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*N. I.*  
*S. A.*

No. 12

# ROUTES

ON THE

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WEST FRONTIER,

Vol. I.

COMPILED

(FOR POLITICAL AND MILITARY REFERENCE)

*Under the orders of the Quarter Master General in India,*

IN THE

INTELLIGENCE BRANCH, IN 1887.

BROUGHT UP TO DATE IN OCTOBER 1892.

BY

LIEUT. W. R. ROBERTSON,

STAFF LIEUTENANT, INTELLIGENCE BRANCH.



CALCUTTA:

OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, INDIA.

1893.

*NOT*

*Handwritten blue ink scribbles and markings, including a large circle and various lines.*



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# ROUTES

ON THE

## NORTH-WEST FRONTIER,

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I. B. DIARY No. 74 OF 1892.  
N.-W. FRONTIER.

## PREFACE TO FIRST EDITION.



**T**HE routes are arranged, as far as possible, in succession, starting from Abbottabad in the north-east, and working round to the south and west, so that all the known routes which would be of use to a force operating in any given district will generally be found together. An alphabetical index is appended for general reference.

In the compilation of the Route Book the following authorities have been consulted :—

### *Intelligence Branch Compilations, etc.*

- Gazetteer of Afghanistan, Part I (1882).
- "    "    "    "    II (1883).
- "    "    "    "    III, Routes, (1884).
- "    "    "    Buner (1887).
- "    "    "    Appendices (1887).
- North-West Frontier Gazetteer (1887).
- Main lines of Communication between the Indus and the Hindu Kush-Helmand (1887).
- Routes in Asia, Sections II and V (1878).
- "    in Afghanistan, Parts I, II, and III (Provisional Edition, 1887).
- "    on the North-West Frontier (Provisional Edition, 1887).
- Report on the best line for a military road from Dera Ghazi Khan to Peshin,—*Sanford* (1885).

### *Printed Reports.*

- Afridis.
- Anglo-Afghan War, 1879-80, Sections IV and V (1881).
- Correspondence and Despatches relating to the expedition against the Mahsud Waziris (1860).
- Diary of a march with General Biddulph, C.B., and part of the Head-Quarters, Quetta Field Force (1878).
- Ghazni Field Force, Section V (1880).
- Kandahar Field Force (1879).
- Kohat to Shutargardan,—*Creagh*.
- Memorandum regarding the passes between the Swat and Indus rivers,—*Stewart* (1886).
- Mobilisation Committee : Lines of Communication (1887).
- Notes of the route from Paiwar Kotal to Hisarak *via* the Lakarai pass,—*Gordon* (1880).
- Quetta Field Force (1878).
- Report on the route from Rajanpur to Vitakri by the Chachar pass,—*Marshall* (1879).
- "    "    Thal-Chotiali Expedition, Appendix No. 1 A,—(Wells' Reports on routes across the Kakar Hills),—(1879).
- "    "    Tira country,—*Scott* (1879).
- "    on Tira and surrounding country,—*Scott* (1880).
- "    on the country of the Zaimukht valley, etc.,—*Tytler* (1879).
- "    "    routes from Khost (Matun) to Ghazni and Kabul,—*Kennedy* (1879).
- "    "    Zamburak pass,—*Larminie* (1880).
- "    "    routes to Ghazni, from native information,—*Creagh* (1880).
- "    "    expedition into the Bazar valley (1878).
- "    "    second expedition into the Bazar valley (1879).
- "    "    internal routes in the Afridi country,—*Merk* (1881).
- "    "    routes in the Zhob country,—*Wylie*.
- "    "    Argundab valley from Kandahar to Kalat-i-Ghilzai,—*Biscoe* (1879).
- "    "    march of General Wilkinson's Field Force from Quetta to the Indus at Dera Ghazi Khan (1882).
- "    "    routes in Khost (Kuram Field Force),—*Kennedy, Carr, and Spratt* (1879).

- Report on the two routes turning the Khaibar,—*Young* (1881).  
 " " Lakarai route,—*Collett* (1879).  
 " " route taken by the force which moved towards Ghazni under Major-General Ross, C.B. (1880).  
 " " hitherto unsurveyed portions of the roads passed over by the force of Brigadier-General MacGregor, C.B., C.S.I. (1880).  
 " " road from Sarbuland to Dabrai,—*Massy*.  
 " " " " Mand-i-Hisar to Wach-ak-Barg *viâ* the Argastan,—*Massy*.  
 " " Han pass,—*Musgrave and Ditmas* (1879).  
 " " routes from { Thall  
 " " { Makhmar } to Kalchas,—*Hay* (1882).  
 " " various routes in the Khwaja Amran range south of the Khojak pass,—*Story* (1881).  
 Reconnaissance report of the Altimor pass,—*Bishop* (1880).  
 " " " Adam Khan defile and kotal,—*Hervey* (1880).  
 " " of the Surkh Bedak pass,—*Gaselee* (1880).  
 Road report from Vador to the Chamalang valley, etc.—*Manners-Smith* (1883).  
 Route of the Ghazni Field Force from Kandaliar to Ghazni (1880).  
 " from Bilut to Kabul or Jalalabad,—*Kennedy* (1879).  
 Topographical report on a portion of Baluchistan,—*Wylie* (1876).

### *Manuscript Reports.*

- Notes on routes to Maidan of Tira,—*Warburton* (1884).  
 " " route from Quetta to Hindu Bagh,—*Nicolson* (1887).  
 " and reports on the various routes into the Bazar valley and Maidan of Tira,—*Lockhart, Scott, and Young*.  
 Report on routes through the hills east of Quetta,—*Watkins* (1886).  
 " on the road from Thal to Dera Ghazi Khan *viâ* the Han pass,—*Tomkins* (1883).  
 " " route over the Dabali pass to Palosi and the Mastura valley, and back by the Marai pass,—*Tucker* (1883).  
 " " Bolan, Khojak, and Gwaja routes, by various officers of the Quetta garrison.

WM. T. BLOOD, *Lieut.,*  
*Royal Irish Fusiliers.*

SIMLA ;  
 1st November 1887. }  
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## PREFACE TO SECOND EDITION.

(NOW DESIGNATED VOLUME I.)

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THE district dealt with in Volumes I and II lies roughly between a line drawn from Chilas through Ashreth, Farajghan, and Kabul to Kandahar, and one drawn from Shardi through Abbottabad, Peshawar, Dera Ismail Khan, Dera Ghazi Khan, Dera Bugti, and Sibi to Nushki.

An alphabetical index of all routes in Volumes I and II is appended to each volume for reference.

The following authorities have been consulted in the revision of Volume I:—

Report on Khagan,—*Captain Beley* (1887).

“ „ road from Khagan to Gilgit,—*Havildar Ramzan Khan* (1892).  
North-West Frontier Gazetteer.

Report on Peshawar-Ali Masjid route,—*G. O. C. Peshawar district* (1892).

“ „ Wana routes,—*O. C. Khajuri Kach Force* (September 1892).  
Standing orders for the Quetta district.

W. R. R.

E. R. F.

SIMLA ;

19th October 1892. }





## LIST OF ROUTES.

No. of Route.	From	To	Via	Stages.	Miles.	Page.
1	Abbottabad	Chilas	Muzaffarabad, Sardi, and the Kamukdori pass.	17	188	1
2	"	Gilgit	Khagan, the Babusar pass, Chilas and the Kinijut pass.	22	201½	3
3	"	Pokal	Manshra and the Mirza Gali.	9	87	7
4	"	"	Shinkhari and the Azri Gali.	7	76½	8
5	"	"	Shinkhari and the Bhisti ridge.	6	?	8
6	"	"	Shinkhari and Chatter	7	?	9
7	"	"	Chatter and the Shahid Gali.	7	75½	10
8	Darbaud	Chilas	The Indus	15	203	10
9	Kanhar	Sabe	.....	1	10	13
10	Hoti Mardan	Amb	Topi and the Indus	6	63	14
11	"	Amazai country	.....	5	57	15
12	Nowshera	Chamla valley	Jahangira pass	5	56	16
13	Hoti Mardan	Chinglai	.....	4	32½	18
14	"	Malka	Sherdara pass and Chamla valley.	5	52½	20
15	"	Buner	Ambela pass	5	39½	22
16	"	"	Kingarglai pass	4	41	25
17	"	"	Girarai pass	5	45½	26
18	Buner	Swat	.....	?	?	27
19	Hoti Mardan	"	Morah pass	4	47	28
20	"	"	Lundkhar and the Morah pass.	5	46½	29
21	"	"	Malakand pass	4	41½	30
22	"	"	Tangi and the Digar pass.	7	67½	31
23	Peshawar	Chitral	Jalala, the Malakand pass and Miankalai.	20	233½	32
24	"	"	Abazai, the Malakand pass, and Shazadgai.	15	172½	34
25	"	Bajaor	Shabkadar and the Gandab valley.	4	42¾	37
26	"	Lachipur	Michni and the Gandab valley.	7	76¾	38
27	"	Dakka	Michni and Haidar Khan	5	51¾	39
28	"	"	Loi Shilman valley	6	51	40
29	"	Kabul	The Khaibar, Jalalabad and Lataband.	16	180¾	42
30	Bansawal	Jalalabad	Lachipur	3	29¾	49
	Jalalabad	Asbretth	The Kunar and Dir	13	191	51
	"	Farajghan	The Alishang	7	94	53
	"	Kabul	Laghman and the Bad-pakht pass.	9	97¾	54
	"	"	The Darunta gorge and Dabali pass.	9	94¾	56
	"	Kat Laghman	Jawara Mena pass	2	26	60
	"	"	Wara Galai pass	3	31¾	60
37	"	Kabul	Chartut and the Karkacha pass.	7	88½	61
38	"	Kuram fort	Agam pass	5	61	63

No. of Route	From	To	Via	Stages.	Miles.	Page.
39	Jagdalak . .	Tezin . . .	Iro Manzel pass . . .	1	12	64
40	" . . .	Karkacha pass . . .	.....	1	9	65
41	Lataband . .	Kabul . . .	Khurd Kabul and the Gospan dara.	3	40½	66
42	Safed Sang . .	Hariab valley . .	Ughzan Lar . . .	3	36	67
43	" . . .	Peiwar kotal . . .	Mamakhel and Tarakai . .	3	27	69
44	Peiwar kotal . .	Safed Sang . . .	Lakarai route . . .	5	56	70
45	" . . .	Kabul . . .	Kurshatal pass and Butkhak.	6	68	72
46	Barikab . . .	Kuram . . .	Oghaz pass . . .	4	46	72
47	" . . .	" . . .	Papin pass . . .	5	46	73
48	Ali Masjid . .	Chinar . . .	Alachi Kandao . . .	2	19	74
49	Landi kotal . .	" . . .	Bazar . . .	1	12	75
50	Chinar . . .	Dakka . . .	Sisobi . . .	2	25	75
51	" . . .	" . . .	Tibai . . .	2	26	76
52	Peshawar . . .	Maidan of Tirah . .	Chora Kandao and Chinar	7	61½	77
53	Bara fort . . .	" . . .	Bara valley . . .	6	56	79
54	" . . .	" . . .	Uchpal pass . . .	7	64	80
55	Kohat . . .	" . . .	Landuki and Arhanga passes.	6	62½	81
56	Serozai . . .	" . . .	Zaimukht country . . .	4	40	83
57	" . . .	Chinorak . . .	.....	2	18½	84
58	Thal 1. . . .	Zawo . . .	.....	3	26	84
59	Balishkhe . . .	Chinorak . . .	.....	3	29½	85
60	Thal . . . .	Maidan of Tirah . .	.....	8	60	86
61	" . . . .	Kabul . . . .	Shutargardan and Logar valley.	18	159½	87
62	Hazar Pir ziarat . .	" . . . .	Dhani pass and Matun . . .	9	?	99
63	" . . . .	Ghazni . . . .	Zer Kamar and Matun . . .	11	99½	101
64	Ahmed-i-Shamu . .	Matun . . . .	Shobakghar pass . . .	3	33	102
65	Alikhel . . . .	Ghazni . . . .	Uchmanki pass and Zurmat.	8	122	103
66	Kabul . . . .	" . . . .	Logar valley and adjoining routes.	11	106½	106
67	" . . . .	" . . . .	Maidan . . . .	10	92	110
68	Padkao Roghani . .	" . . . .	Altimur pass . . . .	6	?	113
69	Banuu . . . .	Thal . . . .	Gumati pass . . . .	3	40	115
70	" . . . .	Ghazni . . . .	Khost . . . .	8	119	116
71	" . . . .	" . . . .	The Tochi . . . .	12	187½	117
72	" . . . .	Katawaz . . . .	.....	4	91	122
73	" . . . .	Kanigurum . . . .	Khasora valley and Makin.	9	83½	122
74	" . . . .	Dosalli . . . .	Shaktu valley . . . .	7	71½	126
75	Shaktu valley . .	Up the Sherana Algad.	.....	?	?	128
76	Dera Ismail Khan.	Makin . . . .	Margaband . . . .	9	97	129
77	" . . . .	Nilai Kach . . . .	Kulachi and the Sheranna pass.	5	64	130
78	Khajuri Kach . .	Wana . . . .	.....	2	29	131
79	" . . . .	Sherrani . . . .	Shakai . . . .	7	79	131
80	Dera Ismail Khan.	Ghazni . . . .	Tank and the Gumal . . .	25	289½	132
81	" . . . .	Mukur . . . .	The Kundar and Rah-i-Maruf.	29	333	136
82	" . . . .	Kalat-i-Ghilzai . . .	" . . . .	30	327	138
83	" . . . .	Kandahar . . . .	Kundar and Maruf . . .	33	385½	140
84	" . . . .	" . . . .	Shekh Haidar pass, the Kundar and Maruf.	30	339½	142
85	Kandahar . . . .	Kabul . . . .	Main road . . . .	32	327½	143
85A.	" . . . .	Wach-ak-Barg . . . .	The Arghastan . . . .	6	67½	150

No. of Route.	From	To	Via	Stages.	Miles.	Page.
86	Kandahar	Ghazni	Arghastan and Khushk-i-Rud.	21	237	152
87	Kalat-i-Ghilzai	Kandahar	The Argandab valley	12	102	155
88	Dera Ismail Khan	Pishin fort	Shekh Haidar pass and Zhub.	26	309½	158
89	" "	Loralai	Vihoa pass	20	235	162
90	Drug	Paiuda Khan Thal	.....	2	34	165
91	Mangrotah	Kot Muhammad Khan.	The Saura and Gishni passes.	5	54½	165
92	Dera Ghazi Khan	Thal (Chotiali)	Vidor and the Chamalang valley.	17	185½	169
93	" "	" "	The Mubariki mountain and Chamalang valley.	16	164½	174
94	Chap valley	Dera Ghazi Khan	The Rakhni plain and Sakhi Sarwar pass.		108	178
95	Dera Ghazi Khan	Loralai	Chota Bala	15	183	183
96	Loralai	Musa Khel	Bara Kwal	8	91½	184
97	Murga	Apozai	Mena bazar	6	99	188
98	Apozai	Loralai	Gwal	5	91½	192
99	Kingri	Murga	Kot Muhammad Khan and Musa Khel bazar.	4	69	194
100	Bara Kwal	Mena bazar	The Sheran Tangi	3	38	196
101	Thal (Chotiali)	Thanishpa	Anambar	9	113	198
102	Loralai	Chinjan	The Kuhar Tangi	4	66½	201
103	"	Akhtarzai	The Torkaizai route	4	48	201
104	Thal (Chotiali)	"	.....	6	66	203
105	Dera Ghazi Khan	Loralai	Bhaladhaka	17	210	204
106	Chinjan	The Arghastan valley.	Mandai	8	127	208
107	Bhaladhaka	Kahan	The Khuba Wunga, Daula Wunga, and Bejar passes.	8	95½	209
108	Dera Ghazi Khan	Sibi	The Chachar pass and Kahan.	17	230	213
109	Mithankot	Loralai	The Han pass and Anambar.	17	214½	217
110	Nahar	Thal (Chotiali)	The Sini pass	6	78½	221
111	"	" "	The Mar pass	4	65	222
112	Thal (Chotiali)	Nahar	The Nili pass	8	98	223
113	Rajanpur	Kahan	The Sori Drishak pass	9	117	224
114	"	Lehri	The Sori and Sehaf valleys.	12	168½	225
115	Sibi	Pishin fort	Harnai	13	138	227
116	"	Thal	.....	8	92	233
117	"	Vitakri	The Gazi pass and Makhmar.	10	109½	235
118	"	"	The Gandhar pass	12	158	238
119	Makhmar	Kalchas	Sorekor	5	69½	240
120	Kach Post	Loralai	Ziarat and Harnai	10	136	242
121	" "	" "	" and Wani	7	84	245
122	" "	Spiri Ragha	Kawas	3	31	246
123	Harnai	Thal (Chotiali)	Vrikh and Pur	5	56½	247
124	"	" "	Sembhar pass	5	60½	250
125	Sibi	Kandahar	The Bolan and Kojak passes.	21	250	251
126	Jacobabad	Quetta	Lehri and the Bolan pass	13	196½	255
127	Quetta	Old Chaman	Syed Yaru and the Sanzal pass.	5	66½	257
128	"	Ghazni	Barshor, Kala Haji Khan, and Bara Khel.	27	296	258
129	"	Kach post	Sarakhula pass	2	30	263

No. of Route.	From	To	Via	Stages.	Miles.	Page.
130	Quetta . . .	Khost (Haruai road.)	The Narai and Uzhda passes.	3	41½	264
131	" . . .	Zarghun . . .	The Hanna gap and the Astangi road.	3	17½	265
132	" . . .	Sibi . . .	Sangan. . . . .	11	107	266
133	" . . .	Kandahar . . .	The Gwajha pass . . .	13	153½	268
134	Gulistan . . .	Old Chaman . . .	The Gwajha pass and along the foot of the hills.	4	49½	273
135	" . . .	" " . . .	Top kotal and Kojak Narai.	3	37½	274
136	" . . .	Iskam Khan (Kunchai plain.)	The Azanga road . . .	2	24	277
137	" . . .	Old Chaman . . .	The Roghani pass . . .	2	22½	280
138	Kala Abdulla Khan.	" " . . .	Arambi and the Bogra pass.	6	60½	281
139	" " . . .	Babu China . . .	The Karatu pass and Kala Haji Khan.	9	96	283
140	" " . . .	Gwal . . .	Mandan . . . . .	6	64½	285
141	Kala Haji Khan	" . . .	.....	4	45½	286
142	" " . . .	Margha Chaman . . .	.....	7	85	288
143	Kala Khushdil Khan.	Tor Jamat . . .	The Shinwa . . . . .	3	28½	289
144	" " . . .	Ispana Talarai . . .	The Narai road . . . . .	3	33½	291
145	" " . . .	Balozai . . .	The Suri Narai pass . . .	1	17	292
146	Old Chaman . . .	Kulat-i-Ghilzai . . .	Maruf . . . . .	17	172	293
147	" " . . .	Kandahar . . .	The Barghana pass . . .	7	78	295

# ROUTES

ON

## THE NORTH-WEST FRONTIER.

### Route No. 1.

FROM ABBOTTABAD TO CHILAS, *via* MUZAFFARABAD, SHARDI AND THE  
KAMUKDORI PASS.

*Authority.*—STAGES 13—17, NATIVE INFORMATION.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter- mediate.	Total.	
				Stages 1—2 by Route No. 2; Stages 3—12 by Route No. 2, Eastern Hindu Kush.
1	MANSAHRA . . .	15½	15½	Road very good, fit for wheels.
2	GARHI . . .	18½		34
3	MUZAFFARABAD . .	10	44	Road fair, but stony in parts; ascending the Dublai pass, then descending to the Kishanganga.
4	MANDAL . . .	12	56	Cross the river by a suspension bridge. The path is stony most of the way. Four paths, impracticable for animals, are said to lead from Kuri, passed on this march, to Bala Kot.
5	BALAGRAN . . .	11	67	Time occupied in walking, 4 hours 21 minutes.
6	CHOWGALI . . .	8	75	Path rocky at first, and ascends nearly 3,000 feet to the top of a pass. Time occupied in walking, 3 hours.
7	BARAN . . .	6	81	There are two paths; the lower follows the Kishanganga. Take the upper one and cross the spur by Chowgali, ascending 3,400 feet. Time occupied in walking, 3 hours 7 minutes.
8	DURAL . . .	10	91	Path is rough, stony, and in some places narrow, by the right bank of the river. Paths lead to the Khagan glen, <i>viz.</i> to Battakand (Buta Kundi?) and to Manur. The first is practicable for laden cattle from June to September.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 1—concluded.

9	LALLA . . . .	8	99	Cross by a bridge the Jagran river (unfordable), thence a general ascent by a rough path. Time occupied in walking, 3½ hours.
10	TALI LOHAT . . . .	9	108	Paths lead to Srinagar and to Buta Kundi and Burawai (stage 10, Route No. 2).
11	DUDNIAL . . . .	12	120	A long and fatiguing march owing to the numerous ups and downs, and the stony nature of the road. The path is in many places very narrow, and carried along the face of the hill by galleries of timber and steps. Time occupied in walking, 5 hours. The Kishanganga is crossed by a suspension bridge. From Durian to Burawai is three marches by a route said to be fit for cattle.
12	SHAEDI . . . .	12	192	A square mud-built fort, 200 yards from the river. Cross to the right bank. The path is fairly good for footmen, but may be said to be impassable for cattle. Time occupied in walking, 4 hours.
There is a road to Burawai by the Ratti Galli.				
13	SAMGAN . . . .	9	141	A camping ground ; wood and water procurable. Cross Kishanganga by <i>zampa</i> , and Sargan or Sazutti by <i>kadal</i> bridge, and follow the left bank of the stream.
14	DOMELA . . . .	9	150	A camping ground north of Gamot. The remainder of the route to Niat is described as devoid of forage and fuel.
15	KAMUKDORI GALI . . . .	9	159	A pass over the Indus-Kishanganga watershed. It is a broad pass, with some open ground at the crest, and is comparatively easy, being used for cattle. Open in May, though snow remains up to July. This range must be at least 16,000 feet high.
16	NIAT . . . .	9	168	A village of 15 houses. Below 12,000 feet the vegetation is quite luxuriant.
17	CHILAS . . . .	20*	188	The route is described as going down the right bank of the Niat stream, which forms the eastern branch of the Thak valley ( <i>see</i> Route No. 2). It probably strikes the latter route before reaching Chilas. The villages of Gushar, Dalo, Manihit, and Basha, at the junction of the Niat and Thak streams, are passed. The valley is very narrow. Basha contains 30 houses, and has some level ground about it. For Chilas, <i>see</i> Route No. 2.

\* This distance is taken from the map.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 2.

FROM ABBOTTABAD TO GILGIT, *vid* KHAGAN, THE BABUSAR PASS, CHILAS, AND THE KINIJUT PASS.

*Authorities.*—STAGES 2—8, CAPTAIN BELEY, AUGUST 1887; STAGES 9—22, HAVILDAR RAMZAN KHAN, JUNE 1892.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MANSABRA . . .	15½	15½	Road lies through the plains, and is broad, level, and fit for wheeled traffic all the way. Mansabrah is a considerable village on the left bank of a large stream. Camping ground small; supplies procurable; dāk bungalow. The road to Ughi branches off from here.
2	JABA . . .	12	27½	Country track; undulating. At 8½ miles, Route No. 1 goes off right to Garhi. At 10½ miles, cross a road leading direct from Shinkhari to Garhi. Some scattered cultivators' houses are known by the name of Jaba. Camp in chir forest under Dumgali. Level spaces difficult to procure; water from Labanai <i>nala</i> ; grass plentiful all along the road (August).
3	BALA KOT . . .	9¼	36¾	Cross over Dumgali pass; gradient 10°—15°. Reach the top in about 400 yards. From here descend to the Kunhar at 4½ miles, here about 50 yards wide. Road practicable for laden mules.

Bala Kot is about 180 feet above the river. About 1,600 inhabitants, chiefly Swatis. Much rice and Indian corn cultivation. Small level plantation affording room for two regiments. Elevation 3,700 feet.

*Alternative Route from Mansabrah.*

2	GARHI . . .	18½	34	Instead of turning left at 8½ miles from Mansabrah keep along Route No. 1 to Garhi; road good and practicable for carts all the way. Supplies procurable; water plentiful; country hilly. The Nainsookh is crossed by a suspension bridge suitable for unladen camels. The Khan of Garhi is one of the most influential men in Hazara.
3	BALA KOT . . .	12½	46½	A fair road and practicable for camels, running up the right bank of the Nainsookh, and occasionally crossing over low hills; a road goes up the left bank of the stream, but not so good. By using this route the Dumgali pass is avoided, but the distance is increased by 9¾ miles.
4	BELA KUWAI . . .	13	49¾	Through the chir plantation and cross by the hill bridge to the other bank of the river. At 7 miles pass Dibri, and 2 miles further on reach Chanul. The road is very hilly. Pace of baggage mules about 2 miles per hour. At Kuwai there is no room for camp except in terraced fields. Fuel scarce; forag plentiful; supplies scarce. Elevation, 5,025 feet.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 2—continued.

5	MALKANDI . . .	$8\frac{3}{4}$	58 $\frac{1}{2}$	Hill road, with bad cliffs. Loads off, unless road previously made and parapet put up. At 4 miles reach Paras, where is good place for encampment by using fields. At 5 miles is the worst bit of road on this march.
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At Malkandi the river is 25 yards wide, banks 40 yards. By cutting down bushes space for two regiments may be found near the forest bungalow. Elevation, 4,700 feet. When the road is improved this stage can be to Jarid.

6	DIWAN BELA . . .	$13\frac{1}{2}$	72	In first part of march the path is very hilly, bad cliffs. Mules can travel, but loads must be taken off at the bad places. At 4 miles cross the river by a bridge, and at 6 miles reach Jarid. Fuel and grass plentiful, camping ground for a regiment. Along the left bank, crossing the Manur stream at 8 $\frac{1}{2}$ miles (see Stage 8, (Route No. 1).
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Just before reaching Diwan Bela pass through the celebrated gorge in which the Khaganis annihilated the regiment of Sikhs under Ibrahim Singh. Space for three regiments. Water from river close at hand. Elevation, 6,025 feet. A very trying march, but mules can travel.

7	RAJWAL . . .	$8\frac{1}{2}$	80 $\frac{1}{2}$	Fairly easy march along the left bank of the river to Khagan, consisting of about 20 houses, the remainder being scattered. Fuel, water and grazing abundant. Supplies procurable, flour excepted.
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Cross to the right bank by a bridge and reach Rajwal (30 houses) at about 3 miles from Khagan. Ample camping ground in many places.

8	NARANG . . .	$9\frac{1}{2}$	90	A fairly easy march. Road on the left bank should also be utilized. At 7 miles enter the Bhimbal <i>tangi</i> , a very nasty defile. Cross the Bhimbal Katta by a bridge 2 feet 9 inches wide, 6 feet above the water. Up stream the wooded gorge leads by a difficult pass to Palas (Stage 7, Route No. 8). The Havildar reports this a much used route by traders in salt and ghi.
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Camp on right bank at Narang bridge; march practicable for mules. Level space for three or four regiments on both sides of the river. Forage and fuel plentiful. At Narang, 30 houses. Elevation, 8,275 feet.

9	BUTA KUNDI . . .	10	100	Difficult march along bad cliffs. Loads would have to be taken off in many places unless the road is improved. Cross to the left bank and pass Dhumduma and Sahoch on the opposite bank. Track very undulating, good ground for encampment along the downs for a large force. From Sahoch a track leads north into Kohistan over the Sapat Gali, <i>vid</i> Kotgali and Philiat. The best place to encamp is at Oorar Buta Kundi, near the first houses passed. Fuel and forage plentiful; water from river. Elevation, 9,000 feet.
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*Note A.*—A road leads up the Buta Kundi *nala* over the Torgali pass to Kashmir (Rewri). This is difficult for laden animals.

10	WAITAR . . .	10	110	One or two bad cliffs. Track along the left bank. At about 7 miles reach Burawai and cross by bridge to the right bank. Plenty of level spaces, more on the left bank than on the right.
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*Note B.*—From Burawai a track goes up the Jora Katta and leads over the best pass—Chautari—into the Kishanganga valley, striking Route No. 1 at Tali Lohat. The Kashmir troops came this way in 1848, and are said to have lost 1,000 coolies, besides ponies, from fatigue and want of food. This route is the best for laden animals. It forks at Jora; the two branches springing respectively from the Chautari pass and from the Ratti Gali to the north of it. (See also Stage 12, Route No. 1.) Srinagar is said to be 14 marches hence.



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 2—continued.

11	BASUL OR KOTAWAI	9	119	The Jalkhad <i>nala</i> , which meets the Nainsookh 4 miles below the lake, affords a route into Kashmir by the Jalkhad or Nurinar pass, said to be a much easier pass than the Torgali. The mouth of the Jalkhad <i>nala</i> marks the last trees passed until Babusar village is reached. Good sloping downs and level stony places. Elevation, 11,000 feet.
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12	GITTIDASS	10	129	A difficult march along cliffs over lake Lulusar; last 3 miles easy. Just before reaching the lake, ford the stream to opposite bank. The depth of water, however, cannot be depended on. The lake is about 1 mile in length and 250 yards wide. Elevation, 11,000 feet.
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The Havildar says a road comes in at the lake from Jalkot. (*Note B*, Route No. 8.) Gittidass appears to be the name given to the ground lying between the lake and the Babusar kotal. Camping space unlimited in undulating and meadow land.

13	BABUSAR VILLAGE	6	135	Up the Gittidass <i>nala</i> , to the open meadow at foot of the Babusar pass (13,500 feet), which forms the British—Chilas boundary. The village of Babusar is on the Thak <i>nala</i> , down which the road goes from the top of the kotal. Here the Bala Kot traders bring laden animals, and no further, the road being too difficult; goods are transferred to coolies.
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From the kotal descend by the Thak *nala*. At first difficult, 400 feet in the first half-mile, afterwards it becomes easy and good. Snow lay on the kotal, a little on the south side, a good deal on the opposite side, in June 1892.

14	THAK	8½	143½	A gradual descent down the still narrow Thak dara; crossing the <i>nala</i> three or four times by bridges before reaching Thak. At 5 miles the track is along a cliff for 500 yards. Here it is crumbling away and requires repair badly. One hundred wooden built terraced houses, with about 300 inhabitants, make up the village of Thak. It is approached by a difficult track ascending 300 feet above the <i>nala</i> . There is a musjid and several fruit gardens; apricots, apples, etc. Some supplies can be had here.
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15	CHILAS	12	155½	The dara now opens out to about a mile in width. To the 5th mile animals can scramble along. Afterwards along a cliff for ¼ mile, reaching Damdama, 10 houses, at 6 miles. Cross by a bridge, and, at the 7th mile, along a cliff for ⅓ mile. From this point the <i>nala</i> goes straight for the Indus, but the track bears left (N. W.) ascending steeply for 1 mile to the edge of a plateau, across which it goes, crossing the Chilas <i>nala</i> by a bridge just before reaching the village. Route No. 1 probably comes in about the middle of this stage.
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About here there is ample camping ground. One hundred houses (stone), with about 300 inhabitants, constitute Chilas. The village stands about one mile south of the river and a little to the west of the fort, now in ruins. Apricots, walnuts, mulberries, pomegranates, etc., abound. Few supplies can be obtained. Not much wood within 3 or 4 miles.

This stage is not practicable for animals between the 5th and 8th miles. The Indus Route (No. 8) comes to Chilas.

16	THALPIN	4	159½	East along the river bank for 2 miles and then cross by raft of inflated skins to opposite bank. Animals must be swam. The rafts do not carry more than 15 maunds. Banks of the river are low and shelving in some places; bottom sandy; width 200 yards; never more than 250 yards at this point; current not swift.
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ROUTES ON THE NORTE-WEST FRONTIER.

Route No. 2—concluded.

Track goes north along the right bank of the Khindar *nala*. Wood and grass procurable. Plenty of camping ground. Many fruit gardens. There are only 4 houses at Thalpin.

17	KHINDAR . . .	7			166½	(See Note at end of route.) Over every kind of ground. Unsuitable for pack transport. A better track can be found by crossing the <i>nala</i> three or four times, thus avoiding the bad parts, but without bridges this cannot be done. Hills on either side of dara are rugged and somewhat bare. A little cultivation near the <i>nala</i> .
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At about 5 miles pass two huts called Khindar Banda. Khindar village consists of about 70 houses, dotted along the *nala* for a considerable distance. Several level spots for encampment, the dara being very wide. Wood and grass procurable. Water from the *nala*.

18	CAMP . . .	4			170½	The <i>nala</i> is crossed by a bridge near Khindar. At 2 miles the track goes over another bridge, on both sides of which the ground is very difficult and rough. Cross another <i>nala</i> (dry), the banks of which require to be ramped down, and proceed up a third <i>nala</i> —the central one—by a very difficult track, covered with fallen trees and boulders. Camp in the dara. This part of the route was found extremely difficult, but, apparently, requires clearing more than anything else.
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19	CAMP . . .	6			176½	At 3 miles reach the Khindar kotal by an easy ascent. The kotal is 2,000 feet higher than Khindar village. There was no snow on it in June 1892. From here descend slightly to the Kinijut dara.
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Wood and grass procurable.

20	BHUD DARA . . .	7			183½	At 1 mile reach foot of Kinijut kotal and ascend by an easy ascent to the crest at 4 miles. For about 1½ miles on either side 3 feet of snow lay. From the kotal the track goes down the Bhud <i>nala</i> , crossing three or four other small <i>nalas</i> . From the kotal animals can travel.
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21	NAIPUR DAMAN . . .	6			189½	At 1 mile cross the Bhud <i>nala</i> (bridge); banks high and steep. Many fallen trees and boulders lie on the track. Here this <i>nala</i> takes off to the east under the name of Sai. Cross another <i>nala</i> (also called Bhud), which joins in here, and proceed by it to the foot of the Naipur (or Gilgit) kotal. From the junction of the Bhud <i>nalas</i> the track is good.
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22	CAMP . . .	5			194½	The ascent is difficult and impassable for animals. Snow was lying for about 1 mile on this side and for 3 on the other. From the kotal descend the Naipur <i>nala</i> to a Gujar's hut. Here is a well of sweet water. The <i>nala</i> water disappears here. The first mile of descent is difficult; afterwards it is easy.
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23	GILGIT . . .	7			201½	Through a defile; stones lying on the track make travelling difficult. At the 2nd mile the <i>nala</i> water re-appears. From here descend sharply for 200 yards. Thence the track remains fairly good to Naipur, situated at the farther end of the defile, at 4½ miles. Twenty houses, standing 400 feet above the Gilgit river. The Kergah <i>nala</i> joins here from the west. Up it a good track goes to Kobistan, joining the Khanbari <i>nala</i> and striking the Indus below Chilas; it is said to be suitable for animals. Abundance of grass along this route. (See Note D, Route No. 8.)
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From Naipur follow the right bank of the river to Gilgit.

Note C.—A road is said to lead from Khindar, going along the crest of the hill and joining in at the Kinijut kotal. This is stated to be a better road than the one above described, once the crest is reached, but the ascent is steep. Consequently the natives usually take the one leading up the dara from Khindar.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 3.

FROM ABBOTTABAD TO POKAL, *via* MANSAHRA AND THE MIRZA GALI.

*Authorities*—CAPTAIN BELEY, 1887; N.-W. F. GAZETTEER, 1887.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	

This route is frequently used by Bala Kot traders who go to Chor for *gali*.

1	MANSAHRA . . .	15½	} <i>Vide</i> Route No. 2.	A stiff pull up the Tundi ridge, but practicable for mules. Pass Hangrai at 8 miles. Room for a small camp at the junction of the Tertema katta and Dhumdalla. Elevation, 7,000 feet.
2	JABA . . .	12		
3	BALA KOT . . .	9¼		
4	DOGA IN DHUMDALLA KATTA . . .	10		
			46¾	

If the weather is very hot, it would be better to halt on the ridge above Hangrai, if good season for water; if drought, down in the Bigar valley, at its head west of the ridge.

5	ON THE TOP OF NAGA OR MALI . . .	5	51¾	Steep ascents. The track leaves the ravine up the left bank. Camp on grassy hill. A track branches off to Asbran. Laden animals can go no further than Ashran on this track.
6	DHIR RIDGE . . .	5	56¾	Below Dhir are dense pine forests, through which the track runs; passable for mules.
7	CHOR . . .	8¼	65	The rise from Dhir is gradual, and also the descent to Chor. The Mirza Gali is about 50 yards wide and 30 yards broad at the top. Elevation, 11,775 feet. A track goes from here to Rajwal (Stage 7, Route No. 2) by the Seh and Nakra Galis.
8	AZRI GALI . . .	7	72	On the upper slopes of the glen around Azri Gali are a few pine and deodar trees. The gali is buried in snow from September to May. Elevation, about 10,000 feet.
9	POKAL . . .	15	87	Down the Sirhan by a steep descent into the Alahi valley and pass Gangwal at 4 miles. Thence the descent becomes more gentle; the bed of the stream widens gradually, and for the last 3 miles below Sachbiar it flows through a plain 4 or 5 miles in area—all under rice

cultivation.

For Pokal, *see* Route No. II, N.-W. F., Vol. II.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 4.

FROM ABBOTTABAD TO POKAL, *via* SHINKIARI AND THE AZBI GALI.

*Authorities*—CAPTAIN BELEY, 1887; N.-W. F. GAZETTEER, 1887.

No. of Stage.	Name of Stage.	DISTANCES.		REMARKS.
		Inter- mediate.	Total.	
1	MANSAHRA . . .	15½	15½	<i>Vide</i> Route No. 2.
2	SHINKIARI . . .	11½		
3	SACHCHA UTLA . . .	12	27	Across plains passing Chiti Gali.
			39	Pass Bhogarmang at 7½ miles. Road good for mules along the banks of the Sirhan river. Route No. 5 takes off here.
4	MANA . . . . .	7	46	Hill track up the eastern fork of the Sirhan, crossing it by a bridge made of poles thrown across and covered with branches of trees and mud. Path is fairly easy to Pinjul; thence the ascent is rapid and path rocky.
5	CHOR . . . . .	8½		
			54½	The usual route taken by traders leaves the stream and winds up the eastern slopes to the summer hamlet of Panjadi, through pine forests and across several petty streams; then passes over grassy slopes, ending in a short steep ascent to the Khandao Gali, or pass, (11,000 feet). The descent thence to the Chor
	glen is easy. For Chor see Stage 7, Route No. 3.			
6	AZBI GALI . . . . .	7	61½	} <i>Vide</i> Route No. 3.
7	POKAL . . . . .	15	76½	

Route No. 5.

FROM ABBOTTABAD TO POKAL, *via* SHINKIARI AND THE BHISTI RIDGE.

*Authorities*—CAPTAIN BELEY, 1887; N.-W. F. GAZETTEER, 1887.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter- mediate.	Total.	
1	MANSAHRA . . . . .	15½	15½	} <i>Vide</i> Route No. 4.
2	SHINKIARI . . . . .	11½		
3	SACHCHA UTLA . . . . .	12	27	
4	BHISTI RIDGE . . . . .	6	39	
			45	Follow the western branch of the Sirhan to Deval and Jabar. Thence, leaving the main

ROUTES ON THE NORTH-WEST FRONTIER.

Route 5—concluded.

stream, wind up to the Soni Gali (11,000 feet). The last 300 or 400 yards zigzags up an almost perpendicular hillside. Route No. 6 comes in here.

5	MALKI . . . .	7	52	Along the ridge, probably difficult in places; a cattle track. Malki peak (12,465 feet) commands an extensive view over Alahi and Nandibar. Room for a fair-sized camp round the top. Snow lies from September to May. Gangwal and Ganthar lie below.
6	POKAL . . . .	P	P	About 12 miles. A stiff descent to Gangwal, lying far down below the peak.

Route No. 6.

FROM ABBOTTABAD TO POKAL, *via* SHINKIARI, CHATTAR, AND THE BHISTI RIDGE.

*Authorities.*—CAPTAIN BELEY, 1887; N.-W. F. GAZETTEER, 1887.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MANSAHRA . . .	15½	15½	} <i>Vide</i> Route No. 4.
2	SHINKIARI . . .	11½		
3	AHL . . . . .	12½	27	A made hill road up the Konsh glen.
4	CHATTAR . . . .	7	39½	
			46½	Road as in last stage. Chattar is situated at the head of the Konsh glen, 6,000 feet above the sea; food and water-supply ample. Stands on an open plain, 4 square miles in extent.
5	BHISTI RIDGE . .	7	53½	A stiff ascent up an unmade road. Elevation, 9,600 feet.
6	MALKI . . . . .	7	60½	Three miles above Bhisti the crest is a small plateau (10,000 feet), about a mile long and one-fourth of a mile broad; clear of trees, with the Palaju stream flowing through. For Malki see Stage 5, Route No. 5.
7	POKAL . . . . .	P	P	<i>Vide</i> Route No. 5.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 7.

FROM ABBOTTABAD TO POKAL, *via* CHATTAR AND THE SHAHID GALI.  
*Authorities.*—CAPTAIN BELEY, 1887; N.-W. F. GAZETTEER, 1887.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MANSAHRA . . .	15½	15½	} <i>Vide</i> Route No. 6.
2	SHINKIARI . . .	11½		
3	AHL . . . . .	12½	39½	
4	CHATTAR . . . .	7	46½	
5	BANSEER . . . .	10	56½	
6	SHAHID GALI . .	9	65½	Road good for mules, over a plain. Practicable for mules of the country only, which traverse it with loads. Elevation of Shahid pass, 9,000 feet.
7	POKAL . . . . .	10	75½	Same as last stage.

Route No. 8.

FROM DARBAND TO CHILAS BY THE INDUS.  
*Authority.*—ROUTES IN ASIA.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	TOWABA . . . . .	12	12	A made road for pack transport, <i>see</i> Stage 1, Route No. V. N.-W. F., Vol. II.
2	KAMACH . . . . .	12	24	Cross the river at Marer, thence by right bank. Mules can travel to Karnar. <i>See</i> Stage 2, Route No. VI, N.-W. F., Vol. II.
3	SHAGAI . . . . .	7½	31½	} At Shagai cross by ferry to left bank. <i>Vide</i> Route No. V, N.-W. F., Vol. II.
4	TAKOT . . . . .	10½	42	
5	SHANG . . . . .	14	56	

By the right bank. At 2 miles cross a stream, here Takhta village of 40 houses belonging to Chakesar; much cultivation, flocks and pasture. A road lies along the river, but the route taken goes over a wooded spur, and is 2 miles shorter than the river route. After

ROUTES ON THE NORTH-WEST FRONTIER:

Routes 8—continued.

3½ miles Pas or Bala Badkhor on the crest of the spur is reached (20 houses), distant from the river about 2½ miles. Cultivation and forest. Descending 2 miles Kuz Badkhor is distant about a mile to the north, and after 1¼ miles more the road by the river is reached. After 1 mile cross a stream, and 2 miles more another stream, whence Shang (200 houses) is reached after 1¼ miles; much cultivation.

6	GARGE . . . .	18	74	Pass Butial, 3¼ miles (15 houses) in Kahna; inhabitants are Pathans. At 1¼ miles more cross the Kahna <i>nala</i> , usually fordable. Munji or Kahna (15 houses), distant 1¼ miles, from the <i>nala</i> is next met with; there is an ascent to it of about 500 yards; cross a stream after one mile, up which lies Lahor, 2 miles off, and 2¼ further Batera on opposite bank is passed and Kohistan territory is entered. Pass Chakai (15 houses), and after 1½ miles more a stream 15 yards wide and 2 feet deep from the south-west is crossed, and a mile beyond another stream from the west, up which at 2 miles is Bankad. After ½ a mile the Indus is reached, and is crossed by rafts near Mirbat. Road since entering Kohistan difficult. Dubar <i>nala</i> coming from north-west enters Maus about 2 miles above Mirbat. This stream, on which there is a village of that name about 4 miles above the junction, is of good size, and runs through a well-wooded valley. Garge (10 houses), the first village in Kohistan, is reached at 3½ miles above the junction of the Dubar and the Indus; on the opposite bank is Jijal.
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7	PALAS . . . .	8½	82½	Along left bank at ¼ of a mile cross stream and at 2½ miles further, Kolai stream (60 feet broad, 3 feet deep, current rapid) and Kolai (1,000 houses) after ¾ of a mile. Around Kolai cultivation and good grazing. Palas is a considerable village. Fights about grazing ground of frequent occurrence, chiefly with the Kolai people, who receive assistance from Alahi.
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Note A.—From here a much used track goes to Khagan by the Bhimbal Gali; practicable for mules when the pass is open (Stage 6, Route No. 2).

8	JALKOT . . . .	17½	100	Continuing up left bank, pass a stream at 1½ miles, another at 1½ miles more, and a third on right bank at 2½ miles more; up this last lies, 4 or 5 miles off, Kaial. Further on cross the Chaorudarat stream at 2 miles; and the <i>nala</i> Kunsher after another 2 miles, and the <i>nala</i> Gabu (44 feet broad, and fordable in places) after 2½ miles. The road becomes more difficult. Pass a spring at 1¾ miles and then the <i>nala</i> and village of Jalkot is reached after another 3¾ miles (700 houses). The <i>nala</i> is crossed by a wooden bridge, and 3 miles up is another village, called also Jalkot. There is no cultivation between Palas and Jalkot. All the lateral valleys up to Chilas are well stocked with pine, which is floated down the streams.
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Note B.—A track passable to mules goes from here over the Sapat Gali to Khagan—see Stage 12, Route No. 2.

9	SEO . . . .	7	107	Cross to right bank by raft or skins; the river is here 500 yards broad (?), and after 7 miles reach Seo (500 houses).
10	CAMP OPPOSITE KAN- DIA NALA . . . .	13	120	After 1½ miles recross to left bank. Cross a stream, the Tchar, at 1¼ miles, which is difficult to ford, and the <i>nala</i> Brashan at 3 miles more. Thence at 3 miles pass the <i>nala</i> Maliar on opposite bank, which drains the Duga valley, and at 1¼ miles the <i>nala</i> Kahinga, thence after 3 miles reach a point opposite the Kandia <i>nala</i> on other bank.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 9—concluded.

11	BANDA-KI-SAZIN . . . . .	11½	131½	At 7¾ miles cross the <i>nala</i> Lahtar, which is the boundary between Kohistan and Shinaka, and is a fine large stream, well wooded with pine. Reach Gabarchar <i>nala</i> at 3½ miles, and 1½ miles further on Banda-ki-Sazin (15 houses), opposite which on the right bank is the valley of Utar.
12	SAZIN . . . . .	18½	150	At 3¾ miles cross stream (32 feet broad and 2 feet deep), which drains Shuni valley, and after 3¼ miles more, the Sumar stream, opposite to which on right bank is the Shегugah stream. Pine trees are very fine in this part. At 2½ miles from Sumar there is a very awkward

bit of road called Chambai Kara, along a steep scarp over the Indus. Thence 9 miles to Sazin, a well-favoured village of about 700 houses (two-storied); cultivation, fruits, including the grape, and vegetables abundant, also a little silk is produced.

*Note C.*—On the right bank opposite Sazin the Tangir valley runs nearly north. Lurg is distant 6 miles up the valley, a village of 60 houses on a plain (1 mile broad by 2 in length) well watered and cultivated. The road lies up right bank of the *nala* and is fit for laden cattle; the valley is confined. From Lurg ascend for 4 miles to Diamar (80 houses, fort, cultivation and fruit-trees). A canal from Juglot (200 houses on a plain ¼ of a mile square) distant 4 miles further up stream joins at Diamar. Road from latter to Juglot slightly descending. On leaving Juglot cross *nala* by wooden bridge (60 feet long). Thence 5 miles to Kami (250 houses and fort). Palori (20 houses) is 2¼ miles beyond, and ¼ mile further Parbat (20 houses) on opposite bank is passed. At 1½ miles thence a stream joins from the west, which drains the Kichlo valley; a road fit for laden mules leads up this valley to Kandia. Proceeding 1½ miles up left bank of *nala* Dabas (20 houses) is reached, and 2 miles further the Gujar village Kurangi (20 houses): it is the last of the villages in Tangir valley on road to Yasin and Mastuj. A stream from the west, which drains the Michar valley, joins here; there is a good road up it to Kandia, which joins that from Parbat. From Kurangi a road goes due north to Pai kotal, by which Yasin is reached, and another north-west to the Chachi kotal *en route* to Mastuj. These passes, on which there is no forest, can be reached in about 4 hours. (Route No. 46, Eastern Hindu Kush.)

13	DUDISHAL . . . . .	16	166	Route continues by right bank from opposite Sazin. After 3½ miles Shatial on opposite bank is passed, and at 2½ miles more the Darel stream joins the right bank of the Indus. Crossing the Darel by a good wooden bridge, fit for cattle, at 5½ miles pass Harban (100 houses) on left bank, which is well-to-do, and 4½ miles further arrive at Dudishal (20 houses), a village appertaining to Darel.
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*Note D.*—From Dudishal to Gilgit by the *Khanbari valley*.—Up right bank 4 miles to Gaia (200 houses and fort), crossing *en route* a wooden bridge 52 feet long and fit for cattle. At Gaia cultivation, fruit and chinar trees grapes grown, people well-to-do. Then cross to left bank by wooden bridge fit for cattle, and after 3 miles reach Pogaj (60 houses), well-to-do. Continuing by left bank 2½ miles to Samakial (well cultivated), and thence 2½ miles cross a stream from south-east, of which a road fit for cattle leads across the Khanbari valley by Hodar to Gilgit. Proceeding 2½ miles up the left bank Darel *nala*, when cross to right bank by wooden bridge, and along right bank 2 miles to Mankial after a mile Patial (20 houses) is reached. Road then enters a dense forest of pine (which continues to near the passes to Puial and Yasin), and after a mile another stream joins the Darel, and 2½ miles further Yahtot (10 houses, cultivation and grazing); the last of the villages in Darel is passed on opposite bank; valleys then confined, and after 2½ miles the pass, bearing 10° east of north, leading to Puial, and also the pass bearing 16° west of north, leading to Yasin, are viewed about 3 miles off.

This route is continued to Gilgit by Hayward thus:—Road up Biragah valley to the Kuli pass (which also is called Biragah Kun), and at 14 miles cross the pass and reach, after another 8, Kalijunji in the Khanbari valley, a place unfrequented except by herdsmen. Then cross after 6 miles the Chonchar pass. The Khanbari stream rises at the pass and falls into the Indus at Hodar. Thence to Tsakarbos is 3 miles, a camp at head of Kergah valley. Proceed down this valley to Mazar Majnun, 12 miles, a tomb of a Saiaid, no habitation, and then 13 miles to Thut, where are some huts, and passing Basin and Nanpura arrive at Gilgit after another 13 miles. Biddulph says the road is fit for ponies, and that the Darelis can muster 2,000 fighting-men. Distance 67 miles. See Route No. 2 and Route No. 32, Eastern Hindu Kush.

14	HODAR . . . . .	23½	189½	By right bank, cross Khanbari <i>nala</i> (80 feet wide, 3 feet deep) at 4½ miles, no bridge, current rapid, crossing difficult. At 8½ miles further the Tor <i>nala</i> on opposite bank flowing from the south-west is passed. Tor village, of 50 houses, lies 2 miles up the <i>nala</i> , along the right bank 9¼ miles by a rugged road to Hodar stream. Cross it and put up at a Hodar village 1¼ miles further.
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15	CHILAS . . . . .	13½	203	Along the right bank, crossing to the left before reaching Chilas. For Chilas see Route No. 2.
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ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 9.

FROM KANHAR TO SABE.

*Authorities.*—LIEUTENANT SOUTHEY, 1888.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter- mediate.	Total.	
1	SABE . . . .	10 ?	10 ?	Road on leaving Kanhar goes up spur behind the village; over right bank of the Kanhar water-course. The starting-point is somewhat difficult, being slabs of slippery rock and a little further on loose rocks and stones. After ascending about 400 feet the road im-

proves, and continues so to the village of Ranzuran, which is reached after a climb of 1½ hours.

Height by aneroid 3,300 feet or 1,700 feet above Kanhar.

No water here. A few fruit-trees and huts and jowar cultivation is all that can be seen.

After an ascent of 950 feet in 20 minutes the village of Makranai is reached. This is larger and better suited for a bivouac than the former village, but there is no water. *Absolute height 4,530 feet. (Wahab.)*

From this point the road after a slight ascent begins a gradual descent to the Urmal and Naranj *nalas*. At 1 hour 50 minutes road crosses a large watercourse, in which is a good spring and some rice-crops, and, winding round this, reaches the village of Urmal in 7 minutes. This is a prosperous-looking village of some 20 or 30 houses; usual jowar crops, also rice. From here the road descends into the Naranj *nala*. This is a stiff bit and would require some labour to make it practicable for laden mules. In the *nala*, or, more properly speaking, ravine, are several graceful-looking trees called "*pastuna*," also rice-crops. Ten minutes beyond this is the village of Naranj, a somewhat scattered hamlet, but it has a good deal of cultivation roundabout and a plentiful supply of water. Abundance of grass grows on the hillsides and continues thus to Sabe.

From Naranj the road begins to rise until it reaches Sabe. The hills, on leaving Naranj, are bare of trees and shrubs, but are fairly well covered with grass. No water between this and Sabe. The remainder of the way is a somewhat stiff ascent, but practicable for mules.

Sabe village is built on the end of a spur overlooking the Shal *nala*. It contained about 40 or 50 houses, which were, however, all burnt by the 2nd column.

There is abundance of cultivation around, and a large quantity of grass on the hillsides. This point commands the Akazai villages in the Shal *nala*, the Upper and Lower Kand, Maira, etc. A road goes from here by Maira to Thakober, taking a good pedestrian one day. It is said to be practicable for foot-men, and appears to keep up on or near the crest.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 10.

FROM HOTI MARDAN TO AMB (MADA KHEL COUNTRY), *via* TOPI AND THE INDUS.

*Authorities.*—STEWART; BLOOD; DAFADAR AMIR KHAN.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter- mediate.	Total.	
	YAR HUSEN . . . . .	14	14	Along the Maneri main road, which is 20 feet—30 feet wide (unmetalled), crossing the Kalpani river by a ford at 1¼ miles. Ample room for camping before reaching Yar Husen, and also beyond that village. One of the largest villages in eastern Yusafzai. Water Supplies would have to be collected.
	from wells, 20 of which are <i>pakha</i> . MANERI . . . . .	12	26	Road similar to last stage, passing through the large village of Dagi at 2 miles. Several <i>nalas</i> are crossed by good, easy ramps, and the Bargan Khwar (below this called Badri) just before reaching Maneri. Two villages of Aka Khel and Umar Khel, 800
				houses. Water plentiful from irrigation wells. Some supplies are procurable here, and from the neighbouring village of Swabi. Wood and camel grazing plentiful in the neighbourhood.
3	TOPI . . . . .	10	36	A village of 600 houses, 12 wells and 36 shops. Good encamping ground at the foot of low spur. Road good, passing alternately through small villages and over spurs of the low hills.
4	KHABUL . . . . .	12	48	On the right bank of the Indus, opposite Turbela, water plentiful, good encamping ground, but commanded by neighbouring low hills. Village built of stone and mud, and not walled; about 400 houses. There is a ferry of boats here.
				Road for 4 miles to the Pihur and Dalmohat ferry, good and practicable for horsed guns, thence up the banks of the Indus, stony and rough, and not suitable for wheeled artillery.
5	SITANA . . . . .	6	54	On the right bank of the Indus, lying at the east foot of the Mahaban range; it is situated on a rich strip of land and is backed by high and difficult hills to the west. Road runs up a narrow strip of land between the spurs of the Mahaban mountain and the right bank of the Indus.
6	AMB . . . . .	9	63	A large village on the right bank of the Indus. Road as in last stage, but very difficult and only fit for foot-men. There is another road to the left, ascending the low spurs by which camels go as far as Ashera. Between Ashera and Amb the road becomes more difficult, and

camels cannot go with full loads.

Hence up the right bank of the Indus by foot-paths to the junction of the Barandu river in Euner.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 11.

FROM HOTI MARDAN TO THE AMAZAI COUNTRY, *via* THE BIRGALI PASS.

*Authorities.*—STEWART; DAFADAR AMIR KHAN.

No. of Stage	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	YAR HUSEN . . .	14	14	} <i>Vide</i> Route No. 10.
2	MANERI . . .	12	26	
3	MENA . . .	10	36	Road broad and good. At $4\frac{1}{2}$ miles pass Bamkhel, at $6\frac{1}{2}$ miles leave Topi road, turning to the left: cross seven or eight ravines, all easy, except after rain. A village of 700 houses (Utmanzai, British) at the foot of a low spur. Water and supplies plentiful.
4	PADA . . .	6	42	Road through open country. A large Gadun village of 400 houses. Water scanty, from one or two wells. Situated at the foot of the hills.
5	BIRGALI . . .	15	57	Road ascends gradually and without any difficulties to Ishnai at 2 miles. Pola is reached at 5 miles; road easy for laden camels: Seri at 9 miles, ascent more difficult and rocky. At 12 miles Gabasanai, road rocky, but not difficult: at 15 miles Birgali. The pass is

not a difficult one and is much crossed by the Amazais trading with British territory: laden camels can go as far as Pola: hence descent into Amazai country.

A small village on the top of the pass of that name. Water scarce.

*Note A.*—From Mena a track passable to mules goes up the Pola valley, passing Dewal and Talai to Utta in Gadun country. Ascent difficult. Distance from Mena 16 miles.

*Note B.*—Alternative route from Yar Husen to Amazai country *via* the Jahingira dara and Ashraf kotal.

2	SALIM KHAN . . .	11	25	<i>ide</i> Route No. 12.
3	KANGALAI . . .	15	40	<i>Vide</i> Route No. 12, stage 4, as far as Swabi, where the <i>nala</i> branches. Thence follow the right-hand stream, which flows from Kangalal, the valley gradually contracting. A small village watered by springs, among the spurs of the Mahaban range.
4	NAGRAI (AMAZAI) . . .	8	48	A large village. Road ascends: difficult, and very jungly, to summit of the Ashraf kotal, at 5 miles; camels could not cross it; descent difficult to Nagrai at 8 miles.

*Note C.*—Alternative route from Mena to Amazai country *via* the Kandal or Panjman pass and Ashraf kotal.

4	PANJMAN . . .	6	42	Country open, but road stony. A village of 100 houses (Utmanzai, British). Supplies scanty. Water plentiful.
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ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 11—concluded.

5	MANGAL THANA (KHUDU KHEL).	8	50	At 1 mile road passes Kandal, a ruined village. At 2½ miles village of Meragai (Gaduns), road easy, with no ascent; at 4 miles Seri (Gaduns), road easy up broad valley; at 5½ miles Damner, road stony but good; at 7 miles Ghaza Kot (Khudu Khel), road ascends valley; hills on either side; at 7 miles reach Mangal thana, a more difficult ascent. Only mules and donkeys could go from Damner to Mangal thana.
6	NAGRAI (AMAZAI)	8	58	This road is reported to be very difficult. <i>Vide Note B.</i>

A village consisting of an upper and lower portion. In the upper is a fortified enclosure with a tower and a number of houses clustered about (Stewart says 4 towers). In the lower some 40 houses and an abundant spring of water. Elevation, about 5,500 feet.

Route No. 12.

FROM NOWSHERA TO THE CHAMLA VALLEY, *via* THE JAHANGIRA PASS.

*Authority.*—BLOOD, 1887.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	CHOKI . . . .	8	8	Cross the Kabul river by the bridge of boats, and follow the Mardan cart-road for about a mile. A track then diverges to the right, and skirting the southern base of the hill runs across open <i>maira</i> to the Kalpani river (5 miles). Cross by a shallow ford with hard sandy bottom,

passable except after heavy rain, when flood may rise to a height of 6' or 7'. Flood comes down suddenly, and subsides rapidly on rain ceasing. Right bank shelving, left bank scarped, and 8' or 10' high. From the ford the track goes up a dry *nala*, through the left bank, for about 80 yards, and then obliquely up the *nala* bank to the left; ascent easy. Thence to 6 miles across *maira*, when the left bank of the Kalpani is again reached. The road from this point follows the left bank, with generally a strip of cultivation between it and the stream, and high broken ground on the right. Roadway averages about 8'.

A small village. Water good from 20 irrigation wells. Good camping ground on *maira* to east of village. No supplies. Hence a track crosses the river by a ford with rather steep descent from the village, and runs north-west to the Mardan cart-road.

2	DHOBIAN . . . .	12	20	Road good and hard, across open <i>maira</i> , suitable for movement to Gumat, 9½ miles, passing Bhago Banda, a small village, at 1 mile, and Kasim at 6 miles. Just beyond Bhago Banda three small <i>nalas</i> are crossed, which would require a little improvement for camels. Leaving Gumat the road is good and free from obstacles to 10½ miles, when the Balar <i>nala</i> is met. This <i>nala</i> , which is generally difficult throughout its course, is here some 15' deep, with scarped banks, and the road is ramped at a very steep gradient, so that it would be impassable for camels in wet weather. A party of 50 men could make it passable in 2 to 3 hours, and there is a small quantity of brushwood about the banks which might be used to prevent slipping. The <i>nala</i> is said to be liable to flood to a depth of 3' or 4' during heavy rain, when it flows with some force, but subsides rapidly on rain ceasing. It receives the greater portion of the drainage of the northern watershed of the <i>maira</i> . The road thence to Dhobian is good.
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Ample camping ground on open land. Water-supply from 30 irrigation wells, but the water is brackish and unfit for drinking. Supplies would have to be collected.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 12—continued.

3	SALIM KHAN . . .	13	33	<p>The best road diverges north-east just before reaching Dhobian, and, avoiding the village, runs over open ground till near Yar Husen, when the cultivation surrounding that village, is entered and the road, 12' to 15' wide, runs</p>
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between thorn hedges to the village, passing through which it joins the Mardan-Maneri main road, which is followed to Dagi. Two *nalas* are crossed with easy ramps, and the road is 25' to 30' wide throughout. Yar Husen is reached at 2½ miles, Dagi at 5. Both are large villages, with 125 and 80 good wells respectively, and ample camping ground in the neighbourhood.

Another route passes through Dhobian by a narrow lane, and, after following the Sarochina road for half a mile, turns north-east to Yar Husen, where it joins the above.

A third route from Dhobian to Dagi runs through Sarochina (1 mile), passes north of Yakubi (2 miles), and thence runs through cultivation to Dagi (4½ miles). This is the shortest route, but the road where it lies through cultivation is a mere path, and without fences.

Leaving Dagi, the track lies in almost a straight line over undulating *maira*, passing at 7½ miles the small village of Managai and at 11 miles a small steep rocky hill, with a police choki on the top, called Gohata. The Mardan-Maneri main road *via* Naodeh is here crossed, and there is a *pakha* well of good water close to the road. One mile further on the track, now well marked, tops a gentle undulation, and Salim Khan first comes in sight, lying on a spur of a rocky hill of the same name.

The track is throughout good, over hard absorbent soil, which would not cut up much in wet weather. The country is generally open for movement.

Ample camping space on high ground to left of road on right bank of the Bargan Khwar, which issues from the Khudu Khel hills by the Jahangira Dara. Ample water-supply from irrigation wells. The *nala* is dry, except after heavy rain in the hills, when it is said to be liable to heavy flood. It is unfordable when 3' deep, owing to strength of current. Supplies would have to be collected.

4	CHINGLAI . . .	15	48	<p>The track, throughout wide enough for fours, follows the right bank, entering the hills at 1½ miles. At 3½ miles the village of Bamkhel (or Tatoli) is seen ¾ mile to the right among trees. Above this point there is a stream of</p>
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good water in the *nala* bed, which is wide, flat, and sandy, and almost level. The track continues along up the right bank, passing Jahangira at about 5 miles on the left, when the *dara* begins to contract, the hills closing in; but the *nala* bed remains of the same character throughout, and would afford the best road for baggage animals. At 6½ miles pass Gargashti and Kale Kala on right bank, and at 7 miles Kasim Khel on the left bank. The *dara* now turns to the left, and pursues a somewhat winding course, past Dandar (10½ miles) and Swabi (13 miles) till it reaches the open valley of Chinglai.

Chinglai is the chief village in Panjtär, and consists of about 1,000 substantial houses, and a strong fort of stone and wood. It can turn out 150 armed men. The village is overlooked on the north and west by the spurs of the Mahaban range. To the south is an open valley, under cultivation, affording ample camping ground. Water from the stream good and plentiful.

5	CHAMLA VALLEY . . .	8 ?	56 ?	<p>The <i>dara</i> is said to be narrow and rocky, the hills higher and more rugged, and the road leaving the <i>nala</i> becomes a mere mountain path, 3 feet to 4 feet wide, and follows the hill-sides, running parallel to the stream. Crossing</p>
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the Mahaban range it goes through Kue, a small Chamla village on the northern slopes, to Kogah a large village in the valley, where there is ample camping space and water, and it is said a certain quantity of supplies could be collected. No part of the road is very steep, and mules can go easily, men in file in most places. The mountains are rocky in character, and a good road could only be made with considerable labour.

From Chinglai another path, similar to the above in character, leads over the range at a more easterly point, going by a small village called Sir Badar to Agari in the Chamla valley. There are said to be open places along the road where halts could be made, and camping space and water at Agari. Distance about 7 miles.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 12—concluded.

Between Nowshera and Salim Khan there is little camel-grazing. Wood and forage are also scarce. The road is not suited for wheeled traffic.

N.B.—The above route beyond Kassim Khel is from native information.

Note A.—From Choki to Surkhder.

1	TORU . . . . .	12	12	<i>Vide</i> stage 2, as far as Bhago Banda. Cross the Kalpani by a good ford at Bhago Banda. On the further (right) bank the road runs up a broad dry <i>nala</i> between high banks for some 500 yards, and then continues
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through cultivation, passing Guladar at 10 miles, and the small hamlets of Khao and Nawa Kala (not shown on maps) at 11 and 11½ miles.

Ample camping ground beyond the latter hamlet, with water-supply from irrigation well. Toru, a large village on the opposite bank of the Kalpani, could furnish some supplies. Some camel-grazing.

2	SUBKHDEB . . . . .	14½	26½	Road continues up the right bank of the Kalpani, through cultivation, to Maiar, 2½ miles. Here the river is crossed by a good ford, and the road runs mostly over open country to Mohib Banda (5 miles) on the Maruan-Yar Husen road. Thence still across the open to Shahbazgara (8 miles), from which point Route No. 14 goes to Ambela.
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Route No. 13.

FROM HOTI MARDAN TO CHINGLAI (KHUDU KHEL COUNTRY), *via* THE MUGHDARA PASS AND ADJOINING ROUTES.

*Authorities.*—STEWART; DAFADAR AMIR KHAN.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	ISMAILA . . . . .	12	12	Along the Maneri main road to Shahbazgara ( <i>vide</i> Route No. 14). Thence to Ismaila, similar in character. A fair-sized village. Water good from irrigation wells; supplies procurable. Little camel-grazing.
2	NAODEH . . . . .	6½	18½	Road as in last stage.
3	MUGHDARA . . . . .	7	25½	Road through easy and open country; no difficulties. A village of 50 houses (Khudu Khels), strongly situated at the foot of the hills. Well water plentiful.
4	CHINGLAI (KHUDU KHEL.)	7	32½	Road easy to foot of Mughdara pass, with gradual ascent to 1½ miles; summit of pass at 2 miles; ascent not steep. Cattle and laden mules cross it daily, but it is difficult for laden camels. Descent easy into Chinglai valley,

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 1E—concluded.

wide and level. At 4 miles pass village of Dandar, consisting of 40 houses (Khudu Khels).  
*Vide also* Route No. 12, Stage 4.

Note A.—From Naodeh *via* the Tigarai pass.

3	TIGARAI	.	.	7	25½	Road easy and open. No difficulties. At 3½ miles crosses British border. A small Khudu Khel village of 30 houses. Water plentiful.
4	CHINGLAI	.	.	6		
					31½	Road reaches Tigarai pass at ½ mile; this pass is higher than the Daran pass ( <i>vide</i> Note B), but not difficult; cattle traverse it daily. Hence up the valley to Chinglai at 6 miles.

Note B.—From Naodeh *via* the Daran pass. Authority.—Buner Gazetteer,

3	AMANKOT	.	.	7	25½	Road over level and open country. A village of 50 houses in British territory. Water plentiful. Supplies scarce.
4	CHINGLAI	.	.	7		
					32½	Road at first lies in the open country and skirts the low hills to 1½ miles. The Daran pass is reached at 2 miles after a steep ascent. The pass is not high, and runs through a narrow defile of about 2 miles between hills which can be easily crowned. The end of pass consists of a series of rocky steeps, but laden camels traverse it. At the foot of the last steep is a well of spring water at 3½ miles; at 4 miles reach the large village of Bagh, inhabited by Saiads. Forty armed men. Thence along the elevated Chinglai valley for 3 miles; road easy, open, and broad, skirted with cultivation, and passing many Khudu Khel villages reach Chinglai at 7 miles.

Note C.—From Naodeh *via* the Dandai pass. Authorities.—Stewart; Blood; Amir Khan.

3	NARINJI	.	.	9	27½	Road good, through cultivation between thorn hedges, averaging 8' broad for 5 miles, passing Shekhjana at 1 mile, Shiwah (a large village) at 2½ miles, and Parmuli at 4½ miles. Thence to Narinji the road traverses open undulating country, passing at 6 miles the small village of Mihal. A village of 700 houses. Water plentiful; supplies would have to be collected.
4	CHINGLAI	.	.	8		
					35½	Road crosses British border just after leaving Narinji. Ascent easy up the valley to 2 miles. steep ascent to top of Dandai pass at 4 miles. Ground broad and open; pass village of Dandai (Khudu Khel). Water and cultivation. A large force, with baggage, could encamp on the top of the pass. The pass is, however, difficult in parts and unsuitable for laden camels. Descent difficult to 5 miles; thence easy along valley to Chinglai at 8 miles.

Note D.—From Narinji *via* the Narinji pass to Kogah. Authority.—Stewart; Amir Khan.

4	KOGAH (in CHAMLA VALLEY)	.	.	8	35½	Road easy, passing small <i>bandas</i> to 2 miles, then ascent up rocky valley with dense jungle on either side. The steep ascent does not commence till the Baghoch kotal is reached. One mile of difficult ascent; mules could traverse it. Water from streams, from top of pass to Kogah, at 3 miles, descent one mile, then level. ( <i>See</i> Stage 4, Route No. 14.)

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 14.

FROM HOTI MARDAN TO MALKA, *via* THE SHERDARA PASS AND CHAMLA VALLEY.

*Authorities.*—STAGES 1—3, BLOOD, 1887. REMAINDER, ROUTES IN ASIA.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SURKHDER . . .	14	14	From Mardan follow the Maneri main road, crossing the Kalpani river at 1¼ miles by a ford easily passable, except when the river is in flood. At 1¾ miles the road to Yar Husen branches to the right. Follow the Naodeh

road, which is 25 feet to 30 feet broad, and good, to Shahbazgara (7½ miles), crossing the Makan river at that village by a good ford, passable except during flood. Here the main road is left, and, turning to the left, the Rustam road is followed over open country to Hosai, 11 miles. Continue along the Rustam road till the small village of Khairabad is reached, a few hundred yards left of road. At this point a track diverges to the right to Surkhder, 1½ miles, along which is the camping ground, about ½ mile short of Shurkhder on the left of the road.

Undulating sandy ground; room for a brigade without encroaching on the cultivation, which here extends to a considerable distance to the north; water-supply from irrigation wells between the road and the Narai *nala*. Supplies would have to be collected Guliarah, 2 miles to south of the *nala*, could furnish supplies for two native regiments, except wood.

*Alternative route by Guliarah.*

About 2 miles past Shahbazgara along the above route a track diverges to the right and leads over open waste to Guliarah (12 miles from Mardan). Camping ground for a division before reaching Guliarah, but water would have to be brought from the Guliarah wells. From Guliarah the road is rather narrow through cultivation between thorn hedges to 14¼ miles, when the Narai *nala* is crossed by a shallow ford, and the road, running up a narrow *nala*, with high scarped banks, joins the main route at Surkhder, 14¾ miles.

2	SHERDARA . . .	10	24	Road good, between thorn hedges, to Chahargulai, 1½ miles, passing Surkhder at ½ mile. At Chahargulai the <i>nala</i> is forded (always passable), and to 2¾ miles the road skirts the base of a rocky hill on the right, with the <i>nala</i> on the left. Then it descends into the <i>nala</i> bed by a rather steep slope, and follows it for 300 yards, when it turns up a branch <i>nala</i> to the left and ascends the bank by an easy slope. Thence between thorn hedges, through Machai (3½ miles) to 4¼ miles, when the Narai <i>nala</i> (here again dry) is crossed by easy slopes. The road now runs mostly through cultivation, over undulating country to 7½ miles, when the Sherdara Khwar is crossed. The <i>khwar</i> is level and sandy, without banks. The small village of Mihrali is a quarter of a mile beyond the crossing, but the track to Sherdara, leaving it on the right, turns up the left bank of the <i>khwar</i> , which it follows to 9¾ miles, and, then recrossing, follows the right bank to Sherdara. Transport had better follow the <i>nala</i> bed, the road being in places narrow between hedges.
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Camping ground for a brigade between the *khwar* and the base of the hills half a mile short of Sherdara. There are no wells, and water would have to be brought from the stream about 200 yards above the village, where it disappears in the sand. The water is good and plentiful, but precautions should be taken to prevent its pollution by the inhabitants.

Sherdara is a small village built on the hill slopes on either side of the mouth of the *dara*. No supplies but wood, and camel grazing abundant. There is good camping ground at Mihrali, but no water.



Route No. 14—continued.

3	AMBELA . . . . .	8½	32½	Passing the village of Sherdara the track follows the <i>nala</i> (now rocky and full of boulders) between inaccessible rocky hills for half a mile above the village. Here the valley divides, the stream falling in cascades down the right hand (main) valley, and the path winding by steep rocky zig-zags up the branch valley to the left, rising some 300' or 400' to a kotal. This ascent is in its present state almost impracticable for laden mules, and blasting would be required to make a road. Men would have to climb up in single file. At the kotal the gorge is narrow, with steep, rocky, bush-clad hills on either hand, affording a formidable position to oppose the advance of a force up the pass. It can, however, be turned by a path which follows the stream up the right-hand valley, described below. Passing the kotal, the path improves, and winds at generally gentle slopes along the hillsides to about 3½ miles, when it debouches into an almost level valley, some 300 to 500 yards wide and a mile or more in length. The stream winds along the right of the valley, and on a knoll to the left stand the ruins of the village of Khanpur. There is room to camp a brigade, and an ample supply of good water from the stream.
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From Khanpur the top of the pass, called Kotalgarh, is visible, about 1½ miles distant. Two roads were used by the expedition of 1863. One follows the valley, which is commanded throughout by hills; the other, more secure, winds along the hillsides on the west of the valley. Both are practically level for about 1½ miles, when there is a steep zig-zag, similar to that above described, for about half a mile to the kotal. The descent to the valley beyond is said to be very easy, either down the gorge from the kotal, or along the hillsides to the south, joining the gorge near its mouth. The villages of Ambela and Kogah are visible from the kotal.

The path above mentioned, crossing the stream at the point where the valley divides, leads by steep zig-zags and rocky steps up the hillside on the right of the valley. It is quite impracticable for animals. After some 400 yards it becomes less steep, and about 500 yards further on it re-crosses the stream, and runs almost level up the right bank for half a mile, when it again crosses and follows the left bank for some 400 yards. All this portion is fairly good, and communication could be opened with the other path, which runs at a higher level. Then, turning to the right, there is a steep rocky ascent over a spur, and rough but less steep descent beyond to the stream, whose rocky bed is followed for about half a mile, when the Khanpur valley is entered and the other path joined.

The first-described path is all that remains of the military road constructed during the Ambela campaign of 1863. At the two points mentioned where it ascends the kotal, it has been entirely destroyed by the rains, and is everywhere more or less worn away and obstructed by rocks, though not seriously so. Except at these two points it is throughout practicable for camels.

Route No. 15 *via* the Ambe'la pass comes in here.

*Note.*—From Khanpur to Ambela is from native information, somewhat corroborated by a distant view from Khanpur.

4	KURIA . . . . .	8	40½	Road good and practicable for field artillery, over the undulating plain of the Chamla valley, which is throughout well cultivated, with an average breadth of 2½ miles. Kogah, the largest village in Chamla, is passed at 1½ miles, and at about 3½ miles the villages of Sura and Agari closely adjoining each other. Here the valley opens out to a width of about 4 miles.
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A village on a spur which stretches nearly across the plain, at the eastern extremity of the Chamla valley. Supplies procurable; water plentiful. (Elev. 2,138'.)

5	MALKA . . . . .	12	52½	On leaving Kuria the road for 2½ miles traverses a narrow valley, through which the Chamla stream flows. It then winds round the base of a low hill for about another mile, until the village of Kabir-Khan-ki-Dehri is reached; so far it is tolerably easy. From the village there is a short descent to the stony bed of the Nugrai <i>nala</i> , which is followed for half a mile. This part of the road is very rough, and is confined on both sides by high, precipitous hills, covered with grass and stunted trees. The tops of these hills are tolerably level and easy of being crowned. After passing the
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ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 14—concluded.

defile the road crosses over a succession of low hills until the Nugrai valley is entered at  $5\frac{1}{4}$  miles. At the northern extremity stands the village of Shergarh. Nugrai, which is 2 miles farther on, is tolerably strong, and is surrounded by a stone wall, 7 feet high, with a single tower and a small keep. (Elev. 4,490'.)

Immediately beyond Nugrai is Shahdam, a village situated on a conical hill, with a tower on the summit. If well defended, it would be a difficult place to assault. From Shahdam the road turns off to Kangalai, distant 12 miles. It crosses over the Sarpatai ridge, and is described as difficult, but practicable for laden mules. Khanpur is the next village passed about a mile beyond Nugrai; thence the road ascends steadily by rather a stony path to Malka. Laden camels with care can travel from Ambela to Malka, but horsed guns not beyond Kuria.

No supplies. Water procurable.

Route No. 15.

FROM HOTI MARDAN TO BUNER, *via* THE AMBELA PASS.

*Authorities.*—YOUNGHUSBAND; DAFADAR AMIR KHAN.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	BAKSHALI . . . . .	$9\frac{1}{2}$	$9\frac{1}{2}$	Along Route No. 14 for $2\frac{3}{4}$ miles. Thence by a good road passing Babini at 6 miles and Chamdheri at 8 miles. Bakshali has 13 wells and 198 houses. The country in the vicinity is open and well cultivated, being irrigated from the ravine.
2	RUSRAM . . . . .	9	$18\frac{1}{2}$	The road crosses the Makan river at Bakshali. At $\frac{1}{2}$ mile pass Gujrat, at $6\frac{1}{2}$ miles pass $\frac{1}{2}$ mile to right of Chahargulai, then cross three deep ravines, all bridged. Road good the whole way, and practicable for field artillery.
3	SUKHABI . . . . .	4	$22\frac{1}{2}$	A police station and the largest village in the Sudum valley, joining on to the village of Pazar. Supplies procurable after due notice. Water plentiful and good from running streams. Room for encampment to east. Country well cultivated.
4	AMBELA . . . . .	12	$34\frac{1}{2}$	A small village to right of entrance to Ambela pass. Road up bed of <i>khwar</i> , passable for all arms. Water plentiful. Room for a large camp to north-west.

Road ascends gradually along the bed of a stream, full of boulders, through a ravine with very steep hills on each side, covered with thick jungle, 6 to 8 feet high, passable for laden mules and mountain guns; difficult for camels; water the whole way. At  $\frac{1}{2}$  mile crosses British border; at 3 miles ascent becomes steep, reaching the top of the Ambela pass, 3,154 feet, at  $6\frac{1}{2}$  miles. Descent easy; reach Ambela village at 9 miles, situated in some open ground near the head of the valley, and about 700 feet below the crest of the pass. It contains about 80 houses belonging to the Bunerwals, who took it from the Amazais some 40 years ago. Supplies procurable and water plentiful from a stream, which flows from one end of the valley to the other.

Route No. 15—continued.

“As a road for troops it certainly presents great difficulties; the track lies up the bed of a stream, encumbered with boulders and large masses of rock, and is overgrown with low trees and jungle. The hills on either side rise to some height, but for the most part with a gradual slope, so that infantry can ascend them without difficulty, except for the obstacle presented by thick thorny jungle.” (*General Chamberlain's despatch.*) The progress of a force must be necessarily slow, as in most parts it is only practicable to move in single file. The baggage of General Chamberlain's force took 50 hours to march from Rustam to the head of the Ambela pass, a distance of 12 miles only.

From here Route No. 14 goes to Malka.

5	BARKILI . . .	5	39½	Road runs through a gorge about 2 miles long through a spur of the Guru mountain; it is said to be very easy, and leads into the heart of the Nurazai Bunerwals. This pass leads from the Chamla valley through the east
				shoulder of the Guru mountain into Buner. The crest of the pass is due north of the village of Ambela, from which it is about 1,800 yards distant. The crest can be shelled from below with mountain guns. A small and almost imperceptible ridge runs down from the mountain on the east of the pass and stretches across the face, from which riflemen can command the crest. According to native report, the road is easy for camels, the entire length of the pass being but 3 miles. The descent into Buner is easy, and is commanded from the crest. There is no water near the crest, but it is found at the further end of the pass. At the foot of the descent the country is like the Chamla valley. The road from Ambela apparently goes up a watercourse to Teri, thence <i>via</i> China through Barkili to Bajkata.

A village of 200 houses of Khanzal Khel: about 200 armed men.

*Alternative routes.*

- (1) By the Ludman pass, a difficult path, 3 miles in length; only practicable for foot-men.
- (2) By the Umal pass, 4 miles in length; also difficult.
- (3) By the Golkanda pass, the most difficult of all.
- (4) By the valley of the Barandu river; an easy open road.

*Note A.*—From Rustam to Tursak *via* the Malandrai pass.

3	ZANGI KHAN . . .	14	32½	Road stony up the Buda <i>khwar</i> to Laringan (2 miles), passing at 1 mile the villages of Lundai (right) and Ali (left). At 5 miles cross the British border; at 7 miles pass between villages of Pitao Malandrai on the left, and Suri
				Malandrai on the right, each about a mile off the road. The former a good-sized village, with 300 or 400 fighting men. The road now runs along the Malandrai valley, which is densely wooded with high thorn bushes. At 10 miles the road reaches the foot of the Malandrai pass through 5 miles of high jungle. Ascent of pass easy and gradual, over sandy rocks and stones, giving a good foot-hold, and through jungle for the most part: not difficult for laden animals and camels; reach top of pass at 12 miles. There is a short path for foot-men from Pitao Malandrai to the top of the pass, called the Jamun road, along which is drinking-water. This path could be used for turning the left of the Malandrai pass. “The Malandrai pass has its advantages over the Ambela pass, (1) being much shorter; (2) by its bringing you at once into the heart of the Buner country in the very centre of their most powerful tribes.”—( <i>Warburton.</i> )

“The hills to the left of the Malandrai valley are precipitous and impracticable for troops. \* \* \* The hills on the right are easy for infantry, and could not be held by the Bunerwals at all effectually till past Suri Malandrai. A light column of infantry and guns could go along the ridge Surmal (so called from the reddish grass that covers it) in front of Amankot, and so on to the pass to outflank it. At Gharibi Oban there is a plentiful supply of water and camping ground for a couple of regiments going very lightly. (This last from reports which, I think, reliable.) This is a road to Barkili in Buner: as it nears the pass it becomes much wooded and might be obstructed.”—(*Tonnochy.*)

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 15—continued.

Descent easy from Malandrai kotal, reaching Zangi Khan at 14 miles, *i.e.* about 2 miles from the summit of the pass, at first through jungle, then fairly open ground. In good years water plentiful. This would be the best pass by which a large force could enter Buner. There is no water between Pitao Malandrai and Zangi Khan. Cavalry can cross this pass only in single file at present, but the road can easily be widened.

4	TURSAK . . .	9		41½	The road at 2 miles passes through Nowikili, 300 houses; can turn out 350 armed men. This village could be easily taken. It would be the best place for a large force to make its first halt at in invading Buner. Water from wells and tanks for cavalry and cattle. Road then through open country, passable for all arms. Richly cultivated. The spring crops are cut a month later than in Yusafzai, <i>i.e.</i> about the middle of May, and the autumn crops a month earlier, <i>i.e.</i> in the beginning of October. Cavalry can act freely after leaving Zangi Khan. The whole Buner valley is perfectly open, with a few low spurs running into it and a few detached hills. The Barandu river forms no obstacle. A force entering Buner before the spring or autumn crops were cut would find sufficient forage for a large number of animals; but the country could not support an invading force in any other form of supply.
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A large place; 1,200 houses; the chief village of Buner; strongly situated near the foot of Jafir hill, but not commanded by it. Can turn out 850 armed men. It is situated on the Barandu river, which waters the whole length of the Luner valley, breadth about 60 feet, depth 2 to 4 feet.

Note B.—From Rustam to Chor Bandha *via* the Bharoch pass.

3	BHAROCH . . .	5		23½	To Baringan <i>vide</i> Note A; then leave the <i>khwar</i> and turn to the left through lanes with high mimosa hedges to Bharoch: cross several small <i>na'as</i> ; water plentiful. Road not passable for horse artillery.
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A village of 120 houses, at the foot of the border hills; strongly situated. Supplies source; water, fuel, and grass, plentiful. Camping ground for a large force to south-east.

4	CHOR BANDHA . . .	6		29½	There are two paths: (1) the Skunr, which goes direct; (2) the Andarpai, which goes <i>via</i> Sarbanda: both roads very difficult, even for unencumbered infantry: quite impracticable for laden mules; ascent sudden and steep; descent equally difficult. Water at Sarbanda. The hillmen say there is a path from Bharoch which turns the Malandrai pass ( <i>vide</i> Note A), but it must be long and very difficult, and only passable for lightly-equipped infantry.
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A small Salarzai village, situated in a narrow valley. Water from ravine and springs. Plenty of wood and grass. Room for small camp in fields around.

Note C.—From Bakshali to Chor Bandha *via* the Spirsai pass.

2	PALODHERI . . .	7		16½	A large village in Sudum valley. Supplies obtainable; water good and plentiful. Camping ground. Road good over the plain. No difficulties. Water plentiful.
3	SPIRSAI (OR SPIRSAL) . . .	7		23½	A village of 30 houses, strongly situated. Drinking-water scarce. Room for small camp in fields to west. Road rough the whole way, ascending gradually as the valley narrows, through much jungle. High hills on both sides.
4	CHOR BANDHA . . .	5		28½	Road ascends. At 1½ miles is a stone called "d'durozgarogat." where is drinking-water; here a path branches off to the right to Sarbanda; at 2½ miles is the summit of the Spirsai pass, practicable for mules and mountain guns; descent pretty gradual and not diffi-

ROUTES ON THE NORTH-WEST FRONTIER.

Route No 15—concluded.

cult to Chor Bandha at 5 miles. The path to Sarbanda is not practicable for baggage mules or mountain guns.

From Chor Bandha the road runs round a spur of the Pajja mountain to the left to Bampoka, about 6 miles distant; passable for all arms. The road to Tursak too is open and easy. Distance about 6 or 7 miles.

Route No. 16.

FROM HOTI MARDAN TO BUNER, *via* THE KINGARGLAI PASS

*Authorities.*—EGERTON; DAFADAR FAIZ TALAB.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KATLANG . . .	12	12	Road good, crossing the Kalpani river at half a mile, fordable except for a few hours after heavy rain. At 9 miles pass through a short defile in a spur from the Pajja mountain, and cross the bed of the Gadar stream.
2	MIAN KHAN . . .	8	20	Small village, situated in the plain, surrounded by crops. Camping ground. Supplies procurable. Water from wells. Road good the whole way, no obstacles; fit for wheeled artillery.
3	KINGARGLAI . . .	13	33	Village, road through cultivated ground fenced by thorny hedges. Direction eastwards. After passing Sanghao (1 mile), where there are only some 80 houses, the road continues for one mile more over open cultivated ground to the foot of a spur, which runs in from the

south-east; a branch road ascends this spur and keeps along the side of the hill for about  $\frac{3}{4}$  mile, where the main track, which has followed the banks of the watercourse through the *tangi*, gains the same level, and the two tracks rejoin. The latter road is very stony and difficult for laden animals, as it follows the edge of the *nala*, whose banks are very steep. The branch road is easy, as, after ascending the spur at a gradual slope, it keeps along the hillside almost at one level, but the jungle is thick and would have to be trimmed here and there to enable laden animals to get through. From the point where the two roads rejoin to the top of kotal is about  $\frac{3}{4}$  mile, the first part of which zig-zags up a small spur on the proper left (south) of the watercourse, and then the road turns northwards and crosses the ridge. The spur is nearly on a level with the kotal, which it covers at a direct range of some 1,200 yards. The hill to the right is very steep and impracticable near the top, but the lower slopes and spurs are easy, though covered with jungle, and are commanded by the top of the opposite spur. The descent on far side of kotal is only steep for some  $\frac{1}{2}$  mile, after which the valley opens out and is cultivated. Kingarglai appeared to be about  $3\frac{1}{2}$  miles distant from the top of kotal; it is situated at foot of the west slope of a long ridge, which runs down from north to south (from Mount Morah), at right angles to direction of road leading to village. There is a tank of water in front of village. At a short distance from the village the road turns southwards towards Nansair, after passing below which place it turns eastwards for a short distance, and, having cleared the south end of the ridge on which Kingarglai is situated, bends northwards to Bampokh, which is on the reverse slopes of the same ridge.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 16—concluded.

A large village of 200 houses situated among fields, with hills to north and west. Good camping ground with water.

A road comes in here from Bazdara. (See Note A, Route No. 17.)

4	TUBSAK . . . .	8	41	From native information it appears that the road runs through the open valley crossing the Barandu river at Tursak. The whole valley of Buner is said to be open and easy for all arms; well watered throughout; and wood and grass are plentiful; other supplies cannot be depended upon.
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Route No. 17.

FROM HOTI MARDAN TO BUNER, *via* THE GIRARAI PASS.

*Authorities.*—STEWART; DAFADAR FAIZ TALAB.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KATLANG . . . .	12	12	<i>Vide</i> Route No. 16.
2	KOI . . . . .	8½		
			20½	Road good the whole way; cross easy <i>nala</i> at 5 miles. No water on the road except in rainy weather. A large village of 300 houses, situated under the spur of a hill. Supplies plentiful. Water from wells only.

Room for large encampment, but want of water would make it unsuitable for a large force.

3	PALAI . . . . .	5½	26	A fair-sized village in an open valley, easy of approach. Supplies plentiful and water from wells. Road good. At 3 miles cross British border. Room for encampment.
4	BAZDARA . . . . .	6½		
			32½	Road ascends through jungle and occasional fields, comparatively easy the whole way. There are two Bazdaras, lower and upper, a mile apart. At the lower, water is scarce; at the upper, plentiful. The upper is situated at the foot of the Morah mountain: 80 houses.

Room for an encampment. Good water from stream.

5	GIRARAI . . . . .	13	45½	Road for 1½ miles along level to east; at 2 miles ascends slightly through jungle; at 4½ miles steep ascent through thick jungle to head of the Girarai pass, only fit for footmen without loads. Pass quite impracticable for troops with baggage; at 8½ miles summit of pass;

commanded on both sides; descent short and not so difficult, through thick jungle, down a ravine to Girarai in Buner.

A large Salarzai village of 140 houses. Water plentiful from streams. Situated in the plain, with hills to north and south, surrounded by fields. Room for encampment.

Hence along the Buner valley to Tursak.

## ROUTES ON THE NORTH-WEST FRONTIER

### Route No. 17—concluded.

Note A.—From Bazdara to Kingarglai, stage 3, Route No. 16.

5	KINGARGLAI	9	41½	At 2 miles road branches off to left to Girarai pass; ascent steep and difficult to 4 miles, summit of Nawadand pass; mules might traverse with it light loads, but not camels. The crest is high and steep descent short and comparatively easy to 5½ miles at 9 miles the village of Kingarglai. "When the foot of Kot Kumar hill is reached, the road turns to the left; zig-zags up to the top of the ridge, goes along the ridge and drops down behind Kot Kumar to Kingarglai. An easy road comes to the above-mentioned ravine from Koi.
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"The hill on the left of the Bazdara road is precipitous, but from it the Kot Kumar ridges can be seen. A mountain battery would have difficulty in ascending it, but might be able to get far enough to shell the ridge in front. There is water near Barmul. From near Barmul an ascent could be made without difficulty by infantry and guns well covered from view for an attack on the Kot Kumar position."—(Tonnochy.)

### Route No. 18.

FROM BUNER TO SWAT, *via* THE KARAKAR PASS.

Authority.—YOUNGHUSBAND (*from various sources*).

The ascent is by a zig-zag path up the face of a steep mountain, with six distinct landing places in the zig-zag to the village of Karakar on the top of the pass. Bullocks can cross this pass, but with difficulty and danger. Camels can be got over by lightening their loads and leading each one carefully over. The ascent is about 2 miles long and the descent 1½. At the foot of the Swat side is a spring of water which feeds a ravine which runs along the foot of the hills, forming a narrow pass, along which the road leads. This pass is about a gunshot wide and 5 miles long, winding about among the lower features of the mountains and issuing in the plain of Swat at Barikot. The hills right and left of the pass are accessible to light infantry, though rough and steep. This is by far the best pass between Swat and Buner. It is a good deal infested by robbers, and guards are, therefore, necessary.

"The Karakar pass commences at a dip in the hill bearing that name and passes the village of Char, lying in the Salarzai division, at the base of the Ilam range. The ascent is 3 miles in length, after which the road brings one to the small village of Ilam on the summit of the range. The descent on the other side is 3½ miles in length, where lies the village of Sipalbandi in the Babuzai division of Swat. Water is procurable on both sides in abundance. The total length of the journey is about 8 miles, but the road is an extremely difficult one. The village of Ilam, alluded to above, has 24 or 25 houses, inhabited by Gujars."—(Warburton.)

*Via* THE JAWARAI PASS.

This pass goes from Gadazai (Buner) to Babuzai (Swat). It leads from Bulokhan or Bishorai to Salampur, and then on to Saidugan. It is very lofty and practicable for footmen only. There is water on the road. This divides the Ilam mountain from the Zilam. It is much used by the followers of the Akhund to get to his residence in Saidugan. A footman starting at daybreak can get to Saidugan by 2 P.M.

"The Jawarai pass may be said to begin at the village of Pacha in the Gadazai country. After passing it, the road comes to the village of Dokada at the base of the Ilam range, distance 4½ miles. After ascending 1½ miles the traveller comes to a spring which is used by Gujars for watering their cattle. They have built a few huts here to shelter themselves in case of necessity. Up to this the road and ascent are both very easy. Three-quarters of a mile further on is another spring which irrigates a few fields in which jowar is grown. There are no huts here. A small portion of the road is very difficult, but it can be used by mules. After reaching the summit and a mile on the other side is a small hamlet, called Shiratrap, of 32 houses, belonging to the Babuzai division of Swat. On the Buner side of the ascent water is to be met with in two places; on the Swat side it is procurable in abundance. The crossing takes 6 hours, and is usually resorted to by men proceeding to visit the high priest of Swat, whose residence, Saidugan, is 3 miles from Sipalbandi."—(Warburton.)

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 18—concluded.

Via THE KALEL PASS.

This pass is north of the Karakar pass, between the Ilam and Do-Sirri mountains, going to Kukari in the Babuzai division of Swat. It is higher and steeper than the Karakar pass, and passable only by mules and bullocks. In many places the road leads along the face of a cliff, and is so narrow that only one bullock can pass at a time. It is said that it takes a hillman from daybreak till 4 P.M. to drive a mule from the Swat side into Buner; but in contradiction of this, one authority pronounces it longer but easier than the Jawarai pass, and practicable for laden mules.

The road by the Kalel pass begins at the village of Batai, to the east of Dakada, at the foot of the Ilam mountains. The ascent is 3 miles. After this the traveller comes to Kalel, a hamlet of Gadazais, by which name the route is known to outsiders. It has 13 houses, and water is procurable in abundance. In proximity to this village lies the shrine of Shahid Baba. At about one-eighth of the descent on the Swat side lies the village of Sangar, consisting of 12 or 13 huts belonging to Gujars of Babuzai. For half a mile after this the road, passing through hills, takes you to the villages of Karkarai and Jambel, situated in Babuzai. This route is said to be an easy one and can be used by mules and bullocks, and is used by traders bringing goods from Swat. Four miles from the village of Kalel lies the shrine of Saiad Ali Baba. \* \* \* \* \* This route, owing to the number of travellers who resort to it, is safer than any other leading to Swat.—(Warburton.)

Route No. 19.

FROM HOTI MARDAN TO SWAT, via THE MORAH PASS.

Authority.—YOUNGHUSBAND (from native information).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KATLANG . . .	12	12	} <i>Vide</i> Route No. 16. Laden camels can with ease make the ascent, though in some places only in single file. For laden animals the Shahkot pass is more used than the Morah pass, which is practically deserted. The new road has been made from the foot of the ascent from Palai; to that point it remains unimproved.
2	PALAI . . .	14		
3	MORAH BANDA .	6	26	A small village of 25 houses, situated on the right of the road, at the foot of the Morah pass. No supplies, but water procurable. Country hilly, rough and raviny, but room for encampment to west of village. Road undulating and stony up a wide valley, with no water.
			32	
4	THANA . . .	15	47	Road level to 1 mile, then gradual ascent to 5 miles; easy for a hill-road, but rocky in some places, and here and there zig-zags. It is considerably more difficult than the Malakand pass ( <i>vide</i> Route No. 21) and about 4 miles longer. The crest of the pass is broad and rounded, commanded by a spur on each side,

which could be crowned by infantry. No water.



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 19—concluded.

There is a short-cut over the kotal by a path to the left dignified by the name of the Cherat pass, but it is very rough and difficult, and only practicable for foot-men. Descent easier and shorter than ascent. Drinking-water about 300 yards down. At 7 miles reach village of Nal Banda, 60 houses. Water from springs and room for encampment in the cultivated fields. Road wide and easy and fit for wheeled artillery.

The most considerable town in Swat, situated at the foot of a spur of the Morah mountain and commanded by it. Easily accessible. Upwards of 1,000 houses, inhabited chiefly by the Baizai clan of Yusufzais. The land round is watered by canals from the Swat river, which is about 1 mile distant. Room for encampment of large force.

Note A.—From Palal to Aladand *via* the Shahkot pass.

Road along level to 4 miles: to foot of kotal at 5 miles jungly and raviny; crest of pass at 8 miles. Ascent rather steep, but traversable with difficulty by bullocks or mules, not by camels: in some places the road is very narrow. Water procurable at south foot of kotal from springs. Descent about 2 miles, easy, gradually descending to Zulm kot at 12 miles. Road level and good to Aladand at 14 miles. A large village in a wide valley, about 1½ miles from the left bank of the Swat river. Outside is a small fort capable of holding 100 men. About 300 houses. Room for encampment. Water plentiful.

Route No. 20.

FROM HOTI MARDAN TO SWAT, *via* LUNDKHWAR AND THE MORAH PASS.

Authority—YOUNGHUSBAND (*from various sources*).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	JALALA . . . . .	13	13	Road very good, passing by Takht-i-Bhai and crossing the Baghari ravine at 12½ miles. A large village in the Baizai division of Yusufzai, on the left bank of the Uch nala at its junction with the Sukhi Baghari ravine. The inhabitants are Rohanis, of whom there are
				some 300 houses. The position of the village is decidedly strong on the south and west sides, but on the north and east it is open. Supplies procurable after due notice. Water plentiful. Country undulating, with partial cultivation. Jalala would be a convenient position for a reserve in the event of an invasion of Swat by the Malakhand or Morah passes, it being too far from the hills to be in danger of attack, and yet near enough to enable convoys being sent over the Malakand pass in one march. The crest of the Malakand, however, is at least 18 miles distant, of which 8 are in the hills.
				Route No. 23 from Peshawar comes in here.
2	LUNDKHWAR . . . . .	6	19	The chief village (700 houses and 15 shops) in the Paizai division of Yusufzai, and the market town of Swat and Bajaor is situated at the junction of two ravines. Supplies procurable. Water from wells and the ravines. Encamp-
				ing ground extensive, near the burial-ground, east of the village. Country very difficult. Road cut up by ravines.

The situation of the village is strong, being surrounded by ravines, which makes it very difficult of approach, and it is moreover well placed with reference to all the surrounding passes, being about equi-distant from all.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 20—concluded.

3	KASIMRH . . . . .	$5\frac{1}{2}$	$24\frac{1}{2}$	Encamp in open ground, 2 miles beyond the village, at a spot where a large black rock stands on the plain. Supplies must be collected. Water plentiful. Country as in last stage. Road very stony and cut up by ravines. Contains about 120 houses and 8 shops. It is surrounded by ravines, with the Kalpani on its east and a branch of the Landai Kanda on its west. Ravines are here in some places 40 feet deep, with perpendicular banks. Roads from here to all the passes into Swat and Buner.
4	MORAH BANDA . . . . .	7	$31\frac{1}{2}$	
5	THANA . . . . .	15	$46\frac{1}{2}$	} <i>Vide</i> Route No. 19.

Route No. 21.

FROM HOTI MARDAN TO SWAT, *via* THE MALAKAND PASS.

Authority.—YOUNGHUSBAND (*from native information*).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	JALALA . . . . .	13	13	<i>Vide</i> Route No. 20.
2	SHAHKOT. (SHAHKOT)	10	23	A large village, situated at the foot of a low spur; supplies procurable. Water plentiful. Country for 4 miles undulating, but after passing Shergarh (the last British village) it becomes hilly, broken, and raviny. Road very fair, crossing a difficult ravine, with banks
from 30 to 50 feet high, immediately before reaching Sahkot. This ravine would require a great deal of labour to make it passable for guns.				
3	DARGAI . . . . .	$4\frac{1}{2}$	$27\frac{1}{2}$	A large village, in an open valley. Supplies plentiful. Water from a large tank and from wells. Room for encampment. Three or four hundred houses surrounded by a mud wall, 40 feet high and 3 feet thick. There is an encamping ground between this and Kharki
sufficient for a force invading Swat. Road fairly good through broken and raviny country.				
4	KHAR . . . . .	14	$41\frac{1}{2}$	From Dargai to the foot of the kotal is $4\frac{1}{2}$ miles, the first $2\frac{1}{2}$ of which are open, crossing one deep and a few small ravines. As the angle formed by the Dargai spur and the main range is neared, the road becomes commanded by the lower spurs on both sides, especially by

two, one of which extends almost across the little valley. Horsemen cross the pass, as do camels, but traders generally make the loads very light before commencing the ascent. On the crest of the kotal two huge masses of rock encroach considerably on the roadway. Beyond them is an open space, which affords encamping ground for 300 or 400 bullocks, and close by is a small spring of water and a few Gujars' huts. The hills right and left, though rugged and steep, are everywhere accessible to good light infantry, and there is a pathway

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 21—concluded.

which, leaving the road about a mile from the bottom of the kotal, leads right up the face of the hill to the huts at the spring. The main road is here and there commanded from spurs on both sides, but all these can be crowned without difficulty.

The descent from the kotal is neither so long nor so difficult as the ascent. The road runs right down the face of the hill two-thirds of the way, and, after a zig-zag or two, again takes a straight course. It is commanded on either side, and in many places six bullocks can go abreast. The village of Khar is about 3 miles from the foot of the kotal. This is by far the best road into Swat, and the one chiefly used by traders from Peshawar and the Kohat salt-mines. It is also the only road fit for the passage of a body of troops with any baggage.

Route No. 23 goes from here to Dir.

Route No. 22.

FROM HOTI MARDAN TO SWAT, *via* TANGI AND THE DIGAR PASS.

*Authorities.*—YOUNGHUSBAND; DAFADAR FAIZ TALAB.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	NARAI . . . .	12	12	Road good the whole way, running along the left bank of the canal, and crossing it at 11 miles. Country open and no obstacles. Road passes Takht-i-Bhai hill at 10 miles. A Swat river canal chowki.
2	TANGI . . . .	13½	25½	Road good, following the right bank of the Swat river canal, and crossing many bridges, all capable of bearing field artillery. At 10½ miles crosses the Jhinda aqueduct. A large village and police <i>thana</i> . Supplies and water plentiful. Room for large encampment.
3	GANDHARI . . . .	8	33½	Road along level country, passable for all arms. No water on road. Gandhari has about 250 houses, built on the right bank of the Jhinda ravine. Country for half a mile to the east, much cut up by ravines. Water procurable from stream for a large force with baggage animals. Encamping ground.
4	HIRO SHAH . . . .	10	43½	Through level country; no difficulties. Cross the Jhinda <i>nala</i> and stream. A small village, with well water and a tank. Encamping ground.
5	HARIAN KOT . . . .	4	47½	Along fairly level country. No difficulties for troops of all arms. Village outside British territory consists of 150 houses of Ranizais. Water from wells. Wide, open country, with hills to west.
6	MEKHBAND . . . .	13	60½	Over fairly level ground without difficulties to the foot of the kotal at 4 miles: then follow a ravine, rocky and jungly to 5 miles. Water plentiful from a stream. Crest of pass at 8 miles, ascent rather steep, unsuitable for camels. Crest of pass broad, and

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 22—concluded.

there is space for an encampment; but water is at some distance. Descent narrow and steep to Mekhband at 13 miles.

Village of 30 houses in a ravine between high hills. Cultivated country in steps all round. Water plentiful from streams. No encamping ground for a force.

7	MATKANAI . . .	7	67½	Road along a rather wide valley. Hills on both sides. At 2 miles pass village of Pir Kbel, where the valley opens. A village in the plains on the left bank of the Swat river close to the village of Totekan. Encamping ground.
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Note A.—From Tangi to the Swat river *viâ* Buch and the Nawaedan pass.

3	ABAZAI . . .	3	28½	Road good but difficult for wheeled artillery owing to the weakness of the small bridges over canal water-cuts, which constantly cross the road. A mud fort with two guns, garrisoned by police, on the Swat river, and commanding the village of Abazai. Route No. 24 comes in here from Peshawar.
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4	BUCHA . . .	8	36½	Road good over undulating country to Nawaedan at 4 miles. Wheeled artillery could use it. Fair on to Bucha, crossing low hills and narrow ravines. In some places rocky.
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5	SWAT RIVER . . .	8	44½	Over the Nawaedan pass, which is not difficult; horses and camels cross it, but it is not much used. Water plentiful on both sides. Descent less than ascent. Cross the Swat river by a rope-bridge at a place called the Dabar ferry. The river here is about 18 yards broad.
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Arangbarang is a village on the right bank of the Swat river. From this are roads to Upper Swat and Bajaor.

Route No. 23.

FROM PESHAWAR TO CHITRAL, *viâ* JALALA, THE MALAKAND PASS, AND MIANKALAI.

Authority.—THE HAVILDAR.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	NAGUMAN RIVER .	8	8	Road made and good, passing immediately under the fort of Peshawar; and at 3 miles crossing the Badni, a small stream, always fordable. A mile or so further on cross another small stream by a <i>pakha</i> bridge, and at 5½ miles, near to the village of Khazano, ford the Shah Alam

branch of the Kabul river, with generally 2 or 3 feet of water in it. At 8¾ miles cross the Naguman river, or principal branch of the Kabul river, by a bridge of boats.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 23—continued.

2	TURANGZAI . . .	12	20	Road merely a country one, crossing innumerable water-cuts; very bad for guns. Country richly cultivated and covered with villages. At 1½ miles ford the Adozai branch of the Kabul river. At 8½ miles, after passing the villages of Dubb, Sewari, Book Jana, Hariana, Guggur, and Soakur, ford the Swat river opposite the village of Tarnao (this ford is practicable during eight months of the year). At Turangzai forage and provisions abundant. Water from branch of the Swat river.
3	JALALA . . .	14	34	A large village, situated on the left bank of the Chalpani <i>nala</i> . The road from Turangzai is a very good one, traversing the uncultivated plain of Hashtnagar. At 2 miles from Turangzai the road crosses a deep ravine, which has been made practicable for guns; and again immediately before arriving at Jalala, the road for about half a mile winds down the bank of the deep mountain torrent on which Jalala is situated. From Jalala the Ranizai country is reached. (See also Route No. 20.)
4	DARGAI . . .	14	48	} <i>Vide</i> Route No. 21.
5	KHAR . . .	15	63	
6	ALADAND . . .	6	69	Road good. Residence of the chief of the Ranizai branch of the Yusafzai clan. Route No. 19 from Katlang comes in here.
7	UCH . . .	9	78	The road goes straight for the Swat river, which is crossed on rafts. Uch, or Uchinai, consists of four villages, one of which belongs exclusively to Saiads, and the other three to Pathans.
8	SHAMSHIKHAN . . .	15	93	Cross an easy pass into Talash; then continue down its valley to Shamsikhhan on the bank of the Panjkora.
9	MIANKALAI . . .	12	105	Cross the Panjkora to Kotkhai; then through valley to Miankalai; about 1,000 houses, built of stone, cemented with mud. It is the largest and most important town of all Bajagr.
10	KAMBAT . . .	12	117	The road goes up the Jandaul valley. This village (of 120 houses) is notorious for thieves.
11	JANBATAI . . .	12	129	Ascent to the Janbatai pass, and then descend to the village. Both ascent and descent are very steep, but there are springs of water on the way. The north side of the pass is a dense pine forest. A fort. Route No. 31 comes in here from Jalalabad.
12	SURBAT . . .	12	141	The road goes down the Baraul valley. Half-way cross at Banda, the frontier of Dir.
13	DIR . . .	12	153	Cross the Dir river at junction with Panjkora, and continue up its left bank to Dir. Dir is

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 23—concluded.

a village of about 400 houses, and is situated on the right bank of the river. A considerable fort of mud and stone stands on a mound and protects the village. Dir is one of the principal marts of the country. (See also Routes Nos. 24 and 31.)

14	KASHGARAI . . .	9	162	The road goes up the Dir valley. From this place guards are always taken.
15	GUJAR . . . . .	12	174	
16	ASHRETH . . . . .	21	195	The road ascends the Lahuri or Lowarai pass, which is difficult, and then descends to Ashreth. This march is a very tedious one, and is dangerous from the depredations of the Kafirs. Immense quantities of iron are found in the bed of a small stream which rises at the foot of the

Lahuri mountains. Ashreth village is the resort of Kafir robbers, and is the place most dreaded by the merchants who travel by this route.

N.B.—From Dir to Ashreth, see also Route No. 24. The distances here given appear excessive.

17	KALA DBOSH . . .	12	207	At about 2½ miles from Ashreth reach Mirkandi, thence by Route No. 13, Eastern Hindu Kush.
18	GAIRAT . . . . .	9½	216½	
19	BROZ . . . . .	7	223½	
20	CHITRAL . . . . .	10	233½	
			233½	

Route No. 24.

FROM PESHAWAR TO CHITRAL, *via* ABAZAI, THE MALAKAND PASS, AND SHAZADGAI.

Authority.—McNAIR.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	LEFT BANK OF THE KABUL RIVER.	10½	10½	Road fair through open level; cultivated country. Leave the Trunk road by the fort at 2½ miles, cross the Badni canal (bridged) at 4 miles, and the Shah Alam (fordable) at 7 miles. The Kabul river is crossed by ferry at the end of the march.

Encamp on the left bank of the Naguman branch. Supplies must be taken from Peshawar. Water plentiful.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 24—continued.

2	SHABKADAR . . .	8½	18½	Road and country as in last stage. Cross the Kabul at 2½ miles, and pass Uchwala at 5 miles. An old Sikh fort; supplies procurable after due notice; water plentiful.
3	ABAZAI . . .	7¼	26	Road good, through cultivated country, passing Mata at 4 miles, and crossing the Swat river (150 yards wide, left bank steep) at the end of the march. A fort on the left bank of the Swat river. Supplies must be collected; water plentiful.

Route No. 22 from Hoti Mardan comes in here.

4	KHARKI . . .	26	52	The last village <i>en route</i> in British territory is Pairam Deri, distant 14 miles. The first half of this distance is over a bare plain; the remainder of the journey is over fertile ground. Supplies in plenty to be had from surrounding villages. Water good and on surface, but fuel scarce.
5	KOTIGRAM . . .	23	75	Distance from Malakand kotal 5 miles, the first 3½ miles by left bank of a running stream. No cultivation beyond Kharki. Wood and grass on the hills. The ascent to kotal is easy, and will allow of laden camels. The top of the pass is very flat and well wooded. In addition,

a good supply of water is to be had. Traces of a made road, executed (so it is said) by the Sikhs, is still to be seen, but being a longer one, is little, if at all, used, even by traders. The descent of very nearly 3 miles into the Swat valley is over rough ground, but, when once in the plains, the going is easy. *Vide* also Route No. 21. Country on both banks of river very fertile and well-irrigated. The river is crossed opposite the large village of Chakdara. At 7 miles beyond is Kotigram, *en route* several villages.

6	RABAT KALA . . .	10	85	Four miles beyond Kotigram is the Laram pass. The ascent is easy and practicable for all beasts of burden. Water plentiful. Slopes of hill cultivated, with hamlets scattered about. Two large-sized tauks at top of pass that hold water for nine months in the year. The descent to
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Rabat Kala is in parts very steep, getting worse on nearing fort, which is built on a low mound on left bank of river, commanding a good position.

The descent is through fir and pine forests. Water and grass plentiful. Some cultivation.

7	SHAZADGAI . . .	5	90	Cross over the Panjkora, and along an easy and level route arrive at the large fort of Shazadgai, which is built at the sharp bend of river above mentioned, commanding a strong position. The valley is a narrow one, but richly cultivated. Supplies of grass and fuel sufficient for a large force. There is an alternate route from Chakdara to Shazadgai, which avoids the Laram pass; but a low kotal (Katgola) is crossed 6 miles due west from Uch, which is 4 miles from Chakdara. This alternate route is principally used by <i>kafilas</i> .
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8	BARAUL BANDA . . .	7	97	From Shazadgai to Baraul kotal route is along right bank of a running stream through rich cultivation; distance 12 miles. The ascent is easy for laden beasts. The northern face of range is well clad; not so the southern. The descent is for over 4 miles through dense fir
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and pine forest and brushwood. Soil rich. Water-supply plentiful. The village of Banda

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 24—concluded.

is on right bank of stream, over which a frail bridge has been thrown. The stream admits of fording right through the year.

9	DIR . . . . .	16	113	About half-way is the fort of Chutiatan, at junction of stream from Baraul Banda with Panjkora. The path keeps to left bank of stream. After leaving the village of Sangrawal, which is 4 miles from Banda, the country falls, forming a deep gorge for the stream to rush through in places as much as 200 feet deep. No cultivation between Banda and Chutiatan, but plenty of grass and firewood. From Chutiatan to Dir the path is along cultivation, wheat and rice chiefly.
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Dir is the name given to the fort, which is large and mud-built; it is used by the chief and his followers; whereas the village is known as Ariax Kot, and is the head-quarters of Shao Baba. The population of fort and village exceeds 10,000 souls. (?) See also Routes Nos. 23 and 31.

10	MIRGA . . . . .	9	123	Path for nearly 1 mile goes by right bank of stream that takes its rise at Lowarai kotal. The valley is a narrow one, but fertile. When opposite the fort of Pana Kot, which is half-way, an ascent of about 300 feet is made, and a similar descent thence to Mirga. The going is easy.
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11	ASHRETH . . . . .	12	134	About 5 miles from Mirga the Lawarai kotal is reached. Elevation, 10,450 feet. The pass is open for laden animals for eight months in the year, commencing from the month of May. The ascent is very easy and gradual, but the
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descent for 5 miles and more is difficult, the stream having to be crossed and recrossed several times. No cultivation between Mirga and Ashreth. The kotal is the northern boundary of Dir territory.

12	KALA DROSH . . . . .	12	146	At about 2½ miles reach Mirkandi, where Route No. 31 comes in from Asmar, thence by Route No. 13, Eastern Hindu Kush.
13	GAIRAT . . . . .	9½	155½	
14	BROZ . . . . .	7	162½	
15	CHITRAL . . . . .	10	172½	
			172½	



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 25.

FROM PESHAWAR TO BAJAOR, *via* SHABKADAR AND THE GANDAB VALLEY.  
*Authority.*—AFGHAN ROUTE BOOK.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	LEFT BANK OF THE KABUL RIVER.	10½	10½	} <i>Vide</i> Route No. 24.
2	SHABKADAR . . .	8¼		
3	AZIM KALA . . . (IN GANDAB).	12	18¾	Leaving the fort, the road makes directly for the hills over open country for 2 miles till it passes Panjpaò; then enters low broken hills at about 3 miles near the small villages of Darwesh Kili. Follows the dry bed of the Gandab Dara for
			30¾	

2 miles; then rises to the low hills on the right, after the junction of a small dry watercourse from Pandiali. Winds along over high ground, rather broken, to the base of a low pass, which it ascends by a rather steep gradient, and descends to Azim Kala, a small village in Gandab, lying in cultivation and commanded by a low picket hill. The pass may be avoided by continuing up the Gandab dara the whole way to Azim Kala; but the defile, as its name, Kharappa Tangi, implies, is rather rough, and after rain impassable for a short time. It is not more than half a mile long and is easily turned, either as above, or by a force marching from Michni through low hills to the watershed N. of Michni, at a place called Sahib China, which has room for a small encampment, with a fine spring of water. From a low hill on either side the camp is commanded and protected, and Peshawar and Michni on one side and the Gandab valley on the other, are within signalling distance. Water scarce in the Gandab valley at certain seasons, when it is gathered from pools dug under the surface of the stream bed. Forage scarce. Supplies should be procurable.

Route No. 26 from Michni comes in here.

4	KUD KALA . . . (HAD KILI?).	12	42¾	The road passes through the Gandab valley close by several villages, and often over rice-fields. Then rising to, and passing over, the Tora Tiga Gali pass, descends about 2 miles to a few huts known as Kud Kala in Hatimzai. Here water and grass are procurable.
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Thence the road descends to Pitao in the valley, and then up the Matai valley and over a pass into B'ajaor, Nawagai, and so on to Miankalai.

This route is practicable for laden mules.

*Note.*—There is another road from Pitao, descending along an open valley to the east, to Danashkul, whence a road goes to Nawagai, practicable for laden camels. Danashkul is situated on the Rud nala, a large place surrounded by trees and with abundance of water. It is inhabited by Isakbel Tarakzai Mohmands, and can turn out 250 matchblockmen.

*To Bajaor by the Alikandi route.*

A road largely used by B'ajaori traders in iron ore, branches off from the Shabkadar and Gandab route before reaching the Kharappa defile, and, winding up the Halki Pindiali valley through dry hillocks, crosses a low pass into Pindiali proper, where it is joined by another, which, starting from Mathra Thana police station, enters the hills and, crossing over the slopes of the Chingai mountain, where it is rather steep and rough though practicable for mules, descends to Pindiali; continuing through the level portion of that valley and over a low pass, it descends the opposite slopes to Danashkul. Turns up that valley to Yakdand, and, following the lesser valley on the right, continues through the Dawaizai villages to Mitai, or turning to the right, crosses a pass over a mountain range and descends to Pipal; thence descends the valley to Ambahar of the Utmankhels, or goes up stream to Nawagai, and thence by an easy pass, probably 6,000 to 7,000 feet, into the further B'ajaori valley.

B'ajaori traders, proceeding towards Kabul, either cross the range behind Hazai mountain into Kunar, or, while the snow covers the range, they descend through Mitai and the Spirkai Tangi or Bardmanai into Bohai, and thence to Goshta or Lalpura. (*See* Route No. 26.)

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 26.

FROM PESHAWAR TO LACHIPUR (KHAIBAR), *via* MICHNI AND THE GANDAB VALLEY.

Authority.—G. B. SCOTT.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter- mediate.	Total.	
1	MICHNI . . . . .	15 $\frac{3}{8}$	15 $\frac{3}{8}$	Road tolerably good, through open, level country fairly cultivated. <i>Nalas</i> difficult after heavy rain. Pass Darbangi at 3 $\frac{3}{4}$ miles, Mathra at 8 $\frac{1}{2}$ miles, and cross the Kabul river by ferry at 13 $\frac{1}{2}$ miles.  A small fort, close to where the Kabul river issues from the hills. Supplies must be collected. Water procurable.
2	AZIM KALA . . . . . (in Gandab).	13	28 $\frac{3}{8}$	A pathway practicable for infantry and mountain gurs, with baggage on mules and ponies, runs northwards from Michni over open ground 2 $\frac{1}{2}$ miles and, cutting the hills near Darwazgai, ascends the opposite slopes to Sahib China, a small hamlet on the crest, where there is a
<p>small supply of spring water and room for an encampment, commanded only from two sharp peaks about quarter of a mile off towards the Gandab side; splendid signalling and picquet stations. From Sahib China a descent, not very difficult, of about 4 to 5 miles falls to the Kharrappa <i>tangi</i> near the village of Razas at the entrance of the Gandab valley, thence to Azim Kala in the valley, near which there is water, and close by an isolated hillock. The total marching distance from Michni being only about 12 or 13 miles over one pass, about 800 feet above the base.</p>				
4	KUTAI . . . . . (in Bohaidag).	14	42 $\frac{3}{8}$	The road continues up the Gandab valley which is a circular basin, about 8 miles square all under cultivation. A gentle ascent is made to the Napaki pass, at 5 miles, elevation about 3,000', and thence an easy descent into the Bohaidag, a large open valley, covered with
<p>villages and highly cultivated. The Napaki pass is very easy. Low serrated ridges of parallel rocks run N. and S. from it on both sides, but the cultivation is carried up to the pass itself. The Bohaidag should be able to furnish supplies to a very large extent, but forage and firewood are scarce. The valley here is over 8 miles broad, and continues so for over 25 miles up and down. Elevation 2,960.</p>				
5	MANZARICHENA . . . . .	14	56 $\frac{3}{8}$	The road ascends through a wide, open cultivated valley, past numerous large villages, by an easy gradient, the ascent being somewhat steeper as the large village of Manzarichena on the watershed below the Ilzai peak is reached. Numerous towers are distinguishable
<p>from the peaks visited, and there appears to be room for a very large camp quite uncommanded from any side by high hills. Elevation 4,875'.</p>				
6	GOSHETA . . . . .	16	72 $\frac{3}{8}$	From the pass a long, easy, but dry and hot, descent is made along the Silala valley. There are no villages, but there was once a choki half-way down, where was a small supply of water. Go-heta is a large village on the river bank. Supplies procurable.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 26 — concluded.

7	LACHIPUR . . .	4	76 $\frac{3}{8}$	Cross the Kabul river by ferry (or by fording, when water is low) to Lachipur, and join the Khaibar route (No. 29). For laden camels this is certainly the easiest route from Azim Kala at least as far as Manzari-chena. The only difficult piece for wheeled artillery is the Napaki pass.
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Route No. 27.

FROM PESHAWAR TO DAKKA *via* MICHNI, HAIDAR KHAN, AND GATA GUDAR.

*Authorities.*—SCOTT; SINCLAIR; NEWNHAM.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MICHNI . . .	15 $\frac{3}{8}$	15 $\frac{3}{8}$	<i>Vide</i> Route No. 26.
2	HAIDAR KHAN . . .	8		

side. Then the Gata Gudar (ferry) has to be crossed, and an ascent of over 1,000' made to the level of Loi Shilman.

For the first half mile or so from Michni there is a good *kacha* road, which was recently made as an approach to the ferry. Leaving this road, that to Dakka turns down a ravine towards the village of Sadin on the bank of the Kabul river. After passing through this, there is a steep ascent of some 3 miles in length, leading into a big punch-bowl-shaped hollow, completely surrounded by hills. In this hollow lies a small village named Pakhan, consisting of about half a dozen houses. Here plenty of good water and some wood, but not much grass, can be procured. The road from Pakhan proceeds in a north-westerly direction over the side of the hollow, and descends into a trough, the direction of which lies nearly due N. and S. In this trough is a second village called Haidar Khan, distant about 1 $\frac{1}{2}$  miles from Pakhan and 8 $\frac{1}{4}$  from Michni.

3	FATTEH KALA . . .	10	33 $\frac{3}{8}$	At this point the road divides,—one branch leading in a northerly direction up the trough to Sapri; the other following a westerly direction to Dakka, over the side of the trough, apparently where the ground is highest and steepest. The road also appeared to be as bad as could be. In this trough there runs a stream of good water.
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4	KAM DAKKA . . .	11	44 $\frac{3}{8}$	The road, after crossing the western side of the trough above mentioned, drops down to Gudar ferry, some 1,000' or 1,200' below, by a steep and rough descent. The river, which is here only 70 to 100 yards wide according to the season, is crossed by a boat or raft ferry. The road then ascends for 3 miles to the Garangi pass (2,800'), an easy descent from which brings one to the Loi Shilman valley. (Route No. 28.)
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ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 27—concluded.

5	DAKKA . . . . .	7	51 $\frac{3}{8}$	Vide Route No. 28.
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Alternative route from Michni to Fatteh Kala.

2	ZANKAI . . . . .	10	25 $\frac{3}{8}$	Leaving Michni N. W. over level country for 2 miles; then another 3 miles over very low hills to Gidarnao (a watercourse coming from Sahib China). From this point the route rises abruptly to a <i>kandao</i> , but the ascent is only 400' to 500' perpendicular. This portion
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of the road is over limestone formation, but very little is required to make it a good road. From the *kandao* the route winds among the hills, over gentle slopes and across several dry watercourses, with excessively easy gradients, to the small hamlet of Zankai; thence to the Zankai *kandao*, which is the highest elevation attained on this route between Michni and Dakka, at an elevation of about 1,200' above the river, the distance from Michni to the *kandao* being about 7 $\frac{1}{2}$  miles direct distance, probably 11 miles walking. Here the descent to the river begins: the fall is easy over soft stone formation, a distance of about 2 $\frac{1}{2}$  miles to the point where it touches the river at Shinilo Gudar. The narrowest part of the river here is 70 yards wide, and it widens out to over 200 yards, with a sandy beach, and above is a flat, open bit of ground on which a small hamlet, inhabited by the ferrymen, stands, where there is ample room for a depôt of stores, and landing-place both at low and high water. The banks are favourable for the construction of a suspension bridge; the current is rapid. The high-water mark is some 60' above present level of water. After crossing the river either of two paths might be chosen, which would be easy for laden camels after repair, both over soft rocks. That to the right ascends gradually to a *kandao* overlooking the hamlet of Shinilo; then passes over another low *kandao* to Samsai; then down a watercourse to the Loi Shilman valley. The height of the first *kandao* is about 1,200' above the river, and some 2 miles from it. The path to the left also ascends for about 3 miles, crosses a low *kandao*, then joins the Gata Gudar route, and passing over the Garangi *kandao* about 1,000' above river-level, falls into Shilman by a fairly easy descent.

3	FATTEH KALA . . . . .	7 $\frac{1}{2}$	32 $\frac{7}{8}$	The road is commanded within easy rifle range from hills above the whole way.
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Route No. 28.

FROM PESHAWAR TO DAKKA, *via* THE LOI SHILMAN VALLEY.

Authorities.—SCOTT; YOUNG; MAXWELL; JENNER; I. B. C.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate	Total.	
1	SAPEIR SANG . . . . .	10	10	This is an important alternative to Route No. 29. It could never, however, be made a good wheel road, nor could it compete with the Khaibar as a military line of communication. Its sole advantage is that it passes through a less lawless country, and one which

would require fewer troops to guard it.

It is approached from Peshawar by the Michni road. The first camping ground would be near Sapeir Sang, on the Mathra Thana side of that place, about 8 miles from Jamrud. Water is plentiful, but indifferent in quality. Fodder obtainable, but coarse and rank.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 28—continued.

2	LAWARIMAINA	7	17	Leaving Shahgai police station cross the plain for about a mile, and enter a narrow valley at Mir Alam's tower (Srakala). Thence follow the bed of the stream for about 3 miles to the small village of Zamakabara, $4\frac{1}{2}$ miles from Shahgai. In some places the road is over boulders and large rocks, which should be blasted, but it is quite easy and practicable for all arms, except wheeled guns. At Zamakabara there is plenty of good water in the bed of the stream, and room for troops to encamp; no supplies.
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The road then ascends to a low kotal by an easy gradient, and at 7 miles reaches Lawarimaina, a fair-sized village, with a few supplies. Plenty of room for troops to encamp, but water sometimes scarce. Elevation 2,600'.

From Lawarimaina the road descends along the banks of a watercourse to the Lawarimaina stream and village, the fall being about 600' perpendicular from Lawarimaina, and the distance about  $1\frac{1}{2}$  miles. The first portion of this bit of road is very good, but the last 200 or 300 yards into the stream is steep and rocky; but by taking a path round to the northwards (from Lawarimaina) of the present track the gradient could be made easier. The village consists of about 60 or 70 huts, quite on the banks of the stream. Here the route crosses the stream at a point commanded by rocks on all sides and from the hills above.

3	SHAHIDMAINA	7	24	From Lawarimaina to Shahidmaina arrangements for safety of a column from attack are particularly simple. On the right flank a steep slope leads down to the river, which is practically impassable, thus protecting the right flank all the way. The hills on further side of the river are out of range. The heights on the left flank would have to be occupied and held, when the road below would be absolutely safe; but the heights to left rise to the crest of the Tartara range, elevation 6,000'.
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Shahidmaina is the last Mullagori village. It is a wretched little place of grass sheds. Both camping ground and water would be found off the road down the valley to the right.

Between Lawarimaina and Shahidmaina the road after the first ascent is good enough, the path winding round two spurs above the Kabul river, and roughly following the contour lines. It then drops down 400' by a very rough and steep descent to Shahidmaina. The camping ground here is cramped. Wood is plentiful near the top of the ridge, but scarce near camp, could be gathered without difficulty by cutting-parties. Lots of hill grass also obtainable with a little warning.

The ascent from Shahidmaina to the saddle of the ridge, called (like many others, as the term means a small plateau) *Dabar*, is considerably greater than the descent to it from the Lawarimaina side, and the descent on the western side to Kam Shilman valley is also long and difficult. Scott says of it: "The ascent over a spur of limestone formation and the descent are steep and rugged, the rise and fall being respectively 2,000' and 1,500' in perpendicular height, and the distances 2 miles each."

From Kam Shilman an easy ascent over soft rocks to a *kandao*, and as easy a descent to the Prang Dara follows, the *kandao* being about 800' to 900' above the watercourses on either side.

4	LOI SHILMAN	12	36	From Prang Dara there is a short-cut over the hills to the Loi Shilman valley, which saves 4 miles, but is practicable only for mules. The caravan route goes up the Loi Shilman stream as far as Sarobi. The road, which lies in the bed of the river, is rough and rocky, with precipitous banks, which hem it in; at Sarobi it opens out, and for the rest of the way to camp is easy enough, lying at times in the bed of the <i>nala</i> , and at others on its banks. At Warsak water is obtained from springs; elsewhere from wells. There is plenty of room to encamp anywhere in the Loi Shilman valley, which is a rough plain, nearly a mile wide, broken by <i>nilas</i> . Near Khwasta Kala would perhaps best divide the distance. Multan Kala would, however, probably prove a better camping ground. Here the water-supply is abundant and good from a number of Persian wells, about 15 within the space of a mile. The water-level is only about 36' below the ground-level, and the wells are used for irrigation. There is
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ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 28—concluded.

sufficient camping ground for a large force. Fuel and grass are scanty near camp, but any quantity could be gathered with a little warning. Other supplies would be practically unobtainable, the total cultivation of the valley hardly sufficing the population. A small number of sheep, goats, and cattle might be obtained.

5	KAM DAKKA . . .	8	44	After leaving the Loi Shilman valley, the path ascends by a gentle slope up to the top of the watershed, the Shilman <i>Gakhe</i> (a pass with gentle ascent on one side and steep fall on the other), and then drops suddenly and steeply to the Kam Dakka valley by a series of zig-zags.
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The rest of the way to Kam Dakka is easy; the village itself is hidden from view till the very last moment by a low hill. It is a miserable place of 50 or 60 houses, the valley being completely commanded by the hills on the South. No supplies procurable. After another mile across the level, the road crosses a rocky spur about 400' high by a stiff and slippery ascent and descent; then another fairly level and easy mile; and, finally, the path passes over a rocky spur which comes down to the water's edge. This part of the road is a mere ledge, overhanging the river, with a drop of from 20' to 30', and precipitous walls overhead. The last 3 miles is across an open stony plain to Dakka.

Route No. 27 from Haidar Khan comes in here.

6	DAKKA . . .	7	51	From the Shilman <i>gakhe</i> to Dakka it is about 10 miles, which would make the march over 17 miles from Multan Kala. Khwasta Kala would, therefore, be a more convenient site for a camp in the Loi Shilman valley.
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For details of Dakka, see stage 4, Route No. 29.

Route No. 29.

FROM PESHAWAR TO KABUL, *via* THE KHAIBAR, JALALABAD AND LATABAND.

*Authorities.*—YOUNG; DUTTON; CARTHEW; CONOLLY; OFFICIAL RECORDS;  
STAGES 1—2 AMENDED BY GENERAL OFFICER COMMANDING  
PESHAWAR DISTRICT, 1892.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	HARI SINGH BURJ . . .	5	5	A double road running parallel to each other and a few yards apart. Both are bridged, but only one is metalled. Camp about 5 miles from Peshawar post office and $\frac{1}{2}$ mile beyond the thana on the edge of the Maira. Space for a division. Water near at hand from the Bara river. No shade of any kind.
2	ALI MASJID . . .	$13\frac{1}{4}$	$18\frac{1}{4}$	The road, which is a broad firm track, crosses a stony treeless undulating plain known as the Maira At 1 mile pass Kacha Garī police post. At 4 miles reach Jamrud fort, situated on a

slight eminence  $3\frac{1}{2}$  miles from the Shadi Bhagrai entrance of the Khaibar. In the vicinity of the fort there is a sarai, a post office and a bazar. Supplies procurable; water plentiful.

Here Route No. 52 branches off to the bazar valley.

Route No. 29—continued.

At 8 $\frac{3}{4}$  miles the road leaves the *nala* and begins to ascend the Shahgai heights by Mackeson's road; the gradient is rather steep for carts.

At 9 $\frac{3}{4}$  miles, Fort Maude (garrison 50 men) situated on a hill on left of road. From here Peshawar, Jamrud, Ali Masjid are all visible. This place was used as a signalling station in 1878—80.

At 10 $\frac{3}{4}$  miles reach the summit of Shahgai heights.

At 11 $\frac{1}{4}$  miles camping ground of Shahgai and Fort Abdul Rahman (for 100 men). No supplies. Water from Khaibar stream below or from the Shahgai *nala*. This fort stands about 400 yards from the road, commanding the valley and road beyond.

From here the road winds down round several lower spurs to the left bank of the stream, which it reaches at 12 $\frac{1}{4}$  miles, and follows to Ali Masjid, closely commanded by the hills on either side of the stream. At 9 miles a cliff on the right allows just room for the road between it and the stream, and here a bar has been fixed to block the road. Beyond is the camping ground forming an amphitheatre.

Commanded on all sides by lofty hills. The fort occupies a hill in the centre of the valley to the west; to the east the ridge now occupied by the remains of barracks; to the north the precipitous slopes of Rotas; and to the south various small hills, some of which command the fort itself. On these latter several detached towers have been built, each for 10 men.

Few supplies. Water good and plentiful from the Khaibar stream, but should be drawn above camping ground. Road good the whole way.

Route No. 48 goes from here to the Bazar valley.

3	LANDI KHANA .	.	13 $\frac{3}{8}$	31 $\frac{3}{8}$	At $\frac{1}{4}$ mile pass under the fort hill. Valley here contracts, and the road, following the stream, runs for $\frac{1}{2}$ a mile through a narrow gorge between the precipitous crags of Rotas and of the fort hill. A new road was blasted out of the face of the hills on the right, about 80' above the old one.
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The road crosses the stream four times in the first mile on low wooden bridges, strong enough for guns. Stream always fordable at these places, if necessary.

The road continues for the next 4 miles along the narrow valley of the Khaibar through lofty bare precipitous hills, rounding numerous small spurs, each of which commands it for some distance in either direction. At 1 $\frac{1}{2}$  miles the Tortang valley issues on the right. Room to camp for one regiment. Good water and wood. The stream here issues from the side of the hill. No water beyond this up to Landi Khana.

At 2 miles Kata Kushtia. A few huts and room to camp. Water here in rains only. In 1878-80 a signalling post was established on a hill above which communicated with Landi Kotal and Ali Masjid.

At 4 $\frac{1}{2}$  miles village of Wali Khel. The valley begins to widen and there are some signs of cultivation. No water in the dry season. At 5 $\frac{1}{4}$  miles Ishpola tope. From here for more than a mile extend on both sides of the road the villages of Ishpola, Niki Khel, and Sultan Khel, all belonging to the Zakha Khels, the most troublesome tribe in the pass. They consist of about 40 walled enclosures with towers; numerous *nalas* would afford cover to an enemy. The valley here is nearly a mile wide, with a good deal of cultivation. No water, at all events in the dry season, though there are said to be springs in the adjacent hills at times. For this season these villages are mostly deserted in dry weather. From 7 $\frac{1}{2}$  to 9 miles the road follows a succession of *nalas*, the banks of which shut out all view on either side. At 8 miles pass Lalabeg, a small village similar to those above mentioned. The only route by which raiders can attack this part of the road is the path leading from Bazar, which joins the Khaibar opposite the Gurgara tower.

At 10 miles Landi kotal. Supplies scanty. Water from Landi khana stream. The road up to this point is rough but good, and not likely to be much affected by rain. From here the descent to Landi Khana begins. The road, a very good one, winds down by an easy gradient, first circling the hill on which Landi kotal camp was pitched, and afterwards along the hills on the right, out of the face of which it is cut. Below, to the left, at 11 $\frac{1}{2}$  miles, is a deep precipitous gorge, whence the water-supply for Landi kotal is drawn.

Half way down the hill is a spur called the Michni Kandao, which commands a raiding route from Bazar. (No. 49.)

Route No. 29—continued.

At  $12\frac{1}{2}$  miles pass Fort Tytler, a strong post for 25 men, which is separated from the road by a deep ravine, and occupies an isolated spur in centre of valley. This fort commands the whole of this descent; also Landi Khana, and the road and valley for a mile beyond it.

At 13 miles bottom of incline, and  $13\frac{1}{2}$  miles Landi Khana camping ground. The camping ground is small, situated a few feet above level of stream. There is also a small fort, with a common stone wall. No supplies. Plenty of good water. Drinking-water can be taken from a spring in the hills close by.

4	DAKKA . . .	10	41 $\frac{3}{8}$	The road rough, but good. At 1 mile the stream sinks into the sand. No water from here to Dakka. At 2 miles a small jazailechi post in a stone <i>sangar</i> . At $3\frac{1}{4}$ miles Painsa Khak (a post of Sangu Khel), the most dangerous part of this march. Frequent raids occurred here from a path leading through a gap in the higher hills on the left to the village of Darband, and thence over an open plain to Pesh Bolak in Ningrahar. South of Darband is the Sisobi pass leading into the Bazar valley. (Route No. 50.)
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In the spring of 1879 convoys used to be fired on almost daily when passing Painsa Khak. At last a careful reconnaissance of the place showed the value of this hill top. A company of Gurkhas was posted there during the day, and all annoyance ceased almost immediately. One reason for this being such a favourite place for the robbers to hunt is probably the fact that there is a small spring, called Geiruk-Kiobuh, about half way up the Darband pass on the west side. This is the only water procurable, at all events during a dry season, between Landi Khana and Haft-Chah; and though the supply is bad and very scanty, it proved enough to be of great use to the Gurkhas, and was no doubt of equal value to the robbers.

At 5 miles Haft-Chah, a small stone fort for 50 men on top of a conical hill in centre of valley. A small supply of water from a spring in the hills 800 yards to the north.

At  $5\frac{1}{2}$  miles the hills contract again; the road runs through a gap in them, about 100 yards wide, and at  $6\frac{1}{4}$  comes out on a wide stony plain, across which it runs for 3 miles. Two small isolated hills a mile to left front here offer a commanding position.

At 9 miles village of Dakka, a summer camp of *kuchis*, with a few ruined walls. Here the hills approach close to left of road; the river Kabul, being a  $\frac{1}{4}$  of a mile to the right, flowing between flat sandy banks.

At 10 miles Dakka fort, a large square fort, about 500 yards by 400 yards, enclosed by a plain mud wall, 15' high, with four round bastions on each face. It stands close to left bank of Kabul river, the town of Lalpura being on the opposite bank, distant about 1,300 yards from north-east of the fort. The lower spurs of the hills on the north-west and south-west entirely command the interior within 400 yards' range. Good water from the river. Supplies obtainable. There is a ferry with one boat.

The garrison of Dakka at the end of the war was usually—

- 1 company, British Infantry.
- 1 battalion, Native Infantry.
- 1 squadron, Native Cavalry.
- 2 guns.

There is a walled enclosure on the south side of the fort, which during the war served as a commissariat yard. Dakka proved most unhealthy to our troops. It stands at an elevation of 1,300'.

Route No. 28 from Peshawar *via* the Loi Shilman valley comes in here.

5	BASAWAL . . .	11	52 $\frac{3}{8}$	Crosses Dakka plain for $\frac{3}{4}$ mile, and enters Khurd-Khaibar pass, through which it runs for one mile, when it issues on a small sandy plain. At $2\frac{1}{2}$ miles the hills fall back on the left, and the road issues on the Girdi plain, the Kabul river lying about $\frac{1}{2}$ mile to the right.
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The road follows the general course of the river, crossing several dry watercourses, with stony beds *en route*. From  $3\frac{1}{4}$  to 4 miles the road runs through low sand hills, which



Route No. 29—continued.

command it on either side, as does also a large isolated hill further to the left. At 4 miles pass Girdi, a village of about 100 houses, affording a few supplies. Two small isolated hills west of village completely overlook it.

At  $4\frac{1}{2}$  miles the hills approach again on the left, and the road runs for  $\frac{1}{2}$  a mile through a spur commanded on both sides by low hills. This spur runs down to the river, but could be avoided in dry seasons by keeping to low ground by river.

The road continues for 3 miles along the foot of the hills to the left, which are high and bare, a well-cultivated plain lying to the right, and crosses another spur at  $6\frac{3}{4}$  miles. The hill on the right here is high and steep, with a stone wall at top, but is avoidable like the former ones, though the low ground is apt to be flooded for irrigation. At 7 miles ground to right swampy, and also parts of the road. At  $7\frac{3}{4}$  miles Hazarnao, a large open village of about 40 houses; plenty of supplies; water from wells and river.

Issuing from Hazarnao, the road crosses the stony bed of a dry stream, follows under the old bank of river to 9 miles, and then ascends to the wide plain of Ningrahar, the hills to the left falling back entirely. At  $9\frac{1}{4}$  miles a pond of good water. At 10 miles village of Basawal (about 200 houses, with a fair amount of supplies); also  $\frac{1}{4}$  mile to left of road a large isolated hill. Small streams of good water cross road at  $9\frac{3}{4}$ ,  $10\frac{1}{4}$ , and  $10\frac{1}{2}$  miles. At  $10\frac{3}{4}$  miles cross a large stream easily fordable, and at 11 miles fort of Basawal. A small mud fort, consisting of a square redoubt of about 80 yards side (walls 12' high) and an outwork much larger, with small ditch and walls about 6' high, the circuit of the whole being about 600 yards. Any amount of supplies from villages of Pesh Bolak and surrounding district. Very good water from stream 50 yards below fort.

Road good the whole way: rough the first 7 miles; afterwards very good. For alternative route from Basawal to Jalalabad *vide* Route No. 30.

6		BARIKAB . . .		10		62 $\frac{3}{8}$		The road leads across the level plain, the villages of Pesh Bolak being visible in the distance about $\frac{1}{4}$ miles to the left, and extending for several miles. At $1\frac{1}{2}$ miles road reaches foot of Maskuh hill, which it follows for $\frac{3}{4}$ mile. At $2\frac{1}{2}$ miles a small stream of water.
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From here for 4 miles the road crosses a dry sandy plain, passing at 4 miles a small old fort, half in ruins, standing in plain  $\frac{1}{2}$  mile to left of road.

At  $5\frac{1}{2}$  miles cross a small *nala*, with steep banks, extending for a long distance on either side, which would be an obstacle to guns or cavalry; and at 6 miles another similar one.

At  $6\frac{1}{2}$  miles Batikot, a large village with about 50 walled and towered enclosures, affording plenty of supplies. Village extends for  $\frac{1}{2}$  mile along left of road; ground all round cultivated. A small stream of good water at  $6\frac{3}{4}$  miles.

At  $7\frac{1}{4}$  miles two small sand hills on right and left of road command it and the plain in either direction for several miles (and also Batikot), affording, with smaller hillocks, an excellent position for artillery.

The road continues across the stony plain, and at  $9\frac{1}{2}$  miles Barikab fort. A small mud fort surrounded with a plain mud wall. Supplies from Batikot and Chardeh. Water from a small stream close to fort.

Road stony first  $2\frac{1}{2}$  miles; then heavy sand up to Batikot, and then stony and rough up to Barikab fort; not likely to be much affected by rain.

For roads to Kuram *via* the Oghaz and Papin passes.—See Routes Nos. 46 and 47.

7		JALALABAD . . .		17 $\frac{1}{8}$		79 $\frac{1}{2}$		The road leads across the same stony plain for 5 miles, commanded for the last 2 by a low range of hills on the right, at a distance of about $\frac{1}{3}$ mile. At 4 miles low hills in front and on left flank also command it at a distance of about a mile.
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At 5 miles begins Choragali pass. The road descends into the dry bed of a stream which it follows, completely commanded on all sides by low rounded hills. It continues for  $5\frac{1}{2}$  miles of the same character, crossing a low kotal (Sask Diwal) at  $6\frac{1}{2}$  miles from Barikab and turning to the north, round the foot of the Girdikas peak, issues at Ali Boghan on the open ground near the right bank of the Kabul river at  $10\frac{1}{2}$  miles, where a small isolated conical hill commands the exit.

At  $12\frac{1}{2}$  miles road descends to the marshy bed of the Chaprair stream (about 300 yards

Route No. 29—continued.

broad, sandy bottom), with a small stream of good water running through the centre, which is easily fordable, though it might present difficulty after heavy rain. Remains of an old fort on the east bank. From here the road continues between sandy hillocks, along the top of the old bank of the river, which lies below to the right.

At  $13\frac{1}{4}$  miles several low hills,  $\frac{1}{2}$  mile to the left above a village (Karez Shukur Khan), a good position for guns. The road continues across an undulating sandy plain until, at 17 miles, new fort of Jalalabad. Road rough, but good the first 10 miles; then sandy. Heavy sand the last 5 miles. No water from Barikab to the Chapriar stream.

Fort Sale is 1 mile short of the city of Jalalabad. Elevation 1,950'. Camping ground south of the fort good, but no shade. Good water from the river and from a spring on the river bank. Supplies obtainable. At Wazirbagh, beyond the city and 2 miles from the fort, there is shady camping ground for 2,000 men. The city itself is an irregular quadrilateral with a perimeter of 2,100 yards.

The summer population does not exceed 2,000. During the war of 1878—80 it was always the head-quarters of a strong brigade, if not of a division.

From here Routes Nos. 31 and 32 take off to Ashreth and Farajghan respectively; alternative Routes Nos. 34 and 37 to Kabul, and Route No. 38 to Kuram fort.

8	ROZABAD . . .	12 $\frac{3}{4}$	92 $\frac{1}{4}$	Leaving the new fort, the road runs across a level sandy plain, with a low range of rounded hills, very suitable for artillery, running parallel to it on the south, at a distance of about a mile for 3 miles.
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(At  $1\frac{1}{4}$  mile pass city of Jalalabad (enclosed by a high mud wall in bad repair), and at  $1\frac{1}{2}$  mile two or three small rocky hillocks (Piper's hill).

Beyond the city the road leads for 3 miles over a wide plain, at first sandy and afterwards stony. At  $2\frac{1}{2}$  miles from fort pass some gardens surrounded by long low walls. At 3 miles Route No. 35 branches off to the right over the Jawara Mena pass to Kats Laghman. At  $3\frac{3}{4}$  miles a small stream of good water.

At  $4\frac{1}{2}$  miles the road begins skirting the foot of a range of low stony hills on the left, which afford a good position for guns to command the road eastward. The Gujak stream here lies immediately on the right. The ground on opposite bank is entirely cultivated. At  $5\frac{1}{2}$  miles the road descends and follows the sandy bed of the stream for a mile.

From  $6\frac{1}{2}$  to 11 miles the route continues of the same character. *viz.* a low range of stony hills on the left at  $\frac{1}{2}$  mile distance, and on the right the stream, beyond which is a highly cultivated plain, studded with villages and gardens (Charbagh, Malabagh, Sultanpur and others).

At 11 miles the hills on the left fall back on the Gujak stream and die away, and the road enters on a wide stony plain, stretching for several miles.

At  $12\frac{1}{4}$  miles camping ground of Rozabad, and at  $12\frac{3}{4}$  miles fort of Rozabad. The latter lies about half a mile off the main road to the right, and close to the bank of the Surkhab stream; it is a strong, well-built native fort, capable of containing a garrison of 200 men. Supplies of all sorts very plentiful. Water-tanks for a large supply of water are filled by a cut from the stream.

The road, otherwise good, is a heavy one throughout. The first 3 miles are through heavy sand; then stony and rough for  $2\frac{1}{2}$  miles, and from  $6\frac{1}{2}$  to 11 miles again through heavy sand.

9	FORT BATTYE . . .	7 $\frac{3}{4}$	100	In a north-westerly direction along a stony plain, which on the track has been cleared from stones. At 4 miles the road passes close to Fatehabad, a large populous village; a small stream crossing it on both sides of the village. From here Route No. 36 goes to Kats Laghman <i>via</i> the Wara Galai pass. At $4\frac{3}{4}$ miles the Kuja <i>nala</i> ,
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a broad stony bed of a stream, loses itself in the Surkhab. The road is a gradual ascent the whole way from Rozabad, and is throughout of the character described above. Fort Battye is a small post, badly situated for defence, being commanded by hills on the west at about 500 yards distance or less. The post is an enclosed stony sarai, with a hornwork for cattle. Water close by. Supplies procurable. The normal garrison during the war was 100 rifles and 40 sabres.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 29—continued.

10	SAFED SANG . . .	8 $\frac{3}{8}$	108 $\frac{3}{8}$	Immediately on leaving Fort Battre, the road descends to the stream from which the water is obtained, and then by a series of ascents and descents winds between low hills for 4 miles, where another stream of good clear water crosses the road, and where convoys make their half-way
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halt. From this point a country path turns off to Nimla Bagh, a very fine old garden, with some celebrated cypress trees in it; and though the path becomes very rough after leaving Nimla, Safed Sang can be reached by it. The Nimla valley is very fertile, and dotted with numerous walled villages. From the stream mentioned above the regular road ascends the whole way to Safed Sang, which lies a mile east of Gandamak. The road being a good one, and the gradients eased off, the ascent is not felt as much as might be expected. The post at Safed Sang is situated above the right bank of the Murki Khel river, and consists of a fort, which encloses the commissariat and ordnance depôts. Height about 4,500'. Supplies at times obtainable. Water-supply good and ample. Climate cool in summer, and very cold in winter.

Routes Nos. 42 and 43 go from here to the Hariab valley and Peiwar kotal respectively.

11	PEZWAN . . .	11 $\frac{3}{4}$	120 $\frac{1}{8}$	From camp the road, which is a good one and perfectly practicable for carts, descends to the Murki Khel stream, which is crossed by an old bridge, built in the time of Dost Muhammad, and since repaired by the British. The river, which is a mere trickling stream in the cold
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weather, increases considerably in the summer, when it is fordable, but liable to sudden floods from the melting snow. At about 1 mile the Chashi and Nian-Rud streams cross the road and, joining, flow in a northerly direction into the Surkhab river. At 1 $\frac{3}{4}$  mile Route No. 37 to Kabul *via* Gandamak and the Karkacha pass branches off from the main road on to a large stony plain. From here the road to Kabul passes along open country to the Khatai stream, after which it winds between low hills. At 4 $\frac{1}{2}$  miles a conical hill, called the 44th Hill, is passed, which is celebrated as being the place where the remnants of our army in the first Afghan War made their last stand, and were destroyed. A cairn of white stones has been erected on the summit to mark the spot. At 6 miles the Fatola stream crosses the road; descent easy. This place is considered by the convoys as half way to Pezwan. For the next 1 $\frac{1}{2}$  mile there is a gradual ascent, and thence to the Surkhab river the descent is gradual and easy, but the road not so good as heretofore. The Surkhab (or red) river, which is reached at 9 miles, is crossed by an old masonry bridge, which was repaired during the war; and from 9 $\frac{3}{4}$  miles the road gradually ascends to Pezwan. The encamping ground is in a hollow, and commanded by surrounding ridges at short ranges. A small stream flows past the west side of the position, but the best water-supply is from a spring at the head of a ravine north-west of the camp. Supplies are obtainable with difficulty. From the camp a path over the hills leads in a westerly direction into the Hisarak valley, about three-fourths of an hour's march; height 4,760'. From Pezwan signalling communication with Gandamak and Jagdalak can be maintained.

12	JAGDALAK . . .	11 $\frac{1}{4}$	131 $\frac{3}{8}$	On leaving Pezwan, the road immediately ascends at a gradient of about 1 in 60 until, at 1 $\frac{1}{4}$ mile, the top of Pezwan kotal is reached; height 4,900'. From this point the road descends to the Zanzilai <i>nala</i> , which is reached at 2 $\frac{1}{4}$ miles, and continues to follow the course
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of this *nala*, winding first in a westerly, then in a northerly, direction. Kani Choki, stony and rough; distance 5 $\frac{3}{4}$  miles. Here there is a small level bit of cultivation on the right, and the road, still of the same character, continues to follow the course of the *nala* for about  $\frac{3}{4}$  of a mile, when the ascent to Jagdalak kotal commences. The ridge is reached at 8 $\frac{1}{4}$  miles, and is 6,150' high. Here there is a small fort, which was usually garrisoned by 200 British infantry during the war. About 1,500 yards off in a north-easterly direction is Pudding hill, the top of which dominates the whole of the Jagdalak pass. From the kotal the road descends at a steep gradient, winding through a narrow pass, varying in width from 100' to 200' until, close to Jagdalak, it opens out into a stony hollow, intersected by the Jagdalak

Route No. 29—continued.

stream. The Jagdalak post, which is 3,000' high, is a walled enclosure situated on an uneven ridge about  $1\frac{1}{2}$  furlong from the main road, which winds round it towards Seh Baba. Water plentiful. Supplies procurable with difficulty. About  $\frac{3}{4}$  mile from Jagdalak on the east of the main road is the entrance to the celebrated defile known as the Pari Dara pass, which is about  $2\frac{3}{4}$  miles in length. Another mountain-path passing through a gorge, opposite to Jagdalak, leads to the ruby mines.

Route No. 39 to Tezin and Route No. 40 to the Karkacha pass take off here.

*Karkacha hills.*—Regarding forage Colonel Jenkins remarks—

"I observed that there was very little of the *zauz* plant growing in the hills about Jagdalak, and there will therefore always be great difficulty in feeding camels from the plains of India in this district. *Kuchi* camels eat the holly bushes, which are plentiful on these hills; but Indian camels do not thrive on this food. Mules and donkeys ought to be used as much as possible here, especially the latter, and the troops ought to be supplied with very light tents."

13	SEH BABA . . .	12 $\frac{1}{2}$	143 $\frac{7}{8}$
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On leaving Jagdalak the main road descends to the Jagdalak stream, and then ascends again for  $2\frac{1}{2}$  miles to the choki of Firnan Beg, which is situated on the left bank of a mountain stream, with a very steep fall in north-east direction. This stream is said to be liable

to rushes of water when the snow is melting, but the fall is so great that they are soon over, and only a slight trickling stream remains. At  $5\frac{1}{2}$  miles Route No. 34 through the Pari Dara pass joins into the main road, and from this point, which is called Sangtoda, a path passing over the Dabali kotal, and running through the Laghman valley, leads to Jalalabad. From here the road, open on both sides, leads across a stony plain interspersed with ravines. At  $7\frac{1}{4}$  miles Kata Sang is reached, a small level piece of cultivation, with a *choki*. The new road, as now existing, although it makes this march rather longer than the old one, maintains the same easy gradient to the top of Kata Sang *tangi*, and from thence descends gently to Seh Baba, passing the *kuchi* camp of Barikab at  $10\frac{1}{2}$  miles, where there is a small stream. Seh Baba is a small post on the right bank of the Tezin river. Water good and plentiful. Supplies obtained with difficulty from Tezin and a village about 8 miles distant called Sirobi. From Seh Baba there is a route to Kabul, *via* Tezin, and Route No. 33 comes in over the Badpakht kotal.

14	LATABAND . . .	15	158 $\frac{7}{8}$
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On leaving camp, the road crosses bed of river when a gradual ascent immediately commences and continues for 10 miles, with intervals of nearly level ground, where it follows a contour round a hill. It then begins with the same gradient to descend to camp at Lataband. At

first the old and new roads cross and re-cross, but at the *choki* of Donagai, about 2 miles from Seh Baba, where the old road diverging leads on to the summit of the Lataband pass, a height of 7,950', the new road bears entirely to the right, escapes the kotal altogether, and winds round each successive hill, never exceeding a height of 7,000'. The new road, although making the march from Seh Baba much longer, is perfectly practicable for the transport of all arms and military stores. Water from two or three springs obtainable, and the road is good throughout.

The post at Lataband was made by the British, and consists of a bastion-shaped stone wall, with ditch on the outside, and a strongly-built keep. The water-supply is plentiful, and is brought right into the fort. Supplies are procurable with difficulty. From Lataband heliographic communication with Sherpur can be maintained.

From here Route No. 41 goes to Khurd Kabul.

15	BUTEKAK . . .	12 $\frac{1}{2}$	171 $\frac{3}{8}$
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The road from camp is broad and good, with a gradual ascent, fit for wheeled traffic. At  $2\frac{1}{2}$  miles there is a small native fort, in which used to be 60 rifles from the Lataband garrison. At  $3\frac{1}{2}$  miles a small stream is crossed. The road for the first 6 miles winds along through low hills; another small stream at  $4\frac{1}{4}$  miles.

Route No. 29—concluded.

The old road, which is rough, stony, and in some parts steep, crosses and re-crosses the new road several times; it is shorter, and though fit for mule carriage, is not for wheels. The latter half of the march is across a stony plain until, nearing Butkhak, the country becomes cultivated, with villages on both sides. At 11 miles cross the dry bed of a stream. The post at Butkhak consists of two native forts, a mud wall forming a square, and enclosing the whole. The village of Butkhak is within 15 yards of the west face. Water plentiful, as also supplies, which are easily procurable. The elevation of Butkhak is about 5,986'.

16	BALA HISSAR AND SHERPUR.	$9\frac{1}{2}$		180 $\frac{7}{8}$
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The road from camp follows a north-westerly direction, is perfectly level, with a good many villages and cultivation. At  $3\frac{1}{4}$  miles is site of General C. Gough's camp on 23rd December 1879; here there is a ruined mud enclosure. At  $4\frac{1}{2}$  miles the Logar river, over which there is an old masonry bridge. On the right bank a small fort, occupied usually by 20 sabres. The river is about 100' broad, and in the summer months is shallow, owing to the irrigation which is carried on over the neighbouring country in the full season. There is a ford about  $1\frac{1}{4}$  mile down the river. At 5 miles there are three bridged *nalas*, and the road winds about rather more. At 8 miles the road leads perfectly straight up to the gate of the Bala Hissar, the fort of Siah Sang on low hills commanding the city,  $\frac{1}{2}$  mile from Bala Hissar on right of the road. From Bala Hissar to Sherpur Cantonment is about  $1\frac{3}{4}$  mile, for the most part a shady road.

Note A.—From Jagdalak to Dargai (Stage 4, Route No. 34).

The road for  $2\frac{1}{2}$  miles follows the course of a stream, which, flowing from the east, joins the Jagdalak stream just before it enters the Pari Dara. It then crosses a low kotal to the left, passes some open ground, and enters a very rough and narrow gorge quite impracticable for laden animals. At Garband Kai it emerges into Route No. 34, and Dargai itself is reached at 8 miles.

Route No. 30.

FROM BASAWAL TO JALALABAD, *via* LACHIPUR.

Authorities.—CARTHEW; I. B. C.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	LACHIPUR . . .	$12\frac{3}{4}$	$12\frac{3}{4}$	With the exception of four small rocks from 2 to 3 miles distant from Basawal and near the road, the country is open throughout on the left-hand side and for $1\frac{1}{2}$ mile on the right, when rocky hills are met, which skirt the road for another $1\frac{1}{2}$ mile. They then gradually open

for  $\frac{3}{4}$  of a mile, when they end. There is now seen at a little distance another range, which eventually meets the road at  $\frac{3}{4}$  of a mile from Chardeh Tope. The country from Basawal is stony for the first half, and sandy for remainder of the way to Chardeh tope. At  $2\frac{1}{2}$  miles road to left to Pesh Polak. At  $4\frac{1}{2}$  miles, and to the right, is a new road, which is available for traffic by other than wheeled conveyances. It leads to Ambar Khana, which is about  $\frac{1}{2}$  mile distant. At this point is a stream of water, which is very clear and good, but is in the hot weather very shallow. The road for most part of the way is heavy when cut up by carts, but is otherwise good.

Chardeh, ruined Buddhist tope, situated on a hill fortified in 1880, and held by 150 infantry. At foot of hills enclosure for 60 cavalry. Camping ground good. Water obtain-

Route No. 30—concluded.

able from *karez* and from Kabul river, 1 mile south. Wood and grass easily obtainable. Fodder also with warning. Valley across river very fertile. Distance 6 miles from Basawal.

At  $7\frac{1}{2}$  miles *nala* 15 yards broad, banks 20' high, bottom sandy, depth of water 6 inches. Road descends through cutting in banks, over wooden bridge, and re-ascends, gradient steep. Fall of *nala* easterly. At  $7\frac{3}{4}$  miles two large villages, Chardeh and Ghaziabad, populous and walled, situated 500 yards to east of road. At 8 miles Tirahi Chardeh *nala*, breadth 100 yards, banks shelving, about 6' high, bottom sand and gravel. Road descends by gentle gradient into bed of *nala*, and re-ascends by similar gentle gradient. Very little water in hot season. At 9 miles a ravine, 30 yards broad, banks abrupt, 9' high. No water in hot season. Road descends into ravine, is carried across an embankment, and re-ascends; gradient steep. Swamp on east of road, 500 yards distant, commences. At  $9\frac{1}{4}$  miles small walled village of Mashwani, 300 yards to east of road.

At  $12\frac{1}{4}$  miles hills averaging 200' to 600' high, rugged and steep. Road, partially metalled, runs at their base past abandoned Sapper fort and small village of Lachipur to within 400 yards of post and fort of Lachipur, which lies in a sandy plain. This fort was made for 150 infantry and 64 cavalry. The camping ground is between the fort and river. Forage plentiful; water from river.

Country level and cultivated; soil alluvial, hardened to a crust, on which all arms can move. *Nalas* can in general be easily crossed or turned at their mouths near Kabul river, which averages 1 to 2 miles from road. Water easily obtainable from *nala* and irrigation channels the whole way. *Nalas* stated by country people to become impassable for two days at a time if heavy rains occur in the Safed Koh. Road much cut up by traffic and deep in dust; otherwise good.

Route No. 26 from Peshawar comes in here down the Silala dara.

2	ALI BOGHAN . . .	$9\frac{3}{4}$	$22\frac{1}{2}$	The road for $2\frac{1}{2}$ miles, after leaving Lachipur, passes along the hill side, following the course of the river. At about $2\frac{3}{4}$ miles it debouches into the Girdikas plain. Water from the river plentiful and good. At $3\frac{1}{2}$ miles reach Girdikas. Supplies can be obtained if a day or two's notice is given. Road fairly good, but heavy; especially across the plain. For about $\frac{3}{4}$ mile the road passes over the plain, when it meets the hill coming down to the river, and follows line of the stream for about $4\frac{3}{4}$ miles, when it comes out on to the Ali Boghan plain. Supplies only obtainable if notice is given some days beforehand. Water good and plentiful from river. Road fairly good, though heavy in places.
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3	FORT SALE, JALAL- ABAD.	$7\frac{3}{8}$	$29\frac{7}{8}$	At 1 mile cross <i>nala</i> (dry except after rain) to the village of Ali Boghan. Road heavy and over broken ground. At 2 miles join Route No. 29 from Choragali and Barikab, which goes off to the left. At $3\frac{1}{2}$ miles cross Chapriar river (wide bed, with little water during dry season). Here Route No. 38 leads to the left bank of the Chapriar, and <i>via</i> Hada to the Agam pass into Kuram. At $5\frac{1}{2}$ miles cross a <i>nala</i> (dry, except after rain). Beyond this the road divides. A new road to the right leads through cultivation, and is free from sand. It is used by the <i>dak tonga</i> . The old road keeps outside the cultivation; it is sandy. The road throughout is unmetalled and unbridged, is at times on clay, and then firm, at times on sand, and then very heavy for wheeled traffic. An alternative route from the village of Ali Boghan, passable for all but wheeled traffic, leads by the river bank over low, grassy, and firm ground for 4 miles, when it joins the <i>dak tonga</i> road above mentioned.
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For remarks regarding Jalalabad, *vide* Route No. 29.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 31.

FROM JALALABAD TO ASHRETH *via* THE KUNAR AND DIR.

*Authorities.*—THE MULLA; ATA MUHAMMAD.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SHEWA . . . .	14	14	After $\frac{1}{2}$ mile cross the Kabul river by ferry-boats. Stream 200 paces across. For 4 miles road passes through populous district; then crosses a bare stony plain, much infested by Shinwari robbers. Strike the Chitral river (here called the Kunar) at Lamba Taka, $3\frac{1}{2}$ miles beyond
which is Shewa, a town of 1,000 houses, the chief place in Shigar district. Road good. There are two alternative roads to Shewa, but above is best and shortest. Road generally good.				
2	NURGAL . . . .	13	27	Road along right bank of river, stony and bad in places. At 2 miles pass village of Islampur. Nurgal has about 60 houses. Road infested by robbers.
3	ZOR KUNAR . . . .	$11\frac{1}{2}$	$38\frac{1}{2}$	Road along right bank of river to Patan. At $2\frac{1}{2}$ miles beyond river is crossed by rafts of inflated skins. It is said to be sometimes fordable (it is 50 paces across) in very cold weather; but Dr. Griffiths, who crossed here in January 1840, describes it as "with diffi-
culty fordable. The streams are three in number; the last almost brimful and very rapid." The Mulla calls it "rapid and deep." Kunar is a town of some 1,000 houses. A road goes along right bank direct to Chigar Sarai from Patan. Road passes well cultivated, and populous district, inhabited chiefly by Delhkans. They talk "Laghmani."				
4	PASHAT, OR NEW KUNAR.	15	$53\frac{1}{2}$	Road good; passes through a populous and well-cultivated district along left bank of the river. Pass the villages of Kunar, Allah Dost, Kuli-gram, Shankar, Shabdalam and Barabat. Pashat is about same size as Zor Kunar, and the residence of the Padshah.
5	SARKANAI . . . .	7	$60\frac{1}{2}$	Road stony and infested by robbers. Passes small villages of Janga, Lamba Taka, and Donai. Sarkanai has some 300 houses, and from it, as well as from Kunar and Pashat, there are roads over the hill to Bajaor.
6	MARAORA . . . .	12	$72\frac{1}{2}$	Road through uninhabited waste on left bank. A village of 200 houses, the frontier village of Jalalabad District. Shortly before reaching Maraora, pass on opposite (right) bank village of Chigar Sarai, where a large stream, the Pech, joins the Chitral. The Pech (or Kattar)
comes from Kafirstan. A few miles up this stream is an affluent from the north also called Kuttar, after a town of that name inhabited by Siah Kafirs.				
7	ASMAR . . . .	$20\frac{1}{2}$	93	Road along left bank of stream bad and stony, with many ups and downs. Pass <i>en route</i> the Bajaor villages of Shigal and Shurtan (80 houses). Asmar is a fort with a village of some 200 houses, and the residence of the Khan
of Asmar. The march is described as "long and difficult."				

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 31—concluded.

8	OLD BARAUL . . .	24	117	Road stony, but good as far as Kot Kod (16 miles), after which a steep ascent to Baraul, which is a village of 200 houses at the head of the Kot Kod valley, up which the road goes, passing the villages of Bedad, Dangram and Mulaiyan, all belonging to Asmar.
9	JANBATAI . . .	24	141	Road on the whole good, but infested by murdering Kafirs. At $\frac{1}{2}$ mile above last camp is pass of same name, with an easy ascent; then descend into the narrow Baraul valley. Road stony. Pass the villages of Banshi (120), Kuneh (30), Suni (15), Khara (20), Shatalu (20), Tulekha (40), Tikakot, and the fort and village of Shalikot (50 houses). Janbatai is a town of 1,200 houses, the residence of the <i>hakim</i> of the Baraul district of Dir, to the ruler of which he is subordinate. Lanshi is the frontier village of that district, which extends to Ijri, a village at junction of Baraul and Panjkora rivers. Route No. 23 comes in here.
10	KALA AHMAD KHAN	13	154	Road down the left bank of Baraul very stony. On leaving Janbatai the Mir has to be forded. It flows through a well-inhabited valley of same name. Pass <i>en route</i> villages of Banda (10), Davikand (40), Kala Fakir Khan (40), Bandai (a town of 1,000), and Draikala (30 houses). Before reaching camp, cross Asmar stream.
11	DIR . . .	16	170	Road good throughout. It follows the left bank of the Baraul by the villages of Langri, Barsabat, Larsabat, Abakand, Saidan (the frontier village of Dir), and Ijri. Then it goes up the right bank of the Panjkora by the villages of Tunga and Kodkai. Each of above villages has about 50 houses. The Panjkora, at the junction, narrows between rocks to a width of 30 paces, but is very deep and rapid. Dir is a town of 1,000 houses, about same size as Janbatai and Bandai. It has a fort, and is the residence of the chief. See also Route No 23.
12	MIRGA . . .	9	179	} <i>Vide</i> Route No. 24.
13	ASHRETH . . .	12	191	

Note A.—Alternative route from Asmar.

Authority.—DAFADAR MUHAMMAD NAWAZ KHAN.

8	SAN . . .	12	105	} <i>Vide</i> Route No. 4. Eastern Hindu Kush? There are two routes, one along each bank of the Chitral river. That along the right bank is much the easier, and is even in its present state (date?) perhaps practicable for laden animals. Route No. 23, from Peshawar, passes through Mirkandi to Chitral.
9	3 MILES SOUTH OF HARNOI OR ARNAWAI . . .	9	114	
10	LANGOBBAT . . .	6	120	
11	MIRKANDI (2 MILES NORTH-WEST OF ASHRETH) . . .	10 $\frac{1}{2}$	130 $\frac{1}{2}$	



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 32.

FROM JALALABAD, TO FARAJGHAN, *via* THE ALISHANG.

*Authorities.*—DUTTON; STEWART.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	CHAHARBAGH . . .	12	12	Cross the Kabul river close under the fort; then turn to the west through country belonging to the sirdars of Besud. Here the numerous water-cuts would make this route very difficult for wheeled artillery. At $3\frac{1}{2}$ miles the cultivation ends, and a fairly good road, running over stony hills, commences, which shortly enters a narrow gorge through the hills, where an enemy might take up a very strong position. After clearing the gorge, the road continues over gentle ascents and descents for about $3\frac{1}{2}$ miles until it reaches the Laghman valley, and from this point to Chaharbagh it is a very good one, fit for any traffic. A collection of unfortified villages, inhabited by Tajiks.
2	TIGRI . . . . .	13	25	Close beyond Chaharbagh the road runs over a sort of kotal between low detached hills, which, combined with the villages, might be made a formidable position. Up to this point the track is smooth and open, fit for any traffic; but it now becomes narrow, and at $3\frac{1}{2}$ miles from Chaharbagh the Alingar river has to be crossed near the village of Kargai, situated on a mound. The water is of no depth, and there is a rude bridge for foot passengers. Here an enemy might advantageously dispute the road, lying, as it does, between a spur of the Kashmund range and the village of Kargai, which is commandingly situated and supported by Agrabad, with its four forts. From the river to Mandrawar the road is a mere footpath through the fields, and very inconvenient for marching. Mandrawar is a good-sized, unfortified village. Route No. 33 comes in by the right bank. Supplies and water plentiful, but there is some difficulty about an encamping ground graveyards or cultivation having monopolized everything near. It would, therefore, probably be better to go on to Tigri, 8 miles further on. The road is a very fair one the whole way, and with a little improvement would be fit for any traffic. On its left lies the Dasht-i-Ziarat, and on its right, down to the Alingar, a cultivated strip containing numerous forts and houses. As the ground round Tigri is mostly cultivated, a force of any size would have to encamp on the ground used by us in 1880, <i>viz.</i> a valley $\frac{1}{4}$ of a mile west of the town. Supplies and water plentiful.
3	RAHEN . . . . .	16	41	Cross the river, which is said to be very dangerous when in flood, but easy in the dry season; then, turning to the left, follow the course of the river, passing many villages. The valley is very fertile, and supplies plentiful. A village of about 80 houses, on the opposite bank. Supplies and water plentiful.
4	NAJIL . . . . .	16	57	Still up the Alishang valley; road easy; pass several villages. Beyond Shamsha Khel the river enters a gorge called Jebun Gakai, where the road is somewhat difficult, and Kafirs sometimes lie in wait. Najil is a fort with villages to the north of it.
5	DAULAT SHAH . . . . .	13	70	The valley narrows considerably in this stage, and the river has to be crossed several times.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 32—concluded.

The Kafirs raid down the valleys from the east. Daulat Shah is a village of 80 houses. The language is Pashai, and different from the Laghmani dialect.

6	GADIALI . . .	13	83	Pass Taimur Hissar, the place from which Taimur started on his expedition against the Kafirs. From Gadiali a road crosses the mountains to the Tagao valley.
7	FARAJGHAN . . .	11	94	

Route No. 33.

FROM JALALABAD TO KABUL, *via* LAGHMAN AND THE BADPAKHT PASS.

*Authorities.*—YOUNG ; SMITH.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KALA ASMATULA KHAN.	11	11	<i>Vide</i> Route No. 34.
2	MANDRAWAR . . .	8 $\frac{3}{4}$	19 $\frac{3}{4}$	At 5 miles the Kabul river has to be forded opposite the village of Gondi. There are two crossings, and in the cold weather at all events the water is not deep, and the fords are wide and safe. When crossed, the route runs up the left bank till the cultivation is passed and a large extent of open gravelly ground reached, which forms a fine encamping ground, and was used as such in February 1880. Here the road or track turns due north, and runs direct to Mandrawar. It is level and open till it passes under the skirt of the Dasht-i-Ziarat, where it becomes contracted and stony. It only requires clearing, however, to fit it for any traffic. This was found in 1880 to be quite the best route to Mandrawar. (Here Route No. 32 comes from the left bank.)
3	BADPAKHT NALA . . .	13	32 $\frac{3}{4}$	

At 5 miles the Kabul river has to be forded opposite the village of Gondi. There are two crossings, and in the cold weather at all events the water is not deep, and the fords are wide and safe. When crossed, the route runs up the left bank till the cultivation is passed and a large extent of open gravelly ground reached, which forms a fine encamping ground, and was used as such in February 1880. Here the road or track turns due north, and runs direct to Mandrawar. It is level and open till it passes under the skirt of the Dasht-i-Ziarat, where it becomes contracted and stony. It only requires clearing, however, to fit it for any traffic. This was found in 1880 to be quite the best route to Mandrawar. (Here Route No. 32 comes from the left bank.)

Shortly after leaving Mandrawar the road branches off due west over the Dasht-i-Ziarat. About half-way the road becomes difficult, winding in and out through the most broken ground, a maze of small broken sandstone hills and deep *nalas*. At about 13 miles there is a bad bit of rock for about 30 yards, which requires blasting, though it would be possible for mules to pass even at present. Beyond this the road descends to a stream, ascends again beyond, and appears to continue of the same character up to Badpakht, the position of which was pointed out at the foot of a low range of hills at the far side of the next valley. The character of the road is the same throughout; it is a very good one, practicable for all arms except wheeled artillery, but with 3 or 4 places which require sloping. This could be easily done with very little delay, as the soil is soft and sandy, and where there is rock, it is a soft sandstone.

Route No. 33—concluded.

Ample camping ground at Badpakht; also some scrub which would afford a fair amount of fuel. Water plentiful in the cold season, but would perhaps fail in the hot weather. Elsewhere no water. No villages in the district. There is said to be a village called Manu at the head of the valley, north of Badpakht. The western part of the Dasht-i-Ziarat is good grazing-ground for sheep, and large flocks belonging to Tigri were seen.

4	NAGULU . . .	18	50 $\frac{3}{4}$	The route over the Badpakht kotal to Nagulu is fit for pack animals, and is constantly traversed by <i>kafilas</i> from Nijrao and Tagao to Jalalabad. From the kotal onwards the route was explored in 1879 by a small column under General Macpherson. The kotal is about 700' above the plain and is crossed by a steep zig-zag. From the crest extended views are obtained, and a few small hamlets are visible under the hills to the right rear. From the foot of the zig-zag on the far side the road runs for a mile along the top of the north bank of a dry <i>nala</i> , into which it then descends, and which it follows for about 3 $\frac{1}{2}$ miles. It then rises again out of the <i>nala</i> , which is 20 or 30 yards wide, with precipitous banks. The road now crosses a stony undulating plain for a couple of miles to Nagulu, where there is an excellent encamping ground. The village lies close to the river and commands the passage; but it is of no strength. In rear of it the ground gradually slopes back to the rugged hills about a mile distant to the north.

5	SEH BABA . . .	10	60 $\frac{3}{4}$	The Kabul river between Nagulu and Sarobi lies in a deep bed about $\frac{1}{2}$ mile broad. The river is forded by a V-shaped crossing, the apex of which is up-stream. The bed is of pebble and gravel, and the stream is fordable by laden animals. After fording the main stream, there is another small branch to be crossed, and then a steep ascent up the opposite bank. Close by is one of the Sarobi villages, about which is a good deal of cultivation and open ground for encamping, and a fair number of willows and other trees. The cultivation may be said to extend for 2 or 3 miles; in fact as far as the last of the Sarobi villages. The Tezin valley now begins to contract to less than a mile in width, the road following the bed of the stream, which is full of boulders, and therefore somewhat troublesome. It was, however, traversed both by camels and horse artillery. At 10 miles Seh Baba, which is about the worst camping ground on the main road to Kabul. There is, however, a fine pool of water there.

6	LATABAND . . .	15	75 $\frac{3}{4}$	} <i>Vide</i> Route No. 29.
7	BUTKHAK . . .	12 $\frac{1}{2}$	88 $\frac{1}{4}$	
8	BALA HISSAR . . .	9 $\frac{1}{2}$	97 $\frac{3}{4}$	

Route No. 34.

FROM JALALABAD TO KABUL, *viâ* THE DARUNTA GORGE AND DABALI PASS.

*Authorities* —JENKINS ; STEWART ; HOLDICH ; ROSS-THOMPSON ; YOUNG.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KALA ASMATULA KHAN.	11	11	For the first 7 miles the route lies through cultivated land on the right bank of the Kabul river. At about the 6th mile the Surkhab, a shallow stream, is crossed. Between the 7th and 8th miles the Darunta gorge is reached. The gorge is formed by the Kabul

river cutting through a spur of the Siah Koh range. The sides of the gorge are so precipitous that it is necessary to cross the spur by a mountain path, fit only for baggage animals lightly laden. The pass, as laid out by us in 1880, rises to a height of about 300' above the plain.

To construct a road fit for wheels along the side of the gorge, or over the spur, would take much time and money.

Having crossed the spur by the mountain path above referred to, the route enters the Laghman valley, and follows the foot of the Siah Koh range over level country up to Fort Asmatula Khan. This fort has eight towers, and covers 10,800 square yards. It, combined with the two villages of Kotalan, would form a strong position. The camping ground is good.

With the exception of crossing the spur at the Darunta gorge, there are no engineering difficulties on this section of the route.

Water is plentiful, but forage and supplies scanty, and for any considerable force would have to be procured from the left bank of the Kabul river or from Jalalabad.

About a mile and a half from the northern foot of the Darunta pass is the village of Fateh Muhammad, or Fatehabad, in the midst of well-cultivated ground, apparently open and traversable, but in reality so deeply intersected by water-cuts for irrigation as to be almost impracticable for cavalry.

2	KHAIROKHEL	10	21	The route follows the foot of the Siah Koh range over level country, intersected by numerous small <i>nalas</i> , and covered with rounded water-worn stones of all sizes.
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For a distance of about 4 miles a narrow strip of cultivation extends between the route and the river. From this point for the remaining 6 miles, up to Khairokhel, the route lies over barren, desolate country, covered with boulders of all sizes. There is no grass; no cultivation; nothing but desolate barrenness.

There are no engineering difficulties to prevent this section of the road being easily made for wheels.

Hollich says of this part of the route: "The high road to Kabul passes between this cultivation and the hills, and for the first 10 or 11 miles runs nearly level, and is already a well-defined, open road, owing to the amount of *kuchi* traffic which has lately passed along it. For about 300 yards it skirts the bank of the Kabul river so closely as to require some additional width to make it practicable for wheeled traffic.

"The first village on the road is Surkh Khan, almost exactly 10 miles from Asmatula's fort, a small unimportant little hamlet built at the end of a sandstone spur, which extends from the Siah Koh down to the river bed. About a mile further, after crossing this spur by a low kotal about 100' above the river, is the village of Khairokhel, containing about 300 houses, with some cultivation reaching down to the banks of the river. From this point cultivation only exists in small unimportant little patches on either side of the river, and the villages are insignificant."

Route No. 34—continued.

*Road.*—This march is fairly good throughout, and practicable for baggage animals and all arms except wheeled artillery; not likely to be much affected by rain, which also falls but seldom. The worst part is at about the 5th and 9th miles.

*Water.*—Water is obtainable everywhere from the river and canals.

*Military position.*—There is no position likely to be occupied by an enemy unless it were the Sir-i-Nazar spur, which would afford a good one, impossible to turn on the river side and difficult on the other.

Both Sir-i-Nazar and Khairokhel are small villages, open, and without any towers.

*Supplies.*—Khairokhel, with the villages of Paian Khel and Khalil Kbel on the opposite bank, can furnish a fair amount of supplies; but, besides this, any amount required could always be collected anywhere on this march, if arrangements were made beforehand to do so, from the fertile district of Laghman.

*Path over Wara Galai pass to Fort Battye.*—From Khairokhel a path turns up the *nala* due south, and ascending the Siah Koh crosses it by the Wara pass, and descends to Fort Battye. It is said to be very bad and difficult indeed. This also is sometimes called the Lakhi pass. (See Route No. 36.)

2	KATS MUHAMMAD ALI	9	30	From Khairokhel up to Kats Muhammad Ali Khan the route lies over a gently undulating country between the foot of the Siah Koh range and the Kabul river, but there is no cultivation worthy of the name: nothing but boulders and barrenness.
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Water is plentiful, so are paving stones, but nothing else. There are no difficulties on this section from an engineering point of view. Road as in last stage.

Holdich says of this part of the road: "The road [from Khairokhel] passes over a low stony plateau, only a few feet above the river-level, much of the same nature as that existing between Jugdalak and Kata Sang, only without the deep intersecting watercourses which render that road so full of steep gradients. Nine miles from Surkh Khan is the village of Kats Muhammad Ali, the last 4 miles of the road being fairly free from stones and easily traversable. Two other villages are passed *en route*, viz. Kar Kach and Urmur. The former possesses about 100 houses and a small square mud fort measuring about 40 yards each way, the road running through the middle of the village and under the fort walls. There are a couple of small villages on the left or opposite bank of the river, about opposite to Kar Kach, inhabited by marauding bands of Utman Khels, one of the numerous sections of the Ghilzai tribe. The villages of Surkh Khan and Khairokhel are peopled by Nazars, another section of Ghilzais, who are said to be occupied entirely in agricultural pursuits, and not to share the marauding proclivities of their neighbours. There are, however, several villages not far from the road, but quite out of sight, hidden among the low spurs at the foot of the Siah Koh range, inhabited by Adamzais, who are well-known robbers. These villages between them could probably muster 600 and 700 armed men, if necessary. The left bank of the river at the eastern end of the valley and the valleys of the Allingar and Alishang contain many important villages, of which the principal appear to be occupied by Tajiks."

Young calls this march 11 miles. He says: "The road bears away from the river and crosses a barren, stony plateau, intersected by two or three *nalas* for about three miles; the first 2 miles are stony and bad. It then descends to a small stream of good water near some huts called Girdi Kach. Thence to Kar Kach the road is fairly good; it runs along the foot of some steep low hills into which several deep and narrow valleys open up, which are infested by gangs of robbers, for whom the formation of the ground is specially well adapted. At the river bed, half-way between Girdi Kach and Kar Kach, the road is broken away, but is passable; it could, however, be easily obstructed at this point. From Kar Kach the road is for 3 miles very good, crossing an open sandy plain, after which it becomes rough and stony up to Kats Muhammad Ali at 11 miles.

*Water.*—No water the first 3 miles; after that always obtainable from the river.

*Kabul river.*—The river is said to be generally easily fordable opposite Khairokhel, and is probably so at several other places between that and Kar Kach. Under the cliffs beyond that it is deep and rapid, but at the west of the bend beyond Urmur it appears to be at most seasons of the year fordable almost anywhere. The fords change their position constantly, and would always require special examination before being used. June and July are said to be the months when the river is fullest. Immediately beyond Kats Muhammad Ali is the

Route No. 34—continued.

Naur gorge, through which there is no path by the river. The Badpakht stream enters the river at the mouth of the gorge.

*Villages, positions, etc.*—Girdi Kach is merely a few huts. Kar Kach is an insignificant village, but has a small fort with two towers of no strength.

All the villages on the north bank of the river are open, without either towers or forts, and in fact there is a very marked absence of these the whole way of west Gondi. During the greater part of this march low stony hills on the left flank would afford good positions for an enemy intending to defend the road, especially the precipitous ones between Girdi Kach and Kar Kach. where an advance under such circumstances would be difficult, as also in the last mile of the approach to Kats Muhammad Ali, where the road is bent in between the low hills and the river.

*Supplies.*—Kats Muhammad Ali itself is probably too small to afford any supplies, but a moderate amount could be obtained from Shahidan, Urmur, and Kar Kach. If, however, more than would be necessary for one regiment were required, arrangements would have to be made for its collection in the fort of Kats Muhammad Ali from Laghman beforehand.

For lateral communication between this stage and Route No. 29 see Routes Nos. 35 and 36.

4	DARGAI . . . . .	11	41	Turning southwards from the river, the road crosses the long flat-topped spurs which jut out from the base of the Siah Koh, and for $2\frac{1}{4}$ miles is rough and stony. It then ascends by a steep zig-zag for about a mile and winds along the side of the hill above a deep precipitous valley to Chota Dargai (at $5\frac{1}{2}$ miles), a small piece of flat ground near a stream, commanded on all sides by high barren hills. The zig-zag is steep, but this part of the road is otherwise good.
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From Chota Dargai the road, here very good, follows the windings of the narrow valley, gradually, but steadily, ascending until, at  $8\frac{1}{2}$  miles, it reaches the top of the Adrag Badrag pass, estimated at about 4,200' high. From here forts, etc., in Kats Laghman are visible with a glass. In ascending the above mentioned valley the road is entirely shut in on both sides between the two high ridges of barren rock through which the valley runs. From the pass the road drops quickly down, and a mile beyond reaches a stream of good water in a wide bed, which the road follows until, at about 11 miles, it issues on the eastern end of the Dargai plain. Here there are several suitable places for encamping, with wood and water close by.

Road as in last stage, and the gradients easy, with the exception of the zig-zag in the 3:d mile, which is rather steep. There would be no difficulty in tracing a good road for wheeled traffic.

*Water.*—At some seasons there is a small stream of water at the end of the first mile; after this there is none until Chota Dargai is reached at  $5\frac{1}{2}$  miles. The stream there is a good one, and is said to have water in it always.

From Chota Dargai to the stream at the 10th mile there is no water. This latter is also said to be always permanent, but there were no means of ascertaining this with certainty.

*Villages.*—Nil.

As regards positions which might be occupied by an enemy, the ground through which the road runs is closely commanded on all sides by high barren hills, which must be crowned before a force could advance by the road. The camping ground commands all the adjacent ground, except the knoll to the south on the opposite side of the valley, which is within 700 yards range.

*Supplies.*—No supplies except firewood and coarse grass.

Loi Dargai has not a dozen houses.

5	KATASANG . . . . .	$11\frac{1}{2}$	$52\frac{1}{2}$	From Bara Dargai the route follows the banks of a stream for about $3\frac{1}{2}$ miles, over easy gradients and open country, up to the entrance of a defile at a locality named Garband Kai. (See Note A, Route No. 29.) About $1\frac{1}{2}$ mile up this defile the route branches off to the right, and follows the bed of another stream until it reaches the Dabali pass, estimated at 5,600' high. This part of the road also is remarkably good; and the gradual ascent, which is made to this
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Route No. 34—concluded.

point the whole way from camp, is quite imperceptible. For the next 2 miles the road descends by an easy gradient, winding round the face of the hill above the Pari Dara defile. It then makes a sudden drop for about 300 yards by a zig-zag (very steep and difficult for laden animals) to the stream, which is reached at  $7\frac{1}{2}$  miles from Dargai. Here Route No. 29 is met. A mile and a half further on is Katasang.

With time and money there would be no difficulty in making the descent to the Pari Dara fit for wheeled traffic, but the present trace cannot be improved, and would have to be abandoned: a better trace could easily be laid out to the left of the present one.

*Water.*—During the cold season there is good water at Garband Kai; but this is probably dry during a great part of the year. There is no other water on the road until the Pari Dara stream is reached.

*Villages, positions, etc.*—As in the previous march, there are no villages anywhere near the route, and the ground allows of an enemy taking up a position for defence almost anywhere. Dabali is a small hamlet of four houses at the northern mouth of the Pari Dara.

*Supplies.*—Nil.

Ross-Thompson says: "No force should, however, in my opinion, attempt the march from Jalalabad to Sangtoda *viâ* the Laghman valley unless it can carry all its supplies for men and animals with it, or unless supplies are stored in depôts along the route before leaving Jalalabad."

"There is nothing from an engineering point of view against the route being adopted; but it appears to me that from the commissariat point of view it is utterly barred as a route for constant communication."

In the first two marches, however, supplies could be easily obtained. The advantages of this route over the main route *viâ* Gandamak appear to be—

First, a saving of 6 or 7 miles;

Second, a considerable gain in the nature of the road;

Holdich says that "the whole difficulty of the Laghman valley route to Kabul from Jalalabad may be said to be distributed between its ends—the Durunta defile and the Dabali pass. Between these two points the road, as it exists in its unmade condition, offers very unusual facilities to a marching force from its contiguity to a large river and its easy gradients—a gain which would be much under-estimated by a mere comparison of the highest point passed over on this route with the known height of the Jagdalak pass."

Third, its comparative immunity from attack.

The *kuchis* frequently use it to avoid being plundered by the Khugianis. On this point Colonel Jenkins says: "I am of opinion that it can be made a very useful road, and could be guarded without difficulty if we held the Laghman valley, by placing a Ghilzai post at Dargai. The principal objection to his route has always been considered the Laki (or Lakarai) pass over the hill above the Durunta gorge, which was not passable even for *kuchi* camels. This is now obviated by the new road, and the only remaining bad piece on the whole route is the last 300 yards or so of the descent to the Pari Dara stream, which is very steep. Everywhere else the route is remarkably easy and good, and quite practicable for all arms, except wheeled artillery, so far as the road itself is concerned.

6	SEH BABA . . .	$5\frac{1}{4}$	} <i>Vide</i> Route No. 29, latter part of stage 13 <i>et seq.</i>
7	LATABAND . . .	15	
8	BUTKHAK . . .	$12\frac{1}{2}$	
9	BALA HISSAR AND SHERPUR.	$9\frac{1}{2}$	
			57 $\frac{3}{4}$
			72 $\frac{3}{4}$
			85 $\frac{1}{4}$
			94 $\frac{3}{4}$

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 35.

JALALABAD TO KATS LAGHMAN, *via* THE JAWARA MENA PASS.

*Authorities.*—STEWART; KINLOCH.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	TATANG . . . .	16	16	At 3 miles leave the Kabul road (Route No. 29) and strike W. by a narrow track across cultivation. The country is dotted with numerous walled villages, and is irrigated to such an extent as to hinder considerably the movements of cavalry. The route is quite impracticable for wheeled guns. At 6½ miles Charbagh, a village of about 300 houses. Winding along a slight ridge between watercourses, the road passes several forts till, at 10 miles, it reaches Sultanpur, a large village with several water-mills and numerous orchards. At 12 miles reach Sultanpur Bala, a walled town containing upwards of 500 houses and a covered bazar. At 14 miles cross the Surkhab, a fast flowing stream, about 2½ deep and very strong, quite impassable when swollen. At 16 miles Tatang Zabar Khan.
2	KATS LAGHMAN . . . .	10	26	From Tatang the road ascends the Siah Koh by very steep and difficult zig-zags. It takes over two hours to reach the summit (4,800). Rocks and boulders render this route impassable for laden animals, though the local bullocks and donkeys are frequently driven by it.

From the summit of the pass it is about 5 miles to the Kabul river. This part of the route has not been surveyed.

Route No. 36.

JALALABAD TO KATS LAGHMAN, *via* THE WARA GALAI PASS.

*Authority.*—STEWART.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	ROZABAD . . . .	12¾	12¾	<i>Vide</i> Route No. 29, stage 8.
2	KURAM . . . .	11	23¾	At 4 miles leave Route No. 29, and strike across country towards Kankrak. At 5 miles cross Kara Su <i>nala</i> after which the road crosses a strong undulating plain till the cultivation along the Surkhab is reached. Pass hamlets of Baghwani and Barera. At 8 miles cross the Surkhab, which is usually about 2 deep, but quite impassable after rain. It flows very rapidly. Immediately after crossing, the ascent of the Siah Koh commences; it is at first steep and stony, but lightly laden animals would ascend without difficulty. At 10 miles the road becomes easy and level, with abundance of water from a stream. At 11 miles Kuram, a Nasir Khel Ghilzai village, near which there is some cultivation and a few mulberry trees. A force might encamp here.



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 36—concluded.

3	KATS LAGHMAN . . .	8	31 $\frac{3}{4}$	For nearly a mile the road continues easy; it then becomes more difficult for a short distance, and then again the ascent becomes gradual and easy. At 3 miles reach the kotal, which is 4,400 above the sea. The road beyond this has not been surveyed. The descent at first is gentle, but afterwards said to be very had and difficult; it runs down a <i>nala</i> , flowing due N. There can, however, be no doubt that it is a practicable route for lightly-laden animals, as <i>kuchi</i> camels frequently traverse it. It is in fact the easiest route across the Siah Koh range. This range consists chiefly of granite, and the hills on either side of the pass are steep and destitute of vegetation.
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Route No. 37.

FROM JALALABAD TO KABUL, *via* CHARTUT AND THE KARKACHA PASS.

*Authorities.*—McNAIR; WOOD; JENKINS; SMITH; I.B.C.; ROUTES IN ASIA.

No of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	ROZABAD . . .	12 $\frac{3}{4}$	12 $\frac{3}{4}$	The Karkacha route leaves the Kabul road (Route No. 29) at the site of the old cantonments. At 1 mile it crosses a dry <i>nala</i> , and then rises over a stony spur from the high plateau above Ganda, which lies about a mile to the left of the road. Ganda is a large village with considerable cultivation about it. At 3 miles a stream. Half a mile further the road passes through a narrow defile, and is bad and rocky. At 5 $\frac{1}{2}$ miles Tutu, which lies a mile or so to the S. of the road. Tutu is a large group of forts and hamlets lying about 5,100' above the sea. There is much cultivation, and water is usually abundant. The road after about 3 miles of level sandy ground skirts the S. W. portion of the old.
2	GANDAMAK . . .	17 $\frac{7}{8}$		
3	CHARTUT . . .	13	43 $\frac{5}{8}$	Badshahoi Kala. At 9 $\frac{1}{2}$ miles pass Asphan, which lies $\frac{1}{2}$ a mile to N. At 12 miles reach the Surkhob, which is here always fordable. Cross over to Chartut. From Asphan onwards the road is stony and much cut up by <i>nalas</i> . Beyond Asphan the Ghilzai country is entered.
4	TEZIN . . .	13	56 $\frac{5}{8}$	From Chartut to Tezin the road runs through Yagiband to the crest of the Karkacha at Badasia, whence it descends through Tora China to Tezin. It is difficult, and consequently not much used by merchants, who prefer the true Karkacha route, which leaves the Kabul road at Surkhpul. Here Route No. 40 comes, in from Jagdalak ( <i>see also</i> Route No. 41).

Wood says of the route from Hisarak: "It then enters the bed of a tributary of the Surkhrud, along which it continues to wind till near the top of the pass. The hills continue to increase in height, and to draw near each other till the bottom of the defile is but 10' wide. On each side the mountains are now naked, precipitous, and craggy. Trees of a large size are found scattered along the torrent's bed: at one place the trunk of a fir, 12' in circumference and 24' long, barricades the passage. Two hundred yards before coming to this pass of the fir tree, a ledge of stone, 4' in height, crosses the path, and is the first obstruction to wheeled carriage. As the summit is approached, the road leaves the bed of the torrent on

Route No. 37—concluded.

the left, and winds along the face of the mountains, which are here more open. The descent of the pass to the W. is more direct than on the opposite side, but here a fall of 20' in the bed of the torrent presents more formidable obstructions to wheeled vehicles than those before enumerated. Karkacha is not a gun-road; it is dangerous for camels, and is traversed with difficulty by laden mules and *yabus*. The hills on both sides are clad with pine, holly, and almond trees. An inferior description of indigo is plentiful. During the months of December, January, and February, snow blocks up the road, and the weather is said to so severe that stones are there fractured by the intensity of the cold. The black wolf and the leopard are sometimes here met; and these, with many other kinds of wild animals, are said to be numerous in the neighbouring mountains of the Safed Koh."

The following is an extract from a report by Colonel Jenkins, C.B., Commanding Corps of Guides, of a reconnaissance made by him on the 15th November 1879 of the Karkacha pass:—

"I marched from the Jagdalak kotal about 7 A.M. with a company of the Guides and a small party of the Guides cavalry.

"We went along the ridge which joins the Karkacha mountains with the Siah Koh range up to the village of Wadat, and then up a spur leading to the Karkacha pass. We reached the top of the pass about 11 o'clock, the distance being nearly 9 miles. The road was steep after leaving Wadat, and goes along a narrow ridge with precipices on each side.

"We saw the Karkacha road, which is the most southern of all the roads from Jalalabad to Kabul.

"It appeared easy up to about 1,000' from the top of the pass. I do not consider it practicable for our baggage animals.

"There is a fine view from the top of the pass. We saw Basawal hill plainly, and the Khaibar hills to the eastward. To the N. and W. we saw the Hindu Kush and a part of the Kabul plain.

"There was no grass on the Karkacha hill; nothing but the bush called (in Pushtu) *irviks*, which is not eaten by any animal, except perhaps the *kuchi* camel."

A road comes in here from Seh Baba—see Stage 13, Route No. 29. Elevation 6,488'.

5	KHURD KABUL	12 $\frac{7}{8}$	69 $\frac{1}{2}$	Road, generally indifferent, at first follows the course of the Rud-i-Tezin, sometimes in the stream bed, sometimes along the hillsides; and then crosses the Haft kotal (or "seven ridges") some of which are very steep. Having passed the last kotal (at about 9 miles) the road
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crosses several *nalas* with intervening plateau, and then runs over an open undulating plain, and enters a *nala* at about 10 miles, which it follows for a mile. A short defile, called the Taraki tangi, is then traversed between hills for a few hundred yards, the road keeping the *nala* bed. The last 1 $\frac{1}{2}$  mile is along the banks of the Rudi-i-Tezin.

Fair camping ground about 1 $\frac{1}{2}$  mile north of the Khurd Kabul; water plentiful; wood and camel forage procurable. This is a difficult march, and an enemy could seriously harass an advancing column. Route No. 41 from Lataband comes in here. Elevation 7,466'.

6	BUTKHAH	9 $\frac{1}{2}$	78 $\frac{5}{8}$	The road descends for 1 $\frac{1}{2}$ mile and then enters the Khurd Kabul pass. The pass is formed by two chains of very high mountains, between which flows the Khurd Kabul river in a very narrow channel. The length of the pass is about 6 miles, and width from 100 to 200 yards,
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and the road crosses the river 23 times. The mountains keep the sun off the path, and the cold is intense. The mountains are of basalt and ironstone, quite barren, broken into crags and precipices, and apparently inaccessible. From the mouth of the pass the road runs along close under the hills to the south.

Camping ground on the left bank, about 1 mile short of the village, which is a small place. Elevation 6,247'.

7	BALA HISSAR AND SHERPUB.	9 $\frac{1}{2}$	88 $\frac{1}{4}$	Vide Route No. 29, stage 16.
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Route No. 38.

JALALABAD TO KURAM FORT, *via* THE AGAM PASS OR NANGNAHAR.

*Authorities.*—LOW; PRINSEP; REID.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	DAULATZAI . . .	9	9	The first 8 miles is over a stony plain; then through cultivation to Daulatzai, a group of hamlets and forts on the left bank of the Chapriar stream. Supplies and water plentiful.  The road follows the left bank of the stream past Kandi Bagh, Kotgi, Sabar, etc. The villages are mostly on the right bank, which is richly cultivated. They lie close together and all are fortified. Agam stands in a fork of the Chapriar stream and at the foot of the Safed Koh, and consists of numerous well
2	PACHIR . . . . .	14	23	
3	CAMP . . . . .	21	44	
<p>built mud forts and numerous orchards. Very little is known of the route between Agam and the crest, but Colonel Low, who reached the summit from the Kuram side, believes the ascent on the Jalalabad side to be easier than that on the Kuram. The first 2 miles at all events from Agam to Pachir is quite easy, and Pachir perhaps would be a more convenient halting place. Colonel Low believes the route to be practicable for laden mules. He also found traces of camel traffic. There can therefore be no doubt that mules can use this route.</p> <p>It is probably at least 20 miles to the top of the pass, and a descent of 2½ miles would have to be made before reaching any ground suitable for a halt. Colonel Low and Captain Reid both describe this latter portion of the road. The crest of the pass is at an elevation of 12,000'. From it there is a steep descent of some 300 yards; then comparatively level ground for ¼ of a mile in a westerly direction, and then another steep zig-zag descent for about ¼ of a mile. Colonel Low says of this: "The road up both of these steep ascents is perfectly free from any impediments, and smoother travelling than in any other portion of the pass; but the ascent is steep, and accomplished slowly. The laden animals, however, appeared to find it easier going than in the bed of the stream."</p> <p>At the foot of the zig-zag the path enters the dry bed of a stream, follows it for a few hundred yards, then crosses a spur to the right, enters another <i>nala</i> bed, which shortly joins the first, and follows it down to camp about a mile below. The nature of the last 2½ miles from the kotal to camp may be estimated from the fact that it took Colonel Low's party two hours to traverse it. (Altogether this long march would be a very steep one; and if troops could halt somewhere on the northern side, it would be a great advantage. Colonel Low heard of such a ground about 3 miles below the crest where water was obtainable.)</p> <p>The camping ground is a semi-circular bay in the hills, with a stream running along the chord on the E. side. There are a few sheds here, and it is evidently used as a stage. The ground would hold a considerable number of troops; horses and animals being put on the level; men on the northern slopes, and up the line of the pass itself.</p> <p>Beyond the stream on the E. pine-clad hills come down precipitously to the water. The camping ground to the W. of the stream is on level ground, and bounded on the W. by a ridge of rocks 30' high. This ridge runs into the slope of the mountains on the N. side, and then becomes precipitous; while up stream, towards the N. E., the valley opens out, the pass is seen, and the topmost ridge is visible.</p> <p>This camping ground would not be difficult to defend, except on the E. face; but, though shots could be dropped into camp from this side, the ground does not admit of an attack being made from it in any force.</p>				
4	ZEBAN . . . . .	9	53	For the first 4 miles or so the descent is steep, but not difficult. At the 4th mile a pass from Malina joins in. Shortly after this the road

Route No. 38—concluded.

becomes very bad, and the path for  $\frac{3}{4}$  mile is the worst of the whole length. There are two points in this length which are troublesome for laden animals:—

- (1) A passage between two rocks which does not admit of broad loads.
- (2) A passage across the stream from the left to the right bank, where the boulders are large.

At about 5 miles the valley widens to about 50 yards, and the road, which is still in the bed of the stream, becomes quite easy. At 6 miles pass *nala* Kala and Golu Kala. The path then leaves the bed, and follows the right bank of the stream to Zeran. Of the route between the kotal and Zeran, Captain Reid reports—

“The road, an ordinary footpath, winds in a northerly direction for 8 miles up a deep and narrow gorge from Zeran (about 6,000' high) to the crest of the Safed Koh. The Agam pass is about 12,000' high above sea. It is passable for infantry in single file, mountain guns and baggage animals, with compact 2-maund loads. Except for an occasional 50 yards, there is no difficulty in shunting a broken-down animal to one side. On the 29th April 1880. the stream in the gorge was 12' wide and 2' deep at Zeran; 6' wide and 7" deep at the shepherds' huts. Everywhere the stream is rapid and broken by boulders; three snow-drifts were crossed. The whole road might be easily and greatly improved by stone-picking.”

5	KURAM . . . .	8	61	From Zeran to Kuram fort the road presents no difficulties, and was frequently used by us in 1879-80. For details of Kuram see stage No. 7, Route No. 61.
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Route No. 39.

FROM JAGDALAK TO TEZIN, *via* THE IRO MANZEL PASS.

*Authorities.*—CARTHEW; STEWART.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	TEZIN . . . .	12	12	From Jagdalak village the road runs for mile up a stony gradual ascent between two converging <i>nalas</i> ; the track then enters the <i>nala</i> bed at the point of bifurcation. The bed is about 100, broad, stony, but not difficult. At $\frac{3}{4}$ mile another <i>nala</i> joins it on the left, but the track

follows the *nala* which comes from the right. This *nala* is not more than 30' broad, and unfit for camel traffic. At one mile enter the Ulai *nala*, which is over 200 yards broad, with trees and cultivation on both sides. Close by is a *burj* and a good spring of water. For the next 2 miles continue to follow the bed of the *nala*, which has steep banks and rolling hills, about 100' or 150' high, on both sides; the gradient becomes gradually steeper. At 3 miles another spring; other *nalas* from the left join the main one, but the road continues to keep to the right. At  $3\frac{3}{4}$  miles leave the *nala* by the proper left bank and ascend the hill on the right by a very steep ascent of  $\frac{1}{5}$ . Pass a few deodars. At  $4\frac{1}{4}$  miles the road becomes easy, and may be called a good hill path. At 5 miles from Jagdalak village reach the top of the Iro Manzel pass by a good zig-zag of  $\frac{1}{30}$ . Height 9,250'. The descent on the other side is very steep and bad, the Tezin valley being about  $4\frac{1}{2}$  miles further on. No water on the road. Tezin is a large group of villages, where there is room to encamp, abundant water, and few supplies. (*Vide* Route No. 37 from Chartut and Route No. 41 from Lataband.)

The Iro Manzel pass is a point of great strategical importance, and, if occupied, would effectually ensure the security of the main road between Pezwan and Seh Baba. Colonel Jenkins, of the Guides, says of it: “I was very much struck by the position of Iro Manzel. It commands all the roads leading from Peshawar to Kabul and the Ghilzai settlements of Hisarak, Jagdalak, and Tezin. As a military position it seems to me very superior to any

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*Route No. 39—concluded.*

point that we could hold on the main ridge of the Safed Koh. We found water within 200' of the top, and there are very easy roads up to it which can be improved by country work-people without much expense."

**Route No. 40.**

**FROM JAGDALAK TO THE KARKACHA PASS.**

*Authority.—STEWART.*

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KARKACHA KOTAL .	9	9	The Jagdalak kotal is the lowest point on the ridge connecting the Siab Koh range with the Karkacha range, which again is a spur thrown out from the Safed Koh chain of mountains. As the ridge connecting the Siab Koh with the Karkacha range joins close to the Karkacha

pass, the road from the fort to the pass may be said to run along the line of watershed nearly the whole way, the water to the right all draining towards Jagdalak and northwards to the Kabul river, and all on the left draining eastwards into the Surkhob river.

Leaving the fort on the kotal, the road proceeds along the crest of the ridge to the southward, and after one and a quarter mile joins in with the Iro Manzel road, and, going along it for a mile, enters a stream which flows down towards Jagdalak. A little further up this stream is situated the village Wadat containing six houses of Maruf Khel Ghilzais. The stream is bounded on either side with high banks of sandstone rocks, topped with conglomerate and loose boulders. The banks reach a height of 300' above the stream, and are very steep. At about 3 miles the road leaves the stream, and ascends the bank to the right, and enters another ravine which runs down to Jagdalak. It then ascends the left bank of this stream by a zig-zag path, and, proceeding up the spur, reaches the crest of the watershed. Here the ridge narrows, and the road sometimes passes along the top of it, like over a knife-edge, with steep precipitous sides, falling into deep yawning chasms many hundred feet below, and sometimes it passes to the left and right of the ridge, with a roadway just sufficient for one person at a time. At this height the loose-boulder formation is passed and the basalt beds of the range are reached, which consist chiefly of soft clays, of a red and brown colour, with an occasional layer of harder rock. These run about N. and S., and are nearly vertical, the road passing over their outcrop; and, although the drops into either ravine are very fearful to look at, yet the ground is firm to the tread, and sure-footed animals can pass without danger. In this way the top of the pass is reached. At 200' from the summit is a piece of level ground, on which are remains of a brick building, said by some to have been a fort, built in the time of the Chagotai dynasty.

The view from the top is much the same as that from the Iro Manzel pass, while the road is more difficult and water farther from the summit.

From here Route No. 37 from Chartut and Gandamak goes to Tezin.

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Route No. 41.

FROM LATABAND TO KABUL, *via* KHURD KABUL AND THE GOSPAN DARA.

Authority.—YOUNG.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KHURD KABUL	18	18	On leaving camp, the path leads in a southerly direction along the watershed, which lies E. of the Lataband stream. The path winds up and down over the tops of the hills until, at three hours from Lataband, it reaches a place called Tsagai, and the <i>kuchi</i> encampment lying in a

hollow among the hills. These hills here form the head of the valley of the Lataband stream, and are gently undulating; the whole ground being here open and easily traversed. There is plenty of good water, grass and some fuel.

From Tsagai easy paths run in several directions. One to the E. leads to Seh Baba, another S. E. to Tezin (distant 6 or 7 miles); another to the S. leads direct to the front over a low ridge and down to the Tezin and Khurd Kabul road (joining it near the Haft kotal near the place called Balutak); a fourth path leads to the S. W. over the same ridge towards Khurd Kabul, passing, at one mile from the ridge, the southern end of the Chinari pass.

Following the latter path for one hour from Tsagai, the top of the above-mentioned ridge is reached. From here a very extensive view is obtained to the S., including the greater part of the Tezin and Khurd Kabul road, including the Haft kotal. The road is apparently distant about 4 miles from the ridge. Three miles nearer, and parallel to, the first road, runs the Chinari road. There is another route, that by the Lataband stream, which lies in a narrow valley, with precipitous sides.

As regards the practicability of the two routes, that by the watershed along the hills is perfectly practicable for both mountain guns and infantry, and by it such a force could cut in on the Tezin and Khurd Kabul road at the western side of the Haft kotal in about five and a half to six hours from Lataband. The route by the Lataband stream is only practicable for infantry, there being one place where guns could not be got over. In going along the first route a force would be very conspicuous; but, on the other hand, a very good view is obtained of all the surrounding valleys; while, in going by the stream, nothing whatever can be seen, and strong flanking parties would be necessary, which would cause the usual delays.

See also Route No. 37 from Jalalabad *via* the Karkacha pass.

2	BUTKHAK	13	31	Along the main road (Route No. 37, stages 5-6) for 3 miles, when, turning to the left, the ascent to the kotal begins. It is fairly easy and appears to be about 2 miles in length. The descent is through a defile some 30 to 40 yards wide, bounded by precipitous rocks, and about 5 miles in length. The road is very rough. There is no water along the route. From the mouth of the defile, the road runs over fairly level ground for the rest of the stage.
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This route is practicable for cavalry, but not for camels. Its only advantage is that the adjoining hills can be easily crowned, and it would be useful in turning the Khurd Kabul, if held by an enemy.

3	KABUL	9½	40½	<i>Vide</i> Route No. 29, stage 16.
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The other routes through the Karkacha mountains are:—

- (1) The Chapar or Sapparai route, avoiding Gandamak and Khugiani, country difficult, but traversed by *kafilas*.
- (2) The Angur Tak road by Tatang-i-Wazir, Surkhab bridge, easy.
- (3) The Chinari route, avoiding the Haft kotal. After crossing the Chinari pass, one road joins the Royal road at Kabar-i-Jabar, which is as easy as the Haft kotal road. Another and a more difficult road goes to Butkhak.

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Route No. 41—concluded.

- (4) The Lakarai road over hills, but short, and practicable for laden animals.  
 (5) The Minari road from Tarakai direct to Kabul. Most of the wood from the Karkacha range of hills reaches Kabul by this route, it being the most direct. It receives its name from the ruins of a lofty miar, or minaret, on the hills.
- (1) Leads from Sultanpur to Jagdalak.
  - (2) From Fatehabad to Surkhpul.
  - (3) From the Tezin valley to Kabul.
  - (4) From Jagdalak to the Tezin valley.

None of these are routes which would be of much use to troops except for turning movements, but they are routes which might be used by guerilla foes, and should therefore be observed.

Route No. 42.

FROM SAFED SANG TO THE HARIAB VALLEY, *via* THE UGHZAN LAR.

*Authority.*—G. B. SCOTT, *May 1879.*

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KUDI KHEL, TARAKAI.	10	10	On leaving camp the road lay to the westward over a stony plain. The bed of the Chabhai, or Gudar, stream was crossed at about 1 mile. The waters of this stream are fed from springs rising in the northern slopes of the Tarakai ridges. The villages of Mama Khel

and Kudi Khel are situated on the banks of the Nian Rud. The villages of Mama Khel were first passed. They can furnish about 600 fighting men. Kudi Khel lies further up stream, and almost at the entrance of the defile where the waters issue from the hills. Here the country is more confined, and the cultivation terraces are narrow and steep, with great drops from one to the other. The water-cuts from the stream are many, and at different levels. The road through Kudi Khel lies along a narrow ledge, at the side of a watercourse with a steep drop towards the stream. Country difficult for the operations of cavalry, and roads could not easily be made. In the level patches at the water's edge are the cultivated lands. Above this the course along the river's bed could not be followed, owing to the swollen state of the waters; but a path crossed the ends of a spur, and went in a northerly direction. Ascending for about  $\frac{1}{2}$  a mile, a stream from the northward flows into the Nian stream. The road lay up this valley, called "Wach Algad." Why this name has been given cannot be ascertained, for it is anything but dry, and contains a good volume of water, sufficient to support considerable cultivation. Following this stream a short distance, the path commenced the ascent of the Tarakai spur to the W. Till the top of the ridge was reached, the ascent was steep, stony, and difficult, yet passable by lightly-laden mules and hill ponies. The path continued in a southerly direction up the ridge, the slope being much more gradual, and the summit of the hill, 8,500' high, was reached without much difficulty; 2,800' was the total amount of ascent from Kudi Khel, and it occupied two hours of quiet walking, exclusive of halt. Continuing the direction to the southward, the ridge dipped gently, and the broad plateau of Tarakai of the Kudi Khels came in view—a tract of land bare of trees, with a few rude huts interspersed, and showing considerable cultivated fields. This Tarakai of the Kudi Khels, though much smaller in extent of ground on which to build or pitch, would be a more charming site for a sanitarium than the Tarakai of the Murki Khels. At an elevation of 8,200' this spot lies secluded and sheltered, being surrounded by hills, and having a never-failing water-supply. The high winds which sweep the Gandamak plains would not here be felt, and the climate during the summer months would indeed be

Route No. 42—concluded.

enjoyable. The Tarakai of the Murki Khels offers one advantage, however—it is much easier of access from the plains.

The Kudi Khel Tarakai is occupied by a few Shinwaris, who, turned out of their country some generations back, have taken shelter in the Khugiani hills, and have become their hamsayahs, paying a third of the produce of their lands to their Khugiani masters. They seem rich in flocks of sheep and goats, though they do not number many souls.

2	UGHZAN	KANDAO	10	20

After passing over the Tarakai plateau, the road enters the dense pine forest, and makes a long gradual ascent along the crest of the great spur thrown from the main range of the Safed Koh, of which Tarakai is the terminal group. Sometimes the crest of the spur is broad, open

and cleared of trees, covered with short turf, on which, from June to September, large herds of cattle graze and the herdsmen bivouac. Gradually, and at about 5 miles from Tarakai, the crest of the ridge becomes narrow, rocky, and at times steep, and the road winds in and among the huge rocks. Further on it again widens, and the road becomes more easy; but in the month of May 1879 Mr. Scott was obliged, on account of the deep snow ahead, to leave the crest, and descend into the stream to the right by a rough, rocky path, cross the stream, and ascend the opposite slope. But in June the route continues upwards till under the foot of a small glacier, extending from Sikaram, and curves round the head of the stream emerging from the glacier, and ascends up the crest of an easy lateral spur, clear of trees, to the Ughzan Kandao, or pass. The pass lies between high snow-clad peaks, rising to 15,000', that on the left, from its flat top, being known as the Takht. Some 3 miles to the S. W. of the Takht stands the Sikaram peak, the base of which is approached over a field of snow. In June and July much of this snow melts, and green grass takes its place; and here the herds from the Jalalabad valley are brought for the hottest months. Elevation, 13,000'.

There is room for a camp just E. of the pass, but the cold is intense, at night at least. If there was no enemy, a better camping ground would be found at the Haozakbas lake, or tarn, source of the Mangal dara, about  $2\frac{1}{2}$  miles beyond the Ughzan pass.

8	HABIAB VALLEY	16	36

From the pass the road turns to the left after a short descent, and winds round the head of the Mangal dara, past the little lake mentioned above, and gradually descends to the southern feeds of the Mangal dara; then ascends to the Lakarai kotal reached by a re-

connoitring party from Ali Khel.

The whole road from Kudi Khel to the Lakarai kotal is little better than a rough cattle-track, impracticable, owing to the snow up to end of May, and again after the first heavy fall of snow in September. Water and firewood are of course plentiful. Good grazing for cattle and mules, but the grass is short and unfitted for cutting or stacking. The road is quite practicable for a mountain battery and mules with light compact loads.

N.B.—From the Lakarai kotal Mr. Scott gives no description of the road, but see Route No. 44.



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Route No. 43.

SAFED SANG TO PEIWAR KOTAL, *via* MAMA KHEL AND TARAKAI.

Authority.—G. B. SCOTT.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MAMA KHEL, TARAKAI.	10	10	This was the site occupied for a few days by General Appleyard's brigade from Gandamak in May 1879. The road, as far as Mama Khel, is over open country—the flat-topped fan-like plateaux that are thrown from the base of the long spurs of the Safed Koh. The country is
2	JOKAN DARA . . . . .	10	20	After leaving Tarakai, the road continues along the crest of the spur for several miles, often broad and open, but at times a narrow rock-bound cattle-track, covered with deep snow till the 15th May. I passed several families of Shinwaris, going up with laden mules, as I
3	PEIWAR . . . . .	7	27	From this descends the path up which comes Route No. 44. It is impracticable for laden animals.

easy riding, intersected by irrigation-cuts. The village of Mama Khel, at an elevation of 6,000', consists of numerous mud forts, lying in cultivation, dotted with orchards, fruit trees of numerous kinds, with vines trailing over them. After passing through Mama Khel, the ascent of Tarakai begins, a winding path over a whitish soft rock and clay, through a fine forest of pines. General Appleyard's baggage was carried upon mules, but the loads were thrown off at every turning and every short ascent, in spite of the assistance given by the soldiers. Tarakai is really the end of the long spur through northward from Sikaram before its abrupt fall into the Jalalabad valley. Its surface is undulating and much cleared of trees, and water in springs is good and plentiful, but no grazing or supplies of any kind. Elevation, 9,170'.

descended by this route from Sikaram on 31st May 1879, but it was unfitted for traffic on the 12th May, when I first tried to go up it.

After 8 miles the spur becomes too rocky to continue along it, and the path winds westward to the stream known as the Jokan Dara, emerging from the snow-fields to the E. of Sikaram peak and *ziarat*. On reaching the stream, the road turns up the side of the stream over snow in May, but short grass and rocks in June to the crest of the Safed Koh range just below, and to the E. of the *ziarat* near Sikaram. There is no firewood to be had here, and only short grass for grazing purposes.

The Shinwaris with mules mentioned above turned aside from the Jokan dara, and continued westwards along the foot of the snow-fields to the Ughzau Kandao on the road from Kudi Khel to Hariab. (Route No. 42.)

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 44.

PEIWAR KOTAL TO SAFED SANG (LAKARAI ROUTE).

Authorities.—GORDON; COLLET; WOODTHORPE; NATIVE INFORMATION.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	BAGHU CHINA	11	11	From the Peiwar kotal the first 4 miles are by the military road and are fit for all arms. From this the route lies along the ravine to the right, or through the fields on the high bank. The ravine route is the best for troops and baggage. At 5 miles villages of Bar Belut and Mushungi passed on right, situated among fields.
2	TAGHAN	9	20	From Baghu China to the top of the Lakarai kotal 3 miles. Half a mile from Baghu China the ascent of the Lakarai kotal is commenced. Up to this point (elevation 9,500') the rise has been very gradual, having a slope of from 5° to 7° only. Above are the precipitous sides of

the Safed Koh, up which a difficult path leads to the Zera Kandao, a short route to Gandamak by the Kbugiani country. The road now leaves the Lurlidar *nala* to the right, and ascends some low wooded spurs, which run down from the Sirmast Khana peak; soil soft; road practicable for laden animals.

The Lakarai commences at the ascent of the kotal. The path is zig-zagged up the side, and is tolerably steep for a short distance; after that easy, over the undulating shoulder of the slopes of the Safed Koh. There are three kotal on the Lakarai. At 2 miles the middle kotal is reached, a short steep ascent. At 3 miles the third kotal, an easy short ascent, the top of which is 10,600' above the sea.

A path leads from the crest to the left to Dreikala, at entrance of Hazar Darakht defile, 7 miles, along the open hillside for 1 mile as far as seen. The path over the Lakarai is here and there made up with logs and stones at ravine corners and bears traces of traffic. It is passable for loaded camels and mules.

From the top of the kotal to village of Taghan, 6 miles. From the top of the pass the road descends through the Mangal *tangi*, or *dara*, to the Gehar Manga villages of Taghan,

Route No. 44—concluded.

Langar Kala Sirkot, and Nasir Muhammad, which are situated in the valley of the Surkhab\* (P) river. The descent for the first 4 miles is "rather abrupt", but does not seem to be difficult. The soil is not stony, but "black and soft." The first village reached (Taghan) is 5 or 6 miles from the kotal. It has an elevation of about 8,500'.

Snow lies to great depth on the northern side of the Lakarai kotal. On the 21st April 1879, a year in which very little snow fell, it was 3' deep. The Lakarai pass is, however, the easiest one through the Safed Koh range, and only impassable for laden animals for about three months. A horseman might use this route without dismounting, and footmen can nearly always traverse it.

3	ASPANDO KUS	9	29
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From Taghan the road passes along the valley through the other villages named above; the valley tolerably open with fields to Stir Kala at 6 miles, where it narrows. Stir Kala is also a Mangal village (vassals of Ghilzais). Here there is a deep narrow ravine caused by floods

wearing away the earth. There is a rough wooden bridge over it, on which camels, etc., pass. There is no road below in the ravine for animals. Beyond this the valley opens, and there are fields. At 7 miles the Adhera kotal (burial-ground kotal), low, with easy ascent and descent for camels, is crossed. Path then leads among fields and small villages. At 8 miles the Hazra valley from Shutargardan direction joins it on left. This valley opens out from the W., and is inhabited by the Musa Khels, who can turn out some 6,000 fighting men. The road crosses the *nala* and mounts by a steep ascent the Hazra kotal. The descent is equally steep, and the road here would require clearing for the passage of troops; but the soil is not difficult, and the work could be easily done. The route then passes along the valley. The hamlet of Aspando is reached at about 2½ miles from the top of the Hazra kotal. There is another path round by Shaikhan, with a less and easier ascent and descent, but a good deal longer. This is used for camels. From Ashuk kotal on to Aspando Kus, 2½ miles, the valley is open.

Aspando Kus is a village of 10 houses, Akbar Khel Ghilzais. Camping ground for a brigade with water and wood.

4	HISARAK	13	42
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From Aspando to Muhammad Shah Khan's fort, Hisarak, 13 miles. Leaving Aspando, the road passes along the valley for 4 miles till the foot of the Ghaughiza kotal is reached. The ascent of this is half a mile in length, and the descent one mile; both are said to be somewhat difficult.

The road then enters the Ghaughiza valley, and passes for 5 miles along the bank of its stream and through a few scattered villages; then the Auzanjan valley joins it from the W. The Ghaughiza valley is inhabited by the Nasir Khels, who number about 2,000 fighting men, and the Auzanjan valley by the Miram Khels, with 15,000 fighting men. At the mouth of the Auzanjan glen the Hisarak district is entered; and from where its waters fall into the Ghaughiza stream is a distance of 3 miles to Muhammad Shah Khan's fort (in good repair and occupied). The fort is placed on the bank of the Hisarak river, which in this place is (in April) about 25 yards broad and 2 feet deep. The Hisarak district has a great many villages dotted about its wide plain. The inhabitants are Jabar Khels.

From a native report it seems that the Ghaughiza valley is well cultivated and open, with many walled villages and with fruit trees in abundance, while the hills above are bare and desolate. The whole of the Lakarai route is said to be practicable for troops, but of course not for wheeled guns. Grass is scarce throughout, but there is plenty of grazing for camels during the summer months. Fuel and water abundant.

5	SAFED SANG	14	56
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The road to Gandamak lies through the Asphan valley, which is open and cultivated, with several villages and hamlets. Asphan itself is a very large village. The road crosses numerous water-courses, and in its ordinary condition is quite impracticable for wheeled guns. Supplies abundant.

NOTE.—There is another route between the Mangal villages and Hisarak which follows the Surkhab stream Shigai, but it is very difficult and only passable by footmen.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 45.

FROM PEIWAR KOTAL TO KABUL, *viâ* THE KURSHATAL PASS AND BUTKHAK.  
*Authorities.*—KENNEDY; GAZETTEER OF AFGHANISTAN.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KOTKI . . . .	15	15	From Peiwar kotal to Belut by the preceding route. Thence going north, enter the Lakarai <i>nala</i> near the villages of Pella and Ala Sanghi. A few miles up the Lakarai pass the road turns off to the left, and ascends the Kurshatal kotal, a spur from the mountain Matungi. The kotal is about 9 miles from Belut. Beyond it is the village of Kotki (Ghilzais).
2	ROBAR . . . .	9	24	A Ghilzai village, situated in a valley or gorge.
3	REGAN . . . .	10	34	A Ghilzai village.
4	CHAKABI . . . .	10	44	The road crosses the Ghorbandi kotal. A large village about 5 miles south-east of Khurd Kabul, the route to which lies through fairly open country. Chakari can be reached by the following routes—
				(1) From Musai (in Logar) by the Gul Dara pass. (2) From Kabul by the Yakh Dara pass, fit only for footmen. (3) From Butkhak by the Gospan Dara ( <i>vide</i> Route No. 41).
5	BUTKHAK . . . .	14½	58½	At Butkhak the Jalalabad-Kabul route is joined. ( <i>Vide</i> Route No. 29.)
6	BALA HISSAR and SHERPUR.	9½	68	<i>Vide</i> Route No. 29, stage 16. NOTE.— <i>This route is reported fit for mules and camels. Supplies are scarce along it, but wood and water are generally procurable.</i>

Route No. 46.

FROM BARIKAB (KHAIBAR) TO KURAM, *viâ* THE OGHAZ PASS.  
*Authority.*—G. B. SCOTT (*chiefly from native information*).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MAZINA . . . .	12	12	<i>Vide</i> Route No. 47.
2	OGHAZ . . . .	12	24	Follow above route to Mahrez; then turn S. E. among low hills, past Kotgai and Deh Bala—the first a large scattered village; the second a small hamlet with tower—to the hamlet of Oghaz, lying among low forest and grass-covered hills at the northern base of Safed Koh. Water, wood, and forage plentiful. Supplies from below. Elevation about 7,000'.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 46—concluded.

3	KIMIL BAZAR . . .	10	34	From Oghaz a narrow zig-zag path, only practicable in summer, follows the crest and slopes of a spur, often narrow and rocky, through dense forest, about 8 miles to the Oghaz pass, elevation about 13,000'; thence a short and fairly easy descent to the villages of Kimil bazar in the Khurmana dara. The villages said
to be large and defended by towers, but commanded from neighbouring heights. Wood, grass, supplies, and water plentiful.				
4	KURAM . . .	12	46	Descends the Khurmana dara, sometimes rocky, but said to be practicable for laden camels, to the exit of the <i>dara</i> , into the Kuram valley, at the village of Tezana; thence an easy march across valley to Kuram. (Stage 7, Route No. 61).

Route No. 47.

FROM BARIKAB (KHAIBAR) TO KURAM, *via* THE PAPIN PASS.

Authority.—G. B. SCOTT (*partly from native information*).

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MAZINA . . .	12	12	A village containing numerous mud forts surrounded by cultivation, dotted with orchards at the base of the Safed Koh, S.-W. from Barikab. For 8 miles the road is over a dry, stony waste. For the last 4 it runs among forts and orchards over fields often irrigated, along either bank of the Papin or Mazina dara, There is room for a large camp in open country just before entering the last slopes of the Safed Koh, here broken into hillocks and plateaux, with steep banks. Supplies plentiful. Elevation, 4,000'.
2	PAPIN . . .	10	22	Immediately after leaving Mazina, the road enters the hills, but continues practicable (with a little mending) for all arms, past the large scattered villages of Kham and Mahrez. It then follows the <i>dara</i> , foot-passengers keeping along the banks, mules along the stony bed of stream, crossing and recrossing the water several times, till reaching the last habitation. Papin, a few towers, surrounded by forest-covered hills, is commanded from all sides within easy rifle range. No room for camp. A force might bivouac on the slopes above stream, holding surrounding heights in strength. Water plentiful; also firewood, grass, and forage for camels; but supplies must come from below. Elevation, 6,000'.
3	PAPIN PASS . . .	8	30	From Papin the road begins to ascend the steep slopes. It is a narrow zig-zag path, practicable for lightly-laden mules, used occasionally by Shinwari traders. A halt would be needed on the crest of the Safed Koh, as there is no other camping ground till the further slopes have been descended. The crest is broad and

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 47—concluded.

open, and the forest dense, which affords some protection against the wind. Snow lies near the top at all seasons, but is not heavy from June to September. During the winter it is impracticable, even for foot-passengers. No supplies. Elevation, 13,000'.

4	TEZANA . . .	10	40	At the southern base of Safed Koh, at the junction of the Khurmana and Buahakai daras. The route descends by a zig-zag path from the Papin pass along the crest and slopes of a long spur, descends to the hamlet of Buahakai and follows the Buahakai <i>dara</i> down to Tezana. The village is large, fortified, and surrounded by orchards. Supplies, forage, and firewood plentiful. Elevation, 6,000'.
5	KURAM . . .	6	46	Across the Kuram valley, practicable for all arms.

Route No. 48

FROM ALI MASJID TO CHINAR ( BAZAR VALLEY ), *via* THE ALACHI KANDAO.

Authority.—G. B. SCOTT.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KARAMNA . . .	8	8	This is the route followed by General Appleyard's brigade to Bazar, and was the line of retreat of the Ali Masjid garrison on 21st November 1878. Crossing the Khaibar stream at the Ali Masjid encamping ground, this route first turns up the Galanai watercourse, and follows it for 3 miles, among low intricate hills, covered with <i>phalai</i> (acacia) jungle till under a <i>ziarat</i> ; it then rises rather abruptly up a white-coloured slope called Spin Khak (white earth) to the Alachi Kandao, or pass, at 5 miles, elevation about 4,600', and enters the cultivated lands of the small village of Alachi, lying in a little basin in the hills. To the right are the craggy slopes of Aspoghas, rising to 6,000'. Passing the village, the road turns up a little watercourse, and crosses a low easy pass to the N. of an isolated hillock at 7 miles, and enters the cultivated lands of the village of Karamna, consisting of seven groups of huts and towers, in a small basin, about a square mile in area, where there is ample room for a camp and good water. To the N., but well back, are the slopes of Aspoghas, the range that divides the Khaibar from Bazar. To the E. and S. are isolated hills, forming excellent picket stations, commanding all approaches from those sides. Elevation, 4,700'.
2	CHINAR . . .	11	19	Leaving the western side of the village, the road descends the Karamna stream to its junction with the Bazar and Chora streams. The first 3 miles are specially formidable, winding down the bed of the stream under high walls of inaccessible rocky hillsides, and troops passing below could be crushed by rocks from above. But if a strong detachment held the isolated hill S. of Karamna, it would overlook and defend the march of the column as far as Burg 3 miles, and could then descend to Burg by a narrow steep path, only practicable for infantry; but the retirement of this detachment would require to be protected by parties occupying positions on the hills on the opposite side, as it would otherwise be defenceless if attacked from Karamna. At Barakas the Chora Kandao route is joined (No. 52). Elevation, 4,200'.

*Alternative Route to Karamna in the Bori Kandao.*

March down towards Ali Masjid, 2½ miles, to Gathi Lalabeg. Then turn south-eastwards

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Route No. 48—concluded.

across the fields to the Bori Dara exit, reaching it about 1 mile S. of Sultan Khel. Enter the defile, and follow it 3 miles to the crest of the ridge dividing the Khaibar from Bazar at the Bori kandao at an elevation of about 5,300'. Then descend the further slope, and pass to N. of an isolated hillock to Karamna. The ascent up the Bori defile is over slippery slabs, between precipitous walls of rock. The breadth of the defile in one place is only 4 feet, and to widen it would need very great labour. The hills above are too steep for any formidable body of men to collect on or descend from, but the pass could be easily defended by a small body of men. The descent on the far side is at times along a ledge overhanging a fall of some hundred feet. The last mile is easy. Colonel Thompson, with 6th Native Infantry, followed this route from Landi Kotal to Karamna in 1879, but there was no opposition attempted, or the passage would have been impossible. Distance 8 miles.

Route No. 49.

FROM LANDI KOTAL TO CHINAR, *via* THE BAZAR KANDAO.

*Authorities.*—G. B. SCOTT; BARROW.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	CHINAR . . . .	12 P	12 P	Road lies west from Landi Kotal (elevation. 3,600') for about a mile; then, running round the west of Suffolk hill, enters the defile specially known as the Tangi dara. Here it wants widening and repairing for a few yards. Ascent up the <i>tangi</i> easy for 3 miles, when it becomes

rough for about a mile to the head of the defile. This is the only really difficult part of the march. From the head of the *tangi* the road ascends for about a mile by zig-zags to the kotal (elevation about 6,400'), which is reached at about the 6th mile, and descends by a similar zig-zag to the Bazar valley. The road where it ascends and descends is about 3 feet wide, and practicable for lightly laden mules. A little widening would much improve it. From the foot of the descent the road lies due south over level country, practicable for cavalry, for about 3 miles, when it joins the Chora route near (Walai. Thence *vide* Route No. 52.)

The Bazar kandao route is important, in that it enables a force in Loargi to watch the Bazar valley or to anticipate an enemy from the west by the Sisobi.

The Tangi dara was reconnoitred in December 1880, when infantry, 2 guns, and a few cavalry, were taken up to its head at the Bazar kandao.

Route No. 50.

FROM CHINAR TO DAKKA OR BASAWAL, *via* THE SISOBI KANDAO.

*Authorities.*—TYTLER; REPORTS ON BAZAR VALLEY EXPEDITIONS, 1878 AND 1879.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SISOBI . . . .	10 P	10 P	The road to the Sisobi kandao turns off from Route No. 52 at a point about 1½ miles E. of Chinari and thence runs up the valley in a north-westerly direction for about 4½ miles. It then ascends the Alachigarh range (here called Pandperai) by a steep zig-zag for about a mile

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Route No. 50—concluded.

to the Sisobi kandao; elevation 4,850'. The descent on the north side is by a similar zig-zag; down oak-covered hillsides; at the bottom a well-cultivated and wooded valley descends gently for about 1½ mile to the Sisobi villages. The path during the ascent and descent of the kotal is narrow and only passable in single file.

Water and room to encamp at the Sisobi villages.

2	DAKKA . . . . .	15 P	25 P
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Road runs down the valley, which is well cultivated and wooded, to Chinar, which is reached at about 4 miles. Here the road branches, one branch leading to Dakka, distant about 11 miles from Chinar; the other to Basawal, distant about 14 miles. The Dakka road was

traversed by General Tytler's column in 1878, bivouacking in a grassy plain about 8 miles from Dakka; the Basawal road was used by the column operating from that place in the following year. On both occasions mountain guns and mule transport accompanied the column over the Sisobi pass.

Route No. 51.

FROM CHINAR TO DAKKA, *via* THE TIBAI KANDAO.

*Authority.*—REPORTS ON BAZAR VALLEY EXPEDITIONS, 1878 AND 1879.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	PLAIN at N. end of Pass.	10 P	10 P	Road up the valley westwards to Nikai, which is passed at about 2 miles. Thence up a wooded valley, reaching the foot of the pass at about 6 miles. Here General Tytler's column encamped in 1878, on grassy plots in wooded ground, commanded on all sides by hills, with water-

supply from a *nala*. The road up the pass is winding, steep, and very difficult for mules. The length of the ascent is about 1¼ mile; the path is shaded by trees, and overhung on the left by inaccessible cliffs. Height of kotal above Bazar plain about 1,000'. At the kotal the road branches, the left-hand road leading to Pesh Bolak and Basawal, that to the right to Dakka. About 3 miles beyond the kotal the Dakka road passes through a dara, about 5 or 6 feet broad, with high perpendicular walls of rock on either side. A stream runs down this dara. A mile further on the valley opens out into a plain, with cultivated land, owned by Shinwaris. Here it would probably be possible to encamp.

2	DAKKA . . . . .	16 P	26 P
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Road follows a dry *nala*, passing at about 3 miles the villages of Shulgari, which are strongly fortified and defended by towers, which, from their position, would bar the passage of a force unprovided with artillery. A few miles further on the route emerges on waterless grassy

plains, and at about 13 miles goes through an extremely precipitous pass.

In 1878 General Tytler's column fought its way through the Tibai pass, accomplishing the distance from their camping ground at the head of the Nikai valley to Dakka in one day. The second stage above given took 9½ hours, although no opposition was encountered on the way. Two mountain guns and mule transport accompanied the column.



Route No. 52.

FROM PESHAWAR TO MAIDAN OF TIRAH, *viâ* THE CHORA KANDAO AND CHINAR.

*Authorities.*—G. B. A. SCOTT; YOUNG; LOCKHART; N. W. F. GAZETTEER.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	HABI SINGH BURJ .	5	5	} <i>Vide</i> Route No. 29 to Jamrud, thence the road follows the bed of the Khaibar stream, here usually dry. Near Kadam (2 miles) the low hills are entered; at 3 miles Gagrai is passed; and at 4½ miles Jabagai, where the Khaibar and Pazar (or Chora) stream meet.
2	SHUDANNA .	13		

The bed of the Khaibar varies from 200 yards wide near Jamrud to 60 yards between Gagrai and Jabagai, widening to over 100 yards at the latter place. Banks very high and precipitous beyond Gagrai; hills on either side rise 1,500' to 2,000' above river bed. Leaving Jabagai, the river bed becomes rather rough, very tortuous, and in places narrow. It is hemmed in by low intricate hills, and a force advancing from Jamrud could be easily obstructed.

Camping ground on the Shahgai beights above village; intersected by ravines, and covered with brushwood; too cramped for a large force. Water good and plentiful; no supplies. Grass, wood, and good camel-grazing obtainable. Time for baggage animals on this march probably 5 hours or more. Elevation, 2,000'.

In wet weather the flooding of the Khaibar stream would render this route impracticable. An easier approach would be by the Shadi Bagier to Shahgai (*vide* Route No. 29), and thence down the slopes to left of Kala Abdul Rahman and Shahgai.

2	BABAKAS . . .	9½	27½	} Road leaves the Khaibar, and ascends gradually by the bed of the Taodamela <i>nala</i> , through low hills, to the Chora kandao (elevation 4,000'), reached at 4 miles. Ascent steep and winding, and commanded within easy rifle range from mountains rising to 5,000' elevation on either side.

The pass could, with little labour, be made a formidable one to attack. Descent on western side is very rough, but the whole road is passable for laden camels. At 6 miles the bottom of the descent is reached, and the first Chora village is passed, whence the road follows the bed of the stream, in which there is often a considerable amount of water, which has to be frequently forded in the next few miles. At 9 miles the Wacha Tangi. Here road leaves the *nala*, and at 9½ miles reaches Barakas, the first Zakra Khel village.

Room for large camp on the Barakas plateau, easily defensible, and not commanded by neighbouring heights, except to the north, where there are good positions for picquets. This camping ground is much more defensible than that occupied near Chura by General Maude in 1879. Water, camel-grazing, firewood, and coarse grass abundant. Elevation, 2,500'(?).

Route No. 48 from Ali Masjid comes in here.

Probable time for baggage animals 8 hours. General Maude's column, with laden camels and elephants, followed this route in 1879.

*Alternative routes from Jamrud to Barakas.*

**I. *Viâ* the Zera kandao.** Road same as above to Jabagai. Thence it follows the bed of the Chora stream for about 1½ mile, when, bending to the right, it leaves the *nala*, and ascends gradually over fairly level high ground and hillocks, lying between the Khaibar and Chora streams, to the foot of the Zera kotal (10½ miles). Road easy to this point. Ascent then very rough for ¾ mile to the kotal (elevation 4,000'), and descent for 2 miles beyond still rougher. The first Chora village is reached at 13½ miles, and the road *viâ* the Chora kandao above described is joined.

The Zera kandao is steeper and more difficult than the Chora kandao, but the route is more direct. It might be useful to turn the Chora kandao, or, in case of a rapid rush on Chora, unencumbered with baggage.

Route No. 52—continued.

II. *Vid the Chora ravine.* Road as above to Jabagai. Thence to the left up the bed of the Chora stream, which soon becomes narrow. At  $6\frac{1}{2}$  miles reach a *tangi*, where there is a bad bit, and the ravine bends sharp to the right. Here a path joins on the left from the Dwa Ghakai pass (said to be practicable for laden bullocks) leading from the N.-W. corner of the Kajurai plain; it is generally used by raiding parties coming from the Bazar valley towards Peshawar. From the *tangi* the stream runs in a very tortuous course through deep, rocky gorges for about 9 miles. At 8 miles pass Shangir, and at 13 miles Maskani Mela. Near the latter the ravine is particularly narrow, rocky, and difficult. Here a path joins from the Kajiri kandao on the Gundghar ridge. At 16 miles the first Chora village is reached (*vide* above).

"This road is very bad, and somewhat circuitous. The hills on either side are very precipitous, and the spurs jutting from their faces are so frequent that the covering parties on either flank of a force moving up the valley could not make way at the rate of more than a mile an hour."—(*Tucker.*) The stream is also generally deep and rapid.

4	CHINAR . . . .	6	33 $\frac{1}{2}$	Road again follows the <i>nala</i> , the water here being shallow, and in places sinking into the sand. At $1\frac{1}{2}$ mile pass the Potosi cave, and at 3 miles reach Walai. Routes Nos. 49 and 50 from Landi Kotal and Dakka converge here. The valley now begins to open out, and the road, winding round the N. base of the Walai hill, enters on an open plateau, from which to the S. the hills recede for over a mile. To the N. lies a low, isolated ridge, at the base of which lies the Chenar village, in some good cultivation. The ground near the village is commanded from the heights above, and General Maude's force, after spending an unpleasant night on this ground, moved on to the high ground a mile to S. of village, where it was in a very defensible position, not commanded from any heights. Water, grass, firewood, and camel-forage plentiful. Supplies not to be depended on. Elevation, 4,200'.
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Probable time for baggage animals, 3 hours. The Walai hill is an excellent position for a signal station.

5	SANDANA	12	45 $\frac{1}{2}$ P	Road westwards from Chinar past the villages of Halwai and Bokar, and then south-westwards up an easy ascent to the Mangalbagh of Jarobi kandao, over the Surghar range, elevation about 5,500' (about 1,300' above Chinar). Up to this pass cavalry can ride easily, but the road is commanded by the adjoining hills, which are throughout accessible for flanking parties. The descent from the <i>kotal</i> is said to be easy, and shorter than the ascent from Bazar, but it is probably more difficult, though not seriously so.
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A hamlet of Sipah Afridis, lying in open country. There is said to be room for a good camping ground. Water, firewood, grass, and forage plentiful; also large numbers of sheep, goats, and cattle in the valley. Elevation about 4,500'.

Hence a road over the Salem Kandao to Nazian and thence to Pesh Bolak, said to be practicable for laden mules, but not for camels.

6	KUZ THAKIAKAI . . . .	7 P	52 $\frac{1}{2}$ P	Road along the Bara river, generally through open cultivated country to Kuz Thakiakai near Dwa Toi, the junction of the Shilobar and Rajghal streams, which drain respectively the Maidan and Rajghal valleys. Below the junction, the river and valley bear the name Bara.
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There is said to be good camping ground, water, forage, and grazing plentiful. Elevation about 5,000'.

7	MAIDAN . . . .	9 P	61 $\frac{1}{2}$ P	Above Dwa Toi the Shilobar Toi, flowing from the south-east, emerges from a dark narrow gorge called the Kharapa <i>tangi</i> , or "difficult defile." This <i>tangi</i> is about 3 miles in length, is very narrow, and bordered by precipices rising 1,000 feet above the stream. The bed of the <i>tangi</i> is probably nearly level and is said to be practicable for laden camels when the water is low.
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ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 52—concluded.

The road generally used by the Afridis avoids the defile by turning up the mountain to the left. It rises by zig-zags for 4 or 5 miles through a forest of oak and olive trees, to the village of Bar Thakiakai, consisting of a few huts and two or three towers. Scott could clearly distinguish this road with a theodolite from a distance of several miles; therefore it must be fairly broad and well used. The village (elevation 6,964') is situated in an open peice of cultivation on the crest, and there is said to be room for about three regiments to encamp, and an abundant supply of good water.

The descent to the Maidan valley is said to be 4 or 5 miles in length, and very easy: the latter statement being corroborated by Scott's distant view of the valley. The total fall cannot be more than 1,000'.

The Maidan valley appears to be nearly circular in form, with a diameter of about 10 miles; not level, but gently sloping in from the surrounding mountains, which rise to an elevation of 8,000' or 9,000' all round. The upper slopes are covered with pine and oak forest, the lower slopes clear and open. The valley is drained by the Sherdara, Manakas Kahudara, and Shilobar stream, which, after their junction, escape through the Kharapa tangi into the Bara valley. The banks of these streams are said to be honeycombed with caves, the summer abodes of Afridi families, and are defended by numerous towers, which dot the cultivation along the banks. Elevation of valley probably 6,000'.

Route No. 53.

FROM BARA FORT TO MAIDAN OF TIRAH, *via* THE BARA VALLEY.

Authority.—G. B. SCOTT; N. W. FRONTIER GAZETTEER.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	DORA . . . . .	10 P	10 P	Road along the Bara river for 3 miles to Ilam-gudar; thence across the Kajurai basin, a plain, dotted with hillocks and somewhat broken with ravines; country open and fairly level. Road easy; water doubtful; forage, grass, and camel-fodder plentiful. Elevation, 1,800'.
2	BARKAI . . . . .	10 P	20 P	Road ascends by easy gradient to a low kotal over red marl hills; then an easy descent for about 3 miles to the Bara river, which is reached about 1½ mile above the confluence of the Tira Toi. Barkai is about 3 miles farther up the river, which here flows in a deep gorge; the

valley having a uniform width of about ¼ mile; hemmed in by precipitous hills, rising some thousand feet above the river. The water here is thick and muddy. At Barkai the valley widens; cultivation commences, and there are numerous villages. Room for camp in fields; water, grass, and camel-fodder plentiful; camp commanded on both sides by hills. Elevation, 2,000'.

At 2 miles Route No. 54 branches off to the left.

3	TORABELA . . . . .	10 P	30 P	Road crosses the river and follows the right bank for about 3 miles to Barwan; a large Orakzai village. Here it recrosses and lies up the left bank to Praikrai; a village of Aka Khel. This is a point of some importance, as it closes all the paths to Kajurai. From here the road traverses Aka Khel limits as far as Sultan Khel. Then the habitations end for 2 or 3 miles; the hills approach the river, and the road obliged to leave it rises over the Spina Krapa, or
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ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 53—concluded.

"white cliff," again descending the river beyond. This is said to be the worst part of the road between Barkai and Dwa Toi at Spin Kharapa. Afridi limits are reached, and it is probable that a force advancing up the valley would first encounter serious opposition at this point.

Here is the village of Torabela, among others, near which join the routes from Bazar over the Halwai and Bokar passes. No details as to supplies or camping ground.

4	SANDANA . . .	10 P	40 P	The road now traverses the Sipah Afridi country: the valley is commanded all the way from Barkai to Sandana by the adjoining heights, which, sometimes approaching, contracting it to a few yards in width, sometimes receding, allow it to expand to a breadth of nearly a mile. The road frequently crosses and recrosses the stream, and often has to leave the bed and follow rough paths in order to avoid boulders and other obstructions.

For details as to camping ground, etc., *vide* Route No. 52.

5	KUZ THAKIAKAI . . .	7 P	47 P	}	<i>Vide</i> Route No. 52.
6	MAIDAN . . .	9 P			

*Note.*—This route is not nearly so much used as that *vid* Bazar (Route No. 52). It is quite impracticable for camels, and therefore not so well suited for military operations. Moreover, the camping grounds, as well as the whole line of march (at least as far as Dwa Toi), are commanded by the surrounding heights, which are covered with forest and difficult of access. The track also frequently crosses and recrosses the river, which after rain becomes much swollen and difficult to ford.

Route No. 54.

FROM BARA FORT TO MAIDAN OF TIRAH, *vid* THE UCHPAL PASS.

*Authorities.*—G. B. SCOTT; N.-W. FRONTIER GAZETTEER.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.	
		Inter-mediate.	Total.		
1	DORA . . .	10 P	10 P	}	<i>Vide</i> Route No. 53.
2	BARKAI . . .	10 P			
3	SULTANZAI . . .	10 P	30 P		

oak and olive forest. Tucker followed this route in 1872. There is little or no water near the crest. The descent is said to be fairly easy, passing the village of Kharasha, situated on a spur, where water is obtainable.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 54—concluded.

A village on the Mastura Toi, the name given to the upper portion of the Bizoti to Orakzai Toi, which joins the Bara river under the Molughar. Wood, grass, and water plentiful.

4	KILAYAH (OR PAKKA) KALA.	5 P	35 P	} <i>Vide</i> Route No. 55, stages 4, 5, 6.
5	DRINGI (OR KANGURI)	12	47 P	
6	STIR KALA . . .	7	54 P	
7	MAIDAN . . .	10	64 P	

*Alternative route from Barkai viâ Waran.*

3	UCHPAL PASS . . .	7 or 8	28 P	} <i>Vide</i> above route. Bivouac on crest. Water supply doubtful. Wood plentiful.
4	WARAN GLEN . . .	10 P	38 P	
5	MAIDAN . . .	10 P	48 P	} Instead of descending into the Mastura (or Bizot) valley by the above route, turn off westwards along a path from the crest. Should be good camping ground, not liable to surprise. Water, grass, wood, and forage plentiful. Elevation, 6,000'. A difficult march over the Tserai pass.

No further details available. The following general remarks refer to this route:—

Afridis going to Waran or Maidan turn off from the Uchpal Kandao, and, by a path running along the hill slopes, enter the Waran valley about 8 miles from the pass. This valley or rather glen, for such appears to be its real character, is about 10 miles long, and is shut in at the western end, and divided from Maidan by a range some 8,000' in elevation, which is crossed by the Tserai pass. Captain Tucker says that he looked from Kharasha over "a valley rising gradually, as it stretched westwards, and opening out wider and wider for a distance of from 15 to 20 miles." From his position at Kharasha he would necessarily have to look across the Waran valley into Maidan, and since both appeared to be one it would follow that the crest of the Tserai pass on the intermediate watershed could be but little elevated above the head of the former valley, and that the ascent and descent of the pass would probably be gentle.

Route No. 55.

FROM KOHAT TO MAIDAN OF TIRAH, viâ THE LANDUKI AND ARHANGA PASSES.

*Authorities.*—G. B. SCOTT; I. B. C.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter- mediate.	Total.	
1	SHERKOT . . .	11 $\frac{3}{4}$	11 $\frac{3}{4}$	Along the Thal main road, which is good and easy. Usual camping ground. Water and supplies procurable. Elevation, 2,400'.
2	BAR MARAI . . .	10	21 $\frac{3}{4}$	Good road up the Karez Dara, passing villages of Alizai and Kuz Marai. This valley has no stream. A large village; room for camp; water and supplies procurable. Elevation, 3,000'.

Route No. 55—continued.

Here Route No. XIV, N.-W. F., Vol. II, comes in from Zera.

3	KILAYAH OR PAKKA KALA . . . . .	12	33 $\frac{3}{4}$	Road crosses the Landuki pass, the ascent of which offers no serious difficulties, over wooded slopes. It is a gradual climb, but, except in one or two places near the top, where the road has suffered from the effects of rain, it is good enough. It is practicable for horsemen and laden camels. Elevation of kotal probably about 6,000'.
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The crest of the Landuki pass is said to be open. There is a hill on one side of the road, where it crosses the top of the range, and a gradual slope upwards to some neighbouring hills on the other side. No trees to speak of. The crest, if held, could be shelled from below. The descent is commanded by neighbouring heights, but it is probable that no resistance would be offered if the pass were once gained.

Beyond the Landuki pass the Mani Khel cultivation commences almost at once, and the road leads for 3 or 4 miles through their settlements to Pakka Kala, or Kilayah. All about here water is abundant, and there must be a selection of encamping grounds.

Kilayah is on the right bank of the Mastura Toi, the southern branch of the Bara river; opposite to it, and stretching for 3 or 4 miles to the east to where the Shiga ravine joins the Mastura Toi, is the upper country of the Daulatzais. Kilayah and the Daulatzai villages are in the same open cultivated valley, and only divided by the river. Bizot and Tanda Utman Khel are large villages. The Firoz Khels have a number of small hamlets, but no large village. The country is well peopled, and ought to be able to furnish supplies and plenty of good encamping grounds. (See Route No. XV A, N. W. F., Vol. II, for more recent information.)

4	DRINGAR OR KANGU- BAI . . . . .	12	45 $\frac{3}{4}$	Road follows the Mastura Toi. The valley is hemmed in the whole way by massive pine-clad mountains, and two defiles are passed, the upper of which, passed first before reaching Dringar, is said to be rather narrow, but both are reported fit for laden mules. After reaching Dringar the valley opens out.
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Room for a fairly large camp between the villages named. Water, wood, and grass procurable, and perhaps a few supplies. Elevation, 5,000'(?).

5	STIR KALA . . . . .	7	52 $\frac{3}{4}$	Road open and easy up the stream. The whole of the road from Pakka Kala is commanded by the adjoining heights.
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Stir Kala is the largest village of the Mulla Khels. Camp at the foot of the Arhanga pass. Water, grass, and firewood abundant.

6	MAIDAN . . . . .	10	62 $\frac{3}{4}$	The road now ascends the Arhanga pass, some 1,500' rise from the last camp. There is a fine spring and <i>ziarat</i> near the foot of the ascent, which is said to be short and easy. The descent is also said to be very easy, and the distance from Stir Kala to the first of the
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Zaka Khel villages not more than 4 miles. To the centre of the Maidan is probably about 10 miles.

Speaking of this pass Scott says: "I conclude it is described as easy in the Afridi sense of the word, but I was told that a stone could be thrown from the crest to the spring at the base, this being, it is said, a common pastime for youngsters with the cattle." The actual ascent from the *ziarat* to the *kotal* is about 1,000 feet.

*Alternative routes from Pakka Kala.*

A traveller from Pakka Kala to Maidan has also a choice of the following routes, all of which are described as "easy":—

- (a) He can take the route through the Firoz Khel villages, then through the Guin pass, by Sangra of the Mishtis, and Diwar, through the Leji pass into Waran, and so meet Route No. 54, stage 5, leading to the Tserai pass. Distance about 14 miles to the first villages of Maidan.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 55—concluded.

- (b) He can go up the valley of the Mastura Toi from Pakka Kala for four miles, past Darma and Charbagh and the Shekban villages, and then turn north by Mishti Bazar.
- (c) If he wants a particularly roundabout route he can go right to the end of the Masturi valley, get into the Mamozai country, and through the Singhak, or Kahu, passes into the south-western corner of Maidan, occupied by the Mulla Khels. The road from Mastura to the Mamozai country is said to turn south-west on reaching the end of the Mastura valley. Some people say that the road is easy. Others that it is an ox-road rather than a camel-road. Some people call the pass the Manda Kandao, and others the Sur Gbakni. The road debouches on the plain country of the Mamozai below the junction of the Kahu and other daras above the villages of Stir Kala and Mopatti. (Route No. 56.)

Route No. 56.

FROM SEROZAI TO MAIDAN OF TIRAH, THROUGH THE ZAIMUKHT COUNTRY.

Authorities.—TUCKER; TYTLER; N. W. F. GAZETTEER.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SPEEKWAI . . .	12½	12½	<i>Serozai is the 4th stage on the Kohat-Thal road, 44¾ miles from Kohat, and 15½ miles from Thal, vide Bengal Route Book.</i> From Serozai a path leads to Torwari, 6½ miles. Thence up the valley of the Shkali Toi, through Zaimukht country, said to be stony and raviny, but fairly level and easy for laden camels.
<p>A large village, in a small open valley with several well-built towers. Ample camping space on terraced fields. Water abundant, conducted to the village in small channels from an adjacent ravine.</p>				
2	STIR KALA . . . (Khanki valley).	12	24½	Road narrow and stony, and somewhat obstructed by trees, lies up a defile, only some 20 to 30 yards wide, as far as the foot of the Mandatta pass. The defile is hemmed in by precipitous mountains, which can, however, be crowned. At 3 miles pass Mandzaki, and at
<p>6 miles Banda Patti. The latter place should be held, as it is situated at the junction of the road from the Khadizai pass on the right. The ascent to the Mandatta pass is about a mile in length and thickly wooded. It is practicable for <i>hill</i> camels, mules, and bullocks. Elevation of kotal about 7,000'. The descent is longer and easier, and the slopes are less thickly wooded. From the foot of the pass to Stir Kala on the Khanki Toi is about 1 mile through a long open valley. (See Stage 6, Route No. IX, N. W. F., Vol II.</p>				
3	MOPATTI . . .	4½	29	Road up open cultivated valley. No difficulties.
4	MAIDAN . . .	11 P	40 P	Up the Kahu dara to the Batan pass. Water plentiful along the road. The range separating the Khanki and Maidan valleys is said to be low at this point, and the road is said by some to be easy; while others state that it is impracticable for camels, and that even

bullocks have to be lightly laden. From Mopatti to the kotal is about 7 miles.  
There is another route from Mopatti to Maidan up the Kamana dara, and over the Singhakh (or Chingas) Kandao. This is said to be easier than the Batan route, and laden oxen traverse it without difficulty.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 56—concluded.

The Kahu and Kamana daras are occupied by the Mamozais. There is much terraced *barani* cultivation, but not much level ground. The cultivated lands of the Afridis extend to within easy gun-shot of the crests of the Batan and Singhakh passes.

Route No. 57.

FROM SEROZAI TO CHINARAK (ZAIMUKHT).

Authorities.—TYTLER; N.-W. F. GAZETTEER.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	TORWARI . . .	6½	6½	Track over open country. A large village at the entrance to the Zaimukht valley, surrounded with a wall 6' thick; houses of stone with flat roofs. At the back of the village stands an isolated rock, from which a strong defence might be made. This, however, is commanded from the north. Ample water from a spring.
2	CHINARAK . . .	12	18½	The old <i>kafila</i> road runs across open country for 3 miles to Dambaki, and thence follows the course of a stream under the northern base of Dandoghar, hemmed in by wooded hills on both sides, to Warmegi (elevation 4,300'); or the sarobi dara might be followed to Nawa Kala,

and Jangbiragha, and thence through low wooded hills to Warmegi. General Tytler's force took this route from Warmegi to Nawa Kala, at which place they encamped on restricted ground, with a plentiful water-supply. From Warmegi to Chinarak the road is fairly level, lying, as before, through low hills intersected by *nalas*. For details of Chinarak *vide* Route No. 59.

Route No. 58.

FROM THAL TO ZAWO (ZAIMUKHT).

Authority.—TYTLER. DECEMBER 1879.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SINGROSA . . .	13	13	Road up the bed of the Singrosa Toi, good and easy the whole way. The river-bed gradually narrows, passing the villages of Dilragha at 8½ miles, Admela at 10 miles, and Thanna at 12 miles. Elevation, 4,000'. General Tytler's baggage column experienced no difficulty.



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 58—concluded.

2	CHINARAK . . . . .	5 P	18 P	<p>The best road for animals is by the river-bed, which is overhung by rocky ledges, and gradually contracts, the last mile and a half being through a defile (the Singrosa defile). Water plentiful in stream. There is also a path along the left bank, over the rocky ledges which overhang the stream, only fit for lightly laden baggage animals.</p> <p>A large village in open fields. Camping-ground good; water and supplies abundant. Routes Nos. 57 and 59 come in here from Serozai and Balishkbel respectively. Elevation, 4,250'.</p>
3	ZAWO . . . . .	8	26 P	

battery mules to pass. The village lies in a hollow basin at the head of the ravine, and has only three approaches, viz. (1) up the bed of the ravine, entering at the lowest point of the basin by a gorge or fissure in the solid rock, some 10 feet wide and 20 to 30 yards in length, with overhanging crags 50 feet to 60 feet high; (2) over a steep rocky spur which runs down to the gorge from the right bank of the ravine; and (3) apparently leading into a neighbouring ravine in which the village of Surmai lies, and thence over the crest of the main range into the Alisherzai country. The two first mentioned were used by General Tytler's attacking parties; by the third the villagers retreated.

Zawo is situated among terraced fields, and built in eight or ten separate hamlets. The slopes of the surrounding hills are in places thickly wooded with fir. Two streams traverse the basin, joining at the gorge above-mentioned. The fields are large and well tilled. Zawo was considered by the inhabitants as the impregnable stronghold of the country till it was destroyed by the expedition of 1879. Elevation, 6,000'.

Route No. 59.

FROM BALISHKHEL (KURAM VALLEY) TO CHINARAK (ZAIMUKHT).

Authority.—TYTLER. DECEMBER 1889.

No. of Stages.	Names of States.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	GOWAKHI . . . . .	10	10	This route is by an old <i>kafila</i> road. Leaving Balishkbel, the exit is somewhat difficult, owing to the precipitous nature of the dara banks. The road ascends to the plateau on the left bank, from which it descends into a <i>nala</i> , which it follows till it ascends the low spurs on

the right bank. Here it is commanded by many points on both sides. The bed of the *nala* was dry till within a mile of Gowakhi. Should opposition be encountered, much difficulty would be experienced in clearing the numerous ridges.

A small village of several hamlets on the right bank of the Gowakhi dara, commanded by precipitous heights on the south, and on the north by low hills covered with dwarf-palm and scrub jungle. Camping ground otherwise good on terraced fields. Water good and sufficient. Grass and fodder abundant. Elevation, 4,400'.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 59 — concluded.

2	MANATU . . .	9	19	The road leads for about half the march over low spurs on the right bank; then, descending into the <i>nala</i> , it ascends the left bank, and runs over rocky ledges overhanging the dara. General Tytler's baggage column experienced much difficulty, and several portions had to be improved. At about 7 miles the road leads on to the high land, which forms the watershed running across the Zaimukht valley, which at this point assumes its most open aspect. General features, large open plateaux intersected by small dry <i>nalas</i> .
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Village lies in large sloping terraced fields on the watershed before mentioned. Water-supply limited, and only obtainable near the village. Hence General Tytler sent three columns into the Watazai valley, which lies south of Manatu, being separated therefrom by a ridge. Elevation, 5,200'.

3	CHINARAK . . .	10½	29½	Leaving Manatu, the road begins to descend from the watershed, traversing broad sloping plateaux for about 4 miles, till it enters the bed of the principal watercourse, the sides of which are steeply scarped. Into this main watercourse run many branch <i>nalas</i> , all more or less
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abrupt, irregular and rocky; the country on this side of the watershed being similar to that on the other side, that is dwarf-palm and scrub jungle, stunted trees, interspersed with tall grass, and *nalas* with scarped banks, filled with round, smooth limestone shingle, showing that at some seasons water must come down in great force and volume. Leaving the *nala*, the road ascends to open slopes, on one of which is the village of Zartunak at 5½ miles, where General Tytler's force encamped. Thence the road, commanded at many points, winds through small hills, covered with undergrowth, and is fairly level, excepting some rough descents and ascents through small *nalas*. The main *nala* bed affords an easier, though more circuitous, route for baggage animals.

Chinarak is situated on a fairly level and open plateau, surrounded by terraced fields, intersected with numerous water channels, fed from the ravine leading into the Zawo defile, at the entrance to which the village may be said to lie. It is a point of strategical importance, being situated at the junction of the three main routes from Balishkhel, Thal, and Torwari (Routes Nos. 57 and 58), and at the mouth of the defile leading to Zawo, the great Zaimukht stronghold.

The Zaimukht valley would present many difficulties for the movement of troops, if opposed. It is throughout a close country. The roads are merely cattle-tracks, and would require much labour to make them good. In December water was scarce except at the camping ground; but the numerous ravines show that at certain seasons there must be heavy floods, which again would render movement difficult. The valley is very fertile, and there are large numbers of cattle, sheep, and goats. Fuel and forage, however, are the only supplies that can be depended on. Elevation 4,250'.

Route No. 60.

FROM THAL TO MAIDAN OF TIRAH, *via* BALISHKHEL.

*Authorities.*—SCOTT; TUCKER; N.-W. F. GAZETTEER.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	CHAPRI . . .	9	9	} <i>Vide</i> Route No. 61.
2	MANDORI . . .	4½		
3	ALIZAI . . .	7		
			20½	

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 60—concluded.

4	SHINAK . . .	6½	} <i>Vide</i> Route No. 61.
5	BALISHKHEL . . .	8½	
6	KHAZINA . . .	9	
			26½
			35
			44

The road ascends the Khurmana dara, occasionally crossing and recrossing the stream. The villages of Badama, Khayaki, Tarali, and Tarkhusam are passed; at the latter place the Gao dara joins (left) and the Ghodeaghara ravine (right).

For the first 3 miles the valley is open, but the hills then contract, forming a formidable defile 6 miles in length, hemmed in by rocky spurs. The bed of the stream is never less than 60 or 70 yards wide. For the first 4 miles the defile is turned by two side-paths. One, passing Mirbagh *ziarat*, ascends the Ghoariatang defile, and crosses the pass of that name at an elevation of nearly 6,000'. The other passes the villages of Tindoh and Khumb, and, turning sharp to the left, crosses the Ghoainghara pass. Both these passes are commanded by the Drabzai peak (7,300'), which was ascended by Colonel Gordon in 1879 with a party of infantry and mountain guns.

Khazina is at the mouth of the defile. Room for a large camp. The slopes to the north are covered with scrub and forest; to the east with cultivation.

7	TERI . . . . .	5	} Road follows the main stream (the Landai Toi) over fairly easy and very open country. The adjoining ground on both sides is very broken, and intersected with ravines.
			49

Room for a large camp on the long dry slopes thrown from the Terighar. Water from the stream.

8	MAIDAN . . . . .	11	} Road up the Lozaka Toi to the village of Lozaka (3 miles), to which point the ascent is gentle. Then there is a steep winding ascent for 3 or 4 miles up the Karach mountain through dense pine forest to the Lozaka pass, elevation about 7,000'. The descent to Maidan
			60

from the kotal is easy. The pass is quite impracticable for camels, and Tucker says that "a mule battery might struggle across it with difficulty."

There is another road which, leaving the Khurmana dara at Teri, runs along a low spur of Kahughar into the Dargai valley, where there is plenty of water. It then ascends the mountain, and passes over the Kalughar kotal into Maidan. This route is perhaps preferable to that by the Lozaka pass. It is said to be practicable for laden camels, and fairly easy for mountain guns.

Route No. 61.

FROM THAL TO KABUL, *via* THE SHUTARGARDAN AND LOGAR VALLEY.

*Authorities.*—CREAGH; HAMILTON; BENGAL ROUTE BOOK.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Intermediate.	Total.	
1	CHAPRI . . . . .	9	9	On leaving Thal, cross stony bed of the Sangroba <i>nala</i> , about 250 yards wide. After heavy rain in the Zaimuklit hills it is impassable for 3 or 4 hours. At ¾ mile cross deep <i>nala</i> by masonry bridge. A shallow stream of good water trickles through it.

Route No. 61—continued.

At 1½ mile cross 2 *nalas*,—the first unbridged, the second crossed by a low bridge, which in its present state would not bear the weight of a gun. Ramps could easily be made for guns just above the bridge.

At 1½ mile old camping ground on high ground overlooking bed of the Kuram. It is commanded by hills on the north. Three regiments could encamp here. Low-lying rice-fields below the camping ground extend to river bank for 400 yards.

At 2 miles take the upper road; slight ascent for a short distance. The lower road leads to Kapiang post, on right bank, Kuram. In cold season river crossed by a trestle bridge, at other times by two fords, (1) 200 yards below bridge, water when river not in flood 2½' deep; (2) 150 yards above bridge, water 2' deep. From Kapiang a road leads to Kuram up the right bank of the river, *viâ* Hazar Pir and Darwazgai pass.

At 2½ miles road leaves river bank, and turns north, to avoid a steep bluff overhanging the river and the bridge. An old ruined fort on top of this bluff. At 2¾ miles road rejoins river bank, and follows up it for the rest of the march; direction north-west. It leads along the base of the Torghar hill, which rises from 600 to 800 feet above it. The Kuram river lies 250 feet below the road; banks precipitous; river bed about 600 yards wide and stony.

At 3 miles 3 furlongs small fortified post of Kapiang, situated on cliff on right bank of Kuram. Distance across about 650 yards, garrison, 25 native cavalry, 40 native infantry. A path leads from this post into Wazivi country, through Maidan.

At 4 miles 2 furlongs a Khatak road post, and another at 4½ miles.

Below the road, on river bank, a camping ground for one regiment and its baggage animals. The road at this point is narrow; guns and carts could not pass each other. After heavy rains it is also much cut up by small landslips which render it temporarily impassable for wheeled carriage and guns. A broad stony *nala* joins the Kuram here on the right bank. A little water in it (in August).

At 6 miles 2 furlongs a zig-zag path leads up to the top of the Torghar hill, on the summit of which there is camping ground for 500 men, who would have to get water from the river, along left bank of which a narrow strip of cultivation extends for half mile.

At 6 miles ¼ furlong river leads through a narrow, rocky gorge, bed 80 yards wide. The rocky hills on the right bank approach to within 250 yards of the road, which now leads for a short distance along the face of a cliff. Guns and carts could not pass each other at this point.

At 7 miles 1 furlong the old road *viâ* the Kafir kotal joins in from the north-east. Cross *nala* from Kafir kotal, gradients easy, the entrance to which is guarded by several Khatak posts. There is an unfinished trestle bridge across this *nala*. The bed is stony and covered with dwarf-palm jungle. The river now bends west-north-west, and continues so to Chapri, the road continuing up its left bank, with low hills on the north commanding it.

At 7 miles 3 furlongs good camping ground for 6 regiments on both sides of the road. Low hills on north should be held by picquets at night. If troops are encamped south of the road, low *sangars* might be built on that side of the tents, to protect the men from fire from the right bank of the river,—the hills on that bank being within 450 yards range of the road.

At 7½ miles cross stony *nala*; gradients easy; bridge broken; camp for two regiments on right bank, south of road. The same remarks as above apply as regards picquets, etc.

At 8 miles 2 furlongs cross stony *nala*; easy gradients. A Khatak post on its left bank.

At 8 miles 5 furlongs cross a small deep *nala* by a wooden bridge, which requires strengthening if guns are to cross it.

A fortified post and *sarai* on line of communications of Kuram Force, on left bank of Kuram river. Garrison during the war: 1 British officer, 40 sabres native cavalry, and 80 rifles native infantry. Dimensions: keep 25 yards square, command 15', parapets 3' high and loopholed. Flanked by two bastions. It flanks the adjoining cavalry and transport lines, the dimensions of which are,—Cavalry lines 95 yards × 50 yards, command, 12', parapets 3' high and loopholed, flanked by 2 towers. Transport lines, 95 yards × 60 yards, command 7½', parapets 4½' high, no loopholes; flanked by two small bastions and one tower, in common with cavalry lines. Triangular ditch 3' deep and 3' wide. North-west face, transport lines, command 10', parapets 4½' high and loopholed. A stone tower is 30 yards from the western bastion of transport lines, in rocky ground, on left bank of the river.

Camping ground for 2 regiments on north-west and 2 regiments north of the post. Low hills approach to within 150 to 350 yards of the post, and would have to be held by

Route No. 61—continued.

picquets at night when camping grounds are used. Supplies from Thal. Water from river. Good grass procurable after rain. At other times, and especially in winter, grass is very scarce. Fair grazing for camels in hills on right bank of river. Grazing guard necessary. Firewood scarce. Elevation 2,270'.

2	MANDORI . . .	4 $\frac{1}{4}$	13 $\frac{1}{4}$	The road continues north-west throughout the march, up the left bank of the Kuram and is commanded by low hills on the north, about 300' high.
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At 2 miles slight ascent from the *na'la* for  $\frac{1}{2}$  mile; there are two roads—the lower has the easier gradient, and is the wider road, but not quite finished. A short cut up the river-bed avoids this ascent. A branch stream of the river has to be forded. It would not be passable when river is in flood.

At 2 $\frac{1}{4}$  miles Ahmad-i-Shama fortified post on right bank about 450 yards distant, 50 yards square; 10' command; 4 bastions at corners. Garrison, 25 native cavalry, 40 native infantry. Camping ground for a brigade south-west of the post.

At 3 miles a Khatak post; average breadth of road here only 11 $\frac{1}{4}$ ', descent gradual.

The short cut up river-bed joins in here. There are two roads. That on the south is the better, it being wider and the gradients easier. Gradual descent to Mandori; maize and rice cultivation to south of road.

A stone-built fortified post and *sarai*, on a small plateau, about 100 yards from the left bank of the Kuram. Garrison, 1 British officer, 40 native cavalry, 90 native infantry. Trace of post irregular; about 90 yards  $\times$  60 yards, command 10', parapets 3' high and loopholed. It is flanked by the *dâk* bungalow at one corner, and three bastions at the remaining corners. Command of *dâk* bungalow 14' including parapets. Transport lines adjoin north face of the post. Dimensions about 64 yards  $\times$  40 yards, command 7', parapet 4 $\frac{1}{2}$ ', ditch 2 $\frac{1}{2}$ ' deep and 3' wide. It has two bastions in common with the post, and two smaller bastions on its north face. Camping ground for two regiments north and north-east of the post. Spurs from a high rocky peak, which rises to a height of 1,000' north of post, approach to within 150 to 350 yards of it, and would have to be held by picquets at night, if troops were encamped here.

The small stone-built village of Mandori is about 250 yards west of the post on the river bank. A narrow strip of cultivation lies between it and the river. A portion of the village is on a rocky spur, some 100' higher than the post. Small quantities of rice, straw, bhusa and fire-wood obtainable from village. Bulk of supplies from Thal. Grass procurable after rain; in winter scarce. Water from springs in river bed; fair grazing for camels in hills on right bank. Guard necessary. Elevation 2,870'.

3	ALIZAI . . .	7	20 $\frac{1}{4}$	The road continues level for 1 $\frac{1}{4}$ mile, direction north-west. Another road winds up to the north over a low kotal, and passing round the upper portion of the village rejoins the main road a short distance beyond the village. For the first mile the road hugs the high rocky
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hill on the north-east, a narrow belt of rice cultivation lying between it and the river; guns or carts could not pass each other here. At one mile cross irrigation channel, 4 feet wide, by wooden bridge. At 1 $\frac{1}{4}$  mile a slight ascent up to a low kotal, road turning slightly north. A branch road was being made following the river bank, which avoids the kotal and is quite level. Hills rise to about 300 feet on either side of the kotal, and are held by Khatak posts. Descent from kotal steep for carts.

For the rest of the march the road continues north-west, skirting low hills, covered with small bushes, and keeping about from 200 to 400 yards from the river bank, along which occasional patches of rice cultivation are met with.

River-bed from  $\frac{1}{2}$  to  $\frac{3}{4}$  mile, wide and stony.

At 2 miles small village of Badshahkot on opposite bank, about  $\frac{1}{2}$  mile distant, with a narrow strip of cultivation adjoining it; a path (Route No. 64) leads from it across the Shabkh hills into Khost. After leaving the *na'la* there are two roads. The first up river-bed passing below a conglomerate cliff, 80 feet high. The second winds up a gradual ascent, and passes over the top of the cliff. First is the shortest and is perfectly level, and can always be used except after very heavy rain, or when the river is in high flood from melting snows

Route No. 61—continued.

Where these roads branch off there is camping space for two regiments. Dwarf-palm jungle requires a little clearing. Hills would have to be held by picquets.

At  $2\frac{3}{4}$  miles the road ascends for 2 furlongs over another cliff. It is steep and narrow for carts, and has no railing or protection on the cliff side. Guns would have to be taken over very carefully. At 3 miles 1 furlong foot of descent. The road now continues level for most of the way.

At  $3\frac{3}{4}$  miles camping ground for two regiments. Low hill on north should at night be held by picquets.

At 3 miles 7 furlongs cross a shallow stony *nala*, banks covered with palm-jungle, on right bank; camping ground for one regiment at  $4\frac{1}{3}$  miles; rice cultivation along left bank of river and between it and the road; it continues up to Alizai; river bank precipitous and 15 feet high.

At 5 miles village of Jelamai, about  $\frac{1}{2}$  mile from right bank of river, surrounded with cultivation,  $1\frac{1}{2}$  mile distant. At 5 miles 6 furlongs cross shallow stony *nala*.

At 6 miles a small village (one of the Boghzai villages) on opposite bank of river, with cultivation on either side of it. At  $6\frac{1}{4}$  miles a zig-zag leads over cliff; gradients easy. A short cut avoiding this ascent leads up the river-bed and crosses shallow branch stream. It would be nearly always passable for all arms. Camels are generally taken by this path.

At 6 miles 5 furlongs cross a narrow deep *nala*, just above its junction with the Kuram. A few springs higher supply Alizai post.

A fortified post and *sarai*, situated about 350 yards from the left bank of the Kuram, on a sloping plain; clay soil, cut up by ravines. The trace of the post is irregular: about 60 yards square, with a small ravelin on west face, in which the cavalry horses are picketed. Command 10 feet parapet wall of mud only from  $2\frac{1}{4}$  feet to 3 feet high, and very weak. No loopholes. It is flanked by two round towers at opposite corners. The transport enclosure adjoins the north wall of the post, and has also an irregular trace, about 60 yards by 70 yards; command 5 feet, parapets  $4\frac{1}{2}$  feet. Triangular ditch 4 feet deep and 4 feet wide. Earth from this ditch on east face is heaped up at the edge of the counterscarp, and the ground rising in this direction enables a man standing on the edge of the counterscarp to fire into the transport enclosure. Earth requires removing. A glacis is not wanted at this point. It has one tower in common with the post, and is also flanked by two small bastions.

Camping ground for one battery, or one cavalry or two infantry regiments, on long narrow strip between east face of post and raviny ground; hill on south within rifle range of camp. Camping ground for two regiments 200 yards north-east of post, close to the most easterly of Alizai villages.

This ground could not be used in wet weather, it being low and soil clayey. A regiment of infantry could encamp on a low rocky spur, 1 mile up the road, towards Shinak and south of it. There are five villages of Alizai. A belt of cultivation 300 yards wide extends between them and the river bank. Supplies of rice, rice straw, white *bhusa*, cattle, fowls, milk and firewood procurable in fair quantities from Alizai and from the villages of Boghzai on opposite bank; other supplies from Thal. Good water from springs, in deep *nala* 200 yards south of post; supply insufficient for large force. River water 400 yards distant. Grass scarce, except after rain. Fair camel-grazing about 2 miles north-east in low hills. Grazing guard necessary. Elevation, 3,070'

4   SHINAK . . . . .	6 $\frac{1}{4}$	26 $\frac{1}{2}$	Proceed north-north-west across a sloping plain cut up by shallow ravines, soil clay, then skirt low hills, 100' high, on north and north-east.
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At 1 mile pass through a cutting in a low spur from these hills. The five villages of Alizai extend up to this spur, and between them and the river bank is  $\frac{1}{2}$  mile of cultivation; villages of Boghzai and Amza Khel lie on opposite bank. For the next  $3\frac{1}{2}$  miles continue north-west skirting low hills on the east. These are offshoots from spurs of the Zaimukht mountains which are about 5 miles distant, and some 3,000' higher than the river bed. Between the road and the river there is continuous cultivation, rice and maize, from  $\frac{1}{4}$  to  $\frac{1}{2}$  mile wide; river bank precipitous, 10' to 12' high.

At  $1\frac{1}{4}$  mile cross stony *nala*, 50 yards wide; gradients easy; probably temporarily impassable after heavy rain in hills. On its right bank west of road, small village of Saïad Khan (Bangash), village of Munda (Wali Kala) on opposite bank.

Route No. 61—continued.

At 2½ miles bridge across irrigation channel, broken, road for short distance passes over low-lying ground liable to be flooded after rain.

At 3 miles cross stony *nala*, 60 yards wide; easy gradients liable to freshets. Village of Samand Kala (Moro Khel) 100 yards from its right bank and west road; and on high steep left bank of a smaller *nala*. Village stone built, wall 8' high round it, and one tower. Six or 7 villages of Bali Amin, extend for 2 miles up right bank of the Kuram, in midst of rich cultivation, a narrow belt along river bank. These villages are of fair size, and have high mud walls round them, and lofty towers. From Bali Amin a path leads over a low kotal south-west into Khost.

At 3¼ miles small fortified village of Yarra (Moro Khel) west of road, and close to it, mud walls, 10' high, 80 yards square, with low tower over gateway.

At 4 miles 3 furlongs road leaves river and proceeds north for next 2 miles up a narrow valley about ½ mile wide. It follows up the left bank of a stony *nala*, 100 yards wide, steep banks, 8' high. Low hills continue parallel to the road on either side, some 200' high, stony and covered with brushwood and dwarf-palm jungle (especially on east).

At 4 miles 6 furlongs pass small village of Rawaleh (Zaimukht) 300 yards west of road at the end of a spur overlooking the Kuram river, Hazar Pir *ziarat* on opposite bank.

Opposite Rawaleh, on both sides of the road, there is camping ground for three regiments; water from river ½ mile distant; low hills on both sides would have to be held by picquets. At 4 miles 7 furlongs cross a narrow deep *nala*; easy gradients; watched by a Khatak post. On its right bank camping ground for two regiments.

At 5¼ miles cross by a causeway a *nala* from the Zaimukht hills (2½ miles east). At 5½ miles cross the main *nala*, 80 yards wide. The road to Balishkhel continues up its right bank. Road to Shinak proceeds for ½ mile north-west up zig-zag to top of a plateau, and, along it to the post. Carts and guns could not be taken up this zig-zag, the turn being too sudden and gradients steep. They should follow Balishkhel road for ½ mile, and then up an easy slope to the post. Road crosses 5 *nalas*.

A stone-built fortified post and *sarai* on plateau, ¼ mile from the left bank of the Kuram about 300' above it. Garrison, 1 British officer, 40 native cavalry, 50 native infantry. Dimensions of post, 66 yards square, command 12', parapets 3½' to 4' high, very thin, and no loopholes; flanked by three towers. Entrance gate in south-east face protected by a redan, 6½' command, parapets 4½'. Transport lines, irregular trace, adjoin south-east face of post, and have 2 flanking towers in common with it, and also 3 small bastions. Dimensions about 62 yards × 60 yards, command 5½', no banquette, except in the 3 small bastions. Camping ground for two regiments, south and south-east of post on the plateau, and for four regiments in narrow valley north-east of post on either side of main road to Kuram. Camping ground for large force 1¼ mile north of post on broad plateau, and for one infantry regiment on plateau, 300 yards north of post.

Supplies (*vide* Alizai) procurable from two small villages of Shinak, immediately below post, and north-west of it. Also from the villages near Hazar Pir *ziarat* on the opposite bank, the other supplies from Balishkhel depôt. Water from spring 250 yards north-west near the nearest village of Shinak, and from river ¼ mile distant. Grass plentiful after rain; at other times scarce. No grazing for camels. Elevation 3,370'.

A stream from the Darwazgai pass joins Kuram on right bank near Hazar Pir *ziarat*. A road leads up it through the Darwazgai pass to Kuram (two marches); easy gradients.

A path also leads from Hazar Pir, due west by Jaji Maidan into Khost. (Route No. 62.)

5	BALISHKHEL	8½	35	At 1 mile main Kuram road joins in on opposite bank of river for 2½ miles; there is a narrow belt of cultivation between river and low stony hills. It is studded over with about 15 villages of Hazar Pir and Mindak, all protected by high mud walls and lofty towers. River banks both
				sides precipitous, from 50 feet to 10 feet high. On east of road, and situated on hillside, 2 miles distant, are the Zaimukht villages of Jelamai and Nirarai; slight cultivation round them. The plateau now widens to 100 yards, and is covered with low bushes and dwarf-palm, and on the east is cut up by several deep <i>nalas</i> .

At 1½ mile room to encamp two brigades. At 2½ miles cross deep stony *nala* from Zaimukht hills 250 yards above its junction with the Kuram; gradients easy; might be temporarily impassable after heavy rain. For the next 4½ miles the road continues north,

Route No. 61—continued.

skirting low hills of conglomerate, 100 feet to 60 feet high. On the east and on the west continuous cultivation, from 200 yards to  $\frac{1}{2}$  mile wide, descending in terraces to river bank, which is precipitous (in parts 70 feet high).

At  $2\frac{3}{4}$  miles small village Madshah (Bangash) on left bank river, mud walls, 60 by 100 yards, 12 feet high; one low tower; rocky hills on right bank now rise almost perpendicularly from river, 800 feet to 1,000 feet above it, and so continue for rest of march. At  $3\frac{1}{4}$  miles two roads. Keep to lower one; a short slight ascent to small stone-built village, Shasher on low hill east of road. The other road is a short cut, too steep for carts, and leads over spur behind the village. At 4 miles cross the Kalu Khwar impassable after rain. At 5 miles cross shallow stony *nala*; on its right bank is the fair-sized village of Durani, two lofty towers, mud wall round village 11 feet high. Water from *nala* all used up in irrigation. Road now ascends very gradually through a well-cultivated valley,  $\frac{3}{4}$  mile wide.

Small village of Kuchah on opposite bank, with one tower and a little cultivation. The road now again skirts low hills on the east, and so continues for the next 2 miles.

At 6 miles low-lying ground for 100 yards, liable to be flooded after rain; and then cross a low kotal.

At 7 miles 3 furlongs large village of Sada, adjoining road on east, four lofty towers; village surrounded by wall of mud and stone, 10 feet high; two or three water mills, several fine *Cbunar* trees.

A road used by *kufilas* leads from here through Zaimukht country to Chiurak (Route No. 59).

At 8 miles cross Khurmana stream, which flows down a rocky bed, 100 yards wide, from the north-east. In August 6 inches of water. In May and June, when snow melts on Safed Koh, it is from 1 to  $1\frac{1}{2}$  feet deep. It joins the Kuram river 200 yards west of the road.

A fortified post and *sarai*, about 150 yards from left bank of Kuram river. Garrison, 50 native cavalry, head-quarters, and 350 native infantry. Trace of post irregular; perimeter 460 yards. Native infantry partly in tents and partly in mud-built barracks; 3 barracks, 120 feet long, 15 feet wide, 8 feet high and three barracks 60 feet long; one of the latter occupied by officers and one end of it used for rest-house for sick European soldiers. The different faces flanked by one stone tower, 15 feet command, and 6 bastions. Walls, stone-built,  $5\frac{1}{2}$  feet command; parapets 4 feet high, in parts surmounted by one row of sandbags. At other parts crest of parapet very weak and scarcely bullet-proof. Ditch triangular, 4 feet and 5 feet wide at top. The native cavalry enclosure adjoins the north-east corner of the post, and is oblong,  $100 \times 50$  yards. The walls are 4 feet high, mud-built, in bad repair and only 3 inches thick at top. A shallow ditch acts as a drain, the ground being damp. Its faces are flanked by the post, and by a small bastion at its north-east corner. Two spurs from a stony plateau, which slope down from the Musazai hills ( $2\frac{1}{2}$  miles distant) approach to within 150 and 250 yards of the post on the north and north-east respectively. Towers on these hills are held at night by picquets, which also watch adjoining *nalas*. Camping ground for two regiments between these spurs and the post; ground low-lying. In wet weather troops should camp on plateau north-east of post, where there is ground or a large force. Water from Kuram river and Khurmana stream, distant 200 yards and 3 furlongs respectively. Supplies from large village of Sada, and from Balishkhel village. Rice and rice-straw plentiful, other supplies from commissariat depôts, Thal or Kuram.

Camping ground for three regiments on stony slope on the north-east and west faces of the enclosure. Grass (*dhub* and hill) plentiful after rain, at other times scarce; camel grazing good at foot of Musazai hills, north of post ( $2\frac{1}{2}$  miles), also in hills behind village of Sangina, on opposite bank river; strong grazing guards should be sent. Elevation 3,500'.

6	WALI MUHAMMAD	$8\frac{1}{2}$	43 $\frac{1}{2}$
	KALA.	—	

On the north the road throughout skirts low stony hills from 100 feet to 150 feet high, and south of it there is a continuous belt of cultivation, descending in terraces to the river bank, and varying in width from 200 to 400 yards. Slight cultivation on right bank;

rocky hills rise from 600 feet to 700 feet above river.

At 7 furlongs transport enclosure north of road; small village of Rigi and commissariat enclosure of same name, respectively 250 and 400 yards south of road. Village of Sangina on opposite bank, built on a mound with two towers and surrounded by rice-fields.

At  $1\frac{1}{4}$  mile *Khatak* post, road for next  $\frac{1}{4}$  mile passes through a grove of mulberry trees. At  $1\frac{1}{2}$  mile cross shallow stony *nala* 300 yards wide. Fields for next  $1\frac{1}{2}$  mile, studded with



Route No. 61—continued.

mulberry and camel-thorn trees, and a few chinar. At  $3\frac{1}{2}$  miles good camping ground for two regiments north of road, at mouth of a stony *nala*. Some grazing for camels  $1\frac{1}{2}$  mile up the *nala*. At  $3\frac{3}{4}$  miles cross a stony *nala*, 30 yards wide; gradients easy. On its right bank, at junction with the Kuram, are the fortified *sarai* and large village of Ibrahimzai, both south of road. The *sarai* is stone-built, 50 feet square, 10 feet command; parapets 3 feet high. Flanking towers at each corner. Entrance on north. It was used as an hospital by the native infantry regiment at Balishkheil, and was garrisoned by 39 infantry and 4 sowars. The village is in four detached parts, and has lofty towers. At 5 miles low ground low hills recede 200 yards. Gentle ascent up stony slope, covered with dwarf-palm; 3 regiments might camp on it north of road, if necessary; 150 yards south of road ( $5\frac{1}{2}$  miles) village of Yakubi. Two towers, fine chunar trees. Hamlet of Saidan on opposite bank. At 5 miles 5 furlongs, cross deep stony *nala*, 30 yards wide, banks 10 feet high; gradients easy.

At 6 miles pass through cultivated valley,  $\frac{1}{4}$  mile wide; low ground. Irrigation channels all bridged. Follow up *nala* bed, 300 yards north, and then strike off north-west across a valley 350 yards wide; 100 yards further up the right bank of the *nala* is the *ziarat* of Hazrat Abbas. Hamlet of Maidal on the right bank at junction with Kuram; two hamlets and village of Bizoti, on right bank river. A path direct across the hills from Hazar Pir *ziarat*, passes behind this village, and crossing the Kuram, a little below Wali Muhammad Kala, leads up its left bank to Kuram fort. It is used by country carriers as a short cut. It is passable for mules, and avoids the Darwazgai pass.

At 7 miles 3 furlongs the road skirts the low hills again on the north, and for the next  $\frac{1}{4}$  mile is lined with fine mulberry trees. In parts road is low-lying, and liable to be flooded after rain.

At  $7\frac{1}{2}$  miles leave the main road, and descend south by cross-road 250 yards, to Wali Muhammad Kala. This cross-road would be difficult for camels after rain.

A high mud-walled enclosure, 75 yards  $\times$  60 yards, wall from 14 feet to 16 feet high. Parapets 4 feet to 6 feet high and loopholed. In centre enclosure a tower, 50 feet high, with several tiers of loopholes and loopholed parapet on top. No flank defence to enclosure. Entrance on east side. It is situated 250 yards south of main road, on the steep left bank of the Kuram (here 60 feet high) and directly opposite the village of Maora, which is perched on the top of a rocky point, 550 yards distant, on right bank of river and some 400 feet above it.

The interior is much cramped.

There is a fair camping ground for two regiments on sloping ground, on the right bank of a stony *nala* 400 yards north-west of the post and north of the road, opposite the small village of Sodwt-i-Kala. A regiment of infantry might also be encamped north of main road, on a stony slope, 250 yards north of the post. Water from river and from a spring immediately below the post, and south of it in river-bed. Supplies procurable in small quantities from neighbouring villages. Grass procurable after rain, at other times scarce. Camel-grazing very scarce. A little may be picked up on the banks of the *nala* leading up to the village of Jalandari, 5 miles north-north-west; grazing guard necessary. Elevation 3,700'.

7	KURAM . . . . .	9	52 $\frac{1}{2}$	At 500 yards from Wali Muhammad Kala, road round small spur on right which commands it, and then crosses a small dry <i>nala</i> , by cuttings through both banks, 86 yards long, 15 feet deep; banks of <i>nala</i> steep and broken. 10 feet high; alternative foot-paths to right and left;
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soil light and stony. At 600 yards from Wali Muhammad Kala passes 44th milestone from Thal, still commanded by low spurs on right. At 880 yards it crosses two small water-cuts, bridged; steep spur here commands on right, 30 feet high, continues for 200 yards; road descending slightly, passes through richly cultivated fields; village of Ramkareh 300 yards to left, low spurs still commanding road on right, level and good, river bank  $\frac{1}{4}$  mile distant on left. At 45th milestone from Thal, village of Amalkot, leaving Amalkot, road winds round several low spurs, all commanding it, between which is cultivation and deep irrigation cuts. For the next  $\frac{3}{4}$  mile road rises slightly till the village of Sultan is reached, built on high ground, commanding the approach by road.

Sultan, a large walled village; good supplies. River  $\frac{3}{4}$  mile to left. Here road, hitherto running north-west, takes a bend more northerly, rises slightly for  $\frac{1}{4}$  mile, skirts low spurs on left, descends, passing 47th milestone from Thal, and crosses a *nala* 200 yards broad; banks low and sloping on the right bank; 400 yards to left of road is the village of Agra,

Route No. 61—continued.

large, supplies plentiful. On right bank of *nala*, cutting 10 feet deep, 24 feet wide, winding 100 yards long. Country open and passable both sides. Road rising slightly, crosses open grassy plain not commanded; rich cultivation a little distance to left extending to river bank 1 mile distant; at summit of plain passes 48th milestone from Thal; country round easily passable for cavalry and infantry; for the next  $\frac{1}{2}$  mile road good and level, apt to become rather heavy, and cut up in places after rain, but easily drained or avoided; it then enters cultivation, and at 48th milestone from Thal, passes through village of Bakhtawar, small supplies procurable. At  $\frac{1}{4}$  mile from Bakhtawar, passes village of Shabean, small; fields around these villages much irrigated, and water-cuts carried across road, over which are small flanked roadways from 3 feet to 4 feet span. At Shabean road crosses small *nala*, dry; banks high, but descent and ascent of easy gradients, through small, cutting on right bank, whence it rises slightly, passing over terraced fields; country open both sides, road not commanded; good, level and wide till 50th milestone from Thal is reached; here road descends to Kurman Toi, 100 yards wide; water at most seasons; banks high, precipitous and broken; descent on left bank by a ramp parallel to course of *nala*; soil light with limestone, shingle and boulders, easily worked away by water; Kurman Toi subject to heavy floods; roadway on left bank liable to be carried away. On left bank and to left of road village of Mistokot, small; few supplies. Right bank of Kurman Toi low, ascent easy, through two small cuttings, 15 feet deep. At the 51st milestone from Thal, village of Sudareh, small; supplies procurable. Road here crosses small *nala*, dry; banks low and easy. Two roads lead from here into the station of Kuram,  $\frac{1}{2}$  mile distant; one to left crosses a *nala* with rather steep gradients, one to right ascending slightly, crosses open fields till it descends at 600 yards further through cutting into *nala* bed; gradient easy; 15 feet deep; roadway 24 feet wide; *nala* 100 yards wide; banks broken, irregular and precipitous in places; several springs in bed, water for greater part of the year. Road ascends right bank through short cutting; at 200 yards from cutting road crosses a narrow deep *nala* by flanked bridge, 15 feet span; bridge 12 feet wide. At this point the precincts of the Kuram station are entered.

Kuram, a large station, two forts; mud walls, 20 feet high, mark north and south boundaries connected by redan traces, walls mud, loopholed, along which huts are built. Forts 800 yards apart, joined by good, broad road, lined with trees. Spacious camping grounds; water from springs west of station good and plentiful; quantity of water in subsoil, which rises to a foot or two of surface in many places. Soil generally damp and heavy; climate fair; fruits and vegetables of all sorts grown in large garden. Country round Kuram open and fairly level, but intersected by many *nalas*, dry except after heavy rain; supplies plentiful. Height 4,650 feet above sea-level.

8	SHILOZAN FORT	7 $\frac{1}{2}$	60	The road descends through short cutting to a <i>nala</i> , 100 yards wide; bed stony; several springs; liable to heavy floods after rain. Road goes through deep cutting on right bank, 15 feet deep, 60 yards long. Banks of <i>nala</i> steep, irregular and broken. Gradients
of cutting easy; soil light, mixed with quantity of limestone boulders, easily worked into by water. On the right bank of <i>nala</i> , a road branching to left in a westerly direction leads to Chankani, and a track to right leading north goes to village of Zeran and thence to Agam pass, over Safed Koh range into Jalalabad valley (Route No. 38). Country open and uncultivated, road not commanded. At 2 $\frac{1}{2}$ miles crosses deep <i>nala</i> , 30 yards wide; banks steep and broken; descent rather steep; ascent easy; liable to heavy floods. At 2 miles 1,100 yards crosses wide <i>nala</i> ; left bank rather steep, right bank easy; country open and uncultivated as before. At 3 miles 50 yards crosses similar <i>nala</i> , 120 yards wide, banks irregular and broken. Road rises gradually, good and wide; country open, same as before. At 4 miles a branch road to left leads to south of Fort Shilozan, the upper road to right leads to north of fort, and is the better one. At 4 $\frac{1}{4}$ miles road dips through low cutting, bank low, 100 yards long, small cattle pond on left; soil light, boggy after rain; road level and good. At 5 miles road dips a little; apt to be much cut up and heavy for wheels after rain. At 5 miles 400 yards cattle pond on right. At 5 $\frac{3}{4}$ miles a track crosses main road leading to village of Shilozan. At 5 miles 950 yards small <i>nala</i> , banks steep, cutting on right bank; small cattle pond on right; cutting 50 yards long, soil light, apt to be cut up after rain; banks 10 feet high. At 6 miles small <i>nala</i> , deep cutting on both sides; easy gradients; floods after rain; country as before. At 6 miles 300 yards crosses small deep <i>nala</i> 30 feet wide,				

Route No. 61—continued.

spanned by wooden bridge; small cutting either side; road level and good; country open.

Shilozan fort on left; branch roads to right lead to camping grounds. Shilozan fort contained the European base hospital; climate good, elevation 5,950' above sea-level; country round open, suited for camping large numbers of troops; water from irrigation-cuts and village of Shilozan  $1\frac{1}{2}$  mile north, good and plentiful; supplies abundant; timber and stone for building purposes procurable in great quantities from foot of Safed Koh spurs, about 2 miles distant; small village of Nai Kai, south of fort. Elevation 5,960'.

9	PEIWAR KOTAL	.	11	71
			—	

At  $1\frac{1}{2}$  mile from Shilozan fort a small deep *nala* crossed by small wooden bridge. At this point a branch road to left leads to road south of fort; country open and uncultivated; road rising gradually. At 2 miles site of old encampment, country open and uncultivated;

road descends to bed of *nala*. At  $2\frac{1}{2}$  miles dry small cutting, easy slopes; road crosses broad hollow in ground, in which are several dry *nala* beds; small; no impediment. Road rises gradually, the lower spurs of the Safed Koh range are now approached, about 1 mile distant; country same as before. At  $3\frac{1}{2}$  miles crosses small *nala*, 8 feet deep, by wooden bridge 30 feet span, dry, except after rain. Road rises gradually, a little cultivation on left, round village of Lutmai, slightly commanded by rising ground on right.

At  $4\frac{1}{2}$  miles deserted village of Habib Kala, built by Afghan troops; would hold 1 regiment infantry and 1 battery; village commands road: water from small cuts taken from Spin Gawai, rising ground and spurs of Safed Koh range behind village. Road here crosses Spin Gawai, left bank low at point of crossing, commanded throughout by right bank: *nala* bed 700 yards wide, stony; near right bank water runs in a deep channel after rain; road carried on causeway; break-water up stream to divert the current, at times very strong. At 5 miles on right bank of Spin Gawai, village of Peiwar or Gundikhel; a group of hamlets on high commanding ground, which slopes in terraced fields towards road; to left, and close to road, is village of Turseh; about 1 mile down bank, village of Sharin Khel. From bed of Spin Gawai a track branches to right of main road up the *nala* leading to the Spin Gawai kotal. Leaving the bed of the Spin Gawai, the country is no longer open; road, passing through richly cultivated and irrigated fields, is commanded by the village on the right: fields divided by stone banks; narrow lanes, and irregular cuts, are passable only by infantry, and that only when not under irrigation. Road beyond village still commanded by high ground to right. At  $5\frac{1}{4}$  miles small camping ground; water good and plentiful; supplies abundant; descends deep *nala*, left bank ramped; easy zig-zag; ascent on right bank easy, *nala* bank steep, rocky, and broken, impassable in many places; commanding ground on right recedes slightly; country on both sides covered with jungle growth and holy-oak trees, 10 feet to 15 feet high. Road gradually descends to a small picquet tower on right. At  $5\frac{1}{2}$  miles crosses a deep *nala*, descent and ascent commanded on right, slopes easy; up this *nala* about 1 mile, small village of Gundi. Road descends, country same as before; view shut in, right and left, by steep spurs at  $\frac{1}{2}$  mile distant on either side. The gorge leading to the Peiwar kotal may now be said to be entered and road commanded till kotal is reached.

At 7 miles crosses deep *nala*; descent rather steep: ascent easy; banks steep, rocky, and broken, passable only in places; *nala* bed commanded from high ground on right, small picquet tower on right. Up the *nala* about—mile small village of Gubazan. Road now rises gradually up to kotal, commanded on both sides; country same as before; for the next mile the road is fairly level, though rising till 7th mile; jungle undergrowth ceases, and cultivation appears on left.

At  $7\frac{1}{2}$  miles two knolls from adjoining spurs on either side completely command the approach; small camping ground here on left; water from village of Turai near road and at the mouth of adjoining ravine. The road now rises steeper, crossing a small *nala* bed till it reaches and passes through cultivation; steep pine-clad hillsides rise precipitously on either side, forming a gorge a hundred yards wide.

At  $9\frac{1}{2}$  miles a small water tank and cattle trough on right; up to this point the road is good, with no difficulty for wheeled carriage, but now the final ascent of the kotal commences. Road rises by a succession of steep zig-zags, wide and metalled; guns could be taken up by hand ropes; hillside covered with pine trees; soil rocky, little or no undergrowth; sides of road built up in many places; about quarter of the way up a small spring to left of road.

At  $10\frac{1}{2}$  miles the summit of the kotal is reached, and road passes between small hills, with fairly level spaces between, suitable for encamping a large force: drinking water from

Route No. 61—continued.

spring, a short way to right and below kotal; supply good and abundant; spring and cattle troughs about 1 mile beyond kotal. A bridle path to right leads from the Peiwar kotal to the Spin Gawai kotal, situated about 2 miles to north: path good and practicable for pack animals; leads for  $1\frac{1}{2}$  mile round steep and wooded hillsides, till it debouches on an open grassy plateau  $\frac{1}{2}$  mile broad: excellent camping ground; water and wood in abundance. Crossing the plateau, the summit of the Spin Gawai kotal is reached. To the west of the plateau a path leads to the villages of Gundi and Zabardast Kala, the latter on the main road from Peiwar kotal to Ali Kbel and the Shutargardan pass. Peiwar kotal could easily be defended from a direct attack from the east or Kuram side, as the steepness of the hillsides allow of but few approaches, which could be defended by a few men. An attack from the west by an enemy advancing up the Hariab valley would be difficult to guard against, as the formation of the hills affords facilities for turning the position. The country to the north is bounded by the steep slopes of Sikaram, the highest peak of the Safed Koh, 15,620 feet above the sea-level; while to the south the ridge descends to the Kuram river, crossed by the Istiar and Strimandar kotals, and the Manglor pass, which latter is the easiest, though most circuitous. General elevation of the Peiwar kotal 8,500 feet; climate good in the summer; the cold in winter is very severe: unlimited amount of timber for building purposes in the vicinity; many kinds of fruits and vegetables grown in the neighbouring villages.

10	ALI KHEL . . .	$12\frac{1}{2}$	83 $\frac{1}{2}$	Road runs through Hariab valley. The average height of the valley is about 7,500 feet; the climate in summer is very fine, but in winter it is very cold, snow lying thickly on the ground, and preventing winter communication between the various villages for a short time. The high ground under the mountains by which the valley is surrounded and the mountains themselves, up to an elevation of 11,000 feet, are covered with forest of various kinds, seven-tenths of which is deodar, with <i>Pinus excelsa</i> , <i>Abies smithiana</i> and <i>webbiana</i> , and edible pine in certain localities.
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For first 2 miles to Hariab river the road descends at a gradient of about 1 in 30, passing through a narrow defile, and commanded at about 150 yards on each side by low pine-clad hills, which could be easily traversed by infantry. These hills are themselves commanded by others and higher ones to the north and south.

At  $1\frac{1}{4}$  mile from Peiwar kotal, on left of road, are springs of good water, from which the late garrison was supplied. At these springs a small stream rises and flows into the Hariab river. The road runs along its right bank.

Just before arriving at these springs, the defile through which the road runs is joined by another defile from the north (through which a path runs to the Spin Gawai kotal) and widens out, forming an almost circular grassy basin, about 308 yards diameter, narrowing at its eastern end, through which the stream from the springs finds exit between steep banks about 10 feet high. The road runs through a cutting here on the stream's right bank, and all arms, except infantry, would have to confine themselves to it for about 70 yards. Having traversed this distance, the hills on each side recede from the road, and for about 1 mile the route runs along fairly open country to the Hariab stream, which it crosses by a rough bridge with stone (kacha) piers. This bridge is liable to the action of floods. The banks of the Hariab stream are low, and it affords no obstacle save when the snows are melting. Having crossed the stream, the road bifurcates, the northern road being the longer by about 1 mile: (i) the southern, or river, road follows the right bank of the Hariab, running southwest to Bian Khal, being commanded throughout by the pine-clad heights of the Mangiar range: (ii) the northern road takes a line east for about  $2\frac{1}{2}$  miles and then turns southeast. It is not commanded by the Mangiar heights. Bifurcation  $2\frac{1}{2}$  miles from Peiwar kotal.

(a) Northern road ascends from the bed of the Hariab, by a zig-zag of easy gradient, and passes hamlet of Zabardast Kala, consisting of a small enclosure, forming a detached fort with dilapidated tower. Camping ground for two brigades, used by Afghan troops as a cantonment prior to 2nd December 1878.

At  $3\frac{1}{4}$  miles crosses Sargul stream, bed about 200 yards wide, banks low; water runs in several channels, the main one being crossed by bridge similar to above (see Hariab); no obstacle.

At  $4\frac{1}{2}$  miles Belut nala, crossing which road runs south. This nala has precipitous

Route No. 61—continued.

banks about 15 feet high, descent and ascent by gradients of 1 in 17. Route No. 44 takes off about here for Safed Sang.

At 6 miles passes through village of Lower Belut on left bank of Lalidar stream, consisting of about five houses, each detached and forming a small fort in itself. This is typical of all Jaji villages. About 800 yards up this stream and on the same bank is the village of Belut, at the mouth of the Lakarai pass. Lalidar stream is about 200 yards wide, with precipitous banks, of which the left commands the right. The road descends into the *nala* by a zig-zag of 60 yards, gradient 1 in 20, and leaves it by a ramped ascent  $\frac{1}{2}$  mile long, cut at any easy gradient in the right bank of the *nala*, parallel to its course. This ascent is commanded by the village of Petta on the right bank of the *nala* and by that bank itself. About  $7\frac{1}{2}$  miles pass Ali Sangi, a hamlet 100 yards (P) to right of road beyond a small *nala*. From opposite this village road traverses a high uncultivated plateau on which (on left of road) is ample camping ground for a large force. Here are some ruined buildings left by troops of Sir F. Roberts' force cantoned on the plateau, Bian Khel camp in 1878. Wood and water plentiful. At 8 miles descent by zig-zag of easy gradient into Karshatal stream, which crosses and passes at 9 miles village of Bian Khel, situate on low ground, surrounded by cultivation. Bed of this stream about 250 yards wide, banks high, steep and grassy. Water-supply fair, rising from springs in the *nala* banks. This northern road passes through terraced fields for the most part, and all wheels and animals would have to keep to it between Zabardast Kala and Belut; however, especially to the north, cavalry might work, though not with facility, the ground being very stony and much cut up by *nalas*.

Bian Khel, near which the 2nd, or river, road rejoins the northern road, is a collection of small hamlets, like all Jaji villages.

(b) *River road*.—From bifurcation,  $2\frac{1}{2}$  miles from Peiwar kotal, continue along right bank of Hariab under Zabardast Kala, which commands it, hence for next mile over stony ground. At  $4\frac{1}{2}$  miles passes village of Kotkai and shortly after Sharif Kala, where road crosses mouth of Shergul *nala*. At 5 miles crosses mouth of Lalidar stream at its junction with the Hariab. At  $6\frac{1}{2}$  miles the road passes under the village of Stir Kala; at 7 miles ascends by steep cutting of 200 yards (too narrow for guns meeting to pass) from river bed, and by a similar descent drops into the Karshatal stream, which crosses and joins northern road at  $7\frac{1}{2}$  miles. This "river road" is commanded throughout by the Mangiar range (see above), and by the right bank of the Hariab and the various villages beneath which it passes.

From junction near Bian Khel the road continues along the right bank of the Hariab to within 200 yards of Ali Khel, where it turns off to the right.

At  $10\frac{1}{2}$  miles pass under Ahmad Khel opposite to which village a track leads *viâ* the Istiar kotal to Kachkina in Kuram, and the Sursurang defile, passable for mules and infantry, and forms an alternative route to the Peiwar. At  $12\frac{1}{2}$  miles the road from which the junction near Bian Khel is commanded by the spurs of the Mangiar range, passes through the village Ali Khel, situate on the Keria, a small confluent of the Hariab. Ali Khel is a village of the usual Jaji type, and consists of some 50 enclosures. Hence the road ascends to the camping ground already described.

11	DREKALA . . .	9	92 $\frac{1}{2}$	Road, passing over high plateaux above the village, descends into the bed of the Hazardarakht stream, and follows left bank. Pass the Jaji villages of Shamu Khel and Kokian at 5 miles; continue in a N.-W. direction; crosses and recrosses the stream. This portion
of the road is the worst of the defile, being confined and commanded by broken and high hills. Troops marching should crown the hills on left bank. Drekala is a small village situated on left bank of the stream, and is a fair place for the bivouac of a brigade.				

12	SIRKAI THANA . . .	10 $\frac{1}{2}$	103	Road turns to the W. Continuing along left bank of stream, the ravine opens out after Drekala; pass Jaji <i>thana</i> (which is a ruined, 40 yards square building) at 6 miles; then the road goes along the bed of the stream, stony bottom, general direction S.-W.S. At
about $8\frac{1}{2}$ miles arrive at Karatiga, and then the ravines of Leo-al-Gud join the stream. This is the point where opposition would probably be met; the ravines extending far back and ground much broken. This position should be held until all the baggage has passed through				

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 61—continued.

13	DOBANDI	9	112	Road turns to N., and goes over the crest of the hill by an easy ascent and two zig-zags, with the exception of the crest, where it is steep. This position is quite untenable without artillery, and even then is very much exposed, being commanded by hills on the right bank
<p>of the Hazardarakht stream, and the position being easily turned on its left flank. Behind the kotal, and to the N. of it, is a red hill commanding it, occupied by a small Ghilzai tower. This is again commanded by a high hill on the left front called Kamran Tang, which is the key of the position from the Surkhai kotal to the Shutargardan. From top of the kotal there are two roads—one to the right descending into the valley of Kasim Khel, and one to the left leading direct to the Kasim Khel, the road descending by a gradual slope to the <i>thana</i>, which is 11,000' above the sea, 50 yards square, but completely commanded by the Kamran Tang hill on the S. of it; distance of descent <math>2\frac{1}{2}</math> miles.</p> <p>Almost immediately after the pass is surmounted, the road turns sharp round to the left, and rounds down a spur, which runs out in a S.W. direction by a very rough, steep, and tortuous path. After descending the spur on the left bank, the road crosses the stream turning round to the N.W., and goes along the right bank by an easy way to the small village of Akhun Khel; distance from crest <math>2\frac{1}{2}</math> miles. Just below the village the road through the gorge narrows, at some places to 5 or 6 yards, being hemmed in by two projecting spurs. The village of Dobandi is about 3 miles below Akhun Khel. Good camping ground on the fields; forage obtainable, but no other supplies.</p> <p>For 3 miles to the crest of the Shutargardan pass the road is easy, and the incline gradual. The descent, however, is difficult, and presents a striking contrast to the ascent, as the footpath is very steep and tortuous, though practicable for all baggage animals. As the soil consists generally of disintegrated rock, the path could, with slight manual labour, be made into a fair road for wheeled traffic, were a cutting made into the side of the hill with the outer bank supported by stones. Timber is not procurable on the spot. The descent is about <math>1\frac{1}{2}</math> mile in length, and merges into the Dobandi <i>nala</i>, which carries off all the water of the neighbouring gorges running down from the Safed Koh. At a point about 1 mile from the bottom of the pass, at Akhun Khel, the <i>nala</i>, whose bed forms the road, runs between precipitous rocky cliffs, about 80' high, 12' wide, and 120' long. Infantry could get passage on either side on the high ground above, covering the <i>nala</i>. The next <math>3\frac{1}{2}</math> miles of road along the bed of the <i>nala</i>, which is very stony, gradually opens out (and on the right are a few detached houses and patches of cultivation) until the village of Dobandi is reached lying on the right bank of the <i>nala</i>.</p> <p>On high ground on the left bank opposite Dobandi is an old unoccupied fort, which commands the road up the stream. There is no encamping ground here for a force over the strength of a regiment, and the position would be a very bad one for any troops at all to make a halt in. There was very little water in the stream, and apparently, from there being no sign of a high-water mark, the road is rarely impassable from excess of water.</p>				
14	KUSHI	$7\frac{1}{2}$	$119\frac{1}{2}$	Almost immediately after leaving Dobandi, the road turns off due N. over the Shinkai kotal, which, though only about 500 yards in length, is very steep, and a severe trial to laden animals. A good road could easily be cut in three or four zig-zags. From the top of the
<p>kotal to Kushi is about <math>5\frac{1}{2}</math> miles, and the decline very gradual. On the right, running down from the foot of the Ghilzai hills, lies the extensive, barren plain of Dashti-Surkhao. The village of Kushi is on the left bank of the Dobandi stream, and, being highly cultivated, can afford abundant supplies. Water is plentiful, though not very good. The rear-guard, with Embassy baggage, laden on 32 camels and 200 mules, which left Kasim Khel at 5 A.M., reached Khushi at 4 P.M.—a fact which speaks fully of the difficulty of the march.</p>				
15	ZARGAN SHAHAR	7	$126\frac{1}{2}$	Leaving Kushi, the road turns N.N.W., and runs over the Dasht-i-Surkhao. After 3 miles along a plateau the road descends into a broad dry <i>nala</i> , where water is never deep, and whose banks are badly defined. The distance between the road in the Ghilzai hills is about

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 61—concluded.

4 miles, and, consequently, no molestation could be offered to a force on the line of march while cavalry swept the intervening plain. The road is practicable for all arms. At Zargan Shahar there is very good and unlimited encamping ground, with first-rate water obtainable from *karez*.

Here Route No. 66 branches off to Ghazni.

16	ZAHIDABAD . . . . .	12	138½	} <i>Vide</i> Route No. 66.
17	CHAHARASIA . . . . .	10	148½	
18	KABUL . . . . .	11	159½	

Route No. 62.

FROM HAZIR PIR (HAZAR PIR ZIARAT) (KURAM VALLEY) TO KABUL,  
*via* THE DUNNI PASS AND MATUN.

*Authorities.*—TO MATUN, DESPATCHES AND REPORTS, KHOST EXPEDITION  
January 1879—FROM MATUN TO KABUL, KENNEDY (*from native information*).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate	Total.	
1	JAJI MAIDAN . . . . .	10½	10½	The road is good and the country open and easily practicable for cavalry. A very little labour would make the road fit for wheeled guns. It passes through open rolling hills, and occasionally over small plains. Water plentiful. The hills stony and bare, except for the low dwarf palms.

Jaji Maidan consists of a cluster of seven villages situated in a small basin, surrounded by easily accessible hills. The whole basin is rice cultivation, and there is no place for troops to encamp, except in the fields, which about January are dry and very suitable grounds.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 62—continued.

Water is abundant. Fuel rather scarce, also grass, but both were brought in by the villagers for sale.

NOAR . . . . .	11	21½	Immediately beneath the camp running through the Jaji Maidan valley is a deep <i>nala</i> that delayed the camels very much. The road for four and a half miles is up a fairly open valley with easily accessible hills on either side, and with several small villages in it, till
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the kotal is reached by a gentle ascent. Three more *nalas* are passed in the valley, but they can all be easily crossed by making a detour. The hills on either side are bare, not practicable for cavalry, but are easy for infantry. The kotal is a low ridge, commanding a fine view of the Khost valley. The descent is steep and rough for the first mile; it then passes along the top of a spur from the kotal range for about three quarters of a mile, where the road descends into the bed of the large river, which runs through this part of the Khost district. The main valley, a broad open plain, studded with numerous villages and covered with cultivation, is now entered. Camp on good dry ground near the village of Noar; water plentiful; no grass was procurable, but there was plenty of *bhusa*; fuel scarce.

The climate of the Khost valley is very markedly warmer than that of Kuram.

3 KHUBI (AKABI?) . . . . .	6	27½	Road good, and over an open level plain; room for camp on the further (right bank) side of the stream that passes under the village of Khubi. Before this stream is reached the road passes over a plain with saltpetre efflorescence, and full of dangerous bogs, so much so that the
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cavalry flankers of General Roberts' force had to be recalled. This would be a very bad place after rain.

4 MATUN . . . . .	8(P)	35½(P)	The road for the first 3 miles to the kotal passes over an open plain: the kotal is low, and the hills all round easily practicable for infantry and devoid of cover. Then through similar hills for about two miles, till the open plain in which Matun is situated
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is reached. The fort is about 3 miles from the exit from the hills.

Matun, the capital of Khost and residence of the Afghan Governor, forms the eastern apex of an equilateral triangle, whose northern and western extremities are Kabul and Ghazni respectively, and whose sides measure, as the crow flies, about 90 miles, but it must be borne in mind that lofty hills, inhabited by warlike, and in all probability, hostile tribes, lie between.

Route No. 64, from Ahmed-i-Shamu over the Shobakghar, comes in here.

5 GHALANG . . . . .	10½	46	} It seems that the majority of traders proceeding from Kabul to Khost, and <i>vice versa</i> , use the route by Jaji Maidan, Darwazgai pass, and Kuram. Two other roads, however, are occasionally followed, but both run through the Mangal country. They are said to be as follows:—  This is the best road, and is used by <i>kafilas</i> . There are but few kotals and none of any difficulty, but in some places the road is narrow and commanded. It lies entirely through the Mangal country. Forage would be difficult to procure, but there is water at the halting places indicated. Hence on to Kabul by the Kuram road, Route No. 61.
6 ZARAKOT . . . . .	9	55	
7 GABAR . . . . .	7½	62½	
8 HUKAMZAI . . . . .	7½	70	
9 HISARAK KALA-MAN- DU (on the Kuram route).	5	75	



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 62—concluded.

5	YAKUBI . . . .	6	} This road is in reality but a path, and is little used. It runs almost entirely through the Mangal country. Hence by Route No. 61.
6	ZANBAR . . . .	7½	
7	GABAR . . . .	12	
8	HUKAMZAI . . . .	7½	
9	HISARAK KALA-MAN- DU (on the Kuram route).	5	
			41½
			49
			61
			68½
			73½

Route No. 63.

FROM HAZAR PIR ZIARAT (HAZIR PIR) TO GHAZNI, *via* ZER KAMAR AND MATUN.

*Authorities.*—TO MATUN—CARR (*Khost Expedition, January 1879*); THENCE TO GHAZNI, KENNEDY (*from native information*).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter- mediate.	Total.	
1	ZER KAMAR . . . .	9	9	Road for about ½ mile runs across the Kuram valley, when it ascends and crosses a stony plateau and ridge, descending into the Sam Gokh valley at about 1½ mile. Thence across the valley, passing the ruined village of Kati at about 1¾ mile, to about 4 miles, when it
				passes over a low ridge into the Sharowanar valley. At about 5 miles a low kotal is crossed, and for the remainder of the stage the road runs among low hills in a southerly or south-easterly direction, crossing the Zer Kamar stream near the end of the stage.
				From Hazar Pir to the Sam Gokh valley the road lies over open valley; thence it passes through a labyrinth of low hills, and camels have to go in single file in places.
				Encamping ground rather confined. Grass forage and water procurable in <i>nala</i> . More water could be obtained by digging.
				For troops marching from Thal a better and more direct road is from E-or up the Zer Kamar stream, crossing <i>nalas</i> at 2½ and 3 miles (ramping required) and a low kotal at 3½ miles, and reaching Zer Kamar camp at 5 miles. This route lies through hills remote from the Mangal tribes, and inhabited only by unwarlike Kuchi Turis and Kuchi Ghilzais, who would be unlikely to offer opposition.
2	SABARI . . . .	10½	19½	Leaving the Zer Kamar valley the road runs among hills and crosses a low kotal at about 3½ miles, whence to 7¼ miles it again lies through low hills, which can be easily crowned. The rest of the stage is over a level uncultivated plain, called Tor-i-oba, in a south-west-

erly direction.

Good open camping ground half a mile north of village.

The road may be described as good for camels, but in wet weather they would have to go in single file. The first 6 miles would require making for guns. Route No. 64 from Ahmed-i-Shamu comes in here.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 63—concluded.

3	MATUN . . . . .	11	30½	The road is a good track, passing over a level plain, good in fine weather, but very bad for camels after rain. Leaving the Sabari valley: it crosses a low kotal, and runs in a southerly direction to about 5 miles, when the Kamkhost nala is crossed. It then lies west-south-west, passing through the villages of Bavi and Abkhel. Population ryots (Sumal Khels). Jagaraons. Jagaraons. Sika Ghilzais. By the Malan road. Tajik Ghilzais. But see also stage 5, Route No. 65. Persian-speaking Tajiks. Ditto do. Ditto do.
4	HAIDEE KHEL . . . . .	9	39½	
5	ALMABACH . . . . .	7½	47	
6	DERA-I-JAGARAON . . . . .	12	59	
7	DARRA . . . . .	10½	69½	
8	GHARDAIS (GARDEZ P) . . . . .	6	75½	
9	KHOLALKHO* . . . . .	7½	83	
10	RAHMAK† . . . . .	9	92	
11	GHAZNI . . . . .	7½	99½	

\* Evidently the Kalaidu of map, on Gardez river.

† Rahmak is 18 miles in straight line from Ghazni according to the map.

*Remarks on road from Matun.*—No large plains lie on this road, which in some places is confined an apparently commanded, but not very much so. No very steep inclines are met, and there is no lofty or difficult kotal to be crossed, and the road is stated to be perfectly suitable to camels and mules. Forage for animals, water, and a certain amount of wood can be procured at the stages named. Grain in any large quantities would not be forthcoming. Between the Khost fort and Jagaraon the population would be more likely to show hostility than further on, but their principal object would be loot, not an organized resistance to an advance. From Darra to Ghazni the tribes, it is believed, would be friendly.

Route No. 64.

FROM AHMED-I-SHAMU (KURAM) TO MATUN, *via* THE SHOBAKGHAR PASS.

*Authority.*—SPRATT (*Khost expedition, January 1879*).

No. of stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	STERKULA NALA . . . . .	9(?)	9(?)	The road crosses the Shobakghar kotal, said to be easy for anything short of wheels. From Ahmed-i-Shamu to the kotal appears to be about 5 or 6 miles.
2	SABARI . . . . .	13	22(?)	The first 4 miles lie mostly over hard ground, among low hills, and a couple of <i>nalas</i> are crossed, which require ramping. At about 2 miles the village of Landa is passed, and at 4 miles Kadam, 40 houses and a large walled enclosure, 150 feet square, suitable for defence.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 64—concluded.

Beyond Kadam the Shamil stream (about 1 foot deep in January) is crossed. The 7th mile is over shingly soil and fields, with low hills, covered with stunted palm at a distance. A steep banked *nala* is crossed near Jura. The 8th and 9th miles are along the left bank of the stream, which is about 300 yards across, with commanding hills on either side, those on the right being steep and rocky. The path could, without much labour, be made good and permanent. River-bed best for troops and animals.

The last 3 miles are mostly over open hard ground, with some *nalas*, which require ramping, and a narrow gorge, at about 11 miles, which would require widening and improving for artillery. The last mile is through low bare hills, and the Sabari *nala* is crossed, the banks of which are steep and would require ramping for baggage animals.

3 | MATUN . . . . | 11 | (33?) | Vide Route No. 63.

Route No. 62 comes in here from Hazar Pir Ziarat.

Route No. 65.

FROM ALI KHEL TO GHAZNI, *via* THE UCHMANKI PASS AND ZURMAT.

Authority.—CREAGH (from native information).

No. of Stage.	Names of Stages	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	DUBUZAI . . . .	<u>12</u>	12	Crossing the Shutargardan river, about a mile from Ali Khel, the road follows the river's right bank to the village of Karmana, distant 6 miles. It passes through cultivation for most of this length, and would require mending before field artillery could pass over it. It

is good for laden animals and infantry; all arms could pass down the river bed, which is about 50 yards wide for this length.

For this distance the road is commanded by hills on both sides; those on the left are steep, thickly wooded, but out of *jazail* range of the road; those on the right, slope gently up from the road and could be easily occupied by flanking parties.

A road from opposite Karmana on the left bank of the river leads over the Sapri pass into Chakmani dara.

Karmana is a village of Hasan Khel Jajis, and has about 100 houses. About one mile on from Karmana is the village of Sikandar Khel. The road still follows the right bank of the river through cultivation for about half a mile, when it falls into the bed of the river, which is here about 80 yards wide; it ascends the bank again close to the village. Up to this the road is practicable for all arms; the hills on the right become steep and craggy, and would have to be occupied by a strong flanking party. Sikandar Khel is a village of the same tribe as Karmana, and has about 60 houses. About 2 miles on from Sikandar Khel is the village of Sishta or Malan Kot (it is known by both names).

The road for this distance follows the river bank (right) through cultivation; it is described as passable for laden mules, camels, etc. Field guns could come down the river.

Throughout this distance the road is commanded by hills on both sides, those on the right being the steepest, and those on the left out of *jazail* range of the road.

All arms could pass down the river bed from Ali Khel to this; there is very slight depth of water, as this bed is very wide, varying from 80 to 50 yards, and the water, which is never of a greater depth than one foot, runs through several channels.

Sishta is a Hasan Khel village of 20 houses. About 3 miles on from here is the village of Dabuzai. The road in front of Sishta turns off from the river to the right in an almost

Route No. 65—continued.

westerly direction, and for about one mile it ascends a hill of easy gradient, on gaining the top of which it turns to the left, running nearly south over low hills, intersected by *nalas*, none of which offer any obstacle; to this the road is practicable for laden camels, mules, etc., but, owing to stones, boulders, etc., field-guns could not travel over it, unless it was repaired.

The reason travellers turn off from the river at Sishta is that a few miles further on it narrows greatly and the hills on each side become much steeper.

Dabuzai is a Hasan Khel village of about 200 houses; between Sishta and Dabuzai there is not much water and no cultivation.

2	AMBAR . . . . .	8	20	About 3 miles on is the Uchmanki kotal, which is described as the highest hill between Ali Khel and Ghazoi. It runs almost east and west, and its east end is washed by the Ahmad Khel river, which rises in Kosain and joins the Kuram river near the village of
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Chargo Kala. This kotal commands the upper portion of the Ahmad Khel dara and the villages in it. It also divides the lands of the Hasan and Ahmad Khel Jajis.

For the first mile the road passes through cultivation, then for 2 miles ascends gently till it reaches the top of the kotal, which consists of a level plain about half a mile wide. From the end of the cultivation to the top of the kotal the road runs over open country, passing over low hills, intersected by *nalas*. These hills are sparsely covered with pine trees. On each side of the road the country is open. Camels, mules, etc., could easily travel over this road, and field artillery could, with a little labour, be brought over it.

Having ascended the kotal, the road proceeds along its top, slightly turning to the right to descend. Descending the kotal one mile from its southern end, the road passes the Ahmad Khel village of Salimi, and about one mile and a half further on that of Mudki.

From Salimi to the Ghilzai boundary, a place called Surki *tangi*, about 6 miles south, this valley, the head of the Ahmad Khel dara, is called the Hazardarakht. It is described as being at Salimi about half a mile wide, opening out to about 5 miles at Ambar, and having on its north and south low hills, which are well wooded with pine and mountain oak.

The descent from Uchmanki kotal is said to be the most difficult part of the whole road, as it is somewhat steep, but with a little labour it could be made passable for wheels: at present the descent is easy for laden animals, camels, mules, etc., which are frequently brought this road.

From Salimi to Ambar the road runs along the river, which it crosses frequently; there is little water in this river, one foot in the deepest part. At Salimi, as already stated, the hills are close to the road and command it, but they could be easily occupied by flanking parties. About one mile and a half on from Salimi the road passes the hamlet of Mudki, and here the hills are quite out of range of the road. This valley (the Hazardarakht) is well cultivated; the road through the river-bed is good and practicable for all arms.

3	GWAMANGAL KALA . . . . .	20	40	About half a mile ahead of Ambar the Sirk <i>tangi</i> is met. This is a cut made through a low hill by the river, which is here very narrow, running through it; the road through this runs along the river bed, but it is equally good along the banks, which are open. The
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water is about 9 inches deep in the river here.

The road now runs through a well-watered plain to Mirzaka and Chingak; at the latter place there are numerous springs, where the river is said to rise. On the right of the road, a long way off, the hills of Machalgah are visible.

At Chingak the Zurmat river also is said to rise, and the road runs along its right bank. At 5 miles distance from Mirzaka is the small village of Karezgi; 9 miles from Karezgi is Khan Khel, and 5 miles beyond Khan Khel is Gwamangal Kala; from Chingak the road passes through a stony plain, which is quite uncultivated, except at or near the villages. All arms might pass over this country.

The village of Ambar has about 15 houses, that of Karezgi 30, and Chingak 40; its inhabitants are Ahmad Khel Jajis.

ROUTES ON THE NORTH-WESTERN FRONTIER.

Route No. 65—continued.

Gwamangal Kala is a village of about 20 houses, inhabited by Ahmadzai Ghilzais. at Gwamangal the Kosain river and one from Machalgah unite and form the Zurmat stream. The Machalgah *nala* is nearly always dry except when the snow melts on the hills.

4	SIRKI KOTAL . . .	29	69	From Gwamangal to Machalgah, a distance of about 7 miles, the road runs along the right bank of the Machalgah <i>nala</i> through a stony plain, almost uncultivated for the first 7 miles. At Machalgah itself there is some cultivation; this village has about 100 houses. All arms could pass over the road as far as Machalgah, which is situated at the foot of the hills of that name. From Machalgah, for about 7 miles, the road ascends the hills at an easy slope following the right bank of the <i>nala</i> , in which there is water from springs. At the 7th mile the highest point is reached, which is said to be about the same height as Shutargardan. A descent of 3 miles is made to reach Sirki <i>kotal</i> . Laden animals could easily travel this road, which is open and only commanded for 600 or 700 yards of its length by a hill about 2 miles from Sirki <i>kotal</i> .
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5	GARDEZ . . .	9	78	Road follows the right bank of the Zurmat stream, which has little water in it except in spring, when the snow melts. It is said never to be unfordable. This village has now only 40 houses, although it was once a town of some importance.
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There are roads from here to Kabul and Khost Kabul, *via* Altimur, about 10 miles off; this road is said to be easy, the Altimur pass being the only difficult part of it. It is said that wheeled guns could travel through this pass, the only difficulty of which is that it is commanded by high hills on both sides for a distance of 3 miles beyond the village of Altimur. The road to Khost is said to be difficult, as it passes over the high range of Jadran mountains. For Altimur-Kabul road see Route No. 68, and for Khost road see Route No. 63.

6	SARKAB KALA . . .	12	90	No details.
7	KALALGU . . .	14	104	At Kalalgu the road is commanded on the right by a low hill, a part of the Machalgah range; from here to Ghazni the distance is said to be about 18 miles. From Gwamangal Kala to Kalalgu the road runs through a well-cultivated plain, which is thickly populated, the hills on

the right being about 10 miles off, those on the left 20. All arms could pass over this road, which runs along the right bank of the Zurmat stream.

The village of Kalalgu has about 100 houses, principally inhabited by Tajiks.

8	GHAZNI . . .	18*	122	From Kalalgu for about 2 miles on the road, which is much intersected by <i>nalas</i> , is commanded on the right by low hills, under-features of the Machalgah range; but on the left it is quite open. After this distance the road on to Ghazni is said to be quite good; it runs through the Shelgarh plain.
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The only difficult part of this route appears to be the country from Ali Khel to Ambar, and the difficult part of that is the descent from the Uchmanki *kotal* into the Hazardarakht; but all natives say that a little labour would soon render this a good road, and that, as it is laden animals can pass over it. It is said to be frequently travelled over by laden mules and camels bringing grain from Zurmat into the Jaji country.

\* This distance, according to the map, is under-stated by at least 10 miles.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 66.

FROM KABUL TO GHAZNI, *via* THE LOGAR VALLEY AND ADJOINING ROUTES.

*Authority.*—ROUTE OF KABUL-KANDAHAR FORCE, 1880.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	CHAHARASIA . . .	11	11	Road good and country all open, though much intersected by water-cuts and irrigation channels. At 2 miles pass lala Hissar on right, and at 4 miles the village of Beni Hissar. There is room for camp here, but the ground is much cut up by irrigation channels. A

little beyond Beni Hissar road enters the Sang-i-Nawishta, a defile about  $1\frac{3}{4}$  mile in length, through which it is confined between a lofty hill on the right, and the Logar river on the left. The defile is commanded on the left by inaccessible and precipitous cliffs, and, though practicable for all arms, it offers a cramped passage for a large force. Half a mile further on the low ridge of Khairabad is crossed; the kotal is about 100' high, and presents no difficulty. From here to Chaharasia the road is level and good. Excellent camping ground on open plain beyond the village near main road. Plentiful supply of good water.

Chaharasia is situated on the southern slope of a low range, running across the plain from E. to W. A mile to the E. flows the Logar river; but the village is irrigated from the Kabul river, which flows immediately behind the low hills N. W. of the village, a water-cut being taken through a gorge in the low range above mentioned.

It is a very rich, well cultivated village, possessing numerous gardens, orchards, and vineyards. There are many trees, and it could give a great amount of all supplies. The Kabul Government often send out troops to this village for a season. The population is a mixed one of Afghans and Tajiks.

N. E. of Chaharasia, and beyond the Logar river, rises a prominent sharp-pointed mountain called Sakh-i-Baranbai, on the eastern side of which is the Khurd Kabul pass.

2	ZAHIDABAD . . .	10	21	Road for the first 2 miles passes over a perfectly level plain; then crosses a low ridge—the ascent is almost imperceptible,—and descends to the Dasht-i-Saka, a level plain about $3\frac{1}{2}$ miles broad. The road traverses this, and then crosses, by an imperceptible ascent, the end of a spur from the mountains on the W. The spur is called the Sum-i-Duldul.
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At the northern end of the Maidan Saka, at a mile from the road to the right, is the village of Namunias, situated at the southern end of a spur running N. and S. At the southern end of the plain, and on the right of the road, is the large Tajik village of Rahmat-abad, and on the further side of the Logar river is situated the large Ghilzai village of Musai. The road to Childukhtaran diverges to the right about half-way across the Saka plain. Between the road and the Logar river are lofty spurs, except at Rahmat-abad, where the plain is open to the E. Hills also bound the view to the W. at a distance of 2 or 3 miles. The road is excellent all the way.

Zahidabad is a large fertile Tajik village, situated on the left bank of the Logar river, about 2 miles S. of Safed Sang; and Gumeran about  $\frac{1}{2}$  a mile lower down on the right bank. The bridge over the Logar river at Zahidabad is in good repair and practicable for infantry, as well as for laden animals. In August 1880 the river contained scarcely a foot of water at the ford below the bridge, where the bottom is firm gravel. Good camping ground, with room for a division. Supplies fairly plentiful. Water abundant from a channel near camp. From Zahidabad two roads lead to Amir Kala—one *via* Zargan Shahar, etc.; the other *via* Kalangas and Baraki Barrak. (See Note C at end of route.)

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 66—continued.

3	ZARGAN SHAHAR . . .	12	33	The road for the first 3 miles is over slightly rising ground, with a spur on the left, close up to the road. This spur, with another nearly parallel to it, 3 miles to the N., ending in the peak of Kalagai (which is about 2,000' above the plain), forms a plain (the Dasht-i-Surkhao),
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at the northern end of which is situated the village of Zahidabad. This plain is well cultivated, being mostly within reach of the Logar river (which now approaches the road), and contains the large Ghilzai villages of Kuti Khel, Sangar Khel, and numerous other villages and forts. From the 4th mile to the end of this march the road goes over a stony plateau. There is no physical difficulty whatever in the way, the road being good and broad throughout. On the left bank of the Logar river, which is about 2 miles distant from the road, some good villages are visible, particularly that of Muhammad Aga, a Persian-speaking community. The Ghilzai hills are about 4 miles distant on the left, and a low disconnected range intervening between it and the Logar river on the right. Two unimportant Ghilzai forts are passed on the left about half-way. Zargan Shahar is a large wealthy village of Tajiks. Camping ground 1 mile S. of village. Supplies, water, and wood plentiful. The standing crops of green Indian-corn afforded excellent forage for animals, early in the month of August. Two infantry brigades (*i.e.* 8 regiments) of the Kabul-Kandahar force camped here together in August 1880.

Here Route No. 61 goes S. E. to Shutargadan and the Kuram.

4	HISARAK . . .	10	43	Road easy. Ground along the Logar river highly cultivated, and supplies plentiful in the vicinity. Water plentiful at camping ground. From this place a road leads to Kushi.
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*Note A.*—From Hisarak to Kala Burani (stage 4, Route No. 67) *viâ* the Surkh Bedak pass 23 miles.

Road good over plain, practicable for field guns.

Pass Shuluk at 9 miles. From here the track continues in a north-westerly direction over a barren plain called Chil Pakan; the ground is undulating but perfectly practicable for all arms until within about 300 yards from the crest of the Surkh Bedak pass, when the rise becomes too steep for field guns. The soil is easily worked, and there would be no difficulty in making a road up to the top.

Distance from Shuluk 8 miles.

The track continues from the kotal towards Kala Durani, bearing 340°, where it joins the main Ghazni-Kabul road.

The descent is steep for about 2 miles, and is quite impracticable for field-guns, nor would it be possible to make a road within a reasonable time. The road was traversed to about half a mile from the top, from which point a good view was obtained.

At about 5 or 6 miles distance in the valley below, the Ghazni-Kabul road is visible, and also the villages of Beni Badam, Kala Durani, and the Maidan district.

There is no water on the route followed beyond the village of Piaro Khel. Laden camels can be, and are, taken over the Surkh Bedak pass, but the route is not suited for the baggage animals of an army. (*Gaselee, June 1880.*)

5	PADKAO ROGHANI . . .	7	50	Road for first 2 miles easy: for remainder of march along narrow and cramped roads, which considerably delays progress of a large force. Good camping ground on low hills W. of Padkao Roghani. Water, wood, and supplies plentiful.
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Two infantry brigades (8 regiments) camped here together in August 1880.

Route No. 68 goes from here to Ghazni *viâ* the Altimur pass.

6	KILA AMIR . . .	9½	59½	Road through cultivated ground up Logar stream, right bank, the valley gradually closing until, at the halting-place, it is little over 600 yards wide. Owing to the numerous watercuts and the softness of the soil, this route would be difficult for wheeled artillery.
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Route No. 66—continued.

The large village of Baraki Rajan is passed soon after leaving Padkao Roghani, and there are numerous forts scattered about the valley, which is highly cultivated and thickly populated.

7	SAIADABAD	8½	68
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Two roads lead to Saia'abad. One runs by the Tangi Wardak to Doaba at the junction of the Shinez and Wardak rivers, and thence to Saia'abad; the other crosses the Zamburak pass to Saia'abad.

The two routes separate at Ursak, 1½ mile beyond Amir Kala. Here the first mentioned route enters the Tangi Wardak defile, an opening in the hills through which the Logar river flows. The valley is from 1 to 1½ mile wide, and is very highly cultivated. A road passable for mules and horsemen leads along both banks of the Logar river; but owing to projecting rocks here and there, wheeled artillery could not move by this route until these rocks were cleared away, which would be a work of great labour. Camels can proceed by this road, but must take to the river-bed twice to avoid the rocks. The river is, however, easily fordable in the dry season; water only 1' to 2' deep; bottom stony. For foot traffic there are several bridges over the river. At 5 miles from Amir Kala reach Doaba, a small village situated at the junction of, and between, the Shinez and Wardak rivers, about midway between the clusters of villages known as Saia'abad and Shekhabad, both of which are on the Kabul Ghazni main road. Doaba itself is about 1½ mile to the E. of the main road. At Doaba the road leaves the valley watered by the Logar stream, and follows the course of the Shinez for about 3½ miles in a westerly, bending round to south-westerly, direction to Saia'abad.

The Tangi Wardak would be forced with great difficulty if resolutely defended. The hills at the narrowest point quite command the road, and the fortified villages along it are very strong. The nature of the ground also prevents the employment of artillery other than mountain guns. In the face of opposition, a turning movement *viâ* the Zamburak pass would probably be advisable; but this, too, would be a difficult operation.

The best camping ground at Saia'abad is on the left bank of the Shinez river. Supplies have to be collected at Saia'abad from the villages in the Shinez and Unkai valleys, both of which are fertile and well cultivated. Between Amir Kala and Saia'abad the inhabitants all belong to the Wardak tribe, and are mostly engaged in agriculture; their villages are clustered together on the river banks, and are all well fortified and loopholed.

Here Route No. 67 *viâ* Arghandi joins in.

*Alternative route viâ the Zamburak pass.*

After leaving Ursak the ascent of the Zamburak pass lies for the first 2 miles along the dry bed of a mountain torrent, and is fairly easy; but the last mile is very steep, the gradient in some places being as much as 1 in 4. Fatigue parties should be placed to render help at the stiffest parts in shifting loads, etc., and officers should be posted at intervals to regulate the flow of traffic, and so avoid blocks at the worst places. The summit of the pass (elevation 8,100') is reached at 5 miles from Amir Kala. The descent on the western side is much easier, and at about 2 miles from the kotal debouches into the Wardak (Shinez?) valley opposite Saia'abad. Distance from Amir Kala to Saia'abad about 8 miles. Two batteries—one of horse the other of field artillery—were brought over the Zamburak kotal in April 1880 from the Ghazni side. The guns had to be lowered down a steep gradient for about ½ a mile, after which no great difficulties were experienced. The time taken in lowering the guns, wagons, and bullock-carts of the first battery that crossed was 4¼ hours; but the experience thus gained enabled better arrangements being made with the second battery, which was passed over in 2½ hours.

8	HAIDAR KHEL	5	73
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Easy road along main Kabul-Ghazni highway. Good camping ground to W. of the road, with room for two infantry brigades (8 regiments); and room for a similar force can also be found a mile or so further on between Haidar Khel and a place called Jakin (Takia). Supplies and

water in sufficient quantity for one cavalry and three infantry brigades.



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 66—continued.

Note B.—Alternative route from Baraki Rajan to Haider Khel by the Sojawan.

The road to the Sojawan pass branches to the left from Baraki Rajan and rejoins the main road about 4 miles south of Haider Khel in the Shinez valley. The distance is about 16 miles. At about 10 miles the summit of the pass is reached. Immediately beneath the pass are two large villages, Shekh Khan and Digan, said to be inhabited by Parsiwans, and a little to the right is the Wardak village of Ladi Khel. The ascent to the kotal is very steep and rugged, impracticable for laden camels. The descent on the other side is not so bad, and is practicable for baggage animals. Leaving the kotal, the direction of the track is generally S.-W. for about 5 miles. At 3 miles pass three or four Wardak villages lying under the hills to the left, about 1 to 1½ mile off the track. They have some small amount of cultivation around them. At 5 miles the track turns westward, and proceeds through an undulating valley until the Ghazni road is met at a point about 6 miles from the summit of the Sojawan pass.

9	HAFTASIA . . .	10½	83½	Road passes close under low hills. On left a little difficult in places for heavy guns. At about 5 miles the road narrows, and troops and baggage have all to converge on the one road. Beyond this, however, it widens, and the country being open, troops can move along on a broad front. The valley is extremely fertile and well cultivated, with numerous villages dotted about. Supplies and water sufficient for three mixed brigades of all arms. Camel-grazing and forage also procurable.
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10	SHASHGAO . . .	9¾	93¼	Road easy for all arms. On the E. it runs close under the hills, and the ground thereabouts is unsuitable for the action of cavalry and wheeled artillery. To the W. the country is open, and troops can move on a broad front. Shashgao is a walled village, surrounded by a considerable amount of cultivation. Good camping ground on open plain. Hills to the E. 1 mile distant. The Shinez is here a very small stream, but water is plentiful in numerous springs. Supplies and forage procurable for a large force. The whole of the Kabul-Kandahar force camped here on 14th August 1880.
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11	GHAZNI . . .	13¾	106½	Road good over open country. Hills to the E. from 2 to 3 miles distant, as far as the northern entrance of the Sher Dahn pass (3½ miles). The road through the pass is good and broad enough for four horses abreast and easy for all arms. Ascents and descents gradual, and quite practicable for the heaviest wheeled guns. Crest of pass, reached at about 5½ miles, is 8,500', containing hills bare and treeless, easy of access, especially on the E. For about a mile beyond the crest of the kotal there is a gradual descent, and the hills close in. The southern end of the pass is reached at about 6½ miles. Here the hills, receding again in a curve on either side, form a basin from a mile to 1½ mile broad, in which is a line of <i>karez</i> furnishing water for a few score acres of cultivation. At 9 miles they converge again, and here the road ascends a second low kotal in nearly a straight line, from the top of which the Ghazni plain is overlooked. Between the 9th and 10th miles there are a succession of dry water-courses, some of which require ramping to allow of the passage of wheeled artillery. At 10¾ miles a <i>nala</i> and stream are met with which also require ramping at this point; but they can be turned by a detour to the W. At 12¾ miles pass the suburb of Roza, the outskirts of which are a mass of vineyards; and ½ a mile further reach camp on the plain to the S. of the two old minars which stand to the E. of Ghazni between the city and the suburb of Roza. Camping ground good, water plentiful, and supplies obtainable for a very large force.
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The walls of Ghazni follow the lines of the rising ground on which the city is built; and though they are out of repair, they still present a formidable obstacle, and would require heavy guns to breach them. The citadel is in the same condition, and the city itself is but a collection of miserable mud hovels. No well is known of in the citadel, though one or more may possibly exist. The place is surrounded by a deep ditch, which, dilapidated as it is, would give considerable trouble if defended by a determined force. There are numerous flanking towers along the walls, but the weak point in Ghazni is that it is commanded by a range of hills on the N. E., which not only look into the city, but into the citadel itself

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 66—concluded.

also, and could search it with fire at a distance of not more than  $\frac{1}{2}$  a mile. This weakness is evidently appreciated by the Afghans, as is evinced by the numerous traverses built both in the citadel and the city. The ditch, however, which runs between the commanding hills and the walls assume the proportions of a deep ravine, and would always be a serious obstacle. The average height of the walls is 30'.

Note C.—Alternative route from Zahidabad (Stage 2) to Kila Amir (stage 6).

3	DEH-I-NAO . . .	9	30	Road along bank of Logar river. Camp at Deh-i-Nao. Water and supplies plentiful from surrounding villages.
4	KALANGAR . . .	9	39	At about 3 miles enter the Deh-i-Nao (or Wagh Jan) Tangi. The hills on either bank of the river, about $\frac{1}{2}$ mile apart, for $1\frac{1}{2}$ to 2 miles.
After quitting the <i>tangi</i> , cultivation extends for about a mile on either side of the river. Fine open plain on the left. Water from river. Supplies abundant. Green Indian-corn affording excellent forage for transport animals.				
Kalangar is a large village, said to contain 1,000 houses.				
5	BARAKI BARBAK . . .	9	48	Ford Logar river close to Kalangar, and cross range of hills by easy kotal, fit for wheeled artillery, to Baraki Barrak. About 3 miles from Kalangar, pass the village of Logar Hisarak.
Baraki Barrak is one of a large cluster of villages situated on both banks of the Logar river. Is situated itself on the left bank. Supplies abundant. Water also plentiful. The cavalry and 2nd brigades of the Kabul-Kandahar force camped here on the 11th August 1880, both having come from Kalangar, up to which point the cavalry brigade had come along the course of the Logar river, the 2nd infantry brigade having struck across S. W. from Zargan Shahr to Dadu Khel, 4 miles, and thence to Kalangar, 4 miles further.				
6	URSAK, beyond KILA AMIR.	$8\frac{1}{2}$	$56\frac{1}{2}$	Road along left bank of the river as far as Ursak, $1\frac{1}{4}$ mile beyond Amir Kala, where cross to right bank.

Route No. 67.

FROM KABUL TO GHAZNI, *via* MAIDAN.

*Authorities.*—DUTTON (ROUTE OF GENERAL ROSS'S FORCE, APRIL 1880);

ROUTE OF KABUL-KANDAHAR FORCE.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KALA KAZI . . .	10	10	Road well known. Passes a low kotal between 3 and 4 miles.
2	ARGHANDI . . .	8		18

up a range of hills on the south, which leads to Lalandar. On the north there is a low range of hills which would form a good encamping ground, not far from Kala Ghulam Haidar; and when this range is passed, there is a valley of moderate extent, stretching away northwards to

Route No. 67—continued.

the cluster of villages known as Paghman. On the slope of the hills which bound this valley on the west, the village of little Arghandi, or Paen Arghandi, as it is called by the natives, is passed. At about  $2\frac{1}{4}$  miles a small stream is crossed, near which there is very good ground for encamping, and at about 7 miles the junction of the Changor and Arghandi streams is crossed. Here the road to Bamian branches off from the Ghazni road, the former continuing in a somewhat westerly course, while the latter turns away to the south. Bala Arghandi is passed on the right of the road, from which it is distant about  $2\frac{1}{2}$  miles; it lies in a small valley running up into, and ending in, the Paghman range of hills. There is no difficulty in finding encamping ground to the east of Bala Arghandi; the country is open, level and cultivated, and excellent water can be obtained from a ravine close by; besides which water can be turned on into the irrigation-cuts. Elevation, 7,200'.

3	PAEN MAIDAN	$7\frac{1}{2}$	$25\frac{1}{2}$	From Arghandi the Ghazni road is even better than in the previous march and requires but little improvement to make it fit for any traffic. The valley here is not very wide, and is bounded by hills both on the east and west, but they are not so near that an enemy could annoy a force marching through the valley, unless they were supplied with artillery. The Kotal-i-Takht is reached at $3\frac{1}{2}$ miles, but the ascent to it is very gentle, and it would not afford as good a position to an enemy as kotals usually do; in fact, the country leading to it is extremely suitable for cavalry, as is that descending from it. From this kotal the cluster of villages called Paen Maidan is visible and distant about 4 miles. Two roads descend from the ridge, one leading to Ghazni, the other direct to Paen Maidan. Soon after the descent is commenced, there is a path on the east, leading over a low ridge which goes to Lalandar. Water easily obtainable at camping ground, as the Kabul river is not far, and water can be brought close to camp by irrigation-cuts. Elevation, 7,170'.
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From Paen Maidan two valleys branch off westwards, being separated by a not very high range of hills; one is called Bala Maidan, through which the Kabul flows. It contains numerous villages, and a path runs through it joining the Bamian road just beyond Rustom Khel. The other is called the Nerikh valley. It contains a good many villages, and is highly cultivated, but it leads nowhere in particular and ends in the hills.

4	KALA DURANI	$7\frac{1}{4}$	$32\frac{3}{4}$	From Maidan the road to Ghazni is very good and fit for wheeled artillery the whole way to Kala Durani. There is only one other fort here, called Kala Sher Muhammad, so the place goes sometimes by the one name, sometimes by the other. The road runs through a valley which is at first rather contracted; it is watered by the
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Kabul river which flows southwards from Maidan, and at  $4\frac{1}{2}$  miles suddenly bends eastwards and has to be crossed. There are the remains of a masonry bridge over it, which has been swept away by floods, but at this season of the year (April) it is easily fordable, not being more than 18 inches deep. The river winds about a little and then strikes off northwards to Deh Kepak, whence it flows nearly due east through the Lalandar valley and makes its way to Kabul. As soon as the river is crossed, there is a gorge running up the hills on the east of the valley, and so to the Logar valley; and it was this route which was taken by Brigadier-General Baker's brigade in November 1879. Before Kala Durani is reached, a low range of hills, with a narrow sort of gorge through it, has to be passed, which might afford a very fair position to an enemy attempting to block the road.

There is no want of encamping ground at Kala Durani, and plenty of good water obtainable from a stream running close by. Elevation, 7,100'.

A road comes in from Hisarak *via* the Surkh Bedak pass. See Note A, Route No. 66.

5	TOP . . .	$10\frac{1}{2}$	$43\frac{1}{4}$	The road, which is a good one, runs generally rather close to the hills on the west side, but any force without horse artillery can march the whole way in the centre of the valley, which is mostly gravelly and uncultivated. There are numerous small ravines which would impede
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Route No. 67—continued.

horse or field artillery, but otherwise there are no difficulties. At about  $4\frac{1}{2}$  miles a village called Beni Padam is passed on the west close under the hills, and near it is another small village called Anda. Shortly after a path strikes off south-west over some open downs to the Langar valley, or Rowat valley, as it is called by some of the natives, and is joined there by a path which comes from the Nerikh valley through the Beksamand valley. About this point also there is a distinct watershed across the valley, the road which had been gradually ascending from Kala Durani, descending gently but decidedly to Top. When the ridge of the watershed is reached, and for some distance afterwards, signalling can be carried on with the Sher Dahan, a kotal about 10 miles short of Ghazni. From Top itself the Sher Dahan is lost, but it can easily be got from hills not far off. There is no want of space for encamping and a good supply of water from a stream. Elevation, 7,400'.

6	SAIADABAD . . .	$10\frac{1}{4}$	$53\frac{1}{2}$
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From Top onwards towards Ghazni, the valley descends gradually at first and afterwards more rapidly, but it and the road are of much the same character as in the last march. Shekhabad is reached at  $6\frac{1}{4}$  miles and consists of 8 or 9 enclosures, one a good fort the others form

no villages called Kheri and Tosang. With the exception of this fort none of the buildings are of any strength or importance.

Ample camping space at Shekhabad, elevation 6,650'.

A stream from Langar flows through Shekhabad, and there are the remains of a masonry bridge over it. Usually, however, the water is of but little depth. From here on the west the village of Amvukhak is distant  $5\frac{1}{2}$ , and Abdul Gafur's fort, which is the principal building in Langar,  $2\frac{1}{2}$  miles further on.

Saiadabad is a cluster of scattered buildings, none of any importance. Elevation, 6,950'. Signalling can be carried on with the Sher Dahan kotal from a hill a short distance to the west of the road.

Here Route No. 66 *via* the Logar valley joins in.

Note A.—From Shekhabad to Kila Amir *via* the Kdam Khan defile.

From Shekhabad camp the road lies along the Kabul road (Route No. 66) for about 3 miles, whence it bends almost due east up a gradual ascent, gradient of about  $\frac{1}{100}$  for about  $1\frac{1}{2}$  or 2 miles, when the Adam Khan defile is entered.

From the entrance to the first small kotal (about 1 mile) some slight work is necessary to widen and improve the wheel-way, and would occupy a company of Sappers from 4 to 5 hours.

At the kotal itself some more work is necessary, but the kotal can be avoided by taking the bend of the watercourse; this piece would occupy about 2 or 3 hours.

From the small kotal to the top of Adam Khan kotal is 2 miles.

From the top to bottom of kotal is 1 mile, and this also wants clearing and widening, and would occupy  $\frac{1}{2}$  a company about 2 or 3 hours.

From the bottom of the kotal the country opens into the Chulpekam Dasht, the Logar valley in the distance, the village of Kalangar being visible. The road from here bears a south-easterly direction, and the passage for artillery would be best along the bed of the drainage, and any repairs that are wanted could be done by men on the spot, and would occupy no great time. The drainage of the dasht is into the Logar north-east, and so on for 5 miles, when a low kotal is crossed into another drainage that runs south-east, and the road lies along the bed of the drainage for 4 miles.

As before, the repairs can be done while on the march, and would cause no very great delay. Between Adam Khan defile and Tangi Wardak defile another passage was observed and reconnoitred on the way back. This pass is called the Chukatu defile; it crosses a steep kotal, the descent west is gradual; but the roadway along the bed of the watercourse is very stony and would require considerable labour in clearing.

A direct route through the Adam Khan defile to Babus, passing the villages of Piru Khel and Shaleh would cause, as far as can be judged by the lie of the country, less labour in repair.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 67—concluded.

By the map, from Shekhabad to Pabus by the Adam Khan defile is about 20 or 22 miles. Captain Harvey thinks it is about 18, but there is no intermediate place except, from native report, Piru Khel and Shaleh, where supplies are reported procurable. (*Harvey, 1880.*)

7	Haidar Khel . . .	5	58½	} <i>Vide Route No. 66, stages 8 et seq.</i>
8	Haftasia . . .	10½	69	
9	Shashgao . . .	9¾	78¾	
10	Ghazni . . .	13¾	92	

Route No. 68.

FROM PADKAO ROGHANI (LOGAR VALLEY) TO GHAZNI, *via* THE ALTIMUR PASS.

*Authorities.*—Stages 1—2, Maclean; Call (*May 1880*); 3—6, Gaselee (*from native information.*)

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	ALTIMUR . . .	15	15	From Padkao Roghani (Route No. 66, stage 5) the road runs at first through the strip of cultivation which extends for a breadth of 3 or 4 miles along the Logar river, and thence to the mouth of the Altimur pass lies over a gradually rising plateau. This plain is
2	SUMMIT OF PASS . . .	6	21	From Altimur to the foot of the pass hard by the Saiad village of Niasi is some five miles. The road so far is passable for artillery with some petty repairs; but as the track follows the shingly bed of the river for more than half the distance, leaving it only to cross

everywhere practicable for troops as far as the mouth of the pass, where the *nala* banks become scarped, and the fields begin to be laid out more in terraces. The road passes to the right of a ruined fort, where it is confined between dry stone walls and is very contracted in places. A working party should precede or accompany the guns for the last mile. There is no water between the Logar canal system and Altimur. A road comes in here from Gardez. *See* Route No. 65.

three low spurs to save detours, draught will be very heavy, although the gradients are not excessive.

As regards the pass itself, the total ascent in some 1,900 yards is about 800 feet, giving a gradient of nearly 1 in 7. For the first 1,200 yards the road follows the *nala* bed. In length it is only necessary to clear a wheel track of stones and boulders.

Route No. 68—continued.

Then the road zig-zags up the face of the hill to the left and passes through a cleft in the rock, which is partly filled with stones; another path encircles the rock, but neither are suitable for guns at present, and as the gradients are bad and the curves awkward, considerable work is required before horses in draught can surmount the ascent.

For the next 400 yards the road is wonderfully good, 17 to 20 feet wide, sloping 1 in  $5\frac{1}{2}$  to 1 in 7, just rough enough to give foot-hold. There are two places in this length requiring improvement, a sidelong piece of ground at about 130 yards, and a rocky corner at 240 yards.

The remaining 350 feet consists of a series of short zig-zags, varying from 14 to 24 paces in length and 18 to 7 in width, ending in a narrow defile 100 feet long. The slope hardly exceeds 1 in  $4\frac{1}{2}$ .

It would be necessary to straighten the track as far as possible to allow of the horses working well together in making a final effort, and blasting would have to be resorted to, before the cutting through hard limestone, which forms the saddle, would be passable.

The summit once reached, all difficulty is at an end as far as could be seen. A broad rough track winds down a little ravine with a slope of 1 in 6 to 1 in 9 for 250 yards, passing a spring head, and then debouches with a gradient of 1 in 14 on to a little open plain, beyond which it was impossible to carry out the inspection.

Another pathway leads up the right side of the *nala* to join the old road just short of the top. This would not be of much service. Probably a portion at least of the baggage would march by Shawaz, to avoid the delay in passing the camels over in single file.

Supposing the pass to be occupied at daylight, guns might be taken over with some difficulty by the afternoon of the following day; two companies sappers being employed, one at the top of the pass, the other at the return half-way up, in addition to three companies of infantry working in two reliefs (equal to 6 companies). Much depends, however, in the progress made in blasting, and it would be safer to give two clear working days. The ground to the left of the pass is favourable to an attack, originating either up the valley to the left of the rocky gorge facing Niasi, or from the village of Shawaz. Guns posted on the Niasi slope could fire with good effect on the kotal with a range of 2,000 yards, as well as on the last 500 yards of road.

There is abundance of water near the village at this time of the year; while the ground beyond the crest is suitable for a small camp and favourable for an active defence.

Every available portion of the pass is cultivated up to the last ascent, and watered by a stream of good water.

3	GUDAL . . . .	P	} P	A good road practicable for foot and horse leads from Altimur kotal into Kharwar.
4	ISPIDAR . . . .	9		
				Ghilzais, about 200 houses.

After this three are no more villages, or cultivation, but the road is open and easy.

At Ispidar there are three small villages of Andari Ghilzais, about 600 houses; water abundant from *korez*; some cultivation.

5	ZANA KHAN . . . .	12	} P	At about one mile pass the village called Kala-i-Surkh, about one mile to left of road, 20 houses. The Robat hills are about one mile to left of road, and on the right are the Abdara hills at a distance of two to three miles. At about eight miles cross an easy kotal called

From the kotal to the villages of Zana Khan is about four miles; the road is described as easy, but with some ravines to cross.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 68—concluded.

The inhabitants of the Zana Khan villages are Wardaks, about one hundred houses; water from *karez*; some cultivation.

6	GHAZNI . . .	16	? To Shashgao* the road leads through a defile thence from Shashgao to Ghazni by Route No. 66. From Ispidar this route must be quite impracticable for wheeled artillery, and probably but few supplies are procurable.

Route No. 69.

FROM BANNU TO THAI, *vid* THE GUMATI PASS.

*Authorities.*—BELEY, 1888; APPLETON, 1879.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter- mediate.	Total.	
1	ZIRWAN . . .	17	17	Cross the Kuram on leaving cantonments and proceed along the Gumati road. Pass the Gumati tower at $4\frac{1}{2}$ miles and enter the Gumati pass. At one point the track is through a pool of water 20 yards long, 4 yards broad, and $1\frac{1}{2}$ deep, confined between sandstone slabs.

Water is brackish, and there are signs of saltpetre about. At this point there was a bridge during the war. The pass then widens. Leave the stream to right for a detour.

At  $6\frac{1}{4}$  miles rejoin the stream, where it is much more open, the actual pass having been traversed.

Junighra hills in front, scarped and formed into turret-like shapes, like the Kafirkot Daryabor seen under it, among trees on a higher plateau above Gumati. Water there said to come from a good spring. Here a stony *nala* comes in from the left, containing a track to Kuram and a Muhammad Khel village. Garang *nala* comes in on right. Hills, lower and running roughly parallel to each other, transverse to the road, all of bare sandstone, converge on to the Gumati plain, by half turn to right. A track leads to the right to Gumati behind the last ridge, from where the *nala* joins. Now cross a stony plain and the Garang *nala* to the Gumati village,  $7\frac{3}{4}$  miles.

The Gumati village is in the middle of a belt of trees; no walls; water from *karez*.

At  $8\frac{3}{4}$  pass some castellated ridges on the left, and on the right a lower sandstone bare range, running beneath, and roughly parallel to the Junighra, which is the continuation of the Kafirkot range to west; across an easy valley, bare of trees and shrubs; little grass.

Traversing some small ravines, draining towards the Gumati stream and some tablelands, reach the highest ground of the march between Gumati and the basin of the Kuram. From the hills on the right signalling is possible to the hills by the Gumati tower overlooking Bannu cantonment.

Then on through ravines, the gorge of the Kuram appearing to the left. Wind about among stony ravines commanded on all sides.

At  $13\frac{1}{4}$  miles drop down to the stony bed of the Kuram, here about 200 yards broad. Ford it, about 30 yards broad, 2 feet deep.

After fording 4 times reach Zirwan, situated in a commanding position on the left bank of the Kuram on a mound near centre of valley; here 400 yards broad. Camping ground below village.

\* It is more probable that Route No. 66 struck about midway between Shashgao and Ghazni.

Route No. 69—concluded.

2	DROZANDO . . . . .	13½	30½	Over a stony ascent to right, leaving lower bed and along a stony plateau. The Khaiti stream from Khost joins in here on the right bank. Cross a succession of ravines; wild and desolate-looking country. Pass through a stony cliff-bound gorge draining to the Kuram; quite dry, except after rain. The route through the gorge
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commanded from the cliffs around. Numerous ravines branching off in all directions.

On through narrowing gorge of the Lamda Zangara.

A slab of rock across the pathway would make the road difficult to laden animals, as it cannot be avoided owing to a deep pool below in the *nala*; would require a few hours work. At 7½ miles reach to the Shinkai kotal up a smooth ascent (2,020').

Down short steep ascent, perfectly easy.

Country on left more open; hills close on right. Road gradually bears round to the right (north) following the bend of the river and hills, and, finally leaving the hills, emerges on the Drozando plain on the river bank. A square walled Kabul Khel village. Extensive encamping ground on large level plain 825' above Bannu.

3	THAL . . . . .	9½	40	Proceed along the level shingly plateau and drop down to the river at ½ mile. Keep along the "kachi," fording many times, as a high ridge abutting on the stream prevents road further along the bank. Alternate stretches in bed of river of stone, grass, and cultivation.
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At 4½ cross to right bank of stream through fields and up on the Thal or high bank. Pass through large village of Biland Khel. Between Biland Khel and Thal is a large open grass and jungle clad plain, bordering the right bank of Kuram and known as the Spin Maidan, a debateable land. Ford the Kuram opposite mouth of Saroba stream, water 1½ deep, through the village of Thal across stony bed of Saroba *nala* and up to the fort of Thal.

*Note.*—An alternative route goes by the Barganatu pass. The stages are Barganatu, 10m.; Chapari, 10m.; Karanga, 15m.; Thal, 18 (or 8?) miles. It is practicable for camels.

Route No. 70.

FROM BANNU TO GHAZNI, *via* KHOST.

*Authority.* BELL (from the Saiud).

No. of Stage	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SHIR-I-TALLA . . . . .	13	13	Road through the Paran pass, said to be easy for camels.  A village in the pass, on the boundary, belonging to Dawar. Inhabited by Utmanzai, a branch of the Turkhel. Most of the villages belong to Waziris, who in the summer migrate to Shawal.
2	CAMP . . . . .	14	27	The road bends to the north through a ravine called Ketu Shul. Camp among Umar Khel Waziris. Fuel, grass, and sheep plentiful; no grain. Encamping ground good.



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 70—concluded.

3	BAZAR KHOST . . . . .	15	42	Road good but pebbly, sometimes boulders cross watercourse 14 or 15 times, hence trying to animals. Two miles short of Bazar Khost two ravines join, one from Shutargardan and the other from Jadran hills to the south. The road to Kabul follows the former, and that to Ghazni All provisions plentiful. Encamping ground
	the latter, by which Bazar Khost is reached good; 4,500 (P) houses.			
4	MARI . . . . .	18	60	The route passes through the country of Khost, country of few hills and many valleys. The place is well populated, all kinds of provisions obtainable. Many villages and gardens are passed. Two or three forts are passed belonging to the Jadran tribe. The strongest and largest is that
	of Khuddad or (Khwaiddad) with six towers, one in each of the four corners, one over the doorway, and one, the largest, in the centre of the fort. The fort can accommodate three or four regiments. Encamping ground good.			
5	CAMP . . . . .	16	76	Camp under the Saroti kotal. The route passes through Jadran country before reaching Ghilzai country. It follows a ravine, often in its bed. Stream moderate. Water plentiful and good. For horses and bullocks road easy, but difficult for camels; country well inhabited, provisions plentiful. Towards end of march a forest is passed. Encamping ground good. Snow falls for three months in year.
6	BALA BAGH . . . . .	19	95	Is situated between Sar-i-Logar (a Logari <i>chauki</i> ) and the Jadran tribes. Route passable for laden camels, bullocks, and horses. The ascent is circuitous. Bala Bagh is a small settlement of the Husen Khel section of the Ghilzai tribe. It is a spacious place. From here one road goes through Logar to Kabul, two days' journey <i>via</i> Shutargardan, the other to Ghazni <i>via</i> Sar-i-Logar and Kala-i-Saiad Husen.
7	KALA-I-SAIAD HUSEN . . . . .	10	105	The road passes through the Ghazni country. Good camping ground.
8	GHAZNI . . . . .	14	119*	Road easy.

Route No. 71.

FROM BANNU TO GHAZNI *via* THE TOCHI.

*Authorities* :—MARDALL AND SMITH; THE MULLA; MCNAIR AND SAIAD; M. H.; N. W. F. GAZETTEER.

No. of Stage.	Names of Stage.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MIR ZAIL . . . . .	10	10	By the Tochi post about 7 miles from Pannu. The road thence follows the general line of the <i>nala</i> ; it is a mere track, rough and stony, but generally level, and passable for all arms. Road up left bank of <i>nala</i> in a north-westerly direction, to Mir Zail, the first village

\* The distances are evidently understated. The actual distance cannot be less than 150 miles.

Route No. 71—continued.

across the frontier; *nala* averages 600 yards in breadth, stream narrow and swift, fordable nearly everywhere, 2 to 3 feet deep. Stream impassable in heavy rains, but flood quickly subsides.

A small hamlet, with a square tower, lying in a hollow near the stream. Camping space on plain N. W. of village.

2	IDAR KHEL . . .	11 (P)	21 (P)	From Mir Zail still along left bank, direction south-west, road flat and fairly good to 3 miles; bare stony plain to the right of road; to the left, across <i>nala</i> , undulating hills practicable for skirmishers. At this distance there is broken ground for about $\frac{1}{2}$ a mile,
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which cavalry and baggage should avoid by taking the bed of the *nala*, which runs here between high banks. At 5 miles, the *nala* makes a sharp twist to the south, in the form of the letter U, about  $2\frac{1}{2}$  miles round, and the path leaves the *nala*, going straight over a saddle (called the Shinkai kotal), and joining it again after  $\frac{3}{4}$  of a mile. From the kotal the track improves, leading for about a mile across a plain, then ascending to higher ground some 50' above the stream, whence the ground is more open, and there is no impediment to the advance of a body of troops.

This is the most direct route into the Dawar valley, and there is good water all along the road. It is said to be passable for field artillery, the Shinkai kotal being the only difficult part. This could be rendered passable by a couple of hundred pioneers in an hour.

There are two other passes leading into the Dawar valley, both longer and more difficult than the Tochi.

Idar Khel stands on the left bank. The right bank and *doab* are cultivated. The Tochi river here was 18" deep in September 1883; bottom gravelly, with big boulders scattered about. Probably 5' deep in spring.

The Dawar valley is divided into Upper and Lower by the Tagri *tangi*. Both valleys are highly cultivated, and are intersected by numerous watercourses, deep and broad. There are also many marshes, and the country is not suited for cavalry operations. Forage, grain, firewood, meat and water are everywhere abundant. The villages are walled, with flanking towers; and every field is defended by a tower.

Route via the Baran pass.

Little is known about this route. The following account is from native information. The distance is probably about 30 miles. Entrance to pass is opposite Baran post. The pass is much more rocky than the Tochi, and there seems to be great doubt whether it is practicable even for cavalry, there being many stiff, tortuous ascents in its course. It is the main trade route, so it would probably be practicable for mountain guns.

Route via the Khasora pass.

Follow Route No. 73 for about 26 miles, then a low pass is crossed, which might require improvement for wheeled artillery. Two miles from Idar Khel the Tochi is crossed.

3	HAKIM KHEL . . . (HAKIM KILAI).	8	29 (P)	On this stage there are no difficulties of importance. Road through cultivation; some water-cuts which would require ramping for wheels. At 2 miles pass the village of Malik Samand, the road running through the village, which is a parallelogram with bastioned mud walls. About 150 houses. Thence the road runs to Idak,
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crossing a small tributary of the Tochi from the north-west about half-way. Pass through Idak, a large walled village, with numerous hamlets outside. Hence a branch road to Khost. At 2 miles from Idak, Hakim Khel is reached over a low ridge; easy for wheels. Road passes by the north wall of the village. A village of the Dawari section of that name; rectangular form, with bastions at the angles. About 100 houses within the walls, numerous hamlets outside.

4	MALIK SHAHZADA KALA,	13	42 (P)	Road runs through cultivation for 4 miles. At $\frac{1}{4}$ mile from village cross the Tochi (no difficulty), following the right bank for $\frac{1}{2}$ mile, when recross to left bank. At 4 mile the cultivation ceases, and hills approach both banks, forming what is called the Tagrai
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ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 71—continued.

*tangi*. This, according to M. H., is perhaps a misnomer, as the valley, which is almost entirely occupied by the river bed, is now here less than 300 yards wide. The *tangi* is about 3 miles in length, and the road follows the river-bed, which is practicable for guns. The hills on either side are 20' to 300' in height, and easy for skirmishers. At the western end of the *tangi* (about 7 miles) a camel road goes north to Kuram. At 12 miles are some bad *nalas*, deep and wide, which would require ramping or bridging. The widest and worst is 30' across. They were dry in September.

A village of Muhammad Khel Dawaris, with five or six Hindu shop-keepers. About 80 houses; walled and bastioned, with two gates. Road runs through village. Supplies procurable for a large force.

5	MIAH KALA . . .	14	56 (P)	Road through field for 5 miles; no difficulties. Then through a gorge for 200 yards, following the banks of the Tochi, passable for all arms. Leaving this <i>tangi</i> , the large village of Dakar is passed on the right bank. Then over a spur that touches the river (road easy), across a small tributary from the north, and through fields to Miah Kala.
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The place consists of two forts, one on either bank of the Tochi; largest on right bank. Only a few houses; no supplies; but the latter can be procured in abundance from Dakar and other large villages near.

6	ZIARAT-I-MAMA . . .	12	68 (P)	Road follows the river-bed throughout, frequently crossing and recrossing. It is fit for wheeled traffic except at one point, where it passes over a spur on the left bank. This would be rendered fit for wheels by 400 men in a day's work. The bed of the river is passable, bottom pebbly. On this stage a good many hamlets and much cultivation are passed. Ziarat-i-Mama is a collection of walled villages, with numerous Tajik and Waziri inhabitants. Supplies abundant, including rice. It was bitterly cold here at the end of September.
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7	MARGHA . . .	26	94 (P)	At about 1 mile pass Adam Khan Kala, a collection of Mada Khel forts (perhaps the Sberanni of the map). Thence over a level plain on the right bank of the Tochi, the hills being 1 to 3 miles distant. At 5 miles pass the mouth of a broad valley from the left (probably drains Shawal), where there is a good deal of cultivation, and the valley is about 1 mile across. The road then follows the hill slopes on the right bank, passing several forts on left bank. At 7 miles is the junction of the Tochi (Mast Toi of map?) and Margha (Tochi of map?) rivers. Hence the road follows the right bank of the Margha, and is very bad for $\frac{1}{2}$ mile, and requires making. Road runs sometimes along the hill slopes, sometimes in the river-bed. At 14 $\frac{1}{2}$ miles pass Sherpali Kala. Road continues up the valley, crossing the stream several times (2' deep in November), and leaving it occasionally to cross a spur. At 23 miles pass Pipali, a few forts belonging to the Pipali section of the Wali Khel Waziris. At 24 miles the hills open out somewhat, and at 25 miles the road, now on the left bank, crosses to the right bank. Margha belongs to the Sherpali section of the Wali Khel Waziris, and consists of a number of detached forts, each with a few houses. Water, fuel, and forage plentiful; supplies procurable. Hence a road south-west to Urmul.
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(M. H. says that from the 2nd mile the above road is very bad. Hills approach both banks, and there is not room for camels to get along. River-bed also impassable for camels, being full of large boulders. The formation on right bank black rock; left bank clay, easily worked. Would require considerable labour to make road fit for wheels. At 12 miles road crosses a low pass; clay, easy slopes, little work necessary). Route No. 79 from Khajuri. Kach comes in at Sheranni.

At  $\frac{1}{2}$  mile cross the Margha river, 2' deep and 15 yards wide in November.

Route No. 71—continued.

8	URGUN (OR WARGIN)	29 $\frac{1}{2}$	123 $\frac{1}{2}$ (?)
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The valley here is about  $1\frac{1}{2}$  mile wide, and the road runs through cultivation for  $\frac{3}{4}$  mile, beginning to ascend the hills on the north side of the valley at  $1\frac{1}{4}$  mile. Ascent easy, but ground much broken and unfit for wheels. The descent on far side is difficult, but practicable for laden camels. At

$6\frac{1}{2}$  miles road crosses the Tochi twice, following the right bank thence for about  $3\frac{1}{2}$  miles, passing at  $6\frac{1}{2}$  miles Daran Kala, at 7 miles crossing a spur, and at  $7\frac{1}{2}$  miles passing a second Daran Kala, a Waziri fort. At  $9\frac{1}{2}$  miles crosses the Tochi, and follows the left bank to  $11\frac{1}{2}$  miles, when it recrosses stream, at this point 30 yards wide (November). Further on a few Waziri houses and some graveyards are passed. The road hereabout is known as the Rah-i-Khar Algar (not Khra Algad, as in map). The hills are quite low and the valley open. (*A camping ground would probably be found here.*) At  $17\frac{1}{4}$  miles the valley contracts and hills become higher; road up bed of stream. The water springs out at  $19\frac{3}{4}$  miles. Up a ravine, with steep hillsides, to a kotal at 22 miles. This is the Waziri Afghan boundary. For the next 3 miles is a gradual descent; road would require making for wheels; easy soil. At 25 miles the road leaves the hills, and at 28 miles crosses the Len Rud, which flows into the Ab-i-Fermul at Pushtai. At  $28\frac{3}{4}$  miles is a village, Deh Shekhan.

Urgun is a fortified town with many towers. About 1,000 houses and many Hindu shops. Supplies of all sorts procurable. The inhabitants are Tajiks. There are two powder and three flint-gun manufactories.

An alternative route exists from Sheranni to Urgun by the Mast Toi (called above Tochi). It is said to be a long stiff day's march. Grass and wood are plentiful along the road, but no supplies.

Another road goes from Margha to Urgun up a tributary of the Tochi called the Du-awa. It is known as the Rah-i-du-awa. M. H. heard that it was open and easy, but did not explore it.

According to M. H. the following roads meet at Urgun:—

I.—A road from Katawaz in the Suliman Khel country, known as the Shatori route. This is a mule track.

II.—A road from Saraoza *via* Sultanai and the Zameh kotal. The latter kotal is passed at  $1\frac{1}{2}$  mile from Urgun. On the Urgun side the ascent is for 500 yards over rock, fit for mules only; blasting and much work necessary to fit it for camels even. On the other side towards the village of Malik Roshan (5 miles from the pass), there is the same slope, but there the soil is easily worked, with but little rock. Sultanai is 17 miles from Urgun by this route, which is very difficult owing to frequent abrupt rises and falls. The village of Malik Roshan has 40 houses of Kharotis.

III.—A road from Kamkai Saraoza (a place to the north-east of Saraoza proper). This M. H. could not go over, but it is the route used by the Kharotis, so as to avoid the Suliman Khels, with whom they are at feud, and by it they take camels laden with grain from Urgun to the Ghazni market.

9	SANGA MAIDAN	17	140 $\frac{1}{2}$ (?)
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Road for 3 miles across a level plain, when the hills are reached. The road crosses this range which is rather steep; it may be avoided by a detour to the north. At  $4\frac{1}{4}$  miles pass Pushtai, which is about 5 miles to the right. The ground here is well known as Dahna. At 5 miles the

Shahtori stream is crossed, and the road goes down a ravine, crossing the stream several times; high *chilgoza* covered hill on both sides. From 7 miles the road goes over a plain for  $2\frac{1}{2}$  miles, when the Shahtori is again crossed. At  $9\frac{3}{4}$  miles pass the cemetery of Shahtori, the fort being a mile distant. Soon after the ascent to the Kotanni kotal commences. This ascent is easy, the ground being soft and free of rocks. At  $12\frac{1}{2}$  miles pass a spring. The kotal is reached at  $13\frac{3}{4}$  miles; elevation 8,000' by aneroid. There is a *ziarat* on the crest. Descent easy, road commanded on both sides by low tree-covered hills. The bottom is reached at 15 miles, whence the road lies down a *dara* or glen. Camping ground on the left bank of the Paltu *nala*. Wood, water, and forage plentiful. The place is exposed to Jadran raids.

M. H. says that between the Kotanni kotal and Sanga Maidan, there is a second kotal to cross, which, though not high, is very rocky and presents greater difficulties for baggage animals than the Kotanni itself. It crosses a spur which springs from the main range to the

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 71—concluded.

north of the Kotanni, and he says that it becomes less rocky as it recedes from the main ridge. He is therefore of opinion that an easier point for the construction of a road might be found farther south, or that the spur might perhaps be altogether avoided by a detour in that direction.

10	KALA KHWAJAZAI . . .	19	160 $\frac{1}{4}$ (P)	Road crosses the Faltu <i>nala</i> , 20 yards wide (November). At 4 $\frac{3}{4}$ miles pass Sarozai, a Kharoti village, about 3 miles to the right in the hills. At 5 $\frac{1}{2}$ miles cross a <i>nala</i> , and at 6 $\frac{1}{4}$ miles cross the Sarozai <i>nala</i> , 18' deep and 60 yards wide, in November. The road requires making in places for wheeled traffic. At 7 miles the country opens a little, and road goes along the bed of a dry <i>nala</i> for $\frac{3}{4}$ mile. At 7 $\frac{3}{4}$ miles a road from Sultanai, 4 $\frac{1}{2}$ miles distant, joins on the left. At 8 $\frac{1}{3}$ miles the country becomes somewhat broken, and there are hills on both sides some $\frac{1}{2}$ mile distant. At 9 $\frac{1}{2}$ miles is a slight descent. There is water here, and the place, which is often used as a camping ground, is called Tandak. Hence a road to the Gumal pass route. At 12 $\frac{1}{2}$ miles the road enters on a level waste, and further on runs through a dry <i>nala</i> to 15 miles. At 16 $\frac{1}{2}$ miles a village of Zurmat, called Patanai, is passed; and at 18 $\frac{3}{4}$ miles there are two forts, 300 yards to the right.
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Water abundant; supplies procurable. There are two forts.

11	KALA RUSTAM KHAN . . .	13 $\frac{1}{4}$	173 $\frac{1}{2}$ (P)	Road through fields belonging to Zurmat. At 1 $\frac{1}{2}$ miles cross a canal. At 3 $\frac{1}{4}$ miles is a fort; and at 4 $\frac{1}{4}$ miles are four or five forts of Ibrahimzai (Andars). At 6 $\frac{1}{2}$ miles there is a slight rise at a place locally known as Band. This is the traditional boundary between Zurmat and Shalgarh. At 8 $\frac{1}{4}$ miles the road crosses the Gardez, 2 feet deep and 30 yards wide (November). River sometimes much swollen in spring and summer. Much timber is brought down by it. The water is unfit to drink. At 9 miles pass Kob-i-Mursal, 400 yards to the right, at 10 miles Kala Mazdur, at 10 $\frac{1}{2}$ miles Kala Sultan Bagh, at 11 $\frac{1}{4}$ miles Kala Niaz Khan, and at 12 $\frac{1}{4}$ miles Kala Sarandaz. Road good for wheels.
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Supplies procurable. Water from a *karez*. Fifty houses.

12	GHAZNI . . .	14(P)	187 $\frac{1}{2}$ (P)	Road throughout level and good for guns. At 2 miles pass Mazulla Khan's fort. At 6 $\frac{1}{2}$ miles pass through Urzu. At 6 $\frac{1}{2}$ miles pass Shalez, a fort village, 300 yards to the left; at 7 $\frac{1}{4}$ miles a <i>karez</i> to right of road; at 8 $\frac{1}{2}$ miles low hills to right of road, 300 yards distant. At 11 miles is a Tajik settlement of three forts, called Deh Khudadad; and about a mile further on Kala Nao, a fortified village near the bank of the river, which is about $\frac{3}{4}$ mile distant.
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For details of Ghazni, see route No. 66.

*Note.*—There is said to be another route from Sheranni to Sanga Maidan *via* Pai Khel, Asar, Luaru, Gujawan, Pir Kute, and Shahtori. Fuel, supplies, and water said to be obtainable at most of these stages, but the information is very unreliable. The stages named are said to average between 10 and 12 miles.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 72.

FROM BANNU TO KATAWAZ.

Authority.—BELL (*from the Saiad*).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	HUSEN BABA ZIARAT	14	14	Leaving Deh-i-Baran the road runs to Husen Baba Ziarat, which is not less than 14 miles distant.
2	WAZDEH SAR . . .	19	33	Road follows the Shawal route through the Husen Tangi defile to the foot of a high mountain, named Wazdeh Sar, at this point a road branches off to Gumal, which is two days' march distant. Road practicable for mule carriage.
3	PIRGALAT . . .	20	53	The next encamping ground is at Pirgalat; hence a road leads to Makin; it is a good caravan road, suitable for camels. From Makin to Quetta a road only passable for mules. There are ascents in two or three places; road traverses Mahsud-Waziri, Gumal and Kakar country. Quetta is reached by it in nine days.
4	KATAWAZ . . .	38	91	From Pirgalat, Katawaz is reached in two days; beyond Katawaz the road joins the main road to Ghazni at Band. See Route No. 72. This route is practicable for pack carriage, but it is more difficult than the Tochi or Baran tang routes. Grass, water, and wood are obtainable at all places, but no other supplies.

Route No. 73.

FROM BANNU TO KANIGURUM *via* THE KHASORA VALLEY AND MAKIN.

Authority: D. A. Q. M. G., WAZIRI EXPEDITION, MAY 1881.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MIRIAN . . .	9	9	Along the frontier road, crossing the Kach Kot (bridged) at 3 miles. After reaching Mirian (or Norur) cross the Tochi, fordable except after heavy rain, and camp on the right bank, on high gravelly ground. Plenty of good water from the Tochi up to the date of force leaving, <i>viz.</i> , 4th May; none whatever

when crossed on return on 21st May. Supplies from Mirian and other villages on the left bank, which is entirely cultivated.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 73—continued.

2	SPIN WOM . . .	10	19
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Route crosses the wide stony plain for 7 miles to the Tangi Khel huts, where the Khasora river issues from the hills, passing at 2½ miles the villages of Sardi Khel, and at 4 miles those of Mirmi Khel (1 tower, in Pilod's village). Road good. Thence to

Spin Wom the road is simply the broad stony bed of the Khasora; it is rough, but presents no difficulties to a force not encumbered with wheeled guns. Low bare hills on both sides command road at close range, but are easily crowned. At 10 miles Spin Wom, a large flat piece of ground, formerly cultivated, about a mile long by 400 yards broad. Water good and plentiful from the stream. There is no village. About 60 *kanals* of green crops were obtained as forage. Plenty of grazing for camels round camp. Height 1,600 feet.

3	DAWA WARKHA . . .	11	30
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Road (as before) continues for nearly 2 miles in bed of stream, when it reaches the Khasora Tangi, about 40 yards wide, formed by the river cutting through a rocky ridge. Both sides are high, precipitous rocks, rising like walls, at right angles to the road, behind

which an enemy might make a very determined stand until enveloped, as he would be safe even from artillery fire. After very heavy rain the stream fills the gorge, which is said to be then impassable for hours, and there does not appear to be any alternative route nearer than the Kisonai pass.

Shortly after passing the gorge, the road ascends on to the Momaki Raghza, which it crosses for nearly 3 miles, descending again to the stream; the ascents and descents had to be smoothed and improved for about 150 yards. After crossing the river-bed, the road ascends a hill on the left bank; the ascent is rather steep (for about 300 yards) for camels, but not otherwise difficult. In making this march with a large number of baggage animals, it is probable that time would be saved by making them keep to the bed of the Khasora the whole way from the Tangi to Dawa Warkha, as much time is lost at these small ascents and descents.

The road continues along the high ground on the left bank, being the southern edge of the Drozunda plateau, and is good and easy. Routes branch off and cross the plateau towards Idar Khel and Tapie in Lower Dawar (Route No. 71). At 9½ miles pass the Maramai tower (Turi Khel) standing on the edge of the high river bank to left of road. Dawa Warkha is a collection of three villages close to the foot of some low stony hills. Camp was pitched on the cultivated-land below Mandatis village, where the crops were cut. Water from stream good and plentiful; very little camel-grazing. Elevation, 2,500'.

4	SAROBO . . .	13½	43½
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Road runs for nearly 2 miles along the *ragza* on left bank, about 150 feet above the stream (the latter is the best route for baggage animals); passing on the opposite bank the two strong towers of Karkanai. It then descends to the bed of the stream, and is narrow and bad for

about 50 yards. Thence the road keeps to the bed of the stream the whole way to Sarobo. It is of the character already described, *viz.*, roughly paved with large water-worn stones, but presenting no difficulty. At 3 miles pass Wurmankai, a solitary tower on left bank, and at 4 miles the large village of Dakai Burj with four or five strong towers commanding the approach both ways. This village stands on the high bank at the junction of the Dakai Khula, by which stream there is said to be an easy route into the Shakto valley. From here the hills on both sides increase in height, and are well covered with brushwood, chiefly holly bushes. At the same time the bed of the stream, which has hitherto been about 150 yards or more in width, narrows considerably for the next 3 miles, being in several places only 30 yards broad, running between high precipitous banks of conglomerate, which shut out all view of the ground behind them. Here are passed in succession Maidan Khel Tota, Ali Mush, and Abbas Khan Kala, all small hamlets of the Turi Khel, standing on the high banks above the stream, and with one tower in each.

From here a road is said to run towards Tapie in Lower Dawar; it is not evident where it leaves the Khasora route.

At 9 miles pass *Eti ziarat* in a large grove of trees on left bank. Very good springs of water.

Route No. 73—continued.

At Musaki two roads branch off to Dawar, one running by the Lukai Khula, and thence over the watershed and down to Amzoni and Mulak in Upper Dawar, and the other bending to the right and going towards Tapie in Lower Dawar. The village of Asad Khel stands on a high bank near the junction of the Luckai Khula.

The ground for encamping is very bad, being little more than the slopes of a stony hill covered with holly bushes. There is also a small piece of flat ground available, near where the crops are cut. There is ground on the high plateau on the right bank, but the ascent would be difficult and steep. Water good and plentiful from the stream. Plenty of grazing for camels. Fifty *kanals* of green crops were obtained. No other supplies. Elevation, 4,200'.

5	RAZANI . . . .	11	54½	Throughout this march also the road follows the bed of the stream (here quite dry), and is as before described. No villages or cultivation are passed. At 3½ miles pass the mouth of the Sara Mela Algad, a large valley similar in character to this part of the Khasora, and
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shortly afterwards the bed of the river, which is here running between large *ragzas*, narrows to a width of about 30 yards for a quarter of a mile, when it again opens out. Here on the left is a path leading to Dosalli, a village to the south. (Route No. 74). At 6½ miles Khani *ziarat*, a large grove of trees in the bed of stream, and a camping ground of the Waziris. The water in the Khasora here disappears entirely in the sand, and from this down to Sarobo there is none whatever. From here a road runs to Mulak in Upper Dawar. From Khani *ziarat* for the next 2½ miles the road skirts the foot of the Giridi Rogho, across which a path (not fit for baggage animals) runs, which saves nearly a mile. Following the bed of the river, at 8 miles the junction is reached of the Khasora and the main valley, which above this point is called the Momai Rogho Algad. From here there is a route into Upper Dawar *via* the Momai Rogho Algad and the Lworgi kotal. The road turns up the Khasora southwards. It soon narrows considerably, but presents no difficulty; and at 11 miles reaches Razani, a small village on rising ground above the left bank. Camp was pitched on the right bank on the *ragza*, south of the village. The ascent to the plateau, after being improved and cleared of stones for about 150 yards, was easy and good. Plenty of good water from the stream. About 200 *kanals* of green crops were obtained in all at Razani. There was also plenty of grazing for camels. No other supplies obtainable. Elevation, 6,000'.

6	RAZMAK PASS . . . .	5½	60	Leaving the camp at Razani the road crosses the end of a low spur, and descends again to the bed of the Khasora. A good road was cut down this descent, length about 150 yards. From here the Khasora is only a mountain stream. For the first 3 miles the path leading up the
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bed presented no difficulty to mules, but required smoothing and clearing away of boulders to allow camels to use it. At 3 miles road leaves the stream and ascends the right bank; very steep for 100 yards; then level for ½ mile, but too narrow to be more than a single file road; then a very steep and narrow ascent for about ½ mile, when the top of the pass is reached. Distance from Razani, 4¼ miles. The last ½ mile of this ascent is very difficult for camels; and short of choosing a new line of road, it was not possible to do much to improve it. In one place springs percolating through the soil keep the path constantly slippery. There is, however, no difficulty in it as a mule-road, but it would always be a single-file one: camels took nearly six hours to get from Razani to Razmak; mules about 3.

From the kotal the ground is open and flat for a distance of more than a mile to the west of the road which skirts the foot of the hills on the east, which are rounded hills rising to a height of a few hundred feet only above the road. On the west, long flat-topped ridges jut out from the lower slopes of the Shuidar mountain; they form first-rate encamping grounds, and there is room for a force of any size. The village of Razmak is a very small one, with no supplies, though the amount of cultivated land round it is large (extending for a mile or two), the crops were thin and poor. About 300 *kanals* were obtained altogether, but part of this came from lower down the valley towards Razani. Plenty of good water from the head of the Tanda China Algad and from a spring. The only grazing for camels is the holly bushes on hills to east, which does not suit them. Elevation, 7,100'.

The road up the Razmak pass from Razani is easily protected on the right flank, the hills that side being easily crowned. On the left flank (east) the hills are high, steep, and wooded, and are not so easily crowned.



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 73—concluded.

At Razmak the head of the Shakto valley lies immediately on the opposite side of the small range of hills to the east. It is entered by two passes, the Nawal and the Angamul, from 3 to 4 miles south of the Razmak pass. Both were reported very difficult for baggage animals in the descent on the eastern side; a good road was made from the Razmak side in 1881, to the top of the Nawal pass; length of ascent about 1 mile.

7	MAKIN . . . . .	8	68	From Razmak the road follows an open valley—that of the Tanda China—the whole way to Makin. The stream has a wide stony bed, forming an easy road; it follows closely the foot of the eastern range of hills, which are thickly wooded, and is bordered
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on the west by the long, flat-topped ridges before mentioned, the height of which above the stream gradually increases, as the latter descends, until near Makin they are 100 feet or more above it. At 2 miles from camp a path leads up to the left to the Nawal pass, and at 3 a similar one to the Angamul pass.

At 4½ pass Langchura, a village lying about a mile off the road up a side valley to the west and on east a few huts called Mirzang. At 7 miles pass a large and very strongly built, tower, standing on high ground to the left of the road. At 8 miles the stream joins a larger one from the west, and here are situated the group of Mahsud Waziri villages called Makin. Makin seems a considerable town (for Waziri land) and probably contains 200 houses and many smelting furnaces, much of the iron-work is carried on here; it lies at the foot of a high mountain along the lower slopes of which it rises in terraces, below it stretching fields to the edge of the *nala* bed.

Route No. 76 comes in here from Dera Ismail Khan *via* Margaband.

8	DWA TOI . . . . .	6½	74½	Road runs over flat <i>ragza</i> land, then enters the <i>nala</i> , which gradually widens: pass villages of Malikshah, Gunokhel, Martaza Kas, Sawan Kala, Marobi, and Najib. Many patches of cultivation are passed on the sides of the <i>nala</i> . A broad stony stream flows down this <i>nala</i> (called Makin), which has to be crossed and recrossed several times.
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Road runs along the Badar stream, which has to be constantly crossed and recrossed, and which narrows from 100 yards down to 10 or 20 at the tangi, passing through which the bed of the stream broadens again. At 6½ miles the Maidan *nala* joins the Badar stream from north-west. At 7½ miles leave the *nala*, and crossing two small *nalas* and *ragzas* reach an excellent camping ground at Kanigurum.

The town of Kanigurum is situated on a small stony ridge on the left bank of the Badar stream; between it and the bed of the stream is an extensive stretch of irrigated cultivation, rising in terraces, banked up by substantial stone walls from the stream bed up to the edge of the town and intersected by narrow lines.

The terraced fields which also extend on the west side of the town and ridge on which it is situated are richly cultivated. The town itself extends along the crest of this ridge and principally down the east side of it, though there are a few houses on the other side also, and contains probably 400 houses. These are built very much like an ordinary hill village in the Himalayas, one above the other in steps. There are several strongly built towers, and the main street is covered in with rafters, like one of the big bazars in Kabul or Kandahar, but the roof is so low that a horseman cannot ride through. The houses are all built of stone and mortar, and a great deal of wood-work is employed in their construction.

9	KANIGURUM . . . . .	9	83½	Road runs along the Badar stream, which has to be constantly crossed and recrossed, and which narrows from 100 yards down to 10 or 20 at the tangi, passing through which the bed of the stream broadens again. At 6½ miles the Maidan <i>nala</i> joins the Badar stream from north-west. At 7½ miles leave the <i>nala</i> , and crossing two small <i>nalas</i> and <i>ragzas</i> reach an excellent camping ground at Kanigurum.
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ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 74.

BANNU TO DOSALLI, *via* THE SHAKTU VALLEY.

Authority.—WAZIRI EXPEDITION, May 1881.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	JANI KHEL . . .	15 $\frac{5}{8}$	15 $\frac{5}{8}$	Along the frontier road, stony country, crossing the Kach Kot (bridged) at 3 miles, passing Mirian, at 8 miles, when the Tochi (fordable except after heavy rain) is crossed, and Burji at 12 $\frac{3}{4}$ miles. A Waziri village and frontier post; supplies
procurable after due notice; water from tanks.				
2	KABKAM WOM . . .	11	26 $\frac{5}{8}$	Road good throughout, though rough. On the left low bare hills gradually rise from the plain, and on the right stretch uninterruptedly for some 12 miles to the Tochi. During the first 3 miles several small <i>nala</i> beds are crossed (no difficulty), said to be formed by
the waste water of the Shaktu in the rainy season, but water can seldom find its way into them. The road runs all the way over a wide stony plateau, descending at the end to the camping ground. At 8 miles pass some graves near a small conical hill, generally supposed to mark the frontier. No water along the road.				
Camping ground on a flat cultivated <i>kach</i> on the right bank of the Shaktu. Water from the river. A small hamlet of the Turi Khel lies about 1 $\frac{1}{2}$ mile off, beyond the hill to the south-east.				
3	MANDAWOM . . .	13 $\frac{1}{2}$	40 $\frac{1}{8}$	The road lies in the broad stony bed of the Shaktu, which for 10 miles follows a very circuitous course, winding between steep rugged hills. At about 4 miles the Khraista, a large dry stony river-bed, joins the Shaktu. The former appears to be the main valley, the
Shaktu being comparatively small. It runs up to a kotal between the Gabargarh and Babargarh hills (Route No. XVI N.-W. F., volume II), whence is a path to Palosin, said to be fit for camels. Beyond the junction the Shaktu <i>tangi</i> is passed through, about 40 yards wide, and offering no difficulty, if uncontested. At about 5 miles paths branch off to the Sin <i>ziarat</i> and Drozunda plateau, said to be easy; distance to where they reach the Khasara, about 6 or 7 miles. This part of the valley appears to be always infested by marauding parties. At about 8 $\frac{1}{2}$ miles pass through a <i>tangi</i> , about 30 yards wide, and at 9 miles cross a large grassy patch on left bank suitable for encampment. At 10 miles the junction of the Sherana Algad. Above this the Shaktu valley opens out, and there are no difficulties.				
Camp on a large flat piece of cultivation on left bank, encircled on all sides by hills. Water from the stream. A few huts in a side <i>nala</i> , at the mouth of which is a small <i>tangi</i> , like a doorway, only about 4 feet wide. Crops uncut on 18th May, and 100 <i>kanals</i> were obtained. Camel-grazing on hills to south.				
4	BAROMAND OR ZEWAR KOT.	6 $\frac{1}{2}$	46 $\frac{5}{8}$	Above Mandawom the valley again contracts. For about 1 $\frac{1}{2}$ mile the road follows the river-bed, when it passes over a rocky spur on the right bank to avoid a waterfall; ascent and descent about 150 yards each, practicable for camels. Soon after the stream is crossed be-

low a second waterfall, 15 to 20 feet high, and the *ragza* on the left bank is ascended by a good zig-zag road 250 yards long (made same date), rather steep for camels, but easy for mules. At 3 $\frac{1}{4}$  miles cross the mouth of the Zaindai *nala*; descent and ascent rather steep, but practicable. The road for the remainder of the stage runs along the high ground, and

Route No. 74—continued.

is quite practicable, though very narrow in places. At about  $4\frac{1}{2}$  miles a road branches to the Dakai Burj (*via* Dakai Khula), said to be very easy over open and undulating ground, distance about 6 miles. There is said to be another plain, similar to the Sham on or near the route. At the end of the march the road descends steeply for about 70 yards (practicable for baggage animals) to the camping ground.

A large walled village. The proper name is said to be Zewar Kot, and Baromand that of the plateau; 300 *kanals* of green crops were obtained here. No other supplies. Water good from the stream.

This stage is the only difficult part of the route. The valley is here narrow, forcing the river into a narrow gorge, and the road is obliged to follow the hillsides at a higher level. There are no villages or cultivation, and the valley from Karkam Wom to Baromand seems to be given up to marauding bands, chiefly of the Jalal Khel.

5	WALADIN or KRACH KHEL.	$13\frac{1}{2}$	$60\frac{1}{2}$	The road follows the river-bed the whole way, and no difficulties are encountered. For the first 7 miles the bed averages some 100 yards in width, lying in a south-westerly direction; it then makes a sharp bend to the north-west, and afterwards averages 60 yards in breadth.
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In the broad part are many rich pieces of cultivated *kach*, the most valuable property in the valley. The villages stand on the high stony plateaux overlooking the *kachs*, while behind them the hills rise steeply. Except Zewar Kot, Kirarai Kot, and Sher Ali's tower, the Shaktu villages have neither walls nor towers.

At  $2\frac{1}{2}$  miles pass Kirarai Kot. The stream here is strong, and flows between high precipitous banks (*ragza*), which shut out all view of what lies behind. Between 4 and 6 miles are the four large *kachs* of Zandarwom Matwom, Pezhizwom, and Dirgai Kach, and at 5 miles the villages of Matwom and Zandarwom are passed, where the Shaktu bends round a small hill, which lies in its course. The bed here is very wide. At 6 miles pass Kikarai with Sher Ali's tower, the only one in the valley. At  $7\frac{1}{2}$  miles reach a gorge, with the village of Khadari on the high bank above it.

Here the Shaktu makes a sharp bend to the north-west and becomes narrower.

At about 7 miles pass the two villages of Sandera (or Sanger), called also Kamolai and Mandakhel. At 8 miles the junction of the Sham stream, with the village of Mirkanai (or Mir Husen) at its mouth, on the high bank to the north. Above this the Shaktu flows between steep hills, broken by deep side valleys, and difficult for flanking parties to crown. The amount of water in the stream is not sufficient to interfere with its being used as a road, and this is said to be almost always the case. At  $10\frac{1}{2}$  miles two villages are passed of the Shahabi Khel, whose chief settlement is said to be situated on the lower slopes of the Shah Ghar.

The village of Waladin is an insignificant hamlet, about 9 miles from the head of the Shaktu valley, situated on a piece of *kach* land on the left bank, and pinned in between the foot of the hills and the stream.

The Shaktu valley is here narrow and bordered with high hills, especially on the right bank, where their steep sides almost overhang the stream and completely command the village. Camp was pitched on the *ragza* behind the village, from the cultivated lands below which 140 *kanals* of green crops were cut. Plenty of good water from the Shaktu, which is here a fair stream; a small amount of camel grazing on the hills to the north. Elevation, 5,700'.

6	SHAM PLATEAU	$6\frac{1}{2}$	$66\frac{1}{2}$	There are two roads; the mule-road 5 miles, the camel-road $6\frac{1}{2}$ miles. The mule-road ascends for half a mile to a small kotal, which overlooks the village of Waladin, and then crosses in succession three spurs of the Waladin Ghar. It then descends to the Larai
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*nala*, and passes through an easy *tangi* for 200 yards. Another low kotal is then crossed, whence the path descends and crosses a stream. At  $3\frac{1}{2}$  miles another low kotal, after which the road lies over a plain for the rest of the stage.

This road appears to offer no difficulties for mules, and the heights on either side are easily crowned throughout, except the Waladin Ghar, which is a high steep hill, commanding a view over all this part of the route.

The camel-road is the same as above to the kotal at  $\frac{1}{2}$  mile, whence it descends to the Larai *nala* at about  $1\frac{1}{2}$  mile. It follows the *nala* for about a mile, and then for the re-

Route No. 74—concluded.

mainder of the distance runs along the open Sham valley. This road is easy throughout. There is a good deal of cultivation in the Larai *nala*, but no villages.

Camp on the Sham plateau. Water from the stream. Plenty of grazing for camels and mules; 170 *kanals* of green crops obtained from the cultivated lands near.

The Sham is a wide grassy plain on the watershed between the Khasora and Shaktu, elevation 6,000 feet, and the principal grazing ground of the Turi Khel and Mahmut Khel Waziris, who bring their flocks here about the month of June. The extent of the plateau is roughly  $1\frac{1}{2}$  mile from east to west, and about the same from north to south; but several broad side valleys open into it, so that the actual extent of flat ground is considerably more. The hills to west and east of it rise to a height of 200 or 300 feet above the plateau, and are covered with the dwarf oak common to all these hills. There are also a few fine large trees scattered round the edge of the plateau and on a knoll in the centre of it. The stream afforded an ample supply of water for the whole force, and is said never to be dry in hot weather. Besides this one, the stream at the lower end of the plain is a good-sized one also, and there is probably water in the side valley.

There are no villages on or near the plateau; a path leading over a low kotal to the east was said to lead to a small village called Dinora, distant a few miles.

7	DOSALLI	.	.	4 $\frac{1}{2}$	71 $\frac{1}{2}$	From the plateau there are two parts which unite at about $1\frac{1}{2}$ mile. The right-hand road, after a gradual and easy descent from the plateau, enters the stream bed and passes through two narrow <i>tangis</i> , about 20 feet wide. The first is about 200 yards long, the second about 50 yards, the small stream flowing over a bed of solid rock. Except these <i>tangis</i> the road presents no difficulties, and notwithstanding them, the laden camels were passed along the road.

The left-hand road goes down a very steep and rough descent, and then follows the course of a stream. This route is only fit for mules.

Passing round opposite sides of a hill, the paths unite and ascend a small kotal at  $1\frac{1}{2}$  mile. From this point the road, though only wide enough for single file, is quite easy for camels. It runs down a small *nala* called Kazakai, which is overhung by wooded hills, easily crowned. At 3 miles is a small *tangi*, 20 yards long, only 4 feet wide. The rock is soft shale, easily cut away, and a good camel-road could soon be made.

Dosalli is a large village on the Sura Mela Algad, a branch of the Khasora. The village is about  $1\frac{1}{2}$  mile from the junction of the valleys.

A path comes in here from Stage 5, Route No. 73.

Route No. 75.

FROM THE SHAKTU VALLEY (WAZIRI) UP THE SHERANA ALGAD.

*Authority.*—YOUNG (*May 1881*).

The Sherana joins the Shaktu about 3 miles below Mandawom (*vide*) Route No. 74, stage 3). The last 2 miles of its course it runs parallel to the Shaktu, a low spur only lying between them. There are no villages or cultivation in the Shrana until quite the upper end is reached (about 8 miles above the junction) at which point are the settlements of the Jalal Khel section of the Nana Khel (?) Mahsuds.

Starting from the junction with the Shaktu the route lies up the dry stony bed of the *nala*, which is here about 100 yards broad. The hills on either side are not very steep; those on the left are the lower spurs of the Babargarh. At 2 miles a footpath leads over the spur into the Shaktu.

There is no water in the Sherana until 3 miles from the junction, at which point it sinks into the soil. In May, 1881, there was here a fair-sized stream, but it was too brackish to be drinkable, even by horses.

Up to 4 miles there are no difficulties. At that point the *nala* narrows suddenly and runs through a peculiar sort of gorge. The high banks on each side seem to be formed of a soft sort of clay mixed with large rocks, and there is evidently a continual landslip going

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 75—concluded.

on, causing the bed of the stream to be blocked up with a mass of large rocks, over which the horses were led with great difficulty; the length of this gorge is about 300 yards.

At the end of the gorge the valley opens out again, and seems to be a level stretch of firm sand, with a stream of water flowing through the centre; but this appearance is deceitful, for there are bad quicksands over the whole bed of the valley for the next mile or more, commencing from the very mouth of the gorge. These quicksands occur in the very driest-looking places, where the surface is either dry sand or gravel, and it was found quite impossible to distinguish them from firm ground. Almost every horse in the escort got involved in these quicksands, and were only extricated with much difficulty, and it has since been reported that on one occasion, some years ago, when the Turi Khel endeavoured to make a raid on the Jalal Khel by this valley, they had to relinquish the attempt on this account. Some of the places will bear a man on foot, but not a horse.

The only way to ascend the valley is at the southern end of the gorge to turn sharp to the left, and keep close along the foot of the hills on that side (right bank). After about a mile from the gorge the quicksands become less numerous and the bed of the stream may be followed, but with great caution. At 6 miles the valley divides; one branch runs south-west, and, becoming narrower, ascends gradually between barren hills to a kotal about 3 miles from the point of separation. The other (and larger) branch runs due south through an open valley for about 2 miles to a gorge (8 miles). At its mouth are the winter quarters of the marauding tribe of the Jalal Khel, whose stronghold (to which also they retire in summer) is called Jywoke. The gorge is a deep narrow chasm, at the southern end of which the stream again divides, one branch passing on either side of a high, thickly wooded hill. This hill was stated to be Jywoke; no village or towers could be seen, but there was said by the guide to be one village about half-way up the hill amongst the trees. A large number of sheep and cattle were visible through a field grass on the hillside.

A difficult path is said to lead by the right-hand branch over a kotal into the Tank Zam.

The whole of the water in the Sberana Algad is very brackish; there is, however, a spring in the gorge mentioned (at 4 miles), and on the north side of it, which is less so than elsewhere, and possible to drink.

Route No. 76.

FROM DERA ISMAIL KHAN TO MAKIN AND KAINGURUM, *via* MARGABAND.

*Authority.*—WAZIRI EXPEDITION, 1881.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	BUDH . . .	20	20	} Water usually obtainable, but sometimes scarce. For alternative stages and other details see Route No. XX, N.-W. F., Vol. II.
2	TANK . . .	22		
3	ZAM . . .	7½	49½	
4	KOT KHIRGI . . .	5½	55	} <i>Vide</i> Route No. XVII, N.-W. F., Vol. II.
5	JANDULA . . .	5½		
6	MARGABAND . . .	7	67½	The cavalry of the force followed the river-bed by Dotak, where the Shahur joins the Zam. The infantry marched by the Spire Ragza route, which leads in a direct line from the Chinjan Kach over a high, flat, stony plateau, sprinkled here and there with

ROUTES ON THE NORTH-WEST FRONTIER

Route No. 76—concluded.

thorn-bushes. Having crossed the plateau, the route follows the bed of the Zam for a short distance, and then runs along the Mandana Kach, which borders the left bank, to a small kotal called Sek Narai. Crossing the kotal it descends again to the river-bed, which it follows for about a mile to Margaband.

Camping ground on left bank, extensive and good.

7	SAR-I-MANJA KACH .	11	
			78½

The route lies along the broad bed of the Zam. The stream has to be crossed a very few times, and the river-bed is so broad and extensive that even with a large baggage train the rate of march would not be delayed. The hills on either side are not formidable.

Ample camping ground on a *kach* on the right bank, under the Sur Rogho Ragza.

8	JANGAL . . . .	9	
			87½

The route still follows the river-bed, passing the villages of Tutiwala and Bangiwala on the right and left banks respectively. About 2 miles from camp pass through the Bararn tangi, the scene of General Chamberlain's fight. The heights on the right bank are

formidable, and there is a tower on the lower hills at the exit of the *tangi*; those on the left bank are less difficult, and there is little doubt that the position could be turned without much difficulty.

Camping ground for a large force on a *kach*, which is generally cultivated.

9	MAKIN . . . .	9½	
			97

The route again follows the bed of the stream to within a short distance of Makin, when it runs over flat *ragza*. Soon after leaving camp the Pazha Algad joins (right), up which is said to be a route to the Shaktu valley. At 3 miles Dwa Toi the junction of the Badar

Algad, up which runs Route No. 73, to Kanigurum. The stream has to be crossed several times. Many patches of cultivation are passed, and the villages of Najib, Marobi, Sawan Kula, Martazi Kas, Gunokhel, and Malik Shah.

For details of Makin see Route No. 73.

Route No. 77.

FROM DERA ISMAIL KHAN TO NILAI KACH, *via* KULACHI AND THE SHERANNA PASS.

*Authorities.*—STAGES 1—4, MAIN LINES OF COMMUNICATION, ETC., 1887; STAGE 5, CAPTAIN MASON, 1888.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	HAIN DAN . . . .	15	15	Frontier road. The first march may also be made to Khuli, 13 miles, a small village. Road good. A deep ravine is passed at 9 miles, which is impassable after heavy rain. Sufficient water for one battalion near to dāk bungalow, rest of the supply would have to be brought from the

Gumal nala, 3 miles. No wells, and no facilities for watering horses. Camp on level ground; soil clay.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 77—concluded.

2	KULACHI . . . .	12	27	Frontier road. Good in dry weather, but heavy in places. Water-supply very deficient for any large force. No facilities for watering horses except at <i>nala</i> on north; banks would have to be ramped.
3	LUNI . . . . .	8	35	
4	MANJI . . . . .	14	49	Road level and good. Camping ground is best east of Manji village, that to west is level, but very stony.
5	NILAI KACH . . . .	15	64	
				<i>Vide</i> Route No. XXII, N.-W. F., Vol. II.

Route No. 78.

FROM KHAJURI KACH TO WANA.

*Authority.*—NATIVE INFORMATION.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SPIN . . . . .	12	12	A very easy march. Cross the Korkana watershed, 3,200 feet above sea-level. Ascent and descent very easy. Descend to about 2,900 or 3,000 feet (reconnoitred).  <i>Vid</i> the Khasra (Dokhwara?) kotal, a rise of a few hundred feet; not so stiff as the Ghwaleri. Laden camels travel. Also cross the Pir Ghwazhab kotal; ascent (from east) not stiff for laden camels; descent westerly to Wana easy. Working parties might be necessary to make the road good for camels. (This is the quickest road from Khajuri Kach to Wana.)
2	WANA . . . . .	17	29	

Route No. 79.

FROM KHAJURI KACH TO SHERRANI, *vid* SHAKAI.

*Authority.*—NATIVE INFORMATION.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SPIN . . . . .	12	12	Compare this route with No. XVID., N.-W. F., Vol. II. As in Route No. 78, or stop short at 10th mile in the Spin plain, if water is available. It may or may not be.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 79—concluded.

2	MICHIN BABA or KARB KOT	10 or 12	22 or 24	A very easy march, ascending gradually. (Part of this route has been seen by our troops.) From here a road goes to Wana. In no place difficult for laden camels. Rocky and stony in many places. It follows the bed or sides of the Wana Toi.
3	KOT JUMA	13	25 or 27	The road goes <i>vid</i> Tiarza. Besides the Tiarza no kotal or <i>tangi</i> , except one low kotal near Kot Juma, which is not difficult. The Tiarza pass may be 6 to 10 miles long, narrow for 2 miles; is practicable for fully laden camels. From Kot Juma a good road goes to Kani-gurum.
4	KOT LALO	9	34 or 46	The road goes <i>vid</i> Shakai and is open and good. No kotal or <i>tangi</i> .
5	DRENARAI	10	44 or 46	There are small kotal, but laden animals can go. Drenarai itself is a kotal.
6	MANGARTAI	18	62 or 64	There is jungle, but not dense. The road goes through a narrow pass or defile called "Sri Khawre," but laden camels can travel by it. No kotal to cross. At Mangartai there are some Miami Kabul Khel melas.
7	SHERANNI	15	77 or 79	A very good open road. Laden camels can go easily. No kotal or <i>tangis</i> .

There is a branch road from Drenarai to Kot Khojal Khel in Birnal, 6 miles. There are some trees on this route. No kotal or *tangi*. Laden camels can go.

There is also an alternative road between Kot Lalo and Mangartai. This goes to Bosh Narai (10 miles). On this road there is dense jungle and high kotal. The Darwesh Khels bring their donkeys and bullocks laden, but the road is a bad hilly one, and would require to be made before troops could march by it. Camels without loads and horses can go. From Bosh Narai to Mangartai is 8 miles. Descend from the Bosh Narai kotal. The road is like that from Kot Lalo to Bosh Narai. By using this road the distance between Karb Kot and Sheranni would be reduced by 10 miles, but laden camels could not use it.

The Bannu-Ghazni Route (No. 71) is struck at Sherrani.

Route No. 80.

FROM DERA ISMAIL KHAN TO GHAZNI, *vid* TANK AND THE GUMAL.  
Authority.—STAGES 10—23, MAIN LINES OF COMMUNICATION, 1887.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	POTAH	16	16	} <i>Vide</i> Route No. XX, N-W. F., Vol. II.
2	HATHALA	10		
			26	



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 80—continued.

3	TANK . . .	16	42	} <i>Vide</i> Route No. XX, N.-W. F., Vol. II.
4	MARTAZA POST . . .	18	60	
5	NILAI KACH . . .	11	71	
6	KHAJURI KACH . . .	15	86	} <i>Vide</i> Route No. XLII, N.-W. F., Vol.
7	KOTKAI . . .	12	98	
8	GULKACH . . .	12	110	} <i>Vide</i> Route No. XVIII, N.-W. F., Vol. II.
9	DOMANDI . . .	10	120	
10	BATSUL . . .	15½	135½	

The road is along the channel of the Gumal, which is wider than usual, and not so stony. At 5½ miles from the encamping ground pass the insulated rock with a flat top, called Khazana Gund, which the Lohanis believe to be full of the treasure of Nadir Shah. At 7½ miles pass

Jani Kats, with 3 acres of cultivation, and the entrance of the stream Zariwan, said to come from near Birmal; a short distance beyond pass Khairu Dingra, a wretched hut so called; then leave the river and ascend the hill of Stigal; the road then leads for 4½ miles over the desolate plain of Sumblabar Ragle, the boundary, as it is called, between Khorasan and India. Batsul is a collection of graves of Lohanis who have died in the pass. Water, grass, and forage are abundant.

13	STAGHAI . . .	14½	150	} The road leads over a stony plain, then ascends to Gat Kai by the bed of a rivulet which drains part of the Waziri country and must be large in the rains, as it has cut a bed, 30 feet wide in the hard slate. At Gat Kai there are some troublesome large stones. The road then runs

along the side of a hill. At 8 miles pass a fine spring, then ascend an easy ravine, and cross the kotal of Staghai, about 450 feet high.

This is a low ridge crossed by three paths, all equally good. The descent is easy by a broad road, then follow the ravine to Staghai.

This march is one of the most difficult, and a road could not be made under a day's hard work. The ravine is crossed by camel-tracks, but none of them are fit for guns, the first 3 miles about Gat Kai being so difficult.

If necessary, this obstacle could be avoided by keeping down the bed of the Gumal.

Water has to be brought from a spring up a ravine to the north nearly a mile distant.

Grass is abundant. The camping ground is in a dry plain 300 yards wide.

14	AHMADSI KACH . . .	10½	160½	} For 3 miles the road follows a level ravine, 40 yards wide, bounded by low rocks, or hillocks, often passable for cavalry, then enters the bed of the Gumal, which winds so much that crossing is very frequent. The breadth of water here is 20 feet, and the depth 1 foot. Pioneers

would have some work in clearing away the stones of the Gumal, but there is no real difficulty for guns.

Route No. 80—continued.

15	SARMARGHA . . .	11½	172	The Gumal still winds so much that it has to be crossed as often as seven times in a mile. Footmen can climb the hills the whole march, and thus avoid this constant crossing. It is never less than 30 yards wide. The shingle is composed of large stones, some of them a foot
				in diameter, but there is no serious obstacle for guns.
				At 4½ miles is "Mamatsile," a great white rock in the centre of the pass, and at 9 miles the salt river of Ab-i-Talkh enters the stream.
				Sarmargha is a halting place, 500 yards wide, and a few feet above the level of the river.
16	OTHMAN . . .	13	185	Following the Gumal, at 5 miles distance, the Dwa (second) Gumal makes its appearance from a narrow ravine. This stream rises at a hill called Durzlei, near Paltu, and flows through the Kharoti country between the Kohnak and Waziri ranges. The Gumal valley, above its
				junction with the Dwa Gumal, is very confined, the Waziri and Murunnu ranges approaching each other. The curves become more frequent. Before reaching Othman the valley opens again. In the ravines at some distance the <i>washu</i> grass is plentiful. The Gumal here is 200 yards wide, with banks 3 feet high; the channel in the dry season is 12 feet wide and 6 inches deep.
				Othman is a widening of the valley large enough for a camp. Water and camel-forage in abundance.
17	SUGHURGAI . . .	12	197	The road presents no difficulty. At 6 miles pass the Kala-i-Babakar, inhabited by Kharotis, who have shown great skill in conducting water to every little spot of soil within miles of their fort. Being the only place of supply for caravans within several marches, there is
				always a quantity of chopped straw for sale.
				A tower of refuge has been built on a rock commanding the fort; to this they fly on any danger appearing, and prevent by their fire any injury being done to the crops or gardens below them.
				The main stream of the Gumal rises here; several springs join near the fort, and flow over a fine small shingle, the stream rapidly increasing till near Othman, where it is generally 12 feet wide and 6 inches deep, running 4 feet per second. Its banks, 3 feet high and 200 yards wide, show that the river is considerable in March.
				The next 6 miles above the fort are up a pass, a pebbly reach, 400 yards wide and very straight. The rocks bounding it gradually rise in height from the Kala-Babakar. The space at Sughurgai is wide enough to encamp on. Fuel, water, and camel-forage abundant.
18	SHINSA . . .	12	209	The road goes over the Kotal-i-Sarwandi, estimated by Broadfoot at 7,500 feet high. The ascent among hills covered with bushes lasts for about 6 miles and has a slope of about 3°: then for 2 miles runs along a level ravine. 30 or 40 yards wide, winding among hills that are
				steep on the north side and rounded on the south.
				The descent towards Shinsta commences with a slope of 11 feet for about 20 yards; here are a few stones that require breaking; after this there is a gentle undulating slope to Shinsta passable for guns. This march would require a few hours' labour.
				There are no houses at Shinsta, the cultivators being migratory, but a little watch-tower commands the cultivation. Water is plentiful from a spring; grass is scanty; but there are abundance of thorny bushes and low trees for fuel.
19	KILA-I-LANGAR . . .	13¾	222¾	Soon after leaving Shinsta, ascend the Kohnak range by the Sargo pass—a ravine cut by water, which winds in easy curves, its width, never less than 30, being sometimes 100 yards. Two hours' work would make it an excellent road.

Route No. 80—concluded.

About 3 miles, pass two ruined forts on the other side of the Sargo defile—one called Glo Kila, or thieves' fort.

Then there is a gradual descent to the deserted fields of Khun-i-Karez (the Bloody Spring), so called from the contests between two factions to possess it, which gives a good supply of water. After this the road passes through the cultivated fields of Langar for 2 miles. There are two forts at Langar, containing about 80 houses; the larger is a square of 100 yards, the walls 20 feet high, 6 feet thick, are made of mud and flanked by eight towers: the gate is uncovered. This is one of the strongest forts in Katawaz.

20	DAND . . . . .	16	238 $\frac{3}{4}$	On leaving Langar, cross a stream, 20 feet wide, 1 foot deep, current 2 feet per second: the water slightly brackish. Its banks are 4 feet high, but easily passable in many places, though in spring it is scarcely fordable. Then ascend gradually to the open plain of Katawaz, and pass Zarghun Shahr (Green City), a fort of about 50 houses of Bolo Khel and Suliman Khel, with some 500 acres of cultivation. Then for 3 miles through Gazdara, which is a pass formed by water flowing into Katawaz through the hillocks formed by the Zheru range and the end of Katasang. The Gazdara gradually diminishes in width. In the middle, for about half a mile, the width at bottom is only 20 feet, the hills at the side 200 feet high, and the windings frequent and sharp. On the Dand side the pass is 30 feet wide bounded on either side by hills that may be easily crowned. A few small springs issue from the crumbling rocks, but are soon lost. Guns could be dragged through the pass, and a few hours' labour would make it a good road.
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*Little Gazdara pass.*—There is another and similar pass, a mile or two to the north, called the Little Gazdara. From Katasang the road leads over a plain for 4 miles, descending easily to Dand. This is a fort with 30 houses and about 150 acres of cultivation, but there is no water nearer than Dhsai or Nani—the former a large village of Andars, with 100 houses; the latter a group of four or five forts of Andars and Suliman Khels.

21	PANNAH . . . . .	12	250 $\frac{3}{4}$	Leaving Dand, a dry watercourse is crossed with banks 4 feet high; it then goes among some low hillocks; the road then bifurcates—one fork going over the ridge, the other round, and both joining again at Jarakaram, 4 miles from Dand. The road over the ridge saves a few hundred yards. It then goes over a plain and crosses some easy hillocks near Pannah. The whole road is very easy for guns. Near Pannah are a number of villages and forts which would supply a brigade with grain and forage, and water abundant at all of them. Pannah itself is a village inhabited by about 500 Andar Ghilzais. Supplies for a small force could be obtained, and there is a water-supply from <i>karez</i> .
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Two cross-roads from Pannah to Kala-i-Kharoti.

22	JOGA . . . . .	10 $\frac{1}{2}$	261 $\frac{1}{4}$	A cluster of forts. No description of the road.
23	NANI . . . . .	13 $\frac{3}{4}$	275	No description of road.
24	ISPANDI . . . . .	7 $\frac{1}{2}$	282 $\frac{1}{2}$	} <i>Vide</i> stages 20 and 21, Route No. 85.
25	GHAZNI . . . . .	7	289 $\frac{1}{2}$	

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 81.

FROM DERA ISMAIL KHAN TO MUKUR, *via* THE KUNDAR AND THE RAH-I-MARUF.

*Authority.*—NATIVE INFORMATION.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter- mediate.	Total.	
1	POTAH . . .	16	16	<p><i>Vide</i> Route No. XX, N.-W. F., Vol. II.</p> <p><i>Vide</i> Route No. XVIII, N.-W. F., Vol. II.</p> <p>Road through a long dara, flanked by hills. Gadawria is a small place belonging to a colony of some 1,500 Lohanis, who are generally engaged in the salt-trade. Considerable quantities of salt are excavated here and exported to Afghanistan. The water at this stage is brackish in the extreme.</p>
2	HATHALA . . .	10	26	
3	TANK . . . . .	16	42	
4	MARTAZA POST . . .	18	60	
5	NILAI KACH . . . . .	11	71	
6	KHAJURI KACH . . .	15	86	
7	KOTKAI . . . . .	12	98	
8	GUL KACH . . . . .	12	110	
9	DOMANDI . . . . .	10	120	
10	HUSEIN ZIARAT . . .	8½	128½	
11	SARMAGO KACH . . .	10	138½	
12	SABA DARGA . . . . .	12½	151	
13	NAKHAL . . . . .	11	162	
14	TRIKHGAE . . . . .	9	171	
15	LABI . . . . .	10½	181½	
16	GADAWANA . . . . .	9	190½	

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 81—concluded.

17	LAMURGHA . . .	12	202½	There is a low kotal in this march, which, owing to its broken and angular surface, is difficult for camels. Lamurgha is an encampment of Taraki shepherds near a spring.
18	BOZA . . .	12	214½	Road generally good, with the exception of one small pass. There is a brackish spring at Boza, but no inhabitants. The Suliman Khel village of Nasars is 4 miles north of this.
19	MULA MIAN ZIARAT	13½	228	Road over a comparative plain. Here is an encamping ground in the Ghilzai country. Water from a spring.
20	SPEDAR . . .	12	240	Road through a difficult pass; country rugged. Spedar is a halting-place without inhabitants, and is the limit of the Taraki Ghilzai country, which is now entered. Water from springs.
21	SHAHDAK . . .	10½	250½	Country rugged; several very difficult ascents and descents to be got over this march. No cultivation to be seen. Water from springs.
22	ZANGALA . . .	12	262½	A difficult pass has to be crossed in this march. Country mountainous. The Tarakis of this place are all shepherds, and have no cultivation.
23	TARZAR-KA-SIB . . .	12	274½	One low pass, called Zangala, has to be crossed. Here is an open spot containing a few Taraki villages.
24	KALA KHAN . . .	9	283½	Road goes through a defile for the greater part of the way. Water abundant.
25	UTKAN . . .	12	295½	Country sprinkled with Taraki villages and cultivation. Water brackish from wells.
26	WASTAZI . . .	10½	306	Road through a narrow defile; country undulating, hilly, and partly cultivated. At this place the water of numerous <i>karez</i> , all brackish, disappears in the soil.
27	DAND . . .	9	315	Over a cultivated and plain country. Water from <i>karez</i> .
28	GHILAN . . .	9	324	Road good and country cultivated. Ghilan is described in the Gazetteer as a district in the Ghilzai country, situated between the Ab-i-Istadah lake and the Mukur district. It is very fertile, and is inhabited by Taraki Ghilzais and a few Duranis.
29	MUKUR . . .	9	333	Road through the villages and country of the Taraki Ghilzais. This "Mukur" is evidently the district of that name, and not the town, which is the 15th stage of Route No. 86. Lumsden distinctly mentions that this route diverges considerably from the above road at a

point some 45 miles further on. In this neighbourhood are many forts and villages on a cultivated plain.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 82.

FROM DERA ISMAIL KHAN TO KALAT-I-GHILZAI, *via* THE KUNDAR AND THE RAH-I-MARUF.

*Authority* — NATIVE INFORMATION.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.	
		Inter-mediate.	Total.		
1	POTAH . . . . .	16	16	<i>Vide</i> Route No. XX, N.-W. F., Vol. II.	
2	HATHALA . . . . .	10	26		
3	TANK . . . . .	16	42		
4	MARTAZA POST . . . . .	18	60		
5	NILAI KACH . . . . .	11	71		
6	KHAJURI KACH . . . . .	15	86		
7	KOTKAI . . . . .	12	98		
8	GUL KACH . . . . .	12	110		
9	DOMANDI . . . . .	10	120		
10	HUSEIN ZIARAT . . . . .	8½	128½		
11	SARMAGO KACH . . . . .	10	138½		
12	SARA DARGA . . . . .	12½	151		<i>Vide</i> Route No. XVIII, N.-W. F., Vol. II.
13	NAKHAL . . . . .	11	162		
14	TRIKHAZ . . . . .	9	171		
15	LARI . . . . .	10½	181½		<i>See also</i> Route No. XIX-A, N.-W. F., Vol. II.
16	GHAIRIBA-I-DARA . . . . .	9	190½	The road is through a long defile, flanked by low hills. The halting-ground is just beyond the pass. Water procured by digging in the bed of a ravine, where it is always to be found close to the surface.	
17	LAWANA KAREZ . . . . .	9	199½	A small village, surrounded by cultivation.	
18	TOPAN . . . . .	10½	210	Road over a plain. The country is inhabited by wandering Babars. Here is one well, but no cultivation. The road to Kandahar is said to turn off here.	

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 52—concluded.

19	CHAMANI . . . . .	9	219	Chamani is a valley, with several small villages scattered over it, inhabited by Dawa Ghilzais. Water plentiful.
20	KASASA . . . . .	9	228	In this march a small kotal has to be crossed. The rest of the road over an undulating country. Kasasa is a halting-place at some springs on neutral ground between the Kakars, Mando Khel, and Tokhi Ghilzai tribes.
21	SANGARI . . . . .	9	237	Road through low hills. Water abundant.
22	DARWAZA . . . . .	7½	244½	Road over a plain to Darwaza, a Ghilzai encamping ground, where there are numerous springs.
23	MURGHA . . . . .	10½	255	Over a plain. Some cultivation. Water from springs and <i>karez</i> .
24	LORGHAI . . . . .	12	267	Country undulating. Lorghai, a village on the boundary-line between the Hotak and Tokhi Ghilzais. Numerous <i>karezes</i> and streams.
25	KHANAN . . . . .	9	276	Road tolerable. Khanan, an old Ghilzai fort. Water from springs.
26	CHAONI . . . . .	9	285	Road good, over a level country, which is cultivated in the immediate vicinity. Chaoni is the head-quarters of the chief of the Hotak Ghilzais. Water from a <i>karez</i> and springs.
27	PESHI . . . . .	12	297	Road bad; country hilly and broken. Two kotals have to be crossed. Peshi is a Ghilzai halting-place at the foot of a kotal and near a spring. On the summit of this hill is a town where the Ghilzais collect transit duty.
28	BAGAT . . . . .	9	306	Water from <i>karez</i> . Here are numerous almond gardens, and the country generally is well cultivated.
29	MULADAD AKHUN . . . . .	10½	316½	Road over a plain, and also, crossing the Tarnak river, traverses a succession of small daras. Country tolerably cultivated with occasional gardens. Inhabited by Hotak Ghilzais. Water from a <i>karez</i> .
30	KALAT-I-GHILZAI . . . . .	10½	327	No details of road. For description of Kalat-i-Ghilzai see stage 8, Route No. 85.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 83.

FROM DERA ISMAIL KHAN TO KANDAHAR, *via* THE KUNDAR AND MARUF.

*Authorities.*—YUSAF SHARIF; MACLEAN; SCOTT; PRIOR; CLIFFORD.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.	
		Inter-mediate.	Total.		
1	POTAH . . . .	16	16	<i>Vide</i> Route No. XX, N.-W. F., Vol. II.	
2	HATHALA . . . .	10	26		
3	TANK . . . . .	16	42		
4	MARTAZA POST . . . .	18	60		
5	NILAI KACH . . . . .	11	71		
6	KHAJUBI KACH . . . .	15	86		
7	KOTKAI . . . . .	12	98		
8	GUL KACH . . . . .	12	110		
9	DOMANDI . . . . .	10	120		<i>Vide</i> Route No. XVIII, N.-W. F., Vol. II.
10	HUSEIN ZIARAT . . . .	8½	128½		
11	SARMAGO KACH . . . .	10	138½		
12	SARA DABGA . . . . .	12½	151		
13	NAKHAL . . . . .	11	162		<i>Vide</i> Route No. XLI, N.-W. F., Vol. II.
14	KALA MULLA KAMAL . . . .	15½	177½		
15	NIGAND . . . . .	12½	190		
16	WAT . . . . .	8	198		Cross the stream, then some low hills lying between it and the Kundar river, and halt on a small plateau above. Water, wood, and grass to be had, but no supplies. From this point the Kundar may be followed upwards to its source and on thence to stage 24.



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 83—continued.

17	WALI MURGHA (a)	15	213	Ascend over the Wazinghar by an easy pass and descend past Raibaza Kala to the bed of the Wali Murgha, a feeder of the Kundar. No supplies. Water in stream.
18	WALI MURGHA (b)	10	223	As the river here takes a long sweep westwards and then bends back again, the route strikes across the angle over undulating country and again crosses the Wali Murgha, where a halt may be made. No supplies.
19	SABAGAI	10	233	Ascent over easy undulating country. Water in small wells. No regular habitations. No supplies.
20	PALEZGIR	8	241	Rough descent, over rather difficult country. Water in small wells. No habitations.
21	MALKAN CHINA	10	251	Road ascends. Fairly easy, over undulating country. Tent dwellings of Mardanzai or Jalalzai (Kakars). The name implies a spring.
22	ZERA	10	261	Road descends over open undulating country. Tent dwellings of Mardanzai.
23	MURGHAI	12	273	Road descends a hill—enclosed valley, watered by a small stream to its junction with a large feeder of the Arghastan; a small Tokhi village, 20 or 30 houses. Large tamarisk jungle.
24	SAR-I-SURKHAH	9	282	Ascent over easy slopes to a plateau at the source of the Surkhab, a feeder of the Arghastan. Sar-i-Surkhab is stage 11 of Route No. 128.
25	NADIR DEH	10	292	<i>Vide</i> stage 12, Route No. 128.
26	KALA ABDULLA	9	301	A small village on the Surkhab. The road follows the course of the river.
27	MARUF	12	313	In the Arghastan valley. From this point to near Kandahar the route follows the Arghastan valley. Major Upton Prior, Deputy Assistan Quartermaster General, writes, 1879 :— “The Arghastan river has banks in some places, very precipitous in its southern or lower half,

but not in the upper or narrow half. Its bottom is sound. The water is always discoloured, but seems good drinking-water, though some people thought it slightly brackish. The depth of the water is from 3 to 4 feet in the centre.

“At its north-eastern end the Arghastan valley is almost a circular plateau, surrounded by hills, with the town of Maruf in the centre of it; it is seemingly highly cultivated and is fairly wooded. The valley then becomes a long, narrow, winding one for about 20 miles, about which distance it reaches the plateau described as dividing the Khushk-i-Rud and Arghastan valley, and it here assumes a more open character till it reaches the village of Amin Kala, when the hills dividing the Khushk-i-Rud and Tarnak commence closing in. The valley is more cultivated than that of the Khushk-i-Rud, and has some villages. The town of Maruf looks a long straight one, running generally north and south, of a whitish appearance. It is supposed to be fortified in the same manner as Kalat-i-Ghilzai, only there is no hill. The river runs to the north of it and forms a deep ravine seemingly; to the south of it there seems to be a hill, a spur running out of the range to the south of the town

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 83—concluded.

which entirely commands it; to its west is a long narrow wood, running east and west. (This was observed through a telescope at a distance of some 15 miles; there seem to be no other villages in the Arghastan valley of any note except Maruf."

Captain James Outram, 1839, writes:—"I crossed the valley to the fort of Maruf, which, in consequence of the approach of the Bombay column, had been evacuated some days before. To my astonishment it proved to be the strongest fortress that we had yet seen in the country, being constructed with double gates, a ditch, *fausse braye*, and towers of solid masonry, which might have held out successfully against all the *matériel* with which the Bombay division was provided. .... sent back the Artillery and Dragoons, and remained with the sappers and 19th Regiment in order to destroy the fort, which before nightfall had been effectually accomplished by blowing up the gateway and principal towers." Supplies abundant. Probable elevation, 6,000'.

28	A STAGE . . . . .	15	328	} <i>Vide</i> Route No. XVIII, N.-W. F., Vol. II.
29	AMIN KALA . . . . .	15	343	
30	ATA MUHAMMAD . . . . .	9	352	} <i>Vide</i> Route No. 85. A.
31	MURGHAN KECHA . . . . .	16	368	
32	MANDI HISSAR . . . . .	7	375	
33	KANDAHAR . . . . .	10 $\frac{5}{8}$	385 $\frac{5}{8}$	

Route No. 84.

FROM DERA ISMAIL KHAN TO KANDAHAR, *vid* THE SHEKH HAIDAR PASS, THE KUNDAR, AND MARUF.

*Authorities*—STAGE 7, BRADFORD; CHASE; TAKHT-I-SULIMAN EXPEDITION.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	HAINDAN . . . . .	15	15	} <i>Vide</i> Route No. 77.
2	KULACHI . . . . .	12	27	
3	DARABAN . . . . .	15	42	<i>Vide</i> Route No. XXXII, N.-W. F., Vol. II.
4	KOT GULDAD . . . . .	13	55	} <i>Vide</i> Route No. 88.
5	GANDABI KACH . . . . .	13	68	
6	KAMAL KULIA . . . . .	9	77	
7	SASOBAI . . . . .	7	84	
				One-fourth mile from Kamal Kulia the route ordinarily used by the Powindahs when going to or from Kandahar, <i>vid</i> Hussein ziarat and the

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 84.—concluded.

Zao pass, branches off to the right up a branch *nala*. This route is said to be perfectly easy and fit for laden camels in its present state; it follows the course of the stream the greater part of the way (described as of the same character as the *Zao nala*), and then passes over the Saparai kotal, a low one, with easy ascent and descent, and striking another *nala* on the far side, follows its course down a gradual descent to the village of Sasobai. Eighty houses inhabited by Sheranis, 6 to 7 miles off.

8	TALKHAN KOT . . .	11	95	Up a <i>nala</i> and over a small kotal of no consequence, and down the course of another <i>nala</i> to the Zhob.
9	GARDAO PLAIN . . .	13 $\frac{1}{4}$		
10	HUSEIN ZIARAT . . .	16	108 $\frac{1}{4}$	<i>Vide</i> Route No. XXVII, N.-W. F., Vol. II.
11 to 30	} KANDAHAR . . .	215 $\frac{1}{2}$	124 $\frac{1}{4}$	
				339 $\frac{3}{4}$

Route No. 85.

FROM KANDAHAR TO KABUL BY THE MAIN ROAD.

*Authorities.*—BISHOP; ROUTE OF KABUL KANDAHAR FORCE, 1880.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MOHMAND . . .	12	12	The road goes due east from the Kabul gate of the city. It is for the first 2 miles the high-road to India <i>vid</i> Mandi Hissar. At this distance the track to Mohmand diverges to the left. An excellent road for all arms, with an extensive plain on either side. About the village is a considerable trace of cultivation. Water, which can be turned on at will, is brought from the Tarnak by irrigation channels. It can likewise be obtained from two <i>karezes</i> , which supply, however, is somewhat brackish. Until camel-thorn shoots in May, there is little or no grazing; but during summer and autumn it is abundant. Encamping ground is situated close to the village.
2	RABAT . . .	8	20	The road leads north-east over an open plain; but it is intersected in places by water-cuts, which caused some delay to baggage animals. There are two of these immediately before reaching the camping ground, worse than the rest, and it would be advisable to have a working party ready to throw loose shingle and sand on the banks, which get very slippery after the traffic of any considerable number of animals. There are two encamping grounds on the Kalat-i-Ghilzai side of the Rabat village. That nearest Rabat, though limited in area, is in a more favourable position with regard to supplies and water. The encampment on the left of the road might accommodate a large force, and is about $\frac{1}{2}$ a mile beyond the village.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 85—continued.

Immediately beyond this encampment are two water channels which require ramping for artillery, and they should be bridged with gang-boards to expedite the passage of laden camels. The water-supply of Rabat is brought by artificial tributaries from the Tarnak. Camel-grazing in winter and early spring *nil*, but in summer and autumn abundant. There is a good deal of cultivated ground in the vicinity of Rabat, and supplies of grain, *atta*, and *bhusa* can be collected.

For alternative road to Mukur, see Road No. 86.

3	KHEL-I-AKHUND .	12			
				32	

The road runs over an undulating plain, with two hills on the left. At about 8 miles it nears the banks of the Tarnak, and the country is confined. There are no obstacles to any arm of the service; but the following remark will apply as well to this as to the

next few marches, *i.e.* that scouts might advantageously suggest many places for a departure from the regular path, owing to irrigation being allowed to spread over the country. At about half way a brigade, for the reason above mentioned, made a detour to the left, the roadway being entirely swamped. Water-supply from the river Tarnak. Encampment near the river bank. If the land is under cultivation, there would be some difficulty in selecting a suitable place. The encampment is about 1,000 yards in length by 250 in depth, and between it and the village is a watercourse, which should be examined the evening prior to a march, as labour will be necessary to facilitate the passing of artillery and baggage animals. About 2 miles down stream there are some tamarisk shrubs in the bed of the river, which would probably furnish some camel-grazing at all seasons. In the summer and autumn months camel-thorn and grass are abundant. Country around is fertile and well cultivated, yielding supplies of grain, *atta*, and *bhusa*.

4	SHAHR-I-SAFA .	12			
				44	

Shortly after leaving camp care must be taken that artillery keep the lower path round a spur, as there is a large rock on the upper road which guns cannot pass. The first 6 or 7 miles of this march is over a constant succession of ascents and descents, and at the 5th mile a

defile is reached, called the Poti pass, between two low hills. The ascent is steep and narrow, and passes over the face of the hill, which falls precipitously towards the bed of the Tarnak. Guns can be taken over the hill, but the road round it was found preferable. After the 7th mile the country becomes more open, the road passing over an undulating plain. There is no village at Shahr-i-Safa, but on the right of an artificial mound, and some 400 yards in front of the river, is situated the encamping ground on a fine open plain. Water procurable from the Tarnak. There is not much cultivated land near the stage, but supplies can be obtained from villages in the vicinity. No camel-grazing in the winter and early spring, but in summer and autumn camel-thorn abounds. Tamarisk bushes on the river-side afford a little fuel.

Major Kennedy, Assistant Quartermaster General, reconnoitred from Pomazai to Bori, and found a good road leading from the former place to the Argandab valley, nearly opposite Dalla, the line by which Ayub Khan would retreat.

5	TIRANDAZ . . .	12			
				56	

The road for the first 4 miles is very good and level, but beyond this, near the villages of Shahbaz Khan and Bakhtiar, irrigation channels had in the month of April overflowed, and the road was swamped. A rather long detour had therefore to be made to the left.

The remainder of the march, excepting one ascent and descent, is good. At the 10th mile a *minar* is reached, and  $\frac{1}{2}$  a mile further is a *nala* with high banks, beyond which again, on the right of the road, and on an open plain is the encamping ground. The surrounding country is richly cultivated, and abundant supplies can be collected. Water from the Tarnak close at hand, but there is also a stream of clear water in a valley, in which the village of Amir is situated, about  $1\frac{1}{2}$  mile from camp. During summer and autumn there is plenty of camel-thorn. *Jhow* jungle for fuel was found in the river-bed.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 85—continued.

6	JALDAK . . .	14	70	<p>On leaving camp, the regular and direct road—for there are two—runs round a hill close to the river bank, which ascends considerably, with a somewhat difficult turn, and, though good enough for camels, would not be considered safe driving for guns. The other, over the hill to the left of the Jalogir pass, is a longer round, but presents no difficulties. These roads meet 3 miles from Tirandaz. The remainder of the march is fairly good, but is a long and trying one. In some places the irrigation cuts caused delay to the camels. The river makes a bend a mile from camp, cutting into the hillside, and a track must be prepared for heavy guns. A poor encamping ground near a <i>nala</i>. In the case of a division, two regiments could pitch on its further bank. Abundant supplies of all kinds are procurable. Grain, lucerne, and young wheat were purchased for the animals without trouble. Camel-grazing abundant in summer and autumn. Some tamarisk bushes in bed of river. Inhabitants, Duranis.</p>
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From Jaldak to Kala Juma Khan 16 miles.—Route takes a general direction of north towards a precipitous high white hill, the north end of Gur-i-Murda range. The road as far as this range is in the Jaldak district, subsequently in the Miran.

To  $\frac{1}{2}$  mile the road follows the Kalat-i-Ghilzai road. Cross two *nalas* which have been ramped; it then follows a track which turns off to the northwards, with the *nala* on the left, and a low hill range on the right. At  $2\frac{1}{2}$  miles the village of Amir is passed on the right, and the road then ascends gently to a fairly level plateau, crossing at  $2\frac{1}{2}$  miles a deep *nala* which would want ramping for guns. Here,  $\frac{1}{2}$  mile on the left, is the village of Marbula. The road then lies straight for the village of Sagai, which is reached at  $4\frac{1}{2}$  miles; and, running along the right of the village, crosses a level plain (direction here  $16^\circ$ ); and crosses another *nala* at  $5\frac{1}{2}$  miles and 200 yards further on another small one; both these are quite practicable for guns. At 6 miles cross a line of *karez* mounds, and the direction is now again straight for Gur-i-Murda hill. At  $6\frac{1}{2}$  miles pass Mirbad village on left, and, after turning slight east for a short distance, cross a *nala* at  $7\frac{1}{2}$  miles. At  $7\frac{1}{2}$  miles pass Abdulla on left, Muhammad Khan lying 1 mile north-west. At  $8\frac{1}{2}$  mile pass Ramazai with several orchards, walled, on south side. Here is water and a good camping ground. At 9 miles another *nala*, practicable for camels, wants ramping for guns. At  $9\frac{1}{2}$  miles pass a drinking-trough and small well on left. From here the road leads to  $11\frac{1}{2}$  miles towards the hill before mentioned, along which it runs to 13 miles, and then turns to the left along the north side of it, and descending along gentle undulations to  $13\frac{1}{2}$  miles, reaches a dry pebbly *nala* in the valley, and following this for another mile or so reaches camp. At  $13\frac{1}{2}$  the road from Kalat-i-Ghilzai joins.

Water good and plentiful from *karez*; supplies and wood plentiful; camel-grazing abundant *en route*.

7	PUL-I-SANG . . .	9	79	<p>Immediately on leaving camp there are two <i>nalas</i> with steep banks, to be crossed, which are apt to delay baggage animals very considerably, as they can only move in one line; otherwise, the march is an easy one, leading over two or three spurs of hills, which offer no difficulties. Supplies can be collected, but with difficulty, sufficient for a division.</p>
8	KALAT-I-GHILZAI . . .	8	87	<p>Road good and easy for all arms, except one ravine with steep banks, close to Pul-i-Sang, which is troublesome for artillery, and causes great delay to baggage animals. Close to this is the division between the Ghilzai and Durani country. The remainder of the road, though winding, is good.</p>

The country round Kalat-i-Ghilzai is capable of supporting a small garrison in the fort permanently. The Hotak district, from 10 to 20 miles to the east, and Mizan district (Duranis) in the Argandab valley to the west, can furnish a large amount of supplies. The people in the immediate neighbourhood of Kalat-i-Ghilzai are Hotak and Tokhi Ghilzais. Route No. 82 from Dera Ismail Khan comes in here.

9	SAR-I-ASP . . .	9	96	<p>Road good. In the first 3 miles several water-cuts cross it, and much retard the progress of camels; otherwise it is easy. At about the 7th mile is a group of villages called Bagh-i-Babru, at which supplies can be collected, and it might be found convenient to halt a mile beyond this, where there is a suitable encamping ground. The encampment at Sar-i-Asp is on the west side of the road. Supplies were collected in village of Sin Khel, 2 miles south-west of camp. There is a considerable amount of cultivated land near, and supplies can always be collected.</p>
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ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 85—continued.

10	NAORAK . . . . .	12	108	The road leads over a series of rolling hills, and there are several <i>nalas</i> , with ascents, which are very trying to artillery. At the latter portion of this march, the hills run in a parallel line close to the road, and between them and the river there is only a narrow strip of ground, which in the last 2 miles varies from 200 to 100 yards in breadth. Owing to the limited space available at Naorak, the force, if of any strength, must be divided on either side of a <i>nala</i> in separate encampments. In addition to this drawback the position is not a good one for a camp, being too confined between the river to the east and hills to the west. There are small patches of cultivation here, but no village. In a south-easterly direction, distant about 3 miles, is a hamlet called Musa Khel; but the country generally is uninhabited and unproductive. The hills around are covered with southernwood. At about 6 miles south of Naorak there is a village named Babakarzai, on the left bank of the Tarnak, with cultivation, as also a narrow valley called Dorai, which contains two or three small villages, 2 and 3½ miles from Babakarzai. Another group of villages, from 6 to 10 miles distant, is called Kuram, situated in an undulating plain to the north-east, from which supplies can also be procured; and on this account it might therefore be found more convenient to halt on the right bank opposite Babakarzai, leaving a march of 13 miles to Tazi.
11	TAZI . . . . .	7	115	In the first 2 miles two ravines, with steep banks within a mile of each other, cross the road, but are easily turned by deviation to the left. A third <i>nala</i> just before reaching camp is, however, rather awkward, the descent into it for artillery being somewhat steep, and a detour to the left necessary to obtain an easier exit. The road otherwise is good, passing over hills covered with southernwood. Encamping ground on the left of the road, a large open space, capable of accommodating a considerable force, with the river flowing within easy distance. The villages on the left bank of the Tarnak, close at hand, whence supplies are procurable, are Tazi, Lala-Shahid, Taht-Gul, Gwajai, Gundai, and Malikawal; all inhabited by Tokhis. The principal maliks in 1880 were Buz Muhammad, Takht-Gul, and Muhammad Ishak. The Tokhi Patozai section also possess villages on the left bank, but they are distant some 7 or 8 miles. Principal among them are Abdulla, Khwaja Khel, Mulla Didum, Ukahas, and Spin Tiga. To the north of camp on right bank are two villages (3 miles off), Ashogai and Abdul Habib, rich in supplies.
12	SHAHJUI . . . . .	12	127	Five large <i>nalas</i> cross the road during this march. The first two are easy, and no deviation need be made from the direct road; but the last three must be carefully scouted, when it will be found that detours to the left are necessary to obtain exit for artillery. With the exception of these ravines, the road is good. The country in the vicinity of Shahjui is open, and there is no difficulty in obtaining a good encampment on either side of the road. Water is procurable from a good large <i>karez</i> . The villages near Shahjui are (1) Saigo, about 1½ mile south of camp; (2) three villages of Musazai, on the left bank of the Tarnak, about 3 miles from Shahjui; (3) Kalai-Dinak, 2 miles east of Shahjui; (4) two villages, Sangar and Kala Khel, towards west, about 3 miles from camp. The villages of Ulan Rabat to the north-west might also be requisitioned but the nearest is quite 7 miles distant. In the Ulan Raat group are some 20 villages; country very rich. Alternative Route No. 86 <i>via</i> the Khushk-i-Rud comes in here.
13	CHASHMA-Y-PANGAK . . . . .	8	135	The road is easy for all arms, with the exception of five <i>nalas</i> , difficult for artillery. The first two can be improved with labour; the third crosses a <i>karez</i> , which, when the Royal Horse Artillery moved over, broke in. It was then filled up, road repaired, and the water of the <i>karez</i> diverted into an underground channel. The fourth <i>nala</i> is a wet one and very boggy. Guns should be taken into, and afterwards up, the <i>nala</i> 150 yards to the left, where there is

Route No. 85—continued.

an easy ascent. The fifth is also a wet *nala* and can be avoided, and the difficulty met in a similar way. Guns, infantry, and baggage should turn off the road to the left, opposite an old mud fort, and should strike the *nala* 160 yards to the left of the regular road. Here there is a perfectly easy natural slope and no water was found in the bed of the ravine. Guns should continue to keep to the left for some distance after passing this obstacle before entering the main road. Beyond this the march is good. There is a large encamping ground to the left of the road, and a plentiful supply of water from a *karez* immediately in front. This *karez*, as also a *nala* beyond it, would have to be ramped, and it would be advisable to lay down boards to facilitate the passage of camels and baggage animals. An equally good camping ground can be selected on north side of the *nala*. The villages near camp are Kala-i-Adam Khan, Babakarzai, Suzai, and Mulla Kaisar. Inhabitants, Tokhi Ghilzais.

14	GHOJAN, OR AGHOA JAN	11	148
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The road passes over an open but poorly-cultivated plain. Here and there *nalas* intersect the road, which all require more or less preparation. At 2 miles cross a *karez*, the sides of which were sloped for passage of artillery. At  $3\frac{1}{2}$  miles pass an old mud fort, said to have been built during the former British occupation, and called by the natives Chaoni-Faringhi. About here is the boundary between the Tokhi and Taraki Ghilzais. At about 8 miles cross a wet *nala* and watercourse. The water can be diverted, and brushwood bottoming might be advantageously laid for guns. With the above exceptions the road is very easy and good for all arms. On the left hand side the hills between the Tarnak and Argandab valleys are, for the greater part of the distance, 6 or 7 miles from the road, closing in to about 5 at the camping ground of Ghojan. Ghojan is the name of a district, watered by a *karez*, with several ramifying branches. On this *karez* are a group of villages, seven in number, situated to the north-west about 2 miles distant. The two to the south are called Aghoa Jan, two in the centre Zabib, and the northerly ones Shinkai. They are villages of considerable size, and the district is fairly fertile. Encampment upon a fine open plain, with its right resting on a hill to the right of road. From Shinkai, the Ota pass, said to be easy, leads to Rasana, and thence to the country of the Jaguri Hazaras. In Aghoa Jan district the inhabitants are Taraki Ghilzais.

15	MUKUR . . . . .	$11\frac{1}{2}$	157 $\frac{1}{2}$
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Over a very good road. Near the first hill on the march, at about 4 miles, is a watercourse, and near to it is a *nala*, which should be crossed about 20 yards to the right of the road, where a ramp was made. Encampment is south of, and close to, the source of the Tarnak, just before reaching which is a burial-ground, said to be the haunt of thieves. The Tarnak rises in a number of springs from the base of a hill about  $\frac{1}{2}$  a mile beyond camp, and flows in an easterly direction for 3 or 4 miles, when it turns south. Its course is marked by a line of willow trees. There are a great many villages, protected by mud forts, in the plain to the east and south-east, and, judging from the rich cultivation around, grain in plenty should be procurable. Goats, sheep, cows, etc., are said to be kept in large numbers; but as the villages (in 1880) were all deserted, neither supplies nor live-stock were obtained, except such as were buried or otherwise hidden and afterwards found by foraging parties. Elevation, 6,550'.

Here Route No. LXVIII, N-W. F., Vol. II, from Quetta comes in.

16	OBA KAREZ . . . . .	14	171 $\frac{1}{2}$
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Half a mile from the Mukur camp the road passes along the base of the hill mentioned in previous march, and is impracticable for wheeled artillery, which should be driven through the gravel-bedded pool of water which lies immediately beneath. After crossing the head of the springs, the regular road makes a bend to the right; but another path leads to the left across a level sandy plain, studded here and there with patches of cultivation. It passes a mound, visible for a considerable distance, about 8 miles from Mukur. There are two deep *nalas* in this march, the sides of which had to be ramped; but there are no other obstacles. The village of Oba is marked by a large tree, near which a *karez* of beautiful clear water spouts from a spot close to the village. Across this stream is the encamping ground on an

Route No. 85—continued.

open waste plain, a path to it diverging to the left. There is another supply of water  $1\frac{1}{2}$  mile before reaching Oba karez; but the ground in the vicinity is not adapted for the encampment of a large force. The villages near Oba karez are (1) Piari; (2) Bazgai to south-east about  $1\frac{1}{4}$  mile; (3) Laram to south about 3 miles; (4) Se Kacha to south-west about 3 miles. Country fertile. Supplies in April 1880 found with difficulty, owing to country being deserted by inhabitants.

17	JAMRAD . . . . .	12	183 $\frac{1}{2}$
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The main road is again struck  $1\frac{1}{2}$  mile after following a track leading from camp round the karez. At the point of juncture is a spring of clear water, and immediately in front the sandy bed of a *nala* is crossed. At about the 8th mile there are two difficult ravines, both of which

require ramping; another at the 10th and a fourth at the 12th mile, through which latter a good crossing for guns will be found by diverging a short distance to the left. Encamp on a cultivated plain south of the sandy bed of a *nala*. Water procurable from a karez, both in front and rear of the camp. The Hazaras occupy a large tract of country to the west of the range of mountains which run parallel to the route from Mukur northwards. Jagui Hazaras A good road through the Opla pass near Shinkai leads to the capital of this section. There is also a good road from Karabagh. North of this tribe Muhammad Khwaja and Chardasta tribes of Hazaras commence. They also possess a tract of country bordering on the plain to the east of the range already alluded to, which is called Karabagh, of which Jamrad, Kala-i-Marwardar (1 mile from camp), and Chabardeh Bebud (2 miles from camp), belonging to the Chardasta section, are the principal villages in its southern portion. These villages are fortified, being built close beside those of the Afghans, who are here mainly of the Andari section of Ghilzais. Most of these villages, both Afghan and Hazara, were in ruins in April 1880, owing to the feud between them. Each tribe had devastated the property of the other.

18	MASHAKI . . . . .	9	192 $\frac{1}{2}$
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Road in many places sandy and heavy for artillery. It lies across a valley, which is much cultivated, and there are many forts and villages scattered on every side. The only obstacles on this march, rather trying to laden camels, are the watercourses which intersect

the road in several places. Mashaki is a fertile group of villages surrounded by cultivation. The camp is on an open sandy plain, about  $1\frac{1}{2}$  mile in length, between two karez. Elevation about 6,900'. The villages in the neighbourhood are—

- |                             |   |                               |                       |
|-----------------------------|---|-------------------------------|-----------------------|
| (1) Khan Mashaki . . . . .  | } | Inhabited by Andari Ghilzais. |                       |
| (2) Haji Musa . . . . .     |   |                               |                       |
| (3) Kala-i-Meri . . . . .   |   |                               |                       |
| (4) Akhun Khel . . . . .    |   |                               |                       |
| (5) Kala-i-Murchi . . . . . |   |                               |                       |
| (6) Said Musa . . . . .     |   |                               | Inhabited by Saiads.  |
| (7) Kala-i-Durani . . . . . |   |                               | Inhabited by Duranis. |

They were all deserted in April 1880. Supplies were brought into camp by the Hazaras. Here Route No. 128 comes in from Quetta.

19	NANI . . . . .	14 $\frac{1}{2}$	207
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The road leads between some low hills. It is sandy and stony for 5 miles, and rather heavy for artillery. At about the 6th mile ascend a low pass and just before it, to the south, cross a stream of water, the bottom of which is very boggy, and therefore it is necessary to find

other crossings besides the direct one lower down. From the 6th to the 8th mile the hills are close on the left (west) side of the road, after which the country opens out into an extensive plain. There are fewer watercourses to impede the column, and the road is better, though in places still sandy and heavy. Encampment upon a plain, for the most part sandy, but there is a good deal of ploughed land and cultivation. There is a large Andari village at Nani which was deserted.



Route No. 85—concluded.

Here Route No. 80 from Dera Ismail Khan joins in.

20	ISPANDI . . . . .	7½	214½	The road is a good one over an open flat plain. On the right pass the group of villages of Karabaghi (inhabitants Kizilbash) and Kala-i-Sher and Kala-i-Fakir (inhabitants Andari). On the left, about 2 miles distant, is a low range of hills, beyond which lie the districts of Nogai, is a large group of villages called Bagla.
Kakrak and Wag haz. On the left, opposite				

21	GHAZNI . . . . .	7	221½	The road for the first 4½ miles is good. A low range of hills borders it at distance of 1½ mile to the west. The country between is well cultivated and studded with a number of villages. That to the east is equally fertile, and extends to a much greater distance to the hills in this
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direction. At about 3½ miles is a garden called Chilbachagan, and between this and the town is the sandy bed of a river, about 200 yards broad. From this point two lines can be taken to the encamping ground on the north side of the fort, i.e. the direct road through the gardens outside the town, which is practicable for artillery, and one by a detour to the right (east), which can be utilised for baggage animals. The immediate vicinity of the south side of the fort is much intersected by canals, and the Ghazni river washes the south-west face. In the event of the fort being occupied by an enemy in force, it would be necessary for an army moving to a position on the north and north-east to work round by a considerable detour to the east. This can be done from the vicinity of Chilbachagan.

The country in the vicinity of Ghazni is extremely fertile and well cultivated. The fortifications of the town are of no strength, and no stand could be made against artillery. The town is in a very dilapidated condition.

The encamping ground for a force marching from Kabul to Ghazni is on the plain to the south of the two old *minars*, which stand to the east of Ghazni between the city and the suburb of Roza.

Route No. 71 from Bannu joins here.

For further details of Ghazni see Route No. 66, which comes in here from Kabul.

22	SHASHGAO . . . . .	13¼	} <i>Vide</i> Route No. 66.
23	HAFTASIA . . . . .	9¾	
24	HAI DAR KHEL . . . . .	10½	
25	SAIDABAD . . . . .	5	
26	KILA AMIR . . . . .	8½	
27	PADKAO ROGHANI . . . . .	9½	
28	HISARAK . . . . .	7	
29	ZARGAN SHAHAR . . . . .	10	
30	ZAHIDABAD . . . . .	12	
31	CHARASIA . . . . .	10	
32	KABUL . . . . .	11	

Route No. 85A.

FROM KANDAHAR TO SARBILAND AND WACH-AK-BARG, *viâ* THE ARGHASTAN.

Authority.—MASSY.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MANDI HISSAR .	10 $\frac{5}{8}$	10 $\frac{5}{8}$	<i>Vide</i> Route No. XVIII, N.-W. F., Vol. II.
2	MURGHAN KECHA .	7	17 $\frac{5}{8}$	The Arghastan road leaves Mandi Hissar in an easterly direction. Between that place and Murghan Kecha two <i>nalas</i> are met, the second of which is about one mile from Murghan Kecha. This <i>nala</i> would be difficult to cross with guns in rainy weather, owing to the swampy nature of the ground near the road, and a slight detour to either bank would be necessary; otherwise the road, which passes through a stony undulating country, is good. At Murghan Kecha there is a good camping ground to the east of the village. The water-supply is obtained from a small stream about half a mile to the south. Another very small stream runs through the village. The water from both these sources is brackish. Murghan Kecha is a large village of some 200 houses, and supplies are plentiful. There is good grazing ground for camels in the neighbourhood.
3	ATA MUHAMMAD .	16	33 $\frac{5}{8}$	From Murghan Kecha the road proceeds in an easterly direction for about 4 miles, when it turns southwards and enters the valley of the Arghastan over a low kotal, which offers little difficulty for the passage of guns. On nearing the river it again assumes an easterly direction and follows the right bank. The road is rough and stony, but passable for guns, none of the <i>nalas</i> being so deep as to necessitate more than a few minutes' labour in ramping, etc. At 9 miles from Murghan Kecha is Babar, a village of 50 houses on the left bank of the river, about one mile from the road. Two miles further on is Karwan Katzi, also on the left bank. Sagzai is reached at about the 13th mile. It is on the left behind a small hill, and cannot be seen from the road. In this and the succeeding marches the drainage from the heights on the left of the road in falling into the river crosses and cuts up the track at frequent intervals, but most of the <i>nalas</i> thus formed can be made practicable for guns with a few minutes' labour. The road is commanded on the left, throughout almost its entire length, by low, undulating hills. An enterprising enemy might seriously annoy convoys, etc., the ground being very favourable for the concealment of large bodies of men. The road is tolerably open on the right, but in most places long, narrow tracts of cultivated land, much cut up by watercourses, intervene between it and the river. The right bank of the Arghastan, along which the road runs, slopes, with a few exceptions, gradually down to the water. The opposite bank is steep and only accessible at intervals to cavalry and guns. On leaving Sagzai two small <i>nalas</i> and the Sodanai <i>nala</i> are crossed. On the latter is situated the village of Khogani, which consists of three hamlets about half mile apart. The <i>nalas</i> present no difficulties for the passage of guns. About 3 $\frac{1}{2}$ miles from Sagzai is Ata Muhammad. Here the ground is suitable for encamping north of the village, and there is a good supply of water close at hand from a canal which brings the water from the river. Supplies might be collected here from Sagzai, Khogani, and Fakr-ud-din. There is very good grazing for camels close at hand.
4	AMIN KALA . . .	9	42 $\frac{5}{8}$	From Ata Muhammad to Pir Muhammad (about 6 $\frac{1}{2}$ miles) the road, passing round the left of the high hill above the former place, becomes more difficult for wheeled carriage. In a few places it will be necessary to leave the road and pass through the low, gravelly hills to the left.

Route No. 55A—concluded.

owing to the rocky and dangerous nature of the path along the river-bank. Between Ata Muhammad and Pir Muhammad is the village of Fakr-ud-din, on the left bank. Close to Fakr-ud-din is the Lahar *nala*, 3 miles from the mouth of which is the village of Smailai; then at intervals of about half a mile are Abdulla Khan, Muhammad Huser, and Amin Kala. The latter is a large village, with a fair camping ground across the Wandoz *nala*. The water-supply is close at hand, and grain and *bhusa* are plentiful. The villagers do not keep a large supply of flour in hand, but there are mills on the river at frequent intervals where the wheat can be ground. The Wandoz *nala* here joins the Arghastan. On this *nala* are situated the villages of Abdul Latif and Mir Alam. On the Wachakai *nala*, which joins the Wandoz about one mile from Amin Kala, is Saifula. From these villages, and also from Meskin Khan, supplies should be collected for a force encamped at Amin Kala. Between Pir Muhammad and Amin Kala, on the left bank of the river, is Tajao, to the south-east of which are the villages of Muhammad Khan, Loe Karez, Kachnai Karez, and Imarat. To the four latter villages there is a rough road from Amin Kala. There is good grazing for camels in and along the river-bed.

6	SARBILAND . . .	13	55 $\frac{5}{8}$	From Amin Kala the road, after crossing the Wandoz <i>nala</i> , the left bank of which is very steep, passes through low, stony hills, and arrives at Meskin Khan, Muhammad Aslam, and Umar, which are 2 $\frac{1}{2}$ , 4, and 4 $\frac{1}{2}$ miles respectively from Amin Kala. About half a mile beyond Umar begins a fair road, practicable for all arms, to the Tarnak valley. Its general direction is north-west; it crosses the low, undulating hills between Umar and the Wandoz <i>nala</i> , and thence over a gentle gradient to the Tagak kotal. It enters the Tarnak valley near Rabat. The distance from Umar to the Tagak kotal is about 9 miles. About one mile beyond Umar the road crosses the Khushk-i-Rud. There is little water in it now (end of January); but the bed does not appear deep enough to offer any serious obstacle to the passage of troops in the rainy season. The first of the Sundarzai group (of which there are 19 villages) is 2 $\frac{1}{2}$ miles from Umar. The road between Amin Kala and Sundarzai is rough, and would require some slight preparation for the passage of wheeled carriage. On the left bank of the river, opposite Sundarzai, are the villages of Utmanzai and Bakalzai. At Mir Afzal the road enters the Lora valley. From the first Sundarzai village to Sarbiland the road is in fair order. At Sarbiland there is a very good camping ground to the east of the village, and the water is good and plentiful. Supplies should be collected from Sundarzai, Mir Afzal, Tafanzai, Bakalzai, and Muhammad Khan. There is plenty of good grazing ground for camels in the neighbourhood.
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6	WACH-AK-BARG . . .	12	67 $\frac{5}{8}$	From Sarbiland the road, passing through Muhammad Khan, crosses the plateau above the right bank of the Lora, through Ayubzai and Hasanzai, in a north-east direction, and at about the 12th mile reaches the large village of Wach-ak-Barg, at the foot of the range of hills from which the Lora issues. The road seems, with the exception of a large <i>nala</i> near Wach-ak-Barg, to be good and passable for all arms. Provisions should be collected during this march at Ayubzai and Hasanzai. From Wach-ak-Barg there is said to be a good road to Kalat-i-Ghilzai, which is fit for wheeled carriage. (Route No. LXXXVII, N.-W. F., Vol. II.)
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*Signal stations on the route.*—There are many points in and near the Arghastan and Lora valleys suitable for heliographic signalling stations. The following are among the more prominent :—

- (1) Murghan Kecha to Kandahar (Picquet hill).
- (2) Tagak kotal to Kandahar.
- (3) Zijja hill to Tagak kotal.
- (4) Shekh Khan hill to Tagak kotal.
- (5) Zijja hill to Shekh Khan hill.
- (6) Zijja hill to Wach-ak-Barg.
- (7) Shekh Khan hill to Wach-ak-Barg.

and from most heights through the Tagak kotal to Kandahar.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 86.

FROM KANDAHAR TO GHAZNI, *viâ* THE ARGHASTAN, KHUSHK-I-RUD, AND TARNAK VALLEY.

Authority.—CAPTAIN W. V. ELLIS, 1880.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MOHMAND . . .	12	12	<i>Vide</i> Route No. 85 to Rabat at 18 miles. Road easy, practicable for all arms. At Rabat turn nearly due east, leaving the direct road from Kandahar to Kalat-i-Ghilzai. Water from large tank near village, fed by canal from the Tarnak. Due notice should be given the previous day when water is wanted, as it takes
2	MABSINZAI . . .	12 $\frac{3}{4}$	24 $\frac{3}{4}$	
<p>some six hours to get the water-supply to the village. Cross many irrigation canals towards end of this march. Some of them knee-deep, and very difficult for camels. Water should be cut off, and ramps made the day before a march. Supplies procurable; wood scarce. Sufficient shrub for native cooking. Wild hyacinths, called by natives <i>pahari piay</i>, and by them much relished as a vegetable, in great plenty. Camping ground to west of the village on fine open plain.</p>				
3	MIR ALAM KAREZ . . .	16 $\frac{1}{2}$	41 $\frac{1}{4}$	Road for first 2 miles fairly good, over low undulating hills; then very broken and rocky ground, with track winding through <i>nalas</i> with gradual ascent as far as Tagak kotal, 14 miles. West of kotal is a sugar-loaf hill called Koh-i-Duzd. Heliographic communication might be established with Kandahar from a hill easy of ascent east of kotal whence the hills north-west of Kandahar are distinctly visible. This stage can be made practicable for wheeled artillery by a company of sappers in six to eight hours. Water slightly brackish from a <i>karez</i> . Supplies plentiful from Mir Alam's village (about 2 miles off), and from the Konchezai villages. Green wheat abundant in spring. Camp small, for complete brigade with cavalry and artillery, in valley, with low barren hills all round, divided by dry bed of <i>nalas</i> .
4	SABICHE . . .	12 $\frac{1}{4}$	53 $\frac{1}{2}$	Road, nearly due east down bed of dry <i>nala</i> at first. At about 2 miles cross low barren plain, covered with southernwood, and intersected by <i>nalas</i> , with steep banks, trying for camels. At about 8 miles reach village of Pir Muhammad. ( <i>See</i> also Route No. 85 A.)  Some 15 houses, with a few fruit trees and willows; also a fine <i>karez</i> which waters the village lands down stream. Thence over undulating country, intersected by deep ravines with steep, but easy banks; ascent gradual, but almost imperceptible. At 4 $\frac{1}{4}$ miles beyond Pir Muhammad's village reach Sariche on right bank of Khushk-i-Rud. Water very good and plentiful from <i>karez</i> considerably above bed of stream on right bank. Camel-grazing, tamarisk, and camel-thorn abundant in bed of stream. This is the first grazing for camels since leaving Kandahar. Supplies abundant from the Konchezai and Sunderzai groups of villages. Very good encamping ground on fine open plateau on right bank of Khushk-i-Rud. Thermometer in beginning of April 1880 some 15° lower than at Kandahar.
5	KALA-I-MIR AFZAL . . .	9 $\frac{3}{8}$	63	Road up right bank of Khushk-i-Rud, with low range of rocky hills to left. About 1 mile from camp road gets very narrow and broken, and in some places ledges of rock project across the path. Baggage animals and wheeled artillery should keep to the bed of

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 86—continued.

the stream. After about 7 miles the road leaves the stream temporarily; crosses low range of barren hills, and again descends into a branch *nala* on the left bank of the main stream. During latter part of march pass numerous small hamlets, with surrounding cultivation. Water from canal on left bank of *nala*. Due notice should be given, as it takes some six hours to get water to the camp. There is also very clear water here from a *karez*, but it is brackish and only fit for animals. Supplies plentiful. Tamarisk for camels. Good camping ground.

6	SALAM KALA . . . . .	$8\frac{3}{4}$	71 $\frac{3}{4}$
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On leaving camp descend into the Khushk-i-Rud. This descent is rather steep for camels, but a few hours' labour would make it quite practicable. Continue up the bed of the stream, easy going. At about 6 miles villages of Khan Gul Khel and Abdul Rahim are passed.

These are the last of the Popalzai villages. This is the boundary line between them and the Hotak tribe of Ghilzais. At  $2\frac{3}{4}$  miles further reach Kala-i-Salam. Camp good on bank of Khushk-i-Rud. Water from a canal on left bank very good and abundant. Supplies very abundant. Good camel-grazing. There is a direct road from here to Kandahar by Shabbaz Khel, over the range, into the Tarnak valley. It passes between two peaks, prominent landmarks in this range, one called Koh-i-Chugni, being sugarloaf-shaped, bearing  $258^\circ$  from camp; and the other  $268^\circ$ .

7	SHERU . . . . .	$12\frac{3}{4}$	84 $\frac{1}{2}$
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The track ascends by an easy gradient into a large open plain and is easy throughout. Pass villages of Khaik-ud-din on right bank, and Shadi on left bank, at about 4 miles. At  $6\frac{1}{2}$  fort of Rahman Khan (rectangular, with four bastions) is passed and at  $7\frac{1}{2}$  the large village

of Sultan, containing upwards of 80 houses. A little further on is village of Gul Muhammad, and again descend into the bed of the Khushk-i-Rud, pass village of Aslan on left bank, and reach Sheru at  $12\frac{3}{4}$  miles. Good camping ground between Sheru and Muhammad Umar, with an abundant supply of good water in open canals, both in front and in rear of the camp. Supplies obtainable; but the Hotak Ghilzais do not give them up so freely as the Popalzais. No camel-grazing.

8	PUMBA . . . . .	$14\frac{1}{2}$	99
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Road generally good. A steady ascent from camp. At about 3 miles a high table-land is reached. At 4 miles pass a steep-bank *nala*, which would require ramping for wheeled artillery (some 4 hours' work for a company of Sappers). Cross table-land, which forms water-

shed between the Tarnak and the Khushk-i-Rud. A somewhat undulating plateau with a slight ascent. At about 10 miles reach elevation of 6,300', whence there is a gradual descent. Then reach village of Mulahad, a few houses, with some fruit trees and cultivation. The camping ground at Pumba is rather broken. A fair water-supply from an open channel; also several springs under the crest of a low range of hills to the east. Supplies obtainable. A little camel-grazing in the valley to the west. Pumba is 10 miles from the fort of Kalat-i-Ghilzai, which is visible bearing W.N.W. Heliographic communication can be easily established. Elevation 6,100' feet.

9	DIWALIK . . . . .	$8\frac{1}{2}$	107 $\frac{1}{2}$
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Road, as in previous march, over high table lands, with a slight ascent from camp. At about 1 mile reach a kotal, whence a grand panoramic view of the Hazara mountains is obtained.

Cross several *nalas* requiring slight labour to ramp. At about 5 miles pass ruined village of Zafarka Kala, with spring of good water. Camping ground very undulating. Several springs of excellent water, which flows in abundance.

Supplies scarce, especially firewood and fodder. Camel grazing close to camp. Easy heliographic communication with column marching up the valley of the Tarnak. Elevation 6,200'.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No 86—continued.

10	SURKOH KANDAO (JAHANDAD)	9	116½	Road good over high table-lands, same as last march, practicable for all arms. A gradual ascent on leaving camp, road passing along the bank of a dry <i>nala</i> . A high plateau reached at about 6 miles (after this slight and gradual descent). This plateau extends up to
<p>range of hills to the east about 2 miles distant, which runs parallel with the road. Numerous springs of water burst from the western slopes of this range, with corresponding patches of cultivation. Vast flocks of sheep visible, the property of the Powindahs who had pitched their camps along the foot of the hills. With the exception of these patches, the country is barren and desolate. Very good camping-ground near the village, with several springs supplying good water in abundance. Supplies procurable. Forage scarce. Plenty of wild thyme, but larger firewood scarce. Excellent camel-grazing, camelthorn being in abundance. Elevation 6,340'.</p>				
11	KAKKA . . . . .	14½	131	Road generally good, over high table-lands. At about 3 miles pass a steep-banked <i>nala</i> requiring a little labour to ramp. At about 7 miles villages of Saiad, Lodin, and Firozi. Some cultivation about. These villages were found empty in April 1880, as the
<p>inhabitants had fled with their women and cattle to the hills. Thence road runs parallel to, and about 3 miles distant from, the Surkoh range, over which there is a pass into Naweh, called Spirsang, reported easy. At about 12½ miles reach a few villages and a kotal. From this kotal a view of the fort of Shahbudin is obtained. It is about 2½ miles distant to the east (camping-ground confined and irregular). Water from an open canal fairly good. In 1880 foraging parties found some grain and <i>bhusa</i>, which had been buried by the inhabitants, who had fled. Some camel-grazing.</p>				
12	SHAHJUI . . . . .	9	140	The Bargai road, which runs east of the hill to the north of Kahka, is the best to Shahjui. It is easy throughout, passing for the first 2 miles between two low ranges of hills. After this it opens out into the valley of the Tarnak. On entering the valley, pass the villages of Madali
<p>(about 2 miles south-east of the road) and Bargai. Through the latter a road leads to Jafri round the Bargai hill. This is reported hilly, but not difficult. Bargai is inhabited by Tohki Ghilzais. Here is a lofty hill to the east called Sperawana, from the top of which the Ab-i-Istadah lake is visible. The best road from Kahka to the lake is by Kashmir Khel through the villages of Sri Sheli, Handai, and Loanalah Murgha, and easy road through an open country belonging to the Tarakis. The camp on the left bank of the Tarnak is opposite the village of Shahjui, a fine open plain with good water from the river from an irrigation canal. Supplies obtainable from three villages to the east on the slope of the hill, and from one to the north. A little camel-grazing in the river-bed. Here Route No. 85 is struck.</p>				
13	KALA-I-JAFIR . . . . .	7	147	Easy road throughout, over open plain with belts of cultivation here and there. At about 2 miles pass ruins of old fort and village, evidently an important place formerly. Numerous water-channels crossed, forming no obstacle. Enormous flocks of sheep along
<p>foot of hills to the east. Villages (in April 1880) deserted. The foraging parties found some <i>ata</i> and a little <i>bhusa</i> buried. Plenty of lucerne grass. Camp on somewhat undulating ground north-west of the group of villages. Water good and abundant from open canal. Firewood scarce. Camels fed from standing crops.</p>				
14	MARTAZA . . . . .	12	159	Road over undulating ground, parallel to range of hills to east. Country open and easy. Cross several <i>nalas</i> ; little ramping required. At about 10 miles road turns west and crosses the Tarnak. In April 1880, there was but little water in the river, and the actual passage was

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 86—concluded.

very easy. The bed of the stream is firm throughout. The banks, however, are very precipitous; and the road to the ordinary ford extremely steep, so that easier gradients must be selected or the regular road ramped. Country on right of Tarnak fertile and well cultivated. All the villages are regular forts, rectangular in shape, with loop-holed walls, 20' to 25' high, and flanked by bastions at the corners. Water very abundant from open *karez*. Foraging parties found large quantities of supplies in the neighbouring villages. Martaza is reported as a hotbed of fanaticism.

15	MUKUR . . . . .	14	173	The direct road to Mukur passes through a richly cultivated and most fertile country, with numerous villages; it is easy throughout, and quite practicable, a few shallow watercourses forming no obstacle. There is another road from Martaza, which turns due W., and strikes

Route No. 85 at about 7 miles: this would be the preferable route in the event of opposition. The district of Mukur is a fine table-land, 7,000' above sea-level, and for extent and richness of soil would compare favourably with any known district at this high altitude. Supplies would be procurable in great quantities if the people were friendly. In April 1880 the villages were searched, but no great quantities of grain were found. Mukur would form a strong line of defence for an enemy to hold against a force marching up this route, as there is an almost continuous line of villages extending across the whole plain.

Water-supply plentiful and excellent from the springs at the source of the Tarnak.

16	Oba Karez . . . . .	14	187	} <i>Vide</i> Route No. 85, stages 16 <i>et seq.</i>
17	Jambad . . . . .	12	199	
18	Mashaki . . . . .	9	208	
19	Nani . . . . .	14½	222½	
20	Ispandi . . . . .	7½	230	
21	Ghazni . . . . .	7	237	

Route No. 87.

FROM KALAT-I-GHILZAI TO KANDAHAR, *via* THE ARGANDAB VALLEY.

*Authority.*—BISCOE, 1879.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KALA JUMADIN . . . . .	7	7	The road ascends due west from Kalat over a range of downs; at 5 and 6 miles is crossed by two deep <i>nalas</i> , which require ramping to render them practicable for artillery; camping ground good and dry, on right of road; good water from a stream close by; and supplies of all sorts procurable from five adjacent villages.
2	TAKIR . . . . .	8½	15½	Road good and practicable for all arms, running west over a broad plain till past the Gau Murda, a high hill on left, when it descends gradually into the Takir valley; camping ground on high undulating plain immediately across Takir stream; water good and plentiful

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 87—continued.

from stream, which, however, is said to dry up in very dry seasons; supplies (wheat, *jowar*, *bhusa*, sheep, fowls, wood, etc.) in abundance from the numerous villages round; between 400 and 500 bullocks obtainable, and in the winter Powindahs bring down camels in large numbers for grazing to within 10 miles of Takir, to the north and north-east, but are not willing to sell or hire.

3	SEHLUM	12½	28
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Road passes over a steep stony kotal (which can be partially avoided by a detour to the right of about 1½ mile), then descends by a series of gentle undulations to Mukrak at 7 miles, meeting the Takir stream again at this point; thence it borders the stream for 2 miles, passes

over a low hill, and again descends to Sehlum on left bank of Argandab; this march is difficult for artillery owing to its sharp ascents and descents, but is not impracticable; another road to Sehlum runs parallel to, and south of this, through the Takhum valley, but is even more difficult for artillery, and is 15 miles long; camping ground on cultivated land close to river, south of village, is very damp after rain; another excellent camping ground on opposite bank, but the ford is 30 yards broad, and ordinarily 2 feet 6 inches deep; supplies of all sorts, sufficient to feed 3,000 men for a week, procurable in a few hours from the adjacent valleys of Takhum, Siajui, and Shekan; bullock carriage plentiful.

4	ARGHASU	10½	38½
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Road leaves river on right, and after crossing the two streams of Takir and Takhum, passes over low easy kotal into a plain from 2 to 3 miles broad; at 7 miles strikes Arghasu stream, then turns east down right bank of stream to Arghasu, a group of 5 small villages

situated in a narrow gorge between high overhanging rocks, distant 1½ mile from Argandab; camping ground stony and confined opposite villages on left bank of stream; supplies scarce, and very little bullock carriage obtainable.

From Arghasu a road runs south *via* Bori to Kandahar; it is considerably shorter than the Argandab route, but is impracticable for laden camels.

Another route from Sehlum to Arghasu by right bank crosses river at Sehlum, and passing over some low hills enters and crosses Shekan valley; thence over a high steep kotal into Daroshak valley, whence it again rises up an extremely steep ascent, and passing along the side of a hill, meets the Arghasu-Tari road half mile beyond ford; it is a mere mountain tract impracticable for camels, along which cavalry might, if necessary, pass in single file. The distance is about 11 miles.

5	TARI	6	44½
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Road descends to river and turns up left bank for half a mile by a narrow rocky path, which required a day's work with 150 men to render passable for camels, then crosses to right bank; this ford is ordinarily 3 feet at deepest part with a strong current; a ramp had to be

made to enable camels to ascend opposite bank; thence road leaves river, ascends a steep rocky hill and again descends by a narrow stony path to river; here a very narrow rocky path between river and overhanging rocks, 3 furlongs long, leads to camping ground; this path is practicable for cavalry in single file, mules and ponies, but not for camels, which have to cross the river and recross again ¼ mile further down; both crossings fairly easy; camping ground at junction of Karwai stream with Argandab; no supplies.

6	CHINARTU	9	53½
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A fairly good road up Karwai stream; at 2 miles turns south-west from stream; crosses plain of Sar-i-ab, and descends to valley of Chinartu, a series of villages situated on stream of same name; good camping ground about 5 miles from Argandab; supplies plentiful; from this

place to Kandahar, bullocks for carriage became scarce, and donkeys were obtained instead. Izintu and Balil are at the head of Chinartu stream.



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 87—concluded.

7	BAGHTU . . .	12½	66	A stony, difficult road over a series of low barren hills; Baghtu, like Chinartu, is a stream along which numerous villages are situated; camping ground 4 miles from Argandab; supplies plentiful.
8	MAIDAN (or OYAN)	7	73	Good road; camping ground on right bank of Oyan stream, close to villages of Muhammad Riza and Din Muhammad, from whence supplies can be procured; numerous other villages also on bank of Argandab, here 2 miles distant. From Oyana road runs to Murdajai on bank of river, and thence straight through the hills to Kandahar; it is said to be rocky and difficult, and very little shorter than the route here described.
9	ALMUSH . . .	5	78	Good road; camping ground at village of Karamula on right bank of Almush stream; supplies plentiful; at head of this stream, about 10 miles up, are situated Zewa and Khartut, and further north, but not on the same stream, is Kajur, all three being fertile divisions of Dahla district.
10	SOZNAI . . .	10	88	Good road throughout; steep descent into Soznai <i>nala</i> ; camping ground just across on right bank of stream; supplies plentiful; Soznai is just outside the Dahla district.
11	SIKAHALA . . .	9	97	Road crosses Argandab at Khoja Mulk, 1 mile from camp; crossing ordinarily easy, 2 feet deep; thence along left bank of Patab canal (the head of which is close to this spot) through continuous gardens of fig, grape, peach, plum, apricot, and pomegranate; past the villages of Miranjan and Sardeh to Sikahala; villages numerous all along banks of river and canal, which latter run parallel about 1 mile apart; supplies plentiful, and grass, except during the very cold weather, abundant; lucerne grass is grown in great quantities under the fruit-trees.
12	KANDAHAR . . .	5	102	A long canal for 2 miles; road then turns to left, and, passing over Baba Wali kotal, enters Kandahar plain 2 miles from city.

The Argandab river in the Mizan district has in ordinary times an average breadth of about 30 yards, a rapid stream of 4 miles an hour, and a depth of from 3 to 6 feet. It widens considerably as it descends towards Kandahar. During the melting of the snows and after heavy rain it rises rapidly and becomes impassable, and towards the latter end of the hot weather it can be forded at almost any spot. Fish abound in it, the commonest sort being a species of barbel, not unlike the Kashmir trout. Like the rest of Southern Afghanistan, there is a curious absence of trees in both these districts. The only ones to be seen are a few mulberries and willows in the valleys, a few wild almonds on the sides of the hills, and an occasional solitary tree on the ridges of the highest, most inaccessible crags, said to be a species of pistachio. The country on either side of this river is wild and mountainous, so much so that, except at the juncture of the numerous small streams which run into it, its banks are unapproachable, until it enters the Dahla district, when the valley gradually opens out, and from Oyan downwards the country, more especially on the right bank is open, cultivated, and dotted with villages.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 88.

FROM DERA ISMAIL KHAN TO PISHIN FORT, *via* THE SHEKH HAIDAR PASS AND ZHOB.

*Authorities.*—BRADFORD; CHASE; TAKHT-I-SULIMAN EXPEDITION.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KHULI . . . .	13	13	To Apozai, <i>see</i> also Route No. XXI, N.-w. F., Vol II. A small village, supplies scarce. Water bad, and quantity uncertain; country level, open and barren; road good except after rain, pass a deep ravine at 9 miles, which, as well as the sur-
rounding country, is impassable after heavy rain.				
2	SAGU . . . .	6	19	A village, supplies and water procurable. Country and road as above, cross the sandy bed of a broad <i>nala</i> just before reaching the village; it is generally dry, but in February, March, July, and August it is often impassable for days.
3	DARABAN . . . .	16	35	Supplies and water procurable; country as above, with partial cultivation near the scattered villages; road good.
4	KOT GULDAD . . . .	13	48	Pass Kot Lalu at 2 miles, elevation 600 feet, on Daraban-Zarkani route. Good camping ground, grass, wood, and water. Road now north-westward; enter the Shekh Haidar pass, formed by the water of the Sawan or Zao river, which watercourse the route follows to its source
at Zao Karai on the road between Sar-i-Tangi and Mazrai Kach, 5th and 6th encampments. The stream is perennial. Camping ground at Guldad good. Grass, wood, and water sufficient: water rather brackish. The valley is about 400 yards wide. The ruins of Kot Guldad are situated on the plateau on the left bank of the river; surrounding hills low.				
5	GANDARI KACH . . . .	13	61	At 6 miles pass Chalwaskai, elevation 1,300 feet. A Powindah encamping ground. Water-supply good. Wood and grass plentiful. Valley 400 yards wide; good ground for encampment. The road runs westward up the stony bed of the Sawan to Chalwaskai, which is a valley of

arable, but fallow land lying to the south-west of the road, and screened by a barrier of vertical strata, about 200 feet high and 30 feet at base, through which the Sta-wi-war stream falls into the Sawan. The Sta-wi-war is formed by the drainage of the north-east slopes of the watershed, on which Kot Wazir Khan stands; the water on the further side falling into the Gat or Daraban stream. Foot-travellers can reach the head of the Gat near Mazrai Kach, 6th encampment, and below the Sur Narai, by following this road, but it is impracticable for animals. Elevation, 2,400 feet.

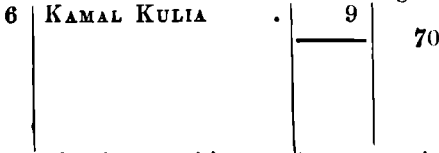
Leaving Chalwaskai on the left, the road runs north-west, or nearly parallel to the line, of the second low range of hills for 3 miles and then 4 miles westerly to Gandari Kach, about half a mile from the mouth of Zao defile. The valley gradually narrows beyond Chalwaskai, the hills on the right bank being low and broken, those on the left steep and flat-

Route No. 88—continued.

topped. At Gandari the valley is about 200 yards wide, the cliffs on each side being perpendicular and formed of a conglomerate and limestone, water-worn pebbles, with boulders imbedded in it, forming a heterogeneous mass of great thickness, through which the water forces its way without difficulty, dislodging enormous masses, of which the lighter ingredients are washed away and the boulders left strewn over the river bed. There is a footpath from here into the Waziri country, used by marauders.

Water here good and plentiful. Wood also plentiful and grazing good. Camp pitched here requires picquets at the mouth of the defile, and to the right and left on the ground commanding the valley.

Up to Gandari Kach the route is easy, road stony but level, and having no impediments for a well-equipped force, but the passage through the backbone of the Suliman range by the Zao defile for a force with camel carriage is a serious undertaking.



At 6 miles pass Sar-i-Tangi. Elevation, 3350 feet. The Zao defile runs westward through a cliff in the upturned strata of limestone, forming the Patar or second range, and the main or Takht range, almost at right angles to the strike of the strata. There are six places in

the defile where working parties are required to make the road practicable for laden camels or mules. Going through the defile from Gandari, these obstacles occur in the following order:—

- (1) For 1 mile from the mouth of the defile the bed of the stream is level, but at this point the waterway is narrower, and the water falls from a height of 20 feet over a slanting rocky bed into a pool below. Parts of the same rock form the sides of the channel to a height of 30 feet. This place was made practicable in about eight hours by a working party of one company; a ramp of stones and grass was made from the bed of the river to the top of the fall, leaving a channel underneath for the water.
- (2) A similar fall, a few hundred yards further on, under an overhanging rock, repaired in the same way as No. 1.
- (3) The next mile of the river bed is more open, but is strewn with enormous boulders 20 to 30 feet high, and between and amongst these the camels must pick their own way. In one place they must pass between two rocks, only 8 feet apart, and are unable to do so without assistance.
- (4) Beyond this for three quarters of a mile the river bed is quite level and smooth, the causeway being a cleft, 16 feet wide, sides precipitous. Evidently the force of the stream increases in this gorge and carries dislodged boulders from above clear through to the place described under No. 3.
- (5) Quarter mile further on the chasm is choked by a high rock, called the Sari rock. It is itself 30 feet high and rests on others 10 feet high. The chasm is 28 feet wide and the water falls on either side of the rock from a height of 30 feet. On the right bank the water falls straight into a pool below, but on the left bank it falls over a succession of rocks and boulders, by levelling which into the form of ramp and by diverting all the water into the right bank channel, the place can be made passable for unladen camels; 250 yards east of the Sari Rud a small pass runs from the defile north-west for 5 kos, where it bifurcates. One *nala* leads to Kashmir Kar, and one to Ganga. The Gumal Panja is described as a large plateau, inhabited during the winter months by the Miangs, who live chiefly about Manji. For the next three quarters of a mile the defile rises perceptibly, widens considerably, and winds gradually south-west to south for 3 miles to Sar-i-Tangi. Until the *tangi* is fairly cleared, the road meanders between and amongst boulders, and in two places, where the *tangi* passes through two barriers of nearly vertical strata, is extremely bad. The water rushes down a slope of smooth rock, with no foot-hold, in both cases. Good road can be constructed by confining the water to one side and filling up the other with grass and stones, and topping it with bagri or sand.

Sar-i-Tangi is the head of the Zao defile and commencement of the second portion of the Zao pass which runs up to Zao Narai (the watershed) in a southerly direction, between the

Route No. 88—continued.

Zao Ghar block of hills to the east and the Waziri hills to the west. The valley is only 100 yards broad, and the only ground available for a camp is a piece of *kach* on the left bank of the stream. On this there is barely room for 1,500 to 2,000 men and transport. It can be guarded with one picquet to the east and one to the west. Water good and plentiful. There is also a warm spring, the water from which is not good. In the Zao defile there are also two warm springs; temperature 79°; the water from all these emits a sulphurous smell.

Leaving Sar-i-Tangi the road runs south along the bed of the stream over a stony and rocky valley with a perceptible rise. The bed of the river is covered with long grass and olive bushes. One and a half mile up on the left bank a *nala* leads into the hills to the south-west; one and a half mile further the stream makes a bend to the south-west, leaving a *kach*, Kamal Kulia, on the right bank, on which Powindahs generally encamp. Elevation 3,900 feet.

7	MAZRAI KACH	10	80	Six miles beyond Kamal Kulia, Sapridi hill commences, the road rising by an easy gradient to Zao Narai, which is a kotal (5,100') between the southern end of the Sapridi hill on the east and the Waziri hills on the west. This is the head of the Zao valley. On the southern side of Narai the road winds down a zig-zag with a fall of 1,000 feet in the first mile, where the bottom of the descent is reached. The road then follows a <i>nala</i> south-east for 2 miles to the head of the Gat with a further fall of 200 feet in three quarters of a mile. The Gat is a deep gorge separating the Sapridi hill from the Khaisor Gat range, the highest point of which is the north summit of the Sulinan range. Through this runs the Daraban river. This river, which is the largest body of water on the route, rises in Pasteh, about 20 miles south-west of Mazrai Kach. It runs through the Khaisor valley, which is arable; the lands on the banks are terraced and can be irrigated by aqueducts built between Mazrai Kach and Uzhdana. The Khaisor valley ends at Mazrai Kach and the river, taking a sudden turn north east, dashes through the Gat, which gorge is impassable for any animal, and is difficult for footmen. Mazrai Kach is only the name of the commencement of 4 or 5 miles of terraced arable land, lying on the left bank of the Daraban river. On the right bank the mass of rock known as the Khaisor Ghar rises from the bed of the river in steep slopes, surmounted by precipitous crags between the Gat and the north summit. The hill is only about 6,000 feet high for 5 or 6 miles; from this point the precipice rises to the height of 11,270 feet, the north summit. Camping ground good. Wood, grass, and water plentiful. Elevation, 3,850 feet.

8	AMANDI DAR	11	91	Leaving Mazrai Kach the road runs alongside fallow arable land for 4 or 5 miles to Niaz Wam, 4,450 feet. At each turn of the river, aqueducts, well and strongly constructed, lead to pieces of <i>kach</i> .

At Niaz Wam, 6 miles from Mazrai Kach, on the right bank, there is a village called Kot Niaz. Here the character of the hills changes; the valley widens out into a basin of table-land, separated by deep *nalas* running into the Daraban stream. At Wardana there is a good camping ground, with plenty of wood, grass, and water. A road leads from here to the summit of the Takht.

9	BARKHARDAR'S FORT	15	106	} <i>Vide</i> Route No. XXXII, N.-W. F., Vol. II.
10	KAPIP KACH	16	122	
11	APOZAI	8½	130½	

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 88—concluded.

12	BADENZAI . . .	15	145½
13	MINA VIALA . . .	11	156½
14	MUSAFIRPUR POST . . .	7	163½
15	TANG HYDERZAI . . .	15	178½
16	GWAL HYDERZAI . . .	10	188½
17	KALU KILA . . .	8	196½
18	AKHTARZAI . . .	13	209½
19	SAIFULLA KILA . . .	11	220½
20	KAZHE . . .	11	231½
21	SHINA KHULA . . .	19	250½
22	HINDUBAGH . . .	10	260½
23	MURGHA . . .	13	273½
24	KHANZAI . . .	16	289½
25	SPRING CAMP . . .	7	296½
26	PISHIN . . .	12	308½

*Vide* Route No. XX, N.-W. F., Vol. II.

From here there is a metalled cart-road the whole way to Pishin.

No supplies or grass; fuel scarce; camel-grazing abundant. Plenty of good water. Room for two battalions. Elevation 5,555'.

At 4 miles, Bagh China. Here Route No. 115 comes in from Gharkhai.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 89.

FROM DERA ISMAIL KHAN TO LORALAI, *viâ* THE VIHOA PASS.

*Authorities.*—O'DONNELL; SUB-SURVEYOR YUSAF SHARIF, 1885.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KHULI . . . .	13	13	} <i>Vide</i> Route No. 88.
2	SAGU . . . .	6	19	
3	CHAUDHWAN . . . .	21	40	Cross the Gumal soon after leaving Sagu. Supplies and water procurable.
4	KOT TAGA KHAN . . . .	7	47	A small village; supplies rather scarce; water procurable; road tolerably good to Vihoa.
5	GURWALI . . . .	12 $\frac{1}{8}$	59 $\frac{1}{8}$	A village and frontier post; supplies procurable; water brackish.
6	DAULATWALA . . . .	8	67 $\frac{1}{8}$	A frontier post; supplies must be collected; brackish water procurable inside the post.
7	VIHOA . . . .	7 $\frac{5}{8}$	74 $\frac{3}{4}$	A frontier post; supplies must be collected; water procurable from a well within the post.
8	GARIBAR . . . .	15	89 $\frac{3}{4}$	} <i>Vide</i> Route No. XXXVI, N.-W. F., Vol. II.
9	CHITARWATA . . . .	8 $\frac{1}{2}$	98 $\frac{1}{4}$	
10	KAIWAHAN . . . .	13 $\frac{1}{4}$	111 $\frac{1}{2}$	
11	NUSHPA . . . .	7	118 $\frac{1}{2}$	Road continues up the <i>nala</i> , not very good, but quite passable by laden camels; gradient about 1 in 20. Two miles from Kaiwahan, at Kohi, the Guzai pass road joins this route. At Nushpa there is room for an encampment either along the stream or on a spur to the west of it. Running water, grass, and fuel in plenty.
12 & 13	MUSA KHEL BAZAR . . . .	23	141 $\frac{1}{2}$	Road ascends for 2 $\frac{1}{2}$ miles to Sabai, and at about 9 $\frac{1}{2}$ miles enters the Musa Khel valley, watered by the Tang stream, the principal branch of the Vihoa river. Running water. Villages and cultivation in places. Grass and fuel abundant.

This route lies through the lands of Kasraui, Isot, and Musa Khel tribes. There are no villages along the route until Musa Khel is reached.

At present (1885) there is no through trade from Central Afghanistan by this route, but up to 20 years ago, when the roads through the Kakar country were closed by Shah Jahan, it is said to have been much used. The road is passable by laden camels throughout,

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 89—continued

and is constantly used by the Musa Khel, Isot, and Kakar tribes, who carry down *ghi*, honey, mats, rope, cattle, etc., and return with grain. Shahdezai half-way, about 12 miles from Nushpa.

14	VIASHT . . . . .	12	153½	At 4 miles the road to Mekhtar diverges south-south-west and goes along about the centre of the Tang stream. At about 6 miles the valley, which has hitherto been about 6 miles wide, becomes suddenly contracted and then broken by spurs from the main ranges which enclose it; these spurs soon after assume the form of distinct ranges.
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At 6 miles the road descends into a small *nala* (a little water at this point), up which it winds generally south-south-west, among low, easily-accessible hills.

At 8½ miles the road leaves the *nala* and crosses a small plain among low hills.

At 9 miles the crest of the water shed is reached: from this there is a very sudden and deep fall to the country beyond; the road goes over a slight, almost imperceptible kotal, called the Spinkai (or white) *tangi*, and winds along the south-east slopes of a low steep ridge of hills with a steep descent of about 50 feet into the *nala* below. Track fairly marked, but stony and rough. It was, however, much improved by the sappers.

The road then crosses a cove between two hillocks, and at 10 miles descends into a small *nala*, along which it winds south-west. Easy going.

At 11 miles this *nala* turns south-east; the road leaves it and ascends to a small stony valley, along which it goes first south, and then south-west.

At 12 miles cross the Viasht, which drains south-east in a wide, deep bed. Banks in places 20 feet high, but at the crossing the path is easy. The country beyond opens out into a long narrow valley. Water good and abundant. Grass and camel-grazing plentiful. Firewood moderate.

15	TORAWANI (OR KAKAL DAMAN.)	16	179½	The road continues in a generally south-west direction along the Viasht valley, keeping above the right bank of the stream. At 2 miles the stream makes an elbow towards the west. The road descends into it, follows it for about 300 yards, and again ascends its right bank, along which it goes, skirting a hill to the west. While in the stream the road is stony and rough.
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At 6 miles the stream turns south-south-east and goes away to the Luni *tangi*. The road continues south-west along a small valley, called the Torawani.

At 11 miles the road crosses a *nala*, in which there is a little water in pools and plenty of grass, but the ground near is too broken to be suitable for a camp.

It then ascends the right bank of the *nala*, which appears to be unnamed and goes over a low rise between the Singhar range to the west and a low detached hill, and continues south-west over a wide stony plain covered with grass and *ber* trees, the whole of which is called the Torawani plain. Many small *nalas* have to be crossed during this part of the march, but they are all easy.

At 15½ miles a deep *nala*, called the Trikh Labar is crossed. It is a dry watercourse about 30 yards wide, the banks about 10 feet high. They are naturally ramped at the crossing, but scarped elsewhere.

At 16 miles strike the Torawani, in which there is an abundant perennial stream. Good camping ground to the west of the stream. Grass, fuel, and camel-forage abundant.

16	NALAI . . . . .	18	187½	The road goes south-south-west up the Torawani valley, which is about half a mile wide, keeping through grass and tamarisk. At half a mile the road crosses the Torawani stream and goes along above its right bank. At 2 miles the low hills on the west sink into the plain and the valley opens out considerably. The road continues south-south-west or across it.
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At 5 miles the road turns south-west and goes over a slight kotal in a wide gap in the hills on that side of the valley, crosses the Torawani stream, which comes down from the north-west, and after winding among low hills for half a mile enters a similar valley to the last traversed, which also appears to be called Torawani, though the drainage of the two does not unite till some distance lower down.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 89—concluded.

At 5½ miles a road branches off west, direct to Nalai.

At 9 miles the valley is divided by a high range of hills. The road is up the right, the narrower of the two valleys, between high grass-covered hills.

At 11 miles the road turns west, and goes through a narrow rocky pass between high hills. These, however, are accessible. The pass is about half a mile long. Beyond this the country opens out, and there is a gradual descent into the Mekhtar plain, over stony plateau and among low undulations.

At 15 miles the Mekhtar villages are passed to the south-west and the road bends round to north across the valley, over alluvial soil, in many places banked for cultivation.

At 16 miles the road goes by an easy pass through two low, close, parallel ranges which bound Mekhtar on the north and makes across the Nalai valley.

Camp on left bank of the Nalai road. Water good and abundant. Camel-forage plentiful. Supplies were collected by the political authorities. The road was good the whole way, except at the pass into the Mekhtar valley. Here it would have been advantageous to clear away the stones that encumber the track. The district passed through since leaving Kakhao is singularly without names.

17	TOR . . . . .	12	199½	The road goes westward along the Nalai Rud, above its left bank. At half a mile the road crosses the river, in which there is a full perennial stream of good water, and goes over a small tract of cultivation. At 2 miles it passes to the south of one of the Nalai villages.

At 5 miles a small ruined village is passed on the left; near this the plain is broken by a few low stony undulations, which are skirted for about 300 yards, when they sink into the plain.

At 6 miles the villages of Zor Nalai are passed about 1 mile to the north of the road. They consist of a group of 14 hamlets, clustered together on an open plain belonging to the Shinzais. The road then continues west about the centre of the Nalai valley over *pat*, and small sandy and stony tracks covered with scrub.

At 10 miles there is a small ruined hamlet about 500 yards north of the road.

Beyond this the valley sinks to a lower level, and is divided diagonally from north-east to south-west by three close parallel ridges of limestone. The road descends about 30 feet to a narrow valley south of these ridges, along which it continues to Tor. Four hamlets and two enclosed hamlets in a small valley, and 3 towers and about 70 huts perched on a ridge of a hill to the north.

18	WAHAB . . . . .	15	214½	} <i>Vide</i> Route No. XLIII, N.-W. F., Vol. II.
19	LAHOR . . . . .	10½	225	
20	LOBALAI . . . . .	10	235	



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 90.

FROM DRUG TO PAINDA KHAN THAL.

Authority.—ROUTE BOOK, 1878.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	Buj (Foot of west slope).	12	12	For Drug, See Stage 3, Route No. XXXV, N.-W. F., Vol. II. Shortly after leaving Drug ascend the Buj hill. It is a very stiff ascent, covered with loose rocks and boulders. Horses, if taken, have to be led a great part of the way. Camels can only carry at most a maund or perhaps two. Descent similar to the ascent,
2	PAINDA KHAN THAL	22	34	Cross the Rud-ki-Kachi, an open valley draining south-westerly, and which is partly under cultivation (Musa Khels). At the west of this is the Chilat-ka-Sham pass, which crosses the range of hills forming the eastern boundary of Sahara, practicable for beasts

though somewhat shorter. Camp a mile or two from foot of west slopes. Grass and wood plentiful. Water from a spring, the drainage of which is with a branch of the Luni. The Buj hill can be turned by taking the Bijheri route (No. XXXVA, Vol. II). Merchandise carried over the Buj hill is generally sent on bullocks or donkeys in preference to camels.

of burden, laden. A few miles from this is Painda Khan Thal. It contains three wells, guarded by small mud *kots*. One *bania's* shop here, with a scanty supply of eatables, Country all round open, now and then cultivated.

Route No. 91.

FROM MANGROTAH TO KOT MUHAMMAD KHAN, *via* THE SAURA AND GHISIN PASSES.

Authority.—CAPTAIN A. H. MASON, DEPUTY ASSISTANT QUARTER MASTER GENERAL.

No. of stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	HABANBOR KACH	16	16	From Mangrota post, the height of which is 814', the road runs almost due west to the point where the Sangar <i>nala</i> debouches into the plains. For the first 1½ mile it runs across hard <i>pat</i> . For the next 2½ miles the road crosses the usual stony <i>daman</i> , which is covered with scrub suitable for camel-grazing, to the foot of the hills, and at 4 miles descends into the broad bed of the Sangar at its mouth. Up to this point the road lies entirely on the left bank of the Sangar <i>nala</i> , and is merely a track. The hills in front are absolutely bare

of any vegetation.

Route No. 91—continued.

The bed of the Sangar at its mouth is  $\frac{1}{2}$  mile broad with perpendicular banks some 20 feet high. The road leads up the *nala*, and passes alternately over hard sand and ground covered with boulders. The stream has to be crossed several times, but at this season (3rd April) it was only a few inches in depth, with pools in places. The *nala* bed gradually contracts in width, and at 6 miles Kirni Kach on the left (right bank of *nala*) is passed. One mile further, on the opposite bank, is Gulki Kach. At  $9\frac{1}{2}$  miles (again on the left bank of the *nala*) Dadchi Kach is passed. At  $11\frac{1}{2}$  miles reach the junction of the Drug and Sangar *nalas*. There is an alternative path, much used by the people of the country, which runs over low hills to the south of the Sangar, leaving the latter about  $1\frac{1}{2}$  miles below, and joining it again just above its junction with the Drug. The Drug comes down from the Jafar country, passing the village of that name, the head-quarters of this small tribe. From enquiries I made on the spot, and also from Imam Baksh, Khan Bahadur (the Bozdar), it appears the road to Drug is practicable for laden camels. It follows the bed of the *nala* the whole way. There is said to be one difficult place not far from Drug itself.

About one mile above junction of the Drug and Sangar, the latter is joined by a *nala* from the south, up which runs a road to Mahoi, said to be fit for laden camels. These *nalas*, running north and south, are a peculiar feature of the hills on this border, and are locally known as *tokhs*.

Just beyond the junction of this *nala* from the south, the Sangar contracts in width, and to the narrowest part is generally applied the name of Khan Band. It was here that brigadier N. B. Chamberlain defeated the Bozdars in 1857. Before that the position, a very strong one against an enemy advancing from the east, was considered by the tribe impregnable. After passing the Khan Band the *nala* again opens out, and 2 miles further Haranbor Kach is reached.

At Haranbor, as well as at the Kirni, Gulki and Dadchi *kaches* crops were growing, but these could not be relied on for a force marching by this road, and all supplies would have to accompany such a force. Forage for camels, however, is plentiful along the route. At Haranbor there is room to encamp a large force, and water is abundant from the stream and from pools. Elevation, 1,886 feet.

2	NILI (or THAK)	12 $\frac{1}{2}$	28 $\frac{1}{2}$	From Haranbor Kach three roads diverge. One runs in a south-westerly direction up the bed of the Luni <i>nala</i> . This route, owing to its difficulty, is little used. The second follows the bed of the Sangar <i>nala</i> to Nili. The third takes a direction intermediate to the other two, running across the hills by Hathimar to Nili, and is somewhat over 4 miles shorter than the second. The third road was the one I selected to go by myself, sending the survey party by the Sangar route.
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After leaving Haranbor Kach the road follows the bed of the Sangar *nala* for half a mile, and then turning to the south-west ascends some low hills rising about 200 feet above the *nala* bed. On reaching the summit a wide level plateau is reached, known as Hathimar. This plateau, like that of Ludriwar and Sarati, which were subsequently crossed, is a level plain, for the most part covered with stones, but in places free from these. It is dotted all over with bushes and small trees, which afford abundant grazing for camels, and flocks of goats and sheep were also to be seen here feeding. The road runs across the Hathimar plain for 2 miles, and then crosses two *nalas*, where the ground is a good deal broken and the existing path would require improvement.

After  $1\frac{1}{2}$  miles of this broken ground the road reaches the plateau of Ludriwar, similar in every way to that of Hathimar, which it crosses in a south-westerly direction for about 5 miles, and then traverses a similar plain, known as Sarati, for another 2 miles. At 11 miles the road descends into the bed of the Sangar by a zig-zag path. The descent is about 150 feet, but the path is steep and stony, and would require improving. I was able to ride down it myself, but the camels had some difficulty in descending, and fell more than once.

On reaching the bed of the Sangar the road follows the stony *nala* for  $1\frac{1}{2}$  miles to Nili at the eastern entrance of the Saura pass. This camping ground is also known as Thak, but this latter name is properly applied to a *kach* some little distance from Nili, on the opposite (right) bank of the Sangar *nala*. At Nili there is space for camping a large force, and water is plentiful. Just before reaching Nili a broad *nala* running from the north is passed on the right, up which there is a road connecting the Luni with the Sangar. A similar valley drains

Route No. 91—continued.

into the Sangar from the south, forming one of the *tokhs* mentioned above as peculiar to these hills. Up this valley to the south, known as the Ghorevel Dab, runs Route No. 92.

Along the route by Hathimar, above described, there are no villages and little or no water is obtainable; but this latter would be of small consequence, as there is a good supply available at the camping grounds at either end of this stage. The supply of wood and grazing for camels is abundant along the whole march.

The alternative route (16 $\frac{3}{4}$  miles) by the bed of the Sangar *nala* was reported by Sub-Surveyor Shekh Mohi-ud-din to be very similar to the route traversed the previous day, that is to say, it lies along the stony bed of the *nala* the whole way, but the number of *kaches* and the amount of cultivation was considerably greater, and date and other trees were seen in many places. There are only three permanent villages on or near the banks of the *nala*, Muhammad Husen Khan's village and Kinni on the left bank, and Tikari, some little distance from the *nala*, on the right bank. Besides these there are huts dotted about here and there. The Sub-Surveyor reported that firewood and camel-grazing were abundant along this route, and a good supply of water obtainable throughout from the stream and from pools. Elevation, 2,717 feet.

3 HINGLUN DAF

9

37 $\frac{1}{2}$

The worst part of the pass is close to the entrance, about  $\frac{1}{4}$  mile from the camp at Nili. The bed of the Sangar is here very narrow, and the pass, which is a rift in the limestone range, has rocky and precipitous sides. It was necessary to cross and recross the stream which

rushes over stones and boulders. After  $\frac{1}{4}$  mile of this bad going the *nala* begins to open out again, and for 3 miles the road runs up its stony bed, occasionally crossing the stream and running first on one side and then on the other. The *nala* here has an average breadth of  $\frac{1}{2}$  of a mile. At 3 $\frac{1}{2}$  miles from Nili the road leaves the bed of the Sangar and ascends to a level plateau to the north, known as Karimar. This plateau is some 100 to 150 feet above the bed of the Sangar. It is similar to the plateau crossed in the previous march, being for the most part stony and covered with bushes, affording an abundant supply of wood and camel forage. After crossing this plain in a south-easterly direction for 3 miles the road descends again to the bed of the Sangar for about 200 yards, and then runs over level ground, skirting the *nala* on its northern side for 2 miles. It then turns north-west, and after following the *nala*, now called the Hinglun *nala*, for  $\frac{1}{2}$  mile, an excellent camping ground is reached at Hinglun Daf, where water and firewood are plentiful, but no other supplies obtainable. From near Hinglun Daf two long parallel valleys run in a south-west direction and are known as Pathan Bel and Baluch Bel respectively. Route No. 92 runs up the latter to Loladhar Sham, and thence to Thal Chotiali. Between these two valleys is a third known as Manjh Bel. The drainage of these three valleys with that of the Hinglun forms the Sangar. Manjh Bel is the head-quarters of the Ghulimani section of the Bozdar tribe.

The only difficult part of this march is the narrow part of the Saura pass. This, after very heavy rain, becomes impassable for, it is said, as much as two days. There is a path for footmen (reported also to be practicable for horsemen, but not for laden camels), which turns the difficult portion of the Saura by crossing the hills north from Nili, and descending in the *nala* to the west of the defile. This would have, if possible, to be improved and made into a track fit for laden camels, so as to be independent of the *nala* bed, the passage of which must always be uncertain owing to sudden floods. Elevation, 3,168 feet.

4 UNDERPUE . . .

7 $\frac{1}{2}$

45

The road by the Ghisin pass being reported impracticable for laden animals, the baggage was sent round by a road to the south *via* the Buha pass, which was considerably longer. I myself went by the shorter route. For the first mile the road follows the bed of the

Hinglun *nala*, which is here narrow, with precipitous sides, and passes over boulders and slabs of rock. This is at present bad going, and it would require a considerable amount of labour to make it into a good camel road, although even now it is passable for laden camels, those accompanying me traversing it without accident. At 1 mile the road left the Hinglun *nala* (up which went the road followed by the baggage animals), and turned to the north-

Route No. 91—concluded.

west up a narrow ravine, which it followed for another mile. Here the going is bad, and our horses had to be led. This part of the road would also require a good deal of labour. At 2 miles from Hinglun Daf the sides of the ravine open out and are not so steep, and here the road became easier and could with some little labour be further improved. At 3 miles a sulphur spring, called Gandege Guze, was passed. From here the road winds over stony undulating ground to the foot of the Ghisin pass,  $3\frac{3}{4}$  miles from Hinglun Daf. The ascent to the kotal was about 1,500 feet, and the last  $\frac{1}{2}$  mile was very steep, but by zig-zagging the road up, the gradient could be greatly reduced. By the use of dynamite a camel-road, with a fair gradient, could be made up to the kotal. The height of the Ghisin pass is 5,127' and the top of the kotal is distant from the camping ground at Hinglun Daf about  $4\frac{1}{2}$  miles. From the summit of the pass a good view is obtained of the country to the west. Immediately below is a small open valley running from south-west to north-west drained by the Underpur *nala*, which joins the Luni further to the north. Dividing the Underpur from a parallel valley drained by the Serin, which also falls into the Luni, is a low range of hills called Turpauzh, the prolongation of which range to the north is known as Turbat. Beyond the Serin rises another and a higher range of hills known as Shakar.

From the summit of the Ghisin kotal the road descends into the Underpur valley (about 2 miles wide), which it crosses in a diagonal direction. The descent on the western side is not so steep as the ascent on the eastern, being about 900 feet only, and it merges gradually into a low undulating stony plain. At 2 miles from the kotal the bottom of the valley is arrived at, and after another  $\frac{1}{2}$  mile over a level plain the camping ground on the right bank of the Underpur stream is reached. Here wood and camel-grazing are obtainable, and water is always to be found in the *nala*. Elevation, 4,047 feet.

In this march the road is in its present state difficult, and would require a good deal of labour to be expended on it to make it a good road for laden camels.

The route followed by the baggage animals by the Buha pass offers only some slight difficulties, but its length (nearly 20 miles) is a serious drawback, and it would be better to improve the shorter route by the Ghisin pass.

From the Buha pass there is a road to Kingri, about 20 miles distant, joining the now Dera Ghazi Khan-Pishin road, where it crosses the Rara Shan.

5	KOT MUHAMMAD KHAN.	9 $\frac{1}{2}$	54 $\frac{1}{2}$
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From the camp at Underpur the road crosses the stream of that name and runs in a westerly direction over the low hills of the Turpauzh range. The existing road (if it may be so called) is a mere track leading over rocky ground, which requires to be re-aligned and to

be properly made. This would present no engineering difficulty. From the western foot of the Turpauzh range the road runs diagonally across the Serin valley (which is here about  $\frac{1}{2}$  mile wide) in a north-westerly direction. After  $\frac{1}{2}$  mile over an alluvial plain the Serin stream is reached. The water of this stream was said by the men of the *badraga* to be bitter, but I was unable to detect this. After crossing the Serin road runs down the centre of the valley for 2 miles over stony ground, and then leaving the bed of the Serin runs in a north-westerly direction, first over some low hillocks for  $\frac{1}{2}$  mile, and then across a broad open plain for 4 miles to Kot Muhammad Khan situated on the left bank of the Kingri stream. This plain, which is part of the valley of the Serin, has an average width of a mile, and is for the most part covered with loose stones, but in some places is free from these, and in others is covered with coarse grass. Parts of this plain were said formerly to have been under cultivation. The road crosses two or three shallow *nalas* (all dry), but it is easy going the whole way.

Excellent camping ground with water, fuel, grass, and camel-grazing in abundance. Kot Muhammad Khan is a position of strategical importance; it commands the more important routes through this country. Here the Kingri and Rod streams unite, and are joined by the Serin from the south and the Warezhiz from the north, and the combined drainage flows through the main Suliman range by the Luni gorge. Elevation, 3,437 feet.

From here Route No. 99 goes to Musa Khel Bazar.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 92.

FROM DERA GHAZI KHAN TO THAL (CHOTIALI), *via* VIDOR AND THE CHAMALANG VALLEY.

*Authority.*—WILKINSON'S EXPEDITION, 1881.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	VIDOR . . . . .	14	14	Leaving the cantonment of Ghazi, the road goes westerly, and passes for the first 7 miles through country fairly cultivated on both sides (autumn and spring crops); irrigation from numerous wells <i>en route</i> . For about a mile and a half the road lies through a belt of date trees, which almost encircle Ghazi. After this the country is dotted about with jungle trees, and, generally speaking, unintersected by obstacles. At $5\frac{3}{4}$ miles from Ghazi the Manika masonry bridge, 2 arches, width of bridge 18 feet; banks similar to the Sori, but it is somewhat broader. At $7\frac{1}{2}$ miles pass the village of Choruttah, situated about 600 yards south of the road. From this, for the rest of the march the country is much more arid and less flourishing; it is dotted with jungle trees, and a few patches of cultivation, watered by the Vidor hill-stream. Vidor is a frontier post and village; supplies to a small amount procurable; one well in the town.
2	JATI . . . . .	7	21	Jati lies at the entrance of the Vidor <i>nala</i> , and is a small camping ground in the bed of the stream, which is here about 500 yards from bank to bank. The hills on each side come down rugged and stony with scanty scrub vegetation; the banks are scarped and precipitous. Camping ground sufficient for a brigade. Water plentiful from the Vidor <i>nala</i> , but not of very good quality; it is rather salt and bitter, but drinkable. Grass procurable in small quantities; wood plentiful; no other supplies. Elevation, 81'.
3	LANGAN . . . . .	12	33	The road lies up the bed of the Vidor, which for the first 6 miles flows through a succession of small valleys, each having a breadth of about a mile and entered through a narrow limestone barrier, in which the river has burst a passage. For the last 6 miles the valley lies between rocky precipices from 20 to 200 feet high, and has an average breadth of 400 yards. At 10 miles Route No. 93 branches off to the left.
<p>The first half of the march is comparatively easy going over sand, bouldery ground only occurring at the numerous river-crossings. The latter half is over ground thickly strewn with boulders, and considerable labour would be required to clear a practicable road for artillery.</p> <p>Camping ground broken into small plateaux, but fairly good. Wood, water, and grass plentiful. Elevation, 1,530'.</p>				
4	GURAKDAT . . . . .	9	42	The road continues up the bouldery bed of the Vidor to the junction of the Sabza Af valley at $1\frac{1}{2}$ mile. It then follows the latter, still in the river-bed, which is rough and full of large boulders to $3\frac{1}{2}$ miles. The <i>nala</i> is about 50 yards broad and confined by walls of rock, 4 feet high. At $3\frac{1}{2}$ miles an easy winding ascent commences, about a mile in length, in which

Route No. 92—continued.

distance the road rises about 400 feet to a level plateau, along which it runs without any difficulty for the next  $3\frac{1}{2}$  miles (8 miles). The end of the plateau is then reached, and a descent of about 40 feet follows into a stony valley, down which the road runs to Gurakdat.

The last half of this march offers no difficulties. The chief difficulty lies in the first  $3\frac{1}{2}$  miles, which are along a river-bed filled with boulders, and bounded by high walls of rock nearly the whole way. The mile of ascent which follows, though rough, is not steep. No villages or racks are passed on this stage.

The camping ground is good, on a fine open plateau called the Hamalband, situated on the right bank of a *nala*, which drains south into the Vidor. Water is plentiful in pools in the river bed, and a fair amount of grass and wood is obtainable. No other supplies. Elevation, 2,450'.

5	SORI . . .	$9\frac{1}{2}$	51 $\frac{1}{2}$	The road descends to the river-bed by a steep ramp of 50' and follows it for about $1\frac{1}{2}$ mile, when a small Bozdar village of 30 huts, called Karma Dahalk, and a <i>ziarat</i> are passed. Before reaching the <i>ziarat</i> the stream passes through a <i>tangi</i> , the road following the rough bouldery bed of the stream. The valley opens out somewhat for the next mile, but continues rough and stony to $3\frac{1}{2}$ miles. The track is then sandy and easy to $5\frac{1}{2}$ miles, when the source of the stream is reached, and a small stony kotal about 50' high is crossed, called the Makha Sham. Elevation by aneroid 2,720'. The road then descends into the bed of a stream which drains north into the Sori, and follows it to the camping ground. The river-bed is sandy and level, and the going easy. The valley is about a mile broad, bounded on the east by an almost continuous rocky precipice, and on the west by a long smooth slope of bare rock.
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Except the first  $3\frac{1}{2}$  miles, which are rough and bouldery, this march presents no difficulties. A gun-road could be constructed as the troops advanced, clearing of boulders only being required. In the *tangi* is a pool which would have to be filled in.

Camping ground rough and confined in the bouldery river-bed. Water and wood are good and abundant, and a small quantity of grass obtainable, but no other supplies. Elevation 2,350'.

6	THAK . . .	$12\frac{1}{2}$	64	The track lies down the bed of the Sori for $\frac{3}{4}$ mile, and then turns to the left, up a rough hillside covered with loose boulders, by a path about 2' wide, ascending 425' in 1,200 yards to a rough stony plateau a mile across. A winding descent then follows by a similar track for a mile to the bed of a stream which drains north into the Sanghar ( $2\frac{1}{2}$ miles). Along the soft sandy bed of the stream, or on its banks, the road runs for 10 miles to the camping ground on the Thak in an almost straight track which a bullock-cart could traverse without much difficulty. The valley (called the Ghorevel Dab) is about 1 mile broad, bounded by bare sandstone hills, some 200' high.
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The ascent and descent of the kotal, though not difficult as a mule-track, would require considerable labour to render it practicable for wheels. The surface, however, is soft soil, covered thickly with loose boulders, and could be easily worked.

Camping ground good and open, near the eastern end of the Sanra defile. Water abundant. A small quantity of grass and wood obtainable, and some supplies after harvest. Elevation, 2,000'.

Here Route No. 91 from Mangrotah is met.

7	HINGLUN KACH . . .	$12\frac{1}{4}$	76 $\frac{1}{4}$ 89 $\frac{1}{4}$	} <i>Vide</i> Route No. 91, stage 3. Half a mile from the camping ground at Hinglun Kach the valley contracts, forming a narrow <i>tangi</i> , through which the stream flows between precipitous walls of rock, 20' to 30' high, surmounted by steep mountain slopes. The <i>tangi</i> is $4\frac{1}{2}$ miles in length, and through
8	TOR KACH . . .	13		

it the route follows the rocky, broken, bouldery stream-bed, in which there is a considerable

Route No. 92—continued.

quantity of clear running water to the 3rd mile. Here and there the mountain side can be taken for 100 yards or so, but for the greater part of the way is among the large boulders and shingle in the stream. The *tangi* would be quite impracticable during flood, and it would be very dangerous to attempt to pass troops through it a time when they might be overtaken by a thundersorm.

At 5 miles the valley opens, and the road leaves the river-bed. At 5½ miles a small kotal about 100' high is crossed into a well-wooded valley about a mile broad, through which an easy road winds for 3 miles with the Hinglun precipice towering about 1,000' on the north, and the lower peaks of the Kala Koh on the south.

At 8½ miles the valley contracts, and a mile further its head is reached, the watershed whence the drainage flows east by the Hinglun and Saura passes into the Indus, and west into the Siran. Passing this kotal, the road runs along the banks of a small *nala* (the Hinglun) and over a succession of flat-topped stony ridges and small knolls, straight to the camping ground at Tor Kach.

Camp on a level grassy plateau, broken up with small *nalas*, on the right bank of the Siran. Wood, water, and grass are very plentiful. Elevation, 4,117'.

The 4½ miles of *tangi* " was said by the Bozdar and Baluch guides to be quite impassable for an army before the arrival of General Wilkinson's brigade, and so it undoubtedly was. Twenty-four hours' work, however, by a company of sappers and a working party of 300 infantry, converted it into a very respectable mule-track, which the 3,000 animals of his brigade traversed without much difficulty. There would doubtless be considerable engineering difficulty in making a wheel-road through this portion, which may really be considered the only obstruction on this route between Saura and Thal; but a more detailed survey would be required before any exact opinion on this point could be formed."

9	RARA SHAM . . .	9¼	98½

The road follows the river-bank for about ¼ mile over an easy grassy plain. It then descends into the river-bed for ¼ mile, where the Siran has burst its way through a wall of slaty sandstone some 30' high and 20' thick, making a cleft about 50 yards wide, called the Tor Tang.

At 1 mile the road ascends to a level ridge, about 40' high, which it traverses due south for 3 miles, when it again enters the broad, sandy, reedy bed of the river for 500 yards. It then follows a very narrow rocky ravine for 2 miles (6¼ miles), and is mostly rough and stony, even for pack-animals. This portion could, however, be made passable for wheeled guns without much difficulty, the rock being a soft, crumbling sandstone. At 6¼ miles a small stony knoll is surmounted, and the rest of the march is over the smooth, grassy *sham* in a north-westerly direction.

Wood, grass, and water plentiful, the latter in large pools close under a low hill immediately to the west of camp. From this hill Ek Bhai mountain can be signalled, and the Rara Sham can be seen stretching like a prairie from north to south, while due east rises the Hinglun mountain some 12 miles off. No supplies obtainable, and the country is quite uninhabited. Grass is wonderfully luxuriant, and small game of all kinds abound. Elevation, 4,450'.

10	GIRDE KACH . . .	7	105½

The road ascends gently for 1 mile over small rolling hills and broken ground to a kotal which is crossed at an elevation of 4,320' into the valley of the Gandhera river. From the kotal to 1¾ mile is over rough broken ground, out up into a number of small stony ravines in

which the torrent-bed loses itself. At 1¾ mile the Gandhera river-bed is crossed, and at 2½ miles, two deep ravines close together, which drain the western hills. The road travels along the western side of the valley, which is about 2 miles broad, the deep dry river-bed following it at a distance of 200 or 300 yards on the east. Between the 3rd and 5th miles the track winds among small rolling hills, and thence to the 6th mile the shingly bed of the Kingri river is crossed five times. The last mile is over broken stony ground, and a succession of small mounds and ravines.

Camping ground on a large open grassy plain on the left bank of the Inayat-ki-Lahar river, into which the Kingri here falls. Hence Ek Bhai can be seen. Wood, grass, and water plentiful. No other supplies. Elevation, 4,175'.

Route No. 92—continued.

This march, though easy for pack-animals, would with difficulty be rendered practicable for wheels, the ravines being broken, steep, and numerous. Ramps could, however, be made without much delay, the soil being a conglomerate of shingle, or soft disintegrating sandstone or limestone filled with fossils.

The Dera Ghazi Khan-Pishin main road is crossed in this stage.

11	CHAMALANG VALLEY	15	120 $\frac{1}{2}$	The road enters a narrow rocky gorge down which the Inyat-ki-Lahar river flows, and follows the river through it for 6 $\frac{1}{4}$ miles, sometimes in the dry bed of the torrent, sometimes on its bank, through boulders, and clumps of reeds, and long grass, to the watershed, elevation 4,600'. Down a gradually opening valley the road runs to 8 $\frac{1}{4}$ miles, when it reaches the head of the Chap <i>nala</i> joining Route No. 93. It then (10 $\frac{1}{4}$ miles) crosses the dry <i>nala</i> bed, and again at 10 $\frac{3}{4}$ miles passes a large ravine, 150 yards wide and 30' deep, with steep shingly banks and winds along the northern slopes of the Chap valley to 12 $\frac{1}{4}$ miles. The valley is bounded on the south by a number of low isolated hills, backed at a distance of about 2 miles by a range having an altitude of at least 1,500'.
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At 12 $\frac{1}{4}$  miles a kotal about 300' high is crossed, whence the track descends to an extensive grassy treeless plain. At 14 $\frac{1}{4}$  miles the broad shallow grassy bed of the Chamalang river is reached, the waterway of which is here about 100 yards wide and 10' deep, furrowed into three or four still deeper cuts, its course trending away with the valley to the north.

Camp at 15 miles on the plain, where water is first met. Wood and grass abundant. A large graveyard near where the Chamalang valley is entered; no other sign of inhabitants.

12	KACHI DAWAT	11 $\frac{1}{2}$	132	The road runs over the grassy plain, crossing small <i>nalas</i> at 1 $\frac{1}{4}$ and 2 $\frac{1}{4}$ miles. At 2 $\frac{3}{4}$ miles a spur of the northern range is crossed, height about 200', followed by a level grassy stretch of half a mile. From 3 $\frac{1}{4}$ to 4 $\frac{1}{4}$ miles is rather rough, over a succession of small stony rises and depressions through thick <i>jhow</i> jungle, the dry bed of the Chamalang being crossed at 3 $\frac{1}{4}$ and again at 3 $\frac{3}{4}$ miles. At 4 $\frac{1}{4}$ miles is the camping ground used by General Wilkinson's force, under Dadar hill whence heliographic communication can be opened with the Ek Bhai peak. Thence to 5 miles is along the northern grassy slopes of the valley, when the Chamalang is again crossed, the bank here being rather steep. From this point to 8 $\frac{1}{4}$ miles is again along the grassy level valley, crossing 3 <i>nalas</i> about 20 yards wide and 8' deep. For the rest of the stage the route lies over broken stony rolling ground, passing through a jungle of long grass and <i>babul</i> trees, and crossing six <i>nalas</i> similar to the last, and the Chamalang itself twice on the way. The bed of the river is hereabouts some 80 yards wide and 12' deep, filled with large boulders. It runs generally parallel to the route.
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Camping ground on a fine open alluvial plain. Water, wood, and grass abundant, the first from large pools in the river-bed. No habitations and no supplies procurable. Elevation, 3,950'.

13	LUNI TANG (CHAMALANG)	7 $\frac{1}{8}$	139 $\frac{1}{8}$	A very easy march, for the most part over a level grassy plain, covered with <i>ber</i> and palm trees, down the Chamalang valley. The Chamalang camp, where General Biddulph's force halted, is situated on the left bank of the river, 3 miles north-east of Luni Tang. The valley has at first an average breadth of about 6 miles, narrowing to about 2 miles at the 3rd mile, whence it gradually contracts to a gorge beyond Luni Tang.
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The first 2 miles is over level grassy plain, crossing three *nalas* at  $\frac{1}{8}$ ,  $\frac{5}{8}$ , and 1 $\frac{3}{8}$  mile, each some 20 yards wide and 10' deep, which carry the drainage of the southern hills into the Chamalang river. The next  $\frac{1}{2}$  mile is over stony, rough ground, through plain jungle, and three dry, rocky *nalas*, each 10 yards wide and 6' deep, are crossed. The dry, rough, bouldery bed of the Chamalang is then crossed (2 $\frac{5}{8}$  miles) and again at 3 $\frac{3}{8}$  miles, 50 yards broad and 10' deep, the road continuing down the centre of the gradually narrowing valley, without further obstruction, to Luni Tang.

Camping ground on open, level plain, with wood, water, and grass in abundance. No habitations are passed, and no supplies procurable. Elevation, 3,600'.



Route No. 92—continued.

14	ZINDI RUD . . .	14½	153½	Immediately after leaving the camping ground the river (now called the Narechi) enters a narrow gorge, barely 200 yards wide, through which it lies for 1½ mile. The road follows the left bank, which is rocky and precipitous, with broken masses of slab rock on the left,
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along which the track lies. There are several large deep pools in the otherwise dry river-bed. Issuing from this defile at 1½ mile there is an easy ascent of half a mile, followed by a mile of almost flat, wooded land, when (at 3 miles) a low kotal is crossed with a descent beyond of some 100 feet over smooth sheet rock, difficult for animals. The country then becomes less stony and broken to 3½ miles, when the river is crossed, with a mile of level ground beyond.

At 4½ miles the rough bouldery bed of the Narechi is entered and traversed for the next mile, winding in a deep trench between sheer rock walls, 30 high, and with a breadth of 30 yards. River-bed dry (in November) except three small pools. From 5½ miles (where the river-bed is quitted) to 6½ miles the valley, though still stony and cut up by *nalas*, is tolerably level, filled with *ber* jungle, and some 2 miles wide. The hills on either side are about 200' high, nothing being visible beyond. Thence to 9 miles is less stony and quite level, the track hugging the southern range, the river-bed following that, on the north. At 7 and 8½ miles the shingly bed of the Narechi is again crossed, breadth 50', depth about 5'.

At 9 miles the river-bed is crossed again, here about 100 yards broad, with broken banks, and for the next ¼ mile the valley contracts to a narrow ravine. It then opens out to a width of several miles, and the rest of the stage is over level *pat*, one small *nala* being crossed at 12½ miles.

Camping ground on the open *pat*. Wood, grass, and water plentiful. The latter from a stream with soft clay bottom and steep banks, difficult of access for animals. Ramps required, and firm watering-stages would have to be made by packing *jhow* bushes in the soft clay.

No habitations are passed on this stage. Though no track exists, the march is by no means difficult for mules. Elevation, 3,175'.

15	PALOSI . . .	10	163½	Over level <i>pat</i> , interspersed with <i>jhow</i> jungle. General direction a little south of west, and skirting the low range on the north side of the valley, which is now about 12 miles wide. To the south two tiers of high mountains are visible. No water crossed <i>en route</i> , but the Narechi accompanies the track about one mile to the south. At 1 mile a broad, broken, shallow <i>nala</i> is crossed, and at 5 miles the slopes of the northern hills touch the road, at once receding again, and a deep <i>nala</i> , which follows their contour, crosses the road, making it rough for about 100 yards.
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Camping ground on open level plain. Wood and grass plentiful. Water abundant from a stream which runs through a fine patch of forest, but difficult of access, as at last stage. No habitations and no supplies. Elevation, 3,135'.

16	WAHWAI OR MIAH KHAN-KI-KOT.*	9	172½	For 8½ miles the road continues over level <i>pat</i> in a direction almost due west. The first 2 miles are through moderately thick <i>jhow</i> jungle. The country is still quite uninhabited. At 2¾ miles is an open <i>karez</i> , which requires ramping. At 5 miles the deserted village of Dilahil-ka-Sher is passed, the inhabitants of which fled to Wahwai in 1873. At 6 miles the ruins of Shahgari are seen about 2 miles south of the road. The valley averages 7 miles in breadth, with a low range on either flank. A second higher range is visible on the south, but none on the north. The last ½ mile of the march is broken by a succession of shallow, shingly <i>nalas</i> (dry in November), which carry the water of the Anambar across the plain to the south, where it joins the Narechi near Chotiali.
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Elevation, 3,130'. Camping ground on the open plain. Wood, grass, and water abundant, the last from *karez*.

\* "Great difficulty in fixing localities in this country is caused by the fact that villages are generally known by the name of the living chief, and this is consequently liable to continual change. A village may be known as "Miah Khan ki-Kot" one year, and next year on the occasion of a new chief, with a turn for building towers, may become "Abdulla Khan-ka-kala." The real name of this village, "Wahwal," appears but little used, and was ascertained with difficulty."

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 92—concluded.

17	THAL . . . .	12½	185½	The whole of the march is over level soft <i>pat</i> , or grassy plain almost entirely devoid of bushes. It runs in a direct line down the centre of the valley, which averages about 4 miles in breadth, bounded on either flank by a low range of hills, having each a higher range running parallel in its rear. On first leaving Wahwai some difficulty for baggage animals is caused by soft muddy irrigation canals in the cultivation immediately around the village. No villages are passed nearer than Jihangir, a small Ladozi village about 2½ miles to the south, and no water is procurable along the route till within 1 mile of Thal. Elevation, 3,050'.
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Route No. 93.

FROM DERA GHIAZI KHAN TO THAL (CHOTIALI), *via* THE MUBARIKI MOUNTAIN AND CHAMALANG VALLEY.

Authority.—MANNERS-SMITH, 1883.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	VIDOR . . . .	14	14	} <i>Vide</i> Route No. 92.
2	JATI . . . .	7		
3	PAZGANI . . . .	10	31	

require much clearing to make a road for wheels. It is, however, quite practicable for infantry, cavalry, and mountain guns, and the heights can be crowned by infantry without much difficulty. Except for a day or so in very wet weather the road is always open, the water from the hills after a storm being quickly carried off.

There is a small patch of cultivation in the bed of the stream, about 2 miles from Jati, called Kamesa, and again, a larger patch of open ground in the *nala* bed at Semu, 5 miles from Jati; this latter is half under cultivation, each half being put under cultivation alternate years; the land does not seem good, and is full of saltpetre. There is ample room here for encamping a brigade, and the surrounding heights could be held without difficulty by picquets for the security of the camp.

At 10 miles from Jati the Runghan *nala* joins the Vidor, and at this point the path branches off from Route No. 92, capital camping ground, large enough for a brigade, but is sparsely covered with wild olive bushes, which, though they would supply a good quantity of fuel, would rather spoil the regularity of an encampment. It is on the right bank of the Runghan *nala*, and if the neighbouring heights were held by picquets would make an excellent and safe halting place, the hills not being very high, accessible, and admirably placed for the defence of the camp. The water of the Runghan stream is very good, far better than that of the Vidor. Regarding the tributaries of the Vidor already mentioned, the Nilang flows up to Mahoi and the Sangar valley; the water is not good. The water of the Pishi is excellent; it also leads into the Sangar, and there is a good deal of cultivation up the valley. Elevation, 1,422'.

Two smaller valleys run into the Runghan *nala* at Pazgani; up one of these the onward route lies.

The Mubariki hill stands up well in the distance to the north-west from this camp.

Route No. 93—continued.

4	JOGIANI . . .	10	41
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The route immediately crosses the Runghan stream and runs in a direction west by north along a flat and rather stony small valley, called Gaju Par, along which a road could most easily be made; little labour would be required to construct it so as to be fit for wheels. This little

valley varies from 200 to 500 yards in width; no water or stream of any sort runs through it, but evidently during the rains it carries down the drainage from the high plateaux bordering the valley which stretch away in high stony uplands to the borders of the Khandur *nala* on the north, and the Runghan *nala* on the south. At  $2\frac{1}{2}$  miles the road ascends up the rocky face of the hill-side about 100 feet to a broad, flat, stony plateau dotted over with scrub vegetation and grass, called Bandluk, and along this the route lies, still preserving a west-by-north direction for another 2 miles. On the north the road is bordered by a small ravine, the continuation of the Gaju Par valley, and on the east stretches out the stony plateau to the banks of the Runghan *nala* for a distance of about 5 miles. A road could with ease be made along this, although a little labour would be required to make a good zig-zag road up from the Gaju Par valley to the Bandluk plateau (only a distance of  $\frac{1}{4}$  mile). When once the top of the plateau is reached, nothing but clearing of stones would be necessary to make an excellent road for all arms and wheeled carriage. At  $4\frac{1}{2}$  miles the road takes a direction almost due north-west, and is bordered on the south-west side by a low stony ridge of hills, and on the north-east by a similar low ridge, running up to a high, level, stony plateau, rough and intersected by water-cuts and ravines; this is also called Gaju Par. Beyond the low ridge on the south-west stretches the continuation of the Bandluk plain, called now the Tholak Dagar. The road continues easy, and could, with a little clearing away of stones, be made excellent for all arms. A fine view of the Ek Bhai, Mubariki, Paha, and Sarroh range is obtained from this plateau. At 7 miles from Pazgani the road descends 50 feet into the Daudar plain, which drains into the Runghan *nala*; a little labour would be required to make the road down this slope good, and directly the foot of the slope is reached, the road continues over much the same style of country already described and requires little work to make excellent.

At 8 miles the road reaches the precipitous bank of the Khandur stream and takes a more westerly direction, following the top of the right bank for another  $1\frac{1}{2}$  mile and then takes a sharp turn to the north down a zig-zag path to the bed of the Khandur stream (which would require here some work to make it good for wheels), crosses the stream, and up to a flat plateau, where he camp was formed, about 50 feet above the bed of the stream. The camping ground, which is called Jogiani, is an excellent position for a camp, and there is sufficient space for a brigade if closely packed, the low semicircle of hills to the north forming excellent natural positions for a picquets, while abundance of good water is procurable from the Khandur stream. Grass and wood too are to be obtained in abundance for the cutting. No other supplies and no habitations visible anywhere. No cultivation of any kind visible during this march, the whole country being an arid, stony tract, with a fair amount of grass and scrub vegetation. Elevation, 2,516'.

The Khandur stream is joined about a mile below (east) Jogiani by the Zahran *nala*, which stretches up a broad rugged valley. The water of the Zahran is very bitter and bad, and it contaminates that of the Khandur to a great extent after its junction; but at Jogiani (above this junction), the water of the Khandur is good. Half a mile above Jogiani the Khandur *nala* branches off into two streams, neither of which is called Khandur, but Gowand and Rungo respectively.

5	KAWAI . . .	14	55
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Route (1), over the Mubariki mountain.—The road runs, after crossing the Khandur *nala* at Jogiani, along the stony Pipla plateau for half a mile in a westerly direction, when the ascent commences, winding about along the faces of the under-features of the Mubariki hill, 7 miles

from Jogiani, when the summit of the hill is reached. The road is fairly easy, though the ascent is considerable, and a road for all arms could with some labour be constructed; as it at present stands, camels with loads would find it a stiff pull-up. The descent is more precipitous than the ascent, and, as in all cases with the Suliman range, the western slopes are more difficult and perpendicular than the eastern. After a descent of  $1\frac{1}{2}$  mile, the saddle, called Parsai Sham, joins Mubariki, and the main Suliman range, with the Baragh range, is reached.

Route No. 93—continued.

From Parsai Sham the road runs down an easy gradient, and could without difficulty be made excellent for 5 miles to camp Kawai, which lies at the foot of the western slopes of the Baragh range, just before reaching the Bel Baluch plain. From just above Kawai a fine view of the Bel Baluch and Manjwel plains to the west, with the Siah Pawad range, is obtained, and in the distance a glimpse of the Rankan plain and the Dadar mountain to the west of the Chamalang valley, from which signalling operations to Ek Bhai, and so to Dera Ghazi Khan, were carried on during the march of General Wilkinson's column. Soon after leaving the Parsai Sham the road towards Kawai passes alongside a deep rift in the rocky surface of the slope, which is called by the Baluchis the "Chor Thrap," or Robber's Leap. The camp at Kawai is situated by the side of a small *nala*, in which there is a limited supply of good water. Camping ground is very limited and only sufficient for a regiment of infantry, but sufficient for a brigade could be obtained near, on the right bank of the *nala*. Abundance of grass and wood is procurable; no other supplies. The climate is delightfully cool and pleasant all day. Elevation, 4,027'.

*Route (2), by the Rungo nala.*—The road branches off from the above-described route about 4 miles from camp Jogiani, and taking a due northerly direction, after about a mile, the steep bank of the Rungo *nala* is reached, close to where it actually enters the hills, dividing Mubariki from the Paha hill. The descent to the *nala* bed is about 150 feet, and the banks rise perpendicularly on both sides. The *nala* being at this point about 250 yards wide, it quickly narrows on entering the hills, and becomes a rugged, tortuous defile, varying from 30 to 50 yards wide, with overhanging masses of rugged precipitous cliffs, rising straight up in places to 1,000 feet, and making the ravine have the appearance of a huge rift in the hill, instead of a waterway dividing two mountains. The route for about 7 miles is over enormous boulders and huge masses of rock; the path, such as it is sometimes rising up the hillsides to avoid an impassable step in the *nala* bed; but as a rule, the route lies in the actual bed of the ravine over irregular masses of rock and boulder, having a steady ascent. It is altogether impracticable for anything but lightly-equipped infantry, and could never be made use of as a military route.

After 7 miles of this rough travelling the head of the *nala* is reached at the Parsai Sham, where there is a nice place for a camp. There is also, it is said, a supply of good water at hand from a spring, but this would probably not be sufficient for a large force, though the Baluchis said there was sufficient for 1,000 men. Abundance of grass and wood at hand. After passing over the Parsai Sham on to the Baragh range, the path again joins the Mubariki route already described.

6	TEJAFAX	.	.	19	74	The route lies for the first 1½ mile down the lower slopes of the Baragh range in a south-westerly direction to the Bel Baluch plain near to the watershed (which is almost imperceptible), dividing the Kaha and Sangar drainage.
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The Bel Baluch is a fine broad expanse of uncultivated land, covered with grass and stunted shrubs. The route preserves a south-west direction to the Lola-ka-Dher, a low ridge which forms the boundary line between the Bozdars and the Khetrans; here it takes a more southerly direction still over soft grassy land along the eastern side of the Sehi ridge, a low rocky line of hills dividing the Bel Baluch from the Manjwel Sham. At 7 miles the route takes a more westerly direction, through the Lakan Daragh, from which a peep at Kot Mubma to the south-east can be seen: passing on in a westerly direction over the Lankan Pusht and Drigi plains for 2½ miles, still over very good going, the route takes a direction almost due north up to the Gwat Bil valley—a narrow valley bounded on the west side by the Chapar range, which is the name given to the southern side of the Siah Pawad range. The route lies 2½ miles up the valley in a northerly direction (from which point the end of the valley can be seen); the path then turns to the north-west up the slope of the Chapar range to the Khujja Chel kotal, 1 mile; the kotal is from 200 to 300 feet above the valley, and the road up is rough and difficult, but could be easily made good. From the kotal a fine view of the Rankhan plain is obtained, and the path descends in a north-west direction, much like the ascent, into the Kuja valley, a small *cul de sac* which opens into the large Rankhan plain; the distance from the Khujja Chel kotal to the entrance of the Rankhan valley is about 2½ miles. Here the road turns to the south-west over the Rankhan plain. Some water but no cultivation

Route No. 93—continued.

After 5 miles from the entrance of the Rankhan plain, the Tejafak *nala*, with a beautiful stream of excellent water, is reached, and camp was pitched on the banks of this stream. This is a very long march and would, for that reason, be a hard one for any large body of troops; the country passed over, however, with the exception of the short portion of the road where it crosses over the Khujja Chel kotal, is excellent and pleasant travelling for man and beast. Several streams of water are met on the route, and the plains passed over, though uncultivated, are covered with excellent grass; wood, too, is abundant. The best way to split up this march for any large force would be to go from Kawai to Kot Muhma, thence to Luni Kot or Tejafak; abundance of wood and excellent water from the Tejafak *nala* is procurable here, also an almost unlimited supply of grass and sufficient camping ground for an army corps.

The Dera Ghazi Khan Pishin main road is crossed in this stage.

7	TUMBA . . . . .	6	80
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From Tejafak the path leads along the bed of the Tejafak *nala*, winding about in a tortuous course through the Tumba range of hills in a north-west direction. Here and there the road rises above the *nala* bed along a little plateau in the hills covered with grass and low scrub,

but usually preserving a course along the bed of the stream for 3 miles, when it leads up the left bank over a small under-feature in the Tumba range and preserves a course above the *nala* bed for 3 miles, winding along the face of the hillside until a large plateau covered with grass on the left (north) bank of the Tejafak *nala* is reached. There is plenty of water of good quality in the Tejafak *nala*, which the Baluchis say is never dry at any season of the year; abundance of grass and wood. No other supplies. The camping ground available is limited, but sufficient for a brigade in irregular formation. It could be easily protected by picquets on the surrounding heights, which are not of any great elevation and well situated for this purpose. The whole road from Tejafak to this camping ground would require some labour to make it practicable for a force of all arms. Although hill camels, lightly laden, have been brought along it as it now stands, the line of road is a good one.

8	KAREHR . . . . .	8	88
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The Tejafak *nala* at Tumba divides into two branches; the road lies along the bed of the more northern one in a north-west direction for half a mile; the *nala* bed then turns in a south-west direction, the path following the bed of the watercourse, which is dry. The

route continues in this direction for  $2\frac{1}{2}$  miles, crossing at about half this distance the watershed called Tumba Paragh; from here the ground slopes gradually down in a south-west direction to the Ganderi plain. The road up to this point from the camp at Tumba is along confined country, either in the *nala* bed, with low hills rising on either side to a height of 200', or along the waterways between these hills (the lower slopes and under-features of the Tumba range). Ample camping ground on the undulating slopes; abundance of grass, and good water in the Karehr stream; also wood; no other supplies and no habitations in the neighbourhood. There is a small village fort called Luni Kalat on the banks of the Karehr stream, south of the camp. The Karehr stream flows in a northern direction, and is afterwards called the Kingri *nala*.

This march is a very easy one. It would be just as well to make one march of it from Tejafak to this halting-place. The hills on each side are accessible and easily crowned, and altogether the march would be a very ordinary one for a large force in a hill country. The Karwada range is a rocky ridge, of no great height, and a road could be made over it into the Chap plain, distance 6 miles, where there is an excellent camping ground, and where this route would join on to No. 92. A fine view of the Chamalang valley and Chap, with the mountains of Dadar and Garibur, the Laki range and Murgha is obtained from the Karwada ridge.

9	CHAP VALLEY . . . . .	6	94
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Leaving camp Karehr in a north-westerly direction, the line of road crosses the Karwada range. The north-western slopes of the range are rugged and difficult, and the route goes winding about down the rocky and sharply-scarped face of the range, over masses of rock

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 93—concluded.

and rugged under-features, where a good deal of labour would be required to make a road for wheels. The distance, however, where blasting and scarping would be necessary, is only for about 1 mile; then the path leads into the Chap plain, and a narrow valley of the same name is seen stretching up to the north, which is the route followed by General Wilkinson. The Chap plain and valley is bounded on the west by the Chap range of hills, which separates it from the Chamalang valley.

There is plenty of water in the Chamalang and Chap valleys; also abundance of wood and grass.

NOTE.—As regards the country traversed by this route, it seems from a comparison with Route No. 92 that it is preferable for many reasons besides being the more direct one. It is certainly not a difficult line, and very little serious engineering is required to make the road the whole way an excellent one (the parts of the route over the Mubariki hill and down the Karwada range being the only doubtful points).

10	CHAMALANG VALLEY	6	100
11	KACHI DAWAT . . .	11½	111½
12	LUNI TANG . . .	7½	118½
13	ZINDI RUD . . .	14½	133½
14	PALOSI . . .	10	143½
15	WAHWAI . . .	9	152½
16	THAL . . .	12½	164½

Vide Route No. 92, stages 11 to 17.

Route No. 94.

FROM THE CHAP VALLEY TO DERA GHAZI KHAN, *via* THE RAKHNI PLAIN AND SAKHI SARWAR PASS.

Authority.—MANNERS-SMITH, 1883.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KAREHR . . .	6	6	Vide Route No. 93, stage 8.
2	BANOR . . .	12	18	The direction of the route is nearly due south from camp, crossing a broad expansive plain, called the Luni Bagha plain. The plain is covered with <i>sen</i> grass, and is beautifully soft going; no road-making is required, and an

Route No. 94—continued.

easier line of route could not be found. At 6 miles the low watershed is reached which divides the drainage of the Kaha to the south and that of the Luni to the north. At 8 miles the village fort of Hasani Kot is passed (40 houses and 3 towers); water is procurable from a well. The plain is here 2 miles broad. Passing on, the road leads over a very low kotal, called Trung, into the central Bagha valley, this portion of it being called Lundi, in which is a village called Shekh Dad Ali (10 houses), also the villages of Lakapatra and Reg; the former of these two was sacked by the Maris in 1881, when 10 Khetrans and 2 Maris were killed in the fight. There are two passes through the Kahora range, which bounds this valley on the east; the upper one called Zori, through which a stream of water flows and which leads into a district called Nacharvel, which contains 3 villages, Gulu-ka-kot, Miran-ka-kot and Mir Muhamad Salarani-ka-kot; there are also two villages at the eastern entrance of the Zori pass called Rahim Boramani-ka-kot and Fazal Khan Boramani-ka-kot.

The second pass through the Kahora range is the Burkran Tangi, at the western entrance of which the camp was pitched. The Banor stream runs through this pass; it rises in a marsh quarter mile west of the entrance of the defile.

This is an extremely easy march, over soft ground and beautiful plains, covered with bright golden grass. The plains are bare of trees, but low scrub vegetation is abundant on the neighbouring hills, affording ample wood for burning: water is plentiful, and there is an unlimited supply of excellent grass. No road-making would be required at all during this march, and a force of all arms could march on a broad front the whole way. The hills bordering the plain could be easily covered by videttes and flanking parties.

3	TEGAVAGH . . .	11	29	Leaving camp Banor, follow the road back (north) to the Zori pass, this being easier than the Burkran Tangi. One mile from camp the route turns to the south-east to the Zori defile, which is of no great extent; some little work would be required here to make a road, as the stream
	running through the pass in places occupies nearly the entire breadth of the tangi. On the east side of the pass are the two village forts of Rahim Khan and Fazal Khan, and further on the village of Salarani-ka-kot is passed. Further up the valley to the north the large village Miran-ka-kot can be seen. The road continues over a beautiful, flat, grassy plain, with cultivation here and there near the villages, for 2½ miles from the Zori pass. It then ascends the Gali range by the Wanga pass by a winding path, rough and difficult, and which would require much work to make passable for wheels. At the summit of the pass (half a mile from the foot) the road descends, turning due east; the descent is far more difficult and rough than the ascent; it is also much longer, and the Takrao plain at the eastern foot of the Wanga pass is reached after a mile's descent over a very rough country, and much labour would be required to make a good road. From the foot of the pass the road for half a mile takes a southerly direction into the Takrao plain.			

The road passes in an easterly direction over it; past three large villages for 1½ mile, and then through the Takrao Nari pass, a small defile of no extent, but difficult and narrow; the road passes up the northern bank above the bed of the small stream which flows through the defile, and then down into the Tegavagh plain—a fine, long, extensive plain, well watered but not very broad (half mile), and bounded by rocky hills, which nowhere are of any great height.

The lower portion of the Tegavagh valley is called Safi. This valley runs up in a north-east direction, the drainage all running up the valley and eventually discharging itself into the Kaha stream. A mile up the valley is a path leading to the east over the low range into the Badi plain and on to Fort Munro; the portion of this latter plain north of Badi is called Churi, and this further north opens into the Rakhni plain.

Camp was pitched in the centre of the Tegavagh plain near the point where the Tegavagh nala passes into it by the Sati Khana pass, a small easy defile through the range on the west of the valley of no great extent. As the Takrao Nari pass was impracticable for camels, these had to make a detour from near the villages of Takrao to the west of the range bordering the Tegavagh valley on that side and came into camp by the Sati Khana pass. Higher up the Tegavagh valley to the north is the large village of Hasani—one of the largest in this part of the country. There is ample camping ground for a large force and abundance of good water. Grass is not so plentiful as before; wood is not so abundant as at previous halting-places.

This march would be an easy one but for the Wanga pass, and this is only difficult for

Route No. 94—continued.

camels as it stands. Hill camels lightly laden came over it, but much work would be required to make a road for wheels.

4	KUA-KA-THAL	.	12	41
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The road lies up the Tegavagh plain in a north-east direction past the two villages of Hasani. After one mile the road turns to the east over a pass in the range bordering this plain on that side. This pass is of no difficulty or extent, and leads into a small valley of irregular

low hills. After one mile of this direction (east) the road leads over the Tula Mara range by a *tangi* of the same name into a small plain called also Tula Mara, which is about half a mile broad, flat, and easy-going, until the eastern extremity of the range is reached at a sudden declivity in the road which leads down into the bed of a ravine in which a stream of good water flows. Beyond this is the Churi-ka-Sham. Some cultivation is passed near the villages of Hasani, but the crops seem poor and entirely dependent on the rainfall for their water-supply.

The Churi-ka-Sham is a broad plain,  $2\frac{1}{2}$  miles extent and about 6 miles in length, flat and easy-going and covered with *sen* grass. It is bounded on the east by the Dekha range, of considerable size; to the south end of this range is a large hill called Mazara, and to the north is the Kandili range in continuation of the Dekha range; but between these is the Churi-ka-Munh, a division in the range joining the Churi plain with the great plain of Rakhni. Through the Churi-ka-Munh passes a stream of water the Tejafak and Tegavagh streams joining at this point, which flows south down the Rakhni valley into the Kaha. This valley is about 4 miles in breadth and extends in a north and south direction for nearly 50 miles without any real break. The climate in the Rakhni valley is delightful. Abundance of game is found in the valley (hares, partridges, quail, and ravine deer).

5	RASAR-KA-THAL	.	8	49
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The road lies in an east-by-north direction, and for the first mile and half across the Rakhni plain to the foot of the Baragh range, winding along and steadily ascending the lower slopes until the watershed of the Guzeri *nala*, which runs between Ek-Bhai and Mubariki, is reached.

This watershed divides the Guzeri *nala*, which flows eventually into the Vidor stream from the water which flows south and into the Rakhni plain and so to the Kala. The ascent up the slopes of the Baragh range is steep, and winds along the features of the hill over rough stony ground and flat slabs of rock; about 2 miles from the watershed of the Guzeri, a small basin in the hills, called the Mana-ka-Thal, is reached; there is water from a spring just below this in the hillside. At 8 miles and at an elevation of 2,150 feet above it is the Rasar-ka-Thal—a fine basin on the summit of the Baragh range, and below the southern slopes of Ek Bhai; there is a good supply of water from a spring, though the road down to the water is rather confined and difficult for animals. There is abundance of good grass and wood, and the camping ground is flat and sufficient for a brigade. From the head of the Guzeri *nala*, there is a path leading down to a shepherds' settlement, but there is no road by this *nala* into the valley on the east side of the Sulimans. The path leads back down the slopes of the Baragh range into the Rakhni plain again near Lola-ka-Duer. The road along this march has been slightly repaired, but, though it runs along a good line, and a good and easy gradient could be found, the whole way from Kua-ka-Thal up to Rasar-ka-Thal, yet it would require a great amount of labour to make it fit for wheels. Only mules, ponies, and bullocks have been taken along it as it now exists. The steady ascent makes this a trying march for baggage animals and horses, and, though this route may be more direct than Route No. 93, the latter is probably the easier and more feasible one. The onward march leads through the Shahidani pass between the Besur and Mahsud mountains (two prominent features of the Suliman range) into the plains on the east of this range.

There is another small *thal*, or flat basin, in the hills to the north-west of the camping-ground, it is not so large as this plateau, but otherwise very similar to it. The spring of water lies between these two *thals*. There is not sufficient water for any very large force, but there is a steady little flow of water, and this of very good quality. To the east side of the Baragh range lies the main Suliman range. These are each divided by deep ravines or *nalas*, that between Mubariki and Ek-Bhai being called the Guzeri; between Ek-Bhai and Lesur, the Lunkun; and that between Besur and Mahsud, the Sbahidani. The Baragh



Route No. 94—continued.

range stretches down south from Rasar-ka-Thal district from the main Suliman range to Fort Munro, and has several large plateaux on its summit; these are Siri, Chatter Mai, and Gagan-ka-Thal.

NOTE A.—From Rasar-ka-Thal to foot of Ek-Bhai mountain, 21 miles.

A path commonly used and easy for mules goes to Muhma—15 miles, thence over a ridge north-west of the plain, and then descends into a second similar plain, also called Rasar-ka-Thal. Beyond this ridge is a rough *nala*, in which there is a good spring and dam called Rasar-ka-Thal Toba. The second Rasar-ka-Thal is a better camping-ground than the first, and is probably the most suitable place for a large camp for a party wishing to ascend Ek-Bhai, the summit of which is about 5 miles from it. There is excellent grass, wood, and water all near at hand. The path leaves this plain and passes north along a succession of ridges to Toba at the head of Abdul *nala*. This is a spring and dam like the first Toba.

There is a very small plain on the ridge north of the spring and lying immediately under the west side of Ek-Bhai. This is a good camping-ground for a small party, and there is abundance of wood, water, and grass.

From Toba the path to Ek-Bhai ascends the steep spur about the middle of the west side of the mountain. After passing the spur an easy path leads zig-zag to the summit, about 2½ miles from Toba. The ascent is very easy on foot and takes about an hour.

The north-west and south faces of Ek-Bhai, except for the path described on the west, are steep and scarped. The east face presents a succession of gentle slopes, grassy and dotted with ilex trees. This face is divided into a number of ridges by *nalas*, named in succession from south to north—Garpusht Jajh, Lakhi (at the head of which is Rudh Toba; this is the white *nala* conspicuous from a distance running from near the summit), Bahaud Sori Thal, Par Pague, and Gand Chahan.

Ek-Bhai can also be ascended on its eastern face by two routes from Sonbani:—

A.—First march.—Gand Chahan, 10 miles.

Second, Thali Toba, said to be about 10 miles; this march is not practicable for animals but if coolies could be had an encampment might be made here, and it is not far from the summit of the mountain.

B.—First march from Sonbani, Lunkun, about 9 miles.

This is said to be waste, and there is plenty of wood and probably grass.

Second march, Garpusht, 5 miles.

This is said to be practicable for laden animals, and there are wood, grass, and water at the camping-ground. This is on Ek-Bhai itself. From Garpusht to the top of the mountain seems not less than 10 miles, and, being all up-hill, it would not be a desirable camping-ground for a party having to go to the top and return every day.

A party proceeding to Ek-Bhai would find it a great convenience to have a few entrenching tools to make the road, and a mule with *pakals* for water. (Surgeon McCartie, 1881.)

6	ΠΑΡΚΑΟ . . .	8
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The path lies down the eastern slopes of the Baragh range in a south-east direction for 4½ miles. The descent is steep and in places difficult, though no great engineering difficulty exists to making a good road down to the Shahidani *nala*, which is entered at this distance.

The descent is very much like the ascent described in the last march, only shorter; the drop from Rasar-ka-Thal to the bed of the Shahidani is about 2,000 feet. From this point the real difficulties of the route commence, and, after traversing the bed of the *nala* for half a mile in an easterly direction, the path becomes very bad indeed over boulders and rocks.

There is no possibility of running a road along either the Besur or Mahsud side of the ravine, as these both rise perpendicularly, and the only roadway possible to make would be a fair-weather road along the actual bed of the *nala*; this, however, is so rough and falls in such steep descents over boulders and rugged rocks that it would be next to impossible to run a road along it. The *nala* varies from 80 to 20 yards in width, and there is no water flowing in the bed of the ravine, though it appears that a rush of water, after heavy rains, comes down which would injure any road that might be made. The last mile of the Shahidani pass is the worst portion; horsemen had to dismount and parties had to be posted along the most difficult places to help the loaded ponies and mules along. There is no doubt that this

Route No. 94—concluded.

portion of this route renders it a far more difficult one and less adaptable for a military road than that over the Mubarak hill.

After emerging from the pass, the road leads up the left bank of the Shahidani over a rough stony plateau for 1½ mile to the camping-ground, called Parkao, which is a very limited one indeed—only sufficient for a regiment of infantry. There is abundance of good water and grass, also a certain amount of scrub vegetation for fuel.

About half-way through the Shahidani pass were the remains of an *abattis* barrier, which had been constructed by the Hadianis as a protection against the inroads of the Musa Khels and other Pathans. The western slope of the Baragh range forms the boundary between the Khetrans and the Hadianis.

7	SAKHI SARWAR	19		76	A long and difficult march through an uninteresting and barren rocky country; the road lies in an easterly direction the entire way. From Parkao the path runs along the bed of the Shahidani <i>nala</i> for quarter of a mile and then runs to the north for a short distance over a
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low ridge of shaly rock and marl down into the bed of a small *nala* called the Shora; here it again turns to the east and proceeding along the bed of the Shora *nala*, for a mile crosses the Shahidani *nala*, where the Shora falls into it, and up to the south bank of the Shahidani by a steep winding path; at this point the road is difficult and requires a good deal of making. The road then runs east again along the right bank of the Shahidani *nala* on a high, flat, stony plateau, called Lop Shan; to the south of this plateau, which is about half a mile wide, rises a still higher plateau, up which there is a path leading; this is called the Tir Mar. On the north bank of the Shahidani *nala* there is a similar broad flat plateau, on which there is some cultivation, called Patra. At the east end of the Lop Shan plain is the Tib Kandak, also a flat plateau, covered with stones and low brushwood. After 1½ mile in an easterly direction over the Lop Shan plain the road descends by a very difficult and stony pathway to the bed of the Mukam Kaw *nala*, along the bed of which the road now runs for the entire remaining distance to Sakhi Sarwar. The bed of this *nala* is alternate patches of waterworn boulders and deep sand, with high precipitous banks, winding along in an easterly direction, and is a very trying and uninteresting march for this reason, and very difficult going for both man and beast. The distance from Parkao is also great, and it would be a trying march for troops at any season of the year; there are pools of very good water in the *nala* bed at occasional intervals, but water at Sakhi Sarwar is scarce. There is one well near the small village which is situated on the right bank of the *nala*; water is also procured from small wells made in the sandy bed of *nala* from 2 to 3 miles up from Sakhi Sarwar and is brought in on bullocks and camels. Sakhi Sarwar is celebrated for a very much respected shrine called after a famous saint of the above name; hundreds of pilgrims, both Hindus and Muhammadans, come here to pay their respects from all parts of India, and the saint seems to be "everybody's friend."

Water from the well is insufficient for these thirsty pilgrims during the time of the *mela* and so additional water has to be procured, as above stated, from the shallow well in the *nala* bed.

Beyond the shrine of its patron saint Sakhi Sarwar presents no attractions; it is a small village at the foot of the hills, of no great extent, nor is it capable of affording much shelter or supplies.

Camp was formed to the north of the village near the well.

8	VIDOR	18		94	District road. Stony but practicable for wheeled carriage. Several sandy-bedded streams are crossed.
					A village and frontier post. Supplies procurable to a small amount. Water from one well in the village.
9	DERA GHAZI KHAN	14		108	Vide Route No. 92, stage 1 reversed.

N.B.—Route No. XLIII N.-W. F., Volume II, should be followed from Sakhi Sarwar.

Route No. 95.

FROM DERA GHAZI KHAN TO LORALAI.

Alternative to Route No. XLIII, N.-W. F., Vol. II.

*Authorities.*—MAITLAND ; SANFORD ; GASELEE ; SAWYER ; DAVIES ; GARBETT.

No. of Stage	Names of Stages.	DISTANCES,		REMARKS.
		Inter-mediate.	Total.	
1	KOT CHOTA . . .	14	14	} <i>Vide</i> Route No. XLV, N.-W. F., Vol. II.
2	CHOTI ZARIM . . .	10		
3	CHOTA BALA . . .	17	24	
4	ZIRADHAN . . .	12	41	
5	KAR . . . . .	10	53	
6	RAKHNI . . . . .	11	63	
			74	The track could, with little difficulty, be converted into a cart-road. At 2 miles is a deep pool, 40 feet diameter, in a ravine, called Maran-i-toba (serpent's spring), the water in which is good. From here at a very easy downward gradient along rounded hillsides in
				a north-westerly direction to the 5th mile. At 8 miles it emerges into an easy valley, with water at its head. Supplies, wood, grass, and camel grazing, all procurable.
				Wood, grass, and water are plentiful on this march, with ample camping or halting-places for troops or convoys. No gorges or defiles are anywhere passed through, and, as the hill slopes are everywhere moderate, it would be difficult for an enemy, successfully opposed, to force a passage down to the plains.
7	CHAPPADAKKA . . .	11	85	Up the Rakhni plain for 9 miles, and turn into the hills by a pass about one mile above the Churi-ki-munh, reaching Chappadakka 2 miles further on. No difficulties beyond a few <i>nala</i> crossings. Running water in river bed and fuel plentiful.
8	GANDHERA . . . . .	13	98	After two river crossings, and rough, but not difficult ground, for $2\frac{1}{2}$ miles, the Rankhan Sham an open grassy plain is reached. Here there is water in pools in the bed of the stream and plenty of grass and fuel. Four miles along this plain is Surati kotal, which is easily
				surmounted. A gradual descent on the other side through ground broken by <i>nalas</i> leads into the Rara Sham, another level, grassy plain, $1\frac{1}{2}$ mile, along which is Gandhera, where good running water and fuel are plentiful.
9	KAJURI . . . . .	$12\frac{3}{4}$	$110\frac{3}{4}$	At this stage the line is crossed by numerous ravines, some of which are wide and deep. At Kingri (5 miles) there is abundance of good water in the river, also grass and fuel. On leaving Kingri the line at once enters the Sandwel pass, the ascent of which is difficult

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 95—concluded.

From the summit of the pass, a more gradual descent, crossed by a few *nalas*, leads to Kajuri, where water is found in small quantity in pools in the river-bed. More can be obtained by digging, and a mile up the river running water is found. Water-supply arrangements may have to be made here. Fuel is rather scarce. Grass plentiful.

10	CHAKI WALANG . . . . .	13½	124¼	By a comparatively easy ascent through hills for rather more than 3 miles the open country is reached, and half a mile further on enter upon undulating country for about 4 miles followed by a flat grassy plain (Laki Sham) until Sara Panu is reached (8 miles), where water is obtainable. Onwards the country is easy, but stony to Chaki Walang. Water obtainable in river bed, and more by digging or well-sinking. Grass and wood plentiful.

An alternative route (No. XLIII, N.-W. F., Volume II) branches to the right at a point about 3½ miles from Kajuri, going *viâ* Saradaka to Mekhtar. It is about 9 miles shorter than the route here described.

11	NABAI . . . . .	9	133¼	This stage crosses rough, rocky country for three parts of the distance, but with easy gradients. The last portion is good going. Running water in river; grass and wood abundant.

12	TOR . . . . .	14¼	147½	Steady ascent to a saddle, surmounting which the line descends by easy gradients into a valley, about 1 mile wide, which is followed along the river bank for about 3 miles. There are several <i>nalas</i> to cross, but by taking the line near foot of hills most of these may be avoided.

There is a short, but steep, drop down into the Mekhtar plain. Mekhtar (5½ miles), the first village met after leaving Rakhni, is a large one, surrounded by cultivation depending on rain-water. There is a copious spring of good water at the village; supplies plentiful, but no grass or wood. Hence the line passes for 4 miles through rain cultivated land, to the village of Sandai, where there is well-water. The ground is then rough, as far as a small pass, leading down to the Sihan river, where running water, of good quality, is found. Cross the river to Malazai, where is good camping ground, with plenty of grass and fuel.

13	WAHAR . . . . .	15	162¼	} <i>Vide</i> Route No. XLIII, N.-W. F., Vol. II.
14	LAHOR . . . . .	10½	173	
15	LOBALAI . . . . .	10	183	

Route No. 96.

FROM LORALAI TO MUSA KHEL BAZAR, *viâ* BARA KWAL.  
*Authorities.*—ZHOB VALLEY EXPEDITION, 1884; O'DONNELL.

No of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	DILAI . . . . .	13	13	Passing along the south side of Sagar the road enters a small valley and leaves it by the <i>Spiro tangi</i> , an easy opening in the low hills; thence it follows for 2 miles the base of the hills. At 7 miles meet and cross the Bobai river, springs and running water, broad pebbly bed, no diff.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 96.—continued.

Cult in crossing. Half a mile from bank of river pass the village of Zangiwal and, turning nearly due east, proceed down the valley on the new road.

Water from a *karez*. Supplies plentiful; camel-grazing scarce.

2	KATZAI CHENA	9½	22½
3	WATAGAN	8¾	31½

Road easy over level plain, direction east-north-east.

Good camping ground on the open plain on left bank on the Marra river. Water supplies and camel-grazing plentiful.

The route follows the well-marked *kafil*a track over level plain, general direction east-north-east. Pass at 1½ mile the village of Samahlak, and cross an open *karez*. At 4 miles the bed of the Marra is crossed, which drains the Marra pass, and joins the Bohai just before it enters the Anambar gap. No difficulty in

crossing. Good water and camel-grazing in the bed of the stream, also fuel in abundance. At 6¼ miles the villages and cultivation of Tera and Muni Manda are passed.

Camping ground on the level open plain. Water good and plentiful. Forage and camel-grazing obtainable in the neighbourhood.

4	BARA KWAL (KAKHAO)	17	48½
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Still along the broad *kafil*a track, general direction north-east up the valley, over an open level plain. The villages of Baharwal and Watagan are passed soon after leaving camp. At 2 and 3 miles pass the hamlets of Ingar and Targai, respectively, and at 6¼ miles a Hamzazai village.

At 8 miles pass a *karez* of good water, and cross a *nala* bed at 14¾ miles—no difficulties. The whole plain is well cultivated and grassy.

Ample room to camp on the plain. Water good and abundant from the Kakhao stream. Camel-grazing abundant. No grass within 2 miles. Fuel scanty, the Kakhao valley being almost treeless. Kakhao is Kibzai country. The village of Bara Kwal is about 2 miles to the east of the camping ground.

5	MURGA	12	60½
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On leaving camp follow the main road from Bor to Musa Khel, a well beaten track, in a generally east direction, through about the centre of the Kakhao plain. This is here nearly 4 miles wide and dotted over with numerous villages and hamlets; all now deserted. At half mile the

road crosses a wide and deep *nala*, draining southwards. There is no difficulty, but the banks want ramping. Thence along a bare stony plain road good, ascending very gradually. At 5 miles the road passes through a large burial-ground. At 6 miles the road passes between two low detached, easily-accessible hills, and crosses the rocky bed of a watercourse draining south. Where the road crosses, the bed is only a few inches below the banks, but just to the south of the road the drainage suddenly breaks a deep channel, into which a clear and abundant stream of water flows from a fissure in a rock. There is good camping ground north-east of this spot, but firewood and grass are scanty. Just beyond this watercourse there is a small spring of good water to the right, south of the road. The road continues over a wide sandy alluvial plain, which is the watershed between Kakhao and Murga Kibzai. At 8 miles a well-marked track diverges to the north, but it only leads to a small hamlet on that side of the plain.

At 9 miles two semi-ruinous towers to the south of the road are passed. From this point there is a regular, but very gradual descent.

At 11 miles the lowest part of the march is reached, and the road strikes a *karez* running from the eastward. It is better to keep to the north of it. The country to the south has recently been under cultivation and is bad going. Camp at 12 miles, near a ruined mud enclosure, about 1 mile north-west of the two principal Kibzai villages.

Room to encamp a large force on the plain. Water good and abundant from the *karez*. Firewood scanty. Camel forage abundant, but no grass.

Route No XLII, N.-W. F., Vol. II, goes hence to Apozai.

Route No. 96—continued.

6	SAR TANG . . .	10	70 $\frac{1}{4}$	See also Route No. 99.
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At 2 miles the plain becomes stony.

At 3 $\frac{1}{2}$  miles near a small dilapidated *ziarat*, the road strikes the Murga stream and keeps above its right bank. There is running water in the stream and a little grass and tamarisk along its banks. It flows in a shallow, stony bed south-westwards.

At 4 $\frac{1}{2}$  miles the road enters among low hills, spurs of the high range which bounds the Murga Kibzai plain on the east, and continues along a little valley, about 400 yards wide, between low accessible hills.

At 8 miles it turns nearly due east, crosses a slight rise and descends into another higher parallel valley, where it again turns north-east.

At 9 miles it enters and crosses a small turfy plain, about 700 yards in diameter, surrounded by low hills. There is a ruinous stone tower on a spur to the east.

The road then descends from the plain to a small *nala* and turns eastward down it, passing through a low rocky ridge. The gap is about 30 yards wide, the hills easily accessible, covered with tufts of grass which increase as the road proceeds. There is a spring of water in the *nala*, slightly saline, but drinkable.

At 10 miles the road passes through another inferior ridge, parallel to the last, and the main ranges and enters a small broken plain, near the head of the Tang *nala*. A conspicuous pillar of rock on a low hill to the east is a landmark. The hills beyond begin to be wooded with wild olive.

Here there is room to camp 4 battalions, on stony ground, commanded all round by low, easily-accessible hills. Running water good and abundant in the Tang *nala*. Grass and camel-forage abundant in the *nala* and on the hills. Small tamarisk for firewood in the *nala*. The wild olive does not afford good fuel, as the wood is very hard and takes long to cut.

7	MACHLAMAN . . .	8	78 $\frac{1}{4}$	The road goes east across the stream and then over a stony slope to the north of the patch of cultivation. It then turns more north and crosses, and descends from a low neck, between the hill to the west, and a spur, into the stream. Here it turns east again through a gap in the first of the main ranges of the Shinghar.
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The gap is about 30 yards wide, the hills on both sides covered with wild olive and grass. They are accessible to active infantry at all points.

At 1 $\frac{1}{2}$  mile the road descends to, and crosses, the stream, and goes over an ascent and descent similar to that just traversed, caused by a spur from the range east of the stream.

The valley of the Tang is here about quarter mile wide, much broken by hillocks and projecting spurs, through which the stream winds.

At 2 miles the Tang turns east, winding round to north, and then back to east, and passes through the second range of the Shinghar.

Just to the south of this there is a little room to camp in the valley. Water, fuel, and grass abundant.

The road crosses the stream, the bed of which is here very rocky, and ascends to narrow ledges of limestone, which protrude from the face of a cliff beyond. The outcropping strata afford a rough, and in places, narrow, path which follows the winding of the stream round the face of the scarp. On the other side there is, in places, a drop of several feet into the stream, in which there are a series of small cascades, rapids, and deep pools. The road is bad in three places particularly, and considerable labour had to be expended before it was really practicable for laden camels.

Beyond this there is a valley about  $\frac{3}{4}$  mile wide between the range last passed and the 3rd or main range of the Shinghar. The road descends to, and crosses the river, and then goes north-north-east above its left bank, along a sandy alluvial flat through grass and tamarisk.

At 4 miles the road turns east-south-east, following the course of the stream, which now passes through the main ridge by a rocky gap, about 20 yards wide, with scarped sides. There is a deep pool in the gap, which renders it impassable.

Here the road turns east-north-east and winds among low undulations which occupy the valley between the main and the next range, about three quarters of a mile farther and considerably lower.

Route No. 96—concluded.

At 5 miles it crosses a large affluent *nala* of the Tang.

At 5½ miles there is a rough rocky ascent to a wide low kotal above the left bank of the Tang, which here passes through the last of the high ranges of the Shinghar.

At 6 miles the road descends into the stream which it follows for about 200 yards through a low rocky ridge, and, again ascending its left bank, goes nearly east across the Machlaman plain, gradually descending.

At 7½ miles it crosses a deep *nala*, but the banks are easy.

At 8 miles camp on the eastern edge of the Machlaman plain. Ample room to camp; the hills to the east are easily accessible. Water good and abundant in the Tang stream just to the south of camp. Fuel and grass abundant in river bed and on the hills. Camel-forage abundant.

At the camp a track diverges northwards through the hills to Paramzai, a similar valley, about 1½ mile distant, in which are two Musa Khel hamlets.

8	MUSA KHEL BAZAR.	13	91¼
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The road goes east, following the course of the Tang stream through the hills, which are all low, easily accessible, and covered with grass and olive trees.

At half mile the road crosses the river and goes east-south-east over a stony plateau above its

left bank. During the next mile there are some rather deep *nalas* to be crossed, and the road is a little rough in places where it goes over outcropping perpendicular strata. These are soft sandstone and could be easily worked.

At 2 miles the road crosses the river and goes along similar ground above the right bank.

At 3 miles there is another crossing, with a rather rough ascent to a plateau above the left bank.

At 3½ miles the road again crosses the river which appears to be encumbered by rocks lower down, and winds eastward for half a mile through low hills. Then, turning northwards, it goes up a little glen, gradually ascending to a low easy kotal, which is crossed at 4 miles. Thence there is a gradual and easy descent across the wide stony daman of the hills to a valley about 2 miles wide, and stretching for a considerable distance from south-west to north-west. The country round is covered with olive trees and low scrub, and there is a large quantity of grass in the watercourses.

At 6 miles the road crosses a large watercourse which drains northward, and then turns from east-north-east to north-north-east over a wide alluvial plain, keeping to the eastern side of the valley to avoid broken ground near the river.

At 8 miles the road from Mekhtar, a rather ill-defined track, joins in from the south.

At 10 miles there is a long steep descent to much lower ground along the banks of the river, which comes round from the west.

The river is crossed three times during the next mile, but the road is quite easy.

At 12 miles ascend from the right bank of the river by a gentle rise to a wide opening in the hills through which the river goes. The ground is broken by a few small watercourses, but there are no difficulties. The road then crosses an under-feature of the hill to the south and descends into the Talas plain.

A certain amount of supplies are always procurable, and larger supplies could be collected by giving notice. Shahara is a regular halting-place between Mena and the Viboa pass. The plain is about 2½ miles wide from east to west, and extends out of sight from north-east to south-west. There is ample room to camp on the plain. Water good and abundant in the river. Camel-forage abundant. Wood and grass are scanty in the vicinity, but fuel is procurable in the river bed.

Route No. 97.

FROM MURGA TO APOZAI, *vid* MENA BAZAR AND ZERRANNA.

*Authority.*—CAPTAIN G. H. W. O'SULLIVAN, R.E.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	CAMP NEAR GADELI RUD.	14	14	Road west over open plain, about 4 miles wide from south-west to north-east, gradually reaching low outcropping hills at $1\frac{1}{2}$ mile, Kazi Kala half a mile off at foot of hills to north. It is a walled enclosure about 50 yards square with one tower. There are some detached towers on the hills here and there.

At  $2\frac{1}{2}$  miles cross a *nala*, of which the banks require ramping, the right bank being 10 feet high; turn north-west and at  $2\frac{3}{4}$  pass another Kazi Kala on our left, similar to the first and apparently of the same dimensions;  $\frac{1}{4}$  mile to our right are several trees in a garden, with a spring of water of about 60 gallons per minute.

At 4 miles reach the scattered village of Dahna, 60 odd houses. Descend 50' to river-bed. It would take one company  $\frac{1}{2}$  an hour to improve the path for wheeled artillery. Turn round first bend in the bed and run west-north-west to  $4\frac{1}{4}$  miles. Then bend  $120^\circ$  for a hundred yards and again bend to original direction. The banks are here about 30 feet high. At 5 miles 1 furlong reach water, 60 gallons a minute; at 5 miles 3 furlongs reach entrance of pass called Dahna *tangi*. Cliffs to north nearly vertical, about 300' high; those to south sloping, jagged rocks at about  $45^\circ$ . General direction of pass north-east, bed 20' wide, sandy gravel and very soft and pleasant going, but easily blocked in places where big boulders have fallen. 100 yards further, after passing through a narrow neck, the defile improves and the hills are easily scaled.

At 6 miles the water ends. General direction north-north-east.

At 7 miles steep cliff on the left; the pass still winding, but the slopes on each side are gentler. Water again about 20 gallons per minute on surface, but evidently a considerable quantity, if dug for. At 7 miles 1 furlong the pass widens, slopes diminish, hills get lower on left, water disappears. The hills on the right are very fine olive-covered hills, bare of grass. General direction north-east.

At 7 miles 1,500 yards 50 feet above *nala* bed the kotal is reached, height by aneroid 5,800'. Road quite practicable so far for wheeled artillery. Hence winding descent among low hills to grassy plain called Shakh. There is a small collection of huts a little further on called Abdullazai.

At 9 miles turn north, round a hill covered with huge boulders and down a sandy river-bed about 30 feet wide. At 9 miles 1 furlong another bed comes in from the south-east, about 100 feet wide; 100 yards further are trees and fields, with a small stream about 100 gallons per minute. About  $\frac{1}{2}$  mile off the right is a village of about 40 scattered houses. There are a few fields also on the left. At 9 miles 3 furlongs reach the Tor *tangi*, and take to a path on the right-hand side above the river, though the river-bed is passable, and apparently better than this rocky path. Water in pools. At 9 miles 4 furlongs cross a low kotal at a bend in the river and reach a big graveyard, with several fields in terraces below, and the village of Tor *tangi* across the river, to which the path again falls by a steep and narrow descent; 100 yards further another *nala* comes in from the left, and the river turns north again, winding between low hills. Water in bed and in an irrigation channel; about 200 gallons a minute.

At 10 miles pass through a gap in a vertical wall of rock and turn north-west for 150 yards, then west, then south-west, west and north, leaving the river at  $10\frac{1}{2}$  miles over a low hill, through a gap in a wall of black rock, and then west down a *nala*, which is left at



Route No. 97—continued.

10 miles 7 furlongs. Thence circle round gradually to north across a fairly grassy valley and cross another kotal, 5,650', at 11 miles 4 furlongs, shortly before which is met a big clump of wild olives.

The path is now a narrow hill-track but easily capable of improvement to make it fit for wheeled artillery. It falls about 100' in the next furlong, and then, following a narrow bed between hills of easy slopes, becomes very rough for 100 yards, but still easily improvable for artillery. It then runs over very easy side-long ground to 12 miles, at which it passes through a vertical ridge of rock, in which there are numerous natural windows, and which could easily be made capable of protracted defence.

It now emerges on a sloping plain, crosses a low range at 12½ miles, and then goes through a quarter of a mile of cultivation, past a small scattered village of 40 huts. General direction north-west, then west to 13¼ through low hills, then turn north for 50 yards, cross the river called Gadeli Rud (water plentiful in pools), and encamp on the left bank at 14 miles near the village of Plan. Height 5,400' by aneroid.

2	MENA BAZAR . . .	15½	29½
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From Gadeli Rud camp the track crosses a small stream, and runs generally west through low hills to 2 miles, then north-west to 2¼ through ditto, and then west over a low stony kotal at 2½ miles. Artillery could get round this by going up a watercourse about 100 yards

to the left. Beyond this pass a small village and a few fields, then turn west-north-west over low hills. At 8 miles pass through a few low hills, and at 8¾ reach the Sawara river, across which, 1¼ mile to the north-east, is the big scattered village of Samalzai at the foot of the hills. Between the foot of the *tangi* and the river cross two dry gravelly *nala* beds, each about 50 feet wide. The Sawara flows from east to west in a bed about 100 yards wide with numerous big pools; the visible flow is about 5,000 gallons per minute. There is a good deal of small tamarisk jungle in the bed for miles to the east as far as it can be seen. The level of the ford is 4,825' by aneroid.

Cross the river and turn north-north-west. At 10¼ enter low hills again and turn west, rising 1 in 6 for about 100 yards, then descend again more gently west. At 12 miles reach river flowing north, work north-west and north, and cross the river at 12¼, then work almost due north to 12¾, cross the river again, and work north-east over an undulating plain. At 13½ miles the hills to the north are called Stroh, those to south-east Mazgar, those to north-west Spinghar.

At 13 miles 5 furlongs cross the Mazgar Rud, flowing about 1,500 gallons per minute, and reach Mu la Sakobai, a small hamlet with a clump of willows and vines, a good deal of cultivation and an irrigation, channel flowing about 1,000 gallons a minute.

Camping ground is about 2 miles south-west of Mena Bazar, much cultivation in terraced fields and two small *karezes* flowing into tanks. The tank nearest Mena was used for drinking and cooking, the other for watering animals, etc.; all forage, fuel, grain, etc., we required was brought in by the people of Mena.

Height of camping ground, 4,875'.

3	ZERRANNA . . .	19¾	48½
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Leave camp and work generally north-east, passing through Mena at 2 miles. Height 5,110 feet. Thence north-east over undulating ground, and at 3 miles emerge on open plain, sloping towards Wani villages, and thence north-west to the Zhob river.

There are a few scattered trees and some *sabar* grass on the plain. At 7¼ miles reach the western end of the Wani ridge, which is about 100 yards to the right.

At about 7½ miles reach Tanazai village, 60 houses, 3 olive trees, several willows, and a few fields, dry river-bed 50 yards wide. Height 4,950'. At 8½ miles reach another river-bed, 150 yards wide. At 9½ miles the highest point of Wani mound is passed, and the plain becomes more level. At 11¼ miles reach Wani village. Height 5,150'. On the right front is the gap between Babarghar and Spiraghar, leading to the Gus Sham. On the right at the foot of Shiraghar is a small village called Ranizai. Road goes on up a dry gravelly river-bed in an east-north-east direction. Wani contains about 100 houses, has a large amount of cultivation in terraced fields on each bank of the river.

Keep on towards the highest point of Babarghar up a beautifully soft dry gravel bed. At 12½ miles leave the bed which bends up towards the Gus Sham gap, and follow a branch

Route No. 97—continued.

*nala*. At 12 $\frac{3}{4}$  miles get once more into broken ground;  $\frac{1}{2}$  mile off to our right is a large walled enclosure, and  $\frac{1}{2}$  mile beyond it a village called Kot Mallizai.

There is a good deal of olive jungle on Babarghar, especially in one ravine. The centre of the gap leading to Gus Sham is now directly to the right. It is a long, low undulating saddle between Babarghar and Spiraghar.

At 14 miles 5 furlongs go over some low hills and regain the *nala* at 14 miles 7 furlongs. Thence gradually work through low hills till at 15 $\frac{1}{4}$  miles reach village of Tadozai, and several fields in rear of which Torghar towers up boldly. The people here call Torghar, *Surwajh*. Thence bend north-by-east round a corner and Sanghar again becomes visible. Cultivation extends to 16 miles. The *nala* now works through low spurs from Babarghar and Torghar; general direction half a point west of north.

At 16 miles 7 furlongs reach another of Umar Khan's villages, with several fields, whence the Zhob valley and river again become visible. The hills are bare, but there is a little tamarisk in the riverbed. At 17 $\frac{1}{2}$  miles reach another of Umar Khan's villages, with some big olive trees and a few fields, also an irrigation channel flowing 30 gallons a minute. At 17 $\frac{3}{4}$  head north-east, at 18 $\frac{1}{4}$  turn north, and at 18 $\frac{1}{2}$  bend east by south and turn inside the hills to Zeranna, which is also one of Umar Khan's villages, crossing several small spurs and *nalas*. At 19 $\frac{1}{4}$  miles pass a big *kabaristan*. At 19 miles 3 furlongs halt. Zeranna consists of two villages, one on each bank of the broad dry river bed in which we camped, there being no other level ground. There are about 60 or 70 houses on the left bank of the *nala*, and 25 to 30 on the right, a large amount of cultivation and many cattle. There is a tower 25' high on the right bank, which, like all the houses, is built of slabs from the thin limestone strata. Height of camp 4,950'. Water about 250 gallons per minute.

Wood scarce; forage and all supplies from the villages.

Note A.—From Mena Bazar to Tor Khula and back.

North-east towards Torghar nearly as far as Wani village; thence north round the western foot of Torghar and Pitao ranges and past the Badenzai villages east to Kadal Chari. Thence north-east down a *nala* towards Ruskai, a largish village, of about 50 houses; about 1 $\frac{1}{2}$  mile further cross the Zhob river, just below a *bund*, whence water is taken off in irrigation channels on both banks. Water, in stream, quite 40,000 gallons per minute.

Then work east past an old deserted fort of black stone on a mound, and thence north-east to Tora Khula or Doda 25 miles.

Returning thence, retrace steps to Kadal Chari. Thence past the Badenzai villages, follow the road hereafter described in the route from Apozai to Smakwal, as far as the bank of the Zhob river near Smakwal. Here skirt the right bank and cross a very difficult irrigation channel. Thence turn south-east and follow up a gravelly *nala* bed towards Mena, cross two very stony ranges of low hills, and passing through Mena Bazar reach camp. The distance by this route was estimated at well over 25 miles.

4	KHWASTAI . . .	21	69 $\frac{1}{2}$	Start up the river bed, and at 3 miles cross a low kotal and descend south down another <i>nala</i> among low spurs from Babarghar.
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Hence work south, bad going over stones up a *nala*. At 2 $\frac{3}{4}$  miles south-by-west, passing along hills about 300 feet above, and east of Tadozai for 300 yards further. Then turn south-south-east, and descend into the river bed, down a very steep bank for 50 yards, then go south-east-by-east for about 800 yards to 3 miles 3 furlongs. Then up over 10 feet of slippery wet rock, and 30 feet of shale on to the plain near Cot Mallizai. At 5 $\frac{1}{4}$  miles we are well between the Babar and Spira ranges; 300 yards further there is a deepish *nala* crossing with water in tiny pools; drainage still flowing towards Wani. At 5 $\frac{1}{2}$  miles descend into a deep ravine, with water in places and turn east along a dangerous ascent on a shelving hillside for 100 yards; 400 yards further reach a *chaman* and lots of oleander bush, turning south-east. At 600 yards further reach the watershed, 5,800, above the sea, at 6 miles 1 furlong.

Work north-east, and after a short descent reach the large open plain of Ghosa. The hills in every direction round the whole 360° of horizon he called Shinghar. The north and western sides of the plain are formed by Babar and Spiraghar.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 97—continued.

At  $7\frac{3}{4}$  miles the village of Shimanzai is half a mile to the right, and Gard village one mile to the left.

At  $8\frac{1}{2}$  reach river bed. General direction south-east by east. At 8 miles 5 furlongs cross a stream flowing 100 gallons a minute and work east. At 9 miles 1 furlong reach Umarzai villages, straggling over a very large area.

At 9 miles 5 furlongs cross a river bed 50 yards wide with water in pools, and at  $9\frac{3}{4}$  reach another village, with an irrigation channel flowing 250 gallons per minute.

Hence onwards the plain becomes very stony and undulating; general direction of track north-east. At  $10\frac{1}{2}$  miles reach and traverse another village, Imarzai, and thence keep on, crossing two hills and valleys; at  $11\frac{1}{2}$  miles parallel ridges of stone crop out on the surface.

At 18 miles cross a tributary of the Sawara river, with a good deal of water in pools and a flow of about 1,000 gallons visible on the surface.

At  $18\frac{1}{2}$  miles enter low hills again, and at 21 miles reach the village of Khwastai. See also Route No. XLII, N.-W.F., Vol. II.

5	BABAR . . . .	12 $\frac{1}{2}$	82
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Return from Khwastai to the point at which the low hills were entered ( $18\frac{1}{2}$  miles above),  $2\frac{1}{2}$  miles on this route; thence work north-west and cross the above-mentioned river at 3 miles at its junction with another, then work east-north-east, north-east and north over stony

hills to 4 miles, then west for another furlong, and then north, general direction north towards Torghar to  $5\frac{1}{2}$  miles, then east for 100 yards, then north-east towards the east end of Babarghar.

At 7 miles emerge on a grassy plain, good going, and cross the *kafila* route from Mena Bazar to the Vihoa. Thence to 8 miles is good galloping ground, the real Gus Sham. At  $8\frac{1}{2}$  miles reach the dry river bed of the Maraman, which is said to flow past Babarghar into the Zhob river, but which I doubt.

There are some immense boulders here at the foot of the hill on our left, and half a mile off to the left front is a mound of bright yellow sand in front of a most extraordinary ridge of rock, reminding one of a row of the colossal statues of ancient Egypt.

Go on north and cross the Maraman again at  $9\frac{1}{4}$ . At  $9\frac{1}{2}$  Kaisarghar and the Takht again show up their full length nearly due north-east.

At  $10\frac{1}{4}$  miles leave the Sham and enter low hills, and after a few hundred yards rise 100 on to another plateau. Work north-north-east to  $10\frac{1}{2}$  miles. Then north again along a valley  $\frac{1}{4}$  mile wide to  $11\frac{1}{2}$  miles.

Thence over low hills to 12 miles, reaching Babar villages and fields. The cultivation is not less than one square mile. There are at least 300 houses here.

Here the Razan river is met flowing east; and as the Maraman cannot cross it, it probably joins it not far off. There are several olive and mulberry trees here, numerous cattle and sheep, and water is plentiful. Grain and forage must be abundant, judging from the cultivation. Sadik's house  $12\frac{1}{2}$  miles.

6	APOZAI . . . .	17	99
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Leaving Babar village work round the hill, from east to north, reaching open ground after  $\frac{1}{4}$  mile, sloping upwards towards the watershed between Babar and Surghar (which they also called Torghar). Pass a big *kabaristan* and at 1 mile 3 furlongs cross the kotal, 5,675 feet,

and descend an easy *nala*, general direction north, through innumerable small olive trees. A coach and four could drive over and down this pass. At 4 miles leave the *nala*, which is full of olives, willows, and oleanders; still work north; olives without number over the whole country, millions of trees.

To the right is the Siliaza Sir and behind it Kaisarghar. The path leads on over low hills. At 6 miles it falls again, crossing and following *nala* beds. At 7 miles a great valley on our right. At 9 miles reach the drainage from the Siliaza Sir, which is here joined by a big dry river bed from Babar, which has been on our left for the last half mile. Sanghar is now on our left front. The Siliaza stream was flowing about 6,000 gallons a minute. The height of this point was 5,100'.

Hence turn north-west along the river bed past a number of rice-fields and irrigation channels, and a few old gnarled willow trees.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 97—concluded.

At 12 miles emerge on the *daman*, sloping down towards the Zhob river. Course north-west; Sanghar to the north. Work round the foot of the hills west-north-west down the numerous flood beds of the Siliaza.

At 16 miles pass a garden and trees on our right, thence west, crossing an irrigation channel flowing about 600 gallons a minute, and at 17 miles reach camp south of the village of Apozai, about 60 houses on a mound.

Unlimited space for camping; brushwood for fuel. Water abundant from irrigation channels.

Route No. 98.

FROM APOZAI TO LORALAI, *via* GWAL.

Authority.—CAPTAIN O'SULLIVAN, 1888.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
	SMAKHWAL . . .	19 $\frac{7}{8}$	19 $\frac{7}{8}$	To Gwal Hyderzai, <i>see</i> also Route No. XX, N. W. F., Vol. II.

At 5 miles pass an irrigation channel flowing about 400 gallons a minute. One mile to the right is the Zhob river and about a mile beyond it is Doda, or Tora Khula. About 2 miles to our left is Hurmai Alikhanzai village.

At 7 $\frac{1}{2}$  miles Ruskai village is 1,400 yards to our right at the foot of a range called Jhar, behind which the Zhob river flows.

At 11 miles is a steep descent of about 30 feet into the bed of a *nala* flowing from the south towards Ruskai. Follow up this *nala* sometimes in the bed, at others on the banks, to the water-parting called Kadal Chari, height 4,700 feet, distance 12 miles, ground on each side undulating hills.

Gentle descent hence onwards between Pitao and Jhar hills.

At 12 $\frac{1}{2}$  miles cross a stream flowing 40 gallons per minute.

At 13 miles village called Dasmal Badenzai on the left. At 13 $\frac{1}{2}$  miles village of Sam Badenzai on the road, and village Kach Badenzai  $\frac{1}{4}$  mile to our right. Total about 80 or 90 houses. The *nala* down which we have come now turns off to the right to join the Zhob river, which is at this point only about  $\frac{3}{4}$  mile distant.

The huts in the Badenzai villages are made of limestone slabs, and thatched with reeds, like the others in this district, but unlike them, have no coating of mud on top of the reeds.

At 13 $\frac{1}{4}$  miles pass a big *kabaristan* with one tamarisk tree.

Course now south-west, on a wide open plain, reaching to Smakhwal in front, and to Spiraghar on the left, past Wani.

At 13 $\frac{1}{2}$  miles cross another drainage flowing to Zhob river. From 14 miles go south to 15 $\frac{1}{2}$  miles; thence south-west. At 16 miles go south, again passing close to another Badenzai village of 40 odd houses.

Hence go on across cultivation and numerous irrigation channels, with low hills on the left from 17 miles 5 furlongs to the right bank of the Zhob river, which is reached at 19 $\frac{1}{2}$  miles. Cross the river, here about 40,000 gallons or more per minute, and work round the south side of Smakhwal, which is a huge limestone ridge, perfectly vertical, about 900 feet high. At 19 $\frac{3}{4}$  miles pass the centre of Smakhwal, *i.e.* the point below the highest peak nearest the river. Space, water and fuel, also camel-grazing sufficient for any force. Height of camp, 4,675 feet.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 98—continued.

2	GWAL . . . . .	16	35 $\frac{7}{8}$	Leave camp, cross large dry bed of tributary and proceed in direction of Kan, open plain, bad going if wet. After $\frac{1}{4}$ mile course about 230°, pass at $\frac{1}{2}$ mile <i>nala</i> , straggling village, few houses, but several trees $\frac{1}{2}$ mile to the right. At 3 miles reach Kan rock.
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Road has wound considerably thus far to avoid ditches. The river was crossed 100 yards north-west of Kan—1 mile further cross wide, sandy, shingly bed of Sawara river. This bed is the boundary of two tribes, *viz.* Abdallazais (Umar Khan) and Alizais (Shingul).

Go on to 10 miles, gradually edging to south side of plain across unlimited cultivable and cultivated ground.

At 11 miles ascend about 50' up a rocky slope on to a level *ghabarg* (the name given in this country to all narrow valleys). About 200 yards wide between ridges 50' high leading to river at 12 $\frac{3}{4}$  miles. After turning round corner into a similar valley with a higher ridge on the left at 12 $\frac{1}{4}$  miles. Name of valley at crossing, Landai. Previous *ghabarg* Kankri Bari. Name of crossing, Musafirpur.

Cross river, broad muddy bed, and go on through tamarisk jungle or keep along path on south bank through low hills. At 13 miles cross again bad quicksandy bottom and get into another *jhow* jungle to 13 miles 1 furlong, where the open plain is again reached. The hills on left,  $\frac{3}{4}$  mile distant are called Band, the cultivated ground Beli. At 14 miles a few huts. There is a great quantity of *lana* the best grazing for camels in these parts, all along this plain, but it is now withered by the frost. At 14 $\frac{1}{2}$  miles Zhob river, 80 yards to the right, several small watercourses. The hills below Gatkai or Tang to the south-east are Narij Guchkai. Height of camp, 4,775'.

3	GWAL HYDERZAI . . . . .	17 $\frac{1}{2}$	53 $\frac{5}{8}$	Across plain, general direction south-east, cross river-bed, dry, several times. Much cultivation at 5 miles.
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At 8 $\frac{1}{2}$  miles enter hills properly called Gatkai, and pass through Tang defile. At 9 miles 5 furlongs and 8 miles 6 furlongs two villages called Jan Muhammad, about 50 houses. This defile has open, broad, firm, shaly bed, hills on each side of easy slopes, no precipitous cliffs and many open spaces.

At 9 $\frac{1}{2}$  miles water, about 30 gallons, flowing. Keep to the right the whole way whenever the *nalas* fork; at 9 $\frac{3}{4}$  miles the stream is quitted. At 11 miles cross water-hed and descend gradually through a *ghabarg* (beautiful going when dry) named Tatak. At 15 miles cultivation, a tower and a few huts. At 17 miles Shinkai hill about 500' high, is on our right, and behind it the river flowing between banks 20 feet high. Camp at 17 $\frac{1}{2}$  miles. No grass or fuel on the spot. Height, 4,850'.

4	BARATH KHEL . . . . .	11 $\frac{1}{2}$	65 $\frac{1}{8}$	Skirting hills, at 3 $\frac{1}{2}$ miles, reach Jalaldin Ruskai village and cemetery. Turn round spur to south-east and leave Zhob valley. At 4 $\frac{3}{4}$ miles Ulgai village (a fort with broken walls) on right, enter broad shingly bed of Ulgai river. At 5 miles Sharan village on left. At 5 $\frac{1}{2}$ miles
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pass between two hills, reach a small *chaman* and go on over stony plain called Dasht to 7 miles, then over undulating stony ground to 8 miles, then enter bed of *nala*, with water in small pools, to 8 miles 1 furlong, then over stony ground as before. At 9 $\frac{1}{2}$  miles reach the top of the Girdi Maghzai Chari and descend gently to cultivated valley of Girdai; at 10 miles enter Gwazh *nala* and wind round to north on west bank of *nala*. At 10 $\frac{3}{4}$  miles enter Wash valley, Saryai Chari to the left, Parath Khel villages to the right; at 11 $\frac{1}{2}$  miles halt. Open cultivated valley a mile wide, about 100 houses, several towers; fuel and grass scarce; water plentiful; a few trees of *Populus euphratica* here. Height, 5,200'.

5	LORALAI . . . . .	26 $\frac{1}{4}$	91 $\frac{3}{8}$	At $\frac{1}{2}$ mile from camp go east, pass through gap, and turn south; leaving the river, which flows east to Marra <i>tangi</i> , go on across open valley, passing a few huts to 1 $\frac{1}{4}$ mile, where turn east over a kotal 150' high over limestone in 1' beds, edge upwards, then work south-east down
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a *nala* to 3 $\frac{1}{2}$  miles in a valley,  $\frac{1}{2}$  mile wide, where there is a little water.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 98—concluded.

At 8 miles enter dry bed of a wide *nala* or river, and follow it against the slope to 8 $\frac{3}{4}$  miles, where it winds west, and we ascend its right bank and leave it. Thence along a valley rather intersected by watercourses; at 11 miles any amount of *sabar* grass; a few yards further cross the water parting. Valley nearly 2 miles wide and several miles long, lots of grass, but no water from 5 to 12 $\frac{1}{2}$  miles, where there are one or two holes in the shingly bed of a *nala* containing a little. At 12 $\frac{3}{4}$  miles a Kibzai hamlet  $\frac{1}{4}$  mile to the right, across the *nala*, whose course we have followed for the last mile or so. At about 14 to 14 $\frac{1}{2}$  miles there are a few shepherds' wells and troughs, but at present they contain only a very little dirty water. At 15 miles a few huts, across the river-bed. At 16 miles enter stony bed. At 16 $\frac{1}{2}$  miles a few shepherds' wells in the bed, where we halted and watered our animals. At 16 $\frac{3}{4}$  ascend about 150' over a spur and return to river at 17 $\frac{1}{4}$  miles and keep along left bank. At 18 $\frac{1}{2}$  miles a few more shepherds' wells at entrance to Torkhezi pass, which is about 80 yards wide—stony bed; hills on each side, easily crossed from this direction. The pass runs nearly due south for  $\frac{1}{4}$  mile to 18 $\frac{3}{4}$  miles, and then bends south-west for 150 yards, then south again for 500 yards. The hills are of thinly-stratified limestone, average 1 foot beds, a good deal tossed about. At 19 miles emerge into the Bori valley; hills difficult to crown from Loralai side. Turning south-west, at 20 $\frac{1}{4}$  miles, reach irrigation channel, about 300 gallons, and at 21 $\frac{1}{4}$  miles Dargai village. Thence to Loralai across the Bori valley.

Route No. 99.

FROM KINGRI TO MURGA, *via* KOT MUHAMMAD KHAN AND MUSA KHEL BAZAR.

*Authorities.*—CAPTAIN G. H. W. O'SULLIVAN AND CAPTAIN MACDONALD, 1888.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KOT MUHAMMAD KHAN.	18	18	<i>Vide</i> also Route No. XLIV, N.-W. F., Vol. II. Height of Kingri post 4,100 feet. The road is commanded by the hills on either side, and at several points could be easily defended
2	MUSA KHEL BAZAR	20	38	Kot Muhammad Khan to Musa Khel bazar, 25 miles by the longer and easier route, and 18 miles by the shorter; the latter crosses into the Musa Khel Sahra by a low but rough pass. The <i>nala</i> , which is followed to the pass at the 11th mile, is called the Rud. The

with small loss by an enemy posted on western side, after which the road crosses the Kingri river, which here makes a sharp bend to the west; from this point the ground is good going, with several ascents and descents of 50 to 100 feet, and several river crossings, till Kot Muhammad Khan is reached. The path constantly crosses the bed of the stream, which on an average is about 50 yards wide; occasionally the stream sinks through the bed, but more usually flows along the surface and is about 3 yards wide and 8 inches deep, forming here and there large and deep pools, full of fish; the valley is well wooded. Good grass, fairly plentiful, and water along whole route in abundance. It is shut in on either hand by precipitous hills; those on the east being practically inaccessible. About one mile from Kot Muhammad cross a large stream, flowing in an easterly direction, bed about 100 yards broad, but water here lost among the stones. The road runs with the river the whole way between the parallel ridges of Shkar and Toresha. See Route No. 91 from Mangrotah, for further details.

Route No. 99—continued.

pass is called Dabar *tangi*. It took 160 men 3 hours to make it passable for a force. It is practicable for laden mules carrying the regulation 2 maunds. Immediately after leaving camp the path crosses a large stream, coming apparently from Kajuri; this stream is about 150 yards wide when in flood, and would then require 2 days' fair weather before it would run down sufficiently to be passable for infantry. One and a quarter mile further the path crosses a low range of stony hills, then over flat open ground, free from stones, for about 1¼ mile. At the 4th mile road again crosses a small stream, liable to freshets, running between high banks; after this to the 8th mile there is excellent going over flat, stony plain, interspersed with scrub and small thorny trees. After this the path becomes broken and runs principally along the bottom and right bank of the *nala* forming the pass; at the 11th mile the pass is entered, the road is in parts very bad, and after heavy rain would always require a little remaking to make it passable for baggage animals. After about 600 yards the road again opens and leads in easy gradients over the highlands, still continuing to rise till the 15th mile, when the descent commences towards Musa Khel bazar; up to this point the general character of the ground over which the path leads is open and stony. The descent is very gradual and might be about 700 feet in the next 5 miles. This latter portion is generally free of stones and runs through a country covered with patches of high grass, low trees and bushes. The last mile before reaching camp has been cultivated and is formed in low-terraced fields.

The road for the first 11 miles is open and free from bush, winding among low black mud-stone hills over stony ground. The top of the pass is also open and stony. No water fit for drinking is met with after the pool at the 11th mile, and this would probably dry up in the early summer (May and June), and fill again during the July storms. With a little skilled labour this route might be made an excellent one, even for laden camels; the scarcity and unreliability of the water-supply along the road being its chief drawback.

The longer road is very easy; the mountain range shown on the survey maps 12 miles from Kot Muhammad Khan blocking the Hamzai valley does not exist; practically the whole route from Kot Muhammad fort to the entrance of the Musa Khel Sahra forms one long valley, broken here and there by low hills and ravines. Water and wood along the route are fairly plentiful; the ground is in parts very stony, and grass suitable for cutting with sickles scarce. About half-way to the bazar (by the longer route) cultivation is met with in large patches. Water in plenty, of good quality, within 50 yards of the road; the stream is led along an irrigation channel and is about 4 feet broad and 1 foot deep. The ascent from the 14th to the 15th mile is very steep, and is called the Vador Chari. The height of the crest is 5,200 feet. About the 16th mile an excellent spring of water is to the left of the road about 100 yards distant from it, very large and deep and full of fish; about the 18th mile the path suddenly turns ¼ left-about and leads into Musa Khel bazar, across a dead-level plain, covered at this season with short green grass resembling "doub."

Musa Khel bazar is a collection of ruined mud forts of large area, inhabited apparently only by Hindu *baniyas*, who trade in wool, and barter in exchange cloth, small daggers of country manufacture, and looking-glasses. Elevation, 4,400'.

3	LAK	.	.	.	18	56

At first for 5½ miles the road leads along open easy country; it then enters a labyrinth of hills and follows the course of hill stream; the road is rocky and stony, although here and there it traverses flat, open valley, covered with short grass and free of stones. Machlaman is the

name of a tract in the hills running north-east and south-west. Musa Khel bazar to Pezwan Kach 11 miles. Height of latter, 5,100 feet. Pezwan Kach to Lak 7 miles.

The War *tangi* is an extremely bad path, of solid rock, running up the hill at about an angle of 35°, very slippery, with a sharp turn at its upper and lower end; this *tangi* succeeded in throwing 7 of my baggage animals and 3 horses; the ponies had to be helped up the slope by 4 men supporting the loads from behind; fortunately this was the 4th day's march, and loads were light. The stream forms a long and very deep pool between the opposite sides of the hill, so it is impossible to avoid this path. An attempt at a roadway has been made on the opposite or south side of the hill, but at the critical point, where the road meets a low wall of limestone, the path stops. This path has evidently been "made," and not "formed;" it would, however, be comparatively easy to remove any opposition at this point. But the Sar *tangi*, though easier to traverse, is a much better position for defence, and any opposition would be either at this point or at the 5th mile from bazar. The *tangi* is about

ROUTES ON THE NORTH-WEST FRONTIER.

Route No 99—concluded.

2½ to 3 miles long, and the difficult portions lead between perpendicular strata of limestone, leaving a path about a foot wide between; water and wood are plentiful along the whole route, and suitable grass fit for cutting fairly plentiful. Lak is an old Pathan camping ground or cattle pen; the ground is, however, clean, and, being free of stones, suitable as a cavalry camp ground. Such ground in this vicinity is rare, and a description is therefore given to enable others to identify it from a distance; this march, though short, is a difficult one; and I did not reach camp till nearly sunset. No supplies obtainable. The water is within 50 yards of this camping ground, plentiful and of excellent quality. Elevation, 5,250'.

4	MURGA . . . . .	13	69
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The Finger-post hill is visible from the valley, and thus furnishes an indication as to the whereabouts of the mouth of the Sir' *tangi*, which would be otherwise difficult to find. Khashkai is to the north of the *tangi* and not south, as shown on the map. Water for

drinking is to be found near two large trees at 7½ miles from Lak; this forms the head of the Shehan river, which passes within 5 miles of Mekhtar and flows into the Anambar river. Near Murga another *nala*, containing flowing water, is crossed, bed about 100 yards wide. Banks about 5 feet high; at Murga itself water is plentiful, the best for drinking purposes being found in a large clear spring to the north-east of the village, near some rising ground.

*Note.*—From Pezwan Kach to Lak Captain Macdonald has rather overstated the difficulties. The sheet rock he mentions is formed of edges of vertical strata, and thus affords a foot-hold for animals; the only mule who fell was made to fall through his driver keeping too close to the preceding one. The road on the opposite side of the defile at this point is in perfect order, and all our camels came over it without any difficulty.

Route No. 100.

FROM BARA KWAL (KAHKAO) TO MENA RAZAR, *via* THE SHERAN TANGI AND GAT.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SHERAN or TAODA . . . . .	10	10	From Bara Kwal the road goes north across Kahkao. At 1 mile the high road from Bori to Murga Kibzai, a well-beaten track, is crossed at right angles.

At 4 miles the road turns north-west and goes over a low stony ridge which breaks the plain. Both the ascent and descent are easy and gradual.

At 6 miles the road leaves the *nala* by its left bank and begins a gradual winding ascent to a low kotal, or *col*, connecting two low parallel ridges. The top is narrow and there is an immediate descent along the northern side of a long ridge above the left bank of a small ravine. The track is stony, but fairly good, and was much improved by the sappers.

At 7½ miles the road reaches the Sheran *nala*, up which it proceeds first north-westward and then northward for the rest of the way. The *nala* contains a good stream of running water and is full of tamarisk; the low hills through which it runs are covered with scrub and have grass in all the rifts. The *nala* is about 20 yards wide.

At 10 miles the road passes the hamlet of Toda Kala on the west, and, ascending the left bank of the stream, reaches a wide stony plain—a sort of basin, surrounded by low hills. Here there is ample room to camp above both sides of the stream. Water good and abundant. Tamarisk for firewood in the stream plentiful, and grass on the hills. Camel-forage abundant.

Toda Kala, or Sheran, is a hamlet of 6 Kibzai huts near a tower, on the right bank of the stream.

<sup>1</sup> Finger-post hill, a peculiar feature on the ridge north of Murga; it looks like the fingers of a hand pointing upwards.



Route No. 100—concluded.

2	GAT	16	26	Leaving the camping place, the road crosses the stream, both banks easy, and goes north-north-east over a level gravelly plain. At 1 mile it reaches a high watershed, broken by low undulations, and a few deep water-courses.
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At 5 miles the road ascends by an easy path and crosses a low kotal over the lowest point in a range which here runs east and west. The top of the kotal is very stony and rough on account of perpendicular strata of limestone which protrude above the surface, the greater part of the ridge being crested with a dyke of rock; but this part of the road was much improved by the sappers.

Hence there is a long easy descent along a well-marked path, to a small valley, where the road, rounding the shoulder of a hill to the west, enters the Gazlai valley, a considerable tract of open country, across which it goes north-north-west.

At 9 miles the Gazlai *nala* is crossed, a dry watercourse about 30 yards wide, with low easy banks, full of tamarisk and coarse grass.

At 11½ miles the road branches off north-north-east to Gat, near a burial-ground. Here there is some perennial water in the Gazlai, good ground to camp and abundant fuel and camel-grazing, and some grass. The Zhob is about 4½ miles.

3	MENA BAZAR	12	38	At 2½ miles the road crosses a low, easy, but rather stony ridge, a spur which juts out from the higher ranges on the south-east, and goes east-north-east along a stony valley between two parallel ranges; road good. The valley
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is at first about half mile broad and expands gradually. It and the hillsides are sparsely wooded with wild olive, and there is some grass.

Just beyond this a track diverges to the right to the hamlet of Kobara, distant about 1 mile. It consists of 10 stone huts belonging to the Khoramzais and Usmanzais, sections of the Ishmailzais; Malik, Basharat. The ground around is called the Khwazba Zamin.

At 6 miles the road descends a few feet into a small *nala* whose course it follows north-eastward. The *nala* widens as the road proceeds; the banks are easy; the bed is composed of fine clay gravel, and is smooth and good going. At 8 miles there is a spring in the *nala* and running water for a few yards.

At 9 miles the road turns north and enters the Sawara Rud, follows it through a gap in a low rocky ridge, and, crossing the stream, ascends its right bank and goes northward over a stony plain, intersected by a few small watercourses. The gap is about 40 yards wide, the hills easy on both sides. There are some ledges of rock and boulders to be avoided at the gap, but no difficulty. The Sawara here contains an abundant stream of good water. Below the gap, the valley of the Sawara is at first about half mile wide, widening out rapidly as it descends into the Zhob valley.

At 10 miles the road crosses the *nala* and goes over a stony, sandy plain above the left bank.

At 11 miles the road enters the *nala* and follows its bed, which is here dry. Most of the water is drawn off by ducts just above, which carry it along the right bank. The remainder is absorbed in the stony bed of the stream.

For the next half mile the road is indifferent.

Route No. 101.

FROM THAL (CHOTIALI) TO THANISHPA, *viâ* ANAMBAR.

*Authorities.*—CHASE, ZHOBI VALLEY EXPEDITION, 1884; SANFORD'S REPORT, 1885; G. B. SCOTT.

No. of Stages.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SHABAZ CHINI . . . . .	11	11	Road over open plain, general direction about east-north-east. Plain dotted with villages. Pass Manji village at 6 miles. Camping ground in open valley. Good water from a spring. Forage, grain, and wood procurable, but should be arranged for beforehand.
2	LAKI . . . . .	13	24	General direction north-east. First 3 miles over billy ground, afterwards over open plain the whole way; easy going, no obstacles. At 3 miles pass the Sanao villages, and at about 7 miles China on the right bank of the Anambar river. Running water in bed. The Sha-
dian villages are passed at 9½ miles, camping ground on open plain, about a mile south of the Samundar villages. Water good and abundant. A small quantity of supplies can be collected, notice being given.				
3	ANAMBAR . . . . .	12	36	Road northwards past the village of Samundar. At 4 miles a low easy kotal is crossed, between the Speragat hill on the east and the low spurs of the Bagrai range on the west. The Anambar defile is then entered, about 4 miles wide from hill to hill. The pass throughout is open and
going easy.				
Camping ground on open plain at the junction of the Bohai and Anambar rivers, about 3½ miles south-east of the Wahar villages. Grass, fuel, and camel-grazing plentiful.				
4	SABBA . . . . .	17	53	From the camp at Anambar two tracks lead northward, one above each bank of the Marra stream. The best is that above the right bank. This leads north across the Bori valley, over stony ground, with a gradual ascent. Road good.

At 7 miles the road passes the village of Marra, about 100 yards to the west. Here there is a little cultivation, irrigated by a *karez* from the Marra Tangi, and a small orchard. There is a good camping ground north of the village. Water good and abundant from the *karez*, firewood, small tamarisk in the Marra *nala*, about 300 yards to the east, camel-forage abundant, grass scanty.

The road continues northward over the open plain, and at about 8 miles crosses the *karez*. Immediately beyond it there is a rather steep descent into, and ascent from, a small *nala*. Two more similar *nalas* have to be crossed during the next 150 yards. It is better for laden animals to turn to the right down the first *nala* and gain the Marra stream, where the bed is smooth and easy going.

At about 8½ miles the road enters the hills by the Marra Tangi.

The *tangi* is only about 300 yards long.

At about 9½ miles the road descends the left bank of the *nala* and turns up it.

Route No. 101—continued.

At 11½ miles the road crosses to the right bank, above which it goes for a short distance, when it again crosses to the left bank, and goes over soft ground through grass and *ruds*.

At 12¼ miles the road descends into the river, rounds a ledge of shut rock which projects into the stream, and continues up the stony bed of the *nala*.

At 16 miles it descends into the stream, and turns north through a gap in low craggy hills.

The stream goes north-north-east, the road continues north over an alluvial flat, *bunded* for cultivation, to the village of Sarbara (or Sabra), reached at 17 miles. There is ample room to camp on the flat if the crops are cut.

There is also a good camping ground for 3<sup>d</sup> battalions on stony ground north of the village, but the rear of the camp would be commanded by spurs from the hills to the north.

Water, good and abundant from a *karez* under a line of trees to the east of the village. Camel forage abundant. There is a little grass and some small tamarisk for fuel in the stream to the east. Moderate supplies of maize and *kerbi* were procured by the commissariat.

The road during this march presented no difficulties to the baggage animals.

5	CHINA (Baratkbel)	9	62	From Sabra the road goes north-eastward across the flat, and about ½ mile passes through a <i>tangi</i> , about 200 yards long and 50 broad, the hills lofty, but accessible on both sides. The road turns north through the gap, following the bed of the stream.
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It then goes northward over a flat, partly stony, partly alluvial, to the village of China, reached at 1½ mile.

The road passes the village, and continuing north-north-west, enters a tract of low, rolling hills, spurs of the high range on the west.

The stony plain above the right bank would afford an excellent camping ground, if necessary. Camel forage is abundant; water good and abundant in the stream which also contains a little grass and small tamarisk. A little *bhusa* and *kerbi* procurable at Daud after the harvests.

At 6 miles the stream goes north through a low ridge, which breaks the plain. Here it is better to descend into it and continue along its bed for about 200 yards, and on entering the Shairan valley re-ascend its right bank. There is a tract over the hill above the right bank, but it is stony and rough. The gap through the hill is wide and easy. There is a small ruined *sangar* on the hill above the left bank.

The road then goes north-north-west across the Shairan valley over alluvial soil. The Shairan villages (3 hamlets) are about 1 mile away to the right.

At 7 miles the road turns north-west through an opening in a low range on the north of the Shairan valley and goes north-west, diagonally across the Naria valley, a bare expanse of *pat*, overlain in places with stones, stretching for many miles east and west.

At 8 miles a small deserted tower is passed on the left.

At China there is ample room to camp east of the village. Water good and abundant in the stream. Camel forage abundant; grass and firewood scanty. *Bhusa*, maize, and *kerbi* were procured by the commissariat.

The China valley is about ¾ mile broad from north to south, and stretches for many miles east and west between low hills. The village is situated on the eastern slopes, chiefly of a low detached ridge, which divides the valley longitudinally. China is an irregular walled village of 50 houses; the people are Baratkhels and a few Rustamzais.

Two roads lead from China into Zhob, (1) that followed by the troops to Alikhel here described; (2) one to Hyderzai (*vide* Route No. 98).

6	ALIKHEL (ZHOB)	14	76	From the camp at China the road goes west through the village, along the northern slope of the detached ridge. At 1 mile this sinks into the plain, and the road continues west through rather broken alluvial ground, but the path is well beaten and easy.
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At 2 miles the road turns north-west through a wide easy opening in the hills to the north, and then begins gradually to ascend a wide, rolling, stony plateau, which is the watershed between the Bori and Zhob drainage. The crest of this is reached at about 4 miles. Thence there is a sudden fall of the country of about 400 feet. The road turns west and goes down the fall of this drop by an easy track, about 3 feet broad, into a *nala*, along which

Route No. 101—concluded.

it winds northward. Road easy. The banks of the *nala* are high, but accessible at very few yards. At 6 miles there are two pools of perennial water. At 7 miles the road ascends the right bank of the *nala* and goes round the shoulder of a hill on the left; thence it goes northward, gradually descending the stony *doman* of the hills, through open country into the Zhob valley. At 11 miles the *pat* is reached and the road goes over land, *bunded* for cultivation. At 12 miles the fort of Alikhel is passed about  $\frac{1}{4}$  mile to the right. This consists of a square enclosure, built of logs, the walls about 10 feet high, with circular flanking towers at the salients.

Thence the road goes north-north-west across hard, open *pat* to the bank of the Zhob river; the Lawara Rud is reached at 14 miles. There is a crossing at this point, and some standing crops on the north side of the river were brought by the commissariat for forage. Excellent camping ground; water good and abundant from the river. Abundant *lani* for camel-forage; no grass. Southernwood and small tamarisk, in the river, were used for fuel.

Route No. XX, N.-W. F., Vol. II, is crossed here.

Baggage animals experienced no difficulty the whole way along this route from Bori into Zhob. There is running water in the Marra stream from China to Anambar.

7	BADSUZAI TANGI	12	88
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Easy march, road avoiding broken ground near the Lora, to the entrance of the *tangi* after passing the small hamlet of Sahibzai, where there are a few small wells or pools in the bed of the watercourse. During the greater part of the year a running stream of water continues

along the Toi from Khaisor to the exit of the pass, and sometimes breaks out again near Bad-suzai. In November 1884 the supply was limited to a narrow strip of running water and some large pools in the bed. There is a large clump of tamarisk trees between the Toi and Tora Khula, where a supply of firewood can be obtained. There is good grazing between the *tangi* and Shaibzai.

8	MOGUL KHAZANA	15	103
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The route follows very nearly the bed of the Toi throughout. A few windings and pools are turned by gentle ascents and descents over the ends of spurs. The hills on either side appear steep and formidable when approached from the south, but, if occupied by an enemy, a half

mile turn to right or left generally shows an easy entrance through what appeared a continuous wall, and on riding round through this, the backs of the spurs are found to be small tablelands, or the hills are quite isolated and have open country suitable for cavalry behind them. At about 14 miles a short, rather narrow, defile between high peaks must be traversed, after which the open valley of Khaisor is entered. Here there is water and grass in abundance. The encampment is generally made near a remarkable pillar of red earth, formed by denudation of surrounding soil, known as Mogul Khazana.

9	THANISHPA	10	113
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No details. Mogul Khazana is probably near stage 12, Route No. LXII, N.-W. F., Vol II.

The following stages—

From Thanishpa to Ghazni were given by natives recently returned from Kabul, *vid* Ghazni:—

Nani, Katawaz, Dela, Tanai and Yet, of the Suliman Khels, Dagar, Wali Murga Thanishpa.

From Thanishpa to Nawa of the Ghilzais:—

Lemai, Wali Murga, Nari Tirkha, Girdi Zangal, and Sara Jangal, of the Murdanzais and Yet, Zangla, and Nawa of the Ghilzais—A. G., *Baluchistan*, 1892.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 102.

FROM LORALAI TO CHINJAN, *via* THE KUHAR TANGI.

*Authority.*—G. B. SCOTT, 1884.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SIRKI ZANGAL . . . . .	13	13	The road runs across the Hori valley in a direction a little west of north, past the villages of Shah karez and Jar karez (about 5 and 6 miles respectively) to Sirki Zangal at the southern end of the Kohar <i>tangi</i> .
2	MANGAS . . . . .	9	22	The road enters the <i>tangi</i> and follows the defile for about 3 miles. The <i>tangi</i> is some 200 yards wide, and the road level and easy. Leaving the defile, the road continues northwards near the bed of the stream, perfectly level, to the Mangas valley.
3	AKHTARZAI . . . . .	11½	33½	From the Mangas valley a short defile leads to the pass overlooking Akhtarzai, or turning to the right from the junction of the Mangas and Uzhda drainage, a march may be made over the Kafir or Khrapa <i>tangi</i> down to Alikhel.
4	CHINJAN . . . . .	33	66½	At 3 miles, village of Talot (Salot ?), then 10 miles through broken country, commanded by hills, but road rideable, thence a short, rather steep ascent of 350 feet in half mile, over which cavalry can ride in single file.  At about 13 miles, cross a kotal (6,000 feet), thence over a perfectly open valley, the Shungluna. This stage is only fitted for a raid.

Route No. 103.

FROM LORALAI TO AKHTARZAI, *via* THE TORKHAIZAI ROUTE.

*Authority.*—ZHOB VALLEY EXPEDITION, 1884.

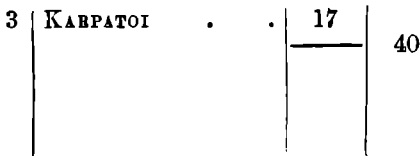
No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	DILAI . . . . .	13	13	<i>vide</i> Route No. 96, stage 1.
2	TORKHAIZAI WAR . . . . .	10	23	Pass to the north of the village of Lahor, and keep above the left bank of the Babai stream, here a dry watercourse. Road good.

Route No. 103—continued.

Passing to the north of Dargai the road then goes west-north-west over stony ground, gradually ascending the *daman* of the Torgarh range.

At 9 miles the entrance to the Torkhaizai pass is reached.

At 9½ miles the *nala* forks. The road is to the left. The *nala* to the right only leads into the hills. At 10 miles the road leaves the hills and enters a plain, about 1 mile wide, called the Torkhaizai War. Here there is room to camp 8 battalions, but the camp is commanded by undulations all round. Abundant small tamarisk for fuel in small *nalas* which drain down from north and east and west, just before the entrance to the Torkhaizai pass. Grass moderate in the *nalas*. Water good and abundant from a spring near the junction of the *nalas*. The Torkhaizai is a perfectly easy pass and quite practicable for wheeled artillery and Heyland carts. The Torgarh range through which it lies is singularly bare and does not even produce the scrub and turfs of grass usually found on hill slopes. The valley between the Torgarh and Kohargarh ranges is about 4 miles broad from north to south, sloping gently south and west.



The road goes northward up a wide stony *nala* full of tamarisk and coarse grass. At half mile it ascends, by an easy path, the left bank of the *nala*, till it reaches a plateau, about 40 feet above the *nala* bed.

It continues northward across this stony plateau, ascending very gradually for 4 miles. Road excellent. At 4½ miles the southern spurs of the Kohargarh range are reached. The road here descends by an easy path down its right bank into a deep *nala*, about 40 yards broad, up which it continues northward, through low accessible hills. The *nala* is here called the Churmai, and is the main stream that goes to form the Torkhaizai. It is full of small pistachio and gwan trees, and contains a little coarse grass. The bed of the Churmai is smooth, and the road good the whole way. At 5 miles the *nala* makes a turn to the west and gradually bends round again to the north, passing through the main range of the Kohargarh. There is nothing of the nature of a defile, and the hills on both sides, though high, are easily accessible. At 7 miles the road ascends the left bank of the Churmai and goes east-north-east over an undulating valley, between parallel ranges about half mile apart, ascending slightly. At 8 miles it turns north, still ascending towards open country.

At 12 miles the road reaches a long crescent-shaped rain-pool, situated in a few acres of short turf. This part of the Uzhdā is a basin in which rain-water collects, and must be flooded after heavy rain. There would be a good camping ground near the pool, in which it is said that water may be confidently expected, and there is good grazing round it for a few animals. But there is nothing else but a little camel-forage. Three roads diverge here. One bends a little to the eastward and goes over a rocky kotal over the hills about 2½ miles in front, and thence descends into the Karpatoi stream near the camping place. The top of the kotal is very rocky, and the descent is bad and would cost much labour to render it practicable for laden animals. It is, however, a well beaten track and used by bullocks and donkeys, but only when unladen. Before reaching the hills it passes east of a small tower, round which are cultivation *bunds*, but the place appears to have been abandoned for a long time.

Another road goes north-east over the Alikhel kotal to Alozai,—*vide Note A*.

The third road—that used by the troops and a convoy—goes north-west diagonally across the plain to a place where the hills sink almost to its level. Here, at 14 miles, it turns north over a slight easy kotal; the hills on both sides low and easy; and goes north-east down a long rather steep and rocky descent to the Karpatoi stream. Some labour was expended by working parties over this part of the road, but the gradient is steep and the ascent would be rather trying for laden camels. The road then follows the stream, the bed of which is smooth and good going, in a general east-north-east direction, through high but accessible hills. At 17 miles there is some open ground, and near here the first road mentioned joins this one.

There is room to camp a small force. Water good and abundant in the stream. Camel-forage and tamarisk for fuel abundant. Grass moderate. The camp is commanded from several points, but the hills are all easily accessible.

ROUTES ON THE NORTH WEST FRONTIER.

Route No. 103—concluded.

4	AKHTARZAI . . . . .	8	48	The road continues east-north-east, following the Karpatoi stream, in which there is abundant running water, the hills becoming gradually lower as the road proceeds, and the valley of the stream wider. At 6 miles the road ascends the left bank of the stream, which goes north-east, and its water is absorbed on issuing from the hills, and goes northward, winding through low, bare undulations. Road good. At 7 miles it reaches the Zhob valley and turns west to Akhtarzai, keeping to the south of a large tract of cultivation. There is an excellent camping ground north of the village, which is called Shangiba, near two large trees. The village consists of three small hamlets, enclosed by mud walls, containing an aggregate of 30 houses. Water is good and abundant from a <i>karez</i> . Camel forage abundant. Wood scanty. No grass, but there is considerable cultivation near the village, and <i>bhusa</i> , <i>kerbi</i> , and grain are generally procurable.
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NOTE A.—From Uzhda to Alozai 8 miles.—Across the plain, and at 3½ miles ascend to the Alikhel kotal. The ascent is easy, but the top is rocky, and thence there is a long rocky descent into a small, dry torrent-bed, which would be very trying for laden camels, though lightly-laden mules would experience no great difficulty. The ascent, however, would be rather trying.

The road follows *nala* north-eastward. The bed is smooth and road easy, through at first high but accessible hills.

At 7 miles the *nala* debouches into the Zhob plain, and the road goes north-eastward to the village. Troops would do better to turn north-west on leaving the hills and make for a large, solitary tower, across cultivated land.

Near this there is a *karez* of good water, good camping ground, and abundant camel forage; no grass, but *bhusa* might be procured, as a good quantity was found in *kaches* in this vicinity.

Route No. 104.

FROM THAL (CHOTIALI) TO AKHTARZAI.

Authorities.—CHASE; G. B. SCOTT, 1884; BROWN, 1885.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	DUKI . . . . .	12	12	Road good throughout over open country; no hills crossed on the way. At Duki is a cantonment in the centre of a plain which becomes a swamp after rain or snow. Its water-supply is carried in an open canal from the Bagho ravine, 10 miles distant, and there is no grass
2	BAGHAO . . . . .	10	22	The track leads across the plain to the gap in the hills whence the water issues, thence through the river bed and across a canal at 7 miles, thence a rise of 500 feet by a steep zig-zag, a drop of 100 feet, and then a gentle ascent to camp along the bed of the Baghao stream. The

pass can be turned by making a detour of about 5 miles, if preferred. Elevation, 4,569'.

Water good: camel-grazing scarce; *bhusa* and grain obtainable.

At Baghao are several fortified villages. A road leads from the gap at the Duki plain to Dulia *viâ* Shah *karez*. Another road leads to Kot from Baghao over a pass to the north of the valley.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 104—concluded.

3	SINJAWI . . . . .	8	30	An easy march. The track leads up the northern ravine beyond Baghao to the right of the low hills and then over an undulating stony plain. Another line may be taken straight up the Baghao valley and through the gap in the low hills to the north at 6 miles.
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Sinjawi is a collection of small villages or forts, situated in a narrow valley, with precipitous hills from 600 to 1,000 feet high on either side. A position in this valley commands the Bori, Smalan, and Baghao roads. In the centre of the valley is a hill, about 900 feet high, on a low spur of which is a good position for a small fort. There is also an isolated hill, which would be a suitable position for a fort of larger dimensions, opposite to a gap in the hills to the south.

Water in canals, the overflow of which must pass through the gap in the hills on the south. Supplies of all sorts plentiful. Camel-grazing and grass on hillsides. Elevation, 5,307'.

4	KATS . . . . .	13	43	Leaving Sinjawi the road at first runs over open country for 1½ mile to the upper Sinjawi hamlets, then enters a short defile and passess, for 1½ mile, the low hills with rather steep sides on the right, and the hamlets of Baye and Clungai, where there is good water, on the left.
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It then follows the dry watercourse known as Kanderai, flanked by high, broken ground for 3 miles, passes through a short defile, 300 yards across, at base of steep hills rising to 500 on either side; then emerging into a basin, rises gently up a spur 2 miles to the Kanderai graveyard, on a plateau about 2 miles wide. From this an easy descent may be made eastwards into the Bori valley, or else, continuing northwards through some low white hills, emerge on to the Bori valley about 6 or 7 miles from Kats, to which place the road is easy.

Here Route No. XLV, N.-W. F., Vol. II, is crossed.

5	TLARAI . . . . .	15	58	An easy road passes up an open level valley to the north-east to the Mangas, then passing up the Asiwal <i>tangi</i> crosses a kotal into the Domandi valley, where there is water at the village of Tlarai.
6	AKHTARZAI (SHINKAI BAGH).	8	66	An easy march down an open valley.

Route No. 105.

FROM DERA GHAZI KHAN TO LORALAI, *via* BHALADHAKA.

*Authorities.*—BROWN; GASELEE, 1885.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	GADAI . . . . .	9½	9½	} <i>Vide</i> Route No. XLIII, N.-W. F., Vol. II.
2	TOMBI WALA . . . . .	10		
3	SAKHI SARWAR . . . . .	9½	29	
4	RAKHI JORGE . . . . .	16	45	
5	KAB . . . . .	13	58	
6	RAKHNI . . . . .	11	69	



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 105—continued.

7	CHAWATA . . .	15	84	The track leads across the Rakhni plain, and at 3½ miles enters the Baddhi pass, through which a camel road has been made; an alternative route is by Churi-ki-munh. The pass is cleared in 2½ miles, and the track is then southerly up the Vati valley for 7 miles. It then makes a slight turn to the west into the Chawata valley, with a slight descent for 2 miles.
<p>There is water in the Baddhi pass in a stream at Chawata in pools, both rather salt. Camel-grazing, wood, and grass not plentiful. Supplies procurable. Elevation, 4,185'.</p> <p>The Vati valley is cultivated nearly the whole distance.</p>				
8	MIR HAJI KOT . . .	14	98	The tract leads for a mile through a gap in the hills, in and out of the bed of the stream, then down a broad valley, partly over firm ground, partly through cultivation, and partly in the sandy bed of a river. Several watered villages are passed on the road.
<p>The water at Haji Kot comes in a canal from Han Kua, 5 miles distant. Water is met with in several places on the road near the villages. Supplies abundant; camel-grazing, wood, and grass scarce. Elevation, 3,690'.</p>				
9	BHALADHAKA . . .	20	118	The track, soon after leaving Mir Haji Kot, enters the Han pass, turning sharply to the right. The pass is perfectly easy to Han Kua, where the valley opens out. At 7 miles a rift is entered, about 200 yards long, through which the drainage of a large area of country escapes. It is from 10 to 20 yards in width, and must be impassable at times. At 10 miles there is a short ascent of 200 feet, rather steep for camels; after that there is a gentler descent for 10 miles to camp, winding round the hills. A short cut across the hills can be taken by horsemen from the summit of the pass to camp, saving about 2 miles. Water plentiful, but bad; grass, wood, and camel-grazing abundant. No supplies; country uninhabited. This is a halting-place much used by raiding parties. It is a long, but not difficult march for camels. A cart road could easily be made along this line. There is a spring of bad water at the 9th mile. Gypsum appears in several places in the hills. Elevation, 4,153'.
10	SHPELAI . . .	8	126	A short and easy march for camels. The track leads through gently undulating hills the whole way, gradually descending with the river, which is crossed four times. Water near the line of march the whole way; it improves in quality as it descends the river-bed. The salts of magnesia and soda which it contains gives men unaccustomed to it diarrhœa and vomiting. The camping ground at Shpelai is occasionally flooded. Grass, camel-grazing, and fuel abundant. No supplies; country uninhabited. Gypsum beds, from which excellent plaster of Paris might be made, close to camp. Elevation, 3,862'.
11	PALIANI . . .	13	139	On leaving camp the route leads through the Shpelai defile for the first mile. This is a rift in the hills through which the stream passes. The rocks rise on both sides perpendicularly from the river bed, and the track necessarily follows the bed of the stream for about ½ mile. There is no difficulty for baggage animals when the river is at its ordinary level. After heavy rain, however, it is subject to rises which would make the defile impassable for two or three days. The valley gradually widens out, and finally issues on an alluvial plain, covered with grass and tamarisk trees. The Shpelai <i>tangi</i> is about 200 yards long and about 20 wide at the narrowest cutting through the edges of vertical beds of soft conglomerate. The water is in parts 3 feet deep. It would be possible to blast out a road at a high level through the rocks, crossing a side ravine with a bridge, or another route might be found to the east of the river, through the low hills, where there is a camping ground clear of floods. Water at camp in pools dirty, but soft. No water after leaving Shpelai <i>tangi</i> ; wood, grass, and camel-grazing plentiful; no supplies. Large flocks and herds on the plain and hills. Elevation 3,350'.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 105—continued.

12	GUMBAT . . . . .	10	149	The track is nearly level the whole way, over alluvial plain, studded with trees and patches of grass. Apparently the ground is soft and sticky after rain. There are a few pools of water in ravines near the line of march. At Gumbat the Narechi stream runs till June. Bottom soft and holding; water good. For the hot weather supply there is a spring, the water of which should be collected in <i>pakha</i> tanks. Grass, camel-grazing, and supplies plentiful. Large tamarisk trees and the Euphrates poplar grow on the Narechi river. The ground is good for manœuvring when dry, but after rain is soft and sticky. Elevation, 3,250'.

13	MANJI . . . . .	15	164	Two lines may be taken. The line skirting the low hills through Chotiali, then across the <i>pakha</i> bridge, and across the plain to Manji, is the best for baggage animals. The other crosses the Narechi at Chotiali and two branches of the Anambar by fords; the first a hard ford, with a paved stone bottom, the second a pebbly hard bottom, and the third a soft and sticky bottom. The plain is soft alluvial soil, covered in parts with tamarisk bushes, camel-thorn, and cultivation. Probably difficult to cross after rain.

Two waters mingle in the canals at Manji; one from Shabash China is salt, and that from Manji Sir is sweet. When troops march through here the salt water ought to be cut off for two days beforehand. Water at several places on the road.

Grass, camel-grazing, and supplies all abundant at Manji. Firewood should be gathered on the march. The camel-grazing is so good on this plain that natives choose it as a camel sanitarium. Elevation, 3,350'.

14	DUKI . . . . .	12	176	The road is over a hard gravelly plain, and used for cart traffic. At 6 miles the ground becomes soft and pliable, and for cart traffic should be metalled or laid with grass. For details of Duki see Route No. 104.

For alternative route from Bhaladhaka to Duki see Note A.

15	BAGHAO . . . . .	10	186	} <i>Vide</i> Route No. 104, stages 2 and 3.
16	SINJAWI . . . . .	8	194	
17	LORALAI . . . . .	16	210	

From Sinjawi village the path passes over stony ground along the base of the low spurs to the north; bending round these spurs, it crosses the plain in an east-north-east direction, and at 2½ miles enters a valley, bounded on the east side by the Sinjawi hills, and on the west by the Lowari range. Making an easy descent and crossing a *nala*, the path for half a mile skirts the base of the low hills to the east, and then rises by a rather trying ascent to the plateau called Lowari-Chari. (A small amount of labour would make it easy.)

About 4 miles from Sinjawi, the Saldarai hills of the Smalan Dumars commence on the east of valley. At 5½ miles the valley opens laterally to the south-east, but there is no practicable outlet in this direction into the Baghao valley. At 6½ miles from Sinjawi fort is the Inzarghat levy post. At 9 miles the Lowari range (Utman Khels) ends, and its continuation forms the Sarkari hills.

There is a hill path between these hills leading to the Utman Khel villages of Monara, Rodlin, etc. At 11½ miles an abundant stream of good water is met with, and half a mile on is the village of Kot. The country here is cultivated and open, and there is an abundance of good hill grass and water.

From Kot the road passes over a level plain; at 15½ miles cross the pebbly bed of the Loralai river and Loralai cantonment is reached. Water is abundant, good camel-grazing, and plenty of grass.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 105—concluded.

NOTE A.—From Bhaladaka to Duki via Thal.

1	BAHAMWALA KACH . . . . .	7	7	After half a mile a small stream is crossed, and at the 2nd mile pass through hills by a narrow cut in a low wall of rock, impassable at present for field artillery. From here to the camping ground, with the exception of a steepish descent at the 3rd mile, is fair going. Supplies plentiful. Road practicable for field artillery,
	none; camel-forage, water, wood, and grass except where noted.			
2	BARAMZAI . . . . .	9	16	The road passes west through a succession of valleys up to the Narlehri pass, the head of which is reached at the 4th mile. The road leads up the stream and through a pool of water, 5 feet deep, and again through another pool, 3 feet deep. This pass would probably become impassable in wet weather, as there must be a great rush of water through it.
	The road now becomes very stony and frequently crosses a stream. The valley along which the road goes is a jungle, and at the 6th mile is about half a mile wide.			
	The camping ground is good; supplies none; camel-forage, water, wood, and grass plentiful.			
3	CHOTIALI . . . . .	20	36	The road crosses a <i>nala</i> at the 2nd and 7th miles, and leads through a jungle of camel-bush up to the 14th mile, and for the last 2 miles runs across some stony spurs. Road ascends and descends continually through march. The camping ground is low and liable to inundation after rain.
4	THAL . . . . .	13½	49½	The road ascends and descends. Three thousand houses of Tarins in the neighbourhood. Canal water. Excellent camping ground; wood, grass, and water (from <i>karez</i> ) are good—the two latter abundant. At the 5th and 6th miles two precipitous <i>nalas</i> are crossed, which would probably become serious obstacles after rains. Thal is a collection of walled villages.
5	DUKI . . . . .	12	61½	<i>Vide</i> Route No. 104.

Route No. 106.

CHINJAN TO THE ARGHASTAN VALLEY, *via* MANDAI (SHARANKAR).

*Authority.*—G. B. SCOTT (STAGES 4—8 *from native information*), 1884.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	GHUNDMURA . . . . .	10	10	From Chinjan the road turns towards the north-east, passing between low hills and over an easy pass to Ghundmura, a village of the Mirzai (Kakars), where there are water and grass.
2	KAZHE . . . . .	17	27	Road almost due north near the Waltoi, across the Lora, where Route No. XX, Vol. II, crosses.
3	MANDAI (SHARANKAR)	14	41	Road in a north-westerly direction. At 8 miles reach the entrance of the defile known as the Kazhe <i>tangi</i> , the debouchment of the Mirzai or Sharan Rud. Road follows bed of stream for short distance, then turns up a low spur, crosses a saddle and descends into main

stream again at a point about a mile above where it left it; thence it follows right bank of stream over fairly open country for about  $1\frac{1}{2}$  mile, then enters formidable-looking defile, turning sharp to the right; continuing in that direction for a mile, hemmed in at the distance of a hundred yards apart by precipitous walls of rock, rising 500 feet or more above the bed of the stream. Infantry might here flank the defile by ascending a steep path to the left front to the crest of the ridge to the north, and descending by an equally steep path on the other side, but all baggage, cavalry, mules, etc., must follow the stream. A mile from the entrance the stream turns sharp to the westward and returns after a 2-miles' course to a point almost parallel with the former bend. The route avoids this circuit by cutting across a low pass to the right, re-entering the stream about half a mile ahead. From this point follow the bed for another mile to camp at a point where the stream turns sharp to the west. Plenty of water, wood, and grass, but no supplies, though cattle and sheep numerous in neighbouring hills. The exact spot is known as Mandai, but the name Sharankar is better known, though really applying to a flat, open bit of country further north.

From Mandai a route to Pishin may be followed up the bed of the Mirzai Rud to the Pishin kotal. Water, grass, and wood being abundant throughout, but no supplies. The distance is about 30 miles and forms two marches through fairly open country, somewhat broken by dry watercourses. About half-way is a hamlet known as Fabu China.

4	BARAKSHAZAI . . . . . (or KHAISOR SAB, OR GARGA-SMALAN).	18	59	From Mandai the route to Kunder turns up to the right, following a northerly direction over open country known as Sharankar to the Barakshahzai Kanda, a pass lying between the Sakirgarh and Spingarh ranges, with a gentle ascent to the crest about 10 miles from Mandai. Thence descent of 4 or 5 miles to the bed of the Garga-Smalan glen, as the upper portion
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of the Khaisor, or Toi, is called. The halt is not usually made on the stream, but at a place known as Barakshahzai, about 2 or 3 miles up the gentle slopes to the north, at the base of the next high mountain range known as Churgigarh.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 106—concluded.

5	CHURGAI (or KUNDAR SAR, or DAGAR).	18	77	Easy ascent to summit of pass, then winding descent of 10 miles to Kundar or Sugandi, and 3 miles farther on over perfectly level open country to high ground, known as Dagar, where there is water sufficient for a <i>kafila</i> and an encampment of Powindahs
6	KUNDAR	15	92	Road over easy country to Kundar. Camping ground on high ground or watershed between two plains. Water in springs abundant.
7	SURKHAO	20	112	Road over easy country between a succession of low hills to Surkhaio on the main <i>kafila</i> route (probably in the Arghastan watershed—G. B. S.). Forage and water abundant.
8	LORA ARGHASTAN	15	127	Easy march over undulating ground to Lora Arghastan, a large stream. Hence to Kandahar the distance is probably about 100 miles. The route is reported to be easy, following the Arghastan valley with a gradual descent.

Route No. 107.

FROM BHALADHAKA TO KAHAN, *via* THE KHUBA WANGA, DAULA WANGA,  
AND BEJAR PASSES.

Authority.—GILL, November 1880.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	NIKBA . . . . .	6 $\frac{5}{8}$	6 $\frac{5}{8}$	The road for 2 $\frac{1}{4}$ miles is good over level plain crossing a dry <i>nala</i> at 1 $\frac{1}{4}$ mile. At 2 $\frac{1}{4}$ miles the entrance to the Khuba Wanga is reached, and the road becomes bad and stony, rising between rounded hills. The first kotal (elevation, 4,730') is reached by steep, stony, difficult

zig-zags at 2 $\frac{7}{8}$  miles. Hence there is a gentle descent for short distance, when the road is good and level to 3 $\frac{1}{3}$  miles. A second ascent commences here, the road becoming stony, and running up a narrow, rocky valley. At 4 $\frac{1}{8}$  miles the foot of the second kotal is reached, and the ascent is steep and difficult for about 80 yards. Elevation of kotal 4,980'. At the summit the road passes through a narrow cutting between conglomerate banks, 10' or 12' high, just wide enough for laden mules. The descent is steep and rugged for a short distance, zigzagging down along a steep hillside. It then becomes more gentle till the plain of the Kalu valley is reached at 5 $\frac{1}{2}$  miles (elevation 4,110'). The remainder of the stage is level, road at first rough and stony, but soon over a grassy plain.

Wood and water rather scarce, the latter from an artificial pool, good and sweet.

Route No. 107—continued.

2	KARAM KHAN	10 $\frac{5}{8}$	17 $\frac{1}{4}$	Road good down the fine, wide plain of the Kalu valley. At 2 $\frac{1}{4}$ miles pass the small village of Oriani. From this point the valley is largely cultivated, and dotted with numerous watch towers. There is no obstacle to movement on an extended front. At 5 $\frac{1}{4}$ miles the village of Malizai is passed, a mile distant under the mountains to the north. A good many tamarisk trees about here. At 8 $\frac{7}{8}$ miles pass Jalal Khan, a walled village with flanking towers. The valley where not cultivated is covered with grass.
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Elevation, 3,900'.

Karam Khan is square, sides 60 yards long, without towers. In the centre is a high, round tower. Wood scarce; water good and plentiful. There is no water along the route.

3	BHOR . . .	12 $\frac{1}{4}$	29 $\frac{1}{2}$	Road at first good, over the wide open plain, which is now sandy and uncultivated, but bearing away towards the hills on the southern side of the valley. At 5 miles a dry <i>nala</i> is crossed. At 5 $\frac{3}{8}$ miles undulating country is entered, and the road is in places somewhat stony, but troops can still move on a wide front. At 7 $\frac{3}{8}$ miles the road passes through a low limestone ridge, with two breaks in it through which several animals can pass abreast. Thence to 8 $\frac{3}{8}$ miles is over grassy plain, when a second ridge similar to the foregoing, but of sandstone, is passed through. Here there is a small quantity of good water.
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An open plain is then traversed to 10 $\frac{1}{4}$  miles, when a narrow defile, some 50 yards in length, is entered, lying between hills some 30 or 40' high. At the end of the defile there is a sudden drop, and a steep descent commences. The road skirts the right bank of a dry *nala*, bounded by almost precipitous hills. It is very bad and stony, and descends by zig-zags 280 feet in 900 yards. Only one animal can go at a time, and the ascent would cause great delay. This is called the Daula Wanga pass.

The road now descends a narrow valley, fairly level, but rather stony. On the north are hills 200' or 300' high, with a wall of precipices at the top, and stony débris slopes below. On the south the hills are stony, but more gentle.

Wood fairly abundant at Bhor. Water good and plentiful. The plain is narrow, and on the northern side bounded by a wall of cliffs utterly impassible; on the south are confused and broken hills. Elevation, 3,570'.

With the exception of the descents of the pass, the road is excellent; but this was found very difficult, as much from the narrowness as from the steepness of the track. The baggage animals were thus seriously delayed.

The whole were collected at the head of the descent before noon; but the rear-guard did not reach camp until half-past 6 in the evening. Thus the animals in rear must have been kept waiting some hours at the head of the pass.

4	KUI (or KUNAL)	15 $\frac{7}{8}$	45 $\frac{3}{8}$	The road continues down the valley, and is very bad, being covered with sharp sandstones. At $\frac{1}{4}$ mile a <i>nala</i> 6' deep is crossed, no difficulty. The track, however, is almost a single one. Animals often have to go in single file. In many parts, however, there is a second track and sometimes a third; but the progress is necessarily somewhat impeded. The road is at first down the left bank of the <i>nala</i> , which runs through the centre of a valley about a mile in width, bounded on the south by confused hills, not very steep, and on the north by the same impracticable ridge, with a wall of cliffs at the top, and a long slope of débris below. Beyond this there is less of the dwarf palm, but the ground is still fearfully stony.
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At 1 $\frac{1}{4}$  miles the *nala* which forms the main watercourse of the valley is crossed to its right bank. The road leaves it, and runs over bare stony spurs from the hills on the north, the *nala* going towards the south-west.

The road to 6 $\frac{3}{8}$  miles follows the left bank of the *nala*, and is very stony. It then enters the *nala* bed. The hills on the south come right down to the bank; those on the

Route No. 107—continued.

north are broken by the Lunial pass, reported to be exceedingly difficult, and impracticable for an army.

At  $8\frac{1}{2}$  miles a low kotal is crossed, ascent gradual, but bad owing to stones. The next 2 miles is over a stony broken plateau, generally following a *nala*, and passing a little dirty water at  $9\frac{3}{4}$  miles.

The road is now generally stony and undulating to  $13\frac{3}{4}$  miles, crossing several *nalas* and a kotal (elevation 3,700') at  $11\frac{5}{8}$  miles, and passing a little water at 13 miles, in a hole under a high cliff, 300 yards off the road and 200' below it.

There is a good deal of grass, *babut* and dwarf palm.

Camping ground close to the river, in which is plenty of water, but some of it very salt. Wood and grass plentiful. The near heights are easily crowned, and the wall of precipices on the north is 2 miles distant. This wall of precipices runs away to the west, and extends to the east as far as the Daula Wanga pass above Bhor, in a line unbroken except at the Lunial pass. This wall of cliffs is geographically and geologically the most remarkable feature in the country, completely and utterly inaccessible. A force endeavouring to ascend the Daula Wanga in the face of a foe could make no flank movement to the west without descending many miles. Elevation, 3,300'.

5	SURKHAD . . .	11 $\frac{7}{8}$	57 $\frac{1}{2}$	The road follows the river-bed, and is fair, but stony, for the first mile, the last 300 yards being through a narrow gorge. It then ascends, and runs along a flat stony plateau on the east. The valley gradually opens out, and the road is good and level, though still stony
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to  $2\frac{1}{2}$  miles, when it again descends to the *nala* bed for some  $\frac{1}{4}$  mile. The banks are almost vertical, and about 12' high. Leaving the *nala* at  $2\frac{3}{4}$  miles, the road ascends easily, and between that point and  $3\frac{1}{4}$  miles three low easy kotal are crossed, with level stretches between. Road easy but stony. Descending from the third kotal, the road reaches the plain at  $3\frac{3}{4}$  miles, and strikes across it, and is generally stony over broken country to  $10\frac{1}{4}$  miles, several dry *nalas*, with steep high banks, being crossed. At 9 miles there is an ample supply of running water in the Kui river, which is here crossed.

At  $10\frac{3}{8}$  miles the road ascends a spur, crossing it through a natural cutting between banks 6' to 8' high. Thence to 11 miles is flat and sandy. A stream is then crossed, and for some 300 yards the road is narrow, winding among lowhills. Thence to camp is level along the open valley.

The camp at Surkhad is in a flat valley; there is an unlimited supply of excellent running water. On the left bank the river runs under cliffs, 20 feet high. Elevation, 2,960'.

To the west the plain extends for a quarter of a mile towards low hills, in which there is a gap through which the road leads to Mamand. There is plenty of tamarisk and wood for fires. Some of the heights are within range, but can easily be crowned; the highest peaks are too far off to be dangerous.

6	KAHNKI . . .	11 $\frac{1}{4}$	68 $\frac{1}{2}$	The road ascends a <i>nala</i> in a westerly direction and is very stony and narrow in places, though not steep. There are stony slopes and spurs on each side. A low easy kotal is crossed at $1\frac{1}{4}$ mile, and thence for $2\frac{1}{2}$ miles the road is fair, but generally stony and undulating. The
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Mamand plain is then entered, where the force encamped on the 3rd November, at  $3\frac{3}{4}$  miles from Surkhad; elevation, 2,950'. Here there is plenty of water, and wood and grass. See also Stage 6, Route No. 117.

For  $\frac{1}{2}$  mile beyond the Mamand camp the road is good and level. It then lies between cliffs for some distance, and passes over a little kotal at  $4\frac{1}{2}$  miles. At  $4\frac{3}{4}$  miles a stream is reached, which the road now follows. A zigzag leads up a spur at 5 miles, descending from which the river-bed (same as at Surkhad) is entered at  $5\frac{1}{2}$  miles. Another track from Surkhad follows the river-bed to this point.

The road now keeps in the bed of the river. Another very steep and bad one, just possible for animals, crosses a spur. The river-bed is fair going, about 100 yards wide, with

Route No. 107—continued.

a cliff 100' high on the right bank, and steeply-sloping hills on the left. At  $5\frac{3}{4}$  miles the river-bed is left to cross a spur on the right bank, after which the road again takes to the river-bed, and passes through a short gorge, with precipices on both sides. Thence to 7 miles is chiefly in the river-bed, with easy hills, 200' to 300' high, on either side. The road then ascends the left bank, passing (nearly level) over a stony spur, and afterwards along a plateau generally flat and sandy. The main river is also left (it goes off southward) and the valley of a tributary stream is followed. The road is mostly good and level, but stony in places, to  $10\frac{3}{4}$  miles. The hills bounding the valley are generally low and easy, and several miles apart. At  $10\frac{3}{4}$  miles running water is reached, and the road follows the river-bed for  $\frac{1}{2}$  mile through a gorge bounded by precipices, from which it emerges on to the Kahnki plain.

Ample camping ground. Water generally bitter, but some good in pools. Wood rather scarce. A little cultivation. The plain is about  $1\frac{1}{2}$  mile in length, surrounded by hills, which, however, are easily crowned. Elevation, 2960'.

7	GHAB . . .	14	82 $\frac{3}{4}$
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The road for the first 3 miles is generally good, over sand and among low, undulating hills, but after the first mile the ground adjoining is much broken and cut up by *nalas*. On the north of the valley is a big mountain 800' high. The main *nalas* generally follows

the northern side. At 3 miles the *nala* is crossed, and again, about 300 yards further on, the road being over the same broken ground, and mounds of shale and sandstones, weathered into curious shapes and peaks. At  $4\frac{1}{2}$  miles the *nala* is again crossed, here about 200 yards wide, filled with tamarisk and shrubs. From the road at this point cliffs and very steep slopes run precipitously down to the *nala* on the right (western) side. Beyond the valley of the *nala* is the same large mountain round which the road circles from Kahnki.

The road is now over a stony plateau to  $5\frac{1}{4}$  miles, when a deep *nala* running west and east is crossed. At  $5\frac{1}{2}$  miles there is a short cut, almost impassable for animals, over a hills through which the regular road passes by a rift. The road then ascends a small *nala* amongst high undulations and broken hills to a kotal at  $6\frac{3}{8}$  miles. Hence the road follows a contour for a short distance, when it comes to a steep drop of about 200', with the fine green Karmat valley spread out below. The descent at first appears impracticable, but the road soon enters a deep narrow gully, which twists between almost vertical sides through the slaty shale, and descends steeply to the bottom. In one place the road is carried over a narrow neck with an almost precipitous *khud* on the right. The road at this point cannot last through another season of heavy rain, and should be reconnoitred beforehand. The descent to the valley is not difficult, the footing being good. The ascent would, however, be very difficult and tedious for animals.

This portion is called the Bejar kotal (the "pass without a tree").

At  $6\frac{3}{4}$  miles the plain is reached, and to  $9\frac{3}{4}$  miles there is no difficulty except that the country is generally broken, and the road rough in places. The valley is some 300 yards wide, enclosed by low broken hills. At  $9\frac{3}{4}$  miles there is another sudden drop of 250', the lower level being gained as before by a steep descent down a similar gully.

The road now descends a narrow ravine, between broken rugged hills. At  $10\frac{5}{8}$  miles there is a pool of good water  $\frac{1}{4}$  mile up a ravine north-eastward, accessible only to footmen. A quarter of a mile on a spur is crossed, the river running away to the south-west at the foot of a huge mountain, summit of which is 2,000' above the plain. The descent from the spur is down another gully, whence the road runs sometimes over the broken plain, sometimes in the river bed, without serious difficulties to  $13\frac{1}{4}$  miles. Here the valley, hitherto closely shut in, begins to open out. It is now 200 yards wide, flat, and bounded by low, rugged hills. The road for the remainder of the stage is good and level, except at two or three points, where low spurs are crossed.

Good open space for camping close to the left bank of the river. The bed is 400 yards wide, bounded, except on the north, by low hills. Water plentiful and of fair quality. Wood and grass fairly abundant. Elevation, 2,570'.

The road from Kahnki may be said to be good generally, and to present no great difficulties, except at the two descents.



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 107—concluded.

8	KAHAN . . . .	13 $\frac{3}{4}$	95 $\frac{7}{8}$
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Road for the first mile is good, level, and sandy at first in the river bed, then along the right bank. At 1 mile an easy, but narrow, zig-zag leads up a spur, about 150 feet above the river. Thence to 1 $\frac{3}{4}$  mile is over a stony plateau, whence the road again descends towards the valley, which is reached at 2 miles.

The valley is broad and flat, with a considerable growth of grass and thorns. The road leads down the middle of the plain, and is at first level and good, but soon stony and over broken ground. At 2 $\frac{7}{8}$  miles is a nasty *nala* crossing, and about 3 miles the ground is very broken, and the road is carried round a spur; over which there is also a short cut. At 3 $\frac{1}{2}$  miles the river is crossed, and at 3 $\frac{3}{4}$  miles is a nasty *nala* crossing. The road is generally fair to 5 $\frac{3}{4}$  miles, sometimes in the river bed, sometimes on the banks; with another bad *nala* crossing at 4 $\frac{5}{8}$  miles.

The main river now trends away westwards and the road ascends along a tributary stream. The valley is very narrow, between steep slopes, with cliffs at the top, 100 to 150 feet high. The river bed is generally followed, which at 6 $\frac{1}{2}$  miles becomes a gorge, with sometimes a narrow strip of flat ground on each side. On both sides are precipices, 200' to 300' high, with steep slopes at the base. River bed generally stony. At 7 $\frac{3}{4}$  miles a ravine joins from the south-west. The gorge is narrowest and the cliffs most precipitous, at 8 $\frac{1}{2}$  miles about which point the track is very heavy and bouldery. Hence the gorge begins to expand and the cliffs become lower, till at 9 miles the fine open plain of Kahan is entered.

The plain is seen extending for some miles to the south and east, cultivated, and with great numbers of very large tamarisk trees. The Kahan river circles round the plain with a wide sweep to the west, its waters eventually running into the river that has been ascended. This plain is richly cultivated with millet. It rises up from west towards the east with a very gentle glacis-like slope, at the upper part of which the road is stony.

To 11 $\frac{1}{2}$  miles the road follows the upper slopes of the *glacis*, crossing a few *nalas* and small spurs, which present no difficulties. It then descends 20 feet sharply to the plain, and passes through millet fields and tamarisk jungle to the banks of river.

Camping ground across the river (on left bank). The river here runs between steep banks, 15' high. For further details see Route No. 108.

Route No. 108.

FROM DERA GHAZI KHAN TO SIBI, *via* THE CHACHAR PASS AND KAHAN.

Authority.—GASELEE.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KOT CHOTA . . . .	14	14 24	} <i>Vide</i> Route No. XLV, N.-W. F., Vol. II.
2	CHOTI ZARIM . . . .	10		
3	GANGHAR . . . .	12	36	

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 108—continued.

4	HARBAND . . .	18	54	No road, and country as above. The temporary bridges are very unsafe. Large camping ground near fort. Water-supply from a running <i>nala</i> .
5	TOBA . . .	17	71	Road good until entering the Chachar pass at the 9th mile, when it becomes stony, leading up the bed of the Chachar <i>nala</i> , and is impracticable for wheels. At 11 miles pass Drakot, where there are some pools of water, sometimes used as an encamping ground, but cramped and otherwise ill-suited for bodies of troops. After passing Drakot the pass becomes narrow for about a mile and-a-half; it then widens out, and there is a good road.

Near Toba there is a quantity of tamarisk jungle. Wood and water, grass for horses, and camel-grazing abundant.

The water is obtained from a spring on the hillside, about 400 yards from camp, and is of excellent quality.

6	BAKSHA-KI-BET. . .	15	86	Pass open and easy for first 5 miles, when a small kotal is reached, over which the path lay. The ascent is easy, but the descent, being down the side of a steep hill of loose earth and sand, is somewhat difficult. There is an easy road, however, to the right, but it is about 2 miles longer.
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About a mile beyond this the pass becomes somewhat narrow, the bed of the *nala* full of boulders, occupying its entire breadth, the road being cut out of the side of the hill. This narrow portion is about a mile long, but beyond it the pass opens out; the road to Baksha-ki-Bet is easy.

Baksha-ki-Bet is a small, open valley at a bend in the Chachar stream, near the point where the Kalchas *nala* joins it, and at the head of the pass.

There are a few large tamarisk trees and a spring of good water, with plenty of grazing for cattle. Elevation, 1,866'.

Captain Wylie has the following remarks on the Chachar pass:—

"The length of this pass is 33 miles. Its lower half is rough, rocky, and cramped. At present it is impassable for wheeled guns, though mountain guns and all other arms of the service could traverse it with ease.

"Without much labour a road sufficiently good for wheeled vehicles could be made. Grass of good quality is obtainable from the hills all round, and the water-supply, though in parts brackish, is of sufficient quantity, especially at Toba and Baksha-ki-Bet.

"If should be remembered that no supplies save grass and wood are obtainable throughout the Chachar, which is quite uninhabited."

7	KALCHAS.	9	95	Road through a country of low undulating sand hills, covered with long, dry grass. At about 4½ miles enter a narrow gorge, which can only be passed in single file. At about 5 miles reach Sham plain and follow the Kalchas <i>nala</i> for 4 miles to camp. The Sham plain is of some extent, but it is divided into several valleys by ranges of hills.
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The plain is undulating, breaking in some parts into stony lines of low hills, but, for the main part, the soil appears good, and grass of the best quality is abundant.

The Kalchas *nala* is the main source of the Chachar. There are always water in it (rather brackish, but not bad), and all along its banks there are sites for encampments.

Good water is reported within 10 feet of the surface, the air is clear and bracing, and in summer the nights are said to be always cool and pleasant. The general elevation is about 2,500 feet above sea-level.

Water-supply from the *nala*, somewhat hard. Grass abundant. Wood scarce.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 108—continued.

8	CHAT . . . . .	18	113	Route along the upper part of the Sham plain toward the tract of country lying between the range of low hills called Mir Dost-ka-Zard and Khap hill. There is no made road, but the country is easy, and, with the exception of an occasional small <i>nala</i> , flat and free from stones.
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It is covered all the way with grass and jungle, bushes and trees.

At about 8 miles a low watershed is crossed, and road proceeds down the Chat stream, which, on rounding the west end of Khap, flows into the Philawar.

Camp at the extreme end of Khap; from encamping ground get a good view of the Philawar valley. This is said to be a magnificent valley, lying between Khap and Siah Koh. Its soil is said to be excellent and pasturage abundant.

All along the road from Kalchas to Chat, water is abundant, at all seasons. At Chat, even if no water is on the surface, by digging only a very short distance a plentiful supply can be obtained. Elevation, 2,600'.

9	PATAR . . . . .	12	125	Road for about 4 miles over an easy country of low undulating hillocks, of sandy soil, covered with grass; then reach a large deep <i>nala</i> draining towards Philawar. Pools of water here and there in its bed.
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Another route goes almost south from here to Dera Bugti, or Sehaf, and on thence to meet this route at Mal, stage 16.

At about 5 miles ascend a gulley to the Barzen pass, then for 2 miles over a high grassy table-land, and descend into the Patar valley, drained by a *nala* of the same name.

Camp near the gap between Sir Ani and Kurdan hills. It is about 2,756 feet above sea-level. Wood, water, and grazing abundant; when on good terms with the Maris, live-stock procurable in large quantities.

Barzen pass at present not practicable for wheeled artillery.

10	KALA-KOH . . . . .	15	140	Passing through the gap between the Sir Ani and Kurdan ranges the road proceeds directly west, skirting the Sir Ani range, over most excellent ground to the Patar <i>nala</i> , about 5½ miles. Along the stony <i>nala</i> bed for about 2 miles to Saj-ka-Kach, where there is good and
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abundant water. Inclining northwards, cross a large *nala*, lying at the foot of the end of the Dauda range.

Ascend this hill and reach an elevated table-land called the Dui valley, running directly east and west. The valley is uncultivated, but the soil is excellent and grass abundant. It is about 12 miles long, and extends on to the open country near Kahan.

The Dui valley, at its widest part, is about 1 mile broad. For the 3 first miles it gently rises to a ridge extending from side to side of the valley called the Dui-ka-Sham (water shed), which, is here the boundary line between the Maris and Bugtis, the drainage on Bugti side running to the Patar, on the Mari side towards the Kahan or Saroz *nala*. Crossing the ridge, the valley generally dips, but is much more stony than before. About 2½ miles beyond the ridge is Kala Koh. Here there is abundant wood, water, grass, and forage for camels. Elevation, 2,800'.

11	KAHAN . . . . .	12	152	Road good, skirting the low hills at the foot of the Dauda range. The valley gradually widens towards Kahan, about a mile from which place the deep Kahan or Saroz <i>nala</i> is crossed. Considerable cultivation, principally wheat and <i>jowar</i> , about
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Kahan. Kahan is a small town enclosed by a mud wall, built in the form of a square, with a sort of bastion in each corner. The walls are about 12 feet high, very thin, and in several places broken down. The valley here is wide and open: the chief town of the Maris. Supplies procurable in small quantities; live-stock in large quantities. Wood, water, and forage abundant. Elevation, 2,430'.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 109—concluded.

12	NAL . . . . .	8	160	Cross the Kahan <i>nala</i> and proceed in a north-westerly direction towards the foot of the Lara Baga hill, and reach an elevated plateau. Crossing this at about 2 miles from Kahan, again strike the <i>nala</i> . Continue along the <i>nala</i> for a short distance, when the Nal <i>nala</i> joins
				the Kahan. The two combined take the name of Nal. At their point of junction they enter a defile in the Kodi hill and flow in a general direction north-west for about 6 miles to Nal Daf, where they are joined by the combined Sarhai and Kaora.
				Road lies along the stony bed of defile, which is on an average 80 yards wide all along. The hills on either side are of sandstone, very pliable, perpendicular, and about 100 feet high.
				Should the country be in hostile occupation, they should be crowned previously to troops entering the defile. At Nal Daf, water and wood abundant, but grass scanty. Camp ground cramped for space, and rocky. At this point the united waters turn sharply to the south-west, circling round the base of the great Gandar table-land, which lies to the north-west, and the route quits the former for the plateau, rejoining them two stages later at Mibi.
				This is a mere repetition of what is mentioned above.
13	DAHU OR DAHOE . . . . .	12	172	The route lies up the valley of the northern tributary of the Sarhaf for about 6 miles, and then crosses over a watershed to head of the Dahu stream.
				Camp on the banks of the stream. Water and wood abundant. Grass scarce.
14	MEHI . . . . .	13	185	Climb up from camp to the Gandar table-land, immediately above it. This is a limestone plateau intersected by deep <i>nalas</i> , with perpendicular sides, which drain into Nal river. The march is an arduous one, being most difficult for camels and horses. No water is to be found
				along the road, and the surface of the plateau is strewn with flints and other stones.
				One of these ravines is closed by a bridge of stones, said to have been made by the Emperor Nadir Shah causing each man of his army to throw one stone in the ravine.
				Descend by a long incline to the bed of the Nal river, which is here a fine, strong stream of clear water. Water, wood, grass abundant, and room to encamp a considerable number of troops.
15	TRATANI . . . . .	13	198	Route lies down the bed of the Nal, which has to be crossed and recrossed repeatedly. The ground is stony, and, marching in such a confined place as the bed of a river, the heat is great. Water supply on march good and constant. At Tratani plenty of space, and grass of excellent quality is abundant; also fuel and water.
16	MAL . . . . .	21	219	For a short distance keep along the bed of the Nal, there take a sudden turn to the right, and follow a route directly west over a series of sandhills. At 10 miles reach Gazi-ke-Khund, where there is a large pool of brackish water;
				at $1\frac{1}{2}$ mile further on emerge from the hills into the plain of Kachi. Keep west along the skirt of the Mari hills for about 10 miles, when Mal is reached.
17	SIBI . . . . .	11	230	Road north-west; no difficulties. There is no water along the route.

Route No. 109.

FROM MITHANKOT TO LORALAI, *via* THE HAN PASS AND ANAMBAR.

*Authorities.*—"MAIN LINES," ETC.; TOMKINS, 1883.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	RAJANPUR . . .	12	12	A small cantonment; supplies and water plentiful, encamping ground good. The old cantonment is 7 miles beyond Rajanpur.
2	FATAHPUR . . .	11	23	Road over level plain, mostly alluvial, but barren for want of water. Fatabpur, a small town surrounded by a mud wall, outside which a drinking trough capable of supplying 50 horses at a time, has been made and connected with a well inside. Water said to be plentiful and good.
3	DRIGRI . . . .	12	35	Near Drigri the road crosses three <i>nalas</i> , which require ramping and might be impassable for a short time during floods. The general character of the road is the same as last march. On leaving Fatabpur, the road crosses several <i>bunds</i> which could be easily

ramped, but at present impede wheel traffic; continues thus for 7 miles over a great deal of soft sand, and one or two shingly ridges.

Drigri, a good-sized village on the right bank of the Chachar (or Cachar). Good water from shallow wells in dry bed of *nala*.

About half mile south-west is the frontier post, a mud walled fort, 300 yards in circumference, in which are two rooms fitted up for travellers; a deep well inside the fort. Supplies plentiful; water scarcely drinkable, comes from a trough inside. There is no water on the road during the whole length of the march.

4	TOBA . . . .	15½	50½	The <i>nala</i> in the lower part of its course is covered with boulders, rendering it almost impassable for laden animals, but a tract could be very easily cleared. Road very rough, crossing <i>nalas</i> and ridges, with steep descents, but no heavy ascents, bending about between
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bare craggy hills, with much inaccessible broken ground as far as Toba, constituting a most formidable defile which could be easily held against the advance of a far superior force.

About 4½ miles within the pass fair water comes trickling through pools in the rocky bed of a branch *nala* in considerable quantity. Above this there is a small level suitable for a resting-place for a few hundred men.

At Toba the Chachar runs through a small valley with a little vegetation. Water from a small spring low down the hillside. Supply at present barely sufficient for 100 men, but with a proper reservoir could be stored for 1,000 men and horses.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 109—continued.

5	BARSHA-KA-BET . . .	15	65 $\frac{1}{8}$	} Vide Route No. 108, stages 6 and 7.
6	KALCHAS . . .	9	74 $\frac{1}{8}$	
7	MUBANJ . . .	19 $\frac{1}{4}$	93 $\frac{3}{8}$	The road passes along a <i>nala</i> containing pools of water; at 5 miles it rises to the top of an undulating plateau of the Koh range, from which there is a steep descent, and for the last 12 miles runs through low jungle with low hills. Between the 12th and 13th miles there are pools of water.
8	WASALANG . . .	13 $\frac{1}{2}$	106 $\frac{7}{8}$	For the first 2 miles the road follows the course of the <i>nala</i> ; it then crosses a range consisting of rocky ridges, only crossed by footpaths, with very steep gradients; 100 hired labourers would in a week make a 4-ft. road here, with easy gradients. The road then leads into a valley at the foot of the Siah Koh, and crosses a small <i>nala</i> , with pools of water. For the last 3 miles the road is level and good. The camping ground is situated in a plain on the near side of a <i>nala</i> which contains large pools of muddy, but tolerably good water.
9	NAHAB . . .	9	115 $\frac{7}{8}$	The road crosses a <i>nala</i> and leads across the Ghartiwala range; the road is about 6 feet wide and in fair order, but the gradients in many places, especially at the kotal, are too steep for wheeled carriage. The descent is steep through a narrow and tortuous defile. A <i>nala</i> with pools of water is next crossed, and for 5 miles the road runs over a level plain and after crossing a stream, a piece of swampy ground is reached. On the whole, the road is well defined. Supplies and water very good and plentiful; camel-forage and wood abundant; a certain amount of grass. Temperature in double-fly tent on 9th April 1879, at 3 P.M., 93° F.
10	HAN KUA (or Karez).	11	126 $\frac{7}{8}$	At the 4th mile a small fortified village is passed, and some water in a <i>nala</i> in pools a little further on, and at the 7th mile a number of other villages scattered over the plain are noticed. The road now passes over a plain covered with short bushes, and at 9 $\frac{1}{2}$ miles a large ruined village is reached. Thence, going due north, the road immediately enters the Han Dara defile, which is about 250 yards wide, with bold limestone cliffs on either side. The defile is about half a mile in length, and from the exit the bed of the Han river is followed to camp.
There is no water in the Han river, but there is an abundant supply of sweet warm water from the <i>karez</i> . Camel-forage, wood, and grass plentiful. No supplies obtainable.				
The road is practicable for field artillery.				
11	BHALADHAKA . . .	16 $\frac{1}{4}$	143 $\frac{1}{8}$	The road runs for 3 $\frac{1}{4}$ miles along the valley of the Han river, between the Chapar hills and the Jadran range. The valley varies in width, and is over a mile wide at the broadest part. It is stony in places, but generally grassy, with numerous acacia, tamarisk, and wild plum trees.
At 3 $\frac{1}{4}$ miles the Jhur Tap <i>tangi</i> is entered. The gorge is 300 yards in length, narrow and with precipitous sides, but the bed is sandy and unobstructed with boulders.				
Emerging from the defile the road leaves the river and runs over a stony plateau to 5 miles, when it again descends to the river bed and follows it to 7 $\frac{1}{4}$ miles. The bed is sandy.				

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 109—continued.

and the ascent very gentle; banks of clay, high and precipitous. At about  $5\frac{1}{2}$  miles is a scanty spring of water. There are also pools of brackish water in the bed.

At  $7\frac{1}{4}$  miles there is a stiff ascent for a mile along a narrow hillside road, with numerous sinuosities. The first 300 yards, called the Nili-dal, is very steep and trying for laden animals. At the top of the ascent the road turns to the right, and runs for about a mile (to  $9\frac{1}{4}$  miles) over a grassy plain. A rocky spur is then crossed, and the Kalichapri plain is entered, and traversed in a northerly direction to  $10\frac{1}{4}$  miles.

The plain is entirely surrounded by high hills, and drained by three large streams, which appear to unite and force their way in a south-westerly direction through the range in which the Han pass lies. There is no village at Kalichapri; water abundant but very brackish.

At  $10\frac{1}{4}$  miles commences the ascent to the Han pass. The road is steep and stony, but short; the kotal being reached at  $10\frac{3}{4}$  miles. Elevation by aneroid 4,525'. The descent is fairly easy, half a mile in length; a flat valley is then traversed for half a mile, after which the road enters the bed of a stream, which it follows through a range of hills between rocky banks for another  $\frac{1}{4}$  mile (to 12 miles). An undulating stony plain is then entered, over which the road runs to  $13\frac{3}{4}$  miles, when a dry *nala* is passed and a grassy undulating plain traversed to the camping ground.

Camping ground on fine open plain. Water plentiful, but very brackish. Camel-  
forage, wood, and grass abundant. No supplies.

12	KUCHKA . . .	12	155 $\frac{1}{8}$	At 8 miles a narrow pass between two hills along the bed of a <i>nala</i> , and at about a mile from camp a <i>nala</i> is again crossed. Grass and wood abundant. Water close to camp. Road a fairly good hill one.
13	TRIK KUBAM . . .	15	170 $\frac{1}{8}$	The road goes across a plain for a mile and then crosses a spur of hills; at 3 miles there is water and the country becomes open. At 10 miles the top of a kotal is reached, and from there is a gradual descent to the camping ground, which is confined and surrounded by low hills.
The supply of water which comes from a spring is good and is said to never fail. Supplies brought from Thal Chotiali; wood and grass locally in plenty, also camel-grazing.				
14	SANGURAI . . .	10	180 $\frac{1}{8}$	The road leads along a splendid plain to the small village of Sangurai. Supplies for a small force might be locally obtained with due notice: grass and wood plentiful, and good camel-grazing ground. The road in valley might be made passable for guns with little difficulty by bridging the <i>nalas</i> .
15	WAHAR . . .	14	194 $\frac{1}{8}$	Across an open country to the Anambar river, which is crossed at 9 miles. The river is fordable by all arms, but subject to heavy floods. The track is bad and stony, and passable only for infantry, pony, mule, and camel-carriage; there is an abundant supply of water and grass.
16	LAHOR . . .	10 $\frac{1}{2}$	204 $\frac{5}{8}$	} <i>Vide</i> Route No. XLIII, N.-W. F., Vol. II.
17	LOBALAI . . .	10	214 $\frac{1}{8}$	

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 109—concluded.

Alternative Route from Kalchas to Nahar, viâ Bhor and Vitakri.

7	BHOR . . . . .	12	} <i>Vide</i> Route No. 119.
8	GANDIAB . . . . .	7½	
9	VITAKRI . . . . .	15	
			86½
			93½
			108½

A bad *nala* to cross on leaving camp. At 2 miles ascend a steep kotal over slabs of slate and loose stones; then a slight descent on to a plain in which are the ruins of a village called Husen Kot. Another bad *nala* is then crossed, over which a road has to be made for cattle, followed by another steep kotal, and afterwards a small stream with running water. A quarter of a mile further is a running stream, the first good water met since leaving camp. Two more kotals are crossed before reaching the camping ground.

10	NAHAR . . . . .	9	} <i>Vide</i> Route No. 111.

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ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 110.

FROM NAHAR TO THAL (CHOTIALI), *via* THE SINI PASS.

*Authorities.*—DUKE; WELLS, 1879.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	VITAKRI . . .	9	9	<i>Vide</i> Route No. 111.
2	MAZAR KACH . . .	12		<i>Vide</i> Route No. 112.
3	DAULA WANGA . . .	15	21	Road excellent over an open grass and sometimes gravelly plain. Wood and water scarce. A well would be required. No habitations or supplies. Elevation, 4,050'.
			36	
4	GIRBAND . . .	21	57	Road excellent over plain (passing through a low range of hills at 3 miles), till the lower spurs of the Tikhel mountain are reached (at about 17 miles), when torrent-beds cross it and render parts bad. A watershed is then crossed, elevation 4 350', the descent from which is rough, but capable of improvement. Water met at 10 miles in a <i>nala</i> in the Kolu valley; also at a place called Kui, by digging. Wood and water plentiful, but the latter is brackish. Forage scarce. No supplies or habitations. Elevation 3,700'
5	SINI KOTAL . . . (Foot of)	6	63	Road very bad along the <i>nala</i> bed, which is obstructed with boulders. Much heavy work would be required to render it good. The gradient is, however, very slight. Water plentiful, but somewhat brackish. No forage, wood, or supplies. Elevation 3,000'.
6	THAL . . .	15 $\frac{3}{4}$	78 $\frac{3}{4}$	Road extremely bad up the face of a steep limestone hill to the Sini kotal (elevation 3,700') at $\frac{3}{4}$ mile. The descent to the Anambar on the far side is equally bad. This kotal has to be crossed in order to avoid a narrow gorge through which the Sini passes, a large pool in the middle of which renders it impassable. This kotal would require much heavy work to render it passable for any beasts heavily laden. The remainder of the route was not traversed, but the greater part was seen from the kotal, and also from Thal, corroborating all reports which concur in saying that the road is excellent throughout.

*Vide* also Route 111.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 111.

FROM NAHAR TO THAL (CHOTIALI), *viâ* THE MAR PASS.

*Authorities.*—DR. O. T. DUKE; WELLS, 1879.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	VITAKRI . . .	9	9	Good road over the plain. Good camping ground. Water, wood, and forage plentiful. Elevation 3,260'.
2	PARAHI . . .	18	27	Road good up the Mar pass, elevation 4,600 feet. The descent from the Mar pass is described as "execrable; large slabs of slippery limestone have to be crossed, and the descent is stated to be steep and rough." ( <i>Wells.</i> ) Natives, however, consider it is a road passable by camels; at Parahi there is water in a perennial stream.
3	CHITAL . . .	18	45	Road over the Sadik Wanga kotal, a limestone ridge (200 feet in height): afterwards good for 6 miles over open gravelly plain. Tikhel mountain is then crossed (or rather spurs running from it) at a height of 5,125 feet; this portion of the road is very rough; water in pools.
4	THAL . . .	20	65	Road stated to be fair by the Butur hill to Khap, and thence made road to Thal. Lieutenant Wells, R.E., describes another route <i>viâ</i> Chotiali, which is 13 miles 4 furlongs in

length; this is at first very bad and difficult; onwards to Thal is 14 miles distance: total 37 miles. It appears from various native accounts that the Tikhel spurs and the Sadik Wanga kotal constitute the principal difficulties; nevertheless it should be remembered it is probable that owing to certain political difficulties which existed at the time when Lieutenant Wells visited Kolu, he was not shown the easiest paths; the natives pronounce the road as one along which lightly-laden camels can pass, but as nevertheless difficult and rough in many places. Lieutenant Wells writes as follows:—"I then consider this Sini road (*vide* Route No. 110) would be the best and most direct for baggage between Vitakri and Thal; of course, the bridle-road would still be over the Mar pass, and the road could be joined to it in the Kolu Chotiali valley.

Route No. 112.

FROM THAL (CHOTIALI) TO NAHAR, *viâ* THE NILI PASS.

*Authority.*—WELLS (*March—April, 1879*); HAY, 1882.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SAWA-KA-MUNH .	17	17	The first 5 miles would be over the Thal plain, then through the pass of the Anambar into the hills and down its course to Sawa-ka-Munh.
<p>From the Sini kotal the Thal valley was plainly seen, and the bed of the Anambar river also; from almost where the river leaves the plains to Sawa-ka-Munh the road seen was decidedly good, and all the natives averred there was no difficulty.</p> <p>Wood and water plentiful. No supplies, but some grain might be procured if arrangements were made beforehand. A few matting sheds, inhabited by nomads. Elevation 2,500'.</p>				
2	NILI PASS (foot of) .	8	25	Road good, and capable of being made excellent along the open valley of the Anambar. The valley is bounded by high bluffs. Plenty of standing water in the river, but not much running. The bed is 250 feet broad, and is evidently filled at times by a roaring torrent.
<p>Wood and water plentiful. Supplies as at last camp. Huts of nomads. Elevation 2,375'.</p>				
3	TOBA . . . . .	10½	35½	The ascent commences at once, the road ascending a tributary of the Anambar, which below Sawa ka Munh is called the Beji. The road up to the kotal is far from bad; along it supplies and plunder are brought from Thal on bullocks. The kotal could easily be cut down
<p>or tunnelled through. Water to be found near the crest by sinking a well. The descent is exceedingly steep and rough. The kotal is reached at 8 miles. Elevation, 3,160'.</p> <p>Water plentiful; wood scarce; forage scarce. Supplies <i>nil</i>. Elevation, 2,700'.</p>				
4	MANJAN VALLEY .	10	45½	Road rough and steep down a narrow valley for 4 miles to the Chakar river. About here Route No. 117 is struck. An easy gradient could be obtained by carrying a road along outlying hills. The next 4 miles is good, following the Manjan branch of the Chakar. At 8
<p>miles a spur is encountered which juts out into the river, and some labour would be required to carry the road along the steep hillside. The river-bed is too rough to be followed. The spur necessitates two hills being crossed, and the river is not fairly reached again for a mile. This is the only very bad place in the whole of the Nili route, and there is nothing to prevent its being made quite good.</p> <p>Water plentiful, but slightly salt. Wood and forage abundant. No supplies procurable. Elevation 2,675'.</p>				
5	TRIMAN . . . . .	16	61½	Road excellent all the way. At about 7 miles a road strikes off for Kahan. Forage, wood and water plentiful, but the latter is slightly salt. No supplies. Habitations as before. Elevation, 3,500'.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 112—concluded.

6	MAZAR KACH . . .	15½	77	Road fair, and capable of being made excellent to a second Triman at 7½ miles. Thence an excellent road over open gravelly plain. The entrance to a pass turning the Mar hill is passed, which was not reconnoitred owing to provisions failing.
<p>Good camping ground. Forage and wood abundant. No supplies procurable. Water-supply precarious, being obtained from rain-water, pools or <i>kacha</i> wells, dug in the sandy torrent-beds. A well would probably be required. Elevation, 3,200'.</p>				
7	VITAKRI . . .	12	89	Road excellent over the open gravelly plain of the Makhmar valley. Good camping ground. Water, wood and forage plentiful. Elevation, 3,260'.
8	NAHAB . . .	9	98	<i>Vide</i> Route No. 111.

Route No. 113.

FROM RAJANPUR TO KAHAN, *viâ* THE SORI DRISHAK PASS.

*Authority.*—FIRST EDITION.

No. of Stage	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MUHAMMADPUR . . .	7	7	Road good. No supplies. Water brackish.
2	SABZALKOT . . .	13	20	The road is quite good, but heavy. No supplies. Good water procurable.
3	GARKHAN . . .	19	39	The road goes over the plain to the mouth of the Sori Drishak pass, which it then enters and continues up its bed the whole way. After rain this route sometimes becomes impassable for two or three days at a time. There is plenty of brackish water by this pass. Near

Garkhan, a branch of the Sori leads off towards the north point of the Sham plain, and another towards Giandari; but neither is practicable for guns. Water here is brackish, but abundant. Firewood and forage abundant.

4	GORKHAR . . .	10	49	The road still goes up the pass. No water met with. Water brackish, but abundant. Wood and grass plentiful.
5	KALCHAS . . .	11	60	The road goes up the Gorkhar ravine for about a mile, when it turns up a small watercourse and comes out on to the Sham plain, which it then crosses to Kalchas in 9 miles. Water is good and abundant. Forage and firewood abundant. This route is impracticable for guns, being much

cut up by large boulders; it is also a bad route for men and animals on account of there being no drinkable water for 37 miles on it.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 113—concluded.

6	CHAT . . . . .	18	} <i>Vide</i> Route No. 108.
7	PATAR . . . . .	12	
8	KALA KOH . . . . .	15	
9	KAHAN . . . . .	12	
			78
			90
			105

Route No. 114.

FROM RAJANPUR TO LEHRI, *via* THE SORI AND SEHAF VALLEYS.

*Authorities.*—FIRST EDITION; QUETTA FIELD FORCE, 1878.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	ASNI . . . . .	7	7	Easy march along a good road. Water at Asni brackish, but not unwholesome. Supplies procurable.
2	LALGOSHI . . . . .	15	22	Road good. There is a bungalow in the fort, also one good well. Supplies obtainable.
3	BANDOWALI . . . . .	16	38	First 8 miles good, remainder over heavy sand. The heat at Bandowali in October was excessive during the day.
4	KABRODANI . . . . .	23	61	For 3 miles the road runs west over a sandy plain, rough with mounds and clumps of stunted jungle, ascending very gradually to the summit of a low ridge, on the far side of which is the Jaburi <i>nala</i> . The route lies up the <i>nala</i> bed for 10 or 11 miles, the first 4
				miles being sandy, afterwards gravelly at intervals, the whole very heavy going. At 14 miles ascend from the <i>nala</i> on to a slight ridge passing one side of an amphitheatre of undulating plain, along which the route lies down to camp in the bed of the Sori. Water plentiful in the bed of the stream.
5	KHAJURI . . . . .	14	75	The route at first lies up the bed of the Sori, and then up the bed of its feeder, the Khajuri. It is sometimes sandy, sometimes stony, and sometimes hard clay. Water all the way (in October). Khajuri is an opening out of the stream from

which it takes its name. It is surrounded by low white hills. Water plentiful in the stream, and in a pool behind a rock, which is not easily seen. Wood plentiful, grass scarce.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 114—continued.

6	LOTI . . . . .	6	81	From Khajuri there is a short ascent into a plateau called Rohel-ka-Vad, whence a slight descent leads down to the Sori <i>nala</i> , on the further bank of which is the camping ground near a grove of tamarisk trees. At one or two places just after leaving Khajuri the road is
				little difficult for wheeled artillery owing to ravines.
7	DEBA BUGTI . . . . .	16	97	Leaving camp the road crosses a <i>nala</i> , and then runs for 5 miles across a plain to the Hangarh range of hills. This range is sandstone, and the ascent is a little steep. A road was made over it, good enough for field guns. A plain is then again traversed for some 8
				miles. About 5 miles from Dera Bugti a <i>nala</i> bed is followed for three-quarters of a mile. The remainder of the road is heavy, and the last portion is up the bed of the Sehaf stream.
				Dera Bugti is a small native fort, enclosing about 100 houses. Supplies obtainable in small quantities if notice is given. Water good and abundant. Grass abundant at a distance of about 4 miles. Wood and camel-grazing plentiful.
8	SINGSILA . . . . .	21	118	Road lies over a plain down the Sehaf valley, following the watercourse. The plain is covered with bush jungle and tamarisk trees, and intersected by numerous small <i>nalas</i> . For artillery, banks would have to be cut down in some places. At 8 miles a pool of water; at
				11 another. Towards the end of march, road stony. Good encamping ground. Water from a <i>nala</i> good and plentiful. Wood and camel-forage abundant. Grass plentiful in the spring, scarce in winter.
9	CHAGIRDI . . . . .	8½	126½	Route for the first 6 miles across very rough ground, intersected by numerous <i>nalas</i> , the banks of many of which are steep and stony. Practicable for artillery, but difficult, very wearying to the cattle, owing to the stony ascents and descents.
				At 6 miles reach the Sehaf <i>nala</i> , in which is a running stream of good water, the bank of the <i>nala</i> steep. The remainder of march lies along the bed of the <i>nala</i> , which is alternately sandy and stony. Camp on the right bank on the stream. Grass and water good and plentiful. Camel-grazing fair; wood abundant. No supplies. Meat sometimes procurable from shepherds.
10	GWACH-KI-DEIK . . . . .	11½	138	Cross the Sehaf immediately on leaving camp and along a sandy ravine for a mile. Here the road ascends and passes alternately across rocky ravines and plateau, till at about 5 miles it descends into a sandy <i>nala</i> . During this 5 miles the road is very bad, rocky,
				narrow, and in places steep. Can be easily made practicable for guns, but difficult.
				March about 3 miles along the bed of abovementioned <i>nala</i> until it joins the Sehaf. Thence along the bed of the Sehaf, which is stony in places, but generally easy. There are short-cuts by ascending and descending the steep bank of the stream. Guns should keep along the river-bed. Encamping ground on right bank of Sehaf. Very rough and stony. Water good and abundant from stream. Wood, grass, and camel-grazing plentiful. No supplies. Meat sometimes procurable from shepherds.
11	DINGAN . . . . .	11	149	First 2 miles down the valley no impediments, then for about 2 miles across the bare rocky slope of an upheaved sandstone hill, with an ascent from the Sehaf and a descent to the valley of the Sori Sur. Very difficult for artillery. Colonel Morgan, 32nd Pioneers,

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 114—concluded.

estimated that it would take his regiment a fortnight to make a good road for guns across this rock. In the Sori Sur there is a plentiful spring of good and wholesome water. From this to Lehri, 25 miles, no other good water is found. To Dingan is about 6 miles along the Sori Sur valley, and the bed of a *nala*. Guns should follow the bed of the *nala*, and not attempt to cut off corners. Dingan is a very bare, hot spot, in an amphitheatre of barren hills. Water exceedingly scarce and bad. Captain North, R.E., reports that the natives pointed out a place, about 3 miles north of Dingan, where good water was obtainable. Grass and fuel plentiful. Camel-grazing scarce. No supplies.

NOTE.—Major Sandeman recommends not halting at Dingan on account of the scanty supply and badness of the water. Captain North would halt at the water in the Sori Suri valley.

12	LEHRI . . . . .	19½	168½	The road for 5 miles leads along the Ghori <i>nala</i> , no impediments, debouches into the Kachi plain, leaving the hills: a perfectly level plain of sun-baked mud, in most parts nearly bare, in some sparsely covered with tufts of grass and stunted weedy jungle.
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This continues all the way to Lehri. There is no water on this march. Water at Lehri good and plentiful in the winter; scarce in the spring. Grass and camel-forage scarce. Supplies procurable.

Route No. 115.

FROM SIBI TO PISHIN FORT, *via* HARNAI.

*Authorities.*—O'SULLIVAN, 1886; GENERAL OFFICER COMMANDING QUETTA DISTRICT, 1892.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	NARI . . . . .	7	7	To Harnai the road is out of repairs and very difficult for carts; thence to Kach it is practicable for carts in fair weather. Bridges over irrigation canals made of sleepers resting on rails, some of them dangerous owing to one side of bridge being a foot or more lower than the
<p>other. At Nari Gorge on the south side of the river is Nari town, with railway station, sidings, and shops of the Sind-Pishin railway. The camping ground is on the north of the river, which has to be forded. Space available sufficient for a brigade of infantry. Except in time of floods, another brigade could encamp south of the river below Nari town. Water-supply unlimited, in fair weather about 132,000 gallons a minute, from the river, and excellent except in floods, when alum is required to precipitate the clay suspended in the water, to render it suitable for drinking. Rest-house. Elevation 500 feet.</p> <p>It should be borne in mind that the river floods suddenly after rain in the hills, and that troops may be detained at any camping ground below Spin Tangi for five days at a time. The floods attain a maximum of about 20 feet above ordinary level of river, blocking all movements by road, and after heavy rain small landslips generally occur on the railway, suspending traffic for one or more days.</p>				
2	KALAT-I-KILA . . . . .	10	17	The road for the first 4½ or 5 miles has been destroyed by the railway, and the only track now leads up the bed of the river, fording it several times. The water in fair weather is about 18" deep at the fords. At 5 miles the old road is met where it passes over a shoulder

Route No. 115—continued.

of a hill, crosses the river again, and then proceeds across a low plain, covered with scrub jungle, first passing a square enclosure, sides about 40 yards long, for Baluch Guides; it then continues along the plain for about 3 miles, bends to the right round a low hill, and emerges on the small plain of Kalat-i-Kila. General direction north-east. There is a rest-house. Camping ground between enclosure and river, and on either side of road. Space sufficient for two brigades; water-supply unlimited, but distant. Fuel and camel-grazing is scarce at all stages. Elevation 720 feet.

3	GANDKIN DAF	9	26
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Immediately on leaving camp the road commences to cross a range of hills at rather a steep gradient, and then descends to the plain on the other side by the old bridle path, which has been slightly improved, but it is not practicable for carts. The old cart-road has been

destroyed by the railway, and carts must keep to the river-bed. Pack-animals going over this kotal cross the line of rails a few hundred yards after reaching the level again, and strike the river about a mile from Kalat-i-Kila. Thence the track continues along the river bed, crossing the stream four times, passes the confluence of the Nari and Beji rivers, and at 5 miles crosses the river from Badra, and emerges on the plain of Babar Kach; here there is a railway station and good camping ground suitable for a division in fair weather, but liable to be flooded. Water as before unlimited. The road to Sangan, etc., by Badra branches off here, and Badra is visible about 4 miles distant. The valley towards Padra is extensively cultivated. The track hence leads across a shingly plain with a rise of about 1 in 200 to Gandkin Daf. General direction north-east. Here there is a railway station, a rest-house and post office. Camping ground for a brigade. Water-supply not very abundant after continued dry weather, but sufficient. Elevation 950 feet.

4	SPIN TANGI OR GUNEJI.	16	42
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The road made in 1880 through the Kuchali defile, which is entered immediately above Gandkin Daf, has entirely disappeared, and carts and pack-animals must keep to the river-bed. The enclosing hills are lofty and nearly inaccessible; the defile very narrow and very

dangerous in floods, which rises 12 to 15 feet above ordinary water-level. Every precaution should be taken in passing this place if the country be at all disturbed. This part of the road is almost impracticable for carts, which could not travel faster than a mile an hour. At 4 miles the hills fall back and a sharp turn and ascent to the left leads to a small plain. This is the old Kuchali encamping ground. The road leads across to the plain, and passes the Kuchali railway station at about 5 miles; thence, with the exception of one very heavy bit of shingle, it is a good cart-road to Zindagiab, 7½ miles. Here there is a rest-house and a good camping ground, where troops marching with cart carriage would halt. The water is sufficient for two regiments and very good from pools in the river-bed, the stream flowing generally below the surface of the shingle. The road crosses the river here; the banks are very high and perpendicular, but the road gradients are fairly cut. The railway embankment has, however, nearly blocked the ascent from the river-bed on the far side, and it would have to be cleared before carts could pass. Half a mile further is a bad dip into a *nala*, which also requires improvement to be practicable for carts. Thence the road runs in an easterly direction, winding along with many ups and downs, but is fairly good for carts, until it arrives at Dalujal (13 miles) at the eastern end of the high range of hills along which it has been skirting. The hills close in on both sides for about 2 miles before reaching Dalujal, and at one place, about a mile from Dalujal, the drainage has been obstructed by the railway embankment and a pond forms across the road after heavy rain. At Dalujal there is a small railway station and ruined bungalow above the road on the hillside. From Zindagiab there is a footpath over the high hills direct to Spin Tangi or Guneji.

At Dalujal the road makes a sharp turn round the foot of the hills below the railway embankment to the north-west, crosses a river, with 2½ feet of beautiful water, leads over a high and level plateau, then descends by a well-cut gradient into the bed of the river, down which it turns for about ¼ of a mile, then passes beneath a railway bridge and ascends to Guneji. Camping ground on the right bank of the river south of the defile hitherto known as Spin Tangi, but unknown by this name to the people of the country. Here there is a defensible *sarai*, a rest-house, and a railway bungalow. Water from the river very good, but it is 60 feet down to it, and the rails have to be crossed. On the whole the left



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 115—continued.

bank is now the best camping ground to the north of the road before it descends to the river. Ample space for a brigade.

From Guneji there is an alternative route to Harnai by Mian Kach, but it is a bad road.

From about Kalat-i-Kila to this point it is Mari country. Supplies can be obtained from the Babian villages. Elevation of camp 1,590 feet. Road from Dalujal to Guneji very good.

5	HARNAI . . .	17
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59

The railway having destroyed the old road, the river-bed has to be again followed, and all traffic now has to go through the gap occupied by a deep pool of water, or over a very rough difficult track on the left bank. On emerging from the gap the road leads over the flats on

the right bank of the river-bed, but these have been much cut up by excavations for the railway embankment. At about 2 miles the track to Thal Chotiali can be struck by crossing the bed of the stream. Here is "Duki road" railway station. The road bends to the left up the watercourse and is very bad. About half a mile off the road to the right is the plateau of Shin Kach. A beautiful spring of water rises at the foot of this plateau. The road now goes along the shingly bed of the river for about  $6\frac{1}{2}$  miles, the old road having been almost entirely destroyed by floods; it then ascends the left bank of this river, crossing the rails on to a plateau along which it proceeds in a direct line for 3 miles. Half way along this plateau ( $9\frac{1}{2}$  miles) is the village of Sinarai which forms the western extremity of Babian Kach. There is water of rather doubtful quality, and a good camping ground for a regiment. At  $1\frac{1}{2}$  mile beyond Sinarai the road again descends to the bed of the river and becomes obliterated. The track now leads over the shingle in the river-bed to a point 4 miles from Harnai, where it ascends on to another plateau by a well cut gradient, which, however, needs repair. It leads across this plateau for 2 miles, when it commences to descend again, and, leaving the collection of villages which form the district of Harnai on the left hand, winds around and among a series of low hills, till it finds its way again to the level of the river, which it crosses  $\frac{1}{2}$  mile from the camp of Harnai. From the river there is a gentle ascent up to the camp. General direction north-west.

With the exception of the Sinarai plateau, 3 miles, and the last 4 miles before reaching Harnai, there is practically no road but the river-bed, and the march is a very trying one, especially for carts. Half a mile before reaching Harnai the new road *via* the Mehrab *tangi* to Sinjawi branches off to the right. (Route No. 120.)

There is a dâk bungalow, a post office and civil court, and bazar, and  $1\frac{1}{4}$  mile further on the Harnai railway station, a telegraph office, and a few bungalows. The camping ground to the north of the road is very extensive, and the water supply abundant and good. Two brigades could encamp here.

There is much cultivation, and supplies are procurable. Camel-grazing in different. Elevation 2,635 feet.

6	NAKIS OR NASAK . . .	8
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Shortly after leaving camp the road crosses the dry stony beds of several *nalas*. It then skirts along the base of a range of hills which rise to a height of about 200 feet on the right hand. The river, on the left, runs along the base of another range of hills, 900 feet high. At 3 miles

the road crosses to the right bank of the river, which here makes a sharp turn from north to east. There is a little water here off the road. Beyond this the road, which throughout this march is a very good cart-road, crosses a wide open plateau till at 7 miles, after traversing a few *nalas* by sharp ascents and descents, it crosses over a ridge by a well-cut gradient and descents, crossing two streams, to Nasak. The old camping ground near the river is now broken up by the railway embankment and station buildings. Troops should camp at the foot of the hill before crossing the streams. There is room for two regiments, and the water supply from the streams is good and sufficient for that number. If necessary, another regiment could encamp to the north of the railway station, using the water from the river, which is abundant and very good.

There is much cultivation here, principally rice. There is also good grazing for cattle. Some supplies are procurable. Camel-grazing indifferent. Elevation, 3,220 feet.

Route No. 115—continued.

7	SHARHRIG . . .	9	76	Leaving the camping ground the road runs up the bed of the river, which it crosses several times, for 5 miles. All along this valley there is grass and water, but nearly all the trees have been destroyed. The 4th and 5th miles are very bad,—coarse shingle and boulders. At 5 miles
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the road rises by a good gradient, which needs slight repair, on to a plateau. At 6 miles the village of Pangri, surrounded by cultivation, principally rice, is passed; and at 8 miles the Siah Dad watercourse is crossed, close to Azim-ka-Tangi. Here the road again crosses the rails, and some repairs are needed. At  $8\frac{3}{4}$  miles cross a *nala* and arrive at Sharhrig post. There is a plentiful supply of water in the *nala*, but not of good quality. The post is a well-situated, defensible walled enclosure, standing in a very open plain. It contains a post and telegraph offices, commissariat depôt and some political buildings, also a well. The railway station is about 1,000 yards distant to the south-west; the principal railway buildings are built on two hillocks on each side of the line. There is also a bungalow belonging to the engineer-in-chief. Two brigades can encamp here easily, on the ground in the vicinity of the engineer-in-chief's bungalow, and to the west of the commissariat enclosure, without interfering with the cultivation, which is very extensive, this valley being the most fertile along the whole route. The water-supply from the *nala* above mentioned and from irrigation channels would be ample, though not of such good quality as at the previous camping grounds. There are military officers' quarters used as a rest-house; also a small bazar.

At 9 miles from the camp is the fine mountain of Kaliphat, which rises nearly perpendicularly to a height of 7,500 feet above the plain. A narrow pass leads to the east of the mountain towards Ziarat; it is known as the Khulez or Khalij road. (Route No. LIII, Vol. II.) Three miles to the south is the Sibar *tangi*, through which the Siah Dad stream flows, and by which lies the track to Sangar valley and Badra.

Supplies procurable. Elevation 3,835 feet.

8	KHOST OR SHOR . . .	$10\frac{1}{2}$	$86\frac{1}{2}$	Leaving camp, the road takes a south-western direction over the level plain, till it strikes the river, which it crosses, and then turns west over sandy bushy ground; it again turns south, and at 4 miles passes the village of Amwa. In winter or after heavy rain the road from
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Shahrig to Amwa is almost impassable; horses and mules sink to their hocks; carts cannot be dragged through the mud, and camels are useless. After Amwa the road is good; it turns west and runs generally parallel to the river. At 8 miles it turns to the north, then again to the west, and passes close to the village of Kacheri. It then follows the river-bank among ridges and on high ground. At 9 miles pass the village of Barban. There is much cultivation here. Road then crosses a deep dry *nala* and over high ground, passing the hamlets of Gaubar and Talai, both surrounded by cultivation, then winds between two small spurs to the village of Shor in the district of Khost. There is a good camping ground on the low bluffs above the cultivated strip lying along the river, for two regiments at most. Water from the river good and plentiful, but 500 yards distant. Water from irrigation channels generally obtainable, but of doubtful quality. Elevation 3,745 feet. Cultivation generally rice. No supplies. A rest-house  $\frac{1}{2}$  mile off the road.

9	DARGAI . . .	$8\frac{1}{2}$	95	Road continues over high ground up the gradually narrowing valley. After some distance enter cultivable ground, and at 3 miles pass the hamlet of Zardala Bagh, where Route No. 130 comes in from Quetta. The wide alluvial flat on which this place is situated is called Ujhgi
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Ragna. On the right are low hills. At about the 4th mile the road onwards has been destroyed, partly by the railway and partly by floods, and thence to Dargai the river-bed has to be followed, until at 8 miles the camping ground on the right bank of the river is reached. Space for two regiments, water abundant and good. Dargai post is on the left bank of the river. There are a few railway bungalows and out-houses. Elevation 4,600 feet.

The road to Mangi through the Chappar rift, the southern entrance to which is 200 yards from the railway bungalows, is now quite impracticable. The rift is about  $1\frac{3}{4}$  mile long, about  $\frac{1}{2}$  mile wide at the middle, and contracts to a few yards in width at each end; the southern neck is about  $\frac{1}{4}$  mile long and straight, the northern  $\frac{1}{2}$  mile long and winding. It bifurcates at about 200 yards from the northern entrance. Men on foot can still pass through the rift

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 115—continued.

but when a freshet comes down the river, the necks are flooded several feet deep, and great caution will always have to be exercised in passing through it during the winter and in July and August. Mangi post is situated opposite the northern entrance to the rift. There is a walled and loopholed enclosure, commissariat depôt, rest-house, and several railway bungalows and offices. There is an extensive camping ground to the north of the post, but the water is indifferent.

10	CHAPPAR BEKH . . . . .	7	102
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Leaving the camping ground on the right bank of the river at Dargai, the river-bed is followed for about  $\frac{1}{4}$  mile, the bank ascended again close to the entrance to Chappar rift, and the road passes over low ground, crossing beneath the railway bridge which leads to Chappar rift

tunnel, and winding along the southern side of the valley. After about 2 miles it gradually assumes a northerly direction, and, crossing the drainage line, zigzags up the face of Chappar mountain, reaching the top by one long, straight gradient about 1,000 yards in length. The road is in very good condition generally, but too steep for carts. The road descends to Chappar Bekh by several short zigzags (the inner side of each of which is formed by the retaining wall of that immediately above it), followed by one long and nearly straight gradient running west down the hillside. At the foot of the short zigzags there is also a bidie-path running in an easterly direction to the foot of the hill, which is reached at about  $1\frac{1}{4}$  mile from Mangi post. The valley now reached is enclosed by the Pil mountain on the north and Chappar mountain on the south. The road skirts along the foot of the hills, and at about 8 miles from Dargai and 4 from Mangi, Chappar Bekh camping ground is reached, Water plentiful from river, but of inferior quality. Space for one regiment. Elevation about 5,400 feet.

11	KACH . . . . .	10	112
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For 2 miles beyond Chappar Bekh the road follows the line of the river on the left bank, until a defile (Urkhbara Wali) is reached, to avoid which the stream is crossed and the road zigzags up the clay hills on the right bank. This portion of the road is very bad, and every

heavy fall of rain does considerable damage, the soil being very soft and holding after rain. When there is water in the river there is a fall, 50 feet high, to the right of the road. From the top of the small plateau now reached there is a slight descent to regain the river-bed. The road now follows the river for some distance, passing the place formerly covered with *jhom* bushes, known to the people of the country as Khumb. There is a railway bungalow on the hill on the left bank above Khumb, but all the bushes have been destroyed. Khumb is about half-way between Mangi and Kach. The river-bed is followed to about 5 miles from Chappar Bekh, thence left bank to 6 miles, then river crossed, right bank followed to  $6\frac{1}{2}$ , river again crossed and left bank followed to 7; the right bank is then taken to  $7\frac{1}{2}$  miles and then the river-bed to 8, when the road ascends the right bank to avoid another gorge (Khuni Pan *tangi*) and winds over hills. The gradients are very easy, and the road hence to Kach in good condition. At about  $9\frac{3}{4}$  miles the cart-road descends again to the river-bed, crosses to left bank, and soon after reaches the gap in the hills, through which the river flows, crosses it immediately below the railway bridge of six 40-ft. spans, and reaches Kach post.

The post is a strong defensible enclosure built for six companies of native infantry; post and telegraph offices, and a few police. The bazar, a very extensive one, where supplies of all kinds can be obtained, including wines and "Europe stores," is abominably filthy, and troops should encamp as far from it as possible. Rest-house. The camping ground is extensive and good to the north-east of the post, sufficient for a brigade. The water-supply abundant, but apt to cause diarrhœa. Elevation 6,300 feet.

12	GHARKAI . . . . .	11	123
13	PISHIN . . . . .	15	138

Cart-road. Camping ground for a brigade; water, fuel, and camel-grazing plentiful. Elevation 5,500 feet.

Cross the Ishpezina kotal. At about 8 miles is Bagh China, an open space in the narrow valley of the Surkhhab. There is a good camping ground, free from brushwood, fit for a regiment. Water abundant and excellent. No supplies, but fuel and camel-grazing abundant;

grass scarce. There is no water to be got between Gharkai and the Surkhhab river.

ROUTES ON THE NORTH-WEST FRONTIER.

*Route No. 115*—concluded.

At Pishin is camping ground for a division. Ample water, fuel, forage, and camel-grazing. Bhusa can be obtained. Elevation, 5,150 feet.

GENERAL REMARKS.

On this route the road, which had been made as far as Gharkai camping ground and was generally excellent, has been allowed to fall into thorough disrepair, the annual allowance for repairs being, I believe, only Rs80 per mile. The only places where it can now be truthfully said that a road exists, are as follows :—

Near Kulat-i-Kila, about 3 miles  
Kuchali to Guneji, about 8 miles.  
Sinarzi plateau, about 3 miles.  
Harnai plateau to Nasak, about 11 miles.  
Below Shahrig, about 3 miles.  
Amwa to beyond Khost, about 9 miles.  
Dargai to Chapper Bekh, about 8 miles.  
Below Kach, about 2 miles.  
Between Kach and Pishin.

*Capt. O'Sullivan.*

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 116.

FROM SIBI TO THAL.

Authority.—DUKE, 1881.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	NABI . . . .	7	7 17 26 41	} <i>Vide</i> Route No. 115.
2	KALAT-I-KILA . . . .	10		
3	GANDEIN DAF . . . .	9		
4	TUNG . . . . .	15		
5	GAMBOLI . . . .	16	57	The road leads straight up the Quat-Mandai valley, and is very good for the first 12 miles. A good stream of sweet water crosses the road at the 7th mile, and at 12 miles the road turns to the north-east and winds among and over the spurs of the hills on the right bank of the Bheji <i>nala</i> ; some of these are steep. The encamping ground consists of several small level plateaux, one of which is of earth and is sufficient for one regiment; the remainder are very rough and stony. Water good. Grass and wood abundant.
6	KATURI . . . .	12½	69½	The Bheji is crossed soon after leaving camp. The road through the Tung is about one mile in length; it is a little steep in places. At the end of the second mile the Bheji is again crossed, its stream is strengthened by copious sulphur springs which flow into it about 2 miles east of the road, and which are well worth a visit. After crossing the river the road winds amongst the low hills, until, at the 6½ miles, the river is again crossed and Karmari plain is reached. Karmari is 1,290 feet above sea-level. It affords an excellent camping ground, and the water in the river is good. Grass in small quantities and firewood are procurable, but no other supplies. At the 8th mile the commencement of a succession of spurs stretching to the Bheji river from the Makh mountain is reached, and the river is not recrossed until nearly the end of the 14th mile. Near the end of the 12½ mile the Suj torrent bed is crossed, in which a little spring of water usually exists. The river banks are so precipitous during this reach of road that river water is not procurable by travellers. The camping ground is good; water and wood are abundant; grass is not very plentiful. To the south of the river lies a <i>Kach</i> , and is called Gamboli, from the mountain which shelters it.
				At half a mile the hills close in on the river and the road crosses and recrosses the stream three times in the first 6 miles, for which distance the valley is from 100 to 200 yards wide, at 6½ and at 7 miles dry torrent-beds join the Bheji river from the south, the hills on that side receding about 2 miles, a low flat-topped under-cliff bounding the true bed of the stream.

At 9 miles further progress due east is stopped by a high table-topped mountain range, with precipitous sides, clearly showing the varied strata of which it is composed.

The river and road bend to the left, or north-east, the path crossing and recrossing the very stony bed of the Bheji nine times.

ROUTES ON THE NORTH-WEST FRONTIER.

*Route No. 116—concluded.*

At 11 miles a valley and tributary stream from the left (or north-west) is passed, and at 13½ miles a broken, stony, irregularly-shaped valley. Camp ground, about 100 yards in diameter, and commanded on two sides by hills, is reached by crossing to the left bank of the river, which is here a full, strong stream, of good, but discoloured water.

The soil gravel. The camp ground is spacious, but very stony in places, and bounded on three sides by the river. Water, grass and wood abundant.

7	POZHA . . . . .	11	80½	A 6-foot camel-track has been cleared the whole way, and is on the whole easy for pack-animals, except in the river-beds, the crossings of which are very rough and difficult. The river Bheji is crossed eight times during the march. This fact alone would render the road useless in the rainy season. All crossing the Bheji might be avoided at some expense in blasting, by carrying the road along the other side of the valley. This would also materially lessen the distance.
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The camping ground is very large, open, and soft, with abundance of grass, wood, and water.

8	THAL . . . . .	11½	92	The road ascends about 800 feet in about 3 miles by an easy track over the Pozha mountains, which closes the Thal valley on the south, a descent of about 250 feet in 2 miles then brings the road on to the Karai plain, a perfectly level smooth valley of very considerable extent, covered with grass and cultivation. At 7¾ miles a low range of hills is crossed, and Thal, with its neighbouring villages, surrounded by their mud watch-towers, scattered among the fields, comes in view. No water is met with in this stage.
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*Alternative route from Gamboli viâ the Sembhar pass.*

6	SEMBHAR . . . . .	10	67	Ascent to the Anghar mountain very steep, road rough, stony, and difficult. The kotals about 600 feet above Gamboli. The soil, however, is soft (clays and shales) and easily worked. Beyond is an open space called Pano, with a pool of good water under an overhanging rock. This was the last fastness held by the Maris when driven out of Kahan by Sir Henry Green. The rest of the road to camp is bad, but less difficult.
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Camping ground stony and confined, water plentiful, but purgative in its effects. No supplies but hill grass. Grazing scarce. Here Route No. 124 is struck.

7	THAL . . . . .	14	81	<i>Vide</i> Route No. 124.
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**NOTE.**—This would be a very useful alternative route in case of the Bheji being flooded. It is always followed by the post-carriers from Thal to Gamboli. Mr. Duke says he has traversed it with mules and lightly-laden camels.

Route No. 117.

SIBI TO VITAKRI, *viâ* THE GAZI PASS, CHAKAR VALLEY, AND MAKHMAR.

*Authorities.*—FIRST EDITION; HAY, (1882).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KURUK . . . .	4	4	Made road; <i>nalas</i> bridged; nowhere commanded; good camping ground; supplies of all sorts; water abundant and wholesome in canals from the Nari river.
2	TALI . . . . .	14	18	Road as above; water occasionally passed in irrigation channels; supplies of all sorts from civil authorities; camping-ground uneven; water fair, from wells.
3	SHIRINAF OF SIRINAB	15	33	Road excellent to mouth of the Gazi pass, after that broken and cut up to Nilag Daf, and stony, but level from that place into camp. No water from Tali to Nilag Daf; road (after Gazi pass is entered) everywhere closely commanded. From Shirinaf a winding
ravine, about 2½ miles in length, extends to the Quat-Mandai valley; in some places it is so narrow that camels laden with boxes cannot get through; the road is otherwise easy and good: at a place called Ramasir there is a dropping-well, covered with ferns and creepers, which is held as a very holy place amongst the Hindu traders in these parts; from Shirinaf to Quat is about 16 miles. The camping ground at Shirinaf is indifferent and not suitable for a large number of troops. There is sweet water in the Shirinaf <i>nala</i> ; the drinking water is good, but slightly brackish, grass can be collected by Maris; wood easily gathered. No other supplies. Elevation, 750 feet.				
4	THURK-KUND . . .	12	45	Road fair, but stony, along Chakar torrent-bed; everywhere closely commanded by fairly accessible hills; water, slightly bitter, procurable everywhere <i>en route</i> ; at Thurk-kund there is some cultivation; water abundant in river-bed; there is a sweet-water <i>kumb</i> about 1
mile up the Barg road to Tung, which takes off at this point; wood easily gathered; grass can be collected by Maris. No supplies. Elevation, 1,320 feet.				
5	BEJARI KACH . . .	9	54	Road open but stony; Chakar Tang passed at about 4½ miles; at this point obstructed by large boulders and is impassable for guns; camels laden with ordinary tents and baggage of a civil officer passed Chakar Tang easily in March 1881; beyond this spot the river,

which has hitherto been called Chakar Kaur, is called Mangara or Manjara; easiest road onwards for baggage animals is along the river, but a good bridle-road passes up the Drez *nala* (sulphur spring), which saves, about 2 miles. The Kattan *nala* is passed just after quitting Chakar Tang (this leads to Kahan; about 2 miles up its course are found the petroleum springs from which it takes its name); slightly bitter water procurable everywhere on road, which is at all points closely commanded. The Chakar defile is in fact a formidable pass; camping-ground excellent; water abundant, slightly brackish, grass and wood plentiful. No supplies. Elevation, 1,890 feet.

Route No. 117—continued.

6	DRAT . . . .	7	61	Road good the whole way, passes along the bed of the Manjara river; water of fair quality but slightly brackish everywhere <i>en route</i> ; at 4½ miles a stony plain is reached on the right bank of the Manjara, called Karmari <sup>1</sup> ; from Karmari three paths go straight to Mamand—
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(1) by the Mamand kotal; (2) by Bejar kotal (*vide* Route No. 107); (3) by a more devious and northerly track. The Mamand kotal road is perfectly easy for 2 miles and a half over a broken plain called Spin Tok, until the escarpment which bounds the Mamand plateau on the west is reached; this escarpment is about 20 feet in altitude, and is approached by an easy slope of 80 feet in height; owing to the precipitous character of the top bluff horses have to be led along its face for about 30 yards; a working party of 50 men with a little blasting powder, could put this part of the road in order in a day. At present camels, even unladen, could not well traverse it whilst mules must be unloaded and their packs carried by men over the difficult place. The third track finds its way out of the Mamand plain on the north through a gap in the hills bounding Mamand, and which allows the Tombhel hill drainage to flow over the plain; it ascends gradually, turning to the east, and passes up the Mazen-Goza valley, which is cultivated, until it reaches the top of a high pass, the Zawi kotal; up to this point the road is excellent. Height of kotal (estimated) 600 feet above the level of Spin Tok; the descent is perfectly easy (about 1 in 8), the path being wide and the Zawi hill, as its name implies, being composed of shales and chalk; the Mamand people use this road for bullock traffic, the Mamand kotal for horse traffic, Bejar for foot traffic, as being the nearest, and the Drat Ban road for camels, as it is the easiest, though longest; all these roads meet at a point called Benang Singh<sup>2</sup> on the edge of Karmari. (Benang Singh is so called from a porous calcareous concretion, which resembles a petrified honey-comb, and which the Maris have placed on a stone pillar standing on this small plain).

From the top of Mamand kotal the whole Mamand plain is cultivated, but the *bunds* which intersect it afford good footpaths. There are three forts in Mamand, one at the western end, which is deserted and belongs to the Powindas, one in the centre belonging to Karam Khan, Bijarani, also in ruins, and a third at the far eastern end of the valley, which is inhabited by the Sumerani Bijarani Maris under Shadian. There is a small spring of inferior water at Mamand, but the cultivation is entirely dependent on rain-water for irrigation. The Mamand basin is about 3 miles in length by a mile in width at its broadest point, and is almost intersected by a low hill. It is entered at its south-eastern corner by roads from Kahan and Vitakri, the total distance from Karmari to Shin Kach *via* Mamand kotal is about 9 miles. From Karmari there also turns off to the north a road to the Bheji river and Gamboli by Nili, 16 miles. The camping-ground at Drat Ban is rough and broken; water plentiful in Manjara river; grass is procurable, and firewood abundant. Elevation 2,140 feet.

*N. B.*—The road from Kalu enters Mamand at its north-eastern angle.

7	SHIN KACH . . . .	7	68	The road for the first two miles and a half is good; it lies along the bed of the Manjara river, and is everywhere commanded by accessible heights; the next 2 miles are over the Drat spur, which projects into the course of the river from the south; its highest point is 210
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feet above the river-bed; it is necessary to traverse the rough kotal, because the bed of the river is obstructed by large boulders and ridges of rock, and by a long and very deep pool of water; camels laden with the ordinary baggage of a civil officer have passed this hill without difficulty; from the base of Drat the road into camp is clear, open, and good; the camping ground is fairly open, but is stony; the neighbouring heights are easily accessible; grass can be collected by Maris. No supplies at Mamand, which is 3½ miles from Shin Kach by an easy road; there are six *baniyas'* shops, but they could not afford much in the way of supplies. The water-supply at Shin Kach is abundant from the Manjara river, but the water is more decidedly brackish than lower down in the course of the stream; the saline deposits too are more extensive. Elevation, 2,470 feet.

<sup>1</sup> The road from Thal Chotiali *via* Nili joins the Chakar road at this spot (Route No. 112).  
<sup>2</sup> Sang (?) pronounced Sing by Baluchis.—P. J. M.



Route No. 117—concluded.

8	TRIMAN . . . .	8	76	The road passes up the Sathiwali torrent-bed along a wide stream between two ranges of hills; the floor of the valley is filled with broken hummocks of conglomerate; at the 3rd mile an open space is passed and some brackish water; it is called Ghora <i>dand</i> or pool;
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Ghora means in the Baluch language a "marauding band;" and this open space is a convenient rendezvous for Mari raiders, hence its name Ghora Dand; there is no water until Triman is reached; the camping ground is stony and broken; no supplies; water in perennial pools in the river limited in quantity and decidedly brackish in taste; there are some fresh-water springs, about a mile and a half to the south of the camp, at a place called Kerar Kankeri. Elevation, 2,920 feet.

9	MAKHMAR . . . .	14½	90½	Road along Sathiwali valley, open and good at 7½ miles; the Sathiwali <i>sham</i> is reached at this point; several <i>kacha</i> wells have been excavated by the Maris in the sandy watercourse near the road; they are about 80 feet deep; in some the water is good, in others brackish;
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after the Sathiwali *ziarat* is passed the road bends slightly to the south and winds over the Lizi Sunth beneath the Kutkain bluffs; at the 12th mile it enters a broad expanse of open country, which bears the general name of Makhmar; this highland is triangular in shape; it is bounded on the north by the Pursi hills; on the south by the Chapar and Churwad hills; on the west by the Rustarani and Kutkain ranges; its southern angle is at the Tattira hill; its eastern at the Makhmar *sham*, and its western point is obscured by a mass of shaly hills behind Kutkain; its surface is, generally speaking, smooth, and in many places grassy, but it is here and there broken up by ravines and hummocks; it has a dip from the Makhmar *sham* of about 200 feet. Tamarisk, dwarf *ber* trees, and other jungle are very abundant, and there is excellent grazing for sheep; the level parts are quite uncultivated, though no doubt, if peace were assured, a good deal of the alluvium would yield fair crops; Makhmar measures at its base from east to west some few miles: it forms the basin of the river bearing the same name, which however has but little water, and this is collected in pools, as the stream mostly percolates beneath the river bed. The Makhmar pastures are common to all the Maris, but are most affected by the Loharanis, who possess immense herds of sheep and goats. The most convenient encamping ground is on the right bank of the river at a spot about due east of Kutkain, called Makhmar Triman. From this spot roads radiate to Kahan, to Bhor, to Vitakri, and to Mamand. Elevation, 2,910 feet.

10	VITAKRI . . . .	19	109½	The road for the first 2 miles out of camp is a little rough and trends towards the south; the Pir Ismail <i>maidan</i> is then reached; at 5½ miles the Wat Wala <i>nala</i> or <i>jung</i> is passed; there are some <i>kacha</i> wells in its sandy bottom; Mazar Kach, a broad plain, or rather especially
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designated portion of Makhmar, is traversed at the 8th mile; no water is met with after Wat Wala until the Kaha *nala* is reached, unless heavy rain has filled the pools in the Mazar Kach drainage; at 10 miles the Makhmar Sham is crossed; this is the eastern limit of the Mari country; from this spot the road, which up to this point is excellent, though occasionally a little stony, traverses the broad Vitakri plain, until the site of the late cantonment is reached; it is everywhere smooth and good, though a low pebbly ridge is crossed about a mile and a half from camp; there is an awkward watercourse close to camp, which should be ramped before mules are sent across it. Elevation 3,160 feet.

Route No. 118.

FROM SIBI TO VITAKRI, *via* THE GANDHAR PASS.

*Authorities.*—FIRST EDITION; DAMES.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KURUK . . . .	4	4	} <i>Vide</i> Route No. 117, Stages 1 and 2.
2	TALI . . . .	14		
3	GAZI . . . .	16	34	

brackish; camel-grazing scanty, would easily be exhausted. This remark applies also to wood.

4	TRATAIN . . . .	15	49	For the first 8 miles there is an easy road up the Gazi torrent to its head. Then a low watershed is crossed, and the drainage basin of the Gandhar torrent reached. The hills are here composed almost entirely of clay of very soft sandstone, and a good road might easily be

made. At present wheeled artillery could not pass. The encamping ground at Tratain is in the bed of the Gandhar. Wood, water, and camel-grazing abundant. Grass ditto. Water in the stream is slightly brackish, but fresh water is at present to be had from a pool in a small torrent-bed coming from the sandstone cliffs to the north of the encamping ground. There would always be water here except after a very dry season. From this place a road direct to Lehri through the Gurkh pass.

5	KISHARI KHUND . . . .	12	61	Compare the next 3 stages with Route No. 108. The road leads along the bed of the Gandhar torrent for the greater part of the way. Soon after leaving the encamping ground the torrent is left, and for about 3 miles the road leads over a small alluvial plain (the Tratain

Lop), leaving the Chichauri Lop to the right. The torrent-bed is again reached at a small plain called Hasil Hai Manta, covered with trees and thence follows the stream. Hasil Khan, Mari, is said to have died here, having been poisoned by Dorubkis, the poison being given in a bottle of spirits.

The remainder of the road up the torrent-bed is extremely rough and stony, and the stream is crossed several times. The encamping ground is limited in size. Wood, grass, grazing, etc., plentiful. Water fresh from small torrent; brackish in the main stream.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 118—continued.

6	MEHI . . . .	7	68	The bed of the Gandhar torrent is followed for the whole way lying between high cliffs. There is abundance of water in the stream, which forms deep pools, abounding in fish and occasionally alligators. The water is brackish, and no other is attainable. Wood and grass are abundant at Mehi.
7	DAHVA . . . .	20	88	The road, immediately after leaving Mehi, crosses the Gandhar torrent, and the ascent of the Gandhar <i>kandao</i> commences. This is a steep stony slope of about 3 miles. The highest point is about 1,000 feet above the torrent. The track then leads across a limestone plateau, intersected by torrent-beds and strewed with flints and other stones. It is very difficult both for camels and horses. After about 15 miles this plateau comes to an end, and there is a sudden descent of 400 or 500 feet down the side of a precipice into the Dahva valley. This valley abounds in the <i>pish</i> ( <i>Chamærops Ritchieana</i> ), and the height above the sea is probably not less than 2,000 feet. There is a good deal of wheat growing here, the first cultivation passed since entering the hill. Water plentiful, grass and camel-grazing scarce. This is a difficult march for baggage animals. There is no water on the road.
8	SHULROF . . . .	15	103	The road runs about 3 miles through the Dahva plain. At the end of this plain there is a steep descent of 300 or 400 feet into the bed of the Soren <i>kaur</i> , along which a tolerably easy track leads to the encamping ground. The water here is very brackish, more so than at any stage before, but there is a pool of rain-water near by not quite so bad. Grass plentiful. Wood and camel-grazing sufficient.
9	CHAPPI KACH . . . .	14	117	The road passes over a small hill pass immediately on leaving the encamping ground, and on descending the bed of the Gur torrent is crossed (salt). The remainder of the road is easy, running through an open plain, bounded on the west by Mount Tatra, and on the east by hills known as Amilapur, Larbaga Zard, and Bizard. The first part of the place is called Lalti, the latter or northern part Chappi. There are separated from each other by the Soren <i>kaur</i> (brackish), which skirts the Chappi plain as far as the encamping ground. It ultimately joins the Makhmar, which itself is a tributary of the Gandhar, the stream which leaves the hills at Lehri. These plains were formerly cultivated and the remains of two or three watch-towers are still visible. There is a considerable extent of good land, more than at Dhava. Chappi Kach is well supplied with wood, grass, and grazing. The water is brackish, as the whole of the Gandhar system is, but there is at present moderately fair water to be got from pools. The height of the plain is probably about 2,500 feet, that of Mount Tatra, a fine hill lying to the west, I should estimate at not less than 6,000 feet.
10	KANDA LANG . . . .	15	132	This is a fairly easy march throughout, with one or two rather difficult places for camels. The road after crossing the torrent lies at first through the plains of Gazi-mara and Mnhammad Kach, and then along the torrent-bed, which is left near the junction with the Shalwar torrent. A small hill pass over hills of clay and shale is then crossed and the Marai plain reached. The Makhmar torrent (fresh) is crossed at about two-thirds of the distance. Another hill pass, with a general rise in the ground, has to be crossed before the encamping ground at the Kauda Kach is reached. Just after passing the Makhmar an old Pathan cemetery is passed, remarkable for a rounded stone pillar, about 15 feet high, which marks one of the tombs. The encamping ground is the best seen in these hills. The water from the Makhmar is good. The stream here forms two deep and large pools under the bank. Wood, grazing, and grass are plentiful. There are a number of <i>pakht</i> trees ( <i>Populus euphratica</i> ) along the edge of the

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 118—concluded.

water. Hence the lower part of the valley is called Pakhtani Kach, the upper part being known as Kanda Lang.

11	MAZAR KACH	14		146
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The road lies for the whole way along the Makhmar plain, and is good. The plain is mostly level, alluvial soil, but is broken occasionally by low hills, covered with stones. At starting Mount Rastrani is left behind to the left, the road running about north-east. The

peaks of Gird-thir and Lizi are passed on the left, and Mount Chapar forms a conspicuous object in front for the first-half of the way. As this mountain is approached, it is left on the right, and the plain widens out into a fine valley, known as Pir Ismail Pati. To the left of this a high white cliff is visible, which forms the boundary of Kotu. It is known as Kotu Drang. The encamping ground at Mazar Kach under Mount Chapar is well supplied with grazing, wood, and water.

12	VITAKRI	12		158
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*Vide* Route No. 117, Stage 10.

NOTE.—The chief objection to this route arises from the badness of the water-supply. It is, however, a practicable alternative route, and gives access to the heart of the Mari country more easily than any other.

Route No. 119.

FROM MAKHMAR TO KALCHAS, *via* SOREKOR.

Authority.—HAY, 1882.

No of Stage	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate	Total	
1	SOREKOR	16	16	Road for 2 miles up and down easy, but pebbly ridges, and then across the Pir Ismail plain for 2 miles to the Khainu gorge, where there is a stream of brackish water. The gorge is narrow and for some 150 yards obstructed by boulders, requiring a working party. After quitting

the gorge the road ascends slightly, winding between low hills for about a mile, and is rough and stony. A succession of small plains and long valleys is then crossed, separated by limestone and rubble ridges. Between two of these valleys the rush of water through the gap in the ridges has cut off the alluvium, and the resulting small ravines would offer serious difficulties to the passage of baggage animals by night. At 13½ miles the *tokhs*, or valleys, are quitted, and a level plain intervenes between the Sorekor torrent and the most southerly of these ridges. The plains and valleys above alluded to are passed in the following order:—

1. Chur War.
2. Uzmi Wala.
3. Bareli.
4. Zingi or Yingi.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 119—concluded.

The Sorekor *nala* collects the western drainage of the Nasan Sham. Encamping ground open and commanding. Water plentiful and fair from pools in torrent. Grass and wood abundant. No supplies. Elevation 3,000 feet.

2	TADA . . . .	20	36	Road traverses the Palami plain for 3 miles, and then crosses the end of the Siah Koh range at the Ghari Wad kotal. It then winds between and over low hills, and along across broken ravines to the 11th mile, when the Parkao valley is entered. This last 6 miles of road is
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commanded throughout. It is easy for mules, but difficult for camels, and almost impassable for guns. At the 9th mile small holes have been dug in the Iris *nala*, in which there is a limited supply of good water. A large graveyard is passed, where the road debouches on the plain, and about 1 mile north of this is a fresh-water spring.

Camping ground on the bank of the drainage channel formed by the junction of the Jantali and Parkao *nalas*. Water in large pools of fair quality. Grass procurable. Fuel abundant. Good camel-grazing. Elevation, 2,620 feet.

3	GANDIDAB . . . .	14½	50½	Road good throughout, the pebbly ridges, which are crossed, being smooth and easy. At 2½ miles the Jagani <i>nala</i> is crossed, with a little water in pools. At 8 miles the Kanal <i>nala</i> is met, the sides of which are steep, about 15 feet high and the bottom strewn with limestone.
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Camping ground fair on right bank of the Kaha *nala*. Water plentiful and good. Grass and wood procurable. Elevation 2,520 feet.

4	BHOR . . . .	6½	57	Road southwards over undulating ground, stony in places, but not difficult. At 2 miles the road turns east into the Pilawar plain between the Kop and Baragh ranges.
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Camping ground good on the bank of a branch of the Kaha *nala*, from which water good and sufficient for a regiment. Wood and grass procurable. Elevation, 2,500 feet.

5	KALCHAS . . . .	12½	69½	Road for 5 miles very good, over the Pilawar plain, covered with trees and bush jungle. Cross the Kop range (2,200') by a stony, in places steep path. The descent on the south side easy and gradual along the Sham, a large bare, undulating plain.
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Good camping ground. Water good from the *nala*. Wood and grass procurable. Elevation, 2,480 feet.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 120.

FROM KACH POST TO LORALAI, *viâ* ZIARAT AND HARNAI.

*Authorities.*—GASELEE (1885); SHOWERS; WATLING; BLOWERS; HAYDEN; CHASE; DUPUIS; QUETTA STANDING ORDERS.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total	
1	KAHAN . . . .	11½	11½	For the first 7 miles the road follows along the bank of the river. A 12-foot road has been laid out at an easy gradient, suitable for cart track, but heavy rains and floods have almost ruined it (1885). Large portions are completely washed away, and in other places

the traffic over the soft clay in wet weather has made the surface very rough. There is a rise of 1,200 feet from Kach to the watershed, which is called the Lorai kotal. Height of summit by pocket aneroid, 7,350 feet. There is a good deal of wood near the summit, mostly juniper trees. Some supplies are procurable from the village of Hamdun, about 100 houses, which was passed to the left of the road from Kach, about 5 miles from the latter place. The descent from the Lorai kotal is pretty rapid to the Kahan valley, which is reached at about 4½ miles

The camp in the Kahan valley is near the Pil rift, a curious cleft, or chasm, through the hill through which the waters from the Lorai kotal and Kawas flow into the Pil lake, and thence to Mangi. The waters, here rushing through the rift with some 300 feet or more of perpendicular limestone rocks on both sides, form a fine piece of scenery of a kind seldom seen.

The drop from the Lorai kotal to Kahan camp is about 1,000 feet. Height of Kahan by pocket aneroid, 6,340 feet. Barometer reading 23—60".

There is some grass procurable from the hills; also firewood; little cultivation in the valley.

2	KAWAS . . . .	7½	19	The track for the most part follows the high river-bed up to Kawas, 6 miles; then rising to the ground on the right bank of the stream reaches the camping ground at Zandra Kawas. This place is so called from a water-mill, turned by a channel bringing water from a spring which
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flows from the hills to the north. The making of a cart-road clear of the river-bed would be a work of great expense and some difficulty. The average breadth of the valley throughout this march is from 1½ to 2 miles.

There is a good deal of cultivation, mostly on patches of land formed of silt deposited by the river. Kawas is a large village of some 300 houses of Spin Tarins, and in the valley there are also several villages of Paniza. Kakars. There is also a settlement of Dotanis, a tribe of Powindahs. Plenty of wood is to be got from the hills near. The camp is situated on high, well-drained ground. The cold during the winter months is probably intense, and the elevation would be too great for troops during that season.

The Pil lake, into which the water from this valley flows through the Pil rift, is caused by a landslip which has partially blocked the natural outlet into the Mangi river, into which the water flows. Height of Kawas by pocket aneroid, 6,950'.

	GHWASHKI . . . .	12	31	There are two roads. That leading up the bed of the watercourse appears to be generally used; it is very stony and rough. The other runs over high ground at the base of the hills bounding the valley to the north. It is much better than the first (which it joins after 4 or 5
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miles?), but a guide is required.

Route No. 120—continued.

At about 4 miles pass Chinah, a small village, with cultivation and fruit-trees, also on the left. Half a mile beyond Chinah is Skobai, or Tchikobi, a small village, with fields. This is the most easterly of the Kawas villages, and there is no cultivation between it and Ghwashki. At about 5½ miles the valley narrows, and there is a defile a quarter of a mile in length. The head-springs of the perennial water are here, and the place is known as Pechi or Pestai. At the Pechi defile the growth of trees and underwood, which has hitherto been confined to the superior slope of the hills, comes right down to the watercourse, and this may be considered the commencement of the juniper forest.

The road now runs through the thick scrub of small juniper trees, wild almond, tamarisk, etc., which fills the valley, for 4 or 5 miles (11 miles), when the valley is closed by a low hill, or spur, running right across it. It is, however, pierced by a rift known as the Tabara tangi, through which the watercourse passes. The road bends to the right into the rift, and again to the left after having passed it. The gorge is very narrow, and has precipitous sides, but can easily be turned, so it presents no obstacle. Ghwashki commences beyond the defile. There is a fair amount of cultivable land, but not much water. All around is a thick forest of large juniper trees.

Halt at 12 miles. Water in an open channel, brought from a considerable distance round the slopes of hills south of camping ground. It is collected in a small tank on the crest of a spur and run off when required for irrigation. Supply is of uncertain amount, and should, if possible, be secured beforehand. A little *bhusa* may sometimes be procurable.

Elevation of Ghwashki, 6,900 feet.

The road this march is indifferent, being either very stony or through thick scrub; before reaching the camping ground the road to Mangi by the Mir Kasim valley turns off to the right up the hillsides. (Route No. LIV, N.-W. F. Vol. II).

4	CHAUTER . . .	13½	44½	South-east up the valley; the track winds through a thick forest of juniper, the trees of which are 40 to 50 feet in height. At about 3 miles is a patch of cultivation. Above this the hills approach very close, and at 3½ miles the road turns sharp to the left (north), winding through a nar-
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row gorge into a valley of rounded rolling hillocks. Just beyond the gorge is a tank. The path then rises slightly for half a mile, crossing a spur, and descends into the Ziarat valley, at first broad, but gradually narrowing. The road continues up the valley, on the right bank at the watercourse, through the forest, which is still thick, but interspersed with grassy glades. The trees here are larger than before. Several small streams of water are passed. The head of the drainage running to Kawas is now reached, and at 6 miles the road crosses the watershed known as Ziarat Chari. Elevation about 8,900 feet, upwards of 2,000 feet higher than Kawas town. As far as this point the road is fairly good. Descent from the Chari follows a steep and rocky watercourse, down a thickly-wooded glen, the forest extending over the hills in all directions as far as the eye can reach. The path is narrow and rough in parts, but was widened and improved by Major Blowers' party in May 1880. At about 1 mile the path enters the bed of the Torwamani *nala*, in which is a little water. Thence the gradient of descent is easy to Korbi Kats, or Kach, an open meadow valley, with perennial water (in a defile to the left) which is reached at 3 miles from the watershed. Thence through a tolerably open valley for 2½ miles (11½ miles), when it narrows and continues to Chanter, where it opens again. Here is a hamlet with perennial water cultivation and fruit-trees. The camping ground is among trees, but otherwise good.

There is a better camping ground about 1½ mile further on the north side of the river-bed. Here water from an irrigation stream is abundant and good, but the distance is not nearly so well divided.

From the above spot there is a steep zigzag path over the hill to north into the Sherin valley, and thence to Pui, which is about 7½ miles distant. The pass over the hill is known as the Kasa kotal.

5	TORAMANA . . .	18½	63	From Chanter the Wani village, about 4 miles, the track follows the valley leading to Smalan (distant 24 miles, to where Sinjawi and Smalan plains join) for 6 miles from Chanter, when the path leading towards Harnai turns sharp to the south, and after 2 miles easy ascent in a south-
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ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 120—continued.

westerly direction, reaches the bottom of a steep ascent to Peshawar kotal. Here (8 miles from Chauter) there is a small spring of good water. The ascent of the hill from the spring to the top is about a mile, and is very steep. The height of the top of Peshawar pass is about 8,200 feet, and there is a rise of about 1,500 feet in the 3 miles from where the track to Harnai leaves the Chauter-Smalan road.

The track then descends rapidly for about  $\frac{1}{2}$  a mile, when it leads along the hillside and across a valley for about a mile, after which it again ascends at a very steep gradient for about a mile to the top of the hill called Uzhda pass, elevation about 8,200 feet.

From here a good view is obtained of the country below; to the east lies the Mehrab *tangi* and Sindli Kan. From the top to the valley below is a very steep descent of about 4 miles: then about 3 miles of easy going to camp under cliffs on the south side of the Toramana plain. Barometer reading 24.3". Height by pocket aneroid, 5,600 feet. Toramana is a plain to which the inhabitants of Harnai resort, after the spring crops are cut, to escape the heat. There is plenty of grass and wood. The plain is 3 or 4 miles long by about a mile in breadth. Water is said always to be found in a stream at south side of valley.

The route over the Uzhda pass is a considerable detour, but this is necessary from the difficult nature of the hillsides of a defile through which the Khushnob water flows. This water is stopped from flowing on by a landslip which seems to have occurred some time ago and completely blocked the exit. An easier road, so as to avoid ascending to the top of the Uzhda hill, could no doubt be made, but a good deal of expense would be incurred.

6	HARNAI . . . . .	17 $\frac{1}{2}$	80 $\frac{1}{2}$	On leaving the Toramana plain follow the Gharkai stream almost due west for about 2 $\frac{1}{2}$ miles, when the Wani is entered, the general direction of which is almost due south. At 2 miles there is a small hamlet and a few fields.
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After about 3 miles (17 $\frac{1}{2}$  from camp) the mouth of the Wam *tangi* is reached. The hill on both sides of this defile are steep and precipitous.

It is necessary to follow the bed of the stream. After passing through the defile the track keeps along the right bank of the Wam for about 3 miles, when it leaves it and goes across a gravelly plain to Harnai. There is good camel-grazing on this plain; also plenty of grass. There is no water after the Wam *tangi* is left.

7	TORSHOR . . . . .	13 $\frac{1}{2}$	94	On leaving Harnai the road to the Mehrab <i>tangi</i> follows the river-bed for 2 miles, when it leads up and over a ridge, and at 4 miles drops into the Mehrab stream; the mouth of the gorge is entered at 5 miles. The road then keeps at the bed of the stream for 6 miles. At about the 8th mile the gorge opens out for a mile or so. A 11 $\frac{1}{2}$ miles is Torkhan; dak bungalow, militia and levy post. The road is dangerous for carts from Harnai.
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8	USHGHAR . . . . .	13	107	Dilkhuna is passed at 4 $\frac{1}{2}$ miles. Here is a dak bungalow. Another road goes by Sinjli Kan and is 2 miles shorter than by Dilkhuna. It crosses the Shnalakai kotal, and is available when the new road is blocked by landslips. It is, however, difficult in bad weather.
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9	SINJAWI . . . . .	12	119	Pass Razghai levy post at 2 $\frac{1}{4}$ miles; dak bungalow. The broad open valley continues until the entrance to a pass under the Torgarh hill is reached. This pass is about a mile in width, and there is no difficulty throughout it. After
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about a mile the pass enters the Smalan valley, in which there is a great deal of cultivated land and several villages.

About 4 miles across the valley brings one to a low ridge, dividing the Smalan valley from that of Sinjawi. In wet weather the ground in the valley is very heavy and most



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 120—concluded.

trying to the baggage animals. At Sinjawi a detachment of native infantry, and militia and levy post; also a dak bungalow.

10	LORALAI . . . . .	17	136	Vide Route No. 105.
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Route No. 121.

FROM KACH POST TO LORALAI, *via* ZIARAT AND WANI.

*Authorities.*—SHOWERS; BLOWERS; WATLING; HAYDEN; CHASE; DUPUIS.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KAHAN . . . . .	11½	11½	} Vide Route No. 120, stages 1 to 4.
2	KAWAS . . . . .	7½		
3	GHWASHKI . . . . .	12	19	
4	CHAUTER . . . . .	13½	31	
5	WANI . . . . .	6¼	44½	
			50¾	Fair road down the valley here upwards of a mile wide, and wooded. At about 1½ mile the Kasa kotal path to Pui branches to the left over the hills on the north side of the

valley. Here is a good camping ground, as above stated. Beyond this point the valley is again narrowed by a spur from the hills to south, immediately after passing which is another village.

The cultivation stretches down the left bank of the river bed. It is watered by the stream which issues from the hills near where the road to Pui branches off, and fields irrigated from the same source extend intermittently to within a short distance of Wani: The road lies along the north side of the valley, skirting the cultivation. It is fairly good, and there is water all the way.

Wani is a hamlet of some half a dozen huts of Wanechis under the hills on the further (south) side of the river bed. There is cultivation on both sides, but the water supply, though usually abundant, has been known to dry up in bad years.

Camping ground tolerable, but it is on a slope, and forage is scanty.

The valley here is about 1½ miles wide. It is bare of trees, and bounded on both sides by precipitous hills. Nispha head is visible over the southern range.

6	SINJAWI . . . . .	16¼	67	Beyond Wani the valley opens out, and for about 2 miles the road lies over a stony plain with tufts of grass. There is then a steep descent to the watercourse, along which the track leads. It is rough and bad. At about 2¾ miles are pools in the river-bed.
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The water is tolerably good, but supply scanty. The hills have now closed in again. They

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 121—concluded.

are scarped at the top, and their lower slopes fall sharply to the watercourse. No ground for encampment, and no forage.

Thence the road continues in the river-bed for about  $1\frac{1}{4}$  mile and is bad. The left bank is then ascended, and the track lies, as before, over a stony plain on the north side of the river-bed. The valley is here open, the hills on the left being precipitous.

At about  $14\frac{1}{2}$  miles the watercourse is crossed. Just beyond this there is a gap about 1,200 yards wide in the northern range, by which the Pui stream escapes to join that followed from the Ziarat watershed. The line of hamlets and cultivation called Raigur stretches up through the narrow valley for three-quarters of a mile or more. The southernmost of the hamlets lies in the gap between the watercourses, about 1,000 yards to left (north) of the road. Ground for encampment could probably be found to its south, but would be commanded by low hills on two sides. Water probably abundant; supplies and forage obtainable in large quantities.

Passing Raigur the road leads straight on, and at about 15 miles re-enters the river-bed, which is stony, and the road consequently indifferent.

At about 16 miles I furlong a grove of trees on the left bank of the watercourse marks the commencement of Sinalan. Near these, ground for encampment might be found. Water abundant; supplies and forage procurable in large quantities from this and the neighbouring settlements of Raigur and Sinjawi.

7	LOBALAI	17	84	<i>Vide</i> Route No. 105.
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Route No. 122.

CROSS ROAD FROM KACH POST TO SPIRA RAGHA, *via* KAWAS.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KAHAN . . . . .	$11\frac{1}{2}$	$11\frac{1}{2}$	} <i>Vide</i> Route No. 120, stages 1 and 2.
2	KAWAS . . . . .	$7\frac{1}{2}$	19	
3	SPIRA RAGHA . . . . .	12	31	

A mule road. The direct route between the two camps lies for the most part along the bed of two or three streams and a river. Starting from Kawas there is a gentle rise for 2 miles to Zandrai, which is about 500 feet above it, direction about south-east. Opposite the Zandra fort the route lies through a narrow defile, which runs nearly due east, in which direction it continues for the next 6 miles, till reaching the Zargai defile, where it goes almost due north, with very little variation, as far as Spira Ragha.

For the most part the route is undulating and winding. The only steep hill is just before entering Spira Ragha, and that would be passable for any arm with a *pakha* road. The soil is mostly sandy and stony till the Zargai defile is passed, and between that and

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 122—concluded.

Spezanda it is of a soft and loamy nature. There is much cultivation between the latter, to avoid which it is necessary to cross the river about twenty times. The river is passable for all arms, being neither deep nor very swift.

Both the defiles vary from about 12 to 30 vuars in width, and at present are impassable to wheeled traffic. The river through the Zargai defile is at present particularly difficult to pass, even with mule transport, owing to the number of boulders blocking it. The streams between Kawas and Zargai defile are usually dry, so the route may be said to be practicable all the year round. There would be some difficulty in making it so through the Zargai defile owing to its small width and the size of the river. As far as can be seen from a critical survey, it is impossible to turn it over the neighbouring hills, owing to their height and steepness. Both defiles rise to a height of about 200 feet on either side. The first is about 100 yards, the second about 300 or 400 yards in length.

Route No. 123.

FROM HARNAI TO THAL (CHOTIALI) *via* VRIKH AND PUR.

Authority—CHASE, 1853.

No. of stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SHUFA . . . .	13 $\frac{1}{3}$	13 $\frac{1}{3}$	This is a fair camel track. From Harnai along Route No. 115 for about 7 $\frac{1}{4}$ miles. The cart-road is then quitted, and the route leads nearly due east (leaving the village of Sinarai on the right at about 7 $\frac{3}{4}$ miles).
				At 8 miles cross a running stream. Good ground for encampment about here. Thence descend the sloping bank of a very large watercourse, which has a grassy, but dry bottom. The opposite bank is reached at 9 miles.
				After this a hollow, or small valley, is descended to the Babian river (10 $\frac{1}{2}$ miles?). Villages and cultivation extend along both banks, and the view, both up and down, is very pretty. Water is abundant from springs in the river-bed, and an irrigation-channel runs along either bank.
				At 11 miles 1 furlong the track clears the cultivation on the left bank of the Babian. Beyond this an arid and desolate region extends to Vrikh. Troops might of course encamp on the left bank of the Babian, but the next march—the most trying of the whole route—would be considerably lengthened without any corresponding advantage.
				Thence the road leads over a stony plain for 2 miles in a north-easterly direction to the camping ground, 3 furlongs, before reaching which the broad, shallow, and dry bed of a torrent is crossed.
2		11 $\frac{1}{3}$	24 $\frac{1}{4}$	Shufa is a halting-place in the stony plain on the right (eastern) bank of a stream running in a wide and deep channel, thickly grown with tall grass and reeds. In the centre of the reed-beds is an open stream of perennial water, which is clear and good. Ample and good ground for encampment. Grass and camel-grazing plentiful. Elevation 2,435 feet. Leaving camp the road descends about 30 feet to the river-bed and crosses it. The further bank is gained at about half a mile. Thence for a short distance across a rocky plain; general direction east. After 1 mile a gentle descent to a basin, surround-

Route No. 123—continued.

ed on the north-east and south by bare craggy hills, of a dark slag-like rock, giving the spot a singularly weird and desolate appearance, not unlike that of the crater of an extinct volcano.

From  $2\frac{1}{2}$  miles a steep and continuous ascent commences, the path<sup>1</sup> climbing the spurs of the hills in front, which are an offshoot from the Pan range. In the first 2 miles the rise is about 1,000 feet, the elevation at 4 miles 5 furlongs being 3,320 feet. At  $6\frac{1}{4}$  miles the summit of the ascent is reached, elevation 4,920 feet. The rise in the last mile and three quarters is 1,700 feet, being a total rise of 2,700 feet in  $3\frac{3}{4}$  miles, or an average gradient of about 1 in 7. This is, of course, a very trying climb for all pack-animals. The descent is eastwards and about a mile long. In this distance there is a fall of 700 feet, so that it is almost as steep as the ascent. A succession of small spurs and ravines being crossed, there are numerous ups and downs, and these, combined with the stony nature of the track, render the descent difficult for baggage animals. After  $7\frac{1}{4}$  miles the path gradually ascends again. At 7 miles 5 furlongs there is a trying descent and sharp ascent. Between 7 miles 7 furlongs and 8 miles 5 furlongs there is a rise of 240 feet. The elevation at the latter distance is 4,770 feet. Thence eastwards, tolerably level to the halting-place of Vrikh. This camping-ground is in the Vrikh valley, which is some 3 or 4 miles long from west to east, and of varying breadth. To the south it is bounded by the Sarposh hills, and to the north by the Aodal range. The latter here is near the road, but further east the valley is open.

At about  $10\frac{1}{4}$  miles pass two wells. There is open ground here suitable for encampment.<sup>2</sup>

At 11 miles 1 furlong reach Vrikh halting-place. The camping-ground is open and good. Water from two or three wells, averaging about 20 feet in depth. Elevation 4,740 feet.

3	PUR	7 $\frac{1}{2}$	31 $\frac{3}{4}$

At about  $1\frac{1}{2}$  miles cross a *na/a* from the Aodal hill, which occasionally contains rain water. The valley is now open to left (north of the road). At 2 miles cross a large watercourse, which contains water for six weeks after rain. The road then passes through a narrow wooded defile

half a mile long. After this the valley is again open. On the north are the long wooded slopes of Sialu, the most western part of whose crest is seen north-east, about 3 miles distant. At 2 miles 5 furlongs (elevation 4,850 feet) enter a narrow valley or glen partially wooded and enclosed by hills on both sides. After ascending this for about  $2\frac{1}{4}$  miles (4 miles 7 furlongs) the road climbs to the crest of the Chur ridge, a long spur running out from the slopes of Sialu.

The original track, which leads to Kanoki camping ground, here diverges to the left<sup>3</sup>

There appears to be no particular difficulty about the ascent, the summit of which is reached at  $5\frac{1}{4}$  miles. Elevation about 5,400 feet. The descent is into the Pur valley, a long narrow plain, bounded by hills on the north, east and south, and about 2 miles in breadth.<sup>4</sup> The foot of the hill is reached at  $6\frac{3}{4}$  miles, being a fall of at least 1,000 feet in a mile and a half, and the road then turns due south to Pur village, three quarters of a mile further on. The village is situated in the centre of the plain. It is a small, walled enclosure, containing a few houses. There is some cultivation dependent on rain. Water from wells plentiful and good. It lasts a month for six weeks after a fall. The drainage from the hills appears to collect in the Pur valley, and sometimes remains in pools for a long time. Green grass is obtainable nearly all the year round. From within a mile of Pur village for  $2\frac{1}{2}$  or 3 miles

<sup>1</sup> Though steep, the road is fairly good, a track 4 feet wide having been cleared by Mr. Bruce, Political Agent, Sibi and Thal Choltrai.

<sup>2</sup> Water abundant and good; grass on the hills.

<sup>3</sup> This path crosses the Chur ridge at a point half a mile east of the road to Pur (which in its original state was a mere footpath, impracticable for horses). The crest of the kotal is reached at  $5\frac{1}{2}$  miles from Vrikh camping ground. Elevation, 5,470 feet. Thence the path keeps along the hills, eastwards, ascending and descending several times. At  $6\frac{1}{2}$  miles the elevation is 5,340 feet. Thence the track descends along the hillsides and over spurs to Kanoki, which is reached at  $7\frac{1}{4}$  miles from Vrikh. This is a halting-place on the top of a narrow spur, close under the high crags and under-features of Sialu. Water from springs, but the supply is uncertain and quality indifferent. Elevation, 4,795 feet.

<sup>4</sup> The road is over loose stones and indifferent, but it is practicable for camels.

<sup>5</sup> From Kanoki the village of Pur is visible in the plain below, about  $2\frac{1}{2}$  miles distant. A steep path leads down rocky ravines to the valley, but it is impracticable for laden mules.

Route No. 123—continued.

eastward the centre of the valley is wooded, but the trees, mostly tamarisks, are small and stunted. There is also undergrowth and low scrub of wild thyme, camel-thorn, etc. Elevation, 4,200 feet.

4	WENGAHAN . . . . .	10		41 $\frac{3}{4}$	From Pur, eastwards over plain, easy road. At 3 $\frac{1}{2}$ miles reach the end of a range of low hills, which thenceforward confines the valley on the north. Here the old path from Kanoki camping place joins in. A road also branches to the right (south-south-east) to Gamboli, etc. It leads over a low kotal in the range bounding the plain on the south side.
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The route now runs due east, along the base of the low range above mentioned. At about 5 $\frac{1}{2}$  miles the foot of a range is reached, beyond which lie the extensive plains of Thal Chotiali. The ascent is steep. Commencing at 4,400 feet, the path rises 150 feet in about 400 yards, and thence 170 feet to the crest, which is reached at 6 miles. Elevation, 4,720 feet. The descent to the plain on the east side is very considerable, being about 1,500 feet in 2 $\frac{3}{4}$  miles, but the zigzag path is not difficult. The foot of the pass is reached at about 7 $\frac{3}{4}$  miles. Elevation, 3,220 feet. A large watercourse is crossed here. It comes from a rugged valley, running up among the hills to the north-west.

Thence a gentle descent of nearly 2 $\frac{1}{2}$  miles to Wengahan in an east-north-easterly direction.

Wengahan is a halting-place on the bank of a narrow but deep *nala*, which contains water after rain. Supply of course uncertain, though it may be found in the deeper holes for some weeks or months. A permanent supply could no doubt be procured by digging a few feet below the surface. There are also brackish springs at a spot called Zargat, about a mile off. Good ground for encampment at Wengahan. There is grass and camel-grazing.<sup>1</sup>

5	THAL . . . . .	14 $\frac{3}{4}$		56 $\frac{1}{2}$	The road lies eastwards over a perfectly bare and level plain of baked clay, which extends to the foot of the hills on either hand, <i>i.e.</i> about 3 miles to the north and 2 $\frac{1}{2}$ to the south. Being occasionally flooded after rain, the surface of the ground is cracked in all directions.
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At about 3 $\frac{3}{4}$  miles the plain begins to be covered with bushes and camel-thorn.

After another mile cultivation appears on both sides of the path. At 6 miles 3 furlongs pass close to Purdil Khan, an enclosed village containing about 40 families. There is a good deal of cultivation around, and irrigation streams run through the village.

At 7 miles cross an irrigation stream flowing south. At 10 miles a similar stream is crossed.

At 10 $\frac{3}{4}$  miles the plain is again covered with low bushes, camel-thorn, and grass in tufts. Between this and Thal several small hamlets, or groups of huts, are passed, each having a few fields adjacent. With these exceptions the country is uncultivated.

By turning off north-east, about Purdil Khan, Pabarkot can be reached at 14 miles from Wangan.

*Alternative route from Vrikk, via Duki, 37 miles.*

Road fit for camels the whole way; camel-grazing good; water at 7 miles, and at 12 miles (Narelai). No supplies. From Narelai the track lies due east. A steady descent over a hard stony plain in a valley, to within 1 $\frac{1}{2}$  miles of Duki, where it crosses the Baghao stream. Duki is reached at 13 miles from Narelai. Here Route No. 104 is struck. (*Gaselee, 1885.*)

<sup>1</sup> From Kanoki the path leads at first over spurs and crosses numerous watercourses. At 3 miles it joins the road from Pur in the plain. Kanoki to Wengahan, 9 miles 5 furlongs.

Route No. 124.

FROM HARNAI TO THAL (CHOTALI), *viâ* THE SEMBHAR PASS.

*Authorities.*—WATLING; JENNINGS.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SHIN KACH . . .	16	16	This is a fair cart-road. Follow Route No. 115 towards Spin Tangi. At about $7\frac{3}{4}$ miles pass the village of Sinarai. There is water here and a good camping-ground. From hence there is a track straight on across the plateau to Shin Kach, but the cart-road can also be followed to within a mile and a half of Guneji gap (the so-called Spin Tangi), if thought preferable.
				At Shin Kach is a good camping-ground. Wood, water, and grass abundant. This place is in the district of Babian. There are villages in the neighbourhood from which some supplies are procurable. Guneji camping-ground is about 3 miles distant.
2	KURIAK . . .	8	24	Road ascends the bed of the Kuriak stream. Rather stony and somewhat trying for pack-animals. Camping-ground on the left bank of the river-bed. It is high and dry, but rather stony. Water from the stream, good and abundant. Wood plentiful; hill grass abundant; no supplies.
3	KANDI . . .	$11\frac{1}{4}$	$35\frac{1}{2}$	Immediately on leaving camp the track ascends the spur of a hill, and crossing a plateau for 2 miles, again descends. Many dry <i>nalas</i> all the way to Kandi, the beds of which are bad and stony. There is a small quantity of water in the river near each camping-ground, but it is not to be depended on; it must generally be dug for in the bed of the river. There is good water about $1\frac{1}{4}$ miles to the north of road. The last 200 yards of the track leading to this water are very rough, only just practicable for camels. No supplies, but there is grass and good camel-grazing. General direction east.
				After rain spring-water is procurable at a spot about $1\frac{1}{2}$ miles north of Kandi; camping-ground good.
4	SEMBHAR . . .	11	$46\frac{1}{2}$	For 3 miles road crosses a succession of dry, stony <i>nalas</i> and two small kotal; just before arriving at Sembhar there is a very bad kotal, extremely difficult for animals. The camp is situated at its foot, and is stony and confined. There is plenty of water, but it is purgative in its effects. The Maris have a post here. No supplies, except hill grass; grazing scarce.
5	THAL . . .	14	$60\frac{1}{2}$	Road very bad from moment of leaving camp. Three bad kotal to cross within as many miles. At the 3rd mile there is a fair supply of good water. Immediately before arriving at this water, and at the mouth of a very narrow pass, 10 feet wide, there is a small open space fit for

Route No. 124—concluded.

the encampment of a small detachment. Room for about one troop of cavalry. From here to the exit of the Sembar pass, about 3 miles, the road is very bad and exceedingly difficult for baggage animals. The track then runs through a mile of rough, stony ground, cut up by *nalas*, before reaching the Thal plain. From this point the country is level and road good into Thal. Near the mouth of the Sembar pass, 7 miles distant from Thal, there is a *pakha* well, the water in which is generally bad, but after being drawn at for a time, it becomes good and fit for use.

The first part of this march is very difficult for baggage animals, and even for cavalry. The worst part is after passing the kotals, when a formidable defile is traversed, which drains to the Thal plain. In places the track is obstructed by large boulders and masses of solid rock, so that camels have difficulty in getting along. The surrounding heights are almost completely inaccessible, and the pass would be an extremely difficult one to force if serious opposition was forced.

Route No. 125.

FROM SIBI TO KANDAHAR, *via* THE BOLAN AND KOJAK PASSES.

*Authorities.*—O'SULLIVAN; ROUTES IN AFGHANISTAN, 1886; GENERAL OFFICER COMMANDING QUETTA DISTRICT, 1892.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MUSHKAF . . .	11 $\frac{1}{4}$	11 $\frac{1}{4}$	Passage of the Nari river very difficult for carts at all times, and floods obstruct the road, sometimes for a period of ten days. Good camping-ground for a brigade; water ample; forage scarce; fuel and camel-grazing plentiful. Elevation, 600 feet.
2	RINDLI . . .	6 $\frac{1}{4}$		
half a mile along the road, west of the railway station and south of the road; space sufficient for three regiments, if packed closely. Along the west side of the camp run two irrigation-channels supplying 2,344 and 6,000 gallons per minute respectively of fair water, with a good deal of soil in suspension. There is much cultivation near Rindli and Dhadar; plenty of fuel and camel-grazing. Forage and water ample. Bazar. Elevation, 750 feet.				
3	KHUNDALANI . . .	10	27 $\frac{1}{2}$	At 3 $\frac{1}{4}$ miles reach the river bank, along which above flood-level, the road is carried the whole way to Khundalani. Railway station, telegraph office and rest house, police guards' quarters, Baluch guides' enclosure, and Brahui tower. Camping-ground for a brigade.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 125—continued.

Water-supply ample. Forage, fuel, and camel-grazing scarce, but wood and grass can be laid in by Brahuis at most of the posts on this route. Elevation, 900 feet.

4	KIRTA . . . . .	8	35½	At ¼ mile a gorge commences, and is shut in by steep cliffs on either side, about 100 yards apart. At 1½ mile the river is crossed. Railway bungalow and station, Baluch guides' enclosure, <i>dadk</i> bungalow, Engineer's bungalow rest-house, commissariat enclosure, with stables, etc. Camping-ground for a division. Coarse grass plentiful in river-bed from 6th mile. Water-supply ample; grass, fuel, and camel-grazing as in stage 3. Elevation, 1,100 feet.
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5	BIBINANI . . . . .	12½	48	D <i>adk</i> bungalow, servants' quarters, commissariat depôt, quarters for police guard, Military Works Department subordinates' quarters and store-yard, tonga mule-shed, Executive Engineers' inspection bungalow.
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At railway station eight bungalows and offices, water-tank, and two sidings. Camping-ground for two regiments if closely packed, and transport train of 100 carts. Space at mouth of Rudbar valley across the river for another brigade. Water-supply ample, Camel-grazing scarce. Forage and fuel as above. Elevation, 1,700 feet.

6	MACH . . . . .	14½	62½	At half a mile from <i>dadk</i> bungalow pass the railway station on the left.
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Railway station, tank, and double siding; Executive Engineer's bungalow and office, post and telegraph offices.

Camping-ground for a brigade; water ample; forage, fuel and camel grazing as in last stage. Elevation, 3,500 feet.

7	KOLEPORE CAMP . . . . .	14½	77	Pass Dozan at 9 miles. D <i>adk</i> bungalow, non-commissioned officers' rest-house, post office, commissariat guards' quarters, railway buildings, and two runaway sidings on left bank. About 300 gallons per minute from aqueduct from Dozan spring, two tanks for storing
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water. Hirok and Kotal stations are supplied hence, water being pumped up to the latter.

Immediately after leaving Dozan cross Dozan bridge, beneath which is a flag station. Height of Kolepore kotal about 6,160 feet.

Camping-ground for a brigade; water ample; forage, fuel, and camel-grazing as above.

8	SARIAB . . . . .	18½	95½	At half a mile railway station. Pass Darwaza at 2 miles. From here Route No. XLIX, Vol. II, goes to Nushki. Officers' rest-house and servants' quarters, transport followers' huts, commissariat enclosure, Public Works Department stores and enclosure.
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Camping-ground at Sariab for a division. Water, fuel, forage, and camel-grazing as above. Elevation, 5,900 feet.

9	QUETTA . . . . .	8	103½	Camping-ground for an army corps. Water, fuel, and forage plentiful; camel-grazing scarce. Elevation, 5,500 feet.
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10	MEHTARZAI . . . . .	12	115½	Cross the Quetta Lora (bridged), and the Karangao <i>nala</i> .
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Room to camp a brigade. Water plentiful; camel-grazing scarce; fuel somewhat scanty. Elevation, 5,200 feet

Regi can be substituted for Mehtarzai, thence to Dinar Karez : 12 miles.



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 125—continued.

11	DINAR KAREZ . . . . .	9	121½	Cross the Ghazarband pass. Camping-ground for a brigade. Water, fuel, and camel-grazing scarce.
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12	SEGI . . . . .	9	133½	Cross the Kakar Lora. Water ample. Camping-ground for a division. Camel-grazing in abundance. Fuel scarce. Elevation, 4,718 feet.
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As the causeway at Segi has been carried away, before committing carts to this road the condition of this point of passage of the Kakar Lora should be ascertained. This remark applies to all the *nalas* crossed up to the Kojak, for the ramps made for the passage of transport animals and carts are sometimes steeply scarped at the base by the river after rain.

There is a direct road from Segi to Kala Abdulla Khan: distance, 15½ miles. Road bad, but practicable for carts.

13	GULISTAN . . . . .	10¼	143¾	Good camping-ground for a division. Camel-grazing scarce. Plenty of fuel obtainable from the neighbouring hills. Forage scarce. Elevation, 4,900 feet.
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The Gwajha pass road branches off here, south-west to the Spintiza kotal. The Roghani pass road goes north-west.

14	KALA ABDULLA KHAN.	9	152¾	Road runs north-east at foot of low hills. From the village there is a gentle descent for about 2 miles. At about 4 miles pass a hamlet with a well of excellent water right of road. At about 6¼ miles the direct track from Segi crosses, and leads to a low kotal in the hills
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to the left, by which is the shortest road to Kala Abdulla Khan. The cart-road continues straight on for a mile, and then turning to the left, passes over a small kotal. Road over kotal is only 10 to 12 feet wide. Kala Abdulla Khan is about ½ a mile beyond.

Ample camping-ground for one division. Camel-grazing scarce. Fuel obtainable in unlimited quantities from the Kojak. Forage scarce. Small bazar. Elevation, 5,168 feet.

15	OLD CHAMAN . . . . .	19	171¾	Cross the Kojak pass. Telegraph and post offices. A small bazar near the camping-ground; also a bungalow of two rooms for the accommodation of officers travelling. Camping-ground for a division. Forage scarce; fuel, water, and camel-grazing plentiful. Elevation 5,451 feet.
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16	GATA . . . . .	17	188¾	Pass Chaman at 7 miles. At 14 miles 3 furlongs cross first branch of the Kadanai river; 2 miles further the second branch. The Kadanai is broad, shallow, and generally quite dry, but has been known to be unfordable for two or three days after heavy storms of rain.
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There is a strong *sarai* and defensible enclosure in a perfectly open plain. Water-supply from a small tank, filled by an irrigation stream coming from a considerable distance, east or north-east. It is liable to be cut off, and in any case troops advancing from Chaman must see that the water-supply is secured. Grain and *bhusa* can be procured from the Nurzai villages to north and north-east, but previous arrangements should, if possible, be made. Camel-grazing scarce. Elevation 3,974 feet.

There is said to be a small well on the left of the road about a mile further on than the post.

From Gatai a road branches north to Kushobai, 9 miles, on the Barghana route.

17	DABRAI . . . . .	9¾	198½	Straight on across the plain. At 1 mile cross third channel of the Kadanai. It is generally dry, but very troublesome to cross when filled by heavy rain. This, however, rarely happens, and then only in winter or early spring. At 3 miles 3 furlongs pass through broad gap in the Gatai or Ganti hills. About a mile beyond these the road bends slightly to the left.
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Route No. 125—continued.

Another track, leading nearly straight on, joins the Barghana route at or near Tandukai, which is about 18 miles by this road from Gatai. The main road leads over a level plain to Dabrai, crossing channel of the Kushobai river at about 7 miles. It is insignificant. The Dabrai post was very similar to that of Gatai, and had the same garrison. Low hills to the south-west command the enclosures, as the others to the north; but the latter are at long range. Ample and good ground for encampment. Water-supply from a good well inside post. The level of water 15'. Several wells outside, of which two are on the opposite (left-hand) side of the road. Grain and *bhusa* can be got from Nurzai villages to the east, but previous arrangements should be made, if possible.

18	MEL KAREZ . . .	12	210½	Ascent from Dabrai by a stony road to a low and broad pass, the crest of which is reached at 4 miles 7 furlongs. Here the road crosses several watercourses; thence steady descent into the Mel valley. At 10 miles 2 furlongs reach the Mel stream (Melmanda). It is a broad obannel, filled with tamarisk jungle, and containing an abundant supply of good water. From the Melmanda a gradual rise to Mel Karez post, which is ½ a mile off the road to the left. Here there was the usual walled and loopholed enclosure, well situated in open ground, and supplied with water from an open <i>karez</i> close at hand. Camel-grazing is tolerably good here (except in winter), but no supplies locally procurable. Water abundant, forage and fuel scarce.
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19	ABDUL RAHMAN . . .	14	224½	Ascent of 2 miles 5 furlongs from Mel karez, over quite open ground, to the crest of the Ghlo kotal. Thence down a narrow valley for about a mile. At the mouth of this the road forks, both branches leading to Abdul Rahman, but that to right (it turns off abruptly) is the cart-road. Thence over undulating and stony, but generally open ground to the ruined village of Sifula, 10 miles 3 furlongs. The last 2 miles into Abdul Rahman are rather heavy, over surface sand. Camping-ground good, on sandy soil. Water from open <i>karez</i> good. A small amount of grain and <i>bhusa</i> locally procurable. Forage, fuel, and camel-grazing scarce.
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20	MANDI HISSAR . . .	15	239½	Road north to a low kotal, which is crossed at 2 miles. At 4 miles the village of Deh-i-Haji. There is water here in irrigation streams, but it is of indifferent quality. About 1½ miles beyond Deh-i-Haji the road forks. That straight on leads to Khushab and thence to Kandahar ( <i>vide</i> Route No. 133, stages 11 to 13). The main road, diverging to the right, reaches the left bank of the Arghastan at 7 miles. The bed of the river is 3 furlongs across, but usually quite dry. At 8 miles the village of Dahi, beyond which the road is often impeded by irrigation. From thence the remainder of the route is over a bare, gravelly, and slightly undulating tract. Camping-ground for a division. Water from <i>karez</i> . Grain and <i>bhusa</i> procurable. Forage, fuel, and camel-grazing as above.
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21	KANDAHAR . . .	10½	250	<i>Vide</i> Route No. XVIII, N.-W. F., Vol. II. The route was practicable for carts all the way to Kandahar in 1881. However, the Gwajha pass road (Route No. 133) is in some respect easier. As to supplies, etc., nothing can be counted on between Chaman and Mandi
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Hissar. At Gatai and Dabrai, indeed, *bhusa* and some barley may be got in from the Nurzai villages at the upper end of the Kadanai plain, and perhaps also from the Shah Pasand direction, if there are no troops moving on that line. But all the villages and cultivation are some distance off the road. Camel-grazing is moderate, even in summer, and in winter there is none. There appears to be a good deal of natural grass in the small Bedak valley and at the upper end of Mel; but these places are too far off the road to be of any use to troops advancing rapidly on Kandahar. It is hardly necessary to remark that horses and all animals in this country have to depend almost exclusively on *bhusa*, with perhaps a little lucerne in

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 125—concluded.

summer. Want of water at Gatai, and even at Dabrai, may be a serious difficulty to troops passing first along the road. Elevation, 3,350 feet.

Route No. 126.

FROM JACOBABAD TO QUETTA, *via* LEHRI AND THE BOLAN PASS.

Authority.—STAGES 1—4, 6TH BOMBAY CAVALRY, 1892; 5—7, GASELEE, 1879.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	NASIRABAD . . .	8	8	Camping-ground ample at all stages. Road bad for wheeled traffic, <i>kutch</i> a bridges crossing <i>nalas</i> are in a rotten state. Supplies and water fair. Nasirabad is about $1\frac{1}{2}$ miles west of the direct road to Shahpur.
2	SHAHPUR . . .	24	32	The Shahpur track is gained by crossing several <i>nalas</i> without bridges. The Shewar is crossed at about $2\frac{1}{2}$ miles, no bridge; last 3 miles heavy sand, with difficulty practicable for carts at the best of times. Water scarce at all seasons.
Camel-grazing and forage plentiful.				
3	PULAJI . . .	$20\frac{3}{4}$	$52\frac{1}{4}$	Road a <i>kutch</i> a cart track crossing <i>bunds</i> and watercourses, some of which are deep and broad. Pass Chatar, or Chattu, at 12 miles and Yar-ki-Got at $16\frac{1}{2}$ miles, whence the track becomes heavy and sandy. Water always scanty. Forage, fuel, and camel-grazing ample.
4	LEHRI . . .	$14\frac{5}{8}$	$67\frac{3}{8}$	There is no particular track. Road goes across the <i>pat</i> over cultivation and <i>bunds</i> . Within half a mile of Lehri cross river. Water, forage, and fuel ample.
From here to Sibi is $32\frac{1}{2}$ miles, <i>via</i> Landi, $24\frac{1}{2}$ miles.				
5	MITTRI . . .	30	$97\frac{3}{8}$	Road over a barren plain, fairly hard, and good going for heavy artillery; no cultivation; jungle scanty; long grass in places, especially near Mittri, where the country improves; and there is a good deal of tamarisk jungle and considerable cultivation; no water on this march until

reaching the river Nari, which is crossed close to Mittri. River-bed heavy going; water about  $2\frac{1}{2}$  feet deep ordinarily; easily forded except after heavy rain. After heavy rain this march would be impracticable as the country lies low and is subject to floods. At Mach, about half-way, there is a *nala* in which there is water at certain seasons after rain. At Mittri water from the river is used. Supplies of *kerbi* are abundant, but the natives seem

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 126—concluded.

unwilling to part with it; grass in the neighbourhood plentiful; wood plentiful; camel-grazing good and close to camp.

6	DHADAR . . .	13	110 $\frac{3}{8}$	Road for the first 4 miles over a level plain; then enter low hills, the road following the bed of a <i>nala</i> ; sandy and heavy going for artillery; leave low hills at 7 miles. At about 10 miles the road turns off to the left, leading round the head of a ravine into Dhadar; good hard going from 7 miles into camp; good camel-grazing near Dhadar; water from a stream conducted by water-cuts for irrigation purposes, easily contaminated, but said to be good for drinking. Care must be taken to get drinking-water as far up stream as possible.

7	KHUNDALANI . . .	10	120 $\frac{3}{8}$	Road over level ground intersected by water cuts, which have been generally bridged and offer no difficulties. At about 3 $\frac{1}{2}$ miles reach the old bed of the Bolan; the descent into it somewhat difficult for artillery. At 6 miles cross the Bolan, and at 4 miles reach Khundalani the usual encamping-ground; the road to it leads along the river-bank, crossing four or five times from one bank to the other.

For details, *vide* Route No. 125, Stage 3.

8	KIETA . . .	8	128 $\frac{3}{8}$
9	BIBINANI . . .	12 $\frac{1}{2}$	140 $\frac{7}{8}$
10	MACH . . .	14 $\frac{1}{2}$	155 $\frac{3}{8}$
11	KCLEPORE CAMP . . .	14 $\frac{1}{2}$	169 $\frac{7}{8}$
12	SARIAD . . .	18 $\frac{1}{2}$	188 $\frac{3}{8}$
13	QUETTA . . .	8	196 $\frac{3}{8}$

*Vide* Route No. 125.

Route No. 127.

FROM QUETTA TO OLD CHAMAN, *via* SYED YARU AND THE SANZAL PASS.

*Authorities.*—STAGES 1—4, G.O.C., QUETTA, 1892; STAGE 5, STORY, 1881.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate	Total.	
1	KUCHLACK . . .	12	12	A metalled cart-road to Kala Abdulla Khan. To Kuchlack, <i>vide</i> Stage 28, Route No. XX, N.-W. F., Vol. II.
2	SYED YARU . . .	11	23	Camping-ground for a brigade. Water and camel-grazing plentiful; fuel scarce. From here a metalled cart-road goes to Pishin, 7 miles.
3	SAYAD HAMID . . .	14	37	Cross the Pishin Lora. Room for a division. Water and camel-grazing ample. From here a metalled cart-road goes to Pishin 14 miles. Elevation, 4,900 feet.
4	KALA ABDULLA KHAN	14	51	For details <i>see</i> Route No. 125.
5	OLD CHAMAN . . .	15½	66½	At 5½ miles the ranges of hills north and south close in considerably, contracting the valley. The ground has become more rough and undulating, and more frequently intersected by <i>nalas</i> . Nothing to interfere with movement of troops of all arms. At 6 miles a narrow footpath

runs round the spur of the hills to the north in a north-easterly direction to a small collection of huts and gardens, about 1¼ mile distant, called Shamazai, inhabited by a tribe of the same name. Here there is a small supply of water. A small supply of water is also found high up on the slope of the spur to the south, about this point. Trees grow abundantly.

At 7 miles the valley has contracted to a width of about 200 yards, being shut in on either hand by spurs from the main ridge, that to the south being steep and lofty. The valley here begins to change direction, trending more to the north. This point is about 1,000 feet above Kala Abdulla Khan. At 8½ miles the valley trends N. by W. The height to the west are very steep and rugged. The slopes to the east more gradual.

At 8½ miles a small vineyard lies to the west of the Sanzal valley, at the mouth of a ravine, which here joins it. Immediately behind the vineyard is a small trickling supply of water, which is collected in a pool formed by constructing a dam across the *nala*.

At 8¾ miles the valley has much narrowed and from the 8th mile to this point is rough and rocky, but not impassable. Up to the 8th mile it is passable for all branches of the service, and has an easy gradient.

At 9¼ miles a ravine branches off to the west, up which a path runs by which the kotal can be ascended; in it is a stream of water. This path is, however, so steep as to be impracticable for either cavalry or mountain artillery, and very difficult for infantry. Another path leads from this point to the top of a second kotal, ¾ mile north, up to the spur which here

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 127—concluded.

divides the above-mentioned ravine from a lesser one, which continues in a northerly direction. The ascent up the first quarter of a mile of this spur is extremely steep and difficult. The path zigzags up its face, which has a rocky and often a slippery surface.

It might be possible, if time were no object, to take mountain artillery or cavalry up and down this path, but it would be extremely difficult. Wheeled artillery could not pass.

At about 10 miles the summit of the kotal is reached, 7,310 feet in height. From the kotal the path follows a spur and descends into the ravine below, with a very steep gradient, 1 in 4, making but one zigzag.

At 11½ miles footpath enters main Sanzal *nala*.

For the last mile a trickling stream runs, but it is impossible to go down the *nala* itself, as there are steep falls in four places; the footpath here leaves the *nala* bed, and follows one or other bank.

At 13 miles is the point where the road from the Kojak kotal crosses Route No. 135, but the Old Chaman road leaves the pass turning to the north over a low hill at 12½ miles. Here there is a small water-channel running fast.

The last 3 miles the path runs up and down spurs of the main ridge, and water is frequently found; also springs.

Route No. 128.

FROM QUETTA TO GHAZNI, *via* BARSHOR, KALA HAJI KHAN AND BARA KHEL.

Authority.—ROUTES IN AFGHANISTAN, PART III (*Edition 1887*).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KUHLACK . . .	12	12	} <i>Vide</i> Route No. 127. Metalled cart-road. For details of Pishin, <i>see</i> Route No. 115, Cart-road. Camping ground for a brigade. Water is abundant. Wood scanty, but can be procured, as well as a large amount of supplies, by previous arrangement. Camel-grazing tolerable, except in winter, when there is none. There are several water-mills near the camping
2	SYED YABU . . .	11		
3	PISHIN . . .	7	30	
4	KALA KHUSHDIL KHAN.	14	44	
ground. Elevation, 5,111 feet.				
5	IAZAK . . .	10½	54½	North-east over the open plain to the mouth of the Barshor glen. At about 3¼ miles pass the ruins of one of Haji Khan Kakar's forts, which is on the further side of the water-course, about half a mile off the road. Shortly afterwards the hills are entered. Those

near the road are low and easily traversable by troops. At about 7¼ miles is Mamanika *ziarat* opposite to the entrance of the western Narin glen. There is room to camp here.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 128—continued.

Thence northwards along the right bank of the watercourse, on which side is cultivable ground, and the hamlet of Poti passed at 8½ miles. The road follows the *nala* round to north-east; it lies along narrow, cultivable flats, and is good. At 10½ miles is Tazak village. Near this is plenty of room for encampment. Water and wood abundant. Supplies procurable by previous arrangement. Camel-grazing tolerable in summer.

Road practicable for artillery all the way.

6	SHAHREGALI . . .	9	63½	
		—		At about 2 miles is the Zaraksar, by which is a rough road to Abu China, and thence to Toba by the Tukhor glen. About here is the commencement of Barshor proper, and the valley is over a mile wide, but, being broken by small ridges, hillocks, etc., parallel to the

course of the stream, it does not appear so large. There are numerous hamlets on both sides, with small orchards, etc., and abundance of water from springs, but not much irrigated land. At about 5½ miles pass over rising ground—a low spur from a hill on the left—and reach the remains of the fort called Mando Kala. It is passed close on the right hand. Thence, descending to cultivable flats, the road bends north, and cuts off a corner, keeping inside a hill and along the right bank of the watercourse. About here is a good deal of open ground on the opposite bank. There is ample room for encampment. Wood and water abundant; camel-grazing fair in summer. Supplies might be collected if previous notice were given. Elevation, about 6,300 feet.

The road is practicable for artillery, and with slight improvement carts might be worked as far as this halting-place.

7	CHAGI . . .	11½	75	
		—		North-east up the Kwat glen. It is at first very narrow, but the hills on either hand are low. Afterwards it appears to broaden out somewhat, and, as Toba is approached, the bounding range (spurs from the plateau) are higher. The ascent after the first few miles, is considerable, but the road is good. At about 9½ miles is the crest. Thence a gentle descent into the Chagi plains. The camping ground is about 2 miles south of Haji Khan Kala. There appears to be plenty of room, and water is abundant. Some little <i>bhusa</i> is procurable in summer, but supplies are very scanty and should be sent up from Barshor or Pishin. Camel-grazing poor in summer, none in winter. Elevation, about 7,800 feet.

The guns of the Bombay column were taken over this road in October 1839, but it is difficult for artillery.

8	GURGATS . . .	12	87	
		—		North-north-east over the Chagi plain, passing Haji Khan Kala (in ruins) at about 2 miles. Thence follow the Chingi <i>nala</i> northward bending round to north-west. The road is very good. At about 10½ miles the Mandan coming from the west joins the Chingi, and the stream is thence forward called the Tokarak. Wood and water abundant; <i>bhusa</i> procurable in summer.

The road is believed to be practicable for artillery all the way.

9	CAMP ON KADANAI . . .	16	103	
		—		Follow the Tokarak northwards. At about 4 miles is the junction of the Dag Lora from the east. Thence the stream bends north-west. It is quitted at about 8 miles, and the road goes northwards, crossing low hills. At about 13 miles a range of some size is crossed; the ascent and descent are rugged, stony, and very difficult for guns. The camping-place is in a somewhat narrow valley. Water from the stream (a branch of the Kadanai). There appear to be a few huts of Barakzai Duranis and some cultivation. The camping place of the Bombay column was at the foot of the hills, about 2 miles further north, on an affluent stream. Water abundant, and some forage for horses procurable.

Route No. 128—continued.

10	KHUDU CHAMAN	10	113	Northward, crossing a range of hills difficult for guns. At the foot of the descent is (or was) the village, or hamlet, of Poti, inhabited by Barakzai Duranis. Thence, down the bed of a watercourse to Khudu Chaman, which is about a mile and a quarter further on. Here there is a small stream coming from the hills to the east, and some cultivated ground. The stream joins a large watercourse some miles to the west. It appears to go to the Arghastan river.
11	SAR-I-SURKHAD	13	126	Northwards, at first over a small range, then across an undulating valley, in general very difficult for guns. Here are wells called Babarka-Chah, about 4 miles from last camp. After crossing the first hills there is apparently a steady ascent to the summit of the Surkhhab range, the highest point of which is about half-way to Sar-i-Surkhhab. Thence a considerable descent to the valley of stream called the Surkhhab. The road follows its course for the last mile. Camp at the head of the valley near the source of this branch of the river. The road this march is described as being very fatiguing for both horses and camels.
12	NADIR DEH	10	136	Follow the Surkhhab, which winds through high hills. Its valley is apparently a very narrow one, and the road in the bed of the watercourse is over loose stones and difficult for guns. The descent is somewhat rapid. The halting-place is at a few huts called Nadir Deh <sup>1</sup> , on the bank of the Surkhhab stream.
13	SPINWARI	10	146	Road northwards. For the first 3 miles it follows the bed of Surkhhab through a narrow valley, as in last march. The Surkhhab valley then opens into that of Maruf, and the stream bends north-west to join the Arghastan, some 10 or 11 miles above Maruf fort. The Maruf or Arghastan valley, stretching south-west, appears to be open and traversable by all arms. From where the Surkhhab is quitted the road continues northwards, afterwards bending north-west. It winds among hills, with several ascents and descents. (It might be better to follow the Surkhhab some miles further, and then ascend the valley; the distance would be greater, but road probably better for artillery.) The Upper Arghastan valley appears to be entered at about 9 miles. It is cultivated but the inhabitants are said to live in tents, which they no doubt shift according to the season. Spinwari is a mound (the ruins of a city) <sup>2</sup> on the left bank of the river, which here runs in a deep bed (described as a large ravine) containing plenty of water. It is about 20 miles north-east of Maruf fort and in the same valley. A <i>kacfla</i> route from Dera Ismail Khan to Kandahar crosses here (probably No. XVIII, Vol. II). No information about supplies, but a certain amount of grain and <i>bhusa</i> is probably procurable.
14	BASSUR KHEL, or MUSA KHEL	11	157	North-east up the valley. At about 6 $\frac{3}{4}$ miles pass the village of Musa Utak. <sup>3</sup> Thence the road winds among hills for 5 miles with a considerable ascent. Bassur Khel is described as a small village with two or three similar ones near it. Apparently it stands very high. The name is probably now changed.

<sup>1</sup> This hamlet has probably changed its name or disappeared altogether since 1839. The Bombay troops found some forage (*bhusa*) secreted by the people, who had deserted the country on their approach.

Neill Campbell remarks that this name is also given to the district.

<sup>2</sup> Probably a settlement of Hotak Ghilzais.



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 128—continued.

15	GHUNDAN . . . . .	10	167	The road goes north-east, apparently along the hills, for about 5 or 6 miles, and then crosses a range by the Shiri kotal. The road is not good, but the light guns of the Bombay column met with no obstruction. At the further foot of the kotal a large dry watercourse is entered. There is an ascent from this at 8 miles, and then a gradual rise to the camping ground, which takes its name from a lofty (isolated?) hill, near by on the right (east). The district is also called Ghundan. The camp of the Bombay column was on the bank of a deep, dry ravine, with a good stream of water, in an irrigation channel close to it. There is cultivation here, and 3 or 4 miles to the left (west) are several villages. The people of the district are Tokhi Ghilzais, and their chief has a fort 2 miles north-east. Ghundan is not marked on the map. The valley in which it is situated appears to be of some size; it lies east and west, and drains west to the Lora river, an affluent of the Arghastan.
16	KISHANI (MAPAN HAMLET) . . . . .	11	178	A mass of hills appears to separate the Ghundan valley from that of the Upper Lora river. The route northwards lies across open plain for 4 miles, and then over these hills, which are, no doubt, a series of parallel ridges, resembling those frequently met with elsewhere in South Afghanistan. The first range is crossed by the Jallu kotal, which appears to be easy. Thence a succession of ascents and descents; the road is very bad, and it was with difficulty the Bombay column got their artillery along it. Apparently the hills are not cleared till the end of the march, when a large valley is entered extending north-east and south-west. The watercourse running down this appears to be the main branch of the (Arghastan) Lora river. The valley is cultivated and populous, the inhabitants being Tokhi Ghilzais. The road turns north-east after leaving the hills, but the camping-place of the Bombay column was at their foot, near the hamlet of Mapan. The name Kishani appears to be given to a tract of some size in which are various villages or hamlets. Water from a small stream; supplies are no doubt procurable.
17	JAMIAT . . . . .	8	186	Road good. It lies north-east up the valley diverging from the hills. Halt at two or three small villages. Water from an irrigation stream. A more direct route would be to march north by east from Kishani towards a gap in the hill south-west of Lake Ab-i-Istadah, entering the route given below somewhere about Taz. The first march would probably be to Nowa, a fort said to be the head-quarters of the Tokhi Ghilzais. The Bombay column marched to Bara Khel, because it appears to have been first intended to take the easterly road by the Gharibai pass, Pabar Kala, and the Lewa tangi.
18	BARA KHEL . . . . .	11	197	Direction as before. Road good, with the exception of some dry watercourses. Bara Khel is a group of large open villages in the same valley, 12 miles south of the west end of lake Ab-i-Istadah, a range of low hills intervening. The country is productive and capable of yielding considerable supplies. It belongs to Tokhi Ghilzais, the chief of whom resides in a fort about 10 miles south.
19	MANSUR KAREZ . . . . .	13	210	Northwards over plain for 5 or 6 miles, and then north-west across the hills south of Ab-i-Istadah. Road practicable for guns. The last 5½ miles are parallel to the western shore of the lake. No difficulties being spoken of on this march, it is probable the road is good

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 128 — continued.

At Mansur karez are 3 or 4 hamlets on the shore of Lake Ab-i-Istadah, the water of which is salt. The camping ground is supplied from a small stream of fine water running into the lake. Supplies scarce. Very little cultivation was seen by the Bombay column in October 1839.

20	TAZ or TAJH (camp 2 miles north of—)	12	222	North by west; the road is good, over undulating ground, crossing two large dry ravines. Country apparently open. Taz is situated about the centre of a wide gap in the range which bounds the Tarnak valley on the south-east side. It is a fort and village $2\frac{1}{2}$ miles
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from the road on the left. The Bombay column camped about 2 miles north. Water from an irrigation channel. Supplies are abundant in the country, which is rich and well cultivated. The Mukur district is entered at this place.

21	MUKUR (MUHAMMAD KALA).	12	231	The road turns north-north-east, and runs parallel to the hills. Plain country and easy marching, a deep ravine is crossed before reaching the camp beyond Muhammad Kala. There are many forts and villages, with cultivation. The Bombay column passed two so-called villages, the first, Arzbegi, <sup>1</sup> at about $3\frac{1}{2}$ miles, and the second, Karai Kala, at about 9 miles, both left of the road. The names are no doubt now altered. The main road from Kandahar to Kabul runs under the hills on the opposite side of the valley, 7 or 8 miles to the left. The Bombay column camped "north of Islam Kala," identifiable with the Mahmud Kala of the present map. Water and supplies abundant. Elevation about 6,550 feet.
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22	ATAK or HOTAK	13	247	Road north-east. At about 6 miles pass Badam Kechar. After this there are low hills close to the road on the left-hand side, and a slight ascent all the way. Atak (or Hotak) is described as a large fort and group of villages in the Jamrud district. The people are Popalzai Duranis. Water from an irrigation stream, but supplies not very abundant. Karez-i-Oba, <sup>2</sup> on the Kandahar-Kabul road, is $3\frac{1}{2}$ or 4 miles distant west-north-west. About here is the watershed of the Tarnak river.
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23	BAKSHI KALA	10	257	Same direction; road good over undulating ground (gravel?), with low range on the left. A good many watercourses are crossed, besides several dry <i>nalas</i> . The Kandahar road runs parallel, about 3 miles distant, on the left. Bakshi is in the Jamrud district; there are several walled villages, with much cultivation and abundance of water. Supplies are plentiful. The people are Andari and Tokhi Ghilzais.
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24	MASHAKI	10	267	Excellent road in the same direction over open and populated country. Villages are passed both on and near the road, as well as Lohani camps in summer. Several watercourses of no great difficulty are crossed; then run from left to right, and join the Ghazni
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<sup>1</sup> Neill Campbell says so called from the owner, "now a prisoner at Kabul." The individual in question was perhaps, Shadi Khan, Atchakzai (*vide* Gazetteer, ATCHAKZAIS), or one of his sons.  
<sup>2</sup> This place is about the same distance from Mahmud Kala as Atak. The road to it would probably diverge to the left (north), before reaching Badam Kechar, which is understood to be a *ziarat* on a mound to the track of Atak.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 128—concluded.

river, which flows from the Ab-i-Istadah. Mashaki is a large group of villages. The plain here is extensively cultivated. Water is abundant, and supplies should be forthcoming in large quantities, but fuel is scanty. The people are Andari Ghilzais.

The Kandahar road is joined north of the Mashaki villages.

25	NANI . . .	14 $\frac{1}{2}$	} <i>Vide</i> Route No. 85, stages 19 <i>et seq.</i>
26	ISPANDI . . .	7 $\frac{1}{3}$	
27	GHAZNI . . .	7	
			281 $\frac{1}{2}$
			289
			296

For the first six stages the route, for the most part well known, is given on the compiler's own authority. The 7th and 8th stages are from notes by the late Captain Showers, who traversed this country with Lieutenant St. George Gore, Royal Engineers, in August 1879. From Gurgats (the 8th stage) onwards the route is that taken by the Bombay column in October 1839.

The whole road is practicable for artillery. It is about six stages shorter than the route *via* Kandahar, the actual distance saved being something over 60 miles. As far as Khushdil Khan Kala the road is practicable for carts. A little labour would make an easy road not only to Khushdil, but right up to Shahargali. From thence to Kishani, in the Upper Lora valley—10 marches—the route lies through a hilly country. and the road in its present condition is difficult for artillery, although it is evident there are no really serious obstacles, and camels appear to travel it well enough. A sufficiency of water and forage was obtained everywhere by the Bombay column. The remaining 11 stages are easy marching, over a level or undulating country, well populated, and producing no inconsiderable amount of supply.

Route No. 129.

FROM QUETTA TO KACH POST, *via* THE SARA KHULA PASS.

*Authority.*—ROUTES IN AFGHANISTAN, PART III (*Edition 1887*).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	GANDAK . . .	14	14	A metalled cart-road all the way; 7 miles is the entrance of the Sarakhula pass. There is a steady but gentle ascent all the way.
<p>Gandak camping-ground is on the left-hand side, or right bank of the watercourse. Here a small flat affords room for a battalion to encamp, but the spot is commanded on all sides. Water is scarce. Firewood abundant, and there is camel-grazing in spring and summer. All supplies must be brought. Elevation, 6,800 feet.</p>				

† Of Routes in Afghanistan ?

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 129—concluded.

2	KACH POST . . .	16	30	Easy road for 5 miles, passing the Sarant <i>tangi</i> . The road is led along the hill slopes on the north side. The gradients are easy, but road narrow. The <i>tangi</i> is a narrow defile, through which runs a small stream. Water plentiful; fuel and camel-grazing scarce. Elevation 6,300 feet.
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This road is practicable for artillery, and also for wheeled carriage.

Route No. 130.

FROM QUETTA TO KHOST (HARNAI ROUTE), *via* THE NARAI AND UZHDA PASSES.

Authority.—WATKINS, 1885; G. O. C., QUETTA, 1892.

No. of Stage	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	TANG . . .	13	13	This is a useful road connecting Quetta with Harnai, and it is practicable for mules. At $5\frac{1}{2}$ miles enter the Hanna gorge. At $6\frac{1}{4}$ miles the gorge is passed. Route No. 132 takes off about here for Sangam. Camp at foot of Zar-
				ghun; space for a regiment. Wood abundant; camel-grazing scarce; grass obtainable; water plentiful, but not good.
2	SIN CHAMAN . . .	$11\frac{3}{4}$	$24\frac{3}{4}$	At about 3 miles the bed of the main <i>nala</i> is entered and followed for $\frac{1}{2}$ a mile. The ascent of the Narai kotal begins here, the road rising 400 feet in a mile. Height of kotal 8,160 feet. The descent is steep (550 feet in the mile) by zigzags down a spur. At about 6 miles a path
				leads north to the Sarant <i>tangi</i> and Kach, probably practicable for mules. Space for one regiment; water, fuel, and forage abundant.
3	KHOST . . .	17	$41\frac{3}{4}$	Cross the Uzhda Psha pass (6,700 feet). At Zardalu Bagh there is room to encamp a brigade. Water ample; forage, fuel, and camel-grazing scarce. Here Route No. 115 is struck and followed to Khost, 3 miles further on.

Route No. 131.

FROM QUETTA TO ZARGHUN, *via* THE HANNA GAP AND THE ASTANGI ROAD.

*Authority.*—WATKINS, 1885.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	HANNA GAP . . .	6 $\frac{1}{4}$	6 $\frac{1}{4}$	<i>Vide</i> Route No. 130.
2	LOWER UBAK . . .	7 $\frac{1}{4}$	13 $\frac{1}{2}$	The path follows the right bank of a wide, dry <i>nala</i> , in a south-easterly direction, and is level and easy, except where two <i>nalas</i> are crossed. At 3 miles is a small pond of good water called Spin <i>karez</i> . Here the Astangi road is left, and the path turns to the left across open,
3	ZARGHUN . . .	3 $\frac{3}{4}$	17 $\frac{1}{4}$	The track leads towards the stream, and then goes along the left bank to a small village. past which the stream-bed must be followed as the road through the village is difficult for mules, though shorter. The foot of Ghulam <i>tangi</i> (elevation 6,730 feet) is reached at about 1 mile.

country towards a gap in the hills, when it follows a dry watercourse to the watershed. Here, near some Pathan huts, a path is passed which leads from the Upper Hanna valley a little east of Chashma *tangi*, and joins the Astangi road.

The path now runs through an enclosed valley, and, circling round the hills on the left, goes north towards the Hanna stream. The camping ground is about  $\frac{1}{2}$  mile short of the stream.

The stream water is good. An irrigation channel runs nearer the camp Wood obtainable. Grass, a little *bhusa*, sheep, etc., can generally be got. The valley is well cultivated, and there are numerous villages and orchards. Inhabitants chiefly Yasinzais.

These first two stages are very easy both for camels and mules.

This is a deep, rocky valley running east into the interior of Zarghun. Its sides and bed are obstructed by huge boulders of conglomerate, necessitating steep ascents and descents.

The path enters the gorge at an easy gradient, soon descending again to the stream. It is very liable to damage from floods, and there are some awkward turns to avoid rocks. It then ascends the slopes above the right bank. This is the worst and steepest part of the road (gradient 1 in 7 in places). At 2 miles it becomes easier, and soon descends to the stream, again rising and finally descending and crossing at 2 $\frac{1}{4}$  miles. The portions near the stream are liable to be washed away, the floods in places rising 10 feet. The left bank is ascended by a steep gradient, and 300 yards further the gorge ends. Elevation, 7,230 feet.

The country is now more open, with high conglomerate cliffs on the left, from which a stream issues through a deep gorge. Pathan huts, orchards, and fields are dotted about on the spurs. The slopes on this side are liable to landslips. On the left bank of the main stream are some huts and cultivation, called Alada's village, but known to Europeans as Upper Urak.

The path follows the left bank and is easy for the remainder of the stage, with the exception of two rather steep ascents to gain the eastern slopes of two cross valleys.

Camping space for about 150 men, but there are other suitable places near. Water good and plentiful from the stream about 600 yards beyond the camp, at which point the path descends. Wood and grass obtainable.

ROUTES ON THE NORTH WEST FRONTIER.

Route No. 131—concluded.

Alternative route from Chashma tangi to Zarghun, 5½ miles.

From Chashma tangi the path follows the grassy flat on the right bank of the stream, but it soon takes to the bed of the stream, which it follows (a few short portions on the banks excepted) to Ghulam tangi.

There are many orchards and fields on both banks. At 1½ mile the hills approach closely to the stream, but recede again at 2 miles. Here a path from Nigandi, Route No. 130, comes in along a nala on the left. A little further on the camping ground at Lower Urak is about ½ mile to the right.

Route No. 132.

FROM QUETTA TO SIBI, *via* SANGAN.

Authorities.—JENNINGS; DUKE; QUETTA STANDING ORDERS, 1890.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SPIN KAREZ . . .	8¾	8¾	This route is practicable for camels. Follow Route No. 131 to Spin karez. Wood and camel-grazing procurable. Grass plentiful if there has been rain. Camping ground for one regiment. Elevation, 6,450 feet.
2	NIGAND . . .	6	14¾	

there are three different paths over this kotal, the centre one of which is the easiest, though the highest; distance to bottom of kotal about one quarter of a mile, very steep descent (6,850 feet), but a road could be easily made; path next runs between banks of the Choki river; the descent into Nigand to the camp is steep, but practicable for laden animals; wood, forage, and grass abundant; camping ground for one regiment. Water scarce. Elevation, 7,450 feet.

3	AS TANGI . . .	7	2¾	Road good and easy, but everywhere commanded; grass, wood, and excellent water plentiful; at 4½ miles there is an open gravelly plateau called Choki, where there is good grazing; also wood and water; there is also about half a mile of cultivation belonging to Satakzai Brahuis; at 5 miles the river is 60 yards wide and 6 to 8 feet deep when in torrent. Camping ground for one regiment. Elevation 5,600 feet.
4	CHACHOBA . . .	6¾	28½	

being pronounced suitable for ordinary traffic: one of them at least is very difficult indeed for laden camels. Grass, wood, and water abundant. Camping ground for one regiment. Elevation, 4,850 feet.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 132—concluded.

5	PIE ISMAIL . . .	5½	34	At 1¼ mile a formidable gorge is entered about ¾ mile in length, and 20 or 30 feet wide, with perpendicular sides of hard rock; this gorge is sometimes filled with water, and in this case it is necessary to climb the neighbouring hills, which are very difficult. Grass, wood, and water plentiful; no village. Camping ground for one regiment. Elevation, 4,250 feet.
From here a hill track goes to Zardalu Bagh, 25 miles, joining the Sangan and Harnai lines in rear of Zarghun—see Route No. 130.				
6	JAGI . . . . .	6	40	No difficulties; road good. Grass, wood, and water plentiful. Camping ground for one regiment. Elevation, 3,700 feet.
7	SANGAN . . . . .	21	61	At 5½ miles road occasionally becomes blocked with heavy boulders, owing to the effect of scour, which denudes the larger boulders; a path could, however, be made without much difficulty; this gorge is 4 miles in length; the remainder of the road in easy. Water, fuel, and forage plentiful. Camping ground for a brigade. Elevation, 1,500 feet.
8	BAHDERA . . . . .	20	81	Road easy and good for the whole extent; at the third mile a gorge, the Parsheb <i>tangi</i> , leading through the hills bounding the Sangan valley, is passed; road, however, is quite open and good; there is good water and a halting place half-way between Sangan and Bahdera. At Bahdera limited supplies can be procured. Camping ground for a brigade. Water, fuel, and forage plentiful. Elevation 900 feet.
9	KALAT-I-KILA . . . . .	9	90	Road good until cart-road is reached; at 4 miles there is a short cut from Fahdera over the hills, passable for horsemen, which saves about 2 miles.
10	NABI . . . . .	10	100	} <i>Vide</i> Route No. 115.
11	SIBI . . . . .	7	107	

Route No. 133.

FROM QUETTA TO KANDAHAR, *via* THE GWAJHA PASS.

*Authorities.*—GASELEE; PRIOR; MATTLAND; O'SULLIVAN.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MEHTANZAI	12	12	} <i>Vide</i> Route No 125.
2	DINAR KAREZ	9	21	
3	SEGI	9	30	
4	GULISTAN (OLD POST)	8½	38½	
Camping ground sufficient for an army corps. Water good and abundant.				
5	GANDIWANI	9	47½	Road is practicable for siege artillery all the way to Kandahar. At about 2½ miles crosses an island between two forks of the river, and after about 100 yards of bad, rough road, passes into the northern fork. There is now no track visible, but the river-bed is easy-going,

good for field-guns, practicable and easily made good for carts. At about 4 miles the valley, which up to this point is about ½ a mile wide, narrows to about 100 or 150 yards; the low hills on each side are throughout passable for cavalry and mountain guns, and easily crowned. Here is excellent water in the *nala*. Shortly afterwards the river-bed widens out to some 300 yards, and continues over smooth light shale to about 5 miles, where it suddenly narrows to about 150 yards, but almost immediately opens out again. The camel track here passes for a short distance along the left bank, but is so bad and rough that it is better to keep to the river-bed. At about 7½ miles the *nala* suddenly turns to the right and enters a *tangi* or defile, at first some 40 yards wide, but narrowing to 20. Banks high, rocky, and precipitous, but easily crowned. On passing this *tangi*, which is some ¾ mile in length, the river-bed narrows to about 15 yards between banks 10 to 12 feet high, with low hills on each side. The river-bed is here a good deal cut up by streams of water. At about 8½ miles is a little waterfall, some 3 feet high, over hard rock, which would require a little work either by blasting or by temporary ramping, to render it passable for guns. At about 9 miles is Garzand Obo, the junction of two streams. Here is room for a small camping ground. The northern stream, which supplies the water, leads to the Top kotal (*vide* Route No. 135). Following the south fork for a short distance the track passes to the left bank of the stream, and crosses a low sharp ridge by a rough, bad road, quite impracticable for guns, but capable of improvement; and after some 200 yards passes into another *nala*. Here is some fairly open ground, known as Gandiwan, Gandiwani, or Windiwan. Room on the low hills for a scattered camp of one brigade. Indifferent supply of water from *karez*. Good water obtainable in abundance by digging a couple of feet in the *nala* bed. Fuel plentiful; camel-grazing scarce. Elevation, 5,670 feet.



Route No. 133—continued.

6	GWAJHA	13 $\frac{3}{4}$	61 $\frac{1}{4}$	The ascent from Gandiwan is about 3 $\frac{1}{4}$ miles. Maximum gradient $\frac{1}{28}$ , and the narrowest part of the road some 10 feet. The last mile, before reaching the top, requires much repair, being very rough and narrow in places. Height of kotal 6,660 feet. Descending, the gradient is much
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steeper, being at first  $\frac{1}{12}$ , but gradually lessens as it descends. Road at top, for 400 yards on far side, very rough and impassable for carts, but a little labour would make it narrow, and practicable. It runs through low hills, furnishing several excellent positions for mountain guns, commanding the west side of the pass. The heights should, if necessary, be crowned from the kotal. The bed of the *nala* is of light small shale. About a mile from the crest the valley opens out and at 4 $\frac{1}{2}$  runs into the Spintizha basin, a broad open valley with a little scattered cultivation; elevation about 6,020 feet. Here is a good camping ground, with abundant camel-grazing and a certain amount of grass for horses. The camp is on the left of the road, and is marked by a large white rock. Water very scanty, barely enough for a battalion, but might be collected by damming. The supply is, however, said to be uncertain. Fuel plentiful; no supplies. Leaving Spintizha, the road crosses the basin, reaching the Wach Dara at about 5 $\frac{1}{4}$  miles. From this point are two roads; one crossing the Wach Dara and proceeding down the Tand Dara (for which see below); the other, which is much better, turning to the left down the bed of the Wach Dara, which is here smooth and shaly. Hills on either side easily crowned; gradient slight. At 5 $\frac{3}{4}$  miles a small *karez*; water good. A mile further on the hills become higher and steeper, and close in on both sides. At about 8 $\frac{1}{2}$  miles another *karez*. Soon after the *nala* turns sharp to the right, and at 9 $\frac{1}{4}$  miles passes through a rocky neck, some 50 yards wide, and rather rough for a short distance. For the next mile or so it is from 80 to 120 yards wide; light shaly bottom, with many trees and bushes. At 10 $\frac{3}{4}$  miles another sharp turn to the right, and the hills become lower and less rugged. At this point is a small spring of good water. Soon the *nala* runs between low, undulating spurs for about 2 miles, when it reaches the stony plain of Kunchai. Elevation of this point about 4,525 feet; steepest gradient (from Spintizha)  $\frac{1}{28}$ . The bed is here 90 to 130 yards wide; clay banks 10 to 15 feet high, generally scarped. Guns, however, could be got on to either bank at almost any point. Camping ground for a brigade. Water, forage, fuel and camel-grazing plentiful. Elevation, 4,575 feet.

*Alternative route, viâ the Tand Dara.*

Road, as far as the Wach Dara (5 $\frac{1}{4}$  miles), described above. The distance from Gandiwan to Gwajha is 11 $\frac{1}{2}$  miles. Road crosses the Wach Dara, and is rough and bad to a small kotal at 5 $\frac{1}{2}$  miles. From the kotal the descent is about  $\frac{1}{15}$  for some 60 yards into a small *nala*, which runs at a gradient of about  $\frac{1}{20}$ , bottom shaly. At about 6 $\frac{1}{2}$  miles the bed of the Tand Dara, a large watercourse coming from the north-east, about 80 yards wide, is reached. The gradient is still about  $\frac{1}{20}$ . The heights should (if necessary) be crowned from kotal.

At about 7 miles the Dara contracts, and for 1 $\frac{1}{2}$  mile varies from 15 to 40 yards in width. Hills on either side become more craggy and precipitous as the pass descends. This is the Gwajha *tangi*, or Gwajha pass proper. The gradient varies from  $\frac{1}{20}$  to  $\frac{1}{8}$  in places. At about 7 $\frac{1}{2}$  miles the defile begins to wind about a good deal, and narrows to 15 yards or less. At 8 $\frac{1}{2}$  miles it opens out somewhat for about 300 yards, when it again suddenly closes into about 25 yards.

At 9 $\frac{1}{4}$  miles the bed of the Dara becomes very rough, being strewn with large rocks and boulders, and much labour would be required to make it fit for wheels. The banks are high, rocky, and steep, and there are many trees, both on the sides and in the bed of the Dara. After 10 miles the hills begin to decrease in height, and at last become mere low spurs; but the Dara becomes, if anything, rougher as it nears the mouth, which is reached at 11 $\frac{1}{4}$  miles. There is usually good water all the way in the Tand Dara.

*This road was good in 1881, but it appears to have been since destroyed by the rains and is now quite impracticable for carts, and very difficult for wheeled artillery.*

Route No. 133—continued.

7	LAGOLI TANK or ALI GULI DAND.	14½	75¾
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Road north by west, down the stony skirts of the hills which slope to the Kunchai plain. Numerous watercourses are crossed, but offer no obstacle to artillery. After 5 or 6 miles the road gets off the stones, and is thenceforward over light alluvial soil or sand. At 8½ miles

turns to left for the tank, which is at the edge of the great sand desert, within the outermost sand-hills. The main road goes straight on to Kunchai wells. The tank is 1½ miles long by over a mile wide, and is said to contain water at all seasons; but this is doubtful. However, there is almost certain to be abundance between November and March. Ample room for encampment. Firewood procurable, and some grass. Camel-grazing good. No permanent inhabitants, but in winter and spring numerous camps of Achakzais are in the neighbourhood and scattered over the whole plain. Elevation, 4,036 feet.

In January 1879 the infantry of General Stewart's division marched straight from Gwajha camp to Kunchai, a distance of 20 miles.

8	KUNCHAI	15	90¾
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East along the same road for about 1½ miles; then north-north-east, getting on to the main track at about 7 miles. Here the route lies over low sand-hills, and is trying to draught horses. Stretches of sand continue for 3 miles, when the road again leads over a hard, stony

plain, covered with southern-wood. A rocky ridge, called Banbul, is 2 or 3 miles to the left. Beyond this north-west is the Kunchai ridge. The sand desert extends up to, and beyond, these hills in great waves of loose red sand. At about 15 miles reach Kunchai camping place. There are two wells—one to the left of the road, the other to the right. They are about 150 feet deep; water slightly brackish, and not sufficient for a large body of men with their baggage animals. About due north of camp, water is procurable from the bed of ravine in the hills. To find the spot keep the highest peak on the right hand. Animals can be watered here from holes dug in the bed of the watercourse. Camel-grazing (southernwood) abundant. No permanent habitations, but nomad camps of Achakzais and Nurzais are scattered about (except in summer). There is also a good deal of cultivation in the plain. *Bhusa* can be procured.

This march is easy for artillery, except where sand has to be crossed.

9	SHAH PASAND	15	105¾
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Road north by east for 6 miles, over a hard level plain; good-going for all arms. Low sand-hills, blown up from the desert to west, are then reached. The road crosses them for about a mile, and is very heavy for artillery. After this a sharp turn to left north-west over

gravel plain, keeping sand-hills on the left. At about 12 miles cross the bed of the Kadanai. It is dry, except after heavy rain, and having low banks, is easily passed. At 14 miles reach the channel of the Kushobai. At the point where it unites with the Kadanai. The road descends into the river-bed down a high bank, and keeps along it for about a mile, when the right bank is ascended to a plateau, on which is the camping ground. The ascent from the watercourse is steep. Close by is the village of Shah Pasand, malik of the Gurak Nurzais. Water from pools in the river-bed is fair. There is also a good well 1 mile further along the road. Wood and *bhusa* procurable. There is tamarisk in the river-bed and elsewhere. Southerwood is also abundant. Camel-grazing is therefore good, except in the depth of winter.

The road is good all the way, and quite practicable for artillery. The country is very bare and barren, and no water is passed on this march. Numerous tents of nomads are, however, scattered about in the cold sea-on, and there are many flocks of sheep. Immediately to north-west of camp is a grand-looking scarped hill (Ashikstake P), which can be seen from Gwajha camp, and forms an excellent landmark over the whole plain. The red sand-hills of the desert come down to the further bank of the river, which is here called the Dori.

Gatai, on the main road, is about 14 miles east of Shah Pasand, and the intervening country is tolerably open. Columns advancing simultaneously on both roads can therefore communicate without much difficulty.

Route No. 133—continued.

10	TAKHT-I-PUL . . .	19	124 $\frac{3}{4}$	Road north-west, hard gravel, and good-going for all arms. It ascends gradually towards the hills. At 1 mile pass a well, about 30 feet deep, in which is abundance of water. At 3 miles reach a watershed. Thence a gentle descent to the Mel valley, which runs up a considerable distance north-east and is about 5 miles wide. Here it presents an appearance very similar to the hard and level portions of the country crossed on the last march. To the left the Dori and sand desert close the valley. At about 10 miles cross the "Manda," or watercourse of Mel, about 4 $\frac{1}{2}$ miles from the camping ground of Mel Manda on the main road, and 5 miles south-west of Mel karez. Thence is a gentle ascent to the Karkara kotal, another watershed, from which the road commences to descend into the tract called Takht-i-Pul. Here there is $\frac{1}{2}$ a mile of rough broken ground, with hills close to the road on both sides. This bit is difficult for artillery. Issuing from this defile, the road gains the right bank of the Dori, which has all the way been running parallel on the left, and turns along it, nearly due north. The country is an undulating plain, intersected by numerous watercourses. These, and an occasional strip of sand, delay the march of artillery. At 6 miles from the Karkara kotal reach camping ground in a broad and level plain on the right bank of the river. Water from the Dori excellent and abundant. <i>Bhusa</i> procurable in small quantities. Camel-grazing indifferent, but should be good in spring among the sand-hills on the further side of the river. Elevation, 3,600 feet.
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Road on the whole good, and quite practicable for artillery, although a trying march for the horses.

The main road, where it exists from the Ghlo kotal ravine (see Route No. 125), is about 3 $\frac{1}{2}$  miles east. Intervening country open, though undulating and stony.

11	DEH-I-HAJI . . .	10	134 $\frac{3}{4}$	At about 6 miles is the post called Kala Abdul Rahman, occupied during the years 1879 and 1880, and the main road (Route 125) is entered. There is irrigated land between the road and the river. <i>Bhusa</i> , and barley procurable. Hence north towards a gap in the low hills. A path of sand is crossed, and then there is a gentle ascent over hard gravel, top of the rise being reached at 8 miles. The descent is slight and easy, and leads to a very extensive cultivated plain. Deh-i-Haji is a large village, 2 miles from the ridge. It was almost deserted soon after the British occupation, but may have been re-occupied. Water from irrigation channels is abundant, but not very good, being somewhat saline. <i>Bhusa</i> , barley, and wheat should be procurable.
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The road is very good for guns all the way.

Instead of going to Kala Abdul Rahman, which might interfere with the march of troops proceeding along the main road, it would probably be quite practicable to keep along the bank of the Dori, and halt on the river at about 9 miles, where it bends to the west. The only difficulty would be in the case of newly-irrigated land intervening. The camping ground would be about 2 miles south-west of Deh-i-Haji.

Thence to crossing of the Arghastan (see next march) 4 miles, and to Khushab, 10 $\frac{1}{2}$  miles.

12	KHUSHAB . . .	10	144 $\frac{3}{4}$	North-west across the open plain. At 1 $\frac{1}{2}$ mile the main road branches half right to the village of Dahi, and so to Mandi Hissar and Kandahar ( <i>vide</i> Route No. 125). This route, though the longest, is much the best, but if, as is most probable, the Gwajha road is used only to relieve the main road, any interference with the latter will be undesirable, and it will be necessary to take the <i>kafila</i> road by Khushab.
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This leads straight on. At about 3 miles reach the Arghastan which has a broad, stony bed about 300 yards across. In winter the water ordinarily runs in several channels not more than a foot deep. The banks are low, and the river offers no obstacle to the passage of the troops with artillery. The season of floods is in winter and early spring. In summer the river may be perfectly dry. Thence straight on, over level open plain, in which large stretches of cultivable land alternate with barren stony tracts, slightly undulating. There are many villages to the west, but none near the road. Khushab is a considerable village, with

*Route No. 133—concluded.*

much cultivation. Water from irrigation channels abundant. *Bhusa* and barley procurable; also lucerne, except in winter. Camel-grazing apparently scanty. Elevation, 3,484 feet.

This march is easy for artillery.

About  $1\frac{3}{4}$  miles south-west of Khushab is Karez-i-Zarak (12 miles from Kandahar cantonment), near which General Phayre's division of Bombay troops was camped in September 1880.

Mandi Hissar is about  $4\frac{1}{2}$  miles north-east. The intervening country is open, but cultivated and intersected by small irrigation channels.

13	KANDAHAR CITY (S. gate).	9	153 $\frac{3}{4}$	North-west towards low kotal in the hills. At about 2 miles cross the channel of the Tarnak. It is usually dry, or nearly so. Thence ascend for about a mile to crest of kotal. The road is stony, and for 100 yards is steep. Descend from the kotal to the plain of Kandahar, which
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is here very thickly studded with villages, surrounded by high-walled enclosures, orchards, etc. Numerous deep water-cuts cross the road. These are passed by narrow rustic bridges, just practicable for camels, but they are often serious obstacles to artillery. General direction northwards. There are various roads. The best seems to be that leading to the Bar Durani gate (10 miles) on the east side of the town. There is also a road to the former British cantonment north-west of the town, which is reached at about 11 miles.

This march is practicable for artillery, but decidedly difficult.

Route No. 134.

FROM GULISTAN TO OLD CHAMAN, *vid* THE GWAJHA PASS AND ALONG THE FOOT OF THE HILLS.

*Authorities.*—ROUTES IN AFGHANISTAN, PART III, *Edition 1887*—QUETTA STANDING ORDERS, 1890.

No. of Stage	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	GANDIWANI . . .	10	10	} <i>Vide</i> Route No. 133, Stages 5 and 6.
2	GWAJHA . . .	11½		
3	KARWARI TALAO . . .	14	21½	
			35½	Road is practicable for all arms. General direction N. E.

At 3 miles cross a ravine containing water, which is run into a small tank out on the stony slope to left of the road. At 4 miles a large watercourse, known as the Shadi Inzar Dara, issues from the hills and turns abruptly south. There is water up it and a small patch or two of cultivation, but no road. At 5½ miles pass Mamazai bagh, a small orchard of apricot trees, with grape vines. It is off the road to the right. No permanent habitations, but often a camp or camps, of Usmanzai Achakzais, to whom the place belongs.

At 6½ miles cross the Iskam Khan *nala*, a large watercourse which comes through a defile in the granite range. There is a difficult footpath up it to Zrin Obo, etc. (*vide* Route No. 135). Alongside is a small running stream, which goes out to a small *dand*, or tank, in the plain, said to be about 2 miles east of the Kandahar road. This is probably the *kafila* halting-place known as Iskam Khan, Skam Kan, or Skamkar. The tank belongs to Jalezai Ahmadzai Achakzais, and a camp of these people is always in the neighbourhood in winter. Up to this point has been a gradual steady rise, and the bed of the Iskam Khan is 500 or 600 feet higher than Gwajha camping ground. The hills now fall away on the right a good deal, and the road lies at a considerable distance from them.

At about 8 miles cross a watercourse issuing from the Sahar *tangi*, of which there is a track to Takai Chaman, etc. (*vide* Route No. 136). It is practicable for pack-animals, though not easy.

At 10½ miles one is abreast of the Khwaja Amran peak. At its foot is a small orchard, about a mile and a half off the road. On either side of the track are small tanks, two to the right and two to the left. They usually contain water in winter.

At 11 miles quit the beaten track and strike half or a quarter right (east-north-east), up the shallow bed of a torrent, one of the many outlets of the Obatu *nala*. No path is distinguishable, but the going is smooth and good. Steady ascent of 1 in 20, or thereabouts. Large *shine* trees are somewhat thickly sprinkled over the stony slopes. At 13 miles reach the main channel of the Obatu and turn up it to the right (east). Usually water comes as far down the *nala* as this point, and many tents of Usmanzais, under Malik Muhammed Khan, are to be found here in winter.

After a short distance turn to the left (north-north-east) and cross low gravelly undulations to the next hollow, which is that of the Karwari *nala*. Here is a small tank on a ridge, supplied by a little channel brought from above. Most years there would be plenty of water; if not, there is more higher up the watercourse. The place called Kar on the Kojak-Narai road from Zrin Obo to Old Chaman (*vide* Route No. 135) appears to be about 2 miles east. Space for one regiment on very uneven ground. Wood and water abundant. Camel grazing in summer only. No permanent habitations and no supplies. Forage scarce. Elevation, 6,800 feet.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 134—concluded.

4	OLD CHAMAN . . .	14	49½	From Karwari talao northwards for about a mile and a half, across undulating, gravelly, or stony ground, to remain the beaten track. There is no path, but the going is good. On reaching the road it is followed in a general north-north-easterly direction over the same
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undulating stony *daman*. At about 5¾ miles cross the Roghani *nala*, which comes from the main range, and passes through a short gorge in the low granitic ridge about a mile to right of the road. At about 7 miles is Roghani Tsahan, a well-known spring and watering place of flocks. On the low elevation from which the water rises is the *ziarat* of Roghani, the resting-place of an ancient saint buried here many generations ago. It is from this *ziarat* that the main range and the track of country around has acquired its name. The people in this neighbourhood are Malizai Achakzais under Malik Lalo Khan.

At about 8 miles a small running stream is crossed. It comes from Pashak, an orchard, a mile to right of the road. At about 11 miles is Sanzal. Here is a sort of small basin in the course of the Sanzal *nala*. It contains a copious spring, round which is a little short grass. There are also two grape vines. Here the road from the Roghani pass, which is also that from Kar, joins in from the south. To the right (south-east), up the Sanzal watercourse, is a track to the Sanzal pass.

All the way from here to Old Chaman, about 3 miles, are springs and short marshy grass along the path, the latter is not always good for laden animals. A good deal of saline efflorescence appears in the neighbourhood of the springs, but the water is good, and so is the grass.

Route No. 135.

FROM GULISTAN TO OLD CHAMAN, *via* THE TOP KOTAL AND KOJAK NARAI ROAD.

*Authorities.*—STORY; MAITLAND; QUETTA STANDING ORDERS, 1890.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	ZBIN OBO . . .	15½	15½	This route is practicable for camels. Follow Route No. 133 to Garzand Obo. There is water here, and a halt might be made, if necessary, but there is not much room to camp. Here two ravines meet to form the Kaji Dara, which has been hitherto followed. The other,

which is considered to be the Kaji *nala* proper, is now entered, and the track leads up the bed of the watercourse, in a west by north direction, between rocky hills, 100 to 150 feet high; gradient easy and road good. At about half a mile from Garzand Obo is another bifurcation of ravines. That to the left is the Top *nala*; it is entered, and followed in a general westerly direction. By the other is the Azanga road (*vide* Route No. 136). The average width of the Top *nala* is 50 yards, and the road on the whole is good. At about 1 mile (10¼ miles) water is first met with. The road continues to follow the windings of the watercourse. It is narrow and rough in some places, and rocky cliffs, 70 or 80 feet high, overhang its bed. At several points ledges of rock render the passage difficult for pack animals, but diversions could be made at these places. Water appears at frequent intervals. The country on either side of the watercourse is extremely difficult.

The elevation of the kotal is about 6,550 feet. It is the lowest point of the Khwaja Amran range, being about 120 less than the Spintizha kotal on the main road. In the immediate neighbourhood of the crest are rounded hills of low elevation.

Route No. 135—continued.

The descent from the kotal is steep for a short distance. A narrow winding ravine is then followed. At first it is only 12 to 15 yards wide, but opens somewhat as it descends. The hills on either side are of no great height, and the road is good; gradient about 1 in 23. At about  $1\frac{3}{4}$  mile from the kotal ( $14\frac{1}{4}$  from Gulistan) the hills cease, and the Spintizha basin is entered. The road now turns sharply to the north for Zrin, Spintizha camping ground being 1 mile in the opposite direction. The track runs parallel to, and near, the foot of the hills over undulating ground. At  $15\frac{1}{2}$  miles is Zrin Obo, two small springs affording an abundant supply of good water. Ample room for encampment; wood tolerably abundant; camel-grazing scanty, even in summer. There is some cultivation in the neighbourhood, and a little *bhusa* is generally procurable.<sup>1</sup> Elevation, 6,150 feet.

To the north-west, near the springs, is the deep bed of the Gwajha torrent, which, rising in the hills to north-east, runs south-west, and is entered by the Gwajha route, about  $2\frac{1}{2}$  miles from Spintizha.

2	KAR . . .	9 $\frac{3}{4}$	25 $\frac{1}{4}$	At quarter and half a mile from Zrin, large watercourses join the Gwajha <i>nalas</i> from the north-east. At 1 mile is a third watercourse coming from the east. This may be considered the main Gwajha. There is a track leading to Gulistan up this. <sup>2</sup>
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Up to this the road is good and practicable for all arms. Elevation here about 6,550 feet; average gradient 1 in 27. There is a path down the Iskam defile to the Kadanai plain.

Continue north of the Iskam Khan. Its bed is upwards of 200 yards wide, fairly smooth, and thickly dotted with *shine* trees. On the left hand—that is, west and north—is the great granitic mass of the Khwaja Amran proper. On the right are low round-topped hills, and difficult country as before. At about 2 miles 8 furlongs a wide ravine joins the Iskam Khan from the right. A quarter of a mile above this the bed of the Iskam Khan is narrowed to 40 yards; it runs at the foot of the eastern hills, while on the left hand is an open undulating space, 300 yards wide, sloping up to foot of the Khwaja Amran. Here are several vineyards and gardens, and the spot is known as Bagh-i-Ahmadzai. There is a fair supply of water and room for the encampment of a considerable force.

At 3 miles 1 furlong a wide open space is reached. On the left hand (west) side is a long stretch of green grass known as Takai Chaman. Here is a vineyard or two, a fair supply of water, and a good camping ground. Across the Chaman a path leads to the Suhar *tangi* (*vide* Route No. 136). At 3 miles 5 furlongs a spur running down from the main range (Roghani) divides Iskam Khan into two branches. The route follows that to the left and runs at the foot of the Khwaja Amran proper, the eastern slopes of which are seamed with ravines running down to the Iskam Khan. On the right hand (east) the ground slopes gently up from the *nala* bed for about 350 yards to the foot of the hills on that side (Roghani range), which are higher than before. At 4 miles 5 furlongs the travelling has become more difficult, as the ground is rougher and much cut up by watercourses. Here is a vineyard called Bagh-i-Malizai, and a small spring or stream. A furlong beyond this three ravines meet; the road follows the centre one, which is very narrow and has high banks. It could however, be easily widened, if necessary, as the soil is loose.

At 5 miles 2 furlongs the crest of the Kojak kotal is reached. Elevation about 7,600 feet. From here the Iskam Khan is first entered to this point, the average gradient is about 1 in 16. The road is good throughout and might easily be made practicable for wheeled traffic. To west of the Kojak kotal rises the great peak of the Khwaja Amran (8,864 feet), distant about 1 mile.

From the crest of the pass the road dips sharply into the valley beneath by a very steep and winding path, which descends a spur between two ravines, affluents of the Obatu *nala*. The fall is about 600 yards long, with an average gradient of 1 in 5, but in places it is still steeper, making the pass on this side difficult for laden animals. There is a little water at the foot of the descent.

<sup>1</sup> There is a path from Zrin over the hills to the west (north ?) into the Iskam Khan defile. It is believed to be just practicable for cavalry and mountain guns.—(*Story*.)

<sup>2</sup> From *Story's* report. No doubt this is the south branch of the Zargangi road. Whiteford, however, states that this path joins, or crosses, that to the Kojak kotal at 700 yards from Zrin. There appear to be numerous tracks; those leading east go to the Azanga and Zargangi paths over the main range; those to the west to the Iskam Khan and Shar defiles (*vide* Route No. 136).

Route No. 135—concluded.

At  $6\frac{1}{4}$  miles is a path to the right (east), which joins the Zargangi road to Gulistan. It is steep and difficult, but can be traversed by laden donkeys.

At  $7\frac{1}{4}$  miles the *nala* is much wider. At  $7\frac{1}{2}$  miles another watercourse (main branch) joins from the east, and the Obatu *nala* thence goes west through a gap in the granite range. This gap is known as the Obatu *tangi*; it is not really a defile, and debouches on the open *daman*, sloping down to the Kunchai plain.

From the foot of the Kojak kotal to this point the average gradient of descent is about 1 in 25. Road in watercourse all the way is good. Here the *nala* bed is quitte, and the track strikes north-east. It rises gradually, crossing watercourses and gravel ridges.

At 8 miles is the watershed between the Obatu and Karwari *nalas*. Elevation about 6,750 feet. Looking north, the valley between the outer granite ridge and the main range is well defined. Forward is a gradual descent. At 8 miles 3 furlongs a large branch of the Karwari is crossed. It runs west through the Karwari *tangi*, and contains a good running stream. The whole plateau near Kar is cultivated, and there are several small vineyards, but the water-supply appears to be comparatively small. Fuel and camel-grazing plentiful.

3 OLD CHAMAN	$12\frac{1}{2}$	$37\frac{3}{4}$	At half a mile cross a low kotal and enter an undulating plain. At 1 mile a watercourse is crossed, and at $1\frac{1}{4}$ mile the Sar Tangi <i>nala</i> . The open rolling plain extends between these as far as the Roghani pass road. At 3 miles cross the Tor Tangi <i>nala</i> . This, as well as the Sar tangi, contains water in the winter. At $4\frac{1}{2}$ miles cross the Roghani <i>nala</i> , up which is the road to the pass of the same name. There is a path down the <i>nala</i> which crosses the camel track from the Gwajha to Old Chaman ( <i>vide</i> Route No. 134). Several springs of water here. Hence the road, keeping near the granite ridge on the left, crosses an easy kotal, on the further side of which are 2 or 3 springs. At $5\frac{1}{2}$ miles the most northerly of the watercourses which pierce the granite dyke is crossed. After this the track leads over a rocky and difficult kotal into the Baghak <i>nala</i> , $6\frac{1}{4}$ miles. Thence the road continues, in the same general direction as before, over low ridges and undulations, the ravines between which all contain more or less water. At $9\frac{1}{2}$ miles is the Sanzal <i>nala</i> , with a small running stream.
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The two kotals, opposite the commencement of the granite ridge,  $\frac{1}{2}$  a mile from Kar, and the other before reaching the Baghak *nala*, are very difficult for laden animals; otherwise the road is good.

It would perhaps be better to turn down the watercourse a quarter of a mile from Kar, and then strike north by west over open undulating *daman*, gaining the camel track from Route No. 134 at or near where the Tor Tangi *nala* crosses it, that is, at about 4 miles from Kar. Thence to Old Chaman about 11 miles.



ROUTES ON THE NORTH-WEST FRONTIER

Route No. 136.

FROM GULISTAN TO ISKAM KHAN (KUNCHAI PLAIN), *via* THE AZANGA ROAD AND ISKAM KHAN NALA.

*Authorities.*—STORY; WHITEFORD, 1881.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	GARZAND OBO	9 $\frac{1}{4}$	9 $\frac{1}{4}$	Follow Route No. 139. Here is abundant water from a small stream running down the pass. Camp on small alluvial flats by the side of the watercourse. There is not, however, much room. The country around is a sort of basin draining to the south-east. It is filled with
2	ISKAM KHAN (Kunchai plain).	14 $\frac{3}{4}$	24	Up the Kaji Dara ( <i>see</i> Route No. 135). After less than half a mile, however, there is another bifurcation of ravines. The road again takes that to the right; the other is Route No. 135. The general direction is now north, but at 2 miles from Garzand Obo the track ascends

small hills, intersected by ravines and deep watercourses. Firewood procurable from the hills. Some camel-grazing in summer. No supplies and no permanent inhabitants, though a few tents of Gurjazai Achakzais may be found in the neighbourhood in summer.

This march is practicable for all arms.

the right (left hand) bank of the watercourse, which is here 150 feet high and very steep. It then strikes nearly due west across country. At 3 $\frac{1}{2}$  miles there is a considerable descent into, and ascent out of, the Lakarai nala, the sides of which are as steep as those of the Kaji, but it is not so deep. Hence, bending round to north-west the crest line of the hills is crossed at about 4 $\frac{1}{2}$  miles, and the track descends a small branch ravine to the Postai nala, where it strikes the Zargangi road (*vide Note B*) and follows it for about a quarter of a mile.

Here the Iskam Khan and Sahar Tangi paths divide at about 5 $\frac{1}{2}$  miles from Garzand Obo.

The former goes west, or west-north-west, apparently following the Potai. There are, however, several paths. That which appears to be the best reaches the Kojak Narai road about 1 $\frac{1}{2}$  mile above Zrin Obo (*vide* Route No. 135) at 6 $\frac{1}{2}$  miles. From Garzand Obo to Zrin, 8 miles, the Azanga road is practicable for cavalry, and perhaps for pack-mules. The route then turns to the right (north)<sup>1</sup> and follows the above road for  $\frac{1}{2}$  a mile, to where the Iskam Khan nala is entered. It then quits the Kojak Narai road (which ascends the Iskam Khan to the Kojak kotal, etc.) and turns west-north-west down the Iskam Khan, here about 200 yards wide, between hills. The bed of the nala is fairly smooth and road good.

At 8 miles 5 furlongs a wide watercourse joins from the south. Up this for some distance runs a path which leads direct to Zrin Obo across the hilly ground in the angle between the Gwaja nala and the Iskam Khan. Cavalry and mountain guns might get over this path, but with difficulty. The road is good and gradient of descent easy. At 9 miles a footpath is said to lead across into the Sahar tangi. At 9 $\frac{1}{4}$  miles is a wide open space, surrounded by rocky and nearly perpendicular cliffs. A main watercourse comes in here from the north-east, and up it is a path leading into the Sahar tangi. At 11 miles 1 furlong the Iskam Khan tangi may be said to commence. A hundred yards further on a clear stream of water gushes out from under a rock. At 11 $\frac{1}{4}$  miles the defile is only 30 yards wide, with high rocky cliffs on either hand. The bed of the nala is rough. A short distance beyond this the defile is

<sup>1</sup> There is, however, a footpath over the hills to the west which cuts off a corner and rejoins the route given above at 8 $\frac{1}{4}$  miles.

*Route No. 136*—continued.

entirely blocked by huge granite boulders, rendering the gorge impracticable for anything but infantry, and not easy even for them. The running stream divides here; the channel to the right has a fall of about 10 feet; that to the left one of about 3 feet. Both run through narrow clefts between the boulders. High rocky cliffs rise on either side of the gorge, the slopes of which are strewn with large masses of granite, half imbedded. It would not be difficult to close the gorge still more completely by blowing down more boulders.

The elevation of this spot is about 5,550 feet, and the average gradient of descent since entering the Iskam Khan is about 1 in 23.

After crossing the first block, a second is met with about 50 yards on, and 50 yards beyond, that is a third, but this is less formidable than the others. The gorge is here only 15 yards wide, and the bed of the watercourse very rough and stony.

At 12 miles the defile is 30 yards wide. It is rocky and strewn with great boulders, but still practicable, and the gradient of descent is easy. The enclosing heights also begin to fall back and decrease in height. At this point the stream disappears.

At 13 miles the breadth of the defile has increased to 100 yards. The hills on either side are also lower, and have become less bold and rocky. The Kunchai hills and the Registan are now visible to the north-north-west. There is a small tank here, and also irrigation channels. Water is not certain; but generally to be found in winter, and a small stream runs down for a considerable distance. The bed of the *nala* continues to be extremely rough.

At 14½ miles the Iskam Khan issues on to the *daman*, which slopes down to the Kunchai plain, elevation 5,120 feet; average gradient from the barriers about 1 in 35. The breadth of the watercourse is here about 200 yards, but its bed is much cut up and thickly covered with large stones. The right (north) bank is a low bluff.

The camel-track from Gwajha to Old Chaman crosses the Iskam Khan *nala* about 2 miles from the hills. There is generally water at this point. From Zrin Obo the distance would be 9½ miles.

The *kafila* halting-place known as Iskam Khan, or Shamkan, is some 3 or 4 miles west of the camel-road, and 2 miles east of the Kandahar route. The road to it would probably be very stony for the first mile and a half or 2 miles.

The Iskam Khan defile may be considered as practicable for infantry only, although the people of the country assert that it is occasionally traversed by laden bullocks and donkeys. To clear away the obstructions would require much labour.

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*Note A.*—Alternative route from Garzand Obo to the Gwajha-Chaman camel-track via the Sahar Tangi, 14 miles.

For the first 5½ miles *vide* stage 2. Thence the track to the Sahar *tangi* goes on in a general north-westerly direction to Takai Chaman (6,900 feet) on the Upper Iskam Khan *nala*, which is reached at about 7 miles. Here the Kojak Narai (Route No. 135) is crossed at 3 miles 1 furlong from Zrin. At 8 miles the path having crossed the Chaman proceeds in a north-westerly direction up the rocky bed of a watercourse running down to the Iskam Khan from the south end of the Khwaja Amran proper. After a quarter of a mile the *nala* becomes narrow and the gradient of ascent increases. On either hand are steep and rocky heights. At about 8½ miles a kotal is reached, the track leaving the bed of watercourse and making a short, but steep ascent of about 60 yards to the crest of a spur (the south shoulder of the Khwaja Amran). The gradient for this short distance is about 1 in 4. Elevation of kotal 7,200 feet.

The descent nearly due west is down a rocky and steep ravine which drains to the Iskam Khan. At 8 miles 7 furlongs the elevation is about 7,000 feet. Here the gradient of descent is 1 in 8, and the path is very narrow and rough, the bed of the watercourse being strewn with boulders and large stones. The heights on either side are high and rocky. The *nala* continues to run in a westerly direction for about 1,000 yards, gradually increasing in breadth, and then bends south.

The path, however, quits it, and, turning north-west, continues gradually descending over the slopes of under-features at the west base of the Khwaja Amran peak. At 9¼ miles a kotal is crossed (elevation about 6,950 feet), immediately to the north of which are vineyards and a small stream.

*Route No. 136—continued.*

Thence the path, running north, dips into a valley or glen, crossing several spurs and ravines. All the latter run from the Khwaja Amran proper into a large affluent of the Iskam Khan. In one of them is a small vineyard, with a little water.

At about 10 miles the path crosses a ridge, which is the watershed between Iskam Khan drainage, and that which goes out through the Sahar *tangi*. Elevation about 6,800 feet. The road here is practicable for pack-animals.

From here the track descends westwards into a valley or hollow, at a gradient of about 1 in 10. At about 1 furlong from the crest of the ridge, a watercourse is entered. It is narrow and the bed is rough. General direction west. At 10½ miles this watercourse leads into another, running down from the Khwaja Amran. It is about 40 yards wide, and is the main drainage channel of this glen. High rock cliffs overhang the *nala* on both sides. This is the Sahar *tangi*.

At 10 miles 7 furlongs the watercourse increases to about 100 yards in width, and the slopes of the hills on either hand are less abrupt. The *nala* bed, however, is exceedingly rough and stony. It gradually widens to about 150 yards, but contracts again, until 11½ miles, where it is 70 yards broad. The watercourse is so filled with large stones as to make walking difficult. Here is a wayside *ziarat*, and a wide *nala* joins from the south. From this point the hills gradually decline in elevation, those on the left (south) being higher than those on the opposite side. At 11 miles 7 furlongs the watercourse is divided into two channels by a ridge, terminating in a rounded knoll, on which is a survey mark (P). Both have a general westerly direction to the Kunchai plain. The high hills are now passed, but beyond the northern branch of the watercourse the ground is very much broken by spurs jutting out on to the stony *daman*, which slopes to the Kunchai plain. They are divided by steep-banked ravines. The channels of the main watercourse are extremely rough and contain no water, but a footpath runs north to water in a hollow about 2 miles from the debouchure of the defile. There is also a small orchard near here.

Following the course of the *nala* westward the camel track from Gwajha camping ground to Old Chaman is reached at about 14 miles (9 miles from Zrin Obo). Towards Gwajha (south-west) there is generally water in the Iskam Khan *nala* at 1½ mile, and in the opposite direction (north-east), at 2½ miles, are four small tanks, two on each side of the road, which generally contain water in winter.

The path down the Sahar *tangi* from Takai Chaman is practicable, but not easy, for cavalry and pack-mules. It is quite impracticable for artillery, and could not be made otherwise without very great labour.

*Note B.—Alternative route from Gulistan to the Kunchai plain, viâ the Zargangi road, 17 miles.*

From Gulistan post two roads can be taken. One follows the Roghani pass road in a west-north-west direction through the low outer range. The other turns the same to the south by the broad gap through which the main Gwaja pass route goes. They unite at about 6 miles in the Zargangi *nala*, where that watercourse issues from the hills of the main range on to the undulating sloping plain called Hazarganji.

Thence for 2 miles up the Zargangi in a general north-westerly direction, at a gradient of 1 in 15 to 1 in 7; after which the track turns south-west, and there is a very difficult zigzag ascent of nearly 1 in 3 for 1 mile to the Zargangi kotal. Elevation of the crest about 7,490 feet; distance from Gulistan post 8 miles.

From the kotal there are two paths. One of these appears to go south-west down a steep descent to the upper Kaji *nala*, and having crossed the main range by the Kaji kotal, north of the Azanga path, eventually joins, or rather crosses, that road in the Potai *nala* at 2½ miles from Zrin Obo.

From the Zargangi kotal to Zrin is 9 miles. The Kaji kotal is hardly practicable for mules, but might be improved. The other path, which must be considered the principal track, ascends a ridge at a steep gradient. This ridge has been called a spur, but it appears to be in reality a part of the main watershed. The general direction of the road is north-

1 It is not improbable that the name of the *nala* and of the route is *Hazarganji*, and not *Zargangi*.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 136—concluded.

north-west. The crest of the highest part of the main range, here called Roghani, is reached at about  $2\frac{1}{2}$  miles from the Zargangi kotal. Its elevation is probably about 8,100 feet. The Kojak kotal over the neck connecting this range with the Khwaja Amran proper, is about 2 miles west-south-west.

Thence is an exceedingly steep descent north-west to the Kojak or Obatu glen, which is reached at about  $2\frac{1}{2}$  miles from the crest of the Roghani range, and 14 miles from Gulistan post.

Here the path enters the Obatu *nala*, and crosses the road from Zrin Obo by the Kojak kotal, to Kar, etc., (Route No. 135).<sup>1</sup> The track then follows the Obatu in a general north-westerly direction through a gap known as Obatu *tangi*, and debouches on to the open *daman* sloping down to the Kunchai plain at about 16 miles. Near its exit from the hills the bed of the watercourse is filled with large stones. There is generally water in the bed of the Obatu about here, which runs down a little way towards the camel-road from Gwajha to Old Chaman (*vide* Route No. 134). Camp might be formed on the Obatu at about 17 miles from Gulistan post.

The camel road crosses the main channel of the Obatu about a mile further on.

This is a very difficult road, and is apparently only practicable for infantry, though it is just possible that cavalry and mountain artillery might get over it.

Route No. 137.

FROM GULISTAN TO OLD CHAMAN, *via* THE ROGHANI PASS.<sup>1</sup>

Authority.—STORY, 1881.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	KARNIN KANTZAI .	$9\frac{7}{8}$	$9\frac{7}{8}$	On leaving Gulistan this route runs in a north-westerly direction; at about $\frac{3}{4}$ of a mile it enters a gorge some $\frac{1}{4}$ mile wide in the range of rocky hills forming the western boundary of the Pishin valley, crosses a valley between two spurs of this range which here

forks, crosses a *col* in the westernmost of those, and at 2 miles from Gulistan emerges on a plain extending north-east and south-west, and sloping gradually upwards to the main range. This plain undulates unceasingly as one travels north-west. At  $4\frac{1}{2}$  miles the route enters a gorge about 80 yards in width, height 5,451 feet, formed by a gap in a spur jutting out from the main range in a south-east direction. To the south-west a high bluff overhangs the gorge; to the north-east the heights are less steep. For the last mile the route follows a dry river bed, rising with an easy gradient of about 1 in 30. It is rough and stony, but otherwise practicable for all arms. About 1 mile from this gorge, in a direction nearly due north, lies a fruit garden named Bagh-i-Dazar-i-Dinzai. Here also is a small supply of water.

Leaving this point, the route still follows the river bed and enters upon a plain comparatively open to the north-east and south-west to the south-west forming a deep valley hemmed in by the heights of the main range and their spurs. The ground is much broken with rocky hills of low elevation, and intersected with ravines. The gradient is here steeper, being about 1 in 20; the road is rough and stony, but passable. At 6 miles the watercourse which the route follows turns sharply to the north, and a main watercourse joins it from the

<sup>1</sup> In Story's report on this route he notes that 1 mile from the crest of the Kojak kotal ( $6\frac{1}{2}$  miles from Zrin) a steep and difficult path branches to the right and joins the Zargangi road. But the Obatu *nala* does not bend west or go out to the plain till a mile and quarter further.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 137—concluded.

north-west. The pass here narrows to about 60 yards, *i.e.* the waterway is about that width. Some 300 yards forward from this point a very small water-supply exists on the western side of the pass. It trickles out from the *nala* bank, is said to be perennial, and goes by the name of *Gidari China*. At 1 mile the *nala* turns sharp to the west, and it is joined by a large *nala* from the north. The height at this point is 6,270 feet; the gradient for last mile about 1 in 18; road good. At 8 miles the river bed runs due north and is joined by a wide water-course line from the north-west. About 1,400 yards from the point where it turns is a small *bagh*, called *Bagh-i-Mahzai*; on the western side there is a small supply of water; gradient about 1 in 15; road rough and stony. At  $9\frac{1}{2}$  miles the river bed turns west, and about  $\frac{3}{8}$  mile further on is a wide open space suitable for encampment. This is called by the natives *Karnn Kantzai*. Water from a small stream in the river bed.

2	OLD CHAMAN . . .	$12\frac{7}{8}$	22 $\frac{3}{4}$	About 300 yards from the camping ground the river bed enters a gorge, through which the road follows it. At $1\frac{1}{8}$ mile arrive at summit of kotal. The footpath up the ravine is extremely difficult in two places; in one place the ravine was about 6 feet wide, with high perpendicular rocky banks. A water-supply is found running in a small stream from the gorge to within $\frac{1}{4}$ of a mile of the kotal. The barometer here reads only 7,700 feet, though in the map it is stated to be 8,080 feet; it is possible this height may refer to the peak. From the summit of the kotal the road dips sharply down into the valley by a rough zig-zag path, average gradient 1 in 3, for a distance of 3 furlongs—estimated, as it was impossible to measure. At $2\frac{7}{8}$ miles the path enters <i>Roghani nala</i> , the average gradient between this and the point abovementioned being 1 in 9. The <i>Roghani nala</i> is here broad, and easy to travel over.
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At  $4\frac{7}{8}$  miles reach Route No. 135; here there are water springs, giving a fair supply, and a little cultivation. The road passes in a westerly direction towards *Roghani Chaman*, passing through a gorge in the granite range. At  $6\frac{1}{2}$  miles reach the road from *Old Chaman* to *Gwajha* camping ground. An ample supply of water is found north of the granite range about  $\frac{1}{2}$  a mile from the *nala*.

Route No. 138.

FROM KALA ABDULLA KHAN TO OLD CHAMAN *via* ARAMBI AND THE B OGRA PASS.

*Authorities.*—WYLIE; CAMPBELL, 1881.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	RAMDIL . . .	4	4	This route is practicable for laden camels. Camping ground for a brigade at each stage. Eastwards over very stony ground to <i>Ramdil</i> , a group of scattered hamlets at the mouth of the <i>Arambi</i> glen. Water from <i>karez</i> abundant and good. Elevation, about 5,300 feet.
2	TSOWAL . . .	13	17	Up <i>Arambi</i> glen. Fairly open at first, with scattered cultivation. The road is good. <i>Tso-wal</i> is a hamlet. There is good water, but no supplies to be counted on. People <i>Kakozai Achakzais</i> . They are lawless and predatory.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 138—concluded.

3	MANDO . . . . .	7	24	<p>A few miles above Tsowal the glen forks. Up to this the road is good. The right-hand branch is followed. It gradually narrows until at 4 miles it becomes a gorge, the road following the bed of a small <i>nala</i> between close-lying hills. It is so narrow that laden camels have</p> <p>so me difficulty in getting along. The heights on either hand are lofty and precipitous. This portion of the pass is about 2 miles long, and would be most difficult to force if the hills were held in any strength. At about 6 miles is a waterfall, necessitating a short, but rather difficult detour. The last half mile of the pass is a steep rise of 400 feet, the edge of the Toba plateau being reached at <math>6\frac{3}{4}</math> miles. Mando is at the head of the pass. Here are huts and orchards of apricot trees. Water good from a <i>nala</i>. People Kakozais. Elevation, about 8,000 feet.</p>
4	Gwal . . . . .	11	35	<p>Northwards 3 miles, skirting the hill called Pondo to the plateau of Chinar. Thence westwards down the Lakari <i>nala</i> for 4 miles to its junction with the Sanzala. The path continues down the united stream, called Rud, to Gwal in Tobin, where there is a tolerable camping</p> <p>ground on the right bank just below the junction of the San <i>nala</i>. Here a road from Mandan, etc., comes in. Water abundant and good, but no supplies can be counted on, although there are many patches of cultivation along the streams. People Ghaibzai Achakzais. Elevation, about 7,000 feet.</p>
5	SINA . . . . .	19	54	<p>Follow the course of the Rud stream for about 3 miles, and then, turning to the left, strike due west across the wide, open plain of Tobin, leaving Ghan Obo about 2 miles to the left. At 10 miles enter the head of the Ghan Obo <i>nala</i>. Here there is water, but no very good ground</p> <p>to encamp. The track ascends the stream through low hills to its source, when the kotal, or crest, of the Bogra is reached, somewhat unexpectedly, at 13 miles from Gwal camp. Its elevation is about 7,800 feet. The first 180 feet of descent is very steep and difficult for laden camels. Thence down a widening glen between considerable heights for 6 miles to Sina, which is merely a camping-ground just outside the hills. Water from a stream abundant and good. No supplies. Elevation, about 5,400 feet.</p>
6	OLD CHAMAN . . . . .	$6\frac{1}{2}$	$60\frac{1}{2}$	<p>Southwards over undulating ground parallel to the foot of the hills.</p> <p>This route is impracticable for artillery, but not for laden camels. Supplies must be carried. In winter the cold is severe, and snow will probably be found on the plateau, which is then totally deserted.</p>

In September 1880 the route was traversed by 3 battalions, 80 sabres, and 6 mountain guns, under Brigadier-General Baker.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 139.

FROM KALA ABDULLA KHAN TO BABU CHINA, *via* THE KARATU PASS AND KALA HAJI KHAN.

*Authorities.*—STAGE 1—6, ROUTES IN AFGHANISTAN, PART III, *Edition 1887*; STAGES 7—9 FROM NATIVE INFORMATION.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	BADWAN . . .	6	6	This route is easy for camels, and almost practicable for artillery.
2	ALIZAI . . .	13	19	Eastwards over the stony ground outside the Arambi glen. Ramdil hamlets are passed on the left at 4 miles. The camping ground is a mile short of Badwan village on a <i>karez</i> stream. It is rough and not very convenient, but there is no better place. Water scarce.
<p>Eastwards, leaving Badwan some distance to the right. At first the route strikes north-east, making a considerable circuit to get to the head of an otherwise impassable <i>nala</i>. On further side of the <i>nala</i>, about a mile by road from the camp, is a clump of the dark tamarisks. From this the track goes nearly due west over a rough saline plain, with occasional trickles of salt water. After rain the ground undulates under the tread of a horse, and is hardly safe for camels. At <math>6\frac{1}{2}</math> miles pass the village of Gangalzai (Sayad Pain being one mile south). A furlong beyond the village is a considerable <i>nala</i>, containing good water; crossing easy. The road bends to left, keeping parallel to <i>nala</i>, for a short distance, and leaves a large and conspicuous tree on the right. On the left, a little off the road, are the hamlets of Spojhak and Muhammad Jan Shingari. At <math>9\frac{1}{2}</math> miles pass village of Sayad Pakur. Thence straight on over gravelly soil to Semzai, 11 miles. Here there is a small irrigation channel, but it is often dry. From Semzai bear away to the left for the camping ground, which is north of Alizai village near the water-mills. Good open ground; water abundant. Supplies should be procurable from the village. Fuel and forage scarce. Elevation, about 5,200 feet.</p>				
3	MULLA ALAM . . .	9	28	From camp north of Alizai strike north-east up the gravelly slope. At 2 miles cross a broad and shallow stony <i>nala</i> , and enter the hills. Thence follow the course of the Karatu <i>nala</i> up a fairly wide valley for 2 miles. At $4\frac{1}{2}$ miles turn left through a gap, still following the watercourse. Thence ascend the narrow glen of the Karatu. The road is rough and the ascent considerable, but steady. Mulla Alam is a wayside <i>ziarat</i> at a place where the pass is about $\frac{1}{2}$ a mile wide. A woody glen leads up to the left front from the main pass. The camping ground is not good, but there is no better place. Water abundant from the stream running down the glen. Fuel plentiful. Elevation, about 6,400 feet.
4	MANDAN . . .	$9\frac{3}{4}$	$37\frac{3}{4}$	The road continues to ascend the Karatu glen, which is shut in by high ridges, Karatu on the right and Toghai on the left. After 2 miles it is only 60 yards wide, and before long diminishes to 30. For $4\frac{1}{2}$ miles from Mulla Alam the road is good, but after that it is

Route No. 159—continued.

steep, narrow, and winding. The last bit is the steepest, but quite practicable for laden camels. The top of the pass is reached at 6 miles. It is the edge of a great undulating plateau, about 8,100 feet high. The road continues in a general north-westerly direction, with a gentle descent, following the course of the Mandan *nala* to the camp. There is a good road straight on down the Mandan to Sabur, where a road (Route No. 141) from Haji Khan Kala to Shalo on the Kadanai, and so down the river to the plain, crosses. Straight on there is a road, believed to be practicable for all arms to the Tokarak, above Gurgats, on the road to Maruf and Ghazni (*vide* Route No. 128). Still straight on the "Dagh" road leads to Khaisor and Zhob. The country here is open, and there is a good choice of ground. Water from the Mandan is generally abundant, but said to dry up occasionally in summer. No supplies or permanent habitations. The country belongs to Alizai Achakzais, but deserted in winter.

A little *bhusa* procurable in autumn, and sheep are plentiful. Firewood and camel-grazing tolerable. No other supplies. Elevation about 8,000 feet.

5	SHAMA UN NALA . . . . .	11	48 $\frac{3}{4}$	From camp on the Mandan north-east down the stream, which here begins to run in a shallow valley. At about 5 miles turn to the right over a low hill, and enter the hollow of the Obastkai <i>nala</i> , crossed at 6 miles. Thence eastward through undulating country to the
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Tor Jamat ridge, which is the boundary between Achakzais and Kakars. The crest of the ridge is reached at 8  $\frac{1}{2}$  miles. From here there is a descent of  $\frac{1}{2}$  a mile to the Shinwa *nala*, a deep grassy hollow, draining south to the Tor Murgha. There is a road down it to Khushdil Khan Kala (see No. 128). After passing the Shinwa the track continues east, over a soft saline plain, called Halki Toba. On the right are low hills, and at 10  $\frac{1}{2}$  miles there is a gap in these, through which comes the Shamaun *nala*, a good-sized stream, with some cultivation along the banks. The track turning to the right passes through the gap. Beyond, there is a considerable extent of undulating country stretching south to the edge of Toba. It is understood to be called Laghai. Fair ground for encampment. Wood and water abundant. No supplies. People Ahmad Khel Taraghari Kakars.

6	KALA HAJI KHAN . . . . .	11 $\frac{1}{4}$	60	Still eastward, gradually ascending through a country of low broken hills, partially wooded with juniper, etc. At 2 miles pass cultivation. There is generally a Kakar camp here in summer. At 4 miles a track to the left side leads to Sarai (a patch of cultivation), and
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thence north-east to the Tokarak. The road continues to lead through the same sort of country for several miles. At about 6  $\frac{1}{2}$  miles reach a watershed, and thence descend a small sloping valley. On the right, a little off the road, is cultivation and a group of apricot trees. The spot is called Ispana Talarai (the shepherd's spring). A monster juniper tree stands by the road here (7 miles). Continuing to descend gradually, the valley widens, and becomes broken by low elevations, which only cease on entering the Chagi plain near Kala Haji Khan. Camp in the plain near the fort, which is now ruined. Open ground; water from *karez*; no supplies, except some *bhusa* in autumn, and sheep. Elevation, 7,570 feet.

7	SEGI or SEGHI . . . . .	10	70	Road good. Segi is a small village of Ahmad Khel Taraghari Kakars. Water plentiful. Some supplies, but no <i>ata</i> . According to Loch's information, the first march is to Hingan, 12 miles. The road is over a slightly undulating country. Water
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plentiful from stream. Supplies scarce.

From Segi a road goes off *via* Kajur, Lahar, and Surkhab, to Maruf.

8	THAL or TAL . . . . .	16	86	The road proceeds down the bed of a stream called Rud, which is easy travelling. That village is a mile off the <i>nala</i> . The people are Sur Kakars (attached to Barakzai Taraghari).
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9	BABU CHINA . . . . .	10	96	Road good down bed of Rud stream. Babu China is stage 2, Route No. XXXIX, Vol. II.
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Route No. 140.

FROM KALA ABDULLA KHAN TO GWAL (TOBIN), *via* MANDAN.

*Authority.*—ROUTES IN AFGHANISTAN, PART III (*Edition 1857*).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	BADWAN . . . .	6	6	} <i>Vide</i> Route No. 139. Camp on the Mandan about $\frac{3}{4}$ mile above the spot there given. It is equally good as regards water, etc.
2	ALIZAI . . . .	13		
3	MULLA ALAM . . . .	9	19	
4	MANDAN . . . .	9	28	
5	KURK . . . .	15	37	
			52	Onwards this is a bad road for camels. North from Mandan at about $5\frac{1}{2}$ miles the track turns west-south-west up the Shenkrai, into the mass of low, parallel, rocky ranges which

separate Toba proper from Tobin. Here the road from Haji Khan Kala by Drajandar joins in. After 2 miles reach a watershed, and thence descend steeply to the bed of a *nala*, which is soon quitted, and the road crosses a spur to another watercourse. This is the Murgha stream, the main drainage channel of this part of the hills, and the track follows it for about 5 miles.<sup>1</sup> At  $12\frac{1}{2}$  miles turn to the left, and crossing rather high ground, descend to a small uneven plateau on the right bank of the Kurk, or Kurak *nala*, which joins the Murgha some 2 miles to the north-east.

The first part of this march is easy, but after entering the hills it becomes difficult for camels, and the road would be impracticable for artillery without improvement. Still a road fit for all arms might be made without much labour.

Water abundant and good; firewood abundant. Camel-grazing tolerable in summer only. The Kurk and neighbouring glens are cultivated, and a little *bhusa* might be procured in autumn. People are Ashazai Achakzais, and not unfriendly.

There is more and better ground for encampment higher up the glen.

6	GWAL . . . .	$12\frac{1}{2}$	64 $\frac{1}{2}$	Descend to the bed of the stream; cross it and up a steep ascent of 150 feet in about 1,000 yards. Thence an easy descent for some distance followed by another rise, on the summit of which is a large graveyard called Madzarikai. From here a steepish, but short, descent

leads into a glen, called at this spot Turkhan, but higher up Baian, the second of that name. There is a nice piece of open ground on the right bank of the stream which drains it. It would make a good camping-ground and is about 15 miles from Buland karez. This glen is cultivated, and belongs to Malizai Achakzais. Leaving Turkhan there is a long and pretty easy ascent, followed by a sharp and rather difficult drop into Ghabarg or Akhbarg ( $3\frac{1}{2}$  miles). This valley is three quarters of a mile wide and drains north-east. There is very little cultivation. Beyond is a rather jagged, and apparently inaccessible range. The road turns south-west up the valley, over soft alluvial soil. Near the head of the valley is a spring of good water, less than a mile beyond which is the watershed called Miratkai (8 miles). The descent is gentle, and the path accompanies a *nala* containing water. It is known as the

<sup>1</sup> Soon after entering the Murgha, a path branches to the left and crosses a succession of narrow, cultivated glens, Baian, Garan gai, Ghezatkai, Kurk, etc. It leads to Chinari, and seems to be a good road.

*Route No. 140—concluded.*

**San.** The valley is about the same breadth as Ghabarg, but much more broken. After 3 miles a path turns off to the right, but it seems better to go straight on. The lower part of the valley is cultivated, and near the end, on the left-hand side, is a clump of trees. This is Gwal. There are no permanent habitations, but in summer a considerable number of Ghaibizai and other Achakzais are camped in the neighbourhood. A little distance further the San joins the Rud stream, and the camping-ground is below the junction, at a flat locally known as *bir Jamat*. Elevation, 7,000 feet.

This march is easier than the last, but the road would require making for artillery.

Water from the Rud abundant and good. Firewood procurable, also camel grazing in summer, some *bhusa* in autumn, and sheep as long as the Achakzais are on the plateau.

Gwal is the summer head-quarters of Madat Khan, Ghaibizai, chief of the Badinzai division of Achakzais. The people are of uncertain disposition. The road through Arambi and Chinar to the Bogara pass, and so to the Kadanai plain, passes through Gwal. (*Vide* Route No. 138.) There is also a path to Murgha Chaman by the Psha pass.

This route, like all others on Tobu, should only be attempted between April and October. It is on the whole a good road, but the hilly tract passed through between Mandan and Gwal offers many opportunities for opposition if the Achakzais are hostile. No supplies can be counted on, and as a rule, everything must be carried up from Pishin. There is a short road up the Machki glen from Kala Abdulla Khan, called Inzar. It is believed to be practicable for mules and bullocks, and supplies could thus be sent up.

Instead of halting on the Mandan, it would perhaps be better to make straight for Buland Karez from the head of the Karatu pass; distance from Mulla Alam about 15 miles. Thence to Turkhan, 15 miles; and Turkhan to Gwal 10½ miles.

There is another and very much shorter road to Gwal from Mandan, turning west and running parallel to the edge of the plateau to Chinar.

**Route No. 141.**

FROM KALA HAJI KHAN TO GWAL (TOBIN).

*Authority.*—ROUTES IN AFGHANISTAN, PART III (*Edition 1887*).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter, mediate.	Total.	
1	SABUR OR SABARA .	11	11	This is a difficult route for artillery. From camp near the fort at first west, but after half a mile turn to the right and pass through a gap in a small range. The road now lies north-west through a tract of broken ground, low hillocks, ridges and undulations. After

a short distance cross a small stream, believed to be called Pasta. Then west-north-west over a low range, by an easy ascent. Beyond is a country of small parallel ranges, or undulations, draining north-east; it is bare and treeless, but fairly well watered. At about 3 miles cross a stream, on which is cultivation. Higher up the valley are a few huts known as Klaka. The next valley is Tukoh, which is watered by a stream called Uskoh. It is tolerably wide and partially cultivated. The people are Ahmad Khel Kakars. The Uskoh is crossed at 4½ miles. A rather steep ridge divides this valley from the narrow hollow of the Psha, which unites with the Uskoh, a mile lower down (north-east).

After crossing the Psha hollow a broken salt plain is entered. The track traverses it diagonally (west-wards), and strikes first the Kuram (7½ miles ?) and then the Shamann (10 miles), both large streams, with much water. The Kuram runs north-east to the

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 141—concluded.

Tokarak, but the Shamaun, where met with, bends from north-east north-west. Its right bank is followed for about a mile to the camping ground, which is opposite to the junction of the Sira Ghabarg *nala*. The spot is fairly good and the hills on this side are low. Water abundant and good. Wood rather scanty; camel-grazing good in summer. There is cultivation and *bhusa* is procurable after the harvest.

The junction of the Shamaun with the Mandan stream is visible a mile or more lower down.

The latter runs in a tolerably open valley, nearly a mile wide.

The road this stage is good, but constant ascents and descents are trying to camels, and the march would be a difficult one for artillery.

Sabur appears to be the same place as Sabara of Route No. 142. A good deal of country is included under the name.

2	BULAND KAREZ . . . . .	10		21

Cross the Shamaun, and along the left bank to its junction with the Mandan. Then to left (south-west up the latte. Its valley is a mile wide and tolerably well cultivated. The hills are low, and easily accessible by

infantry. Passing over to the left bank, the Mandan valley is quitted by a sandy *nala*, which, however, is only followed for a short distance, as the track turns westwards along the hillsides.

At about  $4\frac{1}{2}$  miles strike the Kandil, which is the stream draining Turwa. It is also known by other names. The Kandil is then followed in a north-westerly direction. It contains plenty of water. A short distance up is the rude, open-air praying-place called Ahmad Khan Masjid. It marks the boundary between Achakzais and Kakars. After a mile or so the tract bends westwards round the foot of low hills, and at about 6 miles, enters the long salt plain known as Turwa. It extends south-west up to the edge of the plateau, or nearly so. At 8 miles a hillock on the west side marks the camping-place called Drujandar, where there is plenty of good open ground. Buland karez is a cultivated spot some 2 miles further up the valley. The fields extend for some distance, and belong to Alizai Achakzais. Apparently there is a choice of ground for encampment and *bhusa* should be procurable after the harvest. There is camel-grazing in summer and firewood is procurable. The valley here is fully 2 miles wide. Beyond the low hills and undulations to the south-east is the hollow of the Mandan (see Routes Nos. 139 and 140).

This march is easier than the last.

3	KURK . . . . .	12		33
4	G WAL . . . . .	$12\frac{1}{2}$		$45\frac{1}{2}$

South-west for about  $2\frac{1}{2}$  miles to the debouchure of the Shenkrai *nala*. Thence ascend the Shenkrai as in Route No. 140.

*Vide* route No. 140.

This road from Kala Haji Khan to Gwal was followed by the reconnoitring detachment under Lieutenant-Colonel Boswell, 2nd Sikhs, and Captain Henry Wylie, Political Officer, Pishin District, in May 1879. The strength of detachment was 230 rifles, 2nd Sikhs, and 29 sabres, 3rd Sind Horse, with full transport. All supplies were carried or sent up from Pishin.

Route No. 142.

FROM KALA HAJI KHAN TO MARGHA CHAMAN (KADANI PLAIN).

Authority.—SHOWERS, 1879.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	SABARA OR SABUR .	12½	12½	This route is passable to mules. ( <i>Vide</i> also Route No. 141.)
<p>The road northwards to Gurgats (Route No. 128) and then along the Tokarak and Kadanai to Shalo, is easy, and probably no longer than the one here given; but the people in the vicinity are hostile.</p>				
2	KHAIBIZI . . . .	9½	22	Good road northwards, over easy undulations. Wood, water, and camel-grazing at Khairizi. The Ahmad Khel Kakar country has now been quitted, and that of the Ahmadzai Achakzais entered. Elevation, 7,050 feet.
3	SHALO OR KADANAI .	12	34	General direction north-west. Road fair, over low hills and undulations. The valley of the Upper Kadanai is entered at 11 miles, and the road turns down stream. The water here is decidedly salt, but drinkable. There is wood and camel-grazing, and <i>bhusa</i> is procurable in summer. People Achakzais, malik Painda.
4	MISRAI . . . . .	12	46	Down stream for 1 mile, when the Kadanai is quitted and the road passes westward over low hills and undulations to hollow of the Takri <i>nala</i> , which is entered at about 9 miles. It is a tolerable road. Camp on the Takri. Excellent wood, water, and camel-grazing. <i>Bhusa</i> procurable in summer. The people are Achakzais.
5	WALA . . . . .	15	61	Road north-west for 4 miles down the Takri to its junction with the Kadanai, and thence westwards along that river. There is water and cultivation all the way. At 11 miles the Tashrabat stream comes in from the south. The point of junction is called Manzakai. Wood, water, and camel-grazing at Wala, also <i>bhusa</i> in summer. The people are Alikozai Duranis, and pay revenue to Kandahar through Malik Naorojan, of Balazara in Arghastan.
<p>Apparently there would be no difficulty in following the Kadanai all the way from Shalo, instead of going off to Misrai.</p>				
6	GARDAI . . . . .	11½	72½	Road in the bed of the Kadanai, at first north-west bending round to west and south-west. There is water and cultivation all along, but the hills are high and inaccessible on either hand, with very few lateral valleys. Great quantities of fish in the Kadanai from Wala

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 142—concluded.

downwards. From Gardai, or above it, there is probably a road over the outer ridge of the hills to the Arghastan valley.

7	MARGHA CHAMAN .	12½		85	South-south-west down the Kadanai to its debouchure into the Kadanai plain. Margha Chaman is immediately to the south. It is a grassy plain, a mile and a half long and about a mile wide. Splendid site for encampment. Water from small spring abundant. Grass, also camel-grazing good; firewood procurable from the hills. Supplies can be obtained in considerable quantities from the Nurzai villages along the Kadanai close to the Chaman.
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Gatai, the first march from Old Chaman on the kandahar road, is 14 or 15 miles due west across the plain.

Route No. 143.

FROM KALA KHUSHDIL KHAN TO TOR JAMAT (TOBA), *via* THE SHINWA.

*Authority.*—ROUTES IN AFGHANISTAN, PART III (Edition 1887).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	AMO KACH .	11	11	This is a camel road. From lines at Khushdil, northwards, through the Shikalzai hamlets, and then north by east over the plain. Good road. At about 1½ mile reach the dry shallow and stony bed of the Pishin Lora. It is nearly three quarters of a mile wide, and the track here is somewhat

rough. On reaching the further side the road bends north-east, and is again good. At about 3½ miles pass, on the left-hand, the first village of Khanzai. The second village lies somewhat back from the road; the third is passed at 4½ miles. Thence in the same direction along the right bank of the Tor Murgha *nala*. Low hills approach on both sides of the watercourse. The road is very good.

At about 7½ miles the road bends slightly to the left<sup>1</sup> and at 8 miles passes through low hills, turning still more to the left (north-west) to cut off the bend of the Tor Murgha. At about 8½ miles the road again reaches the watercourse, which here runs through an open valley at right angles to the hill ranges. Thence the track is mostly along alluvial flats on the right bank of the watercourse, but occasionally in its bed. Three-quarters of a mile before reaching Amo Kach is a short gorge, a quarter of a mile in length. Its width is 40 or 50 yards, and the enclosing heights are considerable, but can be crowned. Water commences below the defile and continues to the halting-place. After clearing the gorge the road ascends the left bank, passes over rising ground for nearly half a mile, crossing the Tor Murgha to the camping ground.

Amo Kach is a small flat in the angle between the Greater and Lesser Tor Murgha *nalas*, which meet at this point. The camping ground is small and commanded by hills. Better ground might be found a mile up the Great Tor Murgha. Water abundant and good. Firewood tolerable; camel-grazing appears scanty. Supplies, including *bhusa*, can be procured from villages in the Lesser Tor Murgha valley (see next march), but not in large quantities. People here are Suliman Khel Kakars, quiet and friendly.

<sup>1</sup> Straight on is a road to Tazak. A mile or so further it crosses the Tor Murgha at the point where that watercourse makes a sharp bend from E. S. E. to S. W. Thence up an affluent *nala* for some miles N.-E., and afterwards in a general easterly direction through low hills to Tazak, which is reached at 11½ miles from Khushdil. This road is an easy camel-track.

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 143—concluded.

The road this march is good all the way and practicable for all arms.

2	MANDOZAI . . .	8½	19½	Ascend the Greater Tor Murgha; at first in a general north-westerly direction. For a mile and a half it is tolerably open, but where the watercourse makes a bend and is followed northwards, high hills close in on both sides and form a defile. Its width at the entrance is
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100 yards, afterwards narrowing to 50 yards or less. The bed of the torrent occupies the whole width of the winding gorge, and is a mass of single and angular fragments of rock, over which is a rough, and often hardly visible track. In its present condition this part of the road is fatiguing to both men and animals, but it would be possible to clear a path for camels without much labour. The gradient of ascent is easy, probably about 1 in 50, and there is running water throughout the whole length of the defile. The enclosing heights are steep and lofty, but nevertheless accessible.

At about 5½ miles reach the junction of two great watercourses; that to the right is the Shat; it resembles the Tor Murgha, and up it there is a path to Kan or Kanah on Toba (said to be somewhere near Laghai), but it is a bad road.

The route lies northwards up the other watercourse, which is called Shinwa or Shinwam. At first it resembles the Tor Murgha, but the road is better. At about 7½ miles is a comparatively open space. Here, on the right-hand, is the hamlet of Khanakati, with a few fields irrigated from the stream. Afterwards the hills close in for about 100 yards, but when this gap is passed the country is decidedly more open. The hills are lower, and strips of alluvial soil began to appear on either side of the watercourse. The road is also pretty good. Mandozai is a hamlet about half a mile above the gap. There are a few irrigated fields, and room for encampment might be found on the flats bordering the watercourse. Water and wood fairly plentiful, *bhusa* procurable in small quantities, but nothing else can be counted on.

This march is rather difficult, but only on account of the loose stones in the bed of the watercourse. If cleared away the road would be good.

3	CAMP ON SHINWA, near TOE JAMAT.	9	28½	The road continues up the glen, which has not been reconnoitered beyond Mandozai. It is said to be an easy camel-road, and the glen continues fairly open, with scattered groups of huts and patches of cultivation. There are no narrow defiles, and no sudden ascent to gain the Toba
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plateau. However, the gradient in the upper part of the glen must be considerable.

The head of the Shinwa is crossed by the road from Haji Khan Kala to Mandan at 13 miles from the former and 9 miles from Mandan. Here it is a deep grassy hollow, with a small running stream. Having gained the abovementioned road at about 9 miles, Tor Jamat (a mere open-air praying-place, but well-known spot) is about half a mile to the left and the camping ground on the Obastkai *nala* is some 2 miles further in that direction. Eastwards towards Haji Khan Kala, the camping ground on the Shamaun *nala* is about 2 miles distant.

Halt may be made on the Shinwa. Water and short grass abundant; firewood is probably plentiful. Camel-grazing tolerable in summer. No permanent habitations and no supplies.

The Tor Jamat ridge is the boundary between Kakars and Achakzais on Toba. This march appears to be fairly easy all the way.

On the whole this route appears to be as good as any of the roads leading from Pishin to the Toba plateau. As it enters Kakar Toba close to the Achakzai boundary, it might be useful in the event of complications arising with the latter tribe.

Route No. 144.

FROM KALA KHUSHDIL KHAN TO ISPANA TALARAI (TOBA), *via* BARSHOR AND THE NARAI ROAD.

*Authority.*—ROUTES IN AFGHANISTAN, PART III (*Edition 1887*).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	AMO KACH . . .	11	11	<i>Vide</i> Route No. 143.
2	GHABARG . . .	11½	22½	A mule road. For about a mile its course is between a high hill on the right and the scarp of a plateau on the left. The village of Chingai

is then reached, and beyond it is a tolerably open valley, the watercourse running at the foot of the hills on its right (south-east) side. The path is either in, or close to, it along the banks. It is a good road, though stony in places. On the left hand is cultivation, in terraced fields sloping up to the foot of the high range called Lui Narai. The hamlets of Zhiar, Bagh, and Ragha are passed, each among its own fields and fruit-trees some distance from the road. The people are Suliman Khel Kakars and quite friendly.

At about 4 miles the Tor Murgha is quitted. It comes down a long, narrow glen from the right (east); but the valley continues open to the north-east, and the road leads nearly straight on, leaving the last village (called Warzarob), half a mile to the left.<sup>1</sup>

From this point the route has not been reconnoitred, but it is understood that the track up the valley is easy. At about 9 miles a watershed is crossed. Thence descend a small valley draining north-east to the Ghabarg. The Ghabarg valley, or glen, is reached at about 11 miles, and camp would probably be on the Ghabarg *nala* at about 11½ miles.

Somewhere here, or in the Takhor glen to north, are several hamlets. At any rate, wood and water are understood to be plentiful, and the Ghabarg is said to be an open valley. The people are Barakzai Kakars and friendly.

Shahargali hamlets are about 3 miles south-south-east, down the watercourse, and Kwozh Kach camping ground, on the Barshor road to Kala Haji Khan, etc. (Route No. 128), is half a mile further south.

The road this march is believed to be good all the way.

3	ISPANA TA ARAI . . .	11	33½	Ascend the Ghabarg valley north-east. The road is stated to be good. At about 3 miles two ravines meet. That to the left hand is entered. It is known as Takhor and in some parts of it the road is difficult, though practicable for mules. The gradient of ascent is probably considerable. After some miles there is a very stiff climb up a narrow zig-zag path to the Toba plateau is about 7 or 8 miles the ascent terminates in a small kotal, between the hills. Kayakai on the right and Lui Narai on the left. Thence a slight easy descent down a narrow winding <i>nala</i> which leads into a small broken valley running north-east and south-west. Here the road to Haji Khan Kala branches to the right. It is a good path, and the distance to the old fort is 4½ or 5 miles from the crest of the pass. To Ispana Talarai the road leads on the north-east, winding among hillocks, and crosses a small range to the camping place, which is about 4 miles from Haji Khan Kala on the road to Tor Jamat and Mandan. Here is a patch of cultivation with abundant water and a few apricot trees. There is room
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<sup>1</sup> From Warzarob onwards the valley is known as "Ghabarg." There are many places of the same name.

Route No. 144 - concluded.

to encamp, and also rather lower down the valley towards Haji Khan Kala. People hereabouts are Ahmad Khel Kakars and may be considered friendly.

This place is distant from Sabur or Sabara (*vide* Routes No. 141 and 142) about 10 miles.

This march is difficult for pack-animals. The track through Takhor and over the kota is known as the Narai road. It is said to be a fair path for horsemen, and no doubt mules would get over it, but it is impracticable for camels.

This road seems to be well known and pretty frequently used. It turns the Kwat road (*vide* Route No. 128), but is otherwise of no importance.

Route No. 145.

FROM KALA KHUSHDIL KHAN TO BALOZAI, *via* THE SURI NARAI PASS.

*Authority.*—ROUTES IN AFGHANISTAN, PART III (*Edition 1887*).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	BALOZAI	17	17	A camel road. Cross the watercourse east of Khushdil fort, and then east-south-east past Kamalzai village, and over the open plain to the foot of the hills; good road. At about 4 miles enter the bed of the Suri <i>nala</i> and follow it, winding among low spurs. Ascent

gradual and road tolerably good, though there are some narrow places. The gradient increases after  $6\frac{1}{2}$  miles.

At 8 miles reach the stream and camping ground called Sharin karez, 740 feet above Kala Khushdil Khan. The camping ground is broken and somewhat confined. It is also commanded in all directions. Water excellent, though not very abundant. Wood moderate; forage scanty. No habitations or supplies, but the latter can be collected by previous arrangement.

Ascend the bed of a torrent for  $2\frac{1}{2}$  miles to the foot of the main ridge. This is ascended by a zig-zag path having an average gradient of 1 in 5. It is practicable, though difficult for laden camels, but quite impassable by wheeled artillery. The crest of the Surnarai pass is reached at 11 miles. Elevation, about 7,000'. It is very narrow. Descent comparatively easy, and after a quarter of a mile the broad and smooth bed of a torrent is entered. The gradient of descent is, however, considerable. In front is a semi-isolated hill. The road leaves this to the right, and, descending steadily, reaches the dry bed of the Surkhab at about 14 miles.

Beyond this is open country. The Balozai road crosses the watercourse and continues east across the plain towards a gap in the low gravel ridge which runs from north-east to south-west, down the centre of the Karezat Kakari district.

The Thal Chotiali Field Force appears to have camped a mile or more short of Balozai itself. There is also an excellent site some distance to left of the road, where there is a *karez* and trees. It is called Chingai *karez*. Water is abundant at either of these places, and supplies procurable from Balozai and other villages. Firewood is scanty and camel-grazing indifferant. In winter there is none.

Balozai village is in, or rather just beyond, the gap at the foot of the low hills. A broad, dry watercourse, which passes through the gap, is to the south. There is cultivation; *bhusa* and grain are procurable here, and also from Kanozai, 2 miles to the south-west. The people are Panizai Kakars, and tolerably friendly. Elevation, 6,675'.



ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 146.

FROM OLD CHAMAN TO KALAT-I-GHILZAI, *via* MARUF.

*Authority.*—NICHOLSON (from *Dafr. Fakirulla Khan and Havildar Dada Khan*).

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	MARGHA CHAMAN .	15	15	There are three roads, only one of which is good and practicable for troops of all arms. There are some 15 or 20 villages scattered above Margha Chaman. Supplies abundant. Water plentiful from stream. Camping ground extensive.
2	MULAWALI GAM .	8	23	At about 1 mile cross the Kadanai river, leaving it on the right. Road fair, but requiring repair in places for guns; said to be a better road to the westward. Large camping ground. Supplies plentiful. Water abundant from a <i>nala</i> . A group of villages inhabited by Nurzai Duranis.
3	SARKARI WALA .	9	32	Road fair, but requires repair in places. A group of Nurzai Durani villages. Water plentiful from channels from Kadnai river; much cultivation.
4	MULA SARDAR .	16	48	Road good for pack-animals, but not for guns. At about 4 miles pass the small village of Gani Khan (Durani Popalzais). At about 6 miles the Kadani river is again approached. The road then enters hilly country. Water scanty from a stream.
5	YUSAF . . . .	5	53	Road up and down, difficult for wheels. A small Popalzai Durani village, situated among hills. Water plentiful from a spring. Some cultivation.
6	ATA MUHAMMAD KHAN.	8	61	Country very mountainous. The road travelled is very bad, but there is said to be a good one on the west. A group of villages (Popalzai Durani). Water plentiful from springs. Some supplies obtainable.
7	MIRBAZ KALA .	7	68	Road not fit for wheels. At 3 miles pass Malik Jabar Kala; after which a large stream is crossed at about 5 miles called the Salisun. On the far side is the hill Togra, to the right of which the road passes. All about here is cultivation. A little further on another road

ROUTES ON THE NORTH-WEST FRONTIER.

Route No. 146-- concluded.

from Sarkari Kala joins in. The Arghastan is then crossed. Many villages and much cultivation. Inhabitants Alizai Duranis.

8	GUD . . . . .	14	82	Road up the bed of the Maruf (Arghastan ?) river, passable for all arms. Ample camping ground. Water plentiful from river. A large village. Supplies plentiful.
9	SARKARI GAM . . . . .	7	89	Road up the river bed, fit for all arms. At about 3 miles pass the village of Karvan, and at 4 miles Madazai. To the north of Sarkari Gam is the small fort of Maruf, with a <i>ziarat</i> near it. A <i>nala</i> flows on either side of the fort and village, falling into the Arghastan. The water is here about $2\frac{1}{3}$ feet deep mid-stream.
10	SAIFULA KHAN . . . . .	12	101	The road, fit for all arms, soon leaves the river. At about 8 miles pass the village of Amir Khan. Water from <i>karez</i> .
11	YAR MUHAMMAD . . . . .	6	107	At 4 miles cross the Utargarh <i>nala</i> about 30 feet wide and with $2\frac{1}{3}$ feet of water. Impassable for guns in its present state. The road is otherwise fit for wheels. Water and supplies plentiful. A small village. Good camping ground.
12	PINAKI . . . . .	28	135	At about 1 mile reach the mountain Kingarh. The road runs along a <i>nala</i> towards the north. About a mile on another <i>nala</i> comes into it from the east, and at 3 miles another from the west. At 5 miles the road leaves the <i>nala</i> , which branches off to the west. The road then ascends and descends for a couple of miles, when it meets another <i>nala</i> , down which it runs to the 10th mile, when the <i>nala</i> bends away to the west. At 11 miles the <i>nala</i> is again met, and followed to about 20 miles. It gradually broadens, and finally falls into the Lora, which comes from the north. The Lora is about 100' wide, banks 4 feet to 5 feet high. The water was waist-deep, probably owing to recent rain and snow, but there must always be some water in it. The bottom is hard. Beyond the river is a very difficult ascent of about 3 miles to the crest of a range of red hills. The ascent would be impracticable for camels, but mules might accomplish it. The descent is easy for 3 miles to the village of Pinaki. Water and supplies plentiful.
13	GAZAK . . . . .	7	142	Road good for all arms. Gazak appears to be the name of the district. There are many villages, and much cultivation. Water plentiful.
14	AUGAN . . . . .	9	151	Good road. Supplies and water.
	JABAIDA . . . . .	5	156	Good road. Supplies and water. Inhabitants Hotak Ghilzais.
	KHALA . . . . .	9	165	Road good. Water and supplies plentiful. A large Ghilzai village.
17	KALAT-I-GHILZAI . . . . .	7	172	Road as before. At about 3 miles pass the Tarnak river.

N.B.—With the exception of the first stage the mileage is obviously over-estimated.

Route No. 147.

FROM OLD CHAMAN TO KANDAHAR, *via* THE BARGHANA PASS.

Authority.—CAMPBELL.

No. of Stage.	Names of Stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1	GATAI . . . . .	17	17	<i>Vide</i> Route No. 125, stage 16.
2	KUSHOBAI . . . . .	10 P		
			27 P	This route is practicable for all arms.
3	BEDAK . . . . .	8½	35½ P	For 3 miles across gentle sloping plain at foot of hills, with rise of about 150 feet; road very good. Next 2½ miles nearly along the course of the Surkhai Manda to a small kotal. Ascent in this portion about 300 feet, of which 100 is in the last quarter mile near the kotal. There

is no real difficulty in this part of the road. It is a little rough for guns in places, and the ascent of the kotal would be somewhat troublesome for artillery. The valley is fairly open everywhere between low hills. The worst portion of the road can be avoided by a detour, said to be about 1½ mile longer and a good road. It leaves the bed of the Surkhai Manda at 4½ miles from Khusobai, and rejoins the road just beyond the kotal. The descent from the kotal is easy, but somewhat rocky, falling about 150 feet in 0.4 mile, when the road debouches on an open undulating plain called Bedak, across which 2 or 3 miles brings us to Bedak wells. This is a capital camping ground, with a few fine willow trees and 13 or 14 wells, said never to dry up. Water very good. Firewood is plentiful among the hills close at hand. Camel-grazing and *hariali* grass are abundant. There is no village and no supplies. The wells are generally resorted to by pastoral folk, the grass being as a rule exceedingly abundant and good in the neighbourhood, but at present it is dried up, and the shepherds have moved elsewhere. The water stands just now about 7 feet below the surface, and the supply must be very abundant, as is proved by the fact that the level of the water in one well was reduced about 9 inches by baling, and it recovered very nearly its former level in 15 minutes. This well was about 6 feet in diameter and had 3 feet of water in it. The Bedak valley drains into the Mel Manda.

4	BARGHANA . . . . .	16½	52 P	For the first 10½ miles the road crosses a rolling plain, and is good and smooth, with easy gradients. The first 5¼ miles is over the Mel plain, with drainage to Mel Manda. After that a very easy watershed is crossed into the Maled plain, whose drainage is in the contrary

direction to the Arghastan. Both these plains are, like that of Bedak, said to be very rich in grass, growing to a height of 2 to 3 feet after rain. At 10½ miles the Barghana kotal is crossed; height about 100 feet above Bedak wells; and from this point the road follows a winding open defile for 6¼ miles to Barghana, descending about 600 feet. Water is generally to be found in the pass about 4 miles below the kotal, but it is not permanent, and slightly brackish.

At Barghana there is a fine *karez* of good water, discharge calculated at one cubic foot per second. In very dry weather it is said to dry up to half this quantity. There is a small

Route No. 147—continued.

tank which can be filled for use if desired. Camel-feeding is excellent, and *hariali* grass is found in great quantities. There are villages in the neighbourhood, from which some supplies can be got. The road through the pass is good and easy, with no steep gradients, but in a few places, and for very short distances, at a time, it would be found rough and rocky for guns. The distance between Kushobai and Barghana, nearly 25 miles, is divided very unevenly by halting at Bedak, which might be improved by halting at Tandukai, some 2 or 3 miles nearer Barghana than Bedak is. Route No. LXXX, Vol. II, *via* the Kussa pass, comes in here.

There is no village at Tandukai, but good *karez* water, camel-grazing, and firewood.

5	NAUDIH OR DEH-I-NAU	7½	59½ P	A very easy march, excellent road across undulating plains, with total descent of about 200 feet. The first 2½ miles is across the Makuh plain, drained by the Ashurtar, and then a very low watershed is crossed into the Arghastan valley, and the Arghastan river is itself crossed within 1½ mile from Naudih. The water is very slightly brackish, and becomes worse as it decreases in volume. The flow may be expected to cease altogether at the end of summer, say towards middle of August, unless rain should fall. When that occurs, the people of Naudih, which is a large village, depend for their water on five wells in the village. The water from these is very bad, so brackish as to be almost undrinkable. The water is a long way below the surface, 15 or 20 feet, and its quantity may perhaps be pretty constant. They are said never to dry up. Naudih can provide a small quantity of supplies, grain and <i>bhusa</i> . Camel-grazing is pretty abundant, and some <i>hariali</i> grass is to be found. Firewood scarce.
6	MANDI HISSAR	8	67½ P	
7	KANDAHAR	10½	78	

Another very easy march, across a nearly level plain, a total descent of about 70 feet. Here the regular road is joined.

*Vide* Route No. XVIII, N.-W. F., Vol. II.

The Barghana pass route appears to be thoroughly suitable (as far as the road is concerned) for all arms.

The worst point about it is probably the bad water-supply at Naudih, but this might be avoided by making one march of 15½ miles, from Mandi Hissar to Barghana, which would not be difficult, as the road is good and easy throughout. Water might be got on this march about 2 miles short of Barghana (proceeding from Mandi Hissar), where a *karez* is crossed which supplies the village of Makuh. The wells of this *karez* are closed in, water hardly perceptibly brackish, and doubtless a well could easily be opened up.

From Kushobai it would perhaps be best to avoid the road through Gatai (which involves the long march of 17 miles to Old Chaman) and go through the village of Samazai, more to the east. This is said to be a large village with some supplies and good permanent water 10 or 12 miles from Khusobai, by a good road. From Samazai, Old Chaman can be reached in two easy or possibly by one long march following the base of the Kojak hills. At the end of May copious streams of good water issued from the hills and crossed the road in at least two places, *viz.* Sina, about 7 miles, and Sheriobo, about 10 miles north of Old Chaman; and the supply is said to be permanent in both places. The road might be rather rough for artillery, but quite practicable. With regard to supplies of grain and *bhusa* by this route, by giving a few days' notice to the people of the country, large quantities could be collected at Naudih, Barghana, Kushobai, and Samazai without any difficulty.

This would only leave Bedak (or Tandukai), and perhaps one camp between Samazai and Old Chaman (if that route were followed) to be provided for.

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		pass . . .					
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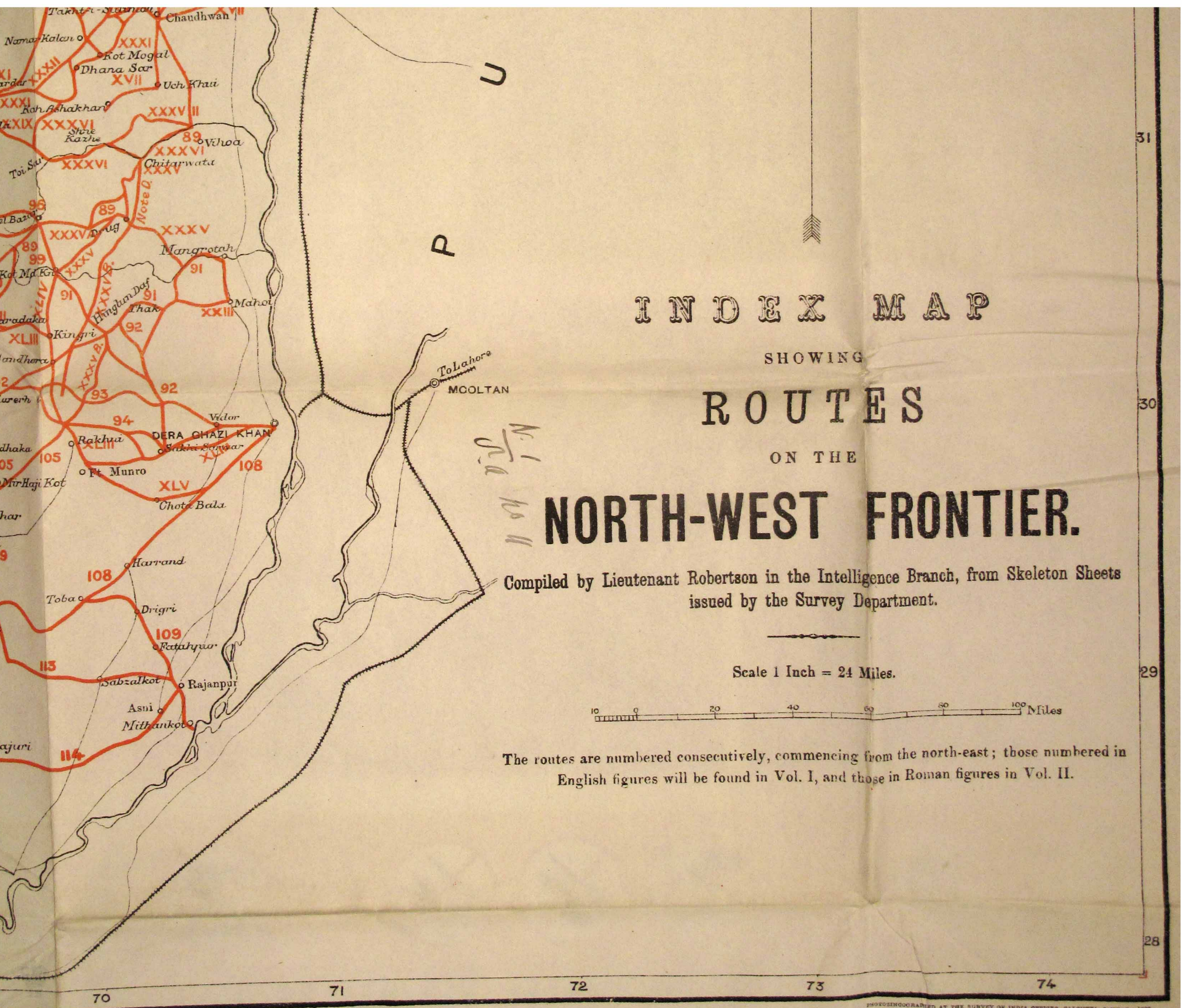
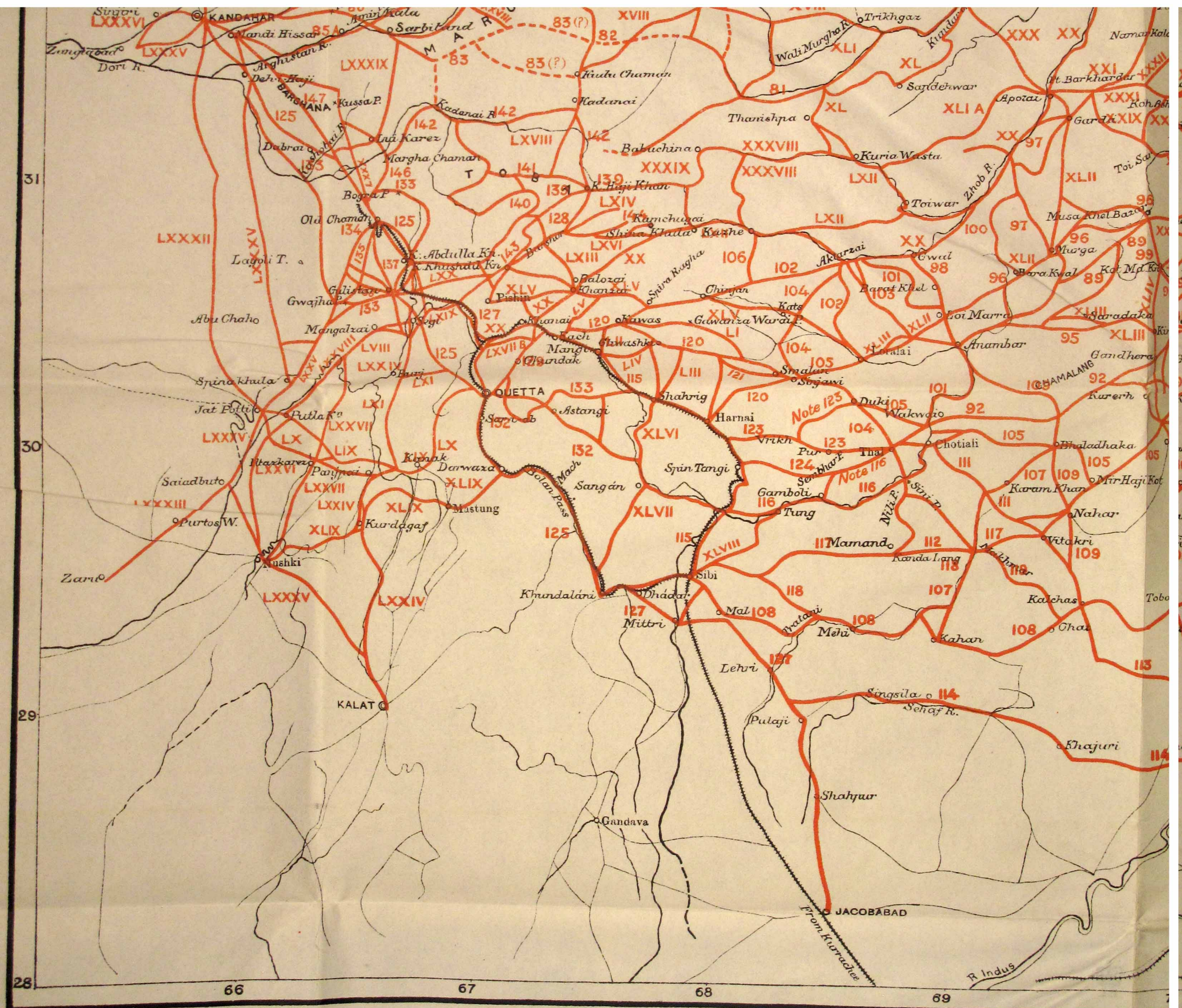
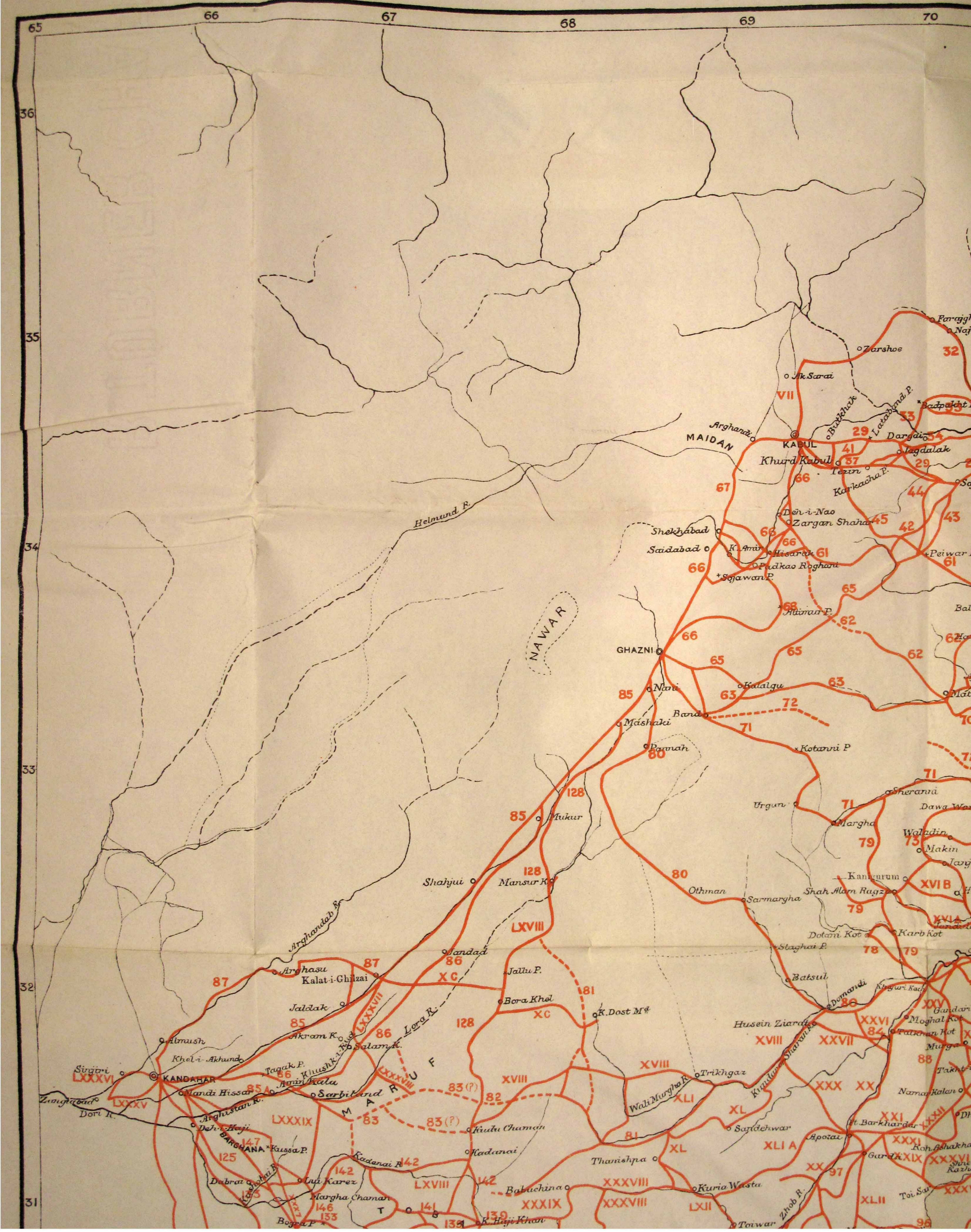
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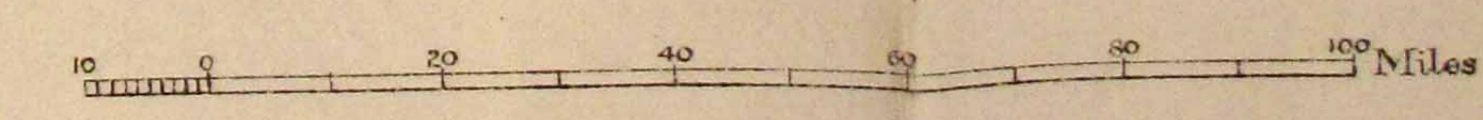




**INDEX MAP**  
SHOWING  
**ROUTES**  
ON THE  
**NORTH-WEST FRONTIER.**

Compiled by Lieutenant Robertson in the Intelligence Branch, from Skeleton Sheets issued by the Survey Department.

Scale 1 Inch = 24 Miles.



The routes are numbered consecutively, commencing from the north-east; those numbered in English figures will be found in Vol. I, and those in Roman figures in Vol. II.



