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Classified List of the Officers of the Senior Department

of the Survey of India as it stood on the 1st July 1881.

No. sanctioned.	No. existing in each grade.	Names of Officers and Branch to which originally posted.	No. in general list.	Substantive Appointment.	Survey Party or Office to which at present attached.
<b>ADMINISTRATIVE STAFF.</b>					
1	1	Lt.-Genl. J. T. Walker, C. B., R. E., F. R. S., P. H. [G. T. S.]	2	Surv. Genl. of India	...
1	1	Lt.-Col. J. Sconce, s. c., P. H. [Rev.]	8	Depty. Surv. Genl.	...
1	1	Capt. R. V. Riddell, R. E., P. H. [Topogl.]	16	Asst. Surveyor General	...
2	2	Mr. J. O. N. James [Topogl.]	29	Ditto	...
3	3	Major J. Waterhouse, s. c., P. H. [Topogl.]	32	Ditto	On furlough
		Major S. H. Cowan, s. c., P. H. [Rev.]	36	Offg. Ditto	...
<b>SENIOR BRANCH.</b>					
<b>DEPUTY SUPERINTENDENTS.</b>					
<b>1ST GRADE.</b>					
4	1	Mr. J. B. N. Hennessey, M. A., F. R. S. [G. T. S.]	3	Depty. Supdt., 1st grade	In charge Head Quarters Office, Dehra Dun
	2	Col. F. C. Anderson, s. c., P. H. [Rev.]	1	Ditto	In charge Mirzapur District [Cadastral] Survey, N. W. P., Naini Tal
	3	Lt.-Col. G. C. Depree, s. c., P. H. [Topogl.]	4	Ditto	In charge Rajputana Topographical Survey, Simla
	4	Maj. H. R. Thuillier, R. E., P. H. [G. T. S.]	6	Ditto	On furlough
<b>2ND GRADE.</b>					
9-8	1	Lt.-Col. C. T. Haig, R. E. [G. T. S.]	7	Depty. Supdt., 2nd grade	On deputation
	2	Maj. J. Herschel, R. E., F. R. S., P. H. [G. T. S.]	9	Ditto	On duty, Europe
	3	Mr. R. B. Smart [Rev.]	10	Ditto	On furlough
	4	Lt.-Col. B. R. Branfill, B. C., P. H. [G. T. S.]	5	Ditto	In charge Bombay Party, Mussoorie
	5	Major G. Strahan, R. E., P. H. [Topogl.]	15	Ditto	In charge Mysore Topogl. Survey, Bangalore
	6	Maj. T. T. Carter, R. E., P. H. [G. T. S.]	13	Ditto	On furlough
	7	Lt.-Col. D. Macdonald, s. c., P. H. [Rev.]	11	Ditto	In charge Dehra Ismail Khan, &c., District Survey, Punjab, Murree
	8	Major F. Coddington, s. c., P. H. [Rev.]	12	Ditto	Deputy Surveyor General's Office, Calcutta
	9	Bt. Lt.-Col. W. M. Campbell, R. E., Passed [G. T. S.]	21	Ditto	In charge No. 2 Astronomical Party, Mussoorie
<b>3RD GRADE.</b>					
2-10	1	Capt. R. V. Riddell, R. E., P. H. [Topogl.]	16	Deputy Supdt., 3rd grade	Head Quarters, Calcutta
	2	Bt. Major C. Strahan, R. E. [Topogl.]	23	Ditto	In charge Gwalior and Central India Survey, Mussoorie
	3	Mr. J. O. N. James [Topogl.]	29	Ditto	Head Quarters, Calcutta
	4	Major W. Barron, s. c., P. H. [Rev.]	14	Ditto	In charge Ghazipur District [Cadastral] Survey, N. W. P., Naini Tal
	5	Lt.-Col. H. C. B. Tanner, Bombay s. c., P. H. [Rev.]	17	Ditto	On special duty, Gilgit
	6	Mr. E. T. S. Johnson [Rev.]	18	Ditto	In charge Jaunpur District [Cadastral] Survey, N. W. P., Hazaribagh
	7	Bt. Maj. W. J. Heaviside, R. E., P. H. [G. T. S.]	27	Ditto	In charge No. 1 Astronomical Party, Mussoorie
	8	Major A. Pullan, s. c., P. H. [G. T. S.]	20	Ditto	In charge Kattywar and Cutah Survey, Poona
	9	„ D. C. Andrew, s. c., P. H. [Rev.]	19	Ditto	In charge South Deccan Topogl. Survey, Bombay, Poona
	10	„ W. H. Wilkins, s. c., P. H. [Rev.]	22	Ditto	In charge Meerut, &c., District Survey, N. W. P., Mussoorie
	11	„ J. E. Sandeman, s. c., P. H. [Rev.]	24	Ditto	In charge Hanthawaddy Dist. [Cadastral] Survey, British Burma, Rangoon
	12	„ W. F. Badgley, s. c., P. H. [Topogl.]	25	Ditto	In charge Khasi and Gato Hills Topogl. Survey, Shillong

No. existing in each grade.	Consolidated Salary.	REMARKS.
	Rs. A. P.	
1	3,000 0 0	
1	2,200 0 0	
1	1,440 0 0	Also receives Rs. 200 special local allowance. Superintendent, Mathematical Instrument Department, and in charge Lithographic Branch, Head Quarters, Calcutta.
2	1,300 0 0	Also receives Rs. 200 special local allowance. In charge Engraving and Cartographic Branches, Head Quarters, Calcutta.
3	750 0 0	For 1 year and 91 days, from 12th December 1879; extension for 9 months. Also receives Rs. 100 Presidency allowance. In charge Photographic Branch, Head Quarters, Calcutta.
1	1,600 0 0	
2	1,627 14 0	Inclusive of Rs. 27-14-0 personal allowance.
3	1,600 0 0	
4	.....	For 2 years, from 17th November 1879.
1	1,600 0 0	Officiating Deputy Superintendent, 1st grade. Commissioner, Venice Exhibition.
2	.....	
3	.....	For 2 years, from 10th January 1880.
4	1,300 0 0	
5	1,482 10 0	
6	.....	For 2 years, from 1st December 1879.
7	1,300 0 0	
8	1,300 0 0	Also receives Rs. 60 Presidency allowance.
9	1,482 10 0	
1	1,440 0 0	Offg. Deputy Superintendent, 2nd grade. Assistant Surveyor General. Also receives Rs. 200 special local allowance.
2	1,440 0 0	Ditto ditto.
3	1,300 0 0	Ditto ditto. Assistant Surveyor General. Also receives Rs. 200 special local allowance.
4	1,000 0 0	
5	1,000 0 0	
6	1,000 0 0	
7	1,140 0 0	
8	1,000 0 0	Also receives Rs. 15 local allowance.
9	1,000 0 0	Ditto ditto.
10	1,000 0 0	
11	1,000 0 0	Also receives Rs. 125 Burma allowance.
12	1,000 0 0	Ditto Rs. 75 Assam allowance.

Classified List of the Officers of the Senior Department of the

Survey of India as it stood on the 1st July 1881,—concluded.

No. sanctioned.	No. existing in each grade.	Names of Officers and Branch to which originally posted.	No. in general list.	Substantive Appointment.	Survey Party or Office to which at present attached.
<b>SENIOR BRANCH—concd.</b>					
<b>ASSISTANT SUPERINTENDENTS.</b>					
<b>1ST GRADE.</b>					
11	...				
1	...	Bt. Maj. T. H. Holdich, R. E., L. S. [Topogl.]	31	Asst. Supdt., 1st grade	In charge Kohat Frontier Topogl. Survey, Mussoorie
2	...	Mr. J. Campbell ... [Rev.]	26	Ditto	On furlough
3	...	Major J. Waterhouse, s. c., P. H. [Topogl.]	32	Ditto	Ditto
4	...	Bt. Maj. M. W. Rogers, R. E., L. S. [G. T. S.]	33	Ditto	Offg. in charge Tidal and Levelling Operations, Poona
5	...	Capt. J. Hill, R. E. ... [G. T. S.]	34	Ditto	In charge Eastern Frontier Series, Bangalore
6	...	Major H. Lees Smith, s. c., M. A., LL. B., P. H. ... [Rev.]	28	Ditto	In charge North Deccan [Topogl.] Survey, Bombay, Poona
7	...	Mr. H. Horst ... [Topogl.]	39	Ditto	On furlough
8	...	W. H. Cole, M. A., H. S. ... [G. T. S.]	35	Ditto	Head Quarters Offices, Dehra Dun
9	...	H. B. Talbot, L. S. ... [Rev.]	30	Ditto	In charge Tharawaddy Dist. [Cadastral] Survey, British Burma, Rangoon
10	...	Capt. A. W. Baird, R. E., P. H. [G. T. S.]	42	Ditto	In charge Tidal and Levelling Operations, India and Burma, Poona
11	...	Capt. J. R. McCullagh, R. E., L. S. [G. T. S.]	44	Ditto	Hanthawaddy Dist. [Cadastral] Survey, British Burma, Rangoon
<b>2ND GRADE.</b>					
11	...				
1	...	Major J. R. Wilmer, s. c., H. S. [Topogl.]	45	Asst. Supdt., 2nd grade	In charge Bhopal and Malwa Topogl. Survey, Mussoorie
2	...	Mr. J. McGill ... [G. T. S.]	47	Ditto	In charge Khandesh and Bombay N. S. [Topogl.] Survey, Poona
3	...	Major S. H. Cowan, s. c., P. H. [Rev.]	36	Ditto	Offg. in charge Photographic Branch, Head Quarters, Calcutta
4	...	E. H. Steel, s. c., H. S. ... [Rev.]	37	Ditto	In charge Bassein District [Cadastral] Survey, British Burma, Rangoon
5	...	H. S. Hutchinson, s. c., P. H. [Rev.]	38	Ditto	Offg. in charge Darjeeling Survey Party
6	...	Mr. E. C. Barrett, H. S. ... [Rev.]	43	Ditto	On furlough
7	...	Major R. Beavan, s. c., P. H. ... [Rev.]	40	Ditto	In charge Beluchistan Topogl. Survey
8	...	Bt. Lt.-Col. R. G. Woodthorpe, R. E., L. S. [Topogl.]	50	Ditto	On furlough
9	...	E. P. Leach, V. C., R. E., L. S. [Topogl.]	51	Ditto	Offg. in charge Guzerat Survey
10	...	Mr. G. H. Cooke, L. S. ... [Rev.]	46	Ditto	On furlough
11	...	E. J. Jackson, L. S. ... [Rev.]	41	Ditto	Ditto
<b>3RD GRADE.</b>					
9-6	...				
1	...	Mr. W. G. Beverley ... [G. T. S.]	49	Asst. Supdt., 3rd grade	Tidal and Levelling Operations, India and Burma, Poona
2	...	Lieut. H. J. Harman, R. E., L. S. [G. T. S.]	53	Ditto	In charge Darjeeling Survey Party
3	...	Capt. G. W. Martin, s. c., H. S. [Rev.]	48	Ditto	On deputation
4	...	A. J. C. Scott, s. c., H. S. [Rev.]	52	Ditto	On furlough
5	...	Lieut. St. G. C. Gore, R. E. ... [G. T. S.]	55	Ditto	Ditto
6	...	Mr. E. C. Ryall ... [G. T. S.]	54	Ditto	Meerut, &c., Dists. Survey, N. W. P., Mussoorie
7	...	Capt. J. R. Hobday, s. c., H. S. [Topogl.]	56	Ditto	Guzerat Survey, Poona
8	...	Lieut. the Hon'ble M. G. Talbot, R. E., H. S. [Topogl.]	57	Supernumerary	Head Quarters Office, Mussoorie
9	...	F. B. Longe, R. E. ... [Topogl.]	58	Ditto	On duty, Poona

No. existing in each grade.	Consolidated Salary.	REMARKS.
	Rs. A. P.	
1	1,140 0 0	Officiating Deputy Superintendent, 3rd grade.
2	.....	For 2 years, from 1st February 1881.
3	.....	On private affairs for 1 year and 91 days, from 12th December 1879; extension for 9 months.
4	1,140 0 0	Officiating Deputy Superintendent, 3rd grade.
5	1,140 0 0	Officiating Deputy Superintendent, 3rd grade.
6	750 0 0	Also receives Rs. 100 charge allowance, and Rs. 15 local allowance.
7	.....	For 2 years, from 5th June 1879; extension for 3 months.
8	750 0 0	
9	750 0 0	Also receives Rs. 100 charge allowance, and Rs. 125 Burma allowance.
10	890 0 0	Ditto ditto ditto, Rs. 100 deputation allowance, and Rs. 15 local allowance.
11	890 0 0	Ditto Rs. 125 Burma allowance.
1	750 0 0	Officiating Assistant Superintendent, 1st grade. Also receives Rs. 100 charge allowance.
2	750 0 0	Ditto ditto. Ditto ditto ditto, and Rs. 15 local allowance.
3	750 0 0	Ditto ditto. Also receives Rs. 100 Presidency allowance.
4	750 0 0	Ditto ditto. Ditto ditto charge allowance, and Rs. 125 Burma allowance.
5	750 0 0	Ditto ditto.
6	.....	For 2 years, from 22nd July 1880.
7	750 0 0	Officiating Assistant Superintendent, 1st grade. Also receives Rs. 100 charge allowance.
8	.....	For 1 year on private affairs, from 30th October 1880.
9	740 0 0	Also receives Rs. 100 charge allowance.
10	.....	For 1 year, from 22nd May 1880; extension for 1 year.
11	.....	For 1 year 7 months and 16 days, from 1st May 1880.
1	600 0 0	Officiating Assistant Superintendent, 2nd grade. Also receives Rs. 15 local allowance.
2	670 0 0	Ditto ditto. Also receives Rs. 100 charge allowance, and Rs. 30 local allowance.
3	.....	Officiating Deputy Assay Master, Bombay Mint.
4	.....	On medical certificate for 2 years, from 21st April 1879; extension for 6 months.
5	.....	For 2 years from 11th December 1880.
6	600 0 0	Officiating Assistant Superintendent, 2nd grade.
7	600 0 0	Ditto ditto.
8	570 0 0	Temporarily attached.
9	570 0 0	Ditto.

Classified List of the Officers of the Junior or Subordinate

Department of the Survey of India as it stood on the 1st July 1881.

No. sanctioned.	N. existing in each grade.	Names of Officers and Branch to which originally posted.	No. in general list.	Substantive Appointment.	Survey Party or Office to which at present attached.
<b>JUNIOR BRANCH.</b>					
<b>SURVEYORS.</b>					
<b>1ST GRADE.</b>					
<i>Salary Rs. 500.</i>					
8	...				
1	...	Mr. H. Duhan ... [G. T. S.]	1	Surveyor, 1st grade	Correspondence Office
2	...	" N. A. Belletty, L. s. ... [Topogl.]	2	Ditto	On duty at Head Quarters, Calcutta
3	...	" W. H. Patterson, L. s. ... [Rev.]	3	Ditto	Detached under Settlement Officer, Cachir District, Assam
...	...	" J. F. Baness ... [Topogl.]	16	Ditto	Chief Draftsman, Head Quarters, Calcutta
4	...	" A. Chamarett ... [Topogl.]	4	Ditto	Geographical Examiner, Head Quarters, Calcutta
5	...	" J. Peyton ... [G. T. S.]	23	Ditto	On duty, Head Quarters Office, Calcutta
6	...	" A. D'Souza ... [G. T. S.]	12	Ditto	Guzerat Survey
7	...	" F. W. Kelly, H. s. ... [Rev.]	6	Ditto	On duty, Office of Deputy Surveyor General, Calcutta
8	...	" C. W. Campbell ... [Rev.]	5	Ditto	Mirzapur District [Cadastral] Survey, N. W. P.
<b>2ND GRADE.</b>					
<i>Salary Rs. 400.</i>					
11-10	...				
1	...	Mr. G. A. McGill, L. s. ... [Topogl.]	7	Surveyor, 2nd grade	Rajputana Topogl. Survey
2	...	" D. Atkinson ... [Topogl.]	15	Ditto	Bhopal and Malwa Topogl. Survey
3	...	" C. J. Neville ... [G. T. S.]	10	Ditto	On half pay
4	...	" F. Grant ... [Rev.]	14	Ditto	Hanthawaddy District [Cadastral] Survey, British Burma
5	...	" L. H. Clarke ... [G. T. S.]	9	Ditto	On duty at Head Quarters, Dehra Dun
6	...	" W. Todd ... [G. T. S.]	11	Ditto	Ditto ditto, Calcutta
...	...	" W. Sinclair ... [Rev.]	8	Ditto	Draftsman, Office of Deputy Surveyor General, Calcutta
7	...	" C. Wood, L. s. ... [G. T. S.]	17	Ditto	Computing Office, Head Quarters, Dehra Dun
8	...	" H. E. T. Keelan ... [G. T. S.]	18	Ditto	On duty at Head Quarters, Dehra Dun
9	...	" P. A. G. Cowley, L. s. ... [Rev.]	20	Ditto	Jaunpur District [Cadastral] Survey, N. W. P.
10	...	" A. J. Wilson, L. s. ... [Topogl.]	27	Ditto	On duty at Head Quarters, Calcutta
11	...	" G. Athiesson ... [G. T. S.]	19	Ditto	Drawing Office, Head Quarters, Dehra Dun
<b>3RD GRADE.</b>					
<i>Salary Rs. 350.</i>					
14	...				
1	...	Mr. J. A. May ... [Topogl.]	27	Surveyor, 3rd grade	On duty at Head Quarters, Calcutta
2	...	" A. D. Smart ... [Rev.]	105	Ditto	On half pay
3	...	" James Todd ... [Rev.]	54	Ditto	Meerut, &c., Dist. Survey, N. W. P.
4	...	" S. M. Smylie, L. s. ... [Rev.]	24	Ditto	South Deccan Survey
5	...	" F. Adams ... [Topogl.]	28	Ditto	On duty at Head Quarters, Calcutta
6	...	" J. S. Pemberton, L. s. ... [Rev.]	30	Ditto	Jaunpur Dist. [Cadastral] Survey, N. W. P.
7	...	" R. D. Farrell ... [Topogl.]	29	Ditto	On duty Office of Deputy Surveyor General, Calcutta
8	...	" H. R. Littlewood ... [Rev.]	31	Ditto	Bassein District [Cadastral] Survey, British Burma
9	...	" W. A. Wilson, L. s. ... [Rev.]	32	Ditto	Ghazipur District [Cadastral] Survey, N. W. P.
10	...	" G. B. Scott, H. s. ... [Rev.]	41	Ditto	Dehra Ismail Khan, &c., Districts Survey, Punjab
11	...	" A. M. Lawson, L. s. ... [Rev.]	40	Ditto	North Deccan Topogl. Survey
12	...	" W. S. Buttress ... [Rev.]	25	Ditto	Dehra Ismail Khan, &c., Dist. Survey, Punjab
13	...	" T. W. Reilly, L. s. ... [Rev.]	21	Ditto	On duty, Office of Deputy Surveyor General, Calcutta
14	...	" E. S. P. Atkinson ... [Topogl.]	34	Ditto	Rajputana Topogl. Survey

No. existing in each grade.	Consolidated Salary.	REMARKS.
	Rs. A. P.	
1	650 0 0	Personal Assistant to the Surveyor General of India. Inclusive of Rs. 150 personal allowance.
2	500 0 0	Also receives Rs. 45 Presidency house rent.
3	600 0 0	
4	500 0 0	Also receives Rs. 45 Presidency house rent.
5	500 0 0	Ditto Rs. 45 ditto.
6	500 0 0	Ditto Rs. 15 local allowance.
7	550 0 0	Inclusive of Rs. 50 personal allowance.
8	500 0 0	
1	400 0 0	
2	400 0 0	
3	200 0 0	On half-pay list, from 3rd November 1879.
4	400 0 0	Also receives Rs. 100 Burma allowance.
5	400 0 0	Doing duty as Solar Photographer.
6	400 0 0	Also receives Rs. 30 Presidency house rent.
...	400 0 0	Ditto Rs. 30 Presidency house rent.
7	400 0 0	
8	400 0 0	
9	400 0 0	
10	400 0 0	Ditto Rs. 30 Presidency house rent.
11	400 0 0	
1	350 0 0	Also receives Rs. 30 Presidency house rent.
2	175 0 0	On half-pay list, from 1st January 1880.
3	350 0 0	
4	350 0 0	Also receives Rs. 15 local allowance.
5	350 0 0	Ditto Rs. 30 Presidency house rent.
6	350 0 0	
7	350 0 0	Also receives Rs. 30 Presidency house rent.
8	350 0 0	Ditto Rs. 100 Burma allowance.
9	350 0 0	
10	450 0 0	Inclusive of Rs. 100 personal allowance.
11	350 0 0	Also receives Rs. 15 local allowance.
12	350 0 0	
13	350 0 0	Also receives Rs. 30 Presidency house rent.
14	350 0 0	

No. sanctioned.	No. existing in each grade.	Names of Officers and Branch to which originally posted.	No. in general list.	Substantive Appointment.	Survey Party or Office to which at present attached.	No. existing in each grade.	Consolidated Salary.	REMARKS.
		<b>JUNIOR BRANCH—contd.</b>						
		<b>SURVEYORS—concl'd.</b>						
21—18		<b>4TH GRADE.</b>						
		<i>Salary Rs. 300.</i>						
1	...	Mr. W. R. Vyall ... [Rev.]	13	Surveyor, 4th grade	Tharawaddy District [Cadastral] Survey, British Burma	1	300 0 0	Also receives Rs. 100 Burma allowance.
2	...	„ A. J. Gibson ... [Rev.]	33	Ditto	Dehra Ismail Khan, &c., Districts Survey, Punjab	2	300 0 0	Also receives Rs. 50 Assam allowance.
3	...	„ M. J. Ogle ... [Topogl.]	43	Ditto	Khasi and Garo Hills Topogl. Survey	3	300 0 0	
4	...	„ A. G. Wyatt ... [Topogl.]	35	Ditto	Khandesh and Bombay Native States Topogl. Survey	4	300 0 0	Ditto Rs. 18 local allowance.
5	...	„ H. Peychers ... [G. T. S.]	36	Ditto	Computing Office, Head Quarters, Dehra Dun	5	300 0 0	
6	...	„ G. Belcham, H. S. ... [G. T. S.]	38	Ditto	Tidal and Levelling Operations, India and Burma	6	300 0 0	Also receives Rs. 18 local allowance.
7	...	„ H. Dowman ... [Rev.]	37	Ditto	Hanthawaddy District [Cadastral] Survey, British Burma. Detached on water land Survey in Akyab	7	300 0 0	Ditto Rs. 100 Burma allowance.
8	...	„ E. G. Little ... [Rev.]	22	Ditto	Mirzapur District [Cadastral] Survey, N. W. P.	8	300 0 0	
9	...	„ H. T. Hanby, L. S. ... [Rev.]	39	Ditto	Ghazipur District [Cadastral] Survey, N. W. P.	9	300 0 0	
10	...	„ L. J. Pocock, H. S. ... [G. T. S.]	44	Ditto	Eastern Frontier Series	10	300 0 0	
11	...	„ A. Christie, H. S. ... [G. T. S.]	46	Ditto	Guzerat Survey	11	300 0 0	Also receives Rs. 18 local allowance.
12	...	„ W. J. O'Sullivan ... [G. T. S.]	48	Ditto	Darjeeling Survey	12	300 0 0	Ditto Rs. 36 ditto.
13	...	„ N. C. Gwynne ... [G. T. S.]	50	Ditto	Kattywar and Cutch Survey	13	300 0 0	Ditto Rs. 18 ditto.
14	...	„ W. C. Price ... [G. T. S.]	52	Ditto	Ghazipur District [Cadastral] Survey, N. W. P.	14	300 0 0	Also receives Rs. 18 local allowance.
15	...	„ C. H. McA'Fee, L. S. ... [G. T. S.]	61	Ditto	Guzerat Survey	15	300 0 0	
16	...	„ C. F. Hamer ... [Topogl.]	45	Ditto	Bhopal and Malwa Topogl. Survey	16	300 0 0	
17	...	„ J. H. O'Donel ... [Rev.]	49	Ditto	Bassein District [Cadastral] Survey, British Burma	17	300 0 0	Also receives Rs. 100 Burma allowance. Ditto Rs. 50 Assam allowance.
18	...	„ A. W. Chennell ... [Topogl.]	58	Ditto	Khasi and Garo Hills, Topogl. Survey	18	300 0 0	
19	...	„ T. E. M. Claudius ... [Topogl.]	47	Ditto	Kohat Frontier Topogl. Survey	19	300 0 0	
20	...	„ A. J. James ... [Topogl.]	59	Ditto	Mysore Topogl. Survey	20	300 0 0	
21	...	„ T. H. Rendell ... [G. T. S.]	64	Ditto	Tidal and Levelling Operations, India and Burma	21	300 0 0	Also receives Rs. 50 deputation allowance and Rs. 18 local allowance.
		<b>ASSISTANT SURVEYORS.</b>						
41		<b>1ST GRADE.</b>						
		<i>Salary Rs. 200 rising to Rs. 250.</i>						
1	...	Mr. R. Todd ... [Topogl.]	53	Asst. Surveyor, 1st grade	Dehra Ismail Khan, &c., Districts Survey, Punjab	1	250 0 0	
2	...	„ D. A. King ... [Rev.]	57	Ditto	Hanthawaddy District [Cadastral] Survey, British Burma	2	250 0 0	Also receives Rs. 100 Burma allowance.
3	...	„ R. B. Smart, Jr., L. S. ... [Rev.]	56	Ditto	Mirzapur District [Cadastral] Survey, N. W. P.	3	250 0 0	
4	...	„ F. Kitchen ... [Topogl.]	62	Ditto	Mysore Topogl. Survey	4	250 0 0	
5	...	„ W. Stotesbury, H. S., L. S., Canarese [Topogl.]	63	Ditto	Ditto ditto	5	250 0 0	
6	...	„ Hugh Todd ... [G. T. S.]	71	Ditto	Ditto ditto	6	250 0 0	
7	...	„ E. J. Connor, L. S. ... [G. T. S.]	69	Ditto	Tidal and Levelling Operations, India and Burma	7	250 0 0	Also receives Rs. 15 local allowance.

Classified List of the Officers of the Junior or Subordinate Department

of the Survey of India as it stood on the 1st July 1881,—continued.

No. sanctioned.	No. existing in each grade.	Names of Officers and Branch to which originally posted.	No. in general list.	Substantive Appointment.	Survey Party or Office to which at present attached.
<b>JUNIOR BRANCH—contd.</b>					
<b>ASSISTANT SURVEYORS—contd.</b>					
<b>1ST GRADE—concl'd.</b>					
<i>Salary Rs. 200 rising to Rs. 250—concl'd.</i>					
		Mr. J. Connor ... [Rev.]	66	Asst. Surveyor, 1st grade ...	Draftsman, Office of Deputy Surveyor General, Calcutta
8		„ T. H. Dunne, L. s. ... [Rev.]	67	Ditto ...	Bassein Dist. [Cadastral] Survey, British Burma
		„ W. J. Lane ... [Rev.]	68	Ditto ...	Draftsman, Office of Deputy Surveyor General, Calcutta
9		„ J. Bond ... [G. T. S.]	75	Ditto ...	No. 2 Astronomical Party
10		„ C. D. Potter, L. s. ... [G. T. S.]	76	Ditto ...	Eastern Frontier Series
11		„ C. Tapsell ... [Topogl.]	60	Ditto ...	Guzerat Survey
12		„ T. Kinney, L. s. ... [G. T. S.]	91	Ditto ...	On half-pay
13		„ J. Newland, L. s. ... [Rev.]	51	Ditto ...	North Deccan Survey
14		„ J. A. Barker ... [Topogl.]	72	Ditto ...	Khandesh and Bombay Native States Topogl. Survey
15		„ E. A. Wainright ... [Topogl.]	70	Ditto ...	Bhopal and Malwa Topogl. Survey
16		„ R. C. D. Ewing, H. s. ... [Rev.]	73	Ditto ...	Meerut, &c., Dists. Survey, N. W. P.
17		„ W. J. Cornelius, L. s. ... [Topogl.]	74	Ditto ...	Gwalior and Central India Topogl. Survey
18		„ W. W. McNair, L. s. ... [Topogl.]	82	Ditto ...	Kohat Frontier Topogl. Survey
19		„ J. T. U. Coxen ... [Rev.]	42	Ditto ...	Beluchistan Topogl. Survey
20		„ G. W. Jarbo, L. s. ... [Rev.]	77	Ditto ...	Tharawaddy District [Cadastral] Survey, British Burma
21		„ P. J. W. Doran, L. s. ... [Topogl.]	79	Ditto ...	Gwalior and Central India Topogl. Survey
22		„ J. R. Scott, L. s. ... [Rev.]	78	Ditto ...	Tharawaddy District [Cadastral] Survey, British Burma
23		„ J. McHatton, L. s. ... [Rev.]	81	Ditto ...	Hanthawaddy Dist. [Cadastral] Survey, British Burma
24		Mr. H. T. Kitchen ... [Topogl.]	84	Ditto ...	Bhopal and Malwa Topogl. Survey
25		„ J. H. Wilson, L. s. ... [Topogl.]	86	Ditto ...	Rajputana Topogl. Survey
26		„ J. Hickie, L. s. ... [G. T. S.]	87	Ditto ...	South Deccan Survey
27		„ W. Fielding, L. s. ... [G. T. S.]	89	Ditto ...	Kattywar and Cutch Survey
28		„ S. O. Madras ... [Rev.]	92	Ditto ...	Ghazipur Dist. [Cadastral] Survey, N. W. P.
29		„ G. D. Cusson, L. s. ... [G. T. S.]	90	Ditto ...	Guzerat Survey
30		„ T. F. Freeman, L. s. ... [Rev.]	93	Ditto ...	On sick leave
31		„ G. C. Swiney ... [Rev.]	94	Ditto ...	South Deccan Survey
32		„ W. H. Lilley ... [Topogl.]	88	Ditto ...	Bhopal and Malwa Topogl. Survey
33		„ J. S. Swiney ... [Rev.]	98	Ditto ...	Jaunpur Dist. [Cadastral] Survey, N. W. P.
34		„ C. P. Torrens ... [G. T. S.]	97	Ditto ...	Bombay Party
35		„ W. Robert ... [Topogl.]	100	Ditto ...	Darjeeling Survey
36		„ T. Shaw, L. s. ... [Rev.]	99	Ditto ...	Mirzapur Dist. [Cadastral] Survey, N. W. P.
37		„ C. W. Wilson, L. s. ... [Rev.]	80	Ditto ...	Meerut, &c., Dists. Survey, N. W. P.
38		„ W. D. Corbett ... [Rev.]	96	Ditto ...	Ghazipur Dist. [Cadastral] Survey, N. W. P.
39		„ F. E. Warde ... [Topogl.]	103	Ditto ...	Khandesh and Bombay Native States Topogl. Survey
40		„ E. J. Martin ... [Rev.]	83	Ditto ...	Jaunpur Dist. [Cadastral] Survey, N. W. P.
41		„ C. W. F. Seyers ... [Rev.]	65	Ditto ...	Meerut, &c., Dists. Survey, N. W. P.

No. existing in each grade.	Consolidated Salary.	REMARKS.
	Rs. A. P.	
...	325 0 0	
8	250 0 0	Also receives Rs. 100 Burma allowance.
...	300 0 0	
9	250 0 0	
10	250 0 0	
11	250 0 0	Also receives Rs. 15 local allowance.
12	125 0 0	On half-pay list, from 7th December 1879.
13	250 0 0	Also receives Rs. 15 local allowance.
14	250 0 0	Ditto ditto.
15	250 0 0	
16	250 0 0	
17	250 0 0	
18	250 0 0	
19	250 0 0	Also receives Rs. 50 Afghanistan allowance.
20	250 0 0	Ditto Rs. 100 Burma allowance.
21	250 0 0	
22	250 0 0	Also receives Rs. 100 Burma allowance.
23	250 0 0	Ditto ditto.
24	250 0 0	
25	250 0 0	
26	250 0 0	Also receives Rs. 15 local allowance.
27	250 0 0	Ditto ditto.
28	250 0 0	
29	250 0 0	Also receives Rs. 15 local allowance.
30	.....	For one year, from 1st May 1880; extension for 6 months.
31	250 0 0	Also receives Rs. 15 local allowance.
32	230 0 0	
33	230 0 0	
34	230 0 0	
35	220 0 0	Also receives Rs. 26-6-5 local allowance.
36	220 0 0	
37	210 0 0	
38	210 0 0	
39	210 0 0	Also receives Rs. 12-9-7 local allowance.
40	210 0 0	
41	210 0 0	

Classified List of the Officers of the Junior or Subordinate Department

of the Survey of India as it stood on the 1st July 1881,—continued.

No. sanctioned	No. existing in each grade.	Names of Officers and Branch to which originally posted.	No. in general list.	Substantive Appointment.	Survey Party or Office to which at present attached.
<b>JUNIOR BRANCH—contd.</b>					
<b>ASSISTANT SURVEYORS.</b>					
<b>2ND GRADE.</b>					
<i>Salary Rs. 160 rising to Rs. 200.</i>					
1		Mr. A. Cooper ... [Topogl.]	85	Asst. Surveyor, 2nd grade ...	On half-pay ...
2		„ W. H. Penrose ... [Rev.]	101	Ditto ...	South Deccan Survey ...
3		„ C. T. Templeton ... [Topogl.]	104	Ditto ...	Gwalior and Central India Topogl. Survey ...
4		„ J. McCay ... [Topogl.]	107	Ditto ...	Khasi and Garo Hills Topogl. Survey ...
5		„ G. E. Parker ... [Rev.]	106	Ditto ...	Hanthawaddy Dist. [Cadastral] Survey, British Burma ...
6		„ G. Campbell ... [Rev.]	55	Ditto ...	Bassein Dist. [Cadastral] Survey, British Burma ...
7		„ W. C. G. Barkley ... [Topogl.]	110	Ditto ...	Rajputana Topogl. Survey ...
8		„ G. T. Hall, L. s. ... [G. T. S.]	118	Ditto ...	Kattywar and Cutch Survey ...
9		„ G. Vander Beck, L. s. ... [Topogl.]	112	Ditto ...	Khandesh and Bombay Native States Topogl. Survey ...
10		„ J. Murphy ... [Rev.]	95	Ditto ...	Hanthawaddy Dist. [Cadastral] Survey, British Burma ...
11		„ C. W. J. Ford ... [Rev.]	109	Ditto ...	Bassein Dist. [Cadastral] Survey, British Burma ...
12		„ A. W. Smart ... [Rev.]	111	Ditto ...	Tharrawaddy District [Cadastral] Survey, British Burma ...
13		„ W. M. Kelly ... [Rev.]	113	Ditto ...	North Deccan Survey ...
14		„ A. Kitchen ... [Topogl.]	114	Ditto ...	Gwalior and Central India Topogl. Survey ...
15		„ P. White ... [Topogl.]	115	Ditto ...	Khasi and Garo Hills Topogl. Survey ...
16		„ B. M. Wilson ... [Rev.]	116	Ditto ...	Hanthawaddy Dist. [Cadastral] Survey, British Burma ...
17		„ E. P. S. Hill, L. s. ... [Rev.]	117	Ditto ...	Mirzapur District [Cadastral] Survey, N. W. P. ...
...		„ R. A. Gibson ... [Topogl.]	108	Ditto ...	Map Curator, Head Quarters, Calcutta ...
18		„ R. R. Dickinson, L. s. ... [Rev.]	120	Ditto ...	North Deccan Survey ...
19		„ J. F. Macarthy, L. s. ... [G. T. S.]	121	Ditto ...	Eastern Frontier Series ...
20		„ E. Graham, L. s. ... [Topogl.]	122	Ditto ...	Khandesh and Bombay Native States Topogl. Survey ...
21		„ H. Corkery, L. s. ... [G. T. S.]	128	Ditto ...	Beluchistan Topogl. Survey ...
22		„ G. L. Fleming ... [Topogl.]	123	Ditto ...	Mysore Topogl. Survey ...
<b>3RD GRADE.</b>					
<i>Salary Rs. 120 rising to Rs. 160.</i>					
1		Mr. A. Bryson, L. s. ... [G. T. S.]	102	Asst. Surveyor, 3rd grade ...	On half-pay ...
2		„ G. R. Copping ... [Topogl.]	124	Ditto ...	Bhopal and Malwa Topogl. Survey ...
3		„ G. A. Knight ... [Topogl.]	125	Ditto ...	South Deccan Survey ...
4		„ D. J. Collins ... [G. T. S.]	126	Ditto ...	Darjeeling Survey ...
5		„ P. A. Peters ... [Rev.]	127	Ditto ...	Detached under Settlement Officer, Cachar ...
6		„ P. F. Prunty ... [G. T. S.]	129	Ditto ...	Kattywar and Cutch Survey ...
7		„ J. Keating ... [G. T. S.]	130	Ditto ...	No. 1 Astronomical Party ...
8		„ C. S. Kraal, L. s. ... [Rev.]	131	Ditto ...	Jaunpur District [Cadastral] Survey, N. W. P. ...
9		„ S. F. Norman ... [G. T. S.]	132	Ditto ...	Guzerat Survey ...
10		„ E. B. M. Drew ... [Rev.]	119	Ditto ...	Ghazipur District [Cadastral] Survey, N. W. P. ...

No. existing in each grade.	Consolidated Salary.	REMARKS.
	Rs. A. P.	
1	100 0 0	On half-pay list, from 6th October 1879.
2	200 0 0	Also receives Rs. 12 local allowance.
3	200 0 0	
4	200 0 0	Also receives Rs. 40 Assam allowance.
5	200 0 0	Ditto Rs. 100 Burma allowance.
6	200 0 0	Also receives Rs. 100 Burma allowance.
7	200 0 0	
8	200 0 0	Also receives Rs. 12 local allowance.
9	192 0 0	Ditto Rs. 11-8-3 ditto.
10	184 0 0	Ditto Rs. 100 Burma allowance.
11	184 0 0	Ditto Rs. 100 ditto.
12	184 0 0	Ditto ditto ditto.
13	184 0 0	Ditto Rs. 11-0-7 local allowance.
14	184 0 0	
15	176 0 0	Also receives Rs. 40 Assam allowance.
16	176 0 0	Ditto Rs. 100 Burma allowance.
17	176 0 0	
...	220 0 0	
18	176 0 0	Also receives Rs. 10-8-11 local allowance.
19	168 0 0	
20	168 0 0	Also receives Rs. 10-1-3 local allowance.
21	168 0 0	Ditto Rs. 50 Afghanistan allowance.
22	168 0 0	
1	80 0 0	On half-pay list, from 1st May 1880.
2	160 0 0	
3	160 0 0	Also receives Rs. 9-9-7 local allowance.
4	160 0 0	Ditto Rs. 19-3-3 ditto.
5	.....	
6	160 0 0	Ditto Rs. 9-9-7 ditto.
7	160 0 0	Ditto Rs. 9-9-7 ditto.
8	160 0 0	
9	160 0 0	Also receives Rs. 10-12-9 local allowance.
10	160 0 0	Rejoined from half-pay list on 1st April 1881.

Classified List of Officers of the Junior or Subordinate Department

No. sanctioned.	No. existing in each grade.	Names of Officers and Branch to which originally posted.	No. in general list.	Substantive Appointment.	Survey Party or Office to which at present attached.
<b>JUNIOR BRANCH—concl'd.</b>					
<b>ASSISTANT SURVEYORS—concl'd.</b>					
<b>3RD GRADE—concl'd.</b>					
<i>Salary Rs. 120 rising to Rs. 160.</i>					
11		Mr. C. Norman, L. s. ... [G. T. S.]	133	Asst. Surveyor, 3rd grade ...	Guzerat Survey ...
12		„ D. Campbell ... [Topogl.]	134	Ditto ...	Khasi and Garo Hills Topogl. Survey ...
13		„ R. F. Warwick, L. s. ... [G. T. S.]	135	Ditto ...	Mysore Topographical Survey ...
14		„ L. F. Berkeley, L. s. ... [Rev.]	136	Ditto ...	Ghazipur District [Cadastral] Survey, N. W. P. ...
15		„ J. M. Kennedy ... [G. T. S.]	137	Ditto ...	Mysore Topographical Survey ...
16		„ G. P. Tate, L. s. ... [Topogl.]	138	Ditto ...	Gwalior and Central India Topogl. Survey ...
17		„ P. C. H. Smart ... [Rev.]	139	Ditto ...	Mirzapur District [Cadastral] Survey, N. W. P. ...
18		„ C. George ... [Topogl.]	140	Ditto ...	Khandesh and Bombay Native States Topographical Survey ...
19		„ J. C. Kelly, L. s. ... [Rev.]	141	Ditto ...	Dehra Ismail Khan, &c., District Survey, Punjab ...
20		„ A. George ... [G. T. S.]	142	Ditto ...	Guzerat Survey ...
21		„ R. W. Senior, L. s. ... [G. T. S.]	143	Ditto ...	Rajputana Topographical Survey ...
22		„ W. H. D. Ewing ... [Rev.]	144	Ditto ...	Bassein District [Cadastral] Survey, British Burma ...

of the Survey of India as it stood on the 1st July 1881,—concluded.

No. existing in each grade.	Consolidated Salary.	REMARKS.
	Rs. A. P.	
11	160 0 0	Also receives Rs. 9-9-7 local allowance.
12	160 0 0	Ditto Rs. 40 Assam allowance.
13	160 0 0	
14	160 0 0	
15	160 0 0	
16	144 0 0	
17	136 0 0	
18	136 0 0	Also receives Rs. 12-3-10 local allowance.
19	136 0 0	
20	136 0 0	Also receives Rs. 12-3-10 local allowance.
21	136 0 0	
22	136 0 0	Also receives Rs. 100 Burma allowance.



# General List of the Officers of the Senior Department

1	2	3	4	5	6	7
Genl. Seniority Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			Rs. A. P.
1	Colonel F. C. Anderson, s. c. [Rev.]	P.	54 0 8	Deputy Superintendent	1st grade	1,627 14 0
2	Lieut.-Genl. J. T. Walker, c. D., B. E., F. R. S. [G. T. S.]	P. H.	54 7 0	Surveyor General of India	.....	3,000 0 0
3	Mr. J. B. N. Hennessey, M. A., F. R. S., [G. T. S.]	Not passed	51 11 0	Deputy Superintendent	1st grade	1,600 0 0
4	Lieut.-Col. G. C. Depree, s. c. [Topogl.]	P. H.	48 10 28	Ditto	Ditto	1,800 0 0
5	„ B. R. Branfill, B. C. [G. T. S.]	P. H.	47 7 8	Ditto	2nd grade	1,300 0 0
6	Major H. R. Thuillier, B. E. [G. T. S.]	P. H.	43 3 5	Ditto	{ 1st grade 1st grade	.....
7	Lieut.-Col. C. T. Haig, B. E. [G. T. S.]	Not passed	46 8 20	Ditto	2nd grade	1,600 0 0
8	„ J. Sconce, s. c. [Rev.]	P. H.	45 2 29	Deputy Surveyor General	.....	2,200 0 0
9	Major J. Herschel, B. E., F. R. S. [G. T. S.]	P. H.	43 8 1	Deputy Superintendent	2nd grade	.....
10	Mr. R. B. Smart	Not passed	54 3 28	Ditto	Ditto	.....
11	Lieut.-Col. D. Macdonald, s. c. [Rev.]	P. H.	45 6 21	Ditto	Ditto	1,300 0 0
12	Major F. Coddington, s. c. [Rev.]	P. H.	43 1 28	Ditto	Ditto	1,300 0 0
13	„ T. T. Carter, B. E. [G. T. S.]	P. H.	43 4 22	Ditto	{ 2nd grade 2nd grade	.....
14	„ W. Barron, s. c. [Rev.]	P. H.	43 5 15	Ditto	3rd grade	1,000 0 0
15	„ G. Strahan, B. E. [Topogl.]	P. H.	42 4 24	Ditto	2nd grade	1,482 10 0
16	Captain R. V. Riddell, B. E. [Topogl.]	P. H.	41 3 19	Ditto	3rd grade	1,440 0 0
17	Lieut.-Col. H. C. B. Tanner, Bombay, s. c. [Rev.]	P. H.	45 11 15	Ditto	Ditto	1,000 0 0
18	Mr. E. T. S. Johnson	Not passed	53 2 2	Ditto	Ditto	1,000 0 0
19	Major D. C. Andrew, s. c. [Rev.]	P. H.	40 3 15	Ditto	Ditto	1,000 0 0
20	„ A. Pullan, s. c. [G. T. S.]	P. H.	45 3 0	Ditto	Ditto	1,000 0 0
21	Brevet Lieut.-Col. W. M. Campbell, B. E. [G. T. S.]	Passed	41 11 12	Ditto	2nd grade	1,482 10 0
22	Major W. H. Wilkins, s. c. [Rev.]	P. H.	39 8 25	Ditto	3rd grade	1,000 0 0
23	Brevet-Major C. Strahan, B. E. [Topogl.]	Not passed	38 1 25	Ditto	Ditto	1,440 0 0
24	Major J. E. Sandeman, s. c. [Rev.]	P. H.	37 9 29	Ditto	Ditto	1,000 0 0
25	„ W. F. Badgley, s. c. [Topogl.]	P. H.	43 7 21	Ditto	Ditto	1,000 0 0
26	Mr. J. Campbell	Not passed	53 4 27	Assistant Superintendent	1st grade	.....
27	Brevet-Major W. J. Heaviside, B. E. [G. T. S.]	P. H.	41 0 27	Deputy Superintendent	3rd grade	1,140 0 0
28	Major H. Lees Smith, s. c., M. A., LL. B. [Rev.]	P. H.	42 3 18	Assistant Superintendent	1st grade	760 0 0
29	Mr. J. O. N. James	Not passed	51 10 25	Deputy Superintendent	3rd grade	1,300 0 0
30	„ H. B. Talbot	[Rev.]	L. S. 50 8 5	Assistant Superintendent	{ 1st grade 1st grade	760 0 0

† Of the two grades here given, the first was under the organization of 1866.

# of the Survey of India as it stood on the 1st July 1881.

8	9	10	11	12
General Seniority Number.	Date of first appointment to Department.	Date of appointment to present grade.	* Period of service counting for pension on 1st July 1881.	REMARKS.
			Y. M. D.	
1	Sept. 10, 1852	April 1, 1868	...	In charge Mirzapur District [Cadastral] Survey, N. W. P., Naini Tal.
2	Dec. 1, 1853	Jan. 1, 1878	...	Surveyor General of India.
3	Apr. 1, 1854	April 1, 1866	26 0 14	In charge Head Quarters Offices, Dehra Dun.
4	Oct. 20, 1854	Oct. 20, 1866	...	In charge Rajputana Topographical Survey, Simla.
5	Oct. 4, 1858	Oct. 1, 1871	...	In charge Bombay Party, Mussoorie.
6	{ May 21, 1850	{ July 18, 1871 Oct. 27, 1878 }	...	On furlough
7	Sept. 22, 1859	Oct. 1, 1867	...	In charge Guzerat Survey, Poona
8	Oct. 21, 1859	Jan. 1, 1879	...	Deputy Surveyor General, Calcutta.
9	Nov. 12, 1859	Oct. 1, 1867	...	On duty, Europe.
10	Oct. 6, 1860	April 1, 1869	32 4 18	On furlough
11	Dec. 19, 1860	Jan. 1, 1878	...	In charge Dehra Ismail Khan, &c., Districts Survey, Punjab, Murree.
12	Jan. 17, 1862	Oct. 27, 1878	...	Deputy Surveyor General's Office, Calcutta.
13	{ Mar. 1, 1862	{ Oct. 1, 1871 Jan. 1, 1878 }	...	On furlough
14	June 27, 1862	April 1, 1870	...	In charge Ghazipur District [Cadastral] Survey, N. W. P., Naini Tal.
15	July 2, 1862	Oct. 26, 1870	...	In charge Mysore Topographical Survey, Bangalore.
16	Aug. 28, 1862	Oct. 1, 1867	...	Supdt., Mathl. Instt. Dept., and in charge Litho. Branch, Head Quarters, Calcutta.
17	Oct. 10, 1862	April 1, 1870	...	On special duty, Gilgit.
18	Nov. 21, 1862	July 5, 1870	33 8 19	In charge Jaunpur District [Cadastral] Survey, N. W. P., Hazaribagh.
19	Dec. 30, 1862	Jan. 1, 1878	...	In charge South Deccan Topographical Survey, Bombay, Poona.
20	Jan. 18, 1863	Jan. 1, 1878	...	In charge Kattywar and Cutch Survey, Poona.
21	Jan. 30, 1863	Jan. 1, 1879	...	In charge No. 2 Astronomical Party, Mussoorie.
22	Apr. 27, 1863	Oct. 27, 1878	...	In charge Meerut, &c., Districts Survey, N. W. P.
23	Sept. 26, 1863	Dec. 1, 1867	...	In charge Gwalior and Central India Topographical Survey, Mussoorie.
24	Oct. 6, 1864	Jan. 1, 1879	...	In charge Hanthawaddy District [Cadastral] Survey, British Burma, Rangoon.
25	May 3, 1865	Dec. 14, 1880	...	In charge Khasi and Garo Hills Topographical Survey, Shillong.
26	Nov. 29, 1865	Nov. 29, 1867	30 3 29a	On furlough
27	Mar. 1, 1866	April 5, 1872	...	In charge No. 1 Astronomical Party, Mussoorie.
28	{ Mar. 26, 1866	{ June 18, 1870 April 1, 1874 }	...	In charge North Deccan Topographical Survey, Bombay, Poona.
29	April 1, 1866	April 1, 1869	28 4 16	In charge Engraving and Cartographic Branches, Head Quarters, Calcutta.
30	{ April 1, 1866	{ Sept. 12, 1870 Dec. 22, 1878 }	32 7 0	In charge Tharawaddy District [Cadastral] Survey, British Burma, Rangoon.

\* Applies only to officers who are under the Uncovenanted Service Rules.

E

General List of the Officers of the Senior Department of the

1	2	3	4	5	6	7
Genl. Seniority Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
31	Bt.-Major T. H. Holdich, B. E. [Topogl.]	L. S.	Y. M. D. 38 4 16	Assistant Superintendent	1st grade ...	Ra. A. P. 1,140 0 0
32	Major J. Waterhouse, s. c. [Topogl.]	P. H.	38 11 8	Ditto	Ditto ...	...
33	Bt.-Major M. W. Rogers, B. E. [G. T. S.]	L. S.	39 4 26	Ditto	Ditto ...	1,140 0 0
34	Captain J. Hill, B. E. ... [G. T. S.]	Not passed	40 6 7	Ditto	Ditto ...	1,140 0 0
35	Mr. W. H. Cole, M. A. ... [G. T. S.]	H. S.	43 6 16	Ditto	{ 1st grade† 1st grade	{ ... 750 0 0
36	Major S. H. Cowan, s. c. ... [Rev.]	P. H.	39 9 16	Ditto	2nd grade...	750 0 0
37	„ E. H. Steel, s. c. ... [Rev.]	H. S.	40 2 5	Ditto	Ditto ...	750 0 0
38	„ H. S. Hutchinson, s. c. [Rev.]	P. H.	41 2 20	Ditto	Ditto ...	750 0 0
39	Mr. H. Horst ... [Topogl.]	Not passed	47 7 27	Ditto	1st grade ...	...
40	Major R. Beavan, s. c. ... [Rev.]	P. H.	36 9 11	Ditto	{ 2nd grade† 2nd grade	{ 750 0 0 ...
41	Mr. E. J. Jackson ... [Rev.]	L. S.	37 6 0	Ditto	2nd grade...	...
42	Captain A. W. Baird, B. E. ... [G. T. S.]	P. H.	38 8 5	Ditto	{ 1st grade† 1st grade	{ 890 0 0 ...
43	Mr. E. C. Barrett ... [Rev.]	H. S.	38 2 16	Ditto	2nd grade...	...
44	Captain J. R. McCullagh, B. E. [G. T. S.]	L. S.	39 3 5	Ditto	{ 1st grade† 1st grade	{ 890 0 0 ...
45	Major J. R. Wilmer, s. c. ... [Topogl.]	H. S.	40 5 12	Ditto	{ 1st grade† 2nd grade	{ ... 750 0 0
46	Mr. G. H. Cooke ... [Rev.]	L. S.	36 7 1	Ditto	{ 2nd grade† 2nd grade	{ ... 750 0 0
47	„ J. McGill ... [G. T. S.]	Not passed	50 8 9	Ditto	{ 1st grade† 2nd grade	{ 750 0 0 ...
48	Captain G. W. Martin, s. c. [Rev.]	H. S.	34 1 2	Ditto	{ 2nd grade† 3rd grade	{ ... ...
49	Mr. W. G. Beverley ... [G. T. S.]	Not passed	45 8 15	Ditto	{ 2nd grade† 3rd grade	{ ... 600 0 0
50	Bt. Lieut.-Col. R. G. Woodthorpe, B. E. [Topogl.]	L. S.	36 9 8	Ditto	{ 2nd grade† 2nd grade	{ ... ...
51	„ E. P. Leach, v. c., B. E. [Topogl.]	L. S.	34 2 20	Ditto	{ 2nd grade† 2nd grade	{ ... 740 0 0
52	Captain A. J. C. Scott, s. c. [Rev.]	H. S.	33 10 12	Ditto	3rd grade ...	...
53	Lieut. H. J. Harman, B. E. ... [G. T. S.]	L. S.	31 1 17	Ditto	{ 2nd grade† 3rd grade	{ ... 670 0 0
54	Mr. E. C. Ryall ... [G. T. S.]	Not passed	43 5 15	Ditto	{ 2nd grade† 3rd grade	{ ... 600 0 0
55	Lieut. St. G. C. Gore, B. E. [G. T. S.]	Ditto	32 4 8	Ditto	{ 2nd grade† 3rd grade	{ ... ...
56	Captain J. R. Hobday, s. c. ... [Topogl.]	H. S.	30 11 16	Ditto	3rd grade†	600 0 0
57	Lieut. the Hon'ble M. G. Talbot, B. E. [Topogl.]	H. S.	26 9 17	Supernumerary	Ditto ...	570 0 0
58	„ F. B. Longe, B. E. ... [Topogl.]	Not passed	24 8 2	Ditto	Ditto ...	570 0 0

† Of the two grades here given, the first was under the organization of 1866.

Survey of India as it stood on the 1st July 1881,—concluded.

General Seniority Number.	8	9	10	11	12
	Date of first appointment to Department.	Date of appointment to present grade.	*Period of service counting for pension on 1st July 1881.	Present Post.	REMARKS.
31	July 23, 1866	Dec. 15, 1868	Y. M. D. ...	In charge Kohat Frontier Topographical Party.	Offg. Deputy Superintendent, 3rd grade.
32	July 23, 1866	June 17, 1870	...	On furlough	For 1 year and 91 days, from 12th December 1879; extension for 9 months.
33	July 30, 1866	Dec. 15, 1868	...	Offg. in charge Tidal and Levelling Operations.	Offg. Deputy Superintendent, 3rd grade.
34	Dec. 18, 1866	Oct. 30, 1870	...	In charge Eastern Frontier Series, Bangalore.	Ditto ditto.
35	{ Jan. 3, 1867 <sup>a</sup> Sept. 1, 1867 <sup>b</sup>	{ Dec. 4, 1870 Oct. 27, 1873 }	13 5 29	On duty at Head Quarters Offices, Dehra Dun.	{ (a) Appointed on probation. Exclusive of service as Professor of Mathematics, Govt. College, Agra, from 14th April 1862 to end of Feb. 1864. (b) Brought on the strength of the Department.
36	{ Jan. 19, 1867 ...	{ Mar. 17, 1868 April 1, 1874 }	...	Offg. in charge Photographic Branch, Head Quarters, Calcutta.	Offg. Asst. Supdt., 1st grade, and Offg. Asst. Survr. Genl.
37	{ Feb. 1, 1867 ...	{ May 20, 1869 April 1, 1874 }	...	In charge Bassein District [Cadastral] Survey, British Burma, Rangoon.	Offg. Asst. Supdt., 1st grade.
38	{ Aug. 13, 1867 ...	{ Aug. 13, 1868 April 1, 1874 }	...	Offg. in charge Darjeeling Survey Party	Ditto ditto.
39	April 1, 1868	Oct. 1, 1869	23 7 1	On furlough	{ For 2 years, from 6th June 1879, extension for 3 months. Joined the Junior Branch, 1st September 1884. Service reckoned under new rules.
40	{ ... July 17, 1868	{ Nov. 9, 1869 Oct. 27, 1878 }	...	In charge Beluchistan Topographical Party	Offg. Asst. Supdt., 1st grade.
41	Nov. 5, 1868	Nov. 5, 1868	12 7 28	On furlough	For 1 year 7 months and 18 days, from 1st May 1860. Joined the Junior Branch, 26th Sept. 1864. Sick leave from 4th July to 3rd Aug. 1867. Sick leave from 19th Aug. to 30th Nov. 1867. Europe, medical certificate, from 23rd July 1871 to 10th Nov. 1872.
42	{ Dec. 4, 1868 ...	{ Oct. 1, 1871 Jan. 1, 1879 }	...	In charge Tidal and Levelling Operations, India and Burma, Poona.	...
43	Dec. 30, 1868	Dec. 30, 1868	17 7 3	On furlough	For 2 years, from 22nd July 1860. Joined the Junior Branch, 18th Nov. 1862. Sick leave for one month, from 20th June 1869.
44	{ Feb. 12, 1869 ...	{ Jan. 1, 1872 Dec. 14, 1880 Aug. 28, 1872 }	...	Hauthawaddy District [Cadastral] Survey, British Burma.	...
45	{ Aug. 24, 1869 ...	{ April 1, 1874 May 10, 1871 Dec. 14, 1880 }	13 5 17	In charge Bhopal and Malwa Topographical Survey, Mussoorie.	Offg. Asst. Supdt., 1st grade.
46	{ April 1, 1870 ...	{ April 1, 1873 April 1, 1874 }	27 8 12	On furlough	For 1 year, from 22nd May 1860, extension for 1 year. Joined the Junior Branch, 6th Dec. 1868.
47	{ Mar. 1, 1871 ...	{ April 1, 1874 Jan. 17, 1873 }	...	In charge Khandesh and Bombay Native States Topographical Survey, Poona.	Offg. Asst. Supdt., 1st grade. Furlough for 1 year, from 4th July 1879. Joined the Junior Branch, 1st Oct. 1881. Service reckoned under new rules.
48	{ Mar. 24, 1871 ...	{ April 1, 1874 April 8, 1871 Jan. 1, 1878 }	20 2 12	Offg. Deputy Assay Master, Bombay Mint	...
49	{ April 1, 1871 ...	{ April 1, 1874 Jan. 1, 1878 }	...	Tidal and Levelling Operations, India and Burma, Poona.	Offg. Asst. Supdt., 2nd grade. Joined the Junior Branch, 1st July 1864. Service reckoned under new rules.
50	{ July 14, 1871 ...	{ July 14, 1871 Dec. 22, 1878 }	...	On furlough	For 1 year on private affairs, from 30th October 1860.
51	{ Oct. 6, 1871 ...	{ Oct. 6, 1871 Jan. 1, 1879 }	...	Offg. in charge Guzerat Survey.	...
52	Jan. 17, 1872	Jan. 17, 1873	...	On furlough	On medical certificate to Europe for 2 years, from 21st April 1879, extension for 6 months.
53	{ June 3, 1872 ...	{ June 3, 1872 April 1, 1874 }	...	In charge Special Survey Operations in and around Darjeeling.	Offg. Asst. Supdt., 2nd grade.
54	{ April 1, 1873 ...	{ April 1, 1874 April 1, 1874 }	26 2 6	Meerut, &c., Districts Survey, N. W. P.	Offg. Asst. Supdt., 2nd grade. Joined the Junior Branch, 25th April 1865. Two hundred and twenty-five days' sick leave included under old rules.
55	{ Apl. 11, 1873 ...	{ Apl. 11, 1873 April 1, 1874 }	...	On furlough	{ For 2 years from 11th December 1860. (c) Under the organization of 1874.
56	Sept. 11, 1874	July 7, 1875	...	Guzerat Survey	Offg. Asst. Supdt., 2nd grade.
57	Mar. 15, 1880	Mar. 15, 1880	...	Head Quarters Office, Mussoorie	Temporarily attached.
58	Mar. 15, 1880	Mar. 15, 1880	...	On duty, Poona	Ditto ditto.

\* Applies only to officers who are under the Uncovenanted Service Rules.

General List of the Officers of the Junior or Subordinate Department

of the Survey of India as it stood on the 1st July 1881.

1	2	3	4	5	6	7
Genl. Seniority Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			Rs. A. P.
1	Mr. Harry Duban ... [G. T. S.]	...	54 5 22	Surveyor	1st grade ...	680 0 0
2	„ N. A. Belletty ... [Topogl.]	L. S.	52 9 27	Ditto	Ditto ...	500 0 0
3	„ W. H. Patterson ... [Rev.]	L. S.	42 9 6	Ditto	Ditto ...	...
4	„ A. Chamarett ... [Topogl.]	...	48 7 1	Ditto	Ditto ...	600 0 0
5	„ C. W. Campbell ... [Rev.]	...	50 1 24	Ditto	Ditto ...	500 0 0
6	„ F. W. Kelly ... [Rev.]	H. S.	47 10 5	Ditto	Ditto ...	550 0 0
7	„ G. A. McGill ... [Topogl.]	L. S.	43 2 7	Ditto	2nd grade ...	400 0 0
8	„ W. Sinclair ... [Rev.]	...	43 9 7	Ditto	Ditto ...	400 0 0
9	„ L. H. Clarke ... [G. T. S.]	...	47 0 27	Ditto	Ditto ...	400 0 0
10	„ C. J. Neuville ... [G. T. S.]	...	47 0 12	Ditto	Ditto ...	200 0 0
11	„ W. Todd ... [G. T. S.]	...	42 7 21	Ditto	Ditto ...	400 0 0
12	„ A. D'Souza ... [G. T. S.]	...	43 10 17	Ditto	1st grade ...	500 0 0
13	„ W. R. Vvall ... [Rev.]	...	42 6 2	Ditto	4th grade ...	300 0 0
14	„ F. Grant ... [Rev.]	...	45 3 6	Ditto	2nd grade ...	400 0 0
15	„ D. Atkinson ... [Topogl.]	...	44 1 24	Ditto	Ditto ...	400 0 0
16	„ J. F. Baness ... [Topogl.]	...	51 0 1	Ditto	1st grade ...	600 0 0
17	„ C. Wood ... [G. T. S.]	L. S.	38 11 10	Ditto	2nd grade ...	400 0 0
18	„ H. E. T. Keelan ... [G. T. S.]	...	38 3 1	Ditto	Ditto ...	400 0 0
19	„ G. Atkinson ... [G. T. S.]	...	37 8 20	Ditto	Ditto ...	400 0 0
20	„ P. A. G. Cowley ... [Rev.]	L. S.	39 5 15	Ditto	Ditto ...	400 0 0
21	„ T. W. Reilly ... [Rev.]	L. S.	40 0 7	Ditto	3rd grade ...	350 0 0
22	„ E. G. Little ... [Rev.]	...	35 8 19	Ditto	4th grade ...	300 0 0
23	„ J. Peyton ... [G. T. S.]	...	50 0 0	Ditto	1st grade ...	500 0 0
24	„ S. M. Smylie ... [Rev.]	L. S.	39 7 5	Ditto	3rd grade ...	350 0 0
25	„ W. S. Buttress ... [Rev.]	...	37 4 12	Ditto	Ditto ...	350 0 0
26	„ A. J. Wilson ... [Topogl.]	L. S.	38 10 0	Ditto	2nd grade ...	400 0 0
27	„ J. A. May ... [Topogl.]	...	40 1 16	Ditto	3rd grade ...	350 0 0
28	„ F. Adams ... [Topogl.]	...	45 2 6	Ditto	Ditto ...	350 0 0
29	„ R. D. Farrell ... [Topogl.]	...	38 5 1	Ditto	Ditto ...	350 0 0
30	„ J. S. Pemberton ... [Rev.]	L. S.	37 11 23	Ditto	Ditto ...	350 0 0

8	9	10	11	12
General Seniority Number.	Date of first appointment to Department.	Date of appointment to present grade.	Period of service counting for pension on 1st July 1881.	REMARKS.
			Y. M. D.	
1	April 22, 1845	April 1, 1866	31 0 22	Personal Assistant to the Surveyor Genl. of India. Exclusive of 16 months' furlough and 1 month's subsidiary leave, from 1st April 1870 to 30th August 1871. Service reckoned under new rules.
2	July 16, 1847	April 1, 1866	33 11 16	On duty at Head Quarters, Calcutta ... Service reckoned under old rules.
3	Dec. 1, 1851	Jan. 1, 1871	19 5 15	Detached under Settlement Officer, Cachar District, Assam. {Leave on private affairs, from 1st May to 31st August 1862. Leave on private affairs to Europe, from 20th July 1872 to 18th January 1873. Leave on private affairs to Europe, from 11th July 1879 to 2nd January 1880.
4	June 2, 1852	Mar. 1, 1871	29 0 29	Geographical Examiner, Head Quarters, Calcutta.
5	Nov. 1, 1853	June 26, 1880	27 8 0	Mirzapur Dist. [Cadastral] Survey, N. W. P.
6	Dec. 4, 1854	July 8, 1879	25 3 8	On duty, Office of Depy. Surveyor Genl., Calcutta. Special leave for 4 months, from 21st January 1859, which was overstayd from 21st May to 18th August 1853. Commencement of second service, 17th August 1859.
7	April 8, 1855	Jan. 1, 1871	26 2 23	Rajputana Topogl. Survey ... Sick leave, from 1st November 1871 to 28th February 1872. Service reckoned under old rules.
8	Oct. 1, 1855	May 1, 1878	21 3 3	Draftsman, Office of Depy. Surveyor Genl., Calcutta. On furlough, private affairs, from 19th April to 22nd October 1877, inclusive.
9	Nov. 26, 1855	Dec. 1, 1872	25 7 5	On duty at Head Quarters, Dehra Dun, as Solar Photographer.
10	Dec. 1, 1855	Oct. 1, 1871	25 7 0	On half-pay list, from 3rd Nov. 1879 ... Inclusive of 6 months' sick leave, from 1st November 1872, reckoned under old rules.
11	Jan. 11, 1856	June 1, 1874	23 4 23	On duty at Head Quarters, Calcutta ... Inclusive of 2 years which count as service out of 4 years and 24 days on medical certificate, under old rules.
12	Feb. 19, 1856	Sept. 1, 1875	20 7 15	Guzerat Survey ... Exclusive of 339 days' furlough, 77 days' leave on medical certificate, and 33 days' preparatory leave, under new rules.
13	June 13, 1856	April 1, 1869	25 0 18	Tharawaddy District [Cadastral] Survey, British Burma.
14	July 11, 1856	April 1, 1872	24 11 21	Hanthawaddy Dist. [Cadastral] Survey, British Burma.
15	Aug. 4, 1856	Jan. 1, 1871	24 10 28	Bhopal and Malwa Topogl. Survey.
16	Sept. 5, 1856	May 1, 1870	24 9 26a	Chief Draftsman, Head Quarters, Calcutta (a) Service reckoned under new rules.
17	May 6, 1858	May 1, 1878	22 11 10	Computing Office, Head Quarters, Dehra Dun. Service reckoned under old rules.
18	Aug. 17, 1858	July 8, 1879	15 3 0	On duty at Head Quarters, Dehra Dun. Exclusive of 11 months' and 13 days' furlough and 16 days' sick leave under new rules.
19	Aug. 1, 1859	June 7, 1881	21 8 20b	Drawing Office, Head Quarters, Dehra Dun. (b) Service reckoned under old rules.
20	Sept. 1, 1859	Nov. 1, 1879	21 10 0	Jaunpur District [Cadastral] Survey, N. W. P.
21	Oct. 18, 1859	June 26, 1880	21 7 2	On duty, Office of Depy. Surveyor Genl., Calcutta. Absent without leave, from 20th January to 28th February 1861.
22	Jan. 1, 1860	Nov. 5, 1871	21 6 0	Mirzapur Dist. [Cadastral] Survey, N. W. P. Apprentice, from 1st January 1860 to 4th November 1862.
23	Feb. 3, 1860	April 1, 1874	21 4 27c	On duty at Head Quarters, Calcutta ... (c) Service reckoned under old rules.
24	July 24, 1860	April 1, 1872	20 11 8	South Deccan Survey.
25	Sept. 1, 1860	Nov. 13, 1879	20 10 0	Dehra Ismael Khan, &c., Districts Survey, Punjab. Copyist, from 1st to 30th September 1860.
26	Oct. 1, 1860	June 26, 1880	20 9 0	On duty at Head Quarters, Calcutta ... Apprentice Draftsman, from 1st January 1860.
27	Oct. 1, 1860	Oct. 1, 1874	21 6 0	On duty at Head Quarters, Calcutta ... Apprentice Draftsman, from 1st January 1860.
28	Oct. 1, 1860	April 1, 1877	24 7 27d	On duty at Head Quarters, Calcutta ... (d) Inclusive of service as Sub-Surveyor, from 3rd November 1860 to 30th September 1860.
29	Oct. 1, 1860	Jan. 1, 1878	20 9 0	On duty, Office of Deputy Surveyor General, Calcutta.
30	Oct. 6, 1860	Jan. 1, 1878	20 8 21	Jaunpur District [Cadastral] Survey, N. W. P. Overstayd privilege leave by 5 days in June 1869.

General List of the Officers of the Junior or Subordinate Department

of the Survey of India as it stood on the 1st July 1881,—continued.

1	2	3	4	5	6	7
Genl. Seniority Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			Rs. A. P.
31	Mr. H. R. Littlewood ... [Rev.]	...	37 7 25	Surveyor	...	...
32	" W. A. Wilson ... [Rev.]	L. S.	38 1 2	Ditto	...	3rd grade ... 350 0 0
33	" A. J. Gibson ... [Rev.]	...	39 3 0	Ditto	...	Ditto ... 350 0 0
34	" E. S. P. Atkinson ... [Topogl.]	...	35 11 4	Ditto	...	4th grade ... 300 0 0
35	" A. G. Wyatt ... [Topogl.]	...	36 4 6	Ditto	...	3rd grade ... 350 0 0
36	" H. Peychers ... [G. T. S.]	...	38 6 18	Ditto	...	4th grade ... 300 0 0
37	" H. Dowman ... [Rev.]	...	35 0 20	Ditto	...	Ditto ... 300 0 0
38	" G. Belcham ... [G. T. S.]	H. S.	36 4 15	Ditto	...	Ditto ... 300 0 0
39	" H. T. Hanby ... [Rev.]	L. S.	34 8 12	Ditto	...	Ditto ... 300 0 0
40	" A. M. Lawson ... [Rev.]	L. S.	42 5 29	Ditto	...	Ditto ... 300 0 0
41	" G. B. Scott ... [Rev.]	H. S.	36 11 6	Ditto	...	3rd grade ... 350 0 0
42	" J. T. U. Coxen ... [Rev.]	...	40 9 22	Assistant Surveyor	...	Ditto ... 450 0 0
43	" M. J. Ogle ... [Topogl.]	...	39 3 27	Surveyor	...	1st grade ... 250 0 0
44	" L. J. Pooock ... [G. T. S.]	H. S.	37 9 5	Ditto	...	4th grade ... 300 0 0
45	" C. F. Hamer ... [Topogl.]	...	34 8 24	Ditto	...	Ditto ... 300 0 0
46	" A. Christie ... [G. T. S.]	H. S.	35 9 1	Ditto	...	Ditto ... 300 0 0
47	" T. E. M. Claudius ... [Topogl.]	...	35 1 0	Ditto	...	Ditto ... 300 0 0
48	" W. O'Sullivan ... [G. T. S.]	...	37 4 17	Ditto	...	Ditto ... 300 0 0
49	" J. H. O'Donel ... [Rev.]	...	35 11 15	Ditto	...	Ditto ... 300 0 0
50	" N. C. Gwynne ... [G. T. S.]	...	38 3 25	Ditto	...	Ditto ... 300 0 0
51	" J. Newland ... [Rev.]	L. S.	43 10 26	Assistant Surveyor	...	Ditto ... 300 0 0
52	" W. C. Price ... [G. T. S.]	...	35 0 8	Surveyor	...	1st grade ... 250 0 0
53	" R. Todd ... [Topogl.]	...	35 11 20	Assistant Surveyor	...	4th grade ... 300 0 0
54	" J. Todd ... [Rev.]	...	47 1 19	Surveyor	...	1st grade ... 250 0 0
55	" G. Campbell ... [Rev.]	...	32 11 19	Assistant Surveyor	...	3rd grade ... 350 0 0
56	" R. B. Smart, Jr. ... [Rev.]	L. S.	34 0 2	Ditto	...	2nd grade ... 200 0 0
57	" D. A. King ... [Rev.]	...	34 7 26	Ditto	...	1st grade ... 250 0 0
58	" A. W. Chennell ... [Topogl.]	...	34 7 0	Surveyor	...	Ditto ... 250 0 0
59	" A. J. James ... [Topogl.]	L. S.	34 7 12	Ditto	...	4th grade ... 300 0 0
60	" C. Tapsell ... [Topogl.]	L. S.	36 7 17	Assistant Surveyor	...	Ditto ... 300 0 0
61	" C. H. McA' Fee ... [G. T. S.]	L. S.	31 7 15	Surveyor	...	1st grade ... 250 0 0
62	" F. Kitchen ... [Topogl.]	...	35 3 7	Assistant Surveyor	...	4th grade ... 300 0 0
63	" W. Stotesbury ... [Topogl.]	{ H. S. } { L. S. Ca- } { narese. }	33 11 6	Ditto	...	1st grade ... 250 0 0
64	" T. H. Rendell ... [G. T. S.]	...	36 11 9	Surveyor	...	Ditto ... 250 0 0
65	" C. W. F. Seyers ... [Rev.]	...	37 10 15	Assistant Surveyor	...	4th grade ... 300 0 0
66	" J. Connor ... [Rev.]	...	33 9 24	Ditto	...	1st grade ... 210 0 0
						325 0 0

8	9	10	11	12	
General Seniority Number.	Date of first appointment to Department.	Date of appointment to present grade.	Period of service counting for pension on 1st July 1881.	Present Post.	REMARKS.
			Y. M. D.		
31	Oct. 6, 1860	Jan. 1, 1878	20 8 26	Bassein District [Cadastral] Survey, British Burma.	
32	Jan. 1, 1861	May 1, 1878	20 6 0	Ghazipur District [Cadastral] Survey, N. W. P.	
33	May 1, 1861	Oct. 1, 1873	20 1 27	Dehra Ismael Khan, &c., Distrs. Survey, Punjab.	Absent without leave for 3 days in January 1866.
34	Aug. 13, 1861	Dec. 17, 1880	12 7 2	Rajputana Topogl. Survey	Furlough for 1 year 3 months and 13 days, from 26th July 1876 to 8th November 1877, and sick leave for 19 days in September 1867.
35	Nov. 1, 1861	April 1, 1874	19 8 0	Khandesh and Bombay Native States Topogl. Survey.	
36	April 8, 1862	June 1, 1874	19 2 23	Computing Office, Head Quarters, Dehra Dun.	Service reckoned under old rules.
37	Oct. 16, 1862	Oct. 16, 1874	18 8 1	Waste Land Survey, British Burma, Akyab.	Absent without leave, 3 days. Sick leave, 2 days in Oct. 1865; 4 days in Dec. 1865, and from 7th to 16th December 1866.
38	Nov. 1, 1862	June 1, 1874	18 8 0	Tidal and Levelling Operations, India and Burma.	Service reckoned under old rules.
39	Nov. 13, 1862	Nov. 13, 1874	18 7 18	Ghazipur District [Cadastral] Survey, N. W. P.	
40	Nov. 18, 1862	Oct. 30, 1879	18 7 13	North Deccan Topogl. Survey.	
41	May 1, 1863	July 8, 1879	18 2 0	Dehra Ismael Khan, &c., Distrs. Survey, Punjab.	
42	May 16, 1863	Nov. 1, 1879	17 6 22	Beluchistan Topogl. Survey	Sick leave, from 8th to 31st October 1878, and 6 months from 12th November 1878.
43	July 1, 1863	April 1, 1873	16 3 27	Khasi and Garo Hills Topogl. Survey	Furlough to Europe for 2 years, from 21st November 1877 to 20th November 1879.
44	July 10, 1863	July 1, 1874	15 6 7	Eastern Frontier Series	Exclusive of 69 days' sick leave.
45	Aug. 3, 1863	July 13, 1878	12 8 24	Bhopal and Malwa Topogl. Survey.	
46	Aug. 7, 1863	Oct. 1, 1874	13 9 1	Guzerat Survey.	
47	Aug. 10, 1863	Jan. 1, 1880	13 1 0	Kohat Frontier Topogl. Survey.	
48	Oct. 1, 1863	Oct. 1, 1874	15 4 17	Darjeeling Survey.	
49	Oct. 1, 1863	Oct. 22, 1879	13 11 15	Bassein District [Cadastral] Survey, British Burma.	
50	Oct. 19, 1863	Oct. 1, 1874	16 3 25	Kattywar and Cutch Survey.	
51	Oct. 22, 1863	Jan. 1, 1878	17 8 10	North Deccan Survey.	
52	Nov. 1, 1863	Oct. 1, 1874	13 0 8	Ghazipur District [Cadastral] Survey, N. W. P.	
53	Nov. 1, 1863	Oct. 1, 1871	13 11 19	Dehra Ismael Khan, &c., Districts Survey, Punjab.	
54	Dec. 27, 1863	Jan. 1, 1872	17 6 4	Meerut, &c., Districts Survey, N. W. P.	Overstayed privilege leave by 1 day in August 1874.
55	Jan. 1, 1864	April 1, 1881	10 11 19	Bassein District [Cadastral] Survey, British Burma.	Office Assistant, from 1st January 1864 to 20th February 1874.
56	Jan. 1, 1864	May 27, 1874	12 0 2	Mirzapur District [Cadastral] Survey, N. W. P.	Apprentice, from 1st January to 31st December 1864.
57	April 12, 1864	Jan. 1, 1874	12 7 25	Hanthawaddy District [Cadastral] Survey, British Burma.	Apprentice, from 12th April to 30th June 1864.
58	May 1, 1864	Nov. 1, 1879	11 7 0	Khasi and Garo Hills Topogl. Survey	Furlough to Europe for 2 years, from 21st November 1877 to 20th November 1879. Probationer, from 10th November 1862 to 30th April 1864.
59	June 15, 1864	Nov. 22, 1880	12 7 12	Mysore Topogl. Survey.	
60	Aug. 2, 1864	Oct. 1, 1872	14 7 16	Guzerat Survey.	
61	Sept. 6, 1864	Aug. 1, 1875	9 7 15	Ditto.	
62	Oct. 1, 1864	April 1, 1874	13 1 7	Mysore Topogl. Survey	Exclusive of 2 months' sick leave.
63	Oct. 4, 1864	April 1, 1874	11 11 6	Ditto.	
64	Oct. 11, 1864	June 7, 1881	14 11 9	Tidal and Levelling Operations, India and Burma.	
65	Dec. 1, 1864	June 7, 1881	15 10 15	Meerut, &c., Districts Survey, N. W. P.	
66	Feb. 15, 1865	Dec. 1, 1874	11 9 24	Draftsman, Office of Deputy Surveyor General, Calcutta.	

General List of the Officers of the Junior or Subordinate Department

of the Survey of India as it stood on the 1st July 1881,—continued.

1	2	3	4	5	6	7
Genl. Seniority Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			Rs. A. P.
67	Mr. T. H. Dunne ... [Rev.]	L. S.	33 6 5	Assistant Surveyor ...	1st grade ...	250 0 0
68	" W. J. Lane ... [Rev.]	...	34 1 5	Ditto ...	Ditto ...	300 0 0
69	" E. J. Connor ... [G. T. S.]	L. S.	32 10 15	Ditto ...	Ditto ...	260 0 0
70	" E. A. Wainright ... [Topogl.]	...	33 0 23	Ditto ...	Ditto ...	250 0 0
71	" Hugh Todd ... [G. T. S.]	...	33 10 15	Ditto ...	Ditto ...	250 0 0
72	" J. A. Barker ... [Topogl.]	...	35 2 18	Ditto ...	Ditto ...	250 0 0
73	" R. C. D. Ewing ... [Rev.]	H. S.	33 0 20	Ditto ...	Ditto ...	250 0 0
74	" W. J. Cornelius ... [Topogl.]	L. S.	32 3 1	Ditto ...	Ditto ...	250 0 0
75	" J. Bond ... [G. T. S.]	...	31 5 24	Ditto ...	Ditto ...	250 0 0
76	" C. D. Potter ... [G. T. S.]	L. S.	35 9 27	Ditto ...	Ditto ...	250 0 0
77	" G. W. Jarbo ... [Rev.]	L. S.	33 9 15	Ditto ...	Ditto ...	250 0 0
78	" J. R. Scott ... [Rev.]	L. S.	32 3 27	Ditto ...	Ditto ...	250 0 0
79	" P. J. W. Doran ... [Topogl.]	L. S.	32 1 27	Ditto ...	Ditto ...	250 0 0
80	" C. W. Wilson ... [Rev.]	L. S.	35 7 22	Ditto ...	Ditto ...	210 0 0
81	" J. McHatton ... [Rev.]	L. S.	31 11 14	Ditto ...	Ditto ...	250 0 0
82	" W. W. McNair ... [Topogl.]	L. S.	30 9 18	Ditto ...	Ditto ...	250 0 0
83	" E. J. Martin ... [Rev.]	...	30 4 15	Ditto ...	Ditto ...	210 0 0
84	" H. T. Kitchen ... [Topogl.]	...	33 0 23	Ditto ...	Ditto ...	250 0 0
85	" A. Cooper ... [Topogl.]	...	40 8 4	Ditto ...	2nd grade...	100 0 0
86	" J. H. Wilson ... [Topogl.]	L. S.	35 0 23	Ditto ...	1st grade ...	250 0 0
87	" J. Hickie ... [G. T. S.]	L. S.	32 5 17	Ditto ...	Ditto ...	250 0 0
88	" W. H. Lilley ... [Topogl.]	...	32 6 28	Ditto ...	Ditto ...	230 0 0
89	" W. Fielding ... [G. T. S.]	L. S.	33 1 13	Ditto ...	Ditto ...	250 0 0
90	" G. D. Cusson ... [G. T. S.]	L. S.	34 9 7	Ditto ...	Ditto ...	250 0 0
91	" T. Kinney ... [G. T. S.]	L. S.	34 1 27	Ditto ...	Ditto ...	125 0 0
92	" S. O. Madras ... [Rev.]	...	30 10 16	Ditto ...	Ditto ...	250 0 0
93	" T. F. Freeman ... [Rev.]	L. S.	30 3 27	Ditto ...	Ditto ...	.....
94	" G. C. Swiney ... [Rev.]	...	32 0 4	Ditto ...	Ditto ...	250 0 0
95	" J. Murphy ... [Rev.]	...	28 11 19	Ditto ...	2nd grade...	184 0 0
96	" W. D. Corbett ... [Rev.]	...	31 1 0	Ditto ...	1st grade ...	210 0 0
97	" C. P. Torrens ... [G. T. S.]	...	29 6 12	Ditto ...	Ditto ...	230 0 0
98	" J. S. Swiney ... [Rev.]	...	30 6 12	Ditto ...	Ditto ...	230 0 0
99	" T. Shaw ... [Rev.]	L. S.	28 7 15	Ditto ...	Ditto ...	220 0 0

8	9	10	11	12
General Seniority Number.	Date of first appointment to the Department.	Date of appointment to present grade.	Period of service counting for pension on 1st July 1881.	REMARKS.
			Y. M. D.	
67	Feb. 15, 1865	Dec. 1, 1874	11 5 24	Bassein District [Cadastral] Survey, British Burma. Absent without leave one day, and sick leave for 10 days in October 1865.
68	Mar. 1, 1865	Dec. 1, 1874	11 8 26	Draftsman, Office of Depy. Survr. Genl., Calcutta. Sick leave, from 19th May to 6th July 1866, and from 7th August to 23rd October 1866.
69	Mar. 1, 1865	July 1, 1874	10 4 10	Tidal and Levelling Operations, India and Burma. Exclusive of 6 months' and 5 days' leave on private affairs under new rules.
70	May 1, 1866	July 13, 1878	11 0 13	Bhopal and Malwa Topogl. Survey.
71	July 15, 1865	June 1, 1874	11 9 16	Mysore Topogl. Survey ... Exclusive of 30 days' sick leave.
72	Sept. 1, 1865	Jan. 1, 1878	13 2 18	Khandesh and Bombay Native States Topogl. Survey.
73	June 9, 1866	Aug. 1, 1878	11 0 20	Meerut, &c., Districts Survey, N. W. P.
74	Aug. 15, 1866	July 8, 1879	10 3 1	Gwalior and Central India Topogl. Survey.
75	Oct. 18, 1866	Oct. 1, 1874	9 5 4	No. 2 Astronomical Party ... Exclusive of 20 days' sick leave.
76	Oct. 29, 1866	Oct. 1, 1874	13 8 24	Eastern Frontier Series, Moulmein ... Ditto of 33 days' sick leave.
77	Nov. 1, 1866	Jan. 1, 1880	11 9 0	Tharawaddy District [Cadastral] Survey, British Burma.
78	Jan. 19, 1867	Nov. 22, 1880	10 3 27	Ditto, ditto.
79	Feb. 1, 1867	July 6, 1880	9 5 3	Gwalior and Central India Topogl. Survey.
80	June 21, 1867	April 1, 1881	13 2 22	Meerut, &c., Districts Survey, N. W. P. (a) Commencement of second service. Sick leave for 3 months, from 1st March 1869, and 2 months, from 1st August 1869.
81	July 1, 1867	April 1, 1881	8 11 14	Hanthawaddy District [Cadastral] Survey, British Burma. Furlough for 1 year, from 1st January to 31st December 1870.
82	Sept. 1, 1867	Oct. 22, 1879	8 10 18	Kohat Frontier Topogl. Survey.
83	Sept. 16, 1867	April 1, 1881	8 4 15	Jaunpur District [Cadastral] Survey, N. W. P. Office Assistant, from 10th September 1867 to 31st July 1870.
84	Nov. 1, 1867	April 1, 1881	11 0 23	Bhopal and Malwa Topogl. Survey.
85	Dec. 1, 1867	April 1, 1874	18 3 0	On half-pay list, from 6th October 1879. (b) Service reckoned under old rules; includes previous service in Pegu Survey, from 2nd January 1863 to 30th November 1867.
86	April 1, 1868	April 1, 1881	12 10 23	Rajputana Topogl. Survey ... Exclusive of 2 months' sick leave, from 1st July 1869. Appointed as Draftsman, from 16th May 1863.
87	April 29, 1868	April 1, 1881	9 11 17	South Deccan Survey, Bombay ... Exclusive of six months' sick leave.
88	May 1, 1868	April 1, 1881	10 1 7	Bhopal and Malwa Topogl. Survey ... Exclusive of leave on medical certificate, from 14th Dec. 1877 to 3rd June 1878. Previous service as Apprentice, from 1st November 1867.
89	May 3, 1868	April 1, 1881	11 1 13	Kattywar and Cutch Survey.
90	May 8, 1868	April 1, 1881	11 9 7	Guzerat Survey ... Exclusive of furlough for 364 days, from 1st November 1870 to 30th October 1880.
91	June 17, 1868	Oct. 1, 1874	11 6 27	On half-pay list, from 7th Dec. 1879.
92	July 6, 1868	April 1, 1881	8 10 16	Ghazipur District [Cadastral] Survey, N. W. P.
93	Sept. 9, 1868	April 1, 1881	7 3 27	On sick leave ... For one year, from 1st May 1880 extension for 6 months.
94	Sept. 17, 1868	April 1, 1881	10 0 4	South Deccan Survey.
95	Nov. 22, 1868	April 1, 1881	6 11 19	Hanthawaddy District [Cadastral] Survey, British Burma. Office Assistant, from 22nd November 1868 to 31st October 1871.
96	Dec. 12, 1868	April 1, 1881	9 1 0	Ghazipur District [Cadastral] Survey, N. W. P. Office Assistant, from 1st December 1868 to 31st July 1870.
97	Dec. 12, 1868	April 1, 1881	7 6 12	Bombay Party.
98	Jan. 5, 1869	April 1, 1881	8 6 12	Jaunpur District [Cadastral] Survey, N. W. P.
99	April 21, 1869	April 1, 1881	6 7 15	Mirzapur District [Cadastral] Survey, N. W. P.

General List of the Officers of the Junior or Subordinate Department

of the Survey of India as it stood on the 1st July 1881,—continued.

1	2	3	4	5	6	7
Genl. Seniority Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			Rs. A. P.
100	Mr. W. Robert ... [Topogl.]	...	30 10 2	Assistant Surveyor ...	1st grade ...	220 0 0
101	„ W. H. Penrose ... [Rev.]	L. S.	29 8 24	Ditto ...	2nd grade ...	200 0 0
102	„ A. Bryson ... [G. T. S.]	H. S.	31 10 1	Ditto ...	3rd grade ...	80 0 0
103	„ F. E. Warde ... [Topogl.]	...	29 9 24	Ditto ...	1st grade ...	210 0 0
104	„ C. T. Templeton ... [Topogl.]	...	28 9 27	Ditto ...	2nd grade ...	200 0 0
105	„ A. D. Smart ... [Rev.]	...	50 8 17	Surveyor ...	3rd grade ...	175 0 0
106	„ G. E. Parker ... [Rev.]	...	31 4 18	Assistant Surveyor ...	2nd grade ...	200 0 0
107	„ J. McCay ... [Topogl.]	...	27 8 23	Ditto ...	Ditto ...	200 0 0
108	„ E. A. Gibson ... [Topogl.]	...	26 11 26	Ditto ...	Ditto ...	220 0 0
109	„ C. W. J. Ford ... [Rev.]	...	28 3 6	Ditto ...	Ditto ...	184 0 0
110	„ W. C. G. Barckley ... [Topogl.]	...	29 8 9	Ditto ...	Ditto ...	200 0 0
111	„ A. W. Smart ... [Rev.]	...	30 4 1	Ditto ...	Ditto ...	184 0 0
112	„ G. Vander Beck ... [Topogl.]	L. S.	31 9 15	Ditto ...	Ditto ...	192 0 0
113	„ W. M. Kelly ... [Rev.]	...	26 10 25	Ditto ...	Ditto ...	184 0 0
114	„ A. Kitchen ... [Topogl.]	...	28 5 4	Ditto ...	Ditto ...	184 0 0
115	„ P. White ... [Topogl.]	L. S.	30 8 22	Ditto ...	Ditto ...	176 0 0
116	„ B. M. Wilson ... [Rev.]	...	33 2 17	Ditto ...	Ditto ...	176 0 0
117	„ E. P. S. Hill ... [Rev.]	L. S.	27 0 17	Ditto ...	Ditto ...	176 0 0
118	„ G. T. Hall ... [G. T. S.]	L. S.	29 2 24	Ditto ...	Ditto ...	200 0 0
119	„ E. B. M. Drew ... [Rev.]	...	27 2 10	Ditto ...	3rd grade ...	160 0 0
120	„ R. R. Dickinson ... [Rev.]	L. S.	29 11 6	Ditto ...	2nd grade ...	176 0 0
121	„ J. F. McCarthy ... [G. T. S.]	L. S.	28 2 2	Ditto ...	Ditto ...	168 0 0
122	„ E. Graham ... [Topogl.]	L. S.	27 8 0	Ditto ...	Ditto ...	168 0 0
123	„ G. L. Fleming ... [Topogl.]	...	27 2 29	Ditto ...	Ditto ...	168 0 0
124	„ G. R. Copping ... [Topogl.]	L. S.	28 0 6	Ditto ...	3rd grade ...	160 0 0
125	„ G. A. Knight ... [Topogl.]	...	27 2 9	Ditto ...	Ditto ...	160 0 0
126	„ D. J. Collins ... [G. T. S.]	...	27 1 27	Ditto ...	Ditto ...	160 0 0
127	„ P. A. Peters ... [Rev.]	L. S.	26 6 23	Ditto ...	Ditto ...	...
128	„ H. Corkery ... [G. T. S.]	L. S.	29 10 10	Ditto ...	2nd grade ...	168 0 0
129	„ P. F. Prunty ... [G. T. S.]	...	26 6 6	Ditto ...	3rd grade ...	160 0 0
130	„ J. Keating ... [G. T. S.]	...	27 1 27	Ditto ...	Ditto ...	160 0 0
131	„ C. S. Kraal ... [Rev.]	L. S.	27 9 6	Ditto ...	Ditto ...	160 0 0
132	„ S. F. Norman ... [G. T. S.]	...	26 10 23	Ditto ...	Ditto ...	160 0 0
133	„ C. Norman ... [G. T. S.]	L. S.	25 1 12	Ditto ...	Ditto ...	160 0 0

8	9	10	11	12
Date of first appointment to the Department.	Date of appointment to present grade.	Period of service counting for pension on 1st July 1881.	Present Post.	REMARKS.
		Y. M. D.		
100	Aug. 21, 1869	April 1, 1881	8 10 2	Darjeeling Survey.
101	Aug. 11, 1869	Dec. 16, 1878	7 8 24	South Deccan Survey.
102	Sept. 20, 1869	Oct. 1, 1873	9 10 1	On half-pay list, from 1st May 1880.
103	Sept. 1, 1870	April 1, 1881	7 9 24	Khandesh and Bombay Native States Topogl. Survey.
104	Sept. 1, 1870	July 6, 1880	6 9 27	Gwalior and Central India Topogl. Survey.
105	Oct. 1, 1870 <sup>a</sup>	Oct. 1, 1870	10 9 0	On half-pay list, from 1st Jan. 1880 ...
106	Nov. 18, 1870	Dec. 17, 1880	9 4 18	Hanthawaddy Dist. [Cadastral] Survey, British Burma.
107	Dec. 1, 1870	Nov. 22, 1880	5 8 23	Khasi and Garo Hills Topogl. Survey.
108	Dec. 1, 1870	April 1, 1881	4 11 26	Map Curator, Head Quarters, Calcutta...
109	Nov. 1, 1871	April 1, 1881	6 3 6	Bassein District [Cadastral] Survey, British Burma.
110	Dec. 1, 1871	April 1, 1881	7 8 9	Rajputana Topogl. Survey ...
111	Dec. 1, 1871	April 1, 1881	8 4 1	Tharawaddy District [Cadastral] Survey, British Burma.
112	July 1, 1872	April 1, 1881	9 9 15	Khandesh and Bombay Native States Topogl. Survey.
113	Oct. 1, 1872	April 1, 1881	4 10 25	North Deccan Survey ...
114	Oct. 1, 1872	April 1, 1881	6 5 4	Gwalior and Central India Topogl. Survey.
115	Oct. 1, 1872	April 1, 1881	7 11 3	Khasi and Garo Hills Topogl. Survey ...
116	Nov. 15, 1872	April 1, 1881	9 5 0	Hanthawaddy Dist. [Cadastral] Survey, British Burma.
117	Nov. 16, 1872	April 1, 1881	5 0 17	Mirzapur District [Cadastral] Survey, N. W. P.
118	Nov. 22, 1872	April 1, 1881	7 2 24	Kattywar and Cutch Survey.
119	May 5, 1873	April 1, 1881	3 5 26	Ghazipur District [Cadastral] Survey, N. W. P.
120	April 16, 1873	April 1, 1881	7 11 6	North Deccan Survey ...
121	Aug. 1, 1873	April 1, 1881	6 2 2	Eastern Frontier Series.
122	Aug. 11, 1873	April 1, 1881	5 8 0	Khandesh and Bombay Native States Topogl. Survey.
123	Aug. 11, 1873	June 7, 1881	3 7 6	Mysore Topogl. Survey.
124	Aug. 11, 1873	Jan. 1, 1880	6 0 6	Bhopal and Malwa Topogl. Survey ...
125	Aug. 11, 1873	April 1, 1880	5 2 9	South Deccan Survey.
126	Oct. 6, 1873	June 11, 1880	5 0 9	Darjeeling Survey ...
127	Nov. 1, 1873	July 6, 1880	4 6 23	Detached under Settlement Officer, Cachar.
128	Nov. 20, 1873	April 1, 1881	6 11 17	Beluchistan Topogl. Survey ...
129	May 9, 1874	Sept. 21, 1880	4 6 6	Kattywar and Cutch Survey.
130	June 1, 1874	Nov. 22, 1880	5 1 27	No. 1 Astronomical Party.
131	July 24, 1874	Dec. 20, 1880	5 8 19	Jaunpur District [Cadastral] Survey, N. W. P.
132	Sept. 1, 1874	April 1, 1881	4 10 23	Guzerat Survey.
133	Oct. 12, 1874	April 1, 1881	3 1 12	Ditto.

General List of the Officers of the Junior or Subordinate Department

1	2	3	4	5	6	7
Genl. Seniority Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			Rs. A. P.
134	Mr. Duncan Campbell ... [Topogl.]	...	29 7 13	Assistant Surveyor ...	3rd grade ...	180 0 0
135	„ R. F. Warwick ... [G. T. S.]	L. S.	26 3 6	Ditto ...	Ditto ...	180 0 0
136	„ L. F. Berkeley ... [Rev.]	...	26 10 3	Ditto ...	Ditto ...	180 0 0
137	„ J. M. Kennedy ... [G. T. S.]	...	24 7 28	Ditto ...	Ditto ...	180 0 0
138	„ G. P. Tate ... [Topogl.]	L. S.	24 11 9	Ditto ...	Ditto ...	144 0 0
139	„ P. C. H. Smart ... [Rev.]	...	25 4 2	Ditto ...	Ditto ...	186 0 0
140	„ C. George ... [Topogl.]	...	28 6 24	Ditto ...	Ditto ...	186 0 0
141	„ J. C. Kelly ... [Rev.]	...	23 8 23	Ditto ...	Ditto ...	186 0 0
142	„ A. George ... [G. T. S.]	...	26 5 18	Ditto ...	Ditto ...	186 0 0
143	„ R. W. Senior ... [G. T. S.]	L. S.	20 7 18	Ditto ...	Ditto ...	186 0 0
144	„ W. H. D. Ewing ... [Rev.]	...	23 10 7	Ditto ...	Ditto ...	186 0 0

of the Survey of India as it stood on the 1st July 1881,—concluded.

General Seniority Number.	8	9	10	11	12
	Date of first appointment to the Department.	Date of appointment to present grade.	Period of service counting for pension on 1st July 1881.	Present Post.	REMARKS.
			Y. M. D.		
134	Nov. 1, 1874	1st April 1881	6 7 13	Khasi and Garo Hills Topogl. Survey	Joined as a Sub-Surveyor on 3rd July 1872.
135	July 2, 1875	Ditto ...	3 7 6	Mysore Topogl. Survey ...	Exclusive of leave on medical certificate for 2 months, from 10th October to 9th December 1877. Also for 6 months, from 1st May to 31st October 1879.
136	Aug. 16, 1875	Ditto ...	4 10 3	Ghazipur District [Cadastral] Survey, N. W. P.	
137	Aug. 19, 1875	Ditto ...	2 7 28	Mysore Topogl. Survey.	
138	Mar. 12, 1878	Ditto ...	2 11 9	Gwalior and Central India Topogl. Survey.	Apprentice, from 1st March 1874.
139	April 18, 1878	Ditto ...	3 2 13	Mirzapur Dist. [Cadastral] Survey, N. W. P.	
140	Sept. 5, 1878	Ditto ...	6 6 24	Khandesh and Bombay Native States [Topogl.] Survey.	Previous service as Sub-Surveyor, from 18th August 1874.
141	Oct. 11, 1878	Ditto ...	1 8 23	Dehra Ismael Khan, &c., Dists. Survey, Punjab.	
142	Oct. 15, 1878	Ditto ...	2 8 17	Guzerat Survey ...	Exclusive of previous service as Sub-Surveyor.
143	Dec. 21, 1878	Ditto ...	...	Rajputana Topogl. Survey.	
144	April 15, 1878	Ditto ...	1 8 6	Bassein Dist. [Cadastral] Survey, British Burma.	Exclusive of 2 months and 1 day suspension, from 28th May to 1st July 1880, and sick leave from 2nd to 28th July 1880.

## Disposition List of the Officers of the Survey

of India as it stood on the 1st July 1881.

Number of Party.	WHERE EMPLOYED.	STRENGTH OF LOWER SUBORDINATE ESTABLISHMENT IN ALL GRADES.						Annual cost of Party.
		Sub-Surveyors.	Writers.	Chainmen and Flagmen.	Native Doctors.	Burkundazes.	Havildars.	
	<i>Eastern Frontier Series.</i>	No.	No.	No.	No.	No.	No.	Rs.
	British Burma; recess quarters at Bangalore ...	...	1	78	2	27	...	...
	<i>Burma Party.</i>							
	British Burma; recess quarters at Bangalore ...	...	1	61	1	7	...	...
	<i>Darjeeling Survey.</i>							
	Special Survey Operations in and around Darjeeling; recess quarters at Darjeeling ...	...	1	54	1	12	...	...
	<i>Bombay Party.</i>							
	In advancing the triangulation to Quetta; recess quarters at Mussoorie ...	...	...	50	1	14	...	...
	<i>Kattywar and Cutch Survey.</i>							
	The Province of Kattywar and Cutch, Bombay Presidency; recess quarters at Poona ...	11	1	145	1	27	...	...
	<i>Guzerat Survey.</i>							
	Guzerat; recess quarters at Poona ...	20	4	184	1	33	1	...

Officer in charge, Surveyors and Assistant Surveyors.	Number in General Lists.	Rank and Grade.	Date of assuming charge.	REMARKS.
Capt. J. Hill, n.e. ...	34	Asst. Supdt., 1st grade. Offg. Depy. Supdt., 3rd grade.	Dec. 25, 1879.	
Mr. L. J. Pocock ...	44	Surveyor, 4th grade.		
" C. D. Potter ...	76	Asst. Surveyor, 1st grade.		
" J. F. McCarthy ...	121	Ditto, 2nd grade.		
Capt. J. Hill, n.e. ...	34	Asst. Supdt., 1st grade. Offg. Depy. Supdt., 3rd grade.	Dec. 25, 1879.	
Lieut. H. J. Harman, n.e. ...	53	Asst. Supdt., 3rd grade. Offg. in 2nd grade.	Oct. 6, 1874.	
Major H. S. Hutchinson, s.c. ...	38	Ditto, 2nd grade. Offg. in 1st grade.	...	Officiating in charge.
Mr. W. J. O'Sullivan ...	48	Surveyor, 4th grade.		
" W. Robert ...	100	Asst. Surveyor, 1st grade.		
" D. J. Collins ...	126	Ditto, 3rd grade.		
Lieut.-Col. B. R. Branfill, n.c. ...	5	Depy. Supdt., 2nd grade.	...	
Mr. C. P. Torrens ...	97	Asst. Surveyor, 1st grade.	Oct. 1, 1880.	
Major A. Pullan, s.c. ...	20	Depy. Supdt., 3rd grade.	...	
Mr. N. C. Gwynne ...	50	Surveyor, 4th grade.	Apl. 26, 1879.	
" W. A. Fielding ...	88	Asst. Surveyor, 1st grade.		
" G. T. Hall ...	118	Ditto, 2nd grade.		
" P. F. Prunty ...	129	Ditto, 3rd grade.		
Lieut.-Col. C. T. Haig, n.e. ...	7	Depy. Supdt., 2nd grade. Offg. 1st grade.	Oct. 5, 1878 ...	Commissioner, Venice Exhibition.
Bt. " E. P. Leach, v. c., n.e. ...	51	Asst. Supdt., 2nd grade.	...	Officiating in charge.
Capt. J. R. Hobday, s.c. ...	56	Asst. Supdt., 3rd grade. Offg. in 2nd grade.		
Mr. A. D'Souza ...	12	Surveyor, 1st grade.		
" A. Christie ...	46	Ditto, 4th grade.		
" C. H. McA' Fee ...	61	Ditto, 4th grade.		
" C. Tapsell ...	60	Asst. Surveyor, 1st grade.		
" G. D. Cusson ...	90	Ditto, 1st grade.		
" S. F. Norman ...	132	Ditto, 3rd grade.		
" C. Norman ...	133	Ditto, 3rd grade.		
" A. George ...	142	Ditto, 3rd grade.		



## Disposition List of the Officers of the Survey

Number of Party.	WHERE EMPLOYED.	STRENGTH OF LOWER SUBORDINATE ESTABLISHMENT IN ALL GRADES.						Annual cost of Party.
		Sub-Surveyors and Computers.	Writers.	Chainmen and Flagmen.	Native Doctors.	Burkundazes.	Jemadars.	
	<i>No. 1 Astronomical Party.</i> Carrying on Electric Determinations of Longitude in India; recess quarters at Mussoorie.	No. ...	No. ...	No. 24	No. ...	No. 3	No. ...	Rs. ...
	<i>No. 2 Astronomical Party.</i> Carrying on Electric Determinations of Longitude in India; recess quarters at Mussoorie.	...	1	10	...	3	...	...
	<i>Tidal and Levelling Operations.</i> Tidal Operations at various ports in India and Burma, also at Aden and Port Blair.	16	1	25	...	10	...	...
	Levelling Operations in Bombay Presidency; recess quarters at Poona.	...	...	...	...	...	...	...

## of India as it stood on the 1st July 1881,—continued.

Officer in charge, Surveyors and Assistant Surveyors.	Number in General Lists.	Rank and Grade.	Date of assum- ing charge.	REMARKS.
Bt. Major W. J. Heaviside, R.E. Mr. J. Keating ...	27 130	Depy. Supdt., 3rd grade Assistant Surveyor, 3rd grade.	... Oct. 1880.	
Bt. Lieut.-Col. W. M. Campbell, R.E. Mr. J. Bond ...	21 75	Depy. Supdt., 2nd grade Assistant Surveyor, 1st grade.	... Nov. 1880.	
Captain A. W. Baird, R. E. ... Bt. Major M. W. Rogers, R. E. W. G. Beverley, Esq. ... Mr. G. Belcham ... " T. H. Rendell ... " E. J. Connor ...	42 33 48 38 64 69	Asst. Supdt., 1st grade Ditto ditto. Offg. Dy. Supdt., 3rd grade. Ditto, 3rd grade. Offg. in 2nd grade. Surveyor, 4th grade. Ditto ditto. Assistant Surveyor, 1st grade.	July 2, 1877. ...	Officiating in charge.

Disposition List of the Officers of the Survey

of India as it stood on the 1st July 1881,—continued.

Number of Party.	WHERE EMPLOYED.	STRENGTH OF LOWER SUBORDINATE ESTABLISHMENT IN ALL GRADES.						Annual cost of Party.
		Sub-Surveyors.	Writers.	Flagmen and Carriers.	Hospital Assistant.	Barkundazes.	Apothecary.	
		No.	No.	No.	No.	No.	No.	
1	<i>No. 1 Topographical Party.</i> Native States in Rajputana Agency, Oodeypur and Sirohi; recess quarters at Mussoorie.	5	...	19	1	3	...	48,500
2	<i>No. 2 Topographical Party.</i> Khandesh and Bombay Native States; recess quarters at Poona.	8	2	123	1	22	...	53,700
5	<i>No. 5 Topographical Party.</i> Sohore, Agar, Indore, Bhopawar, Agencies of Central India Agency; recess quarters at Mussoorie.	5	...	19	1	3	...	54,800

Officer in charge, Surveyors and Assistant Surveyors.	Number in General Lists.	Rank and Grade.	Date of assuming charge.	REMARKS.
Bt. Major C. Strahan, R. E. (in charge).	23	Depy. Supdt., 3rd grade. Offg. in 2nd grade.	Oct. 18, 1880.	
Mr. W. J. Cornelius	74	Asst. Surveyor, 1st grade.		
" P. J. W. Doran	79	Ditto, 1st grade.		
" C. T. Templeton	104	Ditto, 2nd grade.		
" A. Kitchen	114	Ditto, 2nd grade.		
" G. P. Tate	138	Ditto, 3rd grade.		
J. McGill, Esq. (in charge)	47	Asst. Supdt., 2nd grade. Offg. in 1st grade.	Oct. 18, 1880.	
Mr. A. G. Wyatt	35	Surveyor, 4th grade.		
" J. A. Barker	72	Asst. Surveyor, 1st grade.		
" F. E. Warde	103	Ditto, 1st grade.		
" G. Vander Beck	112	Ditto, 2nd grade.		
" E. Graham	122	Ditto, 2nd grade.		
" C. George	140	Ditto, 3rd grade.		
Major J. R. Wilmer, s. c. (in charge).	45	Asst. Supdt., 2nd grade. Offg. in 1st grade.	Oct. 12, 1874.	
Mr. D. Atkinson	14	Surveyor, 2nd grade.		
" C. F. Hamer	45	Ditto, 4th grade.		
" E. A. Wainright	70	Asst. Surveyor, 1st grade.		
" H. T. Kitchen	84	Ditto, 1st grade.		
" W. H. Lilley	88	Ditto, 1st grade.		
" G. R. Copping	124	Ditto, 3rd grade.		

## Disposition List of the Officers of the Survey

of India as it stood on the 1st July 1881,—continued.

Number of Party.	WHERE EMPLOYED.	STRENGTH OF LOWER SUBORDINATE ESTABLISHMENT IN ALL GRADES.						Annual cost of Party.
		Sub-Surveyors.	Writers.	Flagmen and Carriers.	Hospital Assistant.	Burkundazes and Peons.	Apothecary.	
6	No. 6 Topographical Party. Naga Hills on the Eastern Frontier, Assam; recess quarters at Shillong.	No. 3	No. 1	No. 39	No. 1	No. 4	No. ...	Rs. 70,000
7	No. 7 Topographical Party. Meywar, Marwar, Godwar, Shahpura, Mhairwara, and Ajmere, in the Rajputana Agency, and at Simla; recess quarters at Simla.	7	2	22	1	3	...	62,000
8	Nos. 8 and 9 Topographical Parties. Mysore; recess quarters at Bangalore ... ..	10	1	116	1	42	...	88,000
	Beluchistan Topographical Party; recess quarters at Quetta and Sukkur alternately.	4	1	56	...	...	...	96,000
	Kohat Frontier Topographical Party; recess quarters at Mussoorie.	3	...	32	...	4	...	.....

Officer in charge, Surveyors and Assistant Surveyors.	Number in General Lists.	Rank and Grade.	Date of assuming charge.	REMARKS.
Major W. F. Badgley, s. c. (in charge). Mr. A. W. Chennell ... " J. McCay ... " P. White ... " D. Campbell ...	25 58 107 115 134	Deputy Supdt., 3rd grade Surveyor, 4th grade. Assistant Surveyor, 2nd grade. Ditto, 2nd grade. Ditto, 3rd grade.	... Aug. 11, 1873.	
Lieut.-Col. G. C. Depree, s. c. (in charge). Mr. G. A. McGill ... " E. S. P. Atkinson ... " J. H. Wilson ... " W. C. G. Barclay ... " R. W. Senior ...	4 7 34 86 110 143	Depty. Supdt., 1st grade Surveyor, 2nd grade. Ditto, 3rd grade. Asst. Surveyor, 1st grade. Ditto, 2nd grade. Ditto, 3rd grade.	... Nov. 1, 1877.	
Major G. Strahan, B. E. (in charge). Mr. A. J. James ... " F. Kitchen ... " W. Stotesbury ... " Hugh Todd ... " G. L. Fleming ... " R. F. Warwick ... " J. M. Kennedy ...	15 59 62 63 71 123 135 137	Depty. Supdt., 2nd grade ... Ditto, 4th grade. Asst. Surveyor, 1st grade. Ditto, 1st grade. Ditto, 2nd grade. Ditto, 3rd grade. Ditto, 3rd grade.	... Nov. 1, 1879.	
Major R. Beavan, s. c. (in charge) Mr. J. T. U. Coxon ... " H. Corkery ...	40 42 128	Asst. Supdt., 2nd grade. Offg. in 1st grade. Asst. Surveyor, 1st grade. Ditto, 2nd grade.		
Dt. Major T. H. Holdich, B. E. (in charge). Mr. T. E. M. Claudius ... " W. W. McNair ...	31 47 82	Asst. Supdt., 1st grade. Offg. Deputy Supdt., 3rd grade. Surveyor, 4th grade. Assistant Surveyor, 1st grade.		

Disposition List of the Officers of the Survey

of India as it stood on the 1st July 1881,—continued.

Number of Party. Revenue Branch.	WHERE EMPLOYED.	STRENGTH OF LOWER SUBORDINATE ESTABLISHMENT IN ALL GRADES.						Annual of Party
		Sub-Surveyors, &c.	Writers.	Levellers.	Tindals, Measur- ers, &c.	Hospital Assist- ant.	Barkundazes.	
1	Dehra Ismael Khan and Rawal Pindi Districts, Punjab; recess quarters at Murree.	No. 25	No. 1	No. ...	No. 250	No. 1	No. 16	62,000
2	Hanthawaddy District, British Burma ... Professional Establishment (permanent) ... Cadastral do. (temporary) ... Levelling ... .. Recess quarters at Rangoon.	... 24 166 ...	1 ... ... ...	1 ... ... ...	100 ... ... ...	1 ... ... ...	12 ... ... ...	89,000 86,000 8,000
3	Meerut District, North-Western Provinces; recess quarters at Mussoorie.	31	1	...	200	1	17	66,700
4	Ghazipur District, North-Western Provinces ... Professional Establishment (permanent) ... Cadastral do. (temporary) ... Recess quarters at Naini Tal.	... 30 173	1 ... ...	... ... ...	120 ... ...	1 ... ...	13 ... ...	68,000 36,000
5	Mirzapur District, North-Western Provinces ... Professional Establishment (permanent) ... Cadastral do. (temporary) ... Recess quarters at Naini Tal.	... 21 233	2 ... ...	... ... ...	180 ... ...	1 ... ...	16 ... ...	67,500 36,000
6	Jaunpur District, North-Western Provinces ... Professional Establishment (permanent) ... Cadastral do. (temporary) ... Recess quarters at Hazaribagh.	... 26 237	1 ... ...	... ... ...	250 ... ...	1 ... ...	13 ... ...	66,500 17,500

Officers in charge, Surveyors and Assistant Surveyors.	Number in General Lists.	Rank and Grade.	Date of assum- ing charge.	REMARKS.
Lieut.-Colonel D. MacDonald, s.c. (in charge). Mr. G. B. Scott ... " W. S. Buttress ... " A. J. Gibson ... " R. Todd ... " J. C. Kelly ...	11 41 25 33 53 141	Depy. Supdt., 2nd grade Surveyor, 3rd grade. Ditto, 3rd grade. Ditto, 4th grade. Asst. Surveyor, 1st grade. Ditto, 3rd grade.	... ... ... ... ... ...	Dec. 6, 1879.
Major J. E. Sandeman, s. c. (in charge). Captain J. R. McCullagh, n. e. ... Mr. F. Grant ... " H. Dowman ... " D. A. King ... " J. McHatton ... " G. E. Parker ... " J. Murphy ... " B. M. Wilson ...	24 44 14 37 57 81 106 95 116	Depy. Supdt., 3rd grade Asst. Supdt., 1st grade. Surveyor, 2nd grade. Ditto, 4th grade Asst. Surveyor, 1st grade. Ditto, 1st grade. Ditto, 2nd grade. Ditto, 2nd grade. Ditto, 2nd grade.	... ... ... ... ... ... ... ... ...	Dec. 1, 1878. Temporarily detached on Akyab Waste Land Grants Survey.
Major W. H. Wilkins, s. c. (in charge). E. C. Ryall, Esq. ... Mr. J. Todd ... " R. C. D. Ewing ... " C. W. Wilson ... " C. W. F. Seyers ...	22 53 54 73 80 65	Depy. Supdt., 3rd grade Asst. Supdt., 3rd grade. Ofg. in 2nd grade. Surveyor, 3rd grade. Asst. Surveyor, 1st grade. Ditto, 1st grade. Ditto, 1st grade.	... ... ... ... ... ...	Dec. 1, 1877.
Major W. Barron, s. c. (in charge). Mr. W. A. Wilson ... " H. T. Hanby ... " W. C. Price ... " S. O. Madras ... " W. D. Corbett ... " E. B. M. Drew ... " L. F. Berkeley ...	14 32 39 52 92 96 119 136	Depy. Supdt., 3rd grade Surveyor, 3rd grade. Ditto, 4th grade. Ditto, 4th grade. Asst. Surveyor, 1st grade. Ditto, 1st grade. Ditto, 3rd grade. Ditto, 3rd grade.	... ... ... ... ... ... ... ...	Nov. 12, 1873.
Colonel F. C. Anderson, s. c. (in charge). Mr. C. W. Campbell ... " E. G. Little ... " R. B. Smart, Jr. ... " T. Shaw ... " E. P. S. Hill ... " P. C. H. Smart ...	1 5 22 56 99 117 139	Depy. Supdt., 1st grade Surveyor, 1st grade. Ditto, 4th grade. Asst. Surveyor, 1st grade. Ditto, 1st grade. Ditto, 2nd grade. Ditto, 3rd grade.	... ... ... ... ... ... ...	Nov. 1, 1871.
E. T. S. Johnson, Esq. (in charge) Mr. P. A. G. Cowley ... " J. S. Pemberton ... " J. S. Swiney ... " E. J. Martiu ... " C. S. Kraal ...	18 20 30 98 83 131	Depy. Supdt., 3rd grade Surveyor, 2nd grade. Ditto, 3rd grade. Asst. Surveyor, 1st grade. Ditto, 1st grade. Ditto, 3rd grade.	... ... ... ... ... ...	Oct. 1, 1872.

Disposition List of the Officers of the Survey

Number of Party, Revenue Branch.	WHERE EMPLOYED.	STRENGTH OF LOWER SUBORDINATE ESTABLISHMENT IN ALL GRADES.						Annual cost of Party.
		Sub-Surveyors, &c.	Writers.	Levellers.	Tindals, Measur- ers, &c.	Hospital Assist- ant.	Burkundazes.	
7	Tharawaddy District, British Burma ... Professional Establishment (permanent) ... Cadastral do. (temporary) ...	No. ... 25 100	No. 1 ... ...	No. ... ... ...	No. 110 ... ...	No. 1 ... ...	No. 13 ... ...	Rs. ... 78,500 70,000
	Recess quarters at Rangoon.							
8	Bassein District, British Burma ... Professional Establishment (permanent) ... Cadastral do. (temporary) ...	No. ... 30 144	No. 1 ... ...	No. ... ... ...	No. 80 ... ...	No. 1 ... ...	No. 13 ... ...	Rs. ... 88,800 86,000
	Recess quarters at Rangoon.							
10	North Deccan and Konkan Districts, Bombay Presidency ; recess quarters at Poona.	17	1	...	150	1	15	54,800
11	South Deccan Districts, Sholapur, Satara, Bombay Presidency ; recess quarters at Poona.	18	1	...	150	1	9	51,700

of India as it stood on the 1st July 1881,—concluded.

Officers in charge, Surveyors and Assistant Surveyors.	Number in General Lists.	Rank and Grade.	Date of assum- ing charge.	REMARKS.
H. B. Talbot, Esq., in charge ... Mr. W. R. Vvall ... " G. W. Jarbo ... " J. R. Scott ... " A. W. Smart ...	30 13 77 78 111	Asst. Supdt., 1st grade Surveyor, 4th grade. Asst. Surveyor, 1st grade. Ditto, 1st grade. Ditto, 3rd grade.	... Nov. 1, 1880.	
Major E. H. Steel, s. o. (in charge). Mr. H. R. Littlewood ... " J. H. O'Donel ... " T. H. Dunne ... " G. Campbell ... " C. W. J. Ford ... " W. H. D. Ewing ...	37 31 49 67 55 109 144	Asst. Supdt., 2nd grade. Offg. in 1st grade. Surveyor, 3rd grade. Ditto, 4th grade. Asst. Surveyor, 1st grade. Ditto, 2nd grade. Ditto, 2nd grade. Ditto, 3rd grade.	Nov. 20, 1880.	
Major H. Lees Smith, s. c. (in charge). Mr. A. M. Lawson ... " J. Newland ... " W. M. Kelly ... " R. R. Dickinson ...	28 40 51 113 120	Asst. Supdt., 1st grade Surveyor, 3rd grade. Asst. Surveyor, 1st grade. Ditto, 2nd grade. Ditto, 2nd grade.	... Nov. 13, 1880.	
Major D. C. Andrew, s. c. (in charge). Mr. S. M. Smylie ... " J. Hickie ... " G. C. Swiney ... " W. H. Penrose... " G. A. Knight ...	19 24 87 94 101 125	Depy. Supdt., 3rd grade Surveyor, 3rd grade. Asst. Surveyor, 1st grade. Ditto, 1st grade. Ditto, 2nd grade. Ditto, 3rd grade.	... Dec. 24, 1880.	

Classified List of Officers of the Mysore Revenue

No. of Officers in each grade.	NAMES.	Substantive Appointment.	Duty in which at present employed.
1	2	3	4
1	The Honourable Colonel W. C. Anderson...	Survey and Settlement Commissioner	* Superintendent
2	Major J. P. Grant	Superintendent	Superintendent
3	Lieutenant-Colonel J. W. M. Anderson	Deputy Superintendent	Deputy Superintendent
4	Mr. E. H. Butcher†	Assistant Settlement Officer	Assistant Superintendent
<i>1st Grade.</i>			
1	Major J. Rutherford	Assistant Superintendent	Offg. Deputy Superintendent
2	" G. Mackenzie	Ditto	Assistant Superintendent
3	Captain J. B. Lawrence	Ditto	Ditto
4	" R. L. Price	Ditto	Ditto
5	Mr. J. P. Barker	Ditto	Ditto
6	Captain A. H. Macintire	Ditto	Ditto
<i>2nd Grade.</i>			
1	Captain D. Cowie	Assistant Superintendent	Assistant Superintendent
2	Mr. W. E. A. James	Ditto	Ditto
3	" F. B. Clerk	Ditto	Ditto
4	Captain A. McCally	Ditto	Ditto
<i>3rd Grade.</i>			
1	Mr. A. G. Hudson	Assistant Superintendent	Assistant Superintendent
<i>4th Grade.</i>			
1	Mr. E. W. Laserson	Assistant Superintendent	Assistant Superintendent

Survey Department on the 1st July 1881.

SALARIES, INCLUDING ALLOWANCES,				REMARKS.
TO MILITARY OFFICERS.			TO CIVILIANS.	
Military Pay and Allowances.	Staff Pay.	Aggregate Pay and Allowances.	Civil Consolidated Salary.	
5	6	7	8	9
		Rs. As. P.	Rs. As. P.	
		500 0 0		* Appointment abolished from 1st April 1881.
		1,565 14 0		Returned from furlough on 22nd March and was transferred to Bombay with effect from the 8th April 1881.
		1,145 0 0	895 0 0	† Vide Chief Commissioner's Proceedings, No. 8458-2202 G, dated 12th March 1881.
		995 0 0		
		795 0 0		
		795 0 0		On leave on medical certificate from 18th March 1881.
		795 0 0		
		795 0 0	795 0 0	Has been transferred to the Police Department.
		695 0 0		On leave on medical certificate to Europe.
			695 0 0	On two years' furlough to Europe from 13th February 1881.
		695 0 0	695 0 0	Recommendation to 1st grade from 26th November 1880 has not yet been sanctioned.
			560 0 0	Vide Government of India Notification No. 1 G R, dated 11th March 1881.
			460 0 0	Recommendation to 3rd grade from 24th April 1881 has not yet been sanctioned.

General List of Officers of the Mysore Revenue

1	2	3	4	5	6	7
Genl. Seniority Number.	NAMES.	Passed in the Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			Rs. As. P.
1	The Honourable Col. W. C. Anderson	All have passed in the Vernacular.	58 11 5	Survey and Settlement Commissioner	...	600 0 0
2	Major J. P. Grant		43 3 0	Superintendent	...	1,340 14 0
3	Lieut.-Col. J. W. M. Anderson		43 8 10	Deputy Superintendent	...	...
4	Major J. Rutherford		39 5 22	Assistant Superintendent	1st grade	860 0 0
5	Mr. E. H. Butcher		45 0 2	Ditto	Ditto	790 0 0
6	" J. P. Barker		33 9 16	Ditto	Ditto	660 0 0
7	" W. E. A. James		39 0 25	Ditto	2nd grade	560 0 0
8	" F. B. Clerk		36 10 13	Ditto	Ditto	560 0 0
9	Captain J. B. Lawrence		39 8 3	Ditto	1st grade	660 0 0
10	" A. H. Macintire		33 4 11	Ditto	Ditto	660 0 0
11	" D. Cowie		40 6 15	Ditto	2nd grade	560 0 0
12	" A. McCally		37 7 24	Ditto	Ditto	560 0 0
13	" R. L. Price		38 6 20	Ditto	1st grade	660 0 0
14	Major G. Mackenzie		39 11 28	Ditto	Ditto	660 0 0
15	Mr. A. G. Hudson		23 2 2	Ditto	3rd grade	465 0 0
16	" E. W. Laserson		37 2 7	Ditto	4th grade	365 0 0

Survey Department on the 1st July 1881.

8	9	10	11	12
Date of first appointment to the Department.	Date of appointment to present grade.	* Period of service counting for pension.	Present post.	REMARKS.
		Y. M. D.		
Sept. 28, 1863	Feb. 15, 1865	...	Survey and Settlement Commissioner	Appointment abolished.
Nov. 1, 1863	Jan. 15, 1868	...	Superintendent	Superintendent.
Nov. 27, 1863	Nov. 1, 1869	...	...	Transferred to Bombay.
Jan. 25, 1865	July 1, 1873	...	Officiating Deputy Superintendent.	
Oct. 2, 1865	Mar. 26, 1876	15 8 29	Assistant Superintendent.	
Dec. 22, 1866	Dec. 5, 1878	11 9 2	Ditto	
Dec. 1, 1867	June 8, 1876	12 1 9	Ditto	On furlough to Europe.
Jan. 16, 1868	Nov. 26, 1875	13 5 15	Ditto	
Jan. 15, 1869	Mar. 10, 1876	...	Ditto	On leave on medical certificate.
Dec. 6, 1869	Jan. 8, 1879	...	Ditto	Transferred to the Police Department.
Dec. 3, 1870	Dec. 2, 1874	...	Ditto	On leave on medical certificate.
Jan. 18, 1872	May 1, 1878	...	Ditto	
Nov. 1, 1872	Aug. 25, 1878	...	Ditto	
Oct. 24, 1873	Dec. 24, 1871	...	Ditto	
Nov. 23, 1876	Jan. 1, 1878	1 2 2	Ditto	
Mar. 22, 1877	Nov. 1, 1878	12 2 0	Ditto	

NOTE.—In this list the officers have been arranged according to their length of service in the Department, the officer who has been longest in the Department standing first on the list. Their dates of first appointment to the Department (column 8), and period of service (column 10), have

the Uncovenanted Civil Service Rules. Their dates of first appointment to the Department (column 8), and period of service (column 10), have been arranged in consecutive order.

## Disposition List of Officers of the Mysore Revenue

Number of Party.	Where employed.	STRENGTH OF SUBORDINATE ESTABLISHMENTS IN ALL GRADES.						Annual cost of Party from 1st July 1880 to 30th June 1881.
		Sub-Surveyors.	English Clerks.	Karkuns.	Learners.	Mappers.	Peons.	
		3	4	5	6	7	8	
		No.	No.	No.	No.	No.	No.	Rs.
1	Mysore Province ... ..	...	...	...	...	...	...	7,835
1	Ditto ... ..	11	3	62	12	27	9	43,693
1	Ditto ... ..	...	2	8	...	...	4	24,445
	TOTAL ...	11	5	70	12	27	13	75,973
1	Kolar District ... ..	28	...	2	8	...	2	18,682
2	Hassan ditto ... ..	40	...	4	9	...	3	19,949
3	Bangalore ditto ... ..	29	...	2	5	...	2	16,417
4	Kolar ditto ... ..	29	...	2	7	...	2	14,987
5	Hassan and Mysore Districts ... ..	35	...	3	12	...	3	21,919
6	Tumkur ... ..	...	...	...	...	...	2	12,255
7	Hassan and Mysore Districts ... ..	28	...	3	9	...	...	14,730
	TOTAL ...	189	...	16	50	...	14	1,18,939
1	Tumkur and Hassan Districts ... ..	14	...	1	4	...	2	11,777
2	Hassan District ... ..	14	...	1	4	...	2	15,513
3	Ditto ditto ... ..	14	...	1	4	...	2	15,378
	TOTAL ...	42	...	3	12	...	6	42,668
13	GRAND TOTAL ...	242	5	89	74	27	33	2,37,580

## Survey Department on the 1st July 1881.

Officer in charge.	Number in General List.	Rank and Grade.	Date of assuming charge.	REMARKS.
10	11	12	13	14
The Hon'ble Col. W. C. Anderson	1	Survey and Settlement Commissioner ...	Sept. 28, 1863	Cost shown up to 1st April 1881.
Major J. P. Grant	2	Superintendent ...	Jan. 15, 1868	
" J. Rutherford	4	Offg. Deputy Superintendent ...	July 8, 1877	
Mr. J. P. Barker	A ... 6	Assistant Superintendent, 1st grade ...	Aug. 18, 1878	Temporarily absorbed from 1st June 1881.
" E. W. Laseron	B ... 16	Ditto, 4th do. ...	Mar. 20, 1881	
" F. B. Clerk	D ... 8	Ditto, 2nd do. ...	Nov. 26, 1869	
Major G. Mackenzie	G ... 14	Ditto, 1st do. ...	Oct. 20, 1880	
Mr. A. G. Hudson	L ... 15	Ditto, 3rd do. ...	Jan. 1, 1878	
Major J. Rutherford	C ... 4	Assistant Superintendent, 1st grade ...	Mar. 1, 1881	Temporarily absorbed from 1st April 1881.
Mr. E. H. Butcher	E ... 5	Ditto, 1st do. ...	Jan. 26, 1867	
Captain R. L. Price	M ... 13	Ditto, 1st do. ...	Nov. 1, 1879	

Classified List of the Officers of the Geological

No. of Officers in each grade.	NAMES.	Substantive Appointment.	Duty on which at present engaged.
1	H. B. Medlicott, A. M., F. R. S., F. G. S. <i>1st Grade—Rs. 700 rising to Rs. 1,000.</i>	Superintendent, Geological Survey...	Office ...
1	W. T. Blanford, A. B. S. M., F. R. S., F. G. S.	Senior Depy. Supdt., Geol. Survey	On furlough
2	William Theobald	Deputy Superintendent, Geol. Survey	Ditto
3	William King, A. D.	Ditto ditto ditto	Ditto
4	R. Bruce Foote, F. G. S.	Assistant, Geological Survey	Tinnevely
<i>2nd Grade—Rs. 500 rising to Rs. 700.</i>			
1	A. B. Wynne, F. G. S.	Assistant, Geological Survey	On furlough
2	F. R. Mallet, F. G. S.	Ditto ditto	Office
3	Theo. W. H. Hughes, A. B. S. M., F. G. S.	Ditto ditto	South Rewah
4	V. Ball, A. M., F. G. S.	Ditto ditto	Office
5	F. Fedden, A. B. S. M., F. G. S.	Ditto ditto	Kattywar
<i>3rd Grade—Rs. 350 rising to Rs. 500.</i>			
1	C. A. Hacket	Assistant, Geological Survey	Rajputana
2	R. Lydekker, A. B.	Ditto ditto	N. W. Himalaya
3	C. L. Griesbach, F. G. S.	Ditto ditto	Kumaon Himalaya
4	R. D. Oldham, A. B. S. M.	Ditto ditto	Jaunsar and Sirmur
5	P. N. Bose, B. Sc., F. G. S.	Ditto ditto	Nimar
6	Vacant.		
<i>Separately graded.</i>			
	O. Feistmantel, M. D.	Palaeontologist, Geological Survey...	Office ...
<i>Non-graded Officers.</i>			
1	J. Schaumburg	Artist	Office
2	W. R. Bion	Registrar	Ditto
3	Kishen Singh	Sub-Assistant, Geological Survey	Gwalior
4	Hira Lal	Ditto ditto ditto	South Rewah

General List of the Officers of the Geological

Genl. Seniority Number.	NAMES.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			Rs.
1	W. Theobald	.....	52 2 14	Depy. Supdt., Geol. Survey	1st grade	1,100
2	H. B. Medlicott, A. M., F. R. S., F. G. S.	.....	51 10 29	Supdt., Geological Survey	Separately graded.	1,800
3	W. T. Blanford, A. B. S. M., F. R. S., F. G. S.	.....	48 8 25	Senior Depy. Supdt., Geol. Sur.	1st grade	1,400
4	William King, A. B.	.....	47 11 16	Depy. Supdt., Geological Survey	Ditto	1,100
5	R. B. Foote, F. G. S.	.....	46 9 9	Assistant, Geological Survey	Ditto	1,000
6	F. R. Mallet, F. G. S.	Oct. 5, 1868	40 4 19	Ditto ditto	2nd grade	700
7	F. Fedden, A. B. S. M., F. G. S.	Oct. 26, 1869	42 3 10	Ditto ditto	Ditto	700
8	C. A. Hacket	Oct. 5, 1868	47 11 20	Ditto ditto	3rd grade	500
9	T. W. H. Hughes, A. B. S. M., F. G. S.	Aug. 3, 1868	37 10 30	Ditto ditto	2nd grade	700
10	A. B. Wynne, F. G. S.	Nov. 9, 1868	45 8 17	Ditto ditto	Ditto	700
11	V. Ball, A. M., F. G. S.	Oct. 1, 1867	37 11 18	Ditto ditto	Ditto	700
12	R. Lydekker, A. B.	Apl. 5, 1875	31 11 7	Ditto ditto	3rd grade	500
13	O. Feistmantel, M. D.	Oct. 4, 1875	32 7 10	Palaeontologist ditto	Separately graded.	700
14	C. L. Griesbach, F. G. S.	Sept. 15, 1880	33 6 21	Assistant, Geological Survey	3rd grade	410
15	R. D. Oldham, A. B. S. M.	Not passed	22 11 2	Ditto ditto	Ditto	350
16	P. N. Bose, B. Sc., F. G. S.	Not required to pass.	25 1 20	Ditto ditto	Ditto	350
<i>Non-graded Officers.</i>						
1	J. Schaumburg	.....	41 11 30	Artist, Geological Survey	No grade	400
2	W. R. Bion	.....	29 0 15	Registrar ditto	Ditto	280
3	Kishen Singh	.....	31 4 6	Sub-Assistant ditto	Ditto	170
4	Hira Lal	.....	29 11 2	Ditto ditto	Ditto	170

Survey of India on the 1st July 1881.

Pay.	SALARY, INCLUDING ALLOWANCES.		REMARKS.
	Travelling and Horse Allowance.	Total Pay and Allowance.	
Rs. A. P. 1,800 0 0	Rs. A. P. 200 0 0	Rs. A. P. 2,000 0 0	
*1,400 0 0	140 0 0	1,540 0 0	* Special personal pay.
1,100 0 0	130 0 0	1,230 0 0	
1,100 0 0	130 0 0	1,230 0 0	Acting as Deputy Superintendent, vice Mr. W. T. Blanford.
1,000 0 0	130 0 0	1,130 0 0	
700 0 0	130 0 0	830 0 0	Acting in 1st grade, vice Mr. W. T. Blanford.
700 0 0	150 & 130 0 0	980 0 0	Ditto, and as Deputy Superintendent, vice Mr. W. Theobald.
700 0 0	130 0 0	830 0 0	Ditto, ditto ditto, vice Mr. W. King.
700 0 0	130 0 0	830 0 0	
700 0 0	130 0 0	830 0 0	
500 0 0	130 0 0	630 0 0	Acting in 2nd grade, vice Mr. A. D. Wynne.
500 0 0	130 0 0	630 0 0	Ditto, vice Mr. F. R. Mallet.
410 0 0	130 0 0	540 0 0	Ditto, vice Mr. Theo. W. H. Hughes.
350 0 0	130 0 0	480 0 0	
350 0 0	130 0 0	480 0 0	
700 0 0	130 0 0	830 0 0	
400 0 0	.....	400 0 0	
280 0 0	.....	280 0 0	
170 0 0	.....	170 0 0	
170 0 0	.....	170 0 0	

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Date of first appointment to the Department.	Date of appointment to present grade or rank.	Period of service counting for pension.	Present post.	REMARKS.
Nov. —, 1848	Apl. 1, 1876	32 8 0	On furlough.	
Mar. 24, 1854	Apl. 1, 1876	27 3 8	Office.	
Oct. 1, 1855	Apl. 1, 1876	24 5 0	On furlough.	
Mar. 4, 1857	Apl. 21, 1875	24 3 28	Ditto.	
Sept. 28, 1858	Apl. 1, 1876	21 9 13	Tinnevely.	
Feb. 12, 1859	May 1, 1872	22 1 19	Office.	
Oct. 1, 1860	Mar. 24, 1878	20 0 16	Kattywar.	
Nov. 15, 1861	May 1, 1866	18 4 16	Rajputana.	
Nov. 11, 1862	Apl. 21, 1875	15 3 28	South Rewah.	
Nov. 13, 1862	Mar. 31, 1869	14 8 27	On furlough.	
Oct. 29, 1863	Apl. 1, 1876	14 8 3	Office.	
Nov. 26, 1874	Nov. 26, 1874	6 7 5	N. W. Himalaya.	
Mar. 25, 1875	Mar. 10, 1877	6 3 7	Office.	
Nov. 11, 1878	Nov. 11, 1878	2 7 20	Kumaon Himalaya.	
Dec. 17, 1879	Dec. 17, 1879	1 6 15	Jaunsar and Sirmur.	
July 30, 1880	July 30, 1880	0 11 2	Nimar.	
Apl. 12, 1869	July 7, 1874	12 2 19	Office.	
Dec. 12, 1870	Dec. 31, 1878	6 3 0	Ditto.	
Jan. 7, 1874	Apl. 1, 1879	7 5 25	Gwalior.	
Jan. 7, 1874	Apl. 1, 1879	7 5 25	South Rewah.	



Disposition List of the Officers of the Geological

Survey of India on the 1st July 1881.

NAMES OF OFFICERS.	Where employed.	No. in General List.	Rank and Grade.	Date of assuming charge.	STRENGTH OF ESTABLISHMENT OF ALL GRADES.														
					1st grade.	2nd grade.	3rd grade.	Separately graded.	Non-graded Officers.	Clerks & Draftsmen.	Office Establishment.	Pressmen and Servants.							
H. B. Medlicott, A.M., F.R.S., F.G.S. <i>1st Grade.</i>	Office	2	Supdt., Geological Survey.	Mar. 24, 1854	4	5	5	2	4	12	20								
W. T. Blanford, A. B. S. M., F. R. S., F. G. S.	On furlough	3	Senior Depy. Supdt., Geological Survey.	Oct. 1, 1855															
William Theobald	Ditto	1	Depy. Supdt., Geological Survey.	Nov. —, 1848															
William King, A. B.	Ditto	4	Ditto	Mar. 4, 1857															
R. B. Foote, F.G.S. <i>2nd Grade.</i>	Tinnevely	5	Asst., Geological Survey.	Sept. 28, 1858															
A. B. Wynne, F.G.S.	On furlough	10	Asst., Geological Survey.	Nov. 13, 1862															
F. R. Mallet, F.G.S.	Office	6	Ditto	Feb. 12, 1859															
T. W. H. Hughes, A.B.S.M., F.G.S.	South Rewah	9	Ditto	Nov. 11, 1862															
V. Ball, A. M., F.G.S.	Office	11	Ditto	Oct. 29, 1864															
F. Fedden, A. B. S. M., F. G. S. <i>3rd Grade.</i>	Kattywar	7	Ditto	Oct. 1, 1860															
C. A. Hacket	Rajputana	8	Asst., Geological Survey.	Nov. 15, 1861															
R. Lydekker, A. B.	N. W. Himalaya	12	Ditto	Nov. 26, 1874															
C. L. Griesbach, F. G. S.	Kumaon Himalaya	14	Ditto	Nov. 11, 1878															
R. D. Oldham, A.B.S.M.	Jaunsar and Sirmur	15	Ditto	Dec. 17, 1879															
P. N. Bose, B. Sc., F. G. S. Vacant. <i>Separately Graded.</i>	Nimar	16	Ditto	July 30, 1880															
O. Feistmantel, M. D. <i>Non-graded Officers.</i>	Office	13	Palaeontologist	Mar. 25, 1875															
J. Schaumburg	Office	1	Artist	April 12, 1869															
W. R. Bion	Ditto	2	Registrar	Dec. 12, 1870															
Kishen Singh	Gwalior	3	Sub-Asst., Geological Survey.	Jan. 7, 1874															
Hira Lal	South Rewah	4	Ditto	Ditto															

Where employed during last three years.	Annual cost (salary and travelling allowance of officers and their subordinates, if any).	REMARKS.	
		Rs. A. P.	Rs. A. P.
{ 1878-79. Office 1879-80. Ditto 1880-81. Nahun and Office.	Salary and allowance ... 24,000 0 0 Travelling do. ... 266 10 0		24,266 10 0
{ 1878-79. Office and furlough 1879-80. Furlough. 1880-81. Ditto.	On furlough.		
{ 1878-79. Sub-Himalaya 1879-80. Punjab 1880-81. Ditto and furlough.	Salary and allowance ... 11,942 11 9 Travelling do. ... 520 0 0		12,462 11 9
{ 1878-79. Godaveri District 1879-80. Ditto 1880-81. Malabar Coast and furlough	Salary and allowance ... 14,169 5 7 Travelling do. ... 1,418 10 2 Hospital Assistant's pay, &c. ... 237 0 0		15,824 15 9
{ 1878-79. Trichinopoly, Madura & furlough. 1879-80. Furlough 1880-81. Ditto Madura & Tinnevely	Salary and allowance ... 7,643 13 8 Travelling do. ... 910 8 0 Hospital Assistant's pay, &c. ... 120 0 0		8,674 5 8
{ 1878-79. Upper Punjab 1879-80. Ditto. 1880-81. Furlough.	On furlough.		
{ 1878-79. Office and furlough 1879-80. Furlough 1880-81. Ditto and Office.	Salary and allowance ... 9,381 14 9 Travelling do. ...		9,381 14 9
{ 1878-79. Furlough 1879-80. Ditto and South Rewah 1880-81. South Rewah	Salary and allowance ... 13,148 6 2 Travelling do. ... 1,418 14 3 Hospital Assistant's pay, &c. ... 712 0 0		15,279 4 5
{ 1878-79. Palamow Coal Field & furlough. 1879-80. Furlough 1880-81. Ditto and Office	Salary and allowance ... 6,554 10 4 Travelling do. ... 98 0 0		6,652 10 4
{ 1878-79. Kattywar and furlough 1879-80. Office 1880-81. Ditto and Kattywar.	Salary and allowance ... 11,323 4 0 Travelling do. ... 1,357 7 0		12,680 11 0
{ 1878-79. Rajputana 1879-80. Ditto 1880-81. Ditto.	Salary and allowance ... 10,165 12 10 Travelling do. ... 1,051 12 3		11,217 9 1
{ 1878-79. Office and Himalaya 1879-80. Ditto 1880-81. Ditto.	Salary and allowance ... 9,028 0 3 Travelling do. ... 1,256 5 6		10,284 5 9
{ 1878-79. Sirgujah and Himalaya 1879-80. Himalaya and Office 1880-81. Kandahar and Himalaya	Salary and allowance ... 7,773 0 9 Travelling do. ... 1,517 4 0 Lieut.'s Batta from Mily. Dept. ... 730 8 0		10,050 12 9
{ 1879-80. Godaveri Valley 1880-81. Jaunsar and Sirmur	Salary and allowance ... 6,000 0 0 Travelling do. ... 1,087 1 3		7,087 1 3
1880-81. Nimar	{ Salary and allowance ... 5,025 7 6 Travelling do. ... 1,258 1 3		6,283 8 9
{ 1878-79. Office 1879-80. Ditto and Kurhurballee 1880-81. Ditto and Hazaribagh, Lohardugga and Manbhum.	Salary and allowance ... 9,611 7 2 Travelling do. ... 354 3 8		9,965 10 10
{ 1878-79. Office 1879-80. Ditto. 1880-81. Ditto.	Salary ...		4,600 0 0
{ 1878-79. Office 1879-80. Ditto. 1880-81. Ditto.	Salary ...		3,220 0 0
{ 1878-79. Office and Himalaya 1879-80. Punjab 1880-81. Gwalior	Salary ... 1,940 0 0 Travelling allowance ... 469 9 6 Chaprasai do. ... 115 14 4		2,525 7 10
{ 1878-79. Office and Sirgujah 1879-80. Office 1880-81. Ditto and South Rewah	Salary ... 1,940 0 0 Travelling allowance ... 511 1 2 Chaprasai do. ... 144 0 0		2,628 1 2



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Walker, Lieut.-Genl. J. T.	...	Ditto	...	...	...	2 16 ...
Warde, F. E.	...	Ditto	...	...	...	10 26 35
Warwick, R. F.	...	Ditto	...	...	...	14 28 37
Waterhouse, Major J.	...	Ditto	...	...	...	2 4 18
White, P.	...	Ditto	...	...	...	12 26 37
Wilkins, Major W. H.	...	Ditto	...	...	...	2 16 39
Wilmer, Major J. R.	...	Ditto	...	...	...	4 18 35
Wilson, A. J.	...	Ditto	...	...	...	6 20 ...
Wilson, B. M.	...	Ditto	...	...	...	12 26 39
Wilson, C. W.	...	Ditto	...	...	...	10 24 39
Wilson, J. H.	...	Ditto	...	...	...	10 24 37
Wilson, W. A.	...	Ditto	...	...	...	6 22 39
Wood, C.	...	Ditto	...	...	...	6 20 ...
Woodthorpe, Bt. Lt.-Col. R. G.	...	Ditto	...	...	...	4 18 ...
Wyatt, A. G.	...	Ditto	...	...	...	8 22 35
Wynne, A. B.	...	Geological Survey	...	...	...	46 48 ...

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# Statements of the Services of Officers in the Survey of India.

Corrected up to 1st July 1881.

LIEUTENANT-GENERAL J. T. WALKER, C. B., F. R. S., &c., &c., *Royal (late Bombay) Engineers, Surveyor-General of India.*

JOINED the Honourable East India Company's Military Academy at Addiscombe, February 1843; obtained commission as 2nd Lieutenant, 9th December 1844; served at Chatham during 1845; landed in India, 10th May 1846; employed four months at Bombay as Assistant Chief Engineer; leave of absence to Madras for six months from 16th September 1846; Executive Engineer, Upper Sind, May 1847 to October 1848; war services, 1849 to 1853; Lieutenant, 2nd July 1853; appointed 2nd Assistant, Great Trigonometrical Survey of India, 1st December 1853; 1st Assistant, Great Trigonometrical Survey of India, 24th March 1854; Captain, 4th December 1857; conducting trigonometrical operations in the Punjab and Upper Sind, 1854 to 1861; Brevet-Major, 19th January 1858; appointed Superintendent, Great Trigonometrical Survey of India, 12th March 1861; leave of absence to Europe on furlough from 10th November 1863 to 29th January 1865; Lieutenant-Colonel, 27th February 1864; Officiating Surveyor General of India, in addition to his duties as Superintendent, Great Trigonometrical Survey, from 22nd April 1865 to 12th December 1866 and from 12th May 1868 to 7th January 1869, and again from 9th May 1874 to 4th August 1874; Brevet-Colonel, 27th February 1869; furlough to Europe from 10th December 1870 to 31st October 1872, including six months on duty; Regimental Colonel, 11th December 1873; furlough to Europe from 17th April 1876 to 4th January 1877; Companion of the Bath, 2nd June 1877; appointed Surveyor General with direct superintendence over the Great Trigonometrical and the Topographical Surveys, 1st January 1878; Major-General, 1st January 1879; Lieutenant-General, 10th May 1881.

## WAR SERVICES.

Served throughout the Punjab Campaign of 1848-49 as Field Engineer, and was present at the siege and surrender of Mooltan, the battle of Goojerat, and the subsequent pursuit of the Sikhs and Afghans (medal with two clasps); for five years (1849-1853) was employed in making a military survey of the Northern Trans-Indus Frontier, from Peshawur down to Dera Ismail Khan, during which he served as Field Engineer in many of the encounters with the hill tribes on the frontier; at the attacks of Suggow, Pulli, and Yormundi under Colonel Bradshaw; in the affair of the Kohat Pass under Sir Charles Napier; in the actions at Prangni, Nowadund, Shahkote, and Ranceezai under Sir Colin Campbell; the attack of Roree under Colonel Boileau; and subsequently, in 1860, in the expedition against the Mahsood Wuzerees, under Sir Neville Chamberlain (medal with clasp); in 1857, during the mutiny of the Bengal Army, he was at first attached to the staff of Brigadier-General Neville Chamberlain, when that officer was commanding the Punjab moveable column, and subsequently accompanied him to Delhi, where he was also employed during the siege as Field Engineer, and was severely wounded (Brevet of Major, medal with clasp).

LIEUTENANT-COLONEL JAMES SCONCE, *Bengal Staff Corps, Deputy Surveyor General.*

JOINED the Honourable East India Company's Military Academy at Addiscombe, February 1852; date of first commission as 2nd Lieutenant, Bengal Artillery, 9th December 1853; landed in India, 2nd April 1854; promoted to 1st Lieutenant, 23rd September 1857; appointed to Bengal Horse Artillery, 11th February 1858; appointed Adjutant, 4th Battalion, Bengal Artillery, 15th July 1859; appointed Assistant Revenue Surveyor in the Bundelcund Revenue Survey, 21st October 1859; transferred to the Royal Artillery, May 1861; appointed to the charge of 1st Division, Central Provinces Revenue Survey at Jubbulpore, 27th June 1862; promoted to Revenue Surveyor (now Deputy Superintendent of Survey), 3rd grade, 24th January 1863; promoted to 2nd Captain, Royal Artillery, 3rd April 1863; transferred to the charge of 3rd Division, Central Provinces Revenue Survey at Saugor, 13th November 1863; proceeded on furlough to Europe on sick certificate, 25th July 1864; returned from furlough and appointed to do duty in the Office of Superintendent, Revenue Surveys, Calcutta, 16th March 1866; appointed to the charge of 6th Division, Lower Provinces Revenue Survey at Hazaribagh, 3rd November 1866; promoted to Deputy Superintendent of Survey, 2nd grade, 6th November 1868; transferred as Captain to Bengal Staff Corps, 8th March 1869; proceeded on furlough to Europe, 28th March 1872; returned from furlough and appointed to do duty in the Office of Superintendent of Revenue Surveys, Calcutta, 5th November 1873; appointed to the charge of the 3rd Division, Lower Provinces Revenue Survey at Midnapur, 6th December 1873; promoted to Brevet-Major, 9th December 1873; transferred to the charge of the 8th Division, Revenue Survey (Western Soane Irrigation) at Arrah, 16th March 1876; promoted to Major, Bengal Staff Corps, 11th October 1876; appointed Deputy Surveyor General, 1st January 1879; promoted to Lieutenant-Colonel, Bengal Staff Corps, 9th December 1879.

## WAR SERVICES.

Served with the 1st Battalion, Bengal Artillery, and No. 17, Light Field Battery, at the siege and capture of Delhi in September 1857; in action with the rebels at Bulundshuhur in October 1857; in action with the rebels at Agra, 10th October 1857; served during the operations leading to the relief of Lucknow by the Army under Sir Colin Campbell in October and November 1857; in action with the rebels at Cawnpore on 6th November 1857; in action with the rebels at Shunshabad, near Futtegarh, in January 1858; at Alumbagh during the capture of Lucknow in March 1858; has received a mutiny medal with clasps for "Delhi," "Relief of Lucknow," "Capture of Lucknow."

JOHN BABONEAU NICKTERLIEN HENNESSEY, M. A. (Cantab), F. R. S., &c., &c., *Deputy Superintendent, 1st grade.*

*Junior Branch.*

APRIL 14TH, 1844, appointed 3rd class Sub-Assistant and posted to Karara Series, with which did duty, chiefly in Oudh, till 1845-46, when transferred to Chendwar Series and shared in operations through Tirhoot, Chumparun, &c., to confines of Gorakhpur; continuing with latter party, in 1846-47, employed in Gorakhpur Terai, where suffered severely from jungle fever; April 14th, 1847, promoted to 2nd class; 1847-48, present at Sonakhoda Base Line and held charge of a microscope; 1848-49, conducted approximate series, secondary triangulation and ray clearing on North-East Longitudinal Series through Gorakhpur and Oudh Terai, where again suffered severely from jungle fever, and was in consequence unable to take the field in ensuing season; April 15th, 1850, promoted to 1st class; in 1850-51 proceeded with 2nd Hill Series Party into the Punjab, and carried Secondary Series from Dala along Ravi River to Lahore, and thence across Bari Doab to Beas River, by means of which and other series he fixed the positions of Lahore, Amritsar, Tarn Taran, Wazirabad, Guzerat, &c.; 1851-53, attached to Superintendent's Field Office, and employed under the Astronomical Assistant at head quarters and elsewhere in bringing up various computations, acting as recorder of the latitude observations, conducting meteorological observations, &c., until October 1853, when on Captain Renny Tallyour's retirement was placed in charge of the Branch Computing Office with the Surveyor General; 1853-54, present at Chach Base Line, where acted as Assistant to the Surveyor General during the preliminary arrangements, and subsequently held charge of a microscope and conducted the meteorological observations.

*Senior Branch.*

April 25th, 1854, promoted to Senior Branch and appointed 2nd Assistant; November 29th, 1855, promoted to Rs. 400; September 4th, 1858, to 1st Assistant; continued in charge of the Branch Computing Office and was employed in reducing the measurements of Chach and Karachi Base Lines, preparing in manuscript triplicate the general report of the North-East Longitudinal Series, assisting in various professional investigations, examining candidates for the Department, &c.; September 1st, 1862, placed in charge of the Extra Party Base Line operations and proceeded with the apparatus under the orders of the Superintendent to Vizagapatam, where he assisted in the measurement of the Base Line; March 25th, 1863, to April 10th, 1865, absent on sick leave to Europe; during these two years he entered Jesus College, Cambridge University, as a Fellow Commoner and worked through a course of mathematical studies under William Walton, Esq., M. A., and Reverend Percival Frost, M. A., Moderators and Examiners, and Reverend J. Challis, M. A., and J. C. Adams, Esq., M. A., respectively Plumian and Lucasian Professors, whose certificates were received with much satisfaction by the Secretary of State for India, and elicited the approbation of the Government of India; he also proceeded to the Ordnance Survey Office, Southampton, and there studied the process of photozincography under direction from the Secretary of State, with whose sanction he subsequently selected the necessary apparatus and materials for introducing the process into the Great Trigonometrical Survey; also, with the support of the Secretary of State, visited certain field divisions of the Ordnance Survey in England, Scotland and Ireland in order to acquire a knowledge of their operations; he returned to India with the pendulum apparatus under his care; meanwhile, on 9th December 1863, he was specially promoted to Rs. 868; May 4th, 1865, appointed to charge of amalgamated Computing Office, now designated Head Quarters Office, and consisting of a Calculating Branch, with small auxiliary branches for Drawing, Printing and Photozincographing, Instrument Depot, &c., &c., and has continued to act in this capacity with exceptions hereafter noted; 1865-66, on arrival of the photozincographing apparatus from England, established the process in the Dehra Dun Office, and subsequently instructed (besides others) Captains Melville and Waterhouse in order to promote its introduction into the Surveyor General's Office, Calcutta; April 1st, 1866, on re-organization of the Department, was graded as Surveyor, 1st grade, on Rs. 1,100; 1866 and subsequently, besides ordinary duties, took a principal share in all the comparisons of standards; also determined the expansion of the Great Trigonometrical Survey, 10-foot Standard Bar; December 1866 to April 1869, directed and shared in the measurement of the Bangalore Base Line; September 1st, 1869, designation changed to Deputy Superintendent, 1st grade; December 1871, on duty under Colonel J. F. Tennant, C. I. E., R. E., F. R. S., to assist in observation of the solar eclipse at Dodabetta, Neigherries, where he held general charge of the photographic operations; April 1st, 1874, on consolidation of salaries placed on Rs. 1,300; December 9th, 1874, observed the transit of Venus across the Sun's disc; January 4th, 1875, to October 25th, 1876, on furlough to Europe; November 1st, 1876, to January 13th, 1877, officiated as Superintendent, Great Trigonometrical Survey, during Colonel Walker's absence; April 1st, 1877, attained maximum of grade (Rs. 1,600).

COLONEL FREDERICK CORTLANDT ANDERSON, *Bengal Staff Corps, Deputy Superintendent, 1st grade.*

JOINED the service as Ensign on the 13th December 1845; promoted to Lieutenant, 18th March 1850; Brevet-Captain, 13th December 1860; Captain on 18th February 1861; date of appointment to Staff Corps, 18th February 1861; Major on 13th December 1865; Lieutenant-Colonel on 13th December 1871; Brevet-Colonel on 13th December 1876. Posted to do duty with and joined the 16th Grenadiers forming part of the Army of the Sutlej; afterwards attached to 69th Native Infantry till permanently appointed to 71st Native Infantry, 8th August 1846; appointed Interpreter and Quarter Master, 34th Native Infantry, 17th July 1849, and did the duties until an officer of the 34th passed the Interpreter's examination in 1851; made a survey of the Fort of Michnee and its environs for three miles round by desire of Sir Henry Lawrence and Captain (Lord) Napier; appointed to the charge of Sapper and Miner Company and the building of the Fort of Abuzai in 1852; appointed Revenue Surveyor on 10th September 1852, and posted to Bari Doab Survey; transferred as Assistant to Sind-Saugor Doab Survey in February 1856; took officiating charge of this party on 6th December 1856; took charge of Bari Doab survey party in November 1857; resumed charge of Sind-Saugor Doab survey party on Major Shortrede's promotion, 28th January 1858; appointed one of the two British Commissioners for the settlement of boundary between Oudh and territory ceded to Nepal in January 1860 in addition to his own duties; received thanks of Government and Rs. 300 a month deputation allowance for this work; granted six months' leave from 29th April to 15th October 1848; recalled in consequence of declaration of 2nd Sikh War, and rejoined 71st Native Infantry on 24th May 1848.

WAR SERVICES.

Served with 16th Grenadiers till commencement of 1st Sutlej Campaign; served with 71st Native Infantry, holding right bank of Beas; marched in charge of siege train for Lord Gough's Army; took part in various

skirmishes against Bede Bekram and Ram Singh for protection of North Jullundur Doab in 1848-49; took part in skirmishes with hill tribes in the neighbourhood of Michnee under Sir Colin Campbell, and in the Eusufzai Valley under Major Lumsden in 1851-52; served during Indian Mutiny of 1857-58—medal.

LIEUTENANT-COLONEL GEORGE CHARLES DEPREE, *Deputy Superintendent, 1st grade.*

JOINED the late Honourable East India Company's Seminary at Addiscombe in February 1848; appointed 2nd Lieutenant of the Bengal Artillery on 9th December 1850; arrived in India, 18th June 1851, and joined the Artillery at Dum-Dum; leave on private affairs from 28th June to 15th November 1851; proceeded in December 1851 with the 6th Company, 9th Battalion Artillery, on service to Arrakan with the Pegu Field Force; surveyed on a large scale the station of Kyouk-Phyoo for the use of the Officer Commanding; ordered to examine and report upon the Tonghoop Pass between Arrakan and Burma as to its practicability for the passage of 150 elephants required by the force in Pegu, for which duty received letter of thanks by order of His Excellency the Governor General, Lord Dalhousie; appointed Assistant Executive Officer, Chittagong and Arrakan Road, 30th November 1853; sick leave in India from 17th June to 5th December 1854; appointed Assistant Surveyor, Ganjam Topographical Survey, 20th October 1854; employed on the survey of the Cuttack Tributary Mehals, 12th March 1856; 1st Lieutenant on the 21st January 1856; appointed to the charge of the Ganjam Topographical Survey in March 1856, at the same time *ex-officio* Assistant Commissioner, Cuttack Division, 13th September 1856; organised No. 2 Ganjam Topographical Party in 1857; transferred from No. 1 to No. 2 Ganjam Topographical Party in 1858; owing to the mutiny in 1858, employed in running a series of triangles to define the coast line of the Bay of Bengal; 2nd Captain, 27th August 1858; leave on medical certificate to Europe, 10th January 1859 to 2nd April 1860; completed the survey of Cuttack and commenced that of the Chota Nagpur Division, the designation of No. 2 Ganjam being changed to No. 4 Topographical Party, Chota Nagpur Division Survey; appointed *ex-officio* Assistant Commissioner, Chota Nagpur Division; during a long period decided many boundary disputes between the estates of the Rajahs of the Tributary Mehals; joined the Staff Corps, 19th February 1861; appointed Deputy Superintendent, 1st grade, Topographical Survey, on 20th October 1866; Major, 28th June 1868; furlough to Europe on private affairs from 5th December 1868 to 8th December 1870; employed on the survey of a part of the Central Provinces and Rewah; appointed *ex-officio* Assistant Commissioner, Central Provinces, and Assistant Magistrate; on the completion of the survey of the Central Provinces in 1877, No. 4 Topographical Party being disbanded, appointed to the charge of No. 7 Topographical Party, Rajputana and Simla Survey; employed on the survey of the cantonments of Subathu and Kasauli on large scale, and on the survey of hill roads about Simla, 1878, as well as of the country of Bickaneer; Lieutenant-Colonel, 9th December 1876.

WAR SERVICES.

Served with the Pegu Field Force in 1852-53—medal.

MAJOR H. R. THULLIER, *Royal Engineers (Bengal), Deputy Superintendent, 1st grade.*

SERVICE at Addiscombe from 1st August 1855 to 11th June 1857; date of first commission as 2nd Lieutenant, 12th June 1857; promoted to 1st Lieutenant, 27th August 1859; date of arrival in India, 29th April 1859, but service in India commenced from 16th October 1857; appointed to the Survey Department as 2nd Assistant in the Great Trigonometrical Survey, 21st May 1859; promoted to 1st Assistant, 1st February 1861; designation changed to Surveyor, 3rd grade, 1st April 1866; promoted to 2nd grade, 1st October 1867; designation changed to Deputy Superintendent, 2nd grade, 1st September 1869; promoted to Captain, 10th November 1869; furlough to Europe on private affairs, 14th March 1871; promoted to Deputy Superintendent, 1st grade, 18th July 1871; returned to India from furlough, 9th March 1873; graded as Deputy Superintendent, 2nd grade, under the re-organization of 1874, 1st April 1874; acting Deputy Superintendent, 1st grade, from 1st April 1874 to 3rd April 1876; officiated as Superintendent, Great Trigonometrical Survey, from 4th April 1876 to 31st October 1876; promoted to Major, 7th October 1876; acting Deputy Superintendent, 1st grade, from 1st November 1876 to 1st January 1878; promoted to Deputy Superintendent, 1st grade, under the re-organization of 1878, 27th October 1878; furlough to Europe for two years from 17th November 1879.

LIEUTENANT-COLONEL CHARLES THOMAS HAIG, *Royal Engineers (Bombay), Deputy Superintendent, 2nd grade.*

OBTAINED his first commission from the Honourable East India Company's Military College at Addiscombe on 8th June 1854; Lieutenant, 24th May 1856; arrived at Bombay, 5th July 1856; commanded a Company of the Bombay Sappers and Miners with the Persian Expeditionary Force, 1856-57; returned to India, October 1857; started same month in independent command of a Company of the Bombay Sappers and Miners to join the Rajputana Field Force, with which he was afterwards appointed Staff Officer of Engineers; in May 1858 was appointed Assistant Executive Engineer at Neemuch; 22nd September 1859, appointed 2nd Assistant in the Great Trigonometrical Survey of India, in which Department he has remained up to date; joined at Rajkot, 15th October 1859, but proceeded at once to join the Okhamaudal Field Force; after the taking of Dwarka, employed in the Survey in Cutch and Kattywar till May 1860; then proceeded to Murree in the Punjab; returned to Kattywar in October 1860; promoted to 1st Assistant, 1st February 1861; variously employed in the Survey Department in Kattywar, Guzerat, Meywar, Malwa, the Deccan, and Kanara, until the present time, with the exception of three breaks by furlough to Europe, viz., from 14th April 1865 to 13th October 1865, from 30th September 1869 to 22nd September 1871, and from 31st March 1877 to 3rd October 1878; promoted to 1st Assistant, Great Trigonometrical Survey, 1st February 1861; Captain, 12th April 1862; Deputy Superintendent, 2nd grade, 1st October 1867; Major, 5th July 1872; Lieutenant-Colonel, 23rd January 1877; Officiating Deputy Superintendent, 1st grade, 1st November 1879. On deputation as Commissioner, Venice Geographical Exhibition.

WAR SERVICES.

Served with Persian Expeditionary Force, 1856-57; present at the battle of Khushab and at the taking of Mohamera—medal and clasp; served with the Rajputana Field Force, 1857-58; present at the siege and assault of Kotah—medal and clasp; served with the Okhamaudal Field Force, 1859; present at the siege of Dwarka.

MAJOR J. HERSCHEL, *Royal Engineers (Bengal), F. R. S., &c., Deputy Superintendent, 2nd grade.*

JOINED at Addiscombe, February 1855; public examination, 12th December 1856; first commission, Ensign, Royal Engineers, 12th December 1856; Lieutenant, 27th August 1858; landed at Calcutta, 2nd January 1859; Second Assistant, Great Trigonometrical Survey, 3rd November 1859; First Assistant, 1st February 1861; sick leave to England, 20 months, 23rd April 1860; Surveyor, 3rd grade, 1st April 1866; Surveyor, 2nd grade, 1st October 1867; returned to duty, 8th December 1867; Second Captain, 10th November 1869; officiating Surveyor, 1st grade, 1st April 1871; reverted to substantive appointment, 31st October 1872; furlough to England two years, 22nd August 1873; designation changed to Deputy Superintendent, 2nd grade, 1st April 1874; returned to India, 18th August 1875; Major, 10th March 1876; on special duty in England from 17th November 1879.

MR. ROBERT BROUGHTON SMART, *Deputy Superintendent, 2nd grade.*

Was first appointed in the Survey Department on the 21st of September 1846 on Rs. 80 per mensem in the Monghyr and Bhagalpur Revenue Survey under Lieutenant W. S. Sherwill, Revenue Surveyor; on the 1st January 1848 promoted to Rs. 125 per mensem; sick leave from 2nd May to 30th June 1848, and again from 26th October 1848 to 20th January 1849; promoted to Rs. 175 on the 1st February 1850; on detached duty to British Sikkim (Darjeeling) from 1st October 1851 to November 1852; placed in independent charge of the survey party during season 1851-52; services were favourably noticed; on 1st January 1852 promoted to Rs. 200 per mensem; in December 1852 rejoined the Bhagalpur and Beerbhun Survey; on the 1st January 1855 promoted to Rs. 250 per mensem; sick leave from 8th July 1857 to 13th January 1858; promoted to Rs. 300 per mensem on the 1st of January 1859; assumed charge of the 1st or Northern Division Revenue Survey on the 6th October 1860 as Assistant Revenue Surveyor on Rs. 388 per mensem; promoted on the 1st July 1862 in the above survey to Revenue Surveyor; promoted on the 1st April 1866 to Deputy Superintendent, 3rd grade; on the 21st December 1866 was transferred from Assam to the 2nd Division, Central Provinces Survey; on the 6th November 1868 promoted to Officiating Deputy Superintendent, 2nd grade; on the 1st of April 1869 promoted to Deputy Superintendent of Revenue Survey, 2nd grade; on the 19th September 1872 transferred to the 4th Division, North-Western Provinces Revenue Survey, to organize a cadastral survey party, subsequently called 7th or Hamirpur District Survey; on the 1st October 1876 transferred to the 7th or Khorda Revenue Survey; furlough, private affairs, for two years, from 10th January 1880.

LIEUTENANT-COLONEL BRYDGES ROBINSON BRANFILL, *Bengal Cavalry, Deputy Superintendent, 2nd grade.*

MARCH 14TH, 1854, sailed from England as Cadet of Cavalry, Honourable East India Company's Service; June 24th, 1854, landed at Calcutta; August and September, doing duty with 1st Regiment, Light Cavalry, at Cawnpore; October 1854, posted to and joined 5th Bengal Light Cavalry at Ferozepore; 1855, passed the Vernacular, and passed Hindustani at Peshawar 1855 or 1856; 1855-56, on outpost duty with detachment of Regiment at Fort Abbazai, present at one or two skirmishes with Mohmands near Shabhadar; 1855-56, Acting Quarter Master of the Regiment; May 5th, 1856, promoted to Lieutenant; June 26th, 1856, appointed Adjutant of the Regiment; April 28th, 1858, doing duty with 7th K. Dragoon Guards at Sialkot; June 2nd, 1858, medical certificate to Murree (for Peshawar fever); October 4th, 1858, appointed (on probation) to Great Trigonometrical Survey; 1858-59 and 1859-60, two field seasons, levelling in Sind under Major Walker, R. E.; April 7th, 1860, promoted to Captain; April 1860, Assistant Surveyor under Major Walker with expeditionary force under General N. R. Chamberlain against the Mahsud Waziris, present at the taking of the *Bara Tanji* (stated to have a claim for Frontier Service Medal); 1860-61 and 1861-62, in charge of the levelling operations from Sind to Dehra Dun, Attok and Agra (having elected to remain "a local" in Her Majesty's Indian Army); May 1st, 1862, transferred to the Coast Series under Captain Basevi, and joined at Waltair (Vizagapatam); July 14th, 1862, employed in camp selecting Base Line till 14th July; 1862-63, took part in base line measurement; July 18th, 1862-63, executed the line of levels for connection with tide gauge, and also the connecting triangulation with 24-inch theodolite; 1863-64, in (sole) charge Coast Series, extended the series about 140 miles from Guntur to Nellore; 1864-65, in (sole) charge Complete Series to Madras (110 miles) by 10th June (hardly); 1865-66, carried Madras Longitudinal Series to Bangalore 120 miles; 1866-67, 20 months' leave, medical certificate (eye-sight failed from overwork); went to England and back, 28th May 1866 to 24th January 1868; 1867-68, selected Cape Comorin Base Line; 1868-69, completed base line and principal triangulation in vicinity; 1869-70, in charge Madras Party, Great Arc Series, Salem and Coimbatore; January 11th, 1870, promoted to Brevet-Major; 1870-71, Great Arc S. Section, over Palaney Mountains, also obtained by self-registering tide gaugs 13 months' observations at Tuticorin; October 1st, 1871, Deputy Superintendent, 2nd grade, Great Trigonometrical Survey of India; 1871-72, with aid of Captain J. R. McCullagh, R. E., carried Madras and Mangalore Longitudinal Series from Mysore to Mangalore, tried hard, but failed to establish tidal station on the open coast at Mangalore; 1872-73, with Captain McCullagh completed the Mangalore Meridional Series; 1873-74, resumed and completed the Great Arc S. Section; 1874-75, completed Ramnad and Rameswaram Longitudinal Series; 1875-76, completed Ceylon connection, and commenced Madras Coast Series North of Ramnad; 1876-77, furlough (1 year and 17 days) to England, May 15th, 1876, to May 31st, 1877; subsidiary leave; 1877, promoted to Brevet Lieutenant-Colonel; June 1st, 1877, resumed charge of Madras Party (from Captain Carter, R. E.); 1877-78, carried the triangulation across Cauvery (Kaveri) Delta, Tanjore; 1878-79, carried the triangulation Northwards through South Arcot District; 1879-80, completed the triangulation in Southern India.

MAJOR GEORGE STRAHAN, *Royal Engineers (Bengal), Deputy Superintendent, 2nd grade.*

JOINED the Corps of Royal Engineers at Chatham, February 1st, 1859; remained under instruction at the establishment there till June 1860; proceeded to India, October 4th, 1860; arrived in the country, November 20th, 1860; remained in regimental employ with the Sappers and Miners at Roorkee from 6th December 1860 till March 1861; employed in the Irrigation Department, Public Works Department, till July 2nd,

1862; appointed on 2nd July 1862 to Survey Department; served as Assistant in the Gwalior and Central India Survey for two years; received charge of No. 7 Party, Rajputana Survey, 1st September 1864; \* took sick leave to England for 20 months from 10th November 1867 to 6th July 1869; promoted to rank of Captain, January 14th, 1871; appointed Deputy Superintendent, 3rd grade, November 10th, 1867; appointed Deputy Superintendent, 2nd grade, October 26th, 1870; transferred to charge of No. 8 Party, Mysore Survey, 1st October 1875; furlough to Europe on private affairs, May 1st, 1877; returned to India, April 15th, 1879; received charge of No. 2 Party, Khandesh Survey, June 4th, 1879; received charge of Mysore Topographical Party from 1st November 1879. Promoted to rank of Major, 27th May 1881.

\* *Vide G. O. No. 605, dated 26th September 1863,—vide General Report, 1860 to 1865, page 36, para. 160.*

WAR SERVICES.

*Nil.*

**MAJOR THOMAS TUPPER CARTER, Royal Engineers (Bengal), Deputy Superintendent, 2nd grade.**

JOINED the service, 11th December 1857; arrived in India, 12th December 1859; did duty with the Bengal Sappers and Miners; appointed Acting Quarter Master to the same from 9th March 1860, and continued as such till 5th February 1860; ordered 6th February 1860 to join the Sikkim Field Force; appointed Probationary Assistant Engineer, Department of Public Works, 21st May 1861; posted to Peshawur Division, Department Public Works, 22nd June 1861; promoted to 2nd class Assistant Engineer, 16th November 1861; officiated as Executive Engineer, Hazara Division, from 18th December 1861 to 30th April 1862; appointed 2nd Assistant in Great Trigonometrical Survey of India, 1st March 1862; joined the Kashmir Party, 1st May 1862; promoted to 1st Assistant, junior grade, 21st April 1864; nominated to charge of Kashmir Party and Kumaon and Garhwal Party, 3rd February 1865, and remained in charge till 1st May 1867; promoted to Surveyor, 3rd grade, 1st April 1866; appointed to charge of the survey party accompanying the Abyssinian Expedition, 1st December 1867 to 8th March 1869, when, on completion of the work connected with this survey, returned to India; rejoined the Kumaon and Garhwal Party; October 1869 took charge of detached party, and proceeded to the North-Western frontier to fix positions of peaks in country north of Peshawur; designation changed to Deputy Superintendent, 3rd grade, 20th August 1869; local Captain, 11th December 1869; Captain, 13th September 1870; furlough to Europe, 18th December 1870 to 16th December 1871; appointed to charge of levelling party, 4th December 1871; promoted to Deputy Superintendent, 2nd grade, 1st October 1871; appointed to charge of the Brahmaputra Party, 13th May 1872; reverted to Deputy Superintendent, 3rd grade, on the introduction of consolidated salaries, 1st April 1874; furlough to Europe, 4th January 1875 to 16th November 1876; appointed to charge of the Madras Party, 20th November 1876 to 31st May 1877; charge of the Guzerat Party, 15th June 1877; Major, 1st October 1877; charge of Kumaon and Garhwal Party, 1st October 1878; assumed charge of No. 1 Gwalior and Central India Party, 6th May 1879; furlough to Europe for two years from 1st December 1879.

WAR SERVICES.

Served in the capacity of Survey Officer with the Sikkim Field Force under Lieutenant-Colonel Gawler in 1861; mentioned in despatches—*vide G. O. G., Military Department, No. 440, dated 14th May 1861*; served throughout the Umberla Campaign under Brigadier-General Sir Neville Chamberlain, K. C. B., and Major-General Garcock, C. B., in 1863 against the Boneyr and other tribes on the North-West frontier; mentioned in despatches—*vide G. O. G., Military Department, No. 76 of 29th January 1864—medal and clasp*; served in the Abyssinian Expedition under Lieutenant-General Sir Robert Napier, G. C. B., G. C. S. I.; mentioned in despatches—*vide London Gazette of 30th June 1868—medal.*

**LIEUTENANT-COLONEL DONALD MACDONALD, Bengal Staff Corps, Deputy Superintendent, 2nd grade.**

JOINED the service, 20th October 1853; arrived in the country, 1st December 1853; appointed to the 26th Regiment, Bengal Native Infantry; Lieutenant, 18th January 1856; Officiating Quarter Master, May 1857 to April 1858; Adjutant, April 1858; sick leave to Europe, 20th May 1859 to 12th August 1860; appointed to the Survey Department, Revenue Branch, 19th December 1860; Captain, 1st January 1862; joined Staff Corps, 13th August 1864; Revenue Surveyor, 1st January 1865; Deputy Superintendent, 3rd grade, 1st April 1866; furlough, private affairs, to Europe, 18th January 1872 to 14th January 1874; Major, 20th October 1873; Deputy Superintendent, 2nd grade, 1st January 1878; promoted to Lieutenant-Colonel, 20th October 1879.

WAR SERVICES.

*Nil.*

**MAJOR F. CODDINGTON, Bengal Staff Corps, Deputy Superintendent, 2nd grade.**

JOINED the service as a 2nd Lieutenant in the Bengal Artillery on the 12th June 1857; arrived in the country, 16th October 1857; promoted to 1st Lieutenant on the 27th April 1858; appointed to the Bengal Horse Artillery on the 23rd October 1858; transferred services to Royal Horse Artillery in May 1861; appointed an Assistant Surveyor in the Survey Department on the 13th January 1862, and transferred to Bengal Staff Corps from same date; appointed to the charge of a survey party, 3rd Division, Oudh, on the 1st January 1864; sick leave to Europe from the 10th December 1865 to 25th July 1867; promoted Deputy Superintendent of Survey, 3rd grade, on the 26th July 1867; attached to head quarters office from 26th July 1867 till the 15th November 1867; received charge of the 4th Division, Central Provinces Revenue Survey, on the 27th November 1867; promoted Captain, 12th June 1869; raised and received charge of a new survey, 10th Division, Deccan, on the 1st November 1871; furlough to Europe from 29th March 1875 to 18th March 1877; appointed to do duty in the head quarters office from 19th March 1877; promoted Major, 12th June 1877; furlough, six months, on urgent private affairs, under Rule XI. of 1868 rules, from 16th February 1878 to 11th August 1878; rejoined appointment in head quarters office, 12th August 1878; promoted Deputy Superintendent, 2nd grade, on the 27th October 1878.

## WAR SERVICES.

Served with the Cawnpore Field Force and at intrenched camp at Alumbagh and capture of Lucknow between 30th December 1857 and 23rd April 1858. (Medal with clasp for Lucknow.)

**BREVET LIEUTENANT-COLONEL WILLIAM MAXWELL CAMPBELL, Royal Engineers (Bombay), Deputy Superintendent, 2nd grade.**

JOINED the service, 1st August 1858; landed in India, 26th October 1860; attached to Bombay Sappers and Miners at Poona till 15th April 1861, when he marched to Jaulnah in command of a Company of Sappers and Miners, August 1861; joined Great Trigonometrical Survey of India on 30th January 1863 as second Assistant; Junior 1st Assistant, 11th March 1865; promoted to 3rd grade Deputy Superintendent on 1st February 1868, and to 2nd grade Deputy Superintendent, 1st January 1879; Captain, December 1869; took two years' furlough from 12th December 1868, during which he was placed on special duty to assist Colonel Strange in the preparation of survey instruments; returned to India on 3rd September 1871; took six months' leave on urgent private affairs on 8th December 1873, during which he was again placed on special duty with Colonel Strange; returned to India, 23rd September 1874; Major, 1st October 1877; took furlough for one year on 5th February 1878, and returned to India on 4th February 1879, and proceeded on survey duty to join the Southern Division, Afghanistan Field Force, under command of Lieutenant-General D. Stewart, C. B.; returned to India, 3rd February 1879; Brevet Lieutenant-Colonel, 22nd November 1879; received charge of No. 2 Astronomical Party, October 1880.

**CAPTAIN ROBERT VANSITTART RIDDELL, Royal Engineers (Bengal), Deputy Superintendent, officiating 2nd grade; Assistant Surveyor General.**

JOINED the late Honourable East India Company's Military Seminary at Addiscombe, February 1858; appointed Lieutenant, Bengal Engineers, 10th June 1859; attached to the Head Quarters Royal Engineers, Chatham, from August 1859 to November 1860; landed in India, 16th March 1861; joined the Bengal Sappers and Miners, 23rd May 1861; commanded a European Company of the Bengal Sappers and Miners from August 1861 to August 1862; appointed Military 2nd Assistant, Topographical Survey of India, and joined No. 1 Party; employed in Gwalior and Central India, 28th August 1862; transferred as Military Assistant to No. 5 Party employed in Rewah, October 1863; appointed to executive charge of No. 6 Topographical Party employed in the Khasi and Garo Hills, 4th October 1864; transferred to the charge of No. 1 Party employed in Gwalior and Central India, November 1866; transferred to the charge of No. 5 Party, employed in Rewah, Bundelcund, Bhopal, and Malwa, from June 1867, and remained in charge of that party until September 1874; appointed Deputy Superintendent, 3rd grade, 1st October 1867; promoted to Captain, 20th January 1871; promoted to Officiating Deputy Superintendent, 2nd grade, from 11th August 1873 to 26th October 1874; attached to the head quarters office of the Surveyor General at Calcutta from 9th December 1874 to 24th March 1875; furlough to Europe from 26th March 1875 to 12th September 1876; Assistant Surveyor General from 6th October 1876, with charge of the Mathematical Instrument Department and Workshops, and of the Lithographic Branch, Surveyor General's Office; officiated as Deputy Superintendent, 2nd grade, from 8th November 1876 to 6th May 1879, and from 1st November 1879 to the present date.

## WAR SERVICES.

*Nil.*

**BREVET-MAJOR CHARLES STRAHAN, Royal Engineers (Bengal), Deputy Superintendent, officiating 2nd grade.**

DATE of first commission, 8th June 1860; landed at Calcutta, October 1862; appointed to Survey Department as Assistant Surveyor, 1st grade, 26th September 1863; proceeded to join the column under General Tytler in Bhutan from November 1865; rejoined No. 1 Party, September 1866; promoted to Surveyor, 3rd grade, 1st December 1867; promoted to Captain, 20th August 1872; became Deputy Superintendent, 3rd grade, 1st April 1874; Officiating Deputy Superintendent, 2nd grade, 1st February 1878; reverted to Deputy Superintendent, 3rd grade, 5th October 1878; Officiating Deputy Superintendent, 2nd grade, 27th October 1878; proceeded to Jellalabad to join the column under Sir Sam. Browne in Afghanistan, 22nd March 1879; reverted to Deputy Superintendent, 3rd grade, 22nd April 1879; furlough to England from 26th October 1871 to 25th October 1873; officiated as Deputy Superintendent, 2nd grade, from 1st November 1879 to 13th March 1880; furlough to Europe from 27th March to 10th October 1880; Officiating Deputy Superintendent, 2nd grade, from 18th October 1880 to present time. Promoted to rank of Brevet-Major, 2nd March 1881.

**MR. JOHN OWEN NIX JAMES, Deputy Superintendent, 3rd grade, Assistant Surveyor General.**

APPOINTED to the Great Trigonometrical Survey of India as 3rd class Sub-Assistant, 20th July 1845; promoted to 2nd class Sub-Assistant, 29th July 1848; promoted to 1st class Sub-Assistant, 29th July 1851; appointed Senior Sub-Assistant, 10th July 1854; promoted to Civil 2nd Assistant Surveyor, 1st June 1855; transferred as Officiating Chief Draftsman, Surveyor General's Office, 1st September 1858; appointed Assistant Surveyor and Chief Draftsman, 12th July 1861; promoted to 1st grade Assistant Surveyor, Topographical Survey Department, 1st April 1866; promoted to 3rd grade Surveyor, 1st April 1869; Assistant Surveyor General and Deputy Superintendent, 3rd grade, 1st April 1874; Officiating Deputy Superintendent, 2nd grade, from 15th May 1876; reverted to 3rd grade Deputy Superintendent, 19th September 1876; Officiating Deputy Superintendent, 2nd grade, from 15th February 1878; reverted to 3rd grade from 1st April 1878; furlough to Europe from 1st April 1878 to 9th October 1879; officiated as Deputy Superintendent, 2nd grade, from 14th March to 17th October 1880; Officiating Deputy Superintendent, 2nd grade, from 14th December 1880 to present time. Obtained the Indian Mutiny Medal 1857.

**MAJOR WILLIAM BARRON, Bengal Staff Corps, Deputy Superintendent, 3rd grade.**

JOINED the Bengal Artillery as 2nd Lieutenant on 11th December 1855; arrived in the country, 4th February 1859; did duty with the Bengal Artillery at Meerut and Peshawur till end of March 1860; did duty with the Peshawur Mountain Train Battery during April and May 1860; rejoined the Artillery Division at Peshawur, June 1860, and continued there till appointed to the Peshawur Mountain Train Battery on 22nd August 1861; served with it at Murdan and Abbottabad till 3rd July 1862; appointed Assistant Revenue Surveyor in the Revenue Survey, 27th June 1862, and joined on 4th July 1862; joined the Bengal Staff Corps, 4th July 1862; Assistant Superintendent, 1st grade, 27th June 1866; surveyed in the Delhi, Peshawur and Hazara Districts till 15th December 1866; held charge of the North-West Frontier Survey from 12th October to 15th December 1866, and took charge of the 2nd Division, Lower Provinces, at Dibrugarh, Assam, on 1st February 1867; Officiating Deputy Superintendent, 3rd grade, 6th November 1868, continued there surveying in the Lakhimpur District till 8th December 1869; leave on medical certificate to Europe from 6th January 1870 to 3rd April 1871; promoted to Captain, 11th December 1870; appointed Deputy Superintendent of Survey, 3rd grade, on 1st April 1870; on return from furlough took charge of the North-West Frontier Revenue Survey on 17th April 1871; surveyed in the Dera Ghazi Khan District till 15th October 1873; transferred to the 4th Division, Revenue Survey, and took charge on the 13th November 1873; continued since then in charge, and surveyed District Moradabad (cadastrally) and District Budaon; Major, 11th December 1878

Favourably mentioned in despatch No. 7, dated India Office, London, 5th May 1870, from the Right Honourable the Secretary of State for India, to His Excellency the Right Honourable the Governor General of India in Council, for his work in the Lakhimpur District.

**WAR SERVICES.**

Served with the Peshawur Mountain Train Battery in the Mahsood Wuzaree Expedition during April and May 1860 and the forcing of the Burrara Pass; served as Assistant Surveyor with the Umbeyla Expedition, October 1863; severely wounded in the action at the Eagle's Nest Picket on 26th October 1863; wound pension for life (medal with North-West Frontier and Umbeyla clasps).

**LIEUTENANT-COLONEL H. C. B. TANNER, Bombay Staff Corps, Deputy Superintendent, 3rd grade.**

APPOINTED to the Bombay Artillery on the 8th June 1854; joined the Survey Department from the E Brigade, Royal Horse Artillery, as Assistant in the Sindh Revenue Survey on 10th October 1862; transferred with the Sind Party to Chanda, Central Provinces; the party became the 4th Division, Central Provinces Revenue Survey, in February 1865; took sick leave from 18th February to 13th March 1866; furlough to Europe from 14th March 1866 to 11th May 1867; after rejoining from furlough, doing duty in the head quarters office, Calcutta, from 11th May to 23rd June 1867; was placed in charge of the 3rd Division, Central Provinces Revenue Survey at Saugor, on 24th June 1867; transferred with the party to the Nimar District in November 1867; became Officiating Deputy Superintendent from 6th November 1868; became Deputy Superintendent, 3rd grade, from 1st April 1870; took charge of the Bombay City Survey in addition to his other duties in December 1869; transferred with the 3rd Division, Central Provinces Survey, to Bhawalpur; the party became the 1st Division, Bhawalpur Revenue Survey, in November 1870; transferred to the Topographical Party, which accompanied Sir Charles Brownlow's column to Lushai Hills, on 1st November 1871 to 30th April 1872; on return from Lushai Expedition was transferred to charge of 4th Division, Central Provinces, from 29th August 1872; the designation of this party subsequently was altered to the 11th Deccan Topographical Party from 1st October 1872; promoted to the rank of Major, 8th June 1874; took furlough on private affairs on 25th August 1876; rejoined the 11th Division, Deccan Survey, on expiration of furlough on 28th April 1877; ordered to join the Khyber column under Lieutenant-General Sir Samuel Brown as Surveyor in November 1878; joined the Great Trigonometrical Survey Office at Mussoorie on completion of Afghanistan campaign in June 1879; on special duty to Gilgit from July 1879 to present date; promoted to Lieutenant-Colonel, 22nd November 1879.

**WAR SERVICES.**

Accompanied the Persian Expeditionary Force of 1856 as Subaltern in No. 5 Light Field Battery, and was present at the landing at Halibia Bay, the taking of Reshire and Bushire, and the action of Kushat (medal and clasp); accompanied a force despatched after the rebels from Kurrachee to Nugger Parker in May 1859; accompanied Sir Charles Brownlow's column during the Lushai Expedition in November 1871 as Surveyor, (clasp); mentioned in despatches, and received the thanks of the Government of India; accompanied Sir Samuel Brown's column, 1st Division, Peshawur Valley Field Force, as Surveyor, from the commencement to the termination of hostilities in 1878-79.

**MR. EDWARD THOMAS SMITH JOHNSON, Deputy Superintendent, 3rd grade.**

APPOINTED as Junior Sub-Assistant Revenue Surveyor to the Ajmere and Mhairwara Revenue Survey on 13th October 1847; transferred with the Survey Division to Delhi and Rohilcund on the 1st November 1848; promoted to 3rd grade Sub-Assistant Surveyor on 1st January 1850, to 2nd grade, 1st January 1851, and to 1st grade on 1st October 1853; remained in this Survey Division (as the 1st or Western Division, Rohilcund Survey) up to 30th September 1854; transferred with survey to Jubbulpore on 1st October 1854, and again transferred, on promotion to 3rd Civil Assistant to the newly raised Survey at Noemuch, on 16th October 1854; re-transferred to the Jubbulpore Survey on 20th January 1856; promoted to 2nd grade Civil Assistant on 1st December 1856; on the breaking out of the mutiny did garrison duty at the Jubbulpore Residency; transferred on 1st January 1858 with Survey Division to Nagpur (1st or Eastern Division, Nagpur Survey); promoted to 1st grade Civil Assistant on 1st April 1860; re-transferred with survey to Jubbulpore (Saugor and Nerbudda Survey) on 1st October 1861; joined the Drawing Branch of the Head Quarters Office (Calcutta) on 1st November 1861; took charge of Correspondence Branch from 1st April 1862; appointed Assistant Surveyor in charge of the Darjeeling Survey on 21st November 1862; proceeded in charge of above survey party to Benares, &c., on 1st November 1867; on completion of cantonment survey, took up the revenue survey of Bhawalpur (as the 2nd Division, Bhawalpur Survey) on the 1st November 1869; appointed 3rd grade Deputy Superintendent on 5th July 1870; took over charge of 1st Division, Bhawalpur Survey, on 1st November 1871, and the charge of the 3rd Division, North-West Provinces Cadastral Survey (now called the 6th Division), on the 1st October 1872.

**BREVET-MAJOR WILLIAM JAMES HEAVISIDE, Royal Engineers (Bengal), Deputy Superintendent, 3rd grade.**

JOINED Royal Military College, Addiscombe, 1st August 1857; first commission as 2nd Lieutenant, Bengal Engineers, 10th June 1859; joined at Chatham, 1st August 1859; left Chatham in March 1861; granted three months' extension in England to study railway engineering; landed in Calcutta, 1st November 1861; joined Sappers and Miners at Roorkee (about), 15th December 1861; joined Agra and Bombay Road Division, Department Public Works, as Probationary Assistant Engineer, 15th September 1862; promoted to 2nd grade Assistant (about), 1st May 1863; transferred to 2nd Division, Allahabad, Department of Public Works, in August 1864; left Department of Public Works for field service on 14th February 1865; on return from service joined the Great Trigonometrical Survey, 3rd January 1866, as 2nd grade Assistant; posted to East Calcutta Longitudinal Series, charge of No. 2 Astronomical Party from September 1866 until taking furlough to Europe on 30th October 1870; promoted to 1st grade Assistant, Great Trigonometrical Survey, 1st March 1868; promoted to Captain, 24th March 1871; promoted to Deputy Superintendent, 3rd grade, Great Trigonometrical Survey, 5th April 1872; returned from furlough, 4th April 1872, to take charge of pendulum operations, and remained in charge until the completion of them; in joint charge of longitude operations with Major W. M. Campbell, R. E., from November 1875 until taking furlough, 16th November 1877; on return from furlough, 28th November 1878, proceeded to join the Southern Afghanistan Field Force; returned to India, and received charge of Khandesh and Native States Topographical Party, 24th October 1879; received charge of No. 1 Astronomical Party, 18th October 1880. Brevet Major, 22nd February 1881.

**WAR SERVICES.**

Served with the Left Centre Column, Bhootan Field Force, as Assistant Field Engineer, 1865-66—medal; served in 1878-79 with the Southern Afghanistan Field Force on special survey duty; joined Lieutenant-General Stewart's column at Kandahar, and accompanied the Tal Chotiali Force under Major-General Biddulph on its return to India; specially mentioned in Tal Chotiali Field Force orders by Major-General Biddulph No. 427, dated 16th May 1879.

**MAJOR AYRTON PULLAN, Bengal Staff Corps, Deputy Superintendent, 3rd grade.**

APPOINTED a Cadet of Infantry, February 1856; landed in India, 29th April 1856; date of first commission as Ensign, June 14th, 1856; Lieutenant, 26th December 1856; Officiating Quarter Master, 4th Sikh Infantry, July 1857; sick leave from Delhi Field Force, 12th September to 30th November 1857; appointed Adjutant, Berry's Sikhs, November 1857; Adjutant, Gorakhpur Military Police, January 1858; Adjutant, Benares Horse, January 1859; appointed to the Staff Corps, 18th February 1861; attached to Her Majesty's 8th Hussars, November 1861; Doing Duty Officer, 14th Bengal Cavalry, January 1862; officiated as Assistant Political Agent, and Bazar Master, Morar, from April to June 1862; Doing Duty Officer, 8th Bengal Cavalry, June 1862; appointed 2nd Assistant, Great Trigonometrical Survey, 18th January 1863; promoted to 1st Assistant (designation changed to Assistant Surveyor, 1st grade), 1st October 1866; promoted to Captain, 14th June 1868; furlough to Europe for two years, 31st December 1869; Assistant Superintendent, 1st grade, and Officiating Deputy Superintendent, 3rd grade, Great Trigonometrical Survey, 11th December 1871; appointed to the charge of the Kattywar Survey, 6th April 1873; promoted to Major, 14th June 1876; appointed Deputy Superintendent, 3rd grade, Great Trigonometrical Survey, 1st January 1878; furlough to Europe for one year, from 13th May 1878; return to duty, 19th April 1879; resumed charge of Kattywar Survey, 26th April 1879.

**WAR SERVICE.**

Served as orderly officer to Brigadier Johnstone on the March from Jullundar to Delhi, June 1857; served with the 4th Sick Infantry throughout the siege of Delhi; severely wounded; medal and clasp, also mentioned in despatches three times during the Indian rebellion and received the thanks of Sir C. Wingfield, Chief Commissioner of Oudh, for the defence of the town of Bansee when attacked by an insurgent force, July 1858 (horse wounded).

**MAJOR DAVID CLAPHAM ANDREW, Bengal Staff Corps, Deputy Superintendent, 3rd grade.**

JOINED the service on the 3rd December 1859 as Ensign on the General List of Bengal Infantry; arrived in India, 7th March 1860; G. O. C. C., dated 9th April 1860, directed to do duty with Her Majesty's 77th Regiment; promoted Lieutenant on the 10th September 1861; by G. O. C. C., dated 25th March 1862, ordered to join and do duty with the 21st Punjab Infantry, Native Regiment; joined the Revenue Survey Department as Probationary Assistant Surveyor on the 30th December 1862, and confirmed, 18th January 1864; Assistant Superintendent, 1st grade, on the 30th December 1866; joined Bengal Staff Corps, 18th January 1864; promoted Captain on the 9th December 1871; promoted Deputy Superintendent of Revenue Survey, 3rd grade, on the 1st January 1878; proceeded on furlough on medical certificate to Europe on the 28th May 1878; returned to India on the 12th June 1879, and resumed charge of substantive duties on the 13th June 1879; placed in charge of Bassein District, British Burma Survey, 11th November 1879; promoted to Major, 9th December 1879; transferred to No. 11 South Deccan Survey, 20th November 1880.

**WAR SERVICES.**

*Nil.*

**MAJOR WILLIAM HENRY WILKINS, Bengal Staff Corps, Deputy Superintendent, 3rd grade.**

JOINED the Bengal Artillery, 12th December 1857; arrived in the country, 28th January 1858; promoted to 1st Lieutenant, 27th August 1858; joined Thomason College, Roorkee, 12th March 1861; obtained 1st class certificate, &c., 27th August 1862; privilege leave until 1st November 1862, on which date received general leave in India for three months, afterwards extended to six months; commanded the garrison battery in Agra Fort (the 20 days' leave not expended was never cancelled), 11th April 1863; joined the Fyzabad Revenue Survey as Assistant on probation, 27th April 1863; confirmed as Assistant Revenue Surveyor, and appointment to Staff Corps dated from 11th May 1864; joined 1st Division, Central Provinces Revenue Survey, 13th November 1864; promoted to Assistant Superintendent, 1st grade, 27th April 1867; Captain, 12th December 1869; Assistant Superintendent in charge of 1st Division, Central Provinces Survey, 3rd August 1870 to 16th



December 1870; joined the 2nd Division (Punjab) Revenue Survey, 1st July 1871; Officiating Deputy Superintendent, 3rd grade, 13th May 1871 to 24th September 1871; received charge of 2nd Division (Punjab) Revenue Survey, 20th October 1871; Officiating Deputy Superintendent, 3rd grade, from 18th January 1872 to 3rd March 1872, and from 28th March 1872 to 18th March 1877; received charge of 12th (Midnapur) Revenue Survey, 1st December 1876; received charge of 14th (Dearnah) now 3rd Division Survey of India, 7th December 1877; Major, 12th December 1877; confirmed as Deputy Superintendent, 3rd grade, 27th October 1878.

WAR SERVICES.

*Nil.*

MAJOR J. E. SANDEMAN, *Bengal Staff Corps, Deputy Superintendent, 3rd grade.*

JOINED the Royal Military College at Addiscombe in 1860; obtained a commission as Ensign in the Bengal Infantry on the 7th June 1861; arrived in India in October 1861; was attached for duty to Her Majesty's 90th Light Infantry; promoted to Lieutenant, 19th May 1862; 10th October 1862 passed the P. H. examination in Hindustani; had leave in India, private affairs, 15th December 1862 to 12th February 1863; by G. O. C. C., dated 23rd March 1863, was permitted to study at the Civil Engineering College at Roorkee; in September 1864 passed the College final examination, and obtained certificate qualifying for employment as an Engineer in the Department Public Works; was appointed to the Survey Department, and joined appointment at Nagpur on the 6th October 1864; from 17th February 1866 was transferred to 2nd Division, Oudh Survey, and from 13th November 1866 to North-Western Frontier, a survey party in the Punjab; joined the Staff Corps on the 9th May 1867; served in the Punjab till 1870, when by G. G. O., dated 20th December 1869, No. 1265, he was granted two years' furlough to England; he availed himself of this from 14th March 1870, and reported his arrival at Bombay again on the 16th February 1872; rejoined his appointment at Nagpur as Assistant Superintendent of Survey on 21st February 1872; held charge of the 2nd Division, Central Provinces Revenue Survey, from 19th June to 10th August 1872; from 1st October 1872 was transferred to the Moradabad Cadastral Survey; in March 1873 was transferred to Bengal and took over charge of the Midnapur Survey from 21st March 1873; was promoted to Captain by G. G. O., dated 18th June 1873, from 7th June 1873 under R. W. of 16th January 1861; made over charge of the Midnapur Survey in December 1873, and proceeded to join the Goalpara Survey in Assam; in October 1874 was appointed to the Behar Irrigation Survey as Assistant Superintendent; from 1st October 1875 obtained charge of the Darjeeling waste lands survey, which after two months was converted into Dhanwar estate survey; with this party surveyed cadastrally the Dhanwar wards' estate in Hazaribagh, a portion of the Chota Nagpur estate in Lohardugga, and the Government estate of Burkagarh in Lohardugga; from the 1st December 1878 assumed charge of the British Burma Cadastral Survey; was promoted to Officiating Deputy Superintendent, 3rd grade, Survey of India, from 15th May 1876 to 7th November 1876, and from 14th July 1877 to 31st December 1877; officiated as a Deputy Superintendent, 3rd grade, from 1st January 1878; was promoted to Deputy Superintendent, 3rd grade, Survey of India, from 1st January 1879—Promoted to rank of Major 7th June 1881.

WAR SERVICES.

Served with the Black Mountain Expedition in Hazara under Major-General Alfred Wilde from 15th August to 31st October 1868; was present at the advance from Munna Kaduna, and the taking of the Machai Peak; assisted in surveying the route taken by the force and the surrounding country under the direction of Colonel H. C. Johnstone, and compiled a map of the same; received the frontier medal.

MAJOR W. F. BADGLEY, *Bengal Staff Corps, Deputy Superintendent, 3rd grade.*

JOINED the service, 4th April 1857; arrived in Calcutta, 15th May 1857; doing duty with Her Majesty's 88th and 53rd Regiments to 25th November 1858; Lieutenant, 18th May 1858; Oudh Military Police, 26th November 1858; Adjutant, 26th Punjab Infantry, to 11th April 1865; appointed to the Topographical Survey on 8th May 1865, and joined No. 5 Party employed in Rewah and Bundelcund, and remained with that party till October 1868; Assistant Superintendent of Survey, 8th May 1868; Captain, 4th April 1869; furlough, 23rd January 1869 to 21st January 1871; joined and received charge of No. 6 Topographical Party; employed in the Khasi, Garo, and Naga Hills on 8th June 1871, and remained in charge of that party up to the present time, with the exception of a period from October 1874 to August 1875, during which Major Godwin-Austen had charge; Major, 4th April 1877.

WAR SERVICES.

Mutiny and Lushai Expedition—medals and clasp; minor affairs on eastern frontier; four wounds; no recognition of services.

BREVET-MAJOR T. H. HOLDICH, *Royal Engineers (Bengal), Officiating Deputy Superintendent, 3rd grade.*

COMMISSIONED Lieutenant, R. E., 17th December 1862; arrived in India, 3rd March 1865; Assistant Superintendent, 2nd grade, Topographical Survey of India, 23rd July 1865, and joined the Rajputana Topographical Party; attached to special party for service in Abyssinia, December 1867; proceeded to England from Abyssinia on special duty, June 1868; Assistant Superintendent, 1st grade, 15th December 1868; returned to India, 4th May 1869; attached to Gwalior and Central India Topographical Survey; acted in charge of the party during seasons 1871-72 and 1872-73; Officiating Deputy Superintendent, 3rd grade, from 11th August 1873 to 3rd November 1873, and again from 15th December 1873; in charge of Vizagapatam Agency and Central Provinces Survey, 15th December 1873; Captain, Royal Engineers, 4th June 1876; left India on furlough to Europe, 14th May 1877; recalled to join Afghanistan Field Force, December 1878; arrived in India, 15th January 1879; officiated as Deputy Superintendent, 3rd grade, from 15th January to 13th June 1879, and from 1st November 1879 to the present time. Promoted to rank of Major, 2nd March 1881.

## WAR SERVICES.

Served with a detachment of Bengal Sappers and Miners with the field force in Bhootan from October 1865 to end of the campaign—medal; served with a survey party attached to Abyssinian Field Force from December 1867 to close of campaign; mentioned in despatch of Lord Napier of Magdala, Commanding Expedition, dated 1st June 1868, published in General Orders, Military Department, No. 736, dated Simla, 29th July 1868; services commended in a letter from Mr. Cardwell, Secretary of State for War, to Major-General Pears, No. 7603—4695, dated 27th February 1879—medal; served with a survey party attached to Quetta Column, Afghanistan Field Force, from February to 29th March 1879, and with the Kabul Field Force from the 19th October 1879 to the end of August 1880.

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Mr. JAMES CAMPBELL, *Assistant Superintendent, 1st grade.*

APPOINTED by Sudder Board of Revenue, Bengal, an apprentice at Rs. 40 in the Survey Department, 20th September 1844, and joined the Sarun and Chumparun Revenue Survey, 8th October 1844; Sub-Assistant, 3rd grade, at Rs. 80 per month, 1st October 1845; employed on survey of Nepal Frontier among hills North of Chumparun in January and February 1846; charge of a revenue survey camp in District Tirthoot from April 1846; Sub-Assistant Surveyor, 3rd grade, at Rs. 125, 1st January 1848; in District Mymensing, Bengal, from January 1850; Sub-Assistant Surveyor, 2nd grade, at Rs. 150, and transferred to Rohilkund Survey, 1st October 1850; privilege leave from 1st November to 21st December 1850; Sub-Assistant, 2nd grade, at Rs. 175, 1st January 1852; Sub-Assistant Surveyor, 1st grade, at Rs. 200, 1st October 1853; transferred to Jubbulpore District, Central Provinces, in October 1854; Assistant Surveyor, 3rd grade, at Rs. 250, 1st January 1855; transferred to Nagpur District, January 1858; Assistant Surveyor, 2nd grade, at Rs. 300, 1st January 1858; Assistant Surveyor, 1st grade, at Rs. 350, 1st April 1860; in Districts Jubbulpore, Narsingpur and Hoshungabad from November 1860; Senior Assistant Surveyor, at Rs. 400, 1st January 1864; in charge Rohilkund Topographical Survey, 29th November 1865; survey of tea plantations in Kumaon and Gurhwal in 1866; in Bareilly District from October 1866, also survey of settlement and cantonments of Naini Tâl; Assistant Superintendent, 1st grade, 29th November 1867; Officiating Deputy Superintendent, 3rd grade, 1st November 1871; reverted to Assistant Superintendent, 11th August 1872; charge of 15th Division Survey, Bahawalpur, Punjab, October 1872; Officiating Deputy Superintendent, 3rd grade, 21st January 1873; charge of 14th Division Ganges Dearah Survey, Eastern Bengal, October 1874; reverted to Assistant Superintendent, 23rd January 1877; furlough in India from 8th May 1877 to 6th January 1878; charge of North-Western Provinces Cadastral Revision Survey, 7th January 1878; employed in head quarters office from August 1879; transferred in charge of Khoorda Survey from 11th October 1879. Furlough in India from 1st February 1881.

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MAJOR JAMES WATERHOUSE, *Bengal Staff Corps, Assistant Superintendent, 1st grade, and Assistant Surveyor General, Photo. Branch.*

JOINED the service as 2nd Lieutenant, Bengal Artillery, 10th June 1859; arrived in the country, 11th October 1859; services placed temporarily at the disposal of the Foreign Department for special duty, 15th November 1861; left regimental duty, 16th January 1862; returned to regimental duty, 21st December 1862; appointed Officiating Commissary of Ordnance, 3rd class, 13th April 1866; services placed at the disposal of the Government of Bengal, 5th June 1866; appointed Assistant Revenue Surveyor, Lower Provinces, 27th June 1866; services placed at the disposal of the Government of India, Home Department, 7th July 1866; appointed Assistant Surveyor with superintendence of the photozincographic operations in the Office of the Surveyor General of India, 18th July 1866; joined the Survey Department, 22nd July 1866; leave on medical certificate to Europe, 25th March 1867 to 17th February 1869; re-appointed Assistant Surveyor, 2nd grade, 17th February 1869; gazetted Lieutenant in Bengal Staff Corps, 10th June 1859; promoted to 1st grade Assistant Superintendent of Survey from 17th June 1870; promoted to Captain, Staff Corps, 10th June 1871; attached to Colonel Tennant, R. E., for duty with the Indian Eclipse Expedition from 21st November 1871 to 8th January 1872; attached to Colonel Tennant, R. E., for duty in observing the transit of Venus from 10th October 1874 to 1st January 1875; in charge Indian Eclipse Expedition to Nicobar Islands from 11th March to 18th April 1875; Officiating Deputy Superintendent of Survey, 3rd grade, from 26th March 1875; reverted to Assistant Superintendent, 1st grade, 19th September 1876; Officiating Deputy Superintendent of Survey, 3rd grade, from 23rd November 1877 to 6th January 1878; reverted to Assistant Superintendent, 1st grade, 7th January 1878; Officiating Deputy Superintendent, 3rd grade, from 1st February 1878; on special duty in Europe from 10th October 1878 to 8th November 1878; Officiating Deputy Superintendent, 3rd grade, from 9th November 1878 to 6th May 1879, and from 1st November to 11th December 1879; furlough to Europe on private affairs from 12th December 1879.

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WAR SERVICES.

*Nil.*

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BREVET-MAJOR MALCOLM W. ROGERS, *Royal Engineers (Bengal), Assistant Superintendent, 1st grade.*

JOINED the service as a gentleman Cadet in February 1860; appointed Lieutenant in the Royal Engineers, 18th December 1861; served as Division Officer, Cork, Ireland, from 1864 to 1865; landed in India, 20th October 1865; served with the Bengal Sappers and Miners until 4th July 1866; appointed Assistant Surveyor, 2nd grade, Great Trigonometrical Survey of India, on 5th July 1866; promoted to Assistant Surveyor, 1st grade, 5th December 1868; Officiating Deputy Superintendent, 3rd grade, from 18th December 1870; reverted to Assistant Superintendent, 1st grade, 1st November 1872; Officiating Deputy Superintendent, 3rd grade, from 6th April 1873; furlough on private affairs from 1st November 1873; Captain, 11th December 1873; returned to India and appointed Officiating Deputy Superintendent, 3rd grade, 28th October 1874; reverted to Assistant Superintendent, 1st grade, from 1st January 1878; Officiating Deputy Superintendent, 3rd grade, from 15th February 1878; reverted to Assistant Superintendent, 1st grade, from 26th April 1879; Officiating Deputy Superintendent, 3rd grade, 12th December 1879; furlough to Europe for 1 year and 4 days, 1st May 1880; returned from furlough 15th June 1881, appointed Officiating Deputy Superintendent, 3rd grade, 15th June 1881; promoted to rank of Brevet-Major, 2nd March 1881.

## WAR SERVICES.

Served as Survey Officer with the 1st Division of the Quetta Field Force under Lieutenant-General D. Stewart, C. B., from 12th November 1878 to November 1879.

CAPTAIN J. HILL, *Royal Engineers (Bengal), Assistant Superintendent, 1st grade.*

CAPTAIN JOHN HILL, Royal Engineers, joined the service, 25th June 1862, and arrived in India, 10th December 1865; joined Bengal Sappers and Miners at Roorkee, 27th January 1866; appointed 2nd grade Assistant Surveyor, Great Trigonometrical Survey of India, 4th December 1866; posted to Kumaon and Garhwal Series, Great Trigonometrical Survey, 28th December 1866; sick leave to Europe from 11th November 1868 to 30th October 1869; promoted to Assistant Superintendent, 1st grade, Great Trigonometrical Survey, from 30th October 1870; received charge of the Kumaon and Garhwal Series, afternoon of 10th February 1871; Officiating Deputy Superintendent, 3rd grade, 1st April 1871; reverted to substantive appointment of Assistant Superintendent, 1st grade, 4th April 1872; Officiating Deputy Superintendent, 3rd grade, 23rd August 1873; relieved of charge of Kumaon and Garhwal Series, 1st October 1873; received charge of Bombay party, 28th October 1874; local Captain, 25th June 1874; reverted to substantive appointment of Assistant Superintendent, 1st grade, 28th October 1874; relieved of charge of Bombay party, 19th October 1879; furlough to Europe from 20th January 1875 to 28th January 1877; Captain, 16th September 1875; rejoined appointment in India, 28th January 1877; assumed charge of the Eastern Frontier Series, 17th March 1877; Officiating Deputy Superintendent, 3rd grade, 1st April 1878; reverted to substantive appointment of Assistant Superintendent, 1st grade, 22nd April 1879; furlough to Europe for 182 days, 26th May 1879; subsidiary leave from 17th May; returned from furlough and resumed charge of Eastern Frontier Series, 25th December 1879; Officiating Deputy Superintendent, 3rd grade, from 9th April 1880.

## WAR SERVICES.

*Nil.*

MAJOR HENRY LEES SMITH, M. A., LL. D., *Bengal Staff Corps, Assistant Superintendent, 1st grade.*

JOINED the Royal Artillery (Imperial List), 1st April 1861; arrived in India, 13th November 1861; appointed to the Bengal Staff Corps as Probationary Assistant Revenue Surveyor, 26th March 1866; Assistant Revenue Surveyor, 2nd grade, 18th June 1867; 1st grade Assistant Superintendent, Revenue Survey, 18th June 1870; Captain, 1st April 1873; furlough to Europe on private affairs from 24th April 1876 to 26th December 1877; resumed charge of appointment on 11th January 1878 as Assistant Superintendent, 3rd Division, Saharanpur, North-Western Provinces; transferred to 1st Division, Dera Ismail Khan, 1st October 1878; assumed charge of 1st Division, 26th October 1878, in the afternoon, to 5th December 1879; assumed charge of No. 10 Party, Bombay Topographical Survey, from the 13th November 1880; Officiating Deputy Superintendent, 3rd grade, from the 14th December 1880 to 15th June 1881. Promoted to rank of Major, 1st April 1881.

## WAR SERVICES.

*Nil.*

MR. HENRY HORST, *Assistant Superintendent, 1st grade.*

APPOINTED Librarian and Accountant to the Thomason Civil Engineering College, Roorkee, 1st January 1863 up to September 1864; appointed as a 3rd class Sub-Assistant in the Great Trigonometrical Survey (without break of service), 1st September 1864; transferred to the Topographical Survey on Major-General Sir A. Waugh's retirement; promoted to the Senior Department, 1st April 1868; officiated as Surveyor, 3rd grade, from 16th October 1868 to 4th April 1869; promoted to Assistant Superintendent, 1st grade, 1st October 1869; officiated as Deputy Superintendent, 3rd grade, from 1st January to 18th January 1879. Services.—Assisted in the Topographical Survey of the Jhelum and Rawal Pindi Districts till its completion; Gwalior and Central India Survey, Rajputana Survey, and in charge of same for nine months; Simla Survey, Bhopal and Malwa Survey; appointed to the charge of No. 2 Topographical Party or Khandesh and Bombay Native States Survey, 18th October 1874; in charge of picket which repulsed night attack on the Murree Sanitarium in September 1857 (*mutiny medal*); gave information through Captain W. G. Murray to the General Commanding the Agra Division in 1862, which led to the seizure of Harbans Ram, Soubah of Dholpur, and dispersion of 6,000 troops he had quietly collected in the Chumbal ravines for a revolt; furlough to Europe for two years from 5th June 1879; extension for 3 months.

MR. WILLIAM HAMMOND COLE, M. A., CANTAB. F. B. A. S., F. R. G. S., *Assistant Superintendent, 1st grade.*

APPOINTED to the Educational Department, North-Western Provinces, direct from England, 14th April 1862, as Professor of Mathematics at the Government College, Agra; sick leave from 9th September to 8th November 1863; permitted to resign appointment from 1st March 1864 on account of continued ill-health; after nearly three years' residence at Mussooree as Mathematical Master at Mr. Maddock's School was re-appointed to the Government service, 3rd January 1867, as Probationary Assistant Surveyor in the Great Trigonometrical Survey of India and Assistant to the Officer in charge of the Computing Office, being at the same time placed in charge of the Photozincographic Branch of the Computing Office, Dehra; appointed Assistant Surveyor, 2nd grade, on 1st September 1867; conducted the duties of the Computing Office in all its branches from middle of December 1867 to beginning of April 1868 during the absence of Mr. J. B. N. Hennessey, M. A., the Officer in charge, who was deputed to superintend the measurement of the Bangalore Base Line; designation changed to Assistant Superintendent of Surveys on 1st September 1869; promoted to 1st grade from 4th December 1870; officiated as Deputy Superintendent, 3rd grade, from 1st April 1871 to 16th December 1871; officiated again in this grade from 2nd November 1873 to 30th September 1874; officiated again as Deputy Superintendent, 3rd grade, from 4th January 1875 to 27th March 1876; furlough on private affairs from 27th March 1876 to 21st

March 1877; on amalgamation and reduction of the three branches of the Survey Department on the 1st January 1878, reverted to the grade of Assistant Superintendent, 2nd grade, officiating in 1st grade; again promoted to 1st grade from 27th October 1878.

**MR. HENRY BLAQUIRE TALBOT, Assistant Superintendent, 1st grade.**

APPOINTED in the Junior Department of the Great Trigonometrical Survey, 1st December 1848; served under the orders of Captains DuVernet and Robinson in the North-Western Himalaya Series and Sind Snagor Doab, 30th June; resigned, 1852; joined the Revenue Survey as Sub-Assistant, 1st October 1852; Sub-Assistant, 2nd class, 1st January 1854; served under the orders of Captains G. Hunter Thompson, G. Hamilton and A. D. Vanrenen in the Baree Doab, Bharatpur and Bundelcund Surveys; promoted to Assistant Surveyor, 1st January 1858; appointed to the charge of the Rohileund Survey in October 1862; transferred to the charge of the 2nd or Upper Assam Survey, 29th November 1865; appointed to the Senior Branch at the re-organization on 1st April 1866, as Probationary Assistant Superintendent; promoted to 1st grade on 12th September 1870; transferred to the 6th Division, Cadastral Survey, Agra, 1st October 1872, after the abolition of the 2nd or Upper Assam Survey; reverted to 2nd grade Assistant Superintendent on the amalgamation of the Topographical and Revenue Surveys, 19th March 1877; appointed to Behar Irrigation Survey from 1st October 1876, and in charge of the 9th Division, Cadastral Irrigation Survey, Orissa, 28th November 1878; promoted to 1st grade Assistant Superintendent, 22nd December 1878; appointed to charge Tharawaddy District, British Burma Survey, from 1st November 1880.

**CAPTAIN ANDREW WILSON BAIRD, Royal Engineers (Bengal), Assistant Superintendent, 1st grade.**

JOINED the service, 18th December 1861 as Lieutenant, Royal Engineers; arrived in India, 4th March 1863; served with the Bombay Sappers and Miners from 2nd April till 4th May 1864, when, having passed the colloquial examination in Hindustani, was appointed to the Bombay Public Works Department as Probationary Assistant Engineer; joined the Bombay Defences Division on 16th May 1864; gazetted Special Assistant, while employed in the Bombay Defences, on 27th May 1864; passed the departmental examinations, and gazetted Assistant, 2nd class, on 28th March 1865; promoted Assistant, 1st grade, 1st April 1865; appointed Special Assistant to Executive Engineer for reclamations, 7th December 1865; raised to increased pay, 11th April 1866; placed on seconded list from date of joining the Public Works Department by G. G. O., 31st July 1866; appointed Executive Engineer, 4th grade, 2nd October 1867, but permitted to remain, at his own request, as Special Assistant for reclamations in Bombay; services placed at the disposal of Military Department for duty in Abyssinia, 30th January 1868; appointed Assistant Field Engineer with the Abyssinia Force, 24th February 1868; retained by the Military Department on return from Abyssinia for special duty in Bombay by G. O., 30th June 1868; services placed at disposal of Chief Engineer, Presidency, when relieved from military duty, and joined Bombay Defences as Assistant Engineer, 1st grade, 24th November 1868; services placed at disposal of Government of India, 1st December 1868; appointed to the Great Trigonometrical Survey of India as Assistant Surveyor (corresponding to present Assistant Superintendent), 2nd grade, 4th December 1868; placed in charge Bombay levelling party on its formation, 27th September 1869; in consequence of reduction in the Survey this party was suspended; transferred to Guzerat party as Assistant Superintendent, 31st March 1870; proceeded to England on medical certificate on 14th May 1870; in July 1871, while on furlough in England, employed specially to study the practical details of tidal observations and their reduction by harmonic analysis as carried on under the superintendence of Sir William Thomson, until date of return to India; promoted Assistant Superintendent, 1st grade, October 1871; on return to India posted to the Kattywar party as Assistant Superintendent on 30th April 1872; assumed charge of the Bombay tidal and levelling party on its formation in November 1873; gazetted local Captain, 18th December 1873; on the introduction of the consolidated salaries scheme and revision of the grades of survey officers moved down to Assistant Superintendent, 2nd grade, in May 1874; on special duty in England reducing tidal observations of Gulf of Cutch from September 1876 to May 1877; re-promoted Assistant Superintendent, 1st grade, 27th October 1876; but this order which promoted several officers was cancelled by G. O., 11th March 1877; returned to India in June 1877; appointed to the general superintendence and control of tidal observations upon the Indian coasts under the orders of the Superintendent, Great Trigonometrical Survey, by Government of India's Resolution of the 4th July 1877, on the amalgamation of three branches of the Survey Department, 1st January 1878; continued in the charge of the tidal and levelling operations survey of India; promoted for the third time Assistant Superintendent, 1st grade, on the 1st January 1879.

**WAR SERVICES.**

Served with the Abyssinia Field Force in 1868 as Assistant Field Engineer, and appointed Traffic Manager of the Railway; mentioned in the despatches for zeal and management in bringing safely and expeditiously, troops and baggage for embarkation—medal.

**CAPTAIN J. R. McCULLAGH, Royal Engineers (Bengal), Assistant Superintendent, 1st grade.**

FIRST commission, 18th December 1861; joined at Chatham, February 1862; joined at Belfast, June 1864; landed at Calcutta, 20th October 1865; joined head quarters, Bengal Sappers and Miners, Roorkee, 27th October 1865; Officiating Doing Duty Officer, 27th January 1866; Command of Detachment, 1st and 3rd Companies, B. S. and M., at Peshawur, 30th April 1866; passed Lower Standard, Hindustani; permanent Doing Duty Officer, 4th July 1867; Officiating Adjutant and 2nd in Command, B. S. and M., 17th April 1868; appointed to the Public Works Department, 6th November 1868; appointed to the Great Trigonometrical Survey of India, 1st March 1869, as Assistant Surveyor, 2nd grade; officiating in charge, Guzerat Party, ten months, 1870-71; Assistant Superintendent, 1st grade, 1st January 1872; Captain, 11th December 1873; under the re-organization became Assistant Superintendent, 2nd grade, 1st April 1874; furlough to Europe from 1st November 1873 to 27th October 1874; Officiating Assistant Superintendent, 1st grade, 28th October 1874; charge of No. 1 Extra Party, 13th November 1874; Officiating Assistant Superintendent, 1st grade, in charge No. 9 Party, Mysore Topographical Survey, 1st August 1875; reverted, 12th April 1877; Officiating Assistant Superintendent, 1st grade, in charge No. 8 Party, Mysore Topographical

Survey, 27th April 1877; furlough to Europe with six months' duty at Chatham in addition from 5th November 1877 to 5th May 1879; Officiating Assistant Superintendent, 1st grade, 6th May 1879, and attached to Mysore Topographical Survey; promoted to Assistant Superintendent, 1st grade, on 14th December 1880; joined Hanthawady District Cadastral Survey in British Burma on 2nd June 1881.

WAR SERVICES.

Appointed Assistant Field Engineer to the Bhutan Field Force, and to Command No. 2 Company, B. S. and M., 3rd January 1866 (medal and clasp).

MAJOR JOHN RANDAL WILMER, *Bengal Staff Corps, Assistant Superintendent.*

JOINED the service as Lieutenant in the Royal Artillery on the 22nd June 1859; joined the Battery at Guernsey, 1st August 1859; arrived in India on 27th October 1860; Acting Adjutant, 11th Brigade, Royal Artillery, for one month, May 1863. Held command of G11 Royal Artillery from 22nd September 1864 till 24th March 1866 (one year and six months); leave on private affairs, 7th May 1866 to 7th August 1866 (three months); Acting Adjutant, 11th Brigade, September and October 1867; embarked for England with G11 Royal Artillery on 20th November 1867; leave on private affairs, 18th February 1868 to 18th April 1868; returned to India and joined 3-22nd Royal Artillery, 28th April 1869; officiated as a 3rd class Commissary of Ordnance from 22nd June 1869 to 23rd August 1869; appointed to Staff Corps, 24th August 1869; Assistant Superintendent, Topographical Survey, 24th August 1869; sick leave from 19th December 1871 to 2nd March 1872; promoted Brevet-Captain, 22nd June 1871; promoted to Assistant Superintendent, 1st grade, Topographical Survey, 28th August 1872; substantive Captain in Staff Corps, 24th August 1873; appointed to charge of No. 5 Topographical Survey Party, 12th October 1874; reverted to Assistant Superintendent, 2nd grade, on amalgamation of the Surveys; Officiating Assistant Superintendent, 1st grade, 1st January 1878.

WAR SERVICES.

*Nil.*

MR. JOHN MCGILL, *Assistant Superintendent.*

JOINED the Bombay Party, Great Trigonometrical Survey of India, as Sub-Assistant, 3rd grade, on the 1st October 1851; employed on the Aboo Meridional Series under Lieutenant, now General, H. Rivers, B. E.; promoted to Sub-Assistant, 2nd grade, 10th June 1854; triangulation Kattywar, Thar Parkar and Cutch under Lieutenant D. J. Nasmyth, B. E.; privilege leave for three months; Base Line, Karachi and triangulation in Kutch; promoted to 1st class Sub-Assistant, 1st August 1856; triangulation in Sind and Kutch and Guzerat under Captain D. J. Nasmyth, B. E.; promoted to Senior Sub-Assistant on 1st January 1859; triangulation in Mewar and Guzerat under Captain C. T. Haig, B. E.; privilege leave for two months; promoted to Junior Civil Assistant, 2nd grade, on 1st December 1861; approximate work, Mangalore Series and Bombay Longitudinal Series, under Captain C. T. Haig, B. E.; privilege leave for one month in 1863; promoted to Civil 2nd Assistant, September 25th, 1862; approximate triangulation in Kanara and Mysore; promoted to Junior Civil Assistant on 17th August 1864; privilege leave for one month in November 1864; transferred to Northern Bombay Party, 1st November 1865, under Captain D. J. Nasmyth, B. E., and employed in the triangulation and survey of the Island of Bombay; assumed charge of the party for one month on Captain Nasmyth's going on sick leave and made over charge to Captain Haig, B. E., in March 1866; privilege leave for one month, 1st May 1867; promoted to Civil 1st Assistant on 1st September 1867; triangulation for topographical work in Kattywar; privilege leave for one month, 1st May 1870; promoted to Assistant Superintendent, 2nd grade, 1st March 1871; officiated in charge of the Kattywar Party for two months from 1st September 1871 for Captain H. Trotter, B. E.; privilege leave for two months from 29th March 1873; promoted to 1st grade Assistant Superintendent, 1st April 1873; officiated in charge of Kattywar Party for two months from 25th September 1873; by new organization scheme of 1874, 1st April, Assistant Superintendent, 2nd grade, and officiating in 1st grade; three months' privilege leave from 1st June 1875; officiated in charge of Kattywar Party for two months from 9th April 1876; officiated in charge of Bombay Tidal and Levelling Party for three months, from 29th March 1877 to 1st July 1877; in charge of Kattywar Party from 27th April 1878; furlough for one year from 4th July 1879; Officiating Assistant Superintendent, 1st grade, from 1st July 1880; received charge, South Deccan Topographical Party, on 15th July 1880; received charge of Khandesh and Bombay Native States Party, 18th October 1880.

MAJOR S. H. COWAN, *Bengal Staff Corps, Assistant Superintendent.*

JOINED the service, 9th December 1859; arrived in India, 9th April 1860; served with Bengal Artillery Depot at Meerut, April 1860; posted to 4th Company, 3rd Battalion, Bengal Artillery; served with D Battery, 16th Brigade, Royal Artillery, February 1861; appointed in the Ordnance Department, 4th October 1866; admitted to Staff Corps, 19th January 1867; appointed Assistant Superintendent, 3rd grade, in the 4th Division Survey, Bengal, 19th January 1867; appointed Assistant Superintendent, 2nd grade, 17th March 1868; went on furlough to Europe to 30th May 1870; promoted to Captain (Brevet), 9th December 1871; returned from furlough, 3rd May 1872; transferred to 1st Division (Assam) Survey, 1st June 1872; promoted to Captain, 24th December 1872; went on sick leave to Europe, 16th July 1875; returned from Europe, 7th November 1876; transferred to Behar Irrigation Survey, 30th November 1876; transferred to head quarters office, 1st March 1878; transferred to take charge of Cachar Survey, 23rd November 1878; transferred to head quarters office, Photo. Branch, 14th November 1879; promoted to Major, 9th December 1879.

WAR SERVICES.

*Nil.*

MAJOR, EDWARD HARRIS STEEL, *Bengal Staff Corps, Assistant Superintendent.*

JOINED the service on 8th June 1860, and arrived in India, October 11th, 1860; leave on medical certificate to hills north of Kumaon from 10th June to 1st November 1861; leave on medical certificate to Europe from May 1865 to June 1866, after Bhutan Campaign; appointed Assistant Superintendent of Survey, 2nd grade, Survey Department, 1st February 1867, in Assam; leave to Europe on medical certificate, December 1867 to

December 1868; returned to regiment of Royal Artillery; re-appointed and re-joined Survey Department as Assistant Superintendent, 2nd grade, on 26th January 1869; admitted to Staff Corps, 26th January 1869; Captain, Staff Corps, 26th January 1873; in charge 2nd Division Revenue Branch from 2nd November 1876 to 19th April 1877 and again from 18th July to 18th November 1877; Officiating Assistant Superintendent, 1st grade, from 1st to 11th January 1878, again from 1st February to 6th May 1879; Officiating Assistant Surveyor General, 17th March 1878 to 9th October 1879; Officiating Assistant Superintendent, 1st grade, from 20th June to 10th October 1879; in charge of No. 1 Gwalior and Central India Topographical Party from 20th October 1879 to 18th October 1880; promoted to Major, 8th June 1880; Officiating Assistant Superintendent, 1st grade, from 1st November 1879 to present date; transferred to charge of Bassein District Survey from 20th November 1880.

WAR SERVICES.

Served with Khasi and Jaintia Field Force from December 1862 to May 1863; served with Bhutan Field Force from November 1864 to April 1865; present at taking of Dewangiri—medal and clasp.

MAJOR H. S. HUTCHINSON, *Bengal Staff Corps, Assistant Superintendent.*

CADET at the Military College, Addiscombe, from January 1858 to December 1859; appointed a Lieutenant in the Bengal Artillery on 9th December 1859; landed in India, 9th April 1860; served with the Artillery at Meerut, Lahore, and Peshawur up to 9th April 1865; appointed to No. 1 Light Field Battery, Punjab Irregular Force, on 10th April 1865, per G. G. O. No. 380 of 1865; served with it at Bunnu and Dera Ismail Khan up to 12th August 1867; appointed as Probationary Assistant Superintendent of Survey in the 3rd Division, Central Provinces, on 13th August 1867, and appointed to the Staff Corps on the same date; promoted to 2nd grade Assistant Superintendent of Survey on 13th August 1868; served with the 3rd Division up to 20th May 1870; furlough to Europe on medical certificate from 21st May 1870 to 31st December 1871; promoted to local rank of Captain on 9th December 1871; served with the 4th Division, Central Provinces Survey, from 1st January 1872 to 30th September 1872; appointed to 11th Deccan Topographical Survey on 1st October 1872; promoted to substantive rank of Captain on 25th March 1873; Officiating Assistant Superintendent of Survey, 1st grade, from 1st January 1878; promoted to Major, 9th December 1879. Served with Ghazipur Cadastral Survey from 1st January to 3rd April 1881. In temporary charge of the Darjeeling Survey Party from afternoon of the 8th April 1881.

WAR SERVICES.

Nil.

MR. EDWIN CLIFFORD BARRETT, *Assistant Superintendent.*

JOINED the Right Bank, Indus, Sind Revenue Survey, as Probationary Assistant Surveyor, 18th November 1862; Sub-Assistant, 3rd grade, 1st January 1864; transferred to Central Provinces (Chanda District) Survey, 1st February 1865; passed the examination prescribed for the Senior Department, and appointed Assistant Superintendent, 2nd grade, 30th December 1868; sick leave for one month from 20th June 1869; transferred to the Raipur District Survey (2nd Division, Central Provinces), 1st November 1869; passed the Higher Standard Examination in Hindustani, 20th October 1871; was one of the staff of survey officers who accompanied the right column, Looshai Expeditionary Force, in 1871-72; officiated as Assistant Superintendent, 1st grade, from 30th December 1871 to 3rd March 1872; transferred to the 1st Division, Bahawalpur, from 1st June 1872; transferred to the 4th Division, North-Western Provinces, 1st October 1872; officiated as Assistant Superintendent, 1st grade, from 6th July 1873 to 4th November 1873, and again from 1st December 1873 to 14th January 1874; transferred to the Khurda Estate Survey, Orissa, 1st November 1876; in charge of the Khurda Estate Survey from 22nd July to 12th November 1877; Officiating Assistant Superintendent, 1st grade, from 1st April 1878; in charge of the Cuttack District Irrigation Survey from 23rd May to 28th November 1878; transferred to the 6th Division, North-West Provinces, from 1st December 1878; transferred to Ghazipur Survey, 28th July 1879, thence to Bassein Survey, British Burma, 11th November 1879; furlough to Europe 27th August 1880.

WAR SERVICES.

Served with the right column, Looshai Expeditionary Force, in 1871-72; medal and clasp, and received the thanks of the Government of India.

MAJOR REGINALD BEAVAN, *Bengal Staff Corps, Assistant Superintendent.*

APPOINTED as Ensign, 4th May 1860, General List Infantry; 11th June 1860, arrived in India, attached for duty to 19th Foot at Benares; leave on medical certificate to Europe from 15th October 1860 till 11th October 1862 (exclusive); 1st January 1862, promoted to Lieutenant; in 1861, went through a course of instruction at the School of Musketry, obtained extra first class certificate; on return to India was attached\* to 29th Fusiliers at Fyzabad, marched with them to Agra; March 27th, 1863, appointed Musketry Instructor to the 19th Hussars at Lucknow, marched with them to Meerut, held this appointment till 15th April 1865; April 15th, 1865, leave on private affairs to the hills; July 12th, 1865, took up the appointment of Quarter Master, 22nd Punjab Native Infantry, at Umballa; marched to Morar in May 1866; attended the officers' surveying class at Roorkee in the cold weather of 1867-68, first class certificates for surveying and field engineering; September 9th, 1867, appointed to the Bengal Staff Corps; July 17th, 1868, appointed to the Topographical Survey Department as Assistant Surveyor, 2nd grade (this appointment was afterwards cancelled and made probationary); joined No. 6 Party, Khasi, Garo and Naga Hills Survey at Cherrapunji; November 9th, 1869, promoted to Assistant Surveyor, 2nd grade; May 1st, 1870, transferred to Revenue Branch and joined Hazaribagh Survey Party; October 1st, 1870, transferred to Bahawalpur Party; December 1st, 1870, transferred to Dera Ghazi Khan Survey; furlough (medical certificate) to England from 25th November 1871 to 22nd November 1872; joined 1st Division, Central Provinces Survey, 29th November 1872; on detached duty at Chandgurh from February to May 1873; on detached duty at Ahiri, Chanda District, during the field season of 1873-74; transferred to Dera Ismail Khan Survey, 1st October 1874; worked in Dera Ismail Khan, Bunnoo and Rawal Pindi Districts, and in the winter of 1877-78 in the Jowaki country and Kohat Pass; reduced to Assistant Superintendent, 3rd grade, January 1st, 1878, by the operation of the new organization of the Survey Department; May 13th, 1878, officiating 1st grade Assistant

\* By Presidency Division Order of 4th November 1862.

Superintendent; October 5th, reverted to officiating 2nd grade; October 27th, promoted to 2nd grade (third time); October 27th, officiating 1st grade; November 28th, reverted to 2nd grade; December 22nd, officiating 1st grade; February 4th, 1879, reverted to 2nd grade; promoted to Major, 4th May 1880; Officiating Assistant Superintendent, 1st grade, from 14th December 1880 to present time.

#### WAR SERVICES.

Attached to the Kandahar Field Force from October 1878; accompanied General Biddulph's Division to Girishk; mentioned in 2nd Division Field Force order and by General Biddulph dated 6th March 1879; during the winter of 1879-80 was engaged exploring the country between Quetta, Thal Chotiali and Sibi up to end of March 1880; from 27th July 1880 to the present time engaged on survey duties in the same tracts.

#### BREVET LIEUTENANT-COLONEL ROBERT GOSSET WOODTHORPE, *Royal Engineers (Bengal), Assistant Superintendent.*

JOINED the service, 25th June 1865; left Chatham, November 1867; employed in Works Department, Manufacturing District in England, till May 1869; arrived in India, 25th November 1869; joined the head quarters, Bengal Sappers and Miners, at Chakrata, 24th December 1869; served with them till 31st May 1871; joined the Topographical Survey, No. 4 Party, 18th July 1871; transferred to No. 6 Party for service with the Lushai Expeditionary Force, October 1871; had charge of the survey party with the Garo Expedition in field season 1872-73; accompanied Captain Badgley in the Naga Hills survey during field season 1873-74; Officiating Assistant Superintendent, 1st grade, 11th August 1873; reverted to Assistant Superintendent, 3rd grade, 1st April 1874, on amalgamation with Revenue Survey; separate charge, Naga Hills survey party, during field season 1874-75; re-appointed substantive Assistant Superintendent, 2nd grade, with effect from 1st April 1874; employed in head quarters office, Calcutta, as Assistant Surveyor General in charge Lithographic Branch from July till 31st October 1875; separate charge Naga Hills survey, 1875-76; on death of Captain Butler, Political Agent, in January 1876, appointed Political Officer with the survey (extra allowance, Rs. 200 per mensem for this additional work, and thanks of the Governor General in Council and Secretary of State for India); charge of North Lakhimpur Topographical Survey, 1876-77 (thanks of the Governor General in Council); charge North Brahmputra Topographical Survey, 1877-78; Captain, 22nd May 1878; Officiating 1st grade Assistant Superintendent, 28th May 1878; reverted to officiating 2nd grade, 12th August 1878; transferred from No. 6 Topographical Party, September 1878; charge of survey party with the Frontier Expeditionary Field Force, Kuram Column; substantive 2nd grade Assistant Superintendent, 22nd December 1878; Officiating Assistant Superintendent, 1st grade, 1st January 1879; reverted to 2nd grade, 15th January 1879; furlough on private affairs for one year from 30th October 1880; promoted to rank of Brevet Major 22nd November 1879, and to Brevet Lieutenant-Colonel, 2nd March 1881.

#### WAR SERVICES.

Served with the Left Column, Lushai Expeditionary Force, 1871-72 (frontier medal with clasp for Lushai); served with the Garo Hills Expedition in 1872-73, and with the Naga Hills Punitive Expedition in 1875 (mentioned in despatches); joined the Kuram Column, Frontier Expeditionary Field Force, 1st Afghanistan Campaign at Kohat, 25th October 1878; present at the action on the Peiwar Kotal (slightly wounded); mentioned in despatches; 2nd Campaign from 28th September 1879 to date of evacuation of Kabul; present at Alkheil, 14th October; at Killa Kariz Mir on 10th and Charda 11th December 1879; attack of Takht-i-shah, 13th; Asmai heights, 14th, and subsequent operations till 23rd December 1879 inclusive; skirmishes at Saidabad, 25th and 26th April 1880 (very slightly wounded); thanks of Governor General in Council and Secretary of State for India; mentioned in despatches of Generals Robert and Ross.

#### MR. EDWIN JAMES JACKSON, *Assistant Superintendent.*

ARRIVED in the country, 26th June 1864; joined the Department as Senior Sub-Assistant Revenue Surveyor, 26th September 1864; Probationary Assistant Superintendent, 1st April 1866; Assistant Superintendent, 2nd grade, 5th November 1868; sick leave from 4th July to 3rd August 1867; sick leave from 19th August to 30th November 1867; sick leave to Europe from 23rd July 1871 to 10th November 1872; in temporary charge of the 2nd Division (Assam), 20th January to 13th February 1873, or about January 1873; special duty, defined the Naga Frontier Boundary common to District Sibsagar, from December 1873 to May 1874; Cachar Tea Grants Survey from 28th November 1874 to April 1875; relaying the old boundaries to the North-West of Faridpur, which had been washed away by the River Ganges during the past 20 years; employed on this work from February 1877 to April 1877; transferred to 5th Division Survey from 1st July 1877; on furlough from 1st May 1880.

#### BREVET LIEUTENANT-COLONEL E. P. LEACH, *v. c., Royal Engineers (Bengal), Assistant Superintendent.*

DATE of 1st commission, 17th April 1866; landed in India, 17th December 1868; joined the Bengal Sappers and Miners at Roorkee; commanded 5th Company, Sappers and Miners, on detachment at Rawul Pindi from 1st April 1869 to 18th February 1870; appointed to the Public Works Department as Assistant Engineer, 2nd grade, 20th February 1870, and posted to Military Works Branch at Morar; appointed to the Topographical Survey of India as Assistant Superintendent, 2nd grade, 14th October 1871, and posted to No. 6 Topographical Party for Field Service with Lushai Expeditionary Force; transferred upon conclusion of the expedition to No. 1, Gwalior and Central India Survey (officiated in charge from 12th May to end of June 1873); promoted officiating 1st grade Assistant Superintendent, 4th January 1874; transferred to No. 5 Party, Bhopal and Malwa Survey, officiating in charge, 15th September 1874; transferred to No. 7 Party, Rajputana Topographical Survey, 5th October 1874; reverted to 3rd grade Assistant Superintendent upon amalgamation of Topographical and Revenue Surveys with effect from 1st April 1874; re-appointed to substantive 2nd grade Assistant Superintendent by order of Governor General in Council, 1875, with effect from 1st April 1874; appointed to charge of No. 7 Party, Rajputana Survey, 1st October 1875; relieved of charge 1st November 1877; furlough on private affairs for 18 months, from 26th November 1877; reverted to 3rd grade Assistant Superintendent upon amalgamation with Trigonometrical Survey, and owing to reduction of Survey Department, 1st January 1878; joined at Chatham for duty in extension of furlough on 16th March 1878; qualified in advanced class—sub-marine mining; reverted to furlough, 15th September 1878; appointed by Secretary of State for India Private Secretary to James Caird, Esq., *c. b.*, Famine Commissioner, and ordered to proceed to India upon special duty in extension of furlough, 10th October 1878; ordered to

rejoin Survey Department for field service with Army in Afghanistan at Calcutta, 23rd December 1878; joined 1st Division, Peshawur Field Force, 9th January 1879, at Jellalabud; reinstated Assistant Superintendent, 2nd grade, 1st January 1879; promoted Captain, 1st January 1879; furlough to Europe on medical certificate from 12th September 1879 to 23rd February 1880. Rejoined the Survey Department 28th October 1880. Promoted to rank of Brevet Major 22nd November 1879, and to rank of Brevet Lieutenant-Colonel 2nd March 1881; Officiating Assistant Superintendent, 1st grade, from 1st February to 15th June 1881.

#### WAR SERVICES.

Served with Lushai Expeditionary Force from 15th November 1871 to 1st April 1872 (medal with clasp); received thanks of Government of India and Secretary of State for India for valuable service; served with the Army in Afghanistan Kabul Field Force from January 1878 to 5th May 1879; severely wounded at Maidanak, 17th March 1879; temporary wound pension for 12 months; recommended for permanency, Brevet-Major, 22nd November 1879; Victoria Cross, 1st January 1880; 2nd Campaign from 10th March 1880 to present date with the Southern Division Afghanistan Field Force; present at the action of Maiwand; 2 horses shot from under him; appointed Brigade Major, Royal Engineers, Kaddahar Field Force order dated 30th July 1880, from 30th July to 27th October 1880.

#### MR. W. G. BEVERLEY, *Assistant Superintendent.*

APPOINTED to the Great Trigonometrical Survey Department as 3rd class Sub-Assistant on 1st January 1855; served two months in the Drawing Office at Calcutta, and transferred to the Computing Office, Mussooree; posted to the Kashmir Series on 1st January 1856, and continued in it to September 1863; while in the Kashmir Party, assisted in the Observatory; fixed points in the valley for topographical work, and carried the Upper and Lower Jhelum triangulation, the Dras and Sooroo, the Astor, and Upper Indus minor triangulations; transferred to the East Calcutta Longitudinal Series from October 1863, and employed on the approximate work of that party; transferred to the Kumaon and Garhwal Party from October 1864, and employed on it on minor triangulation to July 1866; on sick leave to Europe from 3rd August 1866 to 22nd July 1868; on return from leave, rejoined the Kumaon and Garhwal Party, and continued in it on minor triangulation to October 1870; appointed to charge of the Brahmaputra Party and employed on the approximate work; also received charge of the Assam Valley triangulation in September 1871; made over charge of the Brahmaputra Series in May 1872 and of the Assam Valley triangulation in October 1874, and transferred to charge of the Burma Party in the same month; on furlough from 18th May 1877; resumed charge of the Burma Party on return from furlough on 15th October 1878.

#### *Abstract showing the steps obtained by MR. W. G. BEVERLEY while in the Survey Department.*

Appointed 3rd class Sub-Assistant on 1st January 1855; promoted to 2nd class Sub-Assistant on 1st October 1856; promoted to 1st class Sub-Assistant on 1st November 1858; promoted to Senior Sub-Assistant on 1st November 1859; [promoted to Civil 2nd Assistant, Junior Grade, on 1st March 1861; promoted to Civil 2nd Assistant, Senior Grade, on 19th September 1864; appointed on re-organization of Department, in April 1866, Civil Assistant, 3rd grade, and appointed to Civil Assistant, 2nd grade, from 1st October 1866; promoted to Civil Assistant, 1st grade (Surveyor, 1st grade), 1st October 1868; entered Senior Department as Assistant Superintendent, 2nd grade, 1st April 1871]; Officiating Assistant Superintendent, 1st grade, 10th March 1873; on furlough from 30th May 1877 to 3rd October 1878; on amalgamation appointed Assistant Superintendent, 3rd grade, 1st January 1878; Officiating Assistant Superintendent, 2nd grade, 3rd October 1878.

#### MR. G. H. COOKE, *Assistant Superintendent.*

CAME to the country in 1865; joined the Department, 6th December 1866, as Sub-Assistant, 1st class, under Major James Sconce, Assistant Revenue Surveyor, 3rd class, on 6th December 1869, and Probationary Assistant Superintendent, 1st April 1870; Assistant Superintendent, 2nd grade, 10th May 1871; worked in the Hazaribagh District Survey until October 1871; from November 1871 to May 1872, with Looshai Expeditionary Force; examination leave for three months, from 6th June 1872 to 4th September 1872; transferred to head quarters from 5th September 1872; from 1st November 1872 special duty, Chittagong; in June 1873 transferred sick to Naini Tâl, and completed the survey of the Naini Tâl Cantonment on the scale of 16-inches—one mile; in November 1873 was transferred to the 9th Belaspur District Survey, and completed the survey of Aberi Zemindari; under the re-organization of 1st April 1874, Officiating Assistant Superintendent, 3rd grade; in November 1874 commenced work in the Azimgarh District under Mr. W. Lane (Cadastral Survey); on 1st April 1876, transferred to 2nd or Goorgaon District Survey; in November 1876 transferred to 1st or 10th Deccan Survey; held charge of the survey from 22nd August 1877 to 2nd January 1878; Officiating Assistant Superintendent, 2nd grade, from 1st January 1878; again took over charge of 1st or 10th Deccan Survey from the late Captain E. W. Samuells on 12th September 1878; furlough from 22nd May 1880; promoted to Assistant Superintendent, 2nd grade, on 14th December 1880.

#### WAR SERVICES.

On 1st November 1871 was deputed on special service with right column, Looshai Expeditionary Force; received a medal and the thanks of the Government of India; served a second year in the Looshai country with Major Lewin, Political Officer, and connected the work done by the survey officers attached to the right and left columns of the Looshai Expeditionary Force.

#### LIEUTENANT H. J. HARMAN, *Royal Engineers (Bengal), Assistant Superintendent.*

JOINED the Corps of Royal Engineers as Lieutenant on the 7th July 1869; remained under instruction at the School of Military Engineering, Chatham, until September 1871; sailed for India to join the Bengal Sappers and Miners at Roorkee in December 1871; landed in India on the 26th December 1871; served with the Bengal Sappers and Miners at Roorkee until June 1872; joined the Survey Department, Great Trigonometrical Survey Branch, at Mussooree as Assistant Superintendent, 2nd grade, under the organisation of 1866, on 3rd June 1872; attached to the Computing Office for five weeks, and then to the Kumaon and Gurhwal Survey Party, Great Trigonometrical Survey Branch, under Lieutenant Hill, R. E.; until June 1873



employed in topographical survey work in the hills and plains of the Kumaon and Garhwal Districts; in June 1873 went to Bangalore, Mysore, and took over charge from Captain Herschel, R. E., of No. 1 Extra Party, Captain Herschel going on furlough; during the field season of 1873-74 carried a line of principal levels from Gutti, in the Madras Presidency, through Bellary to the port of Karwar on the Bombay Coast; on 1st April 1874 became Assistant Superintendent, 3rd grade, under the new organisation of that date, and has since officiated in the 2nd grade up to date; in September 1874 gave over the charge at Bangalore of No. 1 Extra Party, and went to Shillong, Assam, to take over charge of the "Assam Valley Series" on the transfer to "Burma" of W. G. Beverley, Esq.; during the field season of 1874-75 was attached to Major H. H. Godwin-Austen, Survey Department; during the Dafla Expedition carried the Assam Valley Series from Sibsagar to Eadiya and to two points beyond Sadiya; during the field season of 1877-78 accompanied Lieutenant Woodthorpe, R. E., during the survey of the Miri Hills, north of the valley of Assam; in May 1878, having completed the Assam Valley triangulation, took the party to Darjeeling, Bengal, with the view of making a topographical survey of Independent Sikkim, but the party has since been employed on work of a revenue survey character in the Darjeeling District hills and plains.

WAR SERVICES.

Served with the Dafla Field Force in 1874-75.

CAPTAIN GERALD WARD MARTIN, *Bengal Staff Corps, Assistant Superintendent.*

OBTAINED commission by competition without purchase at the Royal Military College, Sandhurst; gazetted as Ensign and joined Her Majesty's 88th Regiment of Foot (the Connaught Rangers) on the 22nd June 1867, and remained on the strength of that regiment until appointed to the Bengal Staff Corps; joined the Thomason Civil Engineering College, Roorkee, on the 1st November 1869; obtained the Government College certificate as Civil Engineer, and first prize for photography, November 1st, 1870; passed the Higher Standard in the Native languages; appointed Probationary Assistant Superintendent of Survey on the 24th March 1871; date of commission as Lieutenant and admission to the Bengal Staff Corps, 24th March 1871; joined the 1st Division, Lower Provinces, Revenue Survey in Lower Assam, on the 19th April 1871; transferred to 2nd Division, Lower Provinces, Upper Assam, 15th November 1871; while at work, surveying on the banks of the Brahmaputra, was tossed and severely gored by a wild buffalo on the 15th February 1872, and was consequently disabled for some months; appointed permanently Assistant Superintendent of Survey, 3rd grade, on the 17th January 1873; transferred to the 1st Division, Deccan Topographical Survey, on the 1st February 1873; took over charge of that party from 29th May 1874 to 28th August 1874; again had charge of the same party from 29th March 1875 to the 7th June 1875; went on furlough to Europe for two years from the 15th November 1875 to 14th November 1877; was on leave on urgent private affairs "without pay" from the 15th November 1877 to the 30th January 1878; while at home passed the necessary examination to qualify as Chemist and Assay Master of the Indian Mints and worked in the Royal Mint, London, and obtained a certificate from Mr. Chandler Roberts, F. R. S., &c., Chemist of the Royal Mint, as to the efficiency and competency to take charge of such an office; soon after his return to India was placed on duty at Calcutta in the Head Office of the Revenue Branch of the Survey of India on the 5th February 1878; on the 1st March 1878 was transferred to the 8th Division, Soane Irrigation Survey, and remained with it till the 22nd July 1878; on the 23rd July 1878 was transferred temporarily to the Financial Department for employment in the Assay Department; officiated as Deputy Assay Master, Calcutta Mint, from 29th July to the 11th December 1878, and as Deputy Assay Master, Bombay Mint, from the 18th December 1878 till the 14th February 1879; joined the Kuram Column of the Afghanistan Expeditionary Force as Assistant Superintendent of Survey, 2nd grade, on the 26th February 1879; served with the Column until the 3rd August 1879, and again from 22nd September 1879 till the 28th August 1880; received commission as Captain, 22nd June 1879. Deputy Assay Master, Bombay Mint, from 21st June 1881.

WAR SERVICES.

Served as Assistant Superintendent, Survey of India, with the Kuram Column of the Afghanistan Expeditionary Force under General Roberts, from 26th February 1879 till the 3rd August 1879, and from 22nd September 1879 to 28th August 1880.

CAPTAIN ALEXANDER JAMES CORSE SCOTT, *Bengal Staff Corps, Assistant Superintendent.*

JOINED the service as Ensign in Her Majesty's 79th Cameron Highlanders on the 26th January 1866; arrived in India on the 25th June 1866; appointed a Probationer to the Bengal Staff Corps and 2nd Wing Subaltern, 45th Sikhs, on the 13th May 1869; promoted to Lieutenant in the Bengal Staff Corps on the 14th December 1869; appointed Probationary Assistant Superintendent, Revenue Survey, on the 17th January 1872; confirmed as Assistant Superintendent on the 17th January 1873; furlough to Europe on the 14th July 1874; returned to India and landed on 6th April 1876; promoted to Captain on the 26th January 1878; furlough to Europe on medical certificate from 21st April 1879; extension for 6 months.

WAR SERVICES.

*Nil.*

LIEUTENANT ST. GEORGE CORBET GORE, *Royal Engineers (Bengal), Assistant Superintendent.*

JOINED the service, 8th January 1870; arrived in India, 15th November 1872; appointed Assistant Superintendent, 2nd grade, Great Trigonometrical Survey of India, 25th March 1873; joined the Great Trigonometrical Survey at Dehra Dun on 11th April 1873; Officiating Assistant Superintendent, 1st grade, from 2nd November 1873; by consolidation scheme of 1st April 1874 became Assistant Superintendent, 3rd grade, officiating 2nd grade; reverted to 3rd grade from 28th October 1874; officiating 2nd grade from 4th January 1875; transferred to Topographical Department for work, 15th October 1875; transferred to Guzerat party, Great Trigonometrical Survey, 6th January 1878; appointed to officiate in charge Guzerat party, 2nd September 1878; relieved of the charge of Guzerat party, October 1878; ordered on service to Afghanistan, 3rd January 1879; reverted to Assistant Superintendent, 3rd grade, 26th April 1879; Officiating Assistant Superintendent, 2nd grade, 16th July 1879; furlough to Europe for two years from 11th December 1880.

## WAR SERVICES.

Served with the Afghanistan Field Force, Quetta Column, from 9th February 1879 to 15th May 1880; present at the action of Ahmed Khel, near Ghuzni, and of Urzu Shabiz at Ghuzni.

MR. EDWARD C. RYALL, *Assistant Superintendent.*

APPOINTED Apprentice Draftsman, Surveyor General's Office, Calcutta, 11th August 1854, and to the Great Trigonometrical Survey Department as 3rd class Sub-Assistant, Great Trigonometrical Survey, on 26th April 1855, and posted to head quarters office, Dehra Dun; subsequently on October 1st of the same year was attached to the Rahoon Meridional Series; on 1st October 1856, 2nd class Sub-Assistant, transferred to the Jhelum and Rawul Pindi Topographical Survey Party; served with that party up to May 1859; during the recess seasons of 1858 and 1859 of the Jhelum and Rawul Pindi Party was deputed to do field duty with the Kashmir Survey; January 1st, 1860, promoted to 1st class Sub-Assistant; transferred to the Kashmir Survey in June 1859; served with that survey up to 1st October 1864, and was then transferred to the East Calcutta Longitudinal series; on November 1st, 1865, was posted to the Eastern Frontier Series Party; sick leave from 25th January to 7th September 1866; on return from sick leave was appointed to the Kumaon and Garhwal Topographical Party from 1st May 1867; assisted that party in the large scale surveys of Mussooree, Ranikhet and Kosi Valley, and subsequently in the survey of the Dehra Dun District; appointed to take charge of the Kumaon and Garhwal Party in March 1875; brought the field operations of that party to a close in September 1877; was relieved of the charge of that party on 1st October 1878, and for a short time posted to Surveyor General's Field head quarters office, Dehra Dun; on the 1st January 1879 was transferred to the 3rd Division, North-Western Provinces Survey, Revenue Branch, and now doing duty with it. Military service—As volunteer during the mutiny; served against the Murree rebels (medal).

*Abstract showing the steps obtained by Mr. E. C. RYALL while in the Survey Department.*

Appointed 3rd class Sub-Assistant, 26th April 1855; 2nd class Sub-Assistant, 1st October 1856; 1st class Sub-Assistant, 1st January 1860; Junior Civil 2nd Assistant, 1st July 1862; Senior Civil 2nd Assistant, 1st January 1863; Surveyor, 2nd grade, 1st April 1869; Surveyor, 1st grade, 1st April 1871; Assistant Superintendent, 2nd grade (subsequently on 1st April 1874 designated 3rd grade), 1st April 1873; Officiating Assistant Superintendent, 2nd grade, 7th September 1879; reverted to 3rd grade on 9th October 1879; Officiating Assistant Superintendent, 2nd grade, from 1st November 1879.

CAPTAIN JAMES RAMSAY HOBDAY, *Bengal Staff Corps, Assistant Superintendent.*

ENSIGN, 2-25th King's Own Borderers, 13th January 1869—G. O. C. C., 3rd March 1869, p. 88; date of arrival in India, 31st March 1869; 2nd Wing Subaltern on probation, 38th Regiment, Bengal Infantry, 28th March 1871—G. O. C. C., 4th April 1871, p. 165; 1st Wing Subaltern on probation, 38th Regiment, Bengal Infantry, 6th May 1871—G. O. C. C., 16th May 1871, p. 242; officiated Wing Officer, 38th Regiment, Bengal Infantry, in addition to his other duties, from 21st November 1872 to 5th January 1873—G. O. C. C., 19th December 1872, p. 609; Station Staff Officer, Buxa, Bhootan, 16th March 1873 to 18th September 1874—G. O. C. C., 5th April 1873, p. 170; officiated Wing Officer, 38th Regiment, Bengal Infantry, in addition to his other duties, from 6th April 1873 to 27th June 1873—G. O. C. C., 9th July 1873; Assistant Superintendent, 3rd grade (on probation), Topographical Survey Department, 11th September 1874—Revenue, Agriculture and Commerce Department No. 538 of 11th September 1874; Assistant Superintendent, 3rd grade, Topographical Survey Department, 7th July 1875—Revenue, Agriculture and Commerce Department No. 605 of 19th July 1875; officiated Assistant Superintendent, 2nd grade, Survey of India, from 1st to 10th January 1878, 1st to 5th February 1878, 15th February to 28th April 1878, 15th January 1879 to 3rd February 1879, and from 3rd April 1881 to the present time; promoted to the rank of Captain, 13th January 1881.

## GENERAL LEAVE.

From 12th July 1873 to 17th November 1873—G. O. C. C., 16th August 1873, p. 330, and G. O. C. C., 23rd December 1873, p. 559.

## FURLOUGH.

Two years under rules of 1868 on private affairs—G. G. O., No. 261 of 22nd March 1878; date of leaving Bombay, 29th April 1878; received telegram to join Afghan Field Force, Quetta Column, 15th December 1878; left England, 25th December 1878; arrived at Bombay, 15th January 1879; on medical certificate for one year from 1st December 1879; extended for 120 days.

## WAR SERVICES.

Served with Kandahar Field Force, Southern Afghanistan, from 13th February to 31st October 1879.

LIEUTENANT THE HONOURABLE MILO GEORGE TALBOT, *Royal Engineers (Bengal), Supernumerary Assistant Superintendent, 3rd grade, Survey of India.*

LIEUTENANT, 29th April 1873; appointed to India Establishment, 1st September 1876; arrived in India, 7th November 1876; appointed Supernumerary Assistant Superintendent, 3rd grade, Survey of India, 15th March 1880.

## WAR SERVICES.

Assistant Field Engineer, Jowaki Expedition, 1877-78; attached to 3rd Company, Bengal Sappers and Miners, 1st Afghan Campaign, November 1878 to conclusion of peace; took part in operations at Ali Masjid, 2nd Afghan Campaign, with General Roberts' Force from commencement; present at battle of Churasia, 8th October 1879; of Lataband in December 1879; Assistant Field Engineer up to 14th March 1880; marched with the Force under Sir Frederick Roberts from Kabul to Kandahar.

LIEUTENANT FRANCIS BACON LONGE, *Royal Engineers (Bengal), Supernumerary Assistant Superintendent, 3rd grade, Survey of India.*

LIEUTENANT, 2nd February 1876; appointed to India Establishment, 1st November 1878; arrived in India, 15th January 1879; appointed Supernumerary Assistant Superintendent, 3rd grade, Survey of India, 15th March 1880.

WAR SERVICES.

Assistant Field Engineer, Afghan Field Force, Kabul Division, up to 14th March 1880; marched with the Force under Sir Frederick Roberts from Kabul to Kandahar.



# Statements of Services of Geological Survey Officers.

## MR. HENRY BENEDICT MEDLICOTT, M. A., F. R. S., F. G. S.

ENGAGED by Dr. Oldham from the Geological Survey of Great Britain; joined appointment in India on 24th March 1854; in August 1854 appointed by Court of Directors as Professor of Geology, Roorkee College; re-attached to Geological Survey for the field-season; 1854-55, Narbada Valley; 1855-56, Sub-Himalayas; 1856-57, Bundelkhand; 1857 to 1862, Sub-Himalayas; in October 1862 left Roorkee and re-joined the Geological Survey as Deputy Superintendent for Bengal; 1862-63, South Rewah; 1863-64, Behar; 1864-65, Assam; officiated as Superintendent from 21st August 1864 to 13th November 1864; leave on private affairs from 10th May to 9th November 1865; 1865-66, Central India and Rajputana; 1866-67, Chota Nagpur, Chhattisgarh, Sumbalpur; placed in the 1st grade on the introduction of grading in May 1866; 1867-68, Garo Hills; 1868-69, Hazaribagh, Sirgajah, Sohagpur, Chanda, Mohpani; 1869-70, Satpuras; 1870-71, Bundelkhand, Narbada Valley; officiated as Superintendent from 20th July to 5th September 1870; sick leave, 13th June to 2nd December 1871; 1871 to 1873, Satpuras; officiated as Superintendent from 16th July 1873 to 15th December 1874; 1873-74, Garo Hills; 1874-75, Betul coal-field, Nimar, Nepal; 1875-76, Nimar, Janu Hills; appointed Superintendent on 1st April 1876; 1876-77, Mohpani and Satpura coal-borings; 1877-78, Reh Committee, and Nahan; 1878-79, office, Calcutta; 1879-80, office, Calcutta; 1880-81, Nahan, and office, Calcutta.

## MR. WILLIAM THOMAS BLANFORD, A. B. S. M., F. R. S., F. G. S.

ARRIVED in the country and joined the service as Assistant on the Geological Survey, 1st October 1855; placed in charge of a party to survey the coal-field of Talchir in Orissa in 1855-56; engaged in examining the Rajmahal Hills, 1856-57; officiated as Superintendent, Geological Survey, from 18th May to 17th December 1857; Orissa, 1857-58; in charge of the survey of the Raniganj coal-field, 1858, 1859 and 1860; surveyed parts of Trichinopoly, July to September 1859; in October 1860, despatched to Burma, and placed in charge of the Geological Survey of Pegu; left on private affairs to England from 24th May to 12th November 1862; appointed Deputy Superintendent for Bombay, 13th November 1862; surveyed parts of Surat, Broach, Rajpipla Hills and Khandesh, 1862-63; visited Sind and Cutch, and surveyed parts of Narbada Valley below Hoshungabad, 1863-64; Baroda, Allecrappur, Chota Udupur, &c., 1864-65; route from Poona to Nagpur and portions of Betul, Chhindwara, Nimar, &c., 1865-66; Nagpur, Chanda and Godavari Valley, 1866-67; placed in the 1st grade on the introduction of grading in May 1866; in November 1867 attached as Geologist to the Abyssinian Field Force, and accompanied the Army throughout the Campaign; engaged in working at collections and reports, 1868-69; allowed to visit England on duty from April till November; rejoined at Bombay, 8th November 1869; surveyed portions of Chanda and South-West Berar, and route from Chanda to Hazaribagh, 1869-70; Godavari Valley near Dumagudiam and Ellore, 1870-71; attached to the Perso-Baluch Boundary Commission, and accompanied it throughout Beluchistan and Persia, 1871-72; leave to Europe on medical certificate from 19th September 1872 to 18th September 1874; detained in England on duty for three months; rejoined appointment in Bombay on 17th December 1874; visited Surat to examine water-supply, then surveyed portions of Sind, 1874-75; re-visited Sind, and made two traverses of great deserts to Jodhpur and back, 1875-76; appointed Senior Deputy Superintendent, Geological Survey, 1st April 1876; officiated as Superintendent, Geological Survey, from 23rd June to 3rd October 1876; surveyed part of Sind, 1876-77; office, Calcutta, 1877-78; 1878-79, office, Calcutta; held charge of the current duties of the office of the Superintendent, Geological Survey, from 26th July to 18th August 1879; leave on furlough from 22nd August 1879.

## MR. WILLIAM THEOBALD.

ARRIVED in the country in March 1847; worked (as a volunteer) under Mr. Williams in his exploration of the Upper Damuda and Sone Valleys; appointed Assistant in 1848 by Dr. MacClelland (who took charge of the exploration on Mr. Williams' death), and worked with him in the Karharbari coal-field and the Rajmahal Hills; in 1851 appointed to assist Dr. Fleming in the survey of the Salt Range, and subsequently under Mr. Purdon in works of improvement at the Kheura Salt Mine; on 11th July 1853 joined the Geological Survey under Dr. Oldham, and took up work in the Rajmahal Hills; accompanied Dr. Oldham in 1855 to Tefasserim and Pegu, when he had charge of the coal exploration at Toungdon, near Thayetmyo; in 1856 joined the survey party in the Narbada Valley; in 1857-58 made an exploration in Guzerat; from 1859 to 1862 was employed in Bengal, principally in the alluvial districts; officiated as Deputy Superintendent for Bengal from 12th to 31st May 1862; in November 1862 took charge of the Pegu Survey; placed in the 2nd grade on the introduction of grading in May 1866; leave on furlough from 9th April 1867 to 15th October 1868; resumed charge of Pegu Survey; promoted to 1st grade on 31st March 1869; on completion of Pegu Survey in 1873 returned to Bengal; officiated as Deputy Superintendent for Bengal from 16th July to 15th December 1874; took up work in the Sub-Himalayas of the North-West; leave on furlough from 16th March to 24th October 1876; appointed Deputy Superintendent for Bengal on 1st April 1876; on return from furlough resumed work on the Sub-Himalayan formations, and is still so engaged; held charge of the current duties of the office of the Superintendent, Geological Survey, from 19th August to 31st October 1879; leave on furlough from 17th March 1881.

## MR. WILLIAM KING, B. A. (Queen's University, Ireland).

ENGAGED in England by Dr. Oldham, and joined appointment as Assistant on the Geological Survey on 4th March 1857; in May 1858 attached to Madras Party in the Nilgiri Hills and South Arcot; 1859, Trichinopoly and Tanjore; 1860, Salem and Coimbatore; 1861, Kadapah District; 1862, North Arcot, Kadapah and Nellore, arranged the rock collections in the Madras Central Museum; 1863, Madras, North Arcot and Nellore, delivered three public lectures at Nellore on the Geology of the District; 1864, Kadapah, Bellary and Karnul Districts, delivered a course of lectures on Geology at the Civil Engineering College, Madras; 1864-65, Kadapah, Karnul

and Raichur Doab; 1865-66, Kadapah and Karnul Districts; placed in the 2nd grade on the introduction of grading in May 1866; 1866-67, Bellary District; 1867, 1868 and 1869, Kadapah and Kistna Districts; appointed Deputy Superintendent for Madras, 15th November 1868; furlough leave from 17th September 1869 to 16th December 1870; 1870-71, Raichur Doab and Bhima Valley; officiated in the 1st grade from 13th June to 3rd December 1871; 1871-72, Godavari District and Nizam's Territories; discovered Singareni coal-field; 1872-73, Godavari and Vizagapatam Districts, deputed to Vienna in joint charge of the survey collections at the Exhibition; officiated in the 1st grade from 19th September 1872 to 20th April 1875; 1873-74, Godavari and Kistna Districts; 1874-75, Wynađ gold-field and Godavari District; promoted to 1st grade on 21st April 1875; 1875, 1876, 1877, 1878 and 1879, Godavari and Sironcha Districts and Nizam's Dominions, also the Wynađ gold-fields; 1880-81, Malabar Coast; furlough from 10th May 1881.

MR. ROBERT BRUCE FOOTE, F. G. S.

ENGAGED in England for the Geological Survey; joined as Assistant on the 28th September 1858, deputed to Madras; 1859, in Trichinopoly, South Arcot and Tanjore; 1860 and 1861, in Salem, Trichinopoly and South Arcot; delivered a course of public lectures on Geology at the Civil Engineering College, Madras; 1862, in Salem, Coimbatore, South Arcot and Chingleput; delivered a course of public lectures on Geology in the Civil Engineering College, Madras; 1863, North Arcot, Salem, Chingleput, arranged the paleontological collections in the Madras Museum; 1864, in Chingleput and North Arcot; 1865, in Kadapah, Karnul, Nizam's Territory; 1866, in Karnul, Nellore; placed in the 2nd grade on the introduction of grading in May 1866; 1867, in Nellore, Karnul, Kistna; leave on medical certificate from 29th May 1867 to 22nd October 1868; 1868-69, in Kistna District and Nizam's Territories; 1869-70, in Bellary, Nizam's Territories, Kaladgi; 1870-71, in Bellary, Nizam's Territories, Kaladgi, Belgaum; 1871-72, in Nizam's Territories, Kaladgi, Belgaum, Ratnagiri, Kolhapur; 1872-73, in Bellary, Dharwar, Kaladgi, Sholapur; deputed to Vienna Exhibition in joint charge of the survey collections; officiated in the 1st grade from 16th July 1873 to 17th December 1874; 1873-74, in Kaladgi, Belgaum, Kolhapur, Dharwar; examined the Daubal gold region; 1874-75, in Nellore; 1875, 1876 and 1877, in Nellore and Kistna; promoted to the 1st grade on 1st April 1876; 1877, 1878 and 1879, Trichinopoly, Tanjore, Pudukotta, Madura; furlough from 13th May 1879 to 6th December 1880; Madura, Tinnevely, 1880-81; officiated as Deputy Superintendent from 7th December 1880.

MR. ARTHUR BEAVOR WYNNE, F. G. S.

Was appointed in England by the Secretary of State on the 16th October 1862; had been since October 1852 in the Government service in Ireland, the last seven and a half years being on the Geological Survey; joined his appointment in India on the 13th November 1862; 1862-63, in Surat and Broach Districts; 1863-64, in the Lower Narbada Valley; 1864, 1865 and 1866, in West Berar and the Deccan; leave on medical certificate from 14th April 1866 to 8th November 1867; appointed to officiate as Deputy Superintendent for Bombay from 19th November 1867 to 31st October 1869; 1867, 1868 and 1869, in Kach; passed in the vernacular on 9th November 1868; promoted to 2nd grade on 31st March 1869; 1869, 1870, 1871, 1872 and 1873, Punjab Salt Range and adjoining ground; officiated in the 1st grade from 3rd June 1873 to 15th December 1874; 1873-74, Kohat salt region; 1874-75, Western Rawal Pindi; furlough from 29th March 1875 to 25th April 1876; 1876-77, the tertiary rocks of, and adjoining, the Potwar; officiated in the 1st grade from 1st May to 24th October 1876; 1877-78, Huzara; 1878-79, Bannu; 1879-80, Upper Punjab; officiated in the 1st grade from 13th May 1879 to 2nd April 1880; officiated as Deputy Superintendent from 22nd August 1879 to 2nd April 1880; leave on medical certificate from 3rd April 1880.

MR. FREDERICK RICHARD MALLET, F. G. S.

ENGAGED by Dr. Oldham in England; joined the Geological Survey as Assistant on the 12th February 1859, and took up work in the Raniganj coal-field; 1859-60, in the Khargpur Hills; in July 1860 made a trip to Tibet by Niti; 1860-61, Upper Sone Valley; in July 1861 made an excursion in Spiti; 1861-62, on the Upper Vindhyan in Bundelkhand and Rewah; 1862-63, on the Vindhyan in Mirzapur and Shahabad Districts; 1863-64, on the Vindhyan between Rewah and Saugor; June to September 1864, worked with Dr. Stoliczka in Spiti and Rupshu; 1864-65, worked the Vindhyan boundary from Jabalpur to Barwai; from 10th May to 9th November 1865, officiated as Deputy Superintendent in Bengal; 1865-66, on the Vindhyan and crystalline rocks between Chunar and Tehri in Bundelkhand; 1866-67, through Bhurtpur, Alwar, Bundi and Guna to the Saugor District; 1867-68, the gneiss of Lower Bundelkhand; 1868-69, on the crystalline and transition rocks in the Mirzapur District; passed in the vernacular on 5th October 1868; on furlough for one year from 13th September 1869, with an extension on duty for three months and nine days to 21st December 1870; on his return journey stopped at Adeu to report on the prospects of an artesian boring; 1871-72, in South Mirzapur and Rewah; officiated in the 2nd grade from 13th June to 3rd December 1871; officiated for three months as Curator of the Museum; during the recess seasons of 1871 and 1872, arranged and catalogued a large part of the mineral collections; promoted to the 2nd grade on 1st May 1872; 1872-73, on the crystalline and transition rocks of Northern Hazaribagh; recalled to arrange the mineral collection for the Vienna Exhibition; 1873-74, in the Sikkim Himalayas and Bhutan Duars; 1874, 1875 and 1876, in the Assam coal-fields; officiated in the 1st grade from 16th March to 25th April 1876; since 12th October 1876 has acted as keeper of the mineral collections, the systematic description of which involves much work in the laboratory; early in 1878 examined and reported on some coal and petroleum localities in Ramri, Cheduba and Baronga Islands; leave on medical certificate from 25th July 1879 to 22nd October 1880; 1880-81, Museum; officiated in the 1st grade from 23rd October 1880.

MR. THEODORE WILLIAM HUGHES HUGHES, A. B. S. M., F. G. S.

APPOINTED in England by the Secretary of State on 16th October 1862; joined the Survey as Assistant on the 11th November 1862; 1862-63, in the Sone Valley; 1863-64, the Jherria coal-field; 1864-65, the Bokaro coal-field; 1865, 1866, 1867 and 1868, the Káranpura, Deogarh, Karbarbári, and Daltonganj coal-fields; 1868, 1869, 1870 and 1871, the Wardha Valley coal-fields; passed in the vernacular on the 3rd August 1868; leave

on medical certificate from 1st July 1871 to 8th November 1872; 1872-73, Bandar and Wardha coal-fields; officiated as Deputy Superintendent from 9th November 1872 to 17th December 1874; in July to September 1873 made a trip in Tibet by Niti and Milam; in October 1873 reported on the Kumaun iron ores; in November 1873 reported for the Bengal Iron Company on the Raniganj Field; 1873-74, Wardha Valley coal-field; reported for Messrs. Apear and Company on boring sites in Birbhúm, also for Messrs. Burn and Company on the Birbhúm iron ores; 1874-75, the Pánhita and Jángaon Valleys, and the Wun coal-fields; promoted to the 2nd grade from 21st April 1875; 1875-76, the Godavari Valley; 1876-77, completed survey of the Kota-Maleri area; leave on furlough from 1st November 1877 to 14th October 1879; officiated in the 1st grade from 15th October 1879 to 6th December 1880; officiated as Deputy Superintendent for Bombay from 3rd April to 6th December 1880; 1879-80, South Rewah coal-fields; officiated in the 1st grade and as Deputy Superintendent from 17th March 1881.

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MR. VALENTINE BALL, M. A., F. G. S.

ENGAGED in England by Dr. Oldham; joined appointment in India on 29th October 1864; 1864-65, surveyed the Ramgarh coal-field; officiated from 4th June to 4th December 1865 as Curator of the Geological Museum; 1865, 1866 and 1867, survey of Maunbhúm; officiated from 24th June to 13th November 1867 as Curator of the Geological Museum; 1867-68, survey of Maunbhúm and Singhbhúm; passed in the vernacular on 1st October 1867; officiated from 2nd May to 3rd November 1868 as Joint Curator of the Indian Museum; 1868-69, survey of Singhbhúm; visited (on leave) the Andaman and Nicobar Islands; 1869-70, revision survey of the Rájmahál Hills, reported on Mahendra-Giri in Ganjam as a sanitarium; 1870, 1871 and 1872, survey of coal-fields in Hazaribagh and Sirgújah; 1872-73, on special duty with Mr. Bauerman, visiting the coal and iron fields of Bengal and the Narbada; visited (on leave) the Andamans, Nicobars and other Islands of the Bay of Bengal; deputed to Vienna from 2nd June to 8th December 1873 in joint charge of the survey collections at the Exhibition; 1873-74, surveyed portions of the Satpura Hills; 1874-75, survey of the Raigarh and Hingir coal-field; 1875-76, re-survey of the Orissa coal-fields and parts of Sambalpur; promoted to 2nd grade on 1st April 1876; 1876-77, preliminary survey of the region extending from Cuttack to Naggpur and from the Mahanadi to the Godavari; 1877-78, survey of the Aurunga and the Hutár coal-fields in Palamow; leave on furlough from 1st July 1878 to 30th June 1880 with an extension for three and a half months in order to complete a course of study at Dublin, such extension counting as service; officiated in the 1st grade from 16th to 22nd October 1880; 1880-81, office, Calcutta; officiated in the 1st grade and as Deputy Superintendent from 10th May 1881.

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MR. FRANCIS FEDDEN, A. B. S. M., F. G. S.

ENGAGED in England by Dr. Oldham; joined the Survey as Assistant on the 1st October 1860; deputed to Burma; employed there until 1864; attached to the Salween surveying expedition in 1864-65; surveyed parts of Maunbhúm and Hazaribagh in 1865-66; transferred to Central Provinces in 1866-67; on private affairs leave from 4th May to 5th December 1867; engaged in the survey of Cutch in 1867, 1868 and 1869; passed in the vernacular on 26th October 1869; surveyed parts of Central Provinces, East Berar, and the Nizam's Territories in 1869, 1870, 1871, and 1872; leave on medical certificate from 26th May 1872 to 22nd January 1874; officiated in the 2nd grade from 16th July 1873 to 17th December 1874; resumed work in the Wardha coal-fields, 1874; transferred to the survey of Sind, 1874, 1875, 1876 and 1877; officiated in the 2nd grade from 29th March 1875 to 24th October 1876; transferred to survey of Kattywar, 1877-78; officiated in the 2nd grade from 1st November 1877 to 23rd March 1878; promoted to 2nd grade on 24th March 1878; leave on furlough from 7th June to 20th November 1878; resumed work in Kattywar, 1878-79; officiated as Curator from 25th July 1879 to 22nd October 1880; officiated in the 1st grade from the 22nd August to the 14th October 1879, and from 3rd April to 15th October 1880; 1880-81, Kattywar.

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MR. CHARLES AUGUSTUS HACKET.

ENGAGED in England by Dr. Oldham; joined the Geological Survey as Assistant on the 15th November 1861; 1861, 1862, and 1863, in the Sone Valley; 1864, 1865, 1866, and 1867, on the Vindhya's in Central India; 1867, 1868, and 1869, on the Vindhya's and Arvalis between Bhartpur and Neemuch; passed in the vernacular on 5th October 1868; 1869, 1870, 1871, and 1872, on the Transition and Gondwana Rocks in Jabalpur and South Rewah; 1872-73, Narsingpur and Hosungabad; officiated in the 2nd grade from 3rd June 1873 to 15th December 1874; 1873-74, Rajputana; leave on furlough and medical certificate from 3rd August 1874 to 1st November 1875; 1875, 1876, 1877, 1878, and 1879, the Arvalis in Rajputana and Punjab; officiated in the 2nd grade from 16th March to 26th April 1876, and from 24th March 1878; 1880-81, Rajputana, towards Neemuch and Oodeypore.

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MR. RICHARD LYDEKKER, B. A.

APPOINTED by the Secretary of State in England on 5th November 1874; joined as 3rd grade Assistant on 26th November 1874; took up work on the collection of vertebrate fossils in the Museum; passed in the vernacular on 5th April 1875; 1875-76, in the Jamu Hills; June 1876 to March 1877, arranging and describing fossils in the Museum; March till October 1877, survey of Pir Punjal, Kashmir, Kishtwar and Panji; 1877-78, in the Museum; May to October 1878, survey of Tilail and Dras; 1879, 1880 and 1881, Himalayas; officiated in the 2nd grade from 5th April 1876.

MR. CARL LUDOLF GRIESBACH, F. G. S.

APPOINTED by the Secretary of State in England on 26th September 1878; joined as 3rd grade Assistant on 11th November 1878; took up the survey of the South Rewah coal-fields in November 1878; 1879, Himalaya; 1880, deputed to Afghanistan to report on gold at Kandahar, and petroleum at Sibi; was present at Maiwand and throughout the siege of Kandahar, having been attached to the 66th Regiment with the rank of Lieutenant; passed in the vernacular on 15th September 1880; officiated in the 2nd grade from 13th March to 7th November 1880; officiated in the 2nd grade from 17th March 1881; 1881, Kumaun and Himalayas.

WAR SERVICES.

ON 6th March 1880 was deputed on special service under the orders of the General Commanding in Southern Afghanistan; was present at the action of Maiwand; attached to the 66th Regiment with rank of Lieutenant, Kandahar Field Force order No. 271, dated 29th July 1880, and was present throughout the siege of Kandahar; received the acknowledgments of the Government of India.

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MR. RICHARD DIXON OLDHAM, A. B. S. M.

APPOINTED in Europe by the Secretary of State on 6th November 1879; joined as 3rd grade Assistant on 17th December 1879; took up work in the Godavari Valley; 1880-81, Jaunsár and Sirmur.

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MR. PRAMATHA NATH BOSE, B. SC. (Lond.), F. G. S.

APPOINTED in Europe by the Secretary of State on 13th May 1880; joined as 3rd grade Assistant on 30th July 1880; 1880-81, Lower Narbada Valley.

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MR. OTTOKAR FEISTMANTEL, M. D.

APPOINTED in Europe by the Secretary of State on 5th November 1874; joined in India as 3rd grade Assistant on 25th March 1875; took up work on the plant fossils of the Gondwana formation, upon which he has been principally engaged till now; passed in the vernacular on 4th October 1875; appointed Palæontologist on 10th March 1877; in 1875, 1876, and 1877, made short excursions to the Rajmahal Hills, the Karharbári, Raniganj, and the Sátpara coal-fields; 1878, 1879, office and Karharbári coal-field; 1880-81, office and Hazaribagh, Loharduzga and Maunbhúm.

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MR. JULES SCHAUMBURG.

JOINED the Survey as Chief Draughtsman on 12th April 1869; gazetted as Artist on 7th July 1874.



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