

H.D.
IRRIGATIONAL SETTLEMENT
OF KOTARI TALUKA-S.C.L



REVENUE DEPARTMENT.

From

C. B. PRITCHARD, ESQUIRE, C.S.I.,
Commissioner in Sind.

To

HIS EXCELLENCY THE RIGHT HONOURABLE
LORD REAY, LL.D., G.C.I.E.,
Governor and President in Council,
BOMBAY.

*Commissioner's Office,
Karachi, 4th May 1889.*

MY LORD,

I have the honor to submit the accompanying papers regarding the introduction of an Irrigational Settlement into the Kotri Taluka of the Karachi District

2. The taluka consists of two distinct portions, a rugged plateau known as the Band Virah Tapa, forming geographically part of the Kohistan, and a narrow strip of alluvial soil lying between the edge of the plateau and the river Indus. The Band Virah Tapa has never been surveyed. The cultivation, which is scattered over a wide area, is entirely dependent on a scanty rainfall. The cultivated area is measured up annually and assessed at rates fixed by Captain Dunsterville in 1858, 12 annas per acre for kharif, and 8 annas per acre for rabi. The Superintendent, while hesitating to propose any increase in these rates, evidently thinks that they are too low. But the Collector points out that they are higher than those now levied in the new Kohistan Taluka, and I am of opinion that it would be impolitic to introduce any changes at present.

3. The proposals only apply to the narrow belt situated between the river and the hilly tract, the width of which varies from one mile to eight miles. The total area of the Government villages as found by the revision survey is as under :—

Culturable Land Acres.			Unculturable Waste.	Total.
Unoccupied.	Occupied.	Cultivated.	Acres.	Acres.
16,301	12,873	6,631	16,609	52,414

4. The first settlement was introduced by Colonel Haig in 1863. It was based on an elaborate system of classification of the soil, and the assessment was then imposed, and levied on the whole occupied area. In fixing the assessment allowance was made for fallows, so that in any single year a holding would only pay one-third of the full assessment, because it was considered that, on the average, two-thirds would remain fallow in each year. This was what is now known as a "diffused rate" settlement, and the result was very unsatisfactory both to the people and to Government; to the people, because the system of classification broke down in practice and resulted in great inequalities in the assessment, and to Government, because a great area of waste land being available for cultivation, the zamindars

instead of keeping two-thirds of their holdings fallow, as they were expected to do, cropped the greater part every year and when any portion was exhausted relinquished it and took up new land. The settlement was a failure, and would have been a greater failure had not an unexpected rise in prices lessened the ill effects of the inequalities in the assessment.

5. The current settlement was also introduced by Colonel Haig in 1876. The defects of the previous settlement were fully acknowledged and an entirely different system of assessment was introduced. The land was classed according to its irrigational facilities under the following scale :—

Rice, first class.....	16 Annas.
Do. second class.....	14 „
Other flow	12 „
Lift	10 „

Deductions were made from the scale for lands watered from private canals. After a long and acrimonious correspondence between the Survey Superintendent and the Collector of Karachi, it was decided that assessment should only be levied on cultivation. This was essentially an “irrigational” settlement and differs in no material respect from the present “irrigational settlements,” except that the assessment on each number was fixed and could not be altered ; while under the present system the assessment may be altered each year according to the changes that may take place in the method of irrigation.

6. Under the current settlement the rates are as follows :—

	<i>Group I.</i>	<i>Group II.</i>	<i>Group III.</i>
	Rs. A.	Rs. A.	Rs. A.
Rice, 1st class	3 8	3 2	2 12
Do. 2nd „	3 1	2 12	2 6
Other flow	2 12	2 6	1 14
Lift	2 3	1 15	1 11
Sailabi.....	2 8	2 4	...
Barani.....	1 4	1 1	0 13

The allowances made on account of private canals have not been shown, in order to facilitate comparison with the present rates on which similar deductions will be made.

7. The results of this settlement have on the whole been successful. In the first year the occupied area rose from 9,664 acres to 14,171 acres, and the assessment from Rs. 9,223 to Rs. 14,171. Previous to 1876-77 the assessment was levied on the area occupied and there are no figures to show what area was actually under cultivation. But assuming that two-thirds of the occupied area were cultivated, which is a fair average estimate, we find that the cultivated area increased from 6,442 acres to 7,885 acres. The season of 1876-77 was an unusually good one, but allowing for fluctuations in the seasons, the standard has been fairly maintained. During the twelve years during which it has been in force the average area under cultivation has been 7,405 acres. The realisations for each year are shown in para. 12 of Mr. Disney's report, but as these figures include the revenue derived from unsettled land they are useless for purposes of comparison. The estimates for the proposed settlement are based on the area found to be under cultivation in 1887-88.

8. For the purpose of the settlement the Superintendent has divided the villages of the taluka into two classes. Owing to the completion of the railway the reason which led Colonel Haig to discriminate between the villages

of his first and second classes has disappeared, and most of the villages of the taluka are now on a footing of equality as regards communications and irrigational advantages. The second class comprises three villages only, one in the extreme north, and the two others in the south of the taluka. The land in these villages is high and they are distinctly inferior to the other villages of the taluka. The arrangement appears to be judicious and has my approval.

9. The rates of assessment proposed by Mr. Disney, which are shown in para. 14 of his report, are estimated to give an increase of 42 per cent. on the gross collections and 35 per cent. on the land revenue after deducting village cess. Mr. Disney justifies the proposed increase on the grounds (1) that the rates of the current settlement were for special reasons pitched low; (2) that owing to the completion of the railway, communications have been improved; (3) that there are greater facilities for irrigation; (4) that prices have risen; and (5) that the rates proposed are the same as those in force in the first class villages of the Hyderabad Taluka on the opposite side of the river.

10. The Collector, however, joins issue with the Superintendent on these points. He maintains that the river still remains the chief means of communication; that no special improvements have been made on the canals; that the cultivators have not greatly benefited by the rise in prices; and finally, that the first class villages of Hyderabad are greatly superior to those of the Kotri Taluka. He therefore proposes certain reductions in Mr. Disney's rates. The following table shows the current rates and those proposed by the Superintendent and the Collector.

	Current Rates.			Rates proposed by the Superintendent.		Rates proposed by the Collector.	
	1st Class. Rs. a.	2nd Class. Rs. a.	3rd Class. Rs. a.	1st Class. Rs. a.	2nd Class. Rs. a.	1st Class. Rs. a.	2nd Class. Rs. a.
Gardens.....				4 0	3 8	4 0	3 8
Rice, 1st class.....	3 8	3 2	2 12	4 0	3 8	3 12	3 8
Do. 2nd „.....	3 1	2 12	2 8				
Other flow „.....	2 12	2 6	1 14	3 8	3 0	3 4	3 0
Lift „.....	2 3	1 15	1 11	3 0	2 4	2 12	2 4
Rabi, Sallabi and Bosi.....	2 8	2 4		3 8	3 0	3 4	3 0
Barani, Kharif „.....	1 4	1 1	1 3	1 12	1 4	1 8	1 4
„ Rabi „.....				2 12	2 0	2 8	2 0

It will be observed that the Collector proposed a decrease of 4 annas under every head except gardens in the villages of the first group, and proposes no change in the rates of the second group.

11. I am of opinion that there is considerable force in the remarks made by the Collector. When the present rates were introduced they were considered too high by the Collector and the Assistant Collector. The railway cannot in this tract of country compete with the river boats, and consequently it has not had much effect in improving the condition of the agricultural population. Prices rose greatly during the early years of the present settlement, and the Collector no doubt underestimates the benefit which resulted to the cultivators. But it is to be noticed that they again declined between 1880-81 and 1887-88. The great rise which took place this year can only be regarded as temporary and it would be unsafe to take it into account in fixing the rates of assessment. As regards the irrigation of the taluka, which is always the main factor to be considered in settlements in Sind, it was inferior when the present settlement was introduced, and it must be admitted that it is still inferior though the canal clearances are more regular and better carried out. The canals are small and of bad construction and the land on the skirts of the hilly tract is high, so that the water has to be lifted a great distance. Though the hill floods in certain seasons enable the people to bring large areas under cultivation, yet they are ruinous to any permanent canal system, and there is no probability that any real improvement can be effected in the canals. The mouth of the Baghdad Wah is at present in a bad condition owing to erosion taking

place just above it. Finally, the comparison between the Kotri villages and those of the first group in the Hyderabad Taluka is misleading. The latter are in every way vastly superior. Their water-supply is one of the best in the province, the soil is superior, and they are all near the town of Hyderabad. The rates proposed by the Superintendent are higher than those sanctioned for the Hala Taluka, which fronts the greater part of the cultivated tract of Kotri on the other side of the river.

12. Considering all the circumstances, I am of opinion that the reductions proposed by the Collector are insufficient. Where a uniform rate is imposed upon all land under a certain class of irrigation, it is absolutely necessary that the rate imposed should be as moderate as possible, otherwise inferior land will certainly be thrown out of cultivation. This is a result which has followed the introduction of some of the recent settlements and the rates have had to be modified. I would recommend that the rates proposed by the Superintendent should be reduced by eight annas in each class in both groups, excepting the garden rates, for which the Superintendent's proposals may be accepted. The rates proposed by the Collector for barani lands which are those in force in the adjoining talukas of Manjhand and Tatta may be sanctioned. I think that there is no necessity to provide separate rates under the heads "Lift aided by flow," and "Sailabi aided by lift." There is no irrigation of these classes in the taluka, and if there ever should be, the areas would be so small that it would not be worth while to have separate rates. It would be sufficient to impose the "Lift, or "Sailabi," rates according to the nature of the case.

13. With the modifications which I propose the rates will be as follows :—

	1st Group.	2nd Group.
Gardens	4 0	3 8
Rice.....	3 8	3 0
Other flow	3 0	2 8
Lift	2 8	1 12
<i>Rabi—</i>		
Sailabi.....	3 0	2 8
<i>Barani—</i>		
Kharif.....	1 8	1 4
Rabi	2 8	2 0

These rates are practically the same as those which have been sanctioned for the second group of villages of the Hala Taluka.

14. The following statement shows the results of the rates proposed by the Superintendent and the modified rates to which sanction is now requested :—

	Gross revenue. Rs.	Canal clearance. Rs.	Revenue for collection. Rs.	Village cess. Rs.	Land revenue. Rs.	Revenue of 1887-88. Rs.	Increase. Rs.	Increase per cent. Rs.
Proposed rates	19,865	500	19,365	1,139	18,226	13,651	4,575	33
Modified rates	16,379	500	16,379	963	15,416	13,651	1,765	13

15. The rates proposed for the assessment of unsettled "Kacha" lands are suitable and may be sanctioned.

16. As regards babul groves in occupation the whole question of the assessment of grazing land is now under consideration, and I think that orders on this subject should be deferred pending the settlement of the general question. Under the fallow rules the Collectors have power to levy the full assessment on such land at least once in every five years, and this would be equivalent to a yearly rate of eight annas an acre.

17. The settlement should be introduced experimentally, and, as in the case of all other "irrigational" settlements sanctioned in recent years, no guarantee for a fixed term should be given.

I have honor to be,

My Lord,

Your Lordship's most obedient Servant,

C. B. PRITCHARD,

Commissioner in Sind.



No. 1332 of 1889.

REVENUE DEPARTMENT.

From

COLONEL R. I. CRAWFORD,
Collector of Karachi.

To

C. B. PRITCHARD, Esq., C.S., C.S.I.,
Commissioner in Sind.

*Collector's Office,
Karachi, 16th April 1889.*

SIR,

I have the honor to submit Mr. Disney's No. 94 of 1st February 1889, proposing irrigational settlement rates for the Kotri Taluka. and to append my own remarks on his report.

I have honor to be,

Sir,

Your most obedient Servant,

R. I. CRAWFORD, COLONEL,
Collector of Karachi.

Remarks by the Collector of Karachi on the Irrigational Settlement proposed for the Kotri Taluka by the Superintendent of Revenue Survey in Sind in his No. 94 of 1st February 1889.

The condition of the Khosas inhabiting the Band Vero Tapa is little better than that of the people of the new Kohistan Taluka. The lands in the Band Vero Tapa are not adapted for a survey and settlement. They already pay a heavier assessment than that charged in the Kohistan Taluka under a rough settlement, and I think the Superintendent of Survey has acted wisely in leaving them alone for the present.

2. From the Superintendent of Survey's remarks as contained in clause 6 of para. 3 of his report it is clear that the population of Kotri as compared with the figures given in para. 20 of Colonel Haig's report No. 7 of 6th January 1873 has greatly diminished.

3. It is to be noted that Mr. Disney alludes to the opening of the North-Western Railway since the introduction of the existing settlement in Taluka Kotri in very cheerful terms. But while taking this fact into consideration in connection with the proposed rates, I think Colonel Haig's pertinent remarks regarding this railway should be borne in mind. I would quote them as under :—

“ But the Indus distant from no portion of the cultivated land more than 3 or 4 miles is, of course, the great means of communication with the large markets of Hyderabad and Kotri, and must continue to be so, as no other can compete with it in cheapness.”

It must also be remembered that the generality of the Zamindars in this taluka are petty landholders. Many of them sell their produce to the village bania with whom they bank in advance. The facility of communications with the large markets, therefore, is not of primary consideration in their case.

4. At the time when proposals for the existing settlement in Taluka Kotri were being considered the water-supply of the taluka was declared by Mr. James, late Deputy Collector in charge of the Sehwan Division, to be altogether inferior. Mr. Disney says that this cannot be said of it now, though it is admitted that no special improvements have been carried out during the long interval. I must note that the water-supply of the Kotri Taluka can bear no comparison with the splendid Phuleli supply in the Hyderabad Taluka.

5. The lands in the Kotri Taluka are described in as glowing terms by Mr. Disney in para. 6 of his report as they were by Colonel Haig in 1873. This description of the lands was questioned by Colonel Lambert, late Collector of Karachi, and I have no hesitation in saying that they are very much inferior to the Duabo lands in Hyderabad.

6. The figures given in para. 6 of Mr. Disney's report as representing cultivation during the past 5 years and the assessment collected on them show that the cultivation and revenue have maintained the high level reached in 1876-77 by lowering the rates under the revision settlement introduced with effect from that year.

1883-84	Rs. 11,260	7
1884-85	" 13,510	10
1885-86	" 12,667	8
1886-87	" 14,982	9
1887-88	" 12,574	12

NOTE.—The variations in the above figures were due to variations in the seasons.

7. The details of prices given in clause 2 of para. 8 of Mr. Disney's report show that whereas the prices of the staple crops during the latter 8 years of the currency of the existing settlement have ruled higher than those of the pre-settlement period, they were lower than those which prevailed during the time the fallow diffused settlement was in force as also during the earlier period of the existing settlement. It is stated that the prices now prevailing at Kotri are higher still. But it must be borne in mind that the price of bajri and juari is but little affected by any demand on account of foreign export. The rise in the case of these grains occurs in proportion to the general failure of the crops in the country. Practically, therefore, the growers of bajri and juari are not materially benefited by the rise in prices, because it is only that what they lose in the quantity of produce is made up to them by an increase in the prices. I have omitted to make any mention of the prices of wheat. The reason is that wheat of a superior sort is not grown in this taluka. Moreover, whatever is grown is probably consumed within the district. The "karbi" both juari and bajri has not much value here in years of plenty. In years of drought it commands good prices, though certainly not equal to those obtaining at Hyderabad.

8. I concur in the division of the tract referred to in the proposals into two groups, but consider the rates (gardens excepted) proposed for the villages in the first group to be very high.

9. Mr. Disney proposes to charge the same rates on lands in this taluka as are sanctioned for the Hyderabad Taluka. These rates, if levied, will increase the present revenue by 42 per cent.

10. From the foregoing remarks, however, it will appear that there has been nothing remarkable in the circumstances of Kotri since the introduction of the last settlement to justify such a large increase.

11. I would propose that the villages in the first group in this taluka be assessed at the rates sanctioned for the second class villages in the Hyderabad Taluka, and that no change be made in the rates proposed for the villages in the second group. These rates will give an increase of about 30 per cent. and I think they may as well be tried for a year.

12. Should my proposed rates be adopted the result of the settlement would be as under :—

			Rs.
1st group villages, Garden.....acres	58 @ Rs. 4 0		232
Rice	„ 569 „ 3 12		2,134
Other flow	„ 79 „ 3 4		257
Lift	„ 3,397 „ 2 12		9,342
Rabi	„ 1,445 „ 3 4		4,696
Barani—Kharif	„ 627 „ 1 8		940
„ Rabi	„ 97 „ 2 8		242
	<hr/>		<hr/>
Total...	6,272		17,843
2nd group villages, Garden .....acres	4 @ Rs. 3 8	Rs. 14	
Lift	„ 108 „ 2 4	„ 243	
Rabi.....	„ 9 „ 3 0	„ 27	
Barani—Kharif.....	„ 148 „ 1 4	„ 185	
	<hr/>		<hr/>
	269		469
	<hr/>		<hr/>
Total Acres...	6,541	Rs. 18,312	
<i>Deduct—allowances on account of</i>			
canal clearances		„ 500	
		<hr/>	
Estimated net collection...		17,812	

13. In recommending the lowering of “Barani” rates I have been guided by the rates on that kind of cultivation now levied in Talukas Manjhand and Tatta where the Barani lands are in no way inferior to those of Kotri. In both Manjhand and Tatta the barani rates are Rs. 1-4 for kharif and Rs. 1-8 for rabi throughout.

14. I have no objection to offer to the rates proposed for the katcha lands.

R. I. CRAWFORD, COLONEL,
Collector of Karachi.

From

H. K. DISNEY, Esquire,
Superintendent, Sind Revenue Survey,

To

THE COMMISSIONER IN SIND.

SUPERINTENDENT'S OFFICE,

Camp Ghotki, 1st February 1889.

Sir,

I have the honor to submit proposals for the irrigational settlement of the Kotri Taluka of the Karachi Collectorate.

2. The Kotri Taluka forms the southern portion of the Sehwan Division and is bounded as follows: on the north by the hill torrent known as the "San Nai" and the Manjhand Taluka; on the south by the "Baran" torrent, which separates it from the Tatta Taluka; on the east by the Indus, and on the west by the Kohistan, the "Sumbak" and "Hothian" range of hills forming on this side the actual boundary. The taluka is of compact form with an average length from north to south of about 36 miles, and a mean width from east to west of 19 miles. These approximate dimensions show the area of the District to be about 681 square miles. The boundaries to the north and west of the taluka, which run through uncultivated and hill lands, have never been accurately defined.

3. The taluka is divided into three tapas, *viz.*, the Band Virah, the Bhian and the Bada.

The Band Virah Tapa requires but brief notice as it has not yet been surveyed by this department. It constitutes about four-fifths of the whole Kotri Taluka, and comprises 9 villages, all of vast extent; but cut off as it is from the canal system of the rest of the district, the cultivation of the tapa depends entirely on rainfall. No regular settlement has ever been attempted. The rates in force, *viz.*, 12 annas per acre for kharif and 8 annas per acre for rabi cultivation are those fixed by Captain John Dunsterville in 1858. The assessment is levied under the system of annual measurement of the land actually under crop. Colonel Haig (para. 9 of his Kotri Settlement Report, No. 7 of 1873) points out that Captain Dunsterville's rates might with perfect fairness be increased in consideration of the enormous rise in prices since 1858, but he adds "as the great object of the administration is to encourage lawful pursuits, and to set up habits of industry amongst the wild Khosas that have their homes in this desolate tract, rather than to obtain the maximum revenue from it, there can be but one opinion on the question of not interfering with the existing assessment."

Taking the statistics of cultivation and population now available for the Band Virah Tapa, it appears that cultivation, which in 1873, an unusually good year of rain, was stated to have been about 4,500 acres, has averaged for the last 5 years, from 1883-84 to 1887-88, about 5,203 acres. Last year the rainfall was scanty and cultivation dropped to 2,267 acres. The average collections in the corresponding period have been Rs. 3,827, varying from Rs. 5,570 in 1884-85 to Rs. 1,683 last year. The population of the entire Tapa, at the Imperial Census of 1872 was only 569 souls but this was after a long period of drought, when population would be at its lowest. The Imperial Census of 1881 accounted for 2,765 inhabitants. There is no later information available but judging from the returns of cultivation, the population must have since steadily increased.

The cultivation and population of any year depend greatly on the rainfall. In favourable years, with such low rates of assessment, the profits of cultivation must be considerable. The Tapa is then largely resorted to by graziers for the pasture which is found in the vicinity of the hills and a ready market is thus afforded for the disposal of surplus produce. The liberal rates of 1858 were specially designed to ameliorate the condition of the Khosas. I have no information as to the present state of this tribe and I therefore hesitate to offer an opinion as to whether the present very light rates of assessment might not be somewhat increased.

The other Tapas of the Kotri Taluka are the Bhian and the Bada and it is with these, the only surveyed portion of the district, that this report has specially to do.

Bhian and Bada Tapas.

Bhian in the north and Bada in the south form the narrow strip of country lying between the highlands of the Band Virah Tapa and the Indus. These Tapas were at the former survey divided into 20 villages, which have now at revision been formed into 14. Of the 14 villages, 4, *viz.* Kotri (the European quarter of the station excepted) Khanpur, Andheji Kasi and Unarpur are wholly Jagir, and being Jagirs of the first class, have not been measured by this Department. This report has therefore to deal with only ten villages. One of these, *viz.*, Verh, situated south of Kotri, has been measured for the first time, under the sanction conveyed in your No. 5992, dated 9th December 1887.

The tract of country comprising the Bhian and Bada Tapas is about 41 miles long in direct line from north to south, its mean width being only about $3\frac{1}{2}$ miles and its area, according to the Topographical Survey, about 143 square miles. The population of the tract by the Imperial Census of 1881 was 21,534. These figures include the population of the town of Kotri, then returned at 9,896 but which has greatly diminished since Kotri ceased to be the terminal station of the railway and the Indus Flotilla. Excluding Kotri, the population of the rest of the tract is some 12,000 souls and the average density to the square mile may be stated at 97.

4. No district in Sind is so well off in point of communications as this portion of the Kotri Taluka. The Indus, which is distant from no part of the cultivated land more than 3 or 4 miles, affords cheap and ready communication with the considerable markets of Hyderabad and Kotri. The North-Western State Railway, completed since the last settlement, traverses all the villages, except the two south of Kotri, and has 4 stations within the tract. As Colonel Haig predicted "no hamlet is beyond the sound of the passing train." Between the river and the railway is the main road from Jerruck, by Kotri to Sehwan but the road is now little used by traders. There is no cart traffic. Produce intended for the Hyderabad market takes the river route, while that for Kotri and Karachi is nearly all rail-borne.

5. The Government canals in this tract are—1, the Baghdad and Siran, 2, the Gharo, Chandan and Wachero, and 3, the Rajwah and Sada Bahar. Colonel Haig in para. 19 of his settlement report writes of the water-supply of the district as inferior. This cannot now be said of it. Though no special improvements have been carried out since the last settlement, the Government canals are all in good order. The Executive Engineer, Karachi Canals, to whom a reference was made on the subject, informs me that of late years the canals have benefited much from regular and intelligent clearance and minor improvements.

In addition to the Government canals there are 40 small zamindari canals, the principal of which is $2\frac{1}{4}$ miles in length. Nine are over a mile and the remainder vary from $\frac{1}{4}$ th to $\frac{3}{4}$ th of a mile in length. Little or no attention is paid to clearance and the total area irrigated by the zamindari canals is consequently not more than 2,000 acres.

Besides the canals, the tract has a source of irrigation in the "Nais" or hill torrents described in para. 12 of Colonel Haig's report. I cannot do better than quote the description. "The Virah plateau drains into the lower lying tract, I am now describing, by numerous "Nais" or torrents, most of which are small. The two largest are the "Jatiari Nai," which, after heavy rain, floods a large extent of country in the deh of Manjhu and in the two dehs immediately south of it, and the "Manjeri," about 10 miles further south, which also brings down a large body of water to the lower lands. These hill floods, though they occasionally do some damage to crops, are yet of the greatest benefit to the district from the large extent of land which they saturate and render fit for cultivation in both the kharif and rabi seasons. In the lower part of the district, the hills have a comparatively gradual slope to the low-lying country and the flood-water comes down with no great violence, at once spreading over the land and eventually settling in the "Dhoras" or depressions which scour the surface of the country between the deh of Petaro and the town of Kotri, a distance of 13 miles. These depressions are generally reserved for rabi cultivation and the higher lands are cropped in the kharif."

6. The tract under notice for the most part possesses a highly fertile soil composed of the alluvial deposit of the Indus mixed with the débris which, as described in the last para., is with every fall of rain washed down from the adjacent sand stone hills.

The staple crops are bajri and juari. Taking the area of actual cultivation, as ascertained by the classers of this department in the season 1887-88, the total kharif area in the ten villages for which proposals are submitted, was 5,177 acres. Of this area 2,945 acres were under bajri which has now replaced juari as the principal kharif wheel crop. 1,086 acres were under juari, of which 424 acres were kharif wheel, and 630 dry crop (Barani). Of bajri only 108 acres were found in barani land and this area occurs in Verh and Nai Baran, two villages south of Kotri, the cultivation of which is exclusively dependent on rainfall.

The total area of rabi cultivation in the ten villages, as found by the classers, was 1,454 acres. Wheat and oilseeds are the principal rabi crops with a respective area of 751 and 555 acres.

The area under rice, as ascertained by the classers, was 569 acres of which 547 acres were found in the two villages of Wachero and Bada. The rice principally grown is of an inferior kind, being the common red variety known here as "Lari."

Garden land was returned at 62 acres, of which 34 acres were found in the village of Bhian. Sugar-cane and vegetables are the chief garden crops.

The total area of cultivation in the 10 villages, as recorded by the classers, was 7,067 acres.

The following return of the area under cultivation during the last five years was furnished by the Mukhtiarkar of Kotri :—

Years.	Acres.
1883-84	7,374
1884-85	8,668
1885-86	7,859
1886-87	9,629
1887-88	7,385

Average..... 8,183 Acres.

It thus appears that the cultivation of last year, which was a year of low inundation and scanty rainfall, was about 1,000 acres below the average of the last five years.

7. Land is usually sub-let on the batai system, and the arrangement commonly made here, as elsewhere in this province, is that the zamindar pays the Government demand and takes one-third of the produce from his sub-tenant who bears all the expenses of cultivation.

8. Prices are noticed in paras. 48 and 49 of Colonel Haig's report. He compares the average prices of juari, bajri and wheat for the period of 9 years preceding the settlement of 1862-63 with the average prices for 9 years of that settlement and the result shows a considerable average rise in prices for the settlement period but as during that period prices fluctuated a good deal the rise was not accepted as an indication of their future course and it had nothing to do with the fixing of the rates of the current settlement. Colonel Haig expressly states "there is still sufficient uncertainty as to the probable range of prices during the next decade to render it unsafe to increase the rates of assessment, especially in a poor district." In fact the rates of the present are on the whole lighter than the diffused rates of the former settlement.

I give below the average prices of juari, bajri and wheat, as taken from Colonel Haig's report, for the two periods of 9 years above referred to and I also give, in two periods of 8 years, the average prices of these cereals for the 16 years which have since elapsed. I have taken the kharar at the equivalent in maunds given by Colonel Haig, *viz.* :—

1 kharar juari = 21 maunds.

1 „ bajri = $22\frac{1}{2}$ „

1 „ wheat = $22\frac{1}{2}$ „

	Average from 1854-55 to 1862-63.	Average from 1863-64 to 1871-72.	Average from 1872-73 to 1879-80.	Average from 1880-81 to 1887-88.
	Rs.	Rs.	Rs.	Rs.
Juari per Kharar	31	47	52	41
Bajri, „	36	58	57	47
Wheat, „	43	65	79	72

In the 8 years from 1872-73 to 1879-80 there were again two years of abnormally high prices, *viz.*, 1877 and 1878 during which bajri reached 92 and 95 Rupees per Kharar and juari Rs. 79 and 85. The average of this period cannot therefore be considered a fair one for purposes of comparison. During the last 8 years, on the other hand, prices have been steady with a general upward tendency. The variation per kharar in bajri, juari and wheat has not been more than 2 or 3 Rupees. Taking the prices of the 8 years from 1880-81 to 1887-88 and contrasting them with those of the 9 pre-settlement years from 1854-55 to 1862-63, the price of juari may be said to have increased 32 per cent., of bajri 30 per cent. and of wheat 67 per cent. There has again lately been a considerable rise in prices. Bajri now January 1889, sells in Kotri at Rs. 60, juari at Rs. 50 and wheat at Rs. 90, perkharar. The stalk, karbi, of both juari and bajri is also a valuable product and at times commands very high prices.

Prices have had their effect on the cultivation of the taluka. Juari was formerly the crop most cultivated. As will be seen by a reference to para. 6 of this report, the area of bajri is now 2,945 acres against 1,086 of juari. The cultivation of wheat has increased considerably of late years. Very little rice was cultivated in this district at the time of the last settlement. There are now 569 acres under rice and the price of the inferior sort has averaged Rs. 69 per kharar during the last 8 years. Oilseeds were only

referred to in Colonel Haig's report as "cultivated to so small an extent as to need no notice. They are now with rice and wheat the most valuable exports of the taluka. 555 acres were returned last year as under oilseeds and the price has averaged 60 Rupees per kharar during the last 8 years.

9. Education has made some progress since 1873. There were then in the Kotri Taluka two district vernacular schools, there are now three and the number of pupils has increased from 147 to 192.

The town of Kotri, notwithstanding a large decrease in population, has still, as in 1873, four schools, an Anglo-vernacular and 3 Vernacular, of which last one is a Girls' and one a night school. The aggregate number of pupils has increased from 194 to 252.

It is gratifying to notice that a fair proportion of the pupils are Mahamadans, 28 being returned as attending the district and 95 the Kotri schools.

10. The current settlement in the Kotri Taluka was introduced in the year 1876 and was guaranteed for a term of 10 years under Government Resolution No. 4663, dated 16th August 1876. The continuance of the settlement until a regular or irrigational settlement is introduced was sanctioned by Government Resolution No. 3610, dated 20th May 1886.

Kotri was originally settled by the Survey Department in 1862-63. It was the first taluka of this province into which the Bombay system of settlement was introduced. The great difficulty of applying to Sind a system of settlement under which assessment is levied on all lands in occupation, whether cultivated or uncultivated, was that of dealing with fallows, especially in wheel lands, which comprised most of the cultivated area of the taluka. The plan eventually adopted was to make survey holdings large enough to give room for the requisite fallows without necessitating a constant change of holdings. Two year fallows were held to be necessary in wheel lands and the assessment fixed on this description of land represented a third of the amount the land would pay had the full area of a holding been assessed. The result of the 1862 settlement is fully reviewed in Colonel Haig's report of 1873, so often referred to in this report. Payment of the true assessment was largely evaded by the practice of extending cultivation to the entire area of a holding and of taking up fresh land when a fallow became necessary, the abundance of waste land making this an easy proceeding. The net loss of revenue by this evasion of the Government demand was stated to have been equivalent to 21 per cent. of the average collections of the District. It was, however, admitted that the extension of cultivation which took place under the settlement of 1862-63 was mainly due to the fallow allowance which enabled the people to make the rates extremely light for themselves.

Under the settlement now in force, which was finally sanctioned in 1876, the fallow difficulty was met by restricting the size of survey numbers in wheel lands to the area which might be cultivated under a single wheel in one season, and for the smaller survey numbers thus formed, full assessment was to be levied for any year in which holders elected to cultivate them. In fact, under the current settlement, assessment is levied on the area of cultivation and not as before on the area of occupation. The new rates were designedly moderate as it was thought better to err on the side of liberality in the first district in which a modified plan of settlement was being applied. The immediate result of the 1876 settlement was reported on by Colonel Haig in his No. 553, dated 13th August 1877. While giving due weight to the fact that the circumstances of the year 1876-77 were more than usually favourable to the cultivator, he shows that the revenue for that year exceeded by 54 per cent. that of the previous year, which was the last under the old system and the old rates, and that it

exceeded by 71 per cent. the average collections of the 13 years of the first settlement. Colonel Haig adds "it is in fact the highest revenue ever obtained from the small tract of land which forms the settled portion of the Kotri Taluka and as the new rates are liberal almost to a fault the results above recorded must be regarded as extremely satisfactory."

11. The survey operations necessary to prepare the taluka for irrigational settlement were carried out last year, 1887-88. Against 2,493 survey numbers recorded at the former survey there are now 3,346, of which 722 numbers are in land which has been brought under cultivation since the last settlement. There are now in occupation 12,873 acres against 9,011 acres recorded for 1875-76, an increase of nearly 43 per cent. in the occupied area during the currency of the settlement. As will be seen from the table given in the next para. the revenue of 1876-77, the highest then recorded, has since been exceeded, notably in 1878-79. Of the occupied area 10,448 acres are now held by Mahamadans against 8,215 acres held in 1875-76 and 2,425 acres are now held by Hindus against 796 in 1875-76. These figures show that both classes have alike benefited by the very moderate rates of the expiring settlement.

The division into survey numbers of land under particular classes of cultivation, such as rice and sailab, for which there are distinctive irrigational rates, has been so regulated that high and low-lying land has not been included in the same number, it being of great importance that the assessment, which is levied on the full area of a survey number, should not, in years of low inundation, be in excess of what is fairly due on the actual area of cultivation.

12. The following statement shows the revenue collections, &c., in the Kotri Taluka for the 12 years of the current settlement, *viz.*, from 1876-77 to 1887-88:—

Year.	Demand.	Alienations.	Remissions.	Collections.	
1876-77	26,237	2,711	372	23,154	
1877-78	25,413	2,702	56	22,655	
1878-79	29,600	2,702	78	26,820	
1879-80	19,828	2,702	2	17,124	
1880-81	20,018	2,702	71	17,245	
1881-82	26,126	2,697	286	23,143	
1882-83	27,501	2,697	220	24,584	
1883-84	23,461	2,686	113	20,662	
1884-85	25,688	2,727	...	22,961	
1885-86	20,642	2,700	106	17,836	
1886-87	47,211	23,152	813	23,246	
1887-88	42,282	23,090	71	19,121	

The cultivation and as a consequence the collections of any year depend upon the nature of the inundation. The larger remissions were granted in years of high inundation on account of crops destroyed by flood water.

13. For purposes of settlement I propose to divide the ten villages into two groups, as shown below:—

Grouping.

1st Group.

1. Bhian
2. Budhapur.
3. Manjhu.
4. Railo.
5. Petaro.
6. Bada.
7. Wachero.

2nd Group.

8. Khasai.
9. Verh.
10. Nai Baran.

At the last settlement these villages were formed into 3 classes for assessment purposes, but it does not seem necessary any longer to make a distinction between the villages of Colonel Haig's 1st and 2nd classes. The completion of the Railway since the last settlement has brought all these villages much on an equality as regards communications and the present state of the Government canals calls for no special classification as regards irrigational facilities. The villages of Colonel Haig's 2nd class were Bhian, Buthi, Petaro, Bada, and Rajar. The villages of Khanot and Buthi have now been amalgamated with Bhian and the village of Rajar with Bada. The village of Wachero, which was in Colonel Haig's 3rd class, has now been added to the villages of the proposed 1st group. The circumstances of Wachero, have much improved of late years. It shares with Bada nearly all the rice cultivation of the taluka and has the great advantage of a considerable area under natural inundation.

14. The rates which I would beg to propose are shown below :—

						1st Group.	2nd Group.
						Rs. as.	Rs. as.
<i>Kharif.</i>							
Gardens and sugar-cane	...	...	...	...	...	4 0	3 8
Rice under flow	...	...	...	...	...	4 0	3 8
Other crops under flow	...	...	...	...	...	3 8	3 0
Lift irrigation	...	...	...	...	...	3 0	2 4
Do. aided by flow	...	...	...	...	...	3 8	2 12
<i>Rabi.</i>							
Natural and artificial inundation (sailab and bosi)	...	...	...	...	...	3 8	3 0
Do. aided by lift	...	...	...	...	...	4 0	3 8
Lift irrigation	...	...	...	...	...	4 0	3 4
<i>Barani.</i>							
Kharif	...	...	...	...	...	1 12	1 4
Rabi	...	...	...	...	...	2 12	2 0
<i>Kacha.</i>							
Land sown with kharif and peshras crops	...	...	...	...	...	3 0	
<i>Rabi.</i>							
Land sown with wheat and barley	...	...	...	...	...	3 0	
Land ploughed and sown with other crops	...	...	...	...	...	2 12	
Land unploughed	...	...	...	...	...	1 8	

The rates for kacha land are up to the maximum allowed by Government Resolution No. 842, dated 4th February 1887. The area of kacha land was by the latest returns 885 acres.

I have not proposed rates for babul lands because, as I understand from Government Resolution No. 3363, dated 25th May 1888, the subject of rating such land is under consideration. There are 436 acres of babul land which comprise 291 occupied and 145 unoccupied survey numbers. The babul flourishes in the low lands of the taluka. Including the Ghagh Forest some 1,800 acres are covered with babul groves. The good pasturage which these groves afford even in the hot weather is an advantage which cannot well be over estimated in a dry climate like that of Sind.

15. Accepting for the purposes of estimate the area of cultivation recorded by the classifiers of this Department in the season 1887-88 the following is the result of the application of the proposed rates to the cultivation of each group of villages :—

	Acres.		Rs.	Rs.	
1st Group.	Garden	58 @	Rs. 4 0=	232	
	Rice	569	„ 4 0=	2,276	
	Other flow.....	79	„ 3 8=	276	
	Lift	3,397	„ 3 0=	10,191	
	Rabi sailab and bosi.....	1,445	„ 3 8=	5,057	
	Barani ... {	kharif	627	„ 1 12=	1,097
		rabi	97	„ 2 12=	267
	<hr/>		<hr/>	19,396	
	Total...	6,272			
	<hr/>				
2nd Group.	Garden	4	„ 3 8=	14	
	Lift	108	„ 2 4=	213	
	Rabi sailab and bosi ...	9	„ 3 0=	27	
	Barani, kharif	148	„ 1 4=	185	
		<hr/>		<hr/>	469
	Total...	269			
	<hr/>				
	Total Acres...	6,541	Total Rs...	19,865	

Deduc. —Estimated amount on account of canal clearance allowance, *vide* Rule 5 of the rules for the administration of Irrigational Settlement, sayRs... 500

Estimate of Net Collections Rs... 19,365

The village officers' cess is included in the above figures. The cess is one anna in the rupee and the collections of revenue should according to the figures given amount to Rs. 18,226 and the cess to Rs. 1,139.

The proposed rates would thus give an increase of revenue on the area of cultivation above shown of 42 per cent.

16. It has been stated in this report that the rates of the current settlement were pitched very low and the apparent reason for this may be here again briefly noticed. Kotri was the first taluka of this Province into which a settlement on the Bombay system was introduced. What were known as the diffused rates of the original Sind Settlements worked very unequally and on the expiry of the Kotri lease a change of system became necessary. It was decided after considerable discussion and enquiry to levy assessment only on survey numbers in which cultivation actually took place, instead of as before on all survey numbers in occupation and to make this mode of assessment equitable, the size of survey numbers was restricted to the area which might conveniently be cultivated in one season under any of the different kinds of irrigation available. To further ensure the success of the new system, which was on its trial in Kotri, specially liberal rates were proposed and sanctioned for that taluka. These rates have been in force nearly 13 years and have, as this report shows, greatly contributed to the present improved state of the taluka.

Now that new rates have to be considered there is nothing, I would submit, to deter Government from levying whatever just assessment may be considered necessary.

The only settled talukas of the Karachi Collectorate, which touch upon Kotri, are Manjhand, still under guaranteed settlement, and Tatta, in which an Irrigational Settlement was introduced in 1882. I have not specially considered the rates current in Manjhand and Tatta in formulating proposals for the 1st group of villages. It seems to me that the Irrigational Settlement sanctioned in Government Resolution No. 9914, dated 10th December 1885, for the opposite river side taluka of Hyderabad should serve as the best guide in proposing rates for this group. The Hyderabad Taluka approaches nearest to Kotri in advantages of situation and markets. I have therefore adopted the rates of the 1st Hyderabad group of villages for the villages which I propose to place in the 1st group of the Kotri settlement.

The proposed 2nd group contains only 3 villages Khasai, the northernmost of the taluka, and Verh and Nai Baran in the extreme south. These villages are all in the 3rd class of the current settlement. They are not nearly so well off as the villages of the proposed 1st group. The Lift rate recommended for the 2nd group is the same as that sanctioned for the lower of the two groups of villages of the Tatta Taluka. The wheel irrigation in Khasai, the only village at present affected, is mostly by the expensive process of double lift. The Barani land of the 3 villages is much inferior to that of the villages of the 1st group which get the benefit of the wash from the adjacent hills and the proposed difference of 8 annas in the rating of the Barani land of the two groups is, I think, advisable. A reference to Appendix C will show the percentage of increase in each village, by the application of the proposed rates to the survey numbers actually cultivated in 1887-88.

The difference which appears in that return between the total cultivation as returned by the classers of this Department (column 11) and that obtained from the Mukhtyarkar (column 14) is due in the case of the villages of the 1st group to the fact that the area under babul groves, for which rates have not been proposed in this report, is included in column 14 and not in column 11. Some difference is also due to the recent sub-division of Survey Numbers on account of inequality of level (vide clause 2 of para. 11 of this report). The whole area of the old Survey Numbers appears in column 14 but the area of cultivation according to the new sub-divisions is alone shown in column 11.

The difference in the case of the two villages of Verh and Nai Baran in the 2nd group is because the area of cultivation in column 14 is for the year 1887-88 and that in column 11 for 1888-89. The two villages were surveyed by this Department as late as October last and the area of cultivation then found is recorded in column 11. For the purpose of calculating the percentage of increase, the new rates have been applied to the area of cultivation obtained from the Mukhtyarkar on which the assessment shown in column 12 was levied.

17. Attached to this report are the following Appendices.

- (a) Map of the Taluka showing in different colours the grouping of villages.
- (b) Nominal list of villages in groups.
- (c) Statement comparing for each village the old assessment with that proposed by the new rates.

18. I beg to recommend that the new rates come into force with the revenue year 1889-90.

I have honor to be,

Sir,

Your most obedient Servant,

H. K. DISNEY,

Superintendent, Sind Revenue Survey.

(Through the Collector of Karachi).

Appendix B.

NOMINAL LIST of Villages into which the Kotri Talukā is divided showing the groups in which each is placed.

No.	Names of Villages.	No.	Names of Villages.
	<i>1st Group.</i>	6	Bada.
1	Bhian.	7	Railo.
2	Budhapur.		Khanpur Jagir.
	Unarpur Forest.		Kotri Jagir.
3	Wachero.		<i>2nd Group.</i>
	Unarpur Jagir.	8	Khasai.
4	Manjhu.	9	Verh.
	Andheji Kasi Jagir.	10	Nai Baran.
	Ghag Forest.		Karo Khaho Forest.
5	Petaro.		

H. K. DISNEY,
Superintendent, Sind Revenue Survey.

APPENDIX C.

Statement showing estimated area of future cultivation and assessment thereon according to the proposed Irrigational Settlement of the Kotri Taluka, as compared with the area under cultivation and assessment for the year 1887-88 according to revision settlement.

Number.	Names of new Villages.	Names of old Villages from which formed.	Estimated area of annual cultivation.							Assessment on cultivation of preceding column as per Irrigational Settlement proposed.	Area in occupation in 1887-88.	Under revision Settlement.		Percentage difference by proposed rates.		Remarks.	
			Garden, sugar-cane, &c.	Rice.	Other flow.	Lift.	Barani.		Rabi, Salihab & Bost.			Total cultivation.	Area under cultivation in 1887-88.	Total assessment on cultivated area as per Village Register.	Increase.		Decrease.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1st Group.																	
1	Bhian	Bhian, Khanot, Buti and Kacha lands	34	...	...	1,916	270	5	152	1,686	4,818	3,137	1,858	3,321	45	...	
2	Budhapur	Budhapur, Messa and Kacha lands	4	...	...	1,146	...	...	620	1,826	5,174	2,818	1,966	3,998	44	...	
3	Wachero	Wachero Forest...	...	255	...	268	46	4	181	754	2,550	1,579	859	1,600	59	...	
4	Unarpur Jagir	Unarpur Jagir	...	...	...	91	12	1	114	223	716	977	291	496	44	...	
5	Manjhu	Manjhu	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	Andheji Kasi Jagir	Andheji Kasi Jagir	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	Ghag Forest	Ghag Forest	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Petaro	Petaro	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	Bada	Bada, Rajor and part of Kohistan	11	292	72	219	8	16	83	377	1,204	790	465	901	34	...	
10	Railo	Railo, Chaudandi and part of Kohistan	4	22	7	256	41	71	137	860	2,899	1,697	1,036	1,924	51	...	
11	Khanpur Jagir	Khanpur Jagir	...	...	...	51	264	...	158	552	1,435	1,055	593	1,014	42	...	
12	Kotri Jagir	Kotri Jagir	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total of the 1st Group Villages			58	569	79	3,397	627	97	1,445	6,272	19,396	12,053	7,068	13,254	46	...	
2nd Group.																	
8	Khasai	Khasai with Kacha land and part of Kohistan	4	...	...	108	36	...	9	157	329	366	204	274	20	...	
9	Verh	Part of Verh	...	...	...	...	77	...	...	77	70	159	56	61	15	...	
10	Nai Baran	Nai Baran, Dadu and part of Verh	...	...	...	...	125	...	...	125	70	295	56	62	13	...	
11	Karo Khaho Forest	Karo Khaho Forest	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total of the 2nd Group Villages			4	...	...	108	238	...	9	359	469	820	316	397	18	...	
Grand Total			62	569	79	3,505	865	97	1,454	6,631	19,865	12,873	7,384	13,651	46	...	

New rates applied to area shown in Col. 14.

New rates applied to area shown in Col. 14.

H. K. DISNEY,
Superintendent, Sind Revenue Survey.



सत्यमेव जयते

Revenue Survey and Assessment : Irrigational Settlement of the Kotri Táluka of the Karáchi District in the Province of Sind.

No. 4246.

REVENUE DEPARTMENT.

Bombay Castle, 12th June 1889.

Letter from the Commissioner in Sind, No. 1505, dated 4th May 1889—Submitting the papers noted in the margin containing proposals for the introduction of irrigational settlement into the Kotri Táluka of the Karachi District in the Province of Sind.

Letter from the Superintendent, Sind Revenue Survey, No. 94, dated 1st February 1889.
Letter from the Collector of Karáchi, No. 1332, dated 16th April 1889.

RESOLUTION.—The current settlement of the Kotri Táluka was introduced in 1876 and guaranteed for ten years only ; but its continuance until the introduction of an irrigational settlement was sanctioned by Government Resolution No. 3640, dated 20th May 1886. Proposals for this settlement are now made in respect of ten villages comprised in the Bhian and Bada tapas and situated on or close to the banks of the river Indus.

2. The history and condition of these villages have been fully dealt with in the reports under review and no comment thereon is necessary. The Survey Superintendent's proposals for forming two assessment groups containing respectively seven and three villages are accepted by the Collector of Karáchi and the Commissioner in Sind ; but as regards the rates of assessment there is considerable difference of opinion. The Commissioner who considers that the Collector has not gone far enough in making his proposals for reducing the Survey Superintendent's rates, gives reasons for thinking that the rates to be imposed should be based on those of the second group in the Hála Táluka on the opposite side of the river rather than, as proposed by Mr. Disney, on those of the first group of the Hyderabad Táluka. He accepts Mr. Disney's proposed rate of Rs. 3 per acre for kacha lands. The rates for other lands recommended by him are as follows :—

					1st Group.	2nd Group.
Gardens	...	...	...	...	4 0	3 8
Rice	...	...	...	...	3 8	3 0
Other flow	...	...	...	...	3 0	2 8
Lift	...	...	...	...	2 8	1 12
<i>Rabi</i> —						
Sailabi	...	...	...	...	3 0	2 8
<i>Barani</i> —						
Kharif	...	...	...	...	1 8	1 4
Rabi	...	...	...	...	2 8	2 0

3 The Commissioner estimates the land revenue which will result from the adoption of these rates at Rs. 15,416 or 13 per cent. in excess of the revenue (Rs. 13,651) for 1887-88.

4. The Commissioner's proposals are sanctioned. The rates should be levied from the year 1889-90, but the settlement should not be guaranteed for any fixed term of years. Orders regarding bábul groves may for the present be deferred.

J. DE C. ATKINS,
Acting Under Secretary to Government.

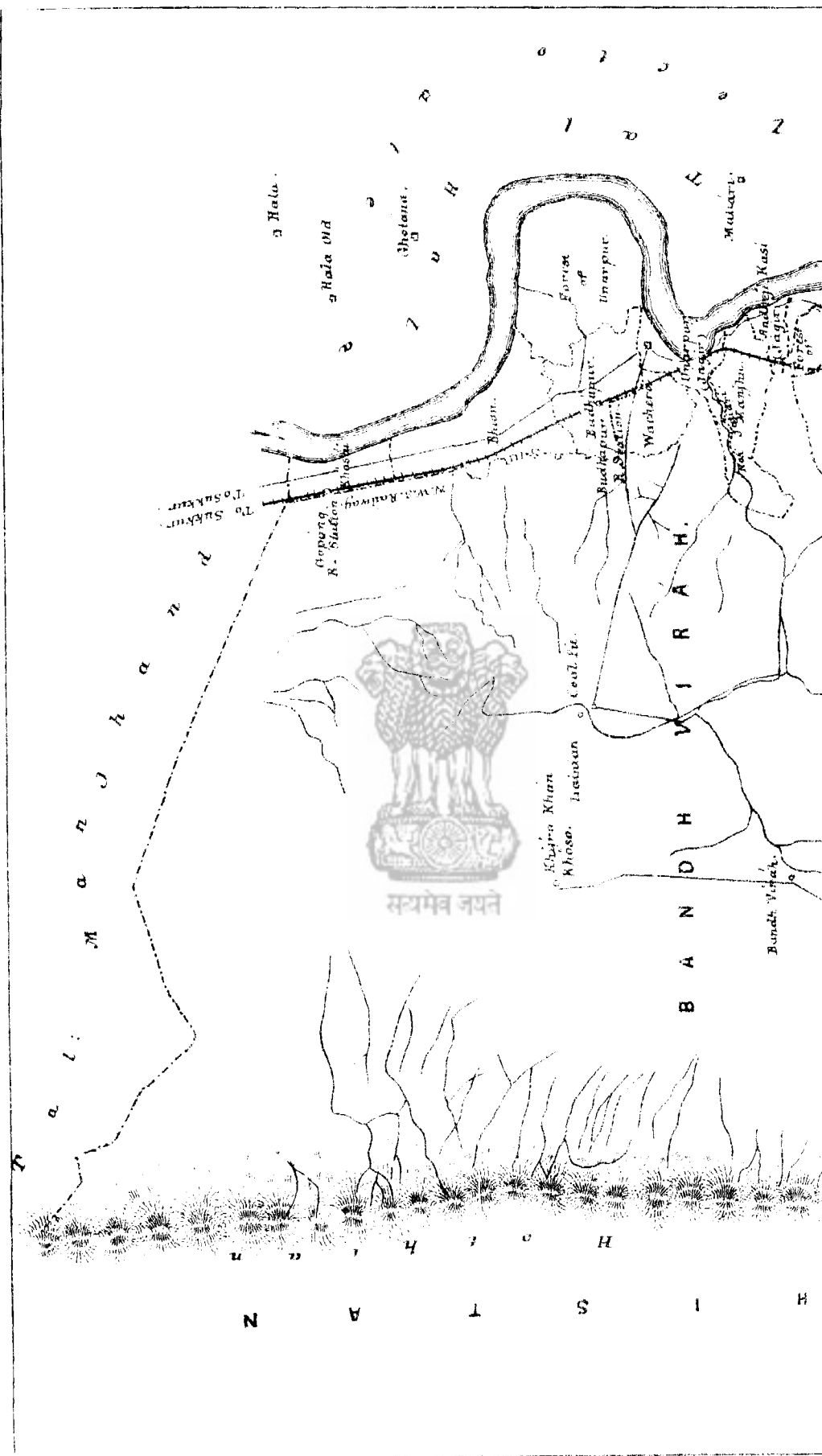
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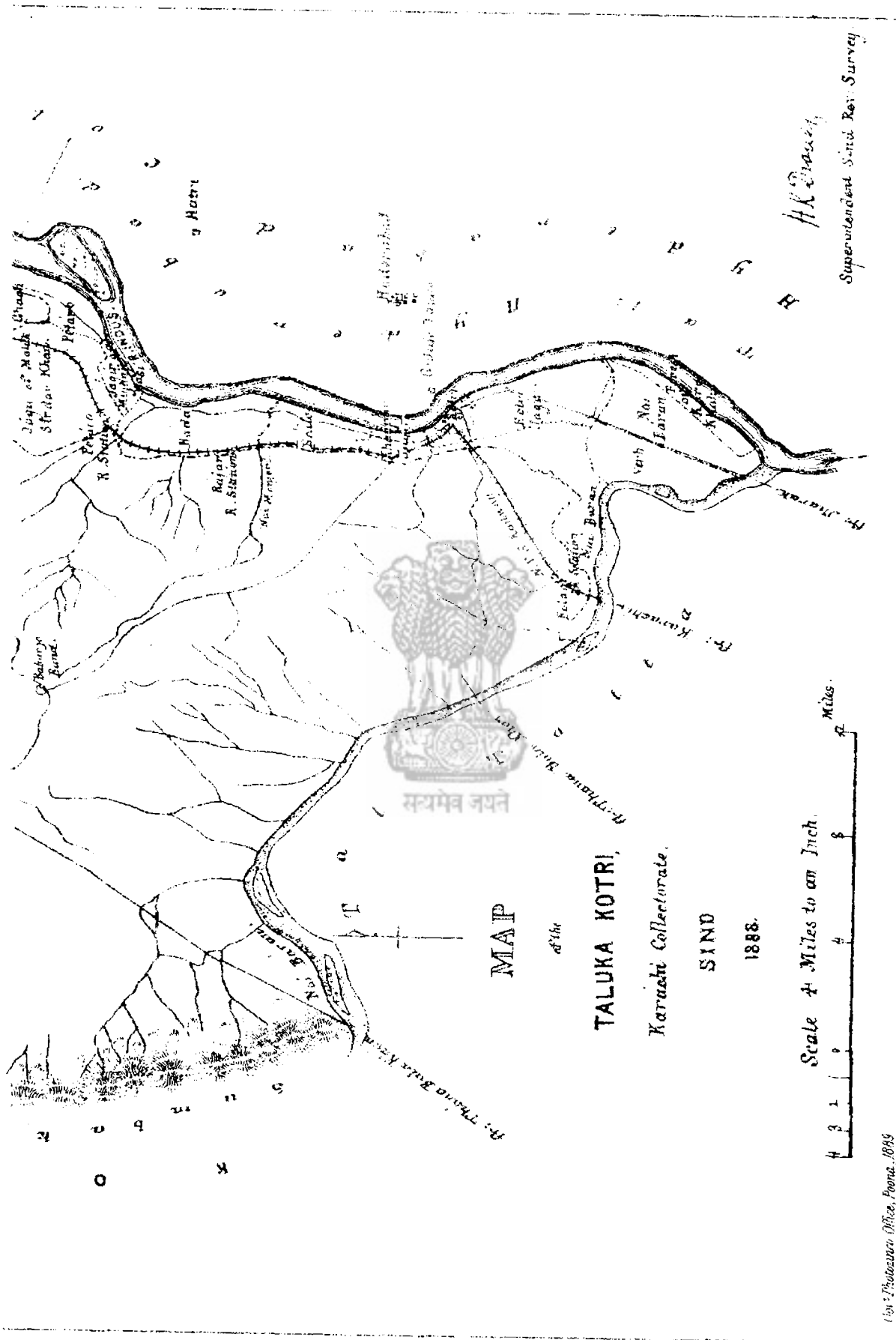
The Commissioner in Sind,
The Superintendent, Sind Revenue Survey,
The Collector of Karáchi,
The Public Works Department of the Secretariat,
The Accountant General.
The Government of India,
The Secretary of State for India. } By letter.

NOTE.—The Commissioner in Sind has been informed by telegram.



सत्यमेव जयते





City: Proctorville, Ohio, Poona, 1899