

unauthorised absence was severely discouraged, the returns, specially of the C Establishment, show a high percentage of leave. In the establishments of Linked Party No. I, the highest percentage was 6·01 and the lowest 2·0.

41. Similar information as regards the classing establishments is given in the following statement :—

			1895-96.	1896-97.
<i>Working days.</i>				
Field classification	...	...	60·74	61·86
Boundary-mark inspection	...	...	...	0·28
Accompanying testing officer	...	...	6·05	6·67
Office work	...	...	14·32	12·43
Total	...	...	81·11	81·24
<i>Non-working days.</i>				
Sickness	...	...	0·33	0·23
Villages not co-operating	...	...	1·65	1·98
Rain...	...	...	0·98	0·07
Travelling	...	...	4·07	7·38
Leave and holidays	...	...	11·86	9·10
Total	...	...	18·89	18·76
Grand Total	...	...	100	100

42. The figures for the year compare as a whole favourably with those of the previous year, notwithstanding that the training of new classers involved the expenditure of 1,609 days on 'office work.' The increase under 'travelling' has already been explained. The loss of time owing to 'sickness' and 'leave and holidays' again shows a decrease.

43. It will be seen from Appendix No. III and from the explanatory remarks in paragraph 30 above that boundary-mark inspection was not completed in any village during the year.

44. Appendix No. IV shows the progress of monsoon office work for the measuring establishments. The papers of all the villages were completed except the fair copies of village maps. The preparation of these maps for 65 villages of the Broach District was postponed owing to the transfer of the classing parties to Broach in October in consequence of the outbreak of plague in Surat. The fair copies of maps of ten villages of the Panch Mahals District were not prepared owing to the boundaries not tallying with those of the taluka map.

45. Appendix No. VII gives similar information regarding the classing establishments. Owing to the transfer of the classing parties to Broach and the dismissal of temporary hands in October, the recess work of 172 villages in the Broach District was unavoidably postponed until the next season.

46. Appendix No. VIII shows the number of maps sent to the Photozinc Office. Of the 160 maps transmitted 86 were printed and returned. The charges in connection with this and other miscellaneous work amounted to Rs. 2,462·4 as compared with Rs. 15·4 in the previous year, showing an increase of Rs. 2,447·0. The total number of forms printed for this survey amounted to 216,615 against 135,810 in the year 1895-96, the cost being Rs. 4,438·8·0 as compared with Rs. 3,793·3·0. One thousand nine hundred and fifty-four maps were mounted on cloth and supplied to the taluka and village officers. The number of revision tracings supplied to talukas was 190.

47. Appendix Statement No. IX shows the total expenditure of this survey for the year under report as contrasted with that of the previous year. Almost all heads contributed to the total decrease of Rs. 2,993, the increase of Rs. 2,569 under contingent charges being entailed by the greater amount of travelling performed by the establishments. The decrease in the pay of the Superintendent and of the Assistant Superintendent is due to the fact that the appointments were held by officers on lower pay than in the previous year, while that under the head of "establishment pay" is due to the exclusion therefrom of the pay of the Survey Mámílatdár.

48. In Appendix X is shown the total cost of the survey since 1851-52 and the average cost of measurement and classification per acre. Taking the area actually measured and classed the rates work out to Re. 0-13-10 and Re. 0-4-7 per acre respectively as compared with Rs. 1-7-3 and Re. 0-3-1 in the previous year. The cost of measurement in 1895-96 showed an unusual increase for reasons explained in the last year's report, while the average cost of classification during the year under report rose owing to the reduced outturn proportionately to the strength of the establishments, mainly resulting from the loss of time in instructing new classers and the difficult nature of the bágáyat classification. Including confirmed numbers the average cost per acre of measurement was Re. 0-0-5 and of classification Re. 0-0-11, as compared with Re. 0-1-10 and Re. 0-1-3 respectively in 1895-96.

49. The details of advances for the erection of boundary-marks are given below as required under Government Resolution No. 694 of the 27th January 1891 :—

Total advance.	Of which recoverable.	Debited to Government.
Rs. a. p.	Rs. a. p.	Rs. a. p.
354 0 0	.....	354 0 0

*Settlement operations.*

50. During the year under report Mr. Maconochie submitted proposals for the revision settlement of the khálsa villages of the Chikhli Táluka of the Surat District, but as the sanction of Government was not obtained before July 31st, 1897, no steps were taken towards the introduction of the revised rates. The revised rates for the khálsa villages of the Chorási and Bárdoli Tálukas of the same district were sanctioned by Government and introduced during the year. The settlement papers of the Kanjari-Ravalia Estates in the Hálol Táluka, of the Limdi Golana Estate in the Jhálod Táluka were prepared and submitted to the Collector of the Panch Maháls District, and those of the inámi village of Vatva to the Collector of the Ahmedabad District. Proposals for the original settlement of the two inámi villages Vanjh and Dindoli of the Chorási Táluka and for the revision of the inámi village of Kanjari, Nadiád Táluka, were submitted to the Survey Commissioner and Director of Land Records and Agriculture. The results of the proposed settlements are as follows :—

Collectorate.	Táluka.	Number of Villages.	Total Acres.	Assessed Acres.	Previous year's Collections.	Assessment according to revised rates.	Increase.	Decrease.
					Rs.	Rs.	Rs.	Rs.
Surat ...	Bárdoli ...	138	142,062	125,926	422,751	4,61,497	38,746	...
	Chorási ...	63	48,364	40,121	130,029	1,49,162	19,133	...
	Chikhli ...	60	103,561	81,753	217,662	2,13,589	...	4,073
	Chorási (Vanjh, Dindoli) ...	2	3,256	1,942	12,953	12,446	...	507
Kaira ...	Nadiád (Kanjari) ...	1	2,514	665	3,240	3,632	392	...



51. The following statement shows the expenditure of this survey for the year under report under each of the heads of (1) measurement, (2) classification, (3) settlement and (4) miscellaneous :—

Heads.	Actual cost.	Rateable proportion of Nos. 5 and 6.	Total cost.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
1. Measurement ... ..	19,261 5 0	4,493 6 4	23,754 11 4
2. Classification ... ..	33,933 13 7	7,916 2 11	41,850 0 6
3. Settlement ... ..	13,434 12 11	18,837 9 3	32,272 6 2
Total ...	66,629 15 6	31,247 2 6	97,877 2 0
5. Deputy Superintendent's salary and expenses of his office.	24,819 2 6	.....	.....
6. Proportion of Survey Commissioner's office and of his salary.	6,428 0 0	.....	.....
Total ...	31,247 2 6	.....	.....

52. The financial results of the Gujarát Revenue Survey in khálsa villages since the introduction of the revised rates are tabulated below :—

Collectorate.	Táluka.	Revenue of Government and alienated Land in		Difference.	Total Increase since Settlement.
		The year prior to Settlement.	1896-97.		
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Ahmedabad...	Dholka ... ..	1,87,766 13 5	2,06,646 3 5	18,879 6 0	2,40,380 10 9
	Dhandhuka ... ..	55,225 14 1	70,342 5 0	15,116 6 11	1,19,375 9 1
	Daskrohi ... ..	3,34,656 12 6	3,89,657 3 1	55,000 6 7	4,35,161 6 0
	Viramgam ... ..	1,63,643 1 0	2,03,973 9 6	40,330 8 6	3,00,724 5 5
	Parántij ... ..	1,23,459 14 4	1,28,048 4 7	4,588 6 3	70,394 6 9
	Sánand ... ..	1,46,420 5 2	1,50,836 0 3	4,415 11 1	39,650 15 9
		10,11,172 12 6	11,49,503 9 10	1,38,330 13 4	12,14,518 11 11
Kaira ...	Mátar ... ..	2,65,370 7 9	2,74,474 12 7	9,104 4 10	38,796 4 1
	Mehmedabad ... ..	2,31,417 5 0	2,51,871 14 0	20,454 9 0	69,646 8 0
	Borsad ... ..	3,29,030 4 0	3,47,610 15 0	18,530 11 0	87,021 6 0
	Nadiád ... ..	3,44,640 14 0	3,68,232 9 0	23,591 11 0	48,167 12 0
	Thúdra ... ..	2,01,366 2 2	2,10,406 10 0	9,040 7 10	20,218 11 8
	Kapadvanj ... ..	1,54,767 12 0	1,58,278 13 0	*1,488 15 10	*1,086 4 0
	Anand ... ..	3,63,682 2 0	3,93,547 7 0	29,865 5 0	59,645 11 0
		18,90,324 14 11	19,99,423 0 7	1,09,098 1 8	2,72,410 0 9
		29,01,497 11 5	31,48,926 10 5	2,47,428 15 0	14,86,928 12 8

\* Decrease.

53. During the year under report Mr. J. A. G. Wales, Assistant Collector, Panch Maháls, was trained in survey work in the Panch Maháls under Mr. H. V. Sathe, Assistant Superintendent, and a certificate of qualification was issued on the 31st May 1897.

54. Mr. Maconochie began his tour in the Bulsár Táluka, in which classification work was in progress, and was occupied in that táluka until the middle of January when he visited Broach to inspect the offices prepared for the Land Records staff of the Broach and Kaira Districts. Returning thence to Bulsár the Deputy Superintendent paid a second short visit to Broach at the end of the month. He next proceeded to Chikhli Táluka in which he toured until the beginning of March in order to acquaint himself with the condition of the people with a view to the submission of settlement proposals. Until the middle of March Mr. Maconochie was engaged in a similar tour of inspection in Jalálpur, whence, after making a short halt in Surat, he went to the Ahmedabad and Kaira Districts to inspect the work of the Circle Inspectors. Returning

through Surat he inspected the classification in progress in the Mándvi Táluka during the latter half of April and the early part of May. He next visited Broach, where measuring and classing establishments were at work, and concluded his tour in the field in the Vágri Táluka in which selected classers were engaged in testing the original classification of the *bára* villages. Mr. Maconochie returned to Surat on 25th May, and prior to giving over charge of the Deputy Superintendent's office on June 17th, prepared and submitted proposals for the settlement of the Chikhli Táluka.

J. McNEILL,

Deputy Superintendent, Revenue Survey, Gujarát.

No. <sup>G</sup><sub>55</sub> OF 1898.

Poona, 18th May 1898.

\* \* \* \* \*

2. The measurement work done this year does not compare unfavourably with that of the preceding season. It will be noted that 52½ men measured an area not very much less than that of the year before when there were 92 men at work. The measurement was, as evidenced by the number of fields and trapezia, much more intricate in 1895-96 than in 1896-97, and it has been a great deal more easy to measure the area turned out in the season under report, but there appears to be no practical falling off in the standard of work. The cost per acre in this season is of course very much less than that of last year.

3. In classification, work is not so satisfactory, but the explanations given by the Deputy Superintendent in his paragraph 19 are applicable. There is always a very large proportionate loss of time and outturn when the areas are scattered.

4. As regards test of measurement work the tendency to select small fields should be checked. If this is not done tests will be confined mainly to certain classes of lands, and this is obviously undesirable. The percentages of tests are sufficient, and where small are satisfactorily accounted for. It is a pity that boundary-mark inspection could not be made, but the hurried nature of operations under the present system render a proper supervision of boundary-marks very difficult.

5. The percentage of test taken by Azam Keshavlal and Chhaganlal is rather low, especially when compared with the other Head Surveyors, and no remark is made on the subject, but they seem to have done more test of measurement. Mr. Mehta's test is ample, and he appears to have done excellent work.

6. The distribution of days as compared with 1895-96 shows a very large reduction of field and increase of office work in measuring establishments. This was apparently unavoidable under existing conditions; the clerical work necessarily cannot be done by temporary hands, but must be undertaken by experienced men. In future it might be possible to have some, at any rate, of this work done in the recess season, putting temporary hands on to current recess work, under proper supervision, if competent men can be secured. It is a great loss of money to have to employ measurers and classers on clerical work in the field season. The loss under head of "villagers not co-operating" is larger than usual this year, but that is probably due to work in Godhra and Halol where the population is less civilized. The percentage of working days is higher in the classing branch, mainly because the bulk of the necessary office work fell upon the measurers in aid of the classers. Non-co-operation of villagers is also less than as regards the measuring establishments, but the labour needed from the villagers by classers is much less than by measurers, and it is sooner ended.

On the whole considering the nature of the work to be done the progress made by the Gujarát Survey is not unsatisfactory.

A. BROWNLOW FFORDE,

Superintendent, Deccan and Gujarát Revenue Surveys.



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PROGRESS REPORT

OF THE

DECCAN REVENUE SURVEY

For the Year ending 31st October 1897.

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# PROGRESS REPORT OF THE DECCAN REVENUE SURVEY FOR THE YEAR ENDING 31st OCTOBER 1897.

No. 197 of 1898.

*Camp Pimpalner District,  
Khándesh, 24th February 1898.*

## *Changes and Promotions.*

Throughout the year, the control of the survey was in the hands of Mr. A. B. Fforde for some time Deputy Superintendent, Deccan Revenue Survey and afterwards Superintendent, Deccan and Gujarát Revenue Surveys. He was promoted to the latter post with effect from 1st July 1897 by Government Resolution noted in the margin.

Government Resolution  
No. 5815, dated 4th August  
1897.

2. Mr. Laxuman Vasudeo, Head Surveyor, in charge B Establishment, availed himself of privilege leave from 27th August to 10th October 1897 granted to him under the Survey Commissioner's sanction noted in the margin, and returned to duty on 11th October 1897. During his absence, the establishment was supervised by Mr. P. B. Phadke, Survey Mámlatdár, in charge of the A Establishment.

No.  $\frac{8}{1338}$ , dated 17th Au-  
gust 1897.

3. The office of Mr. E. Maconochie who did settlement work in the Deccan Survey while he was Deputy Superintendent, Gujarát Survey, ceased to exist on 1st December 1896.

## *Strength of the Survey and Duration of the Working Season.*

4. The establishments employed during the year under report are the same as last year. The A Establishment was

Letter of Establishment.	Mensurers.	Classers.
A ... .. {	23	...
"  "  "  "  "  " {	23	...
B ... .. {	13	9
"  "  "  "  "  " {	12	6
Total ... .. {	36	9
"  "  "  "  "  " {	35	6

N.B.—The upper line of figures refers to the preceding year.

February 1897, because of medically certified unfitness for field work. The number of classers shows a reduction of three due to a smaller transfer than usual of mensurers to classification work. This transfer was made for about a fortnight towards the close of the season.

5. The climate of the Deccan Districts awaiting completion of survey operations being unhealthy especially in the early part of the season, the measuring section with the Officers in immediate charge of parties and the Supervising Officer was, with the approval of the Survey Commissioner and Director, Land Records and Agriculture, deputed to the Konkan Survey for a little over two months. The season under report is, therefore, one of less than 5 months' duration as regards measurement. The classers having been employed from the very beginning in the Deccan Districts, the duration of the season as concerns classification extends over the usual period of 7 months. The details of work turned out by the Deccan parties while employed in the

Vide Survey Commission-  
er's No.  $\frac{8}{2126}$ , dated 26th Sep-  
tember 1896.



Konkan Districts which differs materially from the work in the Deccan and cannot therefore properly be treated along with it, have been excluded from the returns of this survey and the cost for the period debited to the Konkan Survey with the approval of the Survey Commissioner and Director, Land Records and Agriculture. This information will, therefore, appear in the Progress Report of that Survey.

Vide Survey Commissioner's No.  $\frac{8}{1702}$ , dated 7th October 1897.

6. The recess work was closed on 3rd November 1896. The measuring section worked under the direction of the Superintendent, Konkan Survey, up to 15th January 1897, on which date the Konkan work was closed. The parties arrived in the Kalvan Táluka so as to begin work on the 25th January 1897 and closed their field season on 5th June. The classing section opened and closed its field season respectively on 13th November 1896 and 5th June 1897.

#### Measuring Operations.

7. After returning from the Konkan Districts in the middle of January 1897, the measurers of both the establishments were employed on the partial re-measurement work of villages in the Kalvan Táluka where they continued to the end of the season.

8. The subjoined statement is a précis of Appendix I and exhibits the figures of work and cost of the season under report with those of the preceding year :—

Establishment.	Average number of men.	Name of Supervising Officer.	Name of Officer in immediate charge.	MEASURED.			Average cost per Acre.
				Fields.	Vaslas.	Acres.	
1	2	3	4	5	6	7	8
A	22-89	Mr. H. L. Holland, Assistant Settlement Officer.	{ Mr. P. B. Phadke, Survey Mám-lat-dár. }	9,481	56,193	148,339	Rs. a. p. 0 2 0
	22-40			13,301	80,735	114,976	0 2 3
B	13-0		{ Mr. Laxuman Vasudeo, Head Surveyor. }	7,481	49,751	97,823	0 1 8
	12-28			6,035	27,800	64,047	0 2 1
	35-89		Total for 1895-96 ...	16,962	105,944	246,162	0 1 11
	34-68		Do. 1896-97 ...	19,336	108,535	179,023	0 2 2
	...		Increase ...	2,374	2,591	...	0 0 3
	1-21		Decrease ...	...	...	67,139	...

N.B.—The upper line of figures refers to the preceding year.

9. The season under report being considerably shorter than usual, its work cannot well be compared with that of the preceding year; it may, however, be accepted as satisfactory. The details given in the margin show that the work done was all revision. Notwithstanding this, the cost per acre has increased by Re. 0-0-3 per acre. This increase is due to the distribution of the rateable proportion of the Superintendent's office expenses and of the expenditure for the recess work over

	1895-96.	1896-97.
Revision ...	218,136	179,023
Original ...	28,026	...
Total ...	246,162	179,023

the work of 5 months instead of on the full season's work.

10. The A Establishment under the supervision of Mr. P. B. Phadke, Survey Mámílatdár, closed its field season in the Konkan Districts on the 15th January 1897 and after more than a week's journey opened its field season in the Deccan on the 25th of the same month. The tract worked in lay in the Kalvan Táluka and consisted of villages lying to the south of the Kasba town of Kalvan. The work progressed westwards. It was all revision and was conducted on the partial system. The villages measured number 78. There is a decrease of 5·12 per cent. under the days for 'ordinary measurement' and a comparatively large increase under 'inspecting field boundary-marks' due to the partial system. There is a large reduction under the head of sickness and this is certainly due to the time selected for giving employment to men in the Kalvan Táluka. The high percentage of days lost under 'travelling' is attributable to the time spent *en route* from the Konkan to the Deccan Districts. Absence on leave also shows a reduced percentage. The distribution of days thus compares very favourably with that of the preceding year. The cost per acre has increased by 3 pies and the reasons for the increase have been given in paragraph 9 above. The Survey Mámílatdár has done good work on the whole.

11. Mr. Laxuman Vasudeo, Head Surveyor, who with his B Establishment, was first employed in the Konkan Districts returned to the Deccan Districts with the A Establishment. The work was carried on in the villages situated to the north of the Kasba town of Kalvan and proceeded westwards. It was all revision and a total of 40 villages was measured. The partial system accounts for the percentage decrease in the days under 'ordinary measurement' and the increase under 'inspecting field boundary-marks.' The loss of days under 'travelling' show a slight increase over that of the last year giving a high percentage; but this is principally due to days lost in travelling from the Konkan to the Deccan Districts. Other heads do not show large differences and, therefore, need no special comment. The distribution of days is on the whole fair. The increase of 5 pies in the cost per acre is due to causes explained in paragraph 9 above. Mr. Laxuman Vasudeo has worked well.

As the establishment is part measuring and part classing, there is usually more work in it than can be disposed of by a single officer. The Head Surveyor was, therefore, given the assistance of a Nímíatdár for purposes of testing.

12. The subjoined statement contrasts the percentage distribution of working and non-working days in the whole of the measuring section for the year under report with the figures of the preceding year :—

				1895-96.	1896-97.
<i>Working days.</i>					
Measuring	...	...	...	25·47	19·52
Boundary-mark inspection	...	...	...	35·80	50·44
Measurement of boundary disputes, &c.	...	...	...	4·92	5·18
In-door work	...	...	...	3·14	1·89
Total				69·33	77·03
<i>Non-working days.</i>					
Sickness	...	...	...	12·29	5·68
Villagers not co-operating	...	...	...	2·17	2·11
Rain	...	...	...	0·22	...
Travelling	...	...	...	7·14	8·67
Leave and holidays...	...	...	...	8·85	6·51
Total				30·67	22·97

The working days show an increase of 7·70, the corresponding decrease being under the head of sickness in the non-working days.



### Test of Measurement.

13. The details of test taken on work done during the season under report are given in the subjoined statement:—

Establishment.	Name of Officer.	Fields.	Vaslas.	Acres.	Average Vaslas per Field.	Average Acres per Field.	Average difference between original measurement and test per cent.	PERCENTAGES OF TEST.		
								Fields.	Vaslas.	Acres.
1	2	3	4	5	6	7	8	9	10	11
<b>Ordinary Test.</b>								On work done by the Establishment.		
A ...	Mr. H. L. Holland, Assistant Settlement Officer ...	22	134	63	6	3	0 9	1.2	1.1	1.2
	Mr. P. B. Phadke, Survey Mám-latdár ...	227	1,300	722	6	3	0 31	11.9	10.9	13.6
	Total ...	249	1,434	785	6	3	0 29	13.1	12.0	14.8
B ...	Mr. H. L. Holland, Assistant Settlement Officer ...	12	79	45	7	4	0 11	1.0	0.9	1.4
	Mr. Laxuman Vasudeo, Head Surveyor ...	88	183	262	6	3	0 21	7.3	5.6	8.1
	Mr. Shivram Babaji, Nímtándár ...	45	246	113	5	3	0 22	3.7	2.8	3.5
Total ...		145	808	420	6	3	0 20	13.0	9.3	13.0
Grand Total ...		394	2,242	1,205	6	3	0 28	12.7	10.9	14.1
<b>Superior Test.</b>								On work done by the Survey Mám-latdár or Head Surveyor.		
A ...	Mr. H. L. Holland, Assistant Settlement Officer ...	30	159	72	5	2	0 15	13.2	12.2	10.0
B ...	Do. do. ...	9	56	24	6	3	0 12	10.2	11.6	9.2
								On work done by the Nímtándár.		
B ...	Mr. H. L. Holland, Assistant Settlement Officer ...	4	15	9	4	2	0 11	9.0	6.1	8.0
	Mr. Laxuman Vasudeo, Head Surveyor ...	7	42	29	6	4	0 24	15.6	17.1	25.7

The above test refers to Kalvan alone. In addition to this, test was taken in the following villages to the extent noted against them. It refers to villages measured during the previous season:—

Establishment.	Names of Officer.	Name of Taluka.	Name of District.	Number of vil-lages.	Fields.	Vaslas.	Acres.	Average Vaslas per field.	Average acres per field.	Average difference between Original Measurement and Test per cent.	
1	2	3	4	5	6	7	8	9	10	11	
On work done by the Establishment.											
A	Mr. H. L. Holland, Assistant Settlement Officer ... ..	Báglan ...	Násik ...	7	4	29	17	7	4	A. g. 0 17	
B	Mr. H. L. Holland, Assistant Settlement Officer ... .. Mr. Laxuman Vasudeo, Head Surveyor ... .. Mr. Shivram Babaji Nímtándár.	Puran-dhar, Khed. } Níphád, Chándor. }	Poona { Násik {	1	7	48	59	7	8	0 22	
				3	8	33	123	4	15	0 34	
				3	211	1,214	1,814	9	6	0 16	
				8	226	1,295	1,996	6	9	0 17	
On work done by Survey Mám-latdár.											
A	Mr. H. L. Holland, Assistant Settlement Officer ... ..	Báglan ...	Násik ..	7	6	40	33	7	5	1 2	
On work done by Nímtándár											
B	Mr. H. L. Holland, Assistant Settlement Officer ... .. Mr. Laxuman Vasudeo, Head Surveyor ... ..	Puran-dhar, Khed, Níphád. } Chándor. }	Poona { Násik. {	1	26	131	119	5	5	35	
				1							
				3	11	57	165	5	15	0 19	

14. It will be apparent from the above that the work of testing was very much scattered. In order to dispose of the arrears, Mr. Holland after returning from the Konkan Districts visited the single villages in Purandhar and Khed. After these villages were finished, he returned to Poona and proceeded to Báglan. When the test in the Báglan Táluka was completed, he proceeded to Kalvan where he remained up to the middle of May. He then paid a visit to the Chándor villages and intended to complete the test in these as well as in Niphád villages, but fell ill before he could accomplish the work and had, therefore, to return to Poona leaving the test of the villages unfinished. However, early in the current season, the test work in these villages was completed by the Head Surveyor Mr. Laxuman Vasudeo, and its details have been included in the returns of the year under report.

The test of the Survey Mámílatdár as well as of the Head Surveyor was all confined to the Kalvan villages.

The Nímítándár who took measurement test for the Head Surveyor was first employed to dispose of the arrears of test in the villages of the Poona District at the same time when Mr. Holland was there. He was then sent to the Niphád and Chándor villages. After finishing these tests, he joined his establishment in Kalvan where he remained for the rest of the season.

The test taken by the Survey Mámílatdár on the work of his establishment is ample and so are the combined tests of the Head Surveyor and the Nímítándár. Mr. Holland's test on the work done during the year under report is up to the standard, although he had to complete arrears of test in scattered villages.

15. Appendix II exhibits in detail the differences found at test. 717 fields were tested in all. The difference in 688 or 96 per cent. was within 3 per cent. The cases which exceeded the 3 per cent. limit number 29. One of these only was due to carelessness which was punished. The rest were all due to the smallness of the fields tested. No bad work has been allowed to stand.

16. The extent to which the boundary-marks inspection was carried out in each establishment is given below in contrast with the figures of the previous season :—

Estab- lishment.	Name of Supervising Officer.	Name of Officer in immediate charge.	Fields.	Acres.
1	2	3	4	5
A } B }	Mr. H. L. Holland, Assistant Settlement Officer.	Mr. P. B. Phadke, Survey Mámílatdár ... {	974 1,358	9,286 8,365
		Mr. Laxuman Vasudeo, Head Surveyor ... {	713 685	4,978 4,701
.		Total ... {	1,687 2,043	14,264 13,066

N.B.—The upper line of figures refers to the preceding year.

It is to be remembered here that the durations of the seasons under contrast are not the same. The test shown is in addition to the usual test of boundary-marks in survey numbers otherwise tested. The test of the Nímítándár as well as of Mr. Holland is included in the above statement.

17. Boundary-marks were erected and inspected in all the villages measured during the season, and the arrears referred to in paragraph 18 of the last year's progress report were disposed of. The marks were erected by the villagers themselves in 107 villages and had to be erected by hired labour in 11



villages only, for which all boundary-marks accounts were completed and sent to the Superintendent before the close of the year.

Appendix IV.—Monsoon work.

18. The monsoon examination of the field season's work was completed in all the 118 villages measured during the season.

#### Classification.

19. The following statement is a précis of Appendix V and contrasts the work of the season under report with that of the previous year:—

Establishment.	Average strength.	Name of Supervising Officer.	Name of Officer in immediate charge.	Fields.	Acres.	Average area per field.	Average cost per Acre.
1	2	3	4	5	6	7	8
B {	8.61	Mr. H. L. Holland, Assistant Settlement Officer.	Mr. Laxuman Vasudeo, Head Surveyor.	26,915	306,779	11	Rs. a. p. 0 0 6
	5.35			11,999	139,390	12	0 0 9
	...		Increase ...	...	...	1	0 0 3
	3.26		Decrease ...	14,916	167,389	...	...

N. B.—The upper line of figures refers to the preceding year.

	1895-96.	1896-97.
Revision ...	294,883	121,259
Original ...	11,896	18,131
Total ...	306,779	139,390

From the analysis of the work given in the margin, it will be seen that more original classification work was accomplished during the season under report. This partly accounts for the decrease in the total outturn as also does the diminution in strength, and to it must be attributed an increase of 3 pies per acre.

20. The B Establishment was under the supervision of the Head Surveyor.

B Establishment—classing section.

Mr. Laxuman Vasudeo, but for the first two months of the season it was practically without a superintending officer, the Head Surveyor having been on deputation to the Konkan Survey. During this time the men in the establishment were employed on original classification work in the Vinchurkar's jāhgir villages in Niphād and Chāndor. These villages were finished about a week before the Head Surveyor's arrival in Kalvan. The classers were then moved into Kalvan where they remained to the close of the season. 60 villages were classed in all by this section of the party. The work in Kalvan was commenced in the east and it proceeded westwards as far as the villages situated to the north of the town of Kalvan, leaving untouched the southerly villages. The strength of the establishment shows a reduction and it has been accounted for in paragraph 4 above. No men were absent on long leave and this explains the reduced percentage under 'leave and holidays.' The loss under 'travelling' is less as the work was confined to a compact area. The distribution of days is satisfactory. The outturn is less and the cost per acre is more by 3 pies as accounted for in the preceding paragraph.

21. The percentage distribution of working and non-working days for the classing branch of this survey for the year under report is shown in the following statement in contrast with the figures of the previous year:—

				1895-96.	1896-97.
<i>Working days.</i>					
Field classification ...	...	...	...	66.22	69.90
Inspection of boundary-marks, &c. ...	...	...	...	1.18	2.23
Accompanying to test measurement work ...	...	...	...	1.92	2.45
In-door work ...	...	...	...	4.73	4.99
Total ...				74.05	79.57
<i>Non-working days.</i>					
Sickness ...	...	...	...	6.77	5.53
Villagers not co-operating ...	...	...	...	0.43	1.59
Rain ...	...	...	...	0.06	0.42
Travelling ...	...	...	...	9.56	6.62
Leave and holidays ...	...	...	...	9.13	6.27
Total ...				25.95	20.43

The working days have increased by 5.52 per cent. which is accounted for by the reductions under 'sickness,' 'travelling', and 'leave and holidays.' The last two heads have been commented on in the review of the establishment.

*Test of classification.*

22. The test detailed below refers to work done during the season :—

Establishment.	Name of Officer.	Fields.	Acres.	Average acres per field.	AVERAGE DIFFERENCE IN RATE BETWEEN TEST AND ORIGINAL CLASSIFICATION.		PERCENTAGES OF TEST ON WORK DONE BY THE ESTABLISHMENT.	
					Soil.	Water.	Field.	Acres.
1	2	3	4	5	6	7	8	9
B.	<i>Ordinary Test.</i>				A. p.	A. p.		
	Mr. H. L. Holland, Assistant Settlement Officer ...	27	377	14	1 2	...	1.0	1.3
	Mr. Laxuman Vasudeo, Head Surveyor ...	334	2,737	8	0 9	0 1	12.7	9.1
	Total ...	361	3,114	9	0 10	0 1	13.7	10.4
B.	<i>Superior Test.</i>							
	Mr. H. L. Holland, Assistant Settlement Officer ...	4	57	14	1 1	...	1.2	2.1

This test concerns the Kalvan villages and those in Niphád and Chándor, test of which was taken by the Head Surveyor simultaneously with the measure-



ment test. In addition to this, arrears of test in the following villages were disposed of during the season :—

Establishment.	Name of Officer.	Name of Taluka.	Name of District.	Number of villages.	Fields.	Acres.	Average acres per field.	AVERAGE DIFFERENCE IN RATE BETWEEN TEST AND ORIGINAL CLASSIFICATION.	
								Soil.	Water.
1	2	3	4	5	6	7	8	9.	10
B	Mr. H. L. Holland, Assistant Settlement Officer ... ..	Khed ... ..	Poona ... ..	1	144	791	5	0	8
		Purandhar ... ..	Ahmednagar ... ..	1					
		Kopargaon ... ..	Nasik ... ..	3					
		Baglan ... ..		13					

From the above it will be seen that the work of classification test was even more scattered than that of measurement, the Ahmednagar villages being in addition to those particularized under 'measurement test.' As regards arrears, the classification test was taken by Mr. Holland concurrently with that of measurement except in the villages in the Ahmednagar District which awaited classification test only. The test taken by Mr. Holland in Khed, Purandhar, Kopargaon and Baglan was all for the Head Surveyor. This dispensed with the necessity for a visit by the Head Surveyor to those districts specially for the purpose. The test taken by the Head Surveyor is ample. Mr. Holland having been engaged in clearing off the scattered arrears of test, his supervising test in Kalvan remained in arrears. This work will be disposed of during the current season.

23. Appendix VI shows differences between test and original classification annas. 509 fields were tested for soil and in 25 only did the difference exceed one class or 2 annas in soil classification. These cases are as usual due to insufficient care in ascertaining the average depth or order of the soil and to the misapplication of the rules. 167 cases were tested for water and the differences found in them were all within one anna. All these errors have been set right after a full enquiry.

24. It will be seen from the appendix noted in the margin that the monsoon examination of 58 villages was completed and that two villages remained incomplete. This was unavoidable as one man was absent on sick leave and three had to be granted leave on urgent private affairs towards the close of the monsoon.

25. Appendix VIII records the progress in the preparation and distribution of village maps. During the year under report copies of maps of 268 villages, 229 Government and 39 inám, have been reproduced by photography and distributed as usual. Of these 268 villages, 31 are the villages of which fair maps were sent for printing last year. The remaining villages are out of the 535 villages, fair maps of which were sent for reproduction during the year under report. Only maps of 39 villages remained to be sent to the Photozinc Office.

26. Details of the work turned out by the mapping section are given below :—

- |   |     |     |     |     |
|---|-----|-----|-----|-----|
| (1) Taluka maps prepared by hand  | ... | ... | ... | 1   |
| (2) Village maps on which boundary-marks have been shown or on which canals, &c., have been plotted                           | ... | ... | ... | 43  |
| (3) Tracings made of village maps   | ... | ... | ... | 13  |
| (4) Maps mounted on cloth, including those received from the Photozinc Office to be sent to the District and Village Officers | ... | ... | ... | 268 |
| (5) Village maps corrected before being sent to be printed  | ... | ... | ... | 535 |
| (6) Taluka maps coloured for settlement report purposes   | ... | ... | ... | 7   |

The total cost of this office was Rs. 1,392-7-5 against Rs. 1,241-4-0 last year. The increase in cost is due to additional strength employed to dispose of the increased amount of work in connection with item No. 5 above.

27. The total cost incurred by Deccan Survey during the year under report is shown in Appendix IX under the several heads of expenditure and compared with that of the previous year. There is on the whole a decrease of Rs. 13,765 in the year's expenditure. The reasons for the decreases and increases under the different heads of expenditure are recorded below :—

1st.—The decrease of Rs. 830 under the head of 'pay of Survey Commissioner' is due to the proportional debit to this survey being less this year than in the preceding year.

2nd.—The decrease of Rs. 1,617 under the head of 'Pay of Superintendent' is partly due to less pay drawn by Mr. Fforde both as Deputy Superintendent, Deccan Survey and as Superintendent, Deccan and Gujarát Revenue Surveys, and partly to the absence of Mr. Fforde's pay and allowances as Assistant Settlement Officer for one month which were debited to this head last year.

3rd.—The decrease of Rs. 7,819 under the head of 'pay of Assistant Superintendent' is attributable partly to Mr. Holland's pay for two months having been debited to the Konkan Survey, and partly to the abolition of charge on account of Mr. Maconochie whose pay and allowances as Survey Settlement Officer for about 6 months were debited to this head last year.

4th.—The decrease of Rs. 5,169 under the head of 'pay of Establishment' is due to the expenditure for the time the parties of this survey were employed in the Konkan Districts having been debited to the Konkan Survey, partly to deaths among measurers and classers, which were somewhat numerous, and partly to the erasure of expenditure on account of Mr. Maconochie's settlement office; but it is mainly due to the first cause.

5th.—The increase of Rs. 1,657 under the head of 'contingencies' is due to the debit made to this head because of special travelling allowance granted to men in the field parties to meet their actual expenses on account of cart-hire in consideration of the increased amount of travelling.

6th.—The increase of Rs. 13 under the head of construction of 'boundary-marks' is due to larger number of marks erected in waste-land.

28. In accordance with the orders of Government conveyed in their Resolution No. 694, dated 27th January 1891, the information regarding the expenditure of advances on account of the erection of boundary-marks during the year under report is given below :—

Total advances.	Amount recoverable.	Amount debitable to Government.	Balance for which Wasuli Patrahs are not ready.
1	2	3	4
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
446 10 0	432 14 0	13 12 0	.....

29. The total expenditure together with the area measured and classed and the cost per acre is recorded in Appendix X for each year since the beginning of the survey. In the subjoined statement, the expenditure has been arranged under the four main heads of account, namely :—'measurement,' 'classification,' 'settlement' and 'miscellaneous,' and details showing the composition of each have been noted against them. The cost of supervision has been distributed among the heads mentioned in accordance with the instructions contained in the latter part of paragraph 6 of Government Resolution No. 7676, dated the 4th October 1895 :—



Number.	Heads.	Actual cost.	Add—Rateable proportion of Nos. 5 and 6.	Total cost.	Remarks.
1	2	3	4	5	6
		Rs.	Rs.	Rs.	
1	Measurement ... {	21,632 18,012	7,224 6,566	28,856 24,578	} Rateable proportion of $\frac{1}{2}$ of No. 5.
2	Classification ... {	6,640 4,818	2,218 1,756	8,858 6,574	
3	Settlement ... {	14,247 5,453	16,249 15,134	30,496 20,587	} $\frac{1}{2}$ of No. 5 and whole of No. 6.
4	Miscellaneous ... {	5,114 6,983	1,708 2,545	6,822 9,528	
	Total ... {	47,633 35,266	27,399 26,001	75,032 61,267	
5	Superintendent's salary and office expenses. {	22,301 21,733	... ...	... ...	
6	Proportion of Survey Commissioner's pay, &c., establishment and contingencies. {	5,098 4,268	... ...	... ...	
	Total ... {	27,399 26,001	... ...	... ...	
	Grand Total ... {	75,032 61,267	... ...	... ...	

N.B.—The upper line of figures refers to the preceding year.

The amount debited to the 'miscellaneous head' exclusive of the rateable proportion of the cost of supervision added to it, is it will be seen, Rs. 6,983 against Rs. 5,114 last year and details of the items charged to that head are given below :—

Head-quarters Office, Málegaon...	Rs.	a.	p.
...	...	1,123	0 0
Head-quarters Office, Poona ...	Rs.	a.	p.
...	...	7,292	4 5
<i>Deduct—</i>			
Men employed on preparation of—			
	Rs.	a.	p.
(a) Akárbands ...	1,396	12	8
(b) Revenue history statements for settlement purposes ...	166	0	0
(c) Pension papers ...	259	7	9
	1,822	4	5
	1,822	4	5
	5,470	0	0
Compensation for dearness of provisions paid to men in the establishments other than the two above noted...	390	0	0
	6,983	0	0

The grain compensation allowance granted to men in the Deccan Survey under Government Resolution No. 3976, dated 23rd November 1896, amounts to 901 and has been debited to the head of "miscellaneous" under orders of the Survey Commissioner and Director, Land Records and Agriculture. Figures

	Rs.
Head-quarter's Office, Málgaon ...	75
Do. do. Poona ...	436
Other establishments ...	390
Total ...	901

explaining its composition are given in the margin. The cost of the staff entertained for the preparation of Akárbands has alone been charged to the head of settlement, while the expenditure incurred under the sub-items of (b) and (c) has been added to the Superintendent's Office expenses.

The expenditure of which details have been given in the above statement is exclusive of Rs. 5,610-4-6 debited to the Konkan Survey; the cost under 'measurement' and 'classification' is therefore naturally less. There is a decrease of Rs. 8,794 under 'settlement' and an increase of Rs. 1,869 under 'miscellaneous,' the rateable proportions added to them being excluded; the decrease under the former head is due partly to the absence of any charge on account of Mr. Maconochie's pay and allowances as Survey Settlement Officer and partly to there being much less work in connection with the preparation of Akárbands; the increase under the latter head is due to the fact that part of the temporary establishment usually employed on the Akárband work was detailed during the year under report to do the classification of old survey records according to the nature of the documents, which is necessary to their subsequent division into A and B lists, the former representing the papers to be preserved and the latter, the papers to be destroyed.

The average cost per acre for 1896-97 has been for measurement Rs. 0-2-2 and for classification Rs. 0-0-9 against Rs. 0-1-11 and Rs. 0-0-6 respectively for 1895-96. The combined cost this year thus amounts to Rs. 0-2-11, while for the last year it was Rs. 0-2-5. The increase in the combined cost is due to increases under measurement and classification which have been accounted for in the foregoing paragraphs 9 and 19.

#### Settlement.

30. Appendix XI is a detailed statement of the progress attained in the settlement branch of the Deccan Survey as also of the measurement and classification. During the year under report settlement proposals were submitted as noted below :—

Collectorate.	Táluka.	Revision or First Survey.	VILLAGES.	
			Government.	Inám.
1	2	3	4	5
Khándesh ...	Shirpur ...	Revision ...	103	...
	Shaháde ...	Do. ...	150	...
	Táloda ...	First Survey ...	33	...
Sátára ...	Jávli ...	Do. ...	...	4
	Do. ...	Revision ...	...	15

The first two were submitted by the Superintendent himself and the third by Mr. E. Maconochie while he was Deputy Superintendent, Gujarat Revenue Survey. Neither the proposals above detailed nor those for Nandurbár (146 villages, first survey) and Táloda (88 villages, revision) which were submitted in the previous season have yet been sanctioned. Sanction for the Dhulia proposals was received, but the rates for the táluka are not to be introduced until the year



1898-99 under Government Resolution No. 6068, dated 14th August 1897. Consequently there was no work in connection with the introduction of rates into Government villages. Mr. Holland, Assistant Settlement Officer, submitted settlement reports one on 4 and the other on 15 Inám villages in the Javli Táluka of the Sátára Collectorate, but sanctions were received too late for introduction of the rates. In addition to this settlement work, Mr. Holland, as Assistant Settlement Officer, examined Akárbands of 34 villages of the Maindargi, Yellur and Javli Tálukas and disposed of 182 Prakarnas regarding Kamjásti Patraks.

31. The rates for 9 Government villages of Nándgaon, the settlement proposals for which were submitted and sanctioned with the 45 villages of the táluka were announced with the rates of the 45, but as it was subsequently found the introduction of the rates was due during the year under report, details showing the results of the settlement regarding them were omitted from the last year's returns. The necessary details are therefore given below :—

Collectorate.	Táluka.	Number of vil-lages.	Government or Inám.	Revision or First Survey.	Total area.	Government occupied area.	Previous year's collec-tions.	Assess-ment according to Survey Rates.	Increase.
1	2	3	4	5	6	7	8	9	10
Násik ...	Nándgaon ...	9	Government.	Revision ...	22,339	12,159	3,119	3,690	571

The increase in Government revenue is Rs. 571 only which is equivalent to 0.93 per cent. on the total expenditure of the Deccan Revenue Survey.

32. The following are the details showing results of the settlements introduced into villages of the different states :—

Collectorate.	Táluka.	Number of vil-lages.	Government or Inám.	Revision or First Survey.	Total area.	Government occupied area.	Previous year's collec-tions.	Assess-ment according to Survey Rates.	In-crease.	De-crease.
1	2	3	4	5	6	7 *	8	9	10	11
Kurundvád (Junior).	Yellur ...	15	Government.	First Survey.	22,475	14,856	43,074	41,535	...	1,539
	Maindargi ...	15	Do. ...	Do. ...	40,953	35,959	37,866	39,425	1,559	...
Sángli State.	Sháhápúr ...	12	Inám ...	Do. ...	20,769	8,128	10,076	12,421	2,345	...

These settlements were introduced by the karbháris concerned.

33. Of the 13 Survey Subordinates reported last year to have been working in other Departments, two have been pensioned, and one appointed Circle Inspector in the Central Division in the Department of Land Records and Agriculture. There thus remain 10 and they are employed in the undernoted Departments :—

	Number of men.
Forest Settlement Officer, Khándesh ...	2
Do. Kánara ...	4
Do. Ahmednagar ...	1
Divisional Forest Officer, Poona ...	1
Do. Working Plans, N. C. ...	2
Total ...	10

The services of these subordinates are no longer required in this survey, but their names have been borne on the list of the permanent establishments of this survey that they may retain a lien on their respective substantive appointments in the Survey Department, while they are on temporary duties in other Departments in order that the service may count for pension. In addition to the measurers enumerated above, one measurer has been deputed to the Revenue Department in connection with the Amalner-Dharangaon Railway works.

*Personal.*

34. Mr. A. B. Fforde left head-quarters on the 26th November and proceeded to the Málegaon Táluka, the revision settlement proposals for which were then under consideration. Here he spent about a month, collecting information usually required for settlement report purposes. He then visited the Báglan Táluka, the settlement proposals for which were also due. After a short tour in this táluka, he marched to the Kalvan Táluka where survey operations were in progress under the supervision of Mr. Holland, Assistant Settlement Officer, and here he remained up to 31st March. During this time he was several times out testing classification work with Mr. Holland. He then visited the Táloda Táluka as ordered by the Survey Commissioner and Director, Land Records and Agriculture, to make local inquiries in connection with the breaking-up of large numbers and certain other points raised by the Collector of Khándesh in his forwarding remarks on the Settlement Report of the 33 Nazarbándi and Makta villages of Táloda. He inspected many of these villages and after enquiries were concluded, he returned to Poona where he remained to the end of October.

*Surgána Survey.*

35. As last year a party of six pensioned measurers was organized and Mr. Govind Ramchandra, a pensioned Surveyor, who was the Superintending officer last year was placed in charge of that party. Work was commenced in the field on the 15th January, *i.e.*, about a fortnight earlier than last year, in hopes to ensure a more rapid progress. But of the six men that presented themselves, three resigned on plea of ill-health shortly after their arrival and the remaining three only continued to the end of the season. The average number of men was, therefore, 3·9 and the outturn was less as a matter of course. Only 4 villages were measured and 5 classed. This year there was no classer on the establishment and the Head Surveyor had to do the classification work himself. The work was done according to Peint Rules.

36. Details regarding outturn of work, test percentages and the combined cost per acre are given below :—

Head.	Villages.	OUTTURN OF WORK.			PERCENTAGE OF TEST.			Cost per Acre.
		Fields.	Vaslas.	Acres.	Fields.	Vaslas.	Acres.	
1	2	3	4	5	6	7	8	9
Measurement and classification. ...	4	689	5,450	6,822	10·7	13·8	8·3	A. p. 4 10

The classification of mál lands which formed the bulk of the area was done by the measurers concurrently with the measurement work, and the rice lands alone were classed by the Surveyor. In addition to the classification carried out by the Surveyor in the four villages mentioned in the statement above, he also classed rice lands in one village measured during the last season. The cost per acre is Re. 0-4-10 against Re. 0-4-9 last year. In the Progress Report of the last year, the cost is shown to be Re. 0-14-4, but this is due to the cost of classification having been distributed over the rice lands only. The cost distributed over the whole area classed gives Re. 0-4-9.

37. The Tapasni work was finished in September and the party was then disbanded as last year.

38. The total expenditure of the survey for the year under report is Rs. 2,077-12-4 and its details are given below :—

	Rs.	a.	p.
Salaries ...	1,728	0	11
Allowances ...	172	5	0
Contingencies ...	177	6	5
Total ...	2,077	12	4

A. BROWNLOW FFORDE  
Superintendent, Deccan and Gujarát Surveys.



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PROGRESS REPORT

OF THE

KONKAN REVENUE SURVEY

For the Year ending 31st October 1897.

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PROGRESS REPORT OF THE KONKAN REVENUE SURVEY FOR  
THE YEAR ENDING 31st OCTOBER 1897.

No. 289 OF 1898.

*Konkan Survey Superintendent's Office,  
Thana District.  
Camp Zaroli, 18th February 1898.*

*Changes and Promotions.*

Colonel C. W. Godfrey, who was appointed to act as Survey Commissioner and Director, Land Records and Agriculture, by Government Resolution No. 5615 of 18th July 1896, as stated in last year's Progress Report, continued to act as such on the 1st November 1896.

2. As directed in Government Resolution No. 8130 of 16th October 1896, Colonel Godfrey resumed charge of the office of the Superintendent, Konkan Revenue Survey, on the 2nd November 1896, in the forenoon.

3. In accordance with instructions contained in the Government Order No. 10660 of 28th December 1896, communicated by the Survey Commissioner and Director, Land Records and Agriculture, under his Endorsement No.  $\frac{S}{2671}$  of 29th December 1896, and the Government Resolution No. 83 of the 5th January 1897, communicated with instructions by the Survey Commissioner and Director, Land Records and Agriculture, under his Endorsement No.  $\frac{S}{31}$  of 8th January 1897, Colonel C. W. Godfrey delivered over charge of the office of the Superintendent, Konkan Revenue Survey, on the 14th January 1897, in the afternoon.

4. Mr. E. H. Hearn was Acting Superintendent, Konkan Revenue Survey, on the 1st November 1896 during the absence of Colonel Godfrey as stated in paragraph 1 above.

5. As directed in Government Resolution No. 8130 mentioned in paragraph 2 above, Mr. Hearn resumed charge of the office of the Deputy Superintendent on the 2nd November 1896, in the forenoon.

6. Mr. Hearn was appointed Superintendent of the Konkan Revenue Survey by Government Resolution No. 83 of 5th January 1897, and he took charge of the Superintendent's office on the 14th January 1897, in the afternoon.

7. Mr. Hearn was appointed to act as Survey Commissioner and Director, Land Records and Agriculture, by Government Resolution No. 6886 of 16th September 1897. He delivered over charge of the Superintendent's office on the 17th September 1897, in the forenoon.

8. Mr. A. G. Hudson was acting Deputy Superintendent, Konkan Revenue Survey, on the 1st November 1896, during the absence of Mr. Hearn as stated in paragraph 4. As directed in Government Resolution No. 8130 mentioned in paragraph 5, Mr. Hudson resumed charge of the office of the Assistant Settlement Officer on the 2nd November 1896, in the forenoon. Mr. Hudson was appointed Deputy Superintendent, Konkan Revenue Survey, by Government Resolution No. 83 mentioned in paragraph 6. He took charge of the office of the Deputy Superintendent on the 18th January 1897, in the forenoon. He was appointed to act as Superintendent, Konkan Revenue Survey, by Government Resolution No. 7048 of 23rd September 1897, and took charge of the Superintendent's office on the 17th September 1897, in the forenoon.

9. Mr. W. D. Wilkins was appointed to act as Assistant Settlement Officer by Government Resolution No. 874 of 2nd February 1897. He took charge of the office of the Assistant Settlement Officer on the 18th January 1897, in the forenoon. His appointment as Assistant Settlement Officer was abolished with effect from 1st June 1897 by Government Resolution No. 4563 of 17th June 1897.

10. Mr. W. S. Cole was transferred to the Konkan Survey by Government Resolution No. 3416 of 5th May 1897. He took charge of the office in this



Survey on the 12th May 1897, in the forenoon. He was appointed to act as Deputy Superintendent, Konkan Revenue Survey, by Government Resolution No. 7048 mentioned in paragraph 8 above during the absence of Mr. Hudson. He took charge of the office of the Deputy Superintendent on the 17th September 1897, in the forenoon.

11. Mr. J. A. McIver, Assistant Superintendent, Konkan Revenue Survey, was promoted from the 2nd to the 1st Grade of Assistant Superintendents with effect from 1st May 1897, by Government Resolution No. 4278 of 7th June 1897.

12. Mr. Laxuman Vasudev Bhide, Head Surveyor, was transferred to the Deccan Revenue Survey from 1st November 1896, in accordance with orders contained in No.  $\frac{8}{2809}$  of 26th October 1896, from the Survey Commissioner and Director, Land Records and Agriculture.

13. The continuance of the Phálñi Establishment was sanctioned by Government Resolution No. 7905 of 8th October 1896. The work performed by this establishment is shown, as is customary when Phálñi is done, under the head of classification.

14. In accordance with instructions contained in letter No.  $\frac{8}{2126}$  of 26th September 1896, from the Survey Commissioner and Director, Land Records and Agriculture, two Deccan Survey Establishments were employed in the Mángaon Táluka of the Kolába Collectorate from the beginning of the field season to the middle of January 1897. The work performed by these establishments is shown under the head "Deccan Survey Establishments."

*Strength of the Survey and the Duration of the Working Season.*

Letter of Establishment.	Measurers.	Classers.
1	2	3
A ... ..	22	...
B ... ..	...	19
C ... ..	...	19
D ... ..	22	...
E ... ..	24	...
F ... ..	22	...
G ... ..	23	...
H ... ..	24	...
I ... ..	...	20
K ... ..	...	19
Total ...	137	77
<i>Deccan Survey Parties.</i>		
A ... ..	6	...
B ... ..	7	...
Total ...	13	...
Grand Total ...	150	77

15. The number of field establishments employed during the year has been 13, inclusive of the one Phálñi Establishment and two establishments which were transferred from the Deccan Survey; they were working in the Kolába District only from November 1896 to the middle of January 1897, they then reverted to the Deccan Survey. The average strength of measurers and classers during the year under report is distributed among the several establishments as shown in the margin. Although the two establishments were transferred to this Survey for work for a short time, there is a decrease in the number of measurers and an increase in the number of classers. The decrease and increase is due to several of the measurers having been made classers.

16. The field season of the establishments commenced on the dates varying from 10th to 12th November 1896, according to the distances each had to travel from Poona. The field work of all the establishments which were working in the Dáhánu Táluka was closed on the 31st May 1897, and of the Phálñi Establishment on the 1st June 1897.

*Measuring Operations.*

17. Of the 13 establishments 8 were purely measuring, 4 classing, and one was employed on Phálñi work. Of the 8 measuring, 2 were working for about two months. The classing establishments were employed entirely on classification during the whole of the season, and the work of these establishments will, therefore, be reviewed under that head.

18. The subjoined is an abstract of Statement No. I of the appendices, giving the amount of measurement work done during the season contrasted with that of the previous one, together with the average cost per acre for each establishment:—

Establishment.	Average number of men.	Name of Supervising Officer.	Name of Head Surveyor or Survey Mamlatdár or Nimitdár in charge of Establishment.	MEASURED.			Average cost of Measurement per acre.
				Fields.	Vaslás.	Acres.	
1	2	3	4	5	6	7	8
							Rs. a. p.
A ...	21-0	Mr. Wilkins ...	Mr. Baburav Yeshvant Nerurker, Survey Mamlatdár.	9,852	21,775	27,870	0 10 1
	22-26	Do. ...	Mr. Mahadeo Hari Paranjpe, Survey Mamlatdár.	7,423	18,062	27,717	0 9 10
C ...	24-18	Messrs. Hearn and Hudson.	Messrs. Gangadhar Nilkanth, Sadashiv Amrut and Laxuman Vasudev, Head Surveyors.	13,990	11,735	38,611	0 4 9
	...	.....	.....	...	...	...	...
D ...	21-49	Mr. Wilkins ...	Mr. Narayan Bhikaji, Head Surveyor.	13,088	16,691	29,879	0 7 9
	22-35	Do. ...	Mr. Trimbak Pandurang, Head Surveyor.	9,076	7,859	45,426	0 6 6
E ...	21-23	Messrs. McIver and Hudson.	Messrs. Anant Narayan, Head Surveyor and Mahadeo Hari, Survey Mamlatdár.	9,170	48,900	24,635	0 10 8
	24-33	Mr. McIver ...	Mr. Baburao Yeshvant, Survey Mamlatdár.	10,601	47,180	36,631	0 7 7
F ...	23-13	Messrs. McIver and Hudson.	Messrs. Rámchandra Vinayak, Gangadhar Nilkanth and Anant Narayan, Head Surveyors and Nimitdárs.	10,185	29,698	26,409	0 8 5
	21-95	Mr. McIver ...	Mr. Anant Narayan, Sub-pro-tem Head Surveyor.	10,579	18,275	35,467	0 6 6
G ...	20-95	Mr. Wilkins ...	Mr. Trimbak Pandurang, Head Surveyor.	9,525	55,432	34,975	0 7 1
	22-68	Do. ...	Mr. Narayan Bhikaji, Head Surveyor.	6,617	30,813	70,252	0 3 3
H ...	21-82	Messrs. McIver and Hudson.	Mr. Waman Chintaman, Head Surveyor.	8,191	19,127	25,590	0 9 6
	24-05	Mr. McIver ...	Do. ...	9,233	11,493	37,497	0 6 4
City Survey	2-79	Mr. Hearn ...	.....	246	...	70	14 4 0
	...	.....	.....	...	...	...	...
	156-50		Total for 1895-96 ...	74,217	198,058	298,039	0 8 1
	137-59		Total for 1896-97 ...	53,559	133,682	253,050	0 5 11
Deccan Survey Establishments.							
A ...	...	.....	.....	...	...	...	...
	6-09	Mr. Holland ...	Mr. Purshotam Bapuji Phadke, Survey Mamlatdár.	1,714	9,168	4,520	0 10 1
B ...	...	.....	.....	...	...	...	...
	6-45	Mr. Holland ...	Mr. Laxuman Vasudev Bhide, Head Surveyor.	1,669	1,775	6,744	0 6 5
	...		Total for 1895-96 ...	...	...	...	...
	12-55		Total for 1896-97 ...	3,383	10,943	11,264	0 7 11
	156-50		Grand Total for 1895-96 ...	74,217	1,98,058	298,039	0 8 1
	150-14		Grand Total for 1896-97 ...	56,942	1,44,625	2,64,314	0 6 0
	...		Increase ...	...	...	56,275	...
	6-45		Decrease ...	17,275	53,433	...	0 2 1

N.B.—The upper line of figures refers to the preceding year.

19. The result shown in the statement given above is, as was to be expected, from the reduction in the number of men employed. There is an increase in area, which is due to the measurement of varkas numbers containing large areas and requiring fewer vaslás. The measurement and examination of varkas survey numbers take up more time than the smaller rice survey numbers, and although the number of survey numbers is less than in the previous season, the area is much greater. The reduction in fields and vaslás and increase in the area in the amount of measurement work done during the season under report are explained in the details regarding the work done by each establishment.



20. The total old survey numbers and acres which have been confirmed and measured during the season under report, contrasted with the same for the previous season, is shown in the following table:—

Description of Land.	1895-96.				1896-97.			
	CONFIRMED.		RE-MEASURED.		CONFIRMED.		RE-MEASURED.	
	Num- bers.	Acres.	Num- bers.	Acres.	Num- bers.	Acres.	Num- bers.	Acres.
1	2	3	4	5	6	7	8	9
Rice, rabi and bágáit ... ..	50,697	24,156	15,857	4,788	41,653	23,235	8,487	2,952
Varkas ... ..	951	5,411	6,320	151,325	1,202	2,340	5,106	141,668
Forest, &c. ... ..	146	22,296	...	...	494	94,119	...	...
Total ...	51,794	51,862	22,177	156,113	43,349	119,694	13,593	144,620

The work of this season, contrasted with that of the previous one, is shown below:—

Description.	Years.	MEASURED.		CONFIRMED.	
		Rice, Rabi, Bágáit.	Varkas.	Rice, Rabi, Bágáit.	Varkas.
1	2	3	4	5	6
Outturn per chain in acres ...	1895-96 ...	31	989	158	35
	1896-97 ...	20	944	155	16

The amount of actual measurement done by each establishment in detail is as follows:—

Establishment.	ACTUAL MEASUREMENT.					
	Fields.		Vaslas.		Acres.	
	Kharif, Rabi and Garden.	Varkas.	Kharif, Rabi and Garden.	Varkas.	Kharif, Rabi and Garden.	Varkas.
1	2	3	4	5	6	7
A ... ..	738	447	18,062	...	269	16,911
D ... ..	1,082	870	7,859	...	338	21,862
E ... ..	1,231	870	47,180	...	535	21,870
F ... ..	1,553	926	18,275	...	533	25,396
G ... ..	1,822	785	30,813	...	636	25,255
H ... ..	1,745	874	11,493	...	552	21,378
Total ...	8,171	4,772	138,632	...	2,863	132,672
<i>Deccan Survey Establishments.</i>						
A ... ..	92	141	9,168	...	45	3,410
B ... ..	224	193	1,775	...	44	5,586
Total ...	316	334	10,943	...	89	8,996
GRAND TOTAL ..	8,487	5,106	144,625	...	2,952	141,668

21. The 'A' Measuring Establishment was employed from November to the end of March 1897 in the Mángaon Táluka of the Kolába Collectorate, and from April to the end of the field season in the Dáhánu Táluka of the Thána Collectorate, under Mr. Mahadev Hari Paránjpe, Survey Mámlatdár.

This establishment was under the supervision of Mr. W. D. Wilkins, Assistant Settlement Officer, Konkan Revenue Survey.

The work of this establishment, compared with that of the previous season, shows a general decrease in the number of fields, vaslás and acres. This is accounted for by the fact that there was double the number of men laid up with sickness, and also two men had to be engaged in in-door work. Mr. Wilkins states that a great many more days were taken up for traverse work than the previous season. The outturn, however, is not quite satisfactory.

The distribution of working and non-working days gives a percentage of the former, inclusive of in-door work, of 78 against 78 of the previous season. The number of days taken up in travelling is the same as the previous season, but there is an increase of 5 per cent. in sickness, and a decrease of 1 per cent. in villagers not co-operating, and 4 per cent. in holidays, &c.

The cost per acre has decreased 3 pies.

Regarding the Survey Mámlatdár, Mr. Paránjpe, his supervision over his establishment was lax and his conduct in taking tests being found unsatisfactory he was sent back to the Revenue Department.

22. The 'D' Measuring Establishment was employed from November to the end of February 1897 in the Mángaon Táluka of the Kolába Collectorate, and from March to the end of the field season in the Dáhánu Táluka of the Thána Collectorate, under Mr. Trimbak Pandurang Gangal, Head Surveyor.

This establishment was under the supervision of Mr. Wilkins, Assistant Settlement Officer, Konkan Revenue Survey.

The work of this establishment, compared with that of the previous season, shows a decrease in fields and vaslás, but a large increase in acres. Mr. Wilkins states that a great many more days were devoted to theodolite work and hence the above decrease. However, the outturn of work is satisfactory.

The distribution of working and non-working days gives a percentage of the former, inclusive of in-door work, of 87 against 80 of the previous season. The percentage of actual field work having increased 2 per cent. is very satisfactory. In-door work has increased by 5 per cent. as one measurer had to be employed on correction work for eight months. The number of days taken up in travelling, sickness, villagers not co-operating, and holidays is less by 7 per cent. than last season's.

The cost per acre has decreased 2 annas 3 pies owing to the large area of farkas that has been measured.

Mr. Wilkins says—

"That Mr. Trimbak Pandurang, Head Surveyor, managed his establishment well, and his supervision was satisfactory."

23. The 'E' Measuring Establishment was employed from November to the end of March 1897 in the Mángaon Táluka of the Kolába Collectorate, and from April to the end of the field season in the Dáhánu Táluka of the Thána Collectorate, under Mr. Baburao Yeshvant Nerurkar, Survey Mámlatdár.

This establishment was under the supervision of Mr. J. A. McIver, Assistant Superintendent, Konkan Revenue Survey.

The work of this establishment, compared with that of the previous season, shows a general increase in the number of fields, vaslás and acres, which is very satisfactory. The strength of the establishment was slightly greater than the previous season.

The distribution of working and non-working days gives a percentage of the former, inclusive of in-door work, of 81 against 80 of the previous season. The number of days taken up in travelling is 1 per cent. more than the previous season and sickness was less by 2 per cent.

The cost per acre has decreased by 3 annas 1 pie.



Mr. McIver says:—

"The Survey Mamlatdár, Mr. Baburav Yeshvant Nerurkar, performed his duties entirely to my satisfaction. His test-books showed that he was careful in looking into all branches of the field work, and I consider him an upright, painstaking and efficient Survey officer."

24. The 'F' Measuring Establishment was employed from November to middle of March 1897, in the Mángaon Táluka of the Kolába Collectorate, and from the middle of March to the end of the field season in the Dáhánu Táluka of the Thána Collectorate, under Mr. Anant Narayan Kalamkar, Head Surveyor.

This establishment was under the supervision of Mr. McIver, Assistant Superintendent, Konkan Revenue Survey.

The work of this establishment, compared with that of the previous season, shows a decrease in vaslás and an increase in fields and acres. The outturn is satisfactory. The strength of this establishment was slightly less by 1.18 per cent.

The distribution of working and non-working days gives a percentage of the former, inclusive of in-door work, of 81 against 77 of the previous season, which is satisfactory. The number of days taken up in travelling is 3 per cent. more than the previous season; sickness, however, was less by 1 per cent., villagers not co-operating by 2 per cent., and idle days, &c., 4 per cent.

The cost per acre has decreased by 1 anna 11 pies.

Mr. McIver says—

"Head Surveyor Anant Narayan Kalamkar maintained his good character as an energetic and capable officer, and his death from Bubonic Plague in October has been a distinct loss to the Department."

25. The 'G' Measuring Establishment was employed from November to the end of January 1897, in the Máhád Táluka, from February to the end of March in the Mángaon Táluka of the Kolába Collectorate, and from April to the end of the field season in the Dáhánu Táluka of the Thána Collectorate, under Mr. Narayan Bhikaji Belhekar, Head Surveyor.

This establishment was under the supervision of Mr. Wilkins, Assistant Settlement Officer, Konkan Revenue Survey.

The work of this establishment, compared with that of the previous season, shows a decrease in fields and vaslás but a very large increase in area. The strength of the establishment was 1.73 per cent. greater than the previous season.

The distribution of working and non-working days gives a percentage of the former, inclusive of in-door work, of 80 against 80 of the previous season, which is satisfactory. The number of days taken up in travelling is 5 per cent. more than the previous season, this can be accounted for by the fact that this establishment had to work in three different tálukas. Sickness was less by 1 per cent., villagers not co-operating by 1 per cent., and idle days by 3 per cent.

The cost per acre has decreased by 3 annas 10 pies.

Mr. Wilkins says—

"That Mr. Narayan Bhikaji Belhekar, Head Surveyor, managed his establishment well, and his supervision was satisfactory."

26. The 'H' Measuring Establishment was employed from November to the middle of March 1897, in the Máhád Táluka, about a fortnight in the Mángaon Táluka of the Kolába Collectorate, and from April to the end of the field season in the Dáhánu Táluka of the Thána Collectorate, under Mr. Waman Chintaman Gangal, Head Surveyor.

This establishment was under the supervision of Mr. McIver Assistant Superintendent, Konkan Revenue Survey.

The work of this establishment, compared with that of the previous season, shows a decrease in vaslás, but an increase in fields and acres. The strength of this establishment was 2.21 per cent. greater than the previous season.

The distribution of working and non-working days gives a percentage of the former, inclusive of in-door work, of 84 against 80 of the previous season, which is satisfactory. The number of days taken up in travelling is 3 per cent. more than the previous season, this can be accounted for by the fact that this

Mr. McIver says—

"Head Surveyor Waman Chintaman Gangal exercised a judicious and careful control over his men and carried out all his duties in a satisfactory manner. By the retirement of this officer the ranks of the Head Surveyors have lost an experienced and capable officer, who during the three years he was under my supervision has displayed energy and ability."

27. The 'A' Measuring Establishment of the Deccan Revenue Survey was employed from November to the middle of January 1897, in the Mángaon Táluka of the Kolába Collectorate, under Mr. Purshotam Bápuji Phadke, Survey Mámlatdár.

This establishment was under the supervision of Mr. H. L. Holland, Assistant Settlement Officer, Deccan Revenue Survey.

This establishment worked conjointly with the 'E' Establishment of the Konkan Survey. It was necessary to have one Konkan Measurer to work with one Deccan Measurer in the same village, in order that the work should be done in accordance with the Konkan Survey Rules, hence the number of villages measured by this establishment cannot be shown separately in Appendix No. I and others.

. The work done by this establishment when compared with the work done by the Konkan parties must be considered short. The Deccan Measurer appears not to have been equal to the hard work and also to the Konkan system of measuring, &c., hence it was not expected that he could work up to the standard.

28. The 'B' Measuring Establishment of the Deccan Revenue Survey was employed from November to the middle of January 1897 in the Mángaon Táluka of the Kolába Collectorate, under Mr. Laxuman Vasudev Bhide, Head Surveyor.

This establishment was under the Supervision of Mr. Holland, Assistant Settlement Officer, Deccan Revenue Survey.

This establishment worked conjointly with the 'F' Establishment of the Konkan Survey in the same way as described above for the 'A' Deccan party.

The remarks regarding work against the 'A' Deccan party apply also to this establishment.

29. The following table is an abstract of Statement No. I, contrasting the percentage distribution of working and non-working days for the whole Survey under the head of measurement for the year 1896-97 with that of the previous season 1895-96 :—

						1895-96.	1896-97.
<i>Working Days.</i>							
Measuring	...	...	...	...	...	64.0	68.10
Boundary-mark Inspection	...	...	...	...	...	8.97	8.35
Measurement of boundary disputes, tests, &c.	...	...	...	...	...	2.59	2.55
In-door work	...	...	...	...	...	3.42	1.63
Total						...	...
						78.98	80.63
<i>Non-working Days.</i>							
Sickness	...	...	...	...	...	4.76	3.60
Villagers not co-operating	...	...	...	...	...	1.75	0.96
Rain	...	...	...	...	...	0.02	0.14
Travelling	...	...	...	...	...	5.78	7.27
Leave and holidays, &c.	...	...	...	...	...	8.71	7.40
Total						...	...
						21.02	19.37
						100.	100.



From the above, it will be seen that the percentage of working days inclusive of in-door work is 1·65 more than last season's. There is a small increase in the number of days devoted to measuring, and a slight decrease in the number of days taken up for boundary-mark inspection, and there is a decrease in the days taken up for in-door work, idle days, &c., and villagers not co-operating. Travelling has increased by 0·49.

30. The following statement, which gives the amount of tests taken by the officers in charge of establishments of the area and fields measured by their respective establishments in the year 1896-97, as contrasted with that of 1895-96, is deduced from the accompanying detailed Statement No. I:—

Letter of Establishment.	Name of Supervising Officer.	Name of Assistant Superintendent or Head Surveyor, Survey Māmlatdār or Nīmtāndār.	TEST BY EUROPEAN OFFICERS, HEAD SURVEYORS, SURVEY MĀMLATDĀRS OR NĪMTĀNDĀRS					Average difference between Original Measurement and Test Percentage.
			Fields.	Vasās.	Acres.	Average vasās per Field.	Average Acres per Field.	
1	2	3	4	5	6	7	8	9
<i>Rice, Rabi and Garden.</i>								
A {	Mr. Wilkins	Mr. Baburao Yeshwant	1,157	1,420	920	1	0·8	A. 5.
	Do.	Mr. Mahadeo Hari Paranjpe	769	560	450	1	0·6	0 1
C {	Messrs. Hudson and Hearn.	Messrs. Gangadhar Nilkant, Sadashiv Amrut and Laxuman Vasudev.	1,337	891	912	1	0·7	...
	.....	.....	...	...	...	...	...	...
D {	Mr. Wilkins	Mr. Narayan Bhikaji	1,529	2,147	809	1	0·5	0 4
	Do.	Mr. Trimbak Pandurang	1,057	1,065	724	1	0·7	0 1
E {	Messrs. McIver and Hudson.	Messrs. Anant Narayan and Mahadev Hari.	996	3,245	424	3	0·4	0 7
	Mr. McIver	Mr. Baburao Yeshwant Nerurkar Survey Māmlatdār.	1,161	1,480	751	1	0·6	...
F {	Messrs. McIver and Hudson.	Messrs. Ramchandra Vinayak, Gangadhar Nilkanth and Anant Narayan.	1,334	2,052	570	2	0·4	0 3
	Mr. McIver	Mr. Anant Narayan	1,174	2,355	802	2	0·7	...
G {	Mr. Wilkins.	Mr. Trimbak Pandurang	1,208	2,602	604	2	0·5	0 4
	Do.	Mr. Narayan Bhikaji	670	1,840	408	3	0·6	0 1
H {	Messrs. McIver and Hudson.	Mr. Waman Chintaman	1,067	2,337	429	2	0·4	0 3
	Mr. McIver	Do.	1,056	1,477	526	1	0·5	...
City Survey.	Mr. Hearn	.....	8	...	2	...	0·2	...
	.....	.....	...	...	...	...	...	...
Total for 1895-96			8,686	14,694	4,670	2	0·5	0 3
Total for 1896-97			5,887	8,777	3,661	1	0·6	0 1
<i>Deccan Survey Establishments.</i>								
A {	Mr. Holland	Mr. Purshotam Bapuji Phadke, Survey Māmlatdār.	310	141	246	...	0·8	...
	.....	.....	...	...	...	...	...	...
B {	Mr. Holland	Mr. Laxuman Vasudev, Head Surveyor.	254	217	185	1	0·7	...
	.....	.....	...	...	...	...	...	...
Total for 1895-96			...	...	...	...	...	...
Total for 1896-97			564	358	431	...	0·8	...
Grand Total for 1895-96			8,686	14,694	4,670	2	0·5	0 3
Grand Total for 1896-97			6,451	9,135	4,092	1	0·6	0 1
<i>Varkas lands.</i>								
A {	Mr. Wilkins	Mr. Baburao Yeshwant	174	...	3,021	...	17·26	...
	Do.	Mr. Mahadev Hari Paranjpe	89	...	2,141	...	24·6	...
B {	Messrs. Hudson and Hearn.	Messrs. Gangadhar Nilkanth, Sadashiv Amrut and Laxuman Vasudev.	143	...	2,776	...	19·41	...
	.....	.....	...	...	...	...	...	...

Letter of Establishment.	Name of Supervising Officer.	Name of Assistant Superintendent or Head Surveyor, Survey Mamlatdār or Nīmtāndār.	TEST BY EUROPEAN OFFICERS, HEAD SURVEYORS, SURVEY MAMLATDĀRS OR NĪMTĀNDĀRS.					Average difference between Original Measurement and Test percentage.
			Fields.	Vasīs.	Acres.	Average Vasīs per Field.	Average Acres per Field.	
1	2	3	4	5	6	7	8	9
<i>Varkas lands—continued.</i>								
D	Mr. Wilkins ...	Mr. Narayan Bhikaji ...	116	...	2,347	...	20.23	...
	Do. ...	Mr. Trimbak Pandurang ...	107	...	2,709	...	25.32	...
E	Messrs. McIver and Hudson.	Messrs. Anant Narayan and Mahadeo Hari.	127	...	2,771	...	21.82	...
	Mr. McIver ...	Mr. Baburav Yeshwant Nerurkar.	147	...	3,057	...	20.80	...
F	Messrs. McIver and Hudson.	Messrs. Ramchandra Vinayak, Gangadhar Nilkanth and Anant Narayan.	93	...	2,709	...	29.13	...
	Mr. McIver ...	Mr. Anant Narayan ...	148	...	3,704	...	25.03	...
G	Mr. Wilkins ...	Mr. Trimbak Pandurang ...	117	...	2,344	...	20.03	...
	Do. ...	Mr. Narayan Bhikaji...	129	...	2,947	...	22.84	...
H	Messrs. McIver and Hudson.	Mr. Waman Chintaman ...	93	...	3,509	...	37.73	...
	Mr. McIver ...	Do. ...	113	...	2,997	...	26.52	...
		Total for 1895-96 ...	863	...	19,477	...	22.57	...
		Total for 1896-97 ...	733	...	17,555	...	23.95	...
<i>Deccan Survey Establishments.</i>								
A	Mr. Holland ...	Mr. Purshotam Bapuji Phadke, Survey Mamlatdār.	26	...	638	...	24.54	...
	...	...	...	...	...	...	...	...
B	Mr. Holland ...	Mr. Laxuman Vasudev Bhide.	22	...	734	...	33.36	...
	...	...	...	...	...	...	...	...
		Total for 1895-96 ...	...	...	...	...	...	...
		Total for 1896-97 ...	48	...	1,372	...	28.58	...
		Grand Total for 1895-96 ...	863	...	19,477	...	22.57	...
		Grand Total for 1896-97 ...	781	...	18,927	...	24.23	...
		Great Grand Total for 1895-96.	9,529	14,694	24,147	2	2.5	...
		Great Grand Total for 1896-97.	7,232	9,135	23,019	1	3.18	...

N.B.—The upper line of figures refers to the preceding year.

31. The percentages of tests taken by the officers in charge of each Establishment are shown in the sub-joined statement :—

Letter of Establishment.	Name of supervising Officer.	Name of Officer in charge of Establishment.	PERCENTAGE OF MEASURED TEST.			
			Rice, Rabi and Garden.		Varkas.	
			Fields.	Acres.	Fields.	Acres.
1	2	3	4	5	6	7
				A. g.		A. g.
A	Mr. Wilkins ...	Mr. Mahadeo Hari Karanjpe ...	12	14 7	12	12 4
D	Do. ...	Mr. Trimbak Pandurang ...	13	21 2	12	12 4
E	Mr. McIver ...	Mr. Baburao Yeshwant ...	13	13 9	12	13 2
F	Do. ...	Mr. Anant Narayan ...	13	15 0	13	14 5
G	Mr. Wilkins ...	Mr. Narayan Bhikaji ...	12	13 8	12	11 5
H	Mr. McIver ...	Mr. Waman Chintaman ...	13	14 0	12	13 9
<i>Deccan Survey Establishments.</i>						
A	Mr. Holland...	Mr. Purshotam Bapuji ...	20	22 9	16	18 5
B	Do. ...	Mr. Laxuman Vasudev ...	17	16 0	11	13 1

From the above it will be seen that the amount of test is very full and sufficient, and calls for no particular remarks.



32. The following shows the amount of boundary mark inspection test taken by the officers in charge of measuring establishments during the season :—

Letter of Establishment.	Name of Supervising Officer.	Name of Officer in charge of Establishment.	Boundary-mark Inspection.	
			Fields.	Acres.
1	2	3	4	5
A	Mr. Wilkins ...	Mr. Mahadeo Hari Paranjpe ...	373	2,927
D	Do. ...	Mr. Trimbak Pandurang ...	434	3,289
E	Mr. McIver ...	Mr. Baburao Yeshvant ...	505	3,022
F	Do. ...	Mr. Anant Narayan ...	543	4,170
G	Mr. Wilkins ...	Mr. Narayan Bhikaji ...	388	1,972
H	Mr. McIver ...	Mr. Waman Chintaman ...	390	2,800
<i>Deccan Survey Establishments.</i>				
A	Mr. Holland ...	Mr. Purshotam Bapuji ...	80	245
B	Do. ...	Mr. Laxuman Vasudev ...	104	466

The above amount of test taken in each establishment is satisfactory.

33. Statement No. II of the appendices gives in detail the percentage difference between original and test areas for each establishment. From this it will be seen that the percentages of errors found in the measurement work are not as many as last season's. The highest percentage of error found was 11 per cent. in one number only, errors of 8 per cent. were found in three numbers, the remaining errors within 8 per cent. being few, show that the work was well done.

34. Statement No. III of the appendices explains the state of the boundary-mark accounts at the end of the season under report, during which measurement and erection of boundary-mark work was completed in 198 villages. The boundary-marks were put up by the villagers themselves in 99 villages, and in 99 by hired labour. The boundary-mark accounts for all these villages were completed and sent in to the Superintendent before the close of the year.

35. The following statement shows the proportion of villages in which boundary-marks were erected by the villagers themselves for each establishment :—

Letter of Establishment.	Name of Supervising Officer.	Name of Officer in charge.	Total Villages measured.	Boundary-marks erected by		District.
				Villagers	Hired labour.	
1	2	3	4	5	6	7
A	Mr. Wilkins ...	Mr. Mahadeo Hari ...	19	7	12	Mángaon and Dáhánu.
D	Do. ...	Mr. Trimbak Pandurang ...	24	15	9	Do.
E	Mr. McIver ...	Mr. Baburao Yeshwant ...	51	28	23	Do.
F	Do. ...	Mr. Anant Narayan ...	44	27	17	Do.
G	Mr. Wilkins ...	Mr. Narayan Bhikaji ...	31	14	17	Mahád, Mán-gaon and Dáhánu.
H	Mr. McIver ...	Mr. Waman Chintaman ...	29	8	21	Do.
Total ...			198	99	99	
<i>Deccan Survey Establishments.</i>						
A	Mr. Holland ...	Mr. Purshotam Bapuji ...	...	...	...	...
B	Do. ...	Mr. Laxuman Vasudev ...	...	...	...	...

Hired labour had to be employed to put up boundary-marks in half the number of villages. Some of the officers appear to have induced a good many of the villagers to erect their boundary-marks.

36. Statement No. IV of the appendices shows the monsoon examination work performed during the recess. From this it will be seen that the whole of the examination of papers and preparation of maps was completed for all the villages measured this season.

### Classification.

37. The following abstract of Statement No. V of the appendices shows the amount of classification work done during the season under report, and contrasted with that of the previous one, the average cost per acre with the average number of men employed on this branch of the work :—

Letter of Establishment.	Average Strength.	Name of Supervising Officer.	Name of Survey Mámlatdár and Head Surveyor.	Classed.		Average area per Survey Number.	Average cost per Acre.
				Fields.	Acres.		
1	2	3	4	5	6	7	8
							Rs. a. p.
B.	18-57	Messrs. Hearn and Hudson.	Messrs. Narayan Govind and Sadashiv Amrut, Head Surveyors.	51,018	170,570	3-34	0 1 2
	18-80	Mr. Hudson ...	Mr. Sadashiv Amrut, Head Surveyor.	62,860	241,029	3-83	0 0 10
C.	...	.....	.....	...	...	...	...
	18-52	Mr. Hudson ...	Mr. Parashram Purshotam, Head Surveyor.	70,621	196,433	2-78	0 1 0
I.	21-68	Mr. Hearn ...	Messrs. Laxuman Vasudeo and Narayan Govind, Head Surveyors.	70,542	140,220	1-99	0 1 8
	19-86	Messrs. Hearn and Cole.	Mr. Narayan Govind, Head Surveyor.	67,960	171,977	2-53	0 1 3
K.	10-62	Mr. Hearn ...	Mr. Parsharam Purshotam, Head Surveyor.	56,415	145,610	2-58	0 1 3
	18-75	Messrs. Hearn and Cole.	Mr. Gangadhar Vasudev, Head Surveyor.	63,576	152,402	2-40	0 1 3
	54-87		Total for 1895-96 ...	177,975	456,400	2-56	0 1 3
	75-93		Total for 1896-97 ...	265,017	761,841	2-87	0 1 1
	21-6		Increase ...	87,042	305,441	0-60	...
			Decrease ...	...	...	...	0 0 2
Phálñi Establishment.	20-51		Messrs. Gangadhar Vasudev, Head Surveyor and Mankeshwar Gopal, Survey Mámlatdár.	62,504	67,396	1-28	0 1 10
	19-69		Mr. Mankeshwar Gopal, Survey Mámlatdár.	65,348	68,834	1-05	0 2 0

N.B.—The upper line of figures refers to the preceding year.

From the above statement it will be seen that the average number of classers was more than the previous season by 21-6, the reason for this, is, that a measuring establishment was transferred to do classing work. The outturn of work is great, which is very satisfactory. The cost per acre has decreased 2 ptes. The varkas phalni and classification work done by the Phálñi Establishment is shown below the figures of regular classification work. The total outturn of work is satisfactory and does not seem to call for any further remarks.

38. The 'B' Classing Establishment was employed from November to end of December in the Máhád Táluka, during the months of January and February 1897, in the Mángaon Táluka of the Kolába Collectorate, and from March to the end of the field season in the Dáhánu Táluka of the Thána Collectorate, under Mr. Sadashiv Amrut Bramhe, Head Surveyor. .

This establishment was under the supervision of Mr. A. G. Hudson, Deputy Superintendent, Konkan Revenue Survey.

The fields and areas of different descriptions of land dealt with by this Establishment are as follows :—



Description of Land.			Fields.	Acres.
1			2	3
Rice	...	...	37,272	25,321
Rabi	...	...	1,552	12,459
Garden	...	...	81	50
Varkas	...	...	23,955	203,199
Total			62,860	241,029

Out of the total number of fields shown above, 29,047 rice and rabi fields were examined for "Dusota," *i.e.*, capability of growing second crops after a rice crop and position class, and 22,616 varkas and rabi fields had position class applied to them.

The average number of classers employed in the field was slightly in excess than the previous season's. The increase in area is due to the large area of varkas dealt with, the average area per survey number being 3.83 acres against last season's 3.34.

The cost per acre has decreased by 4 pies owing to the increased area disposed of.

The distribution of working and non-working days shows an increase in the former, inclusive of in-door work, from 67 of the previous season to 75; this is accounted for by the decrease of 7 per cent. under the head of sickness, and 1 per cent. under the head of travelling.

Mr. Hudson says—

"Except for a few open villages in the centre of Mángaon, the villages taken up in both Mahád and Mángaon were exceedingly hilly. In Dáhánu some hilly villages were classed, but there was a large area of open country east of the Railway which the men must have found a welcome rest after their hill-climbing. The brunt of the hard work fell on the Head Surveyor in charge, who had to go every day to villages where a pony could not take him." Mr. Hudson also says that "the work of the Head Surveyor Ráo Sáheb Sadashiv Amrut Bramhe was satisfactory."

The work of this establishment was very satisfactory.

39. The 'C' Classing Establishment was employed from November to the end of January 1897, in the Mahád Táluka and two months, February and March 1897, in the Mángaon Táluka of the Kolába Collectorate, and from April to the end of the field season in the Dáhánu Táluka of the Thána Collectorate, under Mr. Parsharam Purshotam Gangal, Head Surveyor.

This establishment was under the supervision of Mr. Hudson, Deputy Superintendent, Konkan Revenue Survey.

This establishment was a measuring one formerly and was made into a classing one this season, hence its work can only be compared with the B Establishment which was working in the same districts.

The fields and areas of different descriptions of land dealt with by this establishment are as follows:—

Description of Land.			Fields.	Acres.
1			2	3
Rice	...	...	38,701	22,515
Rabi	...	...	986	5,634
Garden	...	...	1	1
Varkas	...	...	30,933	168,283
Total			70,621	196,433

Out of the total number of fields shown above 29,744 rice and rabi fields were examined for "Dusota," *i.e.*, capability of growing second crops after a rice crop and position class, and 29,388 varkas and rabi fields had position class applied to them.

The average number of classers employed in the field was the same as in the 'B' Classing Establishment. The increase in area is due to the large area of varkas dealt with, the average area per survey number being 2.78 acres.

The cost per acre is 1 anna.

The distribution of working and non-working days compared with the 'B' Establishment's is much about the same, *viz.*, 76 against the B's 75.

Mr. Hudson says—

"I tried of distribute the hilly villages equally between this and the 'B' Establishment without time being unnecessarily lost. I fear the worst part of the rough country fell to this establishment. Ráo Sáheb Parsharam Parshotam (who retired on the 5th November 1897) did a lot of really hard work." Further on Mr. Hudson says about this Head Surveyor, that he "has done in his time much good work in the Survey," which Mr. Hearn can testify to, as he served under him for very many years.

The work done is very satisfactory.

40. The 'I' Classing Establishment was employed in November and December in the Máhád Taluka, in January and February 1897, in the Mángaon Taluka in the Kolába Collectorate, and from March to the end of the field season in the Dáhánu Taluka of the Thana Collectorate, under Mr. Narayan Govind Agarkar, Head Surveyor.

This establishment was under the direct supervision of Mr. Hearn, Superintendent, up to 12th May, and after that under the supervision of Mr. W. S. Cole, Assistant Superintendent, Konkan Revenue Survey.

The fields and areas of different descriptions of land dealt with by this establishment are as follows :—

Description of Land.		Fields.	Acres.
1		2	3
Rice	...	42,366	33,548
Rabi	...	6,990	39,436
Garden	...	223	321
Varkas	...	18,381	98,672
Total	...	67,960	171,977

Out of the total number of fields shown above 37,796 rice and rabi fields were examined for "Dusota," *i.e.*, capability of growing second crops after a rice crop and position class, and 15,899 varkas and rabi fields had position class applied to them.

The average number of classers employed in the field was slightly less than the previous season's. The establishment had to deal with the more important lands, such as rice, rabi and garden, hence the area classed and examined, &c., is not as great as the establishments working in the Ghat villages where there were large areas of varkas.

The cost per acre has decreased by 5 pies.

The distribution of working and non-working days shows an increase in the former, inclusive of in-door work, from 68 of the previous season to 78; this is accounted for by the decrease of 8 per cent. under the head of sickness, 3 per cent under the head of idle days, and an increase of 1 per cent. under the head of travelling.

The return of work is very satisfactory. Ráo Sáheb Narayan Govind Agarkar, who retired on the 5th November 1897, had been 32 years in the Survey



Department. He was on excellent classer, and held the appointment of Head Surveyor for many years, his conduct has always been good and his management of his men has been excellent.

41. The 'K' Classing Establishment was employed in November and December in the Máhád Táluka, in January and February 1897, in the Mán-gaon Táluka of the Kolába Collectorate, and from March to the end of the field season in the Dáhnú Táluka of the Thána Collectorate under Mr. Gangadhar Vasudev Joshi, Head Surveyor.

This Establishment was under the direct supervision of Mr. Hearn, up to the 12th May, and after that under the supervision of Mr. Cole, Assistant Superintendent, Konkan Revenue Survey.

The fields and areas of different descriptions of land dealt with by this Establishment are as follows :—

Description of Land.				Fields.	Acres.
1				2	3
Rice	...	...	...	44,777	31,498
Rabi	...	...	...	6,011	27,780
Garden	...	...	...	93	282
Varkas	...	...	...	12,695	92,842
Total				63,576	152,402

Out of the total number of fields shown above 42,323 rice and rabi fields were examined for "Dusota," *i.e.*, capability of growing second crops after a rice crop and position class, and 11,993 varkas and rabi fields had position class applied to them.

The average number of classers employed in the field was almost the same as the previous season's. This establishment had also to deal with the more important lands as mentioned already for the 'I' Establishment.

The cost per acre is the same as last season's, *viz.*, 1 anna 3 pies.

The distribution of working and non-working days shows an increase in the former, inclusive of in-door work, from 71 of the previous season to 73. This is accounted for by the decrease of 6 per cent. under the head of sickness and an increase of 4 per cent. under the head of idle days.

The return of work is satisfactory. Ráo Sáheb Gangadhar Vasudev Joshi, Head Surveyor, performed his work well and satisfactorily.

42. The Phálñi Establishment was employed in November and December and again from March to the end of the field season in the Kalyán Táluka; owing to the unhealthiness of the portion of the Murbád Táluka of the Thána Collectorate, it had to be employed there in January and February 1897. This Establishment was under Mr. Mankeshwar Gopal Mhaskar, Survey Mámílatdár, and under the general supervision of the Superintendent.

The field work done during the season was phálñi of 65,348 separate occupancies, covering an area of 68,834 acres, which is very satisfactory.

The cost per acre was 2 annas against last season's 1 anna 10 pies.

Mr. Mhaskar has worked well and with energy, and has performed his duties satisfactorily.

43. The distribution of working and non-working days for the whole of the classification branch of this survey for the season under report is shown in the following statement, and contrasted with the results obtained for the previous season of 1895-96.

	1895-96.	1896-97.	Phalni Establish- ment, 1895-96.	Phalni Establish- ment, 1896-97.
<i>Working days.</i>				
Field classification ...	59.04	65.37	67.0	76.0
Inspection of boundary-marks ...	0.05	0.30	.....	.....
Boundary disputes, tests, &c. ...	6.74	8.35	4.0	5.0
In-door work ...	2.80	1.44	6.0	2.0
Total ...	68.63	75.46	77.0	83.0
<i>Non-working days.</i>				
Sickness ..	11.71	4.53	9.0	3.0
Villagers not co-operating...	0.25	0.20	1.0	3.0
Rain ...	...	0.07	.....	.....
Travelling ...	11.11	11.30	6.0	5.0
Leave and holidays ...	8.30	8.44	7.0	6.0
Total ...	31.37	24.54	23.0	17.0
Grand Total ...	100	100	100	100

44. From the above it will be seen that the percentage of field classification is more than the previous season; the number of days lost to actual field work under the heads of Tests, Boundary disputes and In-door work is a little in excess of the previous season; this can be accounted for as a greater number of villages were classed and examined this season. The number of non-working days under the head of sickness has decreased considerably, viz., by 7.18 per cent. The large percentage of 11.30 per cent. under the head of travelling is due to the classers having to move very often, as also having to move from the Mángaon Táluka in the Kolába Collectorate to the Dáhánu Táluka in the Thána Collectorate.

45. The following abstract statement of Appendix V shows the amount of classification test taken by the Officers in charge of Classing Establishments contrasted with that of the previous season :—

Letter of Establishment.	Name of Supervising Officer.	Name of Survey Mámletdár and Head Surveyor.	TEST BY EUROPEAN OFFICERS AND HEAD SURVEYORS.			Average difference rate per Field between Test and Original Classifica- tion.
			Fields.	Acres.	Average area of Fields tested.	
1	2	3	4	5	6	7
	<i>Rice, Rabi and Gaden Lands.</i>					
B	Messrs. Hearn and Hudson ...	Messrs. Narayan Goyind and				
	Mr. Hudson ...	Sadashiv Amrut ...	1,035	778	0.8	0 0 2
C	Mr. Hudson ...	Mr. Sadashiv Amrut ...	1,604	1,432	0.9	0 0 5
	Mr. Hudson ...	Mr. Parsharam Purshotam ...	1,461	1,006	0.7	0 0 5
I	Mr. Hearn ...	Messrs. Laxuman Vasudev and				
	Mr. Hearn ...	Narayan Govind ...	1,704	1,179	0.7	0 0 7
K	Messrs. Hearn and Cole ...	Mr. Narayan Govind ...	1,668	5,047	3.0	0 0 8
	Mr. Hearn ...	Mr. Parsharam Purshotam ...	1,388	1,314	1.0	0 0 6
	Messrs. Hearn and Cole ...	Mr. Gangadhat Vasudev ...	1,260	2,672	2.1	0 0 8
		Total for 1895-96 ...	4,127	3,271	0.8	0 0 7
		Total for 1896-97 ...	5,993	10,157	1.7	0 0 6



Letter of Establishment.	Name of Supervising Officer.	Name of Survey Mamlatdar and Head Surveyor.	TEST BY EUROPEAN OFFICERS AND HEAD SURVEYORS.			Average difference rate per Field between Test and Original Classification.
			Fields.	Acres.	Average area of Fields tested.	
1	2	3	4	5	6	7
	<i>Varkas lands.</i>					Rs. a. p.
B	Messrs. Hearn and Hudson ...	Messrs. Narayan Govind and Sadashiv Amrut ...	295	339	1.1	0 0 3
	Mr. Hudson ...	Mr. Sadashiv Amrut ...	320	1,313	4.1	0 0 3
C	Mr. Hudson ...	Mr. Parsharam Purshotam ...	230	586	2.5	0 0 3
I	Mr. Hearn ...	Messrs. Laxuman Vasudev and Narayan Govind ...	557	706	1.3	0 0 2
	Messrs. Hearn and Cole ...	Mr. Narayan Govind ...	244	191	0.8	0 0 3
K	Mr. Hearn ...	Mr. Parsharam Purshotam ...	298	177	0.6	0 0 3
	Messrs. Hearn and Cole ...	Mr. Gangadhar Vasudev ...	200	637	3.1	0 0 3
		Total for 1895-96 ...	1,150	1,222	1.1	0 0 2
		Total for 1896-97 ...	994	2,727	2.7	0 0 3
		Grand Total for 1895-96 ...	5,277	4,493	0.9	0 0 6
		Grand Total for 1896-97 ...	6,987	12,884	1.8	0 0 6
Phalni Es- tabli sh- ment ...	The Superintendent ...	Messrs. Mankeshwar Gopal and Gangadhar Vasudev ...	4,256	5,646	1.3	0 0 3
	Do. ...	Mr. Mankeshwar Gopal ( Rabi ... Varkas.	574 4,149	715 4,625	1.2 1.1	0 0 2 0 0 2
		Total ...	4,723	5,340	1.1	0 0 2

N.B.—The upper line of figures refers to the preceding year.

The aggregate average of test taken of all the classification work was 15 per cent. of fields and 10 per cent. of the area; and the average difference between test and classification is the same as the previous season, *viz.*, 6 pies.

45. The percentages of tests taken by the officers in charge of each of the establishments, are as follows:—

Letter of Establishment.	Description.	RICE, RABI AND GARDEN.						RABI AND VARKAS.					
		Work done.		Test.		Percentage.		Work done.		Test.		Percentage.	
		Fields.	Acres.	Fields.	Acres.	Fields.	Acres.	Fields.	Acres.	Fields.	Acres.	Fields.	Acres.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
B	Classed... ..	9,358	14,811	1,604	1,432	16	10	1,339	11,666	320	1,313	24	11
	Examined for Dusota and Position Class ...	29,047	23,019	5,106	3,544	18	15	22,616	139,963	2,848	680	13	1
	Total ..	38,905	37,830	6,710	4,976	17	13	23,955	151,629	3,168	1,993	13	1
C	Classed... ..	9,944	8,743	1,461	1,006	15	12	1,545	16,344	290	586	15	4
	Examined for Dusota and Position Class ...	29,744	19,407	3,859	2,334	13	12	29,388	116,876	3,137	599	11	1
	Total ...	39,688	28,150	5,320	3,340	13	12	30,933	133,220	3,367	1,185	11	1
I	Classed... ..	11,783	41,016	1,668	5,047	14	12	2,482	825	244	191	10	23
	Examined for Dusota and Position Class ...	37,796	32,280	4,492	3,840	12	12	15,909	53,181	1,617	342	10	...
	Total ...	49,579	73,305	6,160	8,887	13	12	18,381	84,006	1,860	533	10	1
K	Classed... ..	8,558	27,778	1,260	2,672	15	10	702	2,914	200	637	28	22
	Examined for Dusota and Position Class ...	42,323	31,782	5,055	4,010	12	13	11,993	73,579	2,176	678	18	1
	Total ...	50,881	59,560	6,315	6,682	12	11	12,695	76,493	2,376	1,315	19	2
Total ...	Classed... ..	40,148	92,348	5,593	10,157	15	11	6,068	31,749	994	2,727	16	9
	Examined for Dusota and Position Class ...	138,910	106,497	18,512	13,723	13	13	79,896	418,599	9,778	2,299	12	1
	Total ...	179,053	198,845	24,505	23,885	14	12	85,964	445,348	10,772	5,026	13	1
Phalni Es- tabli sh- ment.	Classed... ..	6,453	6,874	574	715	9	10	58,890	61,960	4,149	4,625	7	7

The tests taken by the officers in charge of each establishment are sufficient and call for no remarks.

46. Statement No. VI of the appendices gives details of differences between test and present valuations. On the whole of the fields tested 6,987, errors over 2 annas in classification were found in 158 only, giving a percentage of 2·3. The following table gives an abstract of the test results of each establishment :—

Establishment.	Errors up to 1 Anna.	Errors up to 2 Annas.	Errors over 2 Annas.	Total.
1	2	3	4	5
B ... ..	95·58	3·17	1·25	100·
C ... ..	91·60	7·16	1·24	100·
I ... ..	84·73	11·82	3·45	100·
K ... ..	83·70	13·08	3·22	100·
Phalni Establishment ...	93·58	5·57	0·85	100·

All cases in which large errors have been reported on in detail by each officer in charge of classing establishments and the cause of errors, has been satisfactorily explained and, where necessary, the classification has been revised and corrections made.

47. Appendix VII shows that out of 661 villages classed during the field season, the recess examination of field books and preparation of field registers, &c., were completed in 419 villages, leaving a balance of 242, out of these 95 could not be taken in hand as there was a want of measurers and classers; and good hangámis could not be had in sufficient numbers on account of the plague, the remaining number, 147 villages had not been remeasured hence could not be taken in hand. 196 villages of which Phalni was done, 112 had their field register's prepared, the balance 84 could not be taken in hand as there was a dearth of measurers and hangámis. The monsoon examination work of the Deccan Establishments which were employed in the Konkan for two months was completed by this survey, hence gave this survey additional work.

48. Appendix VIII gives details regarding village maps supplied to the District Officers.

During the season under report 201 village maps were sent to the Government Photozincographic Office for reproduction. Fair maps of 75 villages with hill shading, &c., and 5 Taluka maps were prepared in the Head-quarter Office. Maps were supplied as follows :—

115 to applicants.  
134 to Forest Department.  
375 to Revenue Authorities.

49. Appendix IX gives the cost of the survey for the year under report contrasted with that of the previous season, under the several heads of expenditure. There is on the whole an increase in the year's expenditure on account of Survey operations in British Territory of Rs. 7,218. An increase of Rs. 1,694 is shown under the head of Assistant Superintendents' pay, 7,233 under that of establishments, Rs. 2,118 contingent charges and Rs. 2,485 construction of field boundary-marks.

The reasons for the increase in expenditure are as follows :—

1st.—The increase of Rs. 1,694 is due to Mr. McIver's promotion to first grade Assistant Superintendent from May 1897 and also to the return of Mr. Cole, Assistant Superintendent, to this Survey from 12th May 1897.

2nd.—The increase of Rs. 7,233 under the head of pay of establishments is due to the increase of pay as well as grain compensation allowances.

3rd.—The increase of Rs. 2,118 is due to more travelling and having to go a longer distance than formerly.

4th.—The increase of Rs. 2,485 under the head of construction of boundary-marks is attributable to a larger amount having to be paid by Government for marks erected in waste lands in khoti villages.



The total expenditure of this survey amounting to Rs. 2,07,918 is inclusive of the cost of the phālṇi work, and of the Bhor State Rs. 1,031, but this amount being paid by that State, no further remarks appear necessary.

50. Appendix X gives the area measured and classed, together with the total expenditure and cost per acre of both operations. The total expenditure of the survey in British Territory, together with the portion of the expenditure on account of the Survey Commissioner and his establishment, distributed under the four heads of "Measuring, Classing, Settlement and Miscellaneous", has been found to be as follows :—

No.	Head of Expenditure.	Annual Cost.	Rateable proportion of Nos. 5 and 6.	Total Cost.
1	2	3	4	5
		Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Measurement ... ..	74,615 0 5	13,105 2 7	93,720 3 0
2	Classification ... ..	40,102 5 1	10,680 9 7	50,782 14 8
3	Settlement ... ..	.....	45,370 12 5	45,370 12 5
4	Miscellaneous ... ..	6,533 3 2	1,740 0 2	8,273 3 4
	Total ...	1,21,250 8 8	76,896 8 9	1,98,147 1 5
5	Superintendent's salary and expenses of his office ...	63,051 8 9		
6	Proportion of the Survey Com- missioner's office and of his salary ... ..	13,845 0 0		
	Total ...	76,896 8 9		
	Grand Total ...	1,98,147 1 5		
<i>Deccan Survey Establishments.</i>				
	Measurement ... ..	5,553 15 9		
	Miscellaneous ... ..	56 4 9		
	Total ...	5,610 4 6		

Under the head Miscellaneous, the items included in it have already been explained in this office letter No. 803 of 15th May 1894; in addition, this year grain compensation is included in the above head, *vide* Survey Commissioner's Vernacular Order, Awak No. 1000 of 6th November 1897.

The average cost of the season's work is as follows :—

Description.	Measurement per Acre.	Classification per Acre.	Total Cost of both operations inclusive of Settlement and Miscellaneous.
1	2	3	4
	Rs. a. p.	Rs. a. p.	Rs. a. p.
For Survey in British Territory ...	0 5 11	0 1 1	0 7 0

51. The cost of British Territory survey operations per acre under the head of measurement is 5 annas 11 pies, being less by 2 annas 2 pies of the previous season, and under the head of Classification 1 anna and 1 pie, a decrease of 2 pies per acre in consequence of the greater area dealt with. The cost of combined operations is 7 annas, being 2 annas 4 pies less than that of the previous season.

52. The following statement shows the combined cost per acre of both operations of measuring and classing for the last three years :—

	1894-95.	1895-96.	1896-97.
	Rs. a. p.	Rs. a. p.	R. a. p.
Konkan Survey ... ..	0 9 8	0 9 4	0 7 0

53. The subjoined tabular statement gives the number of men and period for which they were employed on work in other departments :—

Department in which employed.	No. of men.	PERIOD OF EMPLOYMENT.		Total period of each.
		From	To	
1	2	3	4	5.
				Y. m. d.
Partition of estates under the Collector of Ratnágiri.	1	1st November 1896 .	31st October 1897...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
Agricultural Department in Ratnágiri District.	1	Do. ...	Do. ...	1 0 0
Forest Department ... ..	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	28th January 1897 .	0 2 28
	1	Do. ...	31st October 1897...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	26th September 1897.	Do. ...	0 1 6
	1	22nd July 1897 ...	Do. ...	0 3 10
Sávantvádi ... ..	1	1st November 1896 .	Do. ...	1 0 0
Native States Survey ... ..	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	17th September 1897.	0 10 17
Bhor State Survey ... ..	1	Do. ...	23rd February 1897 .	0 3 23
Hubli Municipality ... ..	1	Do. ...	31st October 1897...	1 0 0
Bombay Municipality ... ..	1	Do. ...	28th February 1897.	0 4 0
Total ... ..	25			

It will be seen from the above that, during the year under report, the services of no less than 25 men were alienated from ordinary survey work for various periods, and of 18 men for the whole year.

54. The progress of settlement of the districts comprised in the charge of this survey is shown in Appendix XI.

During the year under report the Revision Survey rates sanctioned by Government Resolutions quoted in the margin were introduced into 87 Government villages of the Sálsette Táluka. Original Survey rates for one inám village in the Kalyán Táluka sanctioned by the Survey Commissioner's No.  $\frac{8}{1432}$  of 20th June 1896 were introduced.

No. 8596 of 2nd November 1896.  
No. 9799 of 4th December 1896.

Original Survey rates were also introduced into 97 villages of the Prachandgad Táluka of the Bhór State.

55. The following statement gives the result of the Revision Settlement for Government villages as also the Original Settlement for the Bhór State villages :—

Collectorate.	Táluka.	Government or Inám.	Original or Revision Survey.	Number of villages.	Former Revenue.	Revised demand.	DIFFERENCE.	
							Increase.	Decrease.
1	2	3	4	5	6	7	8	9
					Rs.	Rs.		
Thána	Sáissette	Government	Revision	87	1,08,854	1,37,272	28,418	...
	Kalyán	Inám	Original	1	429	1,218	789	...
			Total	88	1,09,283	1,38,490	29,207	...
Bhór State	Prachandgad	Government	Original	97	21,594	20,497	8,993	...
			Grand Total	185	1,30,877	1,68,987	38,110	...

In addition to the above, the assessment of new garden lands in the Alibág Táluka was worked out in accordance with instructions contained in Government Resolution No. 2438 of 26th March 1895, and was announced finally by the District Deputy Collector, Mr. G. P. Thakar, on the dates varying from 30th December 1896 to 15th January 1897 to the khátedárs of 18 villages in which new garden land was found.

During the year under report proposals, for the introduction of revised rates of 188 villages of the Máhim Táluka, 146 villages of the Rohe Táluka, 137 villages of the Váda Táluka, and 50 villages of the Pawan Máwal Táluka of the Bhór State, were submitted for sanction.

56. The expenditure of advances on account of the erection of boundary marks, flagholders, and chainmen during the year under report is given below :—

Total advances, including previous year's Balance.	Amount recoverable.	Amount debitable to Government.	Balance for which Vasuli Patraks are not ready.
1	2	3	4
Rs.	Rs.	Rs.	Rs.
54,106	39,241	2,837	12,028

The balance for which "Vasuli Patraks" were not prepared is due principally to villages remaining unfinished at the end of the field season, which the advent of the monsoon rendered it impossible to complete.

57. The Deputy Superintendent of this Survey has during the year under report submitted settlement reports on the Máhim and Váda Tálukas. "Kam-jasti Patraks" were prepared for 156 villages and 5,962 Vernacular Prakarnas were disposed of.

The Deputy Superintendent had, during the whole season, supervising charge of the B and C Classing Establishments.

Measurement.	Classification.
1	2
Mr. J. Ghosal.	Mr. J. Ghosal.
Mr. S. M. Edwards	Mr. G. Keatinge.

58. During the season under report Junior Civilians were instructed in survey matters, as shown in the margin, in measurement by Messrs. W. D. Wilkins and J. A. McIver, and in classification by Messrs. Hearn and Hudson.

59. At the beginning of the field season Colonel Godfrey, as Superintendent of this Survey, left Head-quarters and proceeded to the Pawan Máwal Táluka of



the Bhor State and tested the classification of some villages there, he then returned to Head-quarters about the end of December and delivered over charge of the Superintendent's Office to Mr. Hearn as stated in paragraph 3 above. After taking charge of the Superintendent's Office Mr. Hearn proceeded at once to the Máhad Táluka to test the classification work of the I and K Establishments he had charge of, in addition to his duties as Superintendent. Tests of all villages classed by these two Establishments in Máhad and Mángaon were completed by him by the 20th March when he proceeded to the Dáhánu Táluka and tested the classification work done by these two establishments in that táluka and Umbargaon Petha. On the 23rd April, he proceeded to the Sálsette Táluka where he introduced revised rates till the middle of May, after which he proceeded to the Prachandgad Táluka of the Bhor State, where he introduced survey rates up to the end of May. At the beginning of June he returned to the Head-quarters. It was not possible for Mr. Hearn to pay any of the measuring establishments a visit, as his whole time in the Konkan was engaged in testing the work of the two establishments he had charge of. The measuring and classing establishments being employed on work in the same táluka, the work in the field of the former was in a measure scrutinized by Mr. Hearn.

60. The Deputy Superintendent Mr. Hudson and the Assistants Messrs. Wilkins and McIver are to be commended for the good work and efficient supervision they have exercised over their Establishments.

E. H. HEARN,  
Superintendent, Konkan Revenue Survey.



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ANNUAL PROGRESS REPORT  
OF THE  
REVENUE SURVEY DEPARTMENT  
For the Year ending 31st October 1898.

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[Indian Price—10 Annas.]  
[English Price—1 Shilling.]

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No. <sup>8.</sup><sub>59</sub> OF 1899.

From

THE SURVEY COMMISSIONER AND DIRECTOR,  
LAND RECORDS AND AGRICULTURE,

Bombay ;

To

THE SECRETARY TO GOVERNMENT,

Revenue Department,

Bombay.

Poona, 14th January 1899.

SIR,

I have the honour to submit the Annual Progress Report of the Bombay Revenue Survey Department for the year ending 31st October 1898.

2. Mr. Muir-Mackenzie, the permanent incumbent of this office, was absent about 7 months of the year, first on deputation to Europe on special duty as per Government Resolution No. 6922, dated 17th September 1897, and secondly on appointment as Secretary to Government under Government Resolutions No. 3192, dated 6th June 1898, General Department, and No. 4722, dated 23rd August 1898, General Department. Mr. Hearn and Mr. Fforde acted for him. The exact period for which each officer held charge is shown in the following statement :—

From	To	Period.	Name of Officer.
		Y. m. d.	
1st November 1897 ...	14th January 1898 ...	0 2 14	Mr. Hearn.
15th January 1898 ...	12th June 1898 ...	0 4 28	„ Muir-Mackenzie.
13th June 1898 ...	31st October 1898 ...	0 4 19	„ Fforde.
	Total ...	1 0 0	

3. The strength and constitution of the department are exhibited in the following statement :—

Survey.	Number of Establishments.	Number of officers in charge of Establishments.		Rank of Head of Survey.
		European.	Native.	
Gujarát ...	3	1	3	Deputy Superintendent.
Deccan ...	2	1	2	Superintendent.
Konkan ...	10 *	3	10	Deputy Superintendent.
Marátha States ...	3	1	3	Superintendent.

\* Including Phálni Establishment.

*Gujarát Survey.*

4. Mr. J. McNeill, I. C. S., who was appointed to succeed Mr. Seddon on the latter's departure on leave on medical certificate, left the Survey Department at  
B 1301—1

the end of May 1898, and Mr. Cole, the present Deputy Superintendent, was appointed to the charge of the Gujarát Survey. Mr. Cole has submitted the Progress Report for the year, his rank being that of Deputy Superintendent. The Superintendentship was abolished as no longer necessary.

5. The number of parties at work during the year under report was three, as against six in the previous year, three having been reduced as explained in paragraph 6 of the Annual Report for last year.

6. The operations extended over two districts, Broach and the Panch Maháls, the revision survey operations in Surat having all been completed in the previous year. By the end of the season all the field work outlined in Mr. Ozanne's forecast was completed, and also the work in the talukdári villages in the Panch Maháls, which was proposed to be commenced after 1900 for reasons explained in paragraph 3 of Appendix C to that forecast. The only work now remaining for completion is recess examination and settlement. It is estimated that the recess work remaining will be completed by the end of December 1899, when any miscellaneous field work remaining will be taken in hand.

7. The outturn of work is exhibited in the usual tables below :—

*Measurement.*

Year.	MEASURED.			Average cost per Acre.	TESTED		Average error per cent. Acres.
	Fields.	Waslas.	Acres.		Fields.	Acres.	
				Rs. a. p.			A. g.
1896-97	15,910	98,585	*884,050	*0 0 5	2,031 (12·7)	2,563 (9·3)	0 30
1897-98	3,387	19,904	*351,202	*0 0 1	621 (18·3)	1,223 (16·1)	0 23
Increase	...	...	...	...	...	...	...
Decrease	12,523	78,681	532,848	0 0 4	1,410	1,340	0 7

*Classification.*

Year.	CLASSED.		Average cost per Acre.	TESTED.		Average difference.
	Fields.	Acres.		Fields.	Acres.	
			Rs. a. p.			Soil. Water.
1896-97	95,893	*702,976	*0 0 11	24,047 (25·0)	32,152 (22·0)	1 pie ½ pie
1897-98	66,171	*941,101	*0 0 8	19,292 (29·1)	53,895 (22·5)	1 pie 1 pie
Increase	...	238,125	...	...	21,743	0 ½ pie
Decrease	29,722	...	0 0 3	4,755	...	.....

\* Including the confirmed acres.

8. As explained in previous reports the areas, of which the measurement has been confirmed without re-examination, have been included in the above tables.

9. *Measurement.*—The work to be done being limited was carried out by the classers, as explained in paragraph 7 of the Deputy Superintendent's report. There is no reason to suppose that the outturn of work was short of the average attained in the previous season.

10. The test taken by the superior officers was ample. It apparently includes arrears of test on previous season's work (*vide* paragraph 11 of last year's report). The general accuracy of the work was shown to be satisfactory.

11. The cost per square mile, taking credit for the acreage, the measurement of which was confirmed, was Rs. 4 as against Rs. 17 of the previous year. The decrease is due to the increase in the proportion of the area confirmed.

12. The proportion of non-working to working days was higher than in the preceding year. The increase in the number of non-working days was chiefly due to the extra travelling entailed, which was unavoidable. The very large increase under the head of boundary-mark inspection among the working days is due, as explained in paragraphs 26 to 28 of the Deputy Superintendent's report, to the substitution of khunts for bándhs in villages subject to annual flooding in the rains in the Broach District. The work was undertaken at the instance of the Collector, who stated as follows:—

"It would indeed be a pity if the survey parties were to leave the district without carrying out this work simply because in a few villages khunts may not have been ready by the time notified. Such a course of action will perpetuate the nuisance and give rise to bitter feelings which may well be assuaged by a little patience."

The Assistant Superintendent in charge of parties was authorized to make whatever arrangements might seem necessary in communication with the Collector. The results of the work have already been communicated to the Collector.

13. The recess work was duly completed, with the exception of the preparation of fair maps as shown in Statement No. IV. This will be undertaken along with the other recess work that remains to be done as explained in this office letter No.  $\frac{8}{10}$ , dated 4th instant.

14. *Classification.*—The season's outturn appears on the whole satisfactory, notwithstanding the reduction in the number of hands employed and in the days available for field work. The cause of the latter reduction was the extra time occupied in doing the necessary office work referred to in paragraph 22 of the Deputy Superintendent's report and in travelling. The increase in the days lost from non-co-operation of villages points to defective supervision and might perhaps have been avoided.

15. Owing to the large area of which the classification was confirmed the cost per square mile decreased from Rs. 37 in the previous year to Rs. 27.

16. The test taken was satisfactory.

17. The recess work could not be completed as the establishment had to work off arrears of last season. The work remaining will be completed in the manner already explained in this office letter referred to in paragraph 13 above.

18. *Settlement.*—For reasons explained in paragraph 39 of the Deputy Superintendent's report, no settlement work was performed during the year. Mr. Cole joined the survey in the rains and was unable to submit proposals until he could visit the talukas to be reported on. Mr. Mehta, his Assistant, having to supervise field work could only undertake settlement work in the rains.

As explained in paragraph 21 of last year's report, the work is not urgent. The settlements in hand are important and require careful consideration. The Deputy Superintendent and his Assistant are now occupied with the reports for Párdi, Bulsár and Jalálpur, and there is no fear of the work not being completed in due time.



19. The cost of the survey under the usual heads is shown in the table below :—

Year.	Measurement.	Classification.	Settlement.	Miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
1896-97 ...	23,755	41,850	32,272	...	97,877
1897-98 ...	1,951	39,433	29,596	803	71,783
Increase ...	.....	.....	.....	803	.....
Decrease ...	21,804	2,417	2,676	...	26,094

20. The survey has lost a valuable officer in the death of Head Surveyor Bápálál Purshotam, mention of which has already been made in paragraph 24 of last year's report.

#### Deccan Survey.

21. Mr. Fforde held charge of this survey up to 30th June 1898, from which date the rank of the head of this survey was reduced to that of Deputy as before, and Mr. F. B. Young was appointed to act. Mr. Young has accordingly submitted the Progress Report. The other changes in the *personnel* are fully stated by the Deputy Superintendent. Mr. McIver, who was transferred to the Konkan Survey *vice* Mr. Cole appointed to the charge of the Gujarát Survey, and Mr. J. W. Whitcombe, Assistant Superintendent in the Marátha States Survey, who was transferred to the Deccan Survey in place of Mr. McIver have since the close of the year reverted to their respective appointments.

22. No change in the number of establishments was made, but the average strength was increased by 5 measurers and 1 classer.

23. The work accomplished by the parties during the year was as shown

District.	Táluka.	NUMBER OF VILLAGES.			
		Measured.		Classed.	
		According to Revision Survey.	According to 1st Survey.	According to Revision Survey.	According to 1st Survey.
Khandesh	Pimpalner ...	71	...	12	...
	Nandurbár (inclusive of Navápur Petha.)	148	...	...	...
	Taloda ...	34	...	...	...
		182			
Násik	Dhulia ...	...	...	1	...
	Kalvan ...	19	6	108	14

in the margin. The work in the Nandurbár and Taloda Tálukas was confined to the subdivision of large numbers in the unsettled villages, in pursuance of proposals for the survey settlement of those villages submitted with this office letter No. S. 2029 dated 12th February 1898. In the programme for the year under report it was intended to complete the Kalvan táluka and to finish as much work in

Pimpalner as possible. The Kalvan táluka was finished as estimated, but much progress was not made in Pimpalner, owing to men being employed on the subdivision work referred to above. With a view therefore to ensure the completion of the operations by the prescribed date, the survey has been strengthened by the addition of men transferred from the Konkan Survey since the beginning of the current season.

24. The following table shows the details of measurement work :—

Year.	MEASURED.			Average cost per Acre.	TESTED.		Average error per cent. Acres.
	Fields.	Waslas.	Acres.		Fields.	Acres.	
				A. p.			A. g.
1896-97 ...	19,336	108,535	179,023	2 2	444 (14·2)	1,339 (15·6)	0 20
1897-98 ... {	(a) 2,267	18,761	13,096	} 1 5	307	1,464	0 28
	(b) 18,019	87,314	233,453		(13·5)	(11·2)	
	20,286	106,075	246,549				
Increase ...	950	...	67,526	...	...	125	0 8
Decrease ...	...	2,460	...	0 9	137	...	...

(a) Area actually measured.

(b) Area confirmed without actual measurement.

25. Besides the above, the work of breaking up large numbers into manageable sizes was accomplished. In this the parties were aided by Measurer Circle Inspectors, who were deputed by the Collector at the request of this department. The details of this work have been properly furnished separately by the Deputy Superintendent in paragraphs 20 to 24 of his report. The establishments appear, on the whole, to have got through a larger amount of work than in the season previous.

26. The test taken was sufficient and it showed a fair standard of accuracy.

27. The cost per square mile has fallen from Rs. 88 to Rs. 79 owing to increased areas covered and also to causes explained in paragraph 11 of the Deputy Superintendent's Report.

28. With regard to boundary-mark repair, it is satisfactory to notice that, in 94 out of the 96 villages in which measurement work was done during the year, the rayats were induced to erect or repair the marks themselves.

In the original survey no intermediate mounds were erected in the Pimpalner Taluka, but the old boundary lines were found to have been scrupulously recognized and respected by the registered occupants. This showed that the erection of these mounds, required under the Revision Survey rules, was unnecessary in such localities, while it added considerably to the work of the measurers. It was consequently ordered to be discontinued.

29. The recess work was duly completed.

30. Similar details respecting classification are given in the table below :—

Year.	CLASSED.		Average cost per Acre.	TESTED.		Average difference.	
	Fields.	Acres.		Fields.	Acres.		
			A. p.			Soil.	Water.
1896-97 ...	11,999	139,390	0 9	365 (13·8)	3,171 (10·5)	9 pies.	1 pie.
1897-98 ... {	(a) 1,874	36,010	} 0 7	356	1,261	7 Do.	2 pies.
	(b) 17,971	176,193		(19·0)	(8·5)		
	19,845	212,203					
Increase ...	7,846	72,813	...	...	...	0	1 pie.
Decrease ...	...	...	0 2	9	1,910	2 pies.	

(a) Area actually classed.

(b) Area confirmed without actual classification.

There is no separate classing party, but classers are attached to one of the measuring establishments.

31. The outturn shows a satisfactory increase in the number both of fields and acres.

32. The work was fully tested by the Head Surveyor in charge. The test of the supervising officer, however, did not cover the work done in Pimpalner for the reasons explained in paragraph 29 of the Deputy Superintendent's report. The arrears of test referred to in paragraph 34 of last year's report were disposed of.

33. The cost per square mile has decreased from Rs. 30 to Rs. 23.

34. The distribution of working and non-working days in the measuring branch calls for no special comment. In the classing branch there is a large reduction in the number of working days. This was attributable to the large number of days lost in travelling and could hardly be helped. The recess work in this branch is up to date.

35. The cost of the survey under the usual heads is shown in the table below:—

Year.			Measurement.	Classification.	Settlement.	Miscellaneous.	Total.
			Rs.	Rs.	Rs.	Rs.	Rs.
1896-97	...	...	24,578	6,574	20,587	9,528	61,267
1897-98	...	...	32,265	7,535	19,404	7,993	65,197
	Increase	...	5,687	961	...	...	3,930
	Decrease	...	...	...	1,183	1,535	...

36. *Settlement.*—The details of the work have been given in paragraphs 37 and 38 of the Deputy Superintendent's report. The Settlements remaining are those for the two talukas noted in the margin and for isolated Government and Inám villages scattered over the six districts of the Central Division and also one of the Southern Division. In the case of the first taluka the preparation of proposals is already in hand. For the other taluka and the isolated villages the field operations are in progress. Arrangements have been made for the completion of the settlement work in all these villages before 31st October next, the date fixed for closing the work of this survey.

37. The results of the year's operations are decidedly creditable to Mr. Fforde and the officers who worked under him.

38. The question of the survey of the Surgana State has already been reported on in detail under this office No.  $\frac{8}{33}$ , dated  $\frac{15}{11}$ th January 1898.

#### *Konkan Survey.*

39. The charge of this survey was held by Mr. Hearn till his retirement on the 9th April 1898, except for  $2\frac{1}{2}$  months when he officiated as Survey Commissioner, during which time Mr. Hudson acted as Superintendent and Mr. Cole as Deputy Superintendent. On the retirement of Mr. Hearn, the Superintendentship was abolished and the survey has since been in the charge of the Deputy Superintendent, Mr. A. G. Hudson, who has submitted the Progress Report.

40. Mr. McIver was transferred to the Deccan Survey *vice* Mr. Holland deputed on plague duty, and Mr. Sáthe replaced Mr. McIver in the Konkan Survey. Towards the end of the field season Mr. Cole was appointed to succeed to the charge of the Gujarát Survey when the charge of his parties was entrusted to Mr. Wilkins in addition to his own. During Mr. Wilkins' absence on privilege leave in the rains, the charge of the parties was held by Mr. McIver in addition to the settlement duties of the Deccan Survey, Mr. McIver's Deccan parties being supervised by Mr. Whitcombe, who was transferred from the Marátha States Survey.



41. The number of establishments, inclusive of the Phálni Establishment, was 10 as against 11 in the previous year. The field operations reached a stage which enabled some reduction of establishment to be made. The only work remaining to be done was the measurement of the Dáhánu Táluka, which could not be taken up till the middle of January on account of the unhealthiness of the climate. In the beginning of the season, therefore, all the establishments were employed on Phálni operations as sanctioned in Government Resolution No. 7434, dated 11th October 1897, Revenue Department.

42. The operations extended over the four tálukas of the Thána Collectorate noted in the margin. By the middle of January all the establishments were transferred to the Dáhánu Táluka, with the exception of the Phálni party under Mr. Mhasker, which continued its operations until March, when it also was sent to Dáhánu to enable the establishments to finish the work remaining there. Some of the men who were transferred to the Revenue Department as Circle Inspectors had also to be recalled to help in the completion of the work. By the energetic endeavours of the Superintendent and the officers working under him the work in Dáhánu was duly completed.

43. The outturn is exhibited in the tables given below :—

*Measurement.*

Year.	MEASURED.			Average cost per Acre.	TESTED.		Average error per cent. Acres.
	Fields.	Waslas.	Acres.		Fields.	Acres.	
1896-97	56,942	144,625	264,314	A. p. 6 0	7,232 (12·7)	23,019 (8·7)	...
1897-98	(a) 19,936	318,451	127,033	} 6 2	9,329	22,206	...
	(b) 73,211	...	145,691		(4·7)	(17·4)	...
	93,147	318,451	272,724				
Increase	36,205	173,826	8,410	0 2	2,037	...	...
Decrease	...	...	...	...	...	813	...

(a) Area actually measured.

(b) Area confirmed without actual measurement.

*Phálni Work.*

Year.	CLASSED.		Average cost per Acre.	TESTED.		Average difference.
	Fields.	Acres.		Fields.	Acres.	
1897-98	122,681	107,786	A. p. 3 1	13,829 (11·2)	12,583 (11·7)	Rabi. Varkas. 1 pie. 1 pie.

44. Besides the above work, revision classification was done in one village left over last season for reasons explained in paragraph 37 of the Deputy Superintendent's Report.

45. The outturn under measurement shows a large increase in fields and waslas, but a small one in acres. This is due to the preponderance of rice and rabi areas, both "measured" and "confirmed." To this is also attributable the increase in the cost per square mile, which is Rs. 247 as against Rs. 240 in the previous year.

46. The test applied, which includes that of the supervising officers, appears on the whole sufficient.

47. The outturn of Phálni work cannot fairly be compared with the figures of the work done in the previous season by the Phálni Establishment for reasons explained by the Deputy Superintendent in paragraph 41 of his report. There appears no reason however to find fault with the outturn.

48. The following table shows the classified cost of the survey :—

Year.	Measurement.	Classification.	Settlement.	Miscellaneous	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
1896-97 ... ..	99,274	50,783	45,371	8,329	2,03,757
1897-98 ... ..	1,05,603	204	39,006	3,660	1,48,473
Increase... ..	6,329	...	...	...	...
Decrease... ..	...	50,579	6,365	4,669	55,284

49. The details furnished in paragraph 46 of the Deputy Superintendent's Report go to show that in some talukas the work to be done was in excess of the estimate. I am afraid there is little doubt that the work was underestimated by Mr. Hearn. I hope to visit the establishments shortly, and any steps that may be found possible to secure the completion of the work to time will be taken.

50. As regards the distribution of working and non-working days, the only point for comment is the large increase in the number of days under office work. This appears to have been unavoidable as explained in paragraph 29 of the Deputy Superintendent's Report.

51. The details of the settlement work are furnished in paragraph 52 of the Deputy Superintendent's Report. The proposals for the Sháhápúr Taluka, sent in by the Deputy Superintendent, have been submitted to the Commissioner, N. D., with remarks by this office. The reports for Máhád and Mángaon Talukas are with the Collector and have not yet been received in this office. The only settlement that remains to be done is that of the Dáhánu Taluka, proposals for which are under consideration and will be submitted shortly.

52. The field work in this survey was accomplished much before the estimated date, which is creditable to the head of the survey, the subordinate officers and men working under him.

53. During the year Mr. Hearn, one of the most able and experienced officers of the department, retired from service. Government were pleased to express their high estimate of the services of this officer in Government Resolution No. 1852, dated 15th March 1898.

#### *Marátha States Survey.*

54. This survey continued in charge of Mr. J. C. Whitcombe.

55. Mr. J. W. Whitcombe, Assistant Superintendent, was transferred to the British Survey Department and posted to the Deccan Survey under Government Resolution No. 5790, dated 8th September last, with effect from 6th August last. He has since reverted to the Marátha States Survey under orders contained in Government Resolution No. 8144, dated 16th December 1898.

56. The number of establishments remained the same. The distribution of the men for measuring and classing was somewhat different :—

Year.	Measurers.	Classers.	Total.
1896-97 ... ..	44.06	7.94	52
1897-98 ... ..	46.27	5.73	52

57. The measuring and classing operations were carried on simultaneously as in the previous year, the classers following the measurers. The ground covered was 117 villages for measurement and 94 for classification, comprised in the Gad Hinglaj and Panhāla Tālukas of the Kolhāpur State.

58. The following tables show the usual details :—

*Measurement.*

Year.	MEASURED.			Average Cost per acre.	TESTED.		Average error per cent. Acres.
	Fields.	Waslas.	Acres.		Fields.	Acres.	
				A. p.			A. g.
1896-97	24,585	96,198	235,752	1 7	2,262 (16·9)	8,306 (12·7)	0 25
1897-98	(a) 13,016 (b) 12,359	144,221 ...	37,965 157,126	} 1 5 {	2,433 (18·7)	4,678 (12·3)	} 0 13
	25,375	144,221	195,091				
Increase	790	48,023	...	...	171	...	...
Decrease	...	...	40,661	0 2	...	3,628	0 12

(a) Area actually measured.

(b) Area confirmed without actual measurement.

*Classification.*

Year.	CLASSED.		Average Cost per acre.	TESTED.		Average difference.	
	Fields.	Acres.		Fields.	Acres.		
			A. p.			Soil.	Water.
1896-97	24,124	230,761	0 10	115 (19·6)	597 (8·9)	1 pie.	0 pie.
1897-98	(a) 1,973 (b) 17,883	3,399 158,350	} 1 1 {	325 (16·5)	370 (10·9)	} 1 do.	0 do.
	19,856	161,749					
Increase	...	...	0 3	210	...	...	...
Decrease	4,268	69,012	...	...	227	...	...

(a) Area actually classed.

(b) Area confirmed without actual classification.

The outturn, as compared with that of the previous year, shows a considerable falling off in area of both measurement and classification. This is attributable to the hilly nature of the Panhāla Tāluka which made the work much more difficult, and also to the fact that the tálukas of this year contained smaller occupancies, as is shown by the very large increase in waslas and in the increase also in fields under measurement.

59. Working days show a decrease of nearly 10 per cent. for measurers. This decrease was mainly due to the unavoidable loss of time in travelling and in detention of the men in quarantine. The working days for the classers on the other hand show an increase from 87·06 to 87·34.

60. The test taken, which includes that by the Assistant Superintendent, seems adequate.



61. The cost of the operations under all heads is shown in the following table:—

Year.				Measure- ment.	Classifica- tion.	Settlement.	Miscellane- ous.	Total.
				Rs.	Rs.	Rs.		Rs.
1896-97	...	...	...	23,394	11,611	10,096	...	45,101
1897-98	...	...	...	21,781	10,821	10,296	...	42,898
Increase	...	...	...	...	...	200	...	...
Decrease	...	...	...	1,613	790	...	...	2,203

62. The distribution of cost between the States affected, as far as the year under report is concerned, may be briefly exhibited thus:—

State.				Measurement.	Classification.	Settlement.	Total.
				Rs.	Rs.	Rs.	Rs.
Kolhápúr	...	...	...	21,781	10,821	10,176	42,778
Ichalkaranji	...	...	...	...	...	80	80
Vishálgad	...	...	...	...	...	40	40
Total	...	...	...	21,781	10,821	10,296	42,898

63. During the year under report revised survey rates were introduced into 31 villages of the Shirol Táluka of the Kolhápúr State with the results shown below:—

State.				Former Revenue.	Revised demand.	Increase.
				Rs.	Rs.	Rs.
Shirol Táluka, Kolhápúr State...	...	...	...	1,46,888	1,89,568	42,680

64. Mr. Whitcombe and the officers under him appear to have successfully contended against the difficulties met with and to have secured on the whole a satisfactory outturn for the year.

#### Summary.

65. As usual, I append a summary of the work of all the surveys taken together, but excluding that of the Native States Survey, for reasons recorded in previous years reports.

66. In the following table is shown the classified cost of all the surveys:—

Survey.				Measurement.	Classification.	Settlement.	Miscellaneous.	Total.
				Rs.	Rs.	Rs.	Rs.	Rs.
Gujarát	...	...	...	1,951	39,433	29,596	803	71,783
Deccan	...	...	...	30,265	7,535	19,404	7,993	65,197
Konkan	...	...	...	1,05,603	204	39,006	3,660	1,48,473
Total	...	...	...	1,37,819	47,172	88,006	12,456	2,85,453
Total for 1896-97	...	...	...	1,47,607	99,207	98,230	17,857	3,62,901
Increase...	...	...	...	...	...	...	...	...
Decrease...	...	...	...	9,788	52,035	10,224	5,401	77,448

Note. — In the Konkan the following items of cost are excluded from the table.

		1896-97. Rs.	1897-98. Rs.
Phalni operations	...	8,790	21,029
Work in the Bhor State	...	1,031	461

Note.—No work was done in the Janjira State during the year.

This net decrease of Rs. 77,448 is made up as follows :—

Gujarát Survey	...	...	—26,094
Deccan do.	...	...	+3,930
Konkan do.	...	...	—55,284
Net decrease	...	77,448	

The causes of increase and decrease in the several surveys have been explained in the remarks on those surveys. As explained in the previous year's report, the chief point is that the cost of the survey is steadily diminishing from year to year owing to the gradual contraction of the operations of the department. The cost of the operations in the Bhor State amounted to Rs. 461, which sum will be recovered from the State. The cost of the Phalni operations, which this year amounts to Rs. 21,029 owing to all the parties in the Konkan Survey employed on this work in the beginning of the season as explained in paragraph 41 above, will also be partly recovered from the occupants for whom the Phalni is done.

67. The charge against each survey of the pay and allowances of the Survey Commissioner, and his office debitable to survey during the last two years, is shown in the following statement :—

Year.	Gujarát.	Deccan.	Konkan.	Total.
	Rs.	Rs.	Rs.	Rs.
1896-97	6,428	4,268	13,845	24,541
1897-98	6,038	4,722	13,736	24,496
Increase	...	454	...	...
Decrease	390	...	109	45

The distribution has been made according to the usual rules.

68. The next two tables show the cost per square mile in the two years under comparison and the details for each survey :—

Year.	AREA.		Cost per square mile.
	Acres.	Square miles.	
			Rs.
1896-97	1,327,387	2,074	57
1897-98	870,475	1,360	74
Increase	.....	.....	17
Decrease	456,912	714	.....

Survey.	Total area measured, i.e., dealt with under different and varying forms of measurement operations.	Gross cost of such operations.	Cost per square mile.	Percentage of days spent in Boundary-mark inspection.	Cost chargeable to Boundary-mark inspection.	Net Cost of Measurement per square mile.	Net Cost in 1895-96.
	Acres.	Rs.	Rs.		Rs.	Rs.	Rs.
Gujarát	351,202	1,951	4	21.10	412	3	17
Deccan	246,549	30,265	79	51.15	15,481	38	44
Konkan	272,724	1,05,603	247	8.09	8,543	228	220
Total	870,475	1,37,819	101	26.78	36,908	74	57

There is a decrease in area coupled with an increase in the cost of operations. This seems, however, due simply to the character of the year's operations as explained in the reports of each of the surveys.

69. Similar tables follow to show the details of classification :—

Year.			Area classed.	Cost per Acre.	Cost per Square mile.
			Acres.	A. p.	Rs.
1896-97	...	...	1,604,207	0 11	40
1897-98	...	...	1,155,248	0 8	27
Increase	...	...	.....	.....	.....
Decrease	...	...	448,959	0 3	13

Excluding the survey of Native States and Phálni operations in both years.

Survey.			Area classed.	Cost per Acre.	Cost per Square mile.
			Acres.	A. p.	Rs.
Gujarát	...	...	941,101	0 8	27
Deccan	...	...	212,203	0 7	23
Konkan	...	...	1,944	1 8	67
Total	...	...	1,155,248	0 8	27

70. The results as a whole seem in favour of the year of report, there being a decrease in the average cost per acre. The variations of cost in the different surveys are fully explained in the remarks on each of them.

71. The cost of measurement and classification, taken together, are shown below :—

Survey.			Combined cost per acre.			
			1896-97.		1897-98.	
			A.	p.	A.	p.
Gujarát	...	...	1	4	0	9
Deccan	...	...	2	11	2	0
Konkan	...	...	7	1	7	10

Exclusive of Phálni operations and the Survey of Native States.

72. The next table exhibits the total cost, including the item of settlement of each survey contrasted with that of the previous year :—

Survey.			Total cost, 1896-97.	Total cost, 1897-98.	Increase.	Decrease.
			Rs.	Rs.	Rs.	Rs.
Gujarát	...	...	97,877	71,783	...	26,094
Deccan	...	...	61,267	65,197	3,930	...
Konkan	...	...	2,03,757	1,48,473	...	55,284
Total	...	...	3,62,901	2,85,453	...	77,448

Exclusive of survey operations in Native States and Phálni work in both years.



73. The increased revenue accruing from settlements introduced during the year is shown below :—

Survey.	Amount of Settlement Jamábandi.	Average of past collections.	Increase.	
			Rupees.	Per cent.
	Rs.	Rs.		
Deccan ...	4,577	3,414	1,163	33·2
Konkan ...	3,30,134	2,54,434	75,700	29·8
Total ...	3,34,711	2,57,848	76,863	29·8

74. The details of the call on the Survey Department for aid on behalf of other departments are shown in the following statement :—

Survey.	REVENUE.		FOREST.		MUNICIPALITY.		NATIVE STATES.		MARÁTHA STATES SURVEY.		TOTAL.	
	Number of men lent.	Number of months for one man.	Number of men lent.	Number of months for one man.	Number of men lent.	Number of months for one man.	Number of men lent.	Number of months for one man.	Number of men lent.	Number of months for one man.	Number of men lent.	Number of months for one man.
	M. d.	M. d.	M. d.	M. d.	M. d.	M. d.	M. d.	M. d.	M. d.	M. d.	M. d.	M. d.
Gujarat ...	...	...	...	...	7	19 3	...	...	...	...	7	19 3
Deccan ...	1	12 0	7	84 0	...	...	...	...	...	...	8	96 0
Konkan ...	12	90 14	3	36 0	1	12 0	1	12 0	7	84 0	24	234 14
Total ...	13	102 14	10	120 0	8	31 3	1	12 0	7	84 0	39	349 17

75. It will be seen from the above that an equivalent of 29 men was employed on behalf of other departments as against 31 in the previous year.

76. The following table is given corrected and brought to date as usual :—

District.	Former Revenue.	Revised Demand.	Immediate Increase.	Percentage Increase.
	Rs.	Rs.	Rs.	
Ahmedabad...	8,74,265	10,99,018	2,24,753	25·7
Kaira ...	13,30,021	15,32,057	2,02,036	15·2
Panch Maháls ...	1,10,427	1,11,934	1,507	1·4
Surat ...	5,25,780	6,10,659	84,879	16·3
Thána ...	5,90,951	8,21,934	2,30,983	39·1
Khándesh ...	23,55,855	30,76,277	7,20,422	30·5
Násik ...	7,99,441	10,64,160	2,64,719	33·1
Ahmednagar ...	11,76,900	15,12,309	3,35,409	28·5
Poona ...	9,72,165	12,81,699	3,09,534	31·8
Sholápur ...	8,56,901	11,49,475	2,92,574	34·1
Sátára ...	13,19,568	17,17,891	3,98,323	30·2
Kolába ...	7,33,534	10,00,271	2,66,737	36·3
Belgaum ...	11,05,172	14,36,165	3,30,993	29·9
Dhárwár ...	13,00,701	18,87,818	5,87,117	45·1
Bijápur ...	8,56,355	10,79,438	2,23,083	26·0
Total ...	1,49,08,036	1,93,81,105	44,73,069	30·0

77. The following statement gives details of settlements introduced into Inám and Jáhagír villages, the former with the sanction of the Survey Commissioner and the latter under sanction of the Political Agent and the State concerned. It does not include the settlements introduced in the tracts being dealt with by the Marátha States Surveys :—