

SELECTIONS FROM THE RECORDS OF THE BOMBAY
GOVERNMENT,

NO. CCXVII — NEW SERIES.

PAPERS

RELATING TO THE

REVISION SURVEY SETTLEMENT OF 76 VILLAGES

OF THE

DHOLKA TALUKA

OF THE

AHMEDABAD COLLECTORATE.

Bombay:

PRINTED AT THE GOVERNMENT CENTRAL PRESS.

1888.

[Price --14 Annas.]

**INDEX TO THE CORRESPONDENCE RELATING TO THE REVISION
SURVEY SETTLEMENT OF 76 GOVERNMENT VILLAGES IN THE
DHOLKA TA'LUKA OF THE AHMEDABAD COLLECTORATE.**

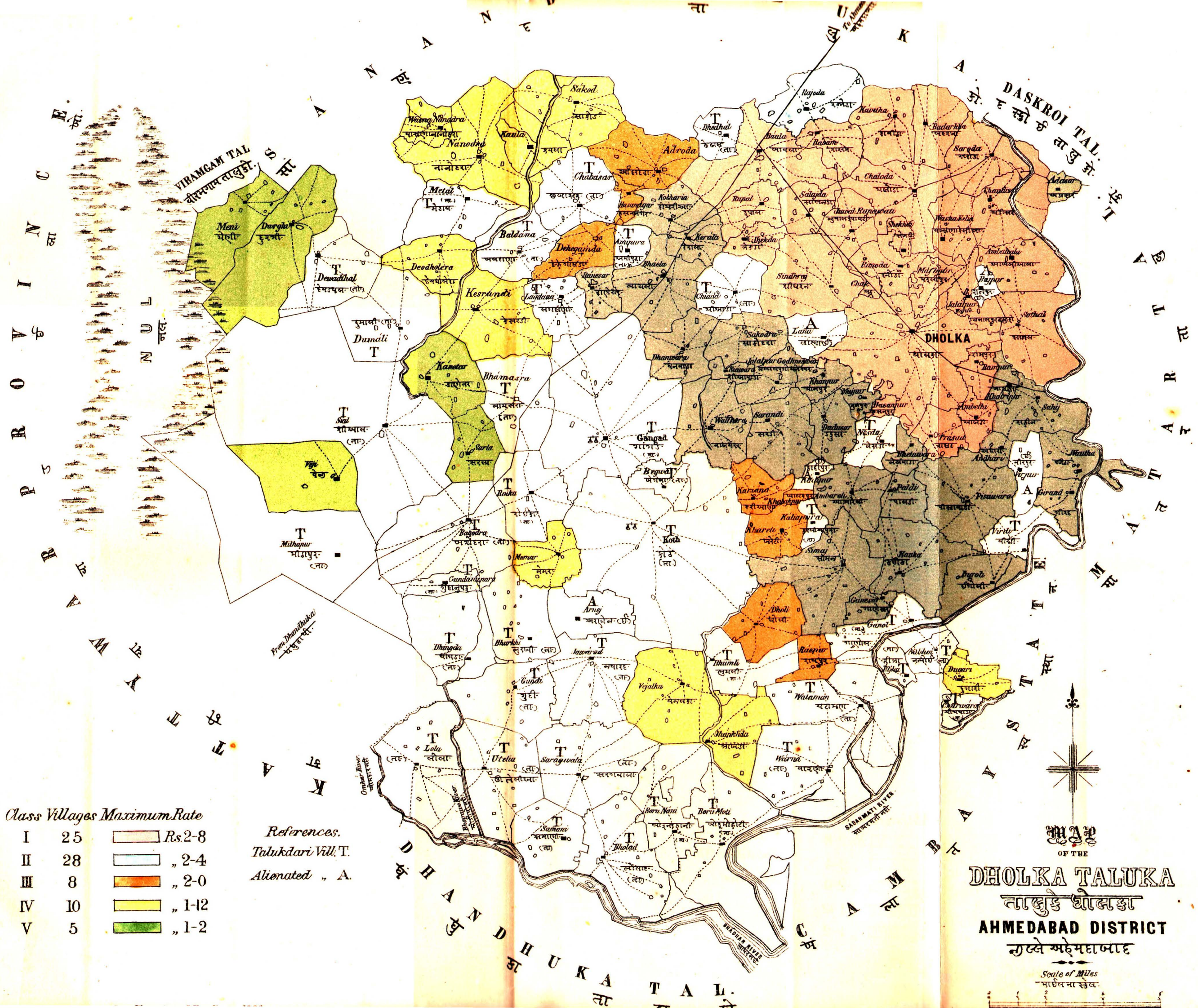
	Paras.	Pages.		Paras.	Pages.
Letter No. 118, dated 1st March 1887, from the Deputy Superintendent, Gujarat Revenue Survey, to the Collector of Ahmedabad, submitting proposals for the revision survey settlement of 76 Government villages in the Dholka Taluka of the Ahmedabad Collectorate.	...	1-24			
CONTENTS.					
Introductory remarks...	1-4	...	Recommendations for dealing with the rights of holders of Government and alienated lands to fruit and other trees, usually not reserved, standing therein	65	...
Re-measurement	5	...	Appendix A.—Details of cultivation	...	25
Original and revision survey areas contrasted	6	...	Appendix B.—Details of population	...	26
Main features of the system of re-measurement adopted	7	...	Appendix C.—Showing occupations of the people	...	26
Total number of survey fields according to the original and the revision survey and the differences found in the original and revision areas of Survey Numbers	8	...	Appendix D.—Return of houses, chavdis, wells, &c., and of live and dead stock	...	27
Percentage of old Survey Numbers re-measured and the increase in the number of Survey and Pot Numbers.	9	...	Appendix E.—Showing the number of schools with their average attendance	...	28
Re-classification	10-16	...	Appendix F.—Showing the number of Survey Numbers cultivated by occupants and sub-tenants, &c.	...	28
General result of re-classification	17	...	Appendix G.—Showing the sale transactions of land	...	29
Situation, boundaries and physical features	18	...	Appendix H.—Showing sub-letting value of land	...	30
Rainfall	19	...	Appendix I.—Showing mortgage transactions of land	...	31
Area by the original and the revised survey under heads of description of cultivation and the difference in the revenue and revision areas of garden explained	20	...	Appendix J.—Showing the prices of principal grains for the last 35 years	...	32
Crops	21	...	Appendix K.—Revenue history for 76 villages	...	33
Mode of cultivation and explanation of the small increase in the area of rice land	22	...	Appendix L.—Showing the result of revision settlement in individual villages	...	34-41
General remarks as to the increase or decrease in the area of cultivation of important crops	23	...	Index to the correspondence relating to the original settlement of the Dholka Taluka	...	43
Communications	24	...	Correspondence relating to the original settlement of the Dholka Taluka	...	45-139
Trade and Markets	25-28	...	Memorandum No. 746 of 26th March 1887 from the Collector of Ahmedabad, submitting the above correspondence with his remarks	...	140-142
Past and present statistics	29-37	...	Memorandum No. 1017, dated 1st April 1887, from the Commissioner, N. D., forwarding the above correspondence to the Survey and Settlement Commissioner for his remarks	...	142
Education	38	...	Memorandum No. 900A, dated 23rd May 1887, from the Acting Survey and Settlement Commissioner, forwarding with his remarks the above correspondence through the Commissioner, N. D., for the orders of Government	...	142-156
Sub-tenures	39	...	Letter No. 3191, dated 11th October 1887, from the Commissioner, N. D., submitting with his remarks the above correspondence for the orders of Government.	...	156-159
Number of sales of land, of leases and mortgages and the value of land established therefrom	40-43	...	Mr. Stewart's memorandum No. 1976, dated 3rd November 1887, forwarding Colonel Prescott's remarks on the revision settlement proposals of the Dholka Taluka	...	159-162
Wages	44	...	Government Resolution No. 796, dated 3rd February 1888, passing orders on the above correspondence	...	163-167
Improvement in the condition of the people since the first settlement	45	...			
Prices of principal grains	46-47	...			
Revenue history	48-49	...			
Summary	50	...			
Old rates of assessment, &c.	51	...			
Proposed grouping and rates of assessment	52-58	...			
Estimated financial result of the proposed rates	59-60	...			
Contrasted statement showing the results by former and the revision surveys under every head	61	...			
Incidence of assessment on occupied land per acre	62	...			
Recommendation of the term of guarantee for the proposed rates	63	...			
11 ijara villages held by Bapu Mia (the continuance or withdrawal of the grant of the ijara being referred for orders)	64	...			

Class	Villages	Maximum Rate
I	25	Rs. 2-8
II	28	" 2-4
III	8	" 2-0
IV	10	" 1-12
V	5	" 1-2

References.
Talukdari Vill. T.
Alienated " A.

DHOLKA TALUKA
તાલુકા ધોલકા
AHMEDABAD DISTRICT
જિલ્લો અહેમદાબાદ

Scale of Miles
માઈલ ના સ્કેલ



No. 118 of 1887.

From

A. S. BULKLEY, ESQUIRE,
Deputy Superintendent, Gujarát Revenue Survey;

To

THE COLLECTOR OF AHMEDABAD.

*Camp Aslali, Daskroi Taluka,
1st March 1887.*

SIR,

I have the honour to submit, for the consideration of Government, proposals for the revised survey settlement of taluka Dholka of the Ahmedabad Collectorate.

2. At the original settlement (1856-57), the Dholka Taluka comprised 102 villages, being 94 villages Government, and 8 villages talukdari, under direct Government management.

102

Since then 20 of the Government villages have been transferred to other talukas as thus:—

19 to taluka Sanand of the Ahmedabad Collectorate, and

1 to taluka Matar of the Kaira Collectorate;

and the above-mentioned 8 talukdari villages have been removed from direct Government management and made over to their respective talukdars. Thus the number of villages originally settled by the Survey Department, which are now ready for revision, is 74. But as during the term of the existing survey lease two villages (Khatripur and Bhetawada) which were originally talukdari, have become Government, the total number of Government villages for revision settlement to which this report relates is 76. It is to be noted that while in the list of villages given in paragraph 26 of Mr. Rogers' settlement report No. 137, dated 14th December 1854, one called Jalalpur Kasbo is included, no village of that name is now borne on the taluka records. The explanation seems to be that, although the Settlement Officer then enumerated it as a separate village, the lands under that name were in reality a portion of those of Jalalpur Vazifo, and have been included in that village at the survey settlement.

3. The subjoined statement gives details of the number of villages originally settled at each separate period, their then tenure, and the Government authority sanctioning their settlement:—

Taluka in which comprised.	Year of Survey Settlement.	Government Villages.	Talukdari Villages.	Total.	Government authority sanctioning the Survey Rates of Assessment.
Dholka	1852-53	7	...	7	Government Resolution No. 6471, dated 8th October 1852.
Do.	1854-55	37	..	37	Government Resolution No. 1634, dated 21st April 1855.
Do.	1856-57	50	8	58	Government letter No. 3341, dated 12th October 1858.
Total ... ..	...	94	8	102	

4. A copy of the several reports on the survey settlement of these batches of villages submitted by Mr. Rogers, Settlement Officer in Gujarát, and the correspondence relating thereto, is appended to this report. The diagrams mentioned in paragraphs 18 and 20 of Mr. Rogers' letter No. 137, dated 14th December 1854, and elsewhere, have not been included as they were too illegible in parts to be correctly deciphered and were thus of little value for reference to be made to them. The Appendix A mentioned in paragraph 18 of the said letter was not to be found in the Dholka Táluka Survey Settlement File and has, therefore, not been included in the accompanying papers. A map of the táluka is appended to the present report, and in it the several revised groups of villages and their revised maximum dry-crop rates are shown; the groups by colours in the body of the map and the rates by correspondingly coloured diagrams on its margin. The existing maximum dry-crop rate of each village is shown in Appendix L. of this report.

5. Before actual revision survey operations were commenced, a test of the old survey measurement work in a fair percentage of the villages was taken by me, under the orders of the Survey and Settlement Commissioner, for the purpose of ascertaining whether its correctness was in general sufficient to warrant the adoption of a system of partial re-measurement for purposes of revision settlement. The result of this test was communicated to Government by the Survey Commissioner who submitted at the same time his recommendations as to the extent and nature of the re-measurement operations to be carried out in the táluka as a whole. These were sanctioned in Government Resolution No. 5948, dated 10th August 1883, and in accordance therewith a partial re-measurement has been effected in all those villages of which the old survey measurements were found, after a careful preliminary test, to be sufficiently correct, based on a code of rules specially framed for the purpose and approved by the Survey Commissioner. In the case of those villages of which the old survey measurements were found, after a specially full and varied test, to be not correct enough to accept either in the whole or in some particular tract of considerable extent, the measurement has been done by the revision survey *de novo*. Out of the whole 76 villages 4 have been thus wholly measured *de novo*, and in 4 others a tract here and there has been thus measured. In these cases the new work has been done on the revision survey system of forming separately recognised occupancies into separate survey and *pot* numbers and dividing old unwieldy waste Government numbers into new ones of a more workable area, and generally dealing with the old numbers and areas concerned as they would be dealt with in the ordinary routine of revision survey operations carried out in the táluka as a whole.

6. The subjoined table shows the original survey areas of the 76 villages contrasted with the figures obtained by the revision survey under the heads of total, unarable, and remaining arable:—

	Total.	Deducted Un-arable.	Remaining Arable.
	Acres.	Acres.	Acres.
By original survey	214,138	28,982	185,156
By revision survey	214,651	28,950	185,701
Increase	513	.....	545
Decrease ... ..	.....	32	.....

The difference between the total area of each survey is 513 acres, or a percentage of 0.23. The increase in the arable area is 545 acres and the decrease in the unarable area is 32 acres. Neither result demands any special comment.

7. The two main features of the system of partial re-measurement adopted are the dividing of original occupied Government survey numbers into new survey and *pot* numbers according to recognised separate occupancies and of sub-dividing old unoccupied arable Government numbers of unwieldy area into new numbers of a convenient size for occupancy. The latter process has not been carried out except in those villages where it was considered to be necessary or found to be advantageous. It is not necessary to specify in detail the various minor heads under which partial re-measurement of old survey numbers has been effected here and there. It is sufficient to state that the operations have been of a similar character to those conducted under the system that has been adopted in the Southern Marátha Country Survey and elsewhere, modified more or less so as to suit local conditions.

8. The subjoined table shows the total number of survey fields according to the original and the revision survey in 72 of the 76 villages under report, that is, after excluding the four (4) villages which, for the reasons stated in paragraph 5, have been entirely measured *de novo*. The percentage differences in area discovered between the results of the two operations in these villages are also shown:—

	Total number of Survey Fields.	Total number of old Survey Numbers submitted to Revision Measurement.	DIFFERENCES IN AREA BETWEEN ORIGINAL AND REVISION SURVEY.						
			Under 5 per cent.	Over 5 and up to 10 per cent.	Over 10 and up to 15 per cent.	Over 15 and up to 20 per cent.	Over 20 and up to 25 per cent.	Over 25 and up to 30 per cent.	Over 30 per cent.
By original survey ...	32,822	6,394	5,197	774	227	94	33	24	45
By revision survey ...	...							
Survey numbers ...	38,344								
<i>Pot</i> numbers ...	1,788								
Total ...	40,132								

In the 4 villages which have been measured *de novo* 1,176 old survey numbers have become 1,799 new survey and *pot* numbers combined.

9. Taking all the results given above it will be found that $19\frac{1}{2}$ per cent. of the old survey numbers in 72 villages have been re-measured and that there is a total increase of 7,933 survey and *pot* numbers combined in the 76 villages dealt with.

10. A test of the original classification in a fair percentage of the Government villages was also taken by me under the orders of the Survey and Settlement Commissioner as preliminary to the commencement of revision classification operations in the taluka generally, for the purpose of ascertaining if the old standard was in general correct and the original work could be confirmed and where necessary satisfactorily adjusted. The result was duly reported to Government in the Survey Commissioner's letter No. 1610, dated 24th July 1883, and Government, by its Resolution No. 5948, dated 10th August 1883 (already referred to), approved of the proposals submitted by the Survey Commissioner for carrying out in the case of dry-crop lands a system of partial re-classification of soil, in rice lands of an entire re-classification of the water-supply, and in lands possessing natural facilities of irrigation a classification of such facilities according to the principle already approved by Government with a view to doing away with special well assessment.

11. The various revision classification operations have been carried out under rules specially framed to apply to local circumstances. A verifying inspection and test of the original soil classification of all new survey and *pot* numbers of both dry-crop and rice land has been made simultaneously with a valuation of the existing sub-soil water advantages possessed by every field, according to a code of rules which were approved by the Survey Commissioner. By this system the original soil classification of dry-crop and rice lands has

been confirmed in all cases in which the verification *in situ* established its general correctness within a prescribed margin of difference. In the case of two villages (Kesrandi and Kanetar) the original classification was found to be not satisfactory enough to confirm or adjust, and their classification has now been done entirely *de novo*.

12. The water-supply of original rice land survey numbers has been classed *de novo* under rules for the classification of rice lands which were framed by Captain Prescott, Superintendent of this Survey, according to which a separate valuation is assigned to each distinct item in the total water-supply available. At the revision classification the valuation of a supply obtainable from a well has not been included in that on which the separate water assessment of a rice land survey number has been calculated.

13. Lands capable of irrigation by water taken by the use of *dhekudis* from the Sábarmati and Rodh rivers and from the Nal have had that water-supply classified according to rules which were adopted in this survey subsequently to the original settlement of the Dholka Táluka, these being modified to suit local conditions where necessary for the purposes of the revised settlement.

14. Alluvial (*bháta*) lands found in permanent occupation at the revision survey have been classified *de novo* according to rules framed in 1863 by the Superintendent of this survey for the conduct of the special examination of all *bháta* lands in villages of the Dholka, Jetalpur, and Daskroi Tálukas, that was then directed to be carried out by this department. In the case of such permanently occupied survey numbers as are submerged in the bed of the Sábarmati river and are not now capable of identification and re-classification under the said rules their original soil classification and value has been confirmed for the purpose of their revised assessment. *Bháta* lands not found to be permanently occupied have not been classified by the revision survey.

15. All lands other than *dhekudiát* and *bháta*, which after careful inspection and consideration have been adjudged to possess an available profitable sub-soil water-supply, have had that advantage valued according to a code of rules drawn up for the purpose (and approved by the Survey and Settlement Commissioner and by him submitted to Government), and the use of which, as embodying the principles to be applied in the course of the revision settlement of the táluka, has been approved by Government in its Resolution No. 6342, dated 6th August 1885. Along with these rules a memorandum on the indications of sub-soil water in the táluka accompanied by a map coloured so as to illustrate the localities in which the various qualities of water prevail was forwarded to the Survey and Settlement Commissioner. The experience gained in the course of this work in the field showed that the anna values of the "classes" of sub-soil water applied in the original rules framed for this special classification might be reduced, and the range of those values according to which the enhancement of the soil valuation should be effected was accordingly modified and fixed by the Survey and Settlement Commissioner at from 2 annas to 6 pies. The result of the assessment at the revised rates to be proposed, calculated on the above-mentioned reduced valuation, is that the average incidence of such enhancement of the soil assessment per acre of occupied Government land adjudged to possess sub-soil water advantage will be 2 annas and 10 pies and will produce a gross revenue of about Rs. 7,200 as compared with Rs. 6,000 which was the amount of the special water-assessment imposed in 1885-86 on Government irrigated land by the levy of a water-bag rate varying from Rs. 10 to Rs. 3.

16. Areas of dry-crop land which have been converted into rice land since the original settlement have had a classification made of their soil which has slightly enhanced the original valuation according to the greater or less facility with which natural advantages of position for conversion have been utilized without the employment of private capital. As it was found, during the progress of this work, that the anna values applied to the "classes" for position and natural advantage which were embodied in the original rules for such classification were capable of modification, they have been reduced with the sanction of the Survey Commissioner, and are fixed at from 4 annas to 1 anna, while class

IV has been eliminated. The water-supply of new rice lands where found to consist of rainfall only has been left unvalued and will not be assessed. Where such lands have been found to avail themselves of water procurable from a Government tank or other such source that water-supply has been valued according to the rules of the department for the classification of such supply in the case of old rice lands. Original rice lands found by the revision survey to have lapsed so far into the condition of ordinary dry-crop land as to need entire re-conversion in order to be made fit for cultivation have been classed as dry-crop land.

17. The general result of the various revision classification operations is as follows:—

11,872 acres of land (including *dhekudiát*) have been re-classed for soil in the field;

12,417 acres of old rice land have had their water-supply classed *de novo*;

5,528 acres of converted dry-crop (new rice) land have had their water-supply (derived from sources other than rainfall) classed *de novo*, and their soil classification adjusted;

2,460 acres of *bhátá* land have been entirely re-classed;

2,936 acres of *dhekudiít* land have had their water classification done in the field;

88,837 acres of land (dry-crop and rice) have been classed for sub-soil water advantage.

18. The Dholka Táluka, named from its *kasbo*, which is some 22 miles distant from Ahmedabad, lies to the south-west of that city. Its geographical position is between 72° 2' to 72° 35' east longitude and 22° 21' to 22° 52' north latitude. Its extreme length from north to south is about 30 miles and its greatest breadth is about 32 miles. Within the range from north to south are comprised some tálukdári villages outlying beyond any of the Government villages. The táluka is bounded on the north side by the Sánand Táluka of the Ahmedabad Collectorate, with the exception of a very short space at the north-west corner where the Virangám Táluka adjoins. The river Sábarmati forms its boundary on the east except where one entire village and portions of two villages lying across that river touch the Daskroi Táluka and the Mátar Táluka of the Kaira Collectorate, and where, at some distance further down the river, four villages on its left bank adjoin Cambay territory. The river Bhádhar, flowing from west to east and joining the Sábarmati near where the latter river falls into the Gulf of Cambay, forms its boundary on the south and separates it from the Dhandhuka Táluka. On the west side it is bounded by the territory of the Thákor of Limdi in Káthiáwár, and by the Nal. The area of the whole táluka is about 960 square miles or 614,400 acres, of which the area of the 76 Government villages comprise 214,651 acres or about 335 square miles. The surface of the country, with a slight gradual slope from north-east to south-west, is of almost uniform level, with hardly any noticeable irregularities beyond an occasional undulation in the neighbourhood of the Sábarmati and Rodh rivers. The lands of the villages in the northern quarter and of some others which lie in a tract extending to a few miles south from Dholka town and of some 6 miles in width are more or less well wooded, and many of the fields are enclosed by high and thick hedges planted with fine tamarind, mango, and ním trees. In the remaining villages, especially those in the south-west quarter and along the western frontier, trees of even small size are scarce. The lands of the táluka are mainly of two orders of soil, one clayey black, and the other sandy with more or less mixture of loam and of colour ranging from dark brown to pale grey. All these latter soils are included in the local term "gorádu," and in this sub-division are comprised the *bháta* lands met with in most of the villages along the banks of the Sábarmati river. The black clayey lands predominate in the villages lying to the far south and south-west of the "kasbo," and the "gorádu" lands in those which form the north portion of the táluka and also occupy a tract lying parallel with the Sábarmati and extending inland for a few miles. There are, however, few villages of the whole number under report which, although mainly composed of one of the two divisions of land, do not comprise a tract of the other, however small. In a few villages the intermixture of such tracts or

patches is very prevalent, and the transition from one to the other character of soil is sometimes very sudden. There is no alluvial tract in any village along the Rodh river in the west quarter. The texture and quality of the ordinary *gorádu* lands in these latter villages differs considerably from that of the villages in the north quarter and is in general much inferior to it. The sub-soil water in this region also differs much from that which prevails in the other, and again from that met with in the black soil villages of the remote southern tract. The water, as found in wells scattered over the *táluka*, varies from perfectly sweet throughout the year to brackish at the best of times, and becoming in the hottest months often undrinkable and useless for irrigation. The qualities which range from sweet to slightly brackish are used more or less freely for the cultivation of garden crops such as sugarcane, ginger, plantains and guavas, chillies, and vegetables down to irrigated wheat, while those that range from drinkable, brackish to undrinkable and finally almost salt are used for raising crops of only wheat and barley. In the black clayey lands which grow *chassia* wheat exclusively the sub-soil water is not used for irrigation, experience having probably taught that it is worse than unprofitable because damaging to the upper soil. Water is obtainable in plenty at depths ranging from 10 to 30 feet. The means of irrigation from the *Sábarmati* river are considerable in some of the villages situated on its right bank from Saroda southwards to Ingoli, and are easily available so long as the channel remains more or less unchanged, but this is a matter of some uncertainty and depends on the nature of the monsoon rainfall in the districts upstream.

19. The rainfall over the area of the *táluka* is equable and in general seasonable. The subjoined table gives the figures for the years 1869-70 to 1885-86 as registered at the *Mámlatdár's Kacheri* in the town :—

Year.	Rainfall.	
	Inches.	Cents.
1869-70	34	49
1870-71	28	49
1871-72	31	19
1872-73	29	23
1873-74	27	72
1874-75	23	64
1875-76	27	41
1876-77	31	29
1877-78	32	15
1878-79	41	47
1879-80	27	89
1880-81	43	66
1881-82	46	51
1882-83	42	47
1883-84	33	69
1884-85	38	22
1885-86	30	12
Average	33	68

In 1876-77 the fall was very untimely and caused a sufficient failure of the *kharif* crops to create a dearth which was felt with some severity. Nothing however has occurred during the existing settlement to show that the climate of all the villages is not so equable that it is necessary or advisable in revising the original settlement to propose variations in the maximum dry-crop rates on the score of climatic conditions being more or less favourable in some villages than in others. The salubrity of the *táluka* is beyond question. No severe epidemics have occurred during the 30 years of the survey lease to prove the contrary and the average percentage of mortality from sicknesses of a marked character is not high.

20. The area of the 76 villages by the original and the revised survey is given in the subjoined table under heads of description of cultivation :—

Description of Land.	By former Survey.	By revised Survey.
	Acres.	Acres.
Arable dry-crop	162,889	164,744
Rice	14,257	12,967
Garden	8,010	.....
<i>Bhāta</i> (assessed)	.....	2,460
” (unassessed)	.....	2,055
<i>Dhekudiāt</i>	.....	3,475
Unarable unassessed	28,982	28,950
Total	214,138	214,651

The difference in the areas entered against “garden” land according to the two surveys is due to the difference in the modes of dealing with lands irrigated and irrigable by means of sub-soil water facilities. Under the former survey the area of lands using well water for raising garden crops fluctuated yearly according as more or fewer water-bags were worked. As well as can be ascertained from the taluka figures of such lands in the 5 years (1880-81 to 1885-86) an average yearly area of 2,662 acres of Government land has been cultivated with crops irrigated from wells both built and unbuilt in dry-crop and *bhātta* lands, excluding lands watered by *dhekudis*. Under the principles to be applied in the revision settlement all the area that is classed as possessing sub-soil water advantage is recorded in the revision survey papers as “dry-crop land, irrigable,” and not as “garden” land in the sense of being specially assessed on account of using well water. There are no data sufficiently complete to show correctly how much the area under well irrigation has extended during the survey lease.

21. The proportion in which various crops are grown is shown in Statistical Table No. III (Appendix A). The subjoined figures which summarise this information relate to Government and alienated lands during the 4 years 1882-83—1885-86 :—

	Kharif.	Rabi.
	Per cent.	
<i>Cereals.</i>		
Jovār	19.13	...
Rice	7.62	...
Bājri	8.53	...
Wheat	...	33.90
Miscellaneous	3.29	...
<i>Pulses.</i>		
Tuvar	0.43	...
Miscellaneous	2.59	...
Gram	...	1.25
<i>Oil-seeds.</i>		
Tal	0.93	...
Castor oil	...	0.59
Linseed	...	0.11
Miscellaneous	0.26	...
Carried over	37.78	35.85

		Kharif.	Rabi.
		Per cent.	
Brought forward ...		37.78	35.85
<i>Fibres.</i>			
Cotton ...	...	11.98	...
<i>Garden Crops.</i>			
Sugarcane ...	...	...	0.46
Miscellaneous ...	...	...	2.20
Grass or fallow ...	...	11.73	...
		61.49	38.51
		100	

22. The modes of husbandry generally practised are such as are common to all parts of the province. The quality is fair on the average, being very good and nearly first class in the villages of the northern and south-eastern parts and only moderately good in those elsewhere, while it is poor in a few on the western frontier. The practice of applying manure is adopted chiefly in the case of *gorádu* lands which are from time to time cropped with sugarcane and the best descriptions of garden and orchard produce, and in rice lands of the lighter kind of soil which get a sufficient water-supply from tanks to ensure, with the aid of manuring, an abundant crop of the better sorts of rice (*kamod* and *sutársál*). The black clayey dry-crop lands are manured only in rare cases. Of the various crops enumerated by Captain Cruickshank of the revenue survey in his report on the Dholka Táluka of the date of 1824-25, there are none which have altogether or nearly ceased to be cultivated at the present date. On the other hand, there is a product which is not mentioned in Captain Cruickshank's minutely detailed list of descriptions of produce and which (it may be inferred) was not cultivated in his time, namely guavas, which is now grown in the lands of the *kasbo* and of a few neighbouring villages and is exported to some extent with considerable profit to the cultivators.

The revision survey operations have ascertained that 2,783 acres of Government dry-crop land have been converted into rice land during the survey lease. The comparative smallness of this area is probably due chiefly to the fact that the profitable raising of a rice crop in many of the villages depends much on the existence of a source of water-supply additional to the ordinary rainfall, and that, failing such aid, cultivators seldom venture to expend labour on levelling available spaces in their dry-crop fields or throwing up embankments to impound the rainfall. The enterprise of the average *khátedár* of Dholka Táluka is not over-conspicuous, and it seems to be exceptional to find him utilising a surplus supply of water in a tank for the purpose of starting the growth of a rabi crop (be it wheat or gram or wál) in his rice field immediately after reaping his kharif crop. This absence of enterprise is doubtless partly due to the fact that the existing assessment of rice lands absorbs so moderate a proportion of the value of the gross yield that an average season's kharif crop amply repays the cultivator and tends to render him careless about seeking to increase his returns at the cost of the slight additional labour that would be involved.

✓ 23. The increased demand for Indian wheat for export to European markets maintained the extension of its cultivation in the táluka which the high prices of 1875 to 1879 had originated and encouraged, but the effect of the fall in price during the last few years has somewhat checked it and the area under wheat (both *chássia* and irrigated) in 1885-86, appears to be somewhat less than the average area of the 5 years, 1878-79 to 1882-83. The total area of Government and alienated land under wheat in 1885-86, as ascertained from the táluka

figures, is about 58,000 acres, which is nearly 34 per cent. of the total cultivated area. The total area under cotton in the same year is as nearly as possible equal to that which the *táluka* returns show to have been the average for the period from 1864 to 1866 when the price of cotton had risen so greatly. In the case of other more ordinary products, such as *jowár* and *bájri* (both grown combined with a variety of pulses), *tuvar*, *kodra*, *tal*, &c., the average area under each has remained about stationary. The total area of occupied Government land in 1885-86, taken at 89,159 acres, shows an increase of nearly 50 per cent. on the corresponding area recorded in 1856-57, the first year of the existing settlement.

24. Improvements in communications have been made to some extent during the survey lease. The most important, as a whole, is the construction of a road between Ahmedabad and Dhandhuka, a portion of which traverses the western part of the Dholka *Táluka*. Of this only the section extending from 1 mile on the Dhandhuka side of Baola as far as Ahmedabad is kept in repair, the other section being practically unused. The former section, however, considerably aids the traffic between the villages of the north-western and western quarters and Ahmedabad. This road is connected with Dholka town by a feeder road which is kept in fair repair and to some extent benefits the villages adjacent. A cleared road from Ahmedabad to Dholka traverses the northern part of the *táluka*, but its superiority over the ordinary cart-tracks is not sufficient to warrant its being claimed to materially benefit the villages along its course, all of which take their produce for sale direct to Ahmedabad. Similarly, the few miles of cleared road from Dholka town to the right bank of the *Sábarmati* at Sahej which join on (across the river) to the lines of made-road leading thence by *Mátar* to *Nadiád* and by *Kaira* to *Mehmadabad*, cannot be considered to appreciably benefit Dholka *Táluka*, since the vast bulk, if not the whole, of the exported produce is taken direct to Ahmedabad. At the same time this road is taken advantage of to some extent by people of the *Kaira* Collectorate who come by it occasionally to import *bájri* and *jowár kadab* and *bával* wood for sale into the villages in the south-western quarter of the *táluka*. It is not easy to determine how much the construction of the B. B. & C. I. Railway has benefited the Dholka *Táluka* as a whole. The importance of Ahmedabad market has been increased by it, no doubt, and in this view the railway has been of advantage both to those villages whose cultivators at the time of the survey settlement were accustomed to cart their produce to Ahmedabad for sale, and to those who, being at a long distance on the further side of Dholka town, were content to dispose of their produce in the Dholka market or to dealers from Dholka who visited their villages, but are now attracted to Ahmedabad itself by the better prices and more certain sale to be got there. The existence of the railway, by diverting from Dholera so much of its former trade with Bombay and thus reducing its importance, has indirectly reacted on the trade of Dholka probably more injuriously in one direction than it has directly stimulated and created business in others. But the decline of Dholera Bandar cannot be considered to have touched the cultivating interests of Dholka *Táluka* either way. Dholera was too difficult of access from Dholka even at the time of the original settlement, owing to the absence of a bridge over the *Bhogává* and of roads better than the ordinary country tracks, to be considered of sufficient account to affect the proposals then submitted for the revised assessment of the *táluka*.

25. There is no market in the *táluka* in the sense of a special place and period for traffic in its general agricultural products on a large scale. Cultivators resident in the *kasbo* and a few from some of the neighbouring villages assemble daily to sell vegetables, fruits, spices, &c. The main trade of the town is represented by dealings in cloths and grain as specified below:—

European piece-goods, imported from Bombay and Ahmedabad, are traded in to an average annual value of Rs. 1,00,000.

Cotton cloths, locally made, consisting of coarse *khádi* and *sádis*, traded in to the average annual value of Rs. 10,000 and Rs. 35,000 respectively.

Grain of local produce, retailed by resident Banyas, Golas, and Musalmáns, to the average annual value of Rs. 1,00,000. ✓

✓ The number of dealers in cloth is 160, who are nearly all Baniyas. The manufacture of *khádi* employs about 2,000 families of the *Dhed* caste. The *sádis* are woven by 50 families of the *khatri* caste, and 200 families of *Momna*

(converted) Musalmáns, 150 families of Tai Musalmáns, and 100 of Rádhanpur Musalmáns, all of which are nearly identical with Bohrás. The *sádis* are exported for sale to Bombay, Ahmedabad, Surat, Baroda, Káthiáwár, and Deesa.

26. Among other local industries is the making of sweet oil from tal (sesamum), of castor oil, and of oil from the seed of the kasumbi plant flower. About 100 oil-presses work in Dholka town, and produce annually about 10,000 maunds (Gujarati, each of 40 sers) of oil to the estimated value of about Rs. 41,500. The preparation of a dye from the powdered flowers of the *kasumbi* plant is also carried on by 5 families. Two cotton ginning factories have been established, one at Bavla about 6 years ago, and the other at Dholka about 2 years ago. They are estimated to have ginned each year an average of 850 bales of locally grown cotton.

27. The most important fair is one which is held annually at Wautha, a village to the south-east of Dholka town on the right bank of the Sábarmati river. The occasion of its being held is the full moon on Kártak Sud 15, and the locality is a space in the sandy bed of the river some half mile in length close to where the river Watrak flows into the Sábarmati. It is frequented by people from every village of the táluka, from Dhandhuka, Viramgám, the Kaira Collectorate, and other parts of the province, and also Káthiáwár, to the estimated average number of 100,000 persons. The amount of barter and trade of all kinds, principally in *goor*, spices, fruits, and cloths, is reckoned at Rs. 30,000. The other fairs held in the táluka are of no importance even locally.

28. Of the staple grains produced only rice and wheat are exported to any noticeable extent. Rice is sent to Ahmedabad, Jhálávád, and Káthiáwár to the estimated average annual value of Rs. 2,20,000. Wheat (which is almost entirely of the reddish hard kind called *káthki*) is exported to Ahmedabad and the Kaira District to the average annual value of about Rs. 3,50,000. Among the orchard and garden products guavas are exported to Ahmedabad, Kaira, Viramgám and Káthiáwár to the average value annually of Rs. 4,000. The average produce of the last 5 years has increased about 25 per cent. on that of former years. Plantains are exported to Ahmedabad, to the average annual value of Rs. 5,000. The kind grown in the táluka is, however, of inferior flavour and quality to that (known as *suneri*=golden) produced in the southern districts of the province from Sachin to Daman. Ginger, yams, garlic, chillies, &c., are grown to but a moderate extent and are for the most part consumed locally, the surplus stock being sent for sale to Ahmedabad and Kaira. *Kasumbi* (safflower) is grown in a few villages, the area so cropped varying according to the nature of the season's rainfall. Its produce, in the shape of the flowers, either green or dried, is sold to professional dyers in Dholka. Tobacco of good quality is grown in Bavla and its cultivation is extending of late, but the present area under this crop is insignificant.

29. In the subjoined table the statistics given for the 76 villages in the year of the original settlement are taken from the returns of that date prepared by the Revenue Survey, and those for 1885-86 are furnished by the Revenue Department as the result of the census which was taken in July last:—

	Year of Original Settlement.	1885-86.	Increase.	Decrease.	Percentage.
Population	68,446	74,698	6,252	...	+ 9
Houses	23,699	31,806	8,107	...	+ 34
{ Tiled	2,163	2,092	...	71	- 3
{ Thatched	14,151	18,676	4,525	...	+ 32
Agricultural cattle	34,839	21,132	...	13,707	- 39
Cows, buffaloes and their young.	5,208	6,857	1,649	...	+ 31
Sheep and goats	541	573	32	...	+ 6
Horses and ponies	1,888	2,591	703	...	+ 37
Carts	5,659	7,025	1,366	...	+ 24
Ploughs	2,223	2,360	137	...	+ 6
Wells					

It will be seen that in the 76 villages the population has increased by 9 per cent. during the survey lease. This rate has not altogether kept pace with the extension of the area in occupancy, but it is found that there are at present 24 acres of

occupied land per head of population as compared with 2 acres which was the average in 1856-57.

30. Houses in the aggregate are more numerous by 31 per cent., the better sort having increased by 34 and the poorer decreased by 3 per cent.

31. Agricultural cattle show an increase of 32 per cent. The result of a comparison of the figures of area in occupancy and of agricultural cattle in the years 1856-57 and 1885-86 respectively shows that the proportion in the two years is nearly identical. According to the figures* of the present time it is

	Acres.	
* Occupied Government and alienated ...	166,418	found that one pair of plough-
Deduct fallow (about 12 per cent.) ...	20,141	oxen is available for every
	146,277	15½ acres of cultivated land,
Divide by 9,338 pairs of oxen ($\frac{18,676}{2}$) = 15½ acres per pair.		taking the mean of black soil
		and <i>gorádu</i> lands—a result
		which may be considered to
		indicate a supply quite sufficient for the requirements of a district in which the
		average irrigated area is not large.

32. Milch kine of all kinds and their young ones show a decrease of 39 per cent. This result is doubtless due to the diminished area of unoccupied land available for grazing having necessitated the professional herdsmen to reduce their stock considerably.

33. Sheep and goats are shown to have increased by 31 per cent.

34. Horses and ponies have increased by 6 per cent.

35. Carts show an increase of 37 per cent.

36. Ploughs have increased by 24 per cent.

37. In the subjoined tables the statistics which have been given in the table under paragraph 29 and have been commented upon as a whole are given, divided under heads of the revised groupings of villages to which it is proposed to apply the revised rates of assessment which will be specified later on.

FIRST GROUP.—25 VILLAGES.

(Coloured pink on the Map.)

		In year of Settlement.	In 1885-86.	Increase.	Decrease.	Percentage.
Population ...	...	45,000	46,196	1,196	...	+ 2½
Houses ...	<div style="display: flex; align-items: center;"> <div style="font-size: 2em; margin-right: 5px;">{</div> <div style="margin-right: 5px;">Tiled ...</div> <div style="margin-right: 5px;">...</div> </div>	14,766	19,049	4,283	...	+ 29
		812	1,039	227	...	+ 27
Agricultural cattle ...	...	6,867	8,678	1,811	...	+ 26
Cows, buffaloes and their young.	...	16,900	9,577	...	7,323	- 43
Sheep and goats ...	...	2,230	2,726	496	...	+ 22
Horses and ponies ...	...	814	272	...	42	- 13
Carts ...	...	1,021	1,392	373	...	+ 37
Ploughs ...	...	2,747	3,121	374	...	+ 13½
Wells ...	...	1,564	1,692	128	...	+ 8

SECOND GROUP.—28 VILLAGES.

(Coloured blue on the map.)

		In year of Settlement.	In 1885-86.	Increase.	Decrease.	Percentage.
Population ...	...	14,614	17,045	2,431	...	+ 16½
Houses ...	<div style="display: flex; align-items: center;"> <div style="font-size: 2em; margin-right: 5px;">{</div> <div style="margin-right: 5px;">Tiled ...</div> <div style="margin-right: 5px;">...</div> </div>	5,797	7,813	2,016	...	+ 35
		611	382	...	229	- 37
Agricultural cattle ...	...	4,431	5,708	1,277	...	+ 29
Cows, buffaloes and their young.	...	10,405	6,960	...	3,445	- 21
Sheep and goats ...	...	1,526	2,179	653	...	+ 43
Horses and ponies ...	...	136	149	13	...	+ 10
Carts ...	...	561	745	184	...	+ 33
Ploughs ...	...	1,772	2,167	395	...	+ 22
Wells ...	...	490	497	7	...	+ 1½

THIRD GROUP.—9 VILLAGES.

(Coloured red on the map.)

	In year of Settlement.	In 1885-86.	Increase.	Decrease.	Percentage.
Population	2,864	3,905	1,041	...	+ 36
Houses	1,087	1,631	544	...	+ 50
{ Tiled	174	250	76	...	+ 44
{ Thatched	1,021	1,537	516	...	+ 50
Agricultural cattle	2,789	1,257	...	1,532	- 55
Cows, buffaloes, and their young.	236	246	10	...	+ 4
Sheep and goats	35	46	11	...	+ 31
Horses and ponies	122	152	30	...	+ 24
Carts	408	584	176	...	+ 43
Ploughs... ..	56	56	...	...	...
Wells					

FOURTH GROUP.—10 VILLAGES.

(Coloured yellow on the map.)

	In year of Settlement.	In 1885-86.	Increase.	Decrease.	Percentage.
Population	5,040	6,044	1,004	...	+ 20
Houses	2,907	2,720	...	187	- 6
{ Tiled	352	342	...	10	- 3
{ Thatched	1,573	2,297	724	...	+ 46
Agricultural cattle	3,778	2,384	...	1,394	- 37
Cows, buffaloes and their young.	592	566	...	26	- 4
Sheep and goats	55	73	18	...	+ 33
Horses and ponies	168	262	94	...	+ 56
Carts	629	964	335	...	+ 53
Ploughs... ..	113	115	2	...	+ 2
Wells					

FIFTH GROUP.—4 VILLAGES.

(Coloured green on the map.)

	In year of Settlement.	In 1885-86.	Increase.	Decrease.	Percentage.
Population	928	1,508	580	...	+ 62½
Houses	142	593	451	...	+ 317
{ Tiled	214	79	...	135	- 63
{ Thatched	259	456	197	...	+ 76
Agricultural cattle	967	954	...	13	- 1
Cows, buffaloes and their young.	624	1,140	516	...	+ 83
Sheep and goats	1	33	32	...	+ 3,200
Horses and ponies	16	38	22	...	+ 137
Carts	103	189	86	...	+ 83
Ploughs... ..	...	...	...	...	...
Wells					

It will be observed that under almost every head an increase has resulted in each part of the total area covered by the several revised groups. The progress made appears at first sight to be greatest in the case of the 4 villages in group V, judging by the percentage increases shown in the items of population, tiled

houses, agricultural cattle and ploughs, but further consideration of their circumstances shows that the advance in prosperity is less actual than apparent. Kolis, who form the entire cultivating class of these villages, multiply more than the higher castes of cultivators do, and large increases in population are in ordinary circumstances commonly observed in their case. The houses which are recorded as "tiled" are practically huts of a very indifferent sort. Agricultural cattle, though greatly more numerous, are relatively to occupied area twice as few as the corresponding average number in the villages of the other groups, while the proportion of acres to a plough is 31. In such cases the husbandry must be (and is) of a scamped and inferior description, and owing to this and the poorness of much of the land and the deficient skill of the cultivators, it is often not remunerative. Moreover, the incidence of population per acre of cultivation is double that of the average of the taluka. But, with all this, it is not denied that these villages have progressed somewhat, only there is little doubt that their prosperity is less substantial and likely to increase than that of the other villages. Reviewing the statistics which relate to the other groups there is good reason to conclude that they have prospered steadily and to a considerable degree during the existing settlement.

38. From information supplied by the Educational Department and tabulated in Appendix E it is seen that there are 28 Government schools for boys, which are attended by 1,064 scholars on the average, and that in the 3 Government schools for girls an average number of 121 attends. There are also 9 private schools with an average attendance of 230 children. At the original survey settlement the percentage of males able to read is stated to be $8\frac{1}{4}$, and in 1885-86* it is reported to be $12\frac{1}{4}$, or one-half larger.

* Cols. 5, 10, and 11 of Appendix B.

39. Appendix F contains the figures relating to sub-tenures, which show that $73\frac{1}{2}$ per cent. of the total number of holdings are cultivated by the Khatedárs alone or in partnership with other persons. Of the remainder $20\frac{3}{4}$ per cent. are sublet for a cash rent, and $5\frac{3}{4}$ per cent. for payment by a share of the produce.

40. In Appendices G, H, and I will be found statistics obtained from the records of the Sub-Registrar's office of the years 1882-83 to 1884-85 relating to transactions dealing with land.

41. The number of sales of land is 601, and the prices realised for Government land give an average of Rs. 30 per acre or about 10 times its yearly assessment. This does not in itself indicate a high value, but it is likely enough that the figures given do not always represent the entire conditions of the dealings.

42. The number of leases recorded is 672, and these relate to both Government and alienated land. The average profit to a lessor, if calculated on the figures of all these transactions, would seem to be about 11 per cent.

43. Upwards of 2,100 mortgage transactions are recorded during the 3 years. The average area of land concerned is $5\frac{1}{2}$ acres and the average sum involved is Rs. 195. The average multiple of the yearly survey assessment which the total amount advanced represents is about 20. It is doubtful if a true estimate of the value of the land can be gained from the mere figures, in the absence of some knowledge of all the surroundings. Reviewing all the above facts relating to land as a negotiable security and looking at the low average assessment per acre under the existing settlement, the average value of land in the taluka may be reckoned as moderately high. Some of the figures go to show that, in villages with the better soils and of the more prosperous condition, Government land fetches very good prices.

44. Money wages paid to field labourers have risen about 60 per cent. during the term of the existing settlement. The average daily rate paid in the first year of the lease appears to have been $2\frac{1}{4}$ annas for a male, and the present average rate is from $3\frac{1}{2}$ to $3\frac{3}{4}$ annas. The rate paid in 1862-63 and for a few years after was a trifle higher than the present. At the same time the prices of ordinary food-grains were more than proportionately higher. Hiring labour by the day is much more common than payment for price-work. Captain Cruikshank, of the Revenue Survey of 1824-25, writing of the then Dholka

táluka mentions that some large land-holders permanently engaged servants (called by him "Slaves") to perform house duties coupled with agricultural work. This custom has quite died out at the present date. ✓

45. It is difficult to estimate accurately how much the general condition of the people has improved during the 30 years of the expiring lease. It will be seen from paragraph 25 of Mr. Rogers' letter No. 137, dated 14th December 1854, that the cultivating class was believed to be deeply in debt to money-lenders at the time preceding the first year of the survey settlement, and it cannot be questioned that it is still involved, but as far as can be ascertained by enquiry of local experts there is reason to conclude that the range of indebtedness has somewhat narrowed and that the existing average degree of insolvency is less than it then was. The number of capitalists in the cultivating class, though small, is stated to be gradually increasing. Of these one-half (about 50) advance money on loan to the poorer cultivators, their terms being much the same as those of regular money-lenders. That there has been and is a rise in the standard of comfort in the large majority of the villages as indicated by the increase in the better kind of dwellings and in the number of all farm cattle but milch kine cannot be questioned. ✓

46. The figures in Appendix J. relate to the prices of produce during a period of five years (1850-51 to 1854-55) before the survey settlement, and the thirty years of the survey lease. The data for the years 1855-56 to 1875-76 were not obtainable from the records of the Mámlatdár's office and have therefore been collected from some of the most respectable and considerable dealers in Dholka town with as much accuracy as was practicable, and may be accepted as fairly correct. The prices in the Ahmedabad market for the years 1856-57 to 1885-86 have been endeavoured to be ascertained from the kacheri papers of the Daskroi Mámlatdár, but without success, and as the alternative of getting this information by enquiry of private dealers in the city has up to now led to much delay with no satisfactory result, and would in the end yield no more reliable information than that already obtained relating to the prices in Dholka, the prices in the Ahmedabad market have not been entered in Appendix J. The subjoined table gives the average price per maund of 40 sers of wheat and rice (*sutársál*) which are the chief food-grains exported, and of jowár (the staple grain locally consumed), during the three decades of the survey lease. (The local ser is for all general purposes equal to 1 lb., English, having been found by Captain Cruikshank, after careful comparison with the Ahmedabad ser, to be only 2½ per cent. heavier than the pound).

Period.	Wheat.	Rice (<i>Sutársál</i>)	Jowár.
	Pounds per Rupee.	Pounds per Rupee.	Pounds per Rupee.
First 10 years (1856-57 to 1865-66) ..	22	32	27
Second „ (1866-67 to 1875-76) ...	31	32	38
Third „ (1876-77 to 1885-86) ...	32	38	38

The average price of each of these grains in the 5 years, 1850—1854, preceding the survey settlement, as given in paragraph 17 of Mr. Rogers' letter No. 137, dated 14th December 1854, is as follows:—

Wheat (<i>chássiá</i>)	58 lbs. per rupee.
Rice (<i>sutársál</i>)	68 „ „
Jowár	85 „ „

The prices of cotton (uncleaned) are given below:—

Period.	Cotton.
	Pound per Rupee.
First 10 years (1856-57 to 1865-66)...	24
Second „ (1866-67 to 1875-76)...	16
Third „ (1876-77 to 1885-86)...	16

The average prices of cotton in the 5 years, 1850—1854, is not given by Mr. Rogers in his letter abovementioned.

47. How far the rise shown in these figures is due to the existence and working of the B. B. & C. I. Railway within a moderate distance and of easy access from the northern and eastern villages of the taluka is a matter which can be only approximately estimated. It cannot be doubted that the creation of the railway has much increased the scope and value of Ahmedabad city as the chief market resorted to by the cultivators of the Dholka Taluka, and has thereby tended to keep up a high scale of prices for their export staple products.

48. The figures relating to the revenue history of the 76 villages under report are embodied in the Appendix, Statement K. The immediate effect of the survey settlement in 74 of these villages, (that is, excluding the 2 which were not brought under the survey system in 1856-57) was a reduction of Rs. 54,796 (Rs. 1,12,116 as against Rs. 1,66,912) or 32 $\frac{3}{4}$ per cent. on the revenue for collection in 1851-52. (It is necessary to contrast the survey settlement figure with that of the former system in 1851-52, because, of the villages, 7 had been assessed by the survey from 1852-53 onwards, 37 from 1854-55, and the remainder in 1856-57.) The figures in Statement K. show that by the year 1865-66, that is, in the first decade of the survey lease, the full survey assessment had averaged Rs. 1,40,815 yearly, and in that year reached to Rs. 1,56,577, being a percentage increase of 40 on the corresponding figure for the first year. Since then and in the period up to 1885-86 the development of cultivation coupled with an increase in revenue in all the 76 villages has been more gradual, and, after occasional fluctuations, the figure of assessment in 1885-86 stands at Rs. 1,52,833, showing a slight decrease per cent. on that of 1865-66. The subjoined figures show in summary the change which has resulted in the heads of assessment of occupied and unoccupied Government land respectively in the first and last year of the survey lease in 74 of the 76 villages :—

	Assessment of occupied Govern-ment Land.	Assessment of unoccupied Govern-ment Land.
	Rs.	Rs.
First year (1856-57)	1,12,116	58,269
Last year (1885-86)	1,51,143	27,710

In the case of the 2 villages which were not brought under the survey settlement until 1866-67 the figures are as below :—

	Rs.	Rs.
1866-67	1,553	2,994
1885-86	1,690	2,970

It may be said of all the villages now for revision settlement that outstandings of land revenue have been of trifling amount during the last 20 years of the survey lease, and that the remissions granted have been almost nominal during the whole term except in the years 1858-59 and 1868-69. The remissions entered at Rs. 8,942 in 1858-59 were owing to a large proportion of the rice land area having been left waste or cultivated with only dry-crops because of the deficient or unseasonable rainfall. This arrangement is in accordance with the provisions of the rules (*tharāvband*) framed by Mr. Rogers as Settlement Officer and the principle of which is mentioned by him in paragraph 8 of his letter No. 82, dated 20th March 1853, to Captain Wingate, Revenue Survey Commissioner. The remissions (Rs. 710) granted in 1868-69 were on account of serious damage to occupied lands in some villages along the Sábarmati river caused by an unusually heavy flood.

49. The subjoined table shows that the revenue has been collected with regularity and but little pressure during the last 3 years of the survey lease :—

Year.	Number of Villages.	Number of Notices.	Number of Distrain Cases.
1882-83 ...	29	171	.....
1883-84 ...	25	130	1
1884-85 ...	33	209	.....
	87	510	1

50. If all the preceding information relating to the past and present condition of the 76 villages be summarised and contrasted, the main features come out as follows :—

- (a). The state of communications with the main market resorted to has generally, and in the case of one portion of the taluka particularly, somewhat improved.
- (b). A line of railway has been constructed connecting that market with Bombay and having three of the most important provincial markets in North Gujarát as stations on it, all of which are easy of access by feeder roads more or less substantially made and kept in repair.
- (c). The prices of local staple agricultural products have increased much during the existing settlement compared with those for the 5 years preceding its introduction.
- (d). The area in occupation has increased by 48 per cent.
- (e). The revenue demand has increased by 34 per cent., and has been collected with regularity and scarcely any appreciable difficulty.
- (f). The average value of land is moderately high.
- (g). Population has increased in fair proportion to the increase in the occupied area. The increase in the number of the better kind of dwellings, in that of live stock generally, and in the value of all agricultural produce, shows that the cultivating class must have benefited much. The class which earns its living by bodily labour for money wage receives a rate of payment much higher than it did and more than enough to counterbalance the average higher price which it pays for its ordinary food.

If all these matters be duly considered it must be admitted that a moderate enhancement of the existing low rates of assessment may be imposed by Government with perfect equity. It is in this view that the proposals which follow for a revision of those rates have been framed.

51. Of the 76 villages of which the revised settlement is now proposed 74

Class.	Number of Villages.	Old Maximum Dry-crop Rate.		
		Rs.	a.	p.
I. ...	14	2	4	0
II. ...	37	2	0	0
III. ...	8	1	12	0
IV. ...	12	1	8	0
V. ...	3	1	0	0
Total ...	74			

were settled under the original scheme at maximum dry-crop rates ranging from Rs. 2½ to Re. 1 per acre. The number of villages in each original class with the maximum dry-crop rate of each class is shown in the margin.

The climatic conditions being considered equally favourable throughout the area in which these villages are situated, the maximum rates adopted varied

according to the nearness or accessibility of the several villages to Dholka as being the sole market of importance.

52. In now proposing for adoption a revised grouping of these 74 villages and also a first grouping of the two villages (Khátripur and Bhetáwáda) which were subsequently brought under the survey system, as mentioned in paragraph 2, the main point to be considered is the accessibility of each village to Ahmedabad as being the chief and practically almost the sole market, and, in addition to that, the terminus of the main section of a very important line of railway communicating direct with Bombay and with considerable centres of trade in the districts to the north of Gujarát, although not actually traversing the táluka. Of the villages in the original second group, 13 which form a tract extending to the north and north-west of 8 villages of the original first group (including Dholka Town) and in the direction of Ahmedabad are now placed in the revised first class. On the other hand, the 4 villages noted in the margin which were in the

1. Khánknr.
2. Mujpur
3. Dadnsar.
4. Adásar.

original first group have been placed in the revised second class, being of some inferiority in general circumstances and (three of them at least) somewhat more distant than others, lying as they do to the south side of Dholka. As regards Adásar it should be explained that although it is placed in Mr. Rogers' second class, as shown by the list given in paragraph 26 of his letter No. 137, dated 14th December 1854, it is in fact a village of the first class and is assessed at the maximum dry-crop rate

1. Khareti.
2. Kariáná.
3. Káláhpur.

of that class, namely Rs. 2-4-0. The three villages of the original second class noted in the margin being of generally inferior character are now included in the revised third class. One village of the original third class (Rajodá), which seems to have been excluded from the original second class without sufficient reason, is now included in the revised second class. In fact, but for the reason that to place it in the revised class I. (with a proposed maximum dry-crop rate of Rs. 2-8-0) would have caused an immediate enhancement of 42·8 per cent. (independent of probable additional enhancements on account of subsoil water advantage, &c.,) which would have pressed exceptionally heavily on cultivators of the type of the majority of its population, the village would naturally be included in that revised group. One village of the original third class (Kocharia) is now placed in the revised second class. There would seem to be no adequate reason for having excluded it from the original second class when Kerála and Bháela on one side and Ganesar on the other side were not excluded. Of the villages in the original fourth class one (Kesrandi) is now placed in the revised third group, and one village (Sarla) is placed in the revised fifth group in consideration of the backward and inferior character and resources of its people, added to an abnormal tendency in a tract of the arable lands to deterioration from development of *Khár* in the soil owing to water-logging. The two villages Khátripur and Khetáwáda are placed in the revised second class. Khátripur has a preponderance of inferior cultivators.

53. In considering what maximum dry-crop rates would be suitable for the villages according to their revised classes, it was found that it would not be practicable to adopt a higher maximum rate than Rs. 2-8-0 for those of the proposed first class without causing an average enhancement of the existing assessment of the group that would exceed the limitation in such cases (33 per cent.) prescribed by Government. But for this restriction a maximum dry-crop rate of Rs. 2 $\frac{3}{4}$ might equitably be proposed for the villages in the first class. The correspondence relating to the original survey settlement shows that the maximum dry-crop rates then proposed were fixed at a specially low figure, and they were, it may fairly be urged, unduly low in the case of the villages comprised in the first and second classes, if due regard be had to their situation and natural resources considered relatively to villages of much the same type in the Mátar Táluka on the opposite side of the Sábarmati River. The sacrifice of revenue immediately resulting from the original settlement was consented to by Government after much hesitation as to its absolute necessity, and although the recovery during the survey lease has been considerable, it will probably not be

complete until near the close of the new lease of 30 years to be granted at the revised rates which are now proposed for adoption.

54. The grouping and the maximum dry-crop rates which are now proposed are as follows:—

Group I—25 villages. Maximum dry-crop rate, Rs. 2-8-0.

These villages form all the portion of the *táluka* lying to the north of Dholka town, and include the town and a few villages adjoining its lands on the south and west side.

Group II—28 villages. Maximum dry-crop rate, Rs. 2-4-0.

Of these villages several lie to the south-east of Dholka town along the *Sábarmati* river, and others range thence inland due south of the town as far west as the boundary of the large *Tálukdári* villages, Koth and *Gángad*, while a few are situated to the west of Dholka and are within easy reach of the metalled road from *Bávlá* to *Ahmedabad*.

Group III—9 villages. Maximum dry-crop rate, Rs. 2. •

Of these villages 5 are situated further from Dholka due south, and the remainder are on its north-west side.

Group IV—10 villages. Maximum dry-crop rate, Rs. 1-12-0.

Some of these villages are the most distant of the *khálsá* villages of the *táluka*, and the others are situated on its south-west and north-west frontier.

Group V—4 villages. Maximum dry-crop rate, Rs. 1-2-0.

These villages, besides being very distant, are very isolated, two being situated on the *Nal*. Their population is exclusively of a backward unimproving type, and of inferior resources and agricultural skill. In the case of one there is more than ordinary tendency to deterioration of soil in consequence of the development of *khár* from water-logging.

55. It is not proposed to alter the maximum water-rates on rice lands which are at present in force in the several villages. Although Mr. Rogers, in paragraph 32 of his letter No. 137, dated 14th December 1854, to the Collector of *Ahmedabad*, writes that he proposed to fix one uniform maximum water-rate of Rs. 6 per acre throughout the district, the rates recorded in the several village *ákár* registers are found to vary, and range from Rs. 6 to Rs. 4, as shown by the following figures:—

In 27 villages the water-rate is Rs. 6			
4	"	"	5½
27	"	"	5
3	"	"	4½
10	"	"	4
—			
71			
—			

In 5 villages there is no water-rate as there is no rice land. According to the grouping proposed for the purpose of the revised settlement the above maximum water-rates will be applied to the several villages according to the detail given in the subjoined table:—

Maximum Water-rate.	Number of Villages.	Revised Groups.
Rs. 6	10	I.
	8	II.
	4	III.
	4	IV.
	1	V.
	—	
	27	

Maximum Water-rate.	Number of Villages.	Revised Groups.
Rs. 5½	2	I. II. III.
	1 1	
	4	
Rs. 5	9	I. II. III. IV.
	13	
	1 4	
	27	
Rs. 4½	1	I. II. V.
	1 1	
	3	
Rs. 4	2	I. II. III. IV. V.
	4	
	2	
	1	
	1	
	10	

56. For *bhátta* lands in permanent occupation it is proposed to adopt permanent maximum rates per acre ranging from Rs. 8 to Rs. 6 (calculated on 16 annas of a classification scale which rises to 28 annas) according to the class and condition of the village. In relation to this subject it has to be explained that such lands were by the original settlement assessed at dry-crop rates with the addition of a water-rate on the bag which was used to irrigate them. A few years subsequently this system of assessing *bhátta* lands (in the *tálukas* of the Ahmedabad Collectorate generally that had been surveyed) was pronounced to be faulty by the then Settlement Officer (Mr. Pedder) in a correspondence which took place between this department and the Revenue Commissioner, N. D., relating to the survey settlement of the Jetalpur *Táluka* originally introduced in 1858-59. It was urged by both the Settlement Officer and the Superintendent of Survey that the correct principle of assessing such lands was that of imposing a permanent *bágdyat* rate on those lands that were permanent (whether permanent wells existed in them or not), and this principle was sanctioned by the Revenue Commissioner, N. D., for adoption in future assessments. It was accordingly decided that this principle should be applied to the *bhátta* lands of the Jetalpur and Daskroi villages, the settlement of which had not been confirmed, and in order to effect the necessary revision of their original assessment the Survey Department was directed to make a re-examination of all lands on the banks of rivers with a view to ascertain which lands were *bhátta* and which were simple *jirdit*. The opportunity was taken of directing that these revision operations should be extended to *bhátta* lands in villages of the Dholka *Táluka* which had been left undefined and unassessed by the original settlement, and accordingly all such lands which were entered in the village registers as either *khardbo* or *bin-ákári* were inspected and divided into three classes:—

(I).—Permanent; and as such to be classified and assessed at a permanent maximum rate.

(II).—Not permanent as regards area, but generally permanent as to quality of soil; as such to be classified, and the classification annas to be entered in the village register, as also the maximum rate; but the land to be recorded as “non-permanent assessed,” since the assessment would be determined yearly according to the area found on measurement to be under cultivation.

(III).—Non-permanent in all respects; to be recorded as *bin-akári* and to be sold annually by auction.

Special rules were framed for conducting this examination and effecting the classification, and the work was carried out in the field season of 1863-64 in the villages of Dholka Táluka noted in the margin, and resulted in certain areas of unoccupied land being recorded as existing in all of them except Badarkha and Adásar and being classified as of class (I) or (II). In due course a permanent maximum rate per acre was proposed for adoption and was recorded in the *akár* register as shown below:—

1. Badarkha.
2. Sároda.
3. Chandisar.
4. Adásar.
5. Ambliála.

6. Sánthal.
7. Sahej.
8. Wantha.
9. Ingoli.
10. Girand.

classification, and the work was carried out in the field season of 1863-64 in the villages of Dholka Táluka noted in the margin, and resulted in certain areas of unoccupied land being recorded as existing in all of them

except Badarkha and Adásar and being classified as of class (I) or (II). In due course a permanent maximum rate per acre was proposed for adoption and was recorded in the *akár* register as shown below:—

Village.	Proposed Rate per Acre.
1. Sároda	Rs. 8
2. Chandisar	” 8
3. Ambliála	” 8
4. Sánthal	” 8
5. Wantha	” 6
6. Ingoli	” 6
7. Girand	” 5

In the case of Sahej no permanent maximum rate seems to have been recorded in its *akár* register.

I have the honour to recommend for adoption in the first four villages above stated the same maximum rate as that already recorded in their *akár* registers, namely Rs. 8. For Badarkha (which adjoins Sároda further up the river) I propose the same rate. For the purpose of judging of the suitability of these proposed rates by comparison with the maximum rates which have already with the sanction of Government been applied in neighbouring and similarly circumstanced villages of the (then) Jetalpur Táluka and the Daskroi Táluka the subjoined table is given:—

Táluka.	Village.	Permanent Maximum Rate.	Remarks.
		Rs.	
Jetalpur (now Sánand) ...	Kásandra	8	Is close to Badarkha.
Daskroi	Mahijda	8	Is close to Chandisar.
Dholka	Badarkha	8	Is close to Kásandra.
	Sároda	8	Adjoins Badarkha and Mahijda across the river.
	Chandisar	8	Adjoins Mahijda across the river.

For Ambliála and Sánthal I propose the same rate as that to be adopted for Chandisar, namely Rs. 8, being also that already recorded in the *akár* registers of these villages. For Adásar (whose *bhátta* lands adjoin those of Chandisar) I

propose, nevertheless, a lower maximum rate, namely Rs. 6 per acre, in consideration of the generally inferior condition of the people and the abnormal liability of the lands to be affected by violent floods. In the case of Sahej (for which, as already stated, no maximum rate has been recorded in its *ákar* register) I propose to adopt a permanent maximum rate of Rs. 7 per acre as a mean between the highest rate (Rs. 8) proposed for the 5 flourishing villages higher up the river which are placed in the revised class I., and Rs. 6 which I propose for adoption for the 3 less flourishing and more distant villages—Wautha, Girand, and Ingoli—which are placed in the revised class II. It will be seen that Rs. 6 is the rate already recorded in the *ákar* registers of Wautha and Ingoli. I propose to raise the rate recorded in Girand from Rs. 5 to Rs. 6, as there seems to be no sufficient reason for making any difference between it and Ingoli. The average rates per acre of *bhátta* land will accordingly be as follows:—

			Rs.	a.	p.
In the highest rated villages	...	...	9	12	0
In the medium rated do.	...	...	9	11	2
In the lowest rated do.	...	...	5	12	2

57. The application of so high a permanent maximum rate to lands which have hitherto been assessed at ordinary dry-crop rates with the addition of a water-rate on the bag used to irrigate them will, of course, cause an enhancement of the existing assessment of an individual holding which may be composed entirely or nearly wholly of *bhátta* land much in excess of the limit of increase (100 per cent.) sanctioned by the orders of Government, and such an enhancement might, ordinarily speaking, be pronounced inequitable. But in such a case the usual comparison between an existing and a revised assessment is not fairly applicable. The existing assessment is faulty in principle and result, in rating such land as ordinary dry-crop land and imposing on it an unduly low demand. Had the survey guarantee of the assessment of all *khálsa* lands of Dholka Táluka not been granted before the necessity of dealing with the *bhátta* lands on a truer system of assessment had been recognised (as it was possible to do in the case of the *bhátta* lands of the Jetalpur and Daskroi Tálukas before their original settlement had been confirmed and guaranteed by Government) the *bhátta* lands of Dholka Táluka would have been then assessed at much the same rates as those which it is now proposed to apply to them by the revision settlement. The result of the revision classification of such lands is that a total area of 481 acres of occupied Government *bhátta* land has been recorded, and its assessment at the proposed permanent maximum rates stated above amounts to Rs. 3,998.

58. The revision survey has recorded and classed 519 acres of Government land irrigable by *dhekudi* in the 8 villages noted in the margin. The first 7 villages take their water from the Sábarmati river direct, and Ambáreli works *dhekudis* from a pool of the old Sukhni Nadi supposed to be a tributary at one time of the Sábarmati.

There are also 1,013 acres of similar land in the eight villages noted in the margin watered from the Rodh river and the Nal. The maximum water-rate which I propose for the first batch of villages is Rs. 1½, being the same as that applied in similarly circumstanced villages of the Daskroi Táluka. According to this the average water-rate per acre is Re. 0-10-1. In all the other villages I propose to adopt a maximum water-rate of Re. 1 per acre, and the average rate per acre will be Re. 0-4-11 in the Rodh river villages and Re. 0-3-10 in the villages on the Nal. The water assessment of the total area of Government *dhekudiat* lands is Rs. 618 as compared with Rs. 430, which is the amount of the water-bag rate levied, under the existing system, on the total area of Government land which was irrigated by *dhekudis* in 1885-86.

59. The estimated result of the application of the proposed revised rates of all kinds is shown in the subjoined table which is an abstract of Appendix Statement L:—

Class.	Number of Villages.	Maximum Dry-crop Rate.	BY FORMER SURVEY.				BY REVISION SURVEY.				Percentage Increase.
			Government occupied Land.		Government occupied Land.		Government unoccupied Land.		Total.		
			Area.	Assessment.	Area.	Assessment.	Area.	Assessment.	Area.	Assessment.	
I ..	25	2 8	28,958 2	58,132 0	29,007 19	76,800 12	3,834 23	4,897 0	32,842 12	81,697 12	32
II ..	28	2 4	31,401 22	56,043 4	31,443 5	67,964 3	5,642 10	6,971 0	37,085 15	74,935 3	21½
III ..	9	2 0	10,564 4	15,757 12	10,595 27	19,949 8	2,306 12	2,520 0	12,901 39	22,469 8	20½
IV ..	10	1 12	14,781 14	20,204 0	14,717 27	24,373 10	3,598 1	3,837 0	18,315 28	28,210 10	20½
V ..	4	1 2	3,453 19	2,695 12	3,410 27	3,024 10	1,577 22	1,638 8	4,968 9	4,663 2	12½
Total ..	76	..	89,158 21	1,52,832 12	89,174 25	1,92,112 11	16,958 38	19,803 8	1,06,133 23	2,11,976 3	25½

60. It will be seen that the average increase on the taluka amounts to 25¾ per cent. The increase in the 2 villages noted in the margin exceeds the limit of enhancement prescribed by the orders of Government. The explanation of this result is as follows:—

1. Chandisar. | 2. Adásar.

Village Chandisar, in Class I.

The increase amounts to 92¼ per cent. This is chiefly owing to the assessment of the occupied Government *bhátta* lands which amount to 118 acres and the average assessment per acre of which is Rs. 8-4-2.

Village Adásar, in Class II.

The increase amounts to 228 per cent. The area of occupied Government *bhátta* land found by the revision survey is 126¾ acres, and its average assessment per acre is Rs. 5-3-7. The increase of assessment on the village is Rs. 521-8-0. By the former survey there were 157¾ acres recorded as Government dry-crop land, while by the revision survey there are 29 acres of such land. (Two acres have been absorbed in the *Sábarmati*.) The remarks contained in paragraph 57 on the subject of the excess in the enhancement of the existing assessment of individual holdings of *bhátta* land effected by their proposed revised assessment apply equally to the case of villages which happen to contain a large proportion of such land, and of this condition of things the two villages in question are conspicuous examples.

61. The results of the two surveys are shown side by side under each description of land in the subjoined table:—

Description of Land.	BY FORMER SURVEY.		BY REVISION SURVEY.		Quit-rent.
	Area.	Assessment.	Area.	Assessment.	
	Acres.	Rs.	Acres.	Rs.	
Government occupied ...	89,159	1,52,833	89,175	1,92,113	...
Government unoccupied assessed ...	15,408	28,007	14,904 2,055. (unassessed <i>bhátta</i> .)	19,863	...
Alienated ...	80,590	1,37,368	79,568	1,61,568	41,936
Government unassessed un-arable... ..	28,981	...	28,949	...	...
Total ...	214,138	3,18,203	214,651	3,73,544	41,936

62. The former (present) assessment of Government occupied dry-crop land averaged Rs. 1-6-3 per acre, and, if the revised rates now proposed are sanctioned, the average assessment by the revision settlement will be Rs. 1-11-9 per acre, which is an increase of $24\frac{3}{4}$ per cent.

63. I have the honour to recommend that the proposed rates of assessment, if sanctioned by Government, should be guaranteed for a term of 30 years dating from the year of their actual levy.

64. Among the 76 villages now for revision settlement the 11 noted in the margin are now held in "ijáro" by Kasbati Bápu Miá Ser Miá, a descendant of Malek Miá, who was the tálukdár of them and of 16 other villages of the Dholka Táluka some 25 years prior to the survey settlement. Owing to his heavy money embarrassments and the impossibility of arranging satisfactorily on his behalf with his creditors, all the 27 villages were taken by Government under its direct management in 1829, the tálukdár being granted a personal cash allowance and receiving other grants-in-aid towards expenditure on special occasions. The result of subsequent correspondence to and fro on the subject of his altered condition was that Government in 1863 permitted him to hold the said 11 villages in "ijáro" until the time of the revision settlement of the táluka, and Bápu Miá so holds them at the present date. In the interval, however, from the date of the grant the terms of the "ijáro" have been modified by Government in respect of reducing the amount of the lump sum originally fixed to be paid by the "ijárdár," in consideration of his frequent representations regarding the loss of his title and position as tálukdár and the insufficient profit which he derived from the "ijáro" on its original terms. Other pecuniary benefactions have been conferred on him and the general tendency of all these concessions on the part of Government indicates a desire to compensate him liberally for the loss which he believes he has suffered by the withdrawal of his villages from his personal management. The question of continuing the existing arrangements (modified as the amount of the lump payment would be, by the result of the ensuing revised assessment), or of withdrawing the grant of the "ijáro" for the future and dealing with the 11 villages as altogether *khálsa*, is one which, I presume, Government will be requested to pass its orders upon in due course, now that the term of the *ijáro* is about to expire.

65. There are no teak, blackwood, and sandalwood trees in the villages under report, but the reservation of the rights of Government to such trees under the terms of Section 40 of the Land Revenue Code will be notified to the people at the introduction of the revised settlement in due course. As regards fruit trees (mango, tamarind, raen, &c.) standing in Government lands, occupied and unoccupied, and in alienated lands, it is found that under the existing system the produce of some of them is sold by auction yearly, and the amount thereby realised along with the fixed amount paid to Government on account of other such trees under orders on the subject passed by the Collector of the district and approved by the Revenue Commissioner, N. D., in 1865 and 1866, is credited in one lump sum in the táluka accounts, the items relating to trees in each separate description of land and to each mode of realisation not being recorded separately. The accounts for the 5 years 1881-82 to 1885-86 show that the average yearly receipts are Rs. 2,379. It is for Government to decide whether this mode of dealing with such trees standing in occupied Government survey numbers shall be abandoned under the revised settlement and the rights of Government in them shall be conceded to the occupants for the future, the fact being duly notified to the people at the introduction of the revised rates. I am respectfully of opinion that this should be done, since a similar concession has already been made by Government in the case of all tálukas of the Province settled since the date (1867) of the Borsad Táluka settlement, with the exception of three in the Panch Maháls District for which under special circumstances special orders have been considered necessary. In the case of fruit trees standing in Government unoccupied lands their produce will continue to be sold by auction yearly and the amount realised will be credited to Government; and where the occupancy right in such a survey

number is sold all fruit trees in existence in it should be sold with it. In the case of such trees in alienated lands I respectfully recommend that the revenue derived by Government under the existing system from the yearly auction of the produce of some and from the levy of a fixed sum on others should also be foregone for the future. It seems doubtful if any *bond fide* Government trees do exist in such lands, and it is also a question whether the levy by Government of such revenue from alienated land, held under Summary Settlement Sanads as something beyond the amount of the assessment recorded in the Sanads, does not contravene the provisions of the Act.

I have the honour to be,

Sir,

Your most obedient Servant,

A. S. BULKLEY,

Deputy Superintendent, Gujarát Revenue Survey.

APPENDIX A.

STATISTICAL TABLE NO. III.

Details of Cultivation—Average of four years from A. D. 1882-83 to 1885-86.

District.	Surveyed Villages.	Crops.	PERCENTAGE OF TOTAL CULTIVATION OF GOVERNMENT AND INAM LANDS.		
			Total.	Kharif.	Rabi.
1	2	3	4	5	6
Dholka Táluka of the Ahmedabad Collectorate.	76 Govern- ment Vil- lages.	Rice	7-62	7-62	.....
		Vari	0-22	0-22	.....
		Mag	0-61	0-61	.....
		Math	1-31	1-31	.....
		Tur	0-43	0-43	.....
		Bájri	3-53	3-53	.....
		Gavár	0-42	0-42	.....
		Kodra	0-72	0-72	.....
		Banti... ..	0-42	0-42	.....
		Javári	19-13	19-13	.....
		Tal (Sesamum)	0-93	0-93	.....
		Barley	1-93	.....	1-93
		Wheat	33-90	.....	33-90
		Cotton	11-98	11-98	.....
		Castor-oil seeds	0-59	.....	0-59
		Kasumbi (Safflower)	0-42	.....	0-42
		Gram	1-25	.....	1-25
		Sarsáv	0-26	.....	0-26
		Ginger	0-19	.....	0-19
		Tobacco	0-12	.....	0-12
		Gnavas	0-36	.....	0-36
		Chillies	0-65	.....	0-65
		Sugarcane	0-46	.....	0-46
Plantains	0-18	.....	0-18		
Linseed	0-11	.....	0-11		
Arad, Bavto, Vegetables, Kalthi, Flax, Maize, Val, Chola and Bhendi	0-24	0-24	.....	
Miscellaneous	0-29	.....	0-29		
Grass or Fallow	11-73	11-73	.....	
		Total ...	100	59-29	40-71

Camp Aslali, Daskroi Táluka,
1st March 1887.

1470-7

A. S. BULKLEY,
Deputy Superintendent, Revenue Survey, Gujarát.

APPENDIX B.

STATISTICAL TABLE No. IV.

Details of Population taken from the Census Returns of 1881-82.

Táluka.	Caste.	MALES.			FEMALES.			Total of Columns 5 and 8.	CAN READ.			
		Under 15 years of Age.	Above 15 years of Age.	Total Males.	Under 15 years of Age.	Above 15 years of Age.	Total Females.		Males.		Females.	
									Number.	Per cent.	Number.	Per cent.
1	2	3	4	5	6	7	8	9	10	11	12	13
Dholka Táluka of the Ahmedabad Collectorate.	Hindus... ..	13,034	20,973	34,007	11,760	21,549	33,309	67,316	3,989	11½	73	½
	Musalmán... ..	1,751	3,022	4,773	1,654	3,209	4,863	9,636	568	12	10	½
	Jains... ..	137	282	419	120	334	454	873	172	41	—	—
	Pársis... ..	2	4	6	—	3	3	9	2	33½	2	66½
	Others... ..	7	11	18	8	12	20	38	2	11	—	—
	Total... ..	14,931	24,292	39,223	13,542	25,107	38,649	*77,872	4,733	12½	85	½

* Note.—The total of Column 9 differs from the figure in the third Column of the table in para. 29 of the report, because the details of each caste were not ascertained by the Revenue Department Officials in the year 1885-86.

Camp Asláli,
1st March 1887. }

A. S. BULKLEY,
Deputy Superintendent, Revenue Survey, Gujarát.

APPENDIX C.

STATISTICAL TABLE No. V.

Occupations of the People taken from the Census Returns of 1881-82.

District.	Surveyed Villages.	Occupations.	Number.
1	2	3	4
Dholka Táluka of the Ahmedabad Collectorate.	76 Government Villages.	Agricultural... ..	27,441
		Partly agricultural... ..	743
		Non-agricultural... ..	49,688
		Total... ..	*77,872

* Note.—The total of Column 4 differs from the figure in the third column of the table in paragraph 29 of the report, because the details of each caste were not ascertained by the Revenue Department Officials in the year 1885-86.

Camp Asláli,
1st March 1887. }

A. S. BULKLEY,
Deputy Superintendent, Revenue Survey, Gujarát.

APPENDIX D.

STATISTICAL TABLE NO. VI.

Return of Houses, Chávdís, Wells, &c., and of Live and Dead Stock.

District.	Surveyed Villages.	HOUSES.					WELLS.				CARTS AND PLOUGHS.		LIVE STOCK.														
		Chávdís.	Tiled.	Flat-roofed.	Thatched.	Total.	For Irrigation.	Drinking.	Out of repair.	Total.	Carts.	Ploughs.	Horses and Ponies.			Female Buffaloes.			Cows.			Oxen Cart and Plough and Buffaloes.	Sheep, old and young.	Goats, old and young.	Donkeys, old and young.	Mules.	Camels.
													Old.	Young.	Total.	Old.	Young.	Total.	Old.	Young.	Total.						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Dhúka Táluka of the Ahmed- abadí Collectorate	70 ..	61	23,007	32	2,168	25,023	1,937	68	218	2,223	1,888	5,650	270	271	541	11,342	7,000	18,482	8,481	7,026	16,407	14,151	5,208		1,118	..	04
		74	81,806		2,002	83,972	2,300		2,601	7,025	274	200	578	12,624		8,508	18,676	08	57	602	..	..	..	..	..	..	..

Notes.—The upper line of figures is that of the previous settlement.

LKLEY,
Revenue Survey, Gujarát.

11-32
14-24
5-27
Daskroi Táluka,
1887.

A. S. BULKLEY,
Deputy Superintendent, Revenue Survey, Gujarát.

APPENDIX E.

Statement of Schools with their average Attendance for the year 1885-86 in the Villages of the Dholka Taluka.

Number of Villages.	District.	GOVERNMENT SCHOOLS.				PRIVATE SCHOOLS.		REMARKS.
		Boys.		Girls.		Boys.		
		Number of Schools.	Average Attendance.	Number of Schools.	Average Attendance.	Number of Schools.	Average Attendance.	
1	2	3	4	5	6	7	8	9
32	Dholka	28	1,064	3	121	9	230	

A. S. BULKLEY,

Deputy Superintendent, Revenue Survey, Gujarát.

*Camp Asláli, Daskroi Táluka,
1st March 1887.*

APPENDIX F.

Statement showing the Number of Survey Numbers cultivated entirely by the Holders in whose names they are entered in the Village Accounts, or in partnership with others, as well as the Survey Numbers sub-let for money or grain payments and those that are Waste.

Surveyed Villages.	Number of Survey Numbers cultivated entirely by the Holders in whose names they are entered in the Village Accounts.	Number of Survey Numbers not cultivated entirely by the Holders in whose names they are entered but cultivated by them in partnership with others.	Number of Survey Numbers sub-let for Money payments.	Number of Survey Numbers sub-let for Grain payments.	Number of Survey Numbers Waste.	Grand Total.
1	2	3	4	5	6	7
76 Government villages of the Dholka Táluka, Ahmedabad Col-lectorate.	25,340	1,232	7,533	2,075	3,836	40,016

A. S. BULKLEY,

Deputy Superintendent, Revenue Survey, Gujarát.

*h 1887, mp Asláli, Daskroi Táluka,
1st March 1887.*

APPENDIX G.

Statement of Sales of Land in Villages of the Dholka Taluka, Ahmedabad Collectorate, taken from the Records of the Sub-Registrar's Office from 1882-83 to 1884-85.

Number.	Name of Villages.	GOVERNMENT.				ALIENATED.				REMARKS.
		Area.	Assessment.	Amount realized.		Area.	Assessment.	Amount realized.		
				Rupees.	Number of years' Multiple of Survey Assessment.			Rupees.	Number of years' Multiple of Survey Assessment.	
1	2	3	4	5	6	7	8	9	10	11
		A. g.	Ra. a. p.	Ra. a. p.		A. g.	Ra. a. p.	Ra. a. p.		
1	A'droda	12 14	17 0 0	300 0 0	17-65	41 10	50 8 0	199 0 0	3-94	
2	Kerāla	22 27	33 12 0	361 0 0	11-02	...	...	...	...
3	Rāncsar	3 11	3 0 0	141 0 0	47-0	23 18	07 0 0	1,099 0 0	16-40	
4	Kāvitha ... ..	...	...	...	...	8 29	51 8 0	460 0 0	8-93	
5	Sākod	24 29	34 4 0	597 0 0	17-43	...	...	...	...
6	Ranoda	23 4	49 4 0	1,077 0 0	21-87	...	...	...	...
7	Badarkha ... ..	...	...	...	...	14 36	49 0 0	1,995 0 0	41-56	
8	Rāmpur	17 20	35 0 0	704 0 0	20-11	...	...	...	...
9	Rupāl	3 19	37 0 0	560 0 0	16-14	4 27	16 0 0	166 0 0	10-37	
10	Hasanagar	3 16	48 12 0	298 0 0	8-16	...	...	...	...
11	Jekda	26 36	96 8 0	1,253 0 0	13-12	...	...	...	...
12	Madipur	30 1	94 8 0	1,717 0 0	18-17	7 32	42 8 0	556 0 0	13-03	
13	Dhanvāda ... ..	...	...	...	...	11 7	16 0 0	399 0 0	24-94	
14	Vāsna Kelia	6 7	11 0 0	597 0 0	54-27	1 18	4 12 0	350 0 0	93-33	
15	Jalālpur Vadfo	15 1	32 0 0	1,223 0 0	38-19	1 10	3 0 0	313 0 0	104-23	
16	Sindrāj	48 23	161 8 0	3,058 0 0	18-93	8 21	16 0 0	350 0 0	21-87	
17	Rāsām ... ..	...	...	...	...	7 37	11 8 0	499 0 0	43-39	
18	Rajoda ... ..	...	...	...	...	4 30	7 0 0	299 0 0	42-71	
19	Kocharia	13 9	18 0 0	1,989 0 0	110-50	...	...	...	...
20	Dholka	36 26	53 0 0	3,593 0 0	67-79	510 6	1,568 0 0	14,224 8 0	9-08	
21	Bāvla	16 23	83 4 0	1,843 0 0	22-20	40 14	118 4 0	4,028 0 0	34-06	
22	Hasanpur	6 1	38 8 0	265 0 0	6-83	...	...	...	...
23	Rāipur ... ..	...	...	...	...	3 29	6 0 0	40 0 0	6-66	
24	Pāidi	2 0	3 8 0	5 0 0	1-43	...	...	...	...
25	Ambeti ... ..	...	...	...	...	17 8	33 0 0	224 0 0	7-0	
26	Sānthal	28 36	52 14 0	759 0 0	14-34	5 36	76 0 0	419 0 0	5-51	
27	Jalālpur Godhnesar	43 25	106 0 0	1,048 0 0	9-80	...	...	...	...
28	Ingoli	14 0	24 8 0	1,080 0 0	44-08	23 13	63 8 0	711 0 0	13-29	
29	Sakodra	22 11	42 0 0	488 0 0	11-36	14 19	17 4 0	276 0 0	16-0	
30	Sarandi	8 26	29 0 0	256 0 0	8-83	23 12	48 0 0	360 0 0	7-50	
31	Trāsad	25 30	44 4 0	302 0 0	6-82	3 8	5 0 0	1,235 0 0	245	
32	Ambaliālā	11 9	24 12 0	504 0 0	20-36	26 0	54 12 0	790 0 0	14-43	
33	Pisāvāda	11 36	27 10 0	199 0 0	7-20	11 35	31 0 0	499 0 0	16-10	
34	Chaloda	24 25	87 0 0	1,491 0 0	17-14	6 21	77 0 0	1,246 0 0	16-18	
35	Jākhda	33 21	54 4 0	948 8 0	17-43	55 23	25 15 0	2,899 0 0	92-49	
36	Sekhdi	4 29	8 0 0	199 0 0	24-87	...	...	...	...
37	Girand	27 13	56 8 0	238 0 0	5-98	3 21	47 0 0	98 0 0	2-09	
38	Mujpur	19 21	52 0 0	390 0 0	7-67	...	...	...	...
39	Khānpur	30 22	43 4 0	645 0 0	14-91	4 26	2 14 0	61 0 0	21-22	
40	Bhetavāda ... ..	...	...	...	...	12 22	33 3 0	300 0 0	3-65	
41	Adāsar	6 9	6 0 0	290 0 0	49-83	4 8	6 0 0	300 0 0	50-0	
42	Vejalka ... ..	...	...	...	...	33 20	31 15 0	3,300 0 0	109-33	
43	Memar ... ..	...	...	...	...	8 30	9 0 0	150 0 0	16-67	
44	Dadusar	16 1	37 0 0	180 0 0	5-15	4 0	7 0 0	99 0 0	14-14	
45	Chandisar	14 23	34 0 0	697 0 0	20-50	23 0	73 8 0	960 0 0	13-05	
46	Simaj	18 8	24 0 0	1,370 0 0	57-08	277 23	1,238 0 0	4,993 0 0	4-03	
47	Vautha	3 0	19 0 0	140 0 0	7-37	8 8	36 8 0	735 0 0	20-14	
48	Vālthera	155 26	270 8 0	2,729 0 0	10-09	53 1	108 10 0	1,953 0 0	17-07	
49	Dughāri	36 0	47 13 0	1,190 0 0	25-08	19 20	5 8 0	194 0 0	35-27	
50	Ambārelli	25 7	69 12 0	1,132 0 0	16-23	...	...	...	...
51	Saroda	5 14	7 0 0	499 0 0	71-29	2 0	21 0 0	399 0 0	14-24	
	Total	903 29	2,004 13 0	36,544 8 0	18-23	1,339 28	4,114 1 0	46,567 8 0	11-32	

Camp Aslāli, Daskroi Taluka, }
1st March 1887.

A. S. BULKLEY,
Deputy Superintendent, Revenue Survey, Gujarāt.

APPENDIX H.

Statement showing sub-lettings in the villages of the Dholka Taluka of the Ahmedabad Collectorat.
Supply taken from the Records of the Sub-Registrar's Office from 1882-83 to 1884-85.

Number.	Villages.	Total acres sub-let.		Total sum for which sub-let.			Sub-letting rate per acre.			Total Assessment.			Average rate of assessment per acre.			The average number of times the survey assessment is equal to the sum for which the land is sub-let.	RE
		A.	g.	Rs.	a.	p.	Ra.	a.	p.	Rs.	a.	p.	Ra.	a.	p.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
1	Kavitha	7	29	75	0	0	9	11	4	41	0	0	5	4	11	1.83	
2	Badarkha	2	22	36	0	0	14	1	11	5	0	0	1	15	4	7.20	
3	Dholka	78	1	712	0	0	9	2	1	223	14	0	2	14	0	3.18	
4	Bavla	1,224	2	2,102	0	0	1	11	6	2,074	4	0	1	11	1	1.01	
5	Paldi	55	6	118	0	0	2	2	3	98	12	0	1	12	11	1.27	
6	Khatripur	9	29	19	0	0	1	15	3	21	0	0	2	2	7	0.90	
7	Santhal	29	17	110	0	0	3	11	10	110	8	0	3	12	1	0.99	
8	Jalalpur-Godhnasar	13	10	14	0	0	1	0	11	16	0	0	1	3	4	0.88	
9	Ingoli	4	26	12	0	0	2	9	3	8	0	0	1	11	6	1.50	
10	Sakodra	3	22	9	4	0	2	9	8	6	0	0	1	11	1	1.54	
11	Sarandi	13	13	17	0	0	1	4	5	16	0	0	1	3	3	1.06	
12	Trasad	0	39	44	5	0	45	7	2	6	0	0	6	2	6	7.39	
13	Ambaliala	68	4	108	8	0	1	9	6	122	1	0	1	12	8	0.88	
14	Chaloda	19	9	42	8	0	2	3	4	29	8	0	1	8	7	1.44	
15	Sahej	103	4	137	0	0	1	5	3	327	0	0	3	2	9	0.42	
16	Jhakhda	553	33	570	10	0	1	0	6	305	7	0	0	8	10	1.87	
17	Sekhdi	23	33	54	8	0	2	3	6	47	0	0	1	15	7	1.16	
18	Girand	23	33	54	8	0	2	3	6	47	0	0	1	15	7	1.16	
19	Mujpur	83	17	155	8	0	1	13	10	153	8	0	1	13	5	1.01	
20	Andhari	4	25	8	0	0	1	11	8	8	0	0	1	11		1.0	
21	Adasar	4	8	10	0	0	2	6	1	6	0	0	1	6	1	1.66	
22	Vejalka	72	22	89	0	0	1	3	8	79	8	0	1	1	6	1.12	
23	Siawada	23	13	36	8	0	1	9	0	41	8	0	1	12	6	0.88	
24	Memar	6	27	10	0	0	1	8	0	8	0	0	1	3	2	1.25	
25	Dadusar	13	2	35	0	0	2	10	11	23	0	0	1	12	3	1.52	
26	Chandisar	12	29	21	11	0	1	11	3	33	0	0	2	9	6	0.66	
27	Simaj	22	21	42	0	0	1	13	10	64	12	0	2	14	0	0.65	
28	Vautha	98	18	100	0	0	1	0	10	233	0	0	2	5	6	0.43	
29	Valthera	134	15	209	0	0	1	8	11	203	0	0	1	8	2	1.03	
30	Kauka	43	3	131	7	0	3	0	10	95	0	0	2	3	3	1.43	
31	Dughari	61	14	164	4	0	2	10	10	109	6	0	1	12	6	1.50	
32	Ambareli	4	0	10	7	0	2	9	9	9	0	0	2	4	0	1.16	
33	Saroda	203	39	358	0	0	1	12	1	405	4	0	1	15	11	0.88	
34	Juval Rupavati	13	30	57	0	0	4	2	4	13	0	0	0	15	1	4.38	
35	Rupal	8	31	63	0	0	7	3	2	15	0	0	1	11	5	4.20	
36	Salajda	10	15	51	0	0	4	14	7	21	4	0	2	0	9	2.40	
37	Sindraj	34	24	72	0	0	2	1	4	41	4	0	1	3	1	1.75	
	Total	3,108	10	5,860	0	0	1	14	2	5,283	13	0	1	11	2	1.11	

Camp Aslali, Daskroi Taluka,
1st March 1887.

A. S. BULKLEY,
Deputy Superintendent, Revenue Survey, C

APPENDIX I.

Statement showing mortgage transactions in the Villages of the Dholka Taluka of the Ahmedabad Collectorate taken from the Records of the Sub-Registrar's Office from 1882-83 to 1884-85.

Number.	Name of Village.	GOVERNMENT LAND.					ALIENATED LAND.					REMARKS.		
		Total Acres mortgaged.	Total sum for which mortgaged.	Mortgage Rate per Acre.	Total Assessment.	Average Rate of Assessment per Acre.	The Average Number of times the Survey Assessment is equal to the sum for which the land is mortgaged.	Total Acres mortgaged.	Total sum for which mortgaged.	Mortgage Rate per Acre.	Total Assessment.		Average Rate of Assessment per Acre.	The Average number of times the Survey Assessment is equal to the sum for which the land is mortgaged.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		A. g.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		A. g.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		
1	Adroda	117 30	268 8 0	2 3 10	217 12 0	1 13 7	1 21	66 17	748 0 0	11 4 2	99 0 0	1 7 10	7 56	
2	Kerla	23 11	1,374 0 0	59 1 8	58 0 0	2 8 0	23 69							
3	Juval Rupavati	21 9	1,605 0 0	70 14 7	49 0 0	2 5 0	30 71							
4	Ranesar							1 2	658 0 0	626 3 3	7 0 0	6 10 8	94 9	
5	Kavitha							30 23	2,783 0 0	91 0 4	175 0 0	5 11 6	15 90	
6	Sakod	29 1	1,339 8 0	46 2 5	82 12 0	2 18 8	16 19	2 20	175 0 0	70 0 0	18 0 0	7 3 4	9 72	
7	Ranoda	4 10	295 0 0	69 6 7	8 0 0	1 14 1	36 87							
8	Badarkha	57 26	3,562 0 0	61 12 6	139 0 0	2 6 7	25 63	10 33	558 0 0	78 12 10	51 0 0	2 13 10	27 52	
9	Rampur	26 24	4,397 0 0	165 4 10	58 0 0	2 2 11	75 81							
10	Rupai	12 5	1,658 0 0	136 11 10	28 0 0	2 5 0	59 21	2 12	299 0 0	130 0 0	17 0 0	7 6 8	17 59	
11	Jekda	23 35	1,228 0 0	15 6 11	102 0 0	4 4 4	12 0 4	27 9	1,539 8 0	58 6 1	79 8 0	2 14 9	19 99	
12	Salajda	4 20	344 0 0	76 7 1	49 0 0	10 14 8	7 0 2	20 17	1,074 0 0	52 9 4	60 4 0	2 15 2	17 83	
13	Mafipur	42 34	4,777 0 0	111 6 7	112 8 0	2 10 1	42 46							
14	Dhanvada	30 15	375 0 0	12 5 9	42 0 0	1 6 1	8 93	5 9	275 0 0	52 10 1	8 0 0	1 8 6	34 37	
15	Vasnakelia	60 25	4,527 0 0	89 6 9	131 0 0	2 9 7	34 56	174 31	7,029 0 0	40 3 7	524 2 0	3 0 0	13 41	
16	Kesrandi							1,214 35	999 0 0	0 13 2	779 8 0	0 10 3	1 23	
17	Bhaola	4 25	679 0 0	146 18 0	30 0 0	6 7 11	22 63							
18	Jalapur Vajifo	5 11	498 0 0	94 6 7	15 4 0	2 14 3	32 66	81 33	5,699 0 0	178 6 0	30 8 0	2 8 4	70 80	
19	Sindraj	80 6	3,793 8 0	47 5 4	311 8 0	3 14 8	12 18							
20	Rasam	11 28	499 0 0	42 10 5	20 8 0	1 12 1	24 34	49 27	2,338 0 0	57 0 7	136 8 0	2 12 1	20 74	
21	Dehganda							166 0	499 0 0	3 0 1	125 0 0	0 12 1	3 99	
22	Rajoda	8 37	315 0 0	35 4 8	26 0 0	2 14 7	12 12	23 19	1,587 0 0	67 8 6	31 0 0	1 5 2	51 19	
23	Kocharia	23 33	1,741 0 0	60 8 1	76 12 0	2 10 6	22 68	80 4	902 0 0	29 15 6	40 4 0	1 5 7	22 41	
24	Nandodra							2,211 4	4,099 0 0	1 13 8	3,097 0 0	2 9 0	1 32	
25	Dholka	9 10	624 0 0	67 7 5	22 12 0	2 7 5	27 43	433 5	25,258 0 0	58 4 11	1,543 4 0	3 9 0	16 36	
26	Bavla	45 0	3,357 0 0	74 13 2	199 14 0	4 7 0	16 85	140 2	12,485 0 0	89 2 6	524 0 0	3 12 0	23 83	
27	Dholi	311 22	6,450 0 0	30 7 11	304 4 0	1 7 1	21 20	90 33	4,574 0 0	60 4 8	133 0 0	1 7 5	34 40	
28	Rajpur	18 38	86 0 0	4 3 9	29 0 0	1 8 7	2 97	31 36	116 8 0	3 10 6	123 0 0	4 0 2	0 91	
29	Paldi	7 23	343 8 0	45 5 9	61 14 0	6 2 10	5 55	8 17	760 0	30 3 5	13 2 0	1 9 0	57 90	
30	Khatripur	3 11	44 8 0	13 9 6	7 4 0	1 13 0	17 20	1 0	284 8 0	14 11 7	81 0 0	4 3 1	3 51	
31	Ambeti	5 21	172 0 0	31 2 1	10 0 0	1 13 0	17 20	1 0	99 0 0	9 0 0	5 6 0	5 6 0	18 44	
32	Ghanesar	2 33	199 0 0	69 3 7	4 0 6	1 6 3	49 75	30 15	799 0 0	26 5 0	61 0 0	2 0 2	13 10	
33	Santhal	36 37	4,320 4 0	117 3 11	140 8 0	3 13 0	30 51	31 32	2,290 0 0	72 0 2	231 8 0	7 4 6	9 89	
34	Jalapur Godhnesar	38 16	2,335 0 0	73 13 2	164 13 0	4 4 9	17 21	20 23	2,390 0 0	119 2 9	35 0 0	1 11 2	68 29	
35	Sakodra	122 25	2,604 0 0	21 8 11	202 4 0	1 10 6	12 88	23 21	290 0 0	11 0 11	24 0 0	1 0 5	10 83	
36	Sarandi	32 32	995 0 0	80 5 6	63 0 0	1 14 10	15 79	26 27	1,031 0 0	38 10 5	57 0 0	2 2 2	18 09	
37	Trasad	53 2	2,360 0 0	44 7 10	141 8 0	2 10 3	16 68	133 26	784 7 0	6 14 0	350 0 0	2 10 0	2 24	
38	Amballala	144 19	3,181 12 0	22 0 5	332 4 0	2 4 11	9 58	247 16	7,321 8 0	29 9 7	623 4 0	2 8 9	11 65	
39	Pisavada	34 38	1,251 0 0	35 12 9	60 8 0	1 12 1	20 68	43 9	1,463 0 0	33 13 2	77 10 0	1 12 11	18 33	
40	Chaloda	44 1	1,903 8 0	43 4 0	177 0 0	4 0 4	10 75	65 36	7,177 8 0	53 9 0	32 14 0	3 13 3	21 32	
41	Sahij	93,195	707 0 0	25 8 5	51 12 0	1 14 0	13 66	1 37	122 0 0	3 8 0	8 8 0	1 13 3	34 36	
42	Jhukhdia	603 15	13,570 8 0	36 14 4	535 13 0	1 1 0	34 69	527 33	25,737 8 0	48 12 3	610 2 0	1 2 8	42 18	
43	Girand	6 18	228 4 0	35 6 3	17 0 0	2 10 4	13 43	7 0	147 0 0	21 6 0	13 12 0	1 15 4	10 69	
44	Mujpur	34 35	635 8 0	15 5 9	69 0 0	1 16 6	7 76							
45	Khanpur	3 8	125 0 0	40 0 0	38 0 0	11 8 4	3 47	9 24	186 0 0	19 6 0	21 8 0	2 3 4	8 78	
46	Bhetavada	78 30	3,349 12 0	45 6 8	274 14 0	3 11 9	12 19	61 25	4,669 0 0	75 12 3	123 10 0	1 15 11	33 08	
47	Khareli	2 37	60 0 0	20 8 3	6 6 0	3 2 8	9 41	8 23	199 0 0	55 10 8	1 10 0	0 7 3	122 46	
48	Vejalka	27 35	2,349 0 0	32 7 7	57 15 0	2 0 8	40 54	139 20	6,344 0 0	33 7 9	213 9 0	1 2 1	29 71	
49	Siavada	14 27	108 0 0	7 3 6	21 12 0	1 7 9	4 87							
50	Memar	23 24	140 0 0	5 15 0	26 0 0	1 1 8	5 38	116 13	2,800 0 0	24 0 9	135 0 0	1 2 8	20 74	
51	Dadusar	3 37	175 0 0	44 9 4	5 0 0	1 4 4	36 0	26 22	799 0 0	30 1 6	47 0 0	1 12 4	17	
52	Chandisar	50 17	1,987 0 0	21 9 0	88 0 0	1 12 1	12 35	27 38	1,874 0 0	67 0 10	96 8 0	3 7 3	19 42	
53	Sinjaj	94 21	2,715 0 0	28 11 7	184 8 0	1 15 3	14 72	1,340 33	20,038 0 0	15 1 0	2,289 0 0	1 11 6	3 75	
54	Vauttha							636 35	1,398 0 0	2 3 1	1,174 8 0	1 13 6	1 19	
55	Kauka	175 4	3,511 8 0	48 9 11	322 12 0	1 13 6	26 37	65 2	3,539 8 0	54 6 7	137 4 0	2 1 10	25 80	
56	Dughari	163 12	35,608 0 0	210 15 9	190 9 0	1 2 1	188 33	255 37	12,030 0 0	47 0 0	247 14 0	0 14 7	48 53	
57	Ambareli	71 9	2,620 4 0	38 12 9	200 8 0	3 10 8	10 06	21 32	2,098 0 0	96 4 0	45 8 0	2 1 7	46 11	
58	Saroda	7 7	399 0 0	55 9 11	11 0 0	1 8 7	36 27	49 38	4,499 0 0	90 1 8	123 4 0	2 7 7	36 50	
59	Kariana							21 4	500 0 0	23 8 7	17 4 0	0 13 0	28 99	
60	Valthera	73 17	1,346 0 0	18 5 5	127 8 0	1 12 0	10 56	43 32	1,784 0 0	40 11 9	57 15 0	1 5 9	30 79	
	Total	2,757 15	1,42,448 12 0	51 10 7	5,764 1 0	2 1 5	24 71	8,333 31	2,65,655 8 0	80 1 2	14,387 1 0	1 11 1	17 71	

Camp Aslali, Daskroi Taluka, }
1st March 1887.

A. S. BULKLEY,
Deputy Superintendent, Revenue Survey, Gujarat.

APPENDIX J.

Statement showing the prices prevalent in the Dholka Taluka of the Ahmedabad Collectorate for 35 years from 1850-51 to 1854-55 and from 1856-57 to 1885-86.

Years.	MEASURED SERS OF 40 TOLAS PER RUPPEE.			
	Wheat.	Rice.	Juwar.	Cotton.
1850-51	72	74	60	75
1851-52	75	77	74	78
1852-53	80	86	60	75
1853-54	50	83½	48½	92
1854-55	52	80	48	95
1856-57	30½	45	45	50
1857-58	30	45	31½	40
1858-59	28	40	30	22
1859-60	20	35	25	18
1860-61	19	32	25	18
1861-62	18½	30	23	20
1862-63	18	30	20	11
1863-64	16	28	20	26
1864-65	18	27	24	27
1865-66	24	23	26	11
1866-67	26½	22	28	13
1867-68	26	22	28	14½
1868-69	26½	23	28	15
1869-70	25	23	30	17
1870-71	24	24	35	17
1871-72	27	29	40	18
1872-73	40	50	50	19
1873-74	36	42	50	17
1874-75	45	48	55	14
1875-76	36	36	35	18
1876-77	29	32	23	18
1877-78	18	29	25	14
1878-79	18	23	23	16
1879-80	35	35	42	16
1880-81	35	35	44	16
1881-82	32	40	45	16
1882-83	40	45	45	16
1883-84	38	44	45	15
1884-85	35	46	45	15
1885-86	35	50	40	15

Camp Aslali, Daskroi Taluka, }
1st March 1887.

A. S. BULKLEY,
Deputy Superintendent, Revenue Survey,
Gujarat.

APPENDIX K.

Revenue History for 76 villages situated in the Dholka Taluka of the Ahmedabad Collectorate in which the Survey Settlement was introduced in the year 1856-57.

YEARS.	OCCUPIED LAND PAYING ASSESSMENT TO GOVERNMENT.						UNOCCUPIED, ASSESSED ARABLE GOVERNMENT LAND.			LAND, THE REVENUE OF WHICH IS ALIENATED ENTIRELY OR PARTIALLY (INA'M.)			TOTAL LAND, GOVERNMENT OCCUPIED, UNOCCUPIED AND INA'M.			Balance outstanding at close of year.	REMARKS.
	Occupied Acres.	Full Standard Assessment.	Remissions.			Balance collected.	Acres.	Full Assessment.	Realizations from Auction Sale of Grazing.	Acres.	Full Standard Assessment.	Collections, rent, &c.	Total of Columns 9, 8 and 11.	Full Assessment: Total of Columns 9 and 12.	Collections: Total of Columns 7, 10 and 13.		
			Permanent.	Casual.	Total.												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		Rs.				Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	
42-43	37,406	1,51,985	..	582	582	1,51,403	30,178	..	..	56,622	2,31,429	30,291	1,24,296	3,33,414	1,81,694	61,990	
43-44	40,979	1,60,490	..	861	851	1,59,648	36,690	..	..	56,215	2,41,883	32,389	1,33,378	4,02,382	1,92,037	65,376	
44-45	35,146	1,32,751	..	1,090	1,090	1,31,661	40,040	..	..	59,790	2,28,060	31,303	1,34,976	3,60,311	1,62,964	45,392	
45-46	37,060	1,53,388	..	2,129	2,129	1,51,257	39,902	..	..	62,109	2,37,008	32,374	1,39,071	3,90,394	1,84,131	55,972	
46-47	38,740	1,56,056	..	698	698	1,55,357	39,904	..	..	59,507	2,33,040	30,670	1,33,151	3,39,095	1,86,026	40,037	
47-48	37,834	1,38,308	..	846	846	1,35,962	41,912	..	89	63,150	2,20,691	34,793	1,42,696	3,57,499	1,70,844	39,693	
48-49	34,508	1,20,787	..	3,571	3,571	1,17,215	46,145	..	..	62,438	2,56,430	32,442	1,43,086	3,79,217	1,49,657	31,075	
49-50	40,344	1,77,283	..	607	607	1,76,676	40,429	..	22	61,222	2,59,620	29,576	1,41,995	4,36,903	2,06,274	65,333	
50-51	41,361	1,73,237	..	2,535	2,535	1,70,732	39,251	1,065	..	63,049	2,62,690	23,492	1,44,161	4,37,022	1,99,224	68,022	
51-52	41,164	1,66,912	..	1,448	1,448	1,65,464	41,505	1,225	52	61,292	2,58,546	26,353	1,43,951	4,26,683	1,92,369	4,523	
56-57	60,086	1,12,116	..	2,364	2,364	1,09,252	42,959	58,269	6,434	75,546	1,18,520	27,367	1,73,591	2,89,905	1,43,553	10,047	
57-58	64,383	1,19,188	..	504	504	1,18,685	39,024	51,189	3,934	75,356	1,18,560	27,526	1,79,263	2,88,937	1,50,145	..	
58-59	70,392	1,28,001	..	8,942	8,942	1,19,058	33,386	44,107	3,379	75,786	1,18,497	26,446	1,79,564	2,90,005	1,48,883	1,672	
59-60	74,463	1,36,035	..	774	774	1,35,261	28,339	36,900	3,761	75,765	1,18,366	23,693	1,73,567	2,91,301	1,67,715	870	
60-61	79,868	1,41,324	..	65	65	1,41,760	24,359	30,608	1,723	75,752	1,19,334	25,967	1,79,979	2,92,266	1,69,450	3,732	
61-62	81,963	1,44,970	..	65	65	1,44,906	21,235	36,064	1,290	74,864	1,17,588	26,675	1,73,062	2,89,522	1,72,371	13	
62-63	87,270	1,52,342	..	338	338	1,52,005	16,630	20,003	1,029	76,705	1,18,233	26,051	1,79,614	2,90,583	1,79,085	109	
63-64	91,390	1,60,051	2,775	25	2,800	1,57,251	13,456	21,929	1,031	76,492	1,37,346	33,900	1,81,333	3,19,523	1,97,232	7,323	
64-65	91,007	1,57,041	2,971	56	3,027	1,54,015	13,901	25,682	1,930	75,627	1,37,740	42,717	1,80,535	3,20,463	1,98,664	529	
65-66	89,372	1,56,577	2,863	..	2,866	1,56,712	14,599	23,044	2,317	76,310	1,37,225	43,380	1,80,781	3,16,346	1,99,409	742	
66-67	91,546	1,58,623	2,756	55	2,811	1,57,224	22,447	2,203	77,067	1,39,146	43,057	1,82,333	3,20,221	2,01,077	209		
67-68	91,965	1,59,379	2,719	1,36,895	13,245	21,301	1,361	76,935	1,39,196	42,560	1,82,195	3,20,376	2,01,306	147			
68-69	92,624	1,60,787	2,750	1,58,035	12,664	20,940	1,633	76,997	1,38,968	42,272	1,82,185	3,20,693	2,01,990	1,444			
69-70	92,723	1,60,787	4,379	1,57,345	12,716	18,716	1,635	76,993	1,39,205	42,942	1,82,432	3,19,645	2,01,972	562			
70-71	93,195	1,60,000	5,018	1,56,515	12,187	17,067	2,139	76,919	1,40,613	42,737	1,82,301	3,19,213	2,01,391	..			
71-72	92,317	1,60,000	4,031	1,56,573	13,040	18,421	2,165	76,918	1,40,593	42,723	1,82,275	3,19,627	2,01,471	213			
72-73	91,955	1,60,000	3,951	1,52,776	13,514	27,336	2,234	77,316	1,38,765	42,672	1,83,285	3,22,329	1,97,632	219			
73-74	90,566	1,60,000	3,346	1,47,553	14,924	25,663	1,763	77,776	1,38,652	42,640	1,83,266	3,15,300	1,91,956	7			
74-75	88,161	1,60,000	2,791	1,47,497	17,405	29,903	2,975	77,634	1,38,240	42,384	1,83,200	3,18,433	1,92,356	77			
75-76	86,714	1,60,000	2,453	1,46,552	17,587	32,273	2,993	77,523	1,36,574	42,230	1,81,329	3,16,357	1,90,325	130			
76-77	86,608	1,60,000	2,365	1,44,635	17,699	33,201	2,926	77,472	1,37,333	42,221	1,81,779	3,18,090	1,89,732	10			
77-78	87,336	1,60,000	4,800	1,43,336	16,913	32,110	2,365	77,429	1,37,797	42,130	1,81,723	3,18,045	1,88,333	63			
78-79	91,160	1,60,000	5,573	1,47,743	13,520	27,131	2,199	77,423	1,37,739	42,177	1,82,133	3,18,233	1,92,120	27			
79-80	90,945	1,60,000	6,272	1,47,379	13,752	26,312	2,267	77,402	1,37,734	42,141	1,82,099	3,18,197	1,92,237	1			
80-81	90,422	1,60,000	5,924	1,47,227	14,305	27,262	2,300	77,376	1,37,673	42,122	1,82,103	3,18,092	1,91,649	..			
81-82	89,337	1,60,000	5,726	1,46,763	14,339	27,904	2,360	77,354	1,37,664	42,103	1,82,080	3,18,113	1,91,231	..			
82-83	89,005	1,60,000	5,705	1,45,943	15,509	23,691	2,596	77,237	1,37,519	42,012	1,81,899	3,17,359	1,90,551	..			
83-84	87,813	1,60,000	5,417	1,44,435	17,034	30,620	2,738	77,259	1,37,393	41,954	1,81,906	3,17,366	1,89,127	..			
84-85	88,276	1,60,000	5,646	1,45,147	13,274	29,431	2,673	77,267	1,37,392	41,952	1,81,817	3,17,706	1,89,712	92			
85-86	89,159	1,60,000	6,063	1,46,325	15,403	23,007	2,439	77,260	1,37,363	41,936	1,81,323	3,18,203	1,91,250	..			

The years above the line are those antecedent to the year of survey settlement.

A. S. BULKLEY,
Deputy Superintendent, Revenue Survey, Gujarat.

Canal, Aslali, Dholka, 1st March 1887.

General Statement referred to in paragraph 59 of the Deputy Superintendent's Report No. 118, dated 1st

Number.	Name of Village.	BY FOI							
		GOVERNMENT OF							
		Maximum dry-crop rate.	Total culturable area including alienated.	Total unculturable area.	Dry-crop.		Garden.		Rice
1	2	3	4	5	6	7	8	9	10
	CLASS I.	Rs. a.	A. g.	A. g.	A. g.	Rs. a.	A. g.	Rs. a.	A.
1	Dholka	2 4	8,533 34	1,431 8	843 6	1,248 4	20 26	40 12	311
2	Mafipur	2 4	1,377 29	152 29	352 24	573 12	...	...	18
3	Jalálpor Wajifo	2 4	1,456 19	112 22	711 2	1,256 4	...	...	19
4	Chak	2 4	242 5	17 15	148 21	256 8	...	...	52
5	Shekhadi	2 4	522 24	20 2	375 34	635 8	...	...	.....
6	Vásna Keliá	2 4	1,879 36	153 17	1,394 12	2,094 8	...	...	.....
7	Sindhraj	2 4	4,771 38	147 22	2,988 18	5,238 12	...	...	477
8	Hasanpur	2 4	468 32	20 13	343 16	597 0	...	...	18
9	Trásad	2 4	1,424 5	133 11	678 37	1,217 8	...	...	152
10	Rámpur	2 4	1,147 12	69 15	456 25	880 8	...	...	123
11	Ranoda	2 4	2,281 5	116 6	1,293 3	2,316 12	...	...	142
12	Bávla	2 0	5,367 3	323 11	2,174 33	3,262 4	...	...	186
13	Badarkha	2 0	2,496 8	155 20	1,032 20	1,844 0	...	...	1
14	Kávitha	2 0	2,754 12	138 27	685 30	1,130 12	...	...	41
15	Saroda	2 0	2,948 23	952 7	1,137 26	1,684 4	16 32	40 12	16
16	Chaloda	2 0	3,916 17	269 15	2,586 27	4,154 4	...	...	58
17	Ambaliála	2 0	2,399 25	315 3	1,076 20	1,712 8	...	...	67
18	Sánthal	2 0	3,435 11	1,040 9	1,637 15	2,679 0	3 15	24 0	616
19	Chandisar	2 0	3,549 0	645 21	744 25	1,002 8	...	...	29
20	Juvál Rupávati	2 0	1,966 0	85 3	1,581 27	2,429 8	...	...	124
21	Rásam	2 0	2,057 11	73 6	869 23	1,305 0	...	...	37
22	Jekada	2 0	1,125 30	63 32	459 18	678 4	...	...	22
23	A'mbeti	2 4	1,125 37	46 18	450 33	722 12	...	...	...
24	Sálajda	2 0	1,601 8	99 11	779 6	1,322 12	...	...	...
25	Rupál	2 0	2,038 18	97 32	1,090 27	1,759 0	...	...	...
	Total ... ..	...	60,887 2	6,679 15	25,893 13	41,973 0	40 33	105	...
	CLASS II.								
1	Adásar	2 4	553 16	111 35	157 26	171 0	...	...	...
2	Sahij	2 0	2,606 29	268 11	1,150 35	1,925 8	8 11	34	...
3	Khátripur	3 0	719 2	35 19	233 10	550 8	...	...	...
4	Vautha	2 0	2,059 9	463 37	929 25	1,663 12	5 29	35	...
5	Girand	2 0	1,164 18	156 21	460 5	816 0	2 20	12	...
6	Ingoli	2 0	2,407 19	408 25	657 30	1,045 12	...	...	...
7	Kanka	2 0	4,562 8	240 25	2,555 36	4,094 4	...	...	...
8	Pisávada	2 0	5,043 2	308 4	1,789 16	2,593 8	...	...	...
9	Andhári	2 0	728 32	42 31	272 31	469 0	...	...	...
10	Bhetávada	3 0	890 28	95 27	372 7	749 4	...	...	...
11	Páldi	2 0	1,233 12	54 9	552 0	975 0	...	...	...
12	A'mbárelí	2 0	2,578 19	407 19	1,451 3	2,349 8	...	...	...
13	Simaj	2 0	5,954 35	237 30	3,279 23	4,666 12	...	...	...
14	Sarandi	2 0	3,548 31	191 9	1,097 12	1,440 12	...	...	...
15	Válthera	2 0	4,066 23	199 6	1,680 15	2,519 4	...	...	...
16	Jalálpor Godhnesar	2 0	1,610 0	131 9	531 25	690 4	...	...	...
17	Khánpur	2 4	1,178 34	64 28	336 2	527 0	...	...	...
18	Siávada	2 0	485 7	41 2	279 31	421 8	...	...	...
19	Sákodra	2 0	2,639 38	84 20	1,093 4	1,522 12	...	...	...
20	Dhanvada	2 0	2,798 31	85 9	1,026 18	1,427 0	...	...	...
21	Ránesar	1 12	1,358 30	42 25	344 20	419 12	...	...	...
22	Kocharia	1 12	2,256 20	74 6	1,107 31	1,387 8	...	...	...
23	Kerála	2 0	1,358 10	86 27	702 37	1,164 4	...	...	...
24	Bháela	2 0	4,139 23	159 22	2,590 30	3,612 12	...	...	...
25	Ghánesar	2 0	993 20	36 27	464 38	730 0	...	...	...
26	Mujpur	2 4	830 24	23 18	482 39	882 8	...	...	...
27	Dádusar	2 4	1,806 6	98 2	1,129 24	1,688 12	...	...	...
28	Rajoda	1 12	3,493 7	184 20	1,963 31	2,600 0	...	...	...
	Total ... ..	...	63,066 17	4,339 3	28,694 4	43,103 12	16 20	81	...

BY REVISION

Number.	Name of Village.	GOVERNMENT CONVERTED DRY-CROP (OR NEW RICE) LANDS.						Total Government Dry-crop Lands including converted Jirait.		GOVERNMENT OLD RICE				
		Sub-soil Water Lands.		Non-sub-soil Water Lands.		Total.		Area.	Assessment.	Sub-soil Water Lands.		Non-sub-soil Water Lands.		
		Area.	Assessment.	Area.	Assessment.	Area.	Assessment.			Area.	Assessment.	Area.	Assessment.	Area.	Assessment.
								26	27					
	CLASS I—continued.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.	A.
1	Dholka ...	51 7	148 0	...	...	51 7	148 0	862 3	1,887 0	290 3	1,308 8	...	...	...
2	Maffipur ...	12 25	44 0	...	...	12 25	44 0	353 30	852 0	18 22	79 0	...	...	...
3	Jalalpor Wajifo ...	1 25	4 12	16 31	44 8	18 16	49 4	719 36	1,706 12	2 4	7 4	18 1	...	...
4	Chak ...	9 5	26 4	...	...	9 5	26 4	148 12	368 4	51 25	220 8	...	...	...
5	Shekhadi ...	17 27	55 0	...	...	17 27	55 0	375 88	915 8	...	...	...	...	...
6	Vasna Kelia ...	1 31	4 8	...	...	1 31	4 8	1,391 2	3,012 8	...	...	...	...	...
7	Sindhraj ...	30 23	100 0	113 9	433 8	143 32	533 8	3,014 32	6,814 8	281 5	1,302 0	196 8	...	...
8	Hasanpur ...	6 2	16 4	...	...	6 2	16 4	342 35	884 4	18 20	81 0	...	...	...
9	Trasad ...	85 13	227 8	...	...	85 13	227 8	679 36	1,603 8	151 30	731 0	...	...	...
10	Rampur ...	87 22	268 0	...	...	87 22	268 0	459 35	1,179 0	122 11	508 8	...	...	...
11	Ranoda ...	18 3	55 0	...	...	18 3	55 0	1,312 27	3,103 0	122 16	574 0	...	...	...
12	Bavla ...	50 0	145 8	...	...	50 0	145 8	2,185 18	5,124 8	181 13	759 8	...	...	...
13	Badarkha ...	2 29	10 0	...	...	2 29	10 0	981 5	2,567 0	1 21	7 4	...	...	...
14	Kavitha ...	26 3	74 12	...	...	26 3	74 12	688 5	1,803 12	38 31	151 0	...	...	...
15	Saroda ...	12 13	34 8	...	...	12 13	34 8	1,038 18	2,396 8	16 39	64 0	...	...	...
16	Chaloda ...	193 34	644 8	...	...	193 34	644 8	2,595 4	6,693 8	56 38	227 0	...	...	...
17	Ambaliala ...	25 11	78 8	20 18	51 0	45 29	129 8	1,066 27	2,518 8	30 15	161 4	29 8	...	...
18	Santhal ...	...	...	96 1	289 0	96 1	289 0	1,518 22	3,557 0	...	...	582 8	...	...
19	Chandisar ...	64 30	197 8	...	...	64 30	197 8	612 3	1,341 8	29 8	123 0	...	...	...
20	Juvál Rupávati ...	109 31	309 0	...	...	109 31	309 0	1,627 31	3,624 8	114 8	571 8	...	...	...
21	Rasam ...	21 17	60 0	...	...	21 17	60 0	871 3	1,937 0	37 3	166 8	...	...	...
22	Jekada ...	6 30	16 4	2 39	12 8	9 29	28 12	463 30	936 12	32 21	149 8	1 8	...	...
23	Ambeti ...	50 11	216 8	...	...	80 11	216 8	452 22	1,012 8	131 38	692 8	...	...	...
24	Salajda ...	3 23	15 0	...	...	3 23	15 0	784 32	1,657 0	216 32	1,299 8	...	...	...
25	Rupál ...	6 0	23 8	12 19	30 0	18 19	53 8	1,098 14	2,476 8	136 22	778 8	0 0	...	...
	Total	924 15	2,774 12	261 37	860 8	1,186 12	3,635 4	25,645 0	59,972 12	2,082 25	9,962 12	8 8	...	...
	CLASS II—continued.													
1	Adasar ...	...	...	...	...	...	...	29 6	40 8	...	...	...	...	...
2	Sahij ...	1 14	3 8	52 30	135 8	54 4	139 0	1,002 22	2,084 0	1 4	6 8	...	...	...
3	Khatripur ...	30 15	70 4	63 10	144 0	93 25	214 4	232 4	484 12	9 25	33 8	...	...	...
4	Vautha ...	7 37	21 0	11 33	27 13	19 30	48 13	843 25	1,795 5	24 7	114 8	...	...	...
5	Girand ...	39 12	117 2	1 36	5 10	41 8	122 12	354 34	772 12	22 38	86 8	...	...	...
6	Ingoli ...	14 14	33 14	22 24	45 14	36 38	79 12	622 8	1,161 12	0 32	2 8	...	...	...
7	Kauka ...	14 29	40 0	12 14	38 8	27 3	78 8	2,545 34	5,016 8	56 23	253 8	...	...	...
8	Fisavada ...	11 24	34 2	11 0	33 8	22 24	67 10	1,790 31	3,192 2	67 19	33 8	...	...	...
9	Andhari ...	...	...	...	...	...	...	271 38	557 0	14 29	...	...	...	...
10	Bhetavada ...	7 2	14 8	...	...	7 2	14 8	366 2	744 8	...	...	...	...	...
11	Paldi ...	27 23	105 8	...	...	27 23	105 8	546 5	1,313 0	36 37	...	...	...	...
12	Ambareli ...	36 19	96 12	...	...	36 19	96 12	1,432 12	2,988 12	209 17	...	...	...	...
13	Simaj ...	8 26	19 8	13 34	28 8	22 20	48 0	3,273 31	5,878 0	110 5	...	...	...	...
14	Sarandi ...	62 0	124 8	56 20	90 8	118 20	215 0	1,101 17	1,787 8	85 8	...	...	...	...
15	Valthera ...	57 32	197 8	50 22	153 0	108 14	350 8	1,673 25	3,159 0	91 24	...	...	...	...
16	Jalalpor Godhnesar	9 24	24 0	...	...	9 24	24 0	531 9	817 8	88 31	361 8	11 8	...	...
17	Khanpur ...	33 23	104 0	...	...	33 23	104 0	335 39	664 8	106 16	566 8	...	...	...
18	Siavada ...	12 5	28 8	...	...	12 5	28 8	282 0	531 8	14 38	71 0	...	...	...
19	Sakodra ...	51 17	123 0	13 22	23 12	64 39	146 12	1,098 7	1,932 4	29 20	120 8	17 8	...	...
20	Dhanvada ...	7 27	25 8	0 30	2 8	8 17	28 0	1,033 16	1,721 0	52 37	283 0	...	...	...
21	Ranesar ...	4 1	8 0	3 31	8 8	7 32	16 8	340 7	575 0	3 17	16 8	104 8	...	...
22	Kocharia ...	66 6	230 0	5 19	12 0	71 25	242 0	1,096 34	2,046 8	209 13	1,095 0	12 8	...	...
23	Kerala ...	9 39	27 8	1 9	3 8	11 8	31 0	714 8	1,440 8	72 25	333 0	8 8	...	...
24	Bhabela ...	64 34	240 8	5 3	21 12	69 37	262 4	2,604 5	4,505 12	335 20	2,086 0	...	...	...
25	Ghanesar ...	0 24	1 8	...	...	0 24	1 8	907 6	907 8	...	...	...	...	...
26	Mujpur ...	39 5	113 0	...	...	39 5	113 0	493 31	1,038 0	49 35	291 8	...	...	...
27	Dadusar ...	100 11	177 8	2 7	2 8	102 18	180 0	1,180 24	1,897 0	184 7	655 8	10 8	...	...
28	Rajoda ...	23 17	62 0	...	...	23 17	62 0	1,963 23	4,050 8	65 6	267 8	...	...	...
	Total	742 0	2,043 2	328 24	777 5	1,070 24	2,820 7	28,229 23	53,102 15	1,943 13	9,541 4	72 8	...	...

continued.

REY.											Average Assessment of Government land per Acre.
Total.	Dhekudiat Lands.		Bhatta Lands.		Total.		Government unoccupied assessed lands.		Percentage difference of assessment.		
	Assessment.	Area.	Assessment.	Area.	Assessment.	Area.	Assessment.	Area.	Assessment.	Increase.		Decrease.
39	40	41	42	43	44	45	46	47	48	49	50
Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.	Increase.	Decrease.	Rs. a. p.
1,308 8	1,152 6	3,195 8	406 5	704 0	19 3/4	...	2 8 0
79 0	372 12	931 0	37 32	82 0	24 1/4	...	2 7 6
51 12	737 35	1,758 8	188 17	344 0	18 1/4	...	2 4 4
220 8	199 37	588 12	10 14	27 8	15	...	2 14 11
...	375 38	915 8	44 36	92 8	2 3/4	...	2 6 4
...	1,391 2	3,012 8	87 6	131 0	25	...	2 2 0
2,356 0	3,492 9	9,170 8	337 25	822 0	21 3/4	...	2 9 9
81 0	361 15	965 4	1 30	2 12	27	...	2 10 8
731 0	831 26	2,334 8	17 7	44 0	24 3/4	...	2 12 10
508 8	582 6	1,687 8	1 10	2 4	21	...	2 14 4
574 0	1,435 3	3,677 0	56 7	125 0	20	...	2 8 10
759 8	2,366 31	5,884 0	73 16	140 8	42 1/4	...	2 7 6
7 4	53 22	659 0	1,036 8	3,233 4	40 32	79 0	41	...	3 1 2
151 0	726 36	1,954 12	43 19	90 0	28 1/2	...	2 10 6
64 0	2 16	8 8	105 16	1,092 0	1,163 9	3,561 0	312 3	600 0	77	...	2 13 2
...	803 21	...	...	...	...
227 0	2,652 2	6,920 8	192 25	313 0	31 1/2	...	2 8 8
293 12	17 1	144 0	1,143 36	2,956 4	76 18	163 0	40 3/4	...	2 8 11
...	32 12	...	...	...	...
2,285 8	140 37	408 0	2 4	19 0	2,244 22	6,269 8	48 38	116 0	35 1/2	...	2 12 7
123 0	13 11	31 12	118 22	979 0	773 4	2,475 4	403 16	342 0	92 1/2	...	2 13 7
...	215 20	...	...	...	...
571 8	1,741 39	4,196 0	75 9	...	...	...	...
166 8	908 6	2,103 8	38 17	65 8	42 1/4	...	2 6 4
156 0	497 30	1,092 12	14 5	24 0	35 1/4	...	2 4 11
692 8	584 20	1,705 0	26 24	34 0	24 3/4	...	2 2 5
1,299 8	1,001 24	2,956 8	62 1	130 0	22 1/2	...	2 13 5
79 8	1,235 3	3,256 0	187 8	423 0	28 1/2	...	2 13 6
...	31 1/2	...	2 10 2
86 12	156 24	448 4	296 25	2,893 0	29,007 19	76,800 12	2,520 15	4,897 0	32	...	2 9 6
...	1,314 18	...	...	...	...
...	126 26	662 0	155 32	702 8	.....	.....	288	...	4 8 2
28 12	150 8	418 8	10 5	97 0	1,340 17	3,328 4	378 29	488 0	22 3/4	...	2 6 7
30 0	324 9	814 12	241 33	105 0	...	10	2 6 1
68 0	53 6	137 0	46 35	337 0	979 29	2,437 5	282 35	32 0	28	...	2 7 9
55 8	109 10	303 0	1 3	9 0	507 6	1,240 4	62 11	1 8	14	...	2 7 2
2 8	28 25	78 0	...	...	651 25	1,242 4	14 18	137 0	18 1/2	...	1 14 0
46 8	2,621 14	5,363 0	54 39	...	...	...	...
42 8	2,041 15	4,434 10	0 21	425 0	18	...	2 0 3
67 8	286 27	624 8	23 27	791 0	17	...	1 15 9
...	366 2	744 8	14 18	575 0	20	...	2 2 6
11 8	583 2	1,524 8	269 37	74 0	...	5 1/4	1 14 4
17 0	21 0	61 0	...	...	1,686 2	4,066 12	65 6	143 0	19 1/2	...	2 8 10
13 8	3,383 36	6,391 8	69 34	152 0	16 3/4	...	2 6 2
08 8	1,218 6	2,296 0	84 4	331 0	2 1/4	...	1 13 10
48 0	1,776 8	3,707 0	220 18	574 0	19	...	1 11 2
11 8	631 31	1,229 0	469 24	374 0	24 3/4	...	2 0 4
66 8	442 15	1,231 0	245 31	362 0	15 1/4	...	1 10 2
71 0	296 38	602 8	341 8	365 0	18	...	2 8 2
205 8	1,145 15	2,137 12	193 25	3 0	17 3/4	...	2 0 5
283 0	1,086 13	2,004 0	1 29	3 0	17 3/4	...	1 12 8
528 0	448 14	1,103 0	86 4	71 0	21	...	1 12 4
1,142 0	1,318 28	3,188 8	292 13	437 0	16	...	2 6 2
378 0	794 33	1,818 8	26 24	30 0	17 3/4	...	2 4 7
2,086 0	2,939 25	6,591 12	210 36	312 0	24	...	2 4 0
...	469 6	907 8	32 3	40 8	16	...	2 4 0
91 8	543 26	1,329 8	512 8	432 0	22 1/4	...	2 0 7
88 8	1,375 22	2,585 8	29 18	61 0	21	...	1 15 1
67 8	2,028 29	4,318 0	123 11	200 0	18	...	2 4 8
...	295 34	293 0	17 3/4	...	1 11 7
758 12	362 9	997 8	184 29	1,105 0	31,443 5	67,964 3	88 30	162 0	44 3/4	...	2 1 10
...	4,902 0	6,971 0	21 1/2	...	2 1 0
...	740 10	...	...	...	...

No.	Name of Village.	Maximum dry-crop Rate.	Total culturable Area including Alienated.	Total Unculturable Area.	GOVERNMENT				
					Dry-crop.		Garden.		H
					Area.	Assessment.	Area.	Assessment.		Area.
1	2	3	4	5	6	7	8	9	10
CLASS III.									
		Rs. a.	A. g.	A. g.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.
1	Khareti	2 0	2,049 0	71 4	761 28	1,213 4	...	...	95 5
2	Kariána	2 0	1,751 21	138 32	831 27	1,087 12	...	...	69 7
3	Khálakpur... ..	2 0	216 17	7 8	151 32	220 4	...	...	37 20
4	Dehgámda	1 12	2,359 32	112 7	478 27	566 12	...	...	223 22
5	Hasannagar	1 12	597 0	33 3	440 14	600 4	...	...	34 39
6	Adroda	1 12	3,506 35	126 22	2,057 32	2,680 13	...	...	169 11
7	Dholi	1 12	3,306 35	95 16	1,858 35	2,656 0	...	...	.....
8	Ráipur	1 12	1,314 15	86 17	447 17	700 0	...	...	4 15
9	Kesrandi	1 8	5,127 0	587 22	2,582 5	2,286 4	...	...	319 28
	Total ... ..	...	20,228 35	1,258 11	9,610 17	12,011 5	...	...	953 27
CLASS IV.									
1	Jákhda	1 8	2,620 8	717 36	1,615 21	1,842 8	...	...	.....
2	Vejalka	1 8	6,440 36	322 14	1,811 31	1,938 12	...	...	23 9
3	Dugári	1 8	1,712 19	220 20	913 16	1,129 12	...	...	88 11
4	Memar	1 8	2,640 28	70 37	962 25	980 10	...	...	34 16
5	Dev-Dholera	1 8	2,549 30	252 20	1,092 28	693 0	...	...	220 29
6	Nánodra	1 8	6,469 20	240 22	1,443 24	1,318 8	...	...	548 35
7	Vásna Nánodra	1 8	1,442 5	60 10	435 2	402 12	...	...	174 16
8	Kavla	1 8	2,137 39	417 28	1,146 39	1,198 0	...	...	272 5
9	Sákod	1 8	4,216 17	340 5	2,271 29	2,204 14	...	...	329 25
10	Kánetar	1 8	3,263 30	614 37	1,233 13	893 2	...	...	163 0
	Total ... ..	...	33,493 32	3,257 29	12,926 28	12,601 14	...	...	1,854 26
CLASS V.									
1	Sarla	1 8	619 26	1,891 37	301 38	262 4	...	...	15 8
2	Meni	1 0	1,395 37	3,229 9	754 15	373 12	...	...	122 2
3	Durgi	1 0	1,772 39	6,260 31	570 22	299 4	...	...	61 4
4	Veji... ..	1 0	3,691 22	2,065 38	1,628 10	1,054 8	...	...	.....
	Total ... ..	...	7,480 4	13,447 35	3,255 5	1,989 12	...	...	198 14
	GRAND TOTAL ... ..	...	185,156 10	28,982 13	80,379 27	1,11,679 11	57 13	187 4	8,721 21

DI—continued.

SURVEY.		BY REVISION SURVEY.											
ORIGINAL.		GOVERNMENT DRY-CROP LANDS.											
Water rate Assessment.		Total.		Maximum dry-crop rate.	Total culturable area including alienated.	Total unculturable area.	Sub-soil water lands.		Non-sub-soil water lands.		Total.		
Dhekudi Assessment.	Total.	Area.	Assessment.				Area.	Assessment.	Area.	Assessment.	Area.	Assessment.	
Rs. a.	Rs. a.	A. g.	Rs. a.	Rs. a.	A. g.	A. g.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.	
13	14	15	16	17	18	19	20	21	22	23	24	25	
...	8 0	856 33	1,625 0	2 0	2,051 7	71 25	8 7	13 0	612 37	1,013 0	621 4	1,026 0	
...	36 8	900 34	1,405 8	2 0	1,766 25	138 17	58 8	90 0	692 18	947 0	750 26	1,037 0	
...	18 0	189 12	381 8	2 0	216 30	7 8	...	...	107 24	165 0	107 24	165 0
...	50 0	702 9	1,360 0	2 0	2,349 8	124 8	211 30	276 0	256 19	386 0	468 9	662 0	
...	79 0	475 13	750 12	2 0	594 30	37 29	162 0	289 0	266 31	448 0	428 31	737 0	
...	...	2,227 3	3,545 4	2 0	3,479 12	193 31	1,240 37	2,014 0	735 34	1,171 0	1,996 31	3,185 0	
...	...	1,858 35	2,656 0	2 0	3,174 39	226 18	...	...	1,859 23	3,100 0	1,859 23	3,100 0
...	...	451 32	713 0	2 0	1,311 21	86 20	...	...	444 15	798 0	444 15	798 0
...	78 8	2,901 33	3,320 12	2 0	5,188 11	644 19	1,430 20	2,195 0	975 13	1,350 0	2,405 33	3,545 0	
...	270 0	10,564 4	15,757 12	...	20,130 23	1,530 15	3,111 22	4,877 0	5,971 14	9,378 0	9,082 36	14,255 0	
...	...	1,615 21	1,842 8	1 12	2,636 3	701 5	...	...	1,631 16	2,315 8	1,631 16	2,315 8
...	...	1,835 0	2,002 8	1 12	6,438 14	341 3	...	...	1,805 37	2,352 0	1,805 37	2,352 0
...	12 0	1,001 27	1,463 8	1 12	1,712 36	220 10	...	...	911 36	1,341 0	911 36	1,341 0
...	...	97 1	1,086 8	1 12	2,625 8	87 23	...	...	959 38	1,168 0	959 38	1,168 0
...	104 0	1,313 17	1,339 0	1 12	2,545 0	284 39	894 23	806 0	136 34	79 8	1,031 17	885 8	
...	72 0	1,992 19	4,051 0	1 12	6,468 38	240 36	778 2	900 0	628 0	811 8	1,406 2	1,711 8	
...	...	609 18	1,492 8	1 12	1,446 2	56 38	443 9	552 8	...	...	443 9	552 8
...	18 0	1,419 4	2,487 0	1 12	2,125 37	429 30	732 35	989 0	215 15	287 8	948 10	1,276 8	
...	15 8	2,601 14	3,158 0	1 12	4,150 23	391 84	969 23	1,138 0	1,169 4	1,498 0	2,138 27	2,636 0	
...	...	1,396 13	1,301 8	1 12	3,225 38	652 27	474 35	556 0	591 32	638 0	1,066 27	1,194 0	
...	221 8	221 8	14,781 14	20,204 0	...	33,374 39	3,407 5	4,293 7	4,941 8	8,050 12	10,491 0	12,343 19	15,432 8
...	...	317 6	306 8	1 2	595 23	1,916 0	234 38	181 8	38 26	24 0	273 24	205 8	
...	...	876 17	722 0	1 2	1,346 20	3,277 10	525 35	325 0	38 6	23 8	564 1	348 8	
...	...	631 26	612 12	1 2	1,746 23	6,287 7	...	...	454 27	295 8	454 27	295 8
...	...	1,628 10	1,054 8	1 2	3,689 20	2,063 17	...	...	1,629 22	1,188 0	1,629 22	1,188 0
...	...	3,453 19	2,695 12	...	7,378 6	13,543 34	760 33	506 8	2,161 1	1,531 0	2,921 34	2,037 8	
5,955 4	430 0	6,385 4	89,158 21	1,52,832 12	...	1,85,701 15	28,950 2	37,667 31	75,476 0	38,293 5	62,869 0	75,965 36	1,38,345 0

Number.	Name of Village.	GOVERNMENT CONVERTED DRY-CROP (OR NEW RICE) LANDS.						Total Government Dry-crop Lands including converted Jirait.		Sub-soil Land			
		Sub-soil Water Lands.		Non-sub-soil Water Lands.		Total.		Area.	Assessment.	Area.	Assessment.		
		Area.	Assessment.	Area.	Assessment.	Area.	Assessment.						
								26	27	28	29	30	31	32	33	34
	CLASS III—continued.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.
1	Khareti	3 32	13 0	138 1	341 8	141 33	354 8	762 37	1,380 8	...	...	...	...
2	Kariána	56 6	135 8	22 4	56 8	78 10	192 0	628 36	1,229 0	69 23	2 2	...	...
3	Khálakpur ... ..	...	...	44 11	89 8	44 11	89 8	151 35	254 8	...	...	...	...
4	Dehgámdá ... ..	...	...	5 24	11 0	5 24	11 0	473 33	673 0	115 34	48 8	...	...
5	Hasannagar ... ..	...	...	11 20	28 8	11 20	28 8	440 11	765 8	...	...	...	...
6	Adroda	83 20	256 8	...	...	83 20	256 8	2,080 11	3,441 8	152 28	81 8	...	...
7	Dholi ... ..	...	...	...	...	...	...	1,859 23	3,100 0	...	...	...	...
8	Ráepur ... ..	...	...	...	...	...	...	444 15	798 0	...	...	...	...
9	Kesrandi	28 18	57 0	4 11	7 0	32 29	64 0	2,438 22	3,609 0	329 1	1,59 8	...	...
	Total ...	171 36	462 0	225 31	534 0	397 27	996 0	9,480 23	15,251 0	667 6	3,166 25	...	...
	CLASS IV.												
1	Jákhda ... ..	...	...	...	...	...	...	1,631 16	2,315 8	...	...	...	...
2	Vejaláka ... ..	...	...	2 32	5 8	2 32	5 8	1,808 29	2,357 8	...	...	...	...
3	Dugári ... ..	...	...	6 5	12 4	6 5	12 4	918 1	1,353 4	...	...	...	...
4	Memar ... ..	...	...	4 20	8 0	4 20	8 0	964 18	1,176 0	...	...	...	...
5	Dev-Dholera	4 10	7 12	...	...	4 10	7 12	1,035 27	893 4	181 2	627 2	...	...
6	Nánodra	50 0	130 8	5 4	10 12	55 4	141 4	1,461 6	1,852 12	526 16	2,770 2	...	...
7	Vasna Nánodra	0 3	0 4	...	...	0 3	0 4	443 12	552 12	166 0	900 0	...	...
8	Kavla	18 31	48 8	...	...	18 31	48 8	967 1	1,325 0	207 31	1,069 0	...	...
9	Sákod	27 36	79 0	...	...	27 36	79 0	2,166 23	2,715 0	284 37	1,222 0	...	...
10	Kanetar	1 21	2 2	...	...	1 21	2 2	1,068 8	1,196 2	55 1	191 8	...	...
	Total ...	102 21	268 2	18 21	36 8	121 2	304 10	12,464 21	15,737 2	1,421 7	6,780 8	...	...
	CLASS V.												
1	Sarla	0 8	0 4	...	...	0 8	0 4	273 32	205 12	12 25	36 8	...	...
2	Meni	4 26	2 10	...	...	4 26	2 10	568 27	351 2	120 36	396 8	...	...
3	Dnrgi ... ..	...	...	2 7	3 4	2 7	3 4	456 34	298 12	...	...	...	...
4	Veji ... ..	...	...	...	...	...	...	1,629 22	1,188 0	...	...	...	...
	Total ...	4 34	2 14	2 7	3 4	7 1	6 2	2,928 35	2,043 10	133 21	433 0	...	...
	GRAND TOTAL ...	1,945 26	5,550 14	837 0	2,211 9	2,782 26	7,762 7	78,748 22	1,46,107 7	6,247 32	29,886 8	2	2

Camp Asláli, Daskroi Táluka, }
1st March 1887.

continued.

Total.		Dhekudiat Lands.		Bhatta lands.		Total.		Government unoccupied assessed lands.		Percentage difference of Assessment.		Average Assessment of Government land per acre.
Assessment.	Area.	Assessment.	Area.	Assessment.	Area.	Assessment.	Area.	Assessment.	Increase.	Decrease.		
Rs.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.	A. g.	Rs. a.			Rs. a. p.
507 8	857 25	1,888 0	103 8	144 0	16½	...	2 1 10
264 8	898 19	1,493 8	483 8	526 0	6½	...	1 7 5
171 8	189 25	426 0	7 18	70 0	11½	...	2 3 5
960 0	698 19	1,633 0	319 0	347 0	20	...	1 15 2
126 0	475 35	891 8	9 29	15 8	18½	...	1 13 11
819 0	2,232 39	4,260 8	604 3	836 0	20½	...	1 12 9
...	1,859 23	3,100 0	26 7	42 0	16½	...	1 10 8
14 8	448 30	812 8	35 18	90 8	14	...	1 13 10
1,596 0	166 29	239 8	2,934 12	5,444 8	718 1	509 0	64	...	1 10 1
4,459 0	166 29	239 8	...	...	10,595 27	19,949 8	2,306 12	2,520 0	26½	...	1 11 10
...	...	...	...	...	1,631 16	2,315 8	...	...	25½	...	1 6 8
88 8	...	...	...	...	1,831 15	2,446 0	72 10	49 0	22½	...	1 5 0
381 0	...	...	...	...	1,001 20	1,734 4	51 12	62 0	18½	...	1 11 4
128 0	...	...	...	...	998 34	1,304 0	198 28	244 0	20	...	1 4 8
716 8	68 25	85 8	...	...	1,313 7	1,695 4	369 13	321 0	26½	...	1 3 2
2,799 8	...	...	...	...	1,994 16	4,652 4	677 22	868 0	14½	...	2 1 1
900 8	...	...	...	...	609 12	1,453 4	138 3	267 0	...	2½	2 4 9
1,069 0	225 5	348 0	...	...	1,399 37	2,742 0	346 20	506 0	11½	...	1 13 9
1,256 0	84 39	130 0	...	...	2,544 31	4,101 0	863 15	933 0	29½	...	1 7 8
488 8	180 33	245 8	...	...	1,392 39	1,930 2	880 38	587 0	48½	...	1 1 9
7,827 8	559 22	809 0	...	...	14,717 27	24,373-10	3,598 1	3,837 0	20½	...	1 8 8
36 8	10 36	11 8	...	...	297 13	253 12	46 32	40 8	...	17½	0 13 8
396 8	164 34	150 0	...	...	854 17	897 10	229 5	169 0	24½	...	0 15 9
288 0	111 17	98 8	...	...	629 15	685 4	570 21	902 0	11½	...	1 5 2
...	...	...	...	...	1,629 22	1,188 0	731 4	527 0	12½	...	0 11 7
721 0	287 7	260 0	...	...	3,410 27	3,024 10	1,577 22	1,638 8	12½	...	0 14 11
39,253 0	1,532 11	2,754 4	481 14	3,998 0	89,174 25	1,92,112 11	14,904 10	19,863 8	25½	...	2 0 7	

te.—The thick figures in column 46, under the heading "Government unoccupied assessed lands" relate to the acres of unoccupied unassessed "bhátta" lands.

A. S. BULKLEY,
Deputy Superintendent, Gujarát Revenue Survey.

*Appendix showing correspondence regarding the first Settlement of the
Dholka Pargana.*

INDEX.

**A.—EXPERIMENTAL SETTLEMENT OF 7 VILLAGES
OF THE DHOLKA PARGANA.**

	Page
Mr. Rogers' report No. 82, dated 20th June 1853	45—55
Captain Wingate's report No. 508, dated 9th August 1853	56—61
Report by the Collector of Ahmedabad, No. 604, dated 31st October 1853	62—72
Report by the Revenue Commissioner, No. 40, dated 6th January 1855... ..	72—73
Government Resolution No. 4736, dated 12th November 1855	74

B.—RESULT OF THE EXPERIMENT.

Mr. Rogers' report No. 40, dated 17th April 1854, reporting the result of the experi- mental settlement	75—81
Collector's report No. 91, dated 1st February 1855	81—87
Revenue Commissioner's report submitting the above, No. 706, dated 30th March 1855	87—89
Government Resolution No. 4735, dated 12th November 1855	89—90

**C.—INTRODUCTION OF THE SETTLEMENT INTO 38
VILLAGES OF THE SAME PARGANA.**

Mr. Rogers' report No. 137, dated 14th December 1854	91—109
Sanction of the Revenue Commissioner to the introduction in anticipation of Govern- ment sanction, No. 666, dated 27th March 1855	109—110
Confirmation of above by Government Resolution No. 1634, dated 21st April 1855... ..	110
Report by Mr. Rogers on completion of settlement, No. 20, dated 14th January 1856	110—115

**D.—RESULTS OF THE REVISED SETTLEMENTS
IN 45 VILLAGES.**

Report by Mr. Rogers on result of the settlement, No. 27, dated 26th January 1856	116—118
Remarks on result of the settlement by Collector, No. 313, dated 16th March 1857	118
Do. of Assistant Collector, No. 55, dated 6th March 1857	118—119
Extract from Revenue Commissioner's No. 565, dated 6th March 1857	119
Order from Revenue Commissioner, No. 761, dated 27th March 1857, respecting the levy of the grazing tax	119

**E.—INTRODUCTION OF SETTLEMENT INTO THE REMAINING
57 VILLAGES OF THE DHOLKA PARGANA.**

Report by Mr. Rogers, No. 56, dated 25th May 1857	120—125
Forwarding letter of Commissioner, No. 2371, dated 27th October 1857... ..	126—127
Collector's forwarding letter not printed)	
Orders of Government, Government letter No. 5309, dated 19th December 1857, with order for submission of further particulars... ..	127—128
Mr. Rogers' No. 12, dated 25th January 1858, giving further particulars asked for... ..	128—132
Collector's forwarding letter No. 111, dated 3rd February 1858	132—133
Commissioner's do. No. 1011, dated 22nd May 1858	133
Query by Government, Government letter No. 2563, dated 31st July 1858, to Mr. Rogers	134
Mr. Rogers' reply No. 106, dated 4th August 1858	134
Order of Government, Government letter No. 3341, dated 12th October 1858	135—136
Report ordered by above from Mr. Rogers, No. 172, dated 10th November 1858	136—138
Revenue Commissioner's No. 2518, dated 23rd December 1858, replying to Govern- ment letter No. 3341, dated 12th October 1858	138—139
Government Resolution No. 247, dated 22nd January 1859, sanctioning the settle- ment	139

**A.—EXPERIMENTAL SETTLEMENT OF 7 VILLAGES
OF THE DHOLKA PARGANA.**

No. 82 of 1853.

FROM

A. ROGERS, ESQUIRE,
Settlement Officer;

TO

CAPTAIN WINGATE,
Revenue Survey Commissioner,
Mahábaleshvar.

Surat, 20th June 1853.

SIR,

The settlement of seven villages of this pargana, according to the 4th paragraph of the Resolution of Government, No. 6471 of 1852, passed under date the 8th October last, having now been completed, I have the honour to lay before you, for submission to Government for sanction, a statement of our proceedings in connection with the introduction of the experimental revised assessment into these villages together with a full explanation of the different arguments which have occurred to me in favour of and against the different methods of assessment of irrigated lands which peculiar circumstances not so frequently met with in the course of the survey of the Deccan and Southern Marátha Country and for dealing with which consequently we have not so much the aid of experience as a guide, have rendered it expedient to try on the first introduction of a revised assessment into the Province of Gujarát. As the general question of the effect of the introduction of the survey into the district will be fully discussed when its settlement, as a whole, is reported on, I will confine my remarks at present to those seven villages under report, and the different systems of assessment adopted in them.

2. The names of the villages and the systems of revenue management prevailing in them up to the present time are as follows:—

1. Ránesar	...	...	Bhágwattái or division of produce system.
2. Degámra	...	...	Do. do.
3. Hassannagar	...	...	Do. but for the last two years a fixed Bigoti.
4. Kocharia	...	...	Jinasvár Bigoti or crop-rate system.
5. Jhekra.	...	...	Do. do.
6. Shekri	...	...	Do. do.
7. Urasur	...	...	Do. do. and Bhágwattái combined.

Of these the first five form almost a group in the centre of the district: the sixth lies a few miles to the north of the town of Dholka itself and the seventh in what may almost be called the bed of the Sábarmati which for the most part bounds the district on the east, from the river, which formerly flowed to the east of it, having changed its course to the west. They embrace considerable varieties of soil, requiring for their cultivation widely different methods of husbandry, and their geological formation differs so much that the facilities for irrigation are much greater in some than in others, so that they are very favourable specimens for an experimental assessment, and will afford us examples of, I believe, every variety of soil and system that we shall meet with in the progress of the survey for some time to come at least, and their settlement will shortly give us the benefit of experience as a ground-work for any general system that may be adopted for the neighbouring districts.

3. You will recollect that when I reported at the end of last rains on the progress of the revenue survey from the time of its introduction in December 1851 I left the question of making the acre or the bigha the standard of assessment an open question. My hesitation in recommending the acre arose partly from my want of familiarity with calculations based upon that measurement, but having now become more accustomed to it and finding that the extraordinary

system of levying the Government revenue on the *ásra* or estimated *bigha*, notwithstanding the accurately recorded field measurements of the former revenue survey of the Province about thirty years ago in force to the present day, has rendered the only returns of cultivation that can be obtained untrustworthy in a great degree, I need no longer hesitate in concurring with you that the acre according to which the villages under report have been settled, should be the standard of the revised assessment in this as well as in the other Collectorates where the survey has already been introduced.

4. The almost universal prevalence of three different kinds of husbandry respectively for dry-crop lands, those cropped with rice and those in which garden crops are raised, has led to the adoption of three distinctive methods of assessment applicable to them. The peculiarity of the climate and the geographical position of the country which render the annual fall of rain very uncertain in quantity, and the circumstance of almost all rice crops being raised from tanks dependent on that fall, have necessitated with reference to rice crops (as the geological structure of the soil of the district, which renders even the best wells liable to become useless from their water becoming more or less salt, has, with reference to garden crops) a separation of the dry-crop from the water-rates of assessment. This has been effected by way of experiment in several ways which will presently be specified.

5. To the difficulty of obtaining fair averages of past collections on which to base the new assessment, owing to the system of collecting the village revenues by the *ásra* or estimated instead of the measured *bigha* you can yourself bear witness. I need only mention that of the seven villages settled those only in which the current *bighás* were found pretty nearly to coincide with the cultivated area as ascertained by the new measurements were *Ránesar* and *Hassannagar*, in which the former survey measurements had been adopted, and *Shekri*, which consists entirely of small fields surrounded by permanent hedges which seldom change their boundaries. In *Urasur* the *Taláti's* accounts showed the estimated *bighás* under cultivation as equivalent to about 163 acres, whereas the actual cultivated area was more than 423 acres: in *Jhekra* the area shown in the estimated *bighás* was about $\frac{1}{3}$ too small; in *Degámra* $\frac{1}{2}$ and in *Kocharia* $\frac{2}{3}$. A comparison of the total areas of the seven villages gives the following return: the difference may be accounted for by the plan adopted in the former revenue survey of calculating the total area of each village by scale from the map, and finding the amount of unarable land by deducting from that the number of *bighás* under cultivation ascertained by measurement:—

		<i>Old Survey.</i>			<i>New Survey.</i>					
		Acres g. a.			Acres g. a.					
1	<i>Hassannagar</i> ...	...	...	...	645	24	15	614	25	0
2	<i>Ránesar</i> ...	...	...	...	1,433	7	10	1,577	29	9
3	<i>Degámra</i> ...	...	...	...	2,609	18	9	2,452	23	0
(<i>Not measured in detail.</i>)										
4	<i>Kocharia</i> ...	...	...	...	2,377	4	5	2,302	25	0
5	<i>Jhekra</i> ...	...	...	...	1,231	9	9	1,151	33	0
6	<i>Shekri</i> ...	...	...	...	549	34	7	526	10	0
7	<i>Urasur</i> ...	...	...	...	577	23	15	660	17	0

6. It would be superfluous for me, when you yourself will be so well able to afford all the requisite information, to enter in detail into the reasons that led to the experimental assessment being fixed at the pitch at which it now stands: I will, therefore, in the confident hope that Government will sanction our proceedings, merely refer to the statistical statement of population, &c., annexed to this report, as in my opinion bearing strong evidence of over-assessment hitherto, in these villages at all events. The only village in which there has been an increase of cultivation at all (*Urasur*) has evidently not increased in prosperity in consequence, and its extension appears only to be owing to the increase of population among a poor and hardy set of peasants.

7. The chief market within easy reach of the villages now settled being the town of Dholka itself, the maximum rate of assessment for dry-crop soils has been fixed highest in the village of Shekri which is close to it: the maximum here is Rs. 2·4 the acre. In Urasur and Jhekra, which are about equi-distant from Dholka to the north-east and north-west, it has been fixed at Rs. 2, and in the remaining four villages which are further west than Jhekra at Rs. 1-12-0. These, according to the classification tables, give an average per acre for each village as follows:—

	Rs.	a.	p.		Rs.	a.	p.		
1. Shekri	1	10	8	5. Hassannagar...	...	1	5	4
2. Urasur	1	1	0	6. Degámra ...	...	1	1	11
3. Jhekra	1	7	0	7. Ránesar ...	...	1	1	4
4. Kocharia	1	3	5					

On the same principles as the above the maximum rate per acre for rice has been fixed at Rs. 7 in Ránesar, Degámra and Kocharia, and at Rs. 8 in Jhekra. In Hassannagar, as an exceptional case owing to local circumstances which will be explained presently, it was reduced to Rs. 6. Urasur and Shekri contain no rice lands under tanks. Different methods of assessment for lands irrigated from wells having been adopted in the different villages settled, a proper comparison of the maximum rates fixed for such lands is unattainable.

8. As shown above in paragraph 4 rice lands under tanks are liable in years of scarcity of rain or in those years in which it may not fall exactly at the proper seasons, to be left entirely waste: in such years they are sometimes, but rarely, cultivated with dry-crops. In order to obviate the necessity of full rice rates on such occasions we have settled that in the villages of Ránesar, Hassannagar, Kocharia and Jhekra, if the larger portion of rice lands are in any year left waste from the failure of rain, or only dry-crops grown in them, one-fourth only of the assessment fixed on them shall be levied. In Degámra separate dry-crop and water-rates have been fixed on the different fields, and the former only will be levied when the fields are left waste through the failure of rain or only dry-crops are grown for the same reasons. A lower maximum for rice lands has been considered necessary in the village of Hassannagar than in the neighbouring villages on account of their being situated at a distance from the village site, and higher than the tank from which their supply of water is derived, so that considerable labour is required in their cultivation. The whole of the rice lands had been waste for 13 out of 31 consecutive years.

9. The different systems for the assessment of lands irrigated from wells that have occurred to us are four in number, viz:—

I.—A rate fixed on the field, to be levied whether the whole or a portion of the land be cultivated with any kind of crop.

II.—A separate water-rate fixed on the field, to be levied when an irrigated crop is grown in any part or the whole of it.

III.—Rates, varying for the superior and less valuable kinds of irrigated crops, fixed on the well, and to be levied by measurement when such crops are raised in addition to the dry-crop rates fixed on the fields in which they are grown.

IV.—Rates fixed on the water-bags (koss or bhar) of each well, to be levied when water is drawn from them for the purpose of raising any kind of irrigated crops, whatever quantity of land may be watered in addition to the dry-crop rates fixed on the different fields to which it is taken. The points of view from which the merits of these different systems must be discussed and determined are probable effect upon the State revenue, risk of error at the time of settlement, convenience for future administration, applicability to the circumstances of the country, and tendency to stimulate industry and consequently increase the prosperity of the cultivators.

10. I think my idea of the merits and demerits of each of these will be best explained by placing my opinions *pro* and *con* in parallel columns as below:—

I.—A rate fixed on the field to be levied whether the whole or a portion of the land be cultivated with any kind of crop.

Pro.

1. Would be very convenient for future administration, inasmuch as it would obviate the necessity for any annual inspection or measurement.

2. Would stimulate industry on the part of the cultivator, who would have to pay the same whether he cultivated more or less of his field.

Con.

1. Would tend to keep the standard of assessment low as, if this were pitched at all high, the land, which of course requires occasional fallows or rotation of crops and would have to pay the same assessment under all circumstances, would probably be thrown up.

2. Would afford no remedy in the case commonly occurring, of the water of a well turning salt, or the well itself falling in, and would thus throw the land out of cultivation when either of these circumstances happened.

3. Would involve great risk of error at the time of settlement from the difficulty of ascertaining which fields, having a right to water, should be assessed as garden lands and which should not.

The risk of Government being defrauded under this system by fields assessed at garden rates being thrown up and the water from the wells being carried to lands assessed at dry-crop rates might be obviated by fixing a water-rate to be levied in addition to that for dry-crop for any field that might not be assessed as garden at the time of the survey, but this again would involve the trouble of annual inspection and measurement.

II.—A separate water-rate fixed on the field to be levied when an irrigated crop is grown in any part or the whole of it.

Pro.

1. Would do away with the 2nd objection to Plan No. I.

2. Would save annual measurement.

3. Would allow for fallows or rotation of crops.

To obviate the 1st objection, the same measures would have to be taken as shown above under the first plan, and these measures would be attended with the same inconveniences.

III.—Rates varying for the superior and less valuable kinds of irrigated crops, fixed on the well, and to be levied by measurement when such crops are raised in addition to the dry-crop rates fixed on the fields in which they are grown.

Pro.

1. Would save a great deal of trouble and risk of error in enquiring at the time of survey into the rights of different fields to water from particular wells.

2. Would provide for the case of wells becoming useless and allow for fallows and rotation of crops.

3. Would admit of a larger revenue being raised when superior kinds of crops are grown.

4. Would allow of all survey fields being measured of the usual size fixed for dry-crop fields instead of being cut up into small patches as garden lands.

Con.

1. Would involve the same objections as the 1st and 3rd against Plan No. I.

2. Would involve annual inspection of crops.

Con.

1. Would involve the difficulty of fixing fair proportionate rates for superior and inferior crops.

2. Would involve minute annual inspection and measurement, and probably the entertainment of an extra establishment for that purpose.

3. Would tend not to create the idea of property in wells, from the tax being levied from separate cultivators.

4. Would not act as a spur to industry, from each man's being able to cultivate as little as he liked and would thus tend to perpetuate the class of inferior cultivators not capitalists.

5. Would open a door for collusion and fraud in the annual inspections and measurements.

IV.—Rates fixed on the water-bags (koss or bhar) of each well, to be levied when water is drawn from them for the purpose of raising any kind of irrigated crops whatever quantity of land may be watered, in addition to the dry-crop rates fixed on the different fields to which it is taken.

Pro.

1. Would possess all the advantages enumerated under Plan No. III.

2. Would tend to create an idea of property in wells by enabling the owner to pay the Government demand and let out the water to others, and thus probably increase the number of wells.

3. Would stimulate to industry by the Government demands being limited, so as to allow the cultivator the benefit of greater exertion.

Great weight must attach to the 2nd objection against Plan No. III. on account of the change of the standard of measurement from the bigha to the acre, and none of the Village Accountants, Ameen Patels or members of the Mámlat-dár's establishments understanding the latter.

11. You are aware that I have all along been prejudiced in favour of this last plan of assessment as it appears to me to provide more than any of the others, for objections on all the points mentioned at the end of paragraph 8 above. I am, however, quite open to conviction from the result of experience to be derived from the present experiment and have endeavoured to give opinions in favour of and against the different methods dispassionately in order to afford an opportunity for the correction of any errors I may have fallen into. The first plan has not as yet been found suitable to any village on account of the rights to water of different fields being very ill-defined: the second plan has been adopted in Jhekra, the nature of the soil of which (an inferior goraroo or white) does not admit of the cultivation of the higher varieties of garden produce. The third plan will have its advantages well tested in Shekri and Urasur where all kinds of garden crops are raised: this has also been adopted in Degámra where garden crops are occasionally raised in rice lands. The fourth has been adopted in Kocharia and Hassannagar.

12. The above applying to "pukka" or built wells, another novel feature of the present settlement is the method adopted for the assessment of "kutcha" wells, i.e., wells not bricked or built up in any way. Owing to great determination towards the surface water is procurable in many villages of this district, especially those in the direction of the Null within a few feet. The water is, however, generally more or less brackish and unfit for anything but the raising of irrigated wheat and barley crops. In other villages again, such as Urasur situated close to the bed of the river, and themselves lying low, perfectly sweet water fit for the irrigation of sugarcane and other valuable garden crops is attainable with equal ease. Availing themselves of this peculiarity the cultivators dig what are called "kutcha" wells: this can be done generally at an average cost of about Rs. 5 and the wells are as long as they last just as useful for irrigation as the more expensive and permanent "pukka" wells. They generally last only for one season and fall in the rains, but are sometimes made serviceable for a second or even a third season by deepening or by strengthening the sides by basket work made of long coarse grass or of the plant twigs of the bastard cypress.

13. I am aware that many strong opinions have been given by men whose opinions are entitled to respect (among whom I may mention Mr. Shaw Stewart of the Civil Service) against any tax on this description of wells on account of its being a direct tax upon industry and therefore objectionable in principle. I think, however, that the proper light in which to look at the subject of their assessment is that of permanent improvement instead of mere temporary

Con.

1. Would open a door to collusion and fraud by concealment of the number of "koss" worked. (This however could in my opinion very easily be checked.)

2. Might tend to disputes as to who should take water. (To this Plan No. III. is equally liable.)

advantage. The ease with which this kind of irrigation can be effected, would, if not checked, tend to perpetuate the usual hand-to-mouth system of the inferior cultivators and would, by no means, have the effect of attracting capital permanently to the soil which we hope may be the result of the introduction of a liberal system of revenue management. We do away with one great objection to the assessment of these wells by making a rule that it is to be levied only when irrigated crops are raised, so that a cultivator is left at liberty at any time to dig a well in order merely to save any other kind of crop without being taxed for it, and by adopting the principles of not making the rates heavy enough to put a stop to this kind of cultivation but still sufficiently heavy to show the cultivator the advantage of sinking permanent wells for which no extra assessment would be levied, we hope to bring about a more lasting benefit to the country in the shape of real improvements and more substantial cultivators than would be obtained by not taxing, and thereby encouraging the sinking of temporary wells by men of no capital. Accordingly the highest rate fixed to be levied as a water-rate on each water-bag of a "kutchra" well capable of irrigating on an average from 3 to 3½ acres is three rupees, which gives about a rupee extra on the acre-rate for dry-crop land, when an irrigated crop is raised in it from a well of this description.

14. There is another kind of well which you will recollect seeing in the village of Urasur called a "Kundia" or "Kundel" well; instead of bricks it is built of large rounded tiles put together without cement. In Urasur the subsoil being for the most part mere sand, a frame-work of planks fastened together is let into the ground at the bottom of the well and the tiles built up on this to the surface; so loose, however, is the sand beneath that these wells, though about ten times more expensive than kutchra wells, cannot be calculated on to last for more than four or five years, and they have, therefore, in that village been assessed in the same manner as kutchra wells. In other localities where the substrata are of a more adhesive nature and where consequently these wells last almost as long as cemented brick wells or at all events for many years, I think it would be as well to offer the same inducements for their construction as those given to the solid brick wells.

15. Having thus sketched the general features of the settlement I will now show the result of it in each of the seven villages and make a few remarks *en passant* on points that will also be of general applicability and require official notice and decision:—

1. The village of Ránesar contains a large quantity of rice land watered with the water retained by an earthen embankment, a good deal of good black soil land capable of growing unirrigated wheat, and a small quantity of very inferior goraroo or white soil. It is this last that brings down the average of collections per acre of former years here below that of the surrounding villages: its best black soil is as good as that of any of its neighbours. The average annual collections of the village for 28 years have amounted to Rs. 869-13-5, and the amount according to the new settlement for the present year is Rs. 548-12-0. The decrease is owing in a great measure to almost the whole of the rice lands of the village being waste from the failure of rain, and if the full assessment according to the new settlement should be made up by waste Government lands being taken up, the net realizable revenue would come up to Rs. 852-12-0. This is exclusive of the Wanta measuring 565 acres 5 gunthás, which will be noticed presently.
2. The next village is Degámra; as it was formerly an inámi village belonging to the late Tálukdár Bápumya of this district, and was purchased on the part of Government in A.D.—, only the returns of 27 years have been procured for it. These give the average collections at Rs. 1,338 which, as compared with the net realizable revenue according to the new settlement on waste lands being taken up for cultivation, shows an increase in the latter of 518½ rupees: the present year's revenue, on account of the rice land (which with the black soil comprise nearly the whole village) being waste, is only Rs. 539. 1,292

acres 11 gunthás of the village out of a total of 2,452 acres 23 gunthás are Wánta. The cultivators are poor, and the Bhágwattái (division of produce) system prevailing up to this time having induced slovenly habits of cultivation, I do not anticipate that the waste lands in this village will be taken up so soon as those in the other villages.

3. The net realizable revenue of Hassannagar has been raised by the new settlement from an average of Rs. 532-7-7 to Rs. 548-12-0 in the present year: this is partly owing to the rice being waste. The village contains very little waste land and, if this were all taken up, the rental would amount to Rs. 852-12. The rates fixed by a Pancháyat in this and Ránesar and introduced in the year of Samvat 1907 (A.D. 1850-51) from being calculated on averages derived from ásrá or estimated bighás which were evidently much larger than they were put down at, were considerably too heavy, and it will be a great relief to the cultivators to get rid of them.
4. The net realizable revenue of Kocharia has also been raised from an average of Rs. 1,887-3-7 to Rs. 2,002-12 for the present year. The small amount of this even is owing in a great measure to rice not having been cultivated, and if the waste lands, which are considerable, were taken up, the rental would rise to Rs. 3,223-4. A large proportion of the village lands, 513 acres 16 gunthás, out of 2,302 acres 26 gunthás, is wánta.
5. The rental hitherto taken from the village of Jhekra has been so enormous, amounting on an average to Rs. 1,567-11-0, which gives an average of Rs. 2-15-0 on the (estimated) bigha of cultivation or about Rs. 5 an acre on unirrigated soils, that it is very evident a large proportion of it must really have been paid out of the proceeds of alienated land, of which the cultivators have almost all more or less in their possession. The average above is far greater than that of any village that I have as yet got returns made out for in the whole pargana, and I find from the Remark Book of the former Gujarát Revenue Survey that the rates of assessment were even then loudly complained of. The alienated lands are all nominally "nukura" or free, so that we have no direct method of deriving revenue from them though we evidently have done so indirectly. In order then to preserve the Government rights pending further enquiry and decision by Government as to the general taxation or otherwise of alienated lands, we have imposed on all alienated lands held by Government cultivators a tax of 8 annas per estimated bigha in lieu of the proportion of the plough tax of Rs. 4-10 for each pair of bullocks exacted under the old system from all Government cultivators, which would fall on the alienated land in their possession, the proportion falling on their Government land having been absorbed in the assessment fixed on their fields. We were obliged also, pending a general settlement of the question of village expenses, to allow an exemption to village servants, who, under the old system, did not pay plough tax at the rate of 8 annas fixed on alienated land on 16 bighás of land for each plough of exemption in addition to their own service land that they might cultivate. This has unavoidably created a good deal of confusion in the system of this village which ought to be rectified as soon as possible by a general settlement of the question of the assessment of alienated lands which I will revert to presently. The reduction of rental in this village that was requisite merely to equalize its assessment with that of the rest of the district has been great, and the revenue for the present year shows a falling off of Rs. 788-14-0 in consequence from the average annual collections of the preceding 32 years; it can never recover its former level to within about Rs. 80 unless the alienated lands are also assessed.
6. The village of Shekri consists entirely of goraroo or white soil capable of producing sugarcane and other valuable crops; the consequence is that being a small village, almost every number in it has at some time or other been cultivated as garden. Its revenue for the present

year shows a decrease from the average of former collections of Rs. 311-12-2, but it may, I think, recover its former level if any considerable quantity of the more valuable garden crops are raised.

7. I have already described the peculiar position of the village of Urasur; its soil is white and particularly fine in some parts where it can be found of any depth. The sand, however, in many places comes to within a foot of the surface, and as we have thought it advisable to set apart a number of fields to be sold annually by auction for the produce of the *sirkut* or coarse grass in them on account of its proceeds exceeding the amount of our assessment, I do not anticipate much permanent improvement in the village: its rental for the present year is Rs. 307½ less than the average collections of former years.

16. The assessment of alienated land is a matter of importance when we consider the large proportion it bears to the Government land in the district. A return I have had prepared from the Táluka Accounts shows the following proportions of Government land and alienated land free or paying revenue to the State in ásrá bighás in Samvat 1900 or A.D. 1843-44. I would have given the returns in acres from the old survey papers, had I not found that the general statements then compiled only give the different quantities of alienated land then in possession of people of different castes, and it would take too long to make out a statement from a compilation extracted from the books of each village separately:—

<i>Tulput or Government Lands.</i>	<i>Alienated Land paying Revenue.</i>	<i>Alienated Land Free.</i>	<i>Total of Columns II. and III.</i>
I.	II.	III.	IV.
Bs. ws. vws.	Bs. ws. vws.	Bs. ws. vws.	Bs. ws. vws.
169,857 4 18	41,035 6 0	84,789 3 0	125,824 9 0
	<i>Total of all the above.</i>		
	Bs. ws. vws.		
	295,711 13 18		

Thus the whole alienated land of the district is nearly equal in quantity to three-fourths of the tulput or Government land, and out of it the proportion paying any direct revenue is not one-half. The revenue derived from it in Samvat 1900 was Rs. 30,835-13-1 in proportion to Rs. 2,02,012-5-10 derived from Government land and Rs. 10,428-11-11 paid as cesses by Government cultivators, the former thus paying on an average 12 annas the bigha and the latter about Rs. 1-4-0. If the free alienated land had been assessed at the average rate, that the rest of it paid an increase in this one pargana of about Rs. 63,600 would have been profit to the State.

17. It would be out of place in this letter to enter into a detail of the different tenures on which alienated land is held. There is no doubt, however, of a great part of it being held in an unauthorized manner, and I believe that nine-tenths of the holders would not be able to produce documentary proof of their titles. Under these circumstances there is no doubt that a large proportion of these lands would be resumed if the operations of the Inám Commission were to be extended to Gujarát, but this would only be effected after the loss of much time and great expense and would provoke great hostility throughout the country which it might be difficult to appease or overcome. I have often thought of the plan you suggested when you were here of confirming by a "Sanad" or deed by our Government, of claims to those holders of alienated lands who might consent to pay a reasonable assessment on their lands, as one well worthy of consideration. The alternative to all that refused would, of course,

be investigation by the Inám Commission, which few could stand. As a precedent for some assessment being placed on alienated lands I may mention that from the year of Samvat 1876 (A.D. 1819-20) to Samvat 1881 (A.D. 1824-25) a rate of $\frac{1}{3}$ the usual assessment on Government lands was levied from all alienated lands throughout the Ahmedabad Collectorate as a quit-rent. It was not taken after the latter year, but from what cause I am not aware, neither the Revenue Selections nor any book of reference of that kind being on my records—I do not see why the holders of such lands should not, in some way or other, be made to contribute towards the expenses of a Government by which they are protected.

17 (a). There remains still a very important point with reference to the revised assessment in this part of the country to be discussed, i.e., the revenue to be derived from waste fields; and its solution is involved in considerable difficulty. I must explain that in this and the neighbouring districts there are in most places cattle belonging to these different classes, those of the cultivators, those of the Bharwars or professional cattle-herds, and those said to belong to the "Mahájans." These last are the shopkeepers and traders who pay contributions towards a fund for the maintenance of objects supposed to be worthy of charity, that is to say, the halt, lame, blind and diseased and useless cattle and animals of every description.

18. These animals and especially the cattle are assumed to have the right of living at free-quarters on the community, and the prejudices of the majority of the people are so great that such rights are practically allowed and the "Mahájans'" cattle wander at their convenience through the village limits without further let or hindrance than an occasional blow of a stick from some cultivator whose crop they may have attacked. To such an extent is this system carried that other cattle than those really fed on charity are deliberately let loose by other people (especially in the towns of the district) without anybody to look after them, on the chance of being allowed to feed upon their neighbours' property. Worse than this is the mischief done by cattle belonging to the professional cattle-herds. These men in the day-time generally go about with their cattle and keep them to waste lands, but at night let them loose to go wherever they like. In both cases the crops of the cultivators suffer, and owing to the state of the law by which no complaint can be entertained except where a precise amount of damage can be proved and then only by the injured party's having himself to take the trouble to go and get his witnesses (if he have any) summoned to the Mámátdár's kacheri, perhaps many miles off, redress is but seldom obtained, and, what is worse, the authorities are helpless to provide a remedy. As this is merely incidentally mentioned with reference to the assessment of waste lands, I need only say that the only remedy that occurs to me at present is the institution of village grounds and the infliction of a groundage-fee or fine on all cattle found loose within the boundaries of a village without some one to look after them, without proof of actual damage done being necessary. I have already addressed the Collector of Ahmedabad on this subject, but as it is a matter in which the rayats generally and, through them, the State, are deeply interested, should be glad if you would call the attention of Government to the subject.

19. The rule at present is that all cattle belonging to any village may graze within its limits on all waste lands without being liable to any payment, but if cattle are brought from any other village by a professional cattle-herd a tax has to be paid by the individual; the amount of this is fixed arbitrarily by the Amin Patels or their Gumástás, generally according to the number of months the cattle may have grazed; there is no way of checking this amount, when it is low, but if at all a large amount be fixed, it is sure to be appealed against: the door for collusion and fraud is wide open. Till within a few years and in some cases until they were abolished amongst the Kussab veras or cesses on trades, by the operation of Act XIX. of 1844, cesses used to be paid on cattle in various methods and under different names: sometimes a round sum was paid by a man according to his circumstances; sometimes the working cattle of cultivators were exempt and only their milch-cows and buffaloes had to be paid for at so much per tail (Puchri vera, or tail tax); and sometimes only the Bharwars' cattle were taxed.) The idea of abolishing at one sweep taxes of this nature,

which were really only an indirect method of levying assessment from waste lands on the plea of their being taxes on industry was, to say the least of it, a hasty measure, and has had the effect of raising the idea that the cattle of a village have a right to graze in its waste lands, in regularly defined fields left fallow for a year or two, as well as common lands not generally cultivated, without paying for the privilege. The consequence has been that out of the seven villages under report only three fields out of those not taken up to be cultivated in the village of Shekri have been taken up to graze cattle in: in this village the fields are, as you are aware, mostly surrounded by permanent hedges, and those taken up for grass are most probably claimed by the parties, who have agreed for them on account of their having cultivated them at some time or other. Two of them fetched four annas each, and the third five annas. In none of the villages has a single field been taken up except for cultivation, as I anticipated.

20. I confess myself considerably at a loss what measures to recommend with reference to waste lands, and as any rules made on the subject will probably be made applicable to all the Gujarát Zillás, I think it will be better, before committing myself to any one opinion, to ascertain from the different Collectors the different methods in which a revenue is derived from waste lands, and reporting on it separately hereafter, without delaying any longer the transmission of the present letter. The difficulty is how to fix a cattle tax in such a way as to oblige those who are professional cattle-herds to take up certain portions of waste land for grazing so as to prevent their cattle from straying about and injuring the cultivators' crops without giving it the appearance of a tax upon their trade. If this could not be done, the cattle of all people with the exception of bullocks used for the plough might be taxed, but the question need not further be discussed at present.

21. Owing to mistakes having occurred in recording the old survey numbers of fields I have as yet been unable to take the necessary steps for bringing under assessment encroachments by the holders of alienated on the neighbouring Government lands, ascertained by the present survey. The numbers will be examined again and as all excess has been directed in the Government Resolution No. 6352, dated 30th September last, to be assessed, I have in the mean time instructed the Mámlatdár of Dholka to issue proclamations in the villages now settled that the question of assessment of encroachments is under consideration, in order to prevent any idea on the part of their holders that they have been confirmed in them by the survey operations, and allow of the point noticed in the concluding paragraph of your letter to me, No. 381, dated 30th October last, as to whether a legislative enactment will be necessary to enable us to throw as a quit-rent on a whole field the amount of survey assessment leviable on the part of it ascertained to be unauthorizedly held, being settled by Government.

22. In the seven villages under report there happens to have been only one small field liable to the payment of quit-rent or salámi; alienated lands in the other villages and all the rest in this are what is called "nukura" or entirely exempt from assessment, and Government cultivators are not liable to the payment of "swádia" for cultivating them. I learn from a late letter of yours to Government that you are about to submit a report on the subject of the assessment of alienated lands in Gujarát, and not being aware of what plan you are about to propose, can only refer you to my letter to your address, dated 4th October last, No. 76 of 1852, for a description of the difficulties surrounding any attempt at commuting the present different methods of assessment of such lands into a fixed annual payment without a legislative enactment of the nature mentioned in the seventh paragraph of that letter.

23. I have already in hand a report on the "gám-kharch" or village expenses of the Ahmedabad Zilla, and will defer until that is prepared certain suggestions that I wish to make on the subject of the pay of Talátis or Village Accountants under the new system and on that of the "kágál putha" or contingent allowance to be given them. In order to avoid confusion in the accounts from delay beyond the close of the revenue year, I beg to report for sanction that I have ordered the Mámlatdár of Dholka for the present year to calculate the Talátis' pay in the usual manner and pay the same contingent allowance as usual.

24. You will recollect that in the villages measured at the commencement of our operations in Dholka the wánta lands were measured in a lump or in large detached pieces as single numbers. These numbers not having been classified so as to admit of the regular survey assessment being put on them, I have directed the Mámlatdár of Dholka for the present year to place against the wánta lands in the villages of Ránesar, Degámra, Kocharia and Jhekra, respectively, the sums of Rs. 673, 1,434, 626 and 476, calculated at the average rates of assessment in them per acre of unirrigated soils as *nuksán* or deduction from the gross revenue of the villages on account of alienations; in the remaining three villages the wánta being in scattered positions was measured and classified in the usual manner. In all other alienated lands the full survey assessment on the acres in present position will, for the present, be shown as "nuksán", and no deduction be made on account of any encroachments ascertained by our measurements.

25. In accordance with the principles of Rule 21 of those in paragraph 84 of the joint report the following dates for the payment of instalments of revenue, fixed upon a careful consideration of the seasons at which the early and late crops are gathered, have been settled and are reported for sanction:—

Kind of Villages.	I.	II.	III.
Kharíf or early crop villages ...	1st January ...	15th February ...	1st April to 15th May.
Rabi or late crop villages ...	1st February ...	15th March ...	1st May to 15th June.

In conclusion, I have the honour to request the usual guarantee for the continuance of the rates fixed for the villages under report for the term of thirty years from Samvat 1909 or A.D. 1852-53. At the same time I have the honour respectfully to suggest that the apportionment of these rates in garden and rice lands may be left an open question, in order to enable the survey officers to recommend one uniform system of assessment for the whole district, whenever the result of the present experiment may enable them with confidence to make a selection of the various plans enumerated above. As the rates themselves are not meant to be altered, there can be no objection to this on the plea of keeping the minds of the cultivators in a state of uncertainty, whereas, if it be not done, we shall have different systems of revenue management prevailing in the same district. I am happy to be able to report that the settlement appears to have given general satisfaction and that the survey and classification of the Dholka Pargana are progressing most favourably under the able superintendence of Captain Fanning and the Assistant Superintendents.

I have the honour, &c.,

(Signed) A. ROGERS.

P.S.—I find that I have omitted above to mention that, owing to the universal custom in this province of reckoning the commencement of agricultural operations from the *Nakshatra* called the *Mrigshur* which invariably occurs on or about the 5th of June, we have thought it advisable to change the latest date for taking the Rázináma or petition to throw up lands, prescribed in Rule 20 of those in the joint report, to the 5th June in each year. It will need time to get the cultivators accustomed to this, especially in villages where late crops prevail, and I therefore hope you will concur with me in recommending the alteration in the rule referred to. The remainder of the rules with the exception of No. 21 continue in substance the same as before.

(Signed) A. R.

No. 503 of 1853.

FROM

CAPTAIN G. WINGATE,
Revenue Survey Commissioner;

To

J. W. HADOW, ESQUIRE,
Acting Collector of Ahmedabad.

Camp Poona, 9th August 1853.

SIR,

I have the honour to request that you will submit, for the consideration of Government, the accompanying original report No. 82, dated 20th June last, from Mr. Rogers, Settlement Officer in Gujarát, in explanation of an experimental settlement of seven villages of the Dholka Pargana based on the Revenue Survey operations, which was carried into effect with my concurrence during the visit I paid to your Collectorate in February and March last, under the sanction conveyed in the Government Resolution No. 6471 of 1852.

2. Mr. Rogers' report contains a full and clear exposition of the settlement, and as I do not think it would be of advantage for me to attempt to epitomise it, I shall confine my observations to such points as seem to call for an expression of my opinion.

3. The acre instead of the bigha standard has been adopted for the experimental settlement and you will observe from the 3rd paragraph of Mr. Rogers' letter that he now concurs with me in thinking the former to be the most suitable for all parts of Gujarát. You are aware that the acre is the standard in all the surveyed Collectorates of the Deccan and Southern Marátha Country. It has also been adopted for the survey settlements of the Konkan and Khándesh, and I am sure that I need not do more than advert to the great importance of having one uniform standard of land measurement for all parts of the Presidency to satisfy you of the importance of introducing the acre standard in Gujarát.

4. Mr. Rogers in his 4th paragraph states that the peculiarities of the rice and garden cultivation in the Dholka District owing to the uncertain fall of rain, the geological character of the soil and the liability of the water in wells to become salt have necessitated in our experimental settlement the separation of the dry-crop from the water-rates of assessment. These peculiarities form the greatest difficulties in the way of a satisfactory settlement of the assessment, and as they require to be always borne in mind in considering the various ways in which we have essayed to meet them, it may not be out of place if I endeavour to describe them somewhat more fully than Mr. Rogers has done.

5. The rice lands are for the most part dependent on tanks which are quite dry in the hot weather and unless the rains fall sufficiently in the early part of the monsoon to fill them, and to enable the cultivators to sow the nursery beds from which the young rice plants are subsequently transplanted into the fields, rice crops cannot be raised at all. Ample falls of rain later in the season though sufficient to fill the tanks are of no avail, and as the early fall is very uncertain it is quite a common occurrence for the entire rice lands of a village to be left waste, so common indeed as to be a characteristic feature of the agriculture of the district. In illustration of this I may mention that out of the seven villages experimentally settled by us last season the rice lands of two, Ranesar and Degámbara, were left entirely uncultivated, though Degámbara is one of the finest rice villages in the district. This evil is too aggravated by the customs obtaining among the cultivators. Unless a tank fills sufficiently to admit of the irrigation from it of the whole plot of rice land laying below it, the custom in some villages is to prevent the cultivation of rice on any part of it so as to avoid disputes about the right to the water

6. Rice then cannot be cultivated with certainty every year. The question for consideration is not the liability of the rice crop to failure or the chances of the crop being good, bad or indifferent; but how to provide for the frequent occurrence of no rice crop at all. A good or even a fair rice crop yields a very remunerative return and would enable the rayat to pay a high rate of assessment with ease. One year then he would be in a position to pay readily a considerable assessment and in another he would have no produce to pay an assessment at all. This peculiarity was the cause of the rice land assessment being only levied when there was a crop on the ground, under all the native plans of assessment, and it points conclusively in my opinion to the future levy of the rice assessment in the shape of a water-rate additional to the ordinary dry-crop assessment to be levied only when rice crops are grown. A fixed assessment to be levied annually under all circumstances, as in the case of the rice lands of the Deccan and Konkan, appears to me to be quite unsuitable to the rice lands of your Collectorate, or, at all events, to the portion of them situated in the Dholka Pargana.

7. The garden cultivation is perhaps not less subject to vicissitude than the rice. It is almost confined to the gorádu or sandy soils, as contradistinguished from the black. The more permanent garden cultivation is irrigated from brick or tile built wells—and owing to there being no rock within a moderate depth of the surface of the ground, and to the treacherous nature of the sandy soil, the brick or tile work of these wells has to be built on a wooden platform which with its superstructure is gradually sunk into the ground by means of under excavation, as the building proceeds until it arrives at the depth where water is obtainable. These wells are liable to accident, and their duration is very uncertain. The pressure of the loose soil frequently causes the brick work to bulge and fall in when the well is destroyed, as owing to the nature of the soil an accident of this kind can seldom be repaired. A good well may last 70 years, but again it may not last 10. In the course of my short visit to the district I observed several wells which had fallen into disrepair and been disused within a very few years and learned that they were mere examples of an ordinary state of things. The uncertain duration of even the best built wells affords then a valid objection to a fixed assessment of irrigated land leviable under all circumstances.

8. Another and even stronger objection is to be found in the liability of the water in wells to become so salt as to be unfit for irrigation at all, or only suited for the irrigation of wheat and barley. The water indeed of perhaps the greater number of the wells in the district is now more or less brackish and is everywhere liable to become so, unless in the immediate vicinity of rivers or other large bodies of sweet water. The varied and varying quality of the water throughout the district may account for the assessment of irrigated land by crop rates and by shares of the produce which were distinctive features of the native system and well adapted to accommodate the amount of the Government dues to the varying value of the garden cultivation from year to year.

9. A third and the strongest objection of all to a fixed garden assessment on particular fields arises from a remarkable peculiarity in the gorádu soil. Though sandy and friable when in a dry state it becomes singularly compact and unabsorptive when wetted. The soil indeed appears to be composed of a mixture of very fine sand and clay, which form when wetted a natural plastic cement which is almost impervious to water. And owing to this, water can be conveyed from a well along a water course framed in this soil for a long distance with very little waste from absorption. I was quite surprised to see instances of fields under irrigation from wells situated not less than a quarter of a mile distant and occasionally, I think, even more. In the Deccan and Khándesh the absorptive character of the trap soils requires the cultivator to confine his irrigation to the immediate vicinity of his well, in order to avoid the loss of water that would result from attempting to convey it further off. This limits the garden cultivation to a particular locality, and facilitates greatly the imposition of a garden assessment on the field so watered. But the case is quite otherwise in the Dholka district. The water there can be conveniently conveyed to any field within a circuit of several hundred yards from the well, and you will readily understand how extremely difficult it is under such circumstances to determine

the extent of land in any or all of these fields to be assessed as irrigated. So great and indeed insuperable did these difficulties appear to us, that we came to the conclusion that no satisfactory settlement could be made by means of an irrigated assessment fixed invariably on a specified extent of land.

10. Mr. Rogers explains in his 5th paragraph the imperfect nature of the data on which we had to adjust the assessment owing to the bigha of the accounts being one of estimate and not of determinate area, in consequence of which it was impossible to ascertain exactly what had been the average rate of collections per acre in the villages for which Mr. Rogers had prepared returns of the cultivation and collections of past years. He also adverts in the same paragraph to a discrepancy in the entire acres of the seven villages according to the former and present surveys, which, he thinks, may be accounted for by the total area of each village at the former survey, being calculated by scale from the map. I have ascertained, however, that the areas given by Mr. Rogers, according to the present survey, are only the sum totals of the areas of all the survey fields, but do not include land within the limits of the villages but outside the boundaries of fields, as the village site, roads, nálas, &c., When the requisite additions to the area of all the survey fields are made on these accounts. I think it probable that the entire area of the lands of each village according to the present survey will be found to correspond very closely with that determined at the former survey.

11. Mr. Rogers leaves it to me to explain the reasons in detail that led to the experimental assessment being fixed at the pitch at which it now stands. The method of adjusting the rates is explained at page 15 of the printed survey correspondence, which we adhere to as closely as the information connected with past cultivation and collections would permit. We also availed ourselves of the local knowledge of those who were acquainted with the condition and peculiar circumstances of the different parts of the district as well as of the villages under settlement. Owing, however, to the imperfect nature of the information relative to past cultivation and collections, I do not feel certain that we have succeeded in pitching the assessment at the most suitable standard, or that it would be safe without further investigation to extend the maximum rates fixed upon to the other villages of the district. I am anxious to state this prominently in order that the Settlement Officer may not feel himself fettered by what has been done in the case of the seven villages experimentally settled, in proposing hereafter rates of assessment for the remainder of the district. He will by that time have materials for reducing the "Asra bighás" of the Talátis' accounts into their equivalent acres in the case of each village, and by means of complete and comparatively trustworthy data for the whole district thus obtained, he will be able to determine with much greater confidence than it was possible for us to do in the case of the seven villages under report the proper standard for the future assessment.

12. The maximum rates of assessment and the different experimental modes selected for the assessment and future management of rice and garden lands are described in the 7th to the 9th paragraph of the report and a contrasted statement of the several advantages and disadvantages of four plans that occurred to us for taxing the land irrigated from wells is given in the 10th para. The first plan was that of a fixed assessment on the field as in the Deccan and Southern Marátha Country, but this, as already explained, was found unsuitable. The three remaining plans only were actually tried; Mr. Rogers' summary of the respective advantages of the several plans is, I think, generally correct. There is one advantage however of plan No. III, which he has omitted to notice, viz., that it provides for the water of a well becoming brackish, without entailing the discontinuance of irrigation by lowering the assessment on the transition from superior crops such as sugarcane, ginger, plantains, &c., which require sweet water to inferior crops of wheat, barley, &c., which can be irrigated with brackish water.

13. Of the three plans I think Nos. III and IV most suitable to the peculiarities of the well irrigation in the Dholka district; No. III or that by which the rate is determined by the crops is, I think, theoretically the most perfect and has long been in use in many villages; but whether it will be found to work so satisfactorily as No. IV, which has yet to be tried as a practical measure re-

mains to be proved by experience. Of the five objections stated by Mr. Rogers against No. III, the 2nd and the 3rd are the only ones to which I attach importance. Mr. Rogers attaches great weight to the 2nd "on account of the change of the standard of measurement from the bigha to the acre, and none of the village accountants, amin pátils or members of the Mámlatdár's establishment understanding the latter." This, however, at the worst, could only be productive of temporary inconvenience, as there can be no doubt that in the course of time all the district and village officials in Gujarát will become as familiar with the acre as they now are with the bigha. These officials in the Deccan have learnt how to measure according to the acre standard and judging by the general quickness and intelligence of the Gujaráthis, I should certainly not anticipate any serious obstacles to the introduction of the new system of measurement with them.

14. Mr. Rogers also enumerates among the objections to which Nos. III and IV are both liable, that they might lead to disputes as to who should *take* water. But it is no part of a revenue settlement to determine who should take water. The point is to determine who should pay for the water, and disputes in regard to it are effectually prevented by No. III but are not in my opinion provided for by No. IV.

15. I do not venture to express however and do not even entertain a decided preference for any one of the three plans. I think it would be premature to do so at present, and that the most desirable course will be for Mr. Rogers to note carefully the difficulties that may attend the working of the three plans during the ensuing season, and, after a deliberate consideration of these difficulties and the means of meeting them, to submit his proposals for the assessment of the whole district. My intention was that the settlement should be purely tentative, as the circumstances to which it was applicable were at once novel and complicated and the objects we had in view will be fully attained if it clear the way for more definite conclusions at the close of another season.

16. The imposition of an extra assessment on land irrigated from kutch wells, discussed in the 12th and 18th paragraphs of Mr. Rogers' report is, in my opinion, a most legitimate source of revenue. It is in principle exactly similar to the assessment placed on waste land, which is not levied until the waste is appropriated. The productive capabilities of the soil remain dormant while the land is unoccupied and no assessment is consequently levied on waste, and in the same way the presence of water available for irrigation at a few feet below the surface is an undeveloped element capable of greatly increasing the value of land but not admitting of assessment until it is brought into use.

17. I concur with Mr. Rogers as to the treatment of "Kundel" or tile built wells, explained in his 14th paragraph. In his 15th paragraph he states the results of the settlement in the case of each of the seven villages, and I do not think it requisite to offer any additional observations on this head.

18. The assessment of alienated land is next considered by Mr. Rogers. I have had an opportunity of discussing this subject fully in a recent report to Government with which I submitted a draft No. 499, dated 4th August 1853, of an Act for the carrying out and future administration of revenue survey settlements in this Presidency. This draft contains provisions for commuting all existing cesses upon alienated land in Gujarát whether direct or indirect, into an equivalent assessment payable annually under all circumstances, and for the imposition besides of a tax of one-fourth of the ordinary assessment which should have the effect of curing all defects in the title on which the land may be held. Without such a tax it is clearly impossible to obtain an adequate revenue from the province of Gujarát under the revenue survey settlement; for the heavy assessment of the Talpat or Government land is now defrayed in part from the produce of alienated land. A most remarkable evidence of this and also of the fact that alienated land has enormously increased in value under our rule, is afforded by the statistical table of population, &c., in the seven experimentally settled villages which accompanies Mr. Rogers' report. This table exhibits the number of houses, inhabitants, ploughs, carts, and cultivation of Government land in the villages in question, at the former survey in 1823-24,

as well as at the present survey in 1852-53, and affords the following remarkable results:—

				No. in 1823-24.	No. in 1852-53.	Increase in 1852-53 per cent.
1. Houses—						
	Tiled	...	...	381	632	...
	Thatched	...	...	153	159	...
	Total	...	...	534	871	63
2. Inhabitants—						
	Males	...	...	843	1,205	...
	Females	...	...	641	1,107	...
	Total	...	...	1,484	2,312	56
	3. Ploughs	...	...	205½	312	52
	4. Carts	...	...	59	68	15
	5. Cultivated acres of first 5 villages in Table.			2,742	2,965	8
	Total	...	...	...	...	...

19. It thus appears that in the course of 29 years, houses have increased 63 per cent, population 56 per cent, and ploughs 52 per cent., while the cultivation of Government land has only increased 8 per cent. There is still a considerable extent of Government waste land in most of these villages and this singularly small extension of cultivation can, I think, only be accounted for by concluding that the heavy assessment of the Government land has checked cultivation and induced the cultivators to apply their greatly augmented resources in the cultivation of alienated lands. The assistance obtained from these has evidently enabled the village communities to increase in numbers and capital in spite of the heavy assessment of the Government land.

20. Mr. Rogers in his 14th and following paragraphs discusses the question as to the best means of obtaining a revenue from waste lands and enumerates the many difficulties in which the subject is involved. The damage done to crops by animals let loose to graze at large from motives of charity or religious prejudices, is one that must probably be remedied by the cultivators themselves. I think, however, that these and other animals found straying in cultivated lands might be pounded by the village authorities and only released on payment of a sum of 2 to 4 annas per head for each day they may remain in their charge, as it appears to me that the Magistrate is fully empowered to enforce such a regulation under the provisions of clause 8 of Section XIX of Regulation XII of 1827. Mr. Rogers, in consideration of the difficulties connected with the subject of waste, thinks it better before committing himself to any opinion to ascertain from the different Collectors of Gujarát the various methods in which a revenue is now derived from waste lands with a view to reporting on the subject hereafter separately which appears to be the most judicious course to adopt.

21. I would, however, observe that it is perhaps only in your Collectorate that the waste is so extensive as to make the subject of much importance; and that by the great extension of cultivation to be anticipated there from the operation of the survey settlements, it will gradually become less so. In devising the proposed arrangements it will be desirable I think to guard against their having the effect of impeding the free extension of cultivation through giving particular parties an interest in keeping the land waste for grazing purposes. The amount of revenue likely to be drawn from waste will, I apprehend, be found inconsiderable.

22. The measures taken by Mr. Rogers with a view to assessing encroachments on Government land by the holders of alienated land described in the

21st paragraph will, I trust, be approved. The commutation of cesses on alienated land into a fixed annual assessment noticed in his next paragraph has, as I have already mentioned, been provided for by the draft Act lately submitted by me to Government, and I may add that Mr. Rogers, to whom I referred the draft for opinion, considers its provisions amply sufficient for the purpose in question.

23. Mr. Rogers reports for sanction in the concluding paragraph of his report the arrangements he has made in connection with the village expenses, the nominal valuation in the accounts of the wánta land in four villages which has not been measured and assessed in detail, and for fixing the dates for the instalments by which the revenue is to be collected in the seven settled villages. All of these arrangements appear to be unobjectionable, and will, I hope, meet with the approval of Government. In his postscript he also reports that he has selected the 5th of June instead of the 30th of April mentioned in Rule 20 of the Joint Report as the latest date for accepting petitions to throw up lands. I think this may be approved as a provisional arrangement; but I think this question and also the dates for the revenue instalments should not be finally settled at present or until we have had experience of the working of the survey settlements in several districts. With the exceptions just noticed, the survey rules have been declared applicable to the settlement.

24. As the settlement, however, is confessedly experimental, and will, as regards the alienated lands, require readjustment in event of the draft Act already noticed becoming law, and it also may be desirable to alter some of the arrangements made for the collection of the assessment on rice and irrigated lands on the introduction of the system that may be eventually approved of for the remainder of the district, I am of opinion that it would not be expedient to declare the 30 years' guarantee to be immediately applicable to the experimental settlement, and would be preferable to defer doing so until Mr. Rogers submits for sanction his proposals for the assessment of the whole district of Dholka.

25. In conclusion, I will briefly state the conclusions to which I have been led from an attentive consideration of all the information at my disposal in regard to the most suitable settlement of the land tax in the district of Dholka. These conclusions are as follows:—

1st. The entire khálsa land, whether dry crop, rice or garden, should be assessed at the ordinary dry-crop rates, to be levied when the land is occupied without reference to the circumstance of the land being irrigated or not.

2nd. In addition to the dry crop assessment, there should, in the case of rice land, be imposed an irrigation cess of fixed amount for each field to be levied in the years in which any portion of the land is cultivated with rice.

3rd. In addition to the dry crop assessment, there should, in the case of well irrigation, be imposed an extra irrigation cess, to be levied when the water is used; but the particular mode in which this cess should be regulated and apportioned I am not yet prepared to specify.

4th. That a general assessment of alienated land is required in order to admit of a sufficient reduction being made in the assessment of the Talpat or Government land, as the latter assessment in reality now falls partly on the alienated land.

5th. That the field assessment and rules for the administration of revenue survey settlements introduced in the surveyed Collectorates of the Deccan and the Southern Marátha Country are quite applicable to the circumstances of the villages of Gujarát under the direct revenue management of the Collectors and not held on peculiar tenures, such as the Bhágdári, Nervádári, and others.

I have, &c.,

(Signed) G. WINGATE,
Revenue Survey Commissioner.

No. 604 of 1853.

FROM

J. W. HADOW, ESQUIRE,
Acting Collector of Ahmedabad;

TO

E. G. FAWCETT, ESQUIRE,
Revenue Commissioner, N. D.

Ahmedabad Collector's Office, 31st October 1853.

SIR,

At the request of Captain Wingate, Superintendent, Revenue Survey, containing in the accompanying letter dated 9th August last, I have the honour to submit, for the consideration of Government, an original report dated 20th June last, from Mr. Rogers, Settlement Officer in Gujarát, in explanation of an experimental settlement of seven villages of the Dholka Pargana.

Submitting original report from Mr. Rogers accompanied with the original letter from Captain Wingate on an experimental settlement of seven villages in the Dholka Pargana.

2. This settlement, as Captain Wingate states in the opening paragraph of his letter, is based on the revenue survey operations and was carried into effect with his concurrence during the visit he paid to this Collectorate in February and March last, under the sanction conveyed in the Government Resolution No. 6471 of 1853.

Based on the revenue survey operations and effected with Captain Wingate's concurrence.

3. After a careful perusal of Mr. Rogers' report and an attentive consideration of Captain Wingate's observations thereon, it appears to me that though most of the questions noticed are of that nature as to admit of a free discussion in reference to the advantages and disadvantages of the plans adopted in the experiment, as also in regard to the measures in contemplation of more general applicability on the extension of the settlement, yet there is hardly any one point on which it would not be premature at the present time to pronounce a decision.

Premature at the present time to pronounce a decision.

4. The safest course therefore to pursue in such a case while the experiment is in progress and the result yet to be judged would, it occurs to me, be to await Mr. Rogers' further report. It may be that from the vicissitude of season and other local peculiarities a trial of one year only will not be found conclusive. Captain Wingate's intention, to use his own words, was "that the settlement should be purely tentative as the circumstances to which it was applicable were at once novel and complicated and the objects we had in view will be fully attained if it clear the way for more definite conclusions at the close of the year."

The settlement having been intended to be purely tentative, further report of Mr. Rogers might be awaited.

5. It may be found therefore to answer every purpose if in transmitting this report I go briefly through the different topics, noting as I pass on such observations as have occurred to me and adding where I am able to do so my concurrence in the suggestions offered and measures proposed for carrying out the revenue survey settlement in this province.

6. The villages are enumerated in paragraph 2nd of Mr. Rogers' report. The position of the five first is described to be central and the land contiguous. The sixth is a few miles to the north of the town of Dholka, and the seventh is on the bank or rather close to the bed of the Sábarmati and occupies a portion of what appears to have been once a channel of the river. This is the village of Urasur, more than once particularly mentioned in the report.

Villages selected, position, soil, husbandry.

7. Embracing as they appear to do from the description Mr. Rogers gives of them varieties of soil requiring different methods of husbandry and capable of producing almost every sort of wet and dry crops, irrigated and unirrigated

Judicious selections of the villages noticed.

wheat, garden produce of all kinds from the sugarcane plantation, &c., the most common country vegetable, and the ordinary dry grains, possessing greater or less facilities of irrigation according to the geological formation, and presenting natural difficulties in the way of a satisfactory settlement the selection of these villages for the experiment evinces in my humble opinion no ordinary discernment on the part of the officer or officers on whom may have devolved the duty of selecting them.

8. Take for instance *Ránesur*, the first in the list, and one of the central group. Here we find three distinct kinds of soil, differently tilled and differently cropped. A small quantity of goradoo (whitish soil composed of sand and clay), the pure black mould answering to the finer description of regur in the Southern Marátha District and the kaerda (a kind of intermediate soil of a brownish colour containing a mixture of goradoo and black mould) suitable for rice cultivation and, where water is abundant, said to be very productive. *Shekree*, again, which is a few miles from Dholka, appears to be entirely goradoo of fine quality, well adapted for garden cultivation, and *Urasar*, the seventh in the list, is much the same as regards soil, except that there is an abundance of sweet water easily attainable, while *Degámra*, which is another of the group, is almost entirely of black soil and kaerda.

9. Mr. Rogers, though an advocate at first of the bigha as the standard of measurement, has since, as appears from his 3rd paragraph, found reason to change his opinion, and now concurs with Captain Wingate in the inexpediency of introducing the acre as the standard. It has accordingly been adopted for the experimental assessment, and should, I am respectfully of opinion, be adhered to as the standard of measurement for all lands throughout the province as recommended by Captain Wingate.

10. As might be expected in villages circumstanced as they are, the husbandry would be found to have gradually adapted itself, not unskilfully though somewhat rudely perhaps to the particular kinds of cultivation; and this adaptation combined with the peculiarities of soil and vicissitude of climate characteristic of this province is explained by Mr. Rogers in his 4th paragraph to have necessitated by way of experiment the separation of the dry-crop from the water-rates of assessment, those for rice and garden land being as usual separately considered, thus giving, as Mr. Rogers states, three distinct methods for the three kinds of cultivation.

11. Captain Wingate in paragraphs 5 to 9 describes more fully these peculiarities of soil and climate; and, as appears to me, very clearly demonstrates that no plan of assessment for the rice and garden lands in this province, dependent on tanks and wells for irrigation, can have a chance of success, unless it be so constructed as to be readily adaptable to vicissitude of climate and local peculiarities and exigencies which render the cultivation of wet-crops not within reach of rivers and streams laborious and pre-eminently precarious.

12. In regard to the rice cultivation Captain Wingate states that the young plants have to be raised in nursery beds at the very commencement of the rainy season and from them transplanted. If the tanks are dry at that time, as is frequently the case (for few retain water when filled for more than six or eight months), and the first fall of rains is insufficient or inopportune, the plants cannot be raised, or if raised, cannot be transplanted, and the consequence is the lands remain unsown. An after-fall is of no use as regards rice cultivation, for the season has passed, and the lands therefore remain entirely waste or are sown, as a last resource, with inferior dry-crops of some kind.

13. It is not unusual above the Gháts to find rice lands dependent in a great measure on tank irrigation, but where the cultivation is carried on extensively as in the southern

districts of Dhárwár, and in some of those to the west of Belgaum, the tanks being fed from springs of sweet water and other sources, are not liable to become dry even should the rain be scanty or have failed entirely, and therefore in that part of the country if the tanks are not choked up and only kept in tolerable condition, a supply of water may at all times be depended upon.

14. So uncertain is the early fall of rain that Captain Wingate states it to be "quite a common occurrence for the entire rice land of a village to be left waste, so common indeed as to be a characteristic feature of the agriculture of the district," and at the end of the same paragraph from which the above quotation is given he describes the custom in some villages to prevent disputes as to the right of water when the supply in the tank is insufficient for the watering of the whole plot below it.

15. To this uncertainty and other peculiarities may, no doubt, be ascribed the origin of the native plans of taking the higher assessment only when there was a crop on the ground, and Captain Wingate is of opinion that it points conclusively to the future levy of the rice assessment in this pargana in the shape of water-rate, additional to the ordinary dry-crop assessment.

16. As regards the garden cultivation Captain Wingate shows (paragraphs 7 to 9) that though not affected so much perhaps as the rice by the uncertainty of the fall of rain it is not the less exempt from vicissitude, the peculiarities of the soil rendering the cultivation both expensive and particularly liable to risk, partly from its shifting nature which is of course opposed to the duration of the best constructed wells, and from the liability of the water to become so salt as to be totally unfit for irrigation of garden produce and only suited for barley or wheat. Captain Wingate describes the water of the greater number of wells "as more or less brackish and everywhere liable to become so except in the immediate vicinity of rivers or large beds of sweet water."

17. The above would seem in themselves to present sufficient objection to a fixed assessment on particular fields or gardens, for it is quite evident that such contingencies as have been noticed could not be adequately met or provided for by any attempt at adjustment, but there is yet another objection to a fixed assessment which Captain Wingate considers the strongest of all, namely, the distance from the wells of the garden or rather patches of garden cultivation which are not, as is the case in the Deccan and Khandesh, confined to the immediate vicinity of the well and limited to a particular locality.

18. This peculiarity is explained by Captain Wingate to be owing to the facility with which the water can be carried along the rudely constructed water-courses formed out of the soil (which when once wetted becomes a plastic cement impervious to water, so that little is lost from absorption) and made available at pleasure for any field or patch of ground often, as Captain Wingate states he found to be the case at a distance of a quarter of a mile or more from the well and within a circuit perhaps of several hundred yards, so that it becomes extremely difficult to determine the extent of land that is to be assessed as irrigated.

19. This is described by Mr. Rogers (in paragraph 5) as having been so unsatisfactory as "data" on which to adjust the assessment owing to the measurements being entered according to the "Asra" or "Bigha" of estimate (which is of course of ever varying dimensions) instead

of at the survey bigha, which like the acre is one of determinate area, as to cause uncertainty in calculating with any approach to accuracy the average rates of collection per acre for the years for which returns had been prepared.

20. The practice of making the "Asra" or "Bigha" of estimate the one of accounts according to which the revenue is collected will, I believe, be found to be universal in the province where the Bigoti assessment may not have been introduced, but for what reason or object it may have been continued in preference to adopting the survey bigha I have failed to discover.

21. Captain Wingate notices the subject in paragraph 10 of his report, but not at length. Probably he has experienced similar difficulties in the adjustment of the assessment in other parts of the Presidency. He explains that what Mr. Rogers adverts to in the same paragraph as a discrepancy in the entire area of the seven villages according to the former and present surveys arises not from any inaccuracy caused by the area of the village having been calculated by scale from the map as conjectured by Mr. Rogers, but from the fact of the lands *outside* the bounds of fields, such as "roads," "nálas," "village sites," the Parampok of the Southern Marátha Districts not being included in the areas of the fields as given by Mr. Rogers according to the *present* survey. When these additions are made, Captain Wingate thinks, the areas according to the present and former surveys will be found very closely to correspond.

22. It would have been more satisfactory, I think, had Mr. Rogers himself afforded some information as to the reasons of the experimental assessment being fixed at the pitch at which it stands. He leaves it, however, as will be seen from his 6th paragraph, to Captain Wingate to supply the details and disposes of the subject with an expression of confident hope that their proceedings will be sanctioned by Government and a reference to a statistical table of population, &c., appended to his report as evidence of over-assessment.

23. Captain Wingate, in noticing this subject, explains (paragraph 11) that the method of adjusting the rates is as described in paragraph 15 of the printed Survey correspondence and that this was adhered to as closely as the imperfect nature of the information relative to past cultivation and collection permitted. He is evidently, however, not satisfied that the assessment has been pitched at the most suitable standard and has doubts whether without further investigation it would be safe to extend the maximum rates to other villages.

24. Fully aware of the imperfect nature of the information they had to refer to, Captain Wingate would rather that the Settlement Officer should avail himself of the requisite materials that will hereafter be at his disposal for reducing the Asra bighás into the equivalent acres and by correcting in this way former inaccuracies be in a position to determine by means of more complete and *comparatively* trustworthy data the proper standard for the whole district, than that he should put himself fettered by what has been done in the case of the seven experimental villages.

25. It would appear from paragraphs 7th and 8th of Mr. Rogers' report that different maximum rates have been fixed for different villages varying according to local advantages as regards distance from the chief market—a very important consideration to which due weight has always been attached in the revision of assessment in other parts of the Presidency, thus for *Shekri* which is close to Dholka, the chief market, the maximum for dry-crops is Rs. 2-4-0 per acre, and for Kocherea and other three villages at the greater distance it is Rs. 1-12-0. The average per acre according to the Classification Tables is given for five, and for these it varies from Rs. 1-10-8 (for *Shekri*) to Rs. 1-1-0 (for *Urasur*).

26. Judging from the kind of soil and the products grown, and bearing in mind the maximum revised rates for dry-crop lands in some of the Southern Marátha Districts, I should say that the rates fixed for these villages are pitched quite as high as circumstances warrant.

Rates appear as high as circumstances warrant.

27. As regards tank irrigation the cultivation of rice by this process appears to be confined to five out of the seven villages. The same principle, as regards local advantages being adhered to in four, gives Rs. 8 as the highest maximum for the rice lands of Jhekra next to Shekra in distance from Dholka. In Hassannaggar as an exceptional case (the lands of which Mr. Rogers states have been waste for 13 out of 31 consecutive years) the distance from which they are situated from the village was taken into consideration and the maximum rate was here lowered to Rs. 6.

Rice cultivation by irrigation from tank.

28. This last was, I believe, the maximum rate fixed for superior rice lands in the Misrikot Division of the Hubli District of the Dhárwár Collectorate, lands of superior quality with a climate not subject to the like vicissitude and pre-eminently suited for rice cultivation. In Hángal the maximum was Rs. 5, and for Turaies Rs. 5-8-0, and for the best description of rice lands capable of producing crops of sugarcane in the most favourably situated, in respect of markets, of the Dhárwár villages those belonging to the rainy section as Captain Wingate describes them Rs. 8 per acre was the maximum.

Maximum rates for superior rice lands in parts of the Southern Marátha Country.

29. It would appear therefore that in four out of the five villages in which rice cultivation is carried on by tank irrigation a fixed rate of assessment has been introduced, but in the event of the rice lands being left waste from the failure of rain in any year a fourth only of the assessment is to be levied. In Degámra the vicissitude of climate is to be met in another way by separating the dry-crop and water-rates, the former only to be levied when the fields are waste or only dry-crops grown.

How the assessment is to be levied when the lands are left waste.

30. It appears to me that if the uncertainty of the climate and the little dependence to be placed on seasonable falls of rain be so great as to render it necessary to provide against the contingency of the larger proportion of rice lands remaining waste by taking only $\frac{1}{4}$ th of the assessment, it might be a matter worthy of consideration whether it would not be preferable to try and meet that contingency by the application of a more simple and direct remedy.

Worthy of consideration whether a more simple and direct remedy for the vicissitude of season might not be applied.

31. I will not venture to offer any opinion at present as regards the standard at which the rates for the dry and wet crops have been pitched. Whether the maximum rates be too high or too low where so much is wanting in the shape of trustworthy and satisfactory "data" as regards measurements and past collections, and an intimate knowledge of the peculiarities of soil, climate, method of husbandry and other matters is indispensable, it would be presumptuous in me to do so.

No opinion offered as regards the standard of assessment.

32. The different systems and plans proposed for the assessment of garden lands under well irrigation are detailed in paragraphs 9 to 14 of Mr. Rogers', and I think satisfactorily disposed of in regard to their respective merits by Captain Wingate in paragraphs 12 to 17.

Plans of assessment for garden lands under well irrigation.

The four plans detailed. 33. Four distinct plans have, it appears, been duly considered—

- I. A fixed rate as in the Deccan and Southern Marátha Country.
- II. A separate water-rate.

III.—Crop rates fixed on the well to be levied by measurement in addition to the dry-crop rates varying according to the crops.

IV.—A tax with varying rates on the water-bags or kos or bhur in addition to the dry-crop rates when the water is used.

34. The merits and demerits of each plan are fully discussed by Mr. Rogers. The 1st plan appears to have been rejected at once as unsuitable, and the remaining three only actually tried. In reference to that part of Mr. Rogers' summary of the advantages and disadvantages of the several plans which refers to No. III., Captain Wingate points out an omission as regards the advantages, *viz.*, the provision made to meet the contingency of the water becoming so brackish or salt as to prevent the cultivation of the *superior* crops, such as sugarcane, ginger, plantain, &c., which require sweet water, by lowering the assessment so as to adopt it to inferior crops of wheat, barley, &c., which can be irrigated with brackish water.

35. Mr. Rogers notices five objections against No. III. Of these Captain Wingate attaches importance to the 2nd and 3rd, *viz.*, involving minute annual inspection and measurement and a tendency to discourage the idea of property in wells, from the tax being levied from separate cultivators (?). As regards the 2nd Mr. Rogers attaches much weight, apparently "on account of the change of the standard of measurement from the bigha to the acre and none of the village accountants, amin patels or members of the Mám-latdár's establishment understanding the latter."

36. Captain Wingate in my opinion very satisfactorily disposes of this matter by showing that any inconvenience caused thereby could only be temporary, as the District and village officials in Gujarát would soon become as familiar with the acre as they now are with the bigha measurement. In the Southern Marátha Country the acre had to be substituted for "Mars" of various kinds and dimensions, and "Kurgis" of indeterminate area, depending more on the number and strength of the bullocks and the nature of the soil than the actual extent of land. In this province the transition is only from the bigha to the acre and therefore the novelty of the change should be much less.

37. Mr. Rogers explains in paragraph 11 that the second plan is under experiment in Jhekra where the soil is inferior Gorádu, the third will be well tested in Shekri and Urasur where all kinds of garden crops are raised, and that the fourth, *viz.* rates on the water-bags, have been adopted in Kocharia and Hassannaggar. Mr. Rogers is in favour of the last plan as being more comprehensive, and provides in his opinion more than any of the others for objections on all the points mentioned at the end of paragraph 8 of his report. Captain Wingate considers No. III, that by which the rate is determined by the crop *theoretically* the best, but does not feel quite sure that in *practice* it will be found to work so satisfactorily as No. IV which has yet to be tried.

38. I am myself inclined, after an attentive consideration of all that has been advanced for and against each plan, to give the preference to No. III as being the one that has long been in use in many villages, and as far as I am capable of judging well calculated to regulate the demands of Government to the varying value of the produce as affected by peculiarities of soil and climate. It would, however, be premature at present, as Captain Wingate remarks (paragraph 15), to express or even entertain any decided preference

for any of one of the three plans, and Government will, no doubt, concur with Captain Wingate as to the course it is desirable to pursue. Mr. Rogers' final report after the result of the experiment is known being awaited.

39. In paragraphs 12 to 18 Mr. Rogers discusses the question of an extra assessment to be imposed on land assessed at dry-crop

The "Kucha" or common well proposed to be taxed when in use.

rates when irrigated from "Kucha" wells; these wells are found chiefly in villages near the "Nal" and banks of rivers or streams; the water being within a few feet of the surface is here so easily procurable that it is not considered worth while to incur the trouble and expense accompanied with the usual risk of constructing "packa wells." Mr. Rogers thinks the system a bad one and would wish to see it checked by showing the cultivators the greater advantage of sinking permanent wells for which no extra assessment would be levied; this he would effect by imposing a tax of Rs. 3 on each water-bag of a "kucha" well, capable of irrigating from 3 to $3\frac{1}{2}$ acres which would be about a rupee extra on the acre-rate for dry-crop land, and mentions that the rule is that the tax is to be levied only when irrigated crops are raised and not when a cultivator merely avails himself of the facility with which water is procurable to save his withering crop.

40. Captain Wingate is of opinion that a tax on such wells, when used for irrigation, is a most legitimate source of revenue; "the presence of water available for irrigation at a few feet below the surface is an undeveloped element capable of greatly increasing the value of land but not admitting of assessment until brought into use." When fairly brought into use for raising garden produce, wheat, &c., it appears right that the cultivator should pay for it, and so far therefore I concur with Mr. Rogers and Captain Wingate in the propriety of taxing the "kucha" well when so used.

41. Mr. Rogers proposes (paragraph 14) to tax the kundel or tile-built wells on the same principle as the kucha, where the subsoil is sandy and treacherous, as is the case in Urasur, where it has been introduced. The expense of constructing these wells is considerable and the attendant risk great where the subsoil is loose. Captain Wingate concurs with Mr. Rogers in the proposed treatment of these wells which provides also, as will be seen, for extending to them, where the subsoil is firmer the same inducements for their construction as given to the solid brick wells.

42. In his 15th paragraph Mr. Rogers shows that result or rather the effect of the settlement on the realizable revenue in

Effect on the realizable revenue of the seven villages of the revised assessment.

Ránesur.

the case of each of the seven villages. As regards Ránesur, the average annual collections for 28 years are put down at Rs. 869-13-5. According to the statistical table appended to his report there were found to be 257 B. 1 W. under cultivation. As entered in the village accounts much of the land is, however, "Kaerda" and a good deal "Kala" of fine quality; according to the revised rates the amount for the present year is put down at Rs. 548-12-0, the decrease being attributable to the rice land not having been cultivated owing to the failure of rain: were the Government waste lands taken up, Mr. Rogers states the net realizable revenue would reach Rs. 852-12-0.

In Degámra the average annual collection for 21 years is put down at Rs. 1,338; on the Government waste lands being

Degámra.

taken up, there would be an increase in the net realizable revenue. According to the new settlement of Rs. 518-8-0, the year's revenue, however, owing to the rice lands being waste, is stated to be only Rs. 539; there is much wanta land. The rayats are poor and much immediate improvement is not anticipated.

The average realizable revenue of Hassannaggar is put down at Rs. 532-7-7 and the effect of the settlement is to raise it to

Hassannaggar.

Rs. 548-12-0 for the present year. If all the waste

lands were taken up, the rental, Mr. Rogers states, would amount to Rs. 852-12-0; the old rates are described as too heavy, and the revised assessment will, therefore, afford relief to the cultivators. In Kochurea the effect is to raise the average realizable revenue from Rs. 1,887-3-7 to Rs. 2,002-12-0 for the present year. On the waste lands being taken up Mr. Rogers states the rental would rise to Rs. 3,223-4-0. There appears to be much wanta also in this village.

The next village noticed is Jhekra. There appears to be a large quantity of alienated land in this village of the "Nakura" or Suru Inám description entirely exempt from assessment. The only way therefore to derive any revenue from these lands to make up for the loss to the State from the cultivators being drawn away from the Tulput to the Inám lands without directly taxing them, which according to practice and the understood rule could not be done in the case of Nukra Inám, was to assess the Government lands very heavily, and accordingly the average in the "Asra" bigha of cultivation in this village is found to be Rs. 2-15-0, or as Mr. Rogers states about Rs. 5 per acre! On irrigated soil a large proportion of this would, as Mr. Rogers assumes, no doubt, have been paid by the cultivators out of the proceeds of alienated lands. In order to equalize the assessment in this village the rental had to be reduced from Rs. 1,567-11-0, the average, to Rs. 788-14-0, nearly one-half, and Mr. Rogers explains that in order to protect the Government rights, pending the decision on the question of taxing alienated lands in general, a tax of 8 annas per estimated bigha has been imposed on all alienated lands held by Government cultivator in lieu of the proportion of plough-tax exacted in such cases under the old system, an exemption of the tax on 16 bighas of land for each plough of exemption being allowed the village servants for the reason explained by Mr. Rogers, pending the settlement of the village expenses.

Mr. Rogers states that this village can only recover its former level to within about Rs. 80 by the assessment of alienated lands.

The effect on the realizable revenue of Shekri, for the year of the revised rates is a decrease of Rs. 311-12-2; taking the average former collections the lands of this little village appear from what Mr. Rogers states to have been at one time cultivated almost entirely as gardens producing sugarcane and other valuable crops, and it is here that plan No. 3 for the assessment of such garden lands will be fairly tested. It would have been interesting had Mr. Rogers stated the proportion of the more valuable crops raised during the last year or two.

The rental of Urasur for the year mentioned is stated to be Rs. 307-8-0 less than the average collections of former years. Mr. Rogers explains that the Sirkut, a species of Giant grass, is produced in this village, and that as the produce exceeds in value the amount of the revised assessment, a number of fields have been set apart to be sold by auction annually.

43. The assessment of alienated land is considered by Mr. Rogers in paragraphs 16, 17 and by Captain Wingate in paragraphs 18, 19 of his letter; of its importance there can be no question when it is borne in mind how extensive these alienations of different kinds are in this province; how their existence has operated hitherto on the cultivation of the Government lands, and consequently on the revenue; and how materially the manner in which the question as regards their future treatment may be decided will eventually affect the settlement in reference to the rates of assessment on the unalienated Tulput lands.

44. A comparative view of the extent of alienated land held under distinct tenures in the Daskroi and Dholka Parganás is given in Captain Cruikshank's printed report, and this shows that the alienations in the latter greatly exceed those of the former. According to actual measurement it would appear to have been 44½ per cent. on the whole arable land, and 39 per cent. on the total area of the khálsa villages at that time, viz. in 1823-24, 66 in number.

45. There are now 92 Khálsa villages in Dholka, and Mr. Rogers finds the alienated land of all descriptions according to a return framed from the district accounts to be nearly equal to $\frac{3}{4}$ ths of the Tulput, and out of it the proportion paying direct revenue is not one-half. The return is, however, made out in "Asra" Bigha, including, I presume, all Tulput alienations under the head of Vechania, Gurania, Passaita, Chakuria, &c., as well as the Wazeefa and Wanta.

Present amount of alienations nearly equal to $\frac{3}{4}$ of the Tulput.

46. I do not concur with Mr. Rogers as to the magnitude of the difficulties that would have to be encountered, were these alienations subjected to the operations of the Inám Commission; the slowness of the process and the distance of time at which the enquiries might be expected to be completed, if now commenced, appears to me to be the chief obstacle; of the unauthorized nature of the majority of such alienations there does not, I believe, exist a doubt; and all that could be said in their favour is a kind of prescriptive right from uninterrupted enjoyment and long continuance in proof of the defect of title under which the "Tulput" alienations have been continued, if not of the illegality it appears hardly necessary to go deeper than the surface when it may be found in the summary way in which these alienations were taxed at pleasure under the Native Government, the tax either salámi or sevadia being looked upon as a regular and legitimate item of revenue as much as any other.

Difficulties in the way of extending the operations of the Inám Commissioner to Gujarát.

47. I am inclined therefore to think that Mr. Rogers has somewhat overestimated the difficulties of extending the Inám Commission to this province and confess that I am an advocate of the measure, as the only effectual way of disposing of and thus setting the public mind at rest as regards the legality of these alienations and the validity of the title under which continuance is claimed. It is with great deference that I venture on this expression of opinion, as I learn from paragraph 18 of Captain Wingate's letter that he has already in a Draft Act now before Government for carrying out the future administration of revenue survey settlements in this province, submitted a proposition for the future treatment of these lands.

A proposition for the future treatment of these lands made by Captain Wingate now before Government.

48. The necessity of greater protection for the revenue than exists at present, if the revenue settlement is to have a chance of success, is very clearly demonstrated by Captain Wingate in the paragraph of his letter above quoted, where he shows that the heavy assessment of the Tulput Government land is now defrayed in part from the produce of alienated land. As evidence of this and also of the enhanced value under our rule of alienated land he refers to the statistical table of population, &c., already adverted to.

The necessity of protection for the revenue shown by Captain Wingate in the effect on cultivation of Government land of the alienations.

49. This, as Captain Wingate explains (paragraph 19), shows that in the course of 29 years though population and ploughs have increased *each above 50 per cent.*, the cultivation of Government land, notwithstanding an abundance of waste, has only increased 8 per cent. The conclusion arrived at by Captain Wingate, as regards the cause of this trifling extension of cultivation, appears to be fully borne out, for such a result as is here shown, if any dependence is to be placed on the village records from which the information as to past cultivation, &c., has, I conclude, been derived, could be accounted for in no other way.

Proof of this afforded by the statistical table appended to Mr. Rogers' report.

50. The subject of revenue from waste land is brought forward in paragraphs 18, 19 and 20 of Mr. Rogers' report, and noticed in paragraphs 20 and 21 of Captain Wingate's letter. It appears to be a question involved at present in some difficulties. I can throw no light on it myself, and as Mr. Rogers is not prepared at present to recommend any specific plan for obtaining a revenue from these lands, and contemplates reporting on the subject hereafter in a separate letter,

Revenue from waste lands how to be derived.

on receipt of certain information called for, it would be premature to say more on the subject at present.

51. Before leaving the subject, Captain Wingate suggests a caution in reference to any arrangements that may hereafter be determined for raising a revenue from waste lands, which should, I am of opinion, be kept prominently in view by the Survey Officers, lest the interests of Government suffer in proportion as particular parties may find it to their advantage to keep the land waste for grazing purposes.

A caution suggested by Captain Wingate to prevent impediment to free extension of cultivation.

52. I have myself received many complaints from different parts of the Collectorate of the damage to crops caused by a practice common in this province of allowing cattle and other animals to roam about and graze wherever they please; whatever may be urged in defence of such a custom on the score of religion or prejudice, it is assuredly a practice not to be tolerated; and I have accordingly issued orders to the effect suggested by Captain Wingate which I trust, if not interfered with, will tend to check the nuisance.

Damage to crops by animals let loose to graze.

53. The report alluded to in paragraph 23 on the gaon-kharch or village expenses as being under preparation, has, I beg to say, been submitted by Mr. Rogers through Captain Wingate and will be forwarded in a few days. In order to avoid confusion in the accounts Mr. Rogers reports for sanction that for the present year he had directed the Mámldatár to pay the Talátis according to the old system.

The Talátis to be paid as usual, pending a decision on the proposed settlement of village expenses.

54. In paragraph 24 Mr. Rogers described the course pursued in reference to the wánta lands in the four villages named in the margin. They appear to have been measured in the lump and a nominal valuation assigned to them in the accounts under the head of "Nuksán" or deficit from alienations; in the remaining three villages the wánta being in scattered positions was measured and classified in the usual manner.

The measurement and assessment of wánta land described.

Ránesur.
Degámra.
Kochuria.
Jhekra.

55. These arrangements Captain Wingate considers unobjectionable and trusts that they will meet with the approval of Government.

56. In the postscript of his report Mr. Rogers states that he has selected the 5th June instead of the 30th April mentioned in Rule 20 of the Joint Report as the latest date for accepting petitions to throw up lands. Captain Wingate thinks that this may be approved of as a provisional arrangement, but would rather that the final settlement of this question and also the dates for the revenue instalments be deferred until they have had experience of the working of the survey settlements in several districts. I beg to add that I entirely concur with Captain Wingate and would recommend that his suggestion be acted upon.

The 5th June instead of 30th May selected as the latest date for petitions for resignation of lands.

57. I do not exactly see the necessity for or the utility of an extension of the date for receiving such petitions, except perhaps in regard to the "rabi" lands. With the exception of these lands, the Kaerda and Gorádu fields are ploughed mostly ready for sowing by the middle of June, and if a cultivator is to be allowed to put off making up his mind whether he will retain his field or throw it up until the 5th June, the chances are that much land will not be cultivated at all.

Necessity for or utility of an extension of the date from 30th May to 5th June not apparent.

58. I believe there is no great difference in this province, as compared with parts of the Southern Marátha Country, in reference to the period from which agricultural operations may be considered to commence, and if it was found expedient there to fix the 30th May as the latest date, the same rule would, I apprehend, be found to answer in Gujarát equally well.

No great difference as regards the period of commencement of agricultural operations.

59. Mr. Rogers requests the usual guarantee for the continuance of the revised rates of assessment for 30 years from 1852-53 ; Captain Wingate, for reasons which appear to me quite conclusive (paragraph 24 of his letter), is of opinion that it would not be expedient, while there is yet so much in regard to these seven villages that has to be arranged and may require re-adjustment, to declare the 30 years' guarantee *immediately* applicable to the settlement, and considers it would be preferable to defer doing so until Mr. Rogers submits, for sanction, his proposals for the assessment of the whole district.

60. In closing his letter Captain Wingate arranges under five heads the conclusions to which he has been led in regard to the most suitable settlement of the land-tax in the district of Dholka. To these I need only refer, feeling convinced of the soundness of the views therein expressed, and of the general applicability of the system therein advocated for the assessment of the three descriptions of land, the whole being assessed in the first instance at the ordinary dry-crop rates with an irrigation cess on rice lands when so cropped, and an extra irrigation cess in the case of well irrigation when the water is used.

61. In conclusion, I have to express my regret at having so long delayed the transmission of these reports, but press of business and an anxious desire to make myself conversant with the different important questions discussed, before I ventured to add any observations of my own, have caused their detention much longer than I intended or anticipated.

I have, &c.,

(Signed) J. W. HADOW,
Acting Collector.

No. 40 OF 1855.

TERRITORIAL DEPARTMENT, REVENUE

FROM

E. G. FAWCETT, ESQUIRE,
Revenue Commissioner, N. D. ;

TO

H. E. GOLDSMID, ESQUIRE,
Secretary to Government.

*Revenue Commissioner's Office,
Camp Dholka, 6th January 1855.*

SIR,

I have the honour to submit the report of Mr. Rogers, Settlement Officer in Gujarát, on the experimental introduction of the survey assessment into seven villages of the Dholka Pargana, Zilla Ahmedabad, as sanctioned by Government Resolution No. 6471 of 1852.

2. This proceeding was carried out with the concurrence of Captain Wingate, whose review of Mr. Rogers' report is also forwarded together with that of the Acting Collector, Mr. Hadow.

3. In these papers that subject is so fully discussed that to go over the ground again would but needlessly occupy the time of His Lordship in Council ; I shall, therefore, refer to the various subjects briefly.

4. The first question propounded is, what should be the standard of measurement? The acre has been decided on, and, I think, quite rightly. There

seems to be no greater difficulty in introducing a new measurement in Ahmedabad than in other parts of the country where the same difficulties have been surmounted and the advantage of having one standard throughout for the purpose of comparison is obvious.

5. The mode of arranging irrigation is next discussed. Four different modes are in question, but that of a fixed rate is unanimously discarded as unsuitable to the circumstances of the district. The *pros* and *cons* of the other three are clearly laid down and discussed at considerable length and all three are under trial in one or other of these villages which seem well selected, from offering varying peculiarities: it appears to me useless to enter further into the subject now. But when Mr. Rogers shall be prepared to report after a year's further experience of their practical effect, it will then be time to decide what is best suited to the peculiarities of this part of the country.

6. I concur in the propriety of taxing kutchra wells and also in treating *Kundel wells* on the same principle.

7 and 8. Mr. Rogers in his 15th paragraph proceeds to show the result of his settlement which, considering it was not a rice year, seems very satisfactory. The pitch of the assessment seems to have been fixed as nearly as practicable in accordance with the rules laid down in the printed survey report. The defectiveness of data has always formed a difficulty in this respect. Captain Wingate expresses uncertainty whether the rates now fixed are those most suitable, and this point will also require to be carefully observed and reported upon by Mr. Rogers after another season's experience. The subject of the assessment of alienated land is one of importance and difficulty. I have not found Captain Wingate's draft Act among the records handed over to this department. The principle of it, as far as I gather it from these papers, seems fair. I have already expressed my opinion on the general subject in paragraphs 26 to 31 of my letter No. 1000, dated 9th April 1853. Mr. Rogers entertains much the same view of the feelings of the people on the subject that I do myself. Mr. Hadow thinks Mr. Rogers over-estimates it, but it would not be prudent to reckon too securely on the few years' tranquillity that Gujarát has enjoyed. The plan proposed is, I consider, feasible, but whether it is introduced peaceably or otherwise will, I think, depend very much on the tact and discretion of the officer to whom the duty is entrusted.

9. These 7 villages will not unfortunately do much in showing the result of measures on this head, as it seems there is but one small field paying *salámi*, and the Government cultivators are not liable to *swadia*.

10. I concur in Captain Wingate's remarks on the subject of waste lands. Mr. Rogers' proceedings seem open to no particular objection, and I beg to recommend that they be confirmed as an experimental measure. It does not, however, seem advisable to give the guarantee for 30 years at present, for the reasons given by Captain Wingate.

11. The taking of *rázinámás* up to the 5th June being concurred in by that officer, I see no cause to raise objection; for the rest the Survey Rules may be declared applicable.

12. Mr. Rogers promises a further report on the subject of "gaon kharch" in the meantime he adopts former practice. His mode of estimating the value of alienations may be adopted for the present.

13. The dates on which instalments are to fall due are noted in paragraph 25 of the report. They are placed 15 days later than those laid down in paragraph 84, Rule 21, of the Joint Report.

14. The conclusions to which Captain Wingate has arrived, as laid down in the concluding paragraph of his report, will not fail to attract attention.

I have the honour to be,

Sir,

Your most obedient Servant,

(Signed) E. G. FAWCETT,
Revenue Commissioner, N. D.

No. 4736 of 1855.

TERRITORIAL DEPARTMENT, REVENUE.

To

E. G. FAWCETT, ESQUIRE,

Revenue Commissioner, N. D.

SIR,

I have placed before the Right Honourable the Governor in Council your letter No. 40, dated the 6th January 1855, submitting a communication from the Collector of Ahmedabad and its accompanying reports by Captain Wingate, late Revenue Survey Commissioner, and Mr. Rogers, Settlement Officer in Gujarát, on the experimental introduction of the survey assessment into seven villages of the Dholka Pargana, and have been directed to convey to you the following observations and instructions:—

The adoption of the Acre as the Standard of Measure.

2nd. Government sanction the adoption of the acre as the standard of measurement for all lands in Gujarát as recommended by Captain Wingate.

Modes and Rates of Assessment on Irrigated Lands.

3rd. On this subject you are referred to paragraph 5 of my letter of this date, No. 4735, in reply to your communication No. 706, dated the 30th March 1855.

Imposition of an extra Tax on Kutcha and "Kundel" Wells.

4th. Approved.

Results of the introduction of the Revised Assessment.

5th. Satisfactory.

Assessments on Alienated Lands.

6th. The Right Honourable the Governor in Council observes with much concern the large amount of alienated lands supposed to be held on invalid titles. The subject will receive due consideration from Government when disposing of Captain Wingate's communication No. 490, dated the 4th August 1853, now before them.

Raising of Revenue from Waste Land.

7th. The report promised in paragraph 21 of Mr. Rogers' letter will be awaited.

Measures adopted for assessing encroachments on Government Land.

8th. Approved.

Village Expenses and the mode of valuing Wánta Land.

9th. On the subject of village expenses you are referred to the observations and instructions contained in my letter of this date, No. 4733. Mr. Rogers' proceedings in directing a nominal valuation to be set on wánta land in the village of Ránesar, Degámra, Kocharia, and Jhekhra, are approved.

Fixing of Dates for the receipt of Revenue Instalments and for Applications to throw up Lands.

10th. His Lordship in Council concurs in the opinion expressed by Captain Wingate in the latter part of paragraph 23 of his letter to the effect that the question of fixing these dates should be deferred until sufficient experience has been acquired of the working of the survey settlement in the districts.

Thirty years' guarantee for the continuation of the Revised Rates of Assessment.

11th. As much yet remains to be adjusted Government are not inclined to make the 30 years' guarantee applicable to this experimental settlement until Mr. Rogers has submitted his proposals for the assessment of the whole district of Dholka.

I have the honour, &c.,

(Signed) H. YOUNG,

Officiating Chief Secretary to Government.

Bombay Castle, 12th November 1855.

B.—RESULT OF THE EXPERIMENT.

No. 40 of 1854.

To

J. W. HADOW, ESQUIRE,

Acting Collector of Ahmedabad,

Viramgam.

Gogha, 17th April 1854.

SIR,

Having as yet received no answer to my report of the 20th June last, No. 82 of 1853, to the late Revenue Survey Commissioner, which has been forwarded by you to Government with a letter from Captain Wingate, and being anxious to ascertain the sentiments of Government on the experimental assessment effected last year in the seven villages of the Dholka Pargana reported on in that letter before I venture to propose the introduction of the survey assessment into a greater number of villages, I have now the honour, in anticipation of the close of the revenue year, to submit, for the information of higher authority, the result of the experiment during the season of 1853-54 (Samvat 1910) which, I am happy to be able to state, notwithstanding the severe manner in which its provisions have been tested by the failure last year of the last and one of the most important falls of rain for the success of agricultural operations in that part of the country, has been highly satisfactory.

2. The comparative results of the three last seasons, *i.e.*, that of 1851-52 under the old system, of 1852-53 when the new assessment was introduced after the crops had been sown, and of that under report, as far as the net revenue is concerned, are as follows for the whole of the seven villages collectively:—

Samvat	...	...	...	1908	1909	1910
A. D.	...	...	...	1851-52	1852-53	1853-54
				Rs. a. p.	Rs. a. p.	Rs. a. p.
Rupees	...	...	...	11,346 8 10	5,764 1 6	7,939 6 5

The net increase in the present year over last under the survey settlement, after deduction of the sum of Rs. 78-11-10 (the decrease in the village of Shekri), amounts to Rs. 1,575-4-11. The decrease from the revenue raised under the old system of management in the year before last appears large, but when compared with the actual average realizations in the same villages for all the years of which I have been able to procure the returns, amounting to Rs. 8,339-3-9, the decrease, a fraction less than one thousand rupees, considering the large reduction made in the assessment of some of the villages as reported last year, is but trifling.

4. The remissions I have found it necessary to grant amount but to Rs. 69-14-0 of which Rs. 18 are strictly nominal, having been given on a well out of which it was decided at the settlement that water should be taken for a certain number of years free of assessment; Rs. 69 were granted in the village of Hassannagar, on the principle explained in the 8th paragraph of my report on the experimental settlement, on account of rice lands taken up but not cultivated

from want of rain; and only Rs. 2-8-0 had to be granted in Jhekra to a woman who was unable on account of her husband's death after the commencement of the season to cultivate a field he had agreed to take up.

5. It will tend to illustrate better the result of the experiment if I give an account of each village separately in the order in which I mentioned them last year, remarking in each how each part of the system with reference to the different plans of assessment for irrigated crops appears to have succeeded.

6. *I.—Ránesar.*—The increase in this village over last year has been Rs. 456-8-0; this is owing to the whole of the rice lands having been waste during last season, and the fields being taken up at the survey rates at the settlement, favourable rain having fallen. These were all cultivated. The extra number of fields taken up was 43.

II.—Degámra.—The same remarks apply to the increase in this village, Rs. 415-12-8. The extra number of fields taken up was 38. In this village the plan of assessment adopted for irrigated crops was that of annual measurement, but as only two kinds of irrigated crops (wheat and barley grown indiscriminately and about of equal nature) are raised, it is not a fair instance by which to judge at the success of the system. Irrigated cultivation during the season under report shows with reference to that of last year a decrease of 1 acre 26 gunthás.

III.—Hassannagar.—The net increase in this village after deducting the Rs. 69-6-0 mentioned in paragraph 4 is Rs. 37-6-0, the increase in numbers (84) taken up being 19. The necessity for the provision that, when rice lands agreed to be taken up at the survey rates cannot be cultivated on account of failure of rain, only a portion of those rates shall be collected and the remainder remitted, is here amply proved. The rice in such very small portions of the fields as were sown broad-cast for the preparation of rice plants of sufficient rain to allow of transplantation, and consequently if the full rates had been levied they would have fallen hard on the cultivators. In this village well irrigated crops were determined to be assessed by the levy of a fixed sum in the lump on each water-bag of wells used, in addition to the dry-crop rates on the fields, and "kutchá" or wells dug in the ground but not built up in any way, were to be assessed in the lump at Rs. 3 the water-bag: the result as compared with last year has been that in permanent wells two water-bags less have been used and two more "kutchá" wells dug. This would tend to show that the assessment on the latter is too light.

IV.—Kocharia.—The increase, Rs. 397-8-0, is owing chiefly to more rice having been able to be cultivated, the increase in numbers taken up having been 21. In the case of this village was amply proved the necessity of the precaution of ordering that the mere taking water out of a well whether built or unbricked to save an irrigated crop or rice for which the assessment was fixed on the land in which it could be grown was not to be considered sufficient cause for levying extra water-rates. The rice crops were failing for want of water, and 42 "kutchá" wells and 3 water-bags from permanent wells were worked to save it, of course without any additional levy. For other irrigated crops only one water-bag of a permanent well was worked, as in last year, but six additional "kutchá" wells were dug: this, as I have remarked in Hassannagar, tends to show that the assessment on the latter is too low.

V.—Jhekhria.—In this village the increase over last year in rupees is 131-9-6 and in numbers 25. The plan of assessment adopted here for well irrigated lands was of a fixed water-rate on the field, to be levied in addition to the dry-crop rate when a portion of it was watered. The result has been a decrease of Rs. 25-12-0 from the revenue derived last year from this source, but perhaps the result of a single season is scarcely a fair criterion by which to judge of the fitness or otherwise of this plan of assessment. The dislike to the plan of levying a cess on alienated lands on account of abolition of the plough-tax has been shown by the amount due for last year, though trifling, not having been paid: this, as I explained in my report, is merely a temporary measure, and will be remedied when the plan proposed for the regular assessment of alienated lands comes into play.

VI.—Shekri.—This is the only village of the seven that shows a decrease, which amounts to Rs. 78-11-10. This is one of the villages in which I mentioned last year that the plan of fixing two kinds of rates, one for the higher and another for the inferior kinds of irrigated or garden crops, on the different wells in the village according to the qualities of their water, to be levied by annual measurement, would be well tested. I will now give the details of the increase and decrease for the present year in order to allow you to judge for yourself whether it has been so or not:—

Increase.					Assessment.		
					Rs. a. p.		
Those fields taken up at survey rates (9)	...	...	...	...	54	12	0
Do. (sold by auction for grass)	...	...	...	...	1	1	0
Total					...	55	13 0

Decrease.					Assessment.		
					Rs. a. p.		
Fields thrown up (13)	...	...	...	...	32	0	0
"Piawa" or water-rate (on area irrigated)	...	...	...	...	102	6	10
Firewood sold	...	...	...	...	0	2	0
Total					...	134	8 10
Deduct Increase					...	55	13 0
Net Decrease					...	78	11 10

The item that at once strikes the eye in the above is that of "piawa" or water-rate, which shows a net decrease of Rs. 102-6-10, but as I intend before closing this report to devote some space to the discussion of the important question of the assessment of irrigated crops, I will only remark now that the area irrigated last year was 82 acres and that of this year is only 51 acres 29 gunthás, a decrease of 30 acres 11 gunthás.

VII.—Urasur.—This village shows a net increase of Rs. 142-14-7 over last year's revenue. The differential water-rate plan of assessment for irrigated crops was also tried in this village whilst an assessment was fixed in the lump at Rs. 3 on each water-bag of an unbricked well. The result has been that from permanent wells irrigated crops have been raised in 19 acres 3 gunthás less than last year, whilst the water-bags used in unbricked wells have increased from 8 to 26. The increase in the number of fields taken up at survey rates has been 5 and the net increase of revenue on that account Rs. 145-8-0.

7. Having thus given the detailed results of the experimental assessment for the first year of its fair trial, I will now venture to offer an opinion upon several points connected with the general system which those results and careful consideration and enquiry from other sources have enabled me to form.

8. In the first place, then, the general pitch of the dry-crop assessment of the different classes of villages appears, when the scantiness of the last rains upon which its success depended is considered, to be fair, and the same may be said of that of the rice lands, but it would be premature to say whether they may be considered applicable to the whole of the pargana until the completion of the measurement and classification of a large number of villages may enable me to look at the measure as a whole in all its bearings.

9. I now come to the question of land irrigated from wells of the four plans for which (described in detail in my report of the 20th June last) I men-

tioned that the 2nd, 3rd and 4th had been respectively tried in the village of Jhekra, in those of Shekri, Urasur and Degámra, and in those of Kocharia and Hassannagar.

10. Of these, I think, there can be no doubt that that tried in Jhekra may be abandoned at once as impracticable, for the reasons given by Captain Wingate in the letter with which he forwarded my report to you, *viz.*, that it is impossible to obtain trustworthy data on which to determine what fields have a right to water from certain wells, and what have not, simply from the fact of such fields not being fixed—from the water being often carried to such great distances from the wells that an attempt to trace the fields irrigated from a certain well for a number of years by the water-courses would be futile—and from the unnecessary increase of labour that would consequently fall on the Survey Department of fixing water as well as dry-crop rates on each field of every village.

11. There remain to be considered the 3rd and 4th plans of assessment for irrigated crops. The third I have shown above has failed by the test of experience in the villages of Shekri and Urasur, where alone it could be fairly tried; the decrease of irrigated cultivation in the village of Degámra is but trifling, but, as remarked already, this is not a fair case by which to test the system, because from the water being all so brackish as to admit no other sort of irrigated crops being raised but wheat and barley, the higher differential rates fixed for crops of a superior description are merely nominal. It stands moreover to reason that for an unscientific system of classification of soils and water such as ours must necessarily be, to have a moderate chance of success, the process should be as little liable to error and therefore as simple as possible; to add to the classification of soils and water one of crops is not the way to simplify it. To explain my meaning: there are produced by irrigation from wells in the Dholka Pargana the following varieties of crops:—Sugarcane, plantains, ginger, yams, sweet potatoes, chillies, turmeric, garlic, onions, wheat, barley, limes and many (other) kinds of inferior grains and vegetables, each of which the system would require us to throw into one of two classes, the high rated or the low rated: to do this it would have to be considered that some of them, although requiring a smaller amount of capital to be laid out than others, are much more liable to failure than the latter, and *vice versa*; whilst again some require a larger amount of care and attention on the part of the cultivators and others require more expenditure and less labour. Some require less water in proportion to their returns than others do; whilst the sensibility of some of the higher varieties of crops to the taint of brackishness in the water is so great that the water-rate for the higher must be reduced very nearly, if not quite to a level, with that for the inferior kinds of produce. To balance nicely all these would tax the skill of a thoroughly practical Indian agriculturist which no one who will ever conduct the operations of a revenue survey and assessment can be, and the chances of error in the settlement are, therefore, considerably multiplied by the adoption of this system. Add to this the necessity of annual measurement of crops and the effect the differential rates would have in fettering the cultivator's hands by his being burdened with heavier assessments the more he expended his time and his money in raising the valuable crop, and I think you will agree with me that the advantages of this plan are more than counterbalanced by its disadvantages. To support my arguments with facts: on enquiring into the reasons of the decrease in the revenue from water-rates in the village of Shekri, I was informed it was owing to the lower crop-rates fixed there being too heavy for it to be worth the cultivators' while to grow "methi" (a kind of small spice grain, hitherto extensively grown) and received a petition against what appeared to the people the injustice of having to pay water-rates on sugarcane and plantains during the time they took in coming to perfection and consequently yielded no return amounting in the former to one and in the latter to two seasons.

12. These difficulties would almost, though not quite, disappear, were the 4th plan of assessment for irrigated crops, that of fixing a cess or fixed water-rate on each water-bag of a well to be levied, whatever the land and quantity of land watered from it, and whatever crop might be raised, adopted. It would be comparatively easy to ascertain, approximately, the quantity of land that could be watered from a single water-bag of a well and the relative increase of value to

the land from being so watered, and a water-rate thus fixed would relieve the cultivator of the trouble, and the State of the expense of an annual measurement of crops, and would spur the former on to greater exertion in cultivating more land or raising a more valuable crop by the certainty that the profit would be, beyond a certain fixed point, all his own. The plan has not had a fair trial in Kocharia and Hassannagar, owing to the ease with which irrigation can be carried on from bricked wells, and yet the revenue from this source has increased in them.

13. Taking, therefore, the whole of the circumstances into consideration I have now no hesitation in respectfully recommending that the 4th plan mentioned in my report of the 20th June last and in the preceding paragraph of this letter for the assessment of garden lands should be the one adopted throughout the Dholka Pargana. I omitted to mention above that this plan would do away with the exceptions mentioned with reference to crops that take more than one season to come to perfection by enabling the cultivator without fear of further exaction to raise other irrigated crops from the same water-bag during the time he might not require it for raising his slowly ripening and more valuable crops.

14. At the settlement this year, I found that, owing to the matter not having been perfectly explained to the Talátis or Village Accountants, the collections of the current year's rental by the regular instalments had not been attended to for the first two instalments: this has now been set to rights. As the "hupta patruk" or list of instalments (No. 12 of the new forms of Revenue Accounts) could not be prepared, until, at the earliest, the end of February, if the water-rates were to be included in them, I have directed the Mámílatdár to enter in each of the first two instalments always one-fourth of the cultivator's *khátás* or accounts, according to the dry-crop rates only and to divide the increase on account of water-rates equally between the two last instalments, paying attention at the same time to the Government Resolution No. 2523 of the 2nd May. This I have now the honour to report for sanction.

15. I mentioned in the 23rd paragraph of my report of the 20th June last, having authorized the Mámílatdárs to deduct in the "jama kharch" or village expense allowance the same amount as usual for the Taláti's contingent expenses for last year. I subsequently directed him to report in detail the actual expense incurred in making up the books' accounts of the seven experimental villages and found that, in four out of the seven that had been measured in detail, the scale allowed in the Southern Marátha Country on the introduction of the survey assessment would be perfectly applicable here also. The remaining three villages contained large quantities of wánta land which was measured at first in large masses so that the expense to the Talátis in recording it was but little and the scale appeared too high: these lands are now, however, being cut up, and by the end of the season will be entered in the same detailed manner as Government land. When this is done the scale will be perfectly applicable, and I have, therefore, the honour to recommend its adoption generally on the introduction of the survey assessment into Gujarát. The difference in the 7 villages between the old and new scales is as follows:—

	Old,			New.		
	Rs.	a.	p.	Rs.	a.	p.
Ránesar ..	3	11	7	7	8	0
Degámra...	4	10	6	8	8	0
Hassannagar	4	3	0	5	0	0
Kocharia...	3	11	7	9	0	0
Jhekra ...	5	9	5	7	0	0
Shekri ...	6	8	3	5	0	0
Urasur ...	5	9	5	5	0	0

16. Another point to be adverted to is the scale of the Taláti's pay. On enquiry of the different Collectors I find that considerable difference in the method of calculating this exists in the four Gujarát Collectorates: it would be tedious

to enter into detailed calculations to show the rate of remuneration in each, but the following, calculated for a village with a net revenue of Rs. 7,453-3-4, will explain it :—

					Rs.	a.	p.	
Ahmedabad	...	...	...	...	134	0	6	per annum.
Kaira	...	...	...	...	167	6	7	do.
Broach	...	...	...	...	172	5	7	do.
Surat	...	...	...	...	174	8	6	do.

The reason of the much smaller amount in this zilla is owing to the pay being calculated on the net realizable revenue after deduction of village and izáfat expenses and after this 20 per cent. of the whole being cut: in the Kaira Collectorate the 20 per cent. are not cut, and in the Broach Collectorate the pay is calculated on the same amount of revenue, nothing being deducted up to Rs. 160, the value of the Taláti's pay according to the regular scale on Rs. 6,000 of revenue, whilst above that sum 15 *dokrás* or 2 annas 6 pies in the rupee are deducted. In Surat the only limit is that no Taláti can receive pay beyond Rs. 25 a month, be the revenue of his village whatever it will. In this zilla the lowest pay that a Taláti can receive is Rs. 6 a month, whilst in Kaira the lowest is Rs. 6 per annum, and in Broach and Surat Rs. 7 a month, or Rs. 84 a year. How these differences have arisen I am unable to say, but one thing is certain that a Taláti is worse paid here than he is anywhere else in British Gujarát. The Talátis are a class of officials on whom the preservation of land revenue depends more than on any others; their responsibility is consequently great and their remuneration ought to be proportionately liberal. Under these circumstances I have the honour respectfully to suggest, for the consideration of the Right Honourable the Governor in Council, that on the introduction of the revenue survey assessment into any district the pay of the village accountants may be calculated on the scale, and that the lowest scale of pay to be given may be fixed at Rs. 84 per annum. I have, likewise, the honour to solicit the sanction of Government to my fixing the "jama kharch" or village expenses of the seven villages under report on this principle for the current year, and have instructed the Mámlatdár not to close the village accounts until these points are settled.

17. I hope to be able to give an opinion on the plan to be adopted for the assessment of waste lands when the close of this season enables me to make proposals for the settlement of a portion of the Dholka Pargana.

18. On a perusal of your letter handing on Captain Wingate's and mine to the experimental settlement which you kindly allowed me a short time ago, I found that you objected to the proposals made in the postscript of my letter to fix the 5th June as the latest period at which "rázinámás" or petitions to throw up fields might be registered instead of the 31st May. As far as I can recollect your only objection was the want of uniformity in the different surveyed districts of the Presidency that would thereby be caused; but I would respectfully beg to submit that this point in importance far falls behind that of interfering with the immemorial customs of the agricultural population of the country. They know when the Miragsal or Miragsar is, as that is the day on which if a cultivator has not commenced his cultivation for the year he will invariably if possible put his plough in the ground; but he does not know when the 30th May is; and the consequence will be constant disputes as to whether he has been too late or not in giving his "rázinámá." As the date is merely a nominal one upon which nothing depends, the close of the revenue year having now been altered to the 31st July, I hope you may be induced by these representations to withdraw your opposition to the measure.

19. It would have been satisfactory had I been able to report the settlement in these villages of the questions of the assessment of alienated lands and the re-arrangement of the "jama kharch" allowance, as proposed by me in my letter to the late Revenue Survey Commissioner, No. 96 of the 12th August 1853, which is still, I believe, under consideration in your office.

20. Hoping that the receipt of this letter will enable Government to come to a speedy decision on my former report, so as to enable me to propose with

more confidence a general rate of assessment for a large portion of the Dholka District and to close the accounts for the current year of the villages already assessed.

I have the honour, &c.,
(Signed) A. ROGERS.

No 91 of 1855,

FROM

J. W. HADOW, ESQUIRE,
Collector of Ahmedabad;

TO

E. G. FAWCETT, ESQUIRE,
Revenue Commissioner, N. D.

*Ahmedabad Collector's Camp,
Parantij, 1st February 1855.*

SIR,

I have the honour to submit, for the consideration and orders of Government, a letter from Mr. Rogers, Settlement Officer, dated 17th April last, the subject being the results of the preliminary experimental settlement of the seven villages in the Dholka District, based on the revenue survey operations and carried into effect with the concurrence of the late Revenue Survey Commissioner, under the sanction of Government.

2. The reports marginally noted, which I had the honour of submitting with my letter No. 604, dated 31st October 1853, will have fully explained the different plans, as well as the rates of assessment, proposed to be tested by this experiment, and as I have already offered such observations as occurred to me, it now only remains for me briefly to notice the results as reported by the Settlement Officer.

Mr. Rogers' report No. 82, dated 20th June 1853.
Captain Wingate's letter No. 508, dated 9th August 1853, on an experimental settlement of seven villages in the Dholka Pargana.

3. The names of the seven villages selected for the experiment are given in the margin. The position of each in reference to the town of Dholka, the varieties of soil and their productive capabilities, and the different methods of husbandry pursued, have been fully described by Mr. Rogers and adverted to in paragraphs 6 to 8 of my letter and need not be here recapitulated: though it will be requisite to keep them in view, bearing in mind also the many natural difficulties presented in the way of effecting a satisfactory settlement, as prominently noticed and discussed by the Settlement Officer and the late Revenue Survey Commissioner.

4. As regards the dry-crop lands no departure from the ordinary plan of assessment by fields, according to the classified qualities of soils, was contemplated, the only question for consideration being the standard at which the assessment had been pitched which Captain Wingate thought might be better judged of hereafter as soon as more complete and accurate data had been obtained.

5. The different maximum rates of assessment for these lands were briefly noticed in paragraphs 25 and 26 of my letter and I ventured to express an opinion on the imperfect data, then before me, that *they were pitched quite as high as circumstances warrant*, and there is nothing in the result of the experiment as reported which induces me to modify that opinion. The maximum rates are Rs. 2-4-0 and Rs. 1-12-0 per acre and the average of five villages according to the classified tables varies from Rs. 1-10-8 to Rs. 1-1-0 per acre.

6. The maximum rates for rice lands cultivated under tank irrigation in five villages are Rs. 8 and Rs. 6 per acre, and the principle of assessment proposed for such lands was a fixed rate to be departed from in years of failure of rain when the lands remain unsown, and in one village alone—Degámra—the experiment of separating the dry-crops and water-rates was to be tried.

7. The chief difficulties likely to be met with appeared to be confined to the adoption of the most suitable modes of management and assessment for the garden lands under well irrigation. This subject was discussed in paragraphs 9 to 14 of Mr. Rogers' report, paragraphs 12 to 17 of Captain Wingate's letter. Of the four plans that were considered, the following three were determined upon for trial:—

II.—A separate water-rate.

III.—Crop rates fixed on the well to be levied by measurement in addition to the dry-crop rates, varying according to the crops.

IV.—A tax with varying rates on the water-bags in addition to the dry-crop rates when the water is used.

8. The Settlement Officer seemed to consider plan IV to possess superior advantages, and the late Revenue Survey Commissioner, though disposed to think III theoretically and IV practically suitable to the peculiarities, was not prepared at the time he wrote to give a decided preference for one or other of the proposed plans.

9. The merits and demerits of each plan, as stated by the Settlement Officer, were ably reviewed by Captain Wingate (paragraphs 12 to 15), and the ultimate conclusions he arrived at as regards the most suitable settlement of the land tax in the district of Dholka were summed up under five heads in the final paragraph of his letter to which I beg to refer.

10. It was recommended that the Settlement Officer should meanwhile note carefully the experimental assessment during the ensuing season, and, after maturely weighing well the difficulties that attended the operation and considering the best means of meeting them, submit his proposals for the assessment of the whole district.

11. Mr. Rogers, with the above object in view, has, as will be seen, personally conducted a second time the settlement of the seven villages to which the experiment was preliminarily confined, and from the investigation he has thus been enabled to institute in the presence of the villagers must now, from the more complete and trustworthy data within his reach and the full knowledge he has acquired of all details connected with the past management of these villages, the productive capabilities of the different lands, the circumstances of the cultivators and the general feeling towards the measure, be in a better position than any one else to arrive at a more definite and satisfactory conclusion as regards the suitability of the standard fixed and the adaptability of particular methods of assessment to the peculiarities of different lands and systems of husbandry.

12. Mr. Rogers is happy to be able to state that the result of the experiment has been highly satisfactory—"notwithstanding the unfavourable nature of the latter part of the season in the failure of the last and one of the most important falls of rain for the success of agricultural operations in that part of the country."

13. The settlement, it will be remembered, was introduced for 1852-53, and the comparative results as regards the realizable revenue of the past season with that of the first year of its introduction and that of the year 1851-52 under the old system, are shown in paragraph 2nd. Compared with the net revenue for the year immediately preceding that for the past season it exhibits a small increase but placed against that 1851-52 a decrease of Rs. 4,007-1-11 is shown, but this, when compared, as Mr. Rogers states, with the average realizations for a number of years, the surest test perhaps of any, dwindles down to a fraction less than Rs. 1,000.

14. It would have been as well, I think, if Mr. Rogers had also given the actual extent of land paying revenue, under cultivation in each of the three years, as also the average for the other years, as this might have afforded means

of arriving at a more satisfactory conclusion. It may, however, be assumed that compared with the actual average cultivation for the years referred to there was a greater breadth of land under crops for the past year, the decrease of revenue being ascribable rather to the large reductions in the assessment to which Mr. Rogers adverts.

15. The necessity for granting trifling remissions in some of the villages forms the subject of paragraph 4th and does not seem to call for any particular remark, as the circumstances under which they were allowed are fully explained.

16. The most interesting part of the report is the result of the experiment in each village and this is shown and ably commented upon in paragraphs 6 to 11. The results are arranged in the order of the villages under seven distinct heads as follows :—

I.—Ránesur.—The increase in the revenue of this village, amounting to Rs. 456-8-0, is accounted for by extended cultivation of rice lands, the revised rates doubtless, as well as the favourable rain, having induced the cultivators to take up the waste land.

The average dry-crop rate of this village is Rs. 1-1-4 and the maximum rate for rice lands Rs. 7 per acre.

II.—Degámra.—An increase also in this village of Rs. 415-12-8 accounted for in the same way as in Ránesur, the maximum rate for rice lands being the same.

III.—Hasannaggar.—An increase also in this village accounted for in the same way as in Ránesur and Degámra. The average dry-crop rate is Rs. 1-5-4, the maximum rate for rice lands being Rs. 6.

IV.—Kocharía.—An increase also in this village accounted for in the same way as in Ránesur, Degámra and Hassannaggar. The average dry-crop rate is Rs. 1-3-5 and the maximum rate for rice lands Rs. 7.

In this village the rice crops are described to have been failing for want of water and only saved by having recourse to irrigation from wells for which no extra water-rate was imposed, according to the plan agreed upon.

V.—Jhekra.—An increase of Rs. 131-9-6 from extended cultivation, the maximum rate for rice lands being Rs. 8 in this village.

VI.—Shekri.—The only village which exhibits a decrease amounting to Rs. 78-11-10. This village appears to have no rice lands, the cultivation being chiefly of the garden description under wells.

The result shows a falling off in the cultivation of irrigated land of 30 acres 11 gunthas.

VII.—Urasur.—An increase of Rs. 142-14-7 from extended cultivation, chiefly apparently from irrigated land under newly dug kacha wells. This village contains no rice lands; the average dry-crop rate is Rs. 1-1-0; its position has been described to be almost in the bed of the Sábarmati and as in Shekri all kinds of garden crops may be raised.

17. In paragraph 8th Mr. Rogers observes that the general pitch of the dry-crop assessment of the different classes of villages, considering the unfavourable nature of the season, appears from the results to be fair, and that the same may be said of the rice lands. As regards the latter Mr. Rogers withholds for the present the expression of his opinion as to the applicability of the rates to the whole of the pargana, considering it would be premature to offer an opinion until the measurements and classification of a large number of villages may enable him to take a more comprehensive view of the measure.

18. In the sentiments here expressed by the Settlement Officer I beg to state that I entirely concur, being of opinion that the present experiment is on too limited a scale and of too short duration to enable any conclusive opinion being arrived at as regards the important question of the applicability of the revised rates to a whole district, the adoption of which it may be reasonably expected would regulate if not determine those for other parts of the Collectorate similarly circumstanced.

19. As regards the plans of assessment for irrigated crops it will be seen that plan II.—*that of a separate fixed rate (water) on the field to be levied in addition to the dry-crop rate, when any portion of it is watered*—was tried in Jhekra, the result being a decrease of Rs. 25-2-0. On this Mr. Rogers observes: “but perhaps the result of a single season is scarcely a fair criterion by which to judge of the fitness or otherwise of this plan of assessment.” The advantage in saving annual measurement which this plan holds out seems to be counterbalanced by the necessity that would exist for annual inspection and the difficulty of determining which lands, having a right to water, should be assessed as garden, and which should not. (*Vide* paragraph 10 of the Settlement Officer’s report dated 20th June 1853.)

Plan III—*rates on the well varying for superior and inferior crops and to be levied by annual measurement*—was tried in Degámra, Shekri and Urasur with no tangible result apparently: as regards Degámra, owing, as explained, to the quality of the water being such as to admit of only two kinds of irrigated crops being grown in this village; as regards Shekri and Urasur there appears to be a falling off in the cultivation by irrigation from the old “packa” wells, while in Urasur there were no less than eighteen additional water-bags used in “kacha” or unbricked wells.

Plan IV—*a tax in the lump on the water-bag with differential crop-rates in addition to the dry-crop rates*—was tried in Hassannaggar and Kocharia, where there appears to have been an extension of cultivation by irrigation of the same sort as in Shekri and Urasur, *viz.*, from the “kacha” well; two more of this description have been dug in the former and six in the latter.

20. The result as regards the irrigation from “kacha” wells in preference to digging and constructing new “packa” wells, or extending the cultivation under the old wells, leads Mr. Rogers to infer that the assessment on the water-bag of the latter, which was fixed at Rs. 3, may be too light; it is very possible that such is the case though not beyond the bounds of probability that either the varying rates for superior and less valuable crops may be pitched too high and require re-adjustment, or the plan itself may not be palatable to the majority of cultivators as discouraging enterprise; the fact also of sweet water being so near the surface and a sufficient supply obtainable with the outlay of a little manual labour only, may probably have as much to do with it as anything else, and this it may be found difficult to counteract effectually.

21. The applicability of the different plans as deducible from the results noticed in the remarks on each village is discussed by the Settlement Officer in paragraphs 10 to 12. Plan II tried in Jhekra is condemned but apparently more from its manifest impracticability for the reasons assigned by the late Revenue Survey Commissioner and concurred in by the Settlement Officer than any material effect on the revenue for the past season. Plan III, tried fairly, Mr. Rogers thinks, in Shekri and Urasur, is described as having failed and is not recommended for adoption. In his remarks on Shekri Mr. Rogers notices an illustrative fact in the decrease of revenue on account of “Peawa” or water-rate paid for the use of water by cultivators, not the owners or in the occupancy of the wells from which it is drawn.

22. Mr. Rogers fully explains his reasons for not approving of plan III. One great objection, as far as I understand, appearing to be the tendency such a mode must have to complicate the assessment by adding to the classification of soils one of water, to be regulated by the varieties and determined by the value of crops and in this way multiplying the chances of error in the settlement, while annual measurements and varying rates fixed according to the value of the crops grown could have but one effect, *viz.*, that of a direct tax upon industry and capital to be seen in the limited field that is left for the exercise of energy and enterprise, the encouragement of which is one of the main objects sought to be attained by the introduction of the revenue survey assessment.

23. I confess the objections urged by Mr. Rogers against this plan appear to be so well-founded that I am inclined to agree with him in considering it practically unsuitable as a method of assessment for garden lands, and the fact mentioned in support of his arguments, in reference to the decrease in the

irrigation cultivation in Shekri tends to confirm me in the opinion that as a plan it is as unsound in principle as it is faulty and injurious in operation.

24. The preference, it will be observed, is given by Mr. Rogers to the 4th plan—that of a cess or fixed water-rate on each bag of a well, whatever may be the quantity of land watered from it. To this plan Mr. Rogers, it will be seen on reference to his report dated 20th June 1853, has been favourably inclined from the first, and there certainly appears, as far as I am able to judge, much that he urged in its favour, while there is less to be brought against it, which experience might not enable the Settlement Officer to meet and remove, than is the case in any of the other plans. It would of course be very necessary where the occupancy of the land brought under the water-bag assessment is in shares for the sharers to come to a very clear understanding as regards liability whether the whole of the prescribed quantity of land be irrigated or not, as without this there would be constant disputes as to who should pay and who should not, in the event of all not making use of the water. No doubt this has occurred to Mr. Rogers though it has not been noticed, from which it may be assumed that he does not attach much weight to it or is prepared to provide a remedy for any difficulties that might arise.

25. Captain Wingate adverts to the difficulty in paragraph 14 of his letter and observes that “it is no part of a revenue settlement to determine who should take water; the point is to determine who should pay for the water, and disputes regarding it are effectually prevented by No. III but are not in my opinion provided for by No. IV.”

26. The omission noticed in the 14th paragraph of Mr. Rogers' letter on the part of the district authorities, explicitly to make known to the talátis the manner in which the regular instalments should be collected, might have been attended with inconvenience had not Mr. Rogers discovered it and caused it to be rectified in time. The attention of my 1st Assistant, Mr. Ritchie, in charge of Dholka, has been directed to the point which, I have no doubt, will obviate the occurrence of any difficulty in this respect; the arrangement proposed for the realization of the increase on account of water-rates appears necessary at present under the circumstances explained by the Settlement Officer, and will, I hope, be sanctioned as part of the experiment.

27. The contingent expense allowance for talátis is noticed in paragraph 15 and from what Mr. Rogers states it will be seen that the scale proposed by Captain Wingate for the Southern Marátha Country and recommended by him together with the scale of pay for the talátis for adoption in this province, is perfectly applicable to this Collectorate.

28. The scale of taláti's pay forms the subject of paragraph 16, and Mr. Rogers takes occasion to contrast the rates of remuneration in the four Collectorates of Gujarát. The scale and system appear to differ considerably and the amount of pay appears disproportionate. In this Collectorate, for instance, the pay is apparently exactly in converse proportion to the amount of labour and degree of responsibility entailed on the taláti under the intricate and complex systems of revenue that obtain, the effect of the scale now in force on the pay of the Ahmedabad Taláti being illustrated by Mr. Rogers as follows:—

In a village with a net revenue of Rs. 7,453-3-4 a taláti's pay according to the Surat rate would be Rs. 174-8-6, while according to the Ahmedabad scale it would only amount to Rs. 134-6-0, the principle explains the effect, the scale being fixed according to the *net realizable revenue* subjected at the same time to a deduction of 20 per cent.; but it remains to be shown, at least I have failed in ascertaining the cause, why this scale was considered and determined upon as being peculiarly suited to the Ahmedabad Collectorate where the work of the taláti is perhaps double what it is in Surat or Broach.

29. There can, I think, be no question that the talátis of Ahmedabad are *overworked* and *underpaid*, and as efficiency and honesty are as desirable in this class of servants as in any other functionaries concerned in the administration of the revenue, I would strongly recommend that the earliest opportunity be taken for placing them on an equality in respect of remuneration with the village

accountants in other parts of the Presidency. I have already recommended in my letter submitting the "gaonkharch" report the adoption of Captain Wingate's scale, which appears to be more simple and at the same time provides a liberal allowance, and perhaps Mr. Rogers on further consideration may be induced to incline to this opinion also.

30. As, however, the question is under consideration, I am respectfully of opinion that there is no necessity for introducing any change at present in regard to the fixing of the gaonkharch on a different principle in the seven villages as proposed by the Settlement Officer at the close of paragraph 16 of his report.

31. The plan for the assessment of waste lands, it will be perceived from paragraph 17, remains to be considered. This subject, it will be remembered, was discussed in paragraphs 18 to 20 of Mr. Rogers' report dated 20th June 1853, and noticed in paragraphs 20—21 of Captain Wingate's letter.

32. In paragraph 18 Mr. Rogers reverts to the subject of the period to be fixed at which lands are to be thrown up or rather petitions registered for permission to throw up fields; he had proposed the 5th June, the "mrigsál" or "margsál" as the most suitable for Gujarát, and now further explains why he considers it better adapted than that of the 30th May. The latter date, Mr. Rogers thinks, would interfere with the immemorial custom of the agricultural population of Gujarát, and another objection is that though the cultivator knows when the "mirgsál" comes round, he will be puzzled to know when the 30th May is.

33. I ventured to recommend the 30th May in preference to the mirgsál not merely for the sake of uniformity but because within my own experience the desirableness of the earliest possible intimation of a cultivator's intention to resign the whole or a part of his holding being received by the district officers had been fully exemplified in the Southern Marátha Country, and I am satisfied that among a body of cultivators there would hardly be found one in ten who had not determined the extent of his cultivation for the ensuing year and made his arrangements before the mrigsál.

34. It is not difficult, I think, to understand that if a cultivator be allowed to hesitate and put off the day of tendering his resignation of his field until the Gola day of the mirgsál arrives, it may then be too late for another person to make his arrangements and then apply to the village or district authorities for permission to cultivate it, the difference of a few days at a critical period of the season for ploughing and sowing being of much importance to the farmer. It may, however, be hoped that when the revenue survey assessment comes to be administered in this Collectorate the occasions for relinquishments and changes of fields will be of far less frequent occurrence than at present and in course of time almost entirely cease as annual occurrences. The question therefore—what is to be the date on which the "bedwa" petition should be given in?—may not be viewed as one of very material importance.

35. I would merely remark in reference to the objection noticed by Mr. Rogers that as the mirgsál is as well known to the farmer of the Deccan as it is to the cultivator of Gujarát, the former, it may be supposed, would have found it as inconvenient to be obliged to observe a date either unsuited to his operations in the field or not familiar to him, as it is supposed the latter would do, were the 30th May fixed as the date for this province. Practice would perhaps make the intelligent cultivator of Gujarát soon familiar with the date, and it would be an easy matter at first for the patel and taláti to assemble the cultivators at the Chávdi a few days previously and warn them of the approaching day.

36. In the concluding paragraph of his report Mr. Rogers solicits a speedy decision on his former report which he hopes the receipt of this letter will enable Government to arrive at the sooner that he may be able to propose with more confidence general rates of assessment for a large portion of the Dholka District. As regards this measure I would respectfully submit, for the consideration of Government, whether it would not be advisable that the plans and rates of assessment now under trial be continued experimentally and carefully watched for at least two or three years in order to the acquisition of surer data on

which to found a decision as regards the general applicability of the principles and rules proposed under a uniform and comprehensive plan for the whole district.

37. To this extent I am prepared to recommend the adoption of the methods and rates which the Settlement Officer considers likely to prove the most advantageous to Government and beneficial to the cultivators on a more extended scale during the current season, and would accordingly solicit the sanction of Government for the extension of the experimental assessment to as many villages as Mr. Rogers may deem advisable, feeling convinced that experience derived in this way will afford the surest and best criterion by which to test and ultimately arrive at a conclusion as regards the most simple, suitable and equitable assessment for the larger portion at least of the different descriptions of land in this Collectorate.

I have the honour, &c.,

(Signed) J. W. HADOW,

Collector.

No. 706 OF 1855.

TERRITORIAL DEPARTMENT, REVENUE.

FROM

E. G. FAWCETT, ESQUIRE,
Revenue Commissioner, N. D.;

TO

H. YOUNG, ESQUIRE,
Chief Secretary to Government,
Bombay.

Revenue Commissioner's Office,
Poona, 30th March 1855.

SIR,

I have the honour to submit a letter as per margin from the Collector of Ahmedabad, forwarding report No. 40 from Mr. Rogers, Revenue Settlement Officer, upon the second year's experimental assessment of seven villages of the Dholka Taluka of the Ahmedabad Collectorate. The new rates were introduced experimentally and a report of the 1st year's result was submitted with my letter No. 40, dated 6th January 1854, which is still before Government.

2. The result of this assessment for the second year is now shown and is represented as highly satisfactory notwithstanding a deficiency of rain in the latter part of the season, and I think it may be accepted as such, for though there is a considerable decrease of revenue as compared with that derived from the system superseded, there was good reason for making a reduction, and the result of the present season shows a considerable increase over that in which the rates were first introduced.

3. The following memorandum shows the increase and decrease in the revenue of seven villages in 1853-54 as compared with the two preceding years, viz. the year 1852-53 in which the experimental rates were introduced, and A.D. 1851-52 in which the revenue was levied under the old rates and also the latter with the former :—

				Rs.	a.	p.
1.	A.D. 1853-54	...	...	7,339	6	5
	A.D. 1852-53	...	...	5,764	1	6
	Increase in 1853-54	...	...	1,575	4	11

				Rs.	a.	p.
2.	A.D. 1851-52	...	...	11,346	8	10
	A.D. 1853-54	...	...	7,339	6	5
	Decrease in 1853-54	...	...	4,007	2	5
3.	A.D. 1851-52	...	...	11,346	8	10
	A.D. 1852-53	...	...	5,764	1	6
	Decrease in 1852-53	...	...	5,582	7	4

4. The decrease in the first year of the survey rates seems according to this very considerable, but it appears that the revenues of the year preceding [the] introduction of the survey rates was above average, and that the reduction in reality may be considered for the next year to be a fraction less than Rs. 1,000.

5. The increase of the second year (1853-54) over the first (1852-53) amounts to Rs. 1,575-4-11. Messrs. Rogers and Hadow make the amount Rs. 1,572-4-11, a difference of Rs. 3 : a difference of 6 pies also occurs between the amount deduced in the second comparison and the figures stated by the Collector, but as these are small sums I have not thought it worth while to delay the disposal of the matter by reference for explanation.

6. The Collector assumes the decrease of revenue to be attributable to the reduction of assessment which is apparently the case.

7. These results seem to indicate that the general pitch of the rates adopted in these villages (of the suitability of which Captain Wingate was uncertain) are fair and encouraging to the people, but both Mr. Rogers and the Collector consider that it would be premature to apply these rates generally to a whole district without further experience which I also concur in thinking prudent before giving the guarantee; but at the same time it is due to the cultivators not to keep them long in suspense of what is to be the final assessment.

8. The maximum and average dry-crop and rice rates are mentioned by the Collector in paragraphs 5 and 6.

9. Remissions were allowed to a small extent, amounting to Rs. 89-14-0; the circumstances under which the abatement was made are explained to be, with a small exception, in conformity with the terms of the settlement, and call for no particular remark.

10. The only village in which a decrease has occurred this season is Shekri, which amounts to Rs. 78-11-6 and occurs in the *peeawa* or water-rates which were fixed in this village by mode III. of differential rates on crops. Mr. Rogers does not detail the reasons which may have induced the rayats to diminish their irrigated cultivation, but enters into a general argument adverse to this mode of assessment. Three of the four plans which were discussed in the correspondence forwarded with my letter No. 40, dated 6th January 1854, have been tried, and Mr. Rogers now gives decided preference to the 4th plan; in paragraph 24 the Collector gives his concurrence. This mode is specified in Mr. Rogers' letter No. 82, dated 20th June 1853, paragraph 10, handed up with my letter No. 40, dated 6th January 1854, as follows:—Rates fixed on the water-bag (*kos*, or *bhar*) of each well to be levied when water is drawn from them for the purpose of raising any kind of irrigated crop whatever quantity of land may be entered, in addition to the dry-crop rate fixed in the different fields to which it is taken. This is the same plan as I advocated in paragraph 9 of my letter No. 1000 of the 9th April 1853, except that Mr. Rogers apparently intends that the water-rate should be taken in those years only in which the land is actually irrigated, a point which I am not indisposed to concede. I concur with Mr. Rogers in thinking that the rate in kacha wells has been made too low in proportion to that on built up wells, and these being disproportionately assessed would seem likely to produce an increase of bad wells and a decrease of good ones.

11. The correspondence relative to the scale of pay and contingent allowances to taláti and gaonkharch has been received and will be shortly submitted.

12. No method of assessment of waste land is proposed in this communication, Mr. Rogers having reserved it for consideration in submitting his proposal for the settlement of a proportion of the Dholka Táluka which he has done in subsequent letter to the Collector of Ahmedabad, dated 14th December last, of which I have been furnished with a copy by Mr. Rogers. In this he proposes that it should be levied at 9 pies per month per head of large cattle, and at one pie on sheep and goats; the cattle of the villagers grazing in their own village under charge of a servant to be exempted. As there are other points connected with the subject which require consideration, and as I have not yet received the report of the Collector, I am not prepared to offer a decided opinion.

13. The date of taking rázinámás is discussed by Messrs. Rogers and Hadow. Captain Wingate saw no objection to the 5th June, nor did I, as mentioned in paragraph 11 of my letter No. 40, dated 6th January 1854. The rains seldom commence very early in Gujarát, and there seems quite sufficient time for the cultivator to make his arrangements without making the confusion that would ensue by the alteration of the date which, after all, is proposed to be only six days earlier.

14. Mr. Rogers has, as I mentioned above, sent me copy of his report proposing revised rates for a considerable portion of the Dholka Pargana which owing to the non-receipt of the Collector's report I have been unable to submit for the orders of Government, but, to avoid delay and the probable loss of the season, I have authorized Mr. Rogers to introduce his settlement experimentally in anticipation of the sanction of Government, and it would, I think, be as well to see the results of this season's settlement before giving the usual guarantee, as the change of both systems and assessment is very considerable.

I have, &c.,

(Signed) E. G. FAWCETT,
Revenue Commissioner, N. D.

No. 4735 OF 1855.

TERRITORIAL DEPARTMENT, REVENUE.

To

E. G. FAWCETT, ESQUIRE,
Revenue Commissioner, N. D.

SIR,

I have placed before the Right Honourable the Governor in Council your letter No. 706, dated the 30th March 1855, submitting a communication from the Collector of Ahmedabad and its accompanying report by the Settlement Officer in Gujarát on the 2nd year's experimental assessment of seven villages in the Dholka Pargana, and have been directed to convey to you the following observations and instructions:—

Result of the 2nd year's Experimental Settlement.

2nd. His Lordship in Council is gratified to find that notwithstanding a deficiency of rain in the latter part of the season there was an increase of Rs. (1,575-4-11) one thousand five hundred and seventy-five, annas four and pies eleven, in the amount of assessment as compared with that of the preceding year.

Applicability of the Revised Rates to the whole District.

3rd. Government fully concur in the opinion expressed by Mr. Rogers and assented to by Mr. Hadow and yourself, viz. that it would be premature to

introduce the revised rates into the whole district until further experience shall have shown them to be applicable.

Remissions.

4. The explanation furnished to Mr. Rogers relative to the amount of remissions granted during the year under report is satisfactory.

Modes and Rates of Assessment on Irrigated Lands.

5. In paragraphs 4 and 11 in Mr. Rogers' report No. 82, dated the 20th June 1853, it was represented that the peculiarities of the soil and climate of the district in which the seven villages are situated rendered a fixed rate of assessment for irrigated land unsuitable, and that three modes of assessment were in operation in these villages, but from a further year's experience of settlement it now appears that the first two of the modes are quite inapplicable and therefore the continuance of the adoption of the third has been recommended, which Government accordingly sanction.

Allowances to Taláti.

6. On this subject I am directed to refer you to my letter of this date, No. 4733, in reply to your communication of the 20th April 1855, No. 878.

Assessment on Waste Land.

7. Mr. Rogers, report on this subject will be awaited.

Applications for throwing up Lands.

8. This subject is disposed of by paragraph 10 of my letter of this date, No. 4736.

Introduction of the Revised Assessment into other Villages of the Dholka Pargana.

9. You are referred to Government Resolution No. 1634, dated the 21st April 1855, confirming the sanction accorded by you to the introduction of the revised assessment into 38 villages of the Dholka Pargana.

I have the honour, &c.,

(Signed) H. YOUNG,

Officiating Chief Secretary to Government.

Bombay Castle, }
12th November 1855. }

**C, INTRODUCTION OF THE SETTLEMENT INTO 38 VILLAGES
OF THE SAME PARGANAH.**

No. 137 of 1854.

To

J. W. HADOW, ESQUIRE,
Acting Collector of Ahmedabad.

Gogha, 14th December 1854.

SIR,

I have the honour to lay before you, for submission at your earliest possible convenience, through the Revenue Commissioner, N. D., to Government, proposals for a revision, on the principles of the revenue survey, of the present rates and system of assessment in the khálsa or directly managed portion of the pargana of Dholka in the Ahmedabad Collectorate and for the introduction of the proposed rates from the current season of Samvat 1911, A.D. 1854-55, into as many of the villages of the district as the completion of the classification of soils by the Revenue Survey Department will admit of their immediate adoption. The necessity for an early settlement of the question will be allowed, if the unsettled state of the minds of the cultivators that will be induced by any long delay, and the return for the season to the obnoxious systems of collecting the Government demands now prevalent which I shall have occasion to mention in the course of this report, that will be forced upon the revenue authorities are taken into consideration.

2. To enter into any detailed historical account of Gujarát from early ages would swell this letter beyond the usual size of assessment reports, but as some knowledge of the vicissitudes that have befallen the Government of the province is necessary before the varieties of its present revenue management, and especially of that portion of it now included in the Ahmedabad Collectorate, can be properly understood, the sketch of the history of the province that I will now do myself the honour to give shall be as short and concise as I can make it consistently with the purpose it is intended to accomplish.

3. The aboriginal inhabitants of Gujarát were probably Kolis, Bhils, and other cognate tribes. There are no authentic histories of Gujarát written before the reign of the Emperor Akbar, but all seem to agree that the province or any considerable portion of it was never consolidated under one Government until Anhilwára or Pattan was founded in the year of Samvat 802, A.D. 746, by Bunráj or Himráj, a Rajput of the Chawura tribe, whose father had been put to death by the Rájá of Canouj, to whom the country is said to have been tributary. Of what nature was the tribute paid to these Rájás by the petty Chiefs of Gujarát we have no means of judging: it was probably not more established nor its collection more certain than that levied subsequently by the Mogals and Maráthás in Káthiáwár, which was collected annually by the march of an armed force, and whose amount fluctuated with the means of resistance or address of those from whom it was demanded. We have no authentic accounts nor even tradition of any general irruption of the Rajputs into Gujarát, at a particular time, and the accounts that the different Rajput families still give of their ancestors having arrived from their original habitations towards Márwár, Rájputána, &c., and founded villages at various times, all lead to the inference that the settlement of their different tribes in Gujarát was gradual, and that they obtained possession of larger or smaller tracts of country, in some instances by force of arms, and in others by sale, mortgage, or private agreements with their occupiers. Up to this point, when no kind of supreme Government existed in the country, the position of these petty Chiefs was one of independence.

4. As before mentioned a consolidated Government was established out of these petty independencies by Bunráj at Pattan about the middle of the 8th century of the Christian era. Of what nature this was, or how far it extended, we have no authentic information, but it was probably little more than a loose feudal rule. Bunráj (the lord of the forest) and the dynasty of six Chawura princes that followed him, are said to have reigned at Pattan for 196 years, but by comparison with the date of the sack of the temple of Somnáth by Mahomed of Ghuzni in A.D. 1026, which is said to have taken place in the reign of Jagánund, the 2nd prince of the Solanky dynasty, about 20 years appear to require to be added on to the duration of the former dynasty. The Solanky dynasty are said to have numbered ten sovereigns and to have reigned about 250 years.

Among these princes was the famous Tidh Ráj Jeysingh, who is said to have conquered Málwa, Barhánpur, and to have founded the fort of Broach. Almost every large stone, tank and other work of public utility in the Ahmedabad Collectorate is ascribed, in some cases correctly, to this prince. The Solanky dynasty was succeeded by that of the Wághelás, another Rajaput tribe, still well known in Gujarát, and is said to have numbered six princes and to have reigned about 126 years. The last of this dynasty, Rája Kurand, was defeated in A.D. 1296 in the reign of the Emperor Allah-ood-deen by an army from Delhi; the commander of the force, Alif Khan, was the first Subhedár or Viceroy appointed to Gujarát by the Court of Delhi.

5. The province was now governed by Subhedárs from Delhi until the year of Hejira 810, A.D. 1407-8, when Jafir Khán—the affairs in Delhi being in an unsettled condition—on the death of Emperor Mahomed Toghlak II., declared himself independent and reigned in Gujarát under the title of Muzaffer Sháh. His grandson who succeeded him under the title of Ahmed Shah founded the city of Ahmedabad, and Gujarát was governed by its own independent Sultáns or kings in succession to him until the reign of Akbar in A.D. 1572. Up to this time we have no information as to the manner in which the revenue management of the country was carried on, with the exception of what is contained in a Firman or Imperial order issued by Akbar for the abolition of transit duties given in the Mirat-i-Ahmadee, a Persian History of Gujarát written by one of the last Diváns of Ahmedabad. From this it appears that the Sultáns of Gujarát, after they had subdued the Rajputs, Kolis, &c., who had possession of the country, continued to exact tribute from them, until an agreement was come to for the division of the lands, one-fourth (thenceforward called wánta or divided land) to be held by the original occupants on the condition of performing service (probably as local police) and paying a quit-rent, and the remaining three-fourths (entitled tulpat) to be appropriated by the State. This arrangement could, however, only be carried out in the neighbourhood of the large towns or stations where the Mahomedan rulers had fortified posts and troops, for we find in the same Firman that an agreement was come to with the greater land-holders that they should retain their estates on the feudal tenure of serving with their contingents in time of war. Thus arose the distinction between what are now called the khálsa or directly managed and the táluk-dári and mehwási villages (in Kaira called also udhad jamábandi from their estates being fixed) indirectly managed by Rajputs, Kolis and others. The feudal tenure of this latter class of villages was maintained, though perhaps not in its integrity, until the time of the Maráthás, for we read of one of the Subhedárs of the province proceeding in the middle of the 17th century to repel an irruption under Siváji into the neighbourhood of Surat, and that he was then assisted by contingents supplied by the Zamindárs of Edar, Kurri, Sánand, Wadhván, Haldurwa, &c. It however fell entirely into disuse under the Maráthás whose revenue system I shall have occasion to notice hereafter.

6. Whilst the province was governed by Subhedárs appointed from Delhi it was the custom to assign one or more districts to them in jághir, the revenues of these being then appropriated by the Subhedárs for the payment of their troops and other expenses necessary for the maintenance of the viceregal dignity, in addition to the assignments granted them on the imperial treasuries for the stipend attached to their rank as the commanders of so many of the royal cavalry or Mansabdárs: the district of Dholka was frequently assigned in this manner in jághir. Precise rules for the guidance of revenue officers were laid down at different times during the Musalmán rule in the province, so that it is to be presumed some direct supervision of the revenue management of the khálsa villages was exercised, and this supposition is confirmed by constant mention being made of the appointment to different districts of separate police and revenue officers, but whether their intervention amounted merely to a general check on the proceedings of the Mukádams or heads of villages, who, it seems, had a percentage on the revenues assigned them or a regular rayatwári settlement with individual cultivators I have been unable to ascertain satisfactorily. In the reign of Akbar took place the far-famed survey by Rája Todar Mal, that Emperor's Minister, in the course of which a cash assessment per bigha of land is said to have been fixed on calculations founded on averages of the actual produce of different soils for a series of years. The records of this survey in the daftars of the Pádsháhi Diván in Ahmedabad give merely certain statistical statements of the condition of each separate village with its gross

revenue, and as the recorded areas prove that the standard of measurement made use of must have been essentially different from that now known in the country, the information to be obtained from them is of no practical use. If an assessment in cash was ever fixed and levied it evidently fell into disuse, either on the decline of the Musalmán power or in the time of the Maráthás, and we have no means of judging of its effect on the general prosperity of the country.

7. Towards the middle of the 17th century the Marátha power began to rise and it was not long before taking advantage of the weakness of the imperial rule, which allowed the dissensions of its own employés to proceed to such lengths that a dismissed Subhedár generally had a fight for it before he would hand over the reins of government in his province to his successor, it commenced to interfere with the affairs of Gujarát. This interference amounted in the first instance merely to plundering inroads in various parts of the country, but as their (the Marátha rulers') aid began to be invoked by different sides in the squabbles among the imperial servants that distracted the country, they soon found out their own strength and acquired a permanent footing in the country by the grant of the "sardeshmukhi" and "chauth" (or a tenth and a fourth part of the revenues) which led in a short time to such a complete establishment of their power that in A.D. 1755 the city of Ahmedabad itself, and with the possession of it entire command over the territories subject to the Subhedárship of the province, fell into their hands. It would be foreign to my purpose of sketching the history of Gujarát in such a manner as to show the effect of the change of its rulers at different times upon its revenue management to enter into a detailed account of the quarrels of the Peshwa and Gáikwár which led to the administration of the country being sometimes in the hands of the one and sometimes in those of the other for about half a century after the above-mentioned event, and I will pass on at once to the period when our own Government began to acquire a territorial footing in the Ahmedabad and Kaira Collectorates, as it is with the former only of these that the present report is more particularly connected.

8. The Bombay Government having in defence of the rights of A'nand Row Gáikwár taken the town of Kurri and crushed the rebellion of Malhár Row Gáikwár, received in return the grant of the pargana of Chikhli in the Surat Zilláh from the former, the latter being provided for by a jághir in the Nadiád Pargana. The Gáikwár then agreeing to pay for the maintenance at Baroda of a subsidiary force from the British Government, a jághir of the value of Rs. 50,000 from the pargana of Nadiád and the whole pargana of Dholka were assigned in payment for the force on the 6th June 1802. In the same account there were assigned within the next year the remainder of the pargana of Nadiád, the pargana of Vijápur and a portion of Kurri, the pargana of Mátar and Mahuda and the customs of Kimkuthodra (a village situated between Surat and Broach cities) with the fort and jághir village of Kaira in inám or free gift. The pargana of Vijápur and the portion of Kurri were subsequently exchanged in 1817 for Kapadvanj, Kurode, and other districts. In the meantime, on the 31st December 1802, the Peshwa had agreed to the treaty of Bassein which secured to the British Government, besides important districts in the Surat and Broach Collectorates, the parganas of Dhandhuka and Gogha now under Ahmedabad with Nagar and the chauth of Cambay in Kaira; all the districts to the north and west of the Máhi river were then formed into the Collectorate of Kaira, and this arrangement continued until A.D. 1817-18, when, in order to provide for the payment of an increased subsidiary force, the Gáikwár ceded to the Honourable East India Company his half share (arising out of the division of territory that had taken place in A.D. 1751-52 between the Gáikwár and the Peshwa) of the city of Ahmedabad, his share of the Daskrohi (formerly called the Haweli) Pargana with Kapadvanj, Kurri, &c., as before mentioned, together with his right to a perpetual farm of the Peshwa's territories on the north of the Máhi. These territories, which included the rest of the present Ahmedabad and Kaira Collectorates, were finally taken possession of by the British Government on the dethronement of the Peshwa in 1818 and the two Collectorates were separated, the former being made to consist as at present of the parganas of Gogha, Dhandhuka, Dholka, Daskrohi (now divided into two, and Jetalpur), Viramgám and Parántj.

9. It may be imagined that with this constant change of masters coupled with the predatory and unsettled habits of the Maráthás, the revenue administration of this portion of Gujarát was none of the best. It was the custom among these

people to farm out the revenues of different districts to the highest bidders. These farmers had again no object in taking the farms but that of making as much money as possible whilst they held them. The rights of the State or of private individuals were but little heeded as long as the farmer incurred no pecuniary loss and the consequence was that the management of whole estates liable to the payment of revenue to the Government changed hands by sale, mortgage or other agreements between private individuals., the heads of villages altered the rates of assessment at pleasure to suit their own convenience and mortgaged, sold, and gave away lands, the property of the State, to obtain ready cash for the payment of their own private expenses, or debts, or the farmer's demands, or for the satisfaction of some religious or charitable whim. Hence it is that we find throughout the province immense quantities of improperly alienated lands, and, where a more regular system has not been introduced by ourselves, an infinite variety of the most complicated plans for ascertaining and collecting the Government dues.

10. Little has been done in the Dholka Pargana (to which I shall now confine my remarks) towards putting an end to the system of revenue management we inherited from the Maráthás. Mr. Jackson in A.D. 1831-32 altered (in the way of lowering) the rates of assessment in a few villages, but although the reductions he made must undoubtedly have been productive of good so far as they went, the experiment tried of lowering a rate or two in a few villages on certain crops or in certain cesses was on too small a scale to have any appreciable effect on the general condition of the district. In the early periods of our rule, district revenue officers seem to have been in the habit of entirely changing the system of villages, as from Bhágwattái (division of produce and levy in kind) to Jinnaswár Bigoti (crop assessment in cash) or *vice versa*, without even referring for the sanction of the Collector. The subsequent attempts at reform were confined to the introduction of a regular bigoti assessment (fixed in cash on the bigha of land and not varying according to crop) into 13 villages, into 4 in the year 1842-43, and into the remainder in 1851-52. With these trifling exceptions, the system of revenue management in the khálsa portion of the district continues the same as it was when it came into our hands half a century ago, with one important alteration that the individual cultivator is now settled with directly by the officers of the State instead of whole villages being settled for in the gross with the patels or others who farmed them. The revenue survey of this and the neighbouring districts under Captain Cruickshank in A.D. 1823-24 was carried out for topographical purposes and to ascertain and record the quantity of waste and cultivated lands yielding and liable to the payment of revenue, but did not interfere in any way with the prevalent assessment.

11. The pargana of Dholka is said formerly to have contained 235 villages with a revenue of about $5\frac{1}{2}$ lákhs of rupees. When it came into our possession, however, it contained but 202, which have since been increased by the founding of 3 new ones to 205, out of which 18 have been transferred to the Mátar and five to the Jetalpur District, so that one hundred and eighty-two villages remain. Of these 95 are Khálsa or directly managed, 79 Tálukdári (indirectly managed by Grássiás, &c., mentioned in paragraph 5), 4 Inámi, and 4 Kherati or granted for charitable purposes. The total area of the district, including the five villages since given over to Jetalpur, as ascertained by Captain Cruickshank's survey, was 595,568 acres. Deducting for these five villages 10,892 acres, we have 584,676 left as the total area of the pargana as it at present stands. This makes it, with the exception of Dhandhuka, the largest pargana in the whole of British Gujarát, and as this is a point of considerable importance when its successful administration for the future is concerned, I will take occasion to recur to the subject before closing this report.

12. The district is bounded on the north by Viramgám and Kurri; on the east by Daskrohi, Jetalpur, the territories of the Naváb of Cambay and the Sábarmati river; on the south by the Bogawa river which enters the Gulf of Cambay at its head; and on the west by the territories of the Thákor of Limbdi, the brackish lake called the Null, and part of the Viramgám Pargana. Its general surface is that of a dead level, there being scarcely a rising ground throughout the district that could be called a hillock. Rather more than a fourth of its area (the north-east portion of it) from a few miles to the south of the town of Dholka is well-wooded and has generally sweet water, whereas, the whole of the rest of the district is very bare of trees except just round the sites of villages, and almost all the wells are more or

less brackish ; the peculiarities of the water I shall have to speak more particularly of when I come to mention the method of assessment I would propose for irrigated lands.

13. The soil of the district consists chiefly of *káli* or black and *gorádu* or light sandy soil : a richer description of the latter prevails in many villages towards the banks of the *Sábarmati* and is called *bháta*, and the infinite gradations between the two soils are designated by the term *besar* or mixed soil. The clear distinction between the two classes of soil is that the former is diluvial formed by the gradual settling down of organic matter through still water in natural hollows or low-lying parts of the country, and the latter is alluvial formed by the lighter deposits from water passing over it. The former is intrinsically the more valuable as it recruits its own strength with merely the aid of rain and atmospheric air, whereas the latter, if it be not assisted by artificial manuring soon wears out and becomes useless except for the production of the inferior kinds of grain crops : with sweet water and good husbandry, however, there can scarcely be said to be a limit to the productiveness of *gorádu* soil.

14. Little can be said of the geological formation of the country. The frequent occurrence of very brackish or salt water springs and other circumstances lead to the supposition that the whole of Gujarát below the hills that bound it on the north was a gradual deposit by streams from those hills whose level has been slightly raised by earthquakes or other convulsions of nature at different times. One earthquake (I think it was in 1819) is said sensibly to have altered the level at which water can be found in the north of the *Dholka* Pargana and to have lowered it by 20 or 30 feet. Again, tradition points to a mound near *Saragwala* in the south of the district as the site of an ancient bandar or port, and round stones with holes in them formerly used as anchors are said to have been found in the *Null*. This, with the fact that the waters of the *Null*, even now after heavy rain find their way into the Gulf of *Cambay* by the *Bogawa* and are always very brackish when low in the hot weather, would lead us to infer that it is not long since at all events a portion of land on the south of the *Dholka* District has been raised in its level. No rock is to be met with in the pargana, and the soil is generally of great depth except where pure sand, clay or clay mixed with limestone nodules are met with. The most curious natural feature in it is the *Null*, a lake nowhere more than 5 or 6 feet deep. Immediately after the rains its extent must be from about 15 miles in length to 5 or 6 in breadth, and its water is then sweet enough to admit of the cultivation of irrigated wheat and barley on its banks, but, as the hot weather advances, the water becomes too brackish to be of any use. Its banks and the islands with which it is studded produce a species of coarse grass or reed whose roots afford the means of subsistence for hundreds of the poorer classes in years of scarcity.

15. There is no perceptible difference in the climate of the different parts of the district although perhaps the north-eastern portion of it may, occasionally, on account of its being better wooded, attract the passing clouds more than the more open country in the rest of the pargana ; the difference, however, is not so appreciable as to afford us any grounds for fixing different rates of assessment for different classes of villages. Our only guide in this respect, then, is the proximity or otherwise of markets for the disposal of agricultural produce.

16. The chief market within the district is the town of *Dholka* itself, from which the pargana takes its name. The only other place in the district that can be called a town is *Sánand*, the station of a *Thánádár* or Police officer. But as this is within about ten miles of *Ahmedabad*, the great mart of the *Collectorate*, the bazar of the former (which is not an important one) need not be taken into account. The port of *Dholera* is situated within a few miles of the southern frontier of the district, and although wheat and cotton, which are produced in large quantities in the black soil of the southern part of *Dholka*, are exported thence to *Bombay* and other places, the obstacles of the *Bogawa* which is not bridged and the entire absence of anything but cart tracks in the shape of roads have as yet prevented the springing up of a traffic in that direction which would tend much to the proper development of the resources of the district. The population of the town of *Dholka* on the 1st January 1848 is stated in Mr. *Fawcett's* statistical report on the *Collectorate* of *Ahmedabad* at 64,054 and the number of houses at 8,811, giving an average of nearly eight

males to a house: by a recent census made by the Acting Collector at my request, the number of inhabitants, male and female, is given at 20,408, so that there must be a misprint in the report or some mistake in copying, as it is most improbable that the average number of males to a house should be so great as that above mentioned. In the statistical report above referred to the number of shops in the town is given at 247, which, although the manufactures of the town consist only of a little coarse cotton cloth made chiefly by the Musalmáns, shows the existence of a considerable non-agricultural population which would enable the neighbouring cultivators partly to dispose of the produce of their lands. By the recent census the non-agriculturists appear to number about 18,875; a good deal of grain is also bought up by dealers in Dholka, and the markets of Ahmedabad and other towns are watched for favourable opportunities of selling it. The statistical figures above would have been given with certainty, had the operations of the Survey Department been extended to the classification of the soil around and other particulars regarding the town itself: this will unfortunately have to be delayed until some time in the present fair season.

17. A general revision of assessment in the district is urgently called for for various important reasons. The prevalent methods of ascertaining and collecting the Government dues are essentially bad, inasmuch as they open a wide door for fraud from their complicated and uncertain nature, the assistance that might have been derived from the accurate field measurements of the old revenue survey being (for what reasons I have never yet been able to ascertain) rejected, and estimates of produce being to this day made (with the exceptions of few villages into which a fixed bigoti settlement has been introduced) in "ásrá" or estimated bighás. The inequality of the assessments in different villages is another great reason for immediate interference, so as to give all an equal chance of profiting by their own industry, instead of, as is at present the case, one village being assessed at rates averaging 4 or 5 rupees the bigha, whilst its neighbour pays on an average but two or three on the same area, although the advantages of the two with reference to market may be precisely the same. The great fall in the value of agricultural produce during the last 30 years would of itself necessitate a revision of the assessments in the "Jinnaswár Bigoti" or crop assessment villages, in order to allow the cultivator under the changed circumstances of the market a fair remuneration for his labour. I subjoin a list of the average prices of the principal kinds of agricultural produce of the district for 11 years previous to the former revenue survey, *i.e.*, from A.D. 1813-14 to 1823-24 inclusive, procured from Captain Cruickshank's report on the Dholka Pargana, compared with the average prices for the last 5 years, from which you will perceive that, in some cases, their values have fallen more than one-half within the period mentioned. The table shows the number of maunds and *kutchas* sers of 40 tolas weight, procurable for the sum of one rupee:—

	Sers per Rupee from 1813 to 1823.		Sers per Rupee from 1850 to 1854.	
	M.	s.	M.	s.
Rice, Kamod ...	0	32½	1	18½
„ Sutársál...	1	0½	1	27½
„ Sathi or Wari	1	16	2	15½
Bájri ...	0	33½	1	21½
Jowár ...	1	9	2	5½
Mug ...	0	34½	1	21½
Math ...	1	6	1	35½
Tuwar ...	0	37½	1	16½
Gowár ...	0	36½	1	37½
Kodra ...	1	24½	1	14½
Báyta ...	1	7	2	9½
Banti ...	1	19½	2	21½
Tal (common oil-seed)	0	16	0	31½
Gol (raw sugar)	0	9½	0	16½
A'du (ginger)...	1	3½	1	17½
Ratálu (yams)	1	28	2	7½
Marcha (chilies)	0	16½	0	37½
Lassan (garlic)	0	29½	1	33½

	Sers per Rupee from 1813 to 1823.		Sers per Rupee from 1850 to 1854.	
	Ms.	s.	Ms.	s.
Kel (plantain)...	*108	0	*199	0
Sakaria (sweet potatoes) ...	3	26	6	15 $\frac{17}{10}$
Chassia wheat (unirrigated) ...	0	30 $\frac{1}{2}$	1	18 $\frac{13}{10}$
Wheat (irrigated) ...	0	33	1	21 $\frac{17}{10}$
Barley (jow) ...	1	14	2	18 $\frac{23}{10}$
Káng ...	1	6	2	6 $\frac{13}{10}$
Chino ...	1	11 $\frac{1}{2}$	2	11 $\frac{7}{10}$
Erandi (castor-oil) ...	0	25	1	6 $\frac{3}{8}$
Gram ...	0	36 $\frac{1}{2}$	1	14 $\frac{3}{8}$
Wariáli ...	0	10 $\frac{1}{2}$	0	15 $\frac{10}{10}$
Methi ...	0	30 $\frac{3}{4}$	1	2 $\frac{7}{10}$
Halдар (turmeric) ...	0	6	0	15 $\frac{7}{8}$
Wál ...	1	11 $\frac{1}{2}$	2	26 $\frac{17}{10}$

* In number per rupee.

The price of cotton for his eleven years has not been inserted in Captain Cruickshank's list, so that I have no means of comparing it with what it now is.

17 (a). It would be trespassing too much upon your time were I to attempt any minute description of the different kinds of systems of assessment we have to supplant. I will, therefore, give in an appendix a specimen of each kind for one village and content myself with naming them and showing how many khálsa villages of the district are now managed according to each of them:—

	No. of Villages.
Jinnaswár bigoti (crop assessment) ...	22
Bhágwattái (division of produce and levy in kind) ...	35
The above two combined ...	6
The 1st combined with plough-tax ...	11
The 2nd do. do ...	3
The 1st and 2nd combined with plough-tax ...	3
Bhágwattái combined with a sum in the lump on individuals ...	4
Permanent cash bigoti on the lands ...	13
	—
	95
	—

In this list the seven villages experimentally assessed on the survey principles last year are included in the class to which they formerly belonged.

18. This diversity of systems with the odd manner in which the annual revenue accounts of the district appear to have been made up, items being reckoned as belonging to the land revenue in one year which were not so in others, remissions being in some instances shown as deductions from the year's revenue, and in others being deducted at once and not shown as revenue at all, with other irregularities, have made it a matter of some difficulty for the members of my establishment to reconcile the revenue as ascertained from the original village returns with that shown in the Mámlatdár's books, but the discrepancy has been satisfactorily accounted for in each individual instance, and the amount shown in the statements which I shall give may, therefore, be relied upon as the actual land revenue of the district for the years in which complete returns have been procurable. As I have mentioned before, however, the returns of cultivation and waste are entirely in *ásrá* or estimated bighás, and are consequently so far trustworthy as they may enable us to judge generally of increase or decrease in the cultivated area of the district as a whole and thus to form an idea whether the general pitch of its assessment was such as to favour or otherwise the prosperity of its cultivators. With these preliminary remarks I will proceed to give in the usual form of diagrams the amount of cultivation, assessment, remissions, and collections during the past 28 years in the Dholka Pargana: for a number of villages I have been able to procure returns for as many as 34 or 35 years, but as those of about 28 villages are only procurable for 28 years I

have thought it preferable to make use of them for only so long as I could get those of nearly the whole of the khálsa villages of the district complete. A few villages in which the accounts were found imperfect have been omitted entirely; and in cases where the returns of only one or two years were wanting, the deficiency has been supplied by the average of the returns of the same villages for all other years being entered. The statement in Appendix A. to this report shows also the revenue of the district without the above-mentioned 28 villages from the year of Samvat 1876, A.D. 1819-20.

19. The diagrams (not printed) numbered I., II., and III. apply to the whole of the khálsa portion of the pargana, Nos. II. and III. being merely given to show in detail the results of the two principal systems of revenue management described above, the jinnaswár bigoti and the bhágwattái, the villages in which a mixture of the two prevails being placed in one or the other according to the predominance of either system. A glance at these will suffice to show that the general result of our revenue administration of the district is far from satisfactory, the average amount in cultivation during the first five years of the diagram being about 84,936 bighás and that for the last five 79,851, and omitting the bad year of A.D. 1848-49 and substituting for it that of A.D. 1846-47, 80,926; so that during 28 years of profound peace and of ample protection both of life and property during which the population has increased at the rate of rather more than 22 per cent. (as I shall have occasion to show presently) cultivation has actually decreased. Not having the returns from the revenue survey which would enable me to carry out my argument for the entire pargana, I will content myself with drawing your attention to the vast disproportion which the diagrams exhibit between the average assessment in the bigoti and bhágwattái villages and remarking that the large remissions (about Rs. 20,000) shown in the year A.D. 1826-27, (or Samvat 1883) were caused by the unprecedented ravages committed throughout the district by an irruption of mice.

20. For the villages into which I propose on receiving the sanction of Government to introduce the survey settlement, in the present season, I have the statistical returns necessary to enable us to judge of the results of former assessments perfect, and as they include a large and nearly continuous tract of country to the south and south-west of the district and are more in actual number than one-third of all the khálsa villages contained in it, any arguments founded on these may fairly be assumed to apply with equal force to the whole pargana. The diagrams numbered IV., V., and VI. which, to be easily understood, are drawn on the same scale, give the cultivation, assessment, and realizations in 37 out of the 38 villages proposed to be assessed immediately for 23 years.

21. In the first place the same general characteristics as those in the diagrams framed for the whole district are observable also in these; in 28 years there has been no increase of cultivation, and the general pitch of assessment in the jinnaswár bigoti villages is far higher than in the bhágwattái. Owing to the plan of levying revenue in the latter according to the actual produce in each year, the remissions are so small that they would scarcely be distinguishable (with the exception of those of A.D. 1826-27) on the scale on which the diagrams are drawn. It is, however, very evident on the diagram of the former class of villages that scarcely a year has elapsed without the cultivators being obliged to be bolstered up with remissions, and in unfavourable years (such as A.D. 1833-34, 1838-39, and 1848-49), with considerable ones.

22. Where the fluctuation of assessment has been so immense as that shown in the diagram of the bhágwattái villages, to give an average per bigha or per acre would be useless. I need not explain to you that this fluctuation is caused not only by the decrease or increase of the area under cultivation, but also by the varying produce of the seasons and the rise or fall of the value of agricultural produce in the market. The average assessment on all lands in the jinnaswár bigoti villages has been, for 28 years, Rs. 3-1-7 the bigha, and the average realizations on the same area have reached Rs. 3-0-2, or within Re. 0-1-5 of the assessment. If we take an English statute acre at one bigha, and seven-tenths (near enough for all practical purposes, although an acre expressed in terms of a standard bigha is 1.7015625) the assessment per acre has been about Rs. 5-4-3.

and the realizations on an average about Rs. 5-2-0. That such a large average amount should ever have been collected is attributable only to the quantities of rent-free or lightly assessed alienated land which is held in a great measure by the holders of Government land in conjunction with the latter, and it must not be imagined that what has been collected has been obtained without difficulty or at once: the cultivators' debts to the State have frequently, to my knowledge, run on from year to year and been collected by dribblets from the surplus produce of any seasons subsequent to that in which they were incurred. I could prove this by actual returns, but their compilation would be a work of labour and time so that I hope my assurance that, from having had charge of the district for some time and from returns made out for a few villages I have satisfied myself of the fact, will be sufficient to support my argument that these assessments have been far too heavy.

23 and 24. The records of the former revenue survey of the district under Captain Cruickshank give the population of the whole of the 38 villages (excluding one close to the town of Dholka which was formerly inhabited and which has now been deserted by its cultivators for the town itself) at 17,600 individuals, and they have been ascertained by our survey to contain 21,548 inhabitants, an increase of 3,948 or about 22 per cent. in rather more than 30 years. During the same period the number of ploughs (calculated at 2 working bullocks for a plough) has increased from 2,769 to 3,178 or at the rate of a little more than 14 per cent. This, when considered in conjunction with the facts that the value of agricultural produce by which the larger portion of these people live, has been (as shown above in paragraph 16) to be nearly one-half of what it formerly was and that the actual area under cultivation has not increased, plainly shows that the great body of the cultivating population are much worse off than they were thirty years ago, and to no other cause can it be traced than the heaviness of the assessments, which have continued the same while the value of the produce out of which they have had to be paid has been gradually diminishing. This is more glaringly evident when we look at the bhágwattái and jinnaswár bigoti villages separately. In the former the increase in population has been 2,401, and that in ploughs 360 or a plough to about 7 people, whereas the increase in the latter in population has been 1,547 and in ploughs 49 or one plough in about $31\frac{1}{2}$ human beings; the inhabitants of the latter had formerly on the average a plough to every seven people, whereas now they have one for every eight only. The increase in the number of plough cattle in the bhágwattái villages is partly owing to their late freedom from the cattle-lifting inroads of the Kattis to which most of them were from their position particularly exposed.

25. The general condition of the cultivating population of the district, although to a casual observer their substantially built houses and good clothing would convey the idea that they were well-to-do in the world, is in reality far from prosperous. They are almost universally deeply involved in debt, and are driven to the aid of money-lenders to procure the necessary funds even for each season's agricultural operations. Capital can scarcely be said to exist among them, and the majority living from hand-to-mouth are in the condition of labourers to their creditors who entirely absorb the surplus profits of their lands. It will tend to the advantage of the State to remedy this state of matters by liberal measures of reform, for the Gujarát cultivator is remarkable for his intelligence and needs but these to enable him to recover his independence, whilst the Dholka Pargana contains large quantities of waste land, the returns from which, when cultivated, will amply compensate the State for any present sacrifice of revenue it may incur.

26. The district extending to the north of the town of Dholka itself is within a few miles of the large market of Ahmedabad; the classification of its villages with a view to a fair apportionment of the assessment according to their distance from their several markets will be rather complicated and its difficulty is enhanced by the way in which the khálsa are intermixed with talukdári and other villages. A reference to the accompanying map of the pargana will best explain this plan of my proposals for the new settlement. I would respectfully beg to propose that the khálsa villages and those placed temporarily under khálsa management, consisting of the 8 villages comprised in the

táluka of the late Sardár Mahomed Khán, should be divided into five classes with varying maximum rates of assessment to be explained presently as follows:—

First Class.

1 Dholka.	8 Transuj.	15 Shekri.
2 Chuk.	9 Nesra.	16 Wásna Keliá.
3 Mufliapur.	10 Dandusar.	17 Ranora.
4 Jálalpor Wazifa.	11 Hassanpur Kasba.	18 Tilaj.
5 Jálalpor Kasba.	12 Mujpur.	19 Amlí.
6 Rampur.	13 Khanpur.	20 Bopal.
7 Ambeti.	14 Sindraj.	21 Ghuma.

Second Class.

1 Amliala.	15 Ambarelee.	29 Salejra.
2 Sánthal.	16 Kharenti.	30 Junjal, Rupawati.
3 Sahij.	17 Kuriana.	31 Bawala.
4 Wautha.	18 Surendi.	32 Rasam.
5 Girand.	19 Jalalpur Godneshwar.	33 Chulora.
6 Virdi.	20 Walthera.	34 Budarkha.
7 Engoli.	21 Siawara Khálsa.	35 Kavitha.
8 Kowka.	22 Dhanwára.	36 Surora.
9 Ganesar.	23 Sakodra.	37 Chandesar.
10 Simaj.	24 Khalekpur.	38 Urasur.
11 Palri.	25 Bhaila.	39 Sánand.
12 Aundhari.	26 Kerala.	40 Manipur. } Near Ah-
13 Rassikpur.	27 Jhekra.	41 Changodar. } medabad.
14 Pisawara.	28 Rupal.	

Third Class.

1 Dholi.	7 Hassannagar.	13 Bhait.
2 Ráipur.	8 Adrora.	14 Deoti Nani. } Near Sánand
3 Ránesar.	9 Darran.	15 Piplon. } and Ahmed-
4 Degámra.	10 Muttora.	16 Bhawanpir. } abad.
5 Muipura.	11 Wásna Chachrawari.	
6 Kocharia.	12 Rujora.	

Fourth Class.

1 Jhakra.	13 Deo Dhollera.	} Of the Vi- rangám Pargana, to be referred to pre- sently.
2 Vejalka.	14 Nanodra.	
3 Warna.	15 Wasna Nanodra.	
4 Nubhoi.	16 Kewula.	
5 Dugari.	17 Sankore.	
6 Rinjha.	18 Jhura.	
7 Chiturwara.	19 Juhar.	
8 Mehmur.	20 Siawara (Sá- nand Tappa). } Near Vi-	
9 Sarla.	21 Daduka. } rangám.	
10 Kanetur.	22 Rethul.	
11 Lugdana.		
12 Khesrindee.		

Fifth Class.

1 Meni.	2 Durgi.	3 Veji.
---------	----------	---------

Total 106 villages.

In explanation of the fourth class I would beg to observe that the town of Virangám is about 9 or 10 miles from the villages entered as near that market.

27. Of the above it is proposed to introduce the revised assessment during the current season into thirty-eight as follows:—

First Class.

1 Chuk.	4 Khanpur.	6 Ambeti.
2 Ranora.	5 Transui.	7 Rampur.
3 Mujpur.		

Second class.

1 Santhul.	9 Aundhari.	16 Sakodra.
2 Sahij.	10 Pahi.	17 Bhafla.
3 Wautha.	11 Ambareli.	18 Kerala.
4 Girand.	12 Khurenti.	19 Salejra.
5 Engoli.	13 Kariana.	20 Juwal Rupawati.
6 Kowka.	14 Walthera.	21 Surora.
7 Ganesar.	15 Siawara Khálsa.	22 Rasum.
8 Pisawara.		

Third Class.

1 Dholi.	2 Ráipur.	3 Adrora.
----------	-----------	-----------

Fourth Class.

1 Jhakra.	3 Memur.	5 Khesrindi.
2 Vejalka.	2 Kanetur.	6 Deo Dhollera.

These, with the seven villages of Kocharia, Hassannagar, Degámra, Ránesar, Jhekra, Shekri and Urasur already experimentally assessed, will make a grand total of 45 villages to be managed henceforward on the revised system and leave but a few scattered villages of the south and south-west portions of the pargana to be settled next year when their classification is completed. There will remain by the end of this season but 11 villages in the district to be managed on the objectionable bhágwattái or division of produce system.

23. I will now proceed to the details of the proposed settlement. You will recollect that the maximum rates per acre for dry-crop soils introduced experimentally into the seven villages mentioned above were in Shekri Rs. 2-4-0, in Jhekra and Urasur Rs. 2, and in Kocharia, Hassannagar, Degámra and Ránesar Rs. 1-12-0. These rates I would respectfully propose to retain respectively for the 1st, 2nd, and 3rd classes of villages detailed above, to reduce in the same ratio 4 annas per acre for the 4th class, and to make the maximum rate in the 5th class which consists but of three very small and poor villages close to the Null, one rupee per acre. The rates for the different classes will then stand thus:—

1st Class.	2nd Class.	3rd Class.	4th Class.	5th Class.
Rs. a.	Rs.	Rs. a.	Rs. a.	Rs.
2 4	2	1 12	1 8	1

The assessment according to the first three of these maximum rates has stood remarkably well the test of the unfavourable season of 1853-54, and when it is considered that the average assessment for 28 years on dry-crop soils in the jinnaswár bigoti villages now proposed to be assessed, the unfavourable results of which have been already noticed, was Rs. 2-5-3 per bigha or about Rs. 3-15-4 per acre, and that prices have fallen about one-half since this was fairly applicable, I do not think that any smaller reduction in the maximum rates would be sufficiently liberal to induce the ends we have in view. The effects of this reduction on the present revenue of the villages to be assessed I will notice after proposing rates for the garden and rice lands of the pargana.

29. The peculiarity of the geological formation of the district which gives more or less of a brackish taint to the well water of almost the whole of it has already been adverted to, and the advantages and the disadvantages of the four different plans of assessment for irrigated lands, *viz.*, 1st, a fixed assessment on the land, to be levied under all circumstances; 2nd, a fixed assessment on each field distinct from the dry-crop rate, to be levied when any part of a field is watered; 3rd, two classes of rates of assessment for superior and inferior kinds of irrigated crops, fixed on the well and to be levied in addition to the dry-crop rate by annual inspection and measurement; and lastly, a rate fixed in the lump on the water-bag of a well, to be levied as a whole under all circumstances when water is drawn to raise an irrigated crop, have been fully discussed in my letter on the experimental assessment of seven of the Dholka villages to the late Revenue Survey Commissioner mentioned in the margin, and my final opinion as to the superiority of the last of the above plans is conveyed to you in my jamábandi report for last year for the seven experimental villages, No. 40, dated 17th April last; a recapitulation of the whole of the arguments on the subject therefore

No. 82, dated 20th June 1853.

would only unnecessarily lengthen the present communication, and I would respectfully at once beg to propose that this plan of assessment for irrigated lands be adopted for the whole of the pargana of Dholka as being most adapted to its peculiar circumstances and most likely to conduce to the interests both of the cultivators and of the State.

30. From sugarcane, plantains and ginger down to the commonest kinds of edible grains so various are the products of the district that to strike any average rate of assessment that would be applicable to all would be impossible, and our only safety, therefore, in settling it will be to keep it low. I feel that in proposing the following rates of irrigated assessment I must crave the indulgence of Government if I cannot give exact statements and figures to explain the reasons for proposing the exact pitch at which I have placed them: I have arrived at the conclusion that they will be fair from the result of the experimental assessment, already referred to, made by the aid of Captain Wingate's great experience, by careful observation of the results of past assessment, and after consultation with Captain Fanning. They, as well as the rates for rice cultivation, which will be noticed hereafter, are merely meant as maximum standards, to be modified according to the classification scales and any other peculiar circumstances that may appear worthy of attention at the discretion of the settling officer. It is a strange fact that, in the Dholka Pargana the well water is sweetest in the highest class villages in the vicinity of the town and gradually gets more brackish as the villages lie further off. This is caused by the nature of the soil and will account for what would otherwise appear a too rapid decrease in the rates proposed for the different classes, which are as follows:—

1st Class per Kos or Water-bag.

Dekuri or wells supplied by the River or Null and not from Springs.	Pukka or permanently built wells.	Kutcha or temporary unbricked Wells.
Rs. a. p.	Rs. a. p.	Rs. a. p.
.....	9 0 0	4 8 0
	<i>2nd Class.</i>	
10 0 0	8 0 0	4 0 0
	<i>3rd Class.</i>	
.....	7 0 0	3 8 0
	<i>4th Class.</i>	
.....	6 0 0	3 4 0
	<i>5th Class.</i>	
4 0 0	5 0 0	3 0 0

31. A common water-bag (the sundia kos) worked by a pair of bullocks and one man will irrigate with fair labour on an average about three-and-a-half acres of land. The dekuri is a pit dug sometimes beneath a bank with a channel to lead into it the river water which is then drawn up by a bag on the top and sometimes a substantially built well inside the bank with a similar water-course attached; the expense necessary to fix the uprights and cross-piece of wood for drawing from them is a mere nothing, whilst the supply of water is always abundant and perfectly sweet, so that they are proposed to be assessed higher than other wells: when permanent wells are sunk after the introduction of the settlement no further assessment than the dry-crop rate will of course be levied for them. You will observe that the assessment now proposed for *kutcha* or unbricked well is rather higher than that originally proposed for the seven

experimental villages : my reason for this change is that that formerly proposed appeared from the experience of the last season to be too low as shown in my annual settlement report for them mentioned above. From these liberal reductions from the former rates of assessment for garden produce in the old crop rate villages I confidently anticipate a large increase in the cultivation of the superior varieties of irrigated crops and have no doubt that the loss in revenue on this account will be but of short continuance.

32. We now come to the assessment of rice lands. I explained in a former report to the late Revenue Survey Commissioner that the rice-growing lands of the district were situated entirely under tanks or in low situations where water would lie in the monsoon ; their value, therefore, entirely depends upon the supply of water they can calculate upon receiving upon an average year after year. Even, however, under the most favourable circumstances there occur in Gujarát such seasons of drought that these lands cannot be cropped with rice, and on this account it was thought advisable in the experimental villages to recommend that, in such years, only a certain small portion of the assessment should be levied on the rice lands. This recommendation I would respectfully beg to extend to the whole of the pargana, and as the valuation of the different villages for their rice land assessment must, on account of the variety of their circumstances in this respect, be left in a great measure to the discretion of the settling officer at the time of the settlement, I propose, as was done in the village of Degámra last year, to keep the dry-crop rate on the rice lands separate from the water-rate, so as to give the lower classed villages the advantage they obtain in the former from the greater distance from a market, and to fix one maximum rate per acre for the rice lands for the whole district, to be lowered at the time of settlement by the settling officer according to the classification scales and any other circumstances that may appear to require attention. The maximum water-rate that I would propose is Rs. 6 per acre, which will be levied only in those years in which a rice or other irrigated crop, such as wheat or barley, may be raised in the rice lands, the dry-crop rate on the field only being levied in those years in which any other but an irrigated crop is raised, or the lands are left waste from want of water. This is a large reduction on the rates on the awal or first class rice lands in some villages under the jinnaswár bigoti system, one of which, Salejra, pays as high as Rs. 9-12-0 the bigha or about Rs. 16-9-5 the acre ; but when it is considered that the value of rice in the market has fallen by one-half within the last thirty years, that there is every probability of its value falling still further, and that it is an article whose profits to the cultivator are in Gujarát in the highest degree uncertain, I do not think that the proposed rate can be said to be too low. The water-rate as well as that for the dry-crop will be calculated separately for each field at the time of settlement and will be levied as a whole whenever any part of a field is cultivated with rice or other irrigated crop in order to avoid the necessity of annual measurements.

33. There remains still one rather difficult point to discuss with reference to the settlement of the pargana, that of the assessment of waste lands. The present method is to levy a cattle-tax on the cattle of non-resident Rabaris or shepherds, the villagers' cattle grazing free of all charge, and is most objectionable inasmuch as it leaves a door open for fraud when the Rabaris can pass off their cattle as belonging to the villagers, and because the tax is not levied at so much per head or by any fixed rule but according to the discretion of the Amín Patels in the lump on a man's cattle. In the seven experimental villages the rule prescribed at page 22 of the joint report of selling waste fields for grazing purposes annually has been as yet carried out, and with the result I anticipated that only a few fields, usually cultivated but which their usual occupants did not in the particular year wish to cultivate and which had accordingly not been taken up at the survey rates, were taken at the auctions as waste land. This will, I have no doubt, be the result in the whole district until grazing land becomes of such value from its scarcity as to induce cultivators to secure portions of it for their own cattle. At present the custom of the country is, after the kharif or early crops are removed, for the cattle to rove at large over the empty fields, those belonging to villagers and those of strangers alike, and whilst the kharif crops are on the ground, the cattle can always find subsistence enough along the roads and hedges and in the uncultivated lands of the village.

34. On calling for information from the four Collectorates of Gujarát as to the method of assessment of waste lands in force I have found that a great variety exists, the Kaira Collectorate being the only one in which one uniform system prevails throughout, Rs. 5 per hundred head of cattle being levied as a grazing tax. The Collector, in his reply to my letter, has not exactly stated that such is the case, but I presume, from its being so in the neighbouring pargana of Jetalpur in the Ahmedabad Collectorate, that this is the levy per month. In the Broach Collectorate certain sums formerly settled continue to be levied from the professional graziers of certain districts or villages, whilst flocks of sheep and goats pay in Hánsot Rs. 4-3-10 per hundred head, and in A'mod Rs. 1-12-0 for the same number. In the rest of the province in some cases certain fixed sums are paid per head of different kinds of cattle (milch buffaloes paying the most), whilst sheep and goats pay in the lump for each flock, whilst in other places the grazing is entirely free.

35. I do not now wish to propose any general plan of assessment on waste lands for the whole of the four Collectorates as uniformity may be secured by the Revenue Commissioner in concert with the different Collectors, but would beg respectfully to suggest for the consideration of Government that the plan of selling annually by auction the grazing of all waste lands should be directed to be carried out whenever practicable. In the Dholka Pargana and other parts of the country a number of cesses on the cattle, which were in reality merely an assessment on waste lands for grazing, were abolished too hastily on the passing of Act XIX. of 1844 as being taxes on the professional shepherds and herdsmen, but to re-impose them in the same shape as formerly would create ill-feeling and would, therefore, be inadvisable. It appears necessary, however, to adopt some plan for this kind of assessment which would leave as little chance of fraud as possible, and this, I think, could be effected by one uniform rate of assessment for cattle of all sizes and sexes, and a similarly leviabale one for all sheep and goats, being fixed. The rate that I would propose is this, that all cattle in the Dholka Pargana be charged at the rate of 9 pies a month per head and all sheep and goats at the rate of one pie (horses, camels, &c., being included among the large cattle) whenever they might be grazed by people of whatever caste whose profession it might be to live upon their produce and to whomsoever the animals might belong. The cattle of villagers grazing in their own village under the charge of their own servants, who might not live by their produce, I would recommend to be allowed to graze free of all charge, but the owners of all animals found grazing loose and not in charge of any one out of his own fields should be at once charged for one month's grazing. This last provision is particularly necessary in the Dholka Pargana, where I have already brought to your notice that immense injury is done to the crops from the want of a proper system of poundage. Rule 14 of those in the Joint Report should notwithstanding still continue in force.

35 (a). The question of the assessment of alienated lands in general, whether entirely or partially exempt from assessment at present, is already before Government in the Act proposed by Captain Wingate for the legalization of the survey settlements, but as it will cause much inconvenience and confusion in the settlement papers, and consequently in the village accounts, if lands found in the possession of parties claiming exemption from assessment in excess of what was ascertained to be in their possession by the former revenue survey measurements be not at once brought under assessment, I have the honour respectfully to propose that all such excess shall be at once assessed at the survey rates, the assessment being thrown, at the option of the parties, either as a quit rent on the whole field or as an assessment on the portion of it found to have been obtained by encroachment on other lands. This will require no further authority than that already contained in the regulations, and all other arrangements for the assessment of alienated land must remain as at present, until the Draft Act referred to above shall have passed into law.

36. The remainder of the pargana not having been classified, it will be impossible to estimate with any degree of accuracy the present loss of revenue that will arise from the adoption of the new rates of assessment in any but the 38 villages proposed to be assessed at once, and the actual loss in these can only be ascertained after the settlement has taken place. In the thirty-eight villages

the decrease from the average receipts of former years may be estimated at about Rs. 27,000, whilst from the cultivation of the waste arable land contained in them and calculated at dry-crop rates only there is room under the survey settlement for an increase of about Rs. 13,000.

37. But however liberal the reductions in the assessment and however theoretically excellent the survey system, they will fail to exercise the beneficial effect on the district that we look for, if the rules for the future administration of the survey settlements are not strictly adhered to, and to ensure this the supervision of their working must be on the part of the Government officers, especially of the native district officials, accurate and unrelaxing. Such a supervision on the present miserable scale of the district establishment will be, as I think you will agree with me in asserting, utterly impossible. Does it not stand to reason that a district containing about 930 square miles of a well cultivated and a populous country and comprising 103 directly managed villages in addition to 71 *tálukdári* (several of which also are under attachment and consequent temporary direct management) and 8 held on other tenures, cannot be properly looked after by one *Mámlatdár* or District Revenue Officer with but six *kárkúns* (the most highly paid of these not receiving Rs. 50 a month) and one Shroff under him. It must be recollected that the *Mámlatdár* is not merely the head Revenue Officer of his district but also the head Native magisterial and judicial executive, as the Joint Police *Amaldár* lately created merely relieves him of the labour of proceeding to the spot where any crime may have been committed and making personal enquiries into the matter and of the general supervision of Police arrangements. The division of the Dholka Pargana has, as you are aware, formed the subject of a correspondence between the late Acting Collector Mr. Mansfield, the Revenue Commissioner, N. D., and myself, and the proposal made to divide it into two *Mámlatdárs'* charges, one at Dholka and a second at *Sánand*, with a *Thánádár* to assist them at *Koth* in criminal business, has been negatived merely on the ground that there are other districts in *Gújarát* yielding an equal, if not larger, revenue to that of Dholka managed by one *Mámlatdár*. The districts specified are *Jambusar*, *Vágra*, and *Broach* in the *Broach* Collectorate, and *Nadiád* in *Kaira*, the richest and most thickly populated pargana in the whole of British *Gujarát*, which are of such small areas that their most distant villages are within easy reach of the *Kacheris* of their respective *Mámlatdárs*, whilst the single pargana of Dholka is equal in area to very nearly two-thirds of either of the whole *Collectorates* of *Surat*, *Broach*, and *Kaira*, which are respectively sub-divided into thirteen, six and seven districts. *Nadiád* contains 82 villages, *Broch* 90, *Vágra* 75, and *Jambusar* 87, whilst Dholka has 182. I have the honour, therefore, respectfully to recommend that you will urge the matter on the re-consideration of the Revenue Commissioner in handing on this report to Government. The plan formerly proposed for the division of the district, and which is explained in the former correspondence and on the accompanying map of the pargana, is as good a one as I can devise, and I have no wish to make any alterations. The three *Viramgám* villages entered above in the fourth class of those of Dholka have been so in anticipation of the scheme of division being sanctioned by Government. This is scarcely the proper place to mention it in, but I cannot refrain from giving an opinion that the *Ahmedabad* Collectorate, equal in area almost to those of the three other *Gujarát* *Collectorates* put together, is far too large to be efficiently superintended by one Collector with his Assistants. The means of Native superintendence moreover are lamentably deficient, the districts of *Viramgám* and *Dhandhuka* being, as well as Dholka, far too large to be each under one *Mámlatdár*. If these districts were properly sub-divided and *Dhandhuka* and *Gogha* then thrown into a separate sub-collectorate, establishments on the same scale as those in the *Deccan* being given to both European and Native officers, something like efficient management would be secured, and I cannot doubt that a representation of the actual state of affairs will secure from Government their sanction for the measures proposed. If a separate report on the subject should be required I shall be happy to submit one.

38. The roads in the Dholka Pargana are of the usual stamp; for the most part mere cart tracks which, where black soil prevails, wear themselves into deep narrow ruts, and where there is *gorádu* make them equally bad for

traffic with loose heavy sand. The road that has been just commenced from Gogha will connect Dholka with Dhandhuka and Ahmedabad, but no proper outlet for the agricultural produce of the district to arrive at the sea-ports on the west of the Gulf of Cambay will be secured until the Bogawa is bridged within our own territories, and a road direct south to Dholka over it constructed from Dholka with branches thence to Sánand and Virangám. With the exception of the Bogawa the engineering difficulties on these lines would be very trifling.

39. Another great *sine quâ non* for the development of the resources of the district is the improvement of its means of irrigation. Rice cultivation could be effectively maintained and improved by attention to the deepening and clearing out of tanks, and I think a good head of water might be obtained by damming up that of the Sukni nadi which now flows to waste somewhere near the village of Transuj to the south of Dholka town, but the mainstay of the garden cultivation of the district will always be its wells. The construction of works of this nature cannot be undertaken to any extent by the officers of the State, and they must, therefore, be left to private enterprise, but for this it appears necessary that greater encouragement should be given than that afforded by the granting of a lease for 30 years or the guarantee that no further demands for revenue shall be made for that period. The wells throughout the district are most uncertain and hundreds of them may now be seen lying perfectly useless on account of their water becoming brackish and unfit for irrigation. Where such is the case parties will always be slow to risk their capital in sinking wells with the possible prospect of not being able to secure adequate returns for it, and I have, therefore, the honour respectfully to recommend that the thirty years' freedom from assessment be explicitly guaranteed at whatever period of the thirty years' survey lease a well may be constructed, that for fifteen of thirty years subsequent to this only one-half of the usual irrigation rates of assessment be levied on the well and for fifteen or thirty years more only three-fourths of those rates so as to delay the levy of the full rates for 60 or 70 years from the date of the construction of the well according to its nature. These provisions would not be necessary in districts where the well water might be depended upon to retain its sweetness permanently.

40. In conclusion, I have the honour to request the usual guarantee from Government for the permanency of the proposed settlement in as far as the tulpat or Government land is concerned for thirty years as well as sanction for altering the settlement papers in the 7 experimental villages so far as to substitute in Shekri, Degámra, Urasur and Jhekra the plan and rates of irrigated and rice assessment now proposed for those at first introduced. As the change will only enhance the rates of assessment on *kacha* or unbricked wells which it is optional with the cultivators to dig or not annually, there can be no objection to the change by which uniformity of system in the whole *khálsa* portion of the pargana will be secured.

I have the honour, &c., ry

(Signed) A. ROGERS.

P.S.—I have frequently in this letter referred to former correspondence in order to avoid prolixity and have thus been unavoidably less explicit on some points than I might otherwise have been. The question of the settlement of the *tálukdári* portion of the district of Dholka is now under discussion under separate correspondence, but this letter to be properly understood should be read in connection with those mentioned above at paragraph 29.

at
with
(Signed) A. ROGER their
share.

VILLAGE DHA'RA OR CUSTOM MENTIONED IN PARAGRAPH 17 a.

I. KHARENTI.—BHÁGWATTÁI COMBINED WITH PLOUGH-TAX.

Kharif Crops.

Rice of all sorts pays $\frac{1}{2}$ produce and the following báltis or extra cesses :—

From the gross produce $\frac{3}{4}$ of a ser per maund as Kamdari; $\frac{1}{2}$ of a ser per maund as Tolamni; $2\frac{1}{2}$ sers when the produce is good as dhurri, $\frac{3}{4}$ maund for each plough used as havildári, but of this half is taken out of the kharif and half out of the rabi crops.

The above báltis belong to Government and the following to other individuals and are called parbhári báltis :—

Tolamni, $\frac{1}{4}$ ser per maund of produce.

Múndir do. do.

Patel Tolu, $\frac{1}{4}$ maund out of gross heap when the produce is good.

Khurajat do. do. do.

Bhur, $7\frac{1}{2}$ sers of gross heap when the produce is good.

Dogs, $2\frac{1}{2}$ sers on the same occasion.

After all these have been separated from the gross produce, the proportion of $\frac{1}{2}$ to State and half to the cultivator is calculated. Jowár, bájri and all the kathol crops pay $\frac{1}{2}$ produce when the following báltis have been deducted from the gross produce :—

Sarkári báltis—

Leriku,—2 sers per maund of produce.

Kámdári, 1 ser do. do.

Tolamni, $\frac{1}{4}$ ser do. do.

Dhurri, $2\frac{1}{2}$ sers out of gross produce when it is good.

Parbhári báltis—

Tolamni, $\frac{1}{4}$ ser per maund of produce.

Múndir do. do.

Patel Tolu, &c., as in rice when the produce is good.

In addition to the above out of the cultivator's share there is deducted as much grain as is of the value of Rs. 8 at the current market price for every hundred maunds of the Government share as bhádu or expense of carriage.

Rabi Crops.

Unirrigated wheat.—Ten per cent. is deducted from the gross produce, as *issuat*, which is taken by the cultivator: then the same báltis as in the kathol crops are deducted, and lastly one maund per bigha of cultivation. After these deductions the State and the cultivators take equal shares of the remainder of the produce; bhádu is after this taken out of the cultivator's share at the same rate as above.

Castor-oil seed and cotton pay $\frac{1}{2}$ share of the gross produce after deduction of the same báltis as those for the kathol crop. Bhádu is also taken as above. Grain, after deduction of the same báltis as above and $\frac{1}{2}$ maund for seed from the gross heap to be given to the cultivator, $\frac{1}{2}$ the remainder as bhádu as above are levied.

In irrigated wheat and barley after deduction of one maund per bigha of cultivation, given to the cultivator as seed, one-third of the remainder is levied, bhádu as above.

Kussumba pays of the bigha a bigoti of Rs. 2-13-0.

Plough-tax is taken at various rates from 9 annas to Rs. 1-3-0 and Rs. 2-5-0 to Rs. 3-8 per plough of two bullocks.

At last, the rates of salámi or quit-rent on alienated lands are various, but it is not dated by to give them here.

II.—WÁSNA KELLA, JINNASWÁR BIGOTI OR CROP-RATE VILLAGE.

Rates payable by Kunbi Pátidárs.

Ginger per bigha Rs. 14-14; limes Rs. 10-4; plantains when bearing Rs. 13-10; sugarcane Rs. 15-15; sweet potatoes Rs. 7; chillies Rs. 5-9; sweet potatoes as a second crop Rs. 3; jowár, bájri, &c., Rs. 2-13, Rs. 1-14 and 7 annas; rice Rs. 3-12; kola, a kind of pumpkin, Rs. 5-9; poppies Rs. 5-9; wheat after fallow Rs. 5-2; barley over fallow Rs. 3-12; methi Rs. 2-5; poppies and wheat as a second crop pay Rs. 3-12, and barely Rs. 2-13; onions Rs. 4-10.

Rates payable by Coolies.

Sugarcane, plantains, ginger Rs. 12-2; sweet potatoes Rs. 5-2; chillies Rs. 4-10; sweet potatoes as second crop Rs. 4; jowár, bájri and kathol Rs. 1-14, Rs. 1-6, Rs. 1-1 and 7 annas, over fallow Rs. 3-4; wheat and barley and methi over fallow Rs. 2-5; wheat as a second crop pays Rs. 2-13, barley Rs. 1-14, and methi Rs. 2-5; wari or hot weather crops either as 1st or 2nd crop pay Rs. 1-14 per bigha. If Government cultivators cultivate alienated land they pay to Government for sugarcane, ginger, or plantains Rs. 7-7; for wheat poppies, sweet potatoes, and chillies Rs. 1-14; for barley and methi over fallow Rs. 1-6; for bájri, jowár, &c., as kharif 7 annas and the same for all hot weather crops, except wheat and sweet potatoes as 2nd crops, which pay 15 annas.

In addition to the above, two cesses called *Anni* and *Bhurai* are levied on the total amount of the rental payable on each man's holding, the former at the rate of one anna and the latter at that of $\frac{1}{10}$ in the rupee.

III. RASAM.—JINNASWÁR BIGOTI, BHÁGWATTÁI AND PLOUGH-TAX.

Bhágwattái.

When irrigated crops are raised in lands that are *Kuwetur* (or that can be irrigated from wells) they pay a share of produce without *bábtis* as follows:—

Jowár, bájri, and other kharif crops, one-half share, the same being taken from unirrigated wheat, castor-oil, seed, and gram among the rabi crops: irrigated wheat over fallows pay $\frac{2}{3}$ and barely $\frac{1}{3}$; hot weather crops pay $\frac{1}{3}$ share all round.

Bigoti.

Jowár, bájri and *kuthol* crops with *kussumba* pay per bigha at rates varying from 15 annas to Rs. 2-13 according to circumstances.

Sugarcane pays Rs. 16-12 per bigha and chillies Rs. 4-10. Rice before planting, sown broad-cast, pays Rs. 7 the bigha.

* Kunbis and others pay cesses (*kháta vera*) on their *khátas* (holdings) at from 16 annas to Rs. 11-3.

Various rates and cesses on alienated land exist, which it is not necessary to show in detail here.

IV.—DANDHUKA.—PARTLY BHÁGWATTÁI AND PARTLY UDHAD OR PAYMENT OF A SUM IN THE LUMP ON THE KHA'TA OR HOLDING.

Rajputs, on certain quantities of land, fixed according to what a plough can cultivate Rs. 37-4 in the lump and 25 Bengal sers of irrigated wheat.

Coolies, village servants and others, pay in kharif crops as follows:—In rice 40 per cent., *tolamni* being levied from the cultivator direct by the weigher at the rate of $\frac{1}{4}$ ser per maund of produce; jowár, bájri and kathol crops, with wari or coarse rice, pay *tolamni* as above direct and 60 per cent. of their produce to Government. Jowár not ripening pays Re. 1 a bigha and no share. In rabi crops coolies and others pay in cotton, castor-oil seed, common oil-seed and gram, &c., $\frac{1}{2}$ the gross produce, *tolamni* being levied direct as above. In unirrigated or *chássia* wheat, after deduction of 5 maunds in the hundred as *Dissuat* and a maund per bigha of cultivation for seed from the gross produce, the remainder is equally divided between the Government and the cultivator, *tolamni* as above.

In irrigated wheat and barley 30 per cent. of the gross produce is levied, tolamni as above; and in irrigated jowár raised in the cold weather 50 per cent. Irrigated wheat, china káng and other hot weather crops pay $\frac{1}{4}$ of their produce with tolamni as above.

V.—GHUMRAO.—JINNASWÁR BIGOTI, VARYING WITH THE CASE OF CULTIVATOR,
THE KIND OF LAND AND THE CROP RAISED.

Kunbi Pátidárs pay per bigha as follows :—

	1st land,	2nd land.	3rd land,
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Jowár, bájri and kathol...	4 3 0	3 12 0	3 4 0
If these are raised in land belonging to Coolies...	2 13 0	2 13 0	2 13 0
Rice ...	6 1 0	6 1 0	6 1 0
Wari or sathi ...	2 5 0	2 5 0	2 5 0
Unirrigated tobacco ...	6 1 0	6 1 0	6 1 0
Caster-oil seed ...	2 5 0	2 5 0	2 5 0
Irrigated wheat over fallow ...	3 4 0	3 4 0	3 4 0

	1st Soil.	2nd Soil.	3rd Soil.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Irrigated 1st crop barley and 2nd crop wheat ...	2 13 0	2 13 0	2 13 0
Second crop barley and onions ...	1 14 0	1 14 0	1 14 0
Irrigated tobacco ...	7 8 0	7 8 0	7 8 0
Cotton, chillies and bengans, common oil-seed, tuvar, &c. ...	4 3 0	3 12 0	3 4 0
Sugarcane ...	9 5 0	9 5 0	9 5 0
Hot weather 2nd crop ...	1 14 0	1 14 0	1 14 0

Certain fields in the village have bigoti rates peculiar to themselves, which there is no necessity to enumerate.

Coolies, Lobárs, Sutárs, and others pay per bigha on all lands for jowár, bájri and kathol crops, wari, cotton, Rs. 1-14; for rice Rs. 3-12; for wheat and barley after fallow, bengans, &c., Rs. 1-14; for second crop barley 15 annas.

There are infinite varieties and sub-divisions of the above systems in different villages, which it would be useless to enter in detail here.

(Signed) A. ROGERS.

No. 666 of 1855.

FROM

E. G. FAWCETT, ESQUIRE,
Revenue Commissioner, N. D.;

TO

A. ROGERS, ESQUIRE,
Settlement Officer, Gujarát.

Revenue Commissioner's Office,
Poona, 27th March 1855.

SIR,

With reference to your memorandum No. 140, dated the 23rd December last, forwarding copy of your report to the Collector of Ahmedabad, No. 137, dated the 14th idem, proposing the introduction of the revised rates into 38

villages of the Dholka Pargana, I have the honour to state that not having yet received the report of the Collector on the subject, I apprehend there is scarcely time to obtain the orders of Government to the measure in time for it to be introduced this season.

2. Reposing full confidence in the care and accuracy with which you have performed the duty entrusted to you, I have the honour to authorize you to proceed to make the settlement of the season accordingly in anticipation of the final sanction of Government.

3. A copy of this letter will be forwarded for the information of Government and the Collector of Ahmedabad.

I have the honour to be,

Sir,

Your most obedient Servant,

(Signed) E. G. FAWCETT,
Revenue Commissioner, N. D.

No. 1634 of 1855.

TERRITORIAL DEPARTMENT, REVENUE.

To

THE REVENUE COMMISSIONER, N. D.

Copy of Resolution passed by Government under date 21st April 1855, on a memorandum from the Revenue Commissioner, Northern Division, No. 667, dated 27th March 1855, submitting, for the approval of Government, copy of his letter to the Settlement Officer in Gujarát relative to the introduction of new rates of assessment into 38 villages of the Dholka Pargana of the Ahmedabad Collectorate.

The sanction accorded by the Revenue Commissioner in anticipation to the revenue settlement of 38 villages in the Dholka Pargana is confirmed.

(Signed) W. HART,
Secretary to Government.

No. 20 of 1856.

To

J. W. HADOW, ESQUIRE,
Collector of Ahmedabad.

Camp Dholka, 14th January 1856.

SIR,

I have the honour to forward a detailed statement of the result of the survey settlement introduced in the course of last season into 37 villages of the Dholka Pargana, showing comparatively the amount of revenue derivable for the year of Samvat 1911, A. D. 1854-55, under the old and new systems. The settlement could not be introduced into the last village (Khánpur) mentioned in the statement on account of the lease under which it was held only expiring with the year, but the present season will see it in full operation in that as well as the seven villages in the first instance experimentally settled in 1853. A report upon the revenue of these last villages during the past season (the third of their trial) will be included in this letter, and will, I trust, prove satisfactory as to the general working of the system.

2. The gross land revenue from all sources under the old and new systems that will bear comparison with each other for the whole 44 villages (the statement not containing, as already mentioned, the details of the revenue of Khánpur), as shown in columns 8 and 18, is as follows:—

			Rs.	s.	p.
Old system	...	...	1,00,037	4	8
New do.	...	...	65,781	14	0
showing a diminution of			...	...	...
			34,255	6	8

If we allow, for the sake of comparison only, that the cesses included in column 6 are assessable on Government land, the new revenue in columns 10 and 15 as compared with that in columns 4, 6 and 7 shows a diminution of Rs. 37,695-12-5, which, considering the great reduction in the rates of assessment made in some of the formerly heavily taxed crop-rate villages and the unusually large revenue that would have been derived under the division of produce system in the remainder, owing to the favourableness of the season, is smaller than might have been expected. The reduction in the former class of villages, 20 in number, is Rs. 26,774-9-4, whilst that in the latter, 17 in number, is Rs. 10,854-5-1.

3. You will observe by a comparison between the area under cultivation shown in estimated bighás for the 37 villages in column 3 (equivalent to about 20,868 acres) and that ascertained by the survey measurements (24,165) in column 9, that the result of the survey in this respect has been decidedly to the advantage of the State.

4. The revenue shown in columns 21 and 22 remains for the year of the settlement the same as under the old system, owing to the new settlement not having been introduced sufficiently early in the season. That in column 21, described as the produce of cultivation in "kharábá" or unarable land, is for the most part the assessment leviable under former revenue management on *bháta* lands (alluvial) in the villages situated on the banks of the Sábarmati, which will, owing to our not having placed any permanent assessment on them, henceforward be sold annually by auction. The plan was recommended by Captain Wingate in the 19th paragraph of his letter No. 286 of the 26th August 1852, and sanctioned in Government Resolution No. 6471, dated 8th October 1852.

5. Of the remissions granted those contained in column 25 are merely incidental to the introduction of the new settlement, at which all increase arising from the equalization of former assessments as well as from apportionment of their fair share of cesses formerly levied from Government cultivators on the alienated lands they cultivate, and other causes such as the levy of water-rates assessed upon alienated lands, &c., has necessarily to be foregone until the season subsequent to its introduction. The remissions in column 26 are, with the exception of those in the village of Wautha, solely on account of wells constructed under leases on favourable terms, whilst the Rs. 234-8-0 in that village are on account of the wanta land in it being held on a lease in the manner of *tálukdári* villages, and all revenue derivable from it being, as a matter of course, included in the amount of the lease. These facts are highly satisfactory in as far as regards the future working of the new system, for I have already had occasion to mention that, under the old, it was seldom that a year elapsed without numerous petty remissions, many of them involving much tedious enquiry and opening a door to fraud, having to be granted especially in crop-rate villages.

6. The revenue actually realized from the 37 villages under report for the last ten years previous to the settlement was, on an average, Rs. 77,204-8-2 or about Rs. 295-6-1 in excess of that of the year of settlement. Considering the prevailing low prices of agricultural produce, the general state of indebtedness of the cultivating population, and the probability that with the opening up of the country and the increase of cultivated area the value of, at all events, the cereals of the district, will fall in the market, I am induced to hope His Lordship

in Council will not consider the reduction in the assessments too great. The estimated decrease for 33 villages given in the 36th paragraph of my letter No. 137 of 1854, was, as you will recollect, about Rs. 27,000.

7. The collections in the 44 villages up to the 31st July last were Rs. 53,053-0-4, leaving a balance of Rs. 10,187-12-1, of which but Rs. 5,221-15-5 were on account of quit-rents, &c., from alienated lands. The comparative result of the proposed settlement for the latter reported on in my letter No. 66, dated 26th June last, has been, as shown in columns 5 and 14 of the statement, to increase the revenue from quit-rents by Rs. 637-12-9. The cause of this increase will be evident from a consideration of that settlement, and I need not, therefore, now enter further into the details of the matter. I would respectfully beg to suggest, however, that the decision of Government on the subject of my letter above referred to, and on that of the revenue shown in column 16, which is mostly imposed upon alienated lands irrigated from rivers, nálas, and Government tanks or embankments, should be communicated as soon as practicable, so that the local authorities may know how to act for the future. For the season under report everything in excess of former assessments has been, as already stated, remitted. Of the above balance, which has accumulated merely from the confusion of introducing the new assessment late in the season and great carelessness on the part of the local authorities, there are now but Rs. 4,959-15-10 outstanding,—Rs. 1,652-0-11 on account of Government land, and Rs. 3,307-12-11 on account of alienated.

8. The change in the 7 experimental villages necessary to bring all the settled villages under one and the same system as regards rice and irrigated lands adopted simultaneously with the introduction of the settlement now reported on has resulted in a diminution of revenue by Rs. 66-14. The actual number of fields in cultivation during the season under report however exceeds that of last year by 16, so that although the success or otherwise of the new system cannot be fairly judged of by the result of it in such a small number of villages, most of them scantily populated by a poor class of cultivators, every omen for the future has as yet been favourable.

9. There is one point, however, in the administration of the new system observable in these villages which, although I should prefer acquiring more experience of its practical working in a larger number of villages before I give a decided opinion as to whether it would be advisable to introduce some change in the system for Gujarát generally, it will be as well to direct attention to at once. I allude to the method the cultivators have adopted, and which I foresaw they would, of throwing up fields by rázináma at the commencement of a season, in order to avoid the contingencies of having to pay assessment if, owing to a failure of periodical rains or other cause, they should happen to remain waste, and taking up the same or others after the rain has fallen without the usual petition prescribed in Section 20 of the rules in the Joint Report. This could only happen where land was of such little value when under the new settlements as not to be worth taking up by non-residents, or where private understanding between the inhabitants of the same village was such as, through fear of the vengeance of the injured party or smallness of population or want of agricultural capital to prevent lands thus thrown up being taken possession of by others. From the steady increase in the area under cultivation since the introduction of the experimental settlement into these villages there appears no doubt that the smallness of the population is the cause of their being able to evade the rules in this manner. Each man has but sufficient agricultural stock and capital to enable him to cultivate the land of his own holding, and very often not that, as many are indebted to the kindness of their friends for the loan of a plough and bullocks for their season's ploughing, and it will probably take some years of the present liberal settlement to create sufficient capital to make it dangerous for a man to throw up his field for fear of some one else immediately taking it up. Under these circumstances I would respectfully beg to suggest for the present that the subject should be noticed by the Assistant Collector in charge of the district in his annual revenue reports in detail, so as to allow Government hereafter to form a correct opinion as to the steps necessary to be taken in the matter.

10. Taking the whole of the 45 villages in which the new settlement is now in force, the realizable assessment would, for the season of A.D. 1854-5, fall short of that collected on an average for the last ten years from Samvat 1901 (A.D. 1844-45) to Samvat 1910 (A.D. 1853-54) by Rs. 31,590-9-0, although the settlement would admit, on the cultivation of land now waste, of an increase of about Rs. 5,490 in dry-crop rates alone, but it must be many years before the present loss can be made up owing to the depressed state of the agricultural population. I confidently expect a large increase in the area under cultivation with irrigated crops under the system of assessment of such land by the *bhur* or water-bag, sanctioned in the 5th paragraph of Government letter No. 4735 of 1855, dated 12th ultimo, to the Revenue Commissioner, N. D., and now in force in the whole of the villages settled.

11. The new system is as yet most imperfectly understood both by the district authorities and by the great body of the cultivators themselves, and it will need great attention to all the details of the settlement by the officer in charge of the district for the next few years to ensure its proper administration. I hope, before proceeding to Europe on furlough, to report upon the revenue for the current season in the settled villages as far as the result can be ascertained by that time.

12. The papers for the settlement of the remainder of the villages under *khálsa* or direct management in the district are now under preparation, and the settlement will, I hope, be introduced in them also by Captain Fanning and myself in the course of the season. The statistical report upon the whole *pargana* will then be submitted; the great size of the district and the consequent difficulty of collecting the whole of the details necessary have been the cause of the piecemeal reports I have been obliged to submit heretofore.

I have the honour, &c.,
(Signed) A. ROGERS.

No.	Names of Villages.	ASSESSMENT ACCORDING TO THE REVENUE SURVEY—contd.		REVENUE FROM OTHER SOURCES.					Gross Revenue by the new Settlement.	REMISSIONS TO BE DEDUCTED.			Net realizable Revenue after deduction of Remissions.	REMARKS.
		Irrigation Rates—continued.		New Assessment less than the old.	New Assessment more than the old.	Cultivation in Lands not assessed.	Grass, Fruit-trees, &c.	Total.		On account of excess beyond former Assessment.	From other causes.	Total.		
		Total.	Gross Revenue from Land under Assessment.											
1	2	17	18	19	20	21	22	23	24	25	26	27	28	29
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
1	Ambeteo	68 8 0	888 12 0	278 5 7	46 15 5	.....	8 0 0	8 0 0	801 12 0	46 15 5	.....	46 15 5	844 12 7	
2	Undharoo	7 0 0	479 4 0	384 7 5	8 8 9	.....	.....	.....	479 4 0	3 3 9	.....	3 3 9	476 0 8	
3	Ingolco	210 0 0	2,377 13 0	1,358 1 2	399 8 1	78 10 2	7 7 0	86 1 2	2,463 14 2	390 4 1	.....	390 4 1	2,073 10 1	
4	Kerala	50 0 0	1,647 0 0	1,604 8 6	116 12 0	.....	5 5 0	5 5 0	1,652 5 0	116 12 0	.....	116 12 0	1,535 9 0	
5	Chuk	63 0 0	244 8 0	317 7 4	7 11 6	.....	2 0 0	2 0 0	2,461 8 0	2 11 6	.....	2 11 6	243 12 6	
6	Transuj	228 0 0	1,039 11 0	864 1 3	149 10 11	.....	25 2 6	25 2 6	1,044 13 6	87 4 0	52 0 0	89 4 0	975 9 6	
7	Palroo	214 8 0	1,168 11 0	858 8 2	110 9 2	.....	.....	.....	1,158 11 0	110 9 2	.....	110 9 2	1,048 1 10	
8	Possawara	48 8 0	3,015 14 0	3,579 10 3	48 9 10	.....	2 14 7	2 14 7	3,018 12 7	48 9 10	.....	48 9 10	2,975 2 9	
9	Bhola	261 8 0	4,020 4 0	1,929 0 3	258 18 5	.....	19 0 0	19 0 0	4,039 4 0	258 18 5	.....	258 18 5	3,780 6 7	
10	Moolpoor	7 0 0	805 4 0	11 8 10	60 0 11	.....	.....	.....	895 4 0	60 0 11	.....	60 0 11	835 3 1	
11	Rampoor	44 8 0	1,135 6 0	890 16 3	127 18 2	.....	2 8 0	2 8 0	1,137 14 0	119 4 3	.....	119 4 3	1,018 9 9	
12	Runoda	842 0 0	1,692 10 0	581 14 10	138 3 8	0 6 8	5 5 0	5 11 3	1,698 5 8	47 10 5	.....	47 10 5	1,650 11 3	
13	Wuotha	691 0 0	2,181 8 0	1,377 12 6	481 11 6	27 4 6	4 12 0	32 0 6	2,213 8 6	197 12 1	234 8 0	32 4 1	1,784 4 5	
14	Salajra	101 4 0	2,078 9 0	2,059 10 2	109 5 8	.....	122 12 6	272 12 0	2,198 5 0	51 4 3	.....	51 4 3	2,145 1 8	
15	Sahel	610 0 0	2,358 11 0	4,010 5 8	152 12 0	284 12 0	38 0 0	34 3 0	2,631 7 0	154 14 10	.....	154 14 10	2,498 8 2	
16	Amburleo	558 8 0	2,782 7 0	2,027 12 10	119 18 2	.....	84 3 0	1 12 0	2,866 10 0	119 8 2	.....	119 8 2	2,747 1 10	
17	Jooval Roopawutee	92 0 0	1,098 0 0	205 8 4	49 4 0	.....	1 12 0	17 11 0	1,009 12 0	49 4 0	.....	49 4 0	1,050 8 0	
18	Bassim	120 0 0	1,891 10 0	499 8 5	204 14 2	.....	12 0 0	91 4 4	1,409 5 0	73 15 8	.....	73 15 8	1,335 5 4	
19	Santhul	1,048 0 0	4,402 4 0	4,937 15 4	321 4 4	101 2 11	402 15 8	282 7 8	4,684 11 3	891 4 4	10 0 0	891 4 4	4,385 6 11	
20	Surora	650 11 0	2,549 11 0	386 5 12	195 10 8	221 18 7	195 10 8	158 7 11	2,928 0 6	390 10 2	186 0 0	528 10 2	2,401 5 4	
21	Adroa	127 8 0	1,832 15 0	489 12 6	28 0 0	.....	16 13 2	18 13 2	1,849 12 2	79 11 8	.....	79 11 8	1,770 0 6	
22	Kareena	148 8 0	681 15 0	292 13 10	178 10 8	.....	87 8 0	87 8 0	719 7 0	7 9 0	.....	7 9 0	711 14 0	
23	Kanetur	278 0 0	4,534 12 0	1,876 7 8	109 8 7	0 3 4	.....	71 12 8	4,626 11 0	109 8 7	14 0 0	918 6 7	4,413 4 5	
24	Kaooka	18 0 0	1,038 1 0	322 8 4	77 10 7	.....	.....	.....	1,088 1 0	12 9 7	.....	12 9 7	1,025 7 5	
25	Kharentee	180 8 0	1,427 8 0	648 2 1	77 15 3	.....	74 14 9	74 14 9	1,502 6 8	77 15 3	.....	77 15 3	1,424 7 6	
26	Ksarundee	15 0 0	500 0 0	368 2 5	32 5 7	.....	11 15 4	11 15 4	511 15 4	32 5 7	.....	32 5 7	479 9 0	
27	Ganesar .. .. .	.....	.....	87 15 6	374 10 5	.....	5 0 0	5 0 0	1,126 6 0	374 10 5	.....	374 10 5	761 11 7	
28	Girund	232 0 0	1,766 1 0	3,477 3 1	11 0 4	.....	26 5 6	26 5 6	1,792 6 6	11 0 4	.....	11 0 4	1,781 6 2	
29	Jakhda .. .. .	.....	732 12 0	420 11 11	65 10 1	8 1 2	21 7 0	24 8 2	757 4 2	65 10 1	.....	65 10 1	691 10 1	
30	Deo Dhollera	222 8 0	1,752 0 0	750 7 10	41 4 1	.....	17 11 0	17 11 0	1,769 11 0	41 4 1	.....	41 4 1	1,728 6 11	
31	Dholee .. .. .	.....	428 12 0	228 9 4	28 9 6	.....	0 15 0	0 15 0	424 11 0	28 9 6	.....	28 9 6	396 1 6	
32	Behmur	28 12 0	645 8 0	543 4 1	0 15 8	.....	24 0 8	24 0 8	649 8 8	0 15 8	.....	0 15 8	648 8 7	
33	Raeopoor .. .. .	.....	1,405 4 0	1,476 10 8	22 8 0	.....	20 6 0	20 6 0	1,524 10 0	22 8 0	.....	22 8 0	1,502 2 0	
34	Vejalika .. .. .	.....	1,404 8 0	871 11 10	46 10 1	.....	126 18 10	126 18 10	1,581 5 10	46 10 1	14 0 0	60 10 1	1,470 11 9	
35	Walthera	88 0 0	462 4 0	159 12 5	15 7 10	.....	0 6 6	0 6 6	462 10 6	15 7 10	.....	15 7 10	447 2 8	
36	Sheesawara	60 0 0	1,168 8 0	584 0 1	189 15 1	.....	21 4 7	21 4 7	1,187 7 7	64 0 1	.....	64 0 1	1,123 7 6	
37	Sukodra	148 8 0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
38	Khanpoor .. .. .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Total	7,015 11 0	58,362 0 0	39,492 2 6	4,941 1 10	757 5 4	1,076 14 5	1,833 3 9	60,195 3 9	3,804 12 6	460 8 0	4,305 4 6	55,929 15 3	
1	Uraur	88 0 0	535 0 0	3 3 10	16 2 10	.....	285 8 0	285 8 0	818 8 0	16 2 10	.....	16 2 10	802 5 2	
2	Kocharla	118 8 0	2,432 8 0	24 0 0	18 0 0	.....	20 0 0	20 0 0	2,452 8 0	18 0 0	18 0 0	34 0 0	2,418 8 0	
3	Jhekra	82 0 0	907 6 0	5 4 0	27 7 0	.....	.....	.....	907 6 0	27 7 0	.....	27 7 0	879 15 0	
4	Daganra	28 0 0	908 8 0	10 11 1	14 0 0	.....	5 4 0	5 4 0	908 12 0	.....	.....	.....	908 12 0	
5	Hanesar	302 8 0	1,200 8 0	0 8 0	386 0 0	.....	15 8 9	15 8 0	1,216 0 0	386 0 0	.....	386 0 0	830 0 0	
6	Shokri	155 8 0	785 12 0	129 12 0	8 0 0	.....	2 9 0	2 9 0	788 5 0	8 0 0	.....	8 0 0	730 5 0	
7	Hassannagar	41 8 0	647 4 0	1 0 0	2 8 0	.....	41 4 0	41 4 0	688 8 0	2 8 0	.....	2 8 0	686 8 0	
	Total	871 0 0	7,419 14 0	174 7 10	470 1 10	.....	370 1 0	370 1 0	7,789 15 0	456 1 30	18 0 0	474 1 10	7,315 13 2	

**D.—RESULTS OF SETTLEMENTS INTRODUCED INTO
45 VILLAGES.**

No. 27 of 1856.

To

J. W. HADOW, ESQUIRE,
Collector of Ahmedabad.

Surat, 26th January 1856.

SIR,

Having ascertained as far as the period of the current season would permit its outturn with reference to the land revenue of the 45 villages of the Dholka Pargana in which the revised survey assessment is now in force, I have the honour to lay before you, for submission to the Right Honourable the Governor in Council, the result of the new system in the first year of its trial, adding a few remarks on its peculiarities.

2. In my report No. 20, dated the 14th instant, the gross land revenue from all sources in which the new and old systems would bear comparison, was given for 44 of the 45 villages at Rs. 66,781-14-0; to afford a correct comparison, however, between the two years, the sum of Rs. 1,624, shown in columns 12 and 13 of the statement that accompanied that letter as the produce of cesses on alienated land when cultivated with certain crops, should be excluded and the balance will then remain at Rs. 64,157-14-0. That result, as compared with the revenue of this season from the same sources, which are all that can be ascertained correctly at present, shows as follows:—

	<i>Land Revenue.</i>	<i>Quit-rents on alienated Lands.</i>	<i>Water-rates.</i>
	Rs. a.	Rs. a.	Rs. a.
A.D. 1854-55 (Samvat 1911) } ...	49,485 8	6,785 11	7,886 11
	Rs. 64,157-14		
A.D. 1855-56 (Samvat 1912) } ...	57,004 0	6,785 11	5,451 7 4
	Rs. 69,241-2-4		

or a net increase for the current season of Rs. 5,083-4-4, after deducting the decrease in revenue from water-rates of Rs. 2,135-3-8 from the increased revenue from land taken up for cultivation of Rs. 7,518-8-0. The amount given above as the produce of revenue derived from water-rates will, I am aware, not correspond with the figures in your office for either of the two years, as certain sums which are shown as revenue in my returns and have been deducted as remissions (such as the value of the water drawn from leased wells, &c.) will not be shown at all in yours, but as the short time left me before proceeding on furlough would preclude my ascertaining what has and what has not been shown as revenue in your returns for last year, I have thought it better to put down the figures as they stand, as they will be sufficiently accurate for my purpose of founding a few general arguments upon them. The amount of quit-rent in two of the 7 experimental villages, viz., Jhekra and Shekri, which were in the first instance but temporarily fixed, will also be altered on their permanent settlement this year.

3. The two main points to be noticed with reference to the comparative statement above, are the increase in revenue from the extension of cultivation and the decrease in that derived from water-rates. These are sufficiently marked of themselves, and I propose to notice them separately.

4. The extension of cultivation represented by the increase of Rs. 7,518 amounts to 4,663 acres 30 gunthás, or more than one-sixth of the area already under cultivation in the same villages. This fact, then, taken in conjunction with that of the decrease in revenue from water which shows to some extent

that the area under irrigation is smaller, I think clearly shows the fairness of the dry-crop assessments fixed at the settlement.

5. In connection with this point I would beg to notice the manner in which the extension of cultivation has taken place. On the cultivators being asked at the introduction of the settlement what fields they would agree to take up at the survey assessments, they took up in the 38 villages (including Khánpur) 3,632 numbers: subsequently, however, 296 more were taken up on application before the 6th June, the last date fixed for receiving applications, and 1,223 after that date with and without application. In the seven experimental villages 834 numbers were held last year, and of these 26 were thrown up: nineteen were subsequently taken up by petition and 33 without leave. This shows the necessity of watching the working of the system in the particulars referred to in the 9th paragraph of my report of the 14th instant mentioned above. In confirmation of the views there expressed I have noticed that, in well populated villages with a good agricultural population, the tendency on the part of the cultivators to lose their hold upon fields by not agreeing beforehand to take them is infinitely less than in those with a poor and scanty population.

6. The decrease in the revenue from water-rates can scarcely be fairly judged of in the Dholka Pargana by a comparison between that of the year of settlement and that of the one immediately succeeding it, on account of the former being estimated at the full value of the irrigation under the new system when the work undertaken under the artificial stimulus of the old was really not nearly of that value. For instance, under the old system, a cultivator would use, for the irrigation of some small patch of land for a short period paying merely the differential crop cess of his village for the area irrigated, the water from a bag capable of irrigating six times as much land and which would accordingly be charged for under the new system as a whole water-bag. The tendency of the latter system being to stimulate industry by inducing a man to economise the water of his well and only letting him take it if he can make the full use of it; a sudden decrease in the revenue from this source was to be expected, especially as the plan of charging the holders of alienated lands for the use of water from Government tanks and wells is almost entirely new and from its novelty sometimes appears harsh of application to those who from the interests of Government having been much neglected have hitherto been able to take water without notice, but I have no doubt whatever of its ultimate success, unless capital is much more freely invested than it is at present in the construction of new works of irrigation. The development of irrigated cultivation requiring, however, a proportionate increase of agricultural capital, cannot, under the most favourable system, be expected to be nearly so rapid as that of ordinary dry-crop cultivation, which requires far smaller means on the part of the cultivator. The result of the new system in two of the seven experimental villages has already been to induce the sinking of several new wells, which are used to the exclusion of the old Government ones.

7. In the course of enquiries into what would probably be the practical result of the system I have proposed to adopt the plan of levying a grazing tax from professional herdsmen. I have found that the rate of 9 pies a head for large cattle suggested in the 35th paragraph of my letter No. 137 of the 14th December 1854, would be excessive, and I have the honour therefore respectfully to suggest that the charge be reduced to $\frac{1}{2}$ an anna per mensem or 6 annas per annum, pending further observation of the working of the system. I have instructed the Mámlatdár to adopt this rate in collecting the present year's revenue, and settled with him some minor details calculated to facilitate the working of the general plan.

8. As the papers from which I have compiled the above returns were mere memoranda handed in by the Talátis, examined by the Muznudárs' Gumástás, I think your Assistant in charge of the district should be directed to see that the whole of the papers for the year's settlement are made out in due form and to report upon the general outturn of the season at its close, especially with reference to the points now mentioned. He should, moreover, see that proper attention is paid by the Mámlatdár and other district authorities to the rules for the administration of the survey settlements supplied to them for their

guidance, and would by so doing acquire that personal acquaintance with their details so necessary for him to have by the time the survey officers leave the district entirely to his management.

I have the honour to be, &c.,

(Signed) A. ROGERS,

Settlement Officer in Gujarát.

P.S.—I may mention that of the reduction in the revenue from water given above Rs. 5,495-1-4 are in Government land, and the remainder in alienated.

No. 313 of 1857.

FROM

J. W. HADOW, ESQUIRE,
Collector of Ahmedabad;

TO

A. ROGERS, ESQUIRE,
Settlement Officer in Gujarát.

*Ahmedabad Collector's Camp,
Dholka, 16th March 1857.*

SIR,

With reference to your letter No. 27, dated 26th January 1856, I have the honour to forward, for your information, copy of a memorandum from my First Assistant, Mr. Ritchie, from which you will perceive that the *results of the return of the season* fully bear out in Mr. Ritchie's opinion the conclusion you had arrived at in the 5th paragraph of your letter.

No. 457 of 1856.

*Ahmedabad Collector's Office,
Camp Sháhibaug, 27th May 1856.*

True copy forwarded for the information and guidance of Mr. Ritchie, First Assistant Collector, whose particular attention is requested to paras. 5, 7 and 8, and Mr. Ritchie will have the goodness in his report upon the general outturn of the season at its close, after the whole of the papers have been made out in due form, fully to notice the points mentioned in paras. 5 and 7 and favour the Collector with his opinion on the working of the system referred to.

(Signed) J. W. HADOW,

Collector. as per margin.

I have the honour to be,

Sir,

Your most obedient Servant,

(Signed) J. W. HADOW,

Collector.

No. 55 of 1857.

*First Assistant Collector's Office,
Camp Dholka, 6th March 1857.*

With reference to the Collector's endorsement No. 457 of 27th May last, Mr. Ritchie has the honour to report that the results of the return of the season fully bear out the conclusion Mr. Rogers had arrived at in the 5th paragraph of his letter, but the year under report being only the second of the introduction of the new system into the 38 villages and the first with regard to the remaining 57, no definite opinion can as yet be formed respecting the working of the system. Doubtless, however, as the rayats become more accustomed to and understand the change of the system, the peculiarities noticed by Mr. Rogers will disappear—at all events, in the better cultivated parts of the country, and eventually, it is to be hoped, in the less favoured also.

2nd. The system proposed in Mr. Rogers' 7th paragraph having been for the present placed in abeyance by the Collector's orders, no observations respecting it appear to be necessary.

(Signed) W. RITCHIE,
First Assistant Collector.

(True Copy.)
(Signed) J. W. HADOW,
Collector.

No. 565 of 1857.

FROM
E. G. FAWCETT, EsQUIRE,
Revenue Commissioner, N. D. ;

To
A. ROGERS, EsQUIRE,
Settlement Officer in Gujarát.

*Thána Districts, Revenue Commissioner's Office,
Camp Kolegaon, 6th March 1857.*

SIR,

* * * * *

3. With reference to paragraph 4 I request you will be good enough to inform me whether what is termed "hatta," as included in column 21, is the land on the banks of the river or that in the bed of the river, sometimes termed "nudee ret." If the latter, there would seem no objection to your proposal, but, if the former, I request you will explain why it is necessary to resort to that course.

I have the honour to be,
Sir,

Your most obedient Servant,
(Signed) E. G. FAWCETT,
Revenue Commissioner, N. D.

No. 761 of 1857.

FROM
E. G. FAWCETT, EsQUIRE,
Revenue Commissioner, N. D. ;

To
J. W. HADOW, EsQUIRE,
Collector of Ahmedabad.

*Thána Districts, Revenue Commissioner's Office,
Camp Uran, 27th March 1857.*

SIR,

In reply to your letter No. 322, dated 17th instant, relative to the collection of the grazing tax, I have the honour to observe that Mr. Rogers appears to have given orders that the tax should be levied according to his new scheme, and I think it would be well that it should be so levied, whether that plan be eventually adopted or not, as it would serve to show its practical effect, while the assessment is in operation experimentally.

2nd. It may, however, so happen that owing to orders subsequently given by you there may not be means of doing so, in which case the old mode should be referred to; in either case the collection of the tax should not remain in abeyance.

I have the honour, &c.,
(Signed) E. G. FAWCETT,
Revenue Commissioner, N. D.

**E.—INTRODUCTION OF SETTLEMENT INTO REMAINING 57
VILLAGES OF DHOLKA PARGANA.**

No. 56 of 1857.

To

J. W. HADOW, ESQUIRE,
Collector of Ahmedabad.

Surat, 25th May 1857.

SIR,

The rates for the revised survey assessment proposed in my letter to your address of the 14th December 1854 (No. 137), for the Dholka Pargana, having now been introduced into the whole of the 102 villages of that district under direct khálsa management, and their effect upon the revenue having been practically ascertained in seven villages at first experimentally assessed, for a period of four years, in the 37 villages into which they were introduced in April and May 1855 for two years, and the remaining 58 villages for the first year subsequent to their introduction, I have the honour to report upon the general result of the measure, with a view to obtaining from Government the usual guarantee for the permanency of the settlements from the current season (that of ^{St. 1913}_{A.D. 1856-57}) for thirty years. In order to make this report as comprehensive as possible, a statistical report, similar to that in the 19th and following paragraphs of my letter No. 137 of 1854 for all the villages that have been brought under assessment, will be included in it. That on the whole district must of course await the result of the survey and assessment that may be instituted in consequence of any decision that Government may arrive at with reference to the system of settlement to be adopted in tálukdári villages reported on in my letter to the Revenue Commissioner, N. D., No. 42, dated 27th April 1854.

2. You will recollect that the revenue derived from the seven villages at first assessed was stated in my letter to you, No. 40, dated 17th April 1854, to be for the year in which the revised system was put in force Rs. 5,764-1-6 and for the following year Rs. 7,339-6-5. In ^{St. 1911}_{A.D. 1854-55} and ^{St. 1912}_{A.D. 1855-56} it stood respectively at Rs. 7,789-15 and Rs. 7,649-10 and had risen in the current year to Rs. 7,897-3-0. This falls short of Rs. 8,339-3-9, the average collections of former years in these villages, by only Rs. 442-0-9, and there is every prospect of the deficiency being fully made up, and the former level of the revenue even passed in a year or two. The actual increase in the area of Government land under cultivation in these villages since the year subsequent to that of the settlement has been 324 acres 7 gunthás, the number of survey fields taken up in ^{St. 1910}_{A.D. 1853-54} being 818, with an area of 3,450 acres 29 gunthás, and the number in the present year being 893, with an area of 3,774 acres 36 gunthás.

3. In the 37 villages into which the revised rates were introduced in ^{St. 1911}_{A.D. 1854-55} the area of Government land under cultivation, with its assessment, for the two subsequent years has stood as follows :—

	Survey Fields.	Area.	Assessment.
		A. g.	Rs. a.
^{St. 1912} A.D. 1855-56	... .. 5,131	28,643 23	50,352 4
^{St. 1913} A.D. 1856-57	... .. 5,596	31,734 6	54,793 8
More in the latter year	... .. 465	3,090 23	4,441 4

If we add to this 4,493 acres 31 gunthás, assessed at Rs. 7,272-4-0, the increase on account of extended cultivation in these villages in A.D. 1855-56 beyond that of the year of settlement, we have an increase in two years of 7,584 acres 14 gunthás, assessed at Rs. 11,713-8-0, as the consequence of the introduction of the revised settlement. The revenue derived from water-rates in these villages up to the present time for 1856-57 is Rs. 4,488-8-0: this, added to the above

dry-crop assessment, Rs. 54,793-8, gives a total of Rs. 59,282, which, when compared with Rs. 77,204-8-2, the value of the average collections on these accounts for the 10 years preceding the year of settlement, leaves a deficit of Rs. 17,922-8-2.

4. The general result of the settlement which I reported (in my letter to you, No. 20, dated 14th January 1856) as about to be introduced into the remainder of the khálsa villages of the district, was a reduction of the revenue directly derivable from Government cultivated lands and well assessment from Rs. 1,24,455-5-8 to Rs. 73,465-14-0,* notwithstanding

*Columns 4, 6 and 7 of the accompanying statement.

Columns 10, 16 and 17 of the same statement.

an increase of the assessment imposed upon about 4,900 acres which were ascertained by the survey measurement to be in excess of the area estimated under the old system. This reduction is, as you will find on reference to my letter just mentioned, proportionately greater than that in the villages mentioned above, paragraphs 2 and 3, owing to a smaller number of the formerly highly assessed crop-rate (Jinnaswár Bigoti) villages being included in the 37 than there were in the 58 villages settled last year. A glance at the diagrams that accompanied my letter No. 137 of the 14th December 1854 will show you how proportionately heavy an assessment had been borne by the "Jinnaswár Bigoti" as compared with the "Bhágwattái" or division of produce villages, and it was consequently to be expected that the reductions according to the revised rates would be greater in the former than in the latter class. I shall be able to show presently that such has been the case.

5. Although the subject properly belongs to the annual settlement report for the current year, I may mention here, as a practical proof of the advantages likely to arise from the revision of the assessments, that in the 58 villages of last year's settlement the increase in cultivated area over that of last year has already been 6,874 acres 9 gunthás, assessed at Rs. 8,587-6-0. This, when added to the increase shown in paragraphs 2 and 3 of this letter for the remainder of the 102 villages settled already, gives an increase of 14,782 acres 30 gunthás, assessed at Rs. 22,427-15-6, as the result of the more liberal system of revenue management adopted. These figures do not include the amount of increase on account of irrigation, but the revenue from this latter source cannot be expected to increase rapidly, for the reasons mentioned in the 6th paragraph of my letter to your address, No. 27, dated 26th January 1856.

6. As the settlement of the district has been completed at three different periods by the separate revision of the assessment in three sets of villages, it will be necessary, for the purpose of giving a general idea of the result of the whole, to assume that the new system was introduced throughout at one and the same time, and that the average value of ten years' collections given in each case below was that of the same instead of different years. The account will then stand thus:—

	Revenue for the year of Settlement.			Preceding ten years' average Collections.		
	Rs.	a.	p.	Rs.	a.	p.
In 7 villages	5,336 12 0	9,121 0 0		
In 37 do.	50,840 8 4	77,204 8 2		
In 58 do.	74,216 5 7	1,17,101 2 1		
			<hr/>	<hr/>		
102			1,30,393 9 11	2,03,426 10 3		

The entire reduction, calculated in this manner, thus comes to Rs. 73,033-0-4, or about 35·9 per cent.

7. The following will show what proportion of this reduction has been received by the two classes of villages mentioned above in para. 6:—

	Ten years' average Collections.			New Assessment.			Per cent. Less.
	Rs.	a.	p.	Rs.	a.	p.	
Crop-rate villages	1,40,462 0 4	82,033 4 0			22·5
Division of produce villages.	62,964 9 11	48,360 5 11			13·4

The average assessment per acre in all of the former class of villages in which returns for 23 years could be obtained was shown in the 22nd paragraph of my

letter No. 137 of 1854 to have been Rs. 5-4-3, whilst in the latter class it was Rs. 3-2-5, so that it is clear the proportionately large reductions in the former was not more than what was necessary merely to equalize the rates of assessment in the two classes.

8. The above are the results of the revision of assessment only in as far as the dry-crop rental on Government cultivated lands and the irrigation rates separately levied are concerned : they include neither the returns from waste and grass lands nor those from quit-rents upon alienated lands, which would lessen the apparent difference between the amount leviabie under the old and new systems. The direct assessment on the latter lands will, owing to the commutation of cesses and the conversion of indirect payments into regular quit-rents, show a slight increase on former receipts from this source as a whole ; but as this forms the subject of a separate correspondence and I am engaged in finally revising the settlements that have been made, no further mention of the matter seems requisite at present.

9. The statistics given in paragraphs 22 to 24 of my letter No. 137 of 1854 are borne out by the returns for the whole 102 villages herewith forwarded. The increase in the general population has been slightly more than 25 per cent., the number of inhabitants to each house being about the same, and the proportion of ploughs to the number of inhabitants being about 1 in 10 instead of 1 in 9. On the other hand, the increase of population in A.D. 1856-57 in the division of produce villages taken separately has been 35·8 per cent. and that in the crop-rate villages only 21·8, the ratio in which the ploughs in the latter class have increased being only one in every 32½ human beings and in the former class one in about every 8½.

10. The more rapid increase in population in the division of produce villages and the easier circumstances under which the fact shown in the preceding paragraph proves that increase to have taken place, clearly point to over-taxation as the cause of the slow and unfavourable progress of the population in the crop-rate villages. That all that lies in the power of the revenue survey to remove this inequality between the two classes has been done is proved by the fact that the average pressure of the revised dry-crop assessment per head in the present year in what were the crop-rate villages is Rs. 2-1-1, the average quantity of cultivated land in the possession of each being 1 acre 8 gunthás, whereas the average area of holdings in the other class of villages is 1 acre 16 gunthás and the average pressure of the dry-crop assessment Rs. 2-2-8 per head.

11. It has been thus proved that the general reduction of assessment in the district would have been but trifling had it not been for the necessity of bringing that in one class of too highly-taxed villages to the level of the other, hitherto not so burdened ; that the burdens of the two classes have been equalized ; and that the result of the introduction of the revised system of revenue management has been satisfactory, as proved by the steady and not over-rapid increase of cultivation subsequently, during several years of partial and one of complete trial. You will, moreover, from personal observation, be able to bear me out when I say that the measure has on the whole been earnestly approved of by the rayats, so much so that the holders of alienated lands complain of not being able to find tenants for their lands. Under these circumstances I hope we may confidently expect without any further delay the usual sanction of Government for the permanency of the survey settlements for thirty years from the present season, inclusive.

12. The only point worthy of notice with reference to the general plan of assessment that appears to remain is that of the revenue to be derived from waste lands. You are aware that after due deliberation on the subject I have proposed a grazing tax, to be levied from the cattle of professional herdsmen and graziers, who have hitherto been taxed in a very irregular manner by the sale of manure, by cesses in the lump fixed at the pleasure of the village and district authorities, &c., and that the levy of the tax has been sanctioned experimentally by the Revenue Commissioner, N. D. As this has nothing to do with the general revision of assessment, I think there is no occasion for the permanent sanction of Government being asked for pending the result of the experiment.

13. As regards the fixing of the instalments by which revenue is to be paid, I have the honour to request sanction to depart from the course laid down in the printed joint report on the survey system in a few villages in the pargana, which consist entirely of black soil, and are therefore capable of producing nothing but wheat and cotton crops. These crops can never be ready for market before about the 1st April, and I would therefore propose that the land revenue of the villages I refer to, a list of which is appended, be collected in two instalments, one on the 15th April and one on the 15th May, as an exceptional case. I have received petitions from rayats of several of these villages praying for this arrangement, and as a contrary decision would have the effect of throwing them more and more into the hands of money-lenders, agricultural capital not being as yet sufficiently plentiful to enable the cultivating classes to provide for contingencies like these, I hope Government will not object to sanction the proposal.

14. In conclusion, I beg to bring to the favourable notice of Government the services of Captain Fanning and the officers of the Survey Department, both European and Native, in having accomplished, with the general accuracy that the above revenue returns vouch for, the measurement and classification of soils in the khalsa portion of one of the largest districts in Gujarát, with the unusual disadvantage of its being the first in the province in which the revised system has been attempted to be introduced, without a single check of any kind worthy of being brought to the notice of higher authority. On Captain Fanning devolved the duty of introducing the new assessment into the 58 villages of last year's settlement, and it is mainly owing to his ability and conscientious discharge of his duties that the Survey Department has been duly organized and brought up to its present strength. I have also to acknowledge with thanks the uniform support we have met with from yourself and the various zilla authorities, and the general assistance we have derived from the zealous co-operation of the zilla establishments, as far as their weakness and the necessity for attention to their ordinary duties would permit.

I have the honour to be, &c.,

(Signed) A. ROGERS,
Settlement Officer, Gujarát.

No. 2371 of 1857.

TERRITORIAL DEPARTMENT, REVENUE.

*Revenue Commissioner's Office,
Camp Mátherán, 27th October 1857.*

Submitted to Government, with reference to the letter from this Department, No. 2256, dated 16th June 1854.

2. The facts mentioned by Mr. Rogers indicate the good effect produced by the new rates of assessment in the khálsa portion of the Dholka Táluka, and it is gratifying to observe that the increase in the area of lands under cultivation since the introduction of the revenue survey already amounts to 14,782 acres and 30 gunthás.

3. The loss of revenue involved by the new assessment as compared with the average of ten years' collections is computed by Mr. Rogers at Rs. 73,033-0-4, or about 35·9 per cent., as follows:—

Para. 9 of his letter.

	Ten years' average Collections.			New Assessment.			Percentage of Loss.
	Rs.	a.	p.	Rs.	a.	p.	
On account of crop-rate villages	1,40,462	0	4	82,033	4	0	22·5
Bhágbattái (division of produce) villages...	62,964	9	11	48,360	5	11	13·4

4. The sacrifice seems warranted under the circumstances. The assessment could not have been equitably adjusted without a considerable reduction, as the rates in Jinnaswár (or crop-rate) bore the proportion of nearly eight to five of those of the Bhágwattái (or share of produce in kind) villages under the old system, and the assimilation of the former to the latter alone would have caused a reduction of about Rs. 50,000. Besides which the old rates generally were acknowledged to be oppressive and unduly heavy.

5. Mr. Rogers in paragraph 13 solicits that the usual guarantee of 30 years be granted in the Dholka Táluka, to which proposal the Revenue Commissioner sees no reason to object. The railway will not, it is believed, come within several miles of any part of this táluka.

6. The Revenue Commissioner also concurs with that gentleman in thinking that the plan of assessment on waste lands, noticed in paragraph 14, might be allowed to form the subject of a separate reference. The grazing tax on large cattle, as reported in paragraph 13 of the Revenue Commissioner's letter quoted at the commencement of this memorandum, was reduced by Mr. Rogers from 9 pies to 6 pies a month per head, the former rates after enquiries instituted by him being considered to be excessive. The Collector objected to this reduction unless sanctioned by Government, but gave no further reason for his objections. The plan being merely experimental, the Revenue Commissioner, for the reason explained in paragraph 7 of his letter just adverted to, thinks that the Settlement Officer's proposition should be upheld in all cases where no tangible and forcible reason is shown to the contrary.

7. It seems unnecessary to forward the letters Nos. 20 and 27, dated 14th and 26th January 1856, referred to by Mr. Rogers in paragraphs 4 and 7, as they would lengthen correspondence and their chief features are given in the report now handed on. These communications all passed through the Collector of Ahmedabad, whose observations thereon may be summed up as expressive of his concurrence in Mr. Rogers' proceedings.

8. The Right Honourable the Governor in Council will observe with satisfaction the favourable mention made by Mr. Rogers in paragraph 16 of the officers of the Survey Department, particularly Captain Fanning, and the support he has received from the Collector and his establishment.

(Signed) E. G. FAWCETT,
Revenue Commissioner, N. D.

No. 5309 of 1857.

TERRITORIAL DEPARTMENT, REVENUE.

To

E. G. FAWCETT, ESQUIRE,
Revenue Commissioner, N. D.

SIR,

I am directed to acknowledge the receipt of your memorandum No. 2371 dated the 27th October last, and of its accompanying communication from the Settlement Officer, Gujarát, reporting the general result of the revised rates of assessment which have been introduced into 102 villages under direct khálsa management in the Dholka Pargana of the Ahmedabad Collectorate.

2. The Right Honourable the Governor in Council has learnt with gratification that the anticipation which he entertained of a rapid and considerable increase of the cultivated area consequent on the introduction of a revised assessment has been fully realized.

3. It appears, however, that this result has, in the first instance, been obtained at an enormous present sacrifice of revenue. His Lordship in Council is well aware that the general prosperity of the country suffered from over-taxation and the old system of assessment, and that this over-taxation more especially pressed on the jinnaswári villages or those subjected to crop rates. Government were prepared to find that the mere equalization of the rates in bhágwattái and jinnaswári villages would entail a considerable sacrifice, and they were prepared for a further loss from the probable necessity of reducing the assessment even below what it formerly was in the more favoured villages.

4. In examining the details placed before Government it appears that Mr. Rogers proposes to reduce the assessment in that class of villages which was most lightly taxed about 24 per cent.; that his proposed reduction in the heavily taxed jinnaswári villages amounts to upwards of 41 per cent.; and that the average reduction is about 35 per cent., involving the immediate sacrifice of an annual revenue of Rs. (73,033) seventy-three thousand and thirty, three.

5. These reductions appear to His Lordship in Council to be very large, and before guaranteeing the new settlement for 30 years he desires to be further informed on some points which appear to him not sufficiently clearly brought before Government.

6. I am directed first to draw your attention to the manner in which Mr. Rogers has in his 9th paragraph stated the percentage reduction proposed by him in jinnaswári and bhágwattái villages respectively, which appears to His Lordship in Council very much calculated to mislead. In that statement the average *collections* under the old system are contrasted with the assessment under the new for each class of villages separately, but the "per cent. loss" exhibited has no reference to the proportion which these amounts bear to each other in the several classes; but it is calculated on the aggregate revenue of both classes of villages, and thus gives no information whatever of any value in judging of the different rate of reduction in the respective classes of villages which alone it can be of interest to know.

7. As the statement stands, the impression which it conveys is that the rental of crop-rate villages has been reduced by 22·5 per cent. and that of bhágwattái villages is by 13·4 per cent., but this is by no means the case. The reduction has been 41·59 per cent. in jinnaswári villages and 23·19 in bhágwattái.

8. You have repeated Mr. Rogers' statement and have added that "that the rates in jinnaswári (crop-rate) bore the proportion of nearly eight to five on those of the bhágwattái (or share of produce in kind) villages under the old system, and the assimilation of the former to the latter alone would have caused a reduction of about Rs. (50,000) fifty thousand."

9. I am directed to state that the information furnished by Mr. Rogers does not appear to His Lordship in Council to afford data for the conclusions at which you have arrived in the passage from your letter above quoted which you will be good enough to explain in detail.

10. His Lordship in Council would wish to be informed of the average amount of the remissions which may have been granted during the last 10 years before the introduction of the new rates. Mr. Rogers gives only the average of the *collection*.

11. The diagrams in use in the Thána and Southern Marátha Country Surveys for exhibiting the fluctuations in the cultivated area, in the amount of assessment and in the amount collected, should be used by Mr. Rogers, and you will be good enough to instruct him accordingly.

12. With reference to Mr. Rogers' proposal to tax the cattle of professional herdsmen, I am directed to point out that such taxes have been everywhere abolished in the Southern Division as being objectionable. The waste lands are there annually sold by auction, in accordance with the rules laid down in Messrs. Goldsmid and Wingate's Joint Report; there would appear to be no reason why this should not be done in Gujarát.

13. On receiving the full explanation on the points above noticed Government will communicate to you their decision as to the adoption of Mr. Rogers, proposed rates.

I have the honour to be,
(Signed) H. YOUNG,
Chief Secretary to Government.

Bombay Castle, 19th December 1857.

No. 12 of 1858.

To

J. W. HADOW, ESQUIRE,
Collector of Ahmedabad.

Camp Dholera, 25th January 1858.

SIR,

I have the honour to acknowledge the receipt of your endorsement No. 28, dated 9th instant, with its accompaniments.

2. It appears to me that Government have not entirely understood the manner in which the calculations given in the 8th and 9th paragraphs of my letter No. 56 of the 25th May last were made. They were based, as explained in the former paragraph upon averages of collections for the ten years preceding that of the introduction of the revised system in three sets of villages and the revenue according to that system in each set in the year of the introduction. The following calculations will prove, I hope, to the satisfaction of the Right Honourable

the Governor in Council that the actual loss consequent upon the revision of assessment in the Dholka Pargana has fallen considerably within the sum of Rs. 73,033-0-4, shown, upon the calculations made as above described, in the 8th paragraph of my letter to your address mentioned above. The revision of assessment was commenced, as you are aware, by the experimental assessment of seven villages in Samvat 1909, A.D. 1852-53, and the average of collections for ten years previous to that year, *i.e.*, from Samvat 1899 to 1908, is that with which the actual result of the introduction of the new system in the year in which the latter was completed must be compared in order to contrast the revenue under the two systems. The former (average of ten years' collections of revenue derived from Government lands under cultivation) was Rs. 2,06,978-2-0, and the revenue of Samvat 1912, A.D. 1855-56, from the same source was Rs. 1,37,975-9-11—an actual loss of Rs. 69,002-8-1, or about 33½ per cent. Calculated in the same manner the percentage reduction in jinnaswár bigoti villages was 37·46 and in bhágwattái villages 24·82. These percentages have been respectively reduced in Samvat 1913, A.D. 1856-57, the first year in which the whole district (102 villages) has been under the revised system, to 38·78 on the whole, and 33·29 and 19·50 in the two separate classes of villages.

3. The above averages, however, are in excess of the real temporary loss entailed by the change of system when the following points are considered. The expenses of management will be reduced by the cost of estimating crops, measuring lands, &c., necessary under the old system being done away with under the new. Again, a large proportion of the plough-tax and other cesses formerly leviable upon cultivators, which has helped to swell the account of ten years' collections, upon which the calculations have been made, has not been included in that of the revenue under the new system on account of its having been transferred in the shape of quit-rents to the alienated lands of the district.

4. The rentals fixed by the revenue survey being meant to be so low as to avoid the necessity of giving annual remissions, which, I have the honour to state with reference to the 10th paragraph of the Government letter mentioned in the margin, were, for the same ten years as those from which the collections are taken, on an average Rs. 3,650-14-11 per annum (Rs. 309-4-11 in bhágwattái and Rs. 3,341-10-0 in jinnaswár bigoti villages), it will help to give a correct idea of the necessity of the reduction in the rental of the district if we contrast it under the new with its amount in Samvat 1905, A.D. 1848-49, an unfavourable year. The revenue of the first year of the new system for the whole district was only Rs. 414 below the revenue of Samvat 1905, being in the jinnaswár bigoti villages (in which the revenue in bad years would not fall in proportion to what it would in the bhágwattái, owing to the existence of numbers of good wells in the former enabling the cultivators to raise irrigated crops) 16·39 below, and in bhágwattái villages 21·76 above, the amount of revenue in the latter year.

5. I am now able to adduce another proof of the argument that the pitch of the new assessment is by no means too low. The land actually in cultivation or paid for as cultivated in the whole of the settled villages of Dholka last year was 77,641 acres assessed at Rs. 1,33,689, an average of Rs. 1-11-6 per acre. The average realizations per acre for 19 years in the 38 villages of the Viramgám Pargana bordering on Dholka, which were settled by Mr. Jackson in Samvat 1893, A.D. 1836-37, have been Rs. 1-5-8, or 21·21 per cent. less than the average of the Dholka dry-crop assessment as now fixed: the difference is in reality greater than this, on account of the latter average including the realizations on account of irrigated land also, but I have not the detailed accounts necessary to show its precise amount. The result, as I have shown in my report to you (mentioned in the margin) on the revision of assessment in the Viramgám Pargana in Mr. Jackson's settled villages, has been that the increase in cultivated area has been in thirty years 115 per cent. I think you will agree with me that the difference between the pitch of the two assessments is not too much in favour of Dholka when the higher value of agricultural produce in its

No. 5309 of the 19th December 1857, to the Revenue Commissioner, N. D.

No. 119, dated 30th December 1857.

markets and the partial superiority of its soil over those of Viramgám are taken into consideration.

6. That the practical result of the lowering of the rentals has been remarkably favourable is proved by the decrease in the percentage of loss and the increase of revenue in the three sets of villages settled, which have been as follows :—

	Increase in Revenue per cent.	Decrease in Loss per cent.
In 7 villages in 5 years ...	32.43	28.08
In 37 do. in 3 years ...	15.84	12.40
In 58 do. in 2 years ...	6.62	4.50

These figures not only show a rapid and immediate increase in the revenue, arising solely from the increased area under cultivation since the introduction of the revised rates of assessment, but also that that increase is progressive, proving beyond a doubt a steady improvement in the prosperity of the agricultural classes and an addition to the agricultural capital of the country. I have already shown (paragraph 2 of my letter No. 56 of 1857, to your address) that the deficit caused by the revision in the seven villages first experimentally assessed under the superintendence of Captain Wingate himself has been all but made up in the course of five years, and the increase shown above in the other villages, which have been assessed at exactly the same rates, gives every promise of the same results being very rapidly attained in them.

7. In the 2nd paragraph of their letter to the Revenue Commissioner, Government designate the present sacrifice of revenue consequent on the settlement enormous. The sacrifice appears heavy, merely from the large general sum of revenue involved in a number of thickly populated and extensive villages possessed of a fertile soil. The sacrifice is not great when compared with what Government have agreed to in the Southern Marátha Country, as will be seen from the following statement contrasting the results of the revision of assessment in the khálsa or Government lands of Dholka and in the Bádámi and Bágalkot Tálukás of the Belgaum Collectorate (*vide* printed report in No. V. of the Selections from the records of the Bombay Government) :—

PERCENTAGES BY WHICH THE SURVEY SETTLEMENT FALLS SHORT OF OR EXCEEDS			
	Average of preceding 31 years.	Average of preceding 10 years.	Year preceding Settlement.
I.—BÁDÁMI.			
<i>Survey Settlement.</i>			
The net revenue of the 1st year of the survey settlement is less per cent. than ...	20½	25½	31
The survey kamál or gross rental is more per cent. than the net revenue of ...	42	32	24½
II.—BÁGALKOT.			
Net revenue less than ...	(32 years.) 32½	19	26½
Survey kamál more ..	19½	37½	30½

	PERCENTAGES BY WHICH THE SURVEY SETTLEMENT FALLS SHORT OF OR EXCEEDS		
	Average of preceding 20 years.	Average of preceding 10 years.	Year of Settlement according to former Rates.
III.—DHOLKA. (91 Villages.)			
The net revenue of Samvat 1913, the first year of the survey settlement, in all the villages falls short per cent. of	26½	28½	*21½
The kamál or gross survey rental (not including water-rates on garden lands) exceeds	9½	6 ⁷ / ₁₀	15½

8. Again, a reference to paragraphs 34 and 61 of the above-mentioned printed report will show that the reduction in the pitch of assessment made by Captain Wingate in the tálukás of Bádámi and Bágalkot, in which it should be borne in mind that a partial revision of assessment had already been carried out by British officers, was respectively about 29 and 31·87 per cent. In No. XII. of the printed selections from the records of Government, moreover, you will find that the percentage reductions made by Captain Wingate in the general pitch of the assessment were respectively 43·3, 32·72, and 39·68 in Kod, Dhárwár, and Mishrikot. The 1st class villages of Dhárwár, which are assessed at the same maximum dry-crop rate as those of Dholka (Rs. 2-4-0 per acre), received a reduction of more than 26 per cent. and still the average assessment of all dry-crop lands in the latter is more than 9 per cent. higher than the average assessment in the 1st class villages of the former táluka, and 43·93 higher than that of the whole district.

9. With reference to paragraphs 6 and 7 of the letter of Government to the Revenue Commissioner, I would beg to explain that the percentages given in the 9th paragraph of my letter with which this correspondence commenced were put in the shape they stand in, representing only the proportionate share of the general percentage of reduction that had been received by the two classes of villages, merely to show that the proportion between the averages of former rates of assessment had also been preserved in the reductions. The actual revenue under both the old and new systems was given for each class in the same statement, so that it could be seen at a glance that the percentages given did not represent the percentage loss in each class respectively. In the present letter both the general percentage reduction and that given severally to each class of villages have been separately given to avoid the possibility of misconception.

10. In reply to that portion of your endorsement asking for my opinion on the advisability of suspending the collection of the grazing tax I have proposed for the Dholka Pargana, I have the honour to suggest that, as its imposition is for the present merely experimental, it should be continued according to the sanction received from the Revenue Commissioner in his letter to your address, No. 761, dated 27th March 1857. On the general question I beg to offer the following explanations.

11. I do not think the plan of merely selling annually the waste lands to the highest bidder at auction is applicable at all events in the Dholka and Viramgám districts, because the professional graziers from whom it was my intention that a grazing tax should be levied, are mostly not permanent residents of the villages in which they graze their cattle. They come from other parts of the

* The difference would have been greater had not some villages been already under the new settlement.

zilla, and many from Kaira and the Gáikwár's territories, with large herds of cattle to graze, as a general rule only for the four monsoon months, after which they return to their own homes, and would never be at the expense of buying waste numbers. Any attempt on the part of the villagers to resist them would be followed by the destruction of their crops by the strange cattle. The consequence of not levying a regular tax would be that even the grazing tax they have hitherto always paid, and the uncertainty of the manner of levying which the mode of taxation proposed was meant merely to remedy, would be lost to the State. You are aware that loud complaints are made by the rayats of the constant injury inflicted on them by this class of men which is often of such an extent as almost to prevent cultivation in a village. The tax is consequently a perfectly legitimate tax, the mode of collection proposed exempting the cattle of the rayats from taxation, and I can see no reason why it should not be levied in the manner in which experience may show to be most practicable at all events until the greater value of land we may expect to be created under the new settlement may induce the resident rayats to take possession of and regularly enclose waste lands. Professional graziers taking up waste lands will of course be exempt from payment of the grazing tax.

12. In conclusion I would beg most respectfully to bring to the notice of higher authority the great mischief that is likely to arise in cases of this nature from the final decision of Government with reference to the adoption of rates of assessment proposed for any district being so long delayed, if that decision should finally be unfavourable. The pitch of assessment now proposed was first tried experimentally by Captain Wingate and myself in A.D. 1853, and its merits fully discussed in subsequent correspondence, until on my report to you, No. 137, dated 14th December 1854, recommending the extension to 38 villages of the district, I was authorized to proceed with the settlement by the Revenue Commissioner in his letter to me, No. 666, dated 27th March 1855, and the sanction was subsequently confirmed by Government in their Resolution No. 1634, dated 21st April 1855. The result of the introduction of the new rates was reported on in my letter to you, No. 20, dated 14th January 1856, and my report to you, No. 27 of the 26th idem, showed its practical effect in the first year of trial. The rates are thus in force in 45 villages for the fourth year and in 58 for the third, without its having been finally decided whether they are to be adopted or not, and the injurious effect of the uncertainty upon the cultivators' minds can be readily understood. A list of all the correspondence that had passed on the subject is annexed for your information.

I have the honour to be,

(Signed) A. ROGERS.

P.S.—The instructions of Government relative to the form of diagram to be used in assessment reports will be attended to in future.

(Signed) A. ROGERS.

No. 111.

*Ahmedabad Collector's Office,
3rd February 1858.*

Submitted to the Revenue Commissioner, N. D., with reference to his memorandum No. 4, dated 4th instant.

1. It appears to the Collector that the further particulars supplied by Mr. Rogers contain all the information required by Government on the points noticed by Mr. Chief Secretary Young's letter.

2. The Collector would, therefore, respectfully beg to urge the importance of the final decision of Government as regards the adoption of the rates being communicated as early as possible in view to the removal of any uncertainty as to the stability of the settlement which may exist in the minds of cultivators,

a continuance of which might be found considerably to impede the operations of the department and prove detrimental in other respects.

3. The Collector solicits the early instructions of the Revenue Commissioner on the subject of paragraph 10 of Mr. Rogers' letter. For the reasons urged by Mr. Rogers, the Collector is respectfully of opinion that the plan of taxation proposed by that gentleman might be allowed a trial in Dholka and Viramgám. If found impracticable or to operate in any way injuriously, revenue from the waste lands might be obtained by the adoption of the rules laid down in Messrs. Goldsmid's and Wingate's Joint Report.

4. Under any circumstances it is very important that an early decision on this question should be arrived at, as the waste lands are very extensive in parts of Dholka and Viramgám.

(Signed) J. W. HADOW,
Collector.

No. 1011 OF 1858.

TERRITORIAL DEPARTMENT, REVENUE.

*Revenue Commissioner's Office,
Camp Mátherán, 22nd May 1858.*

Submitted with reference to Government letter No. 5309, dated 19th December 1857.

2nd. Mr. Rogers enters into minute detail and his calculations show that the reduction of revenue caused by the introduction of the revised rates into the Dholka Pargana is not to the extent apprehended by Government.

3rd. Referring to paragraph 9 of the Government letter under reply, the Revenue Commissioner, N. D., begs to state that the conclusions drawn in paragraph 4 of his memorandum No. 2371, dated 27th October 1837, were not based upon Mr. Rogers' calculations quoted in the preceding paragraph, but upon a comparison of the results of the jinnaswár (crop-rate) and bhágwattái (division of produce) rates as affecting the crop-rate villages, the average of the former of which is Rs. 5-4-3 per acre and that of the latter Rs. 3-2-5. The following illustration shows the method by which the aforesaid conclusions were arrived at. Eight being assumed as an integer for the crop-rate of Rs. 5-4-3 gives a ratio of nearly 5 for the bhágwattái rate of Rs. 3-2-5. Reduce the ten years' collections, Rs. 1,40,462, to the same proportion, and the difference will be Rs. 52,674; or, $1,40,462 \times 5 = 7,02,310 \div 8 = 87,788$.

Deduct this sum from ...Rs. 1,40,462

Difference... .. 52,674

To Mr. Rogers' No. 823,
dated 3rd May 1858.

From Mr. Rogers' No. 64,
dated 11th May 1858.

4. A further correspondence with Mr. Rogers relative to the apparent similarity of certain villages of Dholka to those of Kaira is submitted.

5. Mr. Rogers explains the point of difference to consist in the liability of the water in the wells to turn brackish and shows that the rates need not be closely assimilated: the explanation may be admitted to be valid.

6. Paragraph 11 of Mr. Rogers' letter No. 12 of 25th January 1858 explains the difference of circumstances under which he proposed the grazing tax.

7. The Revenue Commissioner sees no further cause to postpone the grant of the guarantee.

(Signed) E. G. FAWCETT,
Revenue Commissioner, N. D.

No. 2563 OF 1858.

TERRITORIAL DEPARTMENT, REVENUE.

MEMORANDUM.

The undersigned presents compliments, and requests the Settlement Officer in Gujarát will have the goodness, with reference to the statement subjoined to paragraph 7 of his letter No. 12, dated the 25th January 1858,* to specify the items on which he has made the calculations which give the percentages of remission mentioned by him for the Dholka Pargana.

* To the address of the Collector of Ahmedabad.

H. YOUNG,

Chief Secretary to Government.

Bombay Castle, 31st July 1858.

No. 106 OF 1858.

TERRITORIAL DEPARTMENT, REVENUE.

MEMORANDUM.

The Settlement Officer in Gujarát presents compliments to the Chief Secretary to Government, and begs to forward the items called for in his memorandum of the 31st ultimo:—

	Rs.	a.	p.
Net revenue of the first year of the survey settlement in 91 villages of the Dholka Pargana	1,36,937	11	6
Kamál or gross survey rental of the same (not including water-rates on garden land)*	2,05,579	4	0
Average of 20 years preceding that of the settlement ...	1,85,800	2	5
Ditto of ten years	1,91,696	1	10
Revenue of year of settlement according to former rates.	1,73,906	1	5

4th August 1858.

(Signed) A. ROGERS.

* The proceeds of the water-rates in the 91 villages in the first year of the survey settlement were Rs. 12,157-13.

(Signed) A. ROGERS.

Copy of Collector's memorandum No. $\frac{111}{1858}$ to Revenue Commissioner, N. D.

Copy of Revenue Commissioner N. D.'s No. 2049, dated 19th October 1858, and accompanying correspondence.

No. 3341 of 1858.

TERRITORIAL DEPARTMENT, REVENUE.

To

E. G. FAWCETT, ESQUIRE,

Revenue Commissioner, N. D.

SIR,

I am directed to acknowledge the receipt of your memorandum No. 1011, dated the 22nd May last, with accompaniments, having reference to the rates of assessment proposed by the Settlement Officer in Gujarát for 102 villages of the Dholka Pargana of the Ahmedabad Collectorate, and to communicate to you the following observations.

2. Mr. Rogers in his letter No. 56, dated the 25th May 1857, requested Government to sanction his rates for the usual term of 30 years, and urged that that was the fourth year they had been in force without final authority, as well as the injurious effect of the uncertainty on the cultivators.

3. The objection taken by Government (in their letter No. 5309, dated the 19th December 1857) to the proposed rates, was that they entailed an enormous sacrifice of revenue, the necessity of which was not apparent. Mr. Rogers, in his communication of the 25th January 1858, submitted with your memorandum under acknowledgment, states that the sacrifice is less than was supposed. It is, he observes, Rs. (69,002-8-1) sixty-nine thousand and two, annas eight and pie one, and not Rs. (73,033-0-4) seventy-three thousand and thirty-three and pies four, or about $33\frac{1}{2}$ per cent., which has been since reduced.

4. Mr. Rogers adds that the land actually in cultivation or paid for last year in the whole of Dholka settled villages having been 77,641 acres, and the assessment of it (1,33,689) one lách thirty-three thousand six hundred and eighty-nine rupees, the average rate per acre becomes Rs. (1-11-6) one, annas eleven and pies six, while the average for 19 years in 38 villages of Viramgám bordering on Dholka and more favourably situated, is Rs. (1-5-8) one, annas five and pies eight, an average rate obtained from a settlement made by Mr. Jackson, which has more than doubled the cultivated area, and from this comparison Mr. Rogers argues that the Dholka rates proposed by him are fair.

5. The Settlement Officer further states that his rates have actually worked well, as evidenced by a rapid and immediate increase in the revenue arising solely from increased cultivation.

6. Mr. Rogers then compares the result of the Dholka proposed with the results of the Bádámi and Bágalkot settlements. He also refers to the reductions in the rates of Kod and Dhárwár Tálukas.

7. Without attaching much weight or indeed any to the comparison instituted between the reduction in the settlements of Dholka and the Southern Marátha Country (of which the Bádámi and Bágalkot Tálukas are, perhaps, the very worst, Gokák excepted, being very *sandy* and *rocky*), it appears to Government that the case of the Viramgám villages is to the point, while it appears

* Submitted with Mr. Fawcett's letter No. 2256, dated 16th June 1855.

from a letter from Mr. Hadow of the 12th March 1855* that *cultivation has much declined*, that the cultivated portion of the Government arable land bears a small proportion to the total area of it, while Government land has to compete with a quantity of rent-free and lightly assessed alienated land, the cultivation of which has more than kept pace with that of the Government land and *is at present in advance of it*. It must also be noticed that the reduction has taken place chiefly in the dry crop-rate of jinnaswár villages which are described as being in a worse condition than the bhágwattái or division of produce villages, the average assessment per acre in the former having been Rs. 5-4-3, while in the latter it was Rs. 3-2-5, so that the efforts of the survey had to be directed to the equalization of rates between the two classes.

8. His Lordship in Council admits the force of these arguments, and as regards the dry-crops, there is no room for doubt. Government cannot, however, perceive how, as stated by Mr. Rogers, the expenses of management will be reduced by his settlement and remissions will be unnecessary. Where land is irrigated from wells, it is impossible without a too minute supervision, and, without something approaching to a tax upon the crop instead of a tax upon the land, to separate the water-rate from the land tax. His Lordship in Council therefore doubts the policy of imposing a wet crop-rate upon such land when rice or other irrigated crops are raised, and a dry-crop when dry-crops are grown; Government would prefer striking the balance between the two and leaving the people to irrigate or not as they please.

9. As regards the grazing lands Government are of opinion that they should be leased to the village communities or other farmers for either a single year or a term of years, sufficient portion being measured off in the first instance to meet the demands of increasing cultivation. The villages would then collect any taxes they choose, and Government would be relieved from all necessity and expense of collection. His Lordship in Council prefers this plan to that of raising revenue by means of a cattle tax which involves a very minute degree of supervision and is after all liable to evasion.

10. The *dry-crop* rates proposed by Mr. Rogers are sanctioned by Government, and his proposal to collect the revenue of the six villages named in the margin which consist entirely of black soil, and which consequently produce crops which can never be ready for the market before the 1st of April, in two instalments leviable after that date, instead of at the usual periods, is authorized to be acted on.

(Signed) H. YOUNG,
Chief Secretary to Government.

Bombay Castle, 12th October 1858.

No. 2049 of 1853.

*Revenue Commissioner's Office,
Poona 19th October 1858.*

True copies forwarded to the Collector of Ahmedabad, with reference to his memorandum No. 111, dated 3rd February last, for information and guidance and for communication to Mr. Rogers.

2nd. Report upon paragraphs 8 and 9 to be submitted.

(Signed) E. G. FAWCETT,
Revenue Commissioner, N. D.

(True Copy)

(Signed) J. W. HADOW,
Collector.

No. 172 of 1858.

To

J. W. HADOW, ESQUIRE,
Collector of Ahmedabad.

Camp Kura, 10th November 1858.

SIR,

I have the honour to acknowledge the receipt of your endorsement of the 1st instant, No. 1242, forwarding the sanction of Government (as contained in their letter to the Revenue Commissioner, N. D., No. 3341 of 1858, dated 12th

ultimo) to the dry-crop rates introduced into 102 villages of the Dholka Pargana under khálsa management, and calling for further report with reference to the system of assessment adopted for garden and waste lands.

2. With regard to the assessment of garden lands, the question of the system to be adopted was laid before Government in my letter to the Revenue Survey Commissioner, No. 32, dated 20th June 1853 (paragraphs 9 to 11), the result of the experimental trial of three out of the four systems specified was reported in paragraphs 9 to 12 of my letter to you, No. 40, dated 17th April 1854, and the sanction of Government to the plan of placing an assessment upon the water of wells separate from the assessment upon the lands under them was finally given in their letter to the Revenue Commissioner, N. D., dated 12th November 1855, No. 4735. In accordance with this sanction, the whole of the lands under wells in the Dholka and Viramgám Parganas were measured as dry-crop, and so much only of the enquiry generally instituted by the classers of soil and water was made as to enable me to fix fair proportionate taxes for the use of the water of the various wells.

3. The plan of fixing an assessment upon lands under wells that shall include the charge on account of water now proposed by Government would necessitate the collection by the Survey Department of the whole of the detailed information regarding the quantity of land capable of annual irrigation from each well which, on the strength of the above-mentioned sanction of Government, was not in the first instance collected.

4. The difficulty of determining this, and the absence of trustworthy data upon which to ascertain the precise right of the cultivators of different fields to the use of water from certain wells in the Dholka Pargana, have been fully dwelt upon in my reports already quoted and in the letter with which Captain Wingate forwarded my report to you, No. 82 of the 20th June 1853. It would, I believe, be possible to collect this detailed information accurately in Dholka itself and in a few of the surrounding highly cultivated villages, but not in the remainder of the district, and if Government should so direct, steps can be taken with this view during the current or next fair season. It would have the effect, however, of making the cultivators, who have for several years past been assessed under the separate water-tax system, mistrustful of the intentions of Government in reference to the whole settlement and lead to two different systems of assessment being adopted in the same district.

5. On the other hand, the objections to the system of taxing water separately are but few. The only supervision it requires is such as may suffice to ascertain the number of bags from which water is drawn in each well. Even this could be done away with, if Government should so direct, by my fixing a tax in the lump upon each well according to the number of bags the supply of water suffices for, and has been already rendered nearly superfluous by my directing the Mámlatdár to take "rázinámás" from cultivators giving up the right to use the water of wells in the same manner as they are taken for the throwing up of lands. The system approaches *no* nearer to a crop tax than may be occasioned by more water being required to raise a valuable crop, such as sugarcane, than what would be wanted for a common crop such as wheat, and consequently a larger area being capable of being cropped with the latter than with the former variety of produce: in any case the cultivator has the option of cultivating whatever he may know to be most profitable to him.

6. Under these circumstances it remains for Government to decide whether they will direct the system of assessment in garden lands to be revised in the few villages in which alone a revision can be carried out, or allow matters to remain as they are, merely authorizing me to introduce the modification, already alluded to, of taxing whole wells without reference to the separate water-bags filled from them.

7. With regard to waste lands I have already stated the reason for proposing the experiment of a grazing tax to be what experience has shown that people cannot be found to take farms of waste lands for grazing purposes. Ever since the introduction of the revised system of revenue management into Dholka attempts have been made in every village to sell the grazing on waste lands

as proposed by Government, but, as you will find from an inspection of the annual revenue returns, without effect. The best plan by which to test the practicability of the system of letting out the grazing to the village communities themselves would be, in my opinion, for you to direct your Assistant Mr. D'Oyly to try to carry it out during the present season in the Dholka Pargana and report the result. It will certainly be very advantageous in the way of decreasing the amount of supervision now necessary, if it can be carried out, but this will be attended with the disadvantage of leading to constant disputes among the villagers, and occasionally with more serious consequences. The system of selling the annual right of grazing on lands cannot be brought into proper operation until there is only sufficient land left uncultivated to serve for grazing purposes.

8. For the satisfaction of Government on the point of the revision of assessment having lessened the expenditure on the revenue management of the district, I have the honour to append a statement of the sums actually saved, in the last years, of which I have the necessary accounts, in the following items that have been done away with upon the change of system :—

	Rs.	a.	p.
Measuring land	12	0	7
Superintending estimates of crops... ..	222	10	9
Cost of estimating wheat crops in excess of income	504	14	0
Cost of wheat-seed to cultivators	3,597	0	4
Banians for weighing	24	0	0
Total ...	4,360	9	8

I have the honour to be, &c.,
 (Signed) A. ROGERS,
 Settlement Officer in Gujarát.

No. 2518 of 1858.

TERRITORIAL DEPARTMENT, REVENUE.

Revenue Commissioner's Office,

Camp Thána, 23rd December 1858.

Submitted with reference to paragraphs 8 and 9 of Mr. Chief Secretary Young's letter of the 12th October 1858, No. 3341.

2. The water-tax remarked upon by Government has been discussed a great length in the correspondence quoted in the margin, and the system now in use was adopted after trial. The Revenue Commissioner has no observations to offer beyond respectfully referring His Lordship in Council to the opinions already expressed and the reasons given by Captain Wingate.

Mr. Rogers to Captain Wingate, No. 82, dated 20th June 1853.
 Captain Wingate to Collector, Ahmedabad, No. 508, dated 9th August 1853.
 Collector, Ahmedabad, to Revenue Commissioner, N. D., No. 604, dated 31st October 1853.
 Revenue Commissioner, N. D., to Government, No. 40, dated 6th January 1854.
 Collector, Ahmedabad, to Revenue Commissioner, N. D., No. 91, dated 1st February 1855.
 Revenue Commissioner, N. D., to Government, No. 706, dated 13th March 1855.
 Government to Revenue Commissioner, N. D., No. 4735, dated 20th November 1855.

3. The items of Rs. 3,597-0-4 described by Mr. Rogers as having been saved to Government on account of cost of wheat seed to cultivators is a nominal saving only and not to be allowed the weight which that gentleman attaches thereto. From Mr. Rogers' letter, as First Assistant Collector in charge, Ahmedabad, dated 1st June 1850, submitted to Government with the late Revenue Commissioner's letter No. 1566, dated 14th idem, it will be seen that what was granted for cultivation under the bhágbattái system was virtually recovered at the time of the jamábandi settlement.

4. The grazing tax has also received much consideration; the preferable plan labours under the difficulty of getting any person to undertake such a farm. The Collector prefers to entrust the carrying out of the plan proposed by Government to Mr. Rogers, to which the Revenue Commissioner has no objection.

(Signed) E. G. FAWCETT,
Revenue Commissioner, N. D.

No. 247 of 1859.

TERRITORIAL DEPARTMENT, REVENUE,
Dated Bombay Castle, 22nd January 1859.

To

THE REVENUE COMMISSIONER, N. D.

Copy of the Resolution passed by Government on a memorandum from the Revenue Commissioner, N. D., No. 2518, dated 23rd December 1858 with accompaniment, from the Collector of Ahmedabad, having reference to the assessment of garden lands and the disposal of waste lands.

1. The present plan of assessing garden lands by the number of water-bags employed on irrigation may stand wherever it has been introduced. In future settlements if it be at once and satisfactorily ascertainable that a certain number of water-bags, and no more, can be used, the aggregate of the water-bag assessment may be placed in the lump on the well. This, however, will require great care and nicety of application.

2. Mr. Rogers has advanced nothing to prove his position that the mode of disposing of waste lands enjoined in Resolution No. 3341, dated 12th October ast, is impracticable. It is stated by him that attempts have been made, without effect to let (Mr. Rogers erroneously uses the word "sell") the waste lands for grazing, while, on the other hand, he urges that a cattle-tax is practicable. But if a cattle-tax can be successfully imposed by Government, there ought to be no difficulty in letting out the grazing lands to others with power to impose the tax. It appears doubtful whether the intentions of Government have been sufficiently explained to the people.

3. His Lordship in Council therefore desires that the plan of letting out the grazing lands should be fairly tried. A certain portion in each village should be reserved and competed for only among the cultivating classes of the village. This will secure to the cultivators grazing for the cattle used in agriculture.

4. The rest of the grazing should be put up to open competition and let out in convenient tracts, including either a portion of a village grazing, or the whole in one or more villages as may be convenient. The lessees may be permitted to levy a certain amount per head on cattle using the ground in their lease. The rate of levy should be fixed according to the circumstances of the district, and it may, if thought expedient, be higher on the cattle of professional graziers.

5. Government desire that the grazing lands of Dholka should be settled on these principles by the First Assistant Collector in charge of the district in communication with Mr. Rogers. Mr. D'Oyly should be directed to report his proceedings for the information of Government as soon as he has completed the arrangements for one year.

6. His Lordship in Council sees no objections to a guarantee of 30 year's ease from 1856-57. Mr. Rogers may, therefore, give this guarantee for all khálsa lands in the Dholka District.

7. The saving which Mr. Rogers believes has been effected in the revenue management is almost wholly nominal, and it is remarkable that the Collector did not see this.

(Signed) B. H. ELLIS,
Acting Secretary to Government.

No. 746 of 1837.

Camp Modása, 26th March 1837.

I have nothing to remark on the earlier paras. of the report which refer principally to the technical details of remeasurement and classification.

Para. 14 and para. 56.—I agree with Mr. Bulkley on the question of the assessment of Bháttá lands and consider that the division of Bháttá as settled by Mr. Pedder should be observed, *viz.*, *permanently assessed Bháttá* sub-divided into—

- 1 Bháttá with defined area in permanent occupation ;
- 2 Bháttá with undefined area to be measured when occupied ; and
- 3 *Non-permanent* to be sold annually by auction.

But there will be some difficulty about the village of Saroda to which it is presumed that Mr. Bulkley refers in para. 14. Several fields in that village were submerged in 1875, the rayats refuse to relinquish them and go on paying the assessment on them. What is to be done with them ! They are in the rayats' names, and it is presumed that the rayats will have to pay the new Bháttá rates upon the old area and classification and that the fields will figure in the village books at an imaginary area in class I. But supposing the rayats give up these numbers, how will they be shown ? I presume, as their area is not really known, they ought then to go into class II. This should be provided for.

Para. 15.—Government has decided upon the subsoil water system, and it is useless to discuss this question. It seems to have been fairly applied in this revision, but the result in one case has been unfortunate. I refer to Kesrandi, a village standing at the end of class III., which by the operation of this subsoil water system has been raised 64 per cent. from Rs. 3,320-12-0 to Rs. 5,444-8-0. From my knowledge of the village, and of the class of Kolis who mainly cultivate it, I feel sure that this is far too high, and I would therefore recommend that it be put into class IV.

Para. 16.—The rates on rice land seem fair enough, but it is a question whether the rainfall supply of new rice lands should not be assessed.

Para. 18.—Mr. Bulkley has given an accurate account of the táluka, though (para. 19) I should hardly think it very healthy. There is much fever in some parts, especially in Dholka town, though a drainage channel cut 2 or 3 years ago has done much to improve the health of the Kasba.

Para. 20.—It would have been interesting to know how far the area of land under well irrigation has increased during the survey lease ; the theory is that the subsoil water rating will very much develop well irrigation. It will be interesting hereafter to see how far this is the case.

Para. 21.—I should have thought that safflower might have been entered separately and that some more detail might have been given of " garden crops."

Para. 22.—It is not at all likely that the Dholka cultivation will improve under the new revision, which will be much lighter than in the surrounding districts.

Para. 23.—The last sentence of this para. shows a most extraordinary increase in the area of occupied Government land. It would have been as well if Mr. Bulkley had given some explanation of this increase of 50 per cent.

Para. 24.—(and following paras.)—Mr. Bulkley has given a true picture of the state of the táluka as contrasted with its state 30 years ago. Dholka town has distinctly lost since then. In the old days when there were no railways, and Gogha was the port by which goods came by sea, it was a thriving town. It had also before that the advantage of being one of the border garrisons of the Ahmedabad power in face of the unsubdued districts of Káthiáwár. The town itself

has now little or no trade, and as a large number of the working classes are improvident Mussalmans, there is not much chance of its revival. The new mill however, at Dholka promises well.

At the same time these special disadvantages apply to the town and not to the agricultural district. It is quite true that very little has been done for the district in the way of road. The eastern villages can and do grow all sorts of garden-produce, and their real market is Ahmedabad; but unfortunately the Ahmedabad-Dholka road is very bad and the crossing of the Sábarmati at Saroda will always remain a great obstacle. Attempts have been made to connect Dholka with the railway at Barejdi Station by a road from Barejdi to Nawágám Náika and thus to Dholka by a road crossing the river at Sahej. This scheme was approved by the Honourable J. B. Richey, C.S.I., when Collector of Ahmedabad, and by Mr. Little, the Executive Engineer at Kaira. But with every respect for two such distinguished authorities I think that Ahmedabad has been and will remain the market for these villages, and that as the Saroda crossing is so bad the only feasible plan is to try a light tramway from Dholka to Bawla Sarkhej and Sábarmati Station with a station opposite the broken bridge as the river opposite Ahmedabad is fordable most months of the year. With some such incentive as this I believe that the better or eastern and north-eastern group of villages would rapidly improve.

Para. 31.—The number of plough-oxen seems to me rather low.

Para. 37.—Mr. Bulkley's remarks upon the Nall villages in class V. are judicious; whatever figures may show, they are very far behind the rest of the táluka, nor is there any hope of much improvement.

Para. 38.—Education is making fair progress in the táluka.

Para. 39.—The figures in appendix F. are very satisfactory, if the number of self-cultivating Khátedárs is really as high as 73 per cent.

Para. 42.—It would have been better if the leases in Government and alienated lands had been shown separately.

Para. 44.—The rise in money wages is very marked, not only in Dholka táluka but throughout the district, and it seems to me to be rising higher, and I believe that the standard of comfort is rising steadily.

Para. 46.—It is difficult, without some explanation, to understand why the price of wheat from 1856-57 to 1865-66 was only 22 lbs. per rupee especially as in 1850 to 1854 it was as low as 58 lbs.! There is no doubt that the very large export to England, even though it is generally of the soft wheats which are not much grown in Dholka, is gradually raising the price of wheat.

Para. 50.—I agree with Mr. Bulkley's summary. The agricultural position of the táluka is on the whole better than it was 30 years ago; the upward tendency in prices is undoubted, and the táluka was so notoriously under-assessed in comparison with surrounding tálukás that an increase up to the 33 per cent. allowed would be equitable. Mr. Bulkley was good enough to consult me about the grouping of the villages, and I have therefore but little to say on this subject. In fact I am of opinion that the assessment on many of them might have been raised with equity had it not been for the rule forbidding a rise of more than 33 per cent. on each group. I have already above under para. 14 given my reasons for suggesting that Kesrandi should be reduced to class IV. I think that Kanetar might also be reduced to class V. It is a poor village and too near the Nall to bear good crops.

I approve of the assessment on Bháttá and Dhekudiat lands, and although the increase on Chandisar and Saroda is high I am sure that it is not an unfair charge and that it can be paid without any difficulty. But this is not the case with Adásar (No. 1 in class II.). The rise owing to Bháttá assessment in this case is an increase of 228 per cent? The village is a wretched hamlet of Koli cultivators, and I consider it absolutely necessary to make some special arrangement which will very materially reduce this amount.

Para. 63.—The question of Bapumia's villages is an important one. The last Government Resolution on the subject is 4717 of 2nd July 1886. I would in this place only recommend that he be allowed to keep the 11 villages as at

present paying to Government the same proportion of the revised rates as he has hitherto done of the old rates, also that in the new lease the word Izára may be altered to Pata; but this will have to be discussed hereafter.

Para. 65.—As to trees there is no doubt that the arrangement about the right to trees in this zilla is an anomalous one, and that Mr. Bulkley's proposals are *primâ facie* natural; but the question is one of some importance in this district. Under Mr. Ellis' Rules of 1863 Government fruit trees which did not fetch a good price were reserved and have ever since been kept and put up to annual auction. The matter is one of considerable importance. There are villages near Ahmedabad where the revenue from mango and other trees (many of them in occupied Nos.) is very much in excess of the land revenue. If these trees were handed over to the Koli cultivators they would be cut down at once, a very large amount of Government revenue would be lost, and the thick groves which do much to improve the climate of this sandy district would be cleared away.

Attempts might be made to dispossess ourselves of such trees as would fetch a fair price, but I would certainly recommend that as a general rule these trees should be reserved under Rule 91 (3).

In conclusion I would venture to express my opinion founded on a knowledge of the táluka for many years that the proposed revision assessment is moderate and equitable.

G. B. REID,
Collector.

No. 1017 of 1887.

Kalyán, 1st April 1887.

Forwarded to the Survey and Settlement Commissioner, through whom this should have been submitted.

G. F. SHEPPARD,
Commissioner, N. D.

No. 900A of 1887.

Poona, 23rd May 1887.

MEMORANDUM.

1. The revision of the Dholka settlement introduces several questions of great interest and importance. Mr. Bulkley, whose local knowledge is unsurpassed, has submitted a full and clear report. Mr. Reid, who also knows the táluka intimately, adds a concise criticism and several important suggestions. The first settlement was experimental and carried through several stages before the final decision was made, yet the best manner of dealing with irrigational facilities is still for solution. Dholka is thus again the field of experiment and the results will be closely watched.

2. A preliminary test of both the old measurement and classification of the soil was made by the Superintendent himself, which proved a fair standard of accuracy; but it was considered advisable to make a further test in each village by means of a small body of the best measurers working in advance of the main body who then acted under the orders of the Assistant Superintendent, passed on the results of the special test. It is now reported that 22 per cent. of the area was remeasured. This percentage would have been less but for especially bad work found in a few places. The forecast made at the commencement was that remeasurement would probably not exceed 25 per cent. The revision measurement has thus been carried out with great caution, and as now brick and earthen boundary marks have been erected, throughout, all that is required is the due maintenance of these marks. If this is provided for, future remeasurement will be confined to tracts altered by the action of rivers. Differences between

the old and present measurements amounting to 10 per cent. and over have been detected in $6\frac{1}{2}$ per cent. of the remeasured fields. These are numerous but are accounted for by the fact that in certain cases the areas were at the original survey calculated by scale and not by actual measurement. The large differences are almost confined to such numbers which after test were all remeasured. Some differences are due to encroachments made during the lease.

3. All remeasured fields were reclassified and the water classification for all rice land was redone as regards old rice. The work consisted in bringing up the record to the standard of the rules of 1860 which were not applied in Dholka, which was already settled. With respect to new rice, the reclassification was needed to secure a fair revenue to Government, based on the productive capability of the soil, full care, however, being taken to avoid taxation of private improvements. The position of the converted dry-crop field and the water-supply derived from tanks, ponds and streams belonging to Government are fairly taxable, for they are in the one case a natural advantage and in the other an artificial one effected at the cost of Government. The private improvement consists in the expenditure of private capital to create the means of utilizing the natural advantage of rainfall. The water-supply thus rendered available for growing rice by levelling the field and erecting embankments to impound the rainfall has not been taxed. The Collector apparently would have taxed the new rice with reference to the rainfall. In doing so he would have taxed private improvement. The soil classification was dealt with as for all dry-crop land under the partial reclassification rules. It may be here noticed that 309 acres of old rice land, which have reverted to the condition of dry-crop, have been classed and treated as such. *Dhekudiat* land was reclassified for soil under the same principles as regulated the partial reclassification of dry-crop. But as it is proposed to do away with the system of imposing the water-tax on the *dhekudi* and to substitute a light water-assessment on the area of land irrigable by *dhekhudis*, all *dhekudiat* land was classed for command of water from rivers or from the Nal. This subject will be referred to again when the subsoil water assessment is discussed. *Dhekudiat* land was not classed for command of subsoil water. *Bháta* land was entirely reclassified, not under any novel system but merely to apply to Dholka the principles formulated and brought into operation in Gujarát in 1863 which could not be applied to Dholka before the expiry of the guarantee already given.

4. A preliminary test of the old soil classification of dry-crop, rice and *dhekudiat* lands was made by the Deputy Superintendent himself, which proved it safe to dispense with entire reclassification. In two villages only was the old work so inferior and irregular as to compel total reclassification. On the whole, about 8 per cent. of the area dealt with was reclassified in the field. The remainder was either confirmed or adjusted in the direction of remedying the errors observed. Both in black soil and *gorádu* land Mr. Bulkley found as a rule that the old classers were over-liberal to the better and as illiberal to the poorest lands. This illiberality has the tendency of encroaching too much on the margin of profit in the poor lands and must be corrected. The unduly low classification of the better soils stands as much in need of correction, for its natural result is that the holders pay less than their fair share of the Government demand.

Summary.

5. To sum up—

The partial soil reclassification system has been applied to dry-crop, rice (old and new) and *dhekudiat* land.

- (2) Old rice, which is still rice land, has been entirely reclassified with reference to its water-supply from tanks and streams.
- (3) New rice has been classed for natural and artificial advantages apart from those utilizable by reason of the expenditure of private capital.

- (4) *Bhátā* land has been revised to bring its standard of classification up to that elsewhere fixed in Gujarát.
- (5) *Dhekudiat* land and all dry-crop land and rice land (old and new) have been assessed for natural irrigational facilities.

6. This last item of the operations of the revision survey is its special feature and merits full discussion and description. The object as regards *dhekudiat* and other land is similar. Irrigational facilities are now assessed by levying a tax on *dhekudis* in the former and on wells of the latter. The difference is that in the one case it is proposed to substitute for the bag rate on *dhekudis* a *water-assessment* spread over the area commanded by them and for the bag rate on wells an enhanced *soil* valuation based on the increased value of the soil due to the command of subsoil water. The abolition of a special well assessment—"an oppressively heavy tax on those who expend capital and labour in bringing the water into use"—has been decreed, both with the object of more fairly distributing the revenue claimable by Government for facilities for irrigation and also with the object of securing as far as possible finality and permanence of the soil valuation, now being revised. But the applicability of the new principles as regards each particular *táluka* which comes up for revision will require the most anxious consideration. I do not then agree with the Collector that it is useless to discuss the subsoil water-assessment system. But I may say at once that I have formed an independent opinion that it is the best system for assessing irrigational facilities in Dholka. I proceed to show my reasons.

7. The difficulty of rightly assessing irrigational facilities in Dholka is exceptionally great. In places the water-bearing strata are so close to the surface that water is available at a very small cost. In such localities *kachha* wells suffice, but these generally last only one year. In other places the soil is so loose that permanent wells are impossible. Here the *kundel* or tile well, lasting 4 or 5 years, is used. It is in the end costly, compared either with a purely *kachha* or *pakka* well. Where permanent wells are possible there is danger that the water may become too brackish for irrigation. There is danger that the water, even in the vicinity of a well containing sweet water, may be found brackish though such a result is generally due to digging too deep and tapping a brackish substratum. In places, again, the salt impregnation (*khár*) in the soil is so great as to make irrigation positively injurious. This is frequently the case where water is found closest to the surface. Finally the duration of even the best built wells is uncertain. This point has been prominently noticed by Captain Wingate (Appendix p. 57, s. 7). There is no garden land in Dholka in the usual sense of the word. There is everywhere danger of bringing up salt if the same piece of land is continuously irrigated. But with this disadvantage a largely counterbalancing facility exists in *gorádu* soils. It is the facility of training water to great distances in open channels without appreciable loss by percolation. The *gorádu* is the soil most suitable and remunerative for irrigated crops. It has less tendency to *khár* than black soil. Thus it arises that there almost everywhere exists in lands commanded by wells a rotation between irrigated and dry-crops.

8. The necessity of abandoning the old *bhágvatái* and *jinnasvar bighotí* systems of realizing the Government revenue led to the necessity of devising other means than the easy and simple ones possible under those systems of assessing irrigational facilities.

Mr. Rogers thought there were four possible methods. He rejected any plan of fixing a water-assessment on any defined area of land commanded by a well chiefly on account of the peculiarities of Dholka above noticed. He reject.

ed a water-rate to be levied only when irrigation was actually used, or a rate similar to the *jinnasvár bighoti* to be levied by measurement on crops raised by irrigation even though it could be graduated according to the character of the crop, because both these plans would require annual inspections and would expose the occupants of the soil to constant interference of subordinate officials, and would thus open the door to fraud and collusion.

The plan finally adopted was that called the "bag rate" or a fixed levy on each water-bag actually used for irrigation. By this plan annual inspection and interference were reduced to a minimum. It was a plan which appeared suitable to the special conditions of Dholka. It discounted the liability of sweet water to deteriorate and of wells to fall in and the necessity for an interchange between dry and wet crops.

9. Though Mr. Rogers admitted that it would throw temptation in the way of cultivators to conceal the number of bags worked, he did not anticipate or suspect a device which experience has shown up, by which, whereas the bag rate was calculated on the number of acres which could be irrigated in an ordinary working day, the rayats by using relays of bullocks worked night and day, thus really paying very much less than what it was intended they should pay.

I do not think that this is enough to condemn the bag rate. But there is another objection far more weighty. The alienated land is interspersed among the *khálsa* fields. This land in area is not far short of half the gross area. Its peculiar history can be gleaned from the papers now submitted. But the bearing it has on the subject now under discussion is this, that the bag rate, which cannot be charged on wells in alienated land, does not secure to Government any revenue from the irrigation of Government land from alienated wells though the water used may be actually drawn from the subsoil underlying the *khálsa* lands. Any attempt to obviate either of these two defects in the bag rate system would at once necessitate the very objectionable annual inspections and interference of subordinate officials.

Finally the bag rate is after all a tax oppressively heavy on those who expend capital and labour in bringing the water into use. The bag rate, which has now been tried for 30 years, has not succeeded in inciting the cultivators to dig more wells as it was hoped it would incite them. Appendix D. contains some information. Such as it is, it points to this conclusion, for there were at the time of the old settlement 2,223 wells, all told, and are now only 2,360. Further, the increase (137), small though it is, is practically confined to the villages in Mr. Bulkley's first class in which the number of wells (including drinking wells) has risen from 1,564 to 1,692, an increase of 128. The apathy of the cultivators may be one reason for the small increase.

The abolition of the bag rate and the substitution of an assessment based on the command of water will finally settle the question of the legality and policy of its application to *kachha* wells dug during the currency of a settlement, which question was a subject of controversy for 12 years till the passing of Government Resolution No. 5815, dated 18th July 1884.

10. I think that considerable evidence of the difficulty of assessing irrigational facilities in Dholka may be gleaned from the action lately taken in the not dissimilar tracts of the Baroda State in South *Káthiáwár*. A perusal of Mr. Elliot's report lately published will further give strong corroboration of the suitability of the subsoil water-assessment system. The features common to Dholka and the Amreli Panch Maháls are—

- (1) the absence of real garden land owing (a) to the risk of increasing the *khár* in the surface soil, which provides plant food, by over irrigation, and (b) the necessity of a rotation between dry and wet crops;
- (2) the facility for training water in channels to long distances;
- (3) the danger of encouraging irrigation in some tracts, especially of black soil, where *khár* is very abundant and easily brought up;

(4) the liability of wells to become brackish ;

(5) the plentifulness of water within easy reach at a trifling cost.

In some places Mr. Elliot adopted Mr. Rogers' first method of imposing a separate water-rate on a defined area, allowances being made for periodical interchange between dry and wet crops and for the quality of the water. In others, where sweet wells and bitter were found interspersed, where the channels could be made very long and where risk from over-irrigation was marked, Mr. Elliot was led to abandon the taxation of irrigational facilities altogether and to obtain what he considered a fair revenue from a soil classification ; "Lay" he said "the tax on the land only and let the people follow their own sense of what is beneficial to them."

In the later settlements, however, Mr. Elliot practically adopted the subsoil water system of the Bombay Revenue Survey. His action was not imitation but the result of his own experience in dealing with the earlier settled tracts. He first tried the plan of adding to the soil classification annas, a valuation for the facility of utilizing subsoil water, in a tract where all the land was irrigable, and where all had at some time or other actually been irrigated. Later on, the same system was applied to lands not so fully irrigated, due allowances being made for the quality of the water and other relevant factors, in a way which is precisely that which has been established by Mr. Bulkley in Dholka. I adduce this evidence because its independence is so marked and because its relevancy is so clear. It may be that several systems applied severally to various tracts may be better than one for all, but if an uniform system is needed, as it is in my opinion for Dholka, there can be no question now as to which to select.

11. I do not think that it will be seriously urged by any one that the difficulties inseparable from any system of assessing irrigational facilities should induce the plan of giving up the attempt altogether. Such a course would not be fair, because then the enhanced revenue would have to be based exclusively on the soil valuation. The question whether and what enhanced revenue is due stands on different grounds, and will be discussed in its place. An assessment based on the valuation of the soil alone would press most unduly on soils where irrigation is risky or positively harmful, and it would at the same time as unduly benefit lands possessing the command of water for irrigation at the cost of others less favoured. It would not be an assessment based on the productive capability of the land and would be an unfair distribution of the revenue demand.

12. I am bound to notice that Mr. Rogers abandoned the bag rate when he came to deal with the Jetalpur Pargana in 1859. His reasons were, I think, sound though they do to some extent indicate a growing distrust of the bag rate system. He found in Jetalpur an absence of many of the peculiar features of Dholka and stated clearly that the bag rate system in Dholka would not have been approved, but for the existence of these features. He found less tendency to brackishness in the water of these wells, and he found that the right to water from wells was more defined than in Dholka. (I have not noticed this as one of the peculiar features of Dholka. It did not attract great attention till after Dholka was settled, but it did cause difficulty even there. The land which naturally would be the most often irrigated from a well was often not irrigated because the occupant could not claim the right to use the water). In Jetalpur then Mr. Rogers adopted what is entered as the first of the four possible alternatives, viz., "a rate fixed on the field to be levied whether the whole or a portion of the land be cultivated with any kind of crops." On page 48 of the appendix, the advantages and disadvantages of the system are enumerated.

Advantages.—(1) Convenience of administration ; (2) stimulation of well irrigation.

Disadvantages.—(1) Low rating on account of the necessity of alternation of dry and wet cultivation ;

(2) Unsuitability where the water tends to brackishness and where wells are liable to fall in ;

(3) Risk of error owing to the difficulty of ascertaining the right to water.

All these disadvantages more or less appear to have been absent in Jetalpur, and consequently a plan of assessing irrigation facilities was found feasible, which also was more in consonance with the principles of the Joint Report.

13. I think then that the applicability of the subsoil water assessment system to Dholka is fully patent. I now turn to the results of its application. These are shown in the Deputy Superintendent's 15th paragraph. The revenue which will accrue from the introduction of the proposed subsoil water classification is Rs. 7,200, or 2 annas 10 pies per acre of land adjudged to possess in a greater or less degree facilities for irrigation. This compares favourably with the present irrigation revenue from the bag rate which amounts to Rs. 6,000, but, as has been shown, this revenue is considerably less than Government intended and had a right to expect. The following table exhibits the results :—

Class.	GOVERNMENT DRY-CROP LAND.					GOVERNMENT CONVERTED DRY-CROP (OR NEW RICE LANDS).					GOVERNMENT OLD RICE LANDS.							
	Subsoil Water Land.		Rate per Acre.	Non-subsoil Water Land.		Rate per Acre.	Subsoil Water Land.		Rate per Acre.	Non-subsoil Water Land.		Rate per Acre.	Subsoil Water Land.		Rate per Acre.	Non-subsoil Water Land.		Rate per Acre.
	Acres.	Assessment.		Acres.	Assessment.		Acres.	Assessment.		Acres.	Assessment.		Acres.	Assessment.		Acres.	Assessment.	
...	18,967	44,461	2 5 6	5,492	11,876	2 2 7	924	2,775	3 0 1	262	860	3 4 8	2,083	9,968	4 12 6	827	3,524	4 4 2
I ...	10,535	20,889	1 15 5	16,624	29,593	1 12 6	742	2,043	2 13 1	329	777	2 5 9	1,943	9,541	4 14 7	723	3,227	4 7 2
I ...	3,112	4,877	1 9 1	5,971	9,878	1 9 2	172	462	2 11 0	226	534	2 5 10	667	3,169	4 12 0	281	1,290	4 9 5
' ..	4,293	4,941	1 2 5	8,050	10,491	1 4 10	103	268	2 9 8	19	36	1 14 4	1,421	6,780	4 12 4	273	1,047	4 13 7
' ..	761	506	0 10 8	2,161	1,531	0 11 4	5	8	0 9 7	2	3	1 8 0	134	483	3 15 9	61	238	4 11 6
	37,688	75,474	2 0 1	38,298	62,869	1 10 3	1,946	5,551	2 13 8	838	2,210	2 10 2	6,248	29,886	4 13 6	2,164	9,366	4 5 3

It will be noticed that the acre incidence in some groups on dry-crop land is less on the portion not assessed for subsoil water command. This is due to differences in the soil classification. But the fact that such differences hide the effect of the additional soil increment for command of water is evidence of its light incidence. The net result will be a great boon to the payers of the bag rate, and they are the rayats who merit most consideration. It will not be perceptible to others. There is abundant evidence that the new element of valuation has been apportioned with due appreciation of the peculiar conditions of Dholka. The most important element is the degree of liability of the water to brackishness. On this liability the orders of water have been based. The next most important element is the distance to water. On this the sub-orders or classes are regulated. As Mr. Bulkley shows, the highest value in the classification scale is 2 annas. The lowest is 6 pies. The intermediate graduation has been fixed with care. Where the water is perfectly sweet it has been taxed to a depth of 45 feet, but where only fit to grow irrigated barley, no valuation is assigned for a depth over 24 feet. More than half the dry-crop area has been found not to come within reach of the assessment.

Safeguards in application of the system.

The best evidence available to the classers was, of course, the quality and depth of the water of existing wells. All that is known as to the geology of Dholka tends to show that this evidence is unusually trustworthy. But, for the sake of caution, several modifications, all in favour of the soil, were directed. Thus, where in a well-defined tract the quality of the water of existing wells was found to be not uniform, fields not possessing wells were put in the order indicated by the lowest order applicable to existing wells. Poor lands classed for soil below four annas, and lands, where the sandy nature of the soil makes

well-digging impracticable, were entirely exempted. Similarly, where there were indications that irrigation, though possible, might be injurious, the water class was omitted.

It remains to be seen whether the action now taken in this respect will encourage increased utilization of water for irrigation. It at any rate is an honest and straightforward attempt to carry out a system universally admitted to be theoretically sound and claimed to be practically suitable to Dholka.

14. As regards dhekudiat land, it is proposed to abandon the bag-rate system and substitute a separate *water* assessment to be levied on the area now adjudged to be irrigable by dhekudis. This modification is not ruled by the decree of Government to replace special assessments on wells by an additional *soil* valuation on account of the "command of water," but is merely introducing into Dholka the mode of assessing the charge for the use of water from Government rivers and streams which was adopted in 1864 after much discussion and experimental settlements. I should not refer, except very briefly, to the subject which has been already so fully thrashed out, were it not that I see considerable difficulty in applying the dhekudiat rules to talukas now brought under the subsoil water valuation.

I must briefly give the history of the subject.

The bag rate was applied to Dholka, Viramgám and Dhandhuka, but when Mátar came up for settlement, Captain Prescott introduced (1862) the separate water assessment on all land adjudged to be irrigable by dhekudis, on the ground that the bag rate was necessarily a fluctuating demand; that it had not succeeded; that instead of encouraging it had a tendency to check the utilization of river-water for irrigation; and that it was a tax on the expenditure of private capital and industry. Mr. Pedder later on (1864), and after more experience in Mahudha, Thásra and Kapadvanj, said of the separate water assessment that wherever practicable it is doubtless the true principle, and when Captain Prescott in Kapadvanj was for special local reasons inclined to apply the old bag rate again, the Commissioner, Mr. Ellis, objected strongly, saying (1865) "I do not approve of this uncertain and fluctuating mode of assessment. It has failed wherever it has been tried. It would be better to place a light extra assessment as on the land under wells."

Incidentally, the question arose as to whether in certain localities a really heavy water-rate, calculated on a maximum of from Rs. 5 to 9 in addition to the dry-crop rate, but only leviable when the water was used, should not be adopted in the place of the light permanent water-rate calculated on a maximum of from Re. 1 to 2, but leviable whether irrigation was used or not. One reason for this proposal was that it was found that villages possessing apparently equal facilities showed great inequalities in the extent of the utilization of river-water. Some already possessed wells and preferred to use them; but the difficulty which prompted the suggestion was one connected with alienated lands. Notwithstanding the difficulties, the suggested exception was not carried out.

15. The great liability of disturbance arising from alteration in the course of some rivers was a difficulty which was everywhere encountered. In Dholka the Sábarmati is the principal river, and it presented unusual difficulty. I quote from a demi-official letter penned by Mr. Pedder in 1864: "The bed of the Sábarmati is very wide, and the course of the stream varies excessively, so that it may flow under one bank one year and the next be half a mile from it. In Chitrásar, for instance, 2 years ago there were 50 dhekudis at work, and the country was covered with the sugarcane and wheat irrigated from them. This year there is not a single dhekudi at work,—a high sand-bank, some hundred yards wide, having been deposited between the stream and the bank, where the dhekudis used to be made. This bank may remain for the next ten years, or the stream may revert to its old course next year. At Kaloli again, a little down the river, there are this year nearly 100 dhekudis at work, and as many have been worked for years past, but, as likely as not, a sand-bank may be deposited on next rains, and dhekudis may not be worked again for a dozen years to come." Mr. Hadow, Collector of Kaira (1863), said: "The advantage, as regards these lands, of having the water-rate separate is manifest. The site of the dhekudi is generally

the bank of a river and as near the edge as possible, and the time it may last or continue to be of use depends in a great measure on the duration of the portion of the bank on which it stands or has been excavated. Portions of these banks, particularly those on the Vatrak, are constantly falling in during the floods, and the course or channel of the river is constantly shifting."

I have made these quotations to introduce the new difficulties which now present themselves.

A small alteration in the course of a river may not only make many dhekudis unworkable, but may afford new facilities for their erection in other places. If then certain areas are now brought under assessment for the facility of dhekudi irrigation, and if others are assessed for subsoil water command, and if the latter gain and the former lose, *during the currency of the lease*, the facility of irrigation from rivers, it seems clear that though the separate water assessment can be struck off and must be struck off the one, a corresponding assessment will not be possible on the other, already assessed for command of subsoil water. Moreover the valuation of soil for this command cannot be imposed on the land already classed as dhekudiat, where the dhekudis have become useless.

Again, at the expiry of the current lease, though the re-adjustment might be made, it will require the aid of a technical department to re-class for subsoil and for river water command. The finality of the present classification is one of the chief merits of the subsoil water assessment. It cannot be gained under the proposed system of assessing dhekudiat land.

16. If I am correct in my views as regards the new difficulty, it seems to me that the old bag rate *must* be retained in Dholka and substituted in similar tracts which may be assessed for the command of subsoil water. I may now say further that even putting aside present difficulty, I am inclined to give my opinion in favour of the bag-rate for dhekudis.

The bag rate should be retained for dhekudis.

The fluctuating revenue of dhekudis is due to the fluctuating character of this kind of irrigation. The argument against the bag-rate based on the necessity of avoiding taxation of private capital and enterprise is very weak. Dhekudis are very inexpensive. There is very little risk. Even where *khar* appears, a rotation of dry and wet cultivation will prevent its increasing injuriously. I fail to see how the bag rate can check dhekudi irrigation, as Captain Prescott suggested but did not attempt to prove. The number of dhekudis is comparatively small and cannot be indefinitely increased. The annual inspection required to prevent concealment is infinitesimal, and the interference of low-paid subordinates is easily avoidable, for the Mámlatdár himself may easily personally perform the annual inspection.

I urge that a case has not been made out for the modification suggested regarding dhekudis in Dholka. Even in Mátar, Captain Prescott was not able to abandon the bag-rate altogether, for he was forced to provide this form of assessment to meet the case where land not assessed as dhekudiat should become irrigable from the rivers.

It will be objected that there will be want of uniformity, but there may well be want of uniformity when two such different assessments as a separate *water* assessment and an additional *soil* valuation are concerned.

I may add, though it is not an important question in Dholka, where most of the alienated land is subject to a quit-rent, which includes a commutation of the old "malat swadeo" cess, that whereas now, if other alienated land is irrigated by dhekudis it pays its share of the bag-rate, such revenue will not be obtainable if the dhekudiat assessment is substituted.

17. I would propose then that the bag-rate be left as regards dhekudis; but as it is just as amenable to an enhancement as the rest of the revenue, that the bag-rates be increased by 25 per cent., which is the increase justified by the rise in prices. Further, in the guarantee given with the new settlement, it will, as usual, be necessary for Government to reserve the right to assess this rate on new dhekudis erected during the term of the settlement.

The bag-rate should be raised 25 per cent.

18. *Bhāta land*.—As noticed, the Dholka Tāluka is now brought on the same footing as the rest of Gujarāt settled after 1863. Mr. Bulkley has fully explained the whole case regarding these lands. Only nine villages are affected. In one, Adásar, though it has been placed in a lower group than that which its position properly demands, and though the maximum bhāta rate has been lowered on account of the poverty of the Koli inhabitants and liability of the bhāta land to submersion, the proposed revēnue is 228 per cent. in excess of the present demand. Nearly the whole village lands are bhāta. This is a very exceptional case. The value of bhāta is well illustrated by the case of Saroda, in which the occupants insist on their right to be left in occupation of bhāta land completely submerged. I may express an opinion that the difficulty in Saroda which Mr. Reid suggests, will probably disappear when the occupants find how the bhāta land is now treated. They will resign the submerged fields, and it is best that they should. As regards Adásar, I do not propose to bring into discussion the old difference made between Kunbi and Koli rayats, *i. e.*, between skilful and industrious, and careless and indolent cultivators. I think the days of "Caste Bighoti" have passed. The gradual collection of the enhanced demand will, to some extent, meet the case, but it cannot be hoped that even with this provision the Kolis of Adásar will be able to adjust themselves to the new state of things. If the bhāta rules are sound, as I fully believe they are, these then cannot have more consideration. They have it in their power to contract their cultivation within their means and pay their present revenue on half the former area. It is important and advisable that Government should have the occupancy of such lands, not because they are very valuable and would fetch in annual auction many multiples of the enhanced demand, but because their boundaries are liable to constant change, and a fixed field assessment entails annual inspection and much labour. If then part of the land is resigned, its occupation should not be given out in permanency unless it clearly comes under the denomination of permanent bhāta. I would, however, recommend a reduction of Re. 1 in each class of the maximum bhāta rates for Dholka. These maxima are as amenable to the general principles which rule the pitch of maximum rates as those on dry crop. This is not a concession but a reasonable application of principle.

The bhāta land maximum rate may be reduced on principle.

19. The maximum water-rates of rice land have not been modified. But the average rate per acre on old rice has risen partly by reason of the subsoil water classification and partly by reason of the soil classification revision.

Details.

Old Rice Land.	Acre Rate.	
	Present.	Proposed.
	Rs. a. p.	Rs. a. p.
Class I., 25 villages.	3 14 6	4 10 2
" II., 28 " 	4 2 7	4 12 7
" III., 9 " 	3 10 3	4 11 3
" IV., 10 " 	3 15 8	4 9 11
" V., 4 " 	3 9 0	3 11 2
<hr/> Total ... 76 villages. <hr/>		

Rice land has been assessed for subsoil water command even when irrigated entirely from Government tanks, and assessed for tank supply. The importance and value of well irrigation for rice as a supplementary source of supply will be readily judged from the peculiar feature of rice cultivation detailed by Captain Wingate (Appendix, pp. 56-57, paras. 4 to 6). The presence of a well makes the rice crop safe from the risk of failure of the early rains. But it also enables the cultivator to grow superior varieties of rice, which require a more regular and extended irrigation than tanks usually can afford. It enables the rayat to grow a cold weather crop after rice has been taken off the land, and sometimes even a hot weather fodder crop.

20. One point connected with the assessment of rice-land is not noticed by Mr. Bulkley in his report. A rule was made at the original settlement, which provided for the remission of the water-rate in years in which the failure of the early rain prevented the cultivation of rice dependent on tank water. In 1858-59 large remissions were given under this head. But none have since been granted. If Captain Wingate and Mr. Rogers were not wrong in their facts, the absence of these remissions is worthy of remark. Mr. Bulkley conjectures that the later general administrative orders of Government may have covered this rule and rendered its application unnecessary. But the general orders are those which are contained in the Famine Code. These cannot meet the case of failure of one particular crop. The Collector, in reply to a special reference, states that after full consideration he cannot recommend the maintenance of any provision for the remission of the rate for water advantages for rice land, for such a course is in his opinion not consistent with the requirements of administration. He would prefer to deal with an exceptional failure like that of 1858-59 in an exceptional manner, for which no special provision is necessary, I think that Mr. Reid's recommendation may be safely accepted, for experience has not proved the necessity of special provisions and the rates are not high.

21. I have now fully discussed all the important features of the proposed settlement up to the stage of fixing the maximum rates and the grouping of the villages.

Grouping of the villages.—The Collector was consulted by Mr. Bulkley. Modifications in the grouping of villages should always be avoided, if possible, but strict observance of this principle would not be justified in the present case. The old grouping was made with reference to distance from Dholka, then an important market. It is a question whether, even admitting the then importance of Dholka Town, the grouping should not then have been made as it is now made with reference to Ahmedabad. But there is no question that the principle now ruling the grouping is the right one. Eighteen villages have been raised to a higher group, and eight have been, for just reasons, lowered to the next lowest group. The Collector advises special consideration for two villages—Kesrandi and Kanetar—such as has already been recommended by Mr. Bulkley for Rájoda and Adásar. Kesrandi was raised to a higher group by Mr. Bulkley. Mr. Reid objects on the ground of large enhancement involved (64 per cent.) and of the cultivators being Kolis. He is hardly correct in attributing the enhancement to the operation of the subsoil water assessment. It is rather due to the increased maximum rate, the dhekudiat land and new rice, and his objection savours of “caste bighoti.” Still, as the village borders on the lower group, in deference to his opinion I would ask sanction to its transfer to Group IV. For the same reasons Kanetar may, I think, be placed in Group V. though the transfer is more doubtfully expedient. These are the only two villages which were wholly reclassified (*vide supra*, para. 5). There is no large sacrifice of either revenue or principle involved and the recommendation of local authorities must carry great weight. With these exceptions the proposed grouping may be safely sanctioned. I have referred more than once to Adásar, but no modification of grouping can meet the special case of this village.

Maximum rates.—The enhancement of the maximum rates for dry crop on which the grouping is based, is in itself small. But the action taken cannot be judged without a brief review of the past and present condition of the district the course of prices and the other considerations involved, among which the degree of enhancement due to reclassification is not the least important. These last have been fully discussed, and the question which remains is, whether or not a revised demand, 25 per cent. greater than that now exacted, is due.

22. As to the general condition of Dholka, there ought to be unusually abundant information. The reports by Captain Cruickshank in 1825 (Government Selections, No. XI., Old Series) are still readable with much profit. There is no doubt that Dholka Town itself has largely fallen off. The population is divisible

into two strikingly unlike divisions. On the one hand, in the best tracts *generally*, the cultivators are principally Kunbis, skilful and industrious. But on the other, we have to deal with Kolis, Girássias and Musalmáns, all bad farmers and indolent and the latter "idle, thriftless and given to opium" (*Gazetteer*) There is more hope for the Kolis. In Mátar they have improved by their contact with the Kunbis. The statistical tables summarized in Mr. Bulkley's 37th paragraph give some evidence of improvement on the whole, but show that the measure of improvement is greater where Kunbis are most numerous.

The Revenue History (Appendix K) shows, if 1856-57 is compared with 1885-86, that the occupied Government area rose from 60,086 to 89,159 acres while the unoccupied waste available for cultivation fell from 42,959 to 15,408 acres. The revenue from Government land rose from Rs. 1,12,116 to Rs. 1,52,833. The comparison would be more favourable if the early settlement had been introduced in one year, and if that year could be substituted for 1856-57. The Collector hardly credits the correctness of the figures which show the large diminution of the unoccupied waste. But the explanation of increase of cultivation greater than that due to ordinary increase of population is simple. The exorbitant ante-settlement demand on Government land, designed in great degree to secure indirectly some revenue from the large alienations, kept good land out of cultivation till the anomaly was remedied (Appendix, pp. 59, 60, ss. 18, 19, 20, 21).

23. The information derivable from the registers of mortgages and deeds of sale is always difficult to gauge. Sales seem to show a decidedly higher value for Government land than for alienated, though the latter is subject only to an unalterable and small quit-rent. Precisely the same phenomenon is noticeable with respect to mortgages. It is contrary to common sense to suppose that the Government land can have a higher value than the alienated land situated side by side. Therefore the evidence of the Registration Offices is of little value. Appendix H. gives a list of leases. The table is very imperfect. Alienated and Government land are not separated, and it is not shown with respect to the former whether the quit-rent or the full assessment has been taken as the "total assessment." Mr. Bulkley, in answer to a special reference, explains "The leases shown in Appendix H. are for the years 1882-83 and 1884-85. The Government demand is in almost every case paid by the lessor. The low average letting value that works out from the figures as a whole is mainly due to the land in a majority of the villages being of indifferent quality and the cultivating classes being inferior in skill and industry, also to the fact that land available for occupancy is in excess of the demand."

It cannot be argued from the records that the land has anything but a very low letting value, and that as a whole the Registration Office records give *very* much indication of prosperity.

Mr. Bulkley's opinion, based on general and careful enquiry, is that the "range of indebtedness has somewhat narrowed, and that the existing average degree of insolvency is less than it was." But in para. 43 he states that upwards of 2,100 mortgage transactions have been recorded during the last three years.

The evidence of improvement in the standard of comfort is very weak (Mr. Bulkley's para. 45). Wages have risen considerably. On the whole this sketch of the condition of the táluka is not very positive. The improvement claimable is not large. It cannot be otherwise with a cultivating class, notoriously thriftless and improvident. Communications have not improved except as regards the railway, which most certainly has greatly improved the market for all exportable produce, and with such produce, whether it be for export beyond the seas or to the local market of Ahmedabad, Dholka, with its wheat and cotton and its garden crops, is well stocked.

If there is not marked improvement in the condition of the people, its absence cannot be attributed to the action of the Settlement Department, unless it be urged that higher rates would have incited to higher exertions.

24. The justification of the enhancement proposed rests, in a very great measure,—in a larger measure indeed than is usual,—in the revision settlements now being introduced on the rise in the prices of food-grains and all kinds of field produce. In the case of Dholka there is not very marked evidence of general improvement in the condition of the people. Prices require very careful scrutiny. Mr. Bulkley has obtained his record from merchants' books in Dholka. This record I have carefully studied with the price figures of Ahmedabad, given in the *Gazetteer*, and since 1877 in the "Compilation of Prices and Wages in India" published by the Government of India.

Mr. Bulkley has divided the 30 years' lease into three decades, and has given the prices of the five years preceding the settlement. As regards wheat and jowari the average prices of the last two decades are practically the same, but they are 40 per cent. *lower* than the averages of the first decade. Notwithstanding this fall the prices are for wheat 106 per cent. and for jowari 53 per cent. higher than the averages during the five years preceding the settlement. The course of rice prices is slightly different, but rice is 110 per cent. dearer than before the introduction of the current lease.

Appendix J. shows that prices rose very suddenly and very greatly in 1856-57 and maintained the rise secured then till 1871-72. During the years of the American war it was abnormally great. But in 1872-73 a large fall was sustained, which showed no recovery except in the three famine years from 1876-77, and prices are now what they were in 1872-73. The railway was opened to Ahmedabad in 1864. Its effect on Dholka prices appears to be marked by a prevention of the fall which would otherwise have naturally succeeded the abnormal prices of 1864 and the succeeding year.

Cotton must be considered alone. In common with food-grains it rose suddenly in 1856-57, but there was no corresponding fall in 1872-73. The price has slowly and steadily risen all along. The last two decades show a rise of 50 per cent. over the first, and that decade one of 100 per cent. above the ante-settlement period.

A comparison of Dholka with Ahmedabad prices as regards rice is impossible, for the *Gazetteer* gives the figures for clean rice, Mr. Bulkley those for rice in husk. Again the *Gazetteer* prices are the averages of the monthly prices for each year. Mr. Bulkley has sought to give the price for each product as it ruled in the month in which it is usually sold by the cultivators: thus for March in the case of wheat, and for January in that of rice. The following abstract is worth consideration:—

Period.	WHEAT.		JOWARI.	
	Ahmedabad.	Dholka.	Ahmedabad.	Dholka.
	Lbs. per Re.	Lbs. per Re.	Lbs. per Re.	Lbs. per Re.
1850-51 to 1854-55	50	66	84	58
1856-57 to 1865-66	31	22	49	27
1866-67 to 1875-76	21	31	33	38
1876-77 to 1885-86	26	32	38	38

Ahmedabad shows no correspondence to the great rise in the decade ending 1865-66. Again it at first sight appears strange that food-grains should be cheaper before 1865-66 at Ahmedabad than in Dholka. The explanation seems to be that before the opening of the railway Dholka had a better outlet through Dholera and Gogha than Ahmedabad enjoyed. The railway completely reversed their respective facilities, and this appears correctly featured on the course of prices. The comparison above instituted gives much support to the correctness of both records, though there are discrepancies in detail which I cannot explain. Further I do not see sufficient explanation of the enormous rise in the first decade of the settlement at Dholka. It may be partly due to the unsettled condition of this once turbulent tract which cannot be said to have been characterized by peaceful agriculture, till the current lease was well advanced. An

explanation may suggest itself to the Commissioner, N. D., who may have information on his records which is wanting on mine.

25. The question arises whether Dholka was too lightly assessed in 1857. Both Mr. Bulkley and Mr. Reid consider that it was. ^{Was Dholka under-assessed in 1857?} Their opinion is, I think, based chiefly on the hesitation of Government to sanction the proposals first made (see Appendix, p. 74,) and on comparison with the results of original settlements effected soon after that of Dholka, notably in Kaira (Mátar).

It is perfectly true that Government expressed themselves dissatisfied with "the enormous present sacrifice of revenue" and required explanation. I need not refer to the explanations given. Reference may be had to the original reports given in the Appendix. Suffice it to say that the wording of para. 8 of Government Resolution No. 3341, dated 12th October 1858, (Appendix, pp. 135-6,) leaves little room for doubt that Government fully accepted the explanation and withdrew the criticism previously made.

I do not think that Dholka was greatly under-assessed. The reduction made from the old kamál was very large. The unjust indirect assessment of alienated lands by intentionally taking a too heavy assessment on the khálsa area was one large item in the reduction. It was recouped by the settlement made with respect to alienations. This will be seen if Appendix K. is glanced at comparing the revenue of 1851-52 with that of 1855-86. It will be seen that as regards Government land the collections were Rs. 1,65,464 as compared with Rs. 1,46,825; yet if all land is taken together, the possible revenue is almost exactly the same (Rs. 1,92,369 and Rs. 1,91,250). The táluka was undoubtedly over-assessed previous to the survey. The indications of over-assessment were numerous, and reduction was imperative.

26. I wish to make a few remarks on the gradient between Dholka and Mátar. Mátar and Dholka are separated by the ^{Gradient between Mátar and Dholka,} Sábarmati. Though thus adjacent there are many striking differences:—

- (1) Mátar had not been over-assessed (Kaira Compilation, p. 422).
- (2) Mátar was settled *after* Dholka *before* the advent of the railway. Mr. Rogers settled Dholka at a time when prices were falling. Colonel Prescott found them rising. "Prices gradually declined for a series of years until 1857, since when they have risen extraordinarily and are now (1862) more than double what they were in 1856" (Kaira Compilation, p. 421).
- (3) The tract east of Sábarmati (Mátar) is within easy reach of the railway. Dholka has no bridge over the Sábarmati, and it is in contact with Native States on the west. Its communication with Dholera is impeded by the absence of a bridge on the Bhogáva. In point of situation and communications Dholka is far behind Mátar.
- (4) The soil of that part of old Dholka, now Mátar, on the east of the Sábarmati was $\frac{1}{3}$ kyarda and $\frac{2}{3}$ guradu. Dholka, as it now stands, has *comparatively* little guradu; and as one goes west, it is found mixed with black, and finally becomes black. The prevalence of *khar* is far more intense and extensive in Dholka than in Mátar. (Cruikshank's Dholka, p. 52, and Daskrohi, p. 67). The inequality in Mátar, due chiefly to caste bighoti, was a marked feature of the conditions found. Dry-crop rates varied from Rs. 10 to Rs. 1-10. In assimilating and equalizing the assessments, the average pitch was necessarily somewhat influenced (Kaira Compilation, p. 428).
- (5) The population of Mátar, consisting of Kunbis and of Kolis, more settled and more industrious than in Dholka, made a higher assessment lighter than it would otherwise have been. Many of the Kolis of Mátar are nearly as skilful and industrious cultivators as Kunbis (Kaira Compilation, p. 418). The density of population in Mátar had incited the cultivators to emulation and competition, and had roused them from the apathy and indolence which did and do characterize a large proportion of the Dholka farmers.

I do not think that any similar comparison is requisite with respect to the other talukas which adjoin Dholka, for in no other is the gradient so marked as in the case of Matar. While the dry-crop maximum rates for Dholka ranged from Re. 1 to Rs. 2-4, those for the adjoining talukas were—

	Rs.	a.	p.	to	Rs.	a.	p.	
1 Dhandhuka	...	1	0	0	to	2	0	0
2 Jetalpur	...	2	0	0	to	2	12	0
3 Viramgam	...	1	0	0	to	2	0	0
4 Daskroi	...	2	8	0	to	3	12	0

Dhandhuka town was rated by Mr. Rogers at Rs. 2-8-0 but raised to Rs. 4 by Captain Prescott in 1863-64.

27. On the whole, then, I do not think it proved that Dholka was greatly under-assessed by Mr. Rogers. But it is clear that Dholka was not greatly under-assessed by Mr. Rogers. it was very far from being over-assessed, and I urge that the moderate enhancement now proposed by Mr. Bulkley may be safely sanctioned. I have very fully weighed the facts against enhancement,—the indolence and want of enterprise among the people, the as yet small value of land as shown by the Registration records, the absence of marked material progress and improvement,—and though I do not advocate any experiment of imposing high rates to incite the people to greater exertions, I think that an unduly low rent charge does tend to hinder progress. The rise in prices, added to the great improvement in the distribution of the assessment, fully justify the moderate enhancement advocated.

28. Appendix K. shows the Revenue History during the currency of the settlement. As regards casual remissions, the large figure for 1858-59 represents the sum remitted in accordance with the provision made to meet the most unusual failure of the rice crop, (see para. 20 above and para. 48 of the Deputy Superintendent's Report). The remission of Rs. 710 in 1868-69 was due to damage done by a flood of the Sabarmati. These occasional destructive floods are well described in the *Gazetteer*, (pages 9-12), where a detailed notice of the flood of 1875 is given. I notice this flood, for in the objections raised by some villages to the enhancement of the maximum rates it is alleged as the chief ground for consideration. The remission record does not reflect the effects of this flood. The petitions made will be received in due course from the Collector, and in forwarding them to Government the damage for which the district is liable from floods will, no doubt, come up for special comment.

The permanent remissions granted in 1863-64 are those caused by the reduction of the Government demand in the eleven villages allowed to be held in *ijaro* by Bapu Mia (see Mr. Bulkley's 64th paragraph). This amount varies according to the collections of each year. Its increase is due to a reduction made by Government in the *jama* originally fixed. I shall not further comment on the subject of the paragraph of Mr. Bulkley's report, which will doubtless be fully discussed by Mr. Sheppard.

The outstanding balances in 1863-64 were chiefly caused by the application of the Summary Settlement Act to the alienated lands, so late in the year that the assessments due under its provisions could not be collected before the close of the revenue year.

29. Trees in occupied lands and in lands not occupied yield a revenue of over Rs. 2,000 per annum. Mr. Bulkley makes recommendations in his last paragraph, but the Collector shows very good reason for a continuance of special treatment. I think that as regards alienated lands Mr. Bulkley's recommendation must be adopted, but the almost certain denudation of fruit trees, which will result from the concession recommended as regards occupied lands, must be carefully considered. As Government is aware, I am not an advocate for any policy of trying to force rayats to keep or grow trees for climatic purposes in cultivated land, though the question is chiefly important in the treeless Deccan and not in Gujarat, nor in the Konkan. But fruit trees stand on a totally different basis. They repay the tenant, and at the same time are valuable for climatic purposes. Mr. Bulkley, however, justly calls attention to the anomaly of Government securing the revenue and not the tenant. There is not sufficient evidence as to the right of Government to demand compensation for conceding the

right to the trees. Taking all the circumstances into consideration, the best solution seems to be that the tenant should be permitted to enjoy the fruit, but should by a clause in the notification be debarred from cutting down fruit trees without permission. This will secure the object shown requisite by the Collector and will put an end to the anomalous condition of separate ownership of land and trees.

In the same way, as regards land now waste, if possessing fruit trees and if sold or given for occupancy, the right to the fruit should go with the occupancy right, subject to the limitation that trees should not be cut down without permission. Fallen trees and trees which have become too old to bear, and which therefore are felled with permission, will of course belong to the occupant.

E. C. OZANNE,
Acting Survey and Settlement Commissioner.

Submitted to Government through the Commissioner, N. D.

No. 3191 of 1887.

FROM

G. F. SHEPPARD, ESQUIRE,
Commissioner, N. D.;

TO

T. D. MACKENZIE, ESQUIRE,
Acting Chief Secretary to Government,
Revenue Department,
Bombay.

Poona, 11th October 1887.

SIR,

I have the honour to submit the correspondence as per margin, connected with the revision settlement of the Dholka Táluka of the Ahmedabad Collectorate.

Survey and Settlement Commissioner's No. 900A, dated 23rd May 1887, and accompaniments.

2. Viewed under the ordinary tests there is comparatively little evidence of any general advancement in this táluka. Communications have not been improved to any appreciable extent, while the trade of Dholka itself and of its neighbouring port *Dholera* has declined; no new trade centres have sprung up. Population has not increased in proportion to the extended area of cultivation, and, compared with the latter, the number of agricultural cattle has decreased (there being now only a pair of working bullocks for each 15 acres). The decrease in the number of milch cattle, though to a considerable extent explained by the reduction in the grazing area, is remarkable. Wells show an increase of only 6 per cent. during the 30 years!

3. Prices of cereals have fallen during the last 30 years, and the tendency is still downwards.

		Wheat	Rice	Jowári
		Per ser. of 40 Tolás.		
Average for 1st 10 years of guarantee ...	...	22	33	27
Do. for 30 years ...	...	28	34	34
Do. for last 5 years...	...	36	45	44

4. There is, however, considerable difficulty in accepting these figures, as there is no explanation available of the sudden and abnormal rise during the first 5 years of the settlement, those immediately before the American War. With regard to the prices of the last 5 years it must be observed that these have been seasons of good harvest, and as means of exporting surplus grain from Dholka have not materially improved, a plentiful outturn must mean cheap grain.

5. The price of cotton has steadily improved. There must be some mistake in the quotation of 95 lbs. clean cotton per rupee in 1854-55. In 1823-24 it was 20 lbs. per rupee, and the average price during the first decade of the guarantee was 24 lbs.

6. While I am of opinion that so little evidence of general development is likely to be found in very few *tálukás* of Guajarát, I think that there is good and sufficient reason for a fair enhancement of the Government demand. The assessment of 1856 was avowedly a very moderate one; it was founded upon prices very much lower than those now ruling, and it would be no more reasonable to rely on these remaining at their present low pitch than to assume that communications within the *táluka* will continue unimproved. As a matter of fact prices are liable to be disturbed at any time, and if so disturbed, the probability is that they will *rise*, not *fall*; while proposals for connecting Dholka and Ahmedabad by a metalled road, and possibly a tramway, are under consideration.

7. I think that the proposed enhancement of the dry-crop rates by 25½ per cent. is somewhat high, but Mr. Reid's long experience entitles his opinion to much weight, and it must be remembered that in Guajarát it is not the pitch of assessment that materially affects the *rayat's* prosperity, it is his improvidence and inconsiderate expenditure on marriages, &c.

8. The effect of the new subsoil water-rate in superseding well taxation is not so apparent in Dholka as it will be in other *tálukás*, where the well assessment was distributed over the land watered therefrom. The result is a trifling addition of 2 annas 10 pies per acre, which will be hardly perceptible.

9. There is no doubt that *bháta* land, when cultivation is not rendered precarious by the chance of floods, is of great value, but there is a great difference between Dholka and Mátar, and I think that the proposed rates may be reduced by Re. 1 all round as recommended by Mr. Ozanne.

10. Regarding the high percentage *excess* in certain villages* I would observe that no comparison with old rates is possible, because under the old system facilities for irrigation were only charged for *when the water was actually used*. In reply to a reference from this office Mr. Bulkley writes :-

"The undersigned believes that no re-adjustment of the rates (by which he understands rates on the lands assessed as *bháta*) proposed for either Chandisar or Adasar can be made that will alleviate the excessive pressure of the proposed enhancement (either on the villages as a whole or on individual holdings) sufficiently to bring the increases within the prescribed limits of 66 and 100 per cent. respectively, without being positively inequitable in relation to the revised assessment of similar *bháta* lands in other villages of the *táluka*, if these be retained unmodified. There is no remedy for the case in the direction of reduction of maximum rates on *bháta* lands, and if the present holders of such lands in Chandisar and Adasar object to retain them when assessed at the rates proposed, they will have to relinquish them, in which case all such survey numbers will be dealt with in future in accordance with the orders of Government in paragraph 3 of its Resolution No. 603, dated 1st February 1873. Government can, if it see fit, alleviate the excessive pressure on those individual holdings which are not relinquished at the introduction of the revised settlement by extending to them concessions of the nature of those which are granted under paragraph 11 of its Resolution No. 3541, dated 4th May 1885, passed on the proposals for the revised settlement of the Igatpuri *Táluka* of the Násik Collectorate. The undersigned did not offer any suggestions on this subject in his report, because he did not consider the case in question a parallel one to that of the revised settlement of the Igatpuri *Táluka* and other subsequent revision settlements effected in the Deccan."

11. Mr. Bulkley has supplied me with details of the increase in the case of the village Kesrandi, from which it appears that the variation between the former and present classification of rice lands amounts to no less than 19 per cent., and this correction of former defective classification practically amounts to a considerable enhancement, as this is in addition to the increase due to the new soil classification on a higher and uniform standard.

12. I think that the increase in these 3 villages is too sudden, and, as recommended by Messrs. Reid and Ozaune, Kesrandi and Kanetur may be reduced one class. With regard to the latter officer's observations on the Koli village of Adasar, I would beg reference to the late Sir B. Ellis' remarks on similar proposed enhancements in Mátar, at pages 451-453 of Government Selection No. CXIV, N.S., and would recommend that the increase be levied by degrees,

say at intervals of 10 years. This village is divided from the rest of the táluka by the Sábarmati river, and should properly belong to the Daskroi Táluka, but no practical inconvenience is complained of, and it is an off-shoot of the village of Chandisar and may remain in Dholka.

13. Mr. Ozanne's remarks on Dhekudiat rates have been discussed by me with Mr. Bulkley. I have also made enquiries regarding experience gained in Mátar where a separate rate was added on lands capable of being irrigated from the river. The system has been found to work well, to be simple and convenient, and to involve no inspection. I therefore withdraw my objections to the adoption of a similar plan in Dholka.

14. On Mr. Ozanne's proposal that the subsoil water-rate should be added to these lands, Mr. Bulkley now writes:—

"The undersigned remarks that the 'new difficulty' suggested by Mr. Ozanne as probable is based on the fact that, by the rules adopted at the revision survey, *Dhekudiat* lands have not been classed as possessing subsoil water advantage. The undersigned is now of opinion that they ought to be so classed because as a fact they often do possess this advantage, which, being an inherent one, is quite distinct from the external advantage of being able to take water by *Dhekudi* from a Government river or stream or lake. By the revision classification rules *rive* land taking or able to take water by lift from a Government tank, and assessed for that advantage, is none the less also classed for subsoil water advantage if it is found to possess it, and has been assessed for it in due course. And, this being so, there seems to be no sufficient reason why *jiráyat* land adjudged to be *dhekudiat* should not also be assessed for the subsoil water advantage which it may chance to possess. If this be done, the said 'new difficulty' as regards dealing with existing *dhekudiat* lands, which by some alteration in the course of a river or stream may subsequently chance to lose their *dhekudiat* advantage, and yet owing to their soil not being already valued for subsoil water command cannot have the subsoil water assessment imposed on them without the aid of a technical department to effect the necessary classification, will disappear. As regards dealing with ordinary dry-crop lands already assessed for subsoil water advantage, which by the same natural causes may gain a new facility of irrigation from a river, there is no other system available than that of re-classing such lands for the river supply according to the regular *dhekudiat* rules. Mr. Ozanne is mistaken in stating that the subsoil water assessment system secures finality of classification. It does so to a great extent, but not altogether; for if the quality of the subsoil water should become deteriorated, or the depth to it become increased owing to an earthquake or other physical causes, some re-classification in the field by a more or less technically qualified agency would be necessary before re-adjustment of the assessment of the land affected could be made. It is then unreasonable to urge the point of non-finality in condemnation of the proposed system of assessing the *dhekudiat* lands of the Dholka Táluka, and to argue that to adopt in its stead a system of levying a bag-rate will altogether or more nearly attain finality. The undersigned is of opinion that to retain the bag-rate system in the face of the fact that notwithstanding the recognized difficulty presented by the liability of the river Sábarmati to change its course, Mr. Pedder and with him Captain Prescott and Mr. Ellis deliberately pronounced it inferior to the system of imposing a light permanent water assessment on each acre of land adjudged to be irrigable by *dhekudi* under certain rules and conditions, and adopted the latter, first in villages of the Mátar Táluka and afterwards in villages of the Jetalpur and Daskroi Tálukas, which villages, being on the Sábarmati, are similar in condition to the Dholka villages on that river, would be a course both inconsistent with the principles of all assessments of such lands made in Gujarát since 1862, and in itself inexpedient. There is this further argument against it that, if its retention be adopted (as it seems to be argued it should be) solely or mainly on the ground of the liability of the Sábarmati's course to change, creating difficulty in the re-adjustment of the water assessment of the lands which take its water by *dhekudi*, the question arises 'must the same system be adopted in the case of those lands which have been assessed as irrigable from the Rodh river, and the Nálá, to neither of which sources of water-supply can the objection apply of liability to alteration in course?' If not, then the spectacle will be presented of two different systems of assessing *dhekudiat* lands in force in one and the same táluka, in addition to the inconsistency of allowing two different systems to obtain on the two different banks of one and the same river and also in adjoining villages on one and the same bank, although in different tálukas. Mr. Ozanne has not shown that the present system in force in (say) Kasandra of Sánand (which touches Saroda of Dholka) has proved a failure, and until that is shown it is unreasonable to argue that it ought not to be adopted in Saroda. It is necessary to point out that Mr. Ozanne has misunderstood the case when he states that Captain Prescott 'was not able to abandon the bag-rate altogether in Mátar, but was forced to provide' for its being adopted in order to meet the case of lands not originally assessed as *dhekudiat* becoming irrigable from rivers subsequently. Reference to page 575, paragraph 7 of Government Selection (New Series) CXIV, will show that Captain Prescott referred *not* to lands which became irrigable by changes in the course of a river but to dry-crop lands which, not having been assessed at the settlement as *dhekudiat* because they lay beyond his maximum range of 80-guntha chains from the river bank, might, notwithstanding at some future time or other, be found to take water by *dhekudi* from that river of which, however,

the course had *not* altered from what it was at the time of the settlement, and Mr. Ozanne's contention against adopting the modification suggested regarding *dhekudis* is in no degree helped by this argument."

15. I am in favour of this proposal. Owing to low classification of soil the rates on these *dhekudiat* lands (which probably differ little from those on the other side of the river on which sugarcane is extensively grown) will apparently be little, if at all, in excess of those on land in the interior of the *táluka* which produces cereals only. By the permanent water-rate also we make a present to the people of a supply which, under Section 55, Land Revenue Code, is specially reserved to Government. I am not sure that the facilities for irrigation on this *Dhekudiat* land have been sufficiently highly assessed, but a Rs.-2 rate in *Mátar* (in substitution for the bag-rate) was supposed to cover loss to Government, and on this basis Rs. 1-8-0 is high enough for *Dholka*.

16. The subject of *Bápu Mia's* lease will be reported on separately.

17. Regarding *trees* I would support Mr. Bulkley's proposals. In the earlier settled *tálukas* in *Kaira* fruit trees were reserved at the survey, but in *Nadiád* and *Borsad* a more liberal policy was followed, and all were given to the occupants. The reservations in other *tálukas* were found to be a constant source of trouble, and the trees have been gradually sold to the *rayats*. The reservation of such trees on *alienated* land is clearly irregular. I do not share the Collector's apprehensions. The people of *Gujarát* value trees very highly, and spend much capital and labour in planting and preserving them. There is probably no part of India more finely wooded than the two *tálukas* above named, in which no trees were reserved. The question of the groves near *Ahmedabad* may await the settlement of that *táluka*. There are no teak or blackwood trees in *Dholka*, and under the spirit of Section 40, Land Revenue Code, I would propose that all trees on occupied lands should be considered the property of the occupants.

18. The report has been carefully prepared, and does credit to Mr. Bulkley. A few minor errors have been detected which have been corrected in red ink. Some portions of the report lose value by the *alienated* and *tálukdári* area having been included in the figures shown. It is necessary to point this out, as otherwise the figures (as in paragraph 17) would appear incorrect.

19. Correspondence on the subject of petitions received by the Collector is submitted separately.

I have the honour to be,

Sir,

Your most obedient Servant,

G. F. SHEPPARD,

Commissioner, N. D.

No. 1976 OF 1887.

Poona, 3rd November 1887.

MEMORANDUM.

The Survey and Settlement Commissioner presents compliments to the Acting Chief Secretary to Government, and has the honour to explain that when he left India on seven months' furlough in April last, the season was too far advanced to admit of the proposals for the revision settlement of the *Dholka Táluka* of the *Ahmedabad* Collectorate being given that close consideration to which such an important scheme was entitled, and that as a consequence there appeared no hope of carrying out the preparation of the settlement papers and introducing the rates with due deliberation before the rainy season. It was, therefore, decided that the introduction of the rates should be taken in hand in the current year, 1887-88, and that the delay which this change permitted should be taken advantage of by the Survey Commissioner while on furlough to ascertain the opinions of Colonel C. J. Prescott and Mr. W. G. Pedder, the former for many years Superintendent of Survey in *Gujarát*, and the latter an officer of great experience in the settlement operations of that province. The course contemplated was in accordance with precedent, for when the revision survey

broke ground in the Deccan it was considered so desirable that the early Settlement Officers should have an opportunity of giving their opinions as to how far the revision proposals coincided with their aims and intentions at the first settlement that General (then Colonel) Francis was specially deputed to interview Sir George Wingate and place his views before Government. In the case of Dholka this course was recommended, because, it being once conceded that there was no advantage in pressing on the papers for sanction in 1886-87, there was no financial or other reason why they should be submitted earlier than to give time to Government to consider their decision and to cause the rates to be introduced before the close of the next revenue year. The levy of the rates could not in any case take place till the year succeeding the introduction.

2. Acting on demi-official instructions, therefore, the Survey Commissioner took the opportunity to consult both Colonel Prescott and Mr. Pedder. Circumstances prevented his obtaining from the latter more than a general opinion on the merits of Mr. Bulkley's scheme, but the former after most kindly studying the papers penned a valuable memorandum giving in considerable detail his views on the subject. Armed with these opinions the Survey Commissioner hoped to have taken up the threads where he left off handling them in April last and expected to report on the re-settlement step by step in the usual manner. He finds, however, that the matter has been disposed of in his absence, as far as this office is concerned, by Mr. Ozanne, who, during his temporary incumbency before the rains, submitted the correspondence with a full opinion to the Commissioner, N. D., by whom it has been forwarded to Government and is now under their consideration. All that is left therefore for the Survey Commissioner to do is to forward Colonel Prescott's memorandum without delay and to intimate to Government Mr. W. G. Pedder's full agreement with Mr. Bulkley's views, especially on the question of bag-rates in dhekudiat lands regarding which Mr. Ozanne has suggested amendments.

3. As the Survey Commissioner served in Gujarát as a revenue officer for six consecutive years and for the last six years has continuously watched and directed step by step each measure adopted to bring about this particular revision, it may not be amiss for him to state that the proposals formulated by Mr. Bulkley in his very able report were fully discussed with the Survey Commissioner before they were placed on paper and that they are in full consonance with his views. The only amendment he is prepared to receive is that the "dhekudiat" lands should be classed for sub-soil water advantages, as in the case of rice lands, and the resulting annas added to the soil classification, by which step the lands will be placed on the same footing as other dry-crop lands, should they cease to be watered from "dhekudis."

4. Colonel Prescott's memorandum will be sent to the Press to be printed, and it is hoped that it may be published with the correspondence relating to this revision. Government have now the usual information before them to enable them to come to a decision on the settlement, and it will be a great advantage if their sanction is accorded at an early date to enable the subsequent steps to be taken for introduction of the rates in good time. The Survey Commissioner will have an early opportunity in forwarding the revision papers of the neighbouring Dhanduka Taluka, of more clearly dealing with certain points on which he thinks light should be thrown.

T. H. STEWART,

Survey and Settlement Commissioner.

To

THE ACTING CHIEF SECRETARY TO GOVERNMENT,
Revenue Department.

Abbott's Ann, Andover, August 30th, 1887.

I have perused, with very great interest, the papers now returned to the Survey and Settlement Commissioner, Bombay.

2. It is little short of marvellous that Mr Bulkley (who was in the survey at the time of the original settlement of Dholka) should, after 30 years' continuous service in the department, be the officer to whom the revision of the

assessment should be entrusted ; for a more competent, careful and painstaking officer it would be hard to find. Under these circumstances it is not necessary that I should review these reports in detail.

3. I have always been under the impression that, as compared with other districts, Dholka was unduly lowered at the introduction of the survey rates, but Mr. Bulkley and Mr. Ozanne have, I think, proved that this is not the case, and I admit that the comparative statements and statistical tables do not prove such progress, as might have been expected. Whether the lowness of the rates has anything to do with this I cannot say.

Mr. Bulkley, paragraphs 50 to 62. Mr. Ozanne, paragraphs 25 and 26.

Mr. Bulkley, paragraphs 52 to 55.

Mr. Ozanne, paragraph 21.

Mr. Bulkley, paragraphs 56 to 64.

Mr. Ozanne, paragraphs 18 to 20.

Mr. Bulkley, paragraphs 57 and 58.

Mr. Ozanne, paragraph 18.

Mr. Bulkley, paragraph 15.

4. The maximum dry-crop rates and the grouping of the villages seem to have been judiciously determined.

5. I think the water-rates for bhatta, rice and dhekudiat lands respectively are suitable, and if any thing, err on the side of liberality.

6. The average rate for bhatta is about Rs. 8-6, while the dhekudiat average water-rate varies from ten annas and one pie in the best to three annas and ten pies in the poorest villages.

7. These low dhekudiat water-rates, which are distributed over a large area, raise the revenue from 6,000 to 7,200 rupees.

8. I shall say a few words further on regarding water assessment by bag-rate, but would observe here that in bhatta land this system of levy is especially bad. Put your rate wholly on the soil, and the people will use as much water as they can get, or, as is needed for their crops, but, put it on the bag, and they will grow inferior crops trusting to percolation for moisture, and will thus avoid that portion of the assessment which is put on the bag.

Mr. Bulkley, paragraph 56.

Mr. Ozanne, paragraph 6.

9. Some khátas will, of course, be raised by our system, but, as above explained, the khátadár will get the *quid pro quo*. There may be some complaints but they must not be listened to. Ask the holders if they wish to resign the bhatta. I well know the old answer. "No. Although it is zulum, they will not give it up." Under the old system, and in Native States, they would pay a very heavy "jinnaswár bigoti" without a murmur, though they object to a light fixed yearly rate.

10. Mr. Ozanne fully realizes how difficult it is to devise a system of wet classification and assessment which is equitable, workable and not inquisitorial after the final introduction of the rates.

Mr. Ozanne, paragraphs 16 and 17.

11. He remarks that I have—

(a) condemned the bag-rate system as liable to check dhekudiat cultivation, but have not proved that it does so ; and

(b) that I have not been able to quite get rid of the bag-rate in Mátar.

12. First, with regard to the bag-rate. Our objection is that quoted in paragraph 8 of this memorandum, but the main objection is this. Notwithstanding all the arguments as to the right of Government to levy a large extra assessment on account of water, and however much we may look upon water as a hidden treasure which we have a right to tax so soon as it shall have been developed by the exertions of the cultivator, we cannot fail to see that the putting a high rate on the water-bag is but another form of the old "jinnaswár bigoti," and must detract from the value of the tenure which is created by the survey system.

13. Depend upon it the proper system of assessment is that truly set forth in the words of Mr. Elliot, quoted in the 10th paragraph of Mr. Ozanne's report, when he alludes to the assessment of certain similar tracts in one of the Baroda States in South Káthiáwár. "Lay, says Mr. Elliot, the tax on the

land only, and let the people follow their own sense of what is beneficial to them."

14. Now this is truly our system. We have no high bag-rates on water, but a light extra water-rate on the soil—so light that it provides amply for any deterioration on account of "Khár."

15. In those dull crumbly black soils, where Khár is likely to crop up after irrigation with doubtful water, the classification both for soil and water will be low. No earthly precaution will enable us wholly to provide against the development of "Khár." If it appears in sufficient quantity to render the land absolutely unproductive, the occupiers must resign the numbers, and the land must remain fallow till the rainfall shall have washed it clean—for it is notorious that the cause of "Khár" is irrigation by water which is "drinkable salt" or turning salt.

16. But barley and some kinds of wheat will bear a considerable amount of "Khár," and if the assessment is not too high, which it cannot be at the rates proposed, very little permanently assessed land will ever be resigned on this account.

17. As I have before said, put a very low water-rate on a large irrigable area, and wet crop will be developed; put a heavy rate on the water bag, and irrigation will languish. In the former case, poor cultivators will take advantage of the privilege of getting water for next to nothing. In the latter, rich khátadárs only can cultivate malliat crops.

18. Now with regard to the assertion of my not having been able to quite Mr. Ozanne, paragraph 16. abandon the bag-rate in Mátar.

It is quite true that I made an entry in the "Mátar" Physal putrucks that "if after the introduction of the rates it should be found that individuals are watering dry-crop land from dhekudis, such land not being assessed at dhekudiat rates, they shall pay Rs. 8 a bag."

19. Mr. Ozanne does well to refer to these points, because it gives the Survey Department an opportunity of explaining what might otherwise be looked upon as an anomaly; but doing so entails a detailed account of the system adopted in classing dhekudiat water.

The classer proceeds to the source of irrigation and first thoroughly inspects the banks of the river or stream or tank, and examines all land and numbers which *have* been irrigated; and then all numbers, which in his judgment can be irrigated. As he recedes from the source of irrigation, he gradually lowers his water classification (by the anna scale) till he comes to the extreme limit of irrigable land, which is, probably, fixed by a rise in the country. In fact the entire irrigable area is often contained in a basin, or depression, and is easily defined by an experienced expert.

But, there *are* exceptions to this. The lay of a few numbers may be such as to deceive the classer. Now, after the rates have been introduced, some cultivator (with that ingenuity, as regards irrigation, for which the Eastern cultivator is famous,) takes water, with great labour perhaps, to a number supposed to be inaccessible to water. Is he to plead his right of exemption on account of his labour in getting the water, or is Government to impose Rs. 8 a bag on principle? If it proves a prohibitive rate, so much the better, for a classer can be sent to correct the error if it is thought worth while to do so.

This is why the entry referred to was made in the Mátar Physal putrucks, and I consider it was necessary, for it must be borne in mind that this system of classification and assessment of water was then on-its trial, and our agency was not so experienced then, as it is now.

C. J. PRESCOTT, Colonel,
Late Superintendent, Revenue Survey and
Assessment in Gujarát.

To

THEODORE STEWART, Esq.,
Survey and Settlement Commissioner.

Revenue Survey and Assessment: Proposals for the revision Settlement of the Dholka Táluka of the Ahmedabad Collectorate.

No. 796.

REVENUE DEPARTMENT.

Bombay Castle, 3rd February 1888.

Letter from the Commissioner, N. D., No. 3191, dated 11th October 1887—Submitting the papers noted in the margin, containing proposals for the revised survey settlement of the Dholka Táluka of the Ahmedabad Collectorate.

Letter from the Deputy Superintendent, Gujarát Revenue Survey, No. 118, dated 1st March 1887, and accompaniments.

Memorandum from the Collector of Ahmedabad, No. 746, dated 26th March 1887.

Memorandum from the Survey and Settlement Commissioner, No. 900A, dated 23rd May 1887.

Memorandum from the Survey and Settlement Commissioner, No. 1191, dated 8th July 1887—Submitting, with his remarks, a letter No. 1670, dated 30th June 1887, from the Collector of Ahmedabad, who forwards petitions from the inhabitants of certain villages of the Dholka Táluka complaining of the enhanced rates of assessment proposed at the revision settlement of the Dholka Táluka; and makes remarks.

Memorandum from the Commissioner, N. D., No. 3198, dated 12th October 1887—Forwarding the above.

Telegram from the Survey and Settlement Commissioner, dated 28th October 1887.

Memorandum from the Survey and Settlement Commissioner, No. 1976, dated 3rd November 1887.

Telegram from the Deputy Superintendent, Gujarát Revenue Survey, dated 21st January 1888—Replying to Government telegram of the 20th instant.

RESOLUTION.—Of the 76 Government villages now comprised in Dholka Táluka the original settlement of 7 took place in 1852-53, of 37 in 1854-55, and of 30 in 1856-57, while the remaining 2, Khátripúr and Bhetawada, originally tálukdári, were assessed when they lapsed to Government during the term of the settlement which has now expired.

2. In accordance with Government Resolution No. 5948 of 10th August 1883 a partial re-measurement of lands has been effected in all villages in which the old survey measurements were found, after a careful preliminary test, to be sufficiently correct. In other cases—but only in 4 whole villages and in tracts of 4 others—entire re-measurement has been effected. The difference between the old and new figures showing total areas is inconsiderable in the case of both arable and unarable land, and the results of re-measurement generally call for no comment.

3. In the same Resolution Government approved of the proposals for re-classification submitted by the Survey and Settlement Commissioner Mr. T. H. Stewart. The manner in which effect has been given to those proposals is carefully explained in Mr. Bulkley's present report. The operations included a partial re-classification of soil both of dry-crop and rice land, embracing a valuation of sub-soil water advantages according to a carefully considered and liberal method of appraisalment, and the entire re-classification of the water-supply of rice land, omitting the well irrigation already brought to account under sub-soil water. It is highly satisfactory to learn that in 2 villages only the existing soil classification was found to be incapable of adjustment to the demands of a revision settlement.

4. Water-assessment under the existing settlement in Dholka is levied by a rate fixed upon the water actually raised and is payable for every water-lift worked under the name of a 'bag-rate.'

In the case of ordinary well irrigation the assessment of water is now superseded by the system of including sub-soil water advantages in the appraisalment

of soils. The application of this system in Dholka required care owing to the tendency to salt in the sub-soil water; but great care was used, and Government concur in the conclusion of the late Acting Survey and Settlement Commissioner, (Mr. Ozanne), who has examined the question very thoroughly, that the system is particularly well adapted to the settlement of districts, such as Dholka, containing lands in which water is so close to the surface that it can be raised for irrigation at a very small cost, by means of "Kacha," i.e. temporary, wells, which are often little more than shallow pits with a temporary lift erected over them.

5. In this class of lands are those known as "Bhâta." These are the most recent alluvial lands on the bank of the Sâbarmati river, with a soil of exceptional fertility enhanced by water near the surface, and occasionally re-fertilized by exceptionally high inundations. In the original settlement the special character of these lands was not fully realized nor adequately dealt with, but such of them as were considered to be permanent, i.e. not liable to destruction by floods, were, like other irrigable lands, assessed at a dry-crop rate with the addition of the 'bag-rate' on water lifted for irrigation. When similar lands in neighbouring talukâs came to be assessed, the Settlement Officer Mr. Pedder advocated for them an assessment based on their exceptional advantages as regards water, the rate known as 'Bâgâyat' being laid upon these lands or such of them as might be ascertained to be permanent as to quality of soil, and those lands the area of which was liable to be affected by floods being subject to measurement on any modification of their area. Such 'Bhâta' lands as have no permanent character, being in fact river-bed, would be left out of settlement altogether, to be sold annually by auction. A settlement in accordance with these principles was applied to the 'Bhâtas' of other talukâs then under process of assessment and was extended to such areas in Dholka as were found to be unoccupied and consequently at the disposal of Government for a modification of assessment in 1863-64. The 'Bâgâyat' rate thus imposed upon 'Bhâta' lands, in so far as it represented irrigation from 'Kacha' wells, corresponded very nearly to an assessment on the principle now adopted of including sub-soil water advantage in the items of classification of soil. The rates introduced by Mr. Pedder therefore are rightly adopted as the 'datum' for revision assessment of Dholka 'Bhâta' lands by Mr. Bulkley.

6. But there remains another class of irrigational privilege to be dealt with in the Dholka settlement. This is the supply from rivers of water raised by the lifts known as 'Dhekudis.' This resembles 'Kacha' well irrigation in that it involves an insignificant expenditure of capital, but it cannot be assessed by the valuation of sub-soil water advantage, as it is a distinct privilege co-existing with that of sub-soil water but entirely independent of it. It is proposed to substitute for the 'bag-rate' hitherto paid for water raised by 'Dhekudis' a light 'Bâgâyat' rate on all land irrigable from river banks with reasonable facility. These lands were not subjected by Mr. Bulkley to classification for sub-soil water as other lands, no doubt in view of their liability to pay for the use of river water. But as they usually rank high in respect of facilities for well irrigation, and as their capacity for irrigation from river water is liable to interruption or modification as pointed out by the late Acting Survey and Settlement Commissioner (Mr. Ozanne), it is right that the permanent advantage of sub-soil water-supply should be included in their permanent assessment. To this will be added a light assessment representing the additional privilege of irrigation by 'Dhekudi,' which may be liable to modification if the privilege is withdrawn by natural causes, or may be imposed on lands newly brought under 'Dhekudi' irrigation. The 'Dhekudiat' assessment has been carried out in accordance with rules which have stood the test of experience in previous settlements, and their application is well understood; but it is necessary that they should be very clearly formulated and recorded with the Director of Land Records and Agriculture and with the Collectors for guidance in dealing with river-bank lands which may gain or lose the capacity for 'Dhekudiat' irrigation, and it must be clearly borne in mind that after the sub-soil water advantage of such lands has been classified and assessed the 'Dhekudiat' rate should be reduced by the amount of such assessment, as both water privileges cannot be exercised at the same time

on the same land. In the case of the Dholka lands upon which the 'Dhekudiat' cess has already been laid, such portion of it as may represent the value of sub-soil water privilege should be transferred to the permanent assessment due to soil only.

7. These orders will dispose of the objections raised by the late Acting Survey and Settlement Commissioner (Mr. Ozanne) to the distribution of 'Dhekudiat' assessment upon the land, and will make it possible to adhere throughout the whole of the Dholka Settlement to the principle that irrigational privileges should be treated for purposes of assessment as incidental to land valuation rather than as separate items of taxation, such taxation acting *pro tanto* as a discouragement of the use of water.

8. Lastly, as regards lands other than 'Bhāta' and 'Dhekudiat,' Mr. Bulkley shows that the average incidence of the enhancement, due to sub-soil water valuation of the soil assessment per acre of Government occupied land adjudged to possess sub-soil water advantage will be as low as 2 annas and 10 pies, though this enhancement will produce a gross revenue of Rs. 7,200 as compared with Rs. 6,000, the amount of special water assessment imposed in 1885-86 on Government irrigated land by the levy of a water 'bag-rate' varying from Rs. 10 to Rs. 3.

9. Mr. Bulkley has instituted a very thorough comparison between the condition of Dholka at the introduction of the settlement and that at the present time, and his remarks have been carefully examined by Mr. Ozanne. Owing to causes fully explained by the history of the district before British rule, Dholka contains a large admixture of the less industrious and non-agricultural classes and half of its area is comprised in Tālukdāri estates with a revenue management not well calculated to develop enterprise. These conditions make agricultural progress less marked than in the districts adjoining, but there is no reason to question Mr. Bulkley's conclusion, as regards the villages which are not so nearly affected by these conditions, that "they have prospered steadily and to a considerable degree during the existing settlement." As regards the price of land it must not be overlooked that the Tālukdāri villages contain abundant unoccupied land to be had on easy terms and there is as yet no pressure of population on the lands of medium value throughout the district. Prices have risen generally by a large percentage since the period preceding the first settlement, and in the case of wheat, cotton and rice, the exportable products which occupy more than $\frac{1}{2}$ of the area under revision, the increase is over 100 per cent. The original assessment was pitched at an admittedly low standard and the very large area of alienations makes the incidence of land revenue assessment on the total population exceptionally light. All the circumstances considered, the increase in assessment of $25\frac{3}{4}$ per cent. now proposed is fully justified.

10. As regards details of the rates proposed for adoption it will be convenient to consider separately, as Mr. Bulkley has done, dry-crop rates, water rates on rice land, 'bhāta' rates and water rates for 'Dhekudiat' land.

11. In the 74 villages settled under the original scheme the maximum dry-crop rates were fixed at from Rs. $2\frac{1}{4}$ to Re. 1 per acre. The rates now proposed for these villages as well as for Khātripur and Bhetawada are only slightly higher, and range from Rs. 2-8-0 to Rs. 1-2-0. In the grouping of villages, however, several changes are proposed owing to Ahmedabad having now replaced Dholka as the chief market, on the accessibility to or remoteness from which the grouping must be based in the absence of any material differences in the climatic conditions of the villages.

12. The 74 villages originally settled were, according to paragraph 51 of Mr. Bulkley's report, divided into 5 groups constituted as shown in the margin; but from Appendix L and from the calculations, the result of which is shown in paragraph 54, it appears that the real number in group 1 was 16 and that in group 2, 35. Of the villages in the first group Mr. Bulkley proposes to transfer 4 to the second; of those in the second he would transfer 13 to the first and 3 to the 3rd; of those

Group.	No. of villages.
1	14
2	37
3	8
4	12
5	3
	74

in the 3rd he would transfer 2 to the second; and of those in the 4th he would transfer 1 to the 3rd and 1 to the 5th. The villages of Khátripur and Bhetawada are proposed for inclusion in the 2nd group. The revised groups under these proposals will be constituted as shown in the margin. (With the exception of two villages Kesrandi and Kanetar, which may, as recommended by Messrs. Sheppard, Reid and Ozanne, be each reduced a class, and be placed in the 4th and 5th group respectively, this grouping is unanimously recommended by all the officers whose reports are before Government, and it as well as the proposed rates may be sanctioned.

Group.	No. of villages.
1	25
2	28
3	9
4	10
5	4
	<hr/>
	76

13. It is not proposed to allow the maximum water-rates on rice lands, and the present rates, which vary from Rs. 6 to Rs. 4 per acre, may accordingly be continued. It is noticeable that more than 300 acres of rice land which had reverted to the condition of dry-crop land have been transferred to the latter.

14. For permanently occupied 'Bháta' lands, which appear to exist in only

	Maximum Rates.	Average Rates.		
	Rs.	Rs.	a.	p.
In 5 villages.	8	9	12	0
" 1 "	7	9	11	2
" 4 "	6	5	12	2

10 villages, the maximum rates proposed are those given in the margin: but the average rates, also given, are somewhat higher, in consequence of the maximum being nominal only and calculated on 16 annas of a classification scale which rises to 28 annas. The suitability of these maximum rates, which differ little from those recorded in the operations of 1863-64 above mentioned, is shown by the comparison made by Mr. Bulkley between them and the rates already applied to neighbouring and similarly circumstanced villages of the Jetalpur and Daskroi talukás. Mr. Bulkley points out that these rates will cause enhancements of existing assessments on some individual holdings composed mainly of 'bháta' land much in excess of the limit of increase (100 per cent.) sanctioned by Government, but he explains that the usual comparison between original and revised assessments is not applicable; for if the original settlement had taken place a few years later, after the proper system of dealing with these lands had been adopted as in the settlement of 1863-64, the original rates would have been almost exactly the same as those now proposed. This reasoning appears to be just, but it is lost sight of by Mr. Ozanne who is supported by the Commissioner, N. D., in his recommendation of a reduction of Re. 1 in each class of the proposed maximum rates, on the ground that "these maxima are as amenable to the general principles which rule the pitch of maximum rates as those of dry-crop." The circumstances of these lands are very exceptional, and it is not easy to see why cultivators should be freed from the liability to pay rates not believed to be in themselves high, and which have been paid for more than twenty years by their neighbours, merely on the ground that, owing to the discovery of the proper treatment of their lands having been made a little too late, they have been lucky enough hitherto to escape the payment of a proper amount. The proposed rates may be sanctioned. The resulting revenue from the 481 acres of Government occupied land recorded will be Rs. 3,998.

15. The maximum water-rates proposed for 'Dhekudiat' land are (1) Rs. 1½ for 519 acres situated in 7 villages watered from the Sábarmati and 1 from the Sukhni Nadi, and (2) Re. 1 for 1,013 acres watered from the Rodh river and the Nál. The former rate is that applied in similarly circumstanced villages in Daskroi. These proposals are unanimously recommended by all the officers whose reports are before Government except, as already stated, Mr. Ozanne, and may be sanctioned with the proviso already laid down that any addition to the ordinary soil assessment due to sub-soil water advantage shall be balanced by a corresponding reduction in the 'Dhekudiat' rate.

16. In consequence of the Notification published in accordance with Government Resolution No. 7447 of 21st October 1886, petitions against the proposed rates have been received from 28 villages, and forwarded to Government. The remarks of the Collector and the late Acting Survey and Settlement Commissioner (Mr. Bulkley), however, show that in no case has any reasonable cause for interference with the present proposals been made out.

17. In paragraph 59 of his report Mr. Bulkley compares the revenue under the proposed with that under the present settlement; but in consequence of the modifications of his proposals sanctioned above some changes in the figures for the former will have to be made. These should be reported. In the case of villages such as Chandisar and Adásar, in which the enhancement of demand is very considerable, the increase should be levied by triennial increments of 25 per cent.

18. With the modifications indicated above the proposed rates are sanctioned and should be introduced with as little delay as possible. They should be guaranteed, as recommended, for a term of 30 years from the year of their actual levy. It is no small satisfaction to the Governor in Council that Mr. Bulkley's settlement should have been considered and approved by such weighty authorities as Mr. Pedder and Colonel Prescott.

19. The separate report on the subject of Bapu Mia's lease will be awaited.

20. The proposal of the Deputy Superintendent of Survey as to the disposal of fruit trees advocated in paragraph 65 of his report may be adopted in its entirety.

21. Proposals from the Commissioner for the revision of jama of Talukdári villages in Dholka should be submitted.

J. DEC. ATKINS,

Under Secretary to Government.

To

The Commissioner, N. D.,
The Collector of Ahmedabad (with the accompaniment to his letter No. 1670, dated 30th June 1887),
The Survey and Settlement Commissioner,
The Director of Land Records and Agriculture,
The Public Works Department of the Secretariat,
The Accountant General,
The Government of India,
The Secretary of State for India.

With an intimation that the papers are being printed in the form of a Selection from the Records of Government and that when it is ready copies of it will be forwarded to them.

By letter.

ERRATUM.

No. 1448 of 1888.

REVENUE DEPARTMENT.

Bombay Castle, 1st March 1888.

In line 1 of paragraph 13 of Government Resolution No. 796, dated 3rd February 1888, for the word "allow" read the word "alter."

J. DEC. ATKINS,

Under Secretary to Government.

To

The Commissioner, N. D.,
The Collector of Ahmedabad,
The Survey and Settlement Commissioner,
The Director of Land Records and Agriculture,
The Public Works Department of the Secretariat,
The Accountant General.