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Classified List of the Officers of the Senior Department of

No. sanctioned.	No. existing in each grade.	Names of Officers and Branch to which originally posted.	Substantive Appointment.	Survey Party or Office to which at present attached.
ADMINISTRATIVE STAFF.				
1	1	<i>Lt. Genl. J. T. Walker, C.B., B.E., F.R.S., L.L.B.</i> [G. T. S.]	Surv. Genl. of India	On furlough Calcutta
1	1	<i>Bt. Col. G. O. DePrée, s.c., P.C.M.</i> [Topogl.]	Depry. Survr. Genl. in charge Topogl. Survey Branch.	Do.
1	1	<i>Bt. Col. J. S. Searge, s.c., P.H.</i> [Rev.]	Depry. Survr. Genl. in charge Revenue Survey Branch.	Do.
		<i>M. J. B. N. Hennessey, M.A., F.R.S.</i> [G. T. S.]	Depry. Supdt., 1st grade.	Dehra Dun
		<i>Maj. R. V. Riddell, B.E., P.H.</i> [Topogl.]	Depry. Survr. Genl.	On deputation
		<i>C. Strahan, B.E.</i> [Topogl.]	Depry. Supdt., 3rd grade	Calcutta
		<i>Mr. J. O. N. James</i> [Topogl.]	Asst. Survr. Genl.	Undattached
		<i>Major J. Waterhouse, s.c., P.H.</i> [Topogl.]	Ditto	Calcutta
		<i>M. W. Rogers, B.E., L.S.</i> [G. T. S.]	Depry. Supdt., 4th grade	Do.
SENIOR BRANCH.				
DEPUTY SUPERINTENDENTS.				
1ST GRADE.				
1	1	<i>M. J. B. N. Hennessey, M.A., F.R.S.</i> [G. T. S.]	Depry. Supdt., 1st grade	Dehra Dun
2	2	<i>Bt. Lt.-Col. H. R. Thuillier, B.E., P.H.</i> [G. T. S.]	Ditto	In charge Mysore Topographical Survey, Bangalore
3	3	<i>Bt. Col. C. T. Haig, B.E.</i> [G. T. S.]	Ditto	In charge Guzerat Survey, Poona
2ND GRADE.				
1	1	<i>Bt. Lt.-Col. J. Herschel, B.E., F.R.S., P.H.</i> [G. T. S.]	Depry. Supdt., 2nd grade	On duty, Europe
2	2	<i>Lt. Col. B. R. Branfill, B.C., P.H.</i> [G. T. S.]	Ditto	On furlough
3	3	<i>Major G. Strahan, B.E., P.H.</i> [Topogl.]	Ditto	In charge No. 2 Astronomical Party
4	4	<i>" T. T. Carter, B.E., P.H.</i> [G. T. S.]	Ditto	In charge Bhopal and Malwa Topogl. Survey
5	5	<i>Bt. Col. D. Macdonald, s.c., P.H.</i> [Rev.]	Ditto	In charge Missar, &c., districts Survey, Punjab, Murree
6	6	<i>Lt. Col. F. Coddington, s.c., P.H.</i> [Rev.]	Ditto	On furlough
7	7	<i>Bt. Lt.-Col. W. M. Campbell, B.E.</i> [G. T. S.]	Ditto	Do.
8	8	<i>Maj. R. V. Riddell, B.E., P.H.</i> [Topogl.]	Ditto	On deputation
3RD GRADE.				
1	1	<i>Major C. Strahan, B.E.</i> [Topogl.]	Depry. Supdt., 3rd grade	Head Quarters, Calcutta
2	2	<i>Mr. J. O. N. James</i> [Topogl.]	Ditto	Undattached
3	3	<i>Major W. Barton, s.c., P.H.</i> [Rev.]	Ditto	On furlough
4	4	<i>Lt. Col. M. C. B. Tanner, Bombay, s.c., P.H.</i> [Rev.]	Ditto	In charge Darjeeling and Nepal Boundary Parties
5	5	<i>Major W. J. Heavish, B.E., P.H.</i> [G. T. S.]	Ditto	In charge No. 1 Astronomical Party

the Survey of India as it stood on the 1st January 1884.

No. existing in each grade.	Consolidated Salary.	Extra allowances, if any.	REMARKS.
	<i>a. p.</i>		
1	2,650 10 8		For 6 months, from 12th February 1883. Extension for 4 months. Officiating Surveyor General of India.
1	2,200 0 0		Officiating Deputy Surveyor General, in charge Trigonometrical Survey Branch.
1	2,000 10 0		Officiating Deputy Superintendent, 2nd grade. Officiating Assistant Surveyor General, in charge Engraving and Chromographic Offices, Head Quarters, Calcutta.
2	1,482 10 0	(a) Presidency allowance	In charge Lithographic and Photographic Offices, Head Quarters, Calcutta.
2	1,300 0 0	(b) Special local and (c) Inclusive of personal	Officiating Deputy Superintendent, 2nd grade. Officiating Assistant Surveyor General, in charge Mathematical Instrument Office, and Correspondence Office, Head Quarters, Calcutta.
3	1,100 0 0	(a) Presidency	
	1,182 10 0	(a) Presidency	
	2,000 0 0		Officiating Deputy Surveyor General, in charge Trigonometrical Survey Branch.
2	1,600 0 0		
3	1,600 0 0	(c) Half scale, local.	
1			
2			For 1 year, from 10th November 1882. Extension for 6 months.
3	1,482 10 0		
4	1,482 10 0	(c) Half scale, local.	
5	1,300 0 0		For 183 days, from 9th November 1882. Extension for 91 days. Further extension for 274 days.
6			For 1 year and 1 day, from 24th March 1883.
7			Officiating Mint Master, Bombay.
8			
1	1,482 10 0	(c) Presidency	
2	1,300 0 0		Officiating Deputy Superintendent, 2nd grade, and Officiating Assistant Surveyor General.
3			Assistant Surveyor General, and Officiating Deputy Superintendent, 2nd grade. For 24 years, from 9th November 1883.
4	1,300 0 0	(c) Full scale, local	Officiating Deputy Superintendent, 4 grade.
5	1,482 10 0		Ditto

(a) Department of Agriculture, Revenue, and Commerce, No. 213, dated 14th May 1878.
 (b) Department of Revenue, Agriculture, and Commerce Memorandum No. 731, dated 31st Oct.
 (c) Financial Resolution No. 704, dated 22nd February 1880.

Classified List of the Officers of the Senior Department of the

Survey of India as it stood on the 1st January 1884—concluded.

No. sanctioned.	No. existing in each grade.	Names of Officers and Branch to which originally posted.	Substantive Appointment.	Survey Party or Office to which at present attached.
SENIOR BRANCH—concl'd.				
DEPUTY SUPERINTENDENTS—concl'd.				
3RD GRADE—concl'd.				
6		Lt.-Col. A. Pullan, s.c., P.H. [G. T. S.]	Depty. Supdt., 3rd grade.	In charge Kattywar and Cutch Survey, Poona
7		Major D. C. Andrew, s.c., P.H. [Rev.]	Ditto	In charge South Deccan Topogl. Survey, Poona
8		Lt.-Col. W. H. Wilkins, s.c., P.H. [Rev.]	Ditto	On furlough
9		Major J. E. Sandeman, s.c., P.H. [Rev.]	Ditto	In charge Mirzapur and Gorukpur Districts (Cadastral) Survey, N.-W. P., Naini Tal
10		Lt.-Col. W. F. Badgley, s.c., P.H. [Topogl.]	Ditto	On furlough
11		Major T. H. Holdich, R.E., L.S. [Topogl.]	Ditto	In charge Baluchistan Topographical Survey, Mussoorie
4TH GRADE.				
1		Major J. Waterhouse, s.c., P.H. [Topogl.]	Depty. Supdt., 4th grade	Head Quarters, Calcutta
2		Major M. W. Rogers, R.E., L.S. [G. T. S.]	Ditto	Ditto
3		Major J. Hill, R.E. [G. T. S.]	Ditto	In charge Konkani Topogl. Survey, Poona
4		Mr. H. Horst [Topogl.]	Ditto	In charge Burma Topogl. Survey, Rangoon
5		Major W. H. Cole, M.A., H.S. [G. T. S.]	Ditto	Offg. in charge Trigonometrical Branch Office, Dehra Dun
6		Major H. B. Talbot, R.E., L.S. [Rev.]	Ditto	In charge Prome and Akyab Districts [Cadastral] Survey, British Burma, Rangoon
7		Major A. W. Baird, R.E., P.H. A.L.C.E. [G. T. S.]	Ditto	In charge Tiddi and Laveling operations, India and Burma, Poona
8		Major J. R. McCullagh, R.E., L.S. [G. T. S.]	Ditto	In charge Pegu and Shuangheon Districts [Cadastral] Survey, British Burma, Rangoon
9		Major J. R. Wilmer, s.c., H.S. [Topogl.]	Ditto	In charge Mirzapur Topogl. Survey, Mussoorie
10		Mr. J. McGill, R.E., L.S. [G. T. S.]	Ditto	On furlough
11		Major S. H. Cowan, s.c., P.H. [Rev.]	Ditto	In charge Benares and Basti Districts [Cadastral] Survey, N.-W. P., Naini Tal
ASSISTANT SUPERINTENDENTS.				
1ST GRADE.				
1		Major E. H. Steel, s.c., P.H. [Rev.]	Asst. Supdt., 1st grade	In charge Alighur, &c., Districts, Topogl. Survey, N.-W. P., Mussoorie
2		Major H. S. Hutchinson, s.c., P.H. [Rev.]	Ditto	In charge Bassein and Henzada Districts [Cadastral] Survey, British Burma, Rangoon
3		Mr. E. C. Barrett, H.S. [Rev.]	Ditto	In charge Kamrup District [Cadastral] Survey, Assam, Shillong
4		Major R. Beavan, s.c., P.H. [Rev.]	Ditto	In charge Central India and Rajputana Topogl. Survey, Mussoorie
5		Bt. Lt.-Col. R. G. Woodthorpe, R.E., L.S. [Topogl.]	Ditto	In charge North-East Frontier Topogl. Survey, Shillong
6		Mr. G. H. Cooke, H.S. [Rev.]	Ditto	Benares, &c., Districts, [Cadastral] Survey, N.-W. P., Naini Tal
7		Major E. J. Jackson, H.S. [Rev.]	Ditto	Pegu and Shuangheon Districts [Cadastral] Survey, British Burma, Rangoon
8		Captain St. G. C. Gore, R.E. [G. T. S.]	Ditto	Head Quarters, Calcutta
9		Capt. J. R. Hobday, s.c., H.S. [Topogl.]	Ditto	In charge Andaman Topographical Survey, Darjeeling
10		Mr. E. C. Ryall, R.E., L.S. [G. T. S.]	Ditto	On sick leave.
11		Lieut. the Hon. M. G. Talbot, R.E., H.S. *	Ditto	Baluchistan Topogl. Survey, Mussoorie.
2ND GRADE.				
1		Lieut. F. B. Longe, R.E. *	Asst. Supdt., 2nd grade	Mirzapur and Gorukpur Districts, [Cadastral] Survey, N.-W. P., Naini Tal
2		Major R. A. Walsh, R.E., H.S. *	Ditto	Baluchistan Topogl. Survey, Mussoorie
3		Mr. W. H. Patterson, L.S. [Rev.]	Ditto	Mirzapur Topogl. Survey, Mussoorie
4		Major F. W. Kelly, H.S. [Rev.]	Ditto	Prome and Akyab Districts [Cadastral] Survey, British Burma, Rangoon
5		Lieut. H. M. Jackson, R.E., H.S. *	Ditto	Mysore Topogl. Survey, Bangalore
6		Lieut. G. A. Hodgson, s.c., P.H. *	Ditto Probationary	Guzerat Survey, Poona

* Joined the Department after the amalgamation on the 1st January 1878.

No. existing in each grade.	Consolidated Salary.	Extra allowances, if any.	REMARKS.
	R a. p.		
6	1,300 0 0	(a) Half scale, local	Officiating Deputy Superintendent, 2nd grade.
7	1,100 0 0	(a) Ditto (b) Inclusive of personal allowance.	
8			For 273 days, from 8th June 1883.
9	1,100 0 0	(b) Inclusive of personal.	
10			For 1 year, from 10th March 1882. Extension for one year.
11	1,182 10 0	(i) Baluchistan.	
1	1,100 0 0	(d) Special local allowance and (e) Inclusive of personal.	Officiating Deputy Superintendent, 3rd grade, Assistant Surveyor General.
2	1,182 10 0	(c) Presidency	Officiating Deputy Superintendent, 3rd grade. Officiating Assistant Surveyor General.
3	1,182 10 0	(a) Half scale, local	Ditto ditto.
4	1,000 0 0	(f) Burma	Ditto ditto.
5	1,000 0 0		Ditto ditto.
6	1,000 0 0	(g) Burma	Ditto ditto.
7	1,182 10 0	(h) Deputation	Ditto ditto.
8	1,182 10 0	(g) Burma	Ditto ditto.
9	950 0 0	(e) Inclusive of personal.	
10			For 1 year 11 months and 8 days, from 7th November 1883.
11	950 0 0	(e) Inclusive of personal.	
1	950 0 0	(e) Inclusive of personal	Officiating Deputy Superintendent, 4th grade.
2	950 0 0	(g) Burma and (e) Inclusive of personal	Ditto ditto.
3	850 0 0		Ditto ditto.
4	950 0 0	(e) Inclusive of personal	Ditto ditto.
5	990 0 0	(j) Assam	Ditto ditto.
6	850 0 0		Ditto ditto.
7	850 0 0	(g) Burma	Ditto ditto.
8	890 0 0	(c) Presidency	Ditto ditto.
9	850 0 0		Ditto ditto.
10			For 1 month, from 10th December 1883.
11	670 0 0	(i) Baluchistan.	
1	670 0 0		Officiating Assistant Superintendent, 1st grade.
2	670 0 0	(i) Baluchistan	Ditto ditto.
3	600 0 0		Ditto ditto.
4	600 0 0	(g) Burma	Ditto ditto.
5	670 0 0		Ditto ditto.
6	500 0 0	(a) Half scale, local.	Ditto ditto.

(a) Financial Resolution No. 704, dated 22nd February 1880.
 (b) Department of Revenue and Agriculture, No. 116, dated 18th March 1883.
 (c) Department of Agriculture, Revenue, and Commerce Memorandum No. 213, dated 14th May 1878.
 (d) Department of Agriculture, Revenue, and Commerce Memorandum No. 731, dated 31st October 1878.
 (e) Department of Revenue and Agriculture, No. 3983, dated 15th September 1882.
 (f) Department of Home, Revenue, and Agriculture, No. 121, dated 6th May 1880.
 (g) Department of Finance and Commerce, No. 260, dated 16th April 1882.
 (h) Department of Revenue and Agriculture, No. 3258, dated 17th August 1882.
 (i) Revenue and Agricultural Department, No. 5223, dated 15th December 1882.
 (j) Financial Resolution No. 3292, dated 31st October 1880.

Classified List of the Officers of the Junior or Subordinate Department

ment of the Survey of India as it stood on the 1st January 1884.

No. sanctioned.	No. existing in each grade.	Names of Officers and Branch to which originally posted.	Substantive Appointment.	Survey Party or Office to which at present attached.
JUNIOR BRANCH.				
SURVEYORS.				
1ST GRADE.				
<i>Salary Rs500.</i>				
8		Mr. J. F. Baness [Topogl.]	Surveyor, 1st grade	
1		" A. Chamarett [Topogl.]	Ditto	Chief Draftsman, Head Quarters, Calcutta
2		" J. Peyton [G. T. S.]	Ditto	Darjeeling Survey
3		" A. D'Souza [G. T. S.]	Ditto	In charge Secondary Triangn. Party
4		" G. A. McGill, L.S. [Topogl.]	Ditto	On duty at Head Quarters, Calcutta
5		" D. Atkinson [Topogl.]	Ditto	No. 1 Astronomical Party
6		" F. Grant [Rev.]	Ditto	Pegu and Shuaygheen Districts [Cadastral] Survey, British Burma.
7		" C. Wood, L.S. [G. T. S.]	Ditto	Trigonometrical Branch Office, Dehra Dun, also in charge Burma Party.
8		" G. B. Scott, H.S. [Rev.]	Ditto	Hissar, &c., Districts Survey, Punjab:— temporarily detached under Settlement Officer, Rawal Pindi, Punjab.
9		" H. E. T. Keelan [G. T. S.]	Ditto	Tidal and Leveling Operations, India and Burma.
10		" P. A. G. Cowley, L.S. [Rev.]	Ditto	In charge Chhattisgarh Division [Cadastral] Survey, C. P.
2ND GRADE.				
<i>Salary Rs400.</i>				
1		Mr. L. H. Clarke [G. T. S.]	Surveyor, 2nd grade	Trigonometrical Branch Office, Dehra Dun.
2		" W. Todd [G. T. S.]	Ditto	On duty at Head Quarters, Calcutta
3		" A. J. Wilson, L.S. [Topogl.]	Ditto	Central India and Rajputana Topogl. Survey
4		" G. W. E. Atkinson [G. T. S.]	Ditto	Trigonometrical Branch Office, Dehra Dun
5		" J. A. May [Topogl.]	Ditto	On duty at Head Quarters, Calcutta
6		" James Todd [Rev.]	Ditto	On furlough
7		" S. M. Smylie, L.S. [Rev.]	Ditto	Draftsman, Head Quarters, Calcutta
8		" J. S. Pemberton, L.S. [Rev.]	Ditto	Kamrup District [Cadastral] Survey, Assam
9		" H. R. Littlewood [Rev.]	Ditto	Bassein and Henzada Districts [Cadastral] Survey, British Burma.
10		" W. A. Wilson, L.S. [Rev.]	Ditto	In charge Dehra Dun District [Cadastral] Survey, N.-W. P.
11		" F. Adams [Topogl.]	Ditto	On duty at Head Quarters, Calcutta
3RD GRADE.				
<i>Salary Rs350.</i>				
1		Mr. A. D. Smart [Rev.]	Surveyor, 3rd grade	<i>On half-pay</i>
2		" A. M. Lawson, L.S. [Rev.]	Ditto	Konkan Topogl. Survey, Poona
3		" W. S. Buttress [Rev.]	Ditto	Hissar, &c., Districts Survey, Punjab
4		" E. S. P. Atkinson [Topogl.]	Ditto	Mysore Topogl. Survey
5		" A. J. Gibson [Rev.]	Ditto	In charge Ajmere District Survey, Rajputana.
6		" M. J. Ogle [Topogl.]	Ditto	North-East Frontier Topgl. Survey
7		" W. R. Vvall [Rev.]	Ditto	On furlough
8		" A. G. Wyatt [Topogl.]	Ditto	On furlough
9		" H. W. Psychers [G. T. S.]	Ditto	Trigonometrical Branch Office, Dehra Dun
10		" G. Belcham, H.S. [G. T. S.]	Ditto	Tidal and Leveling Operations, India and Burma.
11		" H. Downman [Rev.]	Ditto	Bassein and Henzada Districts [Cadastral] Survey, British Burma.
12		" E. G. Little [Rev.]	Ditto	Mirzapur and Gorakhpur Districts [Cadastral] Survey, N.-W. P.
13		" H. T. Hanby, L.S. [Rev.]	Ditto	Benares, &c., Districts [Cadastral] Survey, N.-W. P.
14		" I. J. Pocock, H.S. [G. T. S.]	Ditto	Mysore Topogl. Survey

No. existing in each grade.	Consolidated Salary.	Extra allowances, if any.	REMARKS.
	<i>R a. p.</i>		
			Transferred to the Office of Director General of Statistics.
1	600 0 0		
2	500 0 0	(a) Full scale, local.	
3	500 0 0	(f) Charge.	
4	500 0 0	(a) Presidency house-rent.	
5	500 0 0	(c) Burma.	
6	500 0 0	(d) Dehra Office and (f) Charge.	
7	600 0 0	(e) Includes personal.	
8	500 0 0	(a) Half scale, local.	
9	500 0 0	(g) Charge.	
10	400 0 0		Doing duty as Solar Photographer.
11	400 0 0	(a) Presidency house-rent.	
12	400 0 0	(d) Dehra Office.	
13	400 0 0	(a) Presidency house-rent.	For 2 years, from 10th April 1869.
14	450 0 0		
15	400 0 0		
16	400 0 0	(c) Burma.	
17	400 0 0	(g) Charge.	
18	400 0 0	(a) Presidency house-rent.	
19	175 0 0		On half-pay list, from 1st January 1880.
20	350 0 0	(a) Half scale, local.	
21	350 0 0		
22	350 0 0	Charge.	
23	350 0 0	(b) Assam.	For 2 years, from 1st August 1883.
24	350 0 0		For 2 years, from 11th November 1883.
25	350 0 0	(d) Dehra Office.	
26	350 0 0	(a) Half scale, local.	
27	350 0 0	(c) Burma.	
28	350 0 0		
29	350 0 0		
30	350 0 0		

(a) Financial Resolution No. 704, dated 22nd February 1880.
 (b) Financial Resolution No. 3222, dated 31st October 1869.
 (c) Home, Revenue, and Agricultural Department, No. 171, dated 6th May 1880.
 (d) Financial Resolution No. 3800, dated 22nd December 1804, and No. 2519, dated 30th November 1871.
 (e) Revenue and Agricultural Department, No. 77, dated 23rd August 1881.
 (f) Revenue, Agriculture, and Commerce Department, No. 341, dated 4th April 1876.
 (g) Revenue and Agricultural Department, No. 113-31, dated 30th October 1883.

Classified List of the Officers of the Junior or Subordinate Department

of the Survey of India as it stood on the 1st January 1884 — continued.

No. sanctioned.	No. existing in each grade.	Names of Officers and Branch to which originally posted.	Substantive Appointment.	Survey Party or Office to which at present attached.
JUNIOR BRANCH—contd.				
SURVEYORS—concl'd.				
4TH GRADE.				
<i>Salary ₹300.</i>				
18				
1		Mr. A. Christie, H.S. . . . [G. T. S.]	Surveyor, 4th grade	Guzerat Survey
2		„ W. J. O'Sullivan . . . [G. T. S.]	Ditto	Darjeeling Survey
3		„ N. C. Gwynne . . . [G. T. S.]	Ditto	Kattywar and Cutch Survey
4		„ W. C. Price . . . [G. T. S.]	Ditto	Benares, &c., Districts [Cadastral] Survey, N.-W. P.
5		„ C. H. McA'Fee, L.S. . . [G. T. S.]	Ditto	Guzerat Survey
6		„ C. F. Hamer . . . [Topogl.]	Ditto	Minzapur Topogl. Survey
7		„ J. H. O'Donel . . . [Rev.]	Ditto	Kamrup District [Cadastral] Survey, Assam
8		„ T. E. M. Claudius . . . [Topogl.]	Ditto	Baluchistan Topogl. Survey
9		„ A. J. James . . . [Topogl.]	Ditto	Mysore Topogl. Survey
10		„ T. H. Rendell . . . [G. T. S.]	Ditto	Tidal and Leveling Operations, India and Burma.
11		„ W. W. McNair, L.S. . . [Topogl.]	Ditto	On furlough.
12		„ J. T. U. Coxen . . . [Rev.]	Ditto	Baluchistan Topogl. Survey
13		„ D. A. King . . . [Rev.]	Ditto	Pegu and Shuaygheen Districts [Cadastral] Survey, British Burma.
14		„ W. Stotesbury, H.S., L.S., Canarese [Topogl.]	Ditto	Mysore Topogl. Survey
15		„ R. B. Smart, L.S. . . . [Rev.]	Ditto	Bassein and Henzada Districts [Cadastral] Survey, British Burma.
16		„ F. Kitchen . . . [Topogl.]	Ditto	Mysore Topogl. Survey
17		„ Hugh Todd . . . [G. T. S.]	Ditto	Ditto
18		„ E. J. Connor, L.S. . . [G. T. S.]	Ditto	Tidal and Leveling Operations, India and Burma.
ASSISTANT SURVEYORS.				
1ST GRADE.				
<i>Salary ₹200, rising to ₹250.</i>				
41				
1		Mr. J. Connor . . . [Rev.]	Asst. Surveyor, 1st grade	Kamrup District [Cadastral] Survey, Assam
2		„ T. H. Dunne, L.S. . . [Rev.]	Ditto	Bassein and Henzada Districts [Cadastral] Survey, British Burma.
3		„ J. Bond . . . [G. T. S.]	Ditto	Trigonometrical Branch Office, Dehra Dun
4		„ C. D. Potter, L.S. . . [G. T. S.]	Ditto	Secondary Triangulation Party

No. sanctioned.	No. existing in each grade.	Consolidated Salary.	Extra allowances, if any.	REMARKS.
<i>R a. p.</i>				
1		300 0 0	(b) Half scale, local.	
2		300 0 0	(b) Full scale, local.	
3		300 0 0	(b) Half scale, local.	
4		300 0 0		
5		300 0 0	(b) Half scale, local.	
6		300 0 0		
7		300 0 0		
8		300 0 0	(e) Baluchistan.	
9		300 0 0		
10		300 0 0	(c) Deputation and (b) Half scale, local.	
11				For 1 year, from 20th March 1883.
12		300 0 0	(e) Baluchistan.	
13		300 0 0	(a) Burma.	
14		300 0 0		
15		300 0 0	(a) Burma.	
16		300 0 0		
17		300 0 0		
18		300 0 0	(b) Half scale, local.	
1		300 0 0		Offg. Surveyor, 4th grade.
2		300 0 0	(a) Burma	Ditto.
3		300 0 0	(d) Dehra Office	Ditto.
4		300 0 0		Ditto.

(a) Home, Revenue, and Agricultural Department, No. 171, dated 6th May 1880.
 (b) Financial Resolution No. 704, dated 22nd February 1886.
 (c) Home, Revenue, and Agricultural Department, No. 482, dated 20th October 1870.
 (d) Financial Resolution No. 3990, dated 22nd December 1864, and No. 2579, dated 30th November 1871.
 (e) Revenue and Agricultural Department No. 5228, dated 15th December 1882.

Classified List of the Officers of the Junior or Subordinate Department

No. sanctioned.	No. existing in each grade.	Names of Officers and Branch to which originally posted.	Substantive Appointment.	Survey Party or Office to which at present attached.
JUNIOR BRANCH—contd.				
ASSISTANT SURVEYORS—contd.				
1ST GRADE—contd.				
<i>Salary R200, rising to R250—contd.</i>				
5		Mr. J. Newland, L.S. . . . [Rev.]	Asst. Surveyor, 1st grade	Konkan Topogl. Survey, Poona
6		„ C. Tapsell . . . [Topogl.]	Ditto	Guzerat Survey
7		„ J. A. Barker . . . [Topogl.]	Ditto	Bhopal and Malwa Topogl. Survey
8		„ E. A. Wainright . . . [Topogl.]	Ditto	Mirzapur Topogl. Survey
„		„ R. C. D. Ewing, H.S. . . . [Rev.]	Ditto	Draftsman, Head Quarters, Calcutta
9		„ W. J. Cornelius, L.S. . . . [Topogl.]	Ditto	Central India and Rajputana Topogl. Survey
10		„ G. W. Jarbo, L.S. . . . [Rev.]	Ditto	Prome and Akyab Districts [Cadastral] Survey, British Burma.
11		„ P. J. W. Doran, L.S. . . . [Topogl.]	Ditto	On duty at Head Quarters, Calcutta
12		„ J. R. Scott, L.S. . . . [Rev.]	Ditto	Prome and Akyab Districts [Cadastral] Survey, British Burma.
13		„ J. McHatton, L.S. . . . [Rev.]	Ditto	Pegu and Shuaygheen Districts [Cadastral] Survey, British Burma.
14		„ H. T. Kitchen . . . [Topogl.]	Ditto	Mirzapur Topogl. Survey
15		„ J. H. Wilson, L.S. . . . [Topogl.]	Ditto	Burma Topogl. Survey, Rangoon
16		„ J. Hickie, L.S. . . . [G. T. S.]	Ditto	South Deccan Topogl. Survey, Poona
17		„ W. A. Fielding, L.S. . . . [G. T. S.]	Ditto	Kattywar and Cutch Survey
18		„ S. O. Madras . . . [Rev.]	Ditto	Benares, &c., Districts [Cadastral] Survey, N.-W. P.
19		„ G. D. Cusson, L.S. . . . [G. T. S.]	Ditto	Guzerat Survey
20		„ T. F. Freeman, L.S. . . . [Rev.]	Ditto	Mirzapur and Gorukpur Districts [Cadastral] Survey, N.-W. P.
21		„ G. C. Swiney . . . [Rev.]	Ditto	Chattisgarh Division [Cadastral] Survey, C. P.
22		„ W. H. Lilley . . . [Topogl.]	Ditto	Mirzapur Topogl. Survey
23		„ J. S. Swiney . . . [Rev.]	Ditto	Prome and Akyab Districts [Cadastral] Survey, British Burma.
24		„ C. P. Torrens . . . [G. T. S.]	Ditto	Burma Topogl. Survey, Rangoon
25		„ W. Robert . . . [Topogl.]	Ditto	Darjeeling Survey
26		„ T. Shaw, L.S. . . . [Rev.]	Ditto	Mirzapur and Gorukpur Districts [Cadastral] Survey, N.-W. P.
27		„ C. W. Wilson, L.S. . . . [Rev.]	Ditto	Aligurb, &c., Districts Survey, N.-W. P.
28		„ E. J. Martin . . . [Rev.]	Ditto	On duty, Head Quarters, Calcutta
29		„ C. W. F. Seyers . . . [Rev.]	Ditto	Ajmere District Survey, Rajputana
30		„ W. H. Penrose . . . [Rev.]	Ditto	Bassein and Henzada Districts [Cadastral] Survey, British Burma.
31		„ G. E. Parker . . . [Rev.]	Ditto	Pegu and Shuaygheen Districts [Cadastral] Survey, British Burma.
32		„ G. Campbell . . . [Rev.]	Ditto	Hissar, &c., Districts Survey, Punjab.
33		„ W. C. G. Barckley . . . [Topogl.]	Ditto	Darjeeling Survey
34		„ G. T. Hall, L.S. . . . [G. T. S.]	Ditto	Kattywar and Cutch Survey
35		„ G. Vander Beck, L.S. . . . [Topogl.]	Ditto	Bhopal and Malwa Topogl. Survey
36		„ R. Todd . . . [Topogl.]	Ditto	South Deccan Topogl. Survey, Poona
37		„ J. Murphy . . . [Rev.]	Ditto	Mirzapur and Gorukpur Districts [Cadastral] Survey, N.-W. P.

of the Survey of India as it stood on the 1st January 1884—continued.

No. existing in each grade.	Consolidated Salary.	Extra allowances, if any.	REMARKS.
	<i>R a. p.</i>		
5	250 0 0	(a) Half scale, local.	
6	250 0 0	(a) Ditto ditto.	
7	250 0 0	(a) Ditto ditto.	
8	250 0 0		
„	325 0 0		
9	250 0 0		
10	250 0 0	(b) Burma.	
11	250 0 0	(a) Presidency house-rent.	
12	250 0 0	(b) Burma.	
13	250 0 0	(b) Ditto.	
14	250 0 0		
15	250 0 0	(b) Burma.	
16	250 0 0	(a) Half scale, local.	
17	250 0 0	(a) Ditto ditto.	
18	250 0 0		
19	250 0 0	(a) Half scale, local.	
20	250 0 0		
21	250 0 0		
22	250 0 0		
23	250 0 0	(b) Burma.	
24	250 0 0	(b) Ditto.	
25	250 0 0	(a) Full scale, local.	
26	250 0 0		
27	240 0 0		
28	240 0 0	(a) Presidency house-rent.	
29	220 0 0		
30	210 0 0	(b) Burma.	
31	200 0 0	(b) Ditto.	
32	200 0 0		
33	200 0 0	(a) Full scale, local.	
34	200 0 0	(a) Half scale, local.	
35	200 0 0	(a) Ditto ditto.	
36	250 0 0	(a) Half scale, local.	
37	200 0 0		

(a) Financial Resolution No. 704, dated 22nd February 1886.
(b) Home, Revenue and Agricultural, Department No. 171, dated 6th May 1880.

Classified List of the Officers of the Junior or Subordinate Department

No. sanctioned.	No. existing in each grade.	Names of Officers and Branch to which originally posted.	Substantive Appointment.	Survey Party or Office to which at present attached.
JUNIOR BRANCH—contd.				
ASSISTANT SURVEYORS—contd.				
1ST GRADE—concl'd.				
<i>Salary R200, rising to R250—concl'd.</i>				
38		Mr. R. A. Gibson . . . [Topogl.]	Asst. Surveyor, 1st grade	Burma Topogl. Survey, Rangoon
39		" A. W. Smart . . . [Rev.]	Ditto	Prome and Akyab Districts [Cadastral] Survey, British Burma.
40		" W. M. Kelly . . . [Rev.]	Ditto	Konkan Topogl. Survey, Poona
41		" A. Kitchen . . . [Topogl.]	Ditto	Baluchistan Topogl. Survey
		<i>E. P. S. Hill</i> . . . [Rev.]		
22		2ND GRADE.		
<i>Salary R160, rising to R200.</i>				
1		Mr. J. McCay . . . [Topogl.]	Asst. Surveyor, 2nd grade	Kamrup District [Cadastral] Survey, Assam
2		" P. White, L.S. . . . [Topogl.]	Ditto	On sick leave
3		" B. M. Wilson . . . [Rev.]	Ditto	On duty, Head Quarters, Calcutta
		" <i>E. P. S. Hill, B.S. L.S. (Persian)</i> . . . [Rev.]	Ditto	Draftsman, Head Quarters, Calcutta
4		" R. R. Dickinson, L.S. . . . [Rev.]	Ditto	Konkan Topogl. Survey, Poona
5		" J. F. Macarthy, L.S. . . . [G. T. S.]	Ditto	Extraordinary leave on private affairs
6		" E. Graham, L.S. . . . [Topogl.]	Ditto	Burma Topogl. Survey, Rangoon
7		" H. Corkery, L.S. . . . [G. T. S.]	Ditto	On sick leave
8		" G. L. Fleming . . . [Topogl.]	Ditto	Extraordinary leave on private affairs
9		" G. R. Copping . . . [Topogl.]	Ditto	Baluchistan Topogl. Survey
10		" G. A. Knight . . . [Topogl.]	Ditto	South Deccan Topogl. Survey, Poona
11		" D. J. Collins . . . [G. T. S.]	Ditto	Prome and Akyab Districts [Cadastral] Survey, British Burma.
12		" P. A. Peters, L.S. . . . [Rev.]	Ditto	Pegu and Shuayghen Districts [Cadastral] Survey, British Burma.
13		" P. F. Prunty . . . [G. T. S.]	Ditto	Kattywar and Cutch Survey
14		" J. Keating . . . [G. T. S.]	Ditto	Andaman Topogl. Survey
15		" C. S. Kraal, L.S. . . . [Rev.]	Ditto	Kamrup District [Cadastral] Survey, Assam
16		" S. F. Norman . . . [G. T. S.]	Ditto	Guzerat Survey
17		" C. Norman, L.S. . . . [G. T. S.]	Ditto	Ditto
18		" D. Campbell . . . [Topogl.]	Ditto	Andaman Topogl. Survey
19		" L. F. Berkeley, L.S. . . . [Rev.]	Ditto	Benares, &c., Districts [Cadastral] Survey N. W. P.
20		" G. P. Tate, L.S. . . .	Ditto	Central India and Rajputana [Topogl.] Survey
21		" J. M. Kennedy . . . [G. T. S.]	Ditto	Mysore Topogl. Survey
		" P. C. H. Smart . . .	Ditto	Map Curator, Head Quarters, Calcutta
22		" C. George . . .	Ditto	Bhopal and Malwa Topogl. Survey
22		3RD GRADE.		
<i>Salary R120, rising to R160.</i>				
1		Mr. E. B. M. Drew . . . [Rev.]	Asst. Surveyor, 3rd grade	Hissar, &c., Districts [Cadastral] Survey, Punjab
2		" R. F. Warwick L.S. . . . [G. T. S.]	Ditto	Mirzapur Topogl. Survey

* Joined the Department after the amalgamation on 1st January 1873.

of the Survey of India as it stood on the 1st January 1884—continued.

No. existing in each grade.	Consolidated Salary.	Extra allowances, if any.	REMARKS.
	<i>R a. p.</i>		
38	200 0 0	(b) Burma.	
39	200 0 0	(b) Ditto.	
40	200 0 0	(a) Half scale, local.	
41	200 0 0	(d) Baluchistan.	
1	200 0 0		
2			For 6 months, from 5th November 1883. Rejoined from half-pay list on 1st September 1880.
3	184 0 0	(c) Presidency house-rent.	
	225 0 0		
4	192 0 0	(c) Half scale, local.	
5			For 6 months private affairs, from 1st October 1881. Extraordinary leave, without allowances, for one year, from 1st April 1882; extension for 6 months. Further extension for 6 months.
6	192 0 0	(b) Burma.	
7			For 1 year, from 12th April 1882; extension for 6 months. Further extension for 6 months.
8			For 6 months, from 9th October 1882; extension for 6 months.
9	176 0 0	(d) Baluchistan.	
10	168 0 0	(c) Half scale, local.	
11	168 0 0	(b) Burma.	
12	160 0 0	(b) Ditto.	
13	160 0 0	(c) Half scale, local.	
14	160 0 0		
15	160 0 0		
16	160 0 0	(c) Half scale, local.	
17	160 0 0	(c) Ditto.	
18	160 0 0		
19	160 0 0		
20	160 0 0		
21	160 0 0		
	200 0 0		
22	160 0 0	(c) Half scale, local.	
1	160 0 0		Rejoined from half-pay list on 1st April 1881.
2	160 0 0		

(a) Financial Resolution No. 3202, dated 31st October 1868.
 (b) Home, Revenue, and Agricultural Department, No. 171, dated 6th May 1860.
 (c) Financial Resolution No. 704, dated 22nd February 1868.
 (d) Revenue and Agricultural, No. 525, dated 16th December 1868.

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.	Substantive Appointment.	Survey Party or Office to which at present attached.
		JUNIOR BRANCH—concl'd. ASSISTANT SURVEYORS—concl'd. 3RD GRADE—concl'd. Salary <i>R</i> 120, rising to <i>R</i> 160.		
3		Mr. J. C. Kelly, L. S. . . . *	Assistant Surveyor, 3rd Grade	Kamrup District [Cadastral] Survey, Assam
4		„ A. George . . . *	Ditto	Guzerat Survey
5		„ R. W. Senior, L. S. . . . *	Ditto	Nepal Boundary Party
6		„ W. H. D. Ewing . . . *	Ditto	Bassein and Henzada Districts [Cadastral] Survey, British Burma.
7		„ J. A. Higgs . . . *	Ditto	Mysore Topographical Survey
8		„ O. D. Smart . . . *	Ditto	Mirzapur and Gorukpur Districts [Cadastral] Survey, N.-W. P.
9		„ A. Ewing . . . *	Ditto	North-East Frontier Topogl. Survey
10		„ M. Gastaud . . . *	Ditto	Central India and Rajputana Topogl. Survey
11		„ P. Beechey . . . *	Ditto	Central India and Rajputana Topographical Survey.
12		„ G. S. Willy's L. S. . . *	Ditto	Benares, &c., Districts [Cadastral] Survey, N.-W. P.
13		„ E. F. Berkeley . . . *	Ditto	Dehra Dun District [Cadastral] Survey, N.-W. P.
14		„ B. R. Hughes . . . *	Ditto	Benares, &c., Districts, [Cadastral] Survey, N.-W. P.
15		„ F. W. Moore . . . *	Ditto	Aligurh, &c., Districts Survey, N.-W. P.
16		„ J. P. Barker . . . *	Ditto	Hissar, &c., Districts Survey, Punjab.
17		Vacant		
18		Ditto		
19		Ditto		
20		Ditto		
21		Ditto		
22		Ditto		

* Joined the Department after the amalgamation on 1st January 1878.

of the Survey of India as it stood on the 1st January 1884—concluded.

No. existing in each grade.	Consolidated Salary.	Extra allowances, if any.	REMARKS.
	<i>R a. p.</i>		
3	160 0 0		
4	160 0 0	(a) Half scale, local.	
5	152 0 0	(a) Full scale, local.	
6	152 0 0	(b) Burma.	
7	128 0 0		
8	128 0 0		
9	128 0 0	(c) Assam.	
10	120 0 0		
11	120 0 0		
12	120 0 0		
13	120 0 0		
14	120 0 0		
15	120 0 0		
16	120 0 0		
17	. . . . .	
18	. . . . .	
19	. . . . .	
20	. . . . .	
21	. . . . .	
22	. . . . .	

(a) Financial Resolution No. 704, dated 22nd February 1886.
 (b) Home, Revenue, and Agricultural Department, No. 171, dated 6th May 1880.
 (c) Home, Revenue, and Agricultural Department, No. 3292, dated 31st October 1883.

General Alphabetical List of the Officers of the Senior Department

1	2	3	4	5	6	7
Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			R a. p.
1	Andrew, Major D. C., s.c. [Rev.]	P. H.	42 9 13	Deputy Superintendent	3rd grade	1,100 0 0
2	Badgley, Lieut.-Col. W. F., s.c. [Topogl.]	P. H.	46 1 21	Ditto	Ditto	
3	Baird, Major A. W., B.E., A.T.C.E. [G. T. S.]	P. H.	41 2 5	Ditto	4th grade	1,182 10 0
4	Barrett, Mr. E. C. [Rev.]	H. S.	40 8 16	Assistant Superintendent	1st grade	850 0 0
5	Barron, Major W., s.c. [Rev.]	P. H.	45 11 15	Deputy Superintendent	3rd grade	
6	Beavan, Major R., s.c. [Rev.]	P. H.	39 3 11	Assistant Superintendent	1st grade	950 0 0
7	Branfill, Lieut.-Col. B. R., D.C. [G. T. S.]	P. H.	50 1 8	Deputy Superintendent	2nd grade	
8	Campbell, Lt. Lieut.-Col. W. M., B.E. [G. T. S.]	Passed.	44 5 12	Ditto	2nd grade	
9	Carter, Major T. T., B.E. [G. T. S.]	P. H.	45 10 22	Ditto	{ 2nd grade } { 2nd grade }	1,482 10 0
10	Coddington, Lieut.-Col. F., s.c. [Rev.]	P. H.	45 7 10	Ditto	Ditto	
11	Cole, Mr. W. H., M.A. [G. T. S.]	H. S.	46 0 16	Ditto	4th grade	1,000 0 0
12	Cooke, Mr. G. H. [Rev.]	L. S.	39 1 1	Assistant Superintendent	1st grade	850 0 0
13	Cowan, Major S. H., s.c. [Rev.]	P. H.	42 3 16	Deputy Superintendent	4th grade	950 0 0
14	DePrée, Lt. Col. G. C., s.c. [Topogl.]	P. C. H.	51 4 28	Deputy Surveyor General, in charge Topogl. Survey Branch.		2,666 10 8
15	Gore, Capt. St. G. C., B.E. [G. T. S.]	Not passed	34 10 8	Assistant Superintendent	1st grade	990 0 0
16	Haig, Lt. Colonel C. T., B.E. [G. T. S.]	Ditto	49 2 20	Deputy Superintendent	1st grade	1,600 0 0
17	Heaviside, Major W. J., B.E. [G. T. S.]	P. H.	43 2 27	Ditto	3rd grade	1,482 10 0
18	Hennessey, Mr. J. B. N., M.A., F.R.S. [G. T. S.]	Not passed	54 5 0	Ditto	1st grade	2,000 0 0
19	Herschel, Lt. Lieut.-Col. J., B.E., F.R.S. [G. T. S.]	P. H.	46 2 1	Ditto	2nd grade	
20	Hill, Major J., B.E. [G. T. S.]	Not passed	43 0 7	Ditto	4th grade	1,182 10 0
21	Hobday, Captain J. R., s.c. [Topogl.]	H. S.	33 5 16	Assistant Superintendent	1st grade	650 0 0
22	Hodgson, Lieut. G. B., s.c. *			Ditto (Probationary)	2nd grade	500 0 0
23	Holdich, Major T. H., B.E. [Topogl.]	L. S.	40 10 16	Deputy Superintendent	3rd grade	1,182 10 0
24	Horst, Mr. H. [Topogl.]	Not passed	49 7 27	Ditto	4th grade	1,000 0 0
25	Hutchinson, Major H. S., s.c. [Rev.]	P. H.	43 8 20	Assistant Superintendent	1st grade	950 0 0
26	Jackson, Mr. E. J. [Rev.]	H. S.	40 0 0	Ditto	Ditto	850 0 0
27	Jackson, Lieut. H. M., B.E. *		25 9 5	Ditto	2nd grade	670 0 0
28	James, Mr. J. O. N. [Topogl.]	Not passed	54 4 25	Deputy Superintendent	3rd grade	1,300 0 0

* Joined the Department after the amalgamation of 1st January 1879.
† Of the two grades here given the first was under the organisation of 1868.

of the Survey of India as it stood on the 1st January 1884.

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 Jan. 1884.	Present Post.	REMARKS.
		Y. M. D.		
1 Dec. 30, 1862	Jan. 1, 1878	. . .	In charge South Deccan Topographical Survey, Poona.	
2 May 3, 1865	Dec. 14, 1880	. . .	On furlough	For 1 year, from 10th March 1882. Extension for 1 year.
3 Dec. 4, 1868	July 1, 1882	. . .	In charge Tidal and Leveling operations, India and Burma, Poona.	Offg. Deputy Superintendent, 3rd grade.
4 Dec. 30, 1868	July 1, 1882	19 0 11	In charge Kamrup District [Cadastral] Survey, Assam.	Offg. Deputy Superintendent, 4th grade. Furlough for 2 years, from 27th August 1880 to 12th July 1882. Joined the Junior Branch, 18th November 1882. Sick leave for 1 month, from 20th June 1883.
5 June 27, 1862	April 1, 1870	. . .	On furlough.	For 2 years from 9th November 1883.
6 July 17, 1868	July 1, 1882	. . .	In charge Central India and Rajputana Topographical Survey.	Offg. Deputy Superintendent, 4th grade.
7 Oct. 4, 1858	Oct. 1, 1871	. . .	On furlough	For 1 year, from 10th November 1882. Extension for 6 months.
8 Jan. 30, 1863	Jan. 1, 1879	. . .	On furlough	For 1 year and 1 day, from 24th March 1883.
9 { Mar. 1, 1862	Oct. 1, 1871 } Jan. 1, 1878 }	. . .	In charge Bhopal and Malwa Topographical Survey.	
10 Jan. 17, 1862	Oct. 27, 1878	. . .	On furlough	For 188 days, from 9th November 1882. Extension for 91 days. Further extension for 274 days.
11 { Jan. 3, 1867b } { Sept. 1, 1867c }	July 1, 1882	15 11 29	Offg. in charge, Trigonometrical Branch Offices, Dehra Dun.	(a) Offg. Deputy Superintendent, 3rd grade. (b) Appointed on probation. Exclusive of service as Professor of Mathematics, Government College, Agra, from 14th April 1862 to end of February 1864. (c) Brought on the strength of the Department.
12 April 1, 1870	July 1, 1882	15 0 15	Benares, &c., Districts [Cadastral] Survey, N.-W. P.	Offg. Deputy Superintendent, 4th grade. Joined the Junior Branch, 8th Dec. 1880. Furlough for 2 years, from 22nd May 1880; extension for 12 days without pay.
13 Jan. 19, 1867	Apr. 29, 1883	. . .	In charge Benares, &c., Districts [Cadastral] Survey N.-W. P.	
14 Oct. 20, 1854	Jan. 1, 1883	. . .	Depy. Survr. General, in charge, Topogl. Survey Branch.	Offg. Surveyor General of India.
15 Apl. 11, 1873	Oct. 10, 1882	. . .	On duty, Head Quarters, Calcutta.	Offg. Deputy Superintendent, 4th grade.
16 Sept. 22, 1859	Nov. 1, 1883	. . .	In charge Guzerat Survey, Poona	
17 Mar. 1, 1866	April 5, 1872	. . .	In charge No. 1 Astronomical Party	Offg. Deputy Superintendent, 2nd grade.
18 April 1, 1854	April 1, 1866	28 6 14	Offg. Dy. Surveyor General, in charge Trigonometrical Survey Branch.	{ Joined the Junior Branch, 14th April 1844. { Service reckoned under new rules.
19 Nov. 12, 1859	Oct. 1, 1867	. . .	On duty, Europe.	
20 Dec. 18, 1866	July 1, 1882	. . .	In charge Konkan Topographical Survey, Poona.	Offg. Deputy Superintendent, 3rd grade.
21 Sept. 11, 1874	Apr. 15, 1883	. . .	In charge Andaman Topogl. Survey, Darjeeling.	Offg. Deputy Superintendent, 4th grade.
22 Aug. 12, 1883	Aug. 12, 1883	. . .	Guzerat Survey, Poona	
23 July 23, 1866	Apr. 29, 1883	. . .	In charge Baluchistan Topographical Survey.	
24 April 1, 1868	July 1, 1882	25 7 27	In charge Burma Topographical Survey, Rangoon.	{ Offg. Deputy Superintendent, 3rd grade. On furlough from 6th June 1870, and special extension till 12th September 1882. Joined the Junior Branch, 1st Sep-tember 1864. { Service reckoned under new rules.
25 Aug. 13, 1867	July 1, 1882	. . .	In charge Bassein and Henzada Districts [Cadastral] Survey, British Burma, Rangoon.	Offg. Deputy Superintendent, 4th grade.
26 Nov. 5, 1868	July 1, 1882	14 8 26	Pegu and Shuagyheen Districts [Cadastral] Survey, British Burma, Rangoon.	Offg. Deputy Superintendent, 4th grade. Joined the Junior Branch 26th Sept. 1864. Sick leave from 10th July to 3rd August 1867. Sick leave from 10th August to 30th November 1867. Europe, medical certificate, from 23rd July 1871 to 10th November 1872. Furlough to Europe from 1st May 1880 to 3rd December 1881.
27 June 11, 1883	June 11, 1883	. . .	Mysore Topographical Survey	Offg. Assistant Superintendent, 1st grade.
28 April 1, 1866	April 1, 1869	30 10 16	Unattached	Assistant Surveyor General, and Offg. Deputy Superintendent, 2nd grade. Joined the Junior Branch 29th July 1846. On furlough from 1st April 1876 to 9th October 1878. Service reckoned under new rules.

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

General Alphabetical List of the Officers of the Senior Department of the

1	2	3	4	5	6	7
Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			R a. p.
29	Kelly, Mr. F. W. [Rev.]	H. S.	50 4 5	Assistant Superintendent	2nd grade	600 0 0
30	Longe, Lieut. F. B., B.E.	Not passed	27 2 2	Ditto	2nd grade	670 0 0
31	Macdonald, Bt. Col. Donald, s.c. [Rev.]	P. H.	48 0 21	Deputy Superintendent	2nd grade	1,300 0 0
32	McCullagh, Major J. R., B.E. [G. T. S.]	L. S.	41 9 5	Ditto	4th grade	1,182 10 0
33	McGill, Mr. J. [G. T. S.]	Not passed	53 2 9	Ditto	4th grade	. . . .
34	Patterson, Mr. W. H. [Rev.]	L. S.	45 3 6	Assistant Superintendent	2nd grade	600 0 0
35	Pullan, Lt.-Col. A., s.c. [G. T. S.]	P. H.	47 9 0	Deputy Superintendent	3rd grade	1,300 0 0
36	Riddell, Major R. V., B.E. [Topogl.]	P. H.	43 9 19	Ditto	2nd grade	. . . .
37	Rogers, Major M. W., B.E. [G. T. S.]	L. S.	41 10 26	Ditto	4th grade	1,182 10 0
38	Ryall, Mr. E. C. [G. T. S.]	Not passed	45 11 15	Assistant Superintendent	1st grade	. . . .
39	Sandeman, Major J. E., s.c. [Rev.]	P. H.	40 3 29	Deputy Superintendent	3rd grade	1,100 0 0
40	Sconce, Bt. Col. J., s.c. [Rev.]	P. H.	47 8 29	Deputy Surveyor General, in charge Revenue Surveys.	. . . .	2,200 0 0
41	Steel, Major E. H., s.c. [Rev.]	H. S.	42 7 26	Assistant Superintendent	1st grade	950 0 0
42	Strahan, Major C., B.E. [Topogl.]	Not passed	40 7 25	Deputy Superintendent	3rd grade	1,482 10 0
43	Strahan, Major G., B.E. [Topogl.]	P. H.	44 10 24	Ditto	2nd grade	1,482 10 0
44	Talbot, Mr. H. B. [Rev.]	L. S.	53 2 5	Ditto	4th grade	1,000 0 0
45	Talbot, Lt. The Hon'ble M. G., B.E. *	H. S.	29 3 17	Assistant Superintendent	1st grade	670 0 0
46	Tanner, Lieut.-Col. H. C. B., Bombay s.c. [Rev.]	P. H.	48 5 15	Deputy Superintendent	3rd grade	1,300 0 0
47	Thuillier, Bt. Lieut.-Col. H. R., B.E. [G. T. S.]	P. H.	45 9 5	Ditto	{ 1st grade 1st grade	{ 1,600 0 0 }
48	Wahab, Lieut. R. A., B.E. *	H. S.	28 8 18	Assistant Superintendent	2nd grade	670 0 0
49	Walker, Lieut.-Genl. J. T., C.B., B.E., F.R.S., L.L.D. [G. T. S.]	P. H.	67 1 0	Surveyor General of India	. . . .	. . . .
50	Waterhouse, Major J., s.c. [Topogl.]	P. H.	41 5 8	Deputy Superintendent	4th grade	1,100 0 0
51	Wilkins, Lt.-Col. W. H., s.c. [Rev.]	P. H.	42 2 25	Ditto	3rd grade	. . . .
52	Wilmer, Major J. R., s.c. [Topogl.]	H. S.	42 11 12	Ditto	4th grade	950 0 0
53	Woodthorpe, Bt. Lieut.-Col. R. G., B.E. [Topogl.]	L. S.	39 3 8	Assistant Superintendent	1st grade	990 0 0

* Joined the Department after the amalgamation of 1st January 1874.
† Of the two grades here given the first was under the organisation of 1866.

Survey of India as it stood on the 1st January 1884—concluded.

8	9	10	11	12
Number.	Date of first appointment to Department.	Date of appointment to present grade.	*Period of service counting for pension on 1st January 1884.	REMARKS.
			Y. M. D.	
29	Feb. 22, 1883	Feb. 22, 1883	28 6 0a	Prome and Akyab Districts [Cadastral] Survey, British Burma, Raungoon. Offg. Assistant Superintendent, 1st grade. (a) Service reckoned under old rules. Special leave for 4 months from 21st January 1859, which was overbooked from 21st May to 10th August 1858. Commencement of second service, 17th August 1858. Joined the Junior Branch, 4th December 1854.
30	Mar. 15, 1880	July 1, 1882	. . . .	Mirzapur and Gorukpur Districts [Cadastral] Survey, N.-W. P. Offg. Assistant Superintendent, 1st grade.
31	Dec. 19, 1860	Jan. 1, 1878	. . . .	In charge Hissar, &c., Districts Survey, Punjab, Murree.
32	Feb. 12, 1869	July 1, 1882	. . . .	In charge Pegu and Shuayghen Districts [Cadastral] Survey, British Burma, Raungoon. Offg. Deputy Superintendent, 3rd grade.
33	Mar. 1, 1871	Feb. 1, 1883	30 2 12	On furlough For 1 year 11 months and 16 days, from 7th November 1883. Furlough for 1 year, from 4th July 1870. Joined the Junior Branch, 1st October 1851. Service reckoned under new rules.
34	Jan. 22, 1883	Jan. 22, 1883	21 11 15	Mirzapur Topographical Survey Offg. Assistant Superintendent, 1st grade. Joined the Junior Branch 1st December 1851. Leave on private affairs from 1st May to 31st August 1882. Ditto to Europe from 20th July 1872 to 18th January 1873, and from 11th July 1870 to 2nd January 1880.
35	Jan. 18, 1863	Jan. 1, 1878	. . . .	In charge Kattywar and Cutch Survey, Poona. Offg. Deputy Superintendent, 2nd grade.
36	Aug. 28, 1862	Jan. 10, 1882	. . . .	On deputation Offg. Mint Master, Bombay.
37	July 30, 1866	July 1, 1882	. . . .	In charge Mathematical Instrument Office and Correspondence, Office Head Quarters, Calcutta. Offg. Deputy Superintendent, 3rd grade. Offg. Assistant Surveyor General.
38	April 1, 1873	Feb. 1, 1883	28 8 6	On sick leave For one month from 10th December 1883. Joined the Junior Branch, 25th April 1855. Two hundred and twenty-five days' sick leave included under old rules.
39	Oct. 6, 1864	Jan. 1, 1879	. . . .	In charge Mirzapur and Gorukpur Districts [Cadastral] Survey, N.-W. P.
40	Oct. 21, 1859	Jan. 1, 1879	. . . .	Deputy Surveyor General, in charge Revenue Surveys, Calcutta.
41	Feb. 1, 1867	July 1, 1882	. . . .	In charge Aligurh, &c., Districts Topographical Survey, N.-W. P. Offg. Deputy Superintendent, 4th grade.
42	Sept. 26, 1863	Dec. 1, 1867	. . . .	In charge Engraving and Cartographic Offices, Head Quarters, Calcutta. Offg. Deputy Superintendent, 2nd grade, and Offg. Assistant Surveyor General.
43	July 2, 1862	Oct. 26, 1870	. . . .	In charge No. 2 Astronomical Party
44	April 1, 1866	July 1, 1882	35 1 0	In charge Prome and Akyab Districts [Cadastral] Survey, British Burma, Raungoon. Offg. Deputy Superintendent, 3rd grade. Joined the Junior Branch, 1st December 1854.
45	Mar. 15, 1880	April 29, 1883	. . . .	Baluchistan Topographical Party
46	Oct. 10, 1862	April 1, 1870	. . . .	In charge Darjeeling and Nepal Boundary Parties. Offg. Deputy Superintendent, 2nd grade.
47	{ May 21, 1859	{ July 18, 1871 Oct. 27, 1878 }	. . . .	In charge Mysore Topographical Survey.
48	Jan. 8, 1883	Jan. 8, 1883	. . . .	Baluchistan Topographical Party Offg. Assistant Superintendent, 1st grade.
49	Dec. 1, 1853	Jan. 1, 1878	. . . .	On furlough For 6 months, from 12th February 1883. Extension for 6 months.
50	July 23, 1866	July 1, 1882	. . . .	In charge Photographic and Lithographic Offices, Head Quarters, Calcutta. Offg. Deputy Superintendent, 3rd grade.
51	April 27, 1863	Oct. 27, 1878	. . . .	On furlough For 273 days, from 8th June 1883.
52	Aug. 24, 1869	July 1, 1882	. . . .	In charge Mirzapur Topographical Survey.
53	July 14, 1871	July 1, 1882	. . . .	In charge North-East Frontier Topographical Survey. Offg. Deputy Superintendent, 4th grade.

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

General Alphabetical List of the Officers of the Junior or Subordinate

1	2	3	4	5	6	7
Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			R a. p.
1	Adams, Mr. F.. . . [Topogl.]	. . .	47 8 6	Surveyor . . .	2nd grade .	400 0 0
2	Atkinson, Mr. D. . . [Topogl.]	. . .	46 7 24	Ditto . . .	1st grade .	500 0 0
3	Atkinson, Mr. E. S. P. . . [Topogl.]	. . .	38 5 4	Ditto . . .	3rd grade .	350 0 0
4	Atkinson, Mr. G. W. E. . . [G. T. S.]	. . .	40 2 20	Ditto . . .	2nd grade .	400 0 0
6	Baness, Mr. J. F. . . [Topogl.]	. . .	53 6 1	Ditto . . .	1st grade .	. . .
6	Barckley, Mr. W. C. G. . . [Topogl.]	. . .	32 2 9	Assistant Surveyor . . .	1st grade .	200 0 0
7	Barker, Mr. J. A. . . [Topogl.]	. . .	37 8 18	Ditto . . .	1st grade .	250 0 0
8	Barker, Mr. J. P. . . *	. . .	. . .	Ditto . . .	3rd grade .	120 0 0
9	Beechey, Mr. P. . . *	. . .	22 5 14	Ditto . . .	3rd grade .	120 0 0
10	Belcham, Mr. G. . . [G. T. S.]	H. S.	38 10 15	Surveyor . . .	3rd grade .	350 0 0
11	Berkeley, Mr. E. F. . . *	. . .	. . .	Assistant Surveyor . . .	3rd grade .	120 0 0
12	Berkeley, Mr. L. F. . . [Rev.]	. . .	29 4 3	Ditto . . .	2nd grade .	160 0 0
13	Bond, Mr. J. . . [G. T. S.]	. . .	33 11 24	Ditto . . .	1st grade .	300 0 0
14	Buttress, Mr. W. S. . . [Rev.]	. . .	39 10 12	Surveyor . . .	3rd grade .	350 0 0
15	Campbell, Mr. D. . . [Topogl.]	. . .	31 1 13	Assistant Surveyor . . .	2nd grade .	160 0 0
16	Campbell, Mr. G. . . [Rev.]	. . .	35 5 19	Ditto . . .	1st grade .	200 0 0
17	Chamarett, Mr. A. . . [Topogl.]	. . .	51 1 1	Surveyor . . .	1st grade .	600 0 0
18	Christie, Mr. A. . . [G. T. S.]	H. S.	38 3 1	Ditto . . .	4th grade .	300 0 0
19	Clarke, Mr. L. H. . . [G. T. S.]	. . .	49 6 27	Ditto . . .	2nd grade .	400 0 0
20	Claudius, Mr. T. E. M. . . [Topogl.]	. . .	37 7 0	Ditto . . .	4th grade .	300 0 0
21	Collins, Mr. D. J. . . [G. T. S.]	. . .	29 7 27	Assistant Surveyor . . .	2nd grade .	160 0 0
22	Connor, Mr. E. J. . . [G. T. S.]	L. S.	35 4 15	Surveyor . . .	4th grade .	300 0 0
23	Connor, Mr. J. . . [Rev.]	. . .	36 3 24	Assistant Surveyor . . .	1st grade .	300 0 0
24	Copping, Mr. G. R. . . [Topogl.]	L. S.	30 6 6	Ditto . . .	2nd grade .	176 0 0
25	Corkery, Mr. H. . . [G. T. S.]	L. S.	32 4 10	Ditto . . .	2nd grade .	. . .
26	Cornelius, Mr. W. J. . . [Topogl.]	L. S.	34 9 1	Ditto . . .	1st grade .	250 0 0
27	Cowley, Mr. P. A. G. . . [Rev.]	L. S.	41 11 15	Surveyor . . .	1st grade .	500 0 0
28	Coxen, Mr. J. T. U. . . [Rev.]	. . .	43 3 22	Ditto . . .	4th grade .	300 0 0

* Joined the Department after the amalgamation on 1st January 1874.

Department of Survey of India as it stood on the 1st January 1884.

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 January 1884.	Present Post.	REMARKS.
		Y. M. D.		
1 Oct. 1, 1860	Apl. 1, 1883	27 1 27 ^a	On duty at Head Quarters, Calcutta	(a) Inclusive of service as Sub-Surveyor, from 3rd November 1850 to 30th September 1860.
2 Aug. 4, 1856	Jan. 22, 1883	27 4 28 ^b	No. 1 Astronomical Party . . .	(b) Service reckoned under old rules.
3 Aug. 13, 1861	Dec. 17, 1880	15 1 2	Mysore Topographical Survey . . .	Furlough for 1 year 3 months and 13 days, from 20th July 1876 to 8th November 1877, and sick leave for 19 days in September 1867.
4 Aug. 1, 1859	June 7, 1881	24 2 20 ^b	Trigonometrical Branch, Office Dehra Dun.	(b) Service reckoned under old rules.
5 Sept. 5, 1856	May 1, 1870	27 3 26 ^c	Transferred to Office of Director General of Statistics.	(c) Service reckoned under new rules.
6 Dec. 1, 1871	Feb. 22, 1883	10 2 9 ^d	Darjeeling Survey . . .	(d) Inclusive of special leave to Europe on full pay for 1 year 10 months and 20 days, from 26th April 1876 to 2nd March 1878.
7 Sept. 1, 1865	Jan. 1, 1878	15 8 18	Bhopal and Malwa Topographical Survey.	
8 Dec. 23, 1833	Dec. 23, 1853	. . .	Hissar, &c., Districts Survey, Punjab.	
9 Dec. 1, 1882	Jan. 22, 1883	0 5 14	Central India and Rajputana Topographical Survey.	
10 Nov. 1, 1862	Apl. 1, 1883	21 2 0 ^e	Tidal and Leveling Operations, India and Burma.	(e) Service reckoned under old rules.
11 Sept. 1, 1883	Sept. 1, 1883	. . .	Dehra Dun District [Cadastral] Survey, N.-W. P.	
12 Aug. 16, 1875	Nov. 13, 1883	7 4 3	Benares, &c., Districts [Cadastral] Survey, N.-W. P.	
13 Oct. 18, 1866	Oct. 1, 1874	11 11 4 ^g	Trigonometrical Branch Office, Dehra Dun.	Offg. Surveyor, 4th grade. (g) Exclusive of 20 days' sick leave.
14 Sept. 1, 1860	Nov. 13, 1879	23 4 0	Hissar, &c., Districts Survey, Punjab	Copyist, from 1st to 30th September 1860.
15 Nov. 1, 1874	Nov. 1, 1883	9 1 13	Andaman Topogl. Survey . . .	Joined as a Sub-Surveyor on 3rd July 1873.
16 Jan. 1, 1864	Jan. 22, 1883	12 5 9	Hissar, &c., Districts Survey, Punjab	Furlough for 1 year, from 22nd September 1881 to 21st September 1882. Office Assistant, from 1st January 1864 to 20th February 1874.
17 June 2, 1852	Mar. 1, 1871	31 6 29	Chief Draftsman, Head Quarters, Calcutta.	
18 Aug. 7, 1863	Oct. 1, 1874	16 3 1	Guzerat Survey.	
19 Nov. 26, 1855	Dec. 1, 1872	28 1 5	Trigonometrical Branch Office, Dehra Dun, as Solar Photographer.	
20 Aug. 10, 1863	Jan. 1, 1880	15 7 0	Baluchistan Topogl. Survey.	
21 Oct. 6, 1873	Nov. 1, 1882	7 6 9 ^h	Prome and Akyab Districts [Cadastral] Survey, British Burma.	(h) Exclusive of 49 days' leave on medical certificate, from 2nd July to 19th August 1878.
22 Mar. 1, 1865	Nov. 1, 1883	12 10 10 ⁱ	Tidal and Leveling Operations, India and Burma.	(i) Exclusive of 4 months and 5 days' leave on private affairs under new rules.
23 Feb. 15, 1865	Dec. 1, 1874	14 3 24	Kamrup District [Cadastral] Survey, Assam.	Offg. Surveyor, 4th grade.
24 Aug. 11, 1873	Oct. 11, 1881	8 6 6	Baluchistan Topogl. Survey . . .	Previous service as Apprentice, from 1st October 1872.
25 Nov. 20, 1873	April 1, 1881	8 2 12 ^j	On sick leave	Leave on private affairs for 1 year from 12th April 1882. Extension for 8 months. Further extension for 8 months. (j) Exclusive of leave without pay, from 21st March to 13th November 1878.
26 Aug. 15, 1866	July 8, 1879	12 9 1	Central India and Rajputana Topographical Survey.	
27 Sept. 1, 1859	Nov. 1, 1883	23 0 22	In charge Chattisgarh Division [Cadastral] Survey, C. P.	Furlough, from 1st July 1882 to 9th October 1883.
28 May 16, 1863	Feb. 22, 1883	19 7 25	Baluchistan Topogl. Survey.	Sick leave, from 8th to 31st October 1878; and 6 months, from 12th November 1879. On furlough in India for 6 months, from 28th May 1883 to 26th October 1884.

General Alphabetical List of the Officers of the Junior or Subordinate Department

1	2	3	4	5	6	7
Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			R. a. p.
29	Cusson, Mr. G. D. . . . [G. T. S.]	L. S.	37 3 7	Assistant Surveyor . . .	1st grade . . .	250 0 0
30	Dickinson, Mr. R. R. . . . [Rev.]	L. S.	32 5 6	Ditto . . .	2nd grade . . .	192 0 0
31	Doran, Mr. P. J. W. . . . [Topogl.]	L. S.	34 7 27	Ditto . . .	1st grade . . .	250 0 0
32	Downman, Mr. H. . . . [Rev.]	. . .	37 6 20	Surveyor . . .	3rd grade . . .	350 0 0
33	Drew, Mr. E. B. M. . . . [Rev.]	. . .	29 8 10	Assistant Surveyor . . .	Ditto . . .	160 0 0
34	D'Souza, Mr. A. . . . [G. T. S.]	. . .	46 4 17	Surveyor . . .	1st grade . . .	500 0 0
35	Dunne, Mr. T. H. . . . [Rev.]	L. S.	36 0 5	Assistant Surveyor . . .	Ditto . . .	300 0 0
36	Ewing, Mr. A. . . . *	. . .	22 0 0	Ditto . . .	3rd grade . . .	128 0 0
37	Ewing, Mr. E. C. D. . . . [Rev.]	H. S.	35 6 20	Ditto . . .	1st grade . . .	325 0 0
38	Ewing, Mr. W. H. D. . . . *	. . .	26 4 7	Ditto . . .	3rd grade . . .	152 0 0
39	Fielding, Mr. W. A. . . . [G. T. S.]	L. S.	35 7 13	Ditto . . .	1st grade . . .	250 0 0
40	Fleming, Mr. G. L. . . . [Topogl.]	. . .	29 8 29	Ditto . . .	2nd grade . . .	. . . .
41	Freeman, Mr. T. F. . . . [Rev.]	L. S.	32 9 27	Ditto . . .	1st grade . . .	250 0 0
42	Gastaud, Mr. M. . . . *	. . .	21 9 24	Ditto . . .	3rd grade . . .	120 0 0
43	George, Mr. A. . . . *	. . .	28 11 18	Ditto . . .	Ditto . . .	160 0 0
44	George, Mr. C. . . . *	. . .	31 0 24	Ditto . . .	2nd grade . . .	160 0 0
45	Gibson, Mr. A. J. . . . [Rev.]	. . .	42 1 0	Surveyor . . .	3rd grade . . .	350 0 0
46	Gibson, Mr. R. A. . . . [Topogl.]	. . .	29 5 26	Assistant Surveyor . . .	1st grade . . .	200 0 0
47	Graham, Mr. E. . . . [Topogl.]	L. S.	30 2 0	Ditto . . .	2nd grade . . .	192 0 0
48	Grant, Mr. F. . . . [Rev.]	. . .	47 9 6	Surveyor . . .	1st grade . . .	500 0 0
49	Gwynne, Mr. N. C. . . . [G. T. S.]	. . .	40 9 25	Ditto . . .	4th grade . . .	300 0 0
50	Hall, Mr. G. T. . . . [G. T. S.]	L. S.	31 8 24	Assistant Surveyor . . .	1st grade . . .	200 0 0
51	Hamer, Mr. C. F. . . . [Topogl.]	. . .	37 4 24	Surveyor . . .	4th grade . . .	300 0 0
52	Hanby, Mr. H. T. . . . [Rev.]	L. S.	37 2 12	Ditto . . .	3rd grade . . .	350 0 0
53	Hickie, Mr. J. . . . [G. T. S.]	L. S.	34 11 17	Assistant Surveyor . . .	1st grade . . .	250 0 0
54	Higgs, Mr. J. A. . . . *	. . .	23 9 0	Ditto . . .	3rd grade . . .	128 0 0
55	Hill, Mr. E. P. S. . . . [Rev.]	H. S.	29 6 17	Ditto . . .	2nd grade . . .	225 0 0
56	Hughes, Mr. B. R. . . . *	. . .	. . .	Ditto . . .	3rd grade . . .	120 0 0
57	James, Mr. A. J. . . . [Topogl.]	L. S.	37 1 12	Surveyor . . .	4th grade . . .	300 0 0
58	Jarbo, Mr. G. W. . . . [Rev.]	L. S.	36 3 15	Assistant Surveyor . . .	1st grade . . .	250 0 0
59	Keating, Mr. J. . . . [G. T. S.]	. . .	29 7 27	Ditto . . .	2nd grade . . .	160 0 0
60	Keelan, Mr. H. E. T. . . . [G. T. S.]	. . .	40 9 1	Surveyor . . .	1st grade . . .	500 0 0
61	Kelly, Mr. J. C. . . . *	. . .	26 2 23	Assistant Surveyor . . .	3rd grade . . .	160 0 0

* Joined the Department after the amalgamation on 1st January 1878.

of the Survey of India as it stood on the 1st January 1884—continued.

8	9	10	11	12	
Number.	Date of first appointment to Department.	Date of appointment to present grade.	Period of service counting for pension on 1st Jan. 1884.	Present Post.	REMARKS.
			Y. M. D.		
29	May 8, 1868	April 1, 1881	14 3 7 ^a	Guzerat Survey . . .	(a) Exclusive of furlough for 364 days, from 1st November 1870 to 30th October 1880.
30	April 16, 1873	April 1, 1881	10 5 6	Konkan Topogl. Survey, Poona . . .	Apprentice, from 1st April 1872 to 16th April 1873.
31	Feb. 1, 1867	July 6, 1880	11 11 3	On duty at Head Quarters, Calcutta . . .	
32	Oct. 16, 1862	Sept. 5, 1883	21 2 1	Bassein and Henzada Districts [Cadastral] Survey, British Burma.	Absent without leave 3 days. Sick leave 2 days in October 1865, 4 days in December 1865, and from 11th to 16th December 1868.
33	May 5, 1873	April 1, 1881	5 11 26 ^b	Hissar, &c., Districts Survey, Punjab . . .	(b) Exclusive of leave without pay, from 17th April 1877 to 31st December 1878. On half-pay list, from 8th November 1879 to 31st March 1881.
34	Feb. 19, 1856	Sept. 1, 1875	23 1 15 ^c	In charge Secondary Triangulation Party . . .	(c) Exclusive of 340 days' furlough, 77 days' leave on medical certificate, and 33 days' preparatory leave under new rules.
35	Feb. 15, 1865	Dec. 1, 1874	13 11 24	Bassein and Henzada Districts [Cadastral] Survey, British Burma.	Offr. Surveyor, 4th grade. Absent without leave 1 day, and sick leave for 10 days in October 1865.
36	Nov. 16, 1881	Nov. 1, 1882	. . .	North-East Frontier Topogl. Survey.	
37	June 9, 1866	Aug. 1, 1878	13 1 20	Draftsman, Head Quarters, Calcutta.	
38	April 15, 1878	April 1, 1881	4 2 6 ^d	Bassein and Henzada Districts [Cadastral] Survey, British Burma.	(d) Exclusive of 2 months and 1 day's suspension, from 24th May to 1st July 1880, and sick leave from 2nd to 26th July 1880.
39	May 3, 1868	April 1, 1881	13 7 13	Kattywar and Cutch Survey.	
40	Aug. 11, 1873	June 7, 1881	5 1 6	Extraordinary leave on private affairs . . .	For 6 months, from 9th October 1882; extension for 6 months. Further extension for 6 months.
41	Sept. 9, 1868	April 1, 1881	8 2 27	Mirzapur and Gorukpur Districts [Cadastral] Survey, N.-W. P.	Sick leave for 2 years, from 1st May 1880; extension for 8 months, without pay, up to 31st Jan. 1883.
42	May 1, 1882	Jan. 17, 1883	. . .	Central India & Rajputana Topogl. Survey.	
43	Oct. 15, 1878	April 1, 1881	5 2 17 ^e	Guzerat Survey . . .	(e) Exclusive of previous service as Sub-Surveyor.
44	Sept. 5, 1878	Dec. 1, 1883	9 0 24	Bhopal and Malwa Topogl. Survey . . .	Previous service as Sub-Surveyor, from 18th August 1874.
45	May 1, 1861	Oct. 11, 1881	22 7 27	In charge Ajmere District Survey, Rajputana.	Absent without leave for 3 days in January 1866.
46	Dec. 1, 1870	Sept. 5, 1883	7 5 26	Burma Topogl. Survey.	Previous service on probation in G. T. S., from 1st October 1868 to 30th June 1870. Apprentice Draftsman, Surveyor General's Office, from 10th October to 30th November 1870. Probationary Assistant Surveyor, 1st December 1870.
47	Aug. 11, 1873	April 1, 1881	8 2 0	Burma Topogl. Survey.	Previous service as Sub-Surveyor, from 1st November 1872.
48	July 11, 1856	Feb. 22, 1883	27 5 21	Pegu and Shuaygheen Districts [Cadastral] Survey, British Burma.	
49	Oct. 19, 1863	Oct. 1, 1874	18 9 25	Kattywar and Cutch Survey.	
50	Nov. 22, 1872	April 1, 1883	9 8 24	Ditto ditto.	
51	Aug. 3, 1863	July 13, 1878	15 2 24	Mirzapur Topogl. Survey.	
52	Nov. 13, 1862	Oct. 29, 1883	21 1 18	Benares, &c., Districts [Cadastral] Survey, N.-W. P.	
53	April 29, 1868	April 1, 1881	12 5 17	South Deccan Topogl. Survey, Poona . . .	Exclusive of 6 months' sick leave.
54	Sept. 12, 1881	Feb. 1, 1882	1 9 0	Mysore Topogl. Survey . . .	Previous service as Apprentice Draftsman, from 31st July 1878.
55	Nov. 16, 1872	April 1, 1881	7 6 17	Draftsman, Head Quarters, Calcutta . . .	
56	Oct. 15, 1883	Oct. 15, 1883	. . .	Benares, &c., Districts [Cadastral] Survey, N.-W. P.	
57	June 15, 1864	Nov. 22, 1880	15 1 12	Mysore Topogl. Survey.	
58	Nov. 1, 1866	Jan. 1, 1880	14 3 0	Prome and Akrab Districts [Cadastral] Survey, British Burma.	Sick leave for 15 days, from 26th May to 9th June 1869.
59	June 1, 1874	Feb. 22, 1883	7 7 27	Andaman Topogl. Survey . . .	
60	Aug. 17, 1858	Oct. 29, 1883	17 9 0 ^f	Tidal and Leveling Operations, India and Burma.	(f) Exclusive of 11 months and 13 days' furlough, and 13 days' sick leave under new rules.
61	Oct. 11, 1878	April 1, 1881	4 2 23	Kamrup Dist. [Cadastral] Survey, Assam	

General Alphabetical List of the Officers of the Junior or Subordinate Department

1	2	3	4	5	6	7
Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			R a. p.
62	Kelly, Mr. W. M. . . . [Rev.]		29 4 25	Assistant Surveyor	1st grade	200 0 0
63	Kennedy, Mr. J. M. . . . [G. T. S.]		27 1 28	Ditto	2nd grade	160 0 0
64	King, Mr. D. A. . . . [Rev.]		37 1 26	Surveyor	4th grade	300 0 0
65	Kitchen, Mr. A. . . . [Topogl.]		30 11 4	Assistant Surveyor	1st grade	200 0 0
66	Kitchen, Mr. F. . . . [Topogl.]		37 9 7	Surveyor	4th grade	300 0 0
67	Kitchen, Mr. H. T. . . . [Topogl.]		35 6 23	Assistant Surveyor	1st grade	250 0 0
68	Knight, Mr. G. A. . . . [Topogl.]		29 8 9	Ditto	2nd grade	176 0 0
69	Kraal, Mr. C. S. . . . [Rev.]	L. S.	30 2 6	Ditto	Ditto	160 0 0
70	Lawson, Mr. A. M. . . . [Rev.]	L. S.	44 11 29	Surveyor	3rd grade	350 0 0
71	Lilley, Mr. W. H. . . . [Topogl.]		35 0 28	Assistant Surveyor	1st grade	250 0 0
72	Little, Mr. E. G. . . . [Rev.]		38 2 19	Surveyor	3rd grade	350 0 0
73	Littlewood, Mr. H. R. . . . [Rev.]		40 1 25	Ditto	2nd grade	400 0 0
74	Madras, Mr. S. O. . . . [Rev.]		33 4 16	Assistant Surveyor	1st grade	250 0 0
75	Martin, Mr. E. J. . . . [Rev.]		32 10 15	Ditto	Ditto	240 0 0
76	May, Mr. J. A. . . . [Topogl.]		42 7 16	Surveyor	2nd grade	400 0 0
77	McA'Fee, Mr. C. H. . . . [G. T. S.]	L. S.	34 1 15	Ditto	4th grade	300 0 0
78	McCarthy, Mr. J. F. . . . [G. T. S.]	L. S.	30 8 2	Assistant Surveyor	2nd grade	
79	McCay, Mr. J. . . . [Topogl.]		30 2 23	Ditto	Ditto	200 0 0
80	McGill, Mr. G. A. . . . [Topogl.]	L. S.	45 8 7	Surveyor	1st grade	500 0 0
81	McHatton, Mr. J. . . . [Rev.]	L. S.	34 5 14	Assistant Surveyor	Ditto	250 0 0
82	McNair, Mr. W. W. . . . [Topogl.]	L. S.	33 3 18	Surveyor	4th grade	
83	Moore, Mr. F. W. . . . *			Assistant Surveyor	3rd grade	120 0 0
84	Murphy, Mr. J. . . . [Rev.]		31 5 19	Ditto	1st grade	200 0 0
85	Newland, Mr. J. . . . [Rev.]	L. S.	46 4 26	Ditto	Ditto	250 0 0
86	Norman, Mr. C. . . . [G. T. S.]	L. S.	27 7 12	Ditto	2nd grade	160 0 0
87	Norman, Mr. S. F. . . . [G. T. S.]		29 4 23	Ditto	Ditto	160 0 0
88	O'Donel, Mr. J. H. . . . [Rev.]		38 5 20	Surveyor	4th grade	300 0 0
89	Ogle, Mr. M. J. . . . [Topogl.]		41 9 27	Ditto	3rd grade	350 0 0
90	O'Sullivan, Mr. W. J. . . . [G. T. S.]		39 10 17	Ditto	4th grade	300 0 0
91	Parker, Mr. G. E. . . . [Rev.]		33 10 18	Assistant Surveyor	1st grade	200 0 0
92	Pemberton, Mr. J. S. . . . [Rev.]	L. S.	40 5 23	Surveyor	2nd grade	400 0 0
93	Penrose, Mr. W. H. . . . [Rev.]	L. S.	32 2 24	Assistant Surveyor	1st grade	210 0 0
94	Peters, Mr. P. A. . . . [Rev.]	L. S.	29 0 23	Ditto	2nd grade	168 0 0

* Joined the Department after the amalgamation on 1st January 1876.

of the Survey of India as it stood on the 1st January 1884—continued.

8	9	10	11	12	
Number.	Date of first appointment to Department.	Date of appointment to present grade.	Period of service counting for pension on 1st Jan. 1884.	Present Post.	REMARKS.
			Y. M. D.		
62	Oct. 1, 1872	Nov. 21, 1883	7 4 25	Konkan Topogl. Survey, Poona	Re-appointed to the Department, 1st October 1878, after employment in the Forest Department, from 1st November 1877 to 30th September 1878.
63	Aug. 19, 1875	Nov. 24, 1883	5 1 28	Mysore Topogl. Survey.	
64	April 12, 1864	April 1, 1883	15 1 25	Pegu and Shuaygheen Districts [Cadastral] Survey, British Burma.	Apprentice, from 12th April to 30th June 1861.
65	Oct. 1, 1872	Dec. 1, 1883	8 11 4	Baluchistan Topographical Survey.	
66	Oct. 1, 1864	Sept. 23, 1883	15 7 7	Mysore Topogl. Survey.	Exclusive of two months' sick leave.
67	Nov. 1, 1867	April 1, 1881	13 6 23	Mirzapur Topogl. Survey.	
68	Aug. 11, 1873	Mar. 7, 1882	7 8 9	South Deccan Topogl. Survey, Poona.	
69	July 24, 1874	April 1, 1883	8 1 19	Kamrup Dist. [Cadastral] Survey, Assam.	Sick leave, from 6th to 22nd February 1879.
70	Nov. 18, 1862	Oct. 30, 1879	21 1 13	Konkan Topogl. Survey, Poona.	
71	May 1, 1868	April 1, 1881	12 7 7a	Mirzapur Topogl. Survey	(a) Exclusive of leave on medical certificate, from 14th December 1877 to 3rd June 1878. Previous service as Apprentice, from 1st November 1867.
72	Jan. 1, 1860	Sept. 23, 1883	24 0 0	Mirzapur and Gorukpur Districts [Cadastral] Survey, N.-W. P.	Apprentice, from 1st January 1860 to 4th November 1862.
73	Oct. 6, 1860	Oct. 29, 1883	23 2 26	Bassein and Henzada Districts [Cadastral] Survey, British Burma.	
74	July 6, 1868	April 1, 1881	11 4 16	Benares, &c., Districts [Cadastral] Survey, N.-W. P.	
75	Sept. 16, 1867	April 1, 1881	10 2 15	On duty at Head Quarters, Calcutta	Furlough, from 1st April to 30th November 1882. Office Assistant, from 10th September 1867 to 31st July 1870.
76	Oct. 1, 1860	Jan. 1, 1883	24 0 0	On duty at Head Quarters, Calcutta	Apprentice Draftsman, from 1st January 1860.
77	Sept. 6, 1864	Aug. 1, 1876	12 0 15	Guzerat Survey	Sick leave for 1 month, from 30th December 1862.
78	Aug. 1, 1873	April 1, 1881	6 5 2	Extraordinary leave on private affairs	For 6 months, from 1st October 1881. Extraordinary leave, without allowances, for 1 year, from 1st April 1882. Extension for 6 months. Further extension for 6 months.
79	Dec. 1, 1870	Nov. 22, 1880	8 2 23	Kamrup Dist. [Cadastral] Survey, Assam.	
80	April 8, 1855	Mar. 7, 1882	28 8 23	On duty at Head Quarters, Calcutta	Sick leave, from 1st November 1871 to 28th February 1872. Service reckoned under old rules.
81	July 1, 1867	April 1, 1881	11 5 14	Pegu and Shuaygheen Districts [Cadastral] Survey, British Burma.	Furlough for 1 year, from 1st January to 31st December 1879.
82	Sept. 1, 1867	Mar. 7, 1882	10 7 15	On furlough	For 1 year, from 28th March 1868.
83	Dec. 13, 1883	Dec. 13, 1883		Aligurb, &c., Districts, Survey, N.-W. P.	
84	Nov. 22, 1868	Aug. 10, 1883	9 5 19	Mirzapur and Gorukpur Districts [Cadastral] Survey, N.-W. P.	Office Assistant, from 22nd November 1868 to 31st October 1871.
85	Oct. 22, 1863	Jan. 1, 1878	20 2 10	Konkan Topogl. Survey, Poona.	
86	Oct. 12, 1874	Sept. 6, 1883	5 7 12	Guzerat Survey.	
87	Sept. 1, 1874	April 30, 1883	7 4 23	Ditto.	
88	Oct. 1, 1863	Oct. 22, 1879	16 5 20	Kamrup Dist. [Cadastral] Survey, Assam.	
89	July 1, 1863	Jan. 1, 1883	18 9 27	North-East Frontier Topogl. Survey	Furlough to Europe for 1 year, from 21st November 1877 to 20th November 1878.
90	Oct. 1, 1863	Oct. 1, 1874	17 10 17	Darjeeling Survey.	
91	Nov. 18, 1870	Jan. 17, 1883	11 10 18	Pegu and Shuaygheen Districts [Cadastral] Survey, British Burma.	
92	Oct. 6, 1860	Sept. 23, 1883	23 2 21	Kamrup Dist. [Cadastral] Survey, Assam.	Overstayed privilege leave by 5 days in June 1869.
93	Aug. 11, 1869	Nov. 1, 1882	10 1 17	Bassein and Henzada Districts [Cadastral] Survey, British Burma.	Leave on Medical Certificate, from 22nd October to 28th November 1883.
94	Nov. 1, 1873	Jan. 17, 1883	7 0 23	Pegu and Shuaygheen Districts [Cadastral] Survey, British Burma.	

General Alphabetical List of the Officers of the Junior or Subordinate Department

1	2	3	4	5	6	7
Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			R a. p.
95	Peychers, Mr. H. W. . . . [G. T. S.] . . .		41 0 18	Surveyor	3rd grade	350 0 0
96	Peyton, Mr. J. . . . [G. T. S.] . . .		52 6 0	Ditto	1st grade	500 0 0
97	Pocock, Mr. L. J. . . . [G. T. S.] . . .	H. S.	40 3 5	Ditto	3rd grade	350 0 0
98	Potter, Mr. C. D. . . . [G. T. S.] . . .	L. S.	38. 3 27	Assistant Surveyor	1st grade	300 0 0
99	Price, Mr. W. C. . . . [G. T. S.] . . .		37 6 8	Surveyor	4th grade	300 0 0
100	Prunty, Mr. P. F. . . . [G. T. S.] . . .		29 0 6	Assistant Surveyor	2nd grade	160 0 0
101	Rendell, Mr. T. H. . . . [G. T. S.] . . .		39 5 9	Surveyor	4th grade	300 0 0
102	Robert, Mr. W. . . . [Topogl.] . . .		33 4 2	Assistant Surveyor	1st grade	250 0 0
103	Scott, Mr. G. B. . . . [Rev.] . . .	H. S.	39 5 1	Surveyor	1st grade	500 0 0
104	Scott, Mr. J. R. . . . [Rev.] . . .	L. S.	34 9 27	Assistant Surveyor	1st grade	250 0 0
105	Senior, Mr. R. W. . . . [G. T. S.] . . .	L. S.	23 1 18	Ditto	3rd grade	152 0 0
106	Seyers, Mr. C. W. F. . . . [Rev.] . . .		40 4 15	Ditto	1st grade	220 0 0
107	Shaw, Mr. T. . . . [Rev.] . . .	L. S.	31 1 15	Ditto	Ditto	250 0 0
108	Smart, Mr. A. D. . . . [Rev.] . . .		53 2 17	Surveyor	3rd grade	175 0 0
109	Smart, Mr. A. W. . . . [Rev.] . . .		32 10 1	Assistant Surveyor	1st grade	200 0 0
110	Smart, Mr. O. D. . . . *		26 3 15	Ditto	3rd grade	128 0 0
111	Smart, Mr. P. C. H. . . . *		28 3 15	Ditto	Ditto	200 0 0
112	Smart, Mr. R. B. . . . [Rev.] . . .	L. S.	36 6 2	Surveyor	4th grade	300 0 0
113	Smylie, Mr. S. M. . . . [Rev.] . . .	L. S.	43 1 7	Ditto	2nd grade	450 0 0
114	Stotesbury, Mr. W. . . . [Topogl.] . . .	{ H. S. } { L. S. Canarese. }	36 5 6	Ditto	4th grade	300 0 0
115	Swiney, Mr. G. C. . . . [Rev.] . . .		34 6 4	Assistant Surveyor	1st grade	250 0 0
116	Swiney, Mr. J. S. . . . [Rev.] . . .		33 0 12	Ditto	Ditto	250 0 0
117	Tapsell, Mr. C. . . . [Topogl.] . . .	L. S.	39 1 17	Ditto	Ditto	250 0 0
118	Tate, Mr. G. P. . . . *	L. S.	27 5 9	Ditto	2nd grade	160 0 0
119	Todd, Mr. H. . . . [G. T. S.] . . .		36 4 15	Surveyor	4th grade	300 0 0
120	Todd, Mr. J. . . . [Rev.] . . .		49 7 19	Ditto	2nd grade	
121	Todd, Mr. R. . . . [Topogl.] . . .		38 5 20	Assistant Surveyor	1st grade	250 0 0

* Joined the Department after the amalgamation on the 1st January 1878.

of the Survey of India as it stood on the 1st January 1884—continued.

8	9	10	11	12
Number.	Date of first appointment to Department.	Date of appointment to present grade.	Period of service counting for pension on 1st Jan. 1884.	REMARKS.
			Y. M. D.	
95	April 8, 1862	Mar. 12, 1883	21 8 23	Trigonometrical Branch Office, Debra Dun. Service reckoned under old rules.
96	Feb. 3, 1860	April 1, 1874	23 10 27	Darjeeling Survey. Service reckoned under new rules.
97	July 10, 1863	Nov. 1, 1883	18 0 7a	Mysore Topographical Survey. (a) Exclusive of 89 days' sick leave.
98	Oct. 29, 1866	Oct. 1, 1874	16 2 24b	Secondary Triangulation Party. Offg. Surveyor, 4th grade. (b) Exclusive of 33 days sick leave.
99	Nov. 1, 1863	Oct. 1, 1874	15 6 8	Benares, &c., Districts [Cadastral] Survey, N.-W. P.
100	May 9, 1874	Jan. 22, 1883	7 0 6	Kattywar and Cutch Survey.
101	Oct. 11, 1864	June 7, 1881	17 5 9	Tidal and Leveling Operations, India and Burma.
102	Aug. 21, 1869	April 1, 1881	11 4 2	Darjeeling Survey.
103	May 1, 1863	Sept. 5, 1883	20 8 0	Hissar, &c., Districts Survey, Punjab. Temporarily detached under Settlement Officer, Rawalpudi, Punjab.
104	Jan. 19, 1867	Nov. 22, 1880	12 9 27	Prome and Akyab Districts [Cadastral] Survey, British Burma.
105	Dec. 21, 1878	April 1, 1881	1 1 18	Nepal Boundary Party.
106	Dec. 1, 1864	June 7, 1881	18 4 15	Ajmere District Survey, Rajputana.
107	April 21, 1869	April 1, 1881	9 1 15	Mirzapur and Gorakpur Districts [Cadastral] Survey, N.-W. P.
108	Oct. 1, 1870c	Oct. 1, 1870	13 3 0	On half-pay list, from 1st Jan. 1880. (c) Commencement of second service.
109	Dec. 1, 1871	Oct. 6, 1883	10 10 1	Prome and Akyab Districts [Cadastral] Survey, British Burma. Three months' sick leave, from 6th July 1880.
110	Oct. 1, 1881	March 7, 1882	4 1 0	Mirzapur and Gorakpur Districts [Cadastral] Survey, N.-W. P. Includes service in the temporary or cadastral establishment without interruption, from 1st December 1870 to 30th September 1881.
111	April 18, 1878	Dec. 1, 1883	5 3 6	Map Curator, Head Quarters, Calcutta. Sick leave, from 8th April to 14th September 1883.
112	Jan. 1, 1864	Sept. 5, 1883	14 6 2	Bassein and Henzada Districts [Cadastral] Survey, British Burma. Apprentice, from 1st January to 31st December 1864.
113	July 24, 1860	April 1, 1883	23 1 5	Draftsman, Head Quarters, Calcutta. Furlough, from 8th November 1882 to 11th March 1883.
114	Oct. 4, 1864	July 21, 1883	14 5 6	Mysore Topogl. Survey.
115	Sept. 17, 1868	April 1, 1881	12 6 4	Chattisgarh Division [Cadastral] Survey, C. P.
116	Jan. 5, 1869	April 1, 1881	11 0 12	Prome and Akyab Districts [Cadastral] Survey, British Burma.
117	Aug. 2, 1864	Oct. 1, 1872	17 1 17	Guzerat Survey.
118	Mar. 12, 1878	Nov. 21, 1883	5 5 9	Central India and Rajputana Topogl. Survey. Apprentice, from 1st March 1874.
119	July 15, 1865	Oct. 6, 1883	14 3 16d	Mysore Topogl. Survey. (d) Exclusive of 30 days' sick leave.
120	Dec. 27, 1863	Feb. 22, 1883	19 3 19	On furlough. In India, for 2 years from 10th April 1883. Overstayed privilege leave by one day in August 1874.
121	Nov. 1, 1863	July 21, 1883	16 5 19	South Deccan Topogl. Survey, Poona. Suspension from 11th May to 6th June 1883.

General Alphabetical List of the Officers of the Junior or Subordinate Department

1	2	3	4	5	6	7
Number.	Names of Officers and Branch to which originally posted.	Passed in Vernacular.	Age.	Rank.	Grade.	Salary.
			Y. M. D.			R a. p.
122	Todd, Mr. W. . . . [G. T. S.]		45 1 21	Surveyor	2nd grade	400 0 0
123	Torrens, Mr. C. P. . . . [G. T. S.]		32 6 12	Assistant Surveyor	1st grade	250 0 0
124	VanderBeck, Mr. G. . . . [Topogl.]	L. S.	34 3 15	Ditto	Ditto	200 0 0
125	Vyall, Mr. W. R. . . . [Rev.]		45 0 2	Surveyor	3rd grade . . . .	. . . .
126	Wainright, Mr. E. A. . . . [Topogl.]		35 6 23	Assistant Surveyor	1st grade	250 0 0
127	Warwick, Mr. R. F. . . . [G. T. S.]	L. S.	28 9 6	Ditto	3rd grade	160 0 0
128	White, Mr. P. . . . [Topogl.]	L. S.	33 2 23	Ditto	2nd grade . . . .	. . . .
129	Willis, Mr. G. S. . . . *		19 6 4	Ditto	3rd grade	120 0 0
130	Wilson, Mr. A. J. . . . [Topogl.]	L. S.	41 4 0	Surveyor	2nd grade	400 0 0
131	Wilson, Mr. B. M. . . . [Rev.]		35 8 17	Assistant Surveyor	Ditto	184 0 0
132	Wilson, Mr. C. W. . . . [Rev.]	L. S.	38 1 22	Ditto	1st grade	240 0 0
133	Wilson, Mr. J. H. . . . [Topogl.]	L. S.	37 6 23	Ditto	Ditto	250 0 0
134	Wilson, Mr. W. A. . . . [Rev.]	L. S.	40 7 12	Surveyor	2nd grade	400 0 0
135	Wood, Mr. C. . . . [G. T. S.]	L. S.	41 5 10	Ditto	1st grade	500 0 0
136	Wyatt, Mr. A. G. . . . [Topogl.]		38 10 6	Ditto	3rd grade	350 0 0

* Joined the Department after the amalgamation on 1st January 1878.

of the Survey of India as it stood on the 1st January 1884—concluded.

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 Jan. 1884.	Present Post.	REMARKS.	
		Y. M. D.			
122	Jan. 11, 1856	June 1, 1874	25 10 23 ^a	On duty at Head Quarters, Calcutta	(a) Inclusive of 2 years, which count as service out of 4 years and 28 days on medical certificate under old rules.
123	Dec. 12, 1868	April 1, 1881	10 6 12	Burma Topogl. Survey, Rangoon.	
124	July 1, 1872	April 30, 1883	12 3 15	Bhopal and Malwa Topogl. Survey	Apprentice Draftsman, from 11th October 1870 to 30th July 1872.
125	June 13, 1856	Jan. 23, 1883	27 1 18	On furlough	For 2 years, from 1st August 1883.
126	May 1, 1866	July 13, 1878	13 6 13	Mirzapur Topogl. Survey.	
127	July 2, 1875	April 1, 1881	4 7 29 ^b	Ditto Ditto	(b) 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. Also 4 months and 25 days from 30th August 1881. Also from 16th August 1882 to 14th August 1883.
128	Oct. 1, 1872	April 1, 1881	9 1 21 ^c	On sick leave	(c) For 3 months, from 5th November 1883. Exclusive of sick leave for 3 months, from 21st October 1878. Leave extended for 3 months; further extension of leave without pay up to 17th August 1879. On half-pay list from 18th August 1879 to 31st August 1880. On sick leave for 1 year, from 17th October 1881. Extension to 28th January 1883.
129	Feb. 25, 1883	Feb. 25, 1883	. . .	Benares, &c., Districts [Cadastral] Survey, N.-W. P.	
130	Oct. 1, 1860	June 26, 1880	23 6 0	Central India and Rajputana Topogl. Survey.	Apprentice Draftsman, from 1st January 1860.
131	Nov. 15, 1872	April 1, 1881	11 11 0	Ditto Ditto	Apprentice, from 1st February to 14th November 1872.
132	June 21, 1867 ^d	April 1, 1881	15 8 22	Aligurh, &c., Districts Survey, N.-W. P.	(d) Commencement of second service. Sick leave for 3 months, from 1st March 1869, and 2 months, from 1st August 1869.
133	April 1, 1868 ^d	April 1, 1881	15 4 23 ^e	Burma Topogl. Survey, Rangoon	(e) Exclusive of 2 months' sick leave, from 1st July 1860. Appointed as Draftsman from 15th May 1863.
134	Jan. 1, 1861	Nov. 1, 1883	23 0 0	In charge Dehra Dun District [Cadastral] Survey, N.-W. P.	
135	May 6, 1858	April 1, 1883	25 5 10 ^f	Trigonometrical Branch Office, Dehra Dun, also in charge Burma party.	(f) Service reckoned under old rules.
136	Nov. 1, 1861	Feb. 22, 1883	22 0 10	On furlough	For 2 years, from 11th November 1863.

Disposition list of Officers attached to the Head Quarters Offices.

Officers in charge, Surveyors and Assistant Surveyors.	Rank and Grade.	Date of assum- ing charge.	REMARKS.
Colonel G. C. DePrée	Depty. Surveyor Genl. in charge Topl. Survey Branch and Offg. Surveyor General of India.	Jan. 1, 1883 Feb. 12, 1883	
Colonel J. Sconce, s.c.	Depty. Surveyor Genl. in charge Revenue Survey Branch.	Jan. 1, 1879	
J. B. N. Hennessey, Esq., M.A.	Depty. Superintendent, 1st grade, and Offg. Depty. Surveyor Genl. in charge Trigl. Survey Branch.	Feb. 12, 1883	
Major C. Strahan, R.E.	Depty. Superintendent, 3rd grade, offg. in 2nd grade.	July 24, 1883	In charge Drawing and Engraving Offices.
Major J. Waterhouse, s.c.	Depty. Superintendent, 4th grade, and offg. in 3rd grade.	Dec. 26, 1881 Apl. 19, 1883	In charge Photo. and Litho. Offices.
Major M. W. Rogers, R.E.	Depty. Superintendent, 4th grade, offg. in 3rd grade.	Apl. 19, 1883	In charge Correspondence Office S. G. O. and Mathl. Inst. Office.
W. H. Cole, Esq., M.A.	Depty. Superintendent, 4th grade, offg. in 3rd grade.	Feb. 12, 1883	In charge Trigonometrical Survey Branch Office.
Captain St. G. C. Gore, R.E.	Asst. Superintendent, 1st grade, and offg. Depty. Superintendent, 4th grade.	Jan. 10, 1883	Personal Assistant and in charge Map, Record and Issue Office.

Surveyors and Assistant Surveyors attached to Survey of India Offices, Calcutta.

Mr. A. Chamarett	Surveyor, 1st grade, and Chief Draftsman	Jan. 22, 1883	} Drawing Office.
G. McGill	Ditto, 1st grade, on duty.	Dec. 20, 1882	
W. Todd	Ditto, 2nd grade, on duty.	Sept. 1, 1880	
J. A. May	Ditto, 2nd grade, on duty.	June 1, 1877	
S. M. Smylie	Ditto, 2nd grade, and Head Draftsman	Mar. 12, 1883	
F. Adams	Ditto, 2nd grade, on duty.	June 1, 1877	
R. C. D. Ewing	Asst. Surveyor, 1st grade, and Draftsman	June 17, 1882	
E. J. Martin	Ditto, 1st grade, on duty.	Dec. 1, 1882	
E. P. S. Hill	Ditto, 2nd grade, and Draftsman	Nov. 1, 1883	

Surveyors and Assistant Surveyors attached to M. R. I. O. S. I. O., Calcutta.

Mr. P. J. W. Doran	Asst. Surveyor, 1st grade, on duty	Oct. 25, 1883	} Map Record and Issue Office.
B. M. Wilson	Ditto, 2nd grade, on duty	Nov. 1, 1882	
P. C. H. Smart	Ditto, 3rd grade, and Map Curator.	Sept. 15, 1883	

Surveyors and Assistant Surveyors attached to Trigl. Survey Branch Office, Dehra Dun.

Mr. C. Wood	Surveyor, 1st grade, on duty	May 1, 1865	Computing Office.
L. H. Clarke	Ditto, 2nd grade, on duty	Oct. 1, 1874	
G. W. E. Atkinson	Ditto, 2nd grade, on duty	Sept. 1, 1870	Drawing Office.
H. W. Psychers	Ditto, 3rd grade, on duty	Sept. 1, 1871	Computing Office.
J. Bond	Asst. Surveyor, 1st grade, Offg. Survr., 4th grade, on duty.	July 1, 1882	Ditto.

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. R
		Sub-Surveyors.	Writers.	Chainmen and Flagmen.	Native Doctors.	Burkundazes.	Havildars.	
		No.	No.	No.	No.	No.	No.	
	Secondary Triangulation Party; recess quarters at Mussoorie . . . . .	...	1	78	2	27	...	...
	<i>Darjeeling Survey.</i> Special Survey Operations in and around Darjeeling; Nepal Boundary Demarcation, recess quarters at Darjeeling . . . . .	...	1	54	1	12	...	32,000
	Burma Party; recess quarters at Dehra Dun . . . . .	...	...	...	...	...	...	23,000
	<i>Kattywar and Cutch Survey.</i> The Province of Kattywar and Cutch, Bombay Presidency; recess quarters at Poona	11	1	145	1	27	...	55,000
	<i>Guzerat Survey.</i> Guzerat; recess quarters at Poona	20	4	184	1	33	1	98,000

of India as it stood on the 1st January 1884.

Officer in charge, Surveyors and Assistant Surveyors.	Rank and Grade.	Date of assuming charge.	REMARKS.
Mr. A. D'Souza Mr. C. D. Potter	Surveyor, 1st grade Asst. Surveyor, 1st grade. Offg. Surveyor, 4th grade.	Oct. 16, 1883.	
Lieut.-Col. H. C. B. Tanner, s.c. E. C. Ryall, Esq. Mr. J. Peyton " W. J. O'Sullivan " W. Robert " W. C. G. Barclay " R. W. Senior	Depy. Superintendent 3rd grade. Offg. in 2nd grade. Asst. Superintendent, 1st grade. Surveyor, 1st grade. Ditto, 4th grade. Asst. Surveyor, 1st grade. Ditto ditto. Ditto 3rd grade.	Nov. 1, 1882.	
Mr. C. Wood	Surveyor, 1st grade	Nov. 8, 1883.	
Lieut.-Col. A. Pullan, s.c. Mr. N. C. Gwynne " W. A. Fielding " G. T. Hall " P. F. Prunty	Depy. Superintendent, 3rd grade. Offg. in 2nd grade. Surveyor, 4th grade. Asst. Surveyor, 1st grade. Ditto, 1st grade. Ditto, 2nd grade.	Apl. 26, 1879.	
Col. C. T. Haig, R.E. Lieut. G. B. Hodgson, s.c. Mr. A. Christie " C. H. McA'Fee " C. Tapsell " G. D. Casson " S. F. Norman " C. Norman " A. George	Depy. Superintendent, 1st grade. Probationary Asst. Superintendent, 2nd grade. Surveyor, 4th grade. Ditto, ditto. Asst. Surveyor, 1st grade. Ditto, ditto. Ditto, 2nd grade. Ditto, ditto. Ditto, 3rd grade.	Oct. 5, 1878.	

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.	No.	No.	No.	R 25,000
	<i>No. 2 Astronomical Party.</i> Carrying on Electric Determinations of Longitude in India; recess quarters at Mussoorie	...	1	10	...	3	...	31,000
	<i>Tidal and Leveling Operations.</i> Tidal Operations at various ports in India and Burma, also at Aden and Port Blair	16	1	25	...	10	...	57,000
	Leveling Operations in Bombay Presidency, &c.; recess quarters at Poona	...	...	...	...	...	...	...

of India as it stood on the 1st January 1884—continued.

Officer in charge, Surveyors and Assistant Surveyors.	Rank and Grade.	Date of assum- ing charge.	REMARKS.
Major W. J. Heaviside, B. E. Mr. D. Atkinson	Depy. Superintendent, 3rd grade. Offg. in 2nd grade. Surveyor, 1st grade.	Dec. 6, 1882.	
Major G. Strahan, R.E.	Depy. Superintendent, 2nd grade	Aug. 1, 1883.	
Major A. W. Baird, B. E., A. I. C. E. Mr. H. E. T. Keelan Mr. G. Belcham " T. H. Rendell " E. J. Connor	Depy. Superintendent, 4th grade. Offg. in 3rd grade. Surveyor, 1st grade. Ditto, 3rd grade. Ditto, 4th grade. Ditto, ditto.	Apl. 20, 1883.	

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.	Writers.	Flagmen and Carriers.	Hospital Assistants.	Barkundazes.	Apothecary.	
		No.	No.	No.	No.	No.	No.	R
1	<i>The Central India and Rajputana Topographical Survey Party.</i> Native States in Rajputana Agency; recess quarters at Mussoorie	7	...	19	1	3	...	51,000
2	<i>Bhopal and Malwa Topographical Party.</i> Bhopal and Malwa Survey; recess quarters at Poona	9	2	123	1	22	...	59,000
5	<i>The Mirzapur Topographical Survey Party.</i> Mirzapur District forest tracts; recess quarters at Mussoorie	8	...	19	1	3	...	46,000

of India as it stood on the 1st January 1884—continued.

Officers in charge, Surveyors and Assistant Surveyors.	Rank and Grade.	Date of assum- ing charge.	REMARKS.
Major R. Beavan, s.c. (in charge)	Asst. Superintendent, 1st grade. Offg. Depy. Superintendent, 4th grade.	Oct. 1, 1863.	
Mr. A. J. Wilson	Surveyor, 2nd grade.		
„ W. J. Cornelius	Asst. Surveyor, 1st grade.		
„ G. P. Tate	Ditto, 2nd grade.		
„ M. Gastaud	Ditto, 3rd grade.		
„ P. Beechey	Ditto, 3rd ditto.		
Major T. T. Carter, B.B. (in charge)	Depy. Superintendent, 2nd grade.	Dec. 3, 1881.	
Mr. J. A. Barker	Asst. Surveyor, 1st grade		
„ G. Vander Beck	Ditto, ditto.		
„ C. George	Ditto, 2nd grade.		
Major J. R. Wilmer, s.c. (in charge)	Depy. Superintendent, 4th grade.	Oct 12, 1874.	
W. H. Patterson, Esq.	Asst. Superintendent, 2nd grade. Offg. in 1st grade.		
Mr. C. F. Hamer	Surveyor, 4th grade.		
„ E. A. Wainright	Asst. Surveyor, 1st grade.		
„ H. T. Kitchen	Ditto, ditto.		
„ W. H. Lilley	Ditto, ditto.		
„ R. F. Warwick	Ditto, 3rd grade.		

Disposition List of the Officers of the Survey

of India as it stood on the 1st January 1884—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 Assistants.	Burkundazes and Peons.		Apothecary.
		No.	No.	No.	No.	No.	R
6	<i>North-East Frontier Topographical Party.</i> North-Eastern Frontier, Assam and South Sylhet; recess quarters at Shillong	11	1	74	1	4	71,000
7	<i>Burma Topographical Party.</i> Forest tracts in Districts Hanthawaddy and Tharrawaddy, British Burmah; recess quarters at Rangoon	16	1	...	1	...	50,000
8	<i>Mysore Topographical Party.</i> Mysore; recess quarters at Bangalore	11	1	116	1	42	79,000
	Baluchistan Topographical Party; recess quarters at Mussoorie	3	1	56	...	...	37,000
	Andaman Topographical Party; recess quarters at Darjeeling	...	...	...	...	...	...

Officers in charge, Surveyors and Assistant Surveyors.	Rank and Grade.	Date of assuming charge.	REMARKS.
Bt. Lieut. Col. R. G. Woodthorpe, B.E. (in charge) Mr. M. J. Ogle " A. Ewing	Asst. Superintendent, 1st grade. Offg. Deputy Superintendent, 4th grade. Surveyor, 3rd grade. Assistant Surveyor, 3rd grade.	Dec. 3, 1881.	
H. Horst, Esq. (in charge) Mr. J. H. Wilson " C. P. Torrens " R. A. Gibson " E. Graham	Deputy Superintendent, 4th grade. Offg. in 3rd grade. Asst. Surveyor, 1st grade. Ditto, ditto. Ditto, ditto. Ditto, 2nd grade.	Dec. 14, 1882.	
Bt. Lt.-Col. H. R. Thuillier, B.E. (in charge). Lieut. H. M. Jackson, B.E. Mr. E. S. P. Atkinson " L. J. Pocock " A. J. James " W. Stotesbury " F. Kitchen " Hugh Todd " J. M. Kennedy " J. A. Higgs	Deputy Superintendent, 1st grade ... Asst. Superintendent, 2nd grade. Offg. in 1st grade. Surveyor, 3rd grade. Ditto, ditto. Ditto, 4th grade. Ditto, ditto. Ditto, ditto. Ditto, ditto. Assistant Surveyor, 2nd grade. Ditto, 3rd grade.	Oct. 20, 1881.	
Major T. H. Holdich, B.E. (in charge) Lieut. The Hon'ble M. G. Talbot, B.E. " R. A. Wahab, B.E. Mr. T. E. M. Claudius " J. T. U. Coxen " A. Kitchen " G. R. Copping	Deputy Superintendent, 3rd grade ... Asst. Superintendent, 1st grade. Ditto, 2nd grade. Offg. in 1st grade. Surveyor, 4th grade. Ditto, ditto. Asst. Surveyor, 1st grade. Ditto, 2nd ditto.	Oct. 1, 1883.	
Capt. J. R. Hobday, s.c. (in charge) Mr. J. Keating " D. Campbell	Asst. Surveyor, 1st grade. Offg. Deputy Superintendent, 4th grade. Asst. Surveyor, 2nd grade. Ditto, ditto.	Nov. 1, 1883.	

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.	Levelers.	Tindals, Mea- surers, &c.	Hospital Assist- ants.	Burkundazes.	
		No.	No.	No.	No.	No.	No.	
1	Hissar and Ferozepur Districts, Punjab	21	1	...	280	1	16	63,100
	(Temporary)	...	...	...	70	...	...	11,000
	Recess quarters at Murrec.							
2	Pegu and Shuaygheen Districts, British Burma	...	...	...	...	...	...	.....
	Professional Establishment (permanent)	26	1	...	180	1	21	1,04,500
	Cadastral do. (temporary)	166	...	...	540	...	...	86,000
	Recess quarters at Rangoon.							
3	Aligarh and Etah Districts, North-Western Provinces	24	1	...	160	1	15	39,720
	Recess quarters at Mussoorie.							
4	Benares and Basti Districts, North-Western Provinces	...	...	...	...	...	...	.....
	Professional Establishment (permanent)	25	1	...	320	1	17	67,900
	Cadastral do. (temporary)	250	...	...	450	...	...	52,000
	Recess quarters at Naini Tal.							
5	Mirzapur and Gorukpur Districts, North-Western Provinces	...	...	...	...	...	...	.....
	Professional Establishment (permanent)	19	2	...	210	1	20	64,800
	Cadastral do. (temporary)	317	...	...	630	...	...	53,000
	Recess quarters at Naini Tal.							
6	Kamrup District, Assam	...	...	...	...	...	...	.....
	Professional Establishment (permanent)	27	1	...	220	1	11	80,700
	Cadastral do. (temporary)	166	...	...	540	...	...	61,000
	Recess quarters at Shillong.							

Survey Department on the 1st January 1884.

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
		₹ a. p.	₹ a. p.	
		1,752 14 0	.....
		995 0 0	.....
		895 0 0	895 0 0	
		
		795 0 0	
		795 0 0	
		795 0 0	.....
		695 0 0	Returned from furlough on the 17th July 1883. Has been recommended for promotion to 1st grade with effect from the 18th November 1883.
		560 0 0	
		560 0 0	

Survey Department on the 1st January 1884.

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.
Nov. 1, 1863	Jan. 15, 1868	Y. M. D.	Superintendent, Revenue Survey and Assessment.	
Jan. 25, 1865	April 8, 1881	...	Deputy Superintendent, Revenue Survey.	
Oct. 2, 1865	Mar. 26, 1876	18 2 29	Assistant Superintendent.	
Dec. 22, 1866	Dec. 5, 1878	14 3 2	Ditto.	
Dec. 1, 1867	June 8, 1876	14 7 9	Ditto.	
Jan. 16, 1868	Nov. 26, 1880	15 11 6	Ditto.	Returned from furlough on the 17th July 1883. Has been recommended for promotion to 1st grade with effect from the 18th November 1883.
Jan. 15, 1869	Mar. 10, 1876	...	Ditto.	Reverted to Military duty.
Dec. 3, 1870	Feb. 8, 1882	...	Ditto.	
Jan. 18, 1872	Nov. 11, 1881	...	Ditto.	
Oct. 24, 1883	Dec. 24, 1877	...	Ditto.	Reverted to Military duty.
Nov. 23, 1876	Jan. 1, 1881	3 8 2	Ditto.	
Mar. 22, 1877	April 24, 1881	14 8 0	Ditto.	

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

M

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 January 1883 to 30th January 1884.
		Sub-Surveyors.	English Clerks.	Karkuns.	Leavers.	Mappers.	Peons.	Pressmen.	
1	2	3	4	5	6	7	8	9	10
		No.	No.	No.	No.	No.	No.	No.	Rs
<i>Controlling Officers.</i>									
1	Mysore Province	3	2	61	9	17	9	6	46,610
2	Ditto	...	2	9	...	...	4	...	17,715
	TOTAL	3	4	70	9	17	13	6	64,325
<i>Measuring Establishments.</i>									
3	Kolar District	32	...	2	6	...	2	...	15,150
4	Bangalore District	36	...	3	4	...	3	...	21,918
5	Mysore ditto	36	...	2	3	...	2	...	24,956
6	Kadur ditto	32	...	2	6	...	2	...	21,709
7	Mysore ditto	34	...	3	4	...	2	...	17,989
8	Ditto ditto	35	...	3	6	...	2	...	18,818
	TOTAL	205	...	15	29	...	13	...	1,20,540
<i>Classing Establishments.</i>									
9	Bangalore District	15	...	1	5	...	2	...	19,867
10	Mysore ditto	15	...	1	3	...	2	...	18,036
11	Kolar ditto	12	...	1	7	...	2	...	16,283
12	Ditto ditto	15	...	1	4	...	2	...	1,218
	TOTAL	57	...	4	19	...	8	...	55,404
	GRAND TOTAL	265	4	89	57	17	34	6	2,40,269

Survey Department on the 1st January 1884.

Officer in charge.	Number in General List.	Rank and Grade.	Date of assuming charge.	REMARKS.
11	12	13	14	15
Lieut.-Col. J. P. Grant	1	Superintendent, Revenue Survey	Jan. 15, 1868	
Major J. Rutherford	2	Deputy Superintendent, Revenue Survey	April 8, 1881	
Mr. D. Appu Rao	A	Assjstant Commissioner	Oct. 6, 1882	Attached to the Survey Department.
„ F. B. Clerk	D	Assistant Superintendent, 1st grade	Nov. 26, 1869	
„ M. S. Náráin Rao	F	Amildar	Nov. 1, 1883	Attached to the Survey Department.
Major D. Cowie	G	Assistant Superintendent, 1st grade	Aug. 1, 1881	
Mr. E. W. Laseron	H	Ditto 3rd grade	Nov. 1, 1878	
„ A. G. Hudson	L	Ditto ditto	Jan. 1, 1878	
Lieut.-Col. G. Mackenzie	C	Assistant Settlement Officer, Assistant Superintendent, 1st grade.	Aug. 1, 1881	
Mr. E. H. Butcher	E	Ditto ditto	Jan. 1, 1867	
„ J. P. Barker	M	Assistant Superintendent, 1st grade	Aug. 1, 1882	
„ W. E. A. James	O	Ditto 2nd grade	Nov. 1, 1883	

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.	Superintendent, Geological Survey	Office
	<i>1st Grade—R700, rising to R1,000.</i>		
1	William King, A.B., D.Sc.	Deputy Supdt., Geological Survey	Chhatisgarh
2	R. Bruce Foote, F.G.S.	Ditto ditto	Kurnul
3	F. R. Mallet, F.G.S.	Ditto ditto	Office
4	Theo. W. H. Hughes, A.R.S.M., F.G.S.	Asst., Supdt. ditto	South Rewah
	<i>2nd Grade—R500, rising to R700.</i>		
1	F. Fedden, A.R.S.M., F.G.S.	Assistant Supdt., Geological Survey	Office
2	C. A. Hacket	Ditto ditto	Furlough
3	C. L. Griesbach, F.G.S.	Ditto ditto	Punjab
4	R. D. Oldham, A.R.S.M.	Ditto ditto	Jaunsar
5	Vacant	Ditto ditto	
	<i>3rd Grade—R350, rising to R500.</i>		
1	P. N. Bose, B.Sc., F.G.S.	Assistant Supdt., Geological Survey	Chhatisgarh
2	T. H. D. LaTouche, A.B.	Ditto ditto	Assam
3	Edward James Jones, A.R.S.M.,	Ditto ditto	Office
4	C. S. Middlemiss, A.B.	Ditto ditto	Office
5	Vacant	Ditto ditto	
6	Vacant	Ditto ditto	
	<i>Separately graded.</i>		
	O. Feistmantel, M.D.	Palæontologist, Geological Survey	Furlough
	<i>Non-graded Officers.</i>		
1	J. Schaumburg	Artist	Office
2	W. R. Bion	Registrar	Office
3	Kishen Singh	Sub-Assistant, Geological Survey	Gwalior
4	Hira Lal	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.			R
1	H. B. Medlicott, A.M., F.R.S., F.G.S.		54 4 29	Supdt., Geological Survey	Separately graded.	1,800
2	William King, A.B., D.Sc.		50 5 16	Depty. Supdt., Geol. Survey	1st grade	1,100
3	R. Bruce Foote, F.G.S.		49 3 9	Ditto ditto	Ditto	1,100
4	F. R. Mallet, F.G.S.	Oct. 5, 1868	42 10 19	Ditto ditto	Ditto	1,100
5	F. Fedden, A.R.S.M., F.G.S.	Oct. 26, 1869	44 9 10	Asst. Supdt. ditto	2nd grade	700
6	C. A. Hacket	Oct. 5, 1869	50 5 20	Ditto ditto	Ditto	700
7	Theo. W. H. Hughes, A.R.S.M., F.G.S.	Aug. 3, 1868	40 4 30	Ditto ditto	1st grade	1,000
8	O. Feistmantel, M.D.	Oct. 4, 1875	35 1 10	Palæontologist, ditto	Separately graded.	700
9	C. L. Griesbach, F.G.S.	Sept. 15, 1880	36 0 21	Asst. Supdt., ditto	2nd grade	500
10	R. D. Oldham, A.R.S.M.	Aug. 1, 1881	25 5 2	Ditto ditto	Ditto	500
11	P. N. Bose, B.Sc., F.G.S.	Not required to pass.	28 7 20	Ditto ditto	3rd grade	440
12	T. H. D. LaTouche, A.B.	June 5, 1882	28 2 2	Ditto ditto	Ditto	410
13	Edward James Jones, A.R.S.M.	Not passed	24 3 26	Ditto ditto	Ditto	350
14	C. S. Middlemiss, A.B.	Not passed	24 1 9	Ditto ditto	Ditto	350
15	Vacant					
16	Vacant					
17	Vacant					
	<i>Non-graded Officers.</i>					
1	J. Schaumburg	Not required to pass.	44 5 30	Artist, Geological Survey	No grade	400
2	W. R. Bion	Do.	31 6 15	Registrar ditto	Ditto	340
3	Kishen Singh	Do.	33 10 6	Sub-Assistant ditto	Ditto	190
4	Hira Lal	Do.	32 5 2	Ditto ditto	Ditto	190

Survey of India on the 1st January 1884.

SALARY INCLUDING ALLOWANCES.			REMARKS.
Pay.	Travelling, Conveyance and House Allowances.	Total Pay and Allowances.	
R a. p.	R a. p.	R a. p.	
1,800 0 0	300 0 0	2,100 0 0	
1,100 0 0	60 0 0	1,160 0 0	Acting Curator.
1,100 0 0	60 0 0	1,160 0 0	
1,100 0 0	150 & 60 0 0	1,310 0 0	
1,000 0 0	30 0 0	1,030 0 0	
700 0 0	30 0 0	730 0 0	
700 0 0	30 0 0	730 0 0	Officiating in 2nd grade. Ditto ditto.
500 0 0	30 0 0	530 0 0	
500 0 0	30 0 0	530 0 0	
440 0 0	30 0 0	470 0 0	
410 0 0	30 0 0	440 0 0	
350 0 0	30 0 0	380 0 0	
350 0 0	30 0 0	380 0 0	
700 0 0	30 0 0	730 0 0	
400 0 0	.	400 0 0	
340 0 0	.	340 0 0	
190 0 0	.	190 0 0	
190 0 0	.	190 0 0	

Survey of India on the 1st January 1884.

Date of first appointment to the Department.	Date of appointment to present grade or rank.	Period of service counting for Pension.	Where employed at present.	REMARKS.
		Y. M. D.		
Mar. 24, 1854	Apl. 1, 1876	29 9 8	Office.	
Mar. 4, 1857	Apl. 21, 1875	26 6 27	Chhatisgarh.	
Sept. 28, 1858	June 14, 1881	25 3 3	Kurnul.	
Feb. 12, 1859	Apl. 11, 1883	24 7 19	Office.	
Oct. 1, 1860	Mar. 24, 1878	22 6 16	Office.	
Nov. 15, 1861	June 14, 1881	21 9 5	On furlough.	
Nov. 11, 1862	Apl. 11, 1883	19 1 13	South Rewah.	
Mar. 25, 1875	Mar. 10, 1877	8 0 3	On furlough.	
Nov. 11, 1878	Jan. 25, 1883	5 1 20	Punjab.	
Dec. 17, 1879	Apl. 11, 1883	4 0 15	Jaunsar.	
July 30, 1880	July 30, 1880	3 5 2	Chhatisgarh.	
Nov. 29, 1881	Nov. 29, 1881	2 1 2	Assam.	
Dec. 29, 1883	Dec. 29, 1883	0 0 3	Office.	
Dec. 29, 1883	Dec. 29, 1883	0 0 3	Office.	
Apl. 12, 1869	July 7, 1874	14 8 19	Office.	
Dec. 12, 1870	Dec. 31, 1878	9 6 15	Office.	
Jan. 7, 1874	Apl. 1, 1879	9 11 25	Gwalior.	
Jan. 7, 1874	Apl. 1, 1879	9 11 25	South Rewah.	

Disposition List of the Officers of the Geological

NAMES OF OFFICERS.	Where employed.	No. in General List.	Rank and Grade.	Date of first joining the Department.	STRENGTH OF ESTABLISHMENTS OF ALL GRADES.							
					Separately graded.	1st grade.	2nd grade.	3rd grade.	Non-graded Officers.	Clerks & Draftsmen.	Office Establishment.	Pressmen and Servants.
H. B. Medicott, A.M., F.R.S., F.G.S. <i>1st Grade.</i>	Office	1	Supdt., Geological Survey.	Mar. 24, 1854	2	4	4	4	4	12	22	
William King, A.B., D.Sc.	Chhatisgarh	2	Depy. Supdt., Geological Survey.	Mar. 4, 1857	4 first grade officers.	...	...	...	...	...	...
R. Bruce Foote, F.G.S.	Kurnul	3	Ditto	Sept. 28, 1858		...	...	...	...	...	...
F. R. Mallet, F.G.S.	Office	4	Ditto	Feb. 12, 1859		...	...	...	...	...	...
Theo. W. H. Hughes, A.B.S.M., F.G.S. <i>2nd Grade.</i>	South Rewah	7	Asst. Supdt., Geological Survey.	Nov. 11, 1862		...	...	...	...	...	...
F. Fedden, A.B.S.M., F.G.S.	Office	5	Asst. Supdt., Geological Survey.	Oct. 1, 1860	4 second grade officers.	...	...	...	...	...	...
C. A. Hacket	On furlough	6	Ditto	Nov. 15, 1861		...	...	...	...	...	...
C. L. Griesbach, F.G.S.	Punjab	9	Ditto	Nov. 11, 1878		...	...	...	...	...	...
R. D. Oldham, A.B.S.M.	Jaunsar	10	Ditto	Dec. 17, 1879		...	...	...	...	...	...
Vacant			Ditto		4 third grade officers.	...	...	...	...	...	...
<i>3rd Grade.</i>						...	...	...	...	...	...
P. N. Bose, B.Sc., F.G.S.	Chhatisgarh	11	Asst. Supdt., Geological Survey.	July 30, 1880		...	...	...	...	...	...
T. H. D. LaTouche, A.B.	Assam	12	Ditto	Nov. 29, 1881		...	...	...	...	...	...
Edward James Jones, A.B.S.M.	Office	13	Ditto	Dec. 29, 1883	...	...	...	...	...	...
C. S. Middlemiss, A.B.	Ditto	14	Ditto	Dec. 29, 1883	...	...	...	...	...	...
Vacant			Ditto		4 non-graded officers.	...	...	...	...	...	...
Vacant			Ditto			...	...	...	...	...	...
<i>Separately graded.</i>						...	...	...	...	...	...
O. Feistmantel, M.D.	On Furlough	8	Palaeontologist, Geol. Survey.	Mar. 25, 1875		...	...	...	...	...	...
<i>Non-graded Officers.</i>					...	...	...	...	...	...
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	Jan. 7, 1874	...	...	...	...	...	...

Survey of India on the 1st January 1884.

Where employed during last three years.	Annual Cost (Salary and Travelling Allowance of Officers and their Subordinates, if any) from April 1882 to March 1883.	REMARKS.
	<i>R a. p. R a. p.</i>	
{ 1880-81. Nahun and Office. 1881-82. Office. 1882-83. Office.	Salary and fixed allowance 24,000 0 0 24,000 0 0	
{ 1880-81. Malabar Coast and furlough . 1881-82. Furlough. 1882-83. Ditto and Chhatisgarh.	On furlough.	
{ 1880-81. Furlough, Madura & Tinnevely 1881-82. Tinnevely. 1882-83. Madura and Kurnul.	Salary and fixed allowance 15,509 15 11 Travelling allowance 1,489 2 3 Hospital Assistant's pay, &c. 304 14 0 17,304 0 2	
{ 1880-81. Furlough, Office and Sikkim . 1881-82. Office. 1882-83. Ditto and Jabalpur.	Salary and fixed allowance 15,837 0 0 Travelling allowance 366 0 6 16,203 0 6	
{ 1880-81. South Rewah 1881-82. Ditto and furlough. 1882-83. Ditto and South Rewah.	Salary and fixed allowance 3,799 2 8 Travelling allowance 495 0 0 Hospital Assistant's pay, &c. 155 0 0 4,449 2 8	
{ 1880-81. Office and Kattywar 1881-82. Kattywar. 1882-83. Ditto and Gujrat and Office.	Salary and fixed allowance 11,853 7 7 Travelling allowance 833 9 0 12,687 0 7	
{ 1880-81. Rajputana 1881-82. Ditto. 1882-83. Ditto and furlough.	Salary and fixed allowance 7,269 8 0 Travelling allowance 347 13 6 7,617 5 6	
{ 1880-81. Kandahar and Himalayas 1881-82. Himalayas & Duty in Europe. 1882-83. Ditto and Punjab.	Salary and fixed allowance 6,517 8 10 Travelling allowance 879 11 9 7,397 4 7	
{ 1880-81. Jaunsar, Sirmur, and Manipur. 1881-82. Manipur. 1882-83. Jaunsar.	Salary and fixed allowance 8,730 0 0 Travelling allowance 1,137 4 9 9,867 4 9	
{ 1880-81. Ninar 1881-82. Ditto. 1882-83. Ditto and Chhatisgarh.	Salary and fixed allowance 7,665 0 0 Travelling allowance 1,497 15 6 9,162 15 6	
{ 1881-82. Garo Hills 1882-83. Assam.	Salary and fixed allowance 7,157 8 0 Travelling allowance 549 6 6 7,706 14 6	
1883. Office.		
1883. Office.		
{ 1880-81. Office and Hazaribagh, Lohardugga, and Manbhum. 1881-82. Office. 1882-83. Ditto, South Rewah & furlough.	Salary and fixed allowance 10,630 2 10 Travelling allowance 617 1 0 11,247 3 10	
{ 1880-81. Office 1881-82. Ditto. 1882-83. Ditto.	Salary 4,600 0 0	
{ 1880-81. Office 1881-82. Ditto. 1882-83. Ditto.	Salary 3,640 0 0	
{ 1880-81. Gwalior 1881-82. Ditto. 1882-83. Ditto.	Salary 2,150 0 0 Travelling allowance 592 1 0 Chaprasai ditto 155 13 0 2,897 14 0	
{ 1880-81. Office and South Rewah 1881-82. South Rewah. 1882-83. Ditto.	Salary 2,150 0 0 Travelling allowance 599 11 10 Chaprasai ditto 140 11 2 2,890 7 0	

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

Corrected up to 1st January 1884.

LIEUTENANT-GENERAL J. T. WALKER, C.B., F.R.S., L.L.D., &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 21st 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; on furlough to Europe for 6 months from 12th February 1883; extension for six months.

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 Prangzai, Nowadund, Shahkote and Raneezai under Sir Colin Campbell; the attack of Roree under Colonel Boileau; and subsequently, in 1860, in the expedition against the Mahsood Wuzceeres, 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).

BREVET-COLONEL GEORGE CHARLES DEPRÉE, *Officiating Surveyor General, and in charge Topographical Surveys.*

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 Arakan 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 Arakan 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 Arakan 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; Brevet-Colonel, 1st July 1881; furlough to Europe for one year, from 9th December 1881. Extension for 1 month. Returned to India 28th December 1882 and appointed Deputy Surveyor General in charge Topographical Surveys from 1st January 1883; Officiating Surveyor General from 12th February 1883 up to the present time.

WAR SERVICES.

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

BREVET-COLONEL JAMES SCONCE, *Bengal Staff Corps, Deputy Surveyor General in charge Revenue Surveys.*

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 Sangor, 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; Bt. Colonel 9th December 1883.

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 Bulundshubur 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 5th November 1857; in action with the rebels at Shanshabad, 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.,
Officiating Deputy Surveyor General, in charge Trigonometrical Surveys.

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 Terais, 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 Tailleur'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 20th, 1855, promoted to Rs. 400; September 4th, 1856, 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 in charge of amalgamated Computing Office, now designated Head-quarters Offices, and consisting of a Calculating Branch, with small auxiliary branches for Drawing, Printing and Photozincographing, Instrument Dépôt, &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-feet Standard Bar; December 1868 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, Neilgherries, 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); Officiating Deputy Surveyor General in charge Trigonometrical Surveys, from 12th February 1883 up to the present time.

Br. LIEUTENANT-COLONEL H. R. THUILLIER, *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 1858; 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; Brevet-Lieutenant-Colonel 7th October 1883.

Br. COLONEL CHARLES THOMAS HAIG, *Royal Engineers (Bombay), Deputy Superintendent, 1st 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 Okhamandal 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, Great Trigonometrical Survey, 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; 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; promoted to Colonel, 1st July 1881; resumed charge of the Guzerat Party on 27th October 1881; Officiating Deputy Superintendent, 1st grade, from 27th November 1881 to 31st December 1882, and again from 12th February 1883 to the present time; substantively promoted to Deputy Superintendent, 1st grade, 1st November 1883.

WAR SERVICES.

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

BREVET LIEUTENANT-COLONEL 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 1866; 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; Brevet Lieutenant-Colonel, 10th March 1883.

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

MARCH 14th, 1854, sailed from England as Cadet of Cavalry; June 24th, 1854, landed at Calcutta; August and September, with 1st Regiment, Light Cavalry; October 1854, joined 5th Bengal Light Cavalry; 1855, passed in the Vernacular, and in Hindustani 1856; 1855-56, on outpost duty with detachment at Fort Abbazai, present at one or two skirmishes with the Mohmands near Shabkadar; 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; June 2nd, 1858, medical certificate to Murree; October 4th, 1858, appointed (on probation) to Great Trigonometrical Survey; 1858-59 and 1859-60, 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. B. Chamberlain against the Mahsud Waziris, present at the forcing of the Barara Tangi; 1860-61 and 1861-62, in charge of the levelling operations from Sind to Dehra Dun, Attok and Agra, elected to remain "a local" in Her Majesty's Indian Army; May 1st, 1862, transferred to the Coast Series, employed in selecting Vizagapatam Base Line till 14th July; 1862-63, took part in base line measurement, and executed the line of levels for connection with tide gauge, also the connecting triangulation with 24-inch theodolite; 1863-64, in charge Coast Series, extended the series about 140 miles from Guntur to Nellore; 1864-65, completed Series to Madras by 10th June; 1865-66, carried Madras Longitudinal Series to Bangalore; 1866-67, 20 months' leave, medical certificate (eye-sight injured by exposure and overwork); went to England and back, 28th May 1866 to 24th January 1868; 1867-68, resumed charge of the Madras Party, and selected Cape Comorin Base Line; 1868-69, completed principal triangulation in vicinity; 1869-70, Great Arc Series, Salem and Coimbatore; January 11th, 1870, promoted to Brevet Major; 1870-71, Great Arc Series Section over Palaney Mountains, also obtained, by self-registering tide gauge, 13 months' tidal observations at Tuticorin; October 1st, 1871, Deputy Superintendent, 2nd grade; 1871-72, carried Madras and Mangalore Longitudinal Series from Mysore to Mangalore; 1872-73, completed the Mangalore Meridional Series; 1873-74, resumed and completed the Great Arc Series Section; 1874-75, completed Rámnád and Rámswaram Longitudinal Series; 1875-76, completed Ceylon connection, and commenced Madras Coast Series north of Rámnád; 19th December 1876, promoted to Brevet Lieutenant-Colonel; 1876-77, furlough (1 year and 17 days) to England, May 14th, 1876, to May 31st, 1877; June 1st, 1877, resumed charge of Madras Party; 1877-78, carried the Madras Coast Series across Cauvery Delta, Tanjore; 1878-79, carried the triangulation northwards through South Arcot District; 1879-80, completed the triangulation in Southern India,—at Madras and Cochin; 1st October 1880, in charge Bombay Party; 1880-81, completed the Eastern Sind Series; 1881-82, principal triangulation near Mergui, British Burma, and superintended measurement of the Mergui Base Line; furlough for one year and six months from 10th November 1882; Lieutenant-Colonel, 1st January 1883.

MAJOR GEORGE STRAHAN, *Royal Engineers (Bengal), Deputy Superintendent, 2nd Grade, and Officiating Assistant Surveyor General.*

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 1868; 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; received charge of No. 2 Astronomical Party from 4th November 1881; Officiating Assistant Surveyor General in charge, Engraving and Cartographic branches, Headquarters, Calcutta, from 27th April 1883 to 24th July 1883; received charge of No. 2 Astronomical Party on 1st August 1883.

WAR SERVICES.

Nil.

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

JOINED the service, 11th December 1857; arrived in India, 19th 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; promoted to Deputy Superintendent, 2nd grade, 1st January 1878; 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; assumed charge of No. 2 Topographical Party, 3rd December 1881.

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 Umbeyla 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.

BREVET-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 25th 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. Promoted to Brevet-Colonel 28th October 1883.

WAR SERVICES.

Nil.

LIEUTENANT-COLONEL 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 India, 16th October 1857; promoted to 1st Lieutenant on the 27th April 1858; appointed to the Bengal Horse Artillery on the 23rd October 1858; services transferred 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 to 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 to 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, on urgent private affairs, under Rule XI. of 1868 from 16th February 1878; rejoined appointment in Head-quarters office, 12th August 1878; promoted to Deputy Superintendent, 2nd grade, on the 27th October 1878; furlough on private affairs for 183 days, from 9th November 1882, extension for 91 days and further extension for 274 days; promoted to Lieutenant-Colonel, 12th June 1883.

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 2nd 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, 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.; Brevet Lieutenant-Colonel, 22nd November 1879; received charge of No. 2 Astronomical Party, October 1880; on furlough, private affairs, for six months, from 10th November 1881; on furlough for 1 year and 1 day from 24th March 1883.

WAR SERVICES.

Served with the Southern Division Afghanistan Field Force under the command of Lieutenant-General D. Stewart, C.B., from 12th March to end of November 1879; Brevet Lieutenant-Colonel, 22nd November 1879—medal.

MAJOR ROBERT VANSITTART RIDDELL, *Royal Engineers (Bengal), Deputy Superintendent, 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 28th 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 9th January 1882; promoted to Major, 3rd June 1881; officiated as Mint Master, Calcutta, from 3rd July 1881 to 2nd October 1881; appointed Deputy Superintendent, 2nd grade, 10th January 1882; officiating as Mint Master, Bombay, from 12th October 1882 to 8th January 1883, and again from 4th May 1883 up to the present time.

WAR SERVICES.

Nil.

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 Military 2nd Assistant, and attached to No. 1 Party, 26th September 1863; took charge of reconnoitring party in Bhutan under General Tytler in October 1865; promoted to

Assistant Surveyor, 1st grade, 1st April 1866; rejoined No. 1 Party, 16th July 1866; promoted to Surveyor, 3rd grade, 1st December 1867; furlough to Europe from 2nd December 1871 to 27th October 1873; promoted to Captain, 20th August 1872; Officiating Deputy Superintendent, 2nd grade, 4th January 1874; reverted to 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; reverted to Deputy Superintendent, 3rd grade, 22nd April 1879; 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 date; Brevet-Major, 2nd March 1881; promoted to Major, 1st July 1881; appointed Assistant Surveyor-General in charge Cartographic and Engraving Branches from 24th July 1883 to present date.

WAR SERVICES.

Served with the Bhutan Field Force, in charge of reconnoitring party under General Tytler, from October 1865 to 16th July 1866—medal and clasp; served with the Peshawur Field Force in Afghanistan under Sir Samuel Brown from March 1879 to end of first campaign in June 1879.

MR. JOHN OWEN NIX JAMES, *Deputy Superintendent, Officiating 2nd Grade, Assistant Surveyor General.*

APPOINTED to the Great Trigonometrical Survey of India as 3rd class Sub-Assistant, 29th July 1845; promoted to 2nd class Sub-Assistant, 29th July 1848; promoted to 1st class Sub-Assistant, 29th July 1853; 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; officiated as Deputy Superintendent, 2nd grade, from 14th December 1880; reverted to 3rd grade from 27th July 1881; officiating Deputy Superintendent, 2nd grade, from 5th November 1881; reverted to 3rd grade from 15th May 1882; obtained the Indian Mutiny Medal, 1857; officiating Deputy Superintendent, 2nd grade, from 2nd November 1882 up to the present time; in charge No. 3 Revenue Survey Party from 12th May to 26th October 1883.

MAJOR WILLIAM BARRON, *Bengal Staff Corps, Deputy Superintendent, Officiating 2nd Grade.*

JOINED the Bengal Artillery as 2nd Lieutenant on 11th December 1858; 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; officiating Deputy Superintendent, 2nd grade, from 7th November 1882 to 8th January 1883, and from 12th February 1883 up to the present time; Furlough, private affairs, from 9th November 1883.

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 Wuzereee 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, Officiating Deputy Superintendent, 2nd 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 Sind 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 re-joining 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, 3rd grade, 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 the Lushai Hills, on 1st November 1871 to 30th April 1872; on return from the Lushai Expedition was transferred to charge of 4th Division, Central Provinces, from 29th August 1872; the designation of this party was subsequently 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 18th April 1882; promoted to Lieutenant-Colonel, 22nd November 1879; on furlough for 6 months from 19th April 1882; took charge of Darjeeling and Nepal Boundary Parties, 1st November 1882; officiating Deputy Superintendent, 2nd grade, from 7th November to 31st December 1882, and from 14th March 1883 to the present time.

WAR SERVICES.

Accompanied the Persian Expeditionary Force of 1856 as Subaltern in No. 5 Light Field Battery, and was present at the landing at Halila Bay, the taking of Heshire and Bushire, and the action of Kushat—(medal and clasp); accompanied a force despatched after the rebels from Kurra-chee 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.

MAJOR WILLIAM JAMES HEAVISIDE, *Royal Engineers (Bengal), Deputy Superintendent, Officiating 2nd 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 Bombay Native States Topographical Party, 24th October 1879; received charge of No. 1 Astronomical Party, 18th October 1880; Brevet Major, 2nd March 1881; promoted to Major, 1st July 1881; on furlough to Europe for 7 months from 28th April 1882; received charge of No. 1 Astronomical Party, 6th December 1882 and resumed joint charge of the Longitude operations; officiating Deputy Superintendent, 2nd Grade, from 29th April 1883 up to the present time.

WAR SERVICES.

Served with the Left Centre Column, Bhutan Field Force, as Assistant Field Engineer, 1865-66—Frontier medal and clasp for Bhutan; served in 1878-79 with the Southern Afghanistan Field Force on special survey duty; joined Sir Donald Stewart's column at Kandahar, and accompanied the Tal Chotiali Force under Sir M. F. Biddulph on its return to India; mentioned in Tal Chotiali despatches. Medal. Brevet of Major.

LIEUTENANT-COLONEL AYRTON PULLAN, *Bengal Staff Corps, Deputy Superintendent, Officiating 2nd 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, Gorukpur 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; returned to duty, 19th April 1879; resumed charge of Kattywar Survey, 26th April 1879; promoted to Lieutenant-Colonel, 14th June 1882; Officiating Deputy Superintendent, 2nd grade, from 26th October 1883.

WAR SERVICES.

Served as Orderly Officer to Brigadier Johnstone on the march from Jullundur to Delhi, June 1857; served with the 4th Sikh 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 Bausee 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 9th December 1859 as Ensign on the General List of Bengal Infantry; arrived in India, 7th March 1860; by G. O. C. C., dated 9th April 1860, directed to do duty with Her Majesty's 77th Regiment; promoted to 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 to Captain on the 9th December 1871; promoted to 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; received Personal Allowance of Rs. 100, until promotion to Deputy Superintendent, 2nd grade, 15th February 1883.

WAR SERVICES.

Nil.

LIEUTENANT-COLONEL 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 appointed to Staff Corps, 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 (Dearah), now 3rd Division Survey of India, 7th December 1877; Major, 12th December 1877; confirmed as Deputy Superintendent, 3rd grade, 27th October 1878; received charge of No. 8 Party, Bassein District, British Burma, on 25th November 1881; received Personal Allowance of Rs. 100, until promotion to Deputy Superintendent, 2nd grade, 15th February 1883; on furlough to Europe for 273 days from 8th June 1883; promoted to Lieutenant-Colonel from 12th December 1883.

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 of 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 Goalparah 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 Barkagarh 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; furlough to Europe from 9th August 1881 to 30th October 1882; appointed to do duty in the Head-quarters Office, Calcutta, from 4th November 1882; received Personal Allowance of Rs. 100, until promotion to Deputy Superintendent, 2nd grade, 15th February 1883; assumed charge of Mirzapur and Gorakpur District Cadastral Survey, North-Western Provinces, from 1st November 1883.

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.

LIEUTENANT-COLONEL 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 9th March 1882, with the exception of a period from October 1874 to August 1875, during which Major Godwin-Austen had charge; Major, 4th April 1877; on furlough to Europe for one year from 10th March 1882; extension for 1 year; Lieutenant-Colonel, 4th April 1883.

WAR SERVICES.

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

MAJOR T. H. HOLDICH, *Royal Engineers, Deputy Superintendent, 3rd Grade.*

COMMISSIONED Lieutenant, R.E., 17th December 1862; appointed to India, October 1864; arrived in India, 3rd March 1865; appointed Assistant to Lieutenant C. Strahan, R.E., in charge Field Survey Operations in Bhootan, October 1865; gazetted Assistant Superintendent, 2nd grade, Topographical Survey of India, 23rd July 1866, 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, and joined the 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 to 14th May 1877; appointed to 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 28th April 1883. Brevet Major, 2nd March 1881; special leave to England for three months from 1st November 1880; assumed charge of Kohat Topographical Survey, 15th February 1881; promoted to Deputy Superintendent (new), 4th grade, 1st July 1882; promoted to Deputy Superintendent, 3rd grade, 29th April 1883; assumed charge of Baluchistan Topographical Party, 1st October 1883.

WAR SERVICES.

Served on special survey duty during Bhootan Campaign from October 1865 to close of campaign; present with the Buxa column to its farthest advance, and subsequently with the Dewangiri column during advance to the Monas; despatches not published—frontier medal and clasp

for Bhootan; served on special survey duty during the Abyssinian Campaign from December 1867 to close of campaign; mentioned in despatches of Sir Lt. Napier, dated 1st June 1868; services commended by Secretary of State for War-medal; served on special survey duty during first period of Afghan Campaign from February 1879 till close of campaign; present with Sir M. Biddulph's division during march from Pishin to India *via* Tal Chotali; mentioned in despatches by Sir M. Biddulph; services specially acknowledged in Field Force Order, No. 427 of 16th May; received acknowledgment of Governor General in Council and Secretary of State for India; served in charge of survey operations in Northern Afghanistan during second period of the campaign; present at several actions fought near Kabul in November and December 1879, siege and defence of Sherpur, occupation of Lughman Valley, expeditions to Kohistan, Logar and Wardak, E. C., mentioned in despatches by Sir F. Roberts; received thanks of Governor General in Council and Secretary of State for India for services in charge of survey operations—medal with clasp for Kabul; served in charge survey operations during expeditions against the Mahsud Waziris in the spring of 1881; present at skirmish on Shaidar Mountain when survey party was attacked; mentioned in despatches by Brevet General R. Kennedy, Commanding Expedition.

MAJOR JAMES WATERHOUSE, *Bengal Staff Corps, Officiating Deputy Superintendent, 3rd 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; resumed charge of the Photographic Office of the Surveyor General's Office, Calcutta, 26th December 1881; Officiating Deputy Superintendent, 3rd grade, from 26th December 1881; promoted to Deputy Superintendent (new), 4th grade, 1st July 1882; continuing to officiate as Deputy Superintendent, 3rd grade.

WAR SERVICES.

Nil.

MAJOR MALCOLM W. ROGERS, *Royal Engineers, Officiating Deputy Superintendent, 3rd Grade, and Officiating Assistant Surveyor General.*

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; promoted to Major, 18th December 1881; promoted to Deputy Superintendent (new), 4th grade, 1st July 1882; continuing to officiate as Deputy Superintendent, 3rd grade; Officiating Assistant Surveyor General, in charge Mathematical Instrument Office and Correspondence Office, Head-quarters, Calcutta, from 19th April 1883.

WAR SERVICES.

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

MAJOR J. HILL, *Royal Engineers, Officiating Deputy Superintendent, 3rd Grade.*

MAJOR JOHN HILL, Royal Engineers, joined the Corps of Royal Engineers as Lieutenant on the 25th June 1862, and after serving at the S. M. E., Chatham, and on the Plymouth Defences, arrived in India on the 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; promoted to Major, 25th June 1882. Deputy Superintendent (new), 4th grade, 1st July 1882; continuing to officiate as Deputy Superintendent, 3rd grade, up to 8th January 1883, and again officiated in the same grade from 12th February 1883 up to the present time.

WAR SERVICES.

Nil.

Mr. HENRY HORST, *Officiating Deputy Superintendent, 3rd Grade.*

APPOINTED Librarian and Accountant to the Thomason Civil Engineering College, Roorkee, 1st January 1853 up to September 1854; appointed as a 3rd class Sub-Assistant in the Great Trigonometrical Survey (without break of service), 1st September 1854; 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 11th October 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 Harbuns 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, with further extension on subsistence allowance, till 12th September 1882; promoted to Deputy Superintendent (new), 4th grade, 1st July 1882; Officiating Deputy Superintendent, 3rd grade, from 13th September up to 31st December 1882, and from 14th March 1883 up to the present time.

Mr. WILLIAM HAMMOND COLE, M.A., CANTAB., F.R.A.S., F.R.O.S., *Officiating Deputy Superintendent, 3rd 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 Mussoree 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, and held charge of the Computing Office, 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; promoted to Deputy Superintendent (new), 4th grade, 1st July 1882. Officiated as Deputy Superintendent, 3rd grade, from 7th November to 5th December 1882, and again from 20th April 1883 up to the present time. Officiating in charge Head-quarters Office, Dehra Dun, and Survey Detachment in Kashmir from 12th February 1883.

MR. HENRY BLAQUIRE TALBOT, *Officiating Deputy Superintendent, 3rd 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-Saugor 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 Rohilcund 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 of Tharawaddy subsequently Prome and Akyab Districts, British Burma Survey, from 1st November 1880; Deputy Superintendent (new), 4th grade, 1st July 1882. Officiating Deputy Superintendent, 3rd grade, from 29th April 1883.

MAJOR ANDREW WILSON BAIRD, A. I. C. E., *Royal Engineers, Officiating Deputy Superintendent, 3rd 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 examination, and gazetted Assistant, 2nd class, on 28th March 1865; promoted to 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 Leveling 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 leveling 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 charge of the tidal and leveling operations, Survey of India; promoted for the third time Assistant Superintendent, 1st grade, on the 1st January 1879; on deputation as Commissioner, Venice Geographical Exhibition in August and September 1881; awarded medal of First class for Tidal observations in India. At the Congress the Survey of India exhibited a complete set of Tidal apparatus, Diagrams, &c. and thus was enabled to be represented in class II. (Hydrography) in which class a diploma of Honor was awarded to the Department; on furlough to Europe for 1 year and 148 days from 16th October 1881. Promoted to Major, 18th December 1881; promoted to Deputy Superintendent (new), 4th grade, 1st July 1882. Resumed charge of Tidal and Leveling operations on the 20th April 1883. Officiating Deputy Superintendent, 3rd grade, from 29th May 1883.

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.

MAJOR J. R. McCULLAGH, *Royal Engineers, Officiating Deputy Superintendent, 3rd 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 Hantlawaddy District Cadastral Survey in British Burma on 2nd June 1881, and received charge of Party on 1st August 1881; promoted to Major, 18th December, 1881; Deputy Superintendent (new), 4th grade, 1st July 1882; Officiating Deputy Superintendent, 3rd grade, 1st November, 1883.

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, Deputy Superintendent, 4th Grade.*

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 G-11, 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 G-11, 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; promoted to Major, 22nd June 1879; promoted to Assistant Superintendent, 1st grade, 24th April 1882; promoted to Deputy Superintendent (new), 4th grade, 1st July 1882.

WAR SERVICES.

Nil.

MR. JOHN MCGILL, *Deputy Superintendent, 4th Grade.*

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, r.e.; promoted to Sub-Assistant, 2nd grade, 10th June 1854; triangulation Kattywar, Thar Parkar and Cutch under Lieutenant D. J. Nasmyth, r.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, Kutch and Guzerat under Captain D. J. Nasmyth, r.e.; promoted to Senior Sub-Assistant on 1st January 1859; triangulation in Mewar and Guzerat under Captain C. T. Haig, r.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, r.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, r.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, r.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, r.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 Leveling 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 of South Deccan Topographical Party, on 15th July 1880; received charge of Khandesh and Bombay Native States Party, 18th October 1880; made over charge 3rd December 1881; on duty Head-quarters office, Calcutta, from 10th December 1881; Assistant Superintendent (new), 1st grade, 1st July 1882; Officiating Deputy Superintendent, 4th grade, from 1st July 1882 up to 31st January 1883; in charge of Secondary Triangulation Party, 1st November 1882 to 15th October 1883. Promoted to Deputy Superintendent, 4th grade, from 1st February 1883. Proceeded on furlough (with subsidiary leave) on 25th October 1883.

WAR SERVICES.

Nil.

MAJOR S. H. COWAN, *Bengal Staff Corps, Deputy Superintendent, 4th Grade.*

JOINED the service, 9th December 1859; arrived in India, 9th April 1860; served with Bengal Artillery Depôt 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; on special duty, Surveyor General's Office, Photographic Branch, Calcutta, from 26th December 1881; assumed charge, Hooghly River Survey, 7th April 1882; Assistant Superintendent, 1st grade (new), 1st July 1882; personal allowance of Rs. 100, 1st April 1881; Officiating Deputy Superintendent, 4th grade (new), from 1st July 1882 up to 28th April 1883, and confirmed in that grade, 29th April 1883; furlough to Europe from 7th August 1883; assumed charge of Benares and Basti Districts (Cadastral) Survey, North-Western Provinces, from 11th December 1883.

MAJOR EDWARD HARRIS STEEL, *Bengal Staff Corps, Officiating Deputy Superintendent, 4th Grade.*

JOINED the service on 8th June 1860, and arrived in India, 11th October 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 rejoined 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 7th December 1881; personal allowance of Rs. 100, 1st April 1881; transferred to charge of Bassein District Survey from 20th November 1880; furlough on medical certificate from 8th December 1881; extension for 6 months; further extension for 4 months and 10 days; Assistant Superintendent (new), 1st grade, 1st July 1882; returned from furlough 22nd October 1883; Officiating Deputy Superintendent, 4th grade, from the same date. Assumed charge of Aligarh and Etah Districts, Topographical Survey, North-Western Provinces, 27th October 1883.

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, Offg. Deputy Superintendent, 4th Grade.*

CADET at the Military College, Addiscombe, from January 1858 to December 1859; appointed 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 Bannu 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; on duty Head-quarters office, Calcutta, from 2nd to 22nd August 1881; furlough on medical certificate from 29th August 1881 to 27th October 1882; Assistant Superintendent (new), 1st grade, 1st July 1882; personal allowance of Rs. 100 from 1st April 1881; Officiating Deputy Superintendent, 4th grade, from 29th October 1882 up to the present time; doing duty in the Head-quarters Office, Calcutta, from 30th October to 25th November 1882; transferred to Bassein District Cadastral Survey, 26th November 1882; received charge of this Survey, 29th May 1883.

WAR SERVICES.

Nil.

Mr. EDWIN CLIFFORD BARRETT, *Offg. Deputy Superintendent, 4th Grade.*

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, 20th July 1879, thence to Bassein Survey, British Burma, 11th November 1879; furlough to Europe, 27th August 1880 to 12th July 1882; subsidiary leave from 13th to 23rd idem; doing duty in the Head-quarters office, Calcutta, from 24th July to end of October 1882; Assistant Superintendent (new), 1st grade, 1st July 1882; Officiating Deputy Superintendent, 4th grade, from 24th July 1882 up to the present time; transferred to Burma Topographical Survey, British Burma; assumed charge of Kamrup District (Cadastral) Survey Assam, 25th July 1883.

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, Offg. Deputy Superintendent, 4th Grade.*

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 23rd Fusiliers at Fyzabad; marched with them to Agra; 27th March 1863, appointed Musketry Instructor to the 19th Hussars at Lucknow, marched with them to Meerut, held this appointment till 15th April 1865; 15th April 1865, leave on private affairs to the hills; 12th July 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 winter of 1867-68, first class certificates for surveying and field engineering; 9th September 1867, appointed to the Bengal Staff Corps; 17th July 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; 9th November 1869, promoted to Assistant Surveyor, 2nd grade; 1st May 1870, transferred to Revenue Branch and joined Hazaribagh Survey Party; 1st October 1870, transferred to Bahawalpur Party; 1st December 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 Chandguruh 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

* By Presidency Division Order of 4th November 1862.

country and Kohat Pass ; reduced to Assistant Superintendent, 3rd grade, 1st January 1878, by the operation of the new organization of the Survey Department ; 13th May 1878, Officiating 1st grade Assistant Superintendent ; 5th October, reverted to officiating 2nd grade ; 27th October, promoted to 2nd grade (third time) ; 27th October, officiating 1st grade ; 28th November, reverted to 2nd grade ; 22nd December, officiating 1st grade ; 4th February 1879, reverted to 2nd grade ; promoted to Major, 4th May 1880 ; Officiating Assistant Superintendent, 1st grade, from 17th November 1880 to 30th June 1882 ; Assistant Superintendent (new), 1st grade, 1st July 1882 ; Officiating Deputy Superintendent, 4th grade, from 1st July 1882 up to the present time ; assumed charge of No. 1 Topographical Party 1st October 1883.

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 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, Officiating Deputy Superintendent, 4th Grade.*

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 ; Appointed to charge of No. 6 Topographical Party from 3rd December 1881 ; Assistant Superintendent (new), 1st grade, 1st July 1882 ; Officiating Deputy Superintendent, 4th grade, 1st July 1882 to 8th January 1883, and from 12th February 1883 up to the present time. Invested with the powers of a Magistrate of the 2nd class to be exercised within the Sub-Division of Karimganj, South Sylhet and Halimgunj in the District of Sylhet, 13th March 1883.

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 Alikhel, 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 Roberts and Ross.

Mr. G. H. COOKE, *Officiating Deputy Superintendent, 4th Grade.*

CAME to the Country in 1865 ; joined the Department, as Sub-Assistant, 1st class, under Major James Sconce, 6th December 1866 ; 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 Lushai Expeditionary Force ; examination leave for three months, from 5th 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 Tal, and completed the survey of the Naini Tal Cantonment on the scale of 16-inches=one mile ; in November 1873 was transferred to the 9th Bilaspur District Survey, and completed the survey of Aheri 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 to 8th June 1882; promoted to Assistant Superintendent, 2nd grade, on 14th December 1880 transferred to No. 3 Party, Meerut, &c., Districts Survey, North-Western Provinces, and joined, 9th June 1882; Assistant Superintendent (new), 1st grade, 1st July 1882; Officiating Deputy Superintendent, 4th grade, 1st July to 31st October 1882, 2nd and 3rd November 1882, from 7th idem up to 31st December 1882, 14th March 1883, and from 20th April 1883 up to the present time; transferred to Benares, &c., Districts (Cadastral) Survey North-Western Provinces, 17th October 1883.

WAR SERVICES.

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

MR. EDWIN JAMES JACKSON, *Officiating Deputy Superintendent, 4th Grade.*

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, Revenue Survey, (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 to 3rd December 1881; transferred to No. 2 Party, Hanthawaddy District, British Burma; Assistant Superintendent (new) 1st grade, 1st July 1882; Officiating Deputy Superintendent, 4th grade, afternoon of 18th November 1882; reverted to Assistant Superintendent, 1st grade, from 6th December 1882; Officiating Deputy Superintendent, 4th grade, from 29th April 1883 up to the present time.

CAPTAIN ST. GEORGE CORBET GORE, *Royal Engineers, Officiating Deputy Superintendent, 4th Grade.*

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 and attached to the Dehra Dun Survey Party; 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 and attached to the Bhopal and Malwa Survey; transferred to Guzerat Party, Great Trigonometrical Survey, 5th 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 to 10th December 1880; furlough to Europe for two years from 11th December 1880; promoted to Captain, 8th January 1882; Assistant Superintendent (new), 2nd grade, 1st July 1882; promoted to Assistant Superintendent, 1st grade, 10th October 1882; appointed to do duty at Head-quarters, Calcutta, from 13th December 1882. Officiating Deputy Superintendent, 4th grade, from 29th May 1883 up to the present time.

WAR SERVICES.

Served with the Afghanistan Field Force, Quetta Column, from 9th February 1879 to 15th May 1880; accompanied Sir D. Stewart's column in its march from Kandahar to Kabul as officer in charge of survey; present at the action of Ahmed Khel, near Ghuzni, and of Urzu Shabiz at Ghuzni.

MR. EDWARD C. RYALL, *Assistant Superintendent, 1st Grade.*

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 Mussoorie, 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 Headquarters office, Dehra Dun; on the 1st January 1879 was transferred to the 3rd Division, North-Western Provinces Survey, Revenue Branch; Military service—as volunteer during the mutiny; served against the Murree rebels—(medal). Transferred to Darjeeling party, 1st September 1881.

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; Assistant Superintendent (new), 2nd grade, 1st July 1882; Officiating Assistant Superintendent, 1st grade, from 1st July 1882 up to 31st January 1883. Promoted to Assistant Superintendent, 1st grade, 1st February 1883.

CAPTAIN JAMES RAMSAY HOBDAY, *Bengal Staff Corps, Officiating Deputy Superintendent, 4th Grade.*

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, 30th Regiment, Bengal Infantry, 20th 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. 505 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 30th June 1882; promoted to the rank of Captain, 13th January 1881; Assistant Superintendent (new), 2nd grade, 1st July 1882; Officiating Assistant Superintendent, 1st grade, from 1st July 1882 to 14th April 1883. Promoted to Assistant Superintendent, 1st grade, 15th April 1883. Officiating Deputy Superintendent, 4th grade, from 25th July 1883 to 21st October 1883 and from 21st October 1883 up to the present time. In charge Andaman Topographical Party from 1st November 1883.

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, Assistant Superintendent, 1st Grade.*

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; Assistant Superintendent, 3rd grade, 24th April 1882; Officiating Assistant Superintendent, 1st grade, from 24th April to 14th May 1882; reverted to Officiating Assistant Superintendent, 2nd grade, from 15th May 1882; Assistant Superintendent (new), 2nd grade, 1st July 1882; Officiating Assistant Superintendent, 1st grade, from 1st July 1882 to 28th April 1883. Promoted to Assistant Superintendent, 1st grade, 29th April 1883. Officiating in charge No. 1 Central India and Rajputana Topographical Party from 1st May

1883 up to 30th September 1883; Officiating Deputy Superintendent, 4th grade, from 1st November to 10th December 1883.

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, Officiating Assistant Superintendent, 1st Grade.*

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; Assistant Superintendent (new), 2nd grade, 1st July 1882; confirmed in the Survey Department, 13th September 1882; Officiating Assistant Superintendent, 1st grade, from 13th September 1882 up to the present time.

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.

LIEUTENANT ROBERT ALEXANDER WAHAB, *Royal Engineers, Officiating Assistant Superintendent, 1st Grade.*

LIEUTENANT, 29th April 1873; appointed to Indian Establishment, 1st January 1876; arrived in India, 8th March 1876; attached to Madras Sappers and Miners from March 1876 till December 1880; appointed Assistant Engineer, 1st grade, Department Public Works, Military Works Branch, January 1881; temporary Executive Engineer, 4th grade, March 1882; appointed Assistant Superintendent, 2nd grade, Survey of India, 8th January 1883; Officiating Assistant Superintendent, 1st grade, from 1st February 1883 up to the present time.

WAR SERVICES.

Served in the 1st Afghan Campaign from 9th January to 9th June 1879 as Assistant Field Engineer and Adjutant, Royal Engineers, Peshawar Valley Field Force; second Afghan Campaign, October 1879 to August 1880; as Assistant Field Engineer; Expedition against Mabsud Waziris in April and May 1881 as Assistant Field Engineer and *in charge of R. E. Park.*

Mr. WILLIAM HENRY PATTERSON, *Officiating Assistant Superintendent, 1st Grade.*

APPOINTED Junior Sub-Assistant Revenue Surveyor 1st December 1851, and posted to the Rechnab Doab (Punjab) Revenue Survey; transferred to the Sindh Sagar Doab Revenue Survey 1st October 1855; promoted to 3rd grade, 1st October 1855; transferred to the Derajat (Trans-Indus) Survey, 1st July 1856; promoted to 2nd grade, 1st May 1857; promoted to 1st grade, 1st January 1859; honorable mention in the Punjab Administration Report for 1859-60; thanks of the Lieutenant-Governor of the Punjab, and of the Government of India. Transferred to the 1st Division (Oudh) Revenue Survey, 1st October 1859; promoted to Assistant Revenue Surveyor, 3rd grade, 1st January 1862; on deputation at Head-quarters office (Drawing Branch), Calcutta, 1st September 1862; promoted to 1st grade, 1st January 1866; designation changed to Civil Assistant, 3rd grade, 1st April 1866; transferred to 2nd Division (Oudh) Revenue Survey, 18th April 1866; during 1867-68 detached to make a survey of the cantonments, civil station, and city of Cawnpore on the scale of 12 inches to the mile; and revision of the plan of the Lucknow Cantonments with additions of environs 2 miles all round, on the scale of 8 inches to the mile; promoted to Civil Assistant, 2nd grade, 1st January 1868; promoted to Surveyor, 1st grade, 1st January 1871; transferred to the 1st Division, Lower Provinces Survey (Assam), 1st April 1871; appointed to the temporary charge of the 1st Division, Lower Provinces Survey, from 24th April to 12th June 1872; doing duty at the Presidency Office, 29th January 1873; rejoined 1st Division Lower Provinces Survey in Assam in February 1873; appointed to the temporary charge of the 1st Division Lower Provinces Survey from 25th November 1873 to 7th January 1874; appointed to the charge of the Survey of Lakhiraj holdings in Districts Darrang and Kamrup, with deputation allowance of Rs. 50 per mensem from 1st December 1874 to 18th June 1879; services recognized by the Chief Commissioner, Assam, in Land Revenue Administration Report of District Darrang, season 1875-76; services placed at the disposal of the Chief Commissioner, Assam, for employment under the Settlement Officer, Cachar, 3rd January 1880; appointed Chief Draftsman, Surveyor General's Office, Calcutta, 8th August 1882; promoted to Assistant Superintendent, 2nd grade, 22nd January 1883; transferred to No. 5, Topographical Party (District Mirzapur), 1st February 1883; Officiating Assistant Superintendent, 1st grade, from 1st February 1883 up to the present time.

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.

SPECIAL powers. Vested with powers of a Deputy Collector under Regulation IX. of 1833 in Districts Kamrup, Nowgong, and Barrang, 11th January 1872; vested with powers of Deputy Collector under Act V. of 1875 B. C. (Surveys) in District Cachar, 10th February 1880.

MILITARY SERVICES. As volunteer during the Mutiny of 1857-58; served against the Murree Rebels: Medal.

MR. FREDRICK WILLIAM KELLY, *Officiating Assistant Superintendent, 1st Grade.*

APPOINTED Junior Sub-Assistant, 4th December 1854; promoted to Sub-Assistant, 1st January 1856, in the Punjab and Sind Surveys; special leave for four months from 21st January 1858, which was overstayed from 21st May to 16th August 1858; employed as Sub-Assistant, 2nd class, in the Bhutpur and Bundelcund Surveys, 17th August 1858; promoted to Sub-Assistant, 1st class, 1st January 1861; transferred to 2nd Division Oudh Survey, 3rd February 1861; promoted to Assistant Revenue Surveyor, 3rd class, 1st January 1864; promoted to Civil Assistant, 4th grade, 1st April 1866; transferred to Head-quarters office, Calcutta, 18th September 1866; promoted to Civil Assistant, 3rd grade, 1st July 1867; promoted to Surveyor, 2nd grade, 1st July 1869; in temporary charge of Midnapur Survey from 2nd March to 19th June 1876; promoted to Surveyor, 1st grade, with personal allowance of Rs. 50, 8th July 1879; promoted to 2nd grade Assistant Superintendent, 22nd February 1883; promoted to officiate as Assistant Superintendent, 1st grade, from the same date; transferred to Prome and Akyab Districts, Cadastral Survey, British Burma.

LIEUTENANT HUGH MILBOURNE JACKSON, *Royal Engineers, Officiating Assistant Superintendent, 1st Grade.*

BORN, 27th March 1858; received Commission in Royal Engineers, 19th June 1877; under instruction at the S. M. E., Chatham, from 19th February 1878 to December 1879; served in the 7th Field Company, Royal Engineers (Chatham), from 20th March 1880 to 1st December 1880; transferred to the Indian Establishment, 1st February 1881; served with the Bengal Sappers and Miners at Roorkee, Calcutta, in the Naga Hills and at Rawal Pindi, from May 1st, 1881, to June 7th, 1883; appointed to Survey of India Department as Assistant Superintendent, 2nd grade, with effect from the 11th June 1883, and to officiate as Assistant Superintendent, 1st grade, from the same date.

WAR SERVICES.

Nil.

Statements of Services of Geological Survey Officers.

Corrected up to 1st January 1884.

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 rejoined 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, Sambalpur; 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, Satpurus; 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, Satpurus; 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, Jamu 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; 1881-82-83, Office, Calcutta.

Mr. WILLIAM KING, A.B., D.SC.

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, Wynaad 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 Wynaad gold-fields; 1880-81, Malabar Coast; furlough from 10th May 1881 to 9th July 1883; Chhattisgarh.

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 palaeontological 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 Dambal 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 to 13th June 1881; appointed Deputy Superintendent from 14th June 1881; Tinnevely, 1881-82; held charge of the current duties of the Office of the Superintendent, Geological Survey, from 23rd July to 22nd October 1882; 1882-83, Madura and and Karnul.

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 Vindhya in Bundelkhand and Rewah; 1862-63, on the Vindhya in Mirzapur and Shahabad Districts; 1863-64, on the Vindhya between Rewah and Sangor; June to September 1864, worked with Dr. Stoliczka in Spiti and Rupshu; 1864-65, worked the Vindhya boundary from Jabalpur to Barwai; from 10th May to 9th November 1865, officiated as Deputy Superintendent in Bengal; 1865-66, on the Vindhya 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 Aden 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 1875 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 to 24th January 1883; examined and reported on a new copper mine in British Sikkim; officiated as Deputy Superintendent from 25th April 1882 to 10th April 1883; promoted to the 1st grade on 25th January 1883 and appointed Deputy Superintendent on 11th April 1883; 1882-83 Museum and Jabalpur.

MR. THEODORE WILLIAM HUGHES HUGHES, A.R.S.M., G.S.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, Karharbári, Itkhuri and Daltonganj coal-fields; 1868, 1869, 1870 and 1871, the Wardha Valley coal-fields; passed in the vernacular on the 3rd August 1868; reported for Government, North-Western Provinces, on roofing slates for barracks, Ranikhet, 1869; accompanied Governor General (Lord Mayo) during tour of Wardha Valley coal-field and opening of Mayo colliery, March 1870; reported for Government, Central Provinces, on lead ore at Sleemanabad, June 1870; pointed out over 20 sites for bore holes in the districts of Chanda and Wún—coal proved in all; also assisted officers of His Highness the Nizam to select positions; leave on medical certificate from 1st July 1871 to 8th November 1872; 1872-73, Bandar and Wardha coal-fields; on special duty with Mr. Banerman, visiting the iron deposits of Central Provinces; 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 Kumaon iron ores; in November 1873 reported for the Bengal Iron Company on the Raniganj Field; 1873-74, Wardha Valley coal-field; recommended and indicated sites for borings in the Bandar Field which proved coal; received thanks of Government, Central Provinces; reported for Messrs. Apar and Company on boring sites in the Raniganj Field, also for Messrs. Burn and Company on the Birbhun iron ores; 1874-75, the Pranlita and Jangaon Valleys, and the Wún coal-fields; 1873-74-75, indicated more bore sites in Wún District; promoted to the 2nd grade from 21st April 1875; 1875-76, the Godavari Valley; visited the Mohpani coal-field, and the trial borings for coal at Kháppá and Moran River; accompanied the Superintendent, during his observations of underground temperature; 1876-77, completed survey of the Kota-Maleri area; recommended borings for coal at Sandrapali,—Godavari River; reported for Bengal Coal Company on supposed occurrence of coal south of Karharbári Field; 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, 1880-81, 1881-82-83, South Rewah coal-fields; again visited Mohpani coal-field, and inspected new sinking, August 1880; officiated in the 1st grade and as Deputy Superintendent from 17th March 1881 to 7th June 1882; urged borings for coal at Umariá-Khalesar, Rewah State and in valley of Johilla River, pointed out sites which proved coal over large area, January 1882; reported for Government, Central Provinces, on coal outcrops in Mahanadi, Jabalpur District, May 1882; leave on furlough from 8th June 1882 to 22nd February 1883; officiated in 1st grade from 23rd February 1883 to 10th April 1883; officiated as Deputy Superintendent from 23rd February 1883 to 10th May 1883; promoted to 1st grade on 11th April 1883; superintending Rewah coal explorations from 1st March 1883.

MR. FRANCIS FEDDEN, A.R.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 Maunbhum 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, 1881-82-83, Kattywar and Museum; officiated in the 1st grade from 8th June 1882 to 22nd February 1883, and from 28th March 1883 to 10th May 1883.

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 in Central India; 1867, 1868, and 1869, on the Vindhya 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 Hoshungabad; 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 to 13th June 1881; 1880-81, Rajputana, towards Neemuch and Oodeypore; promoted to 2nd grade from 14th June 1881; 1881-82, Rajputana; leave on furlough, from 20th November 1882.

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; 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 to 24th January 1883; 1881, Kumaun, Himalayas, and Europe on duty; 1882-83, Garhwal and Himalayas; promoted to 2nd grade on 25th January 1883; accompanied Takht-i-Suleiman expedition in December 1883.

WAR SERVICES.

On 6th March 1880 was deputed on special service under the orders of the General Commanding Southern Afghanistan; was present at the action of Girishk, 14th July, and the battle of Maiwand, 27th July; attached as Lieutenant to the 66th Regiment, Kandahar Field Force, Order No. 271, dated 29th July 1880, and was present throughout the siege of Kandahar and the battle of Kandahar, 1st September 1880; favourably mentioned in despatches; received the acknowledgments of the Government of India—medal and clasp.

MR. RICHARD DIXON OLDHAM, A.R.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, Jaunsar and Sirmur and Manipur; passed in the vernacular on 1st August 1881; 1881-82, Manipur; officiated in 2nd grade from 14th June 1881 to 10th April 1883; 1882-83, Jaunsar; promoted to 2nd grade on 11th April 1883.

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, 1881-82, 1882-83, Lower Narbada Valley and Chattisgarh; officiated in 2nd grade from 2nd March 1882.

MR. THOMAS HENRY DIGUES LATOUCHE, B.A. (Camb.)

APPOINTED in Europe by the Secretary of State on 11th October 1881; joined in India as 3rd grade Assistant on 29th November 1881; 1881-82, Garo Hills; passed in the Vernacular on 5th June 1882; officiated in 2nd grade from 8th June 1882; 1882-83, Assam.

MR. EDWARD JAMES JONES, A.R.S.M.

APPOINTED in Europe by the Secretary of State on the 20th September 1883; joined in India as 3rd grade Assistant on the 29th December 1883.

MR. CHARLES STEWART MIDDLEMISS, B.A. (Cantab.)

APPOINTED in Europe by the Secretary of State on the 20th September 1883; joined in India as 3rd grade Assistant on the 29th December 1883.

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 Paleontologist on 10th March 1877; in 1875, 1876, and 1877, made short excursions to the Rajmahal Hills, the Karharbari, Raniganj, and the Satpura coal-fields; 1878, 1879, Office and Karharbari coal-field; 1880-81, Office and Hazaribagh, Lohardugga and Maunbhum; 1881-82, Office and South Rewah; officiated in 1st grade from 25th April 1882 to 27th March 1883; leave on furlough from 28th March 1883.

MR. JULES SCHAUMBURG.

JOINED the Survey as Chief Draughtsman on 12th April 1869; gazetted as Artist on 7th July 1874; officiated as Principal, Government School of Arts, Calcutta, from 5th June 1882.

MR. WILLIAM ROBERT BION.

JOINED the Survey as Librarian on 12th December 1870; appointed Head Clerk as well as Librarian on 1st August 1873; appointed Registrar on 31st December 1878.

LALA KISHEN SINGH.

JOINED the Survey as an Apprentice on 7th January 1874; 1874-1876, Museum, Calcutta; 1876-77, 1877-78, and 1878-79, Sub-Himalaya; appointed Sub-Assistant on 1st April 1879; 1879-80, Punjab; 1880-81 to 1882-83, Gwalior.

LALA HIRA LAL.

JOINED the Survey as an Apprentice on 7th January 1874; 1874 to 1876, Museum; 1876-77, Sind; 1877-78, Satpura and Museum; 1878-79, Museum and Sirgudah; appointed Sub-Assistant on 1st April 1879; 1879-80, Museum; 1880-81 to 1882-83, Museum and South Rewah.

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