

LIST OF OFFICERS

IN THE

SURVEY DEPARTMENTS

CORRECTED TO

1st JANUARY 1886.



CALCUTTA :
PRINTED BY THE SUPERINTENDENT OF GOVERNMENT PRINTING, INDIA,
1886.

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SURVEY OF INDIA DEPARTMENT.

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List of Officers of the Senior Division, Survey of

No. sanctioned.	No. existing in each grade.	Names of Officers.	Branch to which originally posted.	Passed in Vernacular.	Age.	Date of appointment to the Department.	Date of promotion to the present grade.	Period of service counting towards pension on 1st Jan. '86.
					Y. M. D.			Y. M. D.
ADMINISTRATIVE STAFF.								
1	1	Bt. Col. G. C. DePrée, s.c.	Topogl.	P. C. H.	53 4 28	Oct. 20, 1854	Jan. 12, 1884	
1	1	Bt. Lt.-Col. H. R. Thuillier, B.E.	G. T. S.	P. H.	47 9 5	May 21, 1859	Oct. 1, 1884	
1	1	Bt. Col. J. Sconce, s.c.	Rev.	P. H.	49 8 29	Oct. 21, 1859	Jan. 1, 1879	
		" C. T. Haig, B.E.	G. T. S.	Not passed	51 2 20	Sep. 22, 1859	Nov. 1, 1883	
1		Major C. Strahan, B.E.	Topogl.	Not passed	42 7 25	Sep. 26, 1863	Jan. 10, 1884	
2		Lt.-Col. J. Waterhouse, s.c.	Topogl.	P. H.	43 5 8	July 23, 1866	Jan. 10, 1884	
3		Major M. W. Rogers, B.E.	G. T. S.	L. S.	43 10 26	July 30, 1866	Aug. 7, 1884	
SENIOR DIVISION.								
DEPUTY SUPERINTENDENTS.								
1ST GRADE.								
3		Bt. Col. C. T. Haig, B.E.						
2		Bt. Lt.-Col. J. Herschel, B.E., F.R.S.	G. T. S.	P. H.	48 2 1	Nov. 12, 1859	Jan. 12, 1884	
3		Major G. Strahan, B.E.	Topogl.	P. H.	46 10 24	July 2, 1862	Nov. 10, 1884	
2ND GRADE.								
8	1	Major T. T. Carter, B.E.	G. T. S.	P. H.	47 10 22	March 1, 1862	{ Oct. 1, 1871 } { Jan. 1, 1878 }	
	2	Bt. Col. D. Macdonald, s.c.	Rev.	P. H.	50 0 21	Dec. 19, 1860	Jan. 1, 1878	
	3	Lt.-Col. F. Coddington, s.c.	Rev.	P. H.	47 7 10	Jan. 17, 1862	Oct. 27, 1878	
	4	Major C. Strahan, B.E.						
	5	Lt.-Col. W. Barron, s.c.	Rev.	P. H.	47 11 15	June 27, 1862	Aug. 7, 1884	
	6	Bt. Col. H. C. B. Tanner, Bombay s.c.	Rev.	P. H.	50 5 15	Oct. 10, 1862	Oct. 1, 1884	
	7	Major W. J. Heavyside, B.E.	G. T. S.	P. H.	45 2 27	March 1, 1866	Nov. 10, 1884	
	8	Lt.-Col. A. Pullan, s.c.	G. T. S.	P. H.	49 9 0	Jan. 18, 1863	Nov. 28, 1884	
3RD GRADE.								
10	1	Lt.-Col. D. C. Andrew, s.c.	Rev.	P. H.	44 9 13	Dec. 30, 1862	Jan. 1, 1878	
	2	" W. H. Wilkins, s.c.	Rev.	P. H.	44 2 25	April 27, 1863	Oct. 27, 1878	
	3	Major J. E. Sandeman, s.c.	Rev.	P. H.	42 3 20	Oct. 6, 1864	Jan. 1, 1879	
	4	Lt.-Col. W. F. Badgley, s.c.	Topogl.	P. H.	48 1 21	May 3, 1865	Dec. 14, 1880	
	5	Major T. H. Holdich, B.E.	Topogl.	L. S.	42 10 16	July 23, 1866	April 29, 1883	
	6	Lt.-Col. J. Waterhouse, s.c.						
	7	Major M. W. Rogers, B.E.						
	8	" J. Hill, B.E.	G. T. S.	Not passed	45 0 7	Dec. 18, 1866	Oct. 1, 1884	
	9	Mr. H. Hörst	Topogl.	Not passed	51 7 27	April 1, 1868	Nov. 10, 1884	27 7 27
	10	" W. H. Cole, M.A.	G. T. S.	H. S.	48 0 16	{ Jan. 3, 1867A } { Sep. 1, 1867B }	{ Nov. 28, 1884 }	17 11 28

India Department, as it stood on 1st January 1886.

No. existing in each grade.	Consolidated Salary.	Extra allowances, if any.	Survey Party or Office to which at present attached.	REMARKS.
	Rs. a. p.			
1	3,000 0 0		Surveyor General of India.	
1	2,200 0 0		Deputy Surveyor General in charge, Revenue Survey Branch.	
1			On furlough.	For 2 years from 14th March 1884.
1	2,000 0 0		Dehra Dun	Officiating Deputy Surveyor General. In charge Trigonometrical Survey Branch and Offices.
1	1,482 10 0	(a) Presidency, R60	Assistant Surveyor General	Deputy Superintendent, 2nd Grade. In charge Engraving, Cartographic and Map Record and Issue Offices, Head Quarters, Calcutta.
2	1,100 0 0	(b) Special local, R200, and (c) inclusive of personal R100.	Ditto	Deputy Superintendent, 3rd Grade. In charge Lithographic and Photographic Offices, Head Quarters, Calcutta.
3	1,182 10 0	(a) Presidency, R60	Ditto	Deputy Superintendent, 3rd Grade. In charge Mathematical Instrument Office and Correspondence Office, Head Quarters, Calcutta.
1			Dehra Dun	Officiating Deputy Surveyor General. In charge Trigonometrical Survey Branch and Offices.
2			On duty, Europe	Retired 10 March 86
3	1,600 0 0		In charge Astronomical No. 2 Party, Mussoorie.	
1			On furlough	For 1 year from 6th December 1884. Extension for 6 months.
2			Ditto	For 2 years from 7th March 1884.
3	1,600 0 0		In charge Punjab Traverse Survey, Simla.	Officiating Deputy Superintendent, 1st Grade.
4			Head Quarters, Calcutta.	Assistant Surveyor General.
5	1,300 0 0		In charge Mozufferpore Dist. (Cadastral) Survey, Darjeeling.	
6	1,300 0 0		In charge Himalaya Topogl. Survey, Simla.	
7	1,482 10 0		In charge Astronomical No. 1 Party, Mussoorie.	
8	1,300 0 0		In charge Cutch Survey, Poona.	
1	1,300 0 0		In charge Deccan Topographical Survey, Poona.	Officiating Deputy Superintendent, 2nd Grade.
2	1,300 0 0		In charge Raipur District Traverse Survey and Superintending detached Parties working in C. P. and Rajputana, Mussoorie.	Ditto ditto.
3	1,300 0 0		In charge Gorakhpur District (Cadastral) Survey, Naini Tal.	Ditto ditto.
4	1,100 0 0	(d) Inclusive of personal R100.	In charge Guzerat Topographical Survey, Poona.	Assistant Surveyor General.
5	1,182 10 0		Afghan Boundary Commission.	
6			Head Quarters, Calcutta.	
7			Ditto	Ditto.
8	1,182 10 0		Tidal and Leveling operations India, Burma, Ceylon, &c., Poona.	
9	1,000 0 0	(e) Burma, R125	In charge Burma Topogl. Survey, Rangoon.	Joined the Junior Division, 1st September 1854. On furlough from 5th June 1870, and special extension till 12th September 1882. Service reckoned under new rules.
10	1,000 0 0		In charge Computing Party, Dehra Dun.	(A) Appointed on probation. Exclusive of service as Professor of Mathematics, Government College, Agra, from 14th April 1882 to end of February 1883. (B) Brought on the strength of the Department.

List of Officers of the Senior Division,

No. sanctioned.	No. existing in each grade.	Names of Officers.	Branch to which originally posted.	Passed in Vernacular.	Age.	Date of appointment to the Department.	Date of promotion to the present grade.	*Period of service counting towards pension on 1st Jan. 86.
					Y. M. D.			Y. M. D.
SENIOR DIVISION—concl'd.								
DEPUTY SUPERINTENDENTS—concl'd.								
4TH GRADE.								
11	1	Major A. W. Baird, R.E., F.R.S., A.I.C.E.	3. Prals G. T. S.	P. H.	43 2 5	Dec. 4, 1868	July 1, 1882	
	2	„ J. R. McCullagh, R.E.	3. Prals G. T. S.	L. S.	43 9 5	Feb. 12, 1869	July 1, 1882	
	3	Lt.-Col. J. R. Wilmer, s.c.	Topogl.	H. S.	44 11 12	Aug. 24, 1869	July 1, 1882	
	4	„ S. H. Cowan, s.c.	Rev.	P. H.	44 3 16	Jan. 19, 1867	April 29, 1883	
	5	Major E. H. Steel, s.c.	Rev.	H. S.	44 7 26	Feb. 1, 1867	Jan. 10, 1884	
	6	Lt.-Col. H. S. Hutchison, s.c.	Rev.	P. H.	45 8 20	Aug. 13, 1867	Aug. 7, 1884	
	7	Mr. E. C. Barrett	Rev.	H. S.	42 8 16	Dec. 30, 1868	Oct. 1, 1884	21 0 11
	8	Major R. Beavan, s.c.	Rev.	P. H.	42 3 11	July 17, 1868	Nov. 10, 1884	
	9	Br. Col. R. G. Woodthorpe, R.E.	Topogl.	L. S.	41 3 8	July 14, 1871	Nov. 28, 1884	
10		Mr. G. H. Cooke	Rev.	L. S.	41 1 1	April 1, 1870	Oct. 22, 1885	17 0 15
11		„ E. J. Jackson	Rev.	H. S.	42 0 0	Nov. 5, 1868	Oct. 26, 1885	16 6 29
ASSISTANT SUPERINTENDENTS.								
1ST GRADE.								
11	1	Capt. St. G. C. Gore, R.E.	G. T. S.	Not passed	36 10 8	April 11, 1873	Oct. 10, 1882	
	2	„ J. R. Hobday, s.c.	Topogl.	H. S.	35 5 16	Sep. 11, 1874	April 15, 1893	
	3	„ the Hon'ble M. G. Talbot, R.E.	†	H. S.	31 3 17	March 15, 1880	April 29, 1883	
	4	Lieut. F. B. Louge, R.E.	†	Not passed	29 2 2	March 15, 1880	Jan. 10, 1884	
	5	Capt. R. A. Wahab, R.E.	†	H. S.	30 8 18	Jan. 8, 1883	Aug. 7, 1884	
	6	Mr. E. C. Ryall	G. T. S.	Not passed	47 11 15	April 1, 1873	Feb. 1, 1883	30 7 10
	7	„ W. H. Patterson	Rev.	L. S.	47 3 6	Jan. 22, 1883	Oct. 1, 1884	23 11 15
	8	„ F. W. Kelly	Rev.	H. S.	52 4 5	Feb. 22, 1883	Nov. 10, 1884	30 6 0A
	9	Lieut. H. M. Jackson, R.E.	†	H. S.	27 9 5	June 11, 1883	Nov. 28, 1884	
	10	„ W. H. Pollen, R.E.	†	L. S.	26 2 20	April 26, 1884	Oct. 22, 1885	
	11	„ G. B. Hodgson, s.c.	†	H. S.	27 2 4	Sep. 12, 1883	Oct. 26, 1885	
2ND GRADE.								
6	1	Lieut. S. G. Burrard, R.E.	†	L. S.	25 4 19	Sep. 2, 1884	Sep. 2, 1884	
	2	Mr. A. D'Souza	G. T. S.	Not passed	48 4 17	Oct. 1, 1884	Oct. 1, 1884	25 1 15B
	3	„ G. B. Scott	Rev.	H. S.	41 5 1	Nov. 10, 1884	Nov. 10, 1884	22 8 0
	4	„ J. Eccles, M.A.	†	Not passed	28 3 23	May 30, 1885	May 30, 1885	0 7 2
	5	Lieut. J. M. Fleming, s.c.	†	H. S.	27 4 19	July 3, 1885	July 3, 1885	
	6	Vacant.						

Survey of India Department, as it stood on 1st January 1886—concluded.

No. existing in each grade.	Consolidated Salary.	Extra allowances, if any.	Survey Party or Office to which at present attached.	REMARKS.
	R a. p.			
1	1,182 10 0	(a) Deputation, R100	In charge Tidal and Leveling Operations, India, Burma, Ceylon, &c., Poona.	Officiating Deputy Superintendent, 3rd Grade.
2	1,182 10 0		In charge Mysore Topogl. Survey, Bangalore.	Ditto ditto.
3	1,100 0 0	(b) Inclusive of personal, R100, and (c) Baluchistan, R100.	In charge Baluchistan Topogl. Survey, Mussoorie.	Ditto ditto.
4	1,100 0 0	(b) Inclusive of personal, R100.	In charge Basti District (Cadastral) Survey, Naini Tal.	Ditto ditto.
5	950 0 0	(b) Ditto, R100	In charge Bilaspur District (Cadastral) Survey, Mussoorie.	
6	950 0 0	(d) Burma, R200, and (b) inclusive of personal, R100.	In charge Akyab District (Cadastral) Survey, British Burma, Akyab.	Joined the Junior Division, 18th November 1862. Sick leave for 1 month, from 20th June 1869. Furlough for 2 years, from 27th August 1880 to 12th July 1882.
7	850 0 0		In charge Kurnur District (Cadastral) Survey, Assam, Shillong.	
8	950 0 0	(b) Inclusive of personal, R100.	In charge Rajputana Topographical Survey, Mussoorie.	
9	1,032 10 0		On special duty.	
10	850 0 0		In charge Jubbulpore District Traverse Survey, Mussoorie.	Joined the Junior Division, 6th December 1866. Furlough for 2 years from 22nd May 1880; extension for 12 days without pay.
11			On furlough.	For 1 year from 4th November 1885. Joined the Junior Division, 26th September 1864. Sick leave from 4th July to 3rd August and from 19th 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.
1	990 0 0		Afghan Boundary Commission.	Officiating Deputy Superintendent, 4th Grade.
2	850 0 0		In charge Andaman Topographical Survey, Mussoorie.	Ditto ditto.
3	990 0 0		Afghan Boundary Commission.	Ditto ditto.
4	920 0 0		In charge South Maratha Topographical Survey, Poona.	Ditto ditto.
5	990 0 0		Gorakhpur District (Cadastral) Survey, Naini Tal.	Ditto ditto.
6	850 0 0		In charge Coast Triangulation Survey, Mussoorie.	Ditto ditto. Joined the Junior Division 25th April 1855. Two hundred and twenty-five days' sick leave included under old rules. Sick leave for 28 days from 10th December 1883, excluded.
7	850 0 0		In charge Mirzapur Topographical Survey, Mussoorie.	Officiating Deputy Superintendent, 4th Grade. Joined the Junior Division 1st December 1861. Leave on private affairs from 1st May to 31st August 1862. Ditto to Europe from 20th July 1873 to 18th January 1874, and from 11th July 1879 to 2nd January 1880.
8	600 0 0	(d) Burma, R200	Akyab District (Cadastral) Survey, British Burma, Akyab.	Joined the Junior Division, 4th December 1854. (A) Service reckoned under old rules. Special leave for 3 months from 21st January 1855, which was overstayd from 21st May to 16th August 1869. Commencement of second service, 17th August 1869.
9	670 0 0		Basti District (Cadastral) Survey, Naini Tal.	
10	670 0 0		Himalaya Topographical Survey, Simla.	
11	600 0 0	(e) Presidency, R100	Head Quarters, Calcutta	
1	670 0 0		Astronomical No. 1 Party, Mussoorie.	Officiating Assistant Superintendent, 1st Grade.
2	600 0 0		Raipur District Traverse Survey, Mussoorie.	Ditto ditto. Joined the Junior Division, 10th February 1850. (1) Inclusive of 318 days' furlough, 77 days' leave on medical certificate, and 33 days' preparatory leave under new rules.
3	600 0 0		Bilaspur District (Cadastral) Survey, Mussoorie.	Officiating Assistant Superintendent, 1st Grade. Joined the Junior Division, 1st May 1863.
4	500 0 0		Computing Party, Debra Dun.	
5	500 0 0	(e) Presidency R100	Head Quarters, Calcutta	On probation.

* Applies only to officers who are under the Uncovenanted Service Rules.
† Joined the Department after the amalgamation on the 1st January 1878.

(a) Department of Revenue and Agriculture, No. 519-81-1, dated 18th September 1884.
(b) Ditto ditto No. 3038, dated 16th September 1882.
(c) Ditto ditto No. 422-23-108, dated 16th December 1882.
(d) Department of Finance and Commerce, No. 260, dated 16th April 1882.
(e) Department of Agriculture, Revenue and Commerce Memorandum, No. 213, dated 14th May 1878.

List of Officers of the Junior Division, Survey

No. sanctioned.	No. existing in each grade.	Names of Officers.	Branch to which originally posted.	Passed in Vernacular.	Age.	Date of appointment to the Department.	Date of promotion to the present grade.	*Period of service counting towards pension on 1st Jan. 86.
					Y. M. D.			Y. M. D.
JUNIOR DIVISION.								
SURVEYORS.								
1ST GRADE.								
<i>Salary ₹500.</i>								
8	1	Mr. J. Peyton	G. T. S.		54 6 0	Feb. 3, 1860	April 1, 1874	25 10 27
		" G. A. McGill	Topogl.	L. S.	47 8 7	April 8, 1855	March 7, 1882	30 8 3
		" D. Atkinson	Topogl.		48 7 24	Aug. 4, 1856	Jan. 22, 1883	29 4 28
	2	" F. Grant	Rev.		49 9 6	July 11, 1856	Feb. 22, 1883	29 5 21
	3	" C. Wood	G. T. S.	L. S.	43 5 10	May 6, 1858	April 1, 1883	27 5 10
	4	" H. E. T. Keelan	G. T. S.		42 9 1	Aug. 17, 1858	Oct. 29, 1883	19 9 0
	5	" P. A. G. Cowley	Rev.	L. S.	43 11 15	Sep. 1, 1859	Nov. 1, 1883	25 0 22
	6	" A. J. Wilson	Topogl.	L. S.	43 4 0	Oct. 1, 1860	June 2, 1884	25 6 0
	7	" G. W. E. Atkinson	G. T. S.		42 2 20	Aug. 1, 1859	Nov. 10, 1884	26 2 20
	8	" J. A. May	Topogl.		44 7 16	Oct. 1, 1860	March 1, 1885	26 0 0
2ND GRADE.								
<i>Salary ₹400.</i>								
10	1	Mr. L. H. Clarke	G. T. S.		51 6 27	Nov. 26, 1855	Dec. 1, 1872	30 1 5
	2	" W. Todd	G. T. S.		47 1 21	Jan. 11, 1856	June 1, 1874	27 10 23A
	3	" James Todd	Rev.		51 7 19	Dec. 27, 1863	Feb. 22, 1883	20 3 19
		" S. M. Smylie	Rev.	L. S.	45 1 7	July 24, 1860	April 1, 1883	25 1 5
	4	" J. S. Pemberton	Rev.	L. S.	42 5 23	Oct. 6, 1860	Sep. 23, 1883	25 2 21
	5	" H. R. Littlewood	Rev.		42 1 25	Oct. 6, 1860	Oct. 20, 1883	25 2 26
	6	" W. A. Wilson	Rev.	L. S.	42 7 12	Jan. 1, 1861	Nov. 1, 1883	25 0 0
	7	" A. M. Lawson	Rev.	L. S.	46 11 29	Nov. 18, 1862	June 2, 1884	23 1 13
		" E. S. P. Atkinson	Topogl.		40 5 4	Aug. 13, 1861	March 1, 1885	17 1 2
	8	" A. J. Gibson	Rev.		44 1 0	May 1, 1861	March 1, 1885	24 7 27
	9	" M. J. Ogle	Topogl.		43 9 27	July 1, 1863	Nov. 15, 1885	20 9 27
	10	" F. Adams	Topogl.		49 8 6	Oct. 1, 1860	April 1, 1883	29 1 27B
3RD GRADE.								
<i>Salary ₹350.</i>								
14	1	Mr. W. S. Buttrees	Rev.		41 10 12	Sep. 1, 1860	Nov. 13, 1879	25 4 0
	2	" W. R. Vyall	Rev.		47 0 2	June 13, 1856	Jan. 23, 1883	27 6 18
	3	" A. G. Wyatt	Topogl.		40 10 6	Nov. 1, 1861	Feb. 22, 1883	23 2 6
	4	" H. W. Psychers	G. T. S.		43 0 18	April 8, 1862	March 12, 1883	23 8 23
	5	" G. Belcham	G. T. S.	H. S.	40 10 15	Nov. 1, 1862	April 1, 1883	23 2 0
	6	" H. Downman	Rev.		39 6 20	Oct. 16, 1862	Sep. 5, 1883	23 2 1
	7	" E. G. Little	Rev.		40 2 19	Jan. 1, 1860	Sep. 23, 1883	18 2 10C

of India Department, as it stood on 1st January 1886.

No. existing in each grade.	Consolidated Salary.	Extra allowances, if any.	Survey Party or Office to which at present attached.	REMARKS.
	R a. p.			
1	500 0 0		South Maratha Topographical Survey.	Service reckoned under new rules.
...	600 0 0		Chief Draftsman, Head Quarters, Calcutta.	Sick leave from 1st November 1871 to 23rd February 1872. Service reckoned under old rules.
2	500 0 0		Doing duty, Office of Director General of Statistics.	Service reckoned under old rules.
3	500 0 0	(a) Dehra Office, R50	Bilaspur District (Cadastral) Survey.	Service reckoned under old rules.
4	500 0 0		Computing Party	Exclusive of 11 months and 13 days' furlough and 18 days' sick leave under new rules.
5	500 0 0	(b) Charge, R50	Punjab Traverse Survey	Furlough from 1st July 1882 to 6th October 1883.
6	500 0 0		In charge, Sambalpur Survey	Apprentice Draftsman from 1st January 1860.
7	500 0 0	(a) Dehra Office, R50	Trigonometrical Branch Office, Dehra Dun.	Service reckoned under old rules.
8	500 0 0		Ditto ditto	Apprentice Draftsman from 1st January 1860.
1	400 0 0		Ditto ditto	Doing duty as Solar Photographer.
2	400 0 0		Trigonometrical Branch Office, Dehra Dun.	(A) Inclusive of 2 years, which count as service out of 4 years 26 days on medical certificate under old rules.
3	400 0 0		Rajputana Topographical Survey.	Furlough in India, from 16th April 1883 to 30th September 1884. Overstayed privilege leave by 1 day in August 1874.
4	400 0 0		Jubbulpore District Traverse Survey.	Furlough from 8th November 1882 to 11th March 1883.
5	400 0 0	(c) Burma, R100	Head Draftsman, Head Quarters, Calcutta.	Overstayed privilege leave by 5 days in June 1869.
6	400 0 0		Punjab Traverse Survey	
7	400 0 0		Akyab District (Cadastral) Survey, British Burma.	Furlough for 1 year 3 months and 13 days, from 26th July 1876 to 8th November 1877, and sick leave for 19 days in September 1867.
8	400 0 0	(d) Charge, R50	Mozafferpore District (Cadastral) Survey.	Absent without leave for 3 days in January 1869.
9	400 0 0	(e) Baluchistan, R100	South Maratha Topographical Survey.	Furlough to Europe for 1 year, from 21st November 1877 to 20th November 1878.
10	400 0 0	(e) Presidency house-rent, R30.	Doing duty, Settlement Department, Punjab.	(B) Inclusive of service as Sub-Surveyor, from 3rd November 1866 to 30th September 1866.
1	350 0 0		In charge Ajmere Survey	
2	350 0 0		Baluchistan Topographical Survey.	Copyist from 1st to 30th September 1860.
3	350 0 0	(f) Presidency house-rent, R30.	Raipur District Traverse Survey	Furlough for 2 years from 1st August 1883.
4	350 0 0	(a) Dehra Office, R50	Doing duty as Instructor under C. P. Government.	Furlough from 11th November 1883 to 6th November 1884.
5	350 0 0	(g) Deputation, R50	On duty at Head Quarters, Calcutta.	Service reckoned under old rules.
6	350 0 0		Computing Party	Service reckoned under old rules.
7	350 0 0		Tidal and Leveling Operations, India, Burma, Ceylon, &c.	Absent without leave 3 days, sick leave 2 days in October 1865, 4 days in December 1865, and from 11th to 16th December 1866.
8	350 0 0		Jubbulpore District Traverse Survey.	Apprentice from 1st January 1860 to 4th November 1862.
9	350 0 0		Gorakhpur District (Cadastral) Survey.	(C) Exclusive of 7 years 0 months 11 days' service under 22 years of age.

(a) Financial Resolution No. 3996, dated 22nd December 1864, and No. 2570, dated 30th November 1871.
 (b) Department of Revenue and Agriculture, No. 3023, dated 11th July 1884.
 (c) Department of Home, Revenue and Agriculture, No. 171, dated 6th May 1880.
 (d) Surveyor General's Departmental Order No. 62, dated 7th January 1885.
 (e) Department of Revenue and Agriculture, No. 5225, dated 15th December 1882.
 (f) Financial Resolution No. 704, dated 22nd February 1885.
 (g) Surveyor General's No. 8634-E, dated 20th September 1885.

List of Officers of the Junior Division, Survey

No. sanctioned.	No. existing in each grade.	Names of Officers.	Branch to which originally posted.	Passed in Vernacular.	Age.	Date of appointment to the Department.	Date of promotion to the present grade.	Period of service counting towards pension on 1st Jan. '86
								Y. M. D.	Y. M. D.
JUNIOR DIVISION--contd.								
SURVEYORS--concl'd.								
3RD GRADE--concl'd.								
<i>Salary ₹350--concl'd.</i>								
8		Mr. H. T. Hanby	Rev.	L. S.	39 2 12	Nov. 13, 1862	Oct. 29, 1883	23 1 18
9		" L. J. Pooock	G. T. S.	H. S.	42 3 5	July 10, 1863	Nov. 1, 1883	20 0 7a
10		" A. Christie	G. T. S.	H. S.	40 3 1	Aug. 7, 1863	June 2, 1884	18 3 1
11		" W. J. O'Sullivan	G. T. S.		41 10 17	Oct. 1, 1863	Oct. 1, 1884	19 10 17
12		" W. W. McNair	Topogl.	L. S.	35 3 18	Sep. 1, 1867	Nov. 10, 1884	12 3 10
13		" N. C. Gwynne	G. T. S.		42 9 25	Oct. 19, 1863	March 1, 1885	20 9 25
14		" W. C. Price	G. T. S.		39 6 8	Nov. 1, 1863	Nov. 15, 1885	17 6 8
4TH GRADE.								
<i>Salary ₹300.</i>								
1		Mr. C. H. McA'Fee	G. T. S.	L. S.	36 1 15	Sep. 6, 1864	Aug. 1, 1875	14 0 15
2		" C. F. Hamer	Topogl.		39 4 24	Aug. 3, 1863	July 13, 1878	17 2 24
3		" J. H. O'Donel	Rev.		40 5 20	Oct. 1, 1863	Oct. 22, 1879	18 5 20
4		" T. E. M. Claudius	Topogl.		39 7 0	Aug. 10, 1863	Jan. 1, 1880	17 7 0
5		" A. J. James	Topogl.	L. S.	39 1 12	June 15, 1864	Nov. 22, 1880	17 1 12
6		" T. H. Rendell	G. T. S.		41 5 9	Oct. 11, 1864	June 7, 1881	19 5 9
7		" J. T. U. Coxen	Rev.		45 3 22	May 16, 1863	Feb. 22, 1883	21 4 25
8		" D. A. King	Rev.		39 1 26	April 12, 1864	April 1, 1883	17 1 25
...		" W. Stotesbury	Topogl.	{ H. S. L. S. Con- rease.	38 5 6	Oct. 4, 1864	July 21, 1883	16 5 6
9		" R. B. Smart	Rev.	L. S.	38 6 2	Jan. 1, 1864	Sep. 5, 1883	16 6 2
10		" F. Kitchen	Topogl.		39 9 7	Oct. 1, 1864	Sep. 23, 1883	17 7 7b
11		" Hugh Todd	G. T. S.		38 4 15	July 15, 1865	Oct. 6, 1883	16 3 16c
12		" E. J. Connor	G. T. S.	L. S.	37 4 15	March 1, 1865	Nov. 1, 1883	14 10 10d
13		" J. Connor	Rev.		39 3 24	Feb. 15, 1865	June 2, 1884	16 3 24
14		" T. H. Dunne	Rev.	L. S.	38 0 5	Feb. 15, 1865	Sep. 1, 1884	15 11 24
15		" J. Bond	G. T. S.		35 11 24	Oct. 18, 1866	Oct. 1, 1884	13 11 4e
16		" C. D. Potter	G. T. S.	L. S.	40 3 27	Oct. 29, 1866	Nov. 10, 1884	18 2 24f
17		" J. Newland	Rev.	L. S.	48 4 26	Oct. 22, 1863	March 1, 1885	22 2 10
18		Vacant.						

of India Department, as it stood on 1st January 1886--continued.

No. existing in each grade.	Consolidated Salary.	Extra allowances, if any.	Survey Party or Office to which at present attached.	REMARKS.
8	350 0 0		Basti District (Cadastral) Survey.	
9	350 0 0		Mirzapur Topogl. Survey	(A) Exclusive of 89 days' sick leave.
10	350 0 0		Bilaspur District (Cadastral) Survey.	
11	350 0 0		Basti District (Cadastral) Survey	
12	350 0 0		Astronomical No. 1 Party	Furlough for 1 year from 28th March 1883. On duty in England for 3 months from 28th March 1884. Extraordinary leave for 6 weeks from 28th June 1884.
13	350 0 0		Rajputana Topogl. Survey.	
14	350 0 0		Basti District (Cadastral) Survey.	
1	300 0 0		Trigonometrical Branch Office, Dehra Dun.	Sick leave for 1 month from 30th December 1882. Passed the Poona C. E. College Examination in 1884.
2	300 0 0		Mirzapur Topogl. Survey.	
3	300 0 0	(a) Assam, ₹50	Kamrup District (Cadastral) Survey, Assam.	
4	300 0 0	(b) Baluchistan, ₹100	Baluchistan Topogl. Survey.	
5	300 0 0		Mysore Topogl. Survey.	
6	300 0 0		On duty, Quarter Master General's Office, Simla.	
7	300 0 0		Jubbulpore District Traverse Survey.	Sick leave from 8th to 31st October 1879, and for 6 months from 12th November 1878. On furlough in India for 6 months, from 28th May to 26th October 1883. On leave without allowances from 1st July 1885.
8	300 0 0	(a) Assam, ₹50	Kamrup District (Cadastral) Survey, Assam.	Apprentice from 12th April to 30th June 1884.
...	370 0 0		Draftsman and Compiler, Head Quarters, Calcutta.	
9	300 0 0		Mozufferpore District (Cadastral) Survey.	Apprentice from 1st January to 31st December 1884.
10	300 0 0		Mysore Topogl. Survey	(D) Exclusive of 2 months' sick leave.
11	300 0 0		Ditto	(C) Exclusive of 30 days' sick leave.
12	300 0 0		Tidal and Leveling Operations, India, Burma, Ceylon, &c.	(D) Exclusive of 6 months and 5 days' leave on private affairs, under new rules.
13	300 0 0	(a) Assam, ₹50	Kamrup District (Cadastral) Survey, Assam.	
14	300 0 0		Doing duty as Instructor under C. P. Government.	Absent (without leave 1 day, and sick leave for 10 days in October 1885.
15	300 0 0		Trigonometrical Branch Office, Dehra Dun.	(E) Exclusive of 20 days' sick leave.
16	300 0 0		Mirzapur Topogl. Survey	(F) Exclusive of 33 days' sick leave.
17	300 0 0		Guzerat Topogl. Survey.	

(a) Department of Revenue and Agriculture, No. 278, dated 18th January 1885.
(b) Ditto ditto No. 5228, dated 18th December 1882.

List of Officers of the Junior Division, Survey of India Department, as it stood on 1st January 1886—continued.

No. sanctioned.	No. existing in each grade.	Names of Officers.	Branch to which originally posted.	Passed in Vernacular.	Age.	Date of appointment to the Department.	Date of promotion to the present grade.	Period of service from 1st Jan. '86.	Y. M. D.
1		Mr. C. Tapsell	Topogr.	I. S.	41 1 17	Aug. 2, 1864	Oct. 1, 1872	19 1 17	
JUNIOR DIVISION—contd.									
1st GRADE.									
Salary Rs200, rising to Rs250.									
2		J. A. Barker	Topogr.		39 8 18	Sep. 1, 1865	Jan. 1, 1878	17 8 18	
3		E. A. Wainwright	Topogr.		37 6 23	May 1, 1866	July 13, 1878	15 6 23	
4		R. C. D. King	Rev.	H. S.	37 6 20	June 9, 1866	Aug. 1, 1878	16 2 6	
5		W. J. Corneilus	Topogr.	I. S.	36 9 1	Aug. 15, 1866	July 8, 1879	14 9 1	
6		G. W. Jarbo	Rev.	I. S.	38 3 15	Nov. 1, 1866	Jan. 1, 1880	16 3 0	
7		P. J. W. Dorn	Topogr.	I. S.	36 7 27	Feb. 1, 1867	July 6, 1880	13 11 3	
8		J. McHutton	Rev.	I. S.	36 5 14	July 1, 1867	April 1, 1881	13 5 14	
9		H. T. Kitchen	Topogr.		37 6 23	Nov. 1, 1867	April 1, 1881	15 6 23	
10		J. H. Wilson	Topogr.	I. S.	39 6 23	April 1, 1868	April 1, 1881	17 4 23	
11		J. Hickie	G. T. S.	I. S.	36 11 17	April 29, 1868	April 1, 1881	14 6 17	
12		W. A. Fielding	G. T. S.	I. S.	37 7 13	May 3, 1868	April 1, 1881	15 7 13	
13		S. O. Madras	Rev.	I. S.	35 4 16	July 6, 1869	April 1, 1881	13 4 16	
14		G. D. Cusson	G. T. S.	I. S.	39 3 7	May 8, 1868	April 1, 1881	16 3 7	
15		J. F. Freeman	Rev.	I. S.	34 9 27	Sep. 9, 1868	April 1, 1881	10 2 27	
16		G. C. Swinney	Rev.		36 6 4	Sep. 17, 1868	April 1, 1881	14 6 4	
17		W. H. Lilley	Topogr.		37 0 28	May 1, 1868	April 1, 1881	14 7 28	
18		J. S. Swinney	Rev.		35 0 12	Jan. 5, 1869	April 1, 1881	13 0 12	
19		G. P. Torrens	G. T. S.		34 6 12	Dec. 12, 1868	April 1, 1881	12 6 12	
20		W. Robert	Topogr.		35 4 2	Aug. 21, 1869	April 1, 1881	13 4 2	
21		T. Shaw	Rev.	I. S.	33 1 15	April 21, 1869	April 1, 1881	11 1 15	
22		C. W. Wilson	Rev.	I. S.	40 1 22	June 21, 1867	April 1, 1881	17 8 22	
23		E. J. Martin	Rev.		34 10 15	Sep. 16, 1867	April 1, 1881	12 2 15	
24		C. W. F. Seyers	Rev.		42 4 16	Dec. 1, 1864	June 7, 1881	20 4 16	
25		W. H. Penrose	Rev.	I. S.	34 2 24	Aug. 11, 1869	Nov. 1, 1882	12 1 17	
26		G. E. Parker	Rev.		35 10 18	Nov. 18, 1870	Jan. 17, 1883	13 10 18	
27		G. Campbell	Rev.		37 5 19	Jan. 1, 1864	Jan. 22, 1883	14 5 9	
28		W. C. G. Barkley	Topogr.		34 2 9	Dec. 1, 1871	Feb. 22, 1883	12 2 9	
29		G. T. Hall	G. T. S.	I. S.	34 0 29	Nov. 22, 1872	April 1, 1883	12 0 29	
30		G. Vander Beck	Topogr.	I. S.	36 3 15	July 1, 1872	April 30, 1883	14 3 15	
31		R. Todd	Topogr.		40 5 20	Nov. 1, 1863	July 21, 1883	18 5 19	
32		J. Murphy	Rev.		33 5 19	Nov. 22, 1868	Aug. 10, 1883	11 5 19	
33		R. A. Gibson	Topogr.	I. S.	31 6 26	Dec. 1, 1870	Sep. 5, 1883	9 6 26	
34		A. W. Smart	Rev.		34 10 1	Dec. 1, 1871	Oct. 6, 1883	12 10 1	
35		W. M. Kelly	Rev.	I. S.	31 4 25	Oct. 1, 1872	Nov. 21, 1883	9 4 25	

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

REMARKS.	Survey Party or Office to which at present attached.	Consolidated Salary.	No. existing in each grade.	Y. M. D.
	Cutch Topogr. Survey.	250 0 0	(a) Half scale local, Rs15.	1
	Mysore Topogr. Survey.	250 0 0	(b) Baluchistan, Rs100.	2
	Baluchistan Topogr. Survey.	250 0 0	(b) Baluchistan, Rs100.	3
	On furlough	250 0 0		4
	Trigonometrical Branch Office, Degera Inn.	250 0 0		5
	Akyab District (Cadastral) Survey, British Burma.	250 0 0	(c) Burma, Rs100.	6
	Darftsmn, Head Quarters, Calcutta.	300 0 0		7
	Rajpur District Traverse Survey.	250 0 0		8
	Biharpur District (Cadastral) Survey.	250 0 0		8
	Mirzapur Topogr. Survey.	250 0 0		9
	Burma Topogr. Survey.	250 0 0	(c) Ditto.	10
	Deccan Topogr. Survey.	250 0 0	(a) Half scale local, Rs15.	11
	Cutch Topogr. Survey.	250 0 0	(a) Ditto.	12
	On duty at Head Quarters, Calcutta.	250 0 0	(a) Presidency house-allowance, Rs20.	13
	Andaman Topogr. Survey.	250 0 0		14
	Gorkhpur District (Cadastral) Survey.	250 0 0		15
	Doing duty as Instructor under G. P. Government.	250 0 0		16
	Mirzapur Topogr. Survey.	250 0 0		17
	Akyab District (Cadastral) Survey, British Burma.	250 0 0	(c) Burma, Rs100.	18
	Burma Topogr. Survey.	250 0 0	(c) Ditto.	19
	Himalaya Topogr. Survey.	250 0 0		20
	Gorkhpur District (Cadastral) Survey.	250 0 0		21
	Faujdar Traverse Survey.	250 0 0		22
	On duty at Head Quarters, Calcutta.	250 0 0	(a) Presidency house-allowance, Rs20.	23
	Sambalpur Survey.	230 0 0		24
	Burma Topogr. Survey.	220 0 0	(c) Burma, Rs100.	25
	Doing duty as Instructor under G. P. Government.	220 0 0		26
	Pungab Traverse Survey.	220 0 0		27
	Baluchistan Topogr. Survey.	220 0 0	(b) Baluchistan, Rs100.	28
	Cutch Topogr. Survey.	220 0 0	(a) Half scale local, Rs13-3-2.	29
	Rajpur Traverse Survey.	220 0 0		30
	Mysore Topogr. Survey.	220 0 0		31
	Gorkhpur District (Cadastral) Survey.	220 0 0		32
	Burma Topogr. Survey.	220 0 0	(c) Burma, Rs100.	33
	Three months' sick leave from 6th July 1880.	220 0 0		34
	Gorkhpur District (Cadastral) Survey.	220 0 0	(a) Half scale local, Rs13-3-2.	35

REMARKS.

(A) Commencement of second service. Sick leave from 1st July 1888. Appointed Draftsman from 15th May 1883.

(B) Exclusion of 2 months' sick leave from 1st July 1888. Appointed Draftsman from 15th May 1883.

(C) Exclusion of 6 months' sick leave.

(D) Commencement of second service. Sick leave for 2 years from 1st May 1889; extension for 9 months October 1880.

(E) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(F) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(G) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(H) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(I) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(J) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(K) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(L) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(M) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(N) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(O) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(P) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(Q) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(R) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(S) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(T) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(U) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(V) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(W) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(X) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(Y) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(Z) Exclusion of 2 months' sick leave from 1st January to 31st December 1870.

(a) Financial Resolution No. 705, dated 22nd February 1900.
 (b) Department of Revenue and Agriculture, No. 8234, dated 15th December 1892.
 (c) Department of Home, Revenue and Agriculture, No. 171, dated 6th May 1880.

List of Officers of the Junior Division, Survey

of India Department, as it stood on 1st January 1886—continued.

No. sanctioned.	No. existing in each grade.	Names of Officers.	Branch to which originally posted.	Passed in Vernacular.	Age.	Date of appointment to the Department.	Date of promotion to the present grade.	*Period of service counting towards pension on 1st Jan. '86.
					Y. M. D.			Y. M. D.
JUNIOR DIVISION—contd.								
ASSISTANT SURVEYORS—contd.								
1st GRADE—concl'd.								
<i>Salary R200, rising to R250—concl'd.</i>								
36		Mr. A. Kitchen	Topogl.		32 11 4	Oct. 1, 1872	Dec. 1, 1883	10 11 4
37		" E. P. S. Hill	Rev.	H. S., L. S., Persian.	30 5 15	Nov. 16, 1872	June 2, 1884	8 5 15
38		" R. R. Dickinson	Rev.	L. S.	34 5 6	April 16, 1873	Sep. 1, 1884	12 15 6
39		" P. White	Topogl.	L. S.	35 2 23	Oct. 1, 1872	Oct. 1, 1884	11 0 15
40		" E. Graham	Topogl.	L. S.	32 2 0	Aug. 11, 1873	Nov. 10, 1884	10 2 0
41		" G. A. Knight	Topogl.		31 8 9	Aug. 11, 1873	March 1, 1885	9 8 9
2ND GRADE.								
<i>Salary R160, rising to R200.</i>								
1		Mr. B. M. Wilson	Rev.		37 8 17	Nov. 15, 1872	April 1, 1881	13 11 0
2		" H. Corkery, B.A., LL.D.	G. T. S.	L. S.	34 4 10	Nov. 20, 1873	April 1, 1881	8 2 30
		" P. A. Peters	Rev.	L. S.	31 0 23	Nov. 1, 1873	Jan. 17, 1883	9 0 23
3		" P. F. Prunty	G. T. S.		31 0 6	May 9, 1874	Jan. 22, 1883	9 0 6
4		" J. Keating	G. T. S.		31 7 27	June 1, 1874	Feb. 22, 1883	9 7 27
5		" C. S. Kraal	Rev.	L. S.	32 2 6	July 24, 1874	April 1, 1883	10 1 19
6		" S. F. Norman	G. T. S.		31 4 23	Sep. 1, 1874	April 30, 1883	9 4 23
7		" C. Norman	G. T. S.	L. S.	29 7 12	Oct. 12, 1874	Oct. 6, 1883	7 7 12
8		" D. Campbell	Topogl.		33 1 13	Nov. 1, 1874	Nov. 1, 1883	11 1 13
9		" L. F. Berkeley	Rev.	L. S.	31 4 3	Aug. 16, 1875	Nov. 13, 1883	9 4 3
10		" G. P. Tate	†	L. S.	29 5 9	March 12, 1878	Nov. 21, 1883	7 5 9
11		" J. M. Kennedy	G. T. S.		29 1 28	Aug. 19, 1875	Nov. 24, 1883	7 1 28
12		" P. C. H. Smart	†		30 3 15	April 18, 1878	Dec. 1, 1883	7 3 6
13		" C. George	†	L. S.	33 0 24	Sep. 5, 1878	Dec. 1, 1883	11 0 24
14		" R. F. Warwick	G. T. S.	L. S.	30 9 6	July 2, 1875	March 1, 1884	6 7 29
15		" J. C. Kelly	†	L. S.	28 2 23	Oct. 11, 1878	Sep. 1, 1884	6 2 23
16		" A. George	†	L. S.	30 11 18	Oct. 15, 1878	Sep. 25, 1884	7 2 17
17		" R. W. Senior	†	L. S.	25 1 18	Dec. 21, 1878	Oct. 1, 1884	3 1 18
18		" W. H. D. Ewing	†		28 4 7	April 15, 1878	Nov. 10, 1884	6 2 6
19		" J. A. Iligge	†		26 8 13	Sep. 12, 1881	Nov. 28, 1884	4 3 19
20		" O. D. Smart	†		28 3 15	Oct. 1, 1881	March 1, 1885	6 1 0
21		" A. Ewing	†		24 0 0	Nov. 16, 1881	Oct. 1, 1885	2 0 0
22		" M. Gastaud	†		23 9 24	May 1, 1882	Oct. 30, 1885	1 9 24

No. existing in each grade.	Consolidated Salary.	Extra allowances, if any.	Survey Party or Office to which at present attached.	REMARKS.
	R a. p.			
36	210 0 0	(a) Baluchistan, R100	Baluchistan Topogl. Survey.	
37	210 0 0		Himalaya Topogl. Survey.	
38	210 0 0		Jubbulpore District Traverse Survey.	Apprentice from 1st April 1872 to 15th April 1875.
39	210 0 0		Deccan Topogl. Survey	(A) Exclusive of sick leave for 3 months from 31st October 1876. 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. On sick leave for 3 months, from 5th November 1883 to 4th February 1884.
40	200 0 0	(a) Baluchistan, R100	Baluchistan Topogl. Survey	Previous service as Sub-Surveyor from 1st November 1872.
41	200 0 0	(b) Half scale local, R12	Guzerat Topogl. Survey.	
1	184 0 0	(b) Presidency house rent, R20.	On duty at Head Quarters, Calcutta.	Apprentice from 1st February to 14th November 1872.
2	192 0 0		Tidal and Leveling Operations, India, Burma, Ceylon, &c.	(B) Exclusive of leave without pay, from 21st March to 13th November 1878, and of period on furlough (with pay) from 12th April 1882 to 12th April 1884, and without pay thereafter to 23rd July 1885.
3	176 0 0		On deputation, Straits Settlement Survey.	
4	176 0 0		Tidal and Leveling Operations, India, Burma, Ceylon, &c.	
5	176 0 0		Andaman Topogl. Survey.	
6	176 0 0	(b) Half scale local, R10-9.	Sambalpur Survey	Sick leave, from 6th to 22nd February 1879.
7	176 0 0	(b) Ditto	Guzerat Topogl. Survey.	
8	176 0 0		Ditto.	Joined as a Sub-Surveyor on 3rd July 1872.
9	176 0 0		Andaman Topogl. Survey	
10	176 0 0		Basti District (Cadastral) Survey.	
11	176 0 0		Rajputana Topogl. Survey	Apprentice from 1st March 1874.
12	168 0 0		Mysore Topogl. Survey.	
13	168 0 0	(b) Half scale local, R10-1-3.	Bilaspur District (Cadastral) Survey.	Sick leave from 8th April to 14th September 1883.
14	168 0 0		Deccan Topogl. Survey	Previous service as Sub-Surveyor from 18th August 1874.
15	168 0 0	(c) Assam, R10	Basti District (Cadastral) Survey.	(D) 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 for 4 months and 25 days from 30th August 1881. Also from 18th August 1882 to 14th August 1883.
16	168 0 0	(b) Half scale local, R10-1-3.	Kamrup District (Cadastral) Survey, Assam.	(E) Exclusive of previous service as Sub-Surveyor.
17	168 0 0		Deccan Topogl. Survey	
18	160 0 0	(d) Burma, R100	Const Triangulation Survey.	(F) Exclusive of 2 months and 1 day's suspension, from 25th May to 1st July 1880, and sick leave from 2nd to 28th July 1880.
19	160 0 0		Burma Topogl. Survey	Previous service as Apprentice Draftsman from 31st July 1879.
20	160 0 0		Jubbulpore District Traverse Survey.	Includes service in the temporary or Cadastral establishment without interruption, from 1st December 1879 to 30th September 1881.
21	160 0 0		South Maratha Topogl. Survey	
22	160 0 0		Jubbulpore District Traverse Survey.	
22	160 0 0		Rajputana Topogl. Survey	

List of Officers of the Junior Division, Survey of

No. sanctioned.	No. existing in each grade.	Names of Officers.	Branch to which originally posted.	Passed in Vernacular.	Age.	Date of appointment to the Department.	Date of promotion to the present grade.	*Period of service counting towards pension on 1st Jan. '86.
					Y. M. D.			Y. M. D.
		JUNIOR DIVISION—concl'd.						
		ASSISTANT SURVEYORS—concl'd.						
		3RD GRADE.						
		<i>Salary ₹120, rising to ₹160.</i>						
1		Mr. P. Beechey	†		24 5 14	Dec. 1, 1882	Jan. 22, 1883	2 5 14
2		" G. S. Willis	†		21 6 4	Feb. 25, 1883	Feb. 25, 1883	
3		" E. F. Berkeley	†		21 2 10	Sep. 1, 1883	Sep. 1, 1883	
4		" B. R. Hughes	†		19 6 18	Oct. 15, 1883	Oct. 15, 1883	
5		" F. W. Moore	†		21 0 11	Dec. 13, 1883	Dec. 13, 1883	
6		" J. P. Barker	†		20 4 10	Dec. 23, 1883	Dec. 23, 1883	
7		" N. Bedford	†		24 5 15	Jan. 10, 1884	Jan. 10, 1884	1 11 21
8		" T. W. Babonau	†	L. S.	19 5 21	Jan. 15, 1884	Jan. 15, 1884	
9		" T. J. J. Mills	†		22 0 1	March 14, 1884	March 14, 1884	
10		" H. A. Charrier	†	L. S.	21 2 8	April 21, 1884	April 21, 1884	
11		" P. J. Serrao	†		24 5 28	April 24, 1884	April 24, 1884	1 8 6
12		" J. Smith	†		22 3 17	Aug. 1, 1884	Aug. 1, 1884	0 3 17
13		" W. E. Johnson	†		24 3 16	Aug. 18, 1884	Aug. 18, 1884	1 4 15
14		" C. G. S. Wood	†	L. S.	17 6 0	Aug. 2, 1884	Aug. 2, 1884	
15		" W. V. Skilling	†	L. S.	18 8 6	Nov. 24, 1884	Nov. 24, 1884	
16		" F. E. Warde	†		34 3 24	Nov. 13, 1884	Nov. 13, 1884	1 1 19
17		" A. B. Smart	†		20 3 4	Feb. 25, 1885	Feb. 25, 1885	
48		" G. H. Powell	†	L. S.	21 0 2	March 18, 1885	March 18, 1885	
19		Vacant						
20		Ditto						
21		Ditto						
22		Ditto						

* Applies only to officers who are under the Uncovenanted Service Rules.
† Joined the Department after the amalgamation on 1st January 1878.

India Department, as it stood on 1st January 1886—concluded.

No. existing in each grade.	Consolidated Salary.	Extra allowances, if any.	Survey Party or Office to which at present attached.	REMARKS.
	R a. p.			
1	136 0 0		Rajputana Topogl. Survey.	
2	136 0 0	(a) Burma, R100	Akyab District (Cadastral) Survey, British Burma.	
3	136 0 0		Raipur District Traverse Survey	
4	136 0 0		Mozufferpore District (Cadastral) Survey.	
5	128 0 0		Bilaspur District (Cadastral) Survey.	
6	136 0 0		Punjab Traverse Survey.	
7	128 0 0		Gorakhpur District (Cadastral) Survey.	
8	128 0 0		Raipur District Traverse Survey.	
9	128 0 0		Mysore Topogl. Survey.	
10	128 0 0		Cutch Topogl. Survey.	
11	128 0 0		Guzerat Topogl. Survey.	
12	128 0 0	(b) Assam, R40	Kamrup District (Cadastral) Survey, Assam.	
13	128 0 0		Basti District (Cadastral) Survey.	
14	128 0 0		Rajputana Topogl. Survey.	
15	128 0 0		Gorakhpur District (Cadastral) Survey.	
16	120 0 0		Trigonometrical Branch Office, Dehra Dun.	(A) Date of re-appointment
17	120 0 0		Mozufferpore District (Cadastral) Survey.	
18	120 0 0		Himalaya Topogl. Survey.	
19				
20				
21				
22				

(a) Department of Home, Revenue and Agriculture, No. 171, dated 6th May 1880.
(b) Department of Revenue and Agriculture, No. 278, dated 19th January 1884.

Names of Administrative and Technical Offices of the Survey of India Department as they stood on 1st January 1886.

Names of Offices and Sections.	Nature of Current Operations.	Administrative Superintendent.
HEAD QUARTERS, CALCUTTA.		
<i>Administrative.</i>		
Surveyor General's	Accounts, Correspondence	A. S. G., S. G. O.
Deputy Surveyor General's, Revenue Branch	Ditto	D. S. G., Rev.
Ditto, Topographical Branch	Ditto	D. S. G., Topo.
Map, Record and Issue	Correspondence, Receipts and Issues	A. S. G., D. O. & E. O.
<i>Technical.</i>		
Drawing and Compiling	Mapping	A. S. G., D. O. & E. O.
Engraving	On copper by hand	Do., Do.
Lithographic and Printing	Mapping, Litho. and Type Printing	Do., Litho.
Mathematical Instrument	Repairing, Storing and Issue	Do., M. I. O.
Photozincography	Photo. Reproduction and Zinc Printing	Do., Photo.
TRIGONOMETRICAL BRANCH, DEHRA DUN.		
<i>Administrative.</i>		
Deputy Surveyor General's, Trigonometrical Branch	Accounts, Correspondence	D. S. G., Trig.
<i>Technical Sections.</i>		
Drawing and Compiling	Mapping	Do.
Meteorological	Photo. Reproduction and Zinc Printing	Do.
Photozincography	Letter-press Printing	Do.
Printing	Solar Photography	Do.
Photobeliography		Do.
HEAD QUARTERS OFFICE, SIMLA.		
<i>Administrative.</i>		
Surveyor General's	Direction and Correspondence	S. G.

Names of Field Parties of the Survey of India Department as they stood on 1st January 1886.

Name of Survey or Office.	Original Number of Party and Branch.	Abbreviation or Diminution.	Nature of Current Operations.	Administrative Superintendent.
TRIGONOMETRICAL BRANCH.				
Astronomical No. 1		Astr. 1	Electro-Longitude Observation	D. S. G., Trig.
Do. No. 2		Astr. 2	Ditto ditto	Do.
Coast	Secondary Triangulation.	Coast	Minor Triangulation	Do.
Computing and Type Printing		Comp.	Reduction and Publication	Do.
Tidal and Leveling		Tidal	Automatic Tide Registering and Great Leveling.	Do.
TOPOGRAPHICAL BRANCH.				
Andaman	No. 4 Topographical	And.	Triangulation & Topography	S. G. and D. S. G., Topo.
Baluchistan	No. 3 do.	Bal.	Ditto	Ditto.
Burma	No. 7 do.	Bur.	Triang., Traverse and Forest Topography.	Ditto.
Cutch		Cutch	Triangulation & Topography	Ditto.
Decan	No. 11 Revenue	Dec.	Triang., Trav. & Topog.	D. S. G., Rev.
Guzerat		Guz.	Ditto	S. G. and D. S. G., Topo.
Himalaya	Darjeeling Party	Him.	Triangulation & Topography	D. S. G., Trig.
Mirzapur	No. 5 do.	Mirz.	Ditto	D. S. G., Trig.
Mysore	No. 8 do.	Mys.	Ditto	S. G. and D. S. G., Topo.
Rajputana	No. 1 do.	Raj.	Ditto	D. S. G., Trig.
South Maratha	No. 10 Revenue	S. Mar.	Triang., Traverse & Topog.	Do., Rev.
REVENUE BRANCH.				
Ajmere	Detacht. No. 3 Rev.	Ajm.	Traverse	D. S. G., Rev.
Akyab	No. 7 Revenue	Aky.	Cadastral	Do.
Basti	No. 4 do.	Basti	Do.	Do.
Bilaspur	No. 2 do.	Bil.	Do.	Do.
Gorakhpur	No. 5 do.	Gorakh.	Do.	Do.
Jubbulpore	No. 2 Topographical	Jub.	Traverse	Do.
Kamrup	No. 6 Revenue	Kamr.	Cadastral	Do.
Mozufferpore	No. 8 do.	Mozuf.	Do.	Do.
Punjab	No. 1 do.	Punj.	Traverse and Compilation	Do.
Raipur	No. 3 do.	Raip.	Traverse	Do.
Sambalpur	Detacht. No. 3 Rev.	Samb.	Do.	Do.

Disposition List of Officers of the Survey of India Department, attached to the Head Quarters Offices at Calcutta and Dehra, 1st January 1886.

Name of Office.	Administrative Officers.	Officers of the Senior Division.	Officers of the Junior Division.	Class.	Grade.	Date of appointment.	Details of superintendence and remarks.
Surveyor General of India.	Colonel G. C. DePrée, s.c.					Feb. 12, '83	Director of all Offices and Superintendence of—
Deputy Surveyor General, in charge of Topographical Branch.						Jan. 1, '83	Andaman Survey " Baluchistan " Burma (Forest) " Cutch " Guzerat " Mysore "
Personal Assistant (Offices, Calcutta and Simla).		Lieut. G. B. Hodgson, s.c.		A. Sup.	1st	Sep. 8, '85	
Deputy Surveyor General, in charge Revenue Branch.	Lieut. Col. H. R. Thuillier, R.E.*					Mar. 5, '84	Superintendence of— Ajmere " Akyab " Basti " Bilaspur " Decan " Gorakhpur " Jubbulpore " Kamrup " Mozufferpore " Punjab " Raipur " Sambalpur " South Maratha "
Office, Calcutta.							
Deputy Surveyor General, in charge Trigonometrical Branch.	Colonel C. T. Haig, R.E. (Officiating).					1st Oct. 1, '84	Superintendence of offices at Dehra and of— Astr. No. 1 Party. Do. No. 2 do. Coast Survey. Himalaya " Mirzapur " Rajputana " Tidal and Leveling Operations.
Doing duty	W. H. Cole, Esq., M.A. J. Eccles, Esq., M.A.					3rd Jan. 12, '84	In charge Computing Party.
	Mr. C. Wood					2nd July 26, '85	Computing Party.
	" A. J. Wilson					1st May 1, '65	Ditto.
	" G. W. E. Atkinson.					1st Oct. 1, '85	Drawing Office.
	" J. A. May					1st Sep. 1, '70	Ditto.
	" J. H. Clarke					1st Nov. 1, '85	Ditto.
	" H. W. Peuchers					2nd Oct. 1, '74	Photobeliography Section.
	" C. H. McA'Fee					3rd Sep. 1, '71	Computing Party.
Offices, Dehra and Mussoorie.	" J. Bond					4th Feb. 1, '85	Drawing Office.
	" W. J. Cornelius					4th Oct. 1, '85	Ditto.
	" F. E. Warde					1st July 1, '85	Ditto.
						3rd Oct. 1, '85	Ditto.

* Colonel J. Seance, Deputy Surveyor General (on furlough).

Disposition List of Officers of the Survey of India Department, attached to the Head Quarters Offices at Calcutta and Dehra, 1st January 1886--concluded.

Name of Office.	Administrative Officers.	Officers of the Senior Division.	Officers of the Junior Division.	Class.	Grade.	Date of appointment.	Details of appointments and remarks.
Assistant Surveyor General, Drawing and Engraving Offices. Office, Calcutta.	Major C. Strahan, B.E.			D. Sup.	2nd	July 24, '83	
			Mr. G. A. McGill.	S.	1st	Dec. 20, 82 June 2, 84	Date of joining S.I.O. of appointment as Chief Draftsman.
			" S. M. Smylie .	S.	2nd	Mar. 12, 83	
			" F. Adams .	S.	2nd	June 1, 77	
			" A. G. Wyatt .	S.	3rd	Nov. 14, 84	
			" W. Stotesbury .	S.	4th	June 24, 84 Sep. 1, 84	Date of joining S.I.O. of appointment as Draftsman.
			" P. J. W. Doran .	A. S.	1st	Oct. 25, 83 Jan. 1, 85	Date of joining S.I.O. of appointment as Draftsman.
	" S. O. Madras .	A. S.	1st	May 7, 84			
	" E. J. Martin .	A. S.	1st	Dec. 1, 82			
Assistant Surveyor General, Surveyor General's Office, and Mathematical Instrument Office. Office, Calcutta.	Major M. W. Rogers, B.E.			D. Sup.	3rd	Apr. 19, '83	
Assistant Surveyor General, Lithographic and Photographic Offices. Office, Calcutta.	Lt.-Col. J. Waterhouse, B.C.			D. Sup.	3rd	Dec. '66 Apr. 19, 83	
		Lieut. J. M. Fleming B.C.		A. Sup.	2nd	July 3, 85	
Map, Record and Issue Office. Office, Calcutta.	Major C. Strahan, B.E.		Mr. B. M. Wilson .	D. Sup.	2nd	Nov. 1, '82	

List of Technical and Ministerial Officers of the Survey of India Department, drawing Rs. 100 and above, as it stood on 1st January 1886.

Names.	Age.	Designation.	Salary.	Date of appointment in Government service.	Date of appointment to present pay.	REMARKS.
SURVEY OF INDIA OFFICES.						
Mr. T. W. Babonau	41 10 7	Registrar .	500 0 0	Aug. 9, 1861	April 1, 1885	Short drawn Rs. 40.
SURVEYOR GENERAL'S OFFICE.						
<i>Correspondence Section.</i>						
Mr. M. Francis	48 10 18	Head Clerk .	250 0 0	Jan. 13, 1855	Aug. 1, 1884	
Babu Banee Madhub Banerjee	41 9 0	Clerk .	125 0 0	Mar. 20, 1868	Aug. 1, 1885	Short drawn Rs. 5.
<i>Account Section.</i>						
Mr. E. D. Algar	33 8 13	Head Accountant	225 0 0	Dec. 30, 1878	Dec. 1, 1885	Short drawn Rs. 80.
Babu Bama Churn Chuckerbutty	48 7 18	2nd "	100 0 0	Jan. 1, 1859	Dec. 1, 1885	Ditto Rs. 5.
<i>General Section.</i>						
Mr. J. A. Vallis	37 4 21	Clerk .	150 0 0	April 1, 1871	Dec. 1, 1885	Short drawn Rs. 40.
" H. R. D'Mello	27 3 7	Ditto .	100 0 0	April 1, 1883	Aug. 21, 1885	
REVENUE SURVEY BRANCH OFFICE.						
Mr. A. C. Cunningham	52 2 1	Head Clerk .	300 0 0	Sep. 15, 1852	Mar. 1, 1871	
Babu Kali Podo Banerjee	46 2 4	Clerk .	125 0 0	Jan. 1, 1859	Sep. 1, 1885	
TOPOGRAPHICAL SURVEY BRANCH OFFICE.						
Mr. T. E. Ware	39 7 1	Head Clerk .	175 0 0	Sep. 21, 1871	Aug. 1, 1884	
Babu Doorga Narain Ghose	39 1 0	Clerk .	100 0 0	April 5, 1869	Aug. 1, 1884	Short drawn Rs. 5.
MAP, RECORD AND ISSUE OFFICE.						
Mr. A. E. Byrn	48 1 0	Head Assistant . Personal allowance.	300 0 0 100 0 0	Oct. 9, 1854	Jan. 1, 1874	
" H. R. Vallis	35 10 12	Map Curator .	200 0 0	Mar. 5, 1869	Dec. 1, 1885	Short drawn Rs. 40.
DRAWING OFFICE.						
Mr. G. A. McGill		Chief Draftsman	600 0 0			} See page 18.
" S. M. Smylie		Head ditto	450 0 0			
Vacant		Draftsman	325 0 0			
EUROPEAN DRAFTSMEN.						
Mr. W. Green	46 3 20	Draftsman	250 0 0	Jan. 1, 1862	Sep. 1, 1874	
" J. R. Adels	38 9 16	Ditto	200 0 0	Mar. 23, 1866	Sep. 1, 1874	
" A. J. Musgrove	27 10 10	Ditto	150 0 0	April 22, 1877	Oct. 1, 1885	Short drawn Rs. 5.
" R. Sinclair	24 0 29	Ditto	100 0 0	June 1, 1880	Dec. 1, 1883	
" A. S. Bateman	23 1 26	Ditto	100 0 0	Dec. 6, 1882	Sep. 8, 1885	Short drawn Rs. 10.
NATIVE DRAFTSMEN.						
Munshee Sonaulah	51 9 7	Draftsman	160 0 0	Mar. 31, 1854	Jan. 1, 1874	
" Nabi Baksh	46 0 0	Ditto	150 0 0	Mar. 1, 1859	Feb. 1, 1875	
Babu Hari Hur Sen	54 9 23	Ditto	125 0 0	Feb. 5, 1857	May 1, 1876	
" Mohesh Chunder Shaw	49 0 25	Ditto	100 0 0	Dec. 1, 1856	May 1, 1880	

List of Technical and Ministerial Officers of the Survey of India Department, drawing Rs. 100 and above, as it stood on 1st January 1886—continued.

Names.	Age.	Designation.	Salary.	Date of appointment in Government service.	Date of appointment to present pay.	REMARKS.
ADDITIONAL ESTABLISHMENT, DRAWING OFFICE.						
Mr. W. Stotesbury		Draftsman	400 0 0			} Short drawn Rs. 30. See page 18.
„ P. J. W. Doran		Do.	300 0 0			
SUB-SURVEYORS ON DUTY.						
Babu Madhu Sudun Dutt	49 10 7	Sub-Surveyor	100 0 0	Dec. 15, 1858	Oct. 1, 1865	
Mr. F. Rencontre	27 7 21	Do.	100 0 0	Nov. 1, 1880	Nov. 1, 1879	
ENGRAVING OFFICE.						
Mr. C. W. Coard	55 2 29	Superintendent of Engravers.	1,000 0 0	Nov. 4, 1868	Feb. 1, 1884	Exclusive of house-rent Rs. 100. Short drawn Rs. 50.
„ W. Donaldson	45 1 23	2nd Engraver	700 0 0	Nov. 6, 1868	Jan. 1, 1884	
„ G. G. Palmer	55 11 9	3rd Do.	550 0 0	Sep. 5, 1872	Dec. 1, 1882	Exclusive of house-rent Rs. 50.
„ D. B. Mitchell	45 1 5	4th Do.	550 0 0	Sep. 21, 1872	Jan. 1, 1886	Ditto ditto.
„ J. Fulford	42 5 26	5th Do.	450 0 0	Oct. 10, 1872	Jan. 1, 1886	Exclusive of house-rent Rs. 50. Short drawn Rs. 20.
„ T. B. Rodger	34 3 24	6th Do.	350 0 0	Aug. 20, 1872	Aug. 1, 1884	Exclusive of house-rent Rs. 50.
„ A. G. Palmer	32 4 1	7th Do.	300 0 0	April 1, 1874	May 1, 1880	Ditto ditto.
„ S. M. Coard	27 4 11	8th Do.	250 0 0	Feb. 1, 1875	May 1, 1885	
„ A. W. N. James	25 11 11	9th Do.	200 0 0	Mar. 15, 1878	Aug. 1, 1885	
„ A. R. Coard	24 2 29	10th Do.	150 0 0	Mar. 15, 1878	April 1, 1885	
„ A. D. M. Chamarette	22 7 26	11th Do.	100 0 0	Mar. 15, 1878	April 1, 1882	
„ E. C. Ollenbach	24 11 8	12th Do.	100 0 0	Aug. 1, 1879	Aug. 1, 1882	
„ W. T. Collins	27 2 1	Copper-plate Printer.	150 0 0	Jan. 6, 1880	May 1, 1884	
Babu Russic Lall Roy	51 5 20	1st Native Engraver.	125 0 0	Sep. 1, 1869	Sep. 1, 1877	
„ Joy Kristo Shaw	37 2 28	2nd Do.	100 0 0	Aug. 1, 1869	Aug. 1, 1883	
LITHOGRAPHIC OFFICE, DRAWING SECTION.						
Mr. H. L. Lepage	42 7 5	Head Assistant	450 0 0	July 15, 1871	Dec. 1, 1881	
Munshi Mahomed Azim	54 8 0	Examiner	100 0 0	April 3, 1852	May 1, 1884	Short drawn Rs. 5.
LITHOGRAPHIC PRESS SECTION.						
Mr. D. Deas	30 3 21	Head Lithographic Printer.	300 0 0	Nov. 29, 1883	Nov. 29, 1885	Short drawn Rs. 30.
„ B. Wilson	25 5 28	Asst. Do.	100 0 0	Mar. 1, 1883	Nov. 1, 1884	Short drawn Rs. 20.
TYPOGRAPHIC SECTION.						
„ E. D'Pyvah	35 9 16	Head Printer	100 0 0	Aug. 1, 1868	Nov. 1, 1884	
MATHEMATICAL INSTRUMENT OFFICE, WORKSHOP SECTION.						
Mr. T. Bolton	40 11 21	Mathematical Instrument-maker.	750 0 0	Sep. 16, 1867	Nov. 11, 1871	
„ F. Marshall	29 11 23	Assistant Mathematical Instrument-maker.	500 0 0	Jan. 3, 1881	Jan. 3, 1884	Short drawn Rs. 50.
CORRESPONDENCE SECTION.						
Mr. M. O'Drien	53 1 26	Head Clerk	200 0 0	Mar. 10, 1859	Mar. 1, 1872	
„ W. Campagnac	27 3 10	2nd Clerk	100 0 0	April 1, 1882	Mar. 20, 1885	Short drawn Rs. 25.
STORE SECTION.						
Mr. C. O. Gray	24 10 14	Store-keeper	150 0 0	Feb. 4, 1879	Oct. 1, 1885	

List of Technical and Ministerial Officers of the Survey of India Department, drawing Rs. 100 and above, as it stood on 1st January 1886—concluded.

Names.	Age.	Designation.	Salary.	Date of appointment in Government service.	Date of appointment to present pay.	REMARKS.
PHOTOGRAPHIC OFFICE, NORMAL ESTABLISHMENT.						
<i>Negative Section.</i>						
Mr. J. Mackenzie	48 6 1	Photographer	330 0 0	June 1, 1862	June 1, 1874	Inclusive of house-rent, Rs. 30.
<i>Photo. Transfer Printing Section.</i>						
Mr. J. Harrold	50 7 8	Ditto	330 0 0	Mar. 19, 1873	Mar. 11, 1880	Ditto ditto.
<i>Silver Printing Section.</i>						
Mr. G. G. Dempster	33 0 25	Ditto	200 0 0	July 16, 1873	April 1, 1884	Ditto ditto Rs. 20.
<i>Heliogravure and Collotype Section.</i>						
Mr. A. W. Turner	33 2 12	Photo. Engraver	400 0 0	May 1, 1885	May 1, 1885	Short drawn Rs. 100.
<i>Zinc Printing Section.</i>						
Mr. B. Mackenzie	44 10 7	Zincographer	330 0 0	Nov. 24, 1867	Nov. 24, 1879	Inclusive of house-rent, Rs. 30.
<i>General Office Establishment.</i>						
Mr. W. Moore	27 1 27	Store-keeper	200 0 0	Sep. 15, 1883	Aug. 1, 1885	Short drawn Rs. 80.
CADASTRAL ESTABLISHMENT.						
<i>Negative Section.</i>						
Mr. C. Marshall	50 5 11	Photographer	330 0 0	Mar. 20, 1874	April 1, 1885	Inclusive of house-rent, Rs. 30.
„ L. Lagnier	35 6 0	Ditto	200 0 0	Feb. 1, 1876	Feb. 1, 1881	Ditto ditto Rs. 20.
„ T. Lloyd	31 1 24	Ditto	100 0 0	July 16, 1873	July 1, 1881	
<i>Photo. Transfer Printing Section.</i>						
Mr. R. George	39 7 27	Photographer	330 0 0	Feb. 1, 1876	Feb. 1, 1884	Inclusive of house-rent, Rs. 30. Short drawn Rs. 80.
<i>Zinc Printing Section.</i>						
Mr. J. Watson	51 2 17	Zincographer	330 0 0	Nov. 24, 1867	Mar. 1, 1880	Inclusive of house-rent, Rs. 30.
„ E. A. LeFranc	30 0 20	Ditto	330 0 0	Nov. 15, 1876	Jan. 1, 1886	Ditto ditto. Short drawn Rs. 80.
„ J. B. Mackenzie	20 8 15	Asst. do.	100 0 0	Oct. 1, 1880	Aug. 1, 1885	Short drawn Rs. 30.
<i>General Office Establishment.</i>						
Mr. H. Haward	35 10 20	Head Assistant	500 0 0	Nov. 16, 1883	Nov. 16, 1883	Short drawn Rs. 160.
TRIGONOMETRICAL BRANCH OFFICE.						
<i>Computing Section.</i>						
Babu Ganga Pershad	45 0 0	Computer	240 0 0	Mar. 13, 1857	Feb. 1, 1883	
„ Cally Mohun Ghose	42 8 0	Ditto	200 0 0	Nov. 6, 1865	Feb. 1, 1883	
„ Cally Chomár Chatterjee	43 8 0	Ditto	120 0 0	Aug. 12, 1865	Feb. 1, 1883	
„ Tarnoda Mukerjee	46 7 0	Ditto	100 0 0	May 21, 1862	Feb. 1, 1883	
„ Amba Pershad	43 5 16	Ditto	100 0 0	July 26, 1865	Feb. 1, 1883	
„ Uabica Churan Shome	42 5 16	Ditto	100 0 0	Feb. 8, 1867(a)	Feb. 1, 1883	(a) Date of appointment to Educational Department, Joined Computing Office, Survey of India, 10th April 1868.
„ Soshi Bhoshun Shome	36 2 16	Ditto	100 0 0	April 15, 1872	Sep. 1, 1885	
„ Shiv Nath Saha	35 3 1	Ditto	100 0 0	Nov. 26, 1873	Sep. 1, 1885	
<i>Photozinc Section.</i>						
Mr. C. G. Ollenbach	54 11 13	Zincographer	300 0 0	Jan. 1, 1850(b)	Feb. 1, 1883	(b) Appointed to Survey of India 1st November 1865.
<i>Printing Section.</i>						
Mr. B. V. Hughes	46 0 30	Printer	230 0 0	Nov. 1, 1880(c)	Sep. 1, 1885	(c) Date of appointment to Survey of India. Previous Military service excluded.
<i>Correspondence Section.</i>						
Mr. F. A. D'Rozario	36 5 28	Head Clerk	250 0 0	Oct. 14, 1874	July 1, 1885	Short drawn Rs. 50.

Disposition List of Officers of the Survey of India Department, attached to Field Parties, 1st January 1886.

Name of Survey.	Old Number of Party.	D. S. G. and Superintendent of Branch.	Officers of the Senior and Junior Divisions.	Class.	Grade.	Date of appointment to Party.	SUBORDINATE ESTABLISHMENT.					Annual Cost of Party.	REMARKS.	
							Sub-Surveyors and Computers.	Writers.	Flagmen and Carriers.	Hospital Assistant.	Dunknazes and Poonas.			Apothecary.
Astronomical (Electro Longitude observation).	1	Trig.	Major W. J. Heaviside, B.E.	D. Sup.	2nd	Dec. 6, '82.								
			Lieut. S. G. Burrard, B.E.	A. Sup.	2nd	Oct. 9, 85								Offg. 1st grade.
			Mr. W. W. McNair	S.	3rd	Oct. 9, 85								
Recess quarters, Mussoorie.							1	1	14		6		36,600	
Astronomical (Electro Longitude observation).	2	Trig.	Major G. Strahan, B.E.	D. Sup.	1st	Nov. 13, '85								
Recess quarters, Mussoorie.							1	1	15		6		14,700	
Coast (Triangulation).	...	Trig.	E. C. Ryall, Esq.	A. Sup.	1st	Oct. 6, '85								Offg. Depy. Supdt., 4th grade.
			Mr. R. W. Senior	A. S.	2nd	July 1, 85								
Recess quarters, Mussoorie.								1	70	1	9		28,700	
Tidal and Leveling. (Tide registering and Great Leveling).	...	Trig.	Major A. W. Baird, B.E., F.R.S., A.I.C.E.	D. Sup.	4th	July 4, '77								Offg. 3rd grade.
			Major J. Hill, B.E.	D. Sup.	3rd	Dec. 20, 85								Attached.
			Mr. G. Belcham	S.	3rd	Sep. 1, 79								
			„ E. J. Connor	S.	4th	Dec. 1, 77								
			„ H. Corkery, B.A., L.L.B.	A. S.	2nd	July 20, 85								
Recess quarters, Poona.			„ P. F. Prunty	A. S.	2nd	Oct. 9, 1886	17	2	{ 34 60 temp	10			61,100	

Disposition List of Officers of the Survey of India Department, attached to Field Parties, 1st January 1886—continued.

Name of Survey.	Old Number of Party.	D. S. G. and Superintendent of Branch.	Officers of the Senior and Junior Divisions.	Class.	Grade.	Date of appointment to Party.	SUBORDINATE ESTABLISHMENT.					Annual Cost of Party.	REMARKS.	
							Sub-Surveyors and Computers.	Writers.	Flagmen and Carriers.	Hospital Assistant.	Barkundazes and Poonas.			Apothecary.
Andaman (Topo.)	4	Topo.	Capt. J. R. Hobday, s.c.	A. Sup.	1st	Oct. 1, '83								Offg. D. Supdt., 4th grade.
			Mr. G. D. Cusson	A. S.	1st	Oct. 6, 84								
			„ J. Keating	A. S.	2nd	Nov. 1, 83								
			„ D. Campbell	A. S.	2nd	Nov. 1, 83								
Recess quarters, Mussoorie.							3	1	89		4		38,000	
Baluchistan (Topo.)	3	Topo.	Lt.-Col. J. R. Wilmer, s.c.	D. Sup.	4th	Oct. 1, '85								Offg. 4th grade.
			Mr. M. J. Ogle	S.	2nd	Nov. 1, 85								
			„ T. E. M. Claudius	S.	4th	Oct. 1, 83								
			„ E. A. Wainright	A. S.	1st	June 10, 85								
			„ W. C. G. Barckley	A. S.	1st	Oct. 1, 85								
			„ A. Kitchen	A. S.	1st	Oct. 1, 83								
			„ E. Graham	A. S.	1st	Nov. 1, 85								
Recess quarters, Mussoorie.							5	1	111	1			75,800	
Burma (Topo.)	7	Topo.	H. Horst, Esq.	D. Sup.	3rd	Dec. 14, '82								
			Mr. J. H. Wilson	A. S.	1st	Nov. 1, 77								
			„ C. P. Torrens	A. S.	1st	Nov. 1, 82								
			„ W. H. Penrose	A. S.	1st	Dec. 1, 84								
			„ R. A. Gibson	A. S.	1st	Nov. 1, 83								
			„ W. H. D. Ewing	A. S.	2nd	Oct. 1, 85								
Recess quarters, Rangoon.								25	2	548	2	11	1,24,900	
Cutch (Topo.)		Topo.	Lieut.-Colonel A. Pullan, s.c.	D. Sup.	2nd	Apr. 26, '79								
			Mr. C. Tapsell	A. S.	1st	Nov. 1, 85								
			„ W. A. Fielding	A. S.	1st	May 3, 68								
			„ G. T. Hall	A. S.	1st	Nov. 30, 74								
			„ H. A. Charrier	A. S.	3rd	Oct. 1, 84								
Recess quarters, Poona.								11	1	107	1	24	56,900	

Disposition List of Officers of the Survey of India Department, attached to Field Parties
1st January 1886—continued.

Name of Survey.	Old Number of Party.	D. S. G. and Superintendent of Branch.	Officers of the Senior and Junior Divisions.	Class.	Grade.	Date of appointment to Party.	SUBORDINATE ESTABLISHMENT.						Annual Cost of Party.	REMARKS.
							Sub-Surveyors and Computers.	Writers.	Flagmen and Carriers.	Hospital Assistants.	Burkundazes and Peons.	Apothecary.		
Deccan (Topo.)	Revenue 11	Rev.	Lt.-Col. D. C. Andrew, s.c.	D.Sup.	3rd	Nov. 20, '80	Officiating 2nd grade.
			Mr. J. Hickie	A. S.	1st	Nov. 1, 79	...	...	...	...	...	...	...
			" P. White	A. S.	1st	Oct. 1, 83	...	...	...	...	...	...	...
			" C. George	A. S.	2nd	Nov. 1, 85	...	...	...	...	...	...	...
			" A. George	A. S.	2nd	June 1, 85	...	...	...	...	...	...	...
Recess quarters, Poona.						18	1	148	1	10	...	58,900		
Guzerat (Topo.)	...	Topo.	Lieut.-Colonel W. F. Badgley, s.c.	D.Sup.	3rd	Mar. 14, '84
			Mr. J. Newland	S.	4th	Sep. 1, 85	...	...	...	...	...	...	...
			" G. A. Knight	A. S.	1st	June 19, 85	...	...	...	...	...	...	...
			" S. F. Norman	A. S.	2nd	Sep. 1, 74	...	...	...	...	...	...	...
			" C. Norman	A. S.	2nd	Oct. 12, 74	...	...	...	...	...	...	...
			" P. J. Serrao	A. S.	3rd	Oct. 1, 84	...	...	...	...	...	...	...
Recess quarters, Poona.						27	2	184	1	33	1	83,300		
Himalaya (Topo.)	...	Trig.	Bt. Colonel H. C. B. Tanner, B.E. s.c.	D.Sup.	2nd	Nov. 1, '82
			Lieut. W. H. Pollen, B.E.	A.Sup.	1st	Oct. 1, 85	...	...	...	...	...	...	...
			Mr. W. Robert	A. S.	1st	Sep. 1, 78	...	...	...	...	...	...	...
			" E. P. S. Hill	A. S.	1st	May 23, 85	...	...	...	...	...	...	...
			" G. H. Powell	A. S.	3rd	Oct. 1, 85	...	...	...	...	...	...	...
			Recess quarters, Simla.						10	1	{ 60 40 Temp }	1	{ 12 ...		...	64,700
Mirzapur (Topo.)	Topographical 5	Trig.	W. H. Patterson, Esq.	A.Sup.	1st	Nov. 11, '85	Offg. Depy. Supdt., 4th grade.
			Mr. L. J. Pocock	S.	3rd	July 1, 85	...	...	...	...	...	...	...
			" C. F. Hamer	S.	4th	Aug. 3, 63	...	...	...	...	...	...	...
			" C. D. Potter	S.	4th	July 1, 85	...	...	...	...	...	...	...
			" H. T. Kitchen	A. S.	1st	Nov. 1, 66	...	...	...	...	...	...	...
			" W. H. Lilley	A. S.	1st	May 1, 68	...	...	...	...	...	...	...
Recess quarters, Mussorie.						18	...	200	1	10	...	57,500		

Disposition List of Officers of the Survey of India Department, attached to Field Parties,
1st January 1886—continued.

Name of Survey.	Old Number of Party.	D. S. G. and Superintendent of Branch.	Officers of the Senior and Junior Divisions.	Class.	Grade.	Date of appointment to Party.	SUBORDINATE ESTABLISHMENT.						Annual Cost of Party.	REMARKS.	
							Sub-Surveyors and Computers.	Writers.	Flagmen and Carriers.	Hospital Assistants.	Burkundazes and Peons.	Apothecary.			
Mysore (Topo.)	Topographical 8	Topo.	Major J. R. McCullagh, B.E.	D.Sup.	4th	Mar. 20, '84	84,000	Offg. 3rd grade.
			Mr. A. J. James	S.	4th	Oct. 1, 76	...	...	...	...	...	...	...
			" F. Kitchen	S.	4th	Oct. 1, 75	...	...	...	...	...	...	...
			" Hugh Todd	S.	4th	Oct. 1, 76	...	...	...	...	...	...	...
			" J. A. Barker	A. S.	1st	Nov. 1, 84	...	...	...	...	...	...	...
			" R. Todd	A. S.	1st	Oct. 1, 84	...	...	...	...	...	...	...
			" J. M. Kennedy	A. S.	2nd	Oct. 1, 75	...	...	...	...	...	...	...
			" T. J. J. Mills	A. S.	3rd	Oct. 1, 84	...	...	...	...	...	...	...
Recess quarters, Bangalore.						11	1	128	1	53	...	84,000			
Rajputana (Topo.)	1	Trig.	Major R. Deavan, s.c.	D.Sup.	4th	Oct. 1, '83	57,300	...
			Mr. W. Todd	S.	2nd	Oct. 1, 85	...	...	...	...	...	...	...
			" N. C. Gwynne	S.	3rd	Nov. 8, 85	...	...	...	...	...	...	...
			" G. P. Tate	A. S.	2nd	Mar. 12, 78	...	...	...	...	...	...	...
			" M. Gastaud	A. S.	2nd	May 1, 82	...	...	...	...	...	...	...
			" P. Beechey	A. S.	3rd	Dec. 1, 82	...	...	...	...	...	...	...
			" C. G. S. Wood	A. S.	3rd	Oct. 1, 85	...	...	...	...	...	...	...
			Recess quarters, Mussorie.						10	1	120	1	20			...	57,300
South Maratha (Topo.)	Revenue 10	Rev.	Lt. F. B. Longe, B.E.	A.Sup.	1st	Dec. 29, '85	Offg. Depy. Supdt., 4th grade.	
			Mr. J. Peyton	S.	1st	Aug. 1, 85	...	...	...	...	...	...	...
			" A. M. Lawson	S.	2nd	Nov. 1, 71	...	...	...	...	...	...	...
			" W. M. Kelly	A. S.	1st	Nov. 1, 79	...	...	...	...	...	...	...
			" O. D. Smart	A. S.	2nd	Oct. 1, 85	...	...	...	...	...	...	...
			Recess quarters, Poona.						21	1	133	1	12		...	59,700
Ajybre (Traverse.)	...	Rev.	Mr. A. J. Gibson	S.	2nd	Oct. 20, 85	8,400	Detachment No. 3 Revenue.
			Recess quarters, Mussorie.						9	62	...	5	...		
Akyab (Cadastral.)	Revenue 7	Rev.	Lt.-Col. H. S. Hutchinson, s.c.	D.Sup.	4th	Oct. 12, '85	1,88,000	...
			F. W. Kelly, Esq.	A.Sup.	1st	Mar. 1, 83	...	...	...	...	...	...	...
			Mr. H. R. Littlewood	S.	2nd	Oct. 24, 85	...	...	...	...	...	...	...
			" G. W. Jarbo	A. S.	1st	Nov. 1, 80	...	...	...	...	...	...	...
			" J. S. Swiney	A. S.	1st	Apr. 14, 82	...	...	...	...	...	...	...
			" G. S. Willis	A. S.	3rd	Oct. 1, 84	...	...	...	...	...	...	...
Recess quarters, Akyab.						18	...	176	1	19	...	1,88,000			
						140	2	473	...	...	...	...

Disposition List of Officers of the Survey of India Department, attached to Field Parties,
1st January 1886—continued.

Name of Survey.	Old Number of Party.	D. S. G. and Superintendent of Branch.	Officers of the Senior and Junior Divisions.	Class.	Grade.	Date of appointment to Party.	SUBORDINATE ESTABLISHMENT.						Annual Cost of Party.	REMARKS.	
							Sub-Surveyors and Computers.	Writers.	Flagmen and Carriers.	Hospital Assistant.	Burfcu-lazas and Feods.	Apothecary.			
Basti (Cadastral.)	Revenue 4	Rev.	Lt.-Col. S. H. Cowan, s.c.	D. Sup.	4th	Dec. 11, '83	Offg. 3rd grade.	
			Lieut. H. M. Jackson, R.E.	A. Sup.	1st	Sep. 1, 85	...	...	...	...	...	...	...
			Mr. H. T. Hanby	S.	3rd	May 1, 70	...	...	...	...	...	...	...
			W. J. O'Sullivan	S.	3rd	Aug. 1, 85	...	...	...	...	...	...	...
			W. C. Price	S.	3rd	Oct. 1, 80	...	...	...	...	...	...	...
			L. F. Berkeley	A. S.	2nd	Aug. 16, 75	...	...	...	...	...	...	...
			R. F. Warwick	A. S.	2nd	Nov. 15, 85	...	...	...	...	...	...	...
			W. E. Johnson	A. S.	3rd	Aug. 18, 84	...	...	...	...	...	...	...
Recess quarters, Naini Tal.	Professional Establishment (Permanent)						21	1	157	1	17	...	1,30,000		
	Cadastral Ditto (Temporary)						304	...	623	...	...	...
Bilaspur (Cadastral.)	2	Rev.	Major E. H. Steel, s.c.	D. Sup.	4th	Nov. 4, '85	...	...	...	...	...	...	Offg. 1st grade.
			G. B. Scott, Esq.	A. Sup.	2nd	Oct. 1, 85	...	...	...	...	...	...
			Mr. F. Grant	S.	1st	Nov. 1, 79	...	...	...	...	...	...
			A. Christie	S.	3rd	Nov. 1, 85	...	...	...	...	...	...
			J. McHatton	A. S.	1st	Jan. 1, 80	...	...	...	...	...	...
			P. C. H. Smart	A. S.	2nd	Oct. 1, 85	...	...	...	...	...	...
			F. W. Moore	A. S.	3rd	Oct. 1, 85	...	...	...	...	...	...
			Professional Establishment (Permanent)						25	2	46	1		20	...	1,30,200
Cadastral Ditto (Temporary)						54	1	402	...	...	...	
Recess quarters, Mussoorie.	Professional Establishment (Permanent)						25	2	46	1	20	...	1,30,200		
	Cadastral Ditto (Temporary)						54	1	402	...	...	...
	Gorakhpur (Cadastral.)	5	Rev.	Major J. E. Sandeman, s.c.	D. Sup.	3rd	Nov. 1, '83	Offg. 2nd grade.	
				Capt. R. A. Wahab, R.E.	A. Sup.	1st	Nov. 8, 85		Offg. Depy. Supt., 4th grade.
				Mr. E. G. Little	S.	3rd	Apr. 1, 77	...	...	...	...	...	...
				T. F. Freeman	A. S.	1st	Oct. 1, 76	...	...	...	...	...	...
				T. Shaw	A. S.	1st	Nov. 1, 80	...	...	...	...	...	...
				J. Murphy	A. S.	1st	July 2, 83	...	...	...	...	...	...
A. W. Smart				A. S.	1st	Oct. 1, 85	...	...	...	...	...	...
N. Bedford				A. S.	3rd	Jan. 10, 84	...	...	...	...	...	...
Professional Establishment (Permanent)						14	2	195	1	20	...	1,29,800			
Cadastral Ditto (Temporary)						260	...	689	...	...	...	
Recess quarters, Naini Tal.	Professional Establishment (Permanent)						14	2	195	1	20	...	1,29,800		
	Cadastral Ditto (Temporary)						260	...	689	...	...	...
	Jubbulpore (Traverse.)	Topo. 2	Rev.	G. H. Cooke, Esq.	D. Sup.	4th	Oct. 26, '85	70,900	
				Mr. J. Todd	S.	2nd	Oct. 1, 85	...	...	...	...	...	...
				H. Dowman	S.	3rd	Nov. 1, 85	...	...	...	...	...	...
				J. T. U. Coxen	S.	4th	Nov. 1, 85	...	...	...	...	...	...
				R. R. Dickinson	A. S.	1st	Oct. 1, 85	...	...	...	...	...	...
				J. A. Higgs	A. S.	2nd	Feb. 1, 84	...	...	...	...	...	...
A. Ewing				A. S.	3rd	Nov. 1, 85	...	...	...	...	...	...
Professional Establishment (Permanent)						38	...	330	1	14	...	70,900			
Cadastral Ditto (Temporary)						...	...	...	...	...	...

Disposition List of Officers of the Survey of India Department, attached to Field Parties,
1st January 1886—concluded.

Name of Survey.	Old Number of Party.	D. S. G. and Superintendent of Branch.	Officers of the Senior and Junior Divisions.	Class.	Grade.	Date of appointment to Party.	SUBORDINATE ESTABLISHMENT.						Annual Cost of Party.	REMARKS.			
							Sub-Surveyors and Computers.	Writers.	Flagmen and Carriers.	Hospital Assistant.	Burfcu-lazas and Feods.	Apothecary.					
Kamrup (Cadastral.)	Revenue 6	Rev.	E. C. Barrett, Esq.	D. Sup.	4th	July 25, '83	...	...	...	...	...	...	1,00,000
			Mr. J. H. O'Donel	S.	4th	Oct. 29, 83	...	...	...	...	...	...
			D. A. King	S.	4th	Nov. 1, 84	...	...	...	...	...	...
			J. Connor	S.	4th	Oct. 29, 83	...	...	...	...	...	...
			J. C. Kelly	A. S.	2nd	Oct. 29, 83	...	...	...	...	...	...
			J. Smith	A. S.	3rd	Nov. 1, 84	...	...	...	...	...	...
			Professional Establishment (Permanent)						22	1	146	1		11	...	1,00,000	
			Cadastral Ditto (Temporary)						65	...	169		
Muzafferpore (Cadastral.)	8	Rev.	Lt.-Col. W. Barron, s.c.	D. Sup.	2nd	Nov. 16, '85	...	...	...	...	...	...	1,63,200
			Mr. W. A. Wilson	S.	2nd	Oct. 19, 85	...	...	...	...	...	...
			R. B. Smart	S.	4th	Nov. 1, 81	...	...	...	...	...	...
			B. R. Hughes	A. S.	3rd	Oct. 1, 85	...	...	...	...	...	...
			A. B. Smart	A. S.	3rd	Oct. 1, 85	...	...	...	...	...	...
			Professional Establishment (Permanent)						22	1	188	1		17	...	1,63,200	
			Cadastral Ditto (Temporary)						42	...	151		
			Recess quarters, Darjeeling.	Professional Establishment (Permanent)						22	1	188		1	17	...	1,63,200
Cadastral Ditto (Temporary)						42	...	151	...	...	...			
Punjab (Traverse.)	1	Rev.		Lt.-Col. F. Coddington, s.c.	D. Sup.	2nd	Mar. 3, '84	Offg. 1st grade.			
				Mr. H. E. T. Keelan	S.	1st	Oct. 22, 85	...	...	...	...	...	...
				J. S. Pemberton	S.	2nd	Oct. 21, 85	...	...	...	...	...	...
				C. W. Wilson	A. S.	1st	Oct. 1, 84	...	...	...	...	...	...
				G. Campbell	A. S.	1st	Sep. 21, 82	...	...	...	...	...	...
				J. P. Barker	A. S.	3rd	Dec. 22, 83	...	...	...	...	...	...
			Professional Establishment (Permanent)						27	1	237	1	13		...	71,400	
			Cadastral Ditto (Temporary)							
Recess quarters, Simla.	Professional Establishment (Permanent)						27	1	237	1	13	...	71,400				
	Cadastral Ditto (Temporary)						...	...	...	...	...	...
	Raipur (Traverse.)	3	Rev.	Lt.-Col. W. H. Wilkins, s.c.	D. Sup.	3rd	Nov. 4, '85	Offg. 2nd grade.			
				A. D'Souza, Esq.	A. S.	2nd	Oct. 1, 85		Offg. 1st grade.		
				Mr. W. S. Buttress	S.	3rd	Oct. 1, 85	...	...	...	...	...	...
				J. R. Scott	A. S.	1st	Oct. 23, 85	...	...	...	...	...	...
				G. Vander Beck	A. S.	1st	Nov. 1, 85	...	...	...	...	...	...
				E. F. Berkeley	A. S.	3rd	Nov. 1, 85	...	...	...	...	...	...
T. W. Babonau				A. S.	3rd	Jan. 15, 84	...	...	...	...	...	...
Professional Establishment (Permanent)						24	2	360	1	8	...	63,800					
Cadastral Ditto (Temporary)						...	...	...	...	...	...
Recess quarters, Mussoorie.	Professional Establishment (Permanent)						24	2	360	1	8	...	63,800				
	Cadastral Ditto (Temporary)						...	...	...	...	...	...
	Santhalpur (Traverse.)	...	Rev.	Mr. P. A. G. Cowley	S.	1st	Oct. 10, 83	33,700			
				C. W. F. Seyers	A. S.	1st	Nov. 1, 85	...	...	...	...	...	...
				C. S. Kraal	A. S.	2nd	Oct. 1, 85	...	...	...	...	...	...
				Professional Establishment (Permanent)						15	...	146	1		6	...	33,700
				Cadastral Ditto (Temporary)						9	...	23	
				Recess quarters, Nagpur.	Professional Establishment (Permanent)						15	...	146		1	6	...	33,700
Cadastral Ditto (Temporary)						9	...	23	...	...	...			

Disposition List of Officers of the Survey of India Department
temporarily transferred to other Departments, or on furlough,
&c., 1st January 1886.

Officers of the Senior Division.	Officers of the Junior Division.	Class.	Grade.	Department to which transferred.	REMARKS.
<i>On Deputation.</i>					
Bt. Lt.-Col. J. Herschel, R.E.	. . . . .	D. Sup.	1st	India Office, London.	
Major T. H. Holdich, R.E.	. . . . .	D. Sup.	3rd	Foreign Department	Afghan Boundary Commission.
Bt. Col. R. G. Woodthorpe, R.E.	. . . . .	D. Sup.	4th	Ditto	On special duty.
Captain St. G. C. Gore, R.E.	. . . . .	A. Sup.	1st	Ditto	Officiating Depy. Supt., 4th grade Afghan Boundary Commission.
Captain the Hon. M. G. Talbot, R.E.	. . . . .	A. Sup.	1st	Ditto	Ditto ditto ditto.
	Mr. D. Atkinson	S.	1st	Office of Director General of Statistics.	
	„ E. S. P. Atkinson	S.	2nd	Settlement Department, Rawal Pindi.	
	„ W. R. Vyall	S.	3rd	Govt., Central Provinces.	
	„ T. H. Rendell	S.	4th	Quarter Master General's Office, Simla.	
	„ T. H. Dunne	S.	4th	Govt., Central Provinces.	
	„ G. C. Swiney	A. S.	1st	Ditto.	
	„ G. E. Parker	A. S.	1st	Ditto.	
	„ P. A. Peters	A. S.	2nd	Government, Straits Settlement.	
<i>On Furlough, &c.</i>					
Bt. Colonel J. Sconce, R.C.	. . . . .	D. S. G. Rev.	. . . . .	. . . . .	For 2 years, from 14th March 1884.
Major T. T. Carter, R.E.	. . . . .	D. Sup.	2nd	. . . . .	For 1 year, from 6th December 1884. Extension for 8 months.
Bt. Colonel D. Macdonald, R.C.	. . . . .	D. Sup.	2nd	. . . . .	For 2 years, from 7th March 1884.
E. J. Jackson, Esq.	. . . . .	D. Sup.	4th	. . . . .	For 1 year, from 4th November 1885.
	Mr. R. C. D. Ewing	A. S.	1st	. . . . .	For 1 year, from 17th September 1886.

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

Corrected up to 1st January 1886.

BREVET COLONEL GEORGE CHARLES DEPRÉE, B.S.C., *Surveyor General of India.*

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 Party 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 23rd December 1882 and appointed Deputy Surveyor General in charge Topographical Surveys from 1st January 1883; Officiated as Surveyor General from 12th February 1883 up to the 11th January 1884; confirmed 12th January 1884.

WAR SERVICES.

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

BREVET LIEUTENANT-COLONEL H. R. THUILLIER, *Royal Engineers (Bengal), Deputy Surveyor General, in charge Revenue Survey Branch.*

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 reorganization 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 reorganization of 1878, 27th October 1878; furlough to Europe for two years from 17th November 1879; Brevet Lieutenant-Colonel, 7th October 1883; Officiating Deputy Surveyor General in charge Revenue Survey Branch from 5th March 1884; confirmed 1st October 1884.

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

JOINED the Honourable East India Company's Military Academy at Addiscombe, February 1852; date of first commission as 2nd Lieutenant, Bengal Artillery, 9th December 1853; landed in India, 2nd April 1854; promoted to 1st Lieutenant, 23rd September 1857; appointed to Bengal Horse Artillery, 11th February 1858; appointed Adjutant, 4th Battalion, Bengal Artillery, 15th July 1859; appointed Assistant Revenue Surveyor in the Bundelcund Revenue Survey, 21st October 1859; transferred to the Royal Artillery, May 1861; appointed to the charge of 1st Division, Central Provinces Revenue Survey at Jubbulpore, 27th June 1862; promoted to Revenue Surveyor (now Deputy Superintendent of Survey), 3rd grade, 24th January 1863; promoted to 2nd Captain, Royal Artillery, 3rd April 1863; transferred to the charge of 3rd Division, Central Provinces Revenue Survey at Saugor, 13th November 1863; proceeded on furlough to Europe on sick certificate, 25th July 1864; returned from furlough and appointed to do duty in the Office of Superintendent, Revenue Surveys, Calcutta, 16th March 1866; appointed to the charge of 6th Division, Lower Provinces Revenue Survey at Hazaribagh, 3rd November 1866; promoted to Deputy Superintendent of Survey, 2nd grade, 6th November 1868; transferred as Captain to Bengal Staff Corps, 8th March 1869; proceeded on furlough to Europe, 28th March 1872; returned from furlough and appointed to do duty in the Office of Superintendent of Revenue Surveys, Calcutta, 5th November 1873; appointed to the charge of the 3rd Division, Lower Provinces Revenue Survey at Midnapur, 6th December 1873; promoted to Brevet Major, 9th December 1873; transferred to the charge of the 8th Division, Revenue Survey (Western Soane Irrigation) at Arrah, 16th March 1876; promoted to Major, Bengal Staff Corps, 11th October 1876; appointed Deputy Surveyor General, 1st January 1879; promoted to Lieutenant-Colonel, Bengal Staff Corps, 9th December 1879; Brevet Colonel 9th December 1883; proceeded on furlough to Europe for 2 years from 14th March 1884.

WAR SERVICES.

Served with the 1st Battalion, Bengal Artillery, and No. 17, Light Field Battery, at the siege and capture of Delli in September 1857; in action with the rebels at Bulundshuhur in October 1857; in action with the rebels at Agra, 10th October 1857; served during the operations leading to the relief of Lucknow by the Army under Sir Colin Campbell in October and November 1857; in action with the rebels at Cawnpore on 5th November 1857; in action with the rebels at Shunshabad, near Futtegarh, in January 1858; at Alumbagh during the capture of Lucknow in March 1858; has received a mutiny medal with clasps for "Delhi," "Relief of Lucknow," "Capture of Lucknow."

BREVET COLONEL CHARLES THOMAS HAIG, *Royal Engineers (Bombay), Offy. Deputy Surveyor General, in charge Trigonometrical Survey Branch.*

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 31st October 1883; substantively promoted to Deputy Superintendent, 1st grade, 1st November 1883; Officiating Deputy Surveyor General in charge Trigonometrical Survey Branch, from 1st October 1884.

WAR SERVICES.

Served with Persian Expeditionary Force, 1856-57; present at the battle of Khushab, and at the taking of Mohamern—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, 1st 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; Officiating Deputy Superintendent, 1st Grade, from 1st November 1883 to 11th January 1884; confirmed 12th January 1884.

MAJOR GEORGE STRAHAN, *Royal Engineers (Bengal), Deputy Superintendent, 1st Grade.*

JOINED the Corps of Royal Engineers at Chatham, February 1st, 1859; remained under instruction at the establishment there till June 1860; proceeded to India, October 4th, 1860; arrived in the country, November 20th, 1860; remained in regimental employ with the Sappers and Miners at Roorkee from 6th December 1860 till March 1861; employed in the Irrigation Department, Public Works Department, till July 2nd, 1862; appointed on 2nd July 1862 to Survey Department; served as Assistant in the Gwalior and Central India Survey for two years; received charge of No. 7 Party, Rajputana Survey, 1st September 1864; * took sick leave to England for 20 months, from 10th November 1867 to 6th July 1869; promoted to rank of Captain, January 14th, 1871; appointed Deputy Superintendent, 3rd grade, November 10th, 1867; appointed Deputy Superintendent, 2nd grade, October 26th, 1870; transferred to charge of No. 8 Party, Mysore Survey, 1st October 1875; furlough to Europe on private affairs, May 1st, 1877; returned to India, April 15th, 1879; received charge of No. 2 Party, Khandesh Survey, June 4th, 1879; received charge of Mysore Topographical Party from 1st November 1879; promoted to rank of Major, 27th May 1881; 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; furlough to Europe for one year from 7th May 1884, extension for 6 months; appointed Deputy Superintendent, 1st grade, from 10th November 1884. On duty in Europe from 10th April to 4th August 1885, inclusive (period to count as service, *vide* Secretary of State's letter No. 231, [dated 3rd September 1885]). In charge Astronomical No. 2 Party from 13th November 1885.

* *vide* G. O. No. 005, dated 26th September 1869,—*vide* General Report, 1860 to 1865, page 36, para. 160.

WAR SERVICES.

Nil.

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

JOINED the service, 11th December 1857; arrived in India, 12th December 1859; did duty with the Bengal Sappers and Miners; appointed Acting Quarter Master to the same from 9th March 1860, and continued as such till 5th February 1860; ordered 6th February 1860 to join the Sikkim Field Force; appointed Probationary Assistant Engineer, Department of Public Works, 21st May 1861; posted to Peshawur Division, Department Public Works, 22nd June 1861; promoted to 2nd class Assistant Engineer, 16th November 1861; officiated as Executive Engineer, Hazara Division, from 18th December 1861 to 30th April 1862; appointed 2nd Assistant in Great Trigonometrical Survey of India, 1st March 1862; joined the Kashmir Party, 1st May 1862; promoted to 1st Assistant, junior grade, 21st April 1864; nominated to charge of Kashmir Party and Kumaon and Garhwal Party, 3rd February 1865, and remained in charge till 1st May 1867; promoted to Surveyor, 3rd grade, 1st April 1866; appointed to charge of the survey party accompanying the Abyssinian Expedition, 1st December 1867 to 8th March 1869, when, on completion of the work connected with this survey, returned to India; rejoined the Kumaon and Garhwal Party; October 1869, took charge of detached party, and proceeded to the North-Western Frontier to fix positions of peaks in country north of Peshawur; designation changed to Deputy Superintendent, 3rd grade, 20th August 1869; Local Captain, 11th December 1869; Captain, 13th September 1870; furlough to Europe, 18th December 1870 to 16th December 1871; appointed to charge of Leveling 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; Officiating Deputy Superintendent, 1st grade, from 30th April 1884 up to 2nd December 1884; furlough to Europe for 1 year from 6th December 1884; extension for 6 months on medical certificate.

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. 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 Garvoek, C.B., in 1863, against the Boneyr and other tribes on the North-West Frontier; mentioned in despatches,—*vide* G. O. G. G., Military Depart.

ment, 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, 26th October 1883; furlough to Europe for 2 years, from 7th March 1884.

WAR SERVICES.

Nil

LIEUTENANT-COLONEL F. CODDINGTON, *Bengal Staff Corps, Offg. Deputy Superintendent, 1st 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 to 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; returned from furlough and received charge of No. 1 Revenue Party, Hissar and Ferozepore District Survey, 3rd March 1884; Officiating Deputy Superintendent, 1st grade, from 1st October 1884.

WAR SERVICES.

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

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

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 9th January 1884; Brevet Major, 2nd March 1881; promoted to Major, 1st July 1881; officiated as Assistant Surveyor-General in charge Cartographic and Engraving Branches from 24th July 1883; promoted to Deputy Superintendent, 2nd grade, 10th January 1884; confirmed as Assistant Surveyor General, 23rd May 1884; Officiating Deputy Superintendent, 1st grade, from 3rd December 1884 to 12th November 1885.

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—medal—brevet of Major.

LIEUTENANT-COLONEL WILLIAM BARRON, *Bengal Staff Corps, Deputy Superintendent, 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 Abbotabad 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 31st October 1883; furlough, private affairs, from 9th November 1883; confirmed as Deputy Superintendent, 2nd grade, 7th August 1884; promoted to Lieutenant-Colonel, 11th December 1884; returned from furlough and received charge of No. 8 Revenue Party, Mozufferpore Survey, 16th November 1885.

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.

BREVET COLONEL H. C. B. TANNER, *Bombay Staff Corps, 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 rejoining from furlough, doing duty in the Head-quarters Office, Calcutta, from 11th May to 23rd June 1867; was placed in charge of the 3rd Division, Central Provinces Revenue Survey at Saugor, on 24th June 1867; transferred with the party to the Nimar District in November 1867; became Officiating Deputy Superintendent, 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; Brevet Colonel, 8th June 1884; confirmed as Deputy Superintendent, 2nd grade, from 1st October 1884.

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 Reshire and Bushire, and the action of Kushat—medal and clasp; accompanied a force despatched after the rebels from Kurachee 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, 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 till 29th April 1884, when took over charge of No. 2 Astronomical Party also; Officiating Deputy Superintendent, 2nd grade, from 29th April 1883 to 9th November 1884; confirmed, 10th November 1884.

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, 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, Gorakhpur Military Police, January 1858; Adjutant, Benares Horse, January 1859; appointed to the Staff Corps, 18th February 1861; attached to Her Majesty's 8th Hussars, November 1861; Doing Duty Officer, 14th Bengal Cavalry, January 1862; officiated as Assistant Political Agent, and Bazar Master, Morar, from April to June 1862; Doing Duty Officer, 8th Bengal Cavalry, June 1862; appointed 2nd Assistant, Great Trigonometrical Survey, 18th January 1863; promoted to 1st Assistant (designation changed to Assistant Surveyor, 1st grade), 1st October 1866; promoted to Captain, 14th June 1868; furlough to Europe for two years, 31st December 1869; Assistant Superintendent, 1st grade, and Officiating Deputy Superintendent, 3rd grade, Great Trigonometrical Survey, 11th December 1871; appointed to the charge of the Kattywar Survey, 6th April 1873; promoted to Major, 14th June 1876; appointed Deputy Superintendent, 3rd grade, Great Trigonometrical Survey, 1st January 1878; furlough to Europe for one year, from 13th May 1878; returned to duty, 19th April 1879; resumed charge of Kattywar Survey, 26th April 1879; promoted to Lieutenant-Colonel, 14th June 1882; Officiated as Deputy Superintendent, 2nd grade, from 1st November 1883 to 27th November 1884; confirmed 28th November 1884.

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 Bansee when attacked by an insurgent force, July 1858 (horse wounded).

LIEUTENANT-COLONEL DAVID CLAPHAM ANDREW, *Bengal Staff Corps, Offg. Deputy Superintendent, 2nd 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; Officiating Deputy Superintendent, 2nd grade, from 5th to 23rd March 1884, and again from 30th April 1884 to the present time; promoted to Lieutenant-Colonel, 9th December 1885.

WAR SERVICES.

Nil.

LIEUTENANT-COLONEL WILLIAM HENRY WILKINS, *Bengal Staff Corps, Offg. Deputy Superintendent, 2nd 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; extension for 3 days; promoted to Lieutenant-Colonel, 12th December 1883; returned from furlough and attached to Headquarters, Calcutta, from 14th March 1884; Officiating Deputy Superintendent, 2nd grade, from 7th August 1884 to the present time; transferred to charge of Raipur District Survey from 4th November 1885, superintending detached Parties working in Sambalpur and Ajmere.

WAR SERVICES.

Nil.

MAJOR J. E. SANDEMAN, *Bengal Staff Corps, Officiating Deputy Superintendent, 2nd 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; Officiating Deputy Superintendent, 2nd grade, from 24th September 1884 to the present time.

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 and 3 days; Lieutenant-Colonel, 4th April 1883; returned to duty 13th March 1884, and took charge of Guzerat Party on 25th March 1884; Officiating Deputy Superintendent, 2nd grade, from 1st October 1884 to 15th November 1885.

WAR SERVICES.

Mutiny and Lushai Expedition—medals and clasp; minor affairs on Eastern Frontier; four wounds; no recognition of services, except mention in despatches and thanks of Government.

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 Bhutan, 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; on furlough to Europe for one year from 8th March 1884; recalled to duty and reported his arrival on the forenoon of the 25th August 1884, and attached to the Afghan Boundary Commission; appointed to officiate as Deputy Superintendent, 2nd grade, from 3rd December 1884 to 12th November 1885.

WAR SERVICES.

Served on special survey duty during Bhutan 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 Bhutan; served on special survey duty during the Abyssinian campaign from December 1867 to close of campaign; mentioned in despatches of Sir R. 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 Chotiali; 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 Brigadier-General R. Kennedy, Commanding Expedition.

LIEUT.-COLONEL JAMES WATERHOUSE, *Bengal Staff Corps, Deputy Superintendent, 3rd Grade, and Assistant Surveyor General, Photo. Office.*

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, 9th October 1869; 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; continued to officiate as Deputy Superintendent, 3rd grade, up to 9th January 1884; confirmed 10th January 1884; Officiating Deputy Superintendent, 2nd grade, from 3rd December 1884 up to 12th November 1885; promoted to the rank of Lieutenant-Colonel, 10th June 1885.

WAR SERVICES.

Nil.

MAJOR MALCOLM W. ROGERS, *Royal Engineers, Deputy Superintendent, 3rd Grade, and 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; officiated as Assistant Surveyor General, in charge Mathematical Instrument Office and Correspondence Office, Head-quarters, Calcutta, from 19th April 1883; confirmed 23rd May 1884; confirmed as Deputy Superintendent, 3rd grade, 7th August 1884.

WAR SERVICES.

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

MAJOR J. HILL, *Royal Engineers, 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 substan-

tive appointment of Assistant Superintendent, 1st grade, 29th 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 30th September 1884; in charge of Tidal and Leveling Party, 4th April 1884; attached to Afghan Boundary Commission, 1st September 1884; confirmed as Deputy Superintendent, 3rd grade, 1st October 1884; in charge of Konkan Topographical Survey Party, 2nd October 1884; temporarily transferred to take charge of Tidal and Leveling operations from 6th July 1885, resumed charge of South Maratha Topographical Survey Party on 23rd October 1885; retransferred to Tidal and Leveling operations from 29th December 1885.

WAR SERVICES.

Nil.

MR. HENRY HÖRST, *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 Harbans Ram, Soubah of Dholpur, and dispersion of 6,000 troops he had quietly collected in the Chumbal ravines for a revolt; furlough to Europe for 2 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 9th November 1884; confirmed 10th November 1884.

MR. WILLIAM HAMMOND COLE, M.A., CANTAB., F.R.A.S., F.R.G.S., *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 Mussooree as Mathematical Master at Mr. Maddock's School, was re-appointed to the Government service, 3rd January 1867, as Probationary Assistant Surveyor in the Great Trigonometrical Survey of India, and Assistant to the Officer in charge of the Computing Office, being at the same time placed in charge of the Photozincographic Branch of the Computing Office, Dehra; appointed Assistant Surveyor, 2nd grade, on 1st September 1867; conducted the duties of the Computing Office in all its branches from middle of December 1867 to beginning of April 1868, during the absence of Mr. J. B. N. Hennessey, M.A., the Officer in charge, who was deputed to superintend the measurement of the Bangalore Base Line; designation changed to Assistant Superintendent of Surveys, on 1st September 1869; promoted to 1st grade from 4th December 1870; officiated as Deputy Superintendent, 3rd grade, from 1st April 1871 to 16th December 1871; officiated again in this grade from 2nd November 1873 to 30th September 1874; officiated again as Deputy Superintendent, 3rd grade, 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; officiated as Deputy Superintendent, 3rd grade, from 14th December 1880 to 14th June 1881, and again from 24th April to 14th May 1882; 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 27th November 1884; officiating in charge Head-quarters Office, Dehra Dun, and Survey Detachment in Kashmir, from 12th February 1883; confirmed with effect from 12th January 1884; confirmed as Deputy Superintendent, 3rd grade, 28th November 1884.

MAJOR ANDREW WILSON BAIRD, F.R.S., 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 the 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 to 3rd April 1884; on leave to Europe on urgent private affairs from 4th April 1884 to 28th September 1884; Officiating Deputy Superintendent, 3rd grade, and in charge of Tidal and Leveling operations from 1st October 1884. Officiating Master of the Mint, Calcutta, from 11th July to 12th October 1885. Resumed charge of the Tidal and Leveling Operations, 19th October 1885.

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 Peshawar, 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, from 1st November 1883 to 23rd March 1884, and again from 4th April to the present time; assumed charge of Mysore Topographical Survey, 20th March 1884.

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.

LIEUT.-COLONEL JOHN RANDAL WILMER, *Bengal Staff Corps, Officiating Deputy Superintendent, 3rd 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 to 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. Officiating Deputy Superintendent, 3rd grade, from 5th to 13th March, 30th April to 8th May, 7th to 24th August, and from 24th September 1884 up to the present time; promoted to the rank of Lieutenant-Colonel, 22nd June 1885; appointed to charge of Baluchistan Survey Party from 1st October 1885.

WAR SERVICES.

Nil.

LIEUTENANT-COLONEL S. H. COWAN, *Bengal Staff Corps, Offg. Deputy Superintendent, 3rd Grade.*

JOINED the service, 9th December 1859; arrived in India, 9th April 1860; served with Bengal Artillery Depot at Meerut, April 1860; posted to 4th Company, 3rd Battalion, Bengal Artillery; served with D Battery, 16th Brigade, Royal Artillery, February 1861; appointed in the Ordnance Department, 4th October 1866; admitted to Staff Corps, 19th January 1867; appointed Assistant Superintendent, 3rd grade, in the 4th Division Survey, Bengal, 19th January 1867; appointed Assistant Superintendent, 2nd grade, 17th March 1868; went on furlough to Europe 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, Photographic 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; Officiating Deputy Superintendent, 3rd grade, from 6th to 13th March 1884, and again from 16th September 1884 to the present time; promoted to Lieutenant-Colonel, 9th December 1885.

MAJOR EDWARD HARRIS STEEL, *Bengal Staff Corps, 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 to 26th January 1884; confirmed as Deputy Superintendent, 4th grade, from 10th January 1884; superintending detached parties working in Dehra Dun, Chhattisgarh and Ajmere, from 27th January 1884; resumed charge of Aligarh and Etah Districts Topographical Survey, North-Western Provinces, 7th August 1884; Officiating Deputy Superintendent, 3rd grade, from 3rd December 1884 up to 15th November 1885; transferred to charge of Bilaspur District Cadastral Survey, 4th November 1885.

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.

LIEUTENANT-COLONEL H. S. HUTCHINSON, *Bengal Staff Corps, Deputy Superintendent, 4th Grade.*

CADET at the Military College, Addiscombe, from January 1858 to December 1859; appointed a Lieutenant in the Bengal Artillery on 9th December 1859; landed in India, 9th April 1860; served with the Artillery at Meerut, Lahore, and Peshawar 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 6th August 1884; 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; confirmed in the 4th grade of Deputy Superintendent, 7th August 1884. Officiating Deputy Superintendent, 3rd Grade, from 6th July to 12th October 1885, transferred to charge of Akyab District Cadastral Survey, 22nd October 1885; Officiating Deputy Superintendent, 3rd Grade from 26th October to 12th November 1885; promoted to Lieutenant-Colonel, 9th December 1885.

WAR SERVICES.

Nil.

MR. EDWIN CLIFFORD BARRETT, *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-Western 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 30th September 1884; transferred to Burma Topographical Survey, British Burma; assumed charge of Kamrup District (Cadastral) Survey, Assam, 25th July 1883; confirmed in the 4th grade of Deputy Superintendent, from 1st October 1884.

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, Deputy Superintendent, 4th Grade.*

APPOINTED an 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*

* By Presidency Division Order of 4th November 1862. 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; 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 Chandgurh from February to May 1873; on detached duty at Ahiri, Chanda District, during the field season of 1873-74; transferred to Dera Ismail Khan Survey, 1st October 1874; worked in Dera Ismail Khan, Bunnoo and Rawal Pindi Districts, and in the winter of 1877-78 in the Jowaki country and Kohat Pass; reduced to Assistant Superintendent, 3rd grade, 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; organized and took charge of the Baluchistan Topographical Survey from 27th July 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 9th November 1884; assumed charge of No. 1 Topographical Party, 1st October 1883; promoted to Deputy Superintendent, 4th grade, from 10th November 1884.

WAR SERVICES.

Attached to the Army operating in Southern Afghanistan from October 1878—medal; accompanied General Biddulph's Division to Girishk; mentioned in Lieutenant-General D. M. Stewart's despatches, and in Field Force Order by General Biddulph, dated 6th March 1879; engaged surveying in Southern Afghanistan and Baluchistan till 1st April 1880, and again from 27th July 1880; accompanied the Marri Field Force under Brigadier-General C. MacGregor in October and November 1880; accompanied the Bozdar Field Force under Brigadier-General H. C. Wilkinson, in November and December 1881.

BREVET COLONEL ROBERT GOSSET WOODTHORPE, *Royal Engineers, 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 of 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 6th January 1883, and from 12th February 1883 up to 27th November 1884; 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; confirmed as Deputy Superintendent, 4th grade, 28th November 1884; promoted to the rank of Brevet Colonel, 2nd March 1885; on special duty from 25th May 1885.

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, 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; 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 = 1 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 21st October 1885; transferred to Benares, &c., Districts (Cadastral) Survey, North-Western Provinces, 17th October 1883; appointed to do duty at the Head-quarters, Calcutta, from 17th August 1884; transferred to the Basti District (Cadastral) Survey, North-Western Provinces, 1st May 1885; held temporary charge of Cutch Party, Topographical Survey, from 11th August 1885; confirmed as Deputy Superintendent, 4th grade, 22nd October 1885; assumed charge of Jubbulpore District Survey Party, 26th October 1885.

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 Columns of the Lushai Expeditionary Force.

Mr. EDWIN JAMES JACKSON, 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 25th October 1885; in charge of No. 2 Revenue Party, Hanthawaddy District Survey, British Burma, from 19th February 1884, confirmed as Deputy Superintendent, 4th grade, 26th October 1885. Furlough to Europe for 1 year, from 4th November 1885.

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; attached to the Afghan Boundary Commission, 26th August 1884.

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.

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; Officiating 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, Bhutan, 16th March 1873 to 18th September 1874—G. O. C. C., 5th April 1873, p. 170; Officiating 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; Officiating 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, from 25th October 1883 to 23rd March 1884, and from 4th April 1884 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.

CAPTAIN THE HONOURABLE MILO GEORGE TALBOT, *Royal Engineers, Offg. Deputy Superintendent, 4th 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, from 5th to 13th March and from 30th April to 8th May 1884; in charge No. 3 Topographical Party, Baluchistan Survey, from 29th April 1884 to 18th August 1884; Officiating Deputy Superintendent, 4th grade, from 7th August 1884 to the present time; attached to Afghan Boundary Commission, from 25th August 1884; promoted to the rank of Captain, 8th January 1885.

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 Charasia, 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, Offg. Deputy Superintendent, 4th 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; officiated as Assistant Superintendent, 1st grade, from 13th September 1882 to 9th July 1884; confirmed 10th January 1884; officiated as Deputy Superintendent, 4th grade, from 6th to 13th March 1884, and again from 26th August 1884 to the present time; appointed to do duty at Head-quarters, Calcutta, 17th January 1885; in charge Suakim Expeditionary Survey, from 4th March 1885; attached to the Tidal and Leveling operations, 19th June 1885. Transferred to the charge of the South Maratha Survey Party, 6th July 1885, re-transferred to the Tidal and Leveling operations, 19th October 1885. Again in charge South Maratha Survey Party, 29th December 1885.

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; served as Survey Officer with Suakim Expeditionary force, from 4th March 1885 to 1st June 1885.

CAPTAIN ROBERT ALEXANDER WAHAB, *Royal Engineers, Offg. Deputy Superintendent, 4th 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 6th August 1884; promoted to Assistant Superintendent, 1st grade, from 7th August 1884; in charge No. 3 Topographical Party, Baluchistan Survey, from 19th to 31st August 1884; Zhob Valley Expedition from 1st September 1884; in charge Zhob Valley Expedition, from 14th September 1884; in charge No. 3 Topographical Party, Baluchistan Survey, from 17th December 1884; Officiating Deputy Superintendent, 4th grade, from 26th August 1884 up to the present time; promoted to the rank of Captain, 8th January 1885; transferred to Gorakhpur District (Cadastral Survey) from 8th November 1885.

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; 2nd Afghan Campaign, October 1879 to August 1880, as Assistant Field Engineer; Expedition against Mahsud Waziris in April and May 1881 as Assistant Field Engineer, and in charge of R. E. Park.

MR. EDWARD C. RYALL, *Offg. Deputy Superintendent, 4th 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 Head-quarters 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; sick leave from 10th December 1883 to 4th January 1884. Officiating Deputy Superintendent, 4th Grade, from 6th July 1885 up to the present time. In charge Coast Triangulation Survey, 6th October 1885.

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.

MR. WILLIAM HENRY PATTERSON, *Offy. Deputy Superintendent, 4th Grade.*

APPOINTED Junior Sub-Assistant Revenue Surveyor, 1st December 1851, and posted to the Rechnab Doab (Panjab) Revenue Survey; transferred to the Sindh, Sugar 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; honourable 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 recognised 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 to 30th September 1884; promoted to Assistant Superintendent, 1st grade, from 1st October 1884; in temporary charge of No. 2 Party, Bhopal and Malwa Topographical Survey, from 5th August to 27th October 1884; re-transferred to No. 5 Topographical Party, Mirzapur District; in charge of No. 2 Party, Bhopal and Malwa Topographical Survey, from 24th November 1884 to 26th October 1885; in charge of Mirzapur Topographical Survey Party, from 11th November 1885; Officiating Deputy Superintendent, 4th grade, from 16th September 1884 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 Darrang, 11th January 1872; vested with powers of Deputy Collector under Act V of 1875 B. C. (Surveys) in District Cachar, 19th February 1880.

MILITARY SERVICES.—As volunteer during the Mutiny of 1857-58; served against the Murree rebels—medal.

MR. FREDERICK WILLIAM KELLY, *Assistant Superintendent, 1st Grade.*

APPOINTED Junior Sub-Assistant, 4th December 1854; promoted to Sub-Assistant, 1st January 1856, in the Panjab and Sind Surveys; special leave for four months from 21st January 1858, which was overstayd from 21st May to 16th August 1858; employed as Sub-Assistant, 2nd class, in the Bhurtpur 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; promoted to Assistant Superintendent, 1st grade, 10th November 1884; Officiating Deputy Superintendent, 4th grade, from 3rd December 1884 to 12th October 1885; officiated in charge Burma Topographical Party for 3 months, from 8th July 1885; re-transferred to Akyab District (Cadastral) Survey from 6th October 1885; Officiating Deputy Superintendent, 4th grade, from 26th October 1885 to 15th November 1885.

LIEUTENANT HUGH MILBOURNE JACKSON, *Royal Engineers, 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; officiating in charge of Mysore Topographical Survey from 13th February to 19th March 1884; confirmed as Assistant Superintendent, 1st grade, 28th November 1884; on duty, Surveyor General's Office, Simla, from 6th May 1885; transferred to Basti District (Cadastral) Survey from 1st September 1885; Officiating Deputy Superintendent, 4th grade, from 5th to 12th November 1885.

WAR SERVICES.

Nil.

LIEUTENANT WALTER HUNGERFORD POLLEN, *Royal Engineers, Assistant Superintendent, 1st Grade.*

LIEUTENANT, April 6th, 1879; appointed to Indian Establishment, 20th January 1883; arrived in India, 7th March 1883; served with the Bombay Sappers and Miners up to 6th April 1883; Extra Aide-de-Camp to the Governor General of India, from 6th April 1883 to 25th April 1884; appointed Assistant Superintendent, 2nd grade, Survey of India, 26th April 1884; Officiating Assistant Superintendent, 1st grade, from the same date; transferred to No. 1 Party, Central India and Rajputana Topographical Survey, from 1st October 1884. Assistant Superintendent, 1st grade, sub. *pro tem.*, from 3rd July 1885; transferred to Himalaya Survey Party, 1st October 1885; confirmed as Assistant Superintendent, 1st grade, 22nd October 1885.

WAR SERVICES.

Served with the 26th Company, Royal Engineers, in the Egyptian Campaign, August 9th to October 10th, 1882.

LIEUTENANT GODFREY BECKET HODGSON, *s.c., Assistant Superintendent, 1st Grade.*

OBTAINED his first commission on 10th May 1878 as 2nd Lieutenant in Her Majesty's 22nd Cheshire Regiment; Lieutenant in the same regiment, 13th November 1878; appointed on probation to the Bengal Staff Corps and attached as Wing Officer to the 4th Goorkhas, 15th September 1880; appointed permanently to the Bengal Staff Corps and confirmed in his appointment to 4th Goorkhas on 15th September 1881, but to date from 13th November 1878 (date of Lieutenancy); Officiating Quarter Master, 4th Goorkhas, from 23rd December 1880 to 10th February 1883; exchanged at his own request into 3rd Goorkhas as Wing Officer, 21st March 1883, where he remained till appointed to the Survey of India as Assistant Superintendent, 2nd grade (on probation); date of appointment, 12th September 1883; confirmed as Assistant Superintendent, 2nd grade, and Officiating Assistant Superintendent, 1st grade, 23rd July 1884; appointed to do duty at the head-quarters, Calcutta, from 8th September 1885; confirmed as Assistant Superintendent, 1st grade, 26th October 1885.

WAR SERVICES.

Left Peshawur on 3rd August 1880 to join the 4th Goorkhas on field service in Afghanistan; joined that regiment eventually at Kila Abdulla in the Pishin Valley, 15th September 1880; returned to India, 9th October 1880—medal.

LIEUTENANT SIDNEY GERALD BURRARD, *Royal Engineers, Officiating Assistant Superintendent, 1st Grade.*

RECEIVED commission in Royal Engineers, 6th April 1879; Assistant Secretary to Ordnance Committee for Gunnery Experiments, April 3rd, 1881, to December 8th, 1882; transferred to Indian Establishment, 8th December 1882; landed in India, 10th January 1883; attached to Bengal Sappers and Miners up to 24th March 1883, when appointed to P. W. D., Baluchistan Agency; Personal Assistant to Superintending Engineer and Secretary to Governor General's Agent for Baluchistan, from 2nd April 1883 to 1st September 1884; appointed Assistant Superintendent, 2nd grade, Survey of India, 2nd September 1884; Officiating Assistant Superintendent, 1st grade, from the same date. Posted to Trigonometrical Branch Office, transferred to Astronomical No. 1 Party, 9th October 1885.

WAR SERVICES.

Nil.

MR. ANGELO D'SOUZA, *Officiating Assistant Superintendent, 1st Grade.*

JOINED the Topographical Survey as 3rd class Sub-Assistant on the 19th February 1856, and was appointed to the Ganjam Topographical Survey; took part in the Survey of Sumbulpore and Boad Districts, and assisted in the triangulation of the coast from Pooree to False Point in 1857-58; promoted to 2nd class Sub-Assistant on the 19th February 1859; suffered severely from jungly fever; took privilege leave for 3 months, one of which was cancelled on being transferred to the Assam Series, Trigonometrical Survey, 1st September 1859; carried on a minor series, with a view of fixing the position of Gauhati, and completed a Topographical Survey of the Cossya plateau of about 1,000 square miles in area, on the scale of 4 miles to 1 inch; transferred to the Astronomical Party, Andaman Islands, on 23rd October 1861; promoted to 1st class Sub-Assistant on 8th January 1862; promoted to Senior Sub-Assistant on 18th September 1863; transferred to the Kattywar Party in October 1863; was employed in training the new hands for the Topographical Survey of that country under Captain, now Colonel, C. T. Haig, *r.e.*; on account of the severe famine in Kattywar, the survey was placed in abeyance in 1864-65, and was then employed on the approximate work of the triangulation of Nasik District, Bombay Presidency, under Lieutenant-Colonel D. J. Nasmyth, *r.e.*; and in the following season (1865-66) was employed on the approximate work of the triangulation of the Island of Bombay, and also in executing a number of traverses as basis for the Cadastral Survey of Bombay; promoted to Civil 2nd Assistant, junior grade, on 1st January 1865; promoted to Civil Assistant, 4th grade on the re-organisation of the Department on 1st April 1866; was employed in Kattywar in 1866-67, on the resumption of that survey under Captain C. T. Haig, *r.e.*, and continued in the party till 1869; promoted to Surveyor, 3rd grade, in September 1869; furlough from October 1869 to September 1870; transferred to the Guzerat Party on the 27th September 1870; promoted to Surveyor, 2nd grade, on 1st December 1872; promoted to Surveyor, 1st grade, on 1st September 1875; transferred to the Coast Triangulation Party on 1st October 1883, and assumed charge of the party on the 16th October 1883; promoted to Assistant Superintendent, 2nd grade, on the 1st October 1884; appointed to officiate in the 1st grade with effect from the same date; transferred to Rai ur District Survey Central Provinces from 1st October 1885.

Mr. G. B. SCOTT, *Officiating Assistant Superintendent, 1st Grade.*

JOINED North-Western Frontier Revenue Survey, Murree, as a Junior Sub-Assistant on 1st May 1863; Season 1863-64, triangulated portion, Salt Range, District Shahpur; 1864-65, Revenue Survey, District Eusufzai; 1865-66-67, triangulating in District Hazara; promoted to Sub-Assistant, 4th grade, on 1st January 1866, and to 3rd grade on 15th December 1866; 23rd April 1867, repulsed night attack near Agror border; September 1867, reconnoitred independent hill tracts of Allahi Nandehar, Tikari, and eastern slopes of Black Mountain; May to August 1868, plane-tableing sections of Kaghan; 11th August 1868, repulsed attack of Allahiwals, presented with sword by Punjab Government; October and November 1868, accompanied Black Mountain Expedition; services acknowledged by Punjab Government—medal; 1869, reconnoitred independent hill country between Kaghan and River Indus; promoted to Sub-Assistant, 2nd grade, Revenue Survey, on 15th December 1869; 1869-70, Revenue Survey, District Peshawur, reconnoitred neighbouring independent hill country, fired on by Hassan Khel; 1870-71, Revenue Survey, District Dehra Ghazi Khan; October 1871, transferred to 1st Division, Lower Provinces, Assam, passed examination for senior division in Calcutta; 1871-72, charge of camp, surveyed portion Mekis Hills in Nowgong; promoted to Sub-Assistant, Revenue Survey, 1st grade, on 15th December 1871; 1872-73, Darrang Revenue Survey, charge of camp, reconnoitred small portion of neighbouring independent hills; 1873-74-75; Topographical Survey of District Goalpara in Assam; promoted to Surveyor, 4th grade, on 15th December 1874; November 1875, 16-inch Survey of Cinchona Gardens, Darjeeling; 1875-76, transferred to Cadastral Survey of Dhanwar Estate, District Hazaribagh; October 1876, transferred to 1st Division, Revenue Survey, Rawal Pindi; 1876-77, triangulated portion of Murree and Kahuta Tahsils; passed higher standard examination in 1877; 1877-78, plane-tabled portion of Murree and Kahuta Tahsils; accompanied Jowaki Expedition—clasp; services acknowledged by Punjab Government and Commander-in-Chief, mentioned in despatches; 1878-79, accompanied Afghan column in Khyber, present at attack on Ali Musjid, actions of Det Sarak and Fattehabad, accompanied 1st and 2nd Bazar Valley Expeditions, mentioned in despatches; attacked by Mohmands near Michni. The conspicuous gallantry displayed on this occasion acknowledged by the Viceroy in Council; ascended summit of Sikaram, Safed Koh, 29th May 1879, received congratulatory telegram from Commander-in-Chief, as having been the first European who had done so; services during campaign acknowledged by Secretary of State for India, Viceroy and Governor General, Commander-in-Chief, and Punjab Government—medal and clasp; promoted to Surveyor, 3rd grade, on 8th July 1879; personal allowance of Rs. 100 per month, special grant of Rs. 1,000; recommended by Viceroy and Commander-in-Chief for direct Captaincy in Staff Corps (disallowed by War Office); 1879-80, attached to Quarter Master General's Department during 2nd Afghan Campaign; completed reconnaissance of Afridi and Mohmand countries; accompanied General Tytler's Expedition against the Zaimukhts; services acknowledged by Commander-in-Chief—mentioned in despatches; rejoined 1st Division, Revenue Survey, in June 1880; 1880-81, 12-inch Survey of Hatted Camps in "The Gullies;" surveyed portion of territory disputed between District Sealkot and His Highness the Maharajah of Jammu, on the Chenab; triangulated portion of Kala Chitta Range, District Rawal Pindi; 1882 to 1884, attached to Forest Settlement Department, Punjab, to lay down Reserve Boundaries; promoted to Surveyor, 1st grade, on 5th September 1883; 1st August 1884, transferred to No. 3 Baluchistan Topographical Party; 10th November 1884, promoted to the Senior Division; October and November 1884, accompanied Zhob Valley Expedition, services acknowledged by Governor General in Council; January 1885, deputed to Intelligence Branch, Quarter Master General's Department, to compile Military and Railway Map of India; transferred to Bilaspur District (Cadastral) Survey, Central Provinces, from 1st October 1885.

Mr. JOHN ECCLES, M.A., *Assistant Superintendent, 2nd Grade.*

APPOINTED by Her Majesty's Secretary of State for India as an Assistant Superintendent, 2nd grade, Survey of India; landed at Calcutta, afternoon, 29th May 1885; joined Head quarters Office from the 30th idem. Transferred to the Computing Party, Dehra Dun, 26th July 1885; officiated in charge from 23rd September 1885.

LIEUTENANT JOHN MURCHISON FLEMING, S.C., *Assistant Superintendent, 2nd Grade*
(on probation).

OBTAINED his first commission on the 13th August 1879, as 2nd Lieutenant, 25th "King's Own Borderers"; Lieutenant in the same Regiment, 21st June 1880; appointed on probation to the Bengal Staff Corps, and attached as Wing Officer to the 22nd Punjab Infantry, 22nd July 1882; appointed as Wing Officer to the 4th Bengal Infantry, October 1882; appointed permanently to Bengal Staff Corps by G. G. O. No. 67 of 8th February 1884, with rank, from 20th June 1880; officiated as Quarter Master, 4th Bengal Infantry, from 4th September 1883 to 15th April 1885; and as Adjutant in same Regiment from 15th April until July 3rd, 1885; appointed to Survey of India Department as Assistant Superintendent, 2nd grade, *sub pro tem*, 3rd July 1885, and on probation 22nd October 1885.

WAR SERVICES.

Served with 25th King's Own Borderers in the Khyber Line Field Force from 18th December 1879 to August 31st, 1880, Expeditions against Mamunds and into Lughman Valley—Medal.

MYSORE REVENUE SURVEY DEPARTMENT.

Index to List of Officers of the Mysore Survey Department for 1st January 1886.

	PAGES.		PAGES.
B		H	
Barker, J. P.	50	Hudson, A. G.	50
Butcher, E. H.	50		
C		M	
Clerk, F. B.	50	Mackenzie, Lieut.-Col. G.	50
Cowie, Major D.	50		
G		R	
Grant, Lieut.-Col. J. P.	50	Rutherford, Lieut.-Col. J.	50

General List of the Officers of the Mysore Revenue

1	2	3	4	5	6	7
Number sanctioned.	Number existing in each grade.	Names of Officers and names of substantive appointment.	Passed in the Vernacular.	Age.	Date of first appointment to the Department.	Date of appointment to the present grade.
			All have passed.	Y. M. D.		
1	1	Lieut.-Col. J. P. Grant, Superintendent Revenue, Survey		47 9 0	Nov. 1, 1863	Jan. 15, 1868
1	1	„ J. Rutherford, Depy. ditto		43 11 22	Jan. 25, 1865	April 8, 1861
2	1	Mr. E. H. Butcher, Assistant Settlement Officer		49 6 2	Oct. 2, 1865	April 1, 1861
	2	Lieut.-Col. G. Mackenzie, ditto		44 5 28	Dec. 24, 1871	Oct. 24, 1863
3	1	Mr. J. P. Barker, Assistant Superintendent, 1st grade		38 3 16	Dec. 22, 1866	Dec. 5, 1878
	2	„ F. B. Clerk, ditto ditto ditto		41 4 13	Jan. 16, 1868	Nov. 26, 1880
	3	Major D. Cowie, ditto ditto ditto		45 0 15	Dec. 3, 1870	Feb. 6, 1882
1	1	Mr. A. G. Hudson, ditto ditto 2nd grade	27 8 2	Nov. 23, 1876	Jan. 1, 1884	

NOTE.—This list does not include officers of the Local Service.

Survey Department on the 1st January 1886.

8	9	10	11	12	13	14
Period of service counting for pension.	Military pay and allowances.	Staff pay.	Aggregate pay and allowances.	Civil consolidated salary.	Where employed at present.	REMARKS.
Y. M. D.			R a p.			
...	1,752 14 0	...	Bangalore.	
...	1,145 0 0	...	Kolar.	
...	895 0 0	Nagamangala.	
20 2 29	962 14 0	...	Chintamani.	
...	795 0 0	Mysore.	
16 3 2	795 0 0	...	
17 11 15	795 0 0	...	Chintamani.	
...	695 0 0	...	
5 8 2	

Transferred to the Revenue Branch under Dewan's Proceedings No. 4777-82, dated 21st November 1885.

Transferred to Nassik Survey under Dewan's Proceeding No. 3311-62, dated 3rd September 1885.

GEOLOGICAL SURVEY OF INDIA.

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B		K	
Bion, W. R.	54 56 62	King, W.	54 56 59
Blyth, T. R.	54 56 62	Kishen Singh	55 56 62
Bose, P. N.	54 56 62	L	
F		LaTouche, T. H. D.	54 56 62
Fedden, F.	54 56 61	M	
Feote, R. B.	54 56 59	Mallet, F. R.	54 56 60
G		Medlicott, H. B.	54 56 59
Griesbach, C. L.	54 56 61	Middlemiss, C. S.	54 56 62
H		O	
Hacket, C. A.	54 56 61	Oldham, R. D.	54 56 61
Hira Lal	54 56 62	S	
Hughes, T. W. H.	54 56 60	Schaumburg, J.	54 56 62
J			
Jones, E. J.	54 56 62		

Classified List of Officers of the Geological

No. Sanctioned.	No. existing in each grade.	NAMES OF OFFICERS, and NAME OF SUBSTANTIVE APPOINTMENT.	Passed in Vernacular.	Age.	Date of Appointment to the Department.	Date of promotion to the present grade.	Period of service counting for Pension.
1	1	H. B. Medlicott, A.M., F.B.S., F.G.S., Director, Geological Survey		Y. M. D. 56 4 29	Mar. 24, 1854	Apl. 1, 1876	Y. M. D. 31 9 8
<i>1st Grade—£700, rising to £1,100.</i>							
4	1	William King, A.B., D.Sc., Superintendent, Geological Survey		52 5 16	Mar. 4, 1857	Apl. 21, 1875	28 6 27
	2	R. Bruce Foote, F.G.S., Superintendent, Geological Survey		51 3 9	Sep. 28, 1858	June 14, 1881	27 3 3
	3	F. R. Mallet, F.G.S., F.C.S., Superintendent, Geological Survey	Oct. 5, 1868	44 10 19	Feb. 12, 1859	Apl. 11, 1883	26 10 17
	4	Theo. W. H. Hughes, A.B.S.M., F.G.S., Deputy Superintendent, Geological Survey	Aug. 3, 1868	42 4 30	Nov. 11, 1862	Apl. 11, 1883	21 1 13
<i>2nd Grade—£500, rising to £700.</i>							
5	1	F. Fedden, A.B.S.M., F.G.S., Deputy Superintendent, Geological Survey	Oct. 26, 1869	46 9 10	Oct. 1, 1860	Mar. 24, 1878	24 5 7
	2	C. A. Hackett, Deputy Supdt., Geological Survey	Oct. 5, 1868	52 5 20	Nov. 15, 1861	June 14, 1881	22 10 18
	3	C. L. Griesbach, F.G.S., Ditto Ditto	Sep. 15, 1880	38 0 21	Nov. 11, 1878	Jan. 25, 1883	7 1 20
	4	R. D. Oldham, A.B.S.M., Ditto Ditto	Aug. 1, 1881	27 5 2	Dec. 17, 1879	Apl. 11, 1883	6 0 15
	5	P. N. Bose, B.Sc., F.G.S., Ditto Ditto	Not required to pass.	30 7 20	July 30, 1880	Apl. 1, 1884	5 5 2
<i>3rd Grade—£350, rising to £500.</i>							
6	1	Thom. H. D. La Touche, A.B., Assistant Superintendent, Geological Survey	June 5, 1882	30 2 2	Nov. 29, 1861	Nov. 29, 1881	4 1 2
	2	Edward James Jones, A.B.S.M., Assistant Superintendent, Geological Survey	June 2, 1884	26 3 6	Dec. 29, 1863	Dec. 29, 1883	2 0 3
	3	C. S. Middlemiss, A.B., Assistant Superintendent, Geological Survey	Oct. 6, 1884	26 1 9	Dec. 29, 1883	Dec. 29, 1883	2 0 3
	—	Vacant, Asst. Supdt., Geological Survey					
—	Vacant, Ditto Ditto						
—	Vacant, Ditto Ditto						
<i>Separately graded.</i>							
1	—	Vacant, Palaeontologist, Geological Survey					
<i>Non-graded Officers.</i>							
5	1	J. Schaumburg, Artist, Geological Survey	Not required to pass.	46 5 30	Apl. 12, 1869	July 7, 1874	16 8 19
	2	W. R. Bion, Registrar, ditto	Do.	33 6 15	Dec. 12, 1870	Dec. 31, 1878	11 1 4
	3	Kishen Singh, Sub-Assistant, ditto	Do.	35 10 6	Jan. 7, 1874	Apl. 1, 1879	10 11 25
	4	Hira Lal, Ditto ditto	Do.	34 5 2	Jan. 7, 1874	Apl. 1, 1879	11 11 25
	5	Thos. Ramsay Blyth, Museum Asst., Geological Survey	Do.	26 8 7	Mar. 1, 1884	Mar. 1, 1884	1 10 0

Survey of India on the 1st January 1886.

Pay of substantive appointment.	Acting Allowances.	Travelling, Conveyance and House Allowances.	Total Pay and Allowances.	Where employed at present.	REMARKS.
R a. p. 1,800 0 0		R a. p. 300 0 0	R a. p. 2,100 0 0	Office.	
1,100 0 0		60 0 0	1,160 0 0	Chhattisgarh.	
1,100 0 0		60 0 0	1,160 0 0	Bellary.	
1,100 0 0		60 & 150 0 0	1,310 0 0	Office	Acting Curator.
1,000 0 0		30 0 0	1,030 0 0	South Rewah.	
700 0 0		30 0 0	730 0 0	On furlough.	
700 0 0		30 0 0	730 0 0	Rajputana.	
540 0 0		30 0 0	570 0 0	Afghan Boundary Commission.	
530 0 0		30 0 0	610 0 0	N.-E. Rajputana.	
540 0 0		30 0 0	570 0 0	Chhattisgarh.	
470 0 0	30 0 0	30 0 0	530 0 0	Assam.	Offg. in 2nd grade, see Mr. Fedden.
410 0 0		30 0 0	440 0 0	Chhindwara.	
410 0 0		30 0 0	440 0 0	Kumaun.	
400 0 0			400 0 0	Office.	
380 0 0			380 0 0	Office.	
200 0 0			200 0 0	Malwa.	
200 0 0			200 0 0	Chhattisgarh.	
110 0 0			110 0 0	Office.	

Disposition List of Officers of the Geological

NAMES OF OFFICERS.	Where employed.	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.	Office Estab-lishment.	Office Estab-lishment.
H. B. Medicott, A.M., F.R.S., F.G.S. <i>1st Grade.</i>	Office	Director, Geological Survey.	Mar. 24, 1854	2	4	5	3	5	12	22
William King, A.B., D.Sc.	Chhattisgarh	Supdt., Geological Survey.	Mar. 4, 1857	...	...	...	...	...	...	...
R. Bruce Foote, F.G.S.	Bellary	Ditto	Sept. 28, 1858	...	...	...	...	...	...	...
F. R. Mallet, F.G.S., F.C.S.	Office	Ditto	Feb. 12, 1859	...	...	...	...	...	...	...
Theo. W. H. Hughes, A.B.S.M., F.G.S. <i>2nd Grade.</i>	South Rewah	Depy. Supdt., Geological Survey.	Nov. 11, 1862	...	...	...	...	...	...	...
F. Fedden, A.B.S.M., F.G.S.	On furlough	Ditto	Oct. 1, 1860	...	...	...	...	...	...	...
C. A. Hacket	Rajputana	Ditto	Nov. 15, 1861	...	...	...	...	...	...	...
C. L. Griesbach, F.G.S.	Afghan Boundary Commission.	Ditto	Nov. 11, 1878	...	...	...	...	...	...	...
R. D. Oldham, A.B.S.M.	N. E. Rajputana	Ditto	Dec. 17, 1879	...	...	...	...	...	...	...
P. N. Bose, B.Sc., F.G.S. <i>3rd Grade.</i>	Chhattisgarh	Ditto	July 30, 1880	...	...	...	...	...	...	...
Thom. H. D. La Touche, A.B.	Assam	Assistant Supdt., Geological Survey.	Nov. 29, 1881	...	...	...	...	...	...	...
Edward James Jones, A.B.S.M.	Chhindwara	Ditto	Dec. 29, 1883	...	...	...	...	...	...	...
C. S. Middlemiss, A.B.	Kumaun	Ditto	Ditto	...	...	...	...	...	...	...
Vacant		Ditto		...	...	...	...	...	...	...
Vacant		Ditto		...	...	...	...	...	...	...
Vacant		Ditto		...	...	...	...	...	...	...
<i>Separately graded.</i>				...	...	...	...	...	...	...
Vacant				...	...	...	...	...	...	...
<i>Non-graded Officers.</i>				...	...	...	...	...	...	...
J. Schaumburg	Office	Artist, Geological Survey.	April 12, 1869	...	...	...	...	...	...	...
W. R. Bion	Ditto	Registrar, Geological Survey.	Dec. 12, 1870	...	...	...	...	...	...	...
Nishen Singh	Malwa	Sub-Asst., Geological Survey.	Jan. 7, 1874	...	...	...	...	...	...	...
Hara Lal	Chhattisgarh	Ditto	Ditto	...	...	...	...	...	...	...
Thos. Ramsay Blyth	Office	Museum Assistant, Geological Survey.	Mar. 1, 1884	...	...	...	...	...	...	...

Survey of India on the 1st January 1886.

Where employed during last three years.	Annual Cost (Salary and Travelling Allowance of Officers and their Subordinates, if any) from April 1884 to March 1885.	REMARKS.									
1882-83. Office. 1883-84. Office and special leave. 1884-85. Special leave and Office.	<table border="0"> <tr> <td>Salary and fixed allowance</td> <td>R 12,349 3 10</td> <td>a. p. 12,349 3 10</td> </tr> </table>	Salary and fixed allowance	R 12,349 3 10	a. p. 12,349 3 10							
Salary and fixed allowance	R 12,349 3 10	a. p. 12,349 3 10									
1882-83. Furlough and Chhattisgarh 1883-84. Chhattisgarh and Office. 1884-85. Office and Chhattisgarh.	<table border="0"> <tr> <td>Salary and fixed allowance</td> <td>17,416 5 0</td> <td></td> </tr> <tr> <td>Travelling allowance</td> <td>1,907 0 0</td> <td></td> </tr> <tr> <td>Hospital Assistant's pay, &c.</td> <td>194 7 0</td> <td>19,517 12 0</td> </tr> </table>	Salary and fixed allowance	17,416 5 0		Travelling allowance	1,907 0 0		Hospital Assistant's pay, &c.	194 7 0	19,517 12 0	
Salary and fixed allowance	17,416 5 0										
Travelling allowance	1,907 0 0										
Hospital Assistant's pay, &c.	194 7 0	19,517 12 0									
1882-83. Madras and Kurnul 1883-84. Kurnul, Hyderabad and Bellary 1884-85. Bellary.	<table border="0"> <tr> <td>Salary and fixed allowance</td> <td>14,494 10 8</td> <td></td> </tr> <tr> <td>Travelling allowance</td> <td>1,948 4 6</td> <td></td> </tr> <tr> <td>Hospital Assistant's pay, &c.</td> <td>615 8 3</td> <td>17,056 7 5</td> </tr> </table>	Salary and fixed allowance	14,494 10 8		Travelling allowance	1,948 4 6		Hospital Assistant's pay, &c.	615 8 3	17,056 7 5	Acting Curator.
Salary and fixed allowance	14,494 10 8										
Travelling allowance	1,948 4 6										
Hospital Assistant's pay, &c.	615 8 3	17,056 7 5									
1882-83. Office and Jabalpur 1883-84. Ditto, Andamans and furlough. 1884-85. Furlough, Office & Hazaribagh	<table border="0"> <tr> <td>Salary and fixed allowance</td> <td>9,197 12 7</td> <td></td> </tr> <tr> <td>Travelling allowance</td> <td>367 4 6</td> <td>9,565 1 1</td> </tr> </table>	Salary and fixed allowance	9,197 12 7		Travelling allowance	367 4 6	9,565 1 1				
Salary and fixed allowance	9,197 12 7										
Travelling allowance	367 4 6	9,565 1 1									
1882-83. Furlough and South Rewah 1883-84. S. Rewah, Korea & Jhilmilli. 1884-85. South Rewah.	<table border="0"> <tr> <td>Salary and fixed allowance</td> <td>12,521 8 4</td> <td></td> </tr> <tr> <td>Travelling allowance</td> <td>1,905 8 0</td> <td></td> </tr> <tr> <td>Hospital Assistant's pay, &c.</td> <td>236 8 0</td> <td>14,663 8 4</td> </tr> </table>	Salary and fixed allowance	12,521 8 4		Travelling allowance	1,905 8 0		Hospital Assistant's pay, &c.	236 8 0	14,663 8 4	
Salary and fixed allowance	12,521 8 4										
Travelling allowance	1,905 8 0										
Hospital Assistant's pay, &c.	236 8 0	14,663 8 4									
1882-83. Kattywar, Gujrat and Office 1883-84. Office and furlough. 1884-85. Furlough.	<table border="0"> <tr> <td>Salary and fixed allowance</td> <td>8,583 0 0</td> <td>8,583 0 0</td> </tr> </table>	Salary and fixed allowance	8,583 0 0	8,583 0 0							
Salary and fixed allowance	8,583 0 0	8,583 0 0									
1882-83. Rajputana and furlough 1883-84. Furlough and Rajputana. 1884-85. Rajputana.	<table border="0"> <tr> <td>Salary and fixed allowance</td> <td>3,323 13 4</td> <td></td> </tr> <tr> <td>Travelling allowance</td> <td>1,362 9 0</td> <td>4,686 6 4</td> </tr> </table>	Salary and fixed allowance	3,323 13 4		Travelling allowance	1,362 9 0	4,686 6 4				
Salary and fixed allowance	3,323 13 4										
Travelling allowance	1,362 9 0	4,686 6 4									
1882-83. Himalayas and Punjab 1883-84. Punjab and Afghanistan. 1884-85. Afghanistan.	<table border="0"> <tr> <td>Salary and fixed allowance</td> <td>6,508 9 11</td> <td></td> </tr> <tr> <td>Travelling allowance</td> <td>1,672 14 5</td> <td>8,181 8 4</td> </tr> </table>	Salary and fixed allowance	6,508 9 11		Travelling allowance	1,672 14 5	8,181 8 4				
Salary and fixed allowance	6,508 9 11										
Travelling allowance	1,672 14 5	8,181 8 4									
1882-83. Jaunsar 1883-84. Ditto and Andamans. 1884-85. Andaman Islands & Rajputana	<table border="0"> <tr> <td>Salary and fixed allowance</td> <td>7,013 15 3</td> <td></td> </tr> <tr> <td>Travelling allowance</td> <td>1,882 12 11</td> <td>8,896 12 2</td> </tr> </table>	Salary and fixed allowance	7,013 15 3		Travelling allowance	1,882 12 11	8,896 12 2				
Salary and fixed allowance	7,013 15 3										
Travelling allowance	1,882 12 11	8,896 12 2									
1882-83. Nimar and Chhattisgarh 1883-84. Chhattisgarh. 1884-85. Raipur.	<table border="0"> <tr> <td>Salary and fixed allowance</td> <td>6,578 3 7</td> <td></td> </tr> <tr> <td>Travelling allowance</td> <td>2,344 12 0</td> <td>8,922 15 7</td> </tr> </table>	Salary and fixed allowance	6,578 3 7		Travelling allowance	2,344 12 0	8,922 15 7				
Salary and fixed allowance	6,578 3 7										
Travelling allowance	2,344 12 0	8,922 15 7									
1882-83. Assam 1883-84. Ditto 1884-85. Ditto.	<table border="0"> <tr> <td>Salary and fixed allowance</td> <td>6,564 6 8</td> <td></td> </tr> <tr> <td>Travelling allowance</td> <td>1,912 10 0</td> <td>8,477 0 8</td> </tr> </table>	Salary and fixed allowance	6,564 6 8		Travelling allowance	1,912 10 0	8,477 0 8	Offr. in 2nd grade, vice Mr. F. Fedden.			
Salary and fixed allowance	6,564 6 8										
Travelling allowance	1,912 10 0	8,477 0 8									
1883-84. Korea, Jhilmilli & Chhindwara 1884-85. Chhindwara.	<table border="0"> <tr> <td>Salary and fixed allowance</td> <td>5,895 8 0</td> <td></td> </tr> <tr> <td>Travelling allowance</td> <td>1,943 5 0</td> <td>7,838 13 0</td> </tr> </table>	Salary and fixed allowance	5,895 8 0		Travelling allowance	1,943 5 0	7,838 13 0				
Salary and fixed allowance	5,895 8 0										
Travelling allowance	1,943 5 0	7,838 13 0									
1883-84. Jaunsar and Kumaun. 1884-85. Kumaun.	<table border="0"> <tr> <td>Salary and fixed allowance</td> <td>5,829 9 8</td> <td></td> </tr> <tr> <td>Travelling allowance</td> <td>2,451 4 0</td> <td>8,280 13 8</td> </tr> </table>	Salary and fixed allowance	5,829 9 8		Travelling allowance	2,451 4 0	8,280 13 8				
Salary and fixed allowance	5,829 9 8										
Travelling allowance	2,451 4 0	8,280 13 8									
1882-83. Office. 1883-84. Ditto. 1884-85. Ditto.	<table border="0"> <tr> <td>Salary</td> <td></td> <td>4,500 0 0</td> </tr> </table>	Salary		4,500 0 0							
Salary		4,500 0 0									
1882-83. Office. 1883-84. Ditto. 1884-85. Ditto and furlough.	<table border="0"> <tr> <td>Salary</td> <td></td> <td>3,780 0 0</td> </tr> </table>	Salary		3,780 0 0							
Salary		3,780 0 0									
1882-83. Gwalior 1883-84. Ditto and furlough. 1884-85. Furlough and Malwa.	<table border="0"> <tr> <td>Salary</td> <td>1,800 0 0</td> <td></td> </tr> <tr> <td>Travelling allowance</td> <td>115 9 0</td> <td></td> </tr> <tr> <td>Chaprassi ditto</td> <td>14 0 0</td> <td>1,929 9 0</td> </tr> </table>	Salary	1,800 0 0		Travelling allowance	115 9 0		Chaprassi ditto	14 0 0	1,929 9 0	
Salary	1,800 0 0										
Travelling allowance	115 9 0										
Chaprassi ditto	14 0 0	1,929 9 0									
1882-83. South Rewah. 1883-84. Korea, Jhilmilli & Chhattisgarh 1884-85. Chhattisgarh.	<table border="0"> <tr> <td>Salary</td> <td>2,400 0 0</td> <td></td> </tr> <tr> <td>Travelling allowance</td> <td>602 13 7</td> <td></td> </tr> <tr> <td>Chaprassi ditto</td> <td>136 2 6</td> <td>3,139 0 1</td> </tr> </table>	Salary	2,400 0 0		Travelling allowance	602 13 7		Chaprassi ditto	136 2 6	3,139 0 1	
Salary	2,400 0 0										
Travelling allowance	602 13 7										
Chaprassi ditto	136 2 6	3,139 0 1									
1884-85. Office	<table border="0"> <tr> <td>Salary</td> <td></td> <td>1,200 0 0</td> </tr> </table>	Salary		1,200 0 0							
Salary		1,200 0 0									

Statements of Services of Geological Survey Officers.

Corrected up to 1st January 1886

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 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, Mohani; 1869-70, Satpuras; 1870-71, Bundelkhand, Narbada Valley; officiated as Superintendent from 20th July to 5th September 1870; sick leave, 13th June to 2nd December 1871; 1871 to 1873, Satpuras; officiated as Superintendent from 16th July 1873 to 15th December 1874; 1873-74, Garo Hills; 1874-75, Betul coal-field, Nimar, Nepal; 1875-76, Nimar, Jamu Hills; appointed Superintendent on 1st April 1876; Fellow of the Calcutta University, and Member of the Faculty of Arts and Engineering, 17th April 1876; 1876-77, Mohpani and Satpura coal-borings; 1877-78, Reli Committee, and Nahan; 1878-79, and 1879-80, Office, Calcutta; 1880-81, Nahan, and Office, Calcutta; 1881-82-83-84, Office, Calcutta; extension of service for two years from 2nd August 1884; special leave from 9th May to 8th November 1884; 1884-85, Office, Calcutta; designation changed to Director of the Geological Survey of India.

Mr. WILLIAM KING, A.B., D.SC. (*Honoris causa*).

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 from 17th September 1869 to 16th December 1870; 1870-71, Raichur Doab and Rhima 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, Wynnad 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 Wynnad gold-fields; 1880-81, Malabar Coast; furlough from 10th May 1881 to 9th July 1883; 1883-84, Chhattisgarh; Fellow of the Madras University, and Member of the Faculty of Engineering, 1884; officiated as Superintendent from 7th May to 12th November 1884; 1884-85, Chhattisgarh; designation changed to Superintendent of the Geological Survey of India.

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; 1880-81; Madura, Tinnevely, officiated as Deputy Superintendent from 7th December 1880 to 13th June 1881; appointed Deputy Superintendent from 14th June 1881; 1881-82, Tinnevely; 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 Karnul; 1883-84, Karnul, Hyderabad and Bellary; Fellow of

the Madras University and Member of the Faculty of Engineering, 1884; 1884-85, Bellary; designation changed to Superintendent of the Geological Survey of India.

MR. FREDERIC RICHARD MALLET, F.G.S., F.C.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 Kharakpur Hills; in July 1860 made a trip to Tibet by Niti; 1860-61, Upper Sone Valley; in July 1861 made an excursion in Spiti; 1861-62, on the Upper Vindhyan in Bundelkhand and Rewah; 1862-63, on the Vindhyan in Mirzapur and Shahabad Districts; 1863-64, on the Vindhyan between Rewah and Saugor; June to September 1864, worked with Dr. Stolickza in Spiti and Rupshu; 1864-65, worked the Vindhyan boundary from Jabalpur to Harwai; from 10th May to 9th November 1865, officiated as Deputy Superintendent in Bengal; 1865-66, on the Vindhyan and crystalline rocks between Chunar and Tehri in Bundelkhand; 1866-67, through Bhurtpur, Alwar, Bundi, and Guna to the Saugor District; 1867-68, the gneiss of Lower Bundelkhand; 1868-69, on the crystalline and transition rocks in the Mirzapur District; passed in the vernacular on 5th October 1868; on furlough for one year from 13th September 1869, with an extension on duty for three months and nine days to 21st December 1870; on his return journey stopped at 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, examined and reported on the coal-fields of Upper Assam, received the thanks of the Assam Government; 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; also examined and reported on iron ores of Jabalpur; 1883-84, Museum, Andamans, Barren Island and Narcondam; furlough from 2nd May to 3rd November 1884; 1884-85, Museum and Hazaribagh; designation changed to Superintendent of the Geological Survey of India.

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

APPOINTED in England by the Secretary of State on 16th October 1862; joined the Survey as Assistant on the 11th November 1862; 1862-63, in the Sone Valley; 1863-64, the Jherria coal-field; 1864-65, the Bukaro coal-field; 1865, 1866, 1867, and 1868, the Kāranpura, Deogarh, Karharbari, Ithkuri 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 Wūn—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 the Central Provinces; officiated as Deputy Superintendent from 9th November 1872 to 17th December 1874; during 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. Apcar and Company on boring sites in the Raniganj Field, also for Messrs. Burn and Company on the Birbhum iron ores; 1874-75, the Pranbita and Jangaon Valleys, and the Wūn coal-fields; 1873-74-75, indicated more bore sites in Wūn District; promoted to the 2nd grade from 21st April 1875; 1875-76, the Godavari Valley; visited the Molpani coal-field, and the trial borings for coal at Khāppā 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 Karharbari 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 Molpani 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 Umaria-Khalesar, Rewah State, and in valley of the Johilla River; pointed out sites which proved coal over large area, January 1882; reported for Government, Central Provinces, on coal outcrops in Mabanadi, Jabalpur District, May 1882; leave on furlough from 8th June 1882 to 29th February 1883; officiated in 1st grade from 23rd February to 10th April 1883; officiated as Deputy Superintendent from 23rd February to 10th May 1883; promoted to 1st grade on 11th April 1883; superintending Rewah coal explorations from 1st March 1883; 1883-84, Korea and Jilmilli; officiated as Deputy Superintendent from 29th April to 12th November 1884; in May 1884 reported for Messrs. Schene, Kilburn and Co. on coal near Jainti river; received thanks of the Central India Agency; services placed at the disposal of the P. W. Department in connec-

tion with the Umaria Coal Mines from 18th December 1884; designation changed to Deputy Superintendent of the Geological Survey of India.

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 Manbhum 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, Kattywar; 1882-83, Kattywar, Guzrat, and Museum; officiated in the 1st grade from 8th June 1882 to 22nd February 1883, and from 28th March to 10th May 1883; 1883-84, Muscun; acted as Curator from 21st January to 7th March 1884; officiated in 1st grade from 29th April to 12th November 1884; acted as Curator from 29th April to 7th November 1884; furlough from 22nd November 1884; designation changed to Deputy Superintendent of the Geological Survey of India.

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 Vindhyan in Central India; 1867, 1868, and 1869, on the Vindhyan 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 Odeypore; promoted to 2nd grade from 14th June 1881; 1881-82, Rajputana; leave on furlough from 20th November 1882 to 17th November 1884; 1884-85, Rajputana; designation changed to Deputy Superintendent of the Geological Survey of India.

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, Kumann, Himalays, 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; 1883-84-85, Punjab; attached to Afghan Boundary Commission; officiated in 1st grade and as Deputy Superintendent from 7th May to 7th November 1884; designation changed to Deputy Superintendent of the Geological Survey of India.

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; passed in the vernacular on 1st August 1881; 1881-82, on special service to Manipur; officiated in 2nd grade from 14th June 1881 to 10th April 1883; 1882-83 to 1883-84, Jaunsar and Andamans; promoted to 2nd grade on 11th April 1883; 1884-85, Andamans, on duty in Australia for 35 days after expiration of privilege leave, and North-East Rajputana; designation changed to Deputy Superintendent of the Geological Survey of India.

Mr. PRAMATHA NATH BOSE, B.Sc. (*Loud.*), 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 Chhattisgarh; officiated in 2nd grade from 2nd March 1882 to 31st March 1884; promoted to 2nd grade from 1st April 1884; 1883-84, Chhattisgarh; 1884-85, Raipur; designation changed to Deputy Superintendent of the Geological Survey of India.

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 to 17th November 1884; 1882-83 to 1883-84, Assam; officiated in 2nd grade from 22nd November 1884; 1884-85, accompanied North-East Frontier Exploration party, and 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; 1884, Korea, Jhilmilli, and Chhindwara; passed in the vernacular on 2nd June 1884; officiated in 2nd grade from 29th April to 12th November 1884; 1884-85, Chhindwara, deputed to Kashmir to report on earthquake.

Mr. CHARLES STEWART MIDDLEMISS, B.A. (*Canab.*)

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; 1884, Jaunsar and Kumaun; officiated in 2nd grade from 7th May to 7th November 1884; passed in the Vernacular on 6th October 1884; 1884-85, Kumaun, deputed to report on the Bengal Earthquake.

Mr. JULES SCHAUMBURG.

JOINED the Survey as Chief Draftsman on 12th April 1869; gazetted as Artist on 7th July 1874; officiated as Principal, Government School of Arts, Calcutta, from 5th June 1882 to 18th November 1884; 1885, supervised the preparation of models of the wild tribes of India for the Indian and Colonial Exhibition to be held in London in 1886.

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; compiled and carried through the press a catalogue of the books in the library of the Geological Survey of India, 1884; furlough from 18th April to 28th September 1885.

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 1883-84, Gwalior; furlough from 1st October 1884 to 30th September 1885; 1885, Mulwa.

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 Sirgajah; appointed Sub-Assistant on 1st April 1879; 1879-80, Museum; 1880-81 to 1882-83, Museum and South Rewah; 1883-84, Korea, Jhilmilli, and Chhattisgarh; 1884-85, Chhattisgarh.

Mr. THOMAS RAMSAY BLYTH.

JOINED the Survey as Museum Assistant on 1st March 1884.

