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No. 49 of 1890.



From

H. K. DISNEY, ESQUIRE.

Acting Superintendent, Sind Revenue Survey.

To

THE COMMISSIONER IN SIND.

Superintendent's Office,

Camp Golo Pir, dated 23rd January 1890.

Sir,

I have the honor to submit the Annual Progress Report of the Sind Revenue Survey and Settlement Department for the year 1888-89.

2. The following changes and promotions amongst the gazetted officers of the department took place during the year:—

Government Resolution No. 1231,
dated 13th February 1889.

Lieut.-Colonel T. M. Ward, while on furlough, was appointed Superintendent, Sind Revenue Survey. On return to duty he was transferred to the Presidency Survey Department as Acting Superintendent, Konkan Revenue Survey, and he has not yet joined his appointment in Sind.

Commissioner in Sind's Notification
No. 2195, dated 20th June 1889.

I was granted privilege leave for 3 months from 25th June, and Mr. Berrie, Assistant Settlement Officer, was appointed to act as Superintendent during my absence. I reported my return to duty on 24th September 1889.

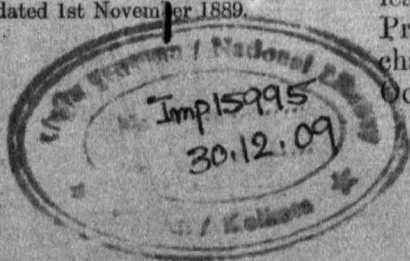
Government Resolution No. 4616,
dated 29th June 1889.

Government Resolution No. 6702,
dated 9th September 1889.

(18)
Mr. L. W. Seymour was promoted from the 3rd to the 2nd grade of Assistant Superintendents from 8th September 1889.

Government Resolution No. 8354,
dated 1st November 1889.

Mr. W. D. Wilkins was granted privilege leave for two months on transfer to the Presidency Survey Department and gave over charge of his duties in this Survey on the 28th October 1889.



3. At the close of the year the strength of the Department stood as under:—

Grade.	Present for duty.	Under Government of India.	On leave.	Total.
Superintendent	1	...	...	1
Assist. Settlement Officer.	1	...	...	1
„ Superintendents ...	3	...	...	3
Total...	5	...	...	5

4. From the beginning of the field season two native officers of this Survey, Messrs. Gopaldas and Isardas, were appointed—Government Resolution No. 6668, dated 5th October 1888—as Surveyors, to the charge of the two parties of classers and measurers which were formed when the Establishment under Mr. Boulton, Assistant Superintendent, who had proceeded on furlough, was broken up.

MEASUREMENT.

5. Original and revision measurement was carried on in the following talukas:—

Karachi Collectorate..... { Dadu.....Revision
 { Sehwan..... ”

Hyderabad	”	{ Sakrand.....	”
		{ Tando Allahyar.	”

Upper Sind Frontier District. { Kashmor.....Original.
Thul..... 33

Thar and Parkar	„	{ Umarkot.....Revision.
		{ Sanghar..... „
		{ Khipra..... „

The measurement of the Sehwan, Sakrand, Tando Allahyar and Umarnot Talukas was finished as also that of Sanghar and Khipra, with the exception of land in the Sanghar Taluka for which the Dimwah extension, now in progress, and of land in the villages of the Khipra Taluka for which the proposed Sarhal wah extension will afford a water-supply. A portion of the Dadu Taluka remained unfinished and in the Thul and Kashmor Talukas the measurement of the land commanded by the Desert Canal was left over pending sanction for its survey.

6. The subjoined table shows the work of the year for each establishment:—

Establishment.	Names of Officers.	Average No. of measurers.	Measurement.						Remarks.
			No. of villages.	Survey Nos.	Waslas.	Arable acres.	Un-divided arable & unarable acres.	Total acres.	
1	2	3	4	5	6	7	8	9	10
A.	Mr. Seymour.....	26	34	17,223	64,619	1,01,879	2,89,969	3,91,848	* These are mixed establishments of classes and measurers. The closing work done by these establishments is shown further on.
B.	" Isardas.....	99	66	11,069	48,413	60,429	3,21,839	3,82,268	
C.	" Wilkins.....	26½	86	16,311	60,992	1,17,865	1,24,053	2,41,918	
D.	" Gopaldas.....	11	56	9,487	52,615	48,064	4,19,086	4,67,150	
E.	" Nash.....	13½	48	9,097	46,014	51,546	1,23,371	1,74,917	
H.	" Kewalsing, attached to the E. Establishment*	7½	...	7,597	30,946	41,188	...	41,188	
F.	" Mathieson.....	9½	17	7,054	26,388	46,923	19,406	66,329	
G.	" Berrie.....	9½	75	6,605	30,608	32,747	32,014	64,761	
	Total 1888-89 ...	113½	382	84,443	3,60,595	5,00,641	13,29,738	18,30,379	
	Previous year ...	118	204	76,452	3,62,756	4,54,918	6,99,177	11,54,095	
	Increase	178	7,991	...	45,723	6,30,561	6,76,284	
	Decrease ...	4½	2,161	

The average number of measurers employed (113½) in this year's operations is thus shown to have been 4½ less than in 1887-88. There is an increase this year in the amount of work under all heads except that of waslas, and the decrease in the number of waslas is insignificant.

7. The average outturn per man for the year is contrasted with that of the previous year in the statement below—

		Numbers.	Waslas.	Acres.
Area per man measured	in 1887-88....	648	3,074	3,855
"	" 1888-89....	741	3,163	4,391
	Increase	93	89	536
	Decrease	...	...	...

8. The subjoined statement is an abstract of the measuring test for the year—

Establishment.	Superintending Officers.	Tested by Assistants.			Tested by native testers.			Total test.			Percentage of measurement as regards numbers.	Remarks.
		Survey Nos.	Acres.	Average error.	Survey Nos.	Acres.	Average error.	Survey Nos.	Acres.	Average error.		
1	2	3	4	5	6	7	8	9	10	11	12	13
				A. G.			A. G.			A. G.		
A.	Mr. Seymour.....	841	5,587	0 19	107	669	0 16	948	6,256	0 19	51	
B.	" Isardas.....	857	5,326	0 20	102	662	0 13	959	5,983	0 20	8	
C.	" Wilkins.....	911	7,472	0 19	110	849	0 21	1,021	8,321	0 19	64	
D.	" Gopaldas.....	770	4,550	0 19	...	...	...	770	4,550	0 19	84	
E.	" Nash.....	162	973	0 23	1,216	6,527	0 18	1,378	7,500	0 18	15	
H.	" Kewalsing, attached to the E. Establishment	677	4,056	0 22	...	...	...	677	4,056	0 22	9	
F.	" Mathieson.....	171	1,140	0 17	921	6,343	0 16	1,092	7,483	0 16	15½	
G.	" Berrie.....	137	889	0 18	860	4,917	0 18	997	5,806	0 18	15	
	Total.....	4,526	29,993	0 20	3,316	19,967	0 17	7,842	42,955	0 19	94	

The work of each establishment has been sufficiently tested and the standard of accuracy is also satisfactory. As already reported in my No. 516, dated 24th June 1889, I spent some days in specially testing the work done by the surveyors in charge of parties.

9. Appendix No. 2 gives in detail the result of the test of each establishment, and shows that the difference in area between original and test measurement exceeded 3 per cent. in the case of the 32 of the 7,842 survey numbers subjected to test.

10. The distribution of days in each establishment is given below, and the average under each head is contrasted with that of the previous year —

Establishment.	Superintending Officers.	Percentage of year.		Percentage of field season.									REMARKS.
		In Field.	In Recess.	Measurement.	Boundary mark Inspection.	Measuring boundary disputes, base-lines, &c.	Sickness.	Non-co-operation.	Rain.	Travelling.	Indoor work.	Leave, holidays, &c.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
A.	Mr. Seymour	54	46	57	14	17	1	1	...	6	1	3	
B.	" Isardas	64	36	86	2	7	...	...	...	3	...	2	
C.	" Wilkins	55	45	61	12	16	2	...	...	7	...	2	
D.	" Gopaldas	66	34	70	7	13	...	...	...	9	...	1	
E.	" Nash	56	44	60	11	16	1	1	1	8	...	2	
H.	" Kewalsing, attached to the E. Establishment	69	31	77	11	6	...	...	1	3	...	2	
F.	Mr. Mathieson	55	45	55	1	35	...	...	...	4	...	5	
G.	" Berrie	55	45	35	...	55	...	...	1	5	2	2	
	Average...	59	41	63	7	21	1	...	...	6	...	2	
	Previous year...	57	43	60	7	22	1	...	2	7	...	1	
	Increase...	2	...	3	...	...	...	...	...	...	...	1	
	Decrease ..	...	2	...	...	1	...	...	2	1	...	...

The distribution of working days is satisfactory and calls for no special remark.

CLASSIFICATION.

11. Six mixed establishments of classers and measurers were employed during the season in preparing the following talukas for the introduction of irrigational settlement:—

Karachi Collectorate	...	{	Sehwan.....	Revision Survey.
			Dadu.....	" "
Hyderabad	"	{	Sakrand.....	" "
			Tando Allahyar	" "
Upper Sind Frontier District		{	Kashmor	Original Survey.
			Thul	" "

The classification of the Sehwan, Sakrand, and Tando Allahyar Talukas was finished during the field season and also of the parts of the Dadu, Kashmor and Thul Talukas which had been brought under measurement.

12. In the abstract given below the work of the classing establishments for the year under report is contrasted with that of the previous year :—

Establishment.	Officers in charge.	Average No. of Classers.	CLASSIFICATION.					Remarks.
			Villages.	Survey Nos.	Arable Acres.	Undivided arable and unarable Acres.	Total Acres.	
1	2	3	4	5	6	7	8	9
A.	Mr. Seymour	1	1	537	2,017	1,357	3,374	
B.	„ Isardas	6	66	19,536	1,20,723	3,21,839	4,42,562	
D.	„ Gopaladas	3	56	12,623	70,977	4,19,086	4,90,063	
E.	„ Nash	12	89	22,368	1,21,844	1,23,371	2,45,215	
H.	{ Kewalsing, attached to the E. Establishment	1	...	7,597	41,188	...	41,188	
F.	Mr. Mathieson	15	70	30,524	90,116	2,98,629	3,88,745	
G.	„ Berrie	15	68	21,685	1,16,335	4,50,464	5,66,799	
	Total...	54.75	350	1,14,870	5,63,200	16,14,746	21,77,946	
	Previous year...	43.81	236	62,926	2,78,100	4,49,701	7,27,801	
	Increase...	10.94	114	51,944	2,85,100	11,65,045	14,50,145	

The average number of classers employed this season is about eleven more than in the season 1887-88. The large increase in outturn is mainly due to the fact that it has been found feasible to apply the partial system of survey, as applied in the Presidency Surveys, in the talukas which have lately come under revision survey. Only survey numbers in which changes have taken place since the last survey, or over-sized survey numbers, have been remeasured and a large proportion of the old work has been confirmed after review. The work has also been accelerated by combining as far as possible the operations of classing and measuring. There is no classification of soil in Sind and measurers have been and are being trained to supply the information regarding crops, kind of irrigation used, &c., which has hitherto been furnished exclusively by the so-called classers. By this means what would have amounted in many cases to a double process of survey has been avoided.

13. The average work of each classer in the field for the last 2 years is contrasted below :—

	Numbers.	Acres.
Average per man for 1887-88	1,426	16,613
„ „ „ 1888-89	2,098	39,780
Increase	662	23,167

14. The following table gives the test taken of the season's work by the assistants and by the surveyors in charge of parties :—

Establishment.	Officers in charge.	Amount of Test.		Percentage of classification test as regards Nos.	Remarks.
		Survey Nos.	Acres.		
1	2	3	4	5	6
A.	Mr. Seymour	21	75	4	
B.	„ Isardas	3,136	21,335	16	
D.	„ Gopaladas	2,282	14,222	18	
E.	„ Nash	3,101	15,932	14	
H.	{ Kewalsing, attached to the E. Establishment	487	2,789	6	
F.	Mr. Mathieson	4,868	35,928	16	
G.	„ Berrie	3,072	17,376	14	
	Total ...	16,967	1,07,657	15	

The detail of the test is given in Appendix 6.

15. The subjoined statement, which calls for no special remark, shows the distribution of days in the classing establishments and the average under each head contrasted with that of the previous year.

Establishment.	Officers in charge.	Percentage of year.		Percentage of Field Season.									REMARKS.
		In field.	In recess.	Classification.	Boundary mark inspection.	Measuring boundaries, &c.	Sickness.	Non-co-operation.	Rain.	Travelling.	Indoor work.	Leave, holidays, &c.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
A.	Mr. Seymour	54	46	77	...	...	...	...	...	16	7	...	
B.	" Isardas	64	36	59	25	2	...	...	1	9	...	4	
D.	" Gopaldas	66	34	61	17	1	...	...	...	19	...	2	
E.	" Nash	56	44	36	11	44	...	...	1	5	1	2	
H.	" Kewalsing, attached to the E. Establishment.....	69	31	60	...	34	...	...	...	5	...	1	
F.	Mr. Mathieson.....	55	45	46	8	39	...	...	...	5	...	2	
G.	" Berrie	55	45	33	13	45	2	...	1	4	...	2	
	Average...	60	40	53	11	24	...	...	...	9	1	2	
	Previous year ..	56	44	38	9	39	4	...	3	4	...	3	
	Increase...	4	...	15	2	...	...	...	...	5	1	...	
	Decrease...	...	4	...	...	15	4	...	3	...	...	1	

RECESS WORK.

16. The whole of the recess work for the year was completed within the recess season, which lasted from about the 20th May to 31st October.

SETTLEMENT.

17. During the year under report sanction was received for the irrigational settlement of the Sukkur Taluka, proposals for which had been submitted during the previous year. The new rates were introduced from the year 1889-90. Proposals were submitted for the irrigational settlement of the talukas shown below :—

Karachi Collectorate	{	Kotri Taluka, Surveyed portion of the Malir Tapa of the Karachi Taluka, Sehwan Taluka,
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and the new rates as sanctioned were introduced from the revenue year 1889-90 in the Kotri Taluka and in the Malir Tapa. The proposals for the Sehwan Taluka have not yet been sanctioned.

18. Consequent on the introduction of irrigational settlement, proposals were submitted during the year, in the usual form, for the revision of Tapadars' charges in the undermentioned talukas—

Karachi Collectorate	{	Ghorabari, Mirpur Sakro, Kotri, Surveyed portion of the Malir Tapa of the Karachi Taluka,
Shikarpur Collectorate	{	Sukkur.

MAPS, LITHOGRAPHIC WORK, &c.

19. During the year maps of 202 villages, which were printed at the Photozincographic Press at Poona, were issued to the revenue authorities, viz.:

Karachi Collectorate	{ Ghorabari .....maps of 6 villages, Mirpur Sakro...maps of 60 „ Shahbandar ...maps of 82 „
Shikarpur Collectorate	Sukkur .....maps of 54 „

Besides the above, hand-drawn copies of 147 village maps, as shown below, were prepared and issued to Mukhtyarkars for immediate use pending the issue of printed maps—

Karachi Collectorate	{ Shahbandar...maps of 106 villages, Kotri .....maps of 17 „ Malir .....maps of 12 „
Shikarpur Collectorate	Sukkur .....maps of 9 „
Thar and Parkar District	Umarkot..... maps of 3 „

20. The following taluka maps were prepared in this office, and 25 copies of each were photozincographed at Poona. Copies have been issued to all offices in which they were required.

Shikarpur Collectorate	Sukkur.
Karachi Collectorate	{ Surveyed portion of Malir Tapa, Kotri Lands within Municipal limits.

21. 3,240 copies of village registers in the new form have been prepared for the talukas named below—

Karachi Collectorate	{ Sakro..... 76 villages, Ghorabari..... 84 „ Shahbandar 106 „ Kotri..... 17 „ Malir Tapa 12 „
Hyderabad Collectorate	{ Guni 368 villages, Hala 107 „
Shikarpur Collectorate	{ Nasirabad..... 112 villages, Mehar 198 „

COST OF SURVEY.

22. The cost of the survey for the year was as follows :—

Sind survey charges.....	Rs. 1,34,588
Share of expenditure on paid labourers) chargeable to Government	{ „ 17,914
Total Rs. 1,52,502	

23. The expenditure incurred was within the sanctioned grant as shown below :—

Sanctioned grant.....	Rs. 1,61,816
Sind survey charges	Rs. 1,34,588

Balance Rs. 27,228.

24. Under the arrangements sanctioned in Government Resolution No. 3544, dated 24th November 1888, all the unadjusted balances of this survey have been cleared off and all the advances received during the year under report, which amounted to Rs. 1,18,953-6-2, have been adjusted.

25. The cost per acre for the present year as compared with that for the previous year is shown below :

	1887-88.			1888-89.		
	Rs.	a.	p.	Rs.	a.	p.
Measurement.....	0	1	8	0	0	9½
Classification	0	1	2	0	0	5½
Both operations			0 2 10	0 1 3.		

26. The cost for both operations this year is thus 1 anna 7 pies per acre less than for last year. The decrease in cost is due (1) to the increased outturn of measurement and classification work, (2) to the application of the partial system, as explained in para. 12 of this report, (3) to the lesser cost of supervision resulting from the employment of surveyors in charge of parties, and (4) to the fact that the area of "undivided arable and unarable land," which is shown in the abstract given under para. 6, is this year very much in excess of that returned in 1887-88.

27. The usual appendices are attached to this report and they give in full detail all necessary information regarding the year's work.

28. A sketch map is hereto attached showing in different colours the

Land under revision settlement	red.	progress of the Sind Revenue Survey up to the close of the year under report.
Land under irrigational settlement for which proposals have been submitted	blue.	
Land for which irrigational settlement proposals have not yet been made	yellow.	
Land in the Thar and Parkar District measured but not settled by this Department.....	green.	

29. In conclusion I would beg to state that I have every reason to hope that the large area which is now being surveyed, under the sanction accorded in your letter No. 2501, dated 12th July 1889, will be disposed of during the current field season. There will then remain for survey in Sind only the work regarding which Government have passed orders in their Resolution No. 8848, dated 22nd November 1889.

I have the honor to be,

Sir,

Your most obedient Servant,

H. K. DISNEY,

Acting Superintendent, Sind Revenue Survey.

No. 636 of 1890.

REVENUE DEPARTMENT.

Commissioner's Office,

Camp Moro, 19th February 1890.

Letter No. 49, dated the 23rd January
1890, from the Superintendent, Sind
Revenue Survey.

Submitted to Government.

2. Mr. Disney held charge of the Sind Revenue Survey Department throughout the year, except for a short period of three months, during which he was on privilege leave.

3. At the beginning of the season one establishment, formerly under Mr. Boulton's supervision, was broken up into two parties, each under a native surveyor. The result of this experiment was, as has previously been reported to Government, an unqualified success, and has led to changes in the same direction being made in the current season.

4. The total area measured was 18,30,379 acres as compared with 11,54,095 acres in the previous year. The large increase is principally due to a greater number of large waste blocks having been measured during the year; but there has also been an increase of 45,723 acres in the arable area measured. The quality of work done, as judged by the percentage of error discovered in the test measurement, appears to have been satisfactory.

5. The work shown under the head "Classification," is, as Mr. Disney points out, not what the term would imply. Under irrigational settlements there is no classification of the soil, as all land in the same group of villages, under the same form of irrigation pays the same rate, whatever the quality of the soil may be. The business of the so-called "classer" in Sind merely consists in collecting statistics as to the area under cultivation, and the kind of irrigation used in each field, in order that the Settlement Officer may have trustworthy figures upon which to base his estimate of the amount of revenue which will be realised by the imposition of certain rates. The arrangement by which this information is now collected by the measurers has resulted in a great saving of time and labour, and the area dealt with in the year under report was 21,77,946 acres as compared with 7,27,801 acres in the previous year. It is clear that this work could be done quite as efficiently without any extra expense by the ordinary revenue establishments; and if this course had been adopted when the system of irrigational settlements was first introduced, the business of the Survey Department being confined to the furnishing of maps, and registers showing the areas of the fields, there is no doubt that the work could have been completed more expeditiously and economically.

6. During the year proposals were submitted for the introduction of irrigational settlements into the Kotri Taluka, part of the Malir tapa in the Karachi Taluka, and the Sehwan Taluka. The proposals for the first two have been approved by Government, and the Sehwan report will shortly be forwarded to Government for sanction.

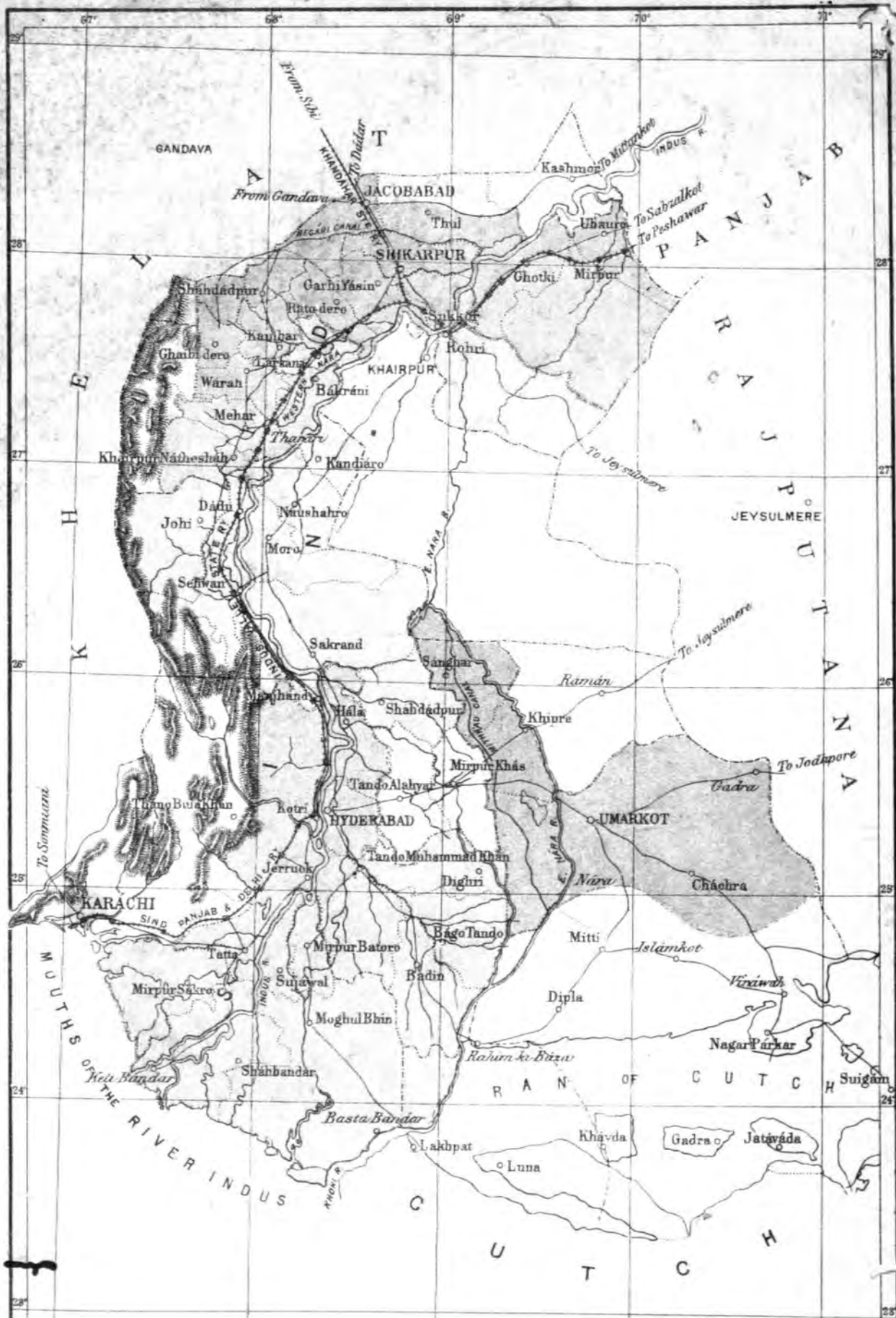
7. The cost of the survey operations for the year was Rs. 1,52,502, as against Rs. 1,74,236 in 1887-88. The decrease in the cost is mainly attributable to the substitution of Native for European supervision in the case of one establishment, and to the amount chargeable to Government on account of labour having been less. The effect of an increase in the outturn of work, combined with a decrease in the cost, has been to reduce the expense of measuring and classification from 2 annas 10 pies to 1 anna 3 pies per acre.

8. At the close of the present season the work of the Survey and Settlement Department in Sind will be practically completed. There will only remain some miscellaneous measuring work, for the completion of which two or three small parties under native supervision will be sufficient. The Department in its present form will cease to exist from the 1st November next, and the Commissioner has already reported to Government the arrangements which he considers necessary, in order that the survey records may afterwards always be kept up to date and that the changes caused by the rapid extension of cultivation may be accurately recorded.

9. The report shows that the Acting Superintendent and his subordinates have done an exceedingly good year's work. Much credit is due to Mr. Disney for the measures which he has taken to diminish the cost of the survey, while at the same time pressing the work forward to an early conclusion.

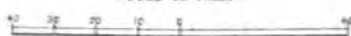
A. C. TREVOR,
Acting Commissioner in Sind.





THE PROVINCE OF SIND

Scale of Miles



REFERENCES

- Land under Revision Settlement —————
- Land under Irrigational Settlement for which proposals have been submitted —————
- Land for which Irrigational Settlement proposals have not yet been made —————
- Land in the Thar & Parkar District measured but not settled by this Department —————

H K Disney

Acting Superintendent Sind Revenue Survey.