

REPORT



WITH MAP

UPON A JOURNEY THROUGH

NORTHERN TIBET AND NORTHERN CHINA



ALSO UPON

THE LATE MAHOMEDAN REBELLION; CHINA'S WEAK
RULE; RUSSIA'S INCREASING INFLUENCE
IN NORTHERN CHINA.

BY

CAPTAIN M. S. WELLBY,

18TH HUSSARS,

AND

LIEUTENANT N. MALCOLM,

93RD HIGHLANDERS.



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1897.

Intelligence Branch Diary No. 9 of 1857
Tibet

PREFACE.

The following is a brief account of an adventuresome journey of which the greater part lay through absolutely unknown country.

Some interesting information is given regarding the late Mahomedan outbreak and also on the spread of Russian influence in Northern China.

SEMLA; }
21st August 1897. }

GEO. H. MORE-MOLYNEUX, *Colonel,*
Aest. Qr. Mr. Genl., Intelligence Branch.

NOTE

The object being to explore Northern Tibet and find a new route to China and the source of the Chumar river. Object of journey

Also if possible to discover what influence Russia is gaining in Northern China and how weak the Chinese rule is growing.

Throughout the journey across Tibet plane table work was most carefully carried out by Sub-Surveyor Daffadar Shahzad Mir, XI Bengal Cavalry.

We took latitudes with theodolite or sextant. Hypsometer, thermometer and barometer daily readings were also recorded.

Some 60 photographs were taken with very fair results.

LUCKNOW;

M. S. W.

March 1897.

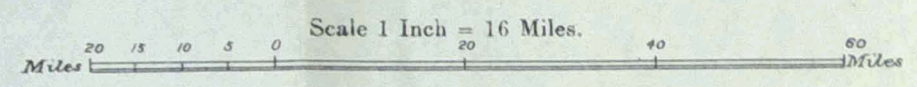
Notes.—On our arrival at the frontier of North Western China, we had unfortunately already outstayed our leave by a fortnight. Our journey in consequence of 42 days across China was a mere race against time. Had there been on our arrival at the frontier more time at our disposal we should undoubtedly have been able under the exceptional opportunities that were offered us, to learn something more relating to China's weak rule and of the intentions of the Russians in Northern China.

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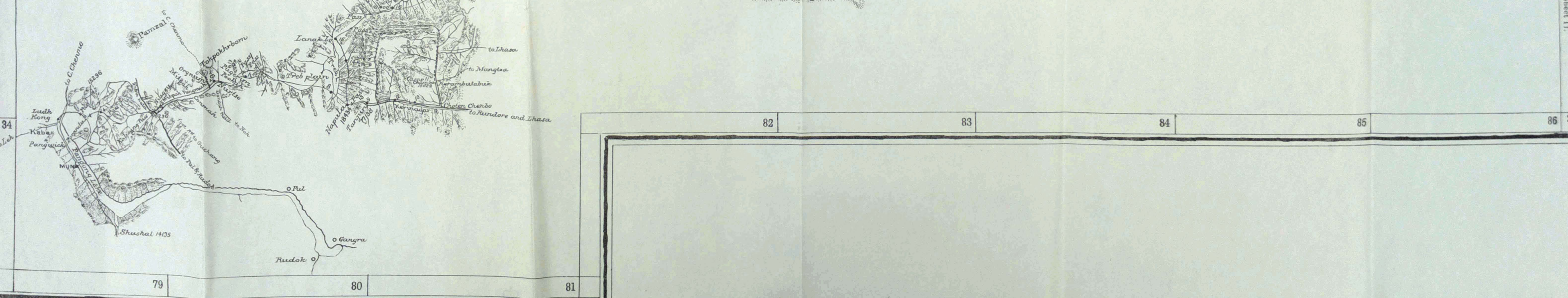
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MAP SHOWING CAPT. M. S. WELLBY'S AND LT. MALCOLM'S ROUTE ACROSS NORTHERN TIBET.



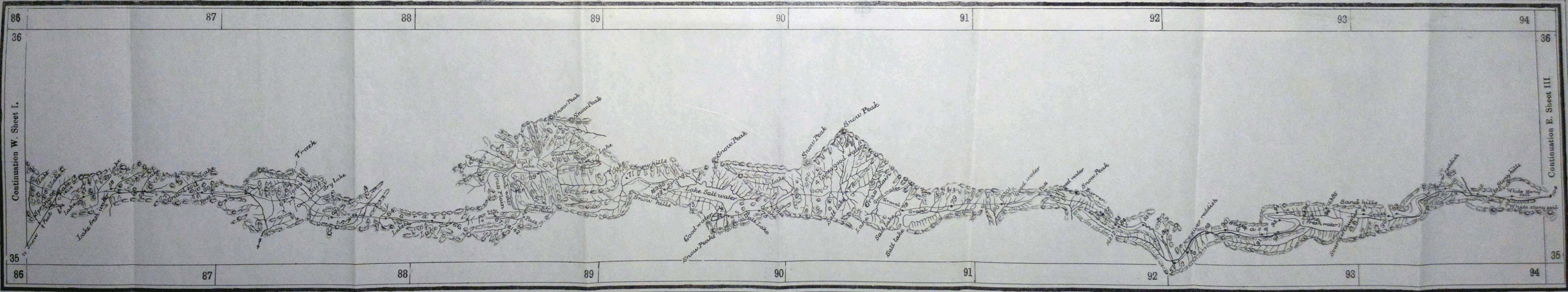
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Continuation E. Sheet II.

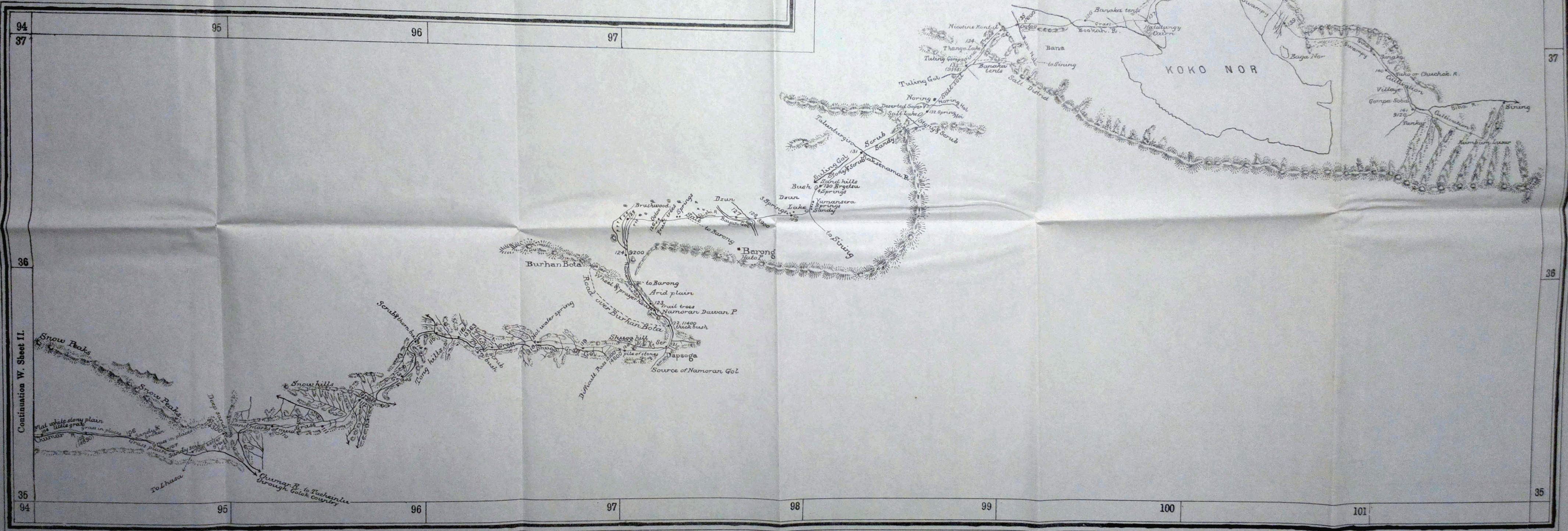
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Continuation W. Sheet I.

Continuation E. Sheet III.

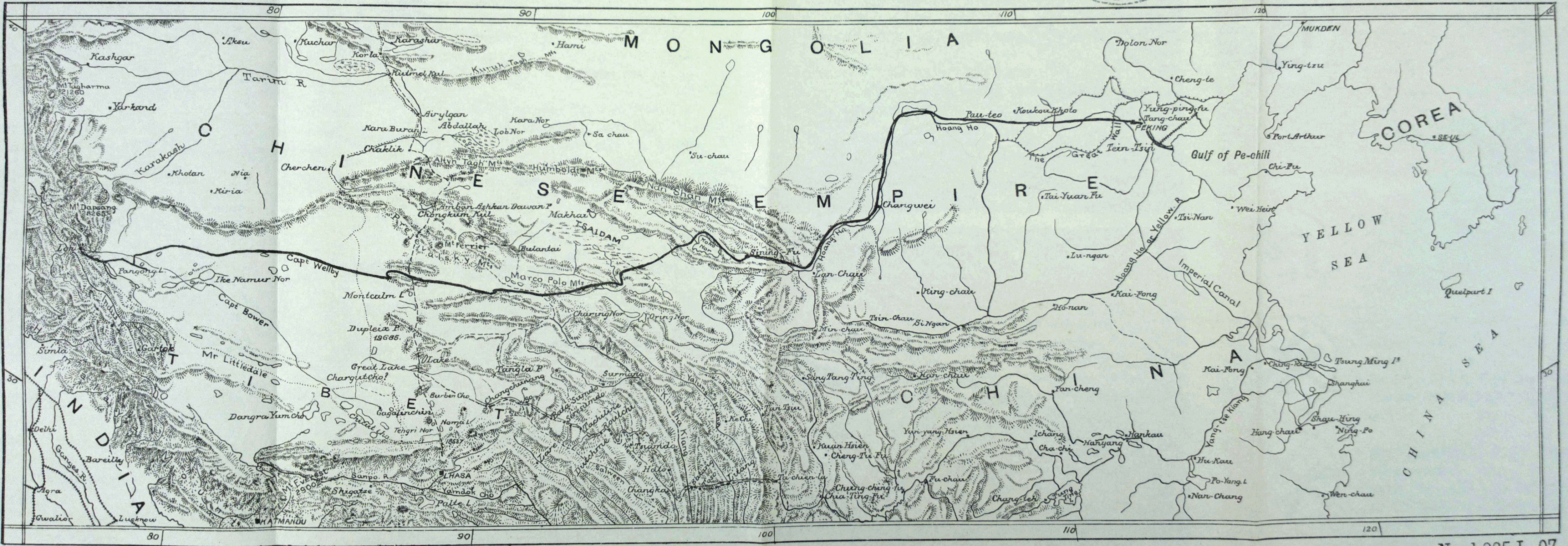
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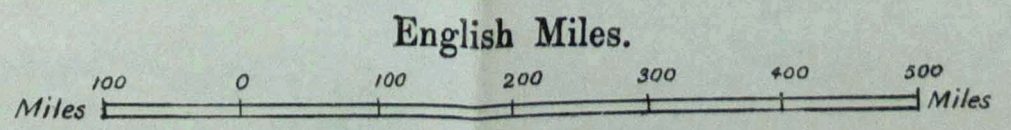
SKETCH MAP SHOWING TRAVELLERS' ROUTES IN TIBET.



Intelligence Branch. Topo. Dy. No. 1,977.
 Exd. C. J. A. July 1897.

REFERENCES.

- Captain Wellby's and Lieut. Malcolm's Route ...
- Captain Bower's Route ...
- Mr. Littledale's Route ..
- M. Bonvalot's Route ...



No. 1,235-I., 97.

REPORT.

On the 4th May 1896, we left Leh for Shushal on the Pangong Lake.

Our caravan consisting of 17 ponies and 22 mules with 8 Argoon and Yarkandi drivers a Ladakhi servant and an Argoon cook had left Leh under the supervision of Duffadar Shabzad Mir, on the 29th April, reaching Shushal by easy stages on the 9th May. We joined them on the 10th May and completed our arrangements in buying bhusa and grain. We carried 18 maunds of grain and 25 of bhusa and nearly 4½ months rations for the men, namely 2 lbs. of flour or rice a day, besides tea, butter, salt, pepper and spices.

Our caravan.

From Shushal the best road for us to take would have been over a pass, the Marsemik La into Chang Chenmo, but this would not have been opened for another one and a half months. We were therefore anxious to take a road by Rudok lying south east of Pangong Lake or between the two Pangong Lakes on to a place called Pal. In order to find out about this latter route we sent two of our men on ahead. They were however, after going about 15 miles, stopped by an armed body of men from Rudok, who advised them that we could not go that way and should we attempt to do so, they would oppose us and there would be trouble.

Opposition from Rudok post.

It was quite evident there was a strong guard at Rudok. They too were well informed of our movements for they knew the date of our departure from Leh, and of our arrival at Shushal. They doubtless have very stringent orders at Rudok against allowing any foreigners to approach this great caravan route to Lhasa.

Shushal.

A glance at the map will show that the only way left, is by way of Ludhkong lying north west of Pangong Lake travelling east from there. This we decided to do. Ludhkong is two marches from Shushal along the edge of the lake. About half way is the village of Mun, where supplies of grain, sheep, etc., are procurable.

Route, Ludhkong.

The water of the Pangong Lake is quite undrinkable, but it is fed by several small fresh water streams from this side of the lake and there is no difficulty in reaching Ludhkong. Here bhusa, milk, sheep, goats and yak in limited numbers are to be had. There is a fresh water stream and a couple of miles off, good grazing and good camping ground everywhere. Just at the north west end of Pangong Lake is another route to Leh shorter than the one we had come, had the passes been open. From here we took another flock of sheep, for those we had taken from Shushal had been unable to reach this place.

At this time of the year, sheep cannot be reckoned upon as part of the commissariat. They have had but poor nourishment during the winter months, and are unable to march even without a load. The second lot we took from Ludhkong all died, with the exception of one, in a very few days. Ludhkong was the last place where we should be able to get any supplies at all.

Sheep.

Ludhkong, last place of supplies.

The only road east, lies over two passes on to Niagzu, and is a three days march without water or grass. With the help of hired yak, we were enabled to accomplish this without any mishap.

At Niagzu, there is a good fresh water stream, some grazing land and plenty of brushwood filled with hares, it possesses no kind of habitation, but is a boundary mark between Ladakh and Tibet.

Boundary of Ladakh and Tibet.

We left Niagzu on the 18th May with 15 hired animals and a guide.

We passed through two spots called Mitpah Yungmah and Mitpah Conmah, both having good grazing land and water.

We were told afterwards, that the Rudok men generally have a small guard at one of these places. We were therefore lucky in evading them.

On the 20th May we reached Lake Treb whose water is slightly saltish, Nomads bring their ponies here to drink the water for medicinal purposes.

Men from Ladakh also come to collect the salt, on this account we were able to find a guide who knew the way. The salt water marks round the lake show that it must have been of a larger size years previously; there was no fresh water stream running into it.

On the further side of the lake, we crossed over the Napu La a fairly easy pass at this time of the year, but after snow the difficulties of crossing would be great.

Glacier.

On the other side of the pass is a fine glacier.

From here we sent back our hired animals and for the future were dependent only upon ourselves.

Rundore Nomads.

On the 23rd May we met a single Nomad who agreed to show us the way as far as Mangtza Cho. He told us that if we continued to follow the valley we were in, we should meet with opposition from the men of Rundore, but in order to avoid this, he would take us up a valley turning to our left; the valley we were in which led to Rundore was well watered and there is probably plenty of good grass in that quarter.

Rundore evidently is a district containing several grassy valleys where men permanently live.

The Rundore men very often go to Mangtza Cho for shooting, several of them have matchlocks and spears.

Rudok officials.

We heard too that many of the Rundore men had been called to Rudok, probably the paraphenalia of our caravan had been greatly exaggerated and the Rudok officials presuming that we were going to travel along the great Lhasa caravan route, had resolved to oppose us with all the force they could collect. This perhaps accounted for the absence of men at Mitpah Yungmah and at Mitpah Conmah.

On the 24th May after marching a couple of miles, our guide shewed us two roads, the longer though easier one turning up to the left some way down the valley while the other cut off a corner over the hills, both joining in the same valley of Kerambutabuk.

Rundore officials
stop our advance.

Whilst encamped in this valley of Kerambutabuk, we received a visit from the local official of Rundore and some of his men. They eventually became friendly disposed towards us and would have let us proceed, but just as our difficulties seemed to have cleared, two more officials arrived in hot haste from Rudok.

They insisted that we must go back by the way we had come, nor could anything alter their decision. They did however agree to give us four men as guides as far as the eastern side of Lanak La.

These Rudok officials were reasonable and intelligent men neither to be won by bribes, nor to be frightened by feigning an advance. It then became clear that we could not have proceeded without bloodshed, which we were most anxious to avoid. These officials were convinced that the Lhasa authorities would demand their heads, should they let us advance. No European they informed us, had ever entered this valley of Kerambutabuk before.

On the arrival of the Rudok officials, the demeanour of the Rundore men at once changed and they were most bitter against our proceeding any further.

The point where this Kerambutabuk valley turned to the left from the main Rundore valley is called Kerinagar. Here is a small nomad encampment and a limited number of sheep and a little grain can be bought.

Close by is a hill called Chotenchonbo, conspicuous amongst many others not only for its size, but because it is said that on the 15th of each month, it emits noises; it is probably volcanic.

Volcano.

By May 29th we had recrossed the Napu La and traversed the Eastern edge of Lake Treb to Lanak La, having been compelled already to shoot two of the ponies worn out. Here at night time our Rundore guides deserted us and henceforth we were at liberty to go whichever way we chose. We intended if possible to strike the Polu road which is marked on the map and travel along this for a few days before striking due east.

Polu road.

We failed to find any track leading anywhere, so struck a course of our own intending to travel due east as much as possible and to strike North rather than South when compelled to do so.

We also intended to strike off a place called Barkhatu marked on the map.

Alteration in map.

Such a place as this we are now convinced does not exist, not only by reason of our failing to find the place, but we could never find anybody who had ever heard of it or of Iman Mula further north.

At this time of the year, the young grass was just beginning to sprout and as ones wellbeing depends principally on finding good grass, a month later would have been more favourable for marching in this country.

Grass.

Had we been furnished with guides who knew the country, and could tell us where to find the grass and where to halt for water, we feel convinced that the first 6 weeks of our journey across Northern Tibet would have been comparatively easy and the deaths in the transport almost nil.

In our case the animals had been severely tried, even before reaching Lanak La on the Tibetan frontier and at that time a single sheep only remained.

In some places we found "Boortsa" growing. In this there is certainly a great deal of nourishment and saline moisture; most of the animals generally preferred this to the grass and required but little water when it was plentiful.

Boortsa.

The animals suffered but little from sore backs, but died simply from exhaustion, we found the ponies excepting those which had come from Lhasa district were the first to give in.

Deaths.

Of the mules, the large Yarkandi mules could stand least fatigue, the medium sized ones were our best.

Mules.

On 31st of May we struck our own course from Lanak La.

A reference to the map and road report will show the kind of absolutely uninhabited country we daily traversed for the first 6 weeks.

During this period our route lay principally through a somewhat dreary region abounding in salt lakes and the vegetation was often of the scantiest, almost daily it became necessary to dig for water and the animals suffered severely both from the want of water and grass, in fact by the end of June only 16 out of our original 89 animals remained, and several of these survivors were showing signs that they could not hold out very much longer.

Description of country.

Luckily, we had little or no severe climbing to do, our route for the most part lying down broad open valleys whose height varied from 15 to well over 16 thousand feet above the sea level. These would continue for four or five days, then we would cross a low easy pass into another wide valley.

All the big ranges of mountains and most of the smaller ones had a general direction of running east and west.

Mountains.

It would in consequence be more difficult to travel this country from north to south.

Fireplace. Signs of Nomads. On the 13th June camp 28 by a salt lake we found a fire place or chula of 3 stones very old, but an unmistakable sign that nomads had been there. Grass was only fair and water only obtainable by digging.

On 18th June Camp 32 height 16,700 we saw a small white butterfly.

Stream. i On 23rd June Camp 36 we hit off a stream which we followed for some time till it wended away northwards increasing in volume and apparently flowing through a grassy country.

Curious Stones. On July 2nd Camp 44 we found a hill covered with round light coloured stones or equal halves of these stones, a little larger than a racquet ball.

On July 7th near Camp 48 were small piles of 3 white stones about 10 yards apart running in two nearly parallel lines for nearly 200 yards.

Eagles, Wild Dogs. On July 12th Camp 52 we saw eagles and wild dogs.

Yak. Towards the middle of July the country generally improved, salt lakes became rarer and game which up to now had been somewhat scarce, was plentiful, especially yak which were ridiculously tame, a herd on one occasion grazing amongst our own animals close to the tents.

It is advisable when marching down a broad valley for some days to choose one side instead of the centre.

Butterfly. On July 19th Camp 59 found a brown butterfly, first coloured one we had seen.

Track to Lhasa. On July 22nd Camp 63 just after leaving camp, we crossed a footpath running almost at right angles to our own course, this was well defined and probably a road to Lhasa.

On this tract one of the men picked up the entire leg bone of a pack animal, clearly showing that a merchant or traveller must at some time or other have come this way, for nomads do not shoe their animals. Although we sent a man up some distance he discovered nothing more. This path ran by the western edge of an ancient dry salt bed of a lake. The lake was divided up into small squares by walls two or three feet high of crystallised salt. The salt was of excellent quality.

River. On July 27th Camp 68, in the midst of a good grassy country we crossed a river which took its rise from some adjacent snow peaks.

The bed was $\frac{1}{2}$ mile across with several small streams a foot deep and was the largest body of water we had come across.

Flowers. Everywhere good grass, flowers, wild onions and other vegetables, "Kumbuk" and "hann". Yak and antelope were abundant.

The river wound its way into a large lake slightly saltish. In a nullah close by this lake, we found some old stone fireplaces and a well defined track ran round the lake. Marmots, butterflies and hoopoes were here. Along the track we picked up a stick 4ft. long another sure sign that nomads had been this way.

By the middle of July only 12 animals remained alive, but the loads were light and fodder being abundant, we got on well.

Muleteers. Our only difficulty was the muleteers who were a lazy, sulky, and unreliable lot of men. There is no doubt that with good men, the deaths amongst the mules and ponies would have been far smaller.

On 2nd August Camp 74, a climax was reached when all the muleteers deserted in a body leaving only Duffadar Shahzad Mir, our cook and servant.

These muleteers undoubtedly perished.

During the night of 10th August Camp 82, 9 of our 12 remaining animals died through eating a poisonous plant.

Three mules only remained, one of these carried nearly 400. lbs from this date. We continued to descend very gradually and from this point followed a small stream daily increasing in volume.

Grass was good though game scarce. On 16th August at camp 88 we saw a black bear.

On 20th August this stream ended in a large fresh water lake 23 miles long by 4, hills covered with rich grass and broken by innumerable small nullahs came close down to the north shore of the lake while to the south a wide plain stretched away to distant mountains.

Lake.

Round the edges of the lake were well worn tracks probably of game, for this was abundant, but we could see no signs of anyone having been here before.

Anywhere around this lake was splendid camping ground.

Camping Grounds.

On 26th August at the eastern extremity of this lake we struck the source of another stream flowing in an eastern direction taking its rise from the hills.

Source of Chumar River.

This we followed and it daily grew larger. Two decent-sized rivers flowed into it from the north (*vide* road report).

On 6th September Camp 109, fourteen weeks since leaving Lanak La, we found an encampment of Tibetan merchants on the other or right bank of the river.

Tibetan merchants.

These men turned out to be friendly enough, but most avaricious with regard to rupees. They were in fact glad of our presence in the form of a protection against strangers.

The camp consisted of some 20 tents being the combined force of two well-to-do merchants and some minor ones.

They were on their way from Lhasa as far into China as Lancheo, where they would separate and dispose of their own individual merchandise which consisted chiefly of polu cloth.

Lhasa to Lancheo.

They had been 2½ months on the road, and expected to reach Barong in the Tsaidam in another 20 or 25 days.

They informed us that the river we had been following was the "Chumar," the very one whose source we had sought.

They told us that it flowed through the Golok country down to Ta-Chumar River. Chien Lu and that it was the biggest river on the road from Lhasa to the Chinese frontier.

We travelled with these merchants for about a week.

The merchandise was carried by some 1,500 yak and 300 ponies.

Transport.

It is worthy of note that one man only looked after 60 of these yak. Supposing that one yak carries merchandise of 200 lbs. weight, it is obvious that one man is only necessary for the transport of 12,000 lbs. of goods; the feeding of the yak costs nothing.

The caravan would regulate the length of march according to the grass and water they came to, once they marched 36 miles in two days. Sometimes they would halt for the whole day, probably the average rate of march was 10 or 12 miles a day.

They were most regular and systematic in the management of this immense camp.

All the yak were loaded before day break, the loads merely being lifted up and hooked on.

Management of merchant camp.

The whole caravan swept away before sunrise, going some four miles an hour.

On arrival at the next camp the yak were at once unloaded and sent out to graze on the mountain side.

In a very few minutes after arrival there was nothing to show that the camp had not been pitched for the last month.

Every thing was carried on with wonderful regularity and silence.

At sunset, all the yak were driven into camp by two or three men, armed with slings, and picketed to the ropes all ready for them.

After this, silence prevailed till the camp was reawakened by one of the men shouting out a loud reveille chou-chou-chou-chou—ou.

The two chief merchants were intelligent fellows and at once recognised our two men whom we sent on in front as coming from Ladakh.

Russians.

They told the merchants we were a doctor and a merchant. They at once replied "they must be either English or Russians as no other people could make a journey across Tibet like that."

Lham.

These merchants at first were willing to talk about things; they told us that no foreigners would ever get to Lhasa and that the determination to stop them was stronger than ever. They afterwards grew suspicious and would tell us nothing, not even the names of the hills.

These people were absolutely trustworthy, for although daily encamped in their midst we could leave our guns lying about and everything else, in perfect safety.

On September 14th camp 115, we saw brushwood and thorn bush the first we had seen since Niagzu.

Shugatza or Shugar-Gol.

The same day we crossed the Shugatza or Shugar Gol from 3 to 6 feet deep and stony bottom, with good grazing land along its banks.

On the 16th September we left the merchants to find our own way.

Hot spring.

On the 17th September camp 118, we found a small stream issuing from a nullah. A short distance up this was a single rock, in the centre of the nullah four feet high. From the top of this rock a spring was bubbling up. The water was fairly hot, but tasteless, though the rock was stained a black and yellow colour.

The high road from Lhasa which we were following can be but seldom used, for at times there is no sign of a track at all, though on some hills are conspicuous marks to show where there is a camping ground.

Caravans to Lhasa.

As far as we could learn from the merchants a large caravan goes every two or three years from Sining carrying chiefly tea to Lhasa.

Camels too traverse this track.

On 15th September we left the Shugatza which began to flow away in a more southerly direction, while we steered for some white rocky hills at the entrance to a nullah which led over the range of mountains into the Tsaidam.

All the way up the nullah were skeletons of tame yak, and we also found a keg of opium.

Source of Namoran Gol.

After the first range of hills we came to a small hill at the entrance to a nullah; on the top of this hill was a large pile of stones ornamented with sticks and red rag. At this spot, called Dapsoga, the Namoran Gol takes its rise and the hill close by, the Mongols call Ser.

At this spot are two roads, one over the Namoran Dawan (pass) which we took and the second one a little further west called the Burhan Bota. Dapeoga.

The latter road, though a little longer, is generally taken by merchants for it is a better road for yak and they are not likely to get lost in the thick brushwood which grows on the banks of the Namoran Gol. Roads in Tsaidam
Namoran Dawan.

On 21st September camp 122, we came to brushwood eight feet high and the following day wild currants and other berries. We also came to a small building twelve feet square and of the same height; inside was a huge prayer wheel for ever being turned by the force of the stream. On the ledge over the door were many prayers on paper, wrapped up in cloth, while the trees around were decorated with prayers written on linen, the largest of which we took. Fruit.
Prayer house.

On the other bank of the river we saw a black bear. Bear.

On 23rd September we reached the end of this beautiful nullah and entered an arid stony plain still following the general direction of the river, at one point of the river a track crossed it, which led on to Barong. Barong Tsaidam.

On the following day we entered a better country with bush, and eventually found a number of boys and girls on bare backed ponies driving home their flocks of sheep. We had fallen amongst the Sopor or Sokpor Mongols; they were always pleasant fellows enough with smiling countenances, strong men with powerful frames; neither were the women unbecoming with the tints on their brown faces, while the children looked in perfect health. We never found any kind of illness or disfigurements amongst any of them in this district. Sopor Mongols.

At this time of the year they were living with their flocks in the bush and at other times they live in tents on the banks of the Bayan Gol or in stone houses at Kyrma and sometimes they take their flocks up the Namoran. Bayan Gol

We travelled with these Mongols two days to their tents on the Bayan Gol, a river at this place 20 yards across and three feet deep, soft bottom with fairly clean water flowing five miles an hour.

No fish in the river.

We bought from these people sheep, tsampa (ground barley) tulshi (flour) mar (butter) and churra (cheese). For one rupee we got 4 lbs. of tsampa or tulshi or one pound of mar; a sheep cost 3 to 4 rupees.

These people preferred rupees to knives, watches, and saffron, and were very fond of any kind of pistol and needles (Sui).

The price of their baggage ponies was from 50 to 120 rupees; but riding ponies, would cost a good deal more.

They had a certain number of camels and immense numbers of sheep, black brown and white with fat tails.

They themselves lived on boiled mutton, tsampa, tea and milk and like snuff.

They brought us too, a grain like rape, called "burma" by themselves and "churma" by Tibetans, as well as vermicelli from China.

They lived in a splendid grazing land amidst a jungle of "hermok" (fruit bushes). We saw no swamp districts, but a well watered district.

Their tents were made of sticks covered with thick felts, of circular shape and pointed conical top, with a hole to let the smoke out; and an opening anywhere for a door.

These tents are wonderful protection against a cold wind.

The climate of the Bayan Gol is most genial all the year round and it seldom rains or snows, though they can often see it raining hard in the mountains around. Bayan Gol.

During the three days we lived with these people, we could put absolute confidence in them; the same as we had with the Tibetan merchants.

Sopor Mongols.

Some of them had been to Lhasa and verified what we had learnt about the country from the merchants; they also told us that just south of Barong is another pass called the Hato, but that it was hardly used at all, and not a recognised route like the other two.

Hato Pass.

Namorun.

It is probable that the Hato runs into the Namoran.

Barong.

The merchants told us that at Barong we should be able to get camels to take us to China. But the Mongols told us that no one in Barong would have gone with us now for fear of the Bana tribes, but that if we liked we could wait at Barong till the merchants came and then travel with them.

Bana Tribes.

Most of these Mongols wore high black boots and thick sheep skin cloaks tucked in at the waist and hanging down over their breeches of the same material. These cloaks are slipped half off on a warm day and the body is left bare.

A conical shaped hat of white fur rim, and red top, and red tassel was held on the head by a string under the chin, others wore various shaped hats and most smoked the long and small bowled pipe.

Sopor Mongols
Marriage.

These Mongols are allowed two wives, but they can very seldom afford to keep more than one.

Should a man wish to marry a girl, he sends a friend with a "katag" piece of white cloth to her father. On his retaining the "katag," it shows that his suit is accepted, thereupon he makes presents of money and substance and after much festivity she becomes his wife.

Burial.

Upon the death of a Mongol, the body is put out in the open plain for a few days with a piece of cloth in the mouth, after a short time when the birds and dogs are considered to have had time to devour the flesh, the friends of the dead man come again and see the corpse. Whatever remains of the bones they smash up and scatter about in all directions, so that every morsel is carried away and nothing remains.

As a matter of fact we did come across some skulls, but no bones of Mongols.

During the time we lived with these Mongols we were endeavouring to persuade them to take us to Tankar or Sining lending us baggage and riding ponies.

Bana Tribes.

We eventually struck a bargain for 10 ponies at Rs. 20 a piece to take us as far as Sining a journey of 16 days. The reason of their hesitation was their fear of the "Bana" tribes who live round the regions of the Koko Nor.

They are called in the map "Banakbasum," "Khasum" meaning three. There are 3 Bana tribes.

These Bana tribes are no doubt of a warlike nature. Only two years ago a Frenchman was killed at Tuling Gumpa which we afterwards came to, and since then a party of missionaries had been attacked by these same tribes.

The Sopor Mongols no doubt dread the Bana people and said that sometimes they had made a raid as far as Barong and that they far outnumbered the Barong men. They also said that the Bana men would be afraid when they knew there were any Englishmen in the caravan.

These Mongols only visited Tankar once in every three years, and not very many of them know the way.

Sopor Mongols.

On these occasions they take felt numnahs and possibly sheep for sale, a numnah being worth Rs. 6, same thing in Ladakh for Rs. 2. With the proceeds they bring back, boots, tea, fine flour, and coloured cloth.

A Sopor Mongol is a rich man if he possesses a thousand sheep and 10 or 15 ponies; not many of them do.

On 1st October we left the Bayan Gol with the 10 ponies, accompanied by four Mongols; two of whom carried guns and a third a very long spear. Bayan Gol.

These men are wonderfully quick, at loading and unloading, the ponies, far better than the Argons. Super ponies.

They too take care of these thick set ponies in their own way. None of the ponies are shod.

At night time after marching they removed every thing from their backs at once and let them graze till morning time; unless they were near the Bana tribes. On these occasions, as soon as darkness came, they would tie them to a rope picketed down, and at the first streak of daylight, would let them have an hours grazing before the start.

They used to water them just before starting on a march, but never during the march or immediately on return.

They were only ridden with snaffles or merely headstalls, but were quite tractable and sure footed.

The baggage animals were led and not driven, a rope being fastened to the lower part of each headstall; a man riding a pony in front having hold of the end of the rope. This answers very well except that the ponies can pick up no living on the way.

The ponies were short thick set, with big bone and coarse head and small ears, and fat from the good grazing.

Although the Mongols knew we had not sufficient money to pay them for the journey they made no hesitation about trusting us until we met some of our own countrymen at Sining. Sining.

On the road the Mongols for the most parts were either praying aloud or singing.

They would not allow us to go far from them, in fact if we did, they said they would turn back, for they said the Bana men often lie hidden behind rocks and suddenly attack.

They were most persistent that we should carry our rifles ready.

On 5th October camp (133), we entered a narrow gorge. In this is a stream but the Mongols neither let themselves or their ponies drink it, for they say it means certain death. Poisonous stream.

We found it tasted slightly of soda.

At the camping ground were some bears feeding on the fruit bushes, they quickly made for the hills on our approach.

On 6th October in the Noring Hol valley we saw two most deserted look- ing Sopor villages on the north side of a small salt lake. Sopor Mongols' flee from Mahomedans.

It appears that after the Mahomedans had been defeated in the late rebellion, some of them had fled by this way, and as they flee, their custom is to loot all that comes in their way. They hesitate at nothing to get their food. The consequence is, that the inhabitants of the villages which lay on their way escape with all they can before their arrival.

To-day several crests of the hills were pine clad. Encampments are made at the foot of some of these hills for making wooden articles from the trees.

On 7th October we came to the remains of an old encampment.

Chinese soldiers.

Here we learnt that a detachment of Chinese soldiers had encamped during their pursuit of the Mahomedans.

A little further on we came to Tuling Gompa, the dirtiest village imaginable inhabited by Sopor Mongols nearly all of whom were lame, blind, or diseased equalled only by the big black dogs.

Bana tribes. Just beyond here on the other banks of the stream were the black tents of the Bana tribes, mostly octagonal with a hole on top to let out the smoke.

Grazing around were immense numbers of sheep as well as ponies, cattle and yak.

These tents were situated at the mouth of and some distance up a broad grassy valley.

From Tuling Gompa are two roads to Tankar the shorter one leads up the valley already mentioned and is used mostly for collecting salt in those districts.

The longer one branches off to the left and is a better road.

Remarkable cave. We took the latter road and on 8th October came to a large conspicuous rock standing out alone in a grassy valley. Inside the rock was a cave 30 feet high and of same diameter. At the entrance was a small courtyard, 12 yards long by 8; the walls were 12 feet high, built from big blocks of white stone, some 2 yards long and a foot broad and deep.

On many of these stones were Chinese inscriptions and in a crevice we found a Chinese coin.

Inside the yard a rope was hung and attached to this were many hairs from horses tails and sheeps shoulder bones with inscriptions on them.

It is said this place was never built by man but was the work of God.

Mongols shooting. The Mongols with us used to give false alarms at night and fire off their matchlocks to accustom their ponies to the noise, during the day time they would practice and shot fairly well at a target 120 yards off.

It was a slow process loading each time with powder and an irregular shaped piece of lead, then ramming this down with a wooden rod, putting the powder on the touch hole, lighting the fuse, resting the guns on a wooden prong which they raised for sighting and finally applying the fuse.

Koko Nor. On 10th October we reached Koko Nor (Lake). All throughout this district was splendid pastureland watered by several streams running into the Lake.

Salt and wool. Along the northern shore we could see in all directions the black tents of the Bana tribes. Each day we overtook many hundreds of yak laden with salt and wool being driven to Tankar.

The Bana people were living as close as 16 miles from Tankar.

The Tankarites send their own flocks almost as far as this and call it the grass country.

Village. Ten miles from Tankar is a compact little village on the right bank of the river. Here grew some poplar trees, and every inch of ground was cultivated right up to the village walls as well as on hill sides and slopes where it looked impossible for crops to grow.

The villagers in their blue garments were busy in the fields, for most of the crops had been cut and were being gathered in.

GOMPA SOBA Monastery. Four miles further on also on the right bank was a snug little monastery called Gompa Soba nestling amongst the trees.

A small wooden bridge crossed the river at this spot. The river is called the "Siho" (west river) or "Taho" (big river) or "Chuchok" by Mongols.

From here we passed through cultivation and several small straggling villages to Tankar.

TANKAR CORNER. The principal crops that grew around Tankar were wheat, barley, oats, millet, peas and a little linseed and opium. This year had produced a splendid harvest.

On 15th October we entered Tankar by the western gate; the main street was crowded with Chinese some Mongols and a few Tibetans.

In our endeavour to change a rupee for some Chinese cash we found that a rupee which had the Queen's crown on was of no use, while one without it produced a fair exchange.

Tankar appears to lie in a kind of hollow, commanded from all quarters by hills and rising ground. TANKAR hill's Commanded.

The chief hills are Ho La or Ta Sand lying north west and Toai-Ta or Wupu, lying south east.

From the summit of this hill the town of SIKING 30 miles off can be seen.

A tree is planted as a land mark to travellers.

The chief importance in Tankar consists in its being the most westerly town of Kansu situated on the Chinese border, and commanding the roads to Koko Nor and Lhasa. The merchandise that is imported is carried further to Lanchow, Peking, etc. At Tankar very little buying and selling goes on. The wool, for instance, is all forwarded by a Chinese agent direct to Peking by camel or raft. Importance of Tankar.

Living in Tankar are some 10,000 inhabitants. At the Yamen, the "Ting" or Major treated us with every mark of respect, attention, and civility and was undoubtedly glad to see us and help us. Chinese Civility.

This spoke well not only for the influence of our passport but also for the friendship the single Danish missionary had gained whilst living with these people for a few months, gained only by using his tact.

We also visited the four Officials from Lhasa men of no small importance. The Chief Official was named Sherchie Chaba and the fourth Lūsata Kinduni. They were posted here to see that justice was done to all Tibetans who passed through the place. They were very friendly with us presenting us with a gold cap under a scarf of blessing. Lhasa Officials.

Lusam Kinduni had a good rifle of German make which he had bought for 18 taels £ 3. from one of the soldiers. Many rifles were got rid of in this manner showing what little discipline can exist in the Chinese Army. Rife of German make.

On account of the recent Mahomedan rebellion a number of soldiers had been kept at Tankar and had only just lately been disbanded. Mahomedan Rebellion. Tankar.

On the walls of the town heaps of stones had been collected for its defence, and small towers had been built for the soldiers to watch from.

The Colonel named "Yang" nevertheless retained his appointment, his title being "Chuman" and his official title at Peking "Hsiehtai." Chinese Colonel.

He too was kindness itself, sending us presents of sheep, grain and fodder for our animals.

He was most inquisitive as to the revenue of India and the numbers and pay of our soldiers, etc.

From Tankar we went to Kumbum and Lusar adjoining each other, the former being on Tibetan soil and the latter in China. Along the road were cave dwellers. Kumbum Monastery.

We overtook strings of camels with pulo, incense, etc., from the Talai Lama to the Emperor, the yearly tribute. Yearly tribute.

We saw many towers which had been built for the soldiers during the late Mahomedan rebellion, and several deserted villages in ruins. Towers built for Rebellion.

Buddha Mina
Fuys Kumbum.

At Kumbum the home of nearly 4,000 Lamas, we lived in the monastery of the living Buddha Mina Fuia. Here too the results of the rebellion had been sorely felt. At one time there was disputes as to whether they themselves should go forth and fight.

Mina Fuia had been to Peking and spoke strongly of the honesty of foreigners in all transactions.

Sining, seat of Ma-
homedan Rebellion.

Lusar to Sining is 16 miles or 45 li (through a well watered and cultivated land dotted with villages and ruins of others.

At this time of the year the road was fair for country carts, at others it must be very heavy.

We entered Sining which had been the centre of the late Mahomedan rebellion by the west gate. On the walls close by, wooden cages had been hung, in which were the chopped off heads of several leading Mahomedan rebels.

Sining which is a "Fu" is an important town, its populations being twice the size of that of Tankar.

From here, roads run in all directions, Sining is famous for its oil, made from mustard seed.

A general (Chent'i) is quartered here, but the number of soldiers must be very small.

Sining like most Chinese towns, has its 4 gates, north, south, east and west, though the eastern gate was peculiar to the place, for it was let down through a niche from above, useful for stopping a rush.

The walls of stone and mud were some three yards broad and over two miles round.

Defence of Sining.

As at Tankar, large heaps of stones had been collected for defending the place, though it is probable that had the Mahomedans come close enough to the walls for stones to be thrown at them, the Chinese would not have had the pluck to defend them. During the rebellion each man who mounted the walls, had to take up one stone.

Inside the walls, the Chinese had dug a deep trench to counteract the undermining which they imagined the Mahomedans were doing.

Pekin.

During the rebellion, before the arrival of the soldiers from Peking, there were always 2,000 people as well as the soldiers on watch on the wall.

From the top of the walls we looked down upon the "Tung Kuan" or eastern suburb, which had been before the rebellion, the home of 10,000 Mahomedans, but now a sad scene of desolation and ruin.

Soldiers in Sining.

At this time, there were many disbanded soldiers in the town, who having received their pay brought a certain amount of money into the place and in some slight degree compensated for the loss of trade caused by the Mahomedan devastations.

Chinese soldiers.

We saw some hundreds of foot soldiers marching through the streets armed with magazine rifles and many big coloured banners, but it was merely a rabble, in no order whatever.

The same applied to the cavalry who were mounted on small ponies with running gait with snaffles only, and rifles slung across their back. These men appeared to have more confidence in their banners, of which they had at least one to every three men, than in their excellent fire arms. From all accounts the belief in the power of these banners to terrify their enemies is deeply rooted in the minds of every Chinaman. They had just been escorting the General from the city, so were in their best war paint.'

During our visit to Sining and the neighbourhood, we not only were told of but saw the results of this Mahomedan outbreak and the following facts were impressed upon our minds, that, although there have been two previous rebellions during the present century, the second of which came to an end only 20 years ago, yet there were absolutely no adequate means at hand for coping with the insurgents. Mahomedan Rebellion, Chinese unprepared for it.

The "Salar" Mahomedans who dwell in the province of Kansu must have been, and were known to the officials to be a most restless and fanatical sect, and their religious enthusiasm was bound to affect their less turbulent but more numerous co-religionists throughout the district.

Everywhere in Kansu, the Mahomedans are by far the most enterprising people, they have far more energy and business talents, than the genuine Chinese, so that, although they formed before the rebellion only about one quarter of the inhabitants yet a far greater proportion of its wealth was in their hands. Mahomedans.

One would naturally imagine that the Chinese Government knowing these facts, and warned by their previous experience, would have kept a considerable force in the town of Sining, the centre of the disturbed district, and the most distant from the coast, as well as a large garrison in Lancheo, the capital of Kansu, lying 450 li (150 miles) east of Sining. Inaccessibility of the Chinese Government.

Instead of this, when the rebellion broke out, the Chinese were powerless; with the results that Sining was absolutely cut off from communication with the outer world, except on the western or Tibetan side for over two months.

The result of this was, that the rebellion grew so rapidly and to such an extent that, before soldiers, who had to march all the way from the seat of the Japanese war, perhaps as much as 2,000 miles, could arrive, the Mahomedans had slain close on 40,000 Chinese in Sining and the district and nothing but the really splendid behaviour of the Chief Military Official (Chen'ti) unsupported by trained troops, prevented the town falling into the hands of the rebels, in which case the insurrection would have spread even further than it did, and Lancheo, itself would have been in great danger. Mahomedan Rebellion.

At length, on the conclusion of the Japanese war the Chinese Government were able to send troops to quell the rebellion, and after weeks of anxiety Sining was relieved.

By this time the trouble had grown to such an extent, that the Russians in Turkestan had begun to move troops in anticipation of the Mahomedans in Chinese Turkistan following the example of their co-religionists in the east. The result of this would have been extremely serious. Russians begin to move troops.

From the reports we received from the missionaries who were in the town during the whole of the rebellion, doctoring the wounded, the fighting between the soldiers and the rebels was very severe.

The Mahomedans were by far the braver individually, and also far better shots than the Chinese, proved by the numbers of Chinamen who were hit in the head, when rannning the town walls, but the superior arms, increasing numbers, and the small amount of discipline possessed by the latter led as they were by one or two men of considerable ability were bound to tell. When once they got the upper hand, the Chinese began to take terrible vengeance on the rebels. Mahomedans braver than the Chinese.

When we passed through the eastern suburb in October not a single soul was living, nor a single house inhabitable.

These same violent and vindictive measures were taken in the surrounding districts.

As many of the ringleaders as could be caught were brought into the town and beheaded, while the remainder fled towards Turke-tan and were pursued by a Chinese force as far as the borders of the Tsaidam. Flight of Mahomedans.

In all probability they succumbed to starvation as no news of their arrival in Turkestan had reached Peking by the beginning of December 1906.

At the present moment the only Mahomedans remaining in the Sining district are old men, women and children, but in Sining itself not even these are left.

Rumours of the Mahomedans. In spite of rumours to the contrary which reached the coast, this rebellion did not extend further east than a small town called Ho Tsui Tsi 140 li (nearly 50 miles) east of Lanchoo.

The reports that, that town had fallen into the hands of the rebels, as well as Sining, were absolutely false and appear to have been started by the officials with a view to increasing their own importance.

Results from the Rebellion. The effects of the rebellion on this district has been very severe, for some time trade was absolutely at a standstill and the agricultural classes were unable to attend to their business.

The result of this is, that everything is very dear at the present time, flour the chief staple of food in Kansu was selling at more than double the ordinary price and in all probability it will be two or three years before things return to their normal state.

Results from the Rebellion. Perhaps, however, what best showed us how severe the trouble must have been was the large number of ruined villages we passed through, first of all on our way from Tankar to Kumbum and then from Kumbum by Sining to Lanchoo. East of Sining as far Ho Tsui Tsi, every small village was utterly wrecked, many were absolutely deserted, while in some, the inhabitants were just beginning to return and to rebuild others.

The rebels spared nothing and what the Chinese felt far worse than the destruction of their houses, was the complete ruination of their temples, many of which were razed to the ground.

West of Sining the destruction does not seem to have been quite so wholesale. The inhabitants appear to have shown a certain amount of resistance. Every village built watch towers and fighting towers for defence, but even here it will be many years before the country resumes its former appearance.

Increase of Chinese Government. Here again we see the strange lack of foresight which characterises the Chinese Government repeated. Every soldier is being removed now that the danger is over and it is extremely unlikely that they will be replaced, meanwhile a new generation will grow up, the Mahomedans will again increase in numbers and their energy will gain for them wealth and power. The natural result of this will be a fresh outbreak.

Results of removing soldiers. It is possible that with German advisers now in the country, some policy of defence against enemies from without and insurgents within may be instituted.

Constitution of Chinese Army. But with the Chinese army constituted as it is at the present time, it will be extremely difficult to make such a policy general. At the present moment there are many armies in China, each General having his own soldiers. For instance, the Emperor and Li Hung Chang each have an army of their own; neither of these were engaged in quelling the rebellion, as that duty was entrusted to a General Wey whose soldiers came from the central provinces of China, and to the Kansu soldiers who fought under their own leader. As long as this state of affairs exists no general system can be established, and the country will always be in danger of disturbances such as the last, which cannot be suppressed without a terrible amount of bloodshed.

On 20th October we left Sining.

Going to Lawen-ou. At some of the villages we could buy mutton, bread of various kinds, potatoes and pears.

Cutter. In some places we found cotton growing in fields covered with big round stones which they plough.

On 24th October we entered Lancheo (Fu.) the capital of Kansu. The crowded streets presented a busy scene and struck one as a city of no small importance, most things can be bought here, but conspicuous were the vegetables, meat, bread, fruits and furs besides a number of Russian articles.

Lancheo too, is famous for the vast amount of tobacco grown and manufactured here. Russian goods.

There are but small suburbs and the town itself is surrounded by a fine wall in good repair, strengthened by a certain number of cannon.

The immense floating population varied with the seasons, and we were told it reached sometimes as many as 600,000 yet we heard it estimated as low as 100,000. Population of Lancheo.

The great importance of Lancheo lays in that it commands the high roads to Peking, Shanghai, Turkestan, Lhasa and Mongolia besides its traffic on the Yellow river.

Lancheo too, is connected with the outer world by telegraph lines, the telegraph office is a fine stone building and wires could be sent to Shanghai and this year 1897 to P'kin. Importance of Lancheo.

The "Futai" or Governor was fond of foreigners and glad to see them and help them.

The strength of the Garrison we could not ascertain; certainly we heard bagles going, and were told that they were learning the German drill taught by their own countrymen who had themselves been taught by the Germans on the coast. German instruc-tion.

The garrison could not have been a strong one.

A year or so back the Russians had set up some shops in Lancheo, openly as merchants, but in reality, for more useful and secret purposes. Russian shops.

They took but little care as to what goods they sold or as to how much profit they gained.

It is quite certain the Russians have surveyed every inch of ground in these districts and know well of the commercial and strategical importance of Lancheo.

This they have discovered under the pretence of attempting to trade, and knowing all this, what object have they to maintain their shops any longer; but rather to keep their knowledge to themselves and throw off suspicion by abiding their opportunity in silence? Business at Lancheo.

It is well known that the Russians, though maintaining their usual posts elsewhere, are even daily increasing those in east Manchuria and with this must come a consequent greater absorption of land.

The railway from Kirin the capital of Manchuria to New-Chwang and Port-Arthur cannot fail to bring all the trade they want into Northern China to the exclusion of British merchandise by way of Hankow.

With their thorough knowledge of Northern China, it does not seem impossible to foretell its future, taking too into consideration the Chinese administration already mentioned in this part of the country.

In one portion of this report it was mentioned how one man alone was required for the transit of 12,000 lbs of goods from China to Lhasa, i. e., 60 yak each carrying 200 lbs. Transport at Lhasa.

The numbers of yak in the Koko_Nor district might truly be called countless.

The journey too from the Tsaidam to Lhasa could be easily accomplished in three months.

It must be remembered too that these yak require no grain to be carried for them.

Presuming the Russians had established depôts in Northern China and the Tsaidam; from these statistics it will be seen that with a stock of 6,000 yak, a caravan of 600 yak could march every fortnight to Lhasa all the year round, and bring to Lhasa every six months over 500 tons weight of goods. To accomplish this only 100 yak men would be required. Of course, this number of yak could be increased to three or four times the size.

A depôt further south than one in the Tsaidam could be formed and would be, at the southern side of the Burhan-Bota range of mountains, in the green valleys on the banks of the Shugatza, and still further south than this in some of the pasture lands that border the Chumar river.

As to the possibility of forming depôts further south still, we are not in a position to state nor what supplies could be obtained from the Tibetans who inhabit the country north of Lhasa.

During the greater part of the year the climate we are told would be favourable.

Russian Agent at
Lhasa.

It does not seem altogether impracticable to take a force through east Tibet as far as Lhasa and when there to maintain it.

We left Lanchao on 25th October.

The journey by cart to Chungwei on the Yellow river takes eight days, most of the way a fair country road.

Coal-Soda.

In these districts we found coal mines and soda, the latter is dug out and burnt all day and night in big fires of weeds to cleanse it.

Chungwei.

Chungwei is probably larger than Sining, is certainly much cleaner and has a very fine city wall.

There is no northern gate, but its place is taken by a Taoist temple.

Wanted for foreigners
at Chungwei.

At Chungwei the people showed more inquisitive interest than at any other place we had come to.

To walk through the streets in foreign clothes was not altogether safe, not by any means for our Mahomedan servants.

At the Yamen too, we received but scant civility, our passport being of little avail, a most anti-foreign feeling prevails here.

A great deal of Mongol wool is brought in on camels and thence transported by boat down the Yellow river to Paot'ao.

As we floated down this river our boat was stopped at the exit of a gorge and boarded by some custom house officials.

They discovered some baskets of pears on board belonging to the boatmen and were for detaining us 24 hours.

We at length, however, persuaded them they were our own, whereupon they had to let us go.

Custom house officials have no power to detain foreigners.

The river in places is being eaten away daily by the currents and is in consequence two miles broad in some places.

Mahomedan colony
near.

Sometimes we found the banks had been revetted by thick matting, but only where Mahomedans were living, showing as usual their superior enterprise.

Wool.

A small though somewhat important place between Chungwei and Paot'ao is Shihsuitsa, standing back half a mile from the left bank of the river. A quantity of wool is brought in here and forwarded by a Chinese agent to Tientsin; the wool is not so good as that brought into Tankar, the price paid being 4 cents for a pound.

The village was mostly composed of blacksmith's shops, a proof that iron must be predominant in the neighbourhood.

Iron.

A little further down the river saltpetre is got and sent into Paot'eo. All the boats this time of year are in a great hurry for fear of being frozen in at Paot'eo.

Saltpetre.

Boats cannot go much beyond Paot'eo by reason of some waterfalls.

Paot'eo.

On 13th November we reached the landing place of Paot'eo an active scene with the unloading of many wool boats.

The town stood nearly three miles off, surrounded by a wall far too large for the place, for there was a large tract of waste land inside.

The place is called "Pu" (fort), but it is impossible to say why.

The town was filled with soldiers returning from the scene of the Mahomedan rebellion and it was difficult to find room.

Chinese soldiers.

From Paot'eo to Pekin is fourteen days, the most important place we came to before Kuci-Hua-chang was Taritai with the usual temple at one of the gates and theatre built just opposite.

The shops were filled with iron, silk and pewter goods which latter is obtained in the neighbourhood, Russian goods were also sold here. Kuci-Hua-chang is a large town with something like 100,000 inhabitants with very dirty approaches and no city walls. At the east end is a Tibetan temple called Wutai, and some two miles north east is the Manchurian town of Suchen with fine trees and lofty towers.

Pewter.

Russian goods.

From here to Pekin is 11 days partly through fine grass Mongolian land.

At Hsingping Ho, we crossed the great wall with an old fort built of small red bricks in a state of dilapidation; the wall in places was only a foot thick and completely broken through in others.

Great Wall.

Shuenhua Fu is an important town erroneously called a "Fu" for it is a Hsien, surrounded by a magnificent wall with immense amount of sand heaped up against the west side. All the approaches were deep in mud.

Shuenhua Heico.

They say that the wall is 6 li long and broad, but it is not more than three.

Grapes are grown south of this town.

In the vicinity are many old grave yards and tall stones with inscriptions of the rounded characters.

Like all towns in northern China flour in its multifarious sort and state was the staple food of the Chinamen, and we were never able to buy any rice.

Flour and not rice found in Northern China.

Outside the town we met great numbers of mules laden with boxes containing oil, for in large letters, there was written on them "Batoum" "Russia."

Russian oil.

Many other mules too were carrying silver, ornamented with red flag and escorted by a few men on foot with spears.

Although this was the Imperial road to the capital it is hardly possible to credit the bad state it is kept in, especially over any hilly country.

Imperial Road

At Sacheng two days from Pekin, we met 2 Russians travelling in the opposite direction, they had a certain amount of baggage, were very reserved and unwilling to show us anything but a loaded revolver.

Russian travellers.

Afterwards we met 5 other Russians on the road; that is to say we met 7 Russians in 2 days, but how many daily go this way and whither they go, it is hard to say.

Road to Pekin

We passed over the Nanko pass and the road from there was fairly good for country carts, passing by many old walls, stones, gates, towers and temples, in one of which inscribed on the wall we found "Walker 1868" and "Allen 1879" as well as several Russian names.

Russian names.

As we approached Peking, we met immense numbers of camels laden chiefly with tea, oil and matches for the Mongol markets. In one hour we counted 765.

We were travelling about 3 miles an hour.

Supposing camels travel 10 hours out of the 24 and at the same rate nearly 4,000 would travel daily from Peking.

From Peking to Tientsin is a good 80 miles, with a metalled road for the last 3 only.

Peking to Tientsin.

The railway between these two towns should be completed before the end of this year, although they say it should be ready this spring.

The railway from Tientsin to Taku, a journey of about two hours, appears to be badly managed, for all is perfect hubbub and a rush.

The railway has been opened 11 years and is paying 15½ per cent.

At the station was a well dressed Chinaman of no small importance he was much enraged at the general confusion and made the very significant remark—"Why don't they let foreigners manage the railway"?

REPORT ON THE CLIMATE.

May.

During the month of May from 4th to 31st from Leh to camp (16)—

The average temperature at 7 P.M. was	...	...	30° Fahrenheit.
The highest temperature being on 4th May	...	...	45° "
The lowest temperature being on 14th and 20th	...	...	30° "

There were 14 fine days; 13 cloudy days; five days with snow or sleet. A north wind was prevailing during the first half of the month; a west or south-west wind during the second half.

June

During the month of June from camp (16) to camp (42)—

The average temperature for the first half of the month at 7 P.M. was	...	...	30° Fahrenheit.
The highest temperature being on 14th June	...	...	55° "
Lowest " " 7th June	...	...	25° "
The average temperature for the second half of the month at 11 A.M. was	...	...	60° "
The highest temperature being on 23rd June	...	...	65° "
Lowest " " 25th June	...	...	55° "
The average amount of frost during the night was	...	...	14° of frost.
The coldest night being 16th June	...	...	25° "
The warmest night being 24th June	...	...	2° "

On 21st June maximum thermometer went up 110° in the sun and there were 11° frost at night.

On 22nd June maximum thermometer showed 78° in tent. There were 26 fine days. Snow fell on four days in the first week. There was no prevailing wind—variable throughout. On some days there was no wind at all. On some days there was haze.

July.

During the month of July from camp (42) to camp (72)—

The average temperature was at 11 A.M.	...	...	57° Fahrenheit.
The highest temperature being on 27th and 28th July	...	...	68° "
The lowest temperature being on 7th July	...	...	47° "
The average amount of frost during the night was	...	...	11° of frost.
The coldest night being 10th July	...	...	26° "
The warmest night being 20th July	...	...	1° "
The average temperature the maximum thermometer ran to was	...	...	66° "
On 28th July the temperature was	...	...	78° in a tent.

There were 21 fine days. There were 10 days stormy or cloudy. Snow sleet, or rain fell on 10 days or nights. Prevailing wind was north or north-west. The wind was generally still in the early morning and rises about 9 o'clock. Sometimes dropped again during early part of the afternoon and nearly always blew hard again in the evening. It very often dropped again after dark.

August.

During the month of August from camp (72) to camp (102)—

The average temperature was at 7 P.M.	50° Fahrenheit.
The highest temperature being on 4th August	56° ..
The lowest temperature being on 10th August	39° ..
The average amount of frost during the night was	34° ..
The coldest night being on 18th August	14° of Frost.
The warmest night being on 25th August	40° Fahrenheit.

There were 11 fine days, 16 days with rain or snow. The greater part of the rain or snow fell at night time. There were two cloudy days. The wind was variable. During the latter part of the month there were several severe storms and many others north and south of us. These storms generally came in the afternoon or evening from the west.

September

During the month of September from camp (102) to camp (127)—

The average temperature for the first 20 days was at 7 P.M.	41° Fahrenheit.
The highest being on 16th September	50° ..
The lowest being on 11th September	30° ..
The average amount of frost during the night was	12° of frost.
The coldest night being 11th September	25° ..
The warmest night being 5th September	36° Fahrenheit.

There were 10 fine days, 10 days cloudy with snow or rain. Prevailing wind was north. During the last 10 days of the month the average temperature at 7 P.M. was 57° Fahrenheit running up as high as 64° on the 27th. The average maximum temperature was at night 32° Fahrenheit. There were only two days with a little rain. Remainder of days were fine; prevailing wind was west.

October.

During the first half of the month of October from camp (127) to Tankar on the Chinese border.

The average temperature was at 7 P.M.	46° Fahrenheit.
The highest temperature being on 3rd October	52° ..
The lowest temperature being on 11th October	30° ..
The average amount of frost at night was	10° of frost.
The coldest night being 10th October	27° ..
The warmest night being 13th October	2° ..

There were 11 fine days; two cloudy days; two with snow. The prevailing wind was east, often chopping round to west in the evening. From Tankar to Peking we met with a continuation of bright clear weather with frosty nights.

APPENDIX.

ROUTE No. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1. 4th May ...	LEH to TICKS ...	9	9	Followed River Indus. Time, 4 hours.
2. 5th May ...	BETWEEN SHERWOS and LICKSE.	28½	37½	Passed Chemsre, 9½ miles, and Maserung on other side of river. Egu, 12½ miles. Upchi, 17½ miles on other side. Sherwos, 23½ miles. Followed Indus. Time, 13 hours 35 minutes.
3. 6th May ...	GYA ...	24½	62	Licksie, 2½ miles. Hernis, 10 miles. Cungias, 16 miles. Followed Indus. Time of march, 13 hours, 55 minutes.
4. 7th May ...	CHUMATANG, 2 miles beyond.	27	89	Kera, 7 miles on left bank. Yakiki, 8 miles. Ner, 14 miles. Keisir, 17 miles. Village on left bank, 10 miles. Chumatang, 25 miles. Followed Indus. Time, 13 hours, 10 minutes.
5. 8th May ...	NOMA ...	23½	112½	Maie, 12½ miles. Followed Indus. Time, 14 hours.

ROUTE No. 1.

FROM LEB TO TANEAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
6. 9th May ...	DONLUNG ...	26	138½	Village of Mot after 2 miles. Champa encampment at "Ralma." 23 miles, grass and water. Followed Indus for 17 miles, then, turned off to left. Most of road heavy sandy and stony. Time, 13¼ hours.
7. 10th May ...	SHUSHAL ...	18	156½	Cross an easy pass and follow a good road all the way through a valley. Pass good grassy spots with Chamba people living there. Time, 9 hours.
1. 11th May ...	...	...	...	Halt at Shushal.
2. 12th May ...	MUN ...	25	181½	Start with a good road, and after about a mile cross a small stream with good grazing land. The road rises after this for about 2 miles when the lake of Pangong came in sight. After 5 miles the road follows bank of the lake, somewhat stoney and heavy going. Pass two small villages with fresh water streams and grazing land before reaching Mun. Time of march, 10 hours.
3. 13th May ...	LUDBKONG ... At end of lake, place called Kaba, and road goes off to the left to Leb.	15	196½	Fair road for baggage animals, but somewhat stony, bitter three miles heavy, sandy going. Follows the bank of the lake for about 12 miles, bounded on other side by snow capped mountains. After six miles is small village of "Pangwick," and a mile further on is some grazing. Time of march 6 hours, 20 minutes.
4. 14th May ...	Camp ...	22½	219	Fair road, turns round to the right where there is good grazing, and after three miles crossed a stream, then ascends an easy pass for 5

Route No. 1.

FROM LEE TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCE.		REMARKS.
		Inter-mediate.	Total.	
				miles more, at the foot of this is a halting place, thence over a dry valley, and at the 13th mile follows a dry stony nullah and at the 15th mile turns up a stony nullah to the left, in view of Pangong Lake and opposite village of Mun (no water).
...	PORANDU Pass ...	...	...	The name of the pass is Porandu and also the halting place below. Time of march, 11 hours.
5. 15th May ...	NIAGZU ...	21	240	Fair road ascends to top of pass Ann 16,236 feet, for 6 miles, and then descends a very stony nullah for 12 miles, a bad road even for baggage animals; then turns up sharply to the left to water and grazing lands. Time of march, 10 hours.
...	KALI SANG Nullah, SUU Nullah.	...	...	About 5 miles from Niagzu is the Kali Sang, where Shu nullah runs north. About 3 miles before reaching earop nullah runs south by east to Pal and Rudok.
5. 16th May ...	NIAGZU ...	...	...	Halt.
5. 17th May ...	NIAGZU ...	...	...	Halt.
6. 18th May ...	NURTSE ...	19	259	Fair road and rising ground all the time. A stream courses down the valley through Niagzu probably not always running. After 9 miles a spot is reached with water and grazing called "Mitpah Yungmah" and 4 miles further on a similar spot "Mitpah Counah."
...	ORGNUM Plain ...	...	...	Soon after this, road bends to right to open plain of Orgnum, where the Donjur road from Nob and the Tokpokhrbo from Chung Chenmo meet. The road bends to left down to Nurtse about a mile, very good grazing and water. Time of march, 9 hours.

ROUTE No. 1.

FROM LEE TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
7. 19th May ...	KONA ...	15½	27¼	Good road, after 1 mile bends to the right, and again at 5 miles, the valley winds to left and at 6½ miles passes through "Pookah," grazing spot, the road then ascends and turns to right, passing through hills at a spot called Sumoanungbo.
...	SUMNANUNGBO ...	...	...	The road winds and ascends and passes an easy pass at 13 miles then a short descent and again rises and turns to the right to grazing land (no water) at foot of Kona pass. Time of march, 7½ hours.
8. 20th May ...	LAKE TREB ...	25	200½	Good road and after about a mile crosses over an easy pass, and after 3 miles another easier pass, thence descends a long broad nullah which at 13½ miles ends up in a gorge. Water and grass throughout the valley; from here the road crosses a waterless plain, passing over 2 small spurs just before dropping down to Lake Treb, nearly 12 miles from the gorge. No fresh water, a little snow, lake drinkable for mules. Time of march, 11¼ hours.
. 21st May ...	TANJUN ... NARPU-LA.	10½	310	For some four miles, a fair road, skirts round Lake Treb, over somewhat sandy soil, thence commences the ascent of Narpu La following the whole a winding stony nullah. An exceptionally bad road when snow falls. An easy descent to a fine glacier, and down to a stony river bed with water, and good grazing on either bank. Time of march, 8½ hours.
9. 22nd May ...	TANJUN ...	...	...	Ifalt.
10. 23rd May ...	Camp TANJUN ...	13½	323½	Fair road, somewhat stony, follows down a broad valley with mountains and grassy valleys on either side after six miles the valleys turn a little more east or to the right. Watered by several small streams on account of the melting snow.

ROUTE No. 1.

FROM LOK TO TANNAH.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.	
		Inter-mediate.	Total.		
11. 24th May ...	CAMP KERAMBUTABUK nullah.	13	336½	Good road down nullah, then turns sharply to the left up nullah 3½ miles with very poor grass, and water from streams. Time, 5½ hours.	
11. 25th May ...	CAMP KERAMBUTABUK nullah.	...	636½	Halt.	
12. 26th May ...	CAMP ...	17	353½	Back again over same road, towards Narpu-La. Time, 8 hours, 20 minutes.	
13. 27th May ...	CAMP ...	17	370½	Over the Narpu-La, to the foot of it. Water in parts of nullah. Time, 10½ hours.	
14. 28th May ...	Lake TANH	...	15	385½	Fair road along lake to its northern end, there is no grass and no fresh water before this, parts very stony and somewhat undulating. Time of march, 8 hours.
15. 29th May ...	LANAK LA	...	11½	397	Good going, uphill, fair grass in many places. Good water. Time, 6½ hours.
30th May ...	LANAK LA	Halt. Good grass and water.
16. 31st May ...	CAMP ...	17	414½	Crossed an easy pass, thence followed a nullah with water in it, but little grass, opening on to a large open plain, firm and stony, this we crossed in a north-east direction. Grass very scarce. Water also scarce only in pools. Good going. Time, 6 hours, 20 minutes.	
17. 1st June ...	Camp by small fresh lake.	14	428	Good going down valley, poor grass and water in places. Time, 7 hours.	

ROUTE No. 1.

FROM LEM TO TANKAR.

Number of stage and date.	Name of stage.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
18. End June ...	Camp by large Salt lake.	10	438	Slow going, over frozen, fresh water small lake, and at four miles pass south of small lake, probably fresh water thence over undulating valleys with poor grass. Fresh water by lake. Time, 5½ hours.
19. 3rd June ...	Camp by Salt Lake	9½	447½	Bad heavy going along border of lake there is better going higher up. Water at starting, but no grass or water afterwards. Time, 7 hours.
20. 4th June ...	Camp on Pass ...	10	457½	Bad going over nullahs along borders of lake thence turn to half left over rising ground, and nullahs, between two hills, over a pass, gradual ascent, heavy going. No water, and very little grass which is found only at top. Time, 8 hours.
21. 5th June ...	Camp by nullah ...	11	468½	Good going down hill in a northerly direction, circling round small hill, thence turning a little to right, along a broad valley, afterwards ascending a very easy pass. The last four miles good going over open plains to nullah. Water along route and a little grass. Very small amount of green grass at camp but good water. Time, 5¾ hours.
21. 6th June ...	...	...	...	Halt.
22. 7th June ...	Camp by stream ...	14	482½	Fair going, followed nullah ascending over a high pass, thence followed course of nullah to foot of pass where there is good grass and a good camping ground. Then turn to right along a broad valley. Water and scanty grass. Time, 12 hours.
23. 8th June ...	Camp in nullah ...	1½	484	Fair going up a nullah to little better, grass and water. Time, 1 hour.

ROUTE No. 1.
FROM LEB TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter- mediate.	Total.	
24. 0th June ...	Camp by Lake Lighten Frozen Fresh Water.	4½	48½	Good going up the nullah to fair grass and water at border of the lake. Time, 2½ hours.
25. 10th June ...	Camp by Small Lake	8½	497	Good going for six miles across frozen lake, thence heavy rising ground and descend to small fresh water lake. Grass and water, good camping ground. Time, 4½ hours.
26. 11th June ...	Camp in Nullah by Lake.	9½	506½	Good going for 5½ miles by the banks of the lake, thence cross an area of it rather over 3 miles, and up to nullah. Grass and water. Time, 5 hours.
27. 12th June ...	Camp by Salt Lake.	10	516½	Good going up the nullah, thence ascending over an easy pass, and descending again to a small con- spicuous hill close by lake. Good camp. Grass good. Water scarce. Time, 5 hours.
28. 13th June ...	Camp by Salt Lake in Nullah.	9	525½	Fair going, skirting round the lake. Grass fair, water very scarce, only little obtainable by digging Sign of old fire at camp.
29. 14th June ...	Camp in Nullah ...	12½	538	Good going, leaving lake to the right. Pass over rising ground, thence level going along a valley and over an easy pass, down to fresh water lake; pass along northern edge and at the end turn up nullah half right, rather heavy going, grass plentiful by lake. Time, 6½ hours.
30. 15th June ...	Camp in dry River Bed.	7½	545½	Good going, but rising ground up nullah for 5 miles, thence gradual descent. Water by digging. Fair grass. Time, 4½ hours.
30. 16th June ...	Camp in dry River Bed.	...	...	Halt.

ROUTE No. 1.

FROM LEH TO TANKAB.

Number of stage and date.	Names of stages.	DISTANCE.		REMARKS.
		Inter-mediate.	Total.	
31. 17th June ...	Camp in dry Bed of Nullah.	10	555½	Good going across a flat open plain crossing three small fresh water streams, thence a gradual rise up nullah. Fair grass. Water by digging at camp. Time, 5 hours.
32. 18th June ...	Camp in small Grassy Nullah.	5	560½	Good going up nullah over rising ground, dipping into a small grassy nullah with water running and easily obtained at other places by digging. Time, 2½ hours.
35. 19th June ...	Camp by Fresh Water Lake.	7	567½	Rising ground for first 2 or 3 miles up a nullah over hard stony rolling ground, thence descend a small winding stony nullah, and delouch to large open plain of gravel and grass and encamp by half frozen fresh water lake. Good grazing. Time, 3½ hours.
33. 20th June ...	Camp by Fresh Water Lake.	...	...	Halt.
34. 21st June ...	Camp in broad dry Nullah Bed.	9½	577	Good going for nearly two miles along the borders of the lake, thence a very gradual ascent over a large open gravel plain, passing close by a small hill on the left at about 5 miles, a range of hills and snow peaks beyond, lying 6 or 8 miles on right or south hand. Halt in a nullah where water is got for ponies by digging. Fair grass close at hand. Time, 5 hours.
22nd June ...	Camp in Bed of Nullah.	7	584	Rising ground for some 3 miles, thence enter a stony bedded nullah and follow this down a gradual descent. Water plentiful. Grass scarce on sides of nullah. Time, 3½ hours.

ROUTE No. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
35. 22nd June ...	Camp in same Nullah.	5	580	Good going down the nullah, whose bed is some 100 yards across, taking a general direction north and east. Water plentiful but no grass. Several small nullahs join this one during its course. Time, 2½ hours.
36. 23rd June ...	Camp in Plain in Nullah.	7	596	Good going, following nullah for some 3 miles, which then debouches into a large open plain. A running stream all the way down the nullah, which at the plain is a fast flowing small river, some 10 yards across and bends away to the north, clear water with gravel bottom. At plain our road skirts round hills, on our right or south hand over fine gravel plains with next to no grass till our halting place in a nullah running north and south where there is good grass; and water by digging. Time, 3½ hours.
24th June ...	Camp in Plain in Shallow Nullah.	6	602	Good going over grassy plain in a north-east direction to avoid rising ground. Good young grass, and water in small quantities by digging. Water plentiful further north. Time, 3 hours.
37. ...	Camp in Small Grass Nullah.	3½	605½	Fair going over grassy plain and rising ground, steep the last mile and dipping into a small nullah with good grass and water. Time, 1 hour, 50 minutes.
25th June ...	Camp in Plain ...	4½	610	Bad going for three miles over hilly ground and cut up by nullahs, thence over grassy plain, alluvial soil. Fair grass and water obtainable. Time, 2½ hours.
26. ...	Camp in Small Nullah.	5	615	Fair going, soon crossing a dry gravel nullah, thence over some rising ground, and descend a valley heavy

ROUTE No. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
				going, with loose slabs of stone, to a small red ochre hill, thence rising ground over grass and dip into a small deep nullah with good grass, water little saltish. Time, 2½ hours.
38. 26th June ...	...	...	615	Halt.
27th June ...	Camp in Broad Dry Nullah.	6	621	Good going over grassy plain and over a low range of hills, sometimes rather heavy going, thence gradual descent to large open plain, partly grass and intersected by broad dry shallow nullahs running north to south. Halt in one of them, water a little saltish, obtained by digging, probably plentiful in certain spots in nullah. Good grass around. Time, 2 hours, 50 minutes.
39. ...	Camp in Nullah on Low Pass.	5	626	Good going across grassy plain for about 2½ miles, thence a gradual ascent to low range of hills and camp in gravel nullah, clay soil below. Grass plentiful. Water by digging, scarce and brackish. Time, 2½ hours.
40. 28th June ...	Camp in same Nullah, lower down.	3	629	Good going, gradual descent down same nullah. Fair grass, but water only by digging, salt and bitter, very bad. Time, 2½ hours, delay through accident to Sulloo. Halt remainder of day.
29th June ...	Camp in same Nullah.	6½	635½	By marching more north than wanted, good going over portion of sandy soil. Crossing nullah shallow and gravel, and over plain of fine hard gravel, at five miles cutting into original nullah good going to camp. No grass before fifth mile. Country to southward, barren with sandy hills.

ROUTE No. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
				Grass good at camp and water plentiful by digging, but brackish. Time, 3½ hours.
41. 20th June ...	Camp in Open Plain	6½	642	Rising ground for a mile, thence good going, very gradual descent over open grassy plain of clean hard gravel soil. Water obtainable after 5 miles, at half mile south of some small hills. Good grass at camp and water a little saltish by digging in small depression. Water plentiful a mile further on in nullah. Time, 3½ hours.
30th June ...	Camp in Open Plain	5½	647½	Good going for a mile thence an ascent, rather sandy, heavy going for 4 miles, crossing a small pass between two hills, thence a very gradual descent over an open plain, grassy alluvial soil, to halting place in open, where very little water was obtained by much digging. To get a supply, necessary to dig some six feet. Time, 3 hours.
42. ...	Camp in Nullah by Small Hill	2	649½	Good going over grassy plain to gravel soil nullah running round foot of the hills. Excellent water one foot below surface. Good grass. Time, 1 hour.
1st July ...	Camp in Nullah ...	5½	655	Gradual ascent for about four miles up broad gravel nullah, good firm going, thence level going along nullah turning little to right to camp, in same nullah. Water good by digging. Grass good. Time, 2½ hours.

ROUTE No. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCE.		REMARKS.
		Inter-mediate.	Total.	
43. 1st July ...	Camp in Broad Nullah.	0	661	Ascent for about 3 miles up nullah, good firm going, thence descend down narrow stony nullah, emerging into a broad gravel nullah. Grass fair. Water by digging. Time, 3 hours.
2nd July ...	Camp in same Nullah.	6	667	Gradual ascent the whole way up nullah. Land to right or south sandy and barren, with little grass, bounded to the north by range of hills, somewhat rocky, with little grass. Water little saltish at camp, but only a foot below surface black clay soil below. Time, 3 hours.
44. ...	Camp in Plain by Small Hill.	4½	671½	Continued down nullah for about a mile, thence crossed a perfectly flat, caked, clayey, soil of about two miles and found small pool of water. Thence steepish ascent up a small nullah to open gravel plain. Grass on hills close by north. No water near. Time, 2 hours, 20 minutes.
3rd July ...	Camp by Dig Nullah	4½	676	Heavy going by reason of snow, during night across uneven plain. At about two miles cross over ridge into another plain, and follow up broad gravel nullah running down the centre. Grass fair. Water scarce in nullah after digging. Time, 2 hours, 20 minutes.
45. ...	Camp in Nullah ...	4½	680½	Rather heavy going, and up hill for about three miles, thence cross over low ridges, and after level going round foot of hills, hit off a gravel nullah running in from north direction. Good grass and good water a foot below surface. Time, 2 hours, 20 minutes.
4th July ...	Camp in same Nullah.	7	687½	Follow nullah turning a little to right by foot of hills, thence good going and very gradual descent

ROUTE No. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
				down grassy plain, bounded on both sides by range of hills. Good grass. Water by digging. Time, 3½ hours.
46. 4th July ...	Camp in same Nullah.	5½	693	Good going down nullah very gradual descent, many other nullahs running into this one from north and south, from the range of hills two or three miles on either side. Excellent grass in valley and good water anywhere in nullah below surface 2 or 3 feet. Time, 2 hours, 45 minutes.
47. 5th July ...	Camp in same Nullah.	5½	698½	Good going down same nullah as the day before, passing several small hills or mounds of dun coloured sandstone. Good water. Grass fair. Time, 2 hours, 45 minutes.
47. 6th July ...	Camp in same Nullah.	...	698½	Halt.
48. 7th July ...	Camp in Big Nullah	10	708½	Continued to follow nullah the whole march, and after some six miles found running water in it. About this distance too there are three nullahs, all apparently running into a lake. The going in nullah is sometimes heavy, perhaps owing to recent snow. Grass at places. Nullah sometimes half a mile wide, at others 100 yards or so. Time, 4 hours, 40 minutes.
8th July ...	Camp by Salt Lake	7½	716	Continued down nullah for about four miles, when the going gets very heavy, just before the nullah becomes full of water. Followed nullah down left bank up to Salt Lake. No grass. No fresh water, and no roots. Country all around lake absolutely barren. Time, 4 hours, 10 minutes.

ROUTE NO. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
49. 8th July ...	Camp in Nullah by Salt Lake.	4	720	<p>Marched along the borders of the lake sometimes rather heavy going. No vegetation anywhere, excepting "Bootsa" in places. Gravel soil and bare hills, halted in a small nullah, running down from hills where we found good water by digging, and bootsa. Water in lake very brackish, too much so for animals.</p> <p>Time, 2 hours, 5 minutes.</p>
9th July ...	Camp beyond Salt Lake.	6	726	<p>Same going as before along borders of the salt lake for nearly five miles; thence over a barren plain, halting by a small nullah running down from the range of low bare hills to north. No water. Bootsa only for animals.</p> <p>Time, 3 hours, 10 minutes.</p>
10 ...	Camp in Salt Country.	6	732	<p>Marched along open barren plain; barren on account of the vast amount of salt in the land for 2 or 3 miles, thence over rising ground, sometimes heavy going, for there was a loose crust of soil on the surface.</p> <p>Camped in a small nullah running down from the hills to the north, where we got good water by digging, and little bootsa for the animals.</p> <p>Time, 3 hours, 10 minutes.</p>
10th July ...	Camp in Salt Country.	7	739	<p>Rising ground, heavy going for some two miles, thence dip into a partially dried up salt lake, very heavy going, through much deposit of salt. Continued afterwards by edge of salt nullah, thence after six miles struck more northward, over rising ground, sand and gravel to a very small nullah from the northern hills. Good water by digging, and little bootsa.</p> <p>Country most barren and desolate.</p> <p>Time, 3 hours, 45 minutes.</p>

Route No. 1.

FROM LEH TO TAREAK.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate	Total.	
51. 10th July ...	Camp in Green Grassy Nullah.	5	744	Continued down the hill, thence along the edge of another dried up salt lake, into a nullah up hill which we followed on to a large sandy nullah running north-east and south-west. Good grass in nullah. Good water just below the surface. Time, 2 hours, 45 minutes.
52. 11th July ...	Camp in Broad Nullah.	7½	751½	Up a winding nullah, steepish going, then descend to a small salt lake and over undulating country with good grass, into a nullah running north-west and south-east. Good water below surface. Good grass. Time, 4 hours.
12th July ...	Camp in Open Plain	6	757½	Over undulating rising ground, thence followed small sandy nullah, winding between hills, and again over grassy undulating ground to small depression, where only a little brackish water was obtained by digging. Good grass. Boortas plentiful. Time, 3 hours, 10 minutes.
53. ...	Camp in Open Plain	7½	765	Undulating grassy ground, at times heavy going, at others following sandy nullah circling round hills. Water by digging, but scarce and saltish. Time, 3 hours, 40 minutes.
13th July ...	Camp by two Small Lakes.	5	770	Undulating grassy ground, but more level, crossing broad gravel nullah, thence dip down into a depression close to range of snow hills to the north to two small fresh water lakes. Grass and boortas plentiful. Time, 2 hours, 35 minutes.
54. ...	Camp by Stream ...	8	778	Rising ground up a nullah for about three miles, thence some two miles over uneven barren ground, afterwards a gradual descent to nullah in which is a stream of good water. Grass along edge of nullah. Time, 4 hours.

ROUTES No. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Name of stage.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
14th July ...	Camp in Nullah ...	7	785	Good going, gradual descent over open plain, thence cross several small nullahs running north and south and after about five miles enter broad gravel nullah running south-east. Good water by digging. Good grass plentiful. Time, 4 hours.
55. ...	Camp by Lake ...	5	790	Followed nullah for about a mile, then turned half left over undulating grassy land, past small hill of sandstone, halting nearly a mile east of a fresh water lake. Good grass and water. Time, 3 hours, 20 minutes.
15th July ...	Camp by Lake ...	6	796	Up a nullah for nearly two miles thence over fine undulating grassy country, crossing some broad gravel nullahs. Halted close by small fresh water lake. Good grass and boortea around. Time, 3 hours, 20 minutes.
56. ...	Camp in Nullah ...	7½	803½	Over undulating good grassy country crossing several nullahs running north and south. To south apparently big nullah running east and west with range of hills beyond, a range of hill also to north. Halted in nullah with good water just below the surface. Excellent grass. Time, 4 hours.
57. 16th July ...	Camp by Fresh Water Lake.	8	811½	Continued over same kind of country as previous day, the whole time a very gradual descent. Halted close to lake whose water was very slightly saltish. Good grass around. Time, 4 hours, 5 minutes.
58. 17th July ...	Camp by Large Lake	8½	820	Continued over same kind of country as the two previous days, heavy going on account of fall of snow.

ROUTE No. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
				Hills on either hand gradually drawing in somewhat closer. Water of lake very slightly saltish. Good water in any nullah by digging. Good grazing lands. Time, 4 hours, 20 minutes.
50. 18th July ...	Camp in Big Nullah on High Ground.	8½	828½	Along borders of the lake for a mile thence over rising and dipping ground, there being no defined features in this large valley between the two ranges of hills, nullahs and smaller hills, running in every direction. Last two miles gradual rising ground, at the summit of which was a broad nullah nearly half a mile across. Good water by digging and good grass. Heavy going today by reason of another fall of snow. Time, 4 hours, 16 minutes.
19th July ...	Camp in Open Plain	7½	850½	Good going up a broad gravel nullah for 2 miles, thence over rising ground with another nullah running east. Good grass everywhere and water in nullah just below surface. Time, 3 hours, 25 minutes.
60. ...	Camp in Nullah ...	7½	843½	Fair going for 5 miles over undefined ground, sometimes undulating grass, and crossing small nullahs running in different directions, thence a gradual ascent up a firm gravel nullah 80 yards broad. Good grass and water below surface. Time, 3 hours, 35 minutes.
20th July ...	Camp in Main Nullah.	7½	851	Good going winding up nullah for about 4 miles, thence cross over a grassy coll, and drop down into another important nullah gradually widening to about 100 yards broad firm going, with water just below surface, five grassy hills on either side, with many smaller nullahs running into this main one which

ROUTE No. 1.

FROM LEB TO TANKEAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
				ran nearly due east, with a very gradual descent.
				Time, 3 hours, 25 minutes.
61. 20th July ...	Camp in Main Nullah.	7	656	Followed nullah, good going, slight descent. Good grass on either side, and water just below surface. Other big nullahs running into it.
				Time, 3 hours, 5 minutes.
21st July ...	Camp by Open Plain	6	666	Followed nullah for between three and four miles which then bent round southwards, passed over undulating grassy land halting in another nullah running north and south. Hills on either side of valley some 4 miles across. Big snow range lying south-west perhaps 50 miles off. Good water below surface.
				Time, 3 hours, 40 minutes.
62. ...	Camp by Open Plain	6½	872½	Continued over open grassy plain, the whole march, crossing several small nullahs, and a very gradual descent, leaving main nullah to our south. Hills running parallel on either side. Halted in small nullah, in all of which is water below surface.
				Time, 3 hours, 15 minutes.
22nd July ...	Camp in Nullah on rising ground.	8½	861	Continued for two miles over grassy plain, and then began to cross the bed of a salt lake, very bad and uneven going, so that we turned somewhat southwards and after some 4 miles reached bank of lake, and marched over rising ground, good firm going, but little grass, fine hard gravel: halting in a nullah with good water below surface.
				Time, 4 hours, 5 minutes.
63. ...	Camp in same Nullah.	6	867	Continued up same nullah, winding somewhat and slightly up hill. Fine grassy hills all round. Good water below surface.
				Time, 3 hours.

ROUTE NO. 1.

FROM IREN TO TARKAN.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
23rd July ...	Camp in Open Plain	5	892	Continued up same nullah for about 3 miles, then gradually descended over open grassy plain, steering east for range of snow mountains in the distance. Water in small nullah below surface. Time, 2 hours, 30 minutes.
64. ...	Camp by small hill in nullah.	6½	900½	Marched over grassy plains for some six miles, crossing several nullahs, then entered a gravel bottomed nullah with rising ground. Good grass everywhere. Water below surface very salt. Time, 4 hours.
24th July ...	Camp in Salt Nullah	7½	908	Over rising ground, thence descend to salt water lake and marched along its northern edge for some 5 miles, then entered nullah slightly rising ground. No grass near lake except on south side. Water below surface in nullah. Very salt. Time, 3 hours, 40 minutes.
65. ...	Camp in same Nullah	5	913	Marched along same nullah a somewhat winding course and very gradual decline. Water in nullah salt. Good grass around and water close by in two small pools, and in nullahs from adjacent hills, below the surface. Time, 2 hours, 25 minutes.
66. 25th July ...	Camp in Nullah in valley.	8	921	March through broad valley towards snow peaks, partly across open grassy plain, partly along a nullah where we found pools of good water. Hills on either hand drawing in somewhat closer. Good grass. Time, 3 hours, 45 minutes.
26th July ...	Camp in Nullah in same Valley.	8	929	Continued over open grassy plain crossing some nullahs and passing by some pools of good water. More pools and good grass in nullah. Time, 4 hours, 5 minutes.

ROUTE No. 1.

FROM LEE TO TANJAR.

Number of stage and date.	Names of stages.	DISTANCE.		REMARKS.
		Inter-mediate.	Total.	
67. 26th July ...	Camp in nullah at end of valley.	6½	935½	Continued through valley crossing several steep nullahs with water in some of them. Excellent grass everywhere. Time, 3 hours, 25 minutes.
27th July ...	Camp in Small Nullah West of Snow Peaks.	8	943½	Continued eastwards up nullah and up hill and after some six miles struck a northern course to avoid a very difficult pass that barred the road eastwards. Good camp. Splendid grass everywhere and water. Time, 4 hours, 10 minutes.
68. ...	Camp by River ...	6½	950	Marched along by side of river that came from snow range thence crossed it, half a mile broad, several streams about one foot deep, then over sandy but grassy soil, marching northwards. Time, 3 hours, 20 minutes.
28th July ...	Camp near Lake ...	8	958	Turning to the right or eastwards marched up nullah up hill, with stream running all the way, thence crossed a grassy coll and again marched northwards down a narrow grassy nullah to a broad valley, where stood a large lake into which the river found its way. Splendid grass everywhere and water plentiful. Time, 4 hours, 10 minutes.
69. ...	Camp in Grassy Nullah by Lake.	8½	964½	Good going along a nomads' road or track along southern border of lake over grassy land, rising ground the last mile. Water plentiful. Good camp. Time, 3 hours.
29th July ...	Camp in Open Plain	7	971½	Good going up hill for about 5 miles over grass land crossing good stream of water from snow mountains after about 3 miles. Thence a gradual decline. Time, 3 hours, 15 minutes.

ROUTE No. 1.

FROM LEU TO TANBAR.

Number of stage and date.	Name of stage.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
70. 29th July ...	Camp in Nullah ...	8	079½	Fair going for 5 miles over somewhat uneven ground, out up by several small nullahs in most of which was water, a good deal of soil being slaty. Thence entered a nullah running more easterly with stream in it. Fair grass. Time, 3 hours, 35 minutes.
30th July ...	Camp by Small Lake on Hill.	7½	987	Continued down nullah for about a mile to small lake thence over a coll to another lake along a valley to 3 more lakes slightly brackish, thence rather a steep ascent over another coll to small fresh water lake. Good deal of the land is slaty and there is less grass, but water is plentiful. Time, 3 hours, 20 minutes.
71. ...	Camp by River ...	8½	995½	Over a ridge and down hill following a track thence crossing over some hills, leaving nullah and water to our right. Thence an easy descent on the other side and down a big broad valley intersected by flowing water, and snow hills on either hand. Fair going. Good grass and water. Time, 3 hours, 50 minutes.
72. 31st July ...	Camp in Valley by Small Pool.	11½	1,007	Heavy going through rain and snow along valley, undulating grassy lands. Thence cross a broad river bed with several small streams after 6 miles, thence gradually rising grassy ground, and after 3 more miles cross another river bed with small stream, thence undulating ground sandy and grassy. Water plentiful. Good camp. Time, 5 hours, 40 minutes.

ROUTE No. 1.

FROM LEHI TO TANNAH.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
73. 1st August ...	Camp by big Salt Lake.	10½	1,017½	Gradual descent over grassy land and fine gravel and sandy soil to a large salt water lake along whose southern edge we marched good going. Good grass plentiful and other water (probably from recent snow). Snow peaks north and south. Time, 4 hours, 15 minutes.
74. 2nd August...	Camp by another Salt Lake.	12½	1,030	Good going over open plain fine gravel and grass, and thence along the edges of another large salt lake, which compelled us to strike somewhat south west to get round it. Good grass and water plentiful. Time, 5 hours, 25 minutes.
75. 3rd August...	Camp by another Salt Lake.	16	1,046	Fair going skirting round lake thence along valley over undulating grassy land, passing by several small lakes and after a rise and descent, over a coll halted on south side of salt water lake, in small nullah in southern range of hills; the northern range with snow peaks beginning some four or five miles off. Good grass and good water. Time, 7 hours.
76. 4th August ...	Camp in Small Nullah.	16	1,062	After passing salt lake somewhat heavy going up hill over several ridges for about 8 miles, thence a descent over more ridges into a nullah winding in a north-east direction. Good grass; good water. Time, 7 hours, 35 minutes.
77. 5th August...	Camp near large Salt Lake.	16½	1,078½	Fair going over somewhat hilly and heavy ground, crossing several heavy nullahs, and being compelled to make a detour north-west round a lake which suddenly appeared in our road. Good grass water plentiful. Snow peaks north and south. Time, 7 hours, 10 minutes.

ROUTE No. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
78. 6th August ...	Camp by small Salt Lake.	19½	1,098	Rising ground up a nullah, thence over rising and dipping ground and cross a level gravel plain and dip down into a nullah with running water, follow nullah down to a broad sandy river bed with several streams of water, some 2 feet deep flowing swiftly, thence over an open gravel plain with scanty grass turning somewhat south, the last two or three miles to a small salt lake with good grazing close by, and good water in small nullahs by digging. Time, 7 hours, 40 minutes.
79. 7th August ...	Camp in Open Plain at Oasis.	15	1,113	Good going down a sandy nullah, thence over flat sand and gravel plain on the northern side of a large salt lake with but scanty vegetation, thence crossing some small sandy hills, and over a level plain of fine gravel and hardly any grass, halting at a kind of Oasis, a small piece of rising ground covered with rich grass and nullah close by with good water below surface. Time, 5 hours, 40 minutes.
80. 8th August ...	Camp in grass Valley in Nullah.	16	1,129	Good going over flat gravel plain and after about five or six miles cross river bed with several small streams and at 10 miles ascend over range of hills, and descend again into a grass valley with sandy soil, several nullahs with small streams running down from the hills to north a mile or two distant. Southwards, plains, and small range of hills. Country well watered and grassy. Time, 6 hours, 5 minutes.
81. 9th August ...	Camp on Summit of Pass.	16	1,145	Good going over grassy valley to a firm bottomed nullah, with good stream of water, follow nullah, closely bounded on either side by hills, latterly becoming narrow, and winding between rocks, with grass

ROUTE NO. 1.

FROM LEN TO TANKAR.

Number of stage and date.	Name of stage.	DIVISIONS.		REMARKS.
		Inter-mediate.	Total.	
				and plants everywhere, thence a long ascent of 5 miles through gravel and slate soil to summit of pass. Rhubarb and some vegetation in plain, and fine grass in all the nullahs by the hills. Nullah running down plain but too full of water for marching up. Time, 7 hours, (halting $\frac{1}{2}$ hour at 9-15 A.M.).
82. 10th August	Camp on Barren Summit.	16	1,161	Good going along southern side of fresh water lake for about three miles, thence ascent of about 12 miles, over heavy ground crossing several water nullahs, no vegetation except rhubarb, and all the hills around barren, one snow peak to north. Thence gradual descent of one mile and half in barren spot, no grass near, and no roots, or droppings. Water too plentiful. Time, 7 hours.
83. 11th August	Camp in Nullah with Stream.	5 $\frac{1}{2}$	1,166 $\frac{1}{2}$	Very heavy going following the course of a nullah downhill, much water in the nullah, but no grass along the barren hills, until our halting spot where there was a very little good grass and droppings. Time, 3 hours.
84. 12th August	Camp in same Nullah.	1 $\frac{1}{2}$	1,168	Very heavy going, impossible to travel any further, through heavy fall of rain and snow. Good grass on both banks. Time, 1 hour.
85. 13th August	Camp in same Nullah.	7	1,175	Continued to follow same nullah, heavy going all the way. Stream about 20 feet across, over a foot deep and fast flowing. Grass in some places in hills on either side. Very gradual descent. Time, 3 hours, 45 minutes.

ROUTE No. 1.
FROM LEE TO TANEAR.

Number of stage and date.	Names of stages.	DISTANCE.		REMARKS.
		Inter-mediate.	Total.	
86. 14th August	Camp in same Nullah.	8	1,188	Followed same nullah, a winding course, by necessity crossing the stream every five or ten minutes banks of hills in places steep. Halted where nullah widened to two or three hundred yards, as it entered the plain. Grass plentiful in places and roots too. Time, 4 hours.
87. 15th August	Camp in same Nullah.	9	1,192	Marched but heavy going over undulating sandy gravel plain, little grass, thence gradually descending, struck another nullah, with stream as before in it. Followed nullah's sandy bed till joined by original nullah. River knee deep and twenty yards broad. Good grass. Time, 3 hours, 45 minutes.
88. 16th August	Camp by same River in Nullah.	5	1,197	Owing to swollen river, and precipitous banks, marched round hills, following in general the river, descending, crossed grassy nullah. Very heavy going. Time, 2 hours, 45 minutes.
89. 17th August	Camp by same Stream.	8½	1,205½	Followed course of stream over gradually descending grassy plains, crossing several nullahs that ran into the southern side of the stream, which increased in volume, and ran more rapidly down its sandy nullah, being stained a dull reddish color by recent rains. Time, 3 hours, 40 minutes.
90. 18th August	Camp by same Stream.	7½	1,213	Crossed river, water being above the knees and flowing fast, good firm sandy bottom, and some thirty yards across, then continued along the left bank, firstly in the sandy nullah itself, thence taking a short way across plain, and crossing several small nullahs, while the river took a winding course.

ROOTS NO. 1.

FROM LER TO TANEAR.

Number of stage and date.	Name of stage.	DISTANCE.		REMARKS.
		Inter-mediate.	Total.	
				Halted close to river where it is joined by another stream from the north. Time, 4 hours, 15 minutes.
19th August ...	Camp by same Stream.	6½	1,218½	Crossed stream that came in from the north, with some difficulty, owing to soft sands, thence continued along left bank of the river, over somewhat uneven ground, cut up by small nullahs and pools, stony, sandy, soil, and grass, which was very green on the hills. Time, 2 hours, 50 minutes.
91. ...	Camp by same Stream.	3½	1,222	Continued to follow the course of the stream descending into nullah itself which necessitated much delay, as it was found impossible to cross river owing to treacherous bottom, and compelled us to turn back, and ascend sandy steep bank. Good grass. Time, 2 hours, 45 minutes.
92. 20th August	Camp by same Stream.	5	1,227	Marched over grassy plain and left bank of river. Good going excepting any low-lying ground which was always treacherous, and the animals sank deep into the sandy soil. Grassy hills three or four miles away to north and south. River apparently split up into many small streams. Time, 2 hours, 30 minutes.
92. 21st August	Camp by same Stream.	...	...	Halt.
93. 22nd August	Camp by Large Fresh Water Lake Southern side.	7	1,234	Marched northwards towards range of green hills, and endeavoured to cross a large shallow fresh water lake, but half way across the water became too deep and bottom too muddy. Compelled to turn back, and march westwards along south bank. Heavy going, splendid grass. Time, 4 hours, 35 minutes.

Route No. 1.

FROM LER TO TANKAR.

Number of stage and date.	Name of stage.	DISTANCE.		REMARKS.
		Inter-mediate.	Total.	
94. 23rd August	Camp by same Lake North side.	8	1,240	Continued very heavy going along the edge of lake; halting on the north side, opposite camp of previous day. Good grass. Time, 3 hours, 50 minutes.
95. 24th August	Camp by same Lake North side.	8	1,248	Marched eastwards along north edge of lake; very heavy going through recent rain. Very fine grassy hills, soil mostly sandy. Followed track most of the way probably a Yak or Kyang track. Good grass. Time, 4 hours, 25 minutes.
96. 25th August	Camp by same Lake North side.	3	1,257	Good going eastwards, along the banks of lake again, all good grass, excepting near the lake which is sand. Time, 4 hours, 10 minutes.
97. 26th August	1st camp beyond Lake near new River. CHUMAN RIVER.	13	1,270	After going some four miles the lake terminated, thence crossed some sandy hillocky, grassy country, biting off another stream which ran easterly and followed general direction of stream, which grew with others joining it, and at places ran swiftly at others sluggish, 10 yards across, one to two feet deep. Country around throughout the valley, very grassy. Time, 5 hours, 50 minutes.
98. 27th August	Camp by same River North side.	8	1,279	Heavy going on account of recent rain, over nullahs, and cut up ground; the river bending away southwards. River increasing, and sandy soil, country all around very green. Followed river the last two miles, in an easterly direction. Roots procurable at intervals. Good grass. Time, 4 hours, 15 minutes.
99. 28th August	Camp by same River North side.	3	1,282	Heavy going across several nullahs following general easterly direction of river. Good grass everywhere. Roots scarce. Time, 1 hour, 45 minutes.

ROUTES No. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
100. 29th August	Camp by same River North side.	9	1,291	<p>Very heavy going for first six miles over country much cut up by small nullahs, followed course of river which winds considerably, afterwards winding northwards, and compelling us to ascend a large hill when the river winds to east again, thence again descending to river. Green grass everywhere, but roots scarce.</p> <p>River some 30 yards broad, and fast flowing. Reddish color. Good grass.</p> <p>Time, 4 hours, 50 minutes.</p>
101. 30th August.	Camp by same River North side.	10	1,301	<p>Heavy going over a hill, across an open grassy plain, then cross a river coming from the north, one foot deep, 15 yards across. Thence over undulating grassy ground crossing several nullahs. Good grass.</p> <p>Time, 5 hours.</p>
102. 31st August	Camp by same River North side.	9	1,310	<p>Heavy going and gentle descent to river, thence over big hill, and over grassy ground cut up by nullahs, last two miles over flat grassy plain to a river coming from north, cross river, which is 20 yards wide and 3 feet deep. Strong current. Good grass.</p> <p>Time, 5 hours, 15 minutes.</p>
103. 1st September	Camp by same River North side.	11	1,321	<p>Heavy going over a plain bounded by white stony hills with little grass for some seven miles, thence very bad going by side of hills over heavy ground very much cut up.</p> <p>River increasing in volume. Forty yards wide. Strong current. Good grass.</p> <p>Time, 5 hours, 40 minutes.</p>

ROUTE No. 1.

FROM LEE TO TANKAR.

Number of stage and date.	Name of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
104. 2nd September	Camp by same River North side.	18	1,333	Good going following the course of the river over grassy plains and white stony soil, or along the bed of the river, crossing some small streams that ran into the main one. Good grass. Time, 5 hours, 40 minutes.
105. 3rd September	Camp by same River North side.	18	1,346	Good going, and for first half, over flat white stony plain, with but little grass, and nothing to relieve the monotony but the snowy peaks, north and east, north. Afterwards river bends a little more east, and the white stony soil is replaced by alluvial soil and certain amount of grass. River bed half a mile, or a mile across at times, and the river becomes split up. Time, 5 hours, 45 minutes.
106. 4th September	Camp by same River North side.	14	1,361	Good going over open plain with a very gradual descent, fair amount of grass in places, but nothing to relieve the monotonous country. Time, 5 hours, 50 minutes.
107. 5th September	Camp by same River North side.	13	1,374	Same going as yesterday for the first eight miles, thence the ground becomes more sandy and a little bit broken up. The hills north and south have drawn in a little bit closer. The river runs from 6 to 8 miles an hour. Fair amount of grass in most places. Time, 5 hours, 30 minutes.
108. 6th September	Camp by same River North side.	7	1,391	Much the same going as yesterday ground a little broken and mostly sandy soil. River not split up into quite so many channels, becoming more condensed. Going somewhat heavy in places through night's rain direction a little bit south of east. Grass and roots fair. Time, 3 hours, 5 minutes.

ROUTES No. 1.

FROM LEU TO TANKEE.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
109. 7th September	Camp by same River North side.	12	1,393	Same going over chiefly sandy soil with some heavy little nullahs to cross, better grass in most places. Halted within a couple of miles of north hills, which become lower and no snow visible. Time, 6 hours, 20 minutes.
110. 8th September	Camp off River Chumar.	15	1,408	Heavy going for six miles up a pass, and over it, working more northwards, very steep in places, and sand very deep, thence four miles along a grass valley, afterwards working more eastwards along another grass valley, skirting southern hills, in places finding well defined track, at the same time following a recognized route, having certain land marks of mud. Time, 7 hours.
111. 9th September	Camp in Valley with Merchant.	15	1,423	Good going following a track over undulating ground through grassy nullahs with streams in them, range of snow hills to north. Good grass. Time, 6½ hours.
112. 10th September.	2nd Camp in Nullah with Merchant.	14	1,437	Very good going along well defined track, firm sandy gravel soil, and fine grass valleys. Good grass. Time, 5 hours, 40 minutes.
113. 11th September.	3rd Camp in Valley with Merchant.	18	1,455	Up hill over an easy pass, and an easy descent to valley some 7 miles, thence across valley with but little grass to opposite hills, skirting along them over undulating ground to some fair grass with stream. Time, 8 hours.
114. 12th September.	4th Camp in low Valley with Merchant.	15	1,468	Rising ground with but scanty grass, but well defined track over an easy pass thence quick descent; good going down valley, bounded half a mile on either hand by steep hills;

ROUTE No. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
114. 13th September.	...	...	1,468	<p>last two miles bending round to right, still descending to grassy hills with stream and stony bed. Good grass.</p> <p>Time, 6 hours, 20 minutes.</p> <p>Halt.</p>
115. 14th September.	6th Camp by SHUGATZA River close to TONG Hills.	18	1,486	<p>Good going down stony bed of river in valley bounded by precipitous mountains, thence through a narrow gorge and down valley of scrub and thornbushes to river Shugatza, some 30 yards across flowing northwards, and some 3 feet deep, stony bottom, neck deep in other places. Brushwood and good grass.</p> <p>Time, 8½ hours.</p>
116. 15th September.	6th Camp in Grass Valley by River.	9	1,495	<p>Good going over open plain resembling a prairie, bounded by barren hills some six miles across, road defined and on right side of river. Sandy soil. Good grass.</p> <p>Time, 3 hours, 10 minutes.</p>
117. 16th September.	1st Camp in Valley after leaving Merchant.	9	1,504	<p>Good going as before, road well defined marked by encampments, scrub and low thornbush in places; stony in some. Good grass.</p> <p>Time, 4 hours, 50 minutes.</p>
118. 17th September.	Camp in same Valley	13	1,517	<p>Good going as before through valley if proper road be taken. We took a wrong road, up a stony nullah to which many stones piled one on top of the other pointed, after going nine miles. Found a hot spring, which is probably the cause of the land marks. Travelled up nullah over range of hills, and down another nullah to valley and consequently to road again. All hills stony with some scrub. Grass less plentiful in valley. River half a mile to a mile off.</p> <p>Time, 7 hours.</p>

ROUTE No. 1.

FROM LEH TO TANKAS.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
119. 16th September.	Camp at Mouth of Nullah in Valley.	13	1,530	<p>Good going over somewhat stony ground, thence across grassy plain, crossing some small streams, where previous encampments have been, thence enter stony nullah about a mile broad with defined road leading in direction of whitish stony hills. Halt in nullah. Grass scarce.</p> <p>Time, 5 hours, 15 minutes.</p>
120. 10th September.	Camp over Pass of SHUGA RANGE.	16	1,546	<p>Up stony nullah, two or three hundred yards broad, with steep mountains on either side for some nine miles ascending all the time. Top of range, probably the Shuga marked by a pile of stones. Road up nullah sometimes traceable either by itself or by droppings and dead animals of previous caravans. Thence an easy descent to small hill in grass plain, noticeable by three long stones on top, regular camping ground, water probably close at hand. Grass fair. Used snow.</p> <p>Time, 6 hours, 40 minutes.</p>
121. 20th September.	Camp by DAPSOGA at Entrance to Nullah.	16	1,562	<p>Easy descent along well marked tracks crossing over a small hill, after going six miles, descending afterwards most of the way over grassy plains. No water obtainable till close to halting place at entrance to nullah noted by large heap of stones, sticks and rags on hill close by. Good water and good grass.</p> <p>Time, 6 hours, 5 minutes.</p>
122. 21st September.	Camp in Nullah BUHANAN BOTA.	16	1,578	<p>Good going down nullah by side of stream crossing from one side to the other as suited best. Stream about 20 yards across, very swift, and knee deep.</p> <p>Good halting place, roots and grass. After marching nine miles a regular camping ground. Other small camping grounds every three or four miles down nullah. Some places thick bush jungle. Worst after marching thirteen miles. Rugged precipitous mountain on either bank.</p> <p>Time, 6½ hours.</p>

ROUTE No. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Name of stages.	DISTANCE.		REMARKS.
		Inter-mediate.	Total.	
123. 22nd September.	Camp by same Stream.	12	1,590	<p>Started crossing stream again, re-crossing about five miles lower down-banks on either side stony, or with scrub, but no grass till after eight miles where there is a regular halting place and spring. After ten miles and descending fast, thick jungle again is reached, with fruit trees, wild currant and raspberries. There is also a prayer wheel turned by water power, inside a brick and mud square enclosure.</p> <p>Many signs of camping grounds for the last two miles.</p> <p>Good grass and bush.</p> <p>Time, 7 hours.</p>
124. 23rd September.	Camp in Grassless Plain.	17	1,607	<p>Continued down nullah for three miles with no grass, then ascended a ridge and descended by a narrow pathway into a grassless arid plain with little scrub. Leaving the stream which ran along the barren hills, a mile or so to the east. At twelve miles hit off river again with little bush and grass; clean water, flowing swiftly, over stones and boulders, knee deep, thence over hard stony arid plain, track all the way and descending.</p> <p>Time, 7 hours.</p>
125. 24th September.	Camp with People at NAMORAN.	12	1,619	<p>Continued descent over arid plain losing track, after 3 miles the country becomes less stony, with sandy hillocks and fur like wavy bush growing on them, with long grass. River becomes split up with many channels. As descent continues, grass and bush become thicker and greener and sandhills disappear, till plain with thick bush, and grass sandy soil is reached.</p> <p>Time, 4 hours, 45 minutes.</p>
125. 25th September.	Camp with People of NAMORAN.	...	1,619	<p>Half.</p>
126. 26th September.	Camp at Ooroo ...	14	1,633	<p>Marched eastwards, after one mile the rich bush suddenly ends, and well worn track crosses a perfectly sterile loose stony plain some four miles across, when some sandy</p>

ROUTE No. 1.

FROM LEU TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
				<p>hillocks and wavy bush are reached, this gradually becomes denser with green grass and fruit bushes, till open grass plain is reached, and spring at Ootoo.</p> <p>Time, 5½ hours.</p>
127. 27th September.	BAYAN GOL ...	23	1,656	<p>Through fruit trees and grass well worn tracks, after two miles reach first Sapor tent encampment. After eight miles cross grassless plain, with salt soil, and salt streams, some two miles across. At some twelve miles reach Shishi stream a halting place easily fordable. Road after this not so marked, passes through same kind of country till Bayan Gol is reached, 20 yards across, 3 deep, softish bottom, water fairly clear, flowing some six miles an hour. Good going all day.</p>
127. { 26th } Sep- { 29th } term- { 30th } ber.	BAYAN GOL ...	...	1,656	Halt.
128. 1st October	BAYAN GOL KANOO	11	1,667	<p>Followed easterly course the right bank of the Bayan Gol, track and good going, after a couple of miles of hermok bush, open grass plain of dry yellow grass. The soil being in many places crusted.</p> <p>Several signs of halting places en route.</p> <p>Time, 3 hours, 45 minutes.</p>
129. 2nd October	KAROKHULSUM ...	16	1,683	<p>Good going all the way over open grass plains, with little hermok bush here and there. No water until halting place, where there is a spring in open grass plain.</p> <p>Followed tracks all the way, good deal of the ground is crusted, apparently saltish. In Dzun District.</p> <p>Time, 5 hours, 35 minutes.</p>
130. 3rd October	YUMANSERA ERGOTSU	20	1,703	<p>Followed tracks over same kind of country and after six miles come to a spring, evidently a camping ground, and soon afterwards hit off Tankar main road, showing signs of frequent use, by the many tracks and droppings of baggage animals. The country here was sandy, and</p>

Route No. 1.

FROM LEE TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCE.		REMARKS. v
		Inter-mediate.	Total.	
181. 4th October	TALUNTURGIN. KAK-SUNAMA STREAM.	19	1,722	<p>becoming uneven with many small sandy hills. At 12 miles there is water, apparently a pond which they say is never dry. Good water. At 13 miles, the sandy hills give way to an open arid plain for about 2 miles, and soon after grass and bermok is reached again, with fine grassy plain, and spring at jumping ground.</p> <p>Time, 7 hours.</p>
181. 4th October	TALUNTURGIN. KAK-SUNAMA STREAM.	19	1722	<p>Road leads for sixteen miles over sandy hills for first five miles, and then over barren stony plain, with scrub, very gradual ascent. At 12 miles it passes close by the Suling-Gol at left bank. This river flows at six or eight miles an hour, clear water, over a stony bottom with good grass and bush along its banks, some six yards broad, and about a foot deep. Last three miles passes over good grassy plain with bermok bush.</p> <p>Small stream of Kakeenama at halting place.</p> <p>Time, 8½ hours.</p>
182. 5th October	TAMNANAGA ...	27	1,740	<p>Well defined road, very gradual ascent over arid plains with scrub and sandy hills and at 16 miles reaches summit of an easy pass, while the hills on either hand close in. Thence an open plain stony with scrub, for three miles descent. The road then enters a narrow gorge by a small stream whose water is said to be fatal, and is never drunk, and descends this for some three or four miles when open plain is reached, in which is salt lake and remains of two deserted "Sopor" villages, and after four or five miles grass and spring are found. No other water en route.</p> <p>Time, 9 hours, 45 minutes.</p>
183. 6th October	TULING GOL ...	20	1,769	<p>Cross over valley in a northerly direction, fair grass, then cross the "Noring-Hol" River, three feet deep, muddy bottom, almost still; the</p>

ROUTE No. 1.
FROM LEE TO TANKEAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
134. 7th October	THANCA NOK (white)	17	1,780	<p>north side of river is called "Nor-ing" and south side "Hol." Tracks continue for another seven miles over the valley crossing firstly heavy salt soil, thence gravel and sandy soil, with fair grass. At 12 miles enters the Tuling Nullah down which flows the Tuling-Gol.</p> <p>Shallow clear stream, 10 yards across, stony bottom, flowing merrily.</p> <p>Good grass in nullah and camping grounds anywhere. Halted after following it for about eight miles, not far from the exit (two or three miles) very gradual ascent.</p> <p>Time, 7 hours, 25 minutes.</p> <p>After two miles up a grassy nullah an old Chinese encampment is reached and after four miles the village of Tuling Gompa, most dirty dilapidated looking place on right-bank, and half-a-mile away from river.</p> <p>A mile further on, on either bank are Banaka black tents perhaps some thirty of them. Here too, are two roads to Sining, the right hand one leads over hills, up valley, is shorter but worse road than the main and left hand one, (it is a salt road). Good road continues through grassy nullahs, and at about fifteen miles the fresh water lake of "Thanga" is reached, nearly two miles long, and about half-a-mile across, apparently quite shallow everywhere about two feet deep, bottom partially sandy and muddy.</p> <p>Time, 6 hours, 15 minutes.</p> <p>NOTE.—The summits of the hill at yesterday's halting place, and all along the march to-day are covered with pine trees, these trees were growing almost as low down as the road itself.</p> <p>Tuling Gompa is the resort of the lame and blind Soporites.</p>
135. 8th October	Oeroo or Nullah. Bara	19	1805	<p>Road continues through grassy nullahs with no water, in a north and north by western direction, and at 10 miles a conspicuous rock</p>

ROUTE No. 1.

FROM LER TO TANKAR.

Number of stage and date.	Name of stages.	DISTANCE.		REMARKS.
		Inter-mediate.	Total.	
				stands out in the middle of the valley. There is a cave inside and a small courtyard of square blocks, one or two yards long, by 1 x 1 at the entrance (called Kanjur).
				Further on, 3 miles, a small stream is found at spot called "Nicotine-Kontal" at the foot of the Nicotine-Kontal pass. An easy ascent and descent in a more easterly direction to spot called Ootoo by Sopor men, and "Bara" nullah by Lhasa men, good grass by a small stream. Mountains barren and rocky excepting where the pine grows. Good going all day and no mistaking road.
				Time, 7 hours, 5 minutes.
136. 9th October	BOOKAN ...	21	1,826	Gradual descent in easterly direction over grassy rising ground, following afterwards course of river on right bank, over plains and rolling ground. Good grass. Hills also grassy. Cross river at 17 miles clear water two to three feet deep, stony bottom, flowing some six miles an hour, continue on left bank over grassy plain. Roots plentiful. River bed quarter of a mile across; river split up into two or three channels fifteen yards across.
				Time, 7 hours, 40 minutes.
137. 10th October	HATUTURGY CAIEN KOKO NOA.	22	1,817	Good going over grassy plains well watered by streams merrily flowing to Koko-Nor. After eight miles come to tents of Banaka people, and continue by the foot of grassy hills dotted with their flocks. At 17 miles good halting place at foot of rising ground. Halt at summit, five miles, by stream, three or four miles north of Cairn on hill conspicuous, in view of lake.
				Time, 7 hours, 35 minutes.
138. 11th October	Camp by Stream running into KOKO NOA.	22	1,869	Good road, leads over fine grass country, first ascending a small hill, thence gradually descending a small lake. Thence over grassy plains

ROUTE No. 1.

FROM LEH TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
				<p>dotted with Banaka tents, till at thirteen miles the Bogo-ulun stream is easily crossed, there are other streams after eighteen and twenty-two miles. Grassy hills to north and snow hills beyond these.</p> <p>Time 7 hours, 30 minutes.</p>
139. 12th October	Camp by Small Stream foot of Pass North of Daga Nok.	33	1,907	<p>Good road, over fine grassy country, after ten miles lower ground is reached, with streams and brushwood. Large encampment of Banaka men, and Lamas also. Swampy ground for three or four miles and streams; thence rising ground and gradual descent to river 23 miles. Gradual rising ground again and descent to streams at 36 and 38 miles.</p> <p>Time, 3 hours, 30 minutes.</p>
140. 13th October	Camp by Si-Ho Western River or Ta-Ho (big) or CHUOROK.	40	1,947	<p>Easy ascent of nine miles to top of pass, crossing a broad valley, thence an easy descent, but swampy heavy road, following stream called Si-Ho or Ta-Ho or Chuchok for five miles.</p> <p>Afterwards good road, descending through grassy valley, following stream. At thirty miles road bends round to the right, and follows close by the river the last four miles.</p> <p>Hills close on either bank, stream here twenty-five feet broad, flowing fast, two to three feet deep, strong bottom. Road stony in places.</p> <p>Time, 9 hours, 10 minutes.</p>
141. 14th October	TANKAR	10	1,963	<p>One mile along river then cross it to left bank. Four feet deep, strong current, bottom of boulders and stones, but good landing at both banks. Grassy country, road follows close by stream, stony in places. Hills close on either bank a few poplars and cultivation.</p> <p>Road again follows close by stream dipping, and rising, and stony.</p>

ROUTE No. 1.

FROM LEE TO TANKAR.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
...	GOMPA SOBA ...	...	...	Pass Monastery (Gompa Soba) on right bank and afterwards pass through cultivated country for about six miles. Trees and several small villages. Good road leading up to Tankar and practicable for country carts. Time, 5 hours.
141. { 15th } { 16th } October	TANKAR ...	...	...	Halt.

ROUTE No. 2.

FROM TANKAR TO CHUNGWEL.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
1. 17th October...	LUSAB ...	21	21	Good mule road follows "Si-Ho" for five (an inn here) miles, thence cross by wooden bridge and also the Hsianhor small stream running into it. Thence ascend over an easy pass and good road but hilly through cultivated land and well watered, and villages.
	HSIANHOR ...	...	...
2. 18th October...	SINING ...	15	30	Good road, following stream through a well watered and cultivated valley, dotted with small villages. Cart road.
3. 19th October...	SINING ...	...	...	Halt.
4. 20th October...	CHANG KIATSA ...	24	00	Good mule road following stream.
5. 21st October...	SHANGTAN ...	42	102	Good mule road through cultivated country after 20 miles enter gorge through which river runs. Last two miles passing through open country.
6. 22nd October...	MAHNEITSA ...	27	129	Road crosses river from north. Ferry boats. Deep and strong current some 60 yards across. After through treeless country. Cultivation. Most of the fields being manured with big stones.
	PAITUN HO ...	...	...

ROUTE No. 2.

FROM TANKAR TO CHUNOWSI.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
7. 23rd October...	SINCHENG ...	15	144	Good road through cultivation.
...	By river to LANCHO	21	165	Afterwards down river by skin raft down the Yellow River. Junction of the Si Ho and Yellow River 27 miles from Lancho at village of— by the salt pacs.
8. 24th October...	LANCHO ...	...	...	Halt.
9. 25th October...	SUUI PENHO ...	21	186	Indifferent cart road up hill through barren hilly country.
10. 26th October	LUTONGSA ...	27	213	Through flat uninteresting country passing village of "Shankiatong" 60 li (3 li equal 1 mile).
11. 27th October	TALAPAI ...	33	246	Desert like country, fair road, village of Chong-Changtsa 50 li.
12. 28th October	INTIAOSHAN ...	18	264	Desert like country little vegetation, no trees, village of "Honsihpu" 40 li.
13. 29th October	...	27	291	Heavy road sandy and hilly; country desolate.
14. 30th October	IEUANCHUEN ...	30	321	Very sandy road, barren country. "Kantangtsa" after 80 li.
16. 31st October	SHAPOTSIA ...	21	342	Very sandy road, thence follow the bed of stream down to river again and then over deep sand following the bed of river north west. Thence ferry boat.
18. 1st November	CHUNOWSI ...	12	354	By road and skin raft. Road sandy. Raft taking about 4 hours.
2nd	} November	...	...	Halt.
3rd				
4th				

ROUTE No. 3.

FROM CHUNOWEI TO PAOT'EO.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.	
		Inter-mediate.	Total.		
5th	... November	Wool boat down Yellow River.	
6th					
7th					
8th					
9th					
10th					
11th					
12th	... November		
13th					
13th November ...	PAOT'EO	...	600	954	Nine days down "Ho-ang Ho" or Yellow River as far as Paot'eo. Travelling some of the time day and night, most of the way through flat uninteresting country. River sometimes 2 miles broad. Probably 600 miles, much winding.

ROUTE No. 4.

FROM PAOT'EO TO TIENSIN.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
13th November ...	PAOT'EO	...	...	.....
1. 14th November	TOURTSI to SALAKI	30	30	After 13 miles come to Tourtsi.
2. 15th November	TARITSI	37	67	After 10 miles come to Mitourchen.
3. 16th November	KUEHUACHEN	40	107	After 17 miles come to Pehsieki
4. 17th November	SHIBONGWA	50	137	.....
5. 18th November	CHANFOLI	33	170	.....

ROUTE No. 4.

FROM PAOT'HO TO TIENHSIN.

Number of stage and date.	Names of stages.	DISTANCES.		REMARKS.
		Inter-mediate.	Total.	
6. 19th November	HOLOSITAI ...	40	210	Halt after 17 miles at a village.
7. 20th November	CHAHALPO ...	43	253	After 17 miles come to Mongol Camp.
8. 21st November	TROTAKBO ...	38	291	After 20 miles comes to Chakari.
9. 22nd November	UJENTSITAOHI ...	42	333	After 25 miles comes to Hsingpingbo.
10. 23rd November	NANTSINGPO ...	47	380	After 22 miles comes to Jokiatong.
11. 24th November	SIAOSIFU ...	32	412	After 14 miles comes to Shuenluafu.
12. 25th November	HUAILAHSIEN ...	...	...	After 12 miles comes to Kunioi. After 27 miles comes to Sachong.
13. 26th November	NAKHO ...	32	441	After 17 miles comes to Chatao.
14. 27th November	PEKIN ...	38	523	After 17 miles comes to Shaho.
10. 29th November	TIENHSIN ...	34	607	Inns to stop at half way.
				Miles.
				LEI to TANKAN ... 1,963
				TANKAN to CHUNGWEI ... 354
				CHUNGWEI to PAOT'HO (by river) ... 600
				PAOT'HO to TIENHSIN ... 607
				TOTAL ... 3,524



