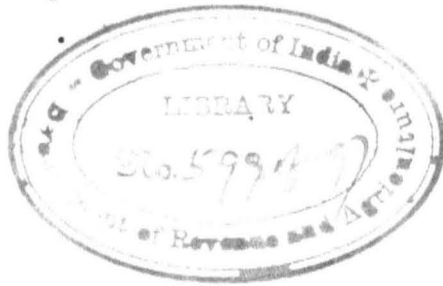


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ANNUAL PROGRESS REPORT

OF THE

REVENUE SURVEY DEPARTMENT

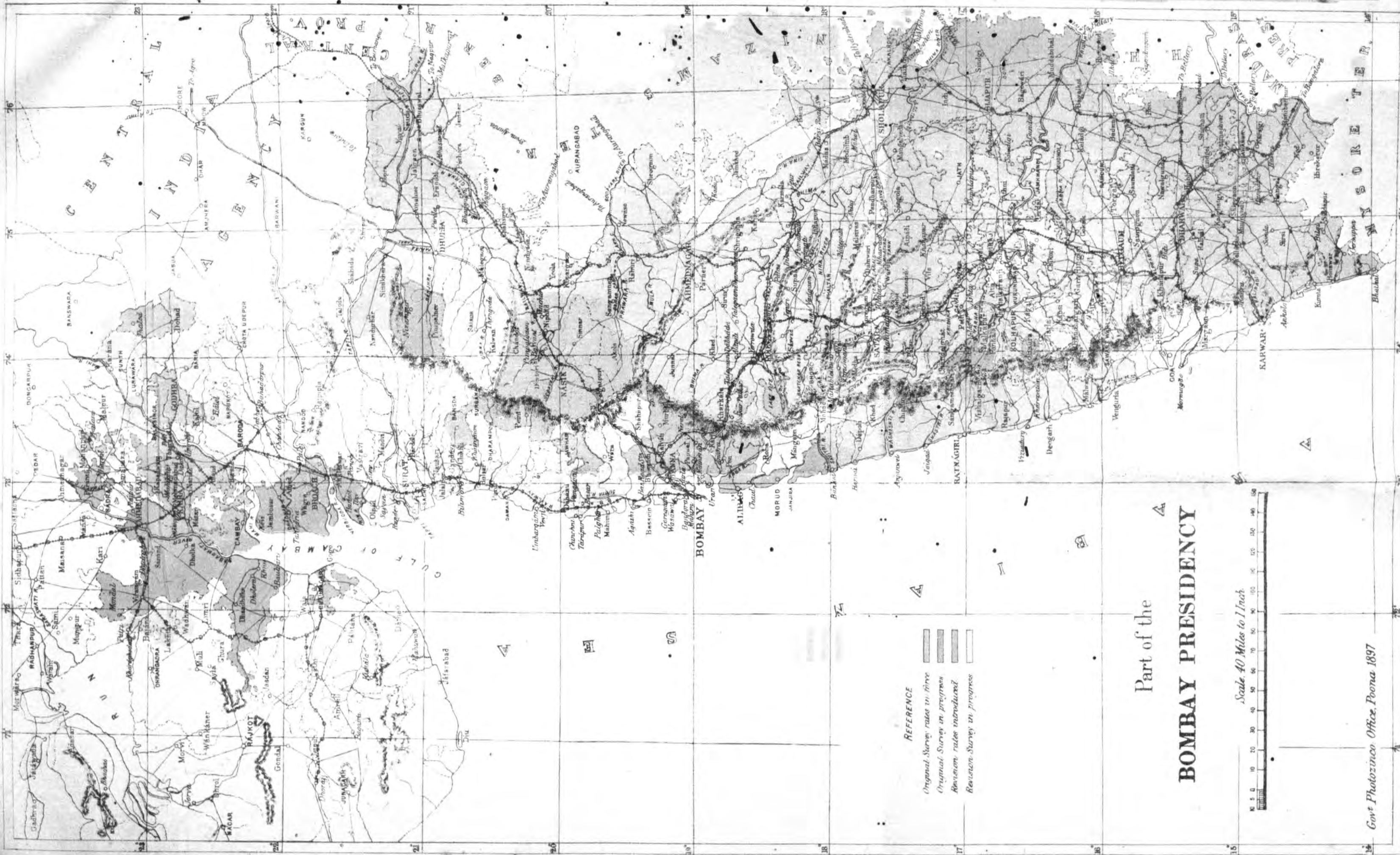
For the Year ending 31st October 1896.

W 1900

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[Price—9 Annas.]

(45)



**REFERENCE**

- Original Survey rates in force
- Original Survey in progress
- Revision rates introduced
- Revision Survey in progress

Part of the

**BOMBAY PRESIDENCY**

Scale 40 Miles to 1 Inch



No.  $\frac{8}{972}$  OF 1897.

From

THE SURVEY COMMISSIONER AND DIRECTOR,  
LAND RECORDS AND AGRICULTURE ;

To

THE CHIEF SECRETARY TO GOVERNMENT,  
Revenue Department.

Poona, 26th June 1897.

SIR,

I have the honour to submit the Annual Progress Report of the Bombay Revenue Survey Department for the year ending 31st October 1896.\* The delay which has occurred in submission of the report is due to my uninterrupted employment until May on special inquiries connected with Famine.

2. The subjoined statement shows the periods for which charge was held by Mr. Ozanne, Colonel Godfrey, and myself :—

From	To	Number of days.		
		m.	d.	
1st Nov. 1895 ...	20th May 1896 ...	6	20	Mr. Ozanne.
21st May 1896 ...	21st June „ ...	1	1	Colonel Godfrey.
24th July „ ...	31st Oct. „ ...	3	8	
22nd June „ ...	23rd July „ ...	1	2	Mr. Muir-Mackenzie.
Total ... 1 year.				

As I held charge of the Department for little over a month, I can do but feeble justice to its operations in the account which follows.

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 ...	6	2	6	Deputy Superintendent.
Deccan ...	2	1	2	Do. do.
Konkan ...	†11	4	11	} Superintendent.
Marátha States ...	3	1	3	

#### GUJARÁT REVENUE SURVEY.

4. The operations of this Survey were supervised by Mr. T. R. Fernandez up to 9th April 1896, and on his retirement from that date by his successor Mr. E. Maconochie, I. C. S.

5. It seems unnecessary to repeat the account of the other changes in the personnel of this Survey which are fully stated by the Deputy Superintendent.

\* NOTE.—Alluded to in this report throughout as 'this year.' The year ending 31st October 1895 is described as 'last year' or the previous year.

† Includes Phalni Establishment.

Suffice to say that the Survey lost Mr. A. B. Fforde, transferred to the Deccan, and Mr. Forbes retired, and obtained in their places Mr. P. R. Mehta, formerly Sub-Assistant, and Mr. H. V. Sáthe, Personal Assistant to the Survey Commissioner. It is creditable to the Survey that its work should not have suffered by these changes. The want of experience in the present staff has been compensated by the industry, care, and sense of its members.

6. The curtailment of work alluded by the Deputy Superintendent in paragraph 7 of his report was due to the acceptance of the original work for certain measurements, which, it had been apprehended, would have had to have been performed afresh at revision.

7. As stated above the operations of the year were confined to the Surat District. The revision measurement of talukas Jalálpur and Mándvi, begun the previous year, and that of Párdi and Bulsár, begun this year, were completed. Revision classification was finished in Chikhli and Jalálpur and progress made in Bulsár. One inám village in the Daskrohi Taluka of the Ahmedabad Collectorate was measured and classed in the course of the season.

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

*Measurement.*

Year.	MEASURED.			Average cost per Acre.	TESTED.		AVERAGE ERROR PER CENT.
	Fields.	Waslas.	Acres.		Fields.	Acres.	Acres.
				Rs. a. p.			A. g.
1894-95 ...	35,993	375,274	*240,676	*0 3 4	4,461 (12.4)	4,577 (9.6)	0 20
1895-96 ...	38,530	403,161	*410,793	*0 1 10	4,847 (12.6)	2,749 (8.4)	0 31
Increase ...	2,537	27,887	170,117	...	386	...	0 11
Decrease ...	...	...	...	0 1 6	...	1,828	...

*Classification.*

Year.	CLASSED.		Average cost per Acre.	TESTED.		Average difference.
	Fields.	Acres.		Fields.	Acres.	
			Rs. a. p.			Soil. Water.
1894-95 ...	36,309	*327,672	*0 1 1	5,875 (16.1)	15,790 (10.6)	3 pies 3 pies.
1895-96 ...	71,989	*219,911	*0 1 3	13,342 (18.5)	9,733 (10.9)	1 pie 1 pie.
Increase ...	35,680	...	0 0 2	7,467	...	..... <sup>a</sup>
Decrease ...	...	107,761	...	...	6,057	2 pies 2 pies.

As sanctioned in paragraph 7 of Government Resolution No. 6839 of 29th August 1896, Revenue Department, issued on last year's Progress Report, the confirmed acres have been taken credit for and included in the above tables.

9. *Measurement.*—The outturn of confirmed and measured acres together shows a satisfactory increase. There was a reduction in the number of acres actually measured, more than balanced, however, by the increase in numbers

\* Including the confirmed acres.

and waslas, which in a country like Surat are a far better test of work than the acreage measured. The outturn would have been larger but for the withdrawal of B party to head-quarters at the beginning of May for reasons explained by the Deputy Superintendent. Endeavours are being made to check the tendency of Head Surveyors to choose for test easy numbers. The test by superior officers was on the whole satisfactory in amount.

10. The cost per square mile, taking credit for the confirmed acres, is Rs. 73 as against Rs. 133 of the previous year. The decrease is due to the reduction in the cost of supervision caused by the replacement of Messrs. Forbes and Fforde by junior officers, Messrs. Mehta and Sáthe. The recess work is up to date. It is a little disappointing that after Mr. Ozanne's remark upon the unfavourable character of last year's numbers of working and non-working days some improvement should not have been shown this year. There is a slight increase in number of non-working days due to "marriages", although they were said to be particularly rife last year, and a more substantial increase due to sickness, which could hardly be helped. In the face of an on the whole creditable outturn too much weight need not be attached to these figures. I trust, however, that the next report will show a substantial improvement.

11. The mode in which it is intended to dispose of the "miscellaneous work" alluded to in paragraph 8 of last year's report is fully explained by Mr. Ozanne in Appendix C to his special report on the completion of the survey, No. S—1187, dated 20th May 1896. That work was taken up at the close of the year 1895-96, and will therefore be accounted for in the next year's progress report.

12. *Classification.*—The outturn shows a considerable increase in the number of "fields," but a decrease in the number of acres. This decrease in area is due to the fact that the whole of the season's work was regular revision work of the ordinary kind, whereas a portion of last season's work consisted of rough valuation survey in Tálukdári villages. The total outturn may be considered satisfactory. Mr. Ozanne in paragraph 18 of last year's progress report stated the expectation that this year's outturn would be smaller. It was probably also diminished by the unavoidable retention of the classing establishments at head-quarters till late in November.

13. The test was on the whole satisfactory. The decrease in the number of acres classed has raised the cost per square mile from Rs. 43 in the previous year to Rs. 50. The distribution of working and non-working days is decidedly more satisfactory than in the measuring parties. There was less sickness, because the work going on in fairly healthy tracts, a fact which is no credit to the classers and is the main cause of the difference. But it is difficult to see why the measurers should show larger figures than classers of time lost owing to want of co-operation by the villagers, or leave, the quantity taken of which is supposed to depend largely on marriages. A classer is probably not less anxious to attend marriages than a measurer. The increase under "office work" is partly due to the counting as office work of some field work which had to be performed by classers, but which was not classing. There is no good reason why work which is *not* office work should be shown as office work. A more potent cause of increased office work was the heavy amount of recess work alluded to by the Deputy Superintendent in paragraph 44 of his report. This was unavoidable.

14. *Settlement.*—The details of this work are shown in paragraph 49 of Mr. Maconochie's report. Sanction of Government has been received to the proposals (1) for the revision settlement of the three tálukas in Surat and (2) for the survey settlement of all the Tálukdári villages referred to with the exception of those for the marginally noted estates, and for the village of Vatva in Ahmedabad the proposals for which were recently received from the Collectors of the respective districts and submitted to Government through the Commissioner, N. D.

Limdi and Golana, District Panch Maháls.

## 15. The classified cost of the Gujarát Survey is shown below :—

Year.	Measurement.	Classification.	Settlement.	Miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
1894-95 ... ..	49,768	21,393	41,263	...	112,424
1895-96 ... ..	47,691	17,187	35,992	...	100,870
Increase ... ..	...	...	...	...	...
Decrease ... ..	2,077	4,206	5,271	...	11,554

16. Mr. Fernandez was prevented spending in the field as much time as would have been desirable by the necessity of writing several settlement reports previous to his retirement. His services were acknowledged by Government in reviewing last year's report. Mr. Maconochie succeeded him in April, and spent every available day of the travelling season in the field. He has acquainted himself rapidly and successfully during the present season with his charge, and in all his work has shown judgment and business capacity. He has been selected for promotion, which he well merits. But the Department will suffer by his departure. Government will observe with satisfaction the commendation bestowed by Mr. Maconochie on A'zam Bápálál, a classing Head Surveyor of quite unusual merit, and on Messrs. Mehta and Sáthe. Mr. Mehta deserves a compliment for his settlement proposals on Tálukdári villages, which show care and judgment, and considerable improvement in style and composition.

## DECCAN REVENUE SURVEY.

17. The charge of this Survey was held by Mr. W. S. Turnbull, Superintendent, up to 18th February 1896, and on his retirement from the 22nd idem up to the close of the year by Mr. A. B. Fforde, Deputy Superintendent. As an Assistant Superintendent Mr. Fforde had considerable experience in the Deccan. Mr. E. Maconochie until April was attached to this Survey as Settlement Officer. In that month he received charge of the Gujarát Survey, but retained charge of his settlement duties in the Deccan until he could submit settlement proposals for all the tálukas with which he had to deal. He eventually submitted all his reports, with the exception of that on Pátasthal rates in Dhulia, proposals for the revision of which were submitted by the Deputy Superintendent.

18. Mr. Jacob Bápuji, after nearly one year's service as Survey Mámldár, reverted to the Revenue Department on promotion to a Mámldat and joined his appointment of Chitnis to the Collector of Sátára on the 5th December 1895. He was replaced by Mr. Purshotam Bápuji Phadke, whose experience for over one year as District Inspector, Land Records and Agriculture, qualified him for charge of a Survey party.

19. No change in the number of establishments was made, but the average strength was increased by 1 measurer and 2 classers.

20. During the year the parties were employed chiefly in Báglán and Kalvan tálukas of the Násik District. The revision measurement and classification of the former táluka was completed, and fair progress was made in the measurement of the latter. Twenty villages were finished, the survey of seven of them being original.

Besides the above, one village in the Peint táluka was measured and classed; the Government lands in one alienated village in Málegaon were remeasured on the partial system. Measurement and classification of scattered villages noted in the margin, lately forming part of the Vinchurkar Jágghir, were also completed.

21. The work of the measurers during the year consisted chiefly of revision measurement on the partial system. The details of outturn are shown in the usual table :—

	Measurement.	Classification.
Pandharpur Táluka ... ..	1 village.	1 village.
Khed Táluka ... ..	...	1 do.
Kopargawon ... ..	1 do.	3 villages.
	2	5

Year.	MEASURED.			Average cost per Acre.	TESTED.		Average error per cent. Acres.
	Fields.	Waslas.	Acres.		Fields.	Acres.	
				A. p.			A. g.
1894-95 ...	12,507	94,940	156,996	3 3	748 (14.8)	4,560 (7.6)	0 20
1895-96 ...	(a)13,803 (b)13,159	99,814 76,130	37,012 209,150	} 1 11	432 (11.4)	2,145 (5.8)	0 25
	16,962	105,944	246,162				
Increase ...	4,455	11,004	89,166	...	...	...	0 5
Decrease ...	...	...	...	1 4	316	2,415	...

(a) Area actually measured.

(b) Area confirmed without actual measurement.

The increase of outturn is due principally to the preponderance of ' revisional ' over ' original ' operations. But the increase in the number of waslas shows that the establishments got through on the whole a larger amount of work—a fact for which they are entitled to credit.

22. The work was fully tested both by the officers in immediate charge of the parties and by the Supervising Officer, Mr. Holland. At the same time it is not understood why the whole of the testing work was confined to the Bāglān tāluka. Inquiries are being made of the Deputy Superintendent on this point. The test work unavoidably remained over in the few isolated villages referred to above. Mr. Holland's verifying test of the work of the officers in direct charge of the parties may seem excessive; but a large amount of such test was necessitated by the inexperience both of the Survey Māmlatdār and the Nīmāndār. The test taken showed the work to be fully up to the accepted standard of accuracy. The time saved under field measurement owing to the partial character of the revision operations was rightly devoted to boundary-mark inspection.

23. The cost per square mile as a consequence of the increased areas covered, shows a decrease from Rs. 130 to Rs. 77.

24. With regard to boundary-mark repair it is satisfactory to notice that out of the 101 villages in which measurement work was done during the year, in 94 the rayats were induced to erect or repair the marks themselves.

25. The recess work was duly completed.

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

Year.	Classed.		Average cost per Acre.	Tested.		Average difference.	
	Fields.	Acres.		Fields.	Acres.	Soil.	Water.
			A. p.				
1894-95 ...	4,469	60,141	1 5	945 (21.0)	6,322 (10.5)	8 pies.	2 pies.
1895-96 ...	(a)2,548 (b)24,367	15,651 291,128	} 0 6	189 (7.4)	534 (3.4)	11 do.	1 do.
	26,915	306,779					
Increase ...	22,446	246,638	...	...	...	3 pies.	0
Decrease ...	...	...	0 11	756	5,788	0	1 pie.

(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. With a view to complete the revision classification of the Báglán táluka by the end of the season the strength of the classers was slightly augmented by transfer of a few measurers who were trained in classing. The outturn shows a large increase both in the number of fields and acres. This is due, as in the case of the measurement operations, to the work having consisted almost wholly of revision operations on the partial system.

27. The work was tested both by Mr. Holland and the Head Surveyor in charge. Owing to the incapacitation of the Head Surveyor by illness the test taken was short in part of area. The Supervising Officer, Mr. Holland; too was compelled to take a larger test of the classer's work, and was thus prevented from taking the usual verification of the Head Surveyor's test (paragraph 24 of the Deputy Superintendent's report). The test taken proved a fair standard of accuracy.

28. With regard to the distribution of working and non-working days, the increase under the head of "Travelling" may be attributable to the fact that work was done in isolated villages scattered over four tálukas, but that under "Leave and Holidays" is large and ought to have been explained.

29. The recess work in this branch is up to date.

30. The increase in the outturn has decreased the cost per square mile from Rs. 57 in the previous year to Rs. 20.

31. The cost of the Survey under the usual heads is shown in the table below:—

Year.			Measure- ment.	Classi- fication.	Settle- ment.	Miscel- laneous.	Total.
			Rs.	Rs.	Rs.	Rs.	Rs.
1894-95	...	...	32,182	5,356	32,215	8,469	78,222
1895-96	...	...	28,856	8,858	30,496	6,822	75,032
Increase ...	...	...	...	3,502	...	...	...
Decrease...	...	...	3,326	...	1,719	1,647	3,190

32. *Settlement.*—With the aid of Mr. Maconochie, I. C. S., the Deputy Superintendent was able to submit settlement proposals for four tálukas in Khándesh and for the remaining villages of the Peint táluka in Násik. Besides this proposals for five Inám vil-  
 Násik ... { (1) Peint.  
 (2) Nándgaon.  
 Sátára ... { (1) Válva.  
 (2) Jávli.  
 (3) \* Sátára.  
 (\*For Kumeri and Tisáli lands only.)  
 Khándesh . { (1) Cháliggaon.  
 (2) Nándurbár.  
 villages (four in Wái and one in Peint) were sub-  
 mitted by Mr. Holland, Assistant Settlement Offi-  
 cer. Revised rates were introduced in two tálukas  
 of Násik, three of Sátára and two of Khándesh,  
 besides minor settlements were announced in several Inám and Jághir vil-  
 lagés as detailed in paragraph 34 of the Deputy Superintendent's report. This record  
 of settlement work is favourable.

#### *Surgána State.*

33. Owing to distance of the Surgána State from the scene of operations supervised by Mr. Whitcombe, the Superintendent, Marátha States Survey, it was decided to entrust the work to the Deccan Survey. The arrangements made were reported to Government in this office No. <sup>S</sup><sub>1125</sub>, dated 11th May 1896. The outturn is fair and the cost per acre moderate.

34. In reviewing the progress report for last year Government were pleased to acknowledge the high value of Mr. Turnbull's services. Mr. Fforde and Mr. Holland travelled energetically. To the activity of these officers is largely due the promptness with which the revised rates have been introduced after sanction had been given to the settlement proposals. The meritorious exertions of Mr. Holland, Assistant Settlement Officer, and the acting Personal Assistant



Mr. G. H. A'ngangonkar in introducing the rates into Nandurbár during the monsoon, were noticed by Government in Resolution No. 6643, dated 24th August last.

### MARATHA STATES SURVEY.

35. This Survey continued in charge of Mr. J. C. Whitcombe: Mr. J. W. Whitcombe, Assistant Superintendent, having completed the requisite period of service in the 5th grade, was recommended for promotion to the 4th grade under this office No.  $\frac{8}{1074}$ , dated 6th May 1896.

36. The number of establishments remained the same, but the average strength was increased by 7.51 for measuring and 0.10 for classing.

37. The measuring and classing operations were carried on concurrently as in the preceding year, the classers following the measurers. The work accomplished was as follows:—

Operations in the Vishálgad and Kágal States and the A'jra táluka of the Ichalkaranji State, which were commenced last year, were completed. Progress was made in the revision of the villages of the Shirol táluka and of its sub-division the Ráibág Petha of the Kolhápúr State.

38. 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.
1894-95 ... ..	26,658	137,336	196,780	1 8	1,528 (10.6)	3,074 (6.8)	0 22
1895-96 ... ..	(a) 23,327 (b) 11,956	180,632 ...	93,145 166,627	} 1 5	3,669 (15.7)	7,483 (8.0)	0 32
	35,283	180,632	259,772				
Increase ... ..	8,625	43,296	62,992	...	2,141	4,409	0 10
Decrease ... ..	...	...	...	0 3	...	...	...

(a) Area actually measured.

(b) Area confirmed without actual measurement.

#### Classification.

Year.	CLASSED.		Average cost per Acre.	TESTED.		Average difference.	
	Fields.	Acres.		Fields.	Acres.	Soil.	Water.
			A. p.				
1894-95 ... ..	24,441	188,395	0 11	298 (11.2)	978 (6.8)	1 pie.	0 pie.
1895-96 ... ..	(a) 2,532 (b) 34,968	28,470 239,687	} 0 8	279 (11.0)	3,256 (11.4)	1 do.	1 do.
	37,500	268,157					
Increase ... ..	13,059	79,762	...	...	2,278	0	1 pie.
Decrease ... ..	...	...	0 3	19	...	0	0

(a) Area actually classed.

(b) Area confirmed without actual classification.

The outturn shows a considerable increase both under measurement and classification. That under measurement is due to the increase in the strength of measurers, that under classification, attributed to the same fact, seems also due to the increase of nearly 9 per cent. in the number of working days, the number lost from sickness being less by 5 per cent. and those spent on "Leave and Holidays" by 3 per cent. This raised the percentage of working days in this branch from 78.50 to 87.04. In the measuring branch also the percentage increased from 82.66 to 85.17.

39. The test taken seems adequate. That under measurement includes the superior test by the Assistant Superintendent.

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

Year.			Measurement.	Classification.	Settlement.	Miscellaneous.	Total.
			Rs.	Rs.	Rs.	Rs.	Rs.
1894-95	...	...	20,744	10,600	10,958	...	42,302
1895-96	...	...	23,404	10,759	10,188	...	44,351
Increase	...	...	2,660	159	...	...	2,049
Decrease	...	...	...	...	770	...	...

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

State.			Measurement.	Classification.	Settlement.	Total.
			Rs.	Rs.	Rs.	Rs.
Kágal...	...	...	6,913	3,395	3,190	13,498
Kolhápur	...	...	8,023	3,680	3,179	14,882
Ichalkaranji	...	...	1,588	740	1,376	3,674
Vishálgad	...	...	6,910	2,944	2,211	12,065
Aundh	...	...	...	...	23	23
Mudhol	...	...	...	...	23	23
Sávnur	...	...	...	...	185	185
Total	...	...	23,404	10,759	10,187	44,350

42. During the year under report revised survey rates were introduced into 8 villages of the Ichalkaranji State and into 25 villages of the Sávnur State, with the results shown below:—

State.			Former Revenue.	Revised Demand.	Increase.
			Rs.	Rs.	Rs.
Ichalkaranji, 8 Darbár	...	...	55,312	71,003	15,691
Sávnur, 25 Darbár	...	...	43,378	50,754	7,376

The result of the year's operations are decidedly creditable to Mr. Whitcombe.

#### KONKAN REVENUE SURVEY.

43. The Progress Report of this Survey is submitted by Mr. Hearn, the present Superintendent, though, except for four months when he officiated as Survey Commissioner, the charge was held by Colonel Godfrey. While Colonel

Godfrey was officiating as Survey Commissioner, Mr. Hearn acted as Superintendent and Mr. Hudson as Deputy Superintendent. Mr. Hudson was throughout the year in supervising charge of one classing party gaining the experience necessary to perfect his knowledge of classification. He also submitted settlement proposals for one táluka. Mr. McIver, Assistant Superintendent, in the middle of the season while working in the Mahád táluka of the Kolába. Collectorate fell ill and proceeded on privilege leave granted him under Government Resolution No. 2820, dated 31st March 1896. During the monsoon Mr. McIver held charge for about two months of the Forest Settlement Officer, Mr. Orr's office, in addition to his own, during the absence of that officer on privilege leave.

44. Advantage was taken of the retirement of one of the Head Surveyors to place a Revenue graduate in charge of a Survey Party. Mr. Mahádev Hari Paránjpe, L.C.E., was selected for the post.

45. The number of establishments, inclusive of the Phálni establishment, was the same as in the previous season. For reasons, however, explained in paragraph 10 of the Superintendent's report, there occurred a decrease in the average strength of both measurers and classers.

46. The following figures represent the comparative average strength of measurers and classers in the two years:—

Year.	Measurers.	Classers.	Total.
1894-95	188	58	246
1895-96	156	55	211

These figures do not include the Phálni establishment. Mr. Hudson joined in the middle of the season.

47. Out of the seven measuring establishments, six were linked under two European Assistants and were employed throughout the season in the Mahád táluka of the Kolába Collectorate. The remaining one worked in the beginning of the season in the Mángaon táluka and by the end of December was transferred to the Sháhápur táluka of the Thána Collectorate, where it worked till the conclusion of the season, a few of the measurers being detached to finish a single village in the Máhim táluka, which had not been completed in the previous season. In the beginning of the season this establishment was under the Superintendent's own supervision, afterwards under that of Mr. Hudson, and towards the close of the season under that of Mr. Hearn, the Deputy Superintendent.

48. The three classing establishments opened the season in the Roha táluka of the Kolába District. Towards the close of December they were transferred to Váda táluka, Thána District, and afterwards to the Sháhápur Táluka in the same district. One of the establishments, with the exception of some three classers who continued in Sháhápur, was again transferred towards the close of the season to Kolába, when it was in the Mahád táluka under Mr. Hudson. A few classers of another establishment were deputed to finish off original classification work of some 9 villages in the Bhor State. The three classing parties which were employed in Roha and afterwards in Váda and Sháhápur were under the supervision of Mr. Hearn, then Deputy Superintendent. The work of each party has been fully examined by the Superintendent, who has also given the opinion of the supervising officer respecting the outturn and the efficiency of the officer in charge. The Survey Mámlatdárs, including Mr. Paránjpe, recently appointed, have all been commended for their good work. The Head Surveyors also have all been spoken of favourably with one exception, *viz.*, the officer in charge of the G Establishment, who was reprimanded for slack supervision.

49. With regard to days devoted to field work, there is on the whole an increase in the measuring branch, but a heavy falling off in the classing parties due (1) to the excessive time lost in travelling and (2) to sickness caused by the unhealthiness of the tracts in the Thána District in which operations had to be carried on.

The loss from sickness was unavoidable. Measures were taken to choose for work in the unhealthy tálukas the best times of the year. It is this necessity

also which accounts in part at any rate for the shifting of parties in the middle of the season and the heavy loss of time in travelling thereby involved. It is a pity that the retransfer of one establishment from Thána to Kolába District could not have been avoided by correct estimation of the small amount of classification required in Sháhápur. These occurrences, however, are hardly to be avoided even under the administration of so practical and experienced a Superintendent as Colonel Godfrey. In both the measuring and the classing parties some working days were lost on account of leave and holidays. This loss was unavoidable as explained in paragraphs 23 and 37 of the Superintendent's report.

50. The following table shows details of the quantity and quality of measurement work :—

Year.	MEASURED.			Average cost per Acre.	TESTED.		Average error per cent. Acre.
	Fields.	Warkas.	Acres.		Fields.	Acres.	
1894-95 ...	76,194	209,684	231,330	A. p. 8 1	9,564 (12·8)	25,326 (13·3)	A. g. 0 1
1895-96 ...	{ (a) 22,423 (b) 51,794	198,058	156,177 51,862	} 8 1	9,529 (12·7)	24,147 (11·7)	...
	74,217	198,058	208,039				
Increase ...	...	...	...	...	...	...	...
Decrease ...	1,977	11,626	23,291	...	35	1,179	0 1

(a) Area actually measured. (b) Area confirmed without actual measurement.

There is a small decrease of outturn due to facts that (1) the average strength of measurers was less by 32 than last year's; (2) the area of warkas dealt with by actual remeasurement was more than double that of last year. The reason, as stated by Mr. Hearn, to whom a reference was made, was that the original work in the Kolába District, especially near the Gháts, was found to be seriously incorrect.

51. The test shown in the table includes that by the supervising officers. The work was partly tested both by the officers in immediate charge of the parties and partly by the supervising officers. The error found to exist was practically nil. The cost rate though high, as is meritable in the Konkan, has not increased. The cost per square mile is Rs. 323, the same as last year.

52. The following table shows the details of classification work :—

Year.	CLASSED.		Average cost per Acre.	TESTED.		Average difference.	
	Fields.	Acres.		Fields.	Acres.	Rice.	Warkas
1894-95 ...	120,433	263,309	A. p. 1 7	5,574 (16·0)	11,404 (16·0)	7 pies.	2 pies.
1895-96 ...	{ (a) 33,760 (b) 144,215 (c) ...	37,079 320,577 98,744	} 1 3	5,277 (16·0)	4,493 (12·0)	} 7 do.	2 do.
	177,975	456,400		17,047 (11·8)	11,362 (3·5)		
Increase ...	57,542	193,091	...	...	...	...	...
Decrease ...	...	...	0 4	297	6,911	...	...

(a) Area actually measured. (b) Area examined for Dusota or position class. (c) Area confirmed without actual classification.

Note.—The table includes the figures for 9 villages of Bhor in 1895-96 and the figures for 14 villages of the same State in the previous year.

53. The number of classers was on an average less by 3·51. The outturn, however, is much larger than in the previous year. This is attributable to the fact that the area found to require actual reclassification in the year under report was only about half that of the previous year.

54. The test taken was satisfactory.

55. The cost per acre has decreased from 0-1-7 in the previous year to 0-1-3, as also the cost per square mile from Rs. 63 to 50.

56. The following table shows the classified cost of the Konkan Survey. There is a decrease in cost of Rs. 4,981, but for reasons explained in paragraph 57 of last year's report, the cost of the field work in Bhor, and settlement in Bhor and Janjira, as also that of the Phálni establishment, has been excluded :—

Year.				Measurement.	Classification.	Settlement.	Miscellaneous.	Total.
				Rs.	Rs.	Rs.	Rs.	Rs.
1894-95	...	...	...	116,923	24,859	45,311	8,317	195,910
1895-96	...	...	...	105,588	35,428	46,910	3,003	190,929
Increase	...	...	...	...	10,569	1,599	...	...
Decrease	...	...	...	11,335	...	...	5,814	4,981

57. A report has already been made on the work of the Phálni establishment, this office No. <sup>S.</sup><sub>2135</sub> dated 23th September 1896 : see Government Resolution No. 7905, dated 8th October 1896. The further report called for by Government in para. 3 of the Government Resolution referred to will be made as soon as the recess work of the remaining 12 villages in Murbád is completed. (This office No. <sup>S.</sup><sub>36</sub> dated 8th January last.) With the exception of two months, when he was away on leave, Mr. Mbaskar continued in charge of this party. The cost per acre has decreased from 2 annas 10 pies in the previous year to 1 anna 10 pies (para. 35 of Superintendent's report).

58. The recess work in the classing establishments was all completed, with the exception of that appertaining to some 5 villages, the work can be finished in plenty of time during the present recess season.

59. Para. 47 of the Superintendent's report gives information regarding the number of men employed in other departments during the year. It appears that the calls were numerous though somewhat less than in the previous year.

60. During the year revised rates were introduced into 197 Government villages of the Bhiwndi Táluka. Three Inám villages of the same táluka and two tálukas of the Bhor State were also settled. Proposals were submitted for the Sálsette and Bassein tálukas and one táluka of the Bhor State. The proposals for the Bassein táluka were made by Mr. Hearn, Deputy Superintendent. Since the close of the year proposals for the Mähim táluka were submitted by Mr. Hudson, Deputy Superintendent, those for Roha, Sháhápúr and Váda are in hand. Having regard to the difficulties which stand in the way of submission of the settlement proposals in the Konkan (paragraph 61 of last year's report), the year's results are satisfactory.

61. As usual a large amount of hard and valuable work was accomplished by this Survey, in trying climates, and notwithstanding considerable difficulties. A great deal is owed to the zeal and experience of the Superintendent Colonel Godfrey and to the perseverance and unabated industry of his veteran Deputy Mr. Hearn. The assistants, and with one exception the chief subordinates, seem to have worked well.

62. Since the close of the year Government have lost by retirement the valuable services of Colonel Godfrey, about whom I venture to repeat the few inadequate phrases, in which, when forwarding the settlement proposals for the Bassein Táluka, I commended his services to acknowledgment by Government.

"I cannot conclude this report without reminding Government that these proposals are probably the last submitted or reviewed by Colonel Godfrey, the present Superintendent, whose retirement is impending. It is satisfactory to know that upon the precedents established in the many difficult Konkan Settlements, which have been committed to his Superintendence, the difficulties which are likely to occur in dealing with the remaining tálukas will be sensibly diminished. Even the short period during which I have held charge of the department has been sufficient to impress me with the extent to which its operations bear the impress of his experience, industry and zeal. These and the other valuable qualities of Colonel Godfrey it is unnecessary for me to commend to Government, who are fully aware of them. But I will venture to close with a warm acknowledgment of the loyal and ungrudging assistance which he has always given to myself."

### SUMMARY.

63. As usual I append a summary of the work of all the Surveys taken together, but excluding the Native States Survey, for reasons recorded in previous year's reports.

64. 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 ... ..	47,691	17,187	35,992	...	1,00,870
Deccan ... ..	28,856	8,858	30,496	6,822	75,032
Konkan ... ..	1,05,588	35,428	46,910	3,003	1,90,929
Total ... ..	1,82,135	61,473	1,13,398	9,825	3,66,831
Total for 1894-95 ...	1,98,873	51,608	1,18,789	17,286	3,86,556
Increase ... ..	...	9,865	...	...	...
Decrease ... ..	16,738	...	5,391	7,461	19,725

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

	1894-95.	1895-96.
	Rs.	Rs.
Phálni Establishment ... ..	3,491	7,675
Work in Bhor and Janjira States ...	6,654	4,608

In Gujarát the only head under which there is an increase is "the charge on account of the Survey Commissioner and his office." There is however a net decrease of Rs. 11,554 owing chiefly to (1) the lower pay of two officers, (2) diminished expenditure on travelling, contingencies, and boundary marks.

In the Deccan the debit on account of the Survey Commissioner is in excess of that in the previous year. In addition there is an increase under the head of pay of establishments on account of the additional hands forming Mr. Maconochie's Settlement Office while he was employed in that Survey. There is on the whole a decrease of Rs. 3,190, which is due to decrease of expenditure in contingencies, as also under pay of Superintendent and Assistant Superintendent. The decrease under the pay of Superintendent is due to the abolition of that post and the substitution of that of a Deputy Superintendent since the retirement of Mr. Turnbull. That under the pay of Assistant Superintendent is due to the appointment of Mr. Maconochie, I. C. S., Survey Settlement Officer, to the charge of the Gujarát Survey since April last.

In the Konkan Survey the charge on account of the Survey Commissioner is lower than last year, but a portion of the allowance due to Colonel Godfrey while officiating as Survey Commissioner appears to have been drawn by him

on return to the Konkan Survey, which has consequently been debited to that Survey and which accounts for the increase under "pay of Superintendent." There is also an increase of Rs. 1,577 under the head of pay of Assistant Superintendents owing to all three Assistant Superintendents being at their post and having drawn full pay and allowances during the year, whereas last year an officer on a lower grade acted for about 4 months in the absence of one of the Assistant Superintendents on leave. The net cost in British territory amounts to Rs. 190,929, or a net decrease of Rs. 4,981, owing chiefly to reductions in establishments and smaller expenditure on boundary marks. The Bhor State cost amounted to Rs. 3,940 and that in Janjira to Rs. 668. These sums will be recovered from the States. The cost of the Phalni establishment, which amounted to Rs. 7,675, will also be partly recovered from the occupants for whom the Phalni was done. On the whole the cost of the year under report is less by Rs. 19,725 than that in the previous year.

65. 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.
1894-95	...	...	...	6,402	4,212	13,459	24,073
1895-96	...	...	...	7,202	5,098	13,184	25,484
Increase	...	...	...	800	886	...	1,411
Decrease	...	...	...	...	...	275	...

The difference is due chiefly to increase under contingent expenditure of this office during the year under report.

66. 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.	
1894-95	...	...	...	629,002	983	Rs. 175
1895-96	...	...	...	864,994	1,352	111
Increase	...	...	...	235,992	369	.....
Decrease	...	...	...	.....	.....	64

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 1894-95.
	Acres.	Rs.	Rs.		Rs.	Rs.	Rs.
Gujarát.	410,793	47,691	73	8.09	3,858	68	122
Deccan...	246,162	28,856	77	35.80	10,330	48	101
Konkan	208,039	1,5,588	323	8.97	9,471	295	292
Total	864,994	182,135	135	17.62	32,092	111	175

While the outturn is larger by 369 square miles the cost per square mile has decreased by Rs. 64. The net cost in the case of the Konkan Survey shows a slight increase, which is due to the area requiring actual remeasurement during the year under report being greatly in excess of the similar area in the previous year.

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

Year.	Area classed.	Cost per Acre.		Cost per Square mile.
		Rs.	As. p.	Rs.
1894-95 ... ..	637,339	1	4	53
1895-96 ... ..	974,943	1	0	40
Increase .. ..	337,604	.....	.....	.....
Decrease ... ..	.....	0	4	13

Excluding Native States and Phálni establishment in both years.

Survey.	Area classed.	Cost per Acre.		Cost per Square mile.
		Acres.	A. p.	Rs.
Gujarát ... ..	219,911	1	3	50
Deccan ... ..	306,779	0	6	20
Konkan ... ..	448,253	1	3	50
Total ... ..	974,943	1	0	40

NOTE.—The above table excludes the work and cost of the Phálni establishment and Native States. The results as a whole are in favour of the year of report, there being a large increase in the area classified and a decrease of 4 pies in the average cost per acre. The variations in the different Surveys are fully explained in the remarks on each of them.

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

Survey.	Combined cost per Acre.	
	1894-95.	1895-96.
	As. p.	As. p.
Gujarát ... ..	4 5	3 1
Deccan ... ..	4 8	2 5
Konkan ... ..	9 8	9 4

Exclusive of Native States and Phálni establishment in both years.

69. 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, 1894-95.	Total cost, 1895-96.	Increase.	Decrease.
	Rs.	Rs.	Rs.	Rs.
Gujarát ... ..	112,424	100,870	.....	11,554
Deccan ... ..	78,222	75,032	.....	3,190
Konkan... ..	195,910	190,929	.....	4,981
Total ... ..	386,556	366,831	.....	19,725

Exclusive of Native States and Phálni establishment in both years.



The expenditure shows a decrease of Rs. 19,725 as against Rs. 14,395 in the previous year.

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

Survey.	Amount of settlement Jamabandi.	Average of past collections.	Increase.	
			Rupees.	Per cent.
	Rs.	Rs.		
Deccan ... ..	9,15,764	7,22,832	1,92,932	26·7
Konkan .. ..	2,30,418	1,67,815	62,603	37·3
Total ... ..	11,46,182	8,90,647	2,55,535	28·7

71. The call on the Survey Department for aid on behalf of other departments, though not quite so large as in the previous year, is still considerable. This assistance it is very difficult for the department, reduced in strength as it is, to give. The details shown below indicate that an equivalent of 44 men was employed on behalf of other departments as against 55 in the previous year :—

Survey.	REVENUE.		FOREST.		MUNICIPALITY.		NATIVE STATES.		MARATHA 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.
Gujarat... ..	...	...	1	3 27	1	12 0	1	2 4	...	...	3	18 1
Deccan ... ..	...	...	13	156 0	...	...	...	...	...	...	13	156 0
Konkan... ..	9	87 27	8	83 15	2	10 30	14	80 12	8	96 0	41	358 24
Total ... ..	9	87 27	22	243 12	3	22 30	15	82 16	8	96 0	57	532 25

72. 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 ... ..	13,16,781	15,18,425	2,01,644	15·3
Panch Mahals ... ..	1,10,427	1,11,934	1,507	1·4
Thána ... ..	3,64,507	5,23,359	1,58,852	43·6
Khândesh ... ..	23,55,321	30,75,493	7,20,172	30·6
Násik ... ..	7,96,322	10,60,470	2,64,148	33·2
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 ... ..	6,27,959	8,79,848	2,51,889	40·1
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 ... ..	1,40,33,344	1,83,33,342	42,99,998	30·6

A reference is invited to the remarks made in this connection in paragraph 73 of last year's report.

73. The following statement gives details of settlements introduced into inám and jághir villages with the sanction of the Survey Commissioner. It does not include the settlements introduced in the tracts being dealt with by the Marátha States Survey :—

Name of District.	Name of Taluka.	Number of Villages.	Nature of Settlement.	Old Collections.	Revised Assessment.	INCREASE.	
						Rs.	Per cent.
					Rs.	Rs.	
Thána ... ..	Bhiwndi ... ..	3	Original ... ..	725	1,518	793	109.4
Khándesh ... ..	Bhusavál ... ..	6	Revision ... ..	3,867	5,422	1,555	40.2
Násik ... ..	Peint ... ..	1	Original ... ..	294	486	192	65.3
Ahmednagar ... ..	Sangamner ... ..	1	Do. ... ..	1,433	1,308	-125	-8.7
Sátára ... ..	{ Sátára ... ..	6	} Revision ... ..	14,978	17,631	2,653	17.7
	{ Wái ... ..	4			5,426	7,301	1,875
Belgaum ... ..	Belgaum ... ..	2	Do. ... ..	808	1,069	261	32.3
Bijápur ... ..	Muddebiháľ ... ..	4	Original ... ..	9,058	10,786	1,728	19.1
Kurundvád, Vádi State	Kurundvád, Vádi.	2	Do. ... ..	1,901	2,640	739	38.8
Kurundvád, Senior ... ..	{ Kurundvád ... ..	8	Do. ... ..	26,934	29,538	2,604	9.7
	{ Angol ... ..	20	Do. ... ..	25,719	27,808	2,089	8.1
Miraj, Junior ... ..	{ Kurdi ... ..	3	Do. ... ..	11,410	11,362	-48	-0.4
	{ Kavtha ... ..	6	Do. ... ..	13,502	11,719	-1,783	-13.2
Bhor State ... ..	{ Rájgad ... ..	54	Do. ... ..	17,049	18,273	1,224	7.2
	{ Vichitrágad ... ..	40	Do. ... ..	11,543	12,573	1,030	8.9

### JUDI SETTLEMENT AND SCALE REMUNERATION.

74. During the year under report the "Judi Tharav" has been settled in 1,350 villages as compared with 1,216 of the previous year, and proposals for the revised scale remuneration have been prepared for 883 as against 805 in the previous year. The increase is satisfactory. The saving which incidentally follows the revised scale has amounted to Rs. 2,151 as compared with Rs. 3,435 in the last year. Regarding this a reference is solicited to the concluding remarks in paragraph 77 of last year's report. The usual table is given below:—

Name of Taluka.	Total Number of Villages	Revision Settlement year.	ARRIERS OF		Name of Taluka.	Total Number of Villages	Revision Settlement year.	ARRIERS OF			
			Judi Settlement.	Revised Scale Remuneration.				Judi Settlement.	Revised Scale Remuneration.		
1	2	3	4	5	1	2	3	4	5		
<b>Dhárwár.</b>					<b>Poona.</b>						
Navalgund ... ..	1	1886-87	1	1	Mával ... ..	7	1886-87 ... ..	1	2	7	
Total ... ..	1	.....	1	1			1887-88 ... ..	2			
<b>Bijápur.</b>							1888-89 ... ..	1			
Muddebiháľ ... ..	4	1896-97	4	4			1890-91 ... ..	1			
Total ... ..	4	.....	4	4	1894-95 ... ..	2	Khed ... ..	21	2		
<b>Belgaum.</b>					1888-89 ... ..	4					
Chikodi ... ..	4	1886-87	...	4	1889-90 ... ..	10					
Belgaum ... ..	6	{ 1888-89 ... 3 }	3	6	1890-91 ... ..	1	Sirúr ... ..	2	...		
Athni ... ..	1	{ 1891-92 ... 3 }	1	1	1895-96 ... ..	1					
Gokák ... ..	2	{ 1895-96 ... 1 }	2	2	1884-85 ... ..	2					
Total ... ..	13	.....	6	13	Purandhar ... ..	22	{ 1894-95 ... 21 }	21	22		
<b>Sátára.</b>					Haveli ... ..	124	{ 1895-96 ... 1 }	9	124		
Tásgaon ... ..	2	1888-89	...	2	Total ... ..	176	.....	55	155		
Khanápur ... ..	8	1891-92	5	8			<b>Ahmednagar.</b>				
Koregaon ... ..	70	{ 1892-93 ... 69 }	4	70			Shrigonda ... ..	1	1890-91	1	...
Wái ... ..	104	{ 1895-96 ... 1 }	5	104	Sangamner ... ..	1	1896-97	1	1		
Jávli ... ..	190	{ 1893-94 ... 100 }	76	190	Total ... ..	2	.....	2	1		
Sátára ... ..	130	{ 1896-97 ... 4 }	16	130	<b>Násik.</b>						
Pátan ... ..	126	{ 1894-95 ... 124 }	86	126	Chándar ... ..	6	1894-95	6	6		
Khatáv ... ..	1	{ 1896-97 ... 6 }	...	1	Niphád ... ..	3	1894-95	3	3		
Karád ... ..	77	1895-96	77	77	Yeola ... ..	8	1895-96	1	8		
Valva ... ..	107	1896-97	107	107	Peint ... ..	166	{ 1895-96 ... 79 }	1	166		
Total ... ..	815	.....	376	815	Nándgaon ... ..	45	{ 1896-97 ... 90 }	45	45		
					Total ... ..	228	.....	56	228		

Name of Táluka.	Total Number of Villages	Revision Settlement year.	ARREARS OF		Name of Táluka.	Total Number of Villages	Revision Settlement year.	ARREARS OF	
			Judi Settlement.	Revised Scale Remuneration.				Judi Settlement.	Revised Scale Remuneration.
1	2	3	4	5	1	2	3	4	5
<i>Khandesh.</i>					<i>Thána.</i>				
Amalner ... ..	150	1888-89	78	150	Murbád ... ..	170	1895-96	170	170
Erandol ... ..	70	1889-90	70	64	Kalyán ... ..	224		224	224
Jámner ... ..	25	1890-91	18	25	Bhiwndi ... ..	200	1896-97	200	200
Bhusaval ... ..	28	1890-91 ... 22 } 1896-97 ... 6 }	22	28	Total ... ..	594	.....	594	594
Jalgaon ... ..	110	1891-92	89	110	<i>Kolába.</i>				
Páchorá ... ..	217	1892-93	55	217	Karjat ... ..	6	1889-90 ... 1 } 1896-97 ... 5 }	5	6
Sindkhed ... ..	21	1892-93 ... 19 } 1894-95 ... 2 }	21	16	Panvel ... ..	244	1893-94 ... 242 } 1894-95 ... 2 }	...	244
Chálisgaon ... ..	129	1896-97	129	129	Pen ... ..	211	1894-95	...	211
Nandurbár ... ..	110		110	110	Alibág ... ..	199	1894-95	...	199
Total ... ..	860	...	592	849	Total ... ..	660	.....	5	660

75. Five junior Civilians were instructed either in measurement or classing or both. Two obtained the certificates both for measuring and classing, one for measuring only, and two for classing only. The revised scheme for training junior Civilians is under consideration and final proposals will shortly be submitted.

I have the honour to be,

Sir,

Your most obedient Servant,

J. W. P. MUIR-MACKENZIE,

Acting Survey Commissioner and Director,

Land Records and Agriculture,

Bombay.

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**PROGRESS REPORT**

OF THE

**GUJARÁT REVENUE SURVEY**

**For the Year ending 31st October 1896.**

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PROGRESS REPORT OF THE GUJARAT REVENUE SURVEY  
FOR THE YEAR 1895-96.

No. 168 OF 1897.

*Camp Chikhli, 17th February 1897.*

1. During the year under report this Survey was under the supervision of Mr. T. R. Fernandez up to the date of his retirement on the 9th of April 1896, when he was succeeded by Mr. E. Maconochie, I. C. S.

2. Mr. A. B. Fforde, Assistant Settlement Officer, was transferred to the Deccan Revenue Survey from the 16th January 1896, the charge of Linked Party No. I being made over to Mr. P. R. Mehta, Sub-Assistant Superintendent, and of the Settlement duties to Mr. H. D. E. Forbes, Assistant Superintendent.

3. From the 19th February 1896, on which date Mr. Fforde assumed charge of the office of Deputy Superintendent, Deccan Revenue Survey, Mr. H. D. E. Forbes was appointed Assistant Settlement Officer. From the 16th March to the 5th June 1896 his services were lent to the Morvi Darbár for the classification of the Adhoi State villages. His place, in charge of Linked Parties, was taken by Mr. H. V. Sáthe, Personal Assistant to the Survey Commissioner, who on his return reverted to his original appointment, until Mr. Forbes' retirement on invalid pension on the 3rd July 1896, when he again took over charge as acting Assistant Superintendent.

4. Mr. P. R. Mehta, Sub-Assistant Superintendent in charge of the D Establishment, was from the beginning of December 1895 attached to Mr. A. B. Fforde for the purpose of acquiring a practical knowledge of classification in the Surat District. On Mr. Fforde's transfer he was given charge of Linked Party No. I, and on Mr. Fforde taking over the appointment of Deputy Superintendent, Deccan Survey, he was gazetted acting Assistant Superintendent. In the meantime the charge of the D Establishment was given to A'zam Mohanlál Ishwar, Head Surveyor.

5. From the 12th February 1896 A'zam Chotalál Bhagwánlál was transferred from the charge of C Establishment to that of the Survey Daftardár's Office, relieving Ráo Sáheb Harilál Mulshankar, Survey Mámlatdár, who was placed in charge of the C Establishment. The latter officer was transferred to the Agricultural Department as District Inspector of Land Records, Kaira, from the 16th October 1896, his place being taken by the Zilla Surveyor of that district, A'zam Rájaram Venirám, under the designation of Head Surveyor.

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

6. The number of field establishments was six as in the preceding year. There were also the Deputy Superintendent's personal office and the head-quarter's office.

7. With a view to the early completion of survey operations, a further curtailment of work was effected under orders from the Survey Commissioner (No. S—137 of 17th January 1896) by making the foot-note to paragraph 1, Chapter III of the Gujarát Revision Measurement Rules applicable to all classes of land. These orders were given effect to from the 10th February, and from that date the A Measuring Establishment was converted into a Classing Establishment, and the D Mixed Classing and Measuring Establishment was put to measurement work only. At the close of the year there were 2 classing and 4 measuring establishments.

8. The average number of chains was 92 and of classers  $29\frac{1}{2}$ , the corresponding figures for the previous year being 81 and 26.

9. Measurement work was begun in Párdi on the 5th November, and classing in Chikhli on the same date. The field season closed on the 5th June in the case of the classing establishments, and on the 31st May in the case of 3

measuring establishments. The B Measuring Establishment closed field work on the 30th April under the circumstances hereafter stated.

#### MEASURING OPERATIONS.

10. The B, C, D and F Establishments were on measurement work throughout the year and the A Establishment for a part of the season as explained in paragraph 7 above.

#### Linked Party No. I.

11. The B Establishment was in charge of A'zam Jethálál Gulábchánd, Head Surveyor, throughout the year. It began work in Párdi, and after completing the revision measurement of 42 villages allotted to it, took up that of 40 villages in Bulsár, in which the work had been left uncompleted by the A, C, and D Establishments.

12. The C Establishment was in charge of A'zam Chotálál Bhagwánhal up to 11th February 1896, when Ráo Sáheb Harilál Mulshankar took over charge. On the latter's transfer to the Agricultural Department, Head Surveyor, Rájáram Venirám succeeded him. After completing 37 villages in Párdi and 26 in Bulsár, the establishment was transferred to Mándvi at the beginning of April and did the revision work of 26 villages in that táluka.

#### Linked Party No. II.

13. A Establishment was in charge of A'zam Chaganlál Dayáram up to the 10th of February, when on its conversion into a classing establishment, it was placed under A'zam Mohanlál Ishwar, A'zam Chaganlál going to D Establishment. It measured 22 villages of Bulsár.

14. A'zam Mohanlál Ishwar had charge of the D Establishment until relieved by A'zam Chaganlál Dayáram. The latter was granted privilege leave from the 18th March to the 20th May, and during his absence classer Keshavlál Pitamber acted as Nintandár in charge. The establishment began work in Bulsár, in which táluka it measured 8 villages. It was transferred to Mándvi from the middle of February, and completed the revision measurement of 39 villages. The Inámi village of Memnagar in Daskroi Táluka of Ahmedabad was also measured and classed in the course of the season by a classer specially deputed from this establishment.

15. The F Establishment was in charge of A'zam Vaijnáth Dinánath up to the time of his retirement on the 10th October 1896, from which date classer Keshavlál Pitamber was given charge as sub. *pro-tem*. Head Surveyor. The establishment accounted for 16 villages in Jalálpur, 1 in Chikhli, and 36 in Mándvi.

16. Subjoined is an abstract of Appendix No. I, showing the amount of measurement work of the year under report as compared with that of the preceding year:—

Letter of Establishment.	1894-95.				1895-96.			
	Average number of hands.	Survey Numbers, including Pot Numbers.	Vaslas.	Acres.	Average Number of Hands.	Survey Numbers, including Pot Numbers.	Vaslas.	Acres.
A ...	15	3,416	18,428	14,644	10 $\frac{3}{4}$	6,886	65,870	4,374
B ...	21	11,097	137,986	10,048	20 $\frac{1}{4}$	8,038	89,404	5,257
C ...	21	11,997	131,148	9,030	21 $\frac{1}{2}$	8,613	101,311	8,181
D ...	2 $\frac{1}{4}$	925	13,093	4,568	22 $\frac{1}{4}$	9,810	91,714	8,751
F ..	21 $\frac{1}{2}$	8,558	74,619	9,402	17 $\frac{1}{4}$	5,183	54,862	6,216
Total ...	80 $\frac{3}{4}$	35,993	375,274	47,692	92	38,530	403,161	32,779

17. From this statement it will be seen that with an increase of 11 in the number of measurers over that of the preceding year, there was an increase of 2,537 and 27,887 respectively in the number of survey numbers and waslas, and a decrease of 14,913 in the number of acres. Taking waslas as the test of work, these results appear to be satisfactory. The decrease in the acreage is partly due to the smallness of individual fields dealt with, and partly to the introduction of the curtailed system. The difficulties that usually arise in a táluka with an unhealthy climate and sparse population were encountered in Mándvi, but the ordinary revision work was completed before the close of the season, and considerable assistance was afforded to the Forest Settlement Officer, Mr. Wood, in his work of revising the forest areas of the táluka. This special work was the subject of correspondence between the Deputy Superintendent and the Survey Commissioner at the time, and consisted chiefly in the measurement of odd pieces of cultivated land in numbers proposed for exclusion from or inclusion in forest areas. The number of measurers employed on this special work was about 20, and the average period of their employment twenty days.

18. The following statement shows the cost per acre of the measurement operations. The average cost for all parties in the preceding year was Re. 0-3-4, excluding the area confirmed the cost per acre was Rs. 1-7-3 :—

Estab-lish-ment.	Average number of hands.	Name of Head Surveyor.	Táluka.	Confirmed Acres.	Re-measured Acres.	Total Acres.	Average Cost of measurement per Acre.			
							Rs.	a.	p.	
A ...	10½	A'zam Chaganlál ...	Bulsár ...	16,071	4,374	20,445	0	4	8	
B ...	20½	A'zam Jethálál... {	Párdi ...	50,490	3,614	54,104	}	0	1	7
		Bulsar ...	Bulsar ...	54,113	1,643	55,756				
C ...	21½	A'zam Chotalál ... {	Párdi ...	60,979	4,354	65,333	}	0	1	4
		Ráo Sáheb Harilál... {	Bulsár ...	49,899	1,208	51,107				
			Mándvi ...	24,393	2,619	27,012				
D ...	22½	A'zam Chaganlál ... {	Bulsár ...	15,592	3,220	18,812	}	0	2	8
			Mándvi ...	41,922	5,402	47,324				
			Daskroi ...	...	129	129				
F ...	17½	A'zam Vajnáth ... {	Jalálpor ...	18,860	1,538	20,398	}	0	1	11
			Chikhli ...	3,787	344	4,131				
			Mándvi ...	41,908	4,334	46,242				
				373,014	32,779	410,793	0	1	10	

#### CLASSIFICATION OPERATIONS.

##### *Linked Party No. I.*

19. The A Establishment was transferred to Linked Party No. I from 10th February in place of the C Establishment, and remained under the charge of A'zam Mohanlál Ishwar for the remainder of the season. It completed the re-classification of 11 villages in Chikhli, 39 in Jalálpor and 7 in Bulsár.

20. A'zam Bápalál Purshotam held charge of the E Establishment throughout the year. Work was begun in Chikhli, and after completing the revision classification of 49 villages, the establishment went to Jalálpor, where it finished 45 villages. One village of Bulsár was taken up at the end of the season.

##### *Linked Party No. II.*

21. A classer was detailed from the D Establishment to classify the land of the Inámi village of Memnagar in Daskroi Táluka of Ahmedabad, and his work was subsequently tested by A'zam Chaganlál, who was on leave in the district.

22. The subjoined statement shows the work of the year under report as compared with that of the preceding :—

1894-95.						1895-96.					
Average number of hands.	Total Survey Numbers.	Total Acres.	Average area per Survey Number.	Average daily outturn per Classer in		Average number of hands.	Total Survey Numbers.	Total Acres.	Average area per Survey Number.	Average daily outturn per Classer in	
				Numbers.	Acres.					Numbers.	Acres.
26	36,309	148,016	4.00	15	61	29½	71,989	88,767	1.23	21	26

As in the case of measurement, there is a large increase in the total of survey numbers, and diminution of acreage owing to the decrease in the average area of the fields dealt with. The average daily outturn, it will be seen, exceeded the rate of 20 numbers required under the rules.

23. The cost per acre of classification work is shown in the following statement:—

Estab-lishment.	Average number of hands.	Name of Head Surveyor.	Táluka.	Fields reclass- ed.	Confirmed Acres.	Acres reclassified.	Total Acres.	Average area per Survey Number.	Average cost per Acre.
									Rs. a. p.
A	8½	A'zam Mohanlál ...	Chikhli ...	3,448	14,130	5,433	19,563	1.58	} 0 1 1
			Jalápur ...	11,591	22,180	13,371	35,551	1.15	
			Bulsár ...	4,700	6,787	4,681	11,468	0.99	
D	½	A'zam Chaganlál ...	Daskroi ...	257	...	498	498	1.94	0 2 0
E	2¼	A'zam Bápál ...	Chikhli ...	30,606	44,892	38,573	83,465	1.26	} 0 1 4
			Jalápur ...	21,173	43,053	25,883	68,936	1.22	
			Bulsár ...	214	102	328	430	1.53	
		Total ...		71,989	131,144	88,767	219,911	1.23	0 1 3

#### Test of Measurement.

24. The measuring work of the A Establishment was tested by A'zam Chaganlál. The number of villages measured was 22, and of those tested 25, the excess being due to the fact that 4 villages, in 3 of which tests were taken, were not completed by the establishment. 606 fields were tested, divided into 4,870 waslas, and measuring 275 acres. The percentages were: on fields 9, on waslas 7½, and on acres 6¼; whilst the average difference was 0.12 gunthas. The test was therefore slightly short, the reason being that A'zam Chaganlál was transferred at short notice to Mándvi. The deficiency was however made up by A'zam Jethálál. The smallness of the average difference is very satisfactory.

25. A'zam Jethálál Gulábchand tested the work of B Establishment. He took test in 76 villages out of 82 completed by his own establishment and in 7 villages measured by the A Establishment. His record shows 1,177 fields, divided into 9,328 waslas, and measuring 611 acres. His percentages of test were: on fields 14½, on waslas 10½, and on acres 11½; whilst the average difference between the original and test acres was 33 gunthas. These figures are all satisfactory.

26. A'zam Chotálál and Ráo Sáheb Harilál tested the work of the C Establishment. Test was taken in 80 villages out of 89 measured. 891 fields were tested, divided into 8,474 waslas, and measuring 623 acres. The percentages of test were: on fields 10¼, on waslas 8¼, and on acres 7½; whilst the average difference was 1 acre 10 gunthas. The last figure is higher than in the other parties, but taken all round the results shown are satisfactory.

27. A'zams Mohanlál and Chaganlál tested the work of the D Establishment. 48 villages were measured by the establishment, whilst tests were taken in 51. The reason for the excess is the same as shown in paragraph 25. 1,015



fields tested were divided into 7,859 waslas, and measured 620 acres. The percentages were on fields  $10\frac{1}{2}$ , on waslas  $8\frac{1}{2}$ , and on acres 7; whilst 29 gunthas was the average difference. The test was therefore satisfactory.

28. The work of the F Establishment was tested by A'zam Vaijnáth. He took tests in 48 villages out of 53, in 583 fields, which were divided into 4,780 waslas, and measured 336 acres. His percentages were: on fields 11, on waslas  $8\frac{1}{2}$ , and on acres  $5\frac{1}{2}$ ; whilst the average difference was 16 gunthas. The test may be considered satisfactory.

29. It appears, therefore, that all the Head Surveyors took the test required with the exception of A'zam Chaganlál, and in his case there is sufficient explanation. A'zam Jethálál's returns are better than any of the others; he is one of the most experienced of the Head Surveyors, is well reported of by the officers in charge of parties, and is entitled to credit for the manner in which he has discharged his duties generally during the year. In the case of the other Head Surveyors the figures point to a tendency to choose numbers of small area containing few waslas. As regards A'zam Vaijnáth failing health rendered this excusable, but in the other cases the percentages on waslas and acres might perhaps be higher. The Head Surveyors have however worked well on the whole and discharged their duties satisfactorily.

30. The following statement shows the test taken by the officers in charge of linked parties:—

Name of Officer.	Letter of Establishment.	Nature of test.	Fields.	Waslas.	Acres.	Difference between test and tested area.	PERCENTAGE.	
							Numbers.	Acres.
						A. g.		
Messrs. Fforde and Mehta.	B	On Head Surveyor ...	66	575	36	0 16	5.60	5.89
		On Measurers ...	61	617	35	0 12	0.75	0.66
Messrs. Fforde, Mehta and Sáthe.	C	On Head Surveyor ...	86	817	29	1 7	9.65	4.65
		On Measurers ...	65	714	43	0 24	0.75	0.52
Mr. Forbes ...	A	On Head Surveyor ...	40	295	15	0 31	6.50	5.45
		On Measurers ...	36	244	14	0 9	0.52	0.32
Messrs. Forbes and Sáthe.	D	On Head Surveyor ...	56	427	42	0 11	5.52	6.77
		On Measurers ...	30	219	11	1 1	0.30	0.12
Ditto. ...	F	On Head Surveyor ...	68	565	28	1 5	11.66	8.33
		On Measurers ...	67	590	31	0 29	1.29	0.50

The work of the season was a good deal interfered with by changes and transfers of officers. More than a month was spent by Mr. Forbes at head-quarters in February and March owing to sickness, prior to his transfer to Morvi, and the test of the work of his charge suffered accordingly, as appears from the record of the A and D Establishments. Much of the work in Mándvi was of a simple nature, such as the conversion of existing pot numbers into survey numbers and the alteration of boundary-marks in that connection. This was a simple operation and no very elaborate test was required from the officer in charge of the party. On the whole the test appears to have been sufficient and properly distributed. Messrs. Mehta and Sáthe both worked energetically, and exercised a close supervision over all branches of their work.

31. The amount of boundary-marks inspection made by the officers was as under:—

Establishment.	Head Surveyor.	INSPECTION OF BOUNDARY-MARKS.	
		Survey Numbers.	Acres.
A	A'zam Chaganlál ...	592	321
B	A'zam Jethálál ...	1,226	744
C	Ráo Sáheb Harilal and A'zam Chotálál ...	618	536
D	Mr. Mehta and A'zam Mohanlál ...	434	288
F	A'zam Vaijnáth ...	275	138

*Test of Classification Operations.*

32. The test of the work of A Establishment was taken by A'zam Mohanlál Ishwar. He took tests in all the 57 villages re-classed by the establishment. The number of fields was 3,279 measuring 3,091 acres. The percentages of tests were: on fields  $16\frac{3}{4}$  and on acres  $13\frac{1}{4}$ ; whilst the average difference per cent. between the classification annas of Head Surveyor and classers was 1.44 pies.

33. The work in the one village of Daskrohi by a classer of the D Establishment was tested by A'zam Chhaganlál. He tested 33 fields measuring 37 acres, or  $12\frac{3}{4}$  per cent. of the numbers and  $7\frac{1}{2}$  per cent. of the acres. There was apparently no difference between his and the classer's annas.

34. A'zam Bápálál took the test of the E Establishment. Tests were taken in each of the 95 villages completed by the establishment. 7,953 numbers were tested measuring 5,045 acres. The percentages of test were: on fields  $15\frac{1}{8}$  and on acres  $7\frac{3}{4}$ ; whilst 0.70 pies represented the difference per cent. on the annas.

35. A'zam Mohanlál's work has been very satisfactory and has justified his promotion to the responsible position of Head Surveyor. A'zam Bápálál has maintained his reputation as an able and indefatigable worker.

36. The following statement shows the test by officers in charge of linked parties:—

Name of Officer.	Estab- lishment.	Nature of Test.	FIELDS.		Area.	AVERAGE DIFFER- ENCE OF RATE PER FIELD BETWEEN ORIGINAL AND TEST CLASSIFI- CATION.		PERCENTAGE.	
			Soil.	Water.		Soil.	Water.	Number.	Area.
						A. p.	A. p.		
Mr. Mehta ...	A.	Head Surveyor .	386	333	335	0 0.10	0 0.18	11.77	10.83
		Classers ...	277	263	239	0 0.54	0 1.21	1.40	1.02
Messrs. Fforde and Mehta.	E.	Head Surveyor .	790	688	521	0 0.21	0 0.32	9.93	10.32
		Classers ...	624	557	465	0 1.28	0 1.06	1.20	0.72

37. The amount of obligatory office work entailed during the field season by the loss of records by fire and by miscellaneous work was as follows:—

*Measuring Establishments.*

- (1) The copying into the new books of details saved from the fire of 5,378 survey numbers as compared with 12,259 numbers in the preceding year.
- (2) Comparing the entries of 419 numbers as compared with 7,843 numbers in the preceding year.

*Classing Establishments.*

- (1) Measurement of new rice discovered at the time of classification to the extent of 1,374 numbers measuring 595 acres. This was of course field work, but not being classing is included for convenience sake under the other head.
- (2) Copying into the new books from the charred classing books details of 3,160 numbers. The figure for the preceding year was 26,473 numbers.
- (3) Comparing the entries of 3,008 numbers.
- (4) Entry in the classing books of the details of 11,564 numbers not dealt with at the time of revision.

38. The subjoined abstract from Appendix No. I shows the percentage distribution of days of the measuring establishment for the past year as compared with the same details of the year preceding :—

		1894-95.	1895-96.
<i>Working days.</i>			
Field measurement ...	...	48.92	50.06
Boundary-mark inspection ...	...	7.90	8.09
Accompanying testing officer ...	...	4.55	4.18
Office work ...	...	14.94	13.23
Total ...		76.31	75.56
<i>Non-working days.</i>			
Sickness ...	...	4.74	5.44
Villagers not co-operating ...	...	2.75	2.98
Rain ...	...	0.26	...
Travelling ...	...	4.07	8.88
Leave and holidays ...	...	11.87	12.14
Total ...		23.69	24.44
Grand Total ...		100	100

39. The figures show a trifling variation from those of the preceding year. The increase under the head of "Sickness" was due to the trying climate of Mándvi and the terror that it inspires. No subordinate of any department stays a day longer in that táluka than he is obliged, and some difficulty was experienced in keeping the men to work. Cases of malingering were however suitably dealt with, and there is no reason to believe that leave was granted unnecessarily. The slight increase under the head of "Leave" was due to the rush of marriages prior to the year of pilgrimages. In the more sparsely populated parts of Mándvi some loss of time unavoidably occurred, owing not so much to the refusal of villagers to co-operate as to their non-existence. The percentage of office work, though less than in the preceding year, is still high. In addition to the work shown in paragraph 37 there were certain items, in some cases of out-door work, other than measurement, causing loss of time which, for want of a more convenient heading, is attributed to office work. Thus 300 days were lost in preparing statements showing the difference between original and revision measurements, for the purpose of ascertaining whether the old measurements were sufficiently correct to admit of curtailment of revision. 500 days were occupied by measurers in pointing out the position of boundary-marks in numbers not re-measured. 200 days were spent in verifying the statements received from the táluka authorities of revision work required. 800 days were spent in copying details of numbers from Village Form No. I into the revision measurement books. The high percentage of office work in this Survey is simply due to the work entailed by the destruction of the records. The proportion of days spent in the districts was 58.98 as against 53.70 in the preceding year.

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

	1894-95.	1895-96.
<i>Working days.</i>		
Field classification ... ..	48·03	60·74
Boundary-mark inspection ... ..	...	...
Accompanying testing officer ... ..	10·27	6·05
Office work ... ..	13·18	14·32
Total ...	71·48	81·11
<i>Non-working days.</i>		
Sickness ... ..	2·64	0·33
Villagers not co-operating ... ..	2·50	1·65
Rain ... ..	0·34	0·98
Travelling ... ..	7·57	4·07
Leave and holidays ... ..	15·47	11·86
Total ...	28·52	18·89
Grand Total ...	100·0	100·00

The working days show a satisfactory increase, no time being lost as in the preceding year through departmental difficulties. Office work shows a slight increase, the cause of which is explained in part in paragraph 37. 225 days lost in training 17 new classers on the formation of the second classing party are also included in the percentage under the head of "Office work." All the non-working day figures show decreases and call for no remark. The percentage proportion of days spent in the districts was 61·11 as compared with 58·04 in 1894-95.

41. The following statement shows the number and nature of deputations of subordinates during the year :—

Department to which deputed.	Number of men.	Period of Deputation.		Length of absence. Y. m. d.
		From	To	
Forest Department, Surat ...	1	23rd January 1896 ...	18th May 1896 ...	0 3 27
City Survey, Surat ... ..	1	1st November 1895 ...	31st October 1896.	1 0 0
Morvi State ... ..	1	2nd April 1896 ...	5th October 1896 .	0 2 4

42. In Appendix No. III are given the details of boundary-mark inspection in the villages in which measurement was completed during the year.

43. Appendix IV shows the progress of monsoon office work for the measuring establishments. It will be seen that the papers of all the villages were completed.

44. Appendix VII gives the same information for classing establishments. The papers of all villages except 8 of Bulsár were completed during the recess. The completion of the work however involved the retention of the classing daftars at head-quarters during the greater part of November, and to avoid further delay and for general convenience the Bulsár villages were left over till next season, when the rest of the taluka will be disposed of.

45. Appendix VIII shows the number of maps sent to the Photozinc Office during the year. Copies of one map only were received in return. The charges in connection with this and other miscellaneous work amounted to

Rs. 15.4 as compared with 2348.1 in the previous year. The Kaira maps have been received since the close of the year. The total number of forms printed for this Survey amounted to 135,810 against 345,980 in the year 1894-95, and the cost was respectively Rs. 3,793-3-0 and Rs. 9,833-14-0, showing a decrease in the year under report of 6,040-11-0. 957 maps were mounted on cloth and supplied to the Táluka and Village officers. The number of revision tracings supplied to the Táluka authorities was 228.

46. Appendix No. IX shows the total cost of the Survey for the year under report and a decrease of Rs. 11,554 on the figures of the preceding year. The pay of the Survey Commissioner is the only head under which there is an increase. The decrease in the pay of Assistants is due to the transfer of Mr. A. B. Fford, the retirement of Mr. H. D. E. Forbes, and the succession of officers on lower pay. The decrease under the head of "Establishments" is due to the fact that from the 19th February Mr. Mehta's pay, which had been debited to that head, came under that of Assistant Superintendents. The decrease in contingent charges of Rs. 4,601 is due to revision operations being confined to one district only, and consequent decrease of travelling. The decrease of Rs. 2,117 on account of boundary-marks is due to the smaller number erected under the curtailed system.

47. In Appendix X is shown the total cost of the Survey for each year since 1851-52, and the average cost of measurement and classification per acre. Taking the acres actually measured and classed the rates work out to Rs. 1-7-3 and Re. 0-3-1 respectively, as compared with Rs. 1-0-8 and Re. 0-2-3 for the previous year. The cause of increase on account of measurement was the smaller outturn of area, partly owing to decrease in the area of individual numbers and partly to the adoption of the curtailed system which resulted in fewer numbers being measured, in the work being completed sooner than was anticipated, and in the withdrawal of B. party to head-quarters at the beginning of May as there was no more field work for it to take up. The increase on account of classification was due to decrease in the size of individual numbers. If confirmed numbers be included, the measurement figures for the year under report show a considerable decrease and the classification figures a slight increase. They are as follows:—Measurement, 1894-95, Re. 0-3-4; 1895-96, Re. 0-1-10. Classification, 1894-95, Re. 0-1-1; 1895-96, Re. 0-1-3.

48. 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.
750 15 6	347 13 9	403 1 9

#### *Settlement Operations.*

49. Proposals for the revision settlement of 3 tálukas of the Surat District, Chorási, Olpád and Bárdoli, were submitted to Government by Mr. Fernandez through the usual channel. The sanction of Government was not, however, received in any case, and in consequence no steps were taken towards the introduction of revised rates. The guarantee expired in Chorási in 1894-95, and in Bárdoli in 1894-95. In Olpád the lease runs till 1898-99. Proposals were also submitted for the revision settlement of the Inámi village of Watwa in the Daskroi Táluka of Ahmedabad. Proposals for the survey settlement of the Mehlool and for the valuation settlement of the Limdi-Golana, Tálukdári Estates in the Panch Maháls, were prepared by Mr. P. R. Mehta, Acting Assistant Superintendent, and submitted for sanction. Mr. H. D. E. Forbes, Assistant Settlement Officer, submitted proposals for the survey settlement of Kanjri-Ravalia, and the valuation settlement of Bhamarya Sonipur, all Tálukdári

Estates of the Panch Maháls. The results of these settlements are shown in the subjoined statement :—

Collectorate.	Táluka.	Number of villages.	Total Acres.	Assessed Acres.	Previous year's Collections.	Assessment according to revised rates.	Increase or decrease.
						Rs.	Rs.
Surat	Bárdoli ... ..	138	142,062	125,926	4,27,751	4,67,150	+44,399
		70	55,138	41,13	1,73,344	1,83,029	+9,685
		135	202,263	130,682	5,32,906	5,08,120	-24,786
		343	399,463	297,746	11,29,001	11,58,299	+29,293
Ahmedabad	Daskroi ... .. Inámi Village Watwa ... ..	1	3,927	3,635	13,326	15,360	+2,034
		75	58,798	47,174	18,751	33,871	+782
Panch Maháls	Hálol (Táludári Estate) ... .. Godhra (Mehlol Estate) ... .. Jhálol (Limdi and Golana Estate) ... ..	27	27,155	7,072	10,042	10,470	+428
		14	31,913	22,027	14,510	18,228	+3,718

50. The following statement shows the expenditure of this Survey for the year under report under each of the heads (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 ... ..	39,101	14	9	8,589	4	8	47,691	3	5
2. Classification ... ..	14,091	15	9	3,095	8	1	17,187	7	10
3. Settlement ... ..	17,104	14	0	18,886	12	8	35,991	10	8
4. Miscellaneous ... ..	.....			.....			.....		
Total ... ..	70,298	12	6	30,571	9	5	1,00,870	5	11
5. Deputy Superintendent's salary and expenses of his office.	23,369	9	5	.....			.....		
6. Proportion of Survey Commissioner's office and his salary.	7,202	0	0	.....			.....		
Deduct—	30,571	9	5	.....			.....		
Cost of the Táludári Survey ... ..	.....			.....			3,271	14	1
Total ... ..	.....			.....			97,598	7	10

51. The financial results of the Gujarát Revenue Survey in kbálsa 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.	1895-96.						
		Rs. a. p.	Rs. a. p.						
Ahmedabad	Dholka ... ..	1,87,766	13 5	2,10,928	5 5	23,161	8 0	2,21,501	4 9
	Dhandhuka ... ..	55,225	14 1	71,247	5 0	16,021	6 11	1,04,269	2 2
	Daskroi ... ..	3,34,666	12 6	3,96,367	3 0	61,700	6 6	3,80,160	15 5
	Virangám ... ..	1,63,643	1 0	2,03,973	9 6	40,330	8 6	2,60,393	12 11
	Parántij ... ..	1,23,459	14 4	1,30,407	10 4	6,947	12 0	65,806	0 6
	Sánand ... ..	1,46,420	5 2	1,51,969	8 0	5,549	2 10	44,066	10 10
Kaira	Mátar ... ..	2,65,370	7 9	2,73,178	3 7	7,807	11 10	29,691	15 3
	Mehmadabad ... ..	2,31,417	5 0	2,46,623	11 0	15,206	6 0	49,191	15 0
	Borsad ... ..	3,29,080	4 0	3,47,570	15 0	18,490	11 0	18,490	11 0
	Nadiád ... ..	3,44,640	14 0	3,69,216	15 0	24,576	1 0	24,576	1 0
	Thásra ... ..	2,01,366	2 2	2,12,544	6 0	11,178	3 10	11,178	3 10
	Kapadvanj ... ..	1,54,767	12 0	1,55,170	7 0	402	11 0	402	11 0
A'nand ... ..	3,63,682	2 0	3,93,462	8 0	29,780	6 0	29,780	6 0	
Total ... ..	29,01,497	11 5	31,62,860	10 10	2,61,162	15 5	12,39,499	13 8	

52. During the year no junior Civilian was attached to either measuring or classing establishments of this Survey.

53. Mr. Fernandez began his tour in the east of Jalálpor, where measurement work was going on. At the beginning of December he went into the Chikhli Táluka and inspected the classification work then in progress. The Survey Commissioner was also in Chikhli the greater portion of the month. From the beginning of January to the middle of February the Deputy Superintendent was occupied in acquainting himself with the condition of villages in the Bulsár Táluka. From the 13th February to the time of handing over charge he was at head-quarters preparing settlement proposals for the Chorási and Olpád Tálukas. Mr. Maconochie was in the Chikhli Táluka from the 23rd of April to the 17th of May and from the latter date up to the end of May in Jalálpor Táluka, inspecting villages with a view to the preparation of settlement proposals.

54. Mr. T. R. Fernandez retired after 30 years' service in the Department, during 7 of which he held the office of Deputy Superintendent. His services were acknowledged by His Excellency in Council in Government Resolution No. 6839, dated 29th August 1896. Azam Vaijnáth Dinánáth retired on the 10th October after nearly 37 years' service in the Department, and it is to be regretted that the illness with which he had had to contend ever since working in Mándvi terminated fatally shortly after. The late Head Surveyor bore an exemplary character, and Government has lost in him a most faithful and honest servant.

E. MACONOCHE,  
Deputy Superintendent, Gujarát Revenue Survey.

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**PROGRESS REPORT**

OF THE

**KONKAN REVENUE SURVEY**

**For the Year ending 31st October 1896.**

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PROGRESS REPORT OF THE KONKAN REVENUE SURVEY FOR  
THE YEAR ENDING 31st OCTOBER 1896.

No. 229 OF 1897.

Konkan Survey Superintendent's Office,  
Kolába District's,  
Camp Surav, 18th February 1897.

*Changes and Promotions.*

Colonel C. W. Godfrey, Superintendent, Konkan Revenue Survey, held charge of this Survey for the whole year with the exception of the periods mentioned below, during which he was appointed to act as Survey Commissioner and Director, Land Records and Agriculture, by Government Resolutions Nos. 3999 and 5615 of 19th May and 18th July 1896, respectively :—

From 20th May 1896 to 21st June 1896,  
and

From 24th July 1896 to 31st October 1896.

2. While Colonel Godfrey was employed, as stated above, Mr. E. H. Hearn, Deputy Superintendent, Konkan Revenue Survey, was appointed to act as Superintendent by Government Resolutions quoted in the above paragraph. Mr. Hearn acted as Superintendent, Konkan Revenue Survey, from 1st to 21st June 1896, and again from 24th July 1896 to 31st October 1896.

3. Mr. E. H. Hearn, Deputy Superintendent, Konkan Revenue Survey, was allowed to draw the increased pay at Rs. 910 per mensem from the 26th February 1896 by Government Resolution No. 3599 of 4th May 1896.

4. Mr. A. G. Hudson, Assistant Superintendent, Konkan Revenue Survey returned before the expiration of two years' furlough granted to him by Government Resolution No. 8907 of the 30th October 1894. He received charge of the Supervising Office of the "B" Classing and "C" Measuring Establishments. He was appointed to act as Assistant Settlement Officer by Government Resolution No. 2683 of 26th March 1896, and was confirmed by Government Resolution No. 5613 of 18th July 1896. He was appointed to act as Deputy Superintendent, Konkan Revenue Survey, while Mr. Hearn acted as Superintendent in accordance with orders contained in Government Resolutions quoted above in paragraph 1.

5. Mr. W. D. Wilkins, Assistant Superintendent, Konkan Revenue Survey, was appointed to act as Assistant Settlement Officer by Government Resolution No. 5810 of 24th July 1896. He acted as Assistant Settlement Officer from 24th July 1896 to 31st October 1896.

6. Mr. J. A. McIver, Assistant Superintendent, Konkan Revenue Survey, was granted privilege leave by Government Resolution No. 2820 of 31st March 1896. He proceeded on leave from the 8th April 1896 and returned to duty on the 1st June 1896.

7. Mr. J. A. McIver, Assistant Superintendent, Konkan Revenue Survey, was appointed to take charge of the Office of the Forest Settlement Officer, Thána, in addition to his own duties, by Government Resolution No. 6626 of 24th August 1896.

8. Mr. Mahádeo Hari Paránjpe, late Head Kárkún, Dáhánu Táluka, has been appointed Survey Mámlatdár in this Survey by the Survey Commissioner and Director, Land Records and Agriculture—*vide* his Memo. No. <sup>s</sup><sub>2824</sub> of 26th November 1895. He took charge of the "E" Measuring Establishment on the 17th December 1895, in the forenoon.

9. The continuance of the Phalni Establishment was sanctioned by Government Resolutions Nos. 10217 of 26th December 1895 and No. 7905 of 8th October 1896, but in anticipation of Government sanction, the Phalni Establishment recommenced work on the 14th November 1895 in the Murbád Táluka of the Thána Collectorate, in accordance with instructions contained in Memorandum No. <sup>s</sup><sub>2586</sub> of 28th October 1895, from the Survey Commissioner and Director, Land Records and Agriculture. A detailed report on the working of

this establishment was made by the Survey Mámálatdár and was forwarded with this office No. 1357 of 15th September 1896, to the Survey Commissioner and Director, Land Records and Agriculture. The work performed by this establishment is shown, as is customary when Phalni is done, under the head of Classification.

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

10. The number of field establishments employed during the year has been

Letter of Establishment.	Measurers.	Classers.
A ... ..	21	...
B ... ..	...	16
C ... ..	24	...
D ... ..	21	...
E ... ..	21	...
F ... ..	23	...
G ... ..	21	...
H ... ..	22	...
I ... ..	...	22
K ... ..	...	17
City Survey ... ..	3	...
Total ... ..	156	55

11, inclusive of the Phalni Establishment, the same number as in the preceding year. 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 number of the establishments is the same as last year, there is a decrease in the number of measurers and a slight decrease in the number of classers. The decrease in the number of measurers is due to the nine measuring establishments being at work up to the end of March 1895 during last year, while only seven measuring estab-

lishments were at work throughout the year under report. There is a decrease of three classers for field work, one died in the month of November 1895, and two were employed at the Head-quarter Office on correction work.

11. The field season of the establishments commenced on dates varying from 8th to 12th November 1895, according to the distances each had to travel from Poona. The field work of all the establishments which were working in the Mahád Táluka was closed on the 23rd May 1896, and of those which were working in the Sháhápur Táluka in the first week of June 1896, that is, after completing the whole field work in that táluka, the above dates for closing field work being sanctioned by the Survey Commissioner and Director, Land Records and Agriculture—*vide* his No.  $\frac{8}{1046}$  of 4th May 1896.

*Measuring Operations.*

12. Of the 10 establishments 7 were purely measuring and 3 classing. 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.

13. 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 Mámálatdár or Nímálatdár in charge of Establishment.	MEASURED.			Average cost of Measurement per Acre.
				Fields.	Vaslas.	Acres.	
1	2	3	4	5	6	7	8°
A ...	21-60	Mr. Wilkins ... ..	Messrs. Padmákar Janárdan and Bábúráo Yeshwant.	7,880	22,001	29,192	0 9 2
	21-0	Do. ... ..	Mr. Bábúráo Yeshwant ... ..	9,852	21,775	27,870	0 10 1
C ...	22-72	The Superintendent and Mr. McIvor,	Mr. Laxuman Vásudeo ... ..	10,537	27,865	28,804	0 6 9
	24-18	Messrs. Hearn and Hudson.	Messrs. Gangádhár Nílkant, Sadáshiv Amrut and Laxuman Vásudeo.	13,960	11,735	38,611	0 4 9
D ...	21-84	Mr. Wilkins ... ..	Mr. Trimbak Pándurang ... ..	11,404	17,598	33,318	0 5 9
	21-49	Do. ... ..	Mr. Náráyan Bhikáji ... ..	13,088	16,691	29,879	0 7 9

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

Establishment.	Average number of men.	Name of Supervising Officer.	Name of Head Surveyor or Survey Māmlatdār or Nīmtandār in charge of Establishment.	MEASURED.			Average cost of Measurement per Acre.
				Fields.	Vaslas.	Acres.	
1	2	3	4	5	6	7	8
E ...	22-88	Messrs. Cole and McIver.	Mr. Rāmhandra Vināyak ...	8,600	28,328	25,404	0 10 5
	21-23	Messrs. Hudson. McIver and	Messrs. Anant Nārāyan and Mahādeo Hari.	9,170	43,600	24,635	0 10 8
F ...	21-14	Messrs. Cole and McIver.	Mr. Wāman Chintāman ...	13,020	19,828	28,979	0 8 5
	23-13	Messrs. McIver and Hudson.	Messrs. Rāmhandra Vināyak, Gangādhār Nilkanth and Anant Nārāyan.	10,185	29,698	26,409	0 8 5
G ...	22-35	Mr. Wilkins ...	Messrs. Mānkeshwar Gopāl, Nārāyan Bhikāji and Anant Nārāyan.	7,157	54,582	24,882	0 9 10
	20-95	Do. ...	Mr. Trimbak Pāndurang.	9,525	55,432	34,975	0 7 1
H ...	21-95	Messrs. Cole and McIver.	Mr. Sadāshiv Rāmhandra ...	7,291	12,194	23,367	0 9 8
	21-82	Messrs. McIver and Hudson.	Mr. Wāman Chintāman...	8,191	19,127	25,590	0 9 6
J ...	14-97	Mr. McIver ...	Mr. Bāburāo Yeshwant ...	3,616	13,462	12,609	0 8 9
	...	.....	.....	...	...	...	...
L ...	14-65	Mr. McIver ...	Mr. Nārāyan Bhikāji ...	3,294	13,876	24,511	0 4 9
	...	.....	.....	...	...	...	...
City Survey.	3-21	Mr. Wilkins ...	.....	395	...	264	4 1 11
	2-79	Mr. Hearn ...	.....	246	...	70	14 4 0
	187-39	... ..	Total for 1894-95 ...	76,194	209,684	231,330	0 8 1
	156-59	.....	Total for 1895-96 ...	74,217	198,058	208,039	0 8 1
	...	.....	Increase ...	...	...	...	...
	30.80	.....	Decrease ...	1,977	11,626	23,291	...

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

14. The result shown in the statement given above is, as was to be expected from the reduction in the number of establishments and men employed, a decrease under all heads. Whatever explanation can be given for the general reduction in the amount of measurement work done during the season under report will be found in the details regarding the work done by each establishment.

15. 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.	1894-95.				1895-96.			
	CONFIRMED.		RE-MEASURED.		CONFIRMED.		RE-MEASURED.	
	Num- bers.	Area.	Num- bers.	Area.	Num- bers.	Area.	Num- bers.	Area.
	2	3	4	5	6	7	8	9
		Acres.		Acres.		Acres.		Acres.
Rice, rabi and bagait ... ..	56,691	46,776	10,391	5,184	50,697	24,156	15,857	4,788
Varkas ... ..	4,693	60,322	3,729	76,611	951	5,411	6,320	151,325
Forest, &c. ... ..	295	42,173	...	...	146	22,295	...	...
Total ... ..	61,679	149,271	14,120	81,795	51,794	51,862	22,177	156,113

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
Out-turn per chain in acres ...	1894-95 ...	28	416	254	328
	1895-96 ...	31	989	158	35

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 ...	1,949	776	21,775	...	664	17,691
C ...	1,467	1,392	11,735	...	588	26,138
D ...	2,158	913	16,691	...	677	21,680
E ...	2,453	970	43,600	...	822	20,135
F ...	2,491	657	29,698	...	631	22,765
G ...	2,592	987	55,432	...	822	22,973
H ...	2,747	625	19,127	...	584	19,943
Total ...	15,857	6,320	198,058	...	4,788	151,325

The above statements are prepared as directed in Survey Commissioner's paragraphs 41 and 42 of his Report No.  $\frac{8}{1194}$ , dated 10th May 1895, submitting Annual Progress Report of the Bombay Revenue Survey for the year ending 31st October 1894.

16. The "A" Measuring Establishment was employed during the whole season in the Mahád Táluka of the Kolába Collectorate.

This establishment was in charge of the Survey Mámlatdár Mr. Báburáo Yeshwant Nerurkar and under the supervision of Mr. W. D. Wilkins, Assistant Superintendent, Konkan Revenue Survey, during the whole season.

The work of this establishment, compared with that of the previous season, shows an increase in the number of fields, but a decrease in number of trapezia, as well as in the area dealt with. This is accounted for by the fact that 8,733 rice and rabi fields were dealt with instead of 7,069 of the previous season, and 1,949 of those numbers had to be re-measured against 1,883 of the former season. Considering that there was a slight decrease in the strength of this establishment from the previous season, the out-turn of work appears satisfactory. Mr. Wilkins states that the work was retarded from "the rugged and hilly nature of the tract dealt with this year in the vicinity of Ráygad and the thick jungle" and "the want of co-operation on the part of the villagers during cholera in November and December."

The distribution of working and non-working days gives a percentage of the former, inclusive of in-door work, of 78 against 74 of last season: this is satisfactory. There is a decrease of 2 per cent. in the number of days taken up by travelling and also of 2 per cent. under the head of Sickness.

The cost per acre has increased 11 pies owing to the slight decrease in area. Mr. Wilkins reports regarding Mr. Nerurkar as follows:—

“Mr. Nerurkar has worked well and his supervision has been very satisfactory.”

17. The “C” Measuring Establishment was employed from the commencement of the season up to end of December in the Mángaon Táluka of the Kolába Collectoráté, under Mr. Gangádhár Nilkanth Tikhe, Nimtandár; from January to the end of February in the Sháhápúr Táluka, under Mr. Sadáshiv Amrut Bramhe, Head Surveyor; and from March to the end of the season under Mr. Laxuman Vásudev Bhide, Head Surveyor, in the Sháhápúr and Máhim tálukas of the Thána Collectorate.

This establishment was under the supervision of the Superintendent from the commencement of the season up to the end of February, and afterwards under the supervision of Mr. A. G. Hudson during the month of March, and from April to the end of the season under the supervision of Mr. E. H. Hearn.

The work of this establishment, compared with that of the previous season, shows an increase in the survey numbers and acres dealt with, but a decrease in the number of trapezia. 12,568 rice and rabi fields were dealt with instead of 9,525 of the previous season, and 1,467 of those numbers had to be re-measured against 770 of the previous season. The strength of the establishment was slightly greater than the previous season, and being employed for some months in villages of the Sháhápúr Táluka, where there are large areas of varkas, it was to be expected that the out-turn would be greater, which is very satisfactory.

The distribution of working and non-working days gives a percentage of the former, inclusive of in-door work, of 77 against 78 of last season. In the percentages of non-working days there is an increase of 2 per cent. under the head of Sickness owing to the unhealthy climate of the Sháhápúr Táluka and of 1 per cent. under the head of Travelling. This establishment had to move up from the Mángaon Táluka of the Kolába Collectorate to the Sháhápúr Táluka of the Thána Collectorate, and hence the increase.

The cost per acre is 2 annas less than the previous season on account of the area being greater.

The Head Surveyor Mr. Laxuman Vásudeo Bhide, who is a good officer, carried on his duties and looked after this establishment satisfactorily; so did Head Surveyor Mr. Sadáshiv Amrut Bramhe whilst he was in charge.

18. The “D” Measuring Establishment was employed during the whole field season in the Mahád Táluka of the Kolába Collectorate.

This establishment was in charge of Mr. Náráyan Bhikáji Belhekar, sub. *pro-tem.* Head Surveyor, and under the supervision of Mr. W. D. Wilkins, Assistant Superintendent, Konkan Revenue Survey, during the whole season.

The work of this establishment, compared with that of the previous season, shows an increase in the number of fields and a decrease in the number of trapezia, as well as in the area dealt with. This is accounted for by the fact that 11,912 rice, rabi and garden fields were dealt with instead of 10,479 of the former season, and 2,158 of these numbers had to be re-measured against 1,204 of the former season. The decrease in area is due to some extent to more rice and varkas numbers having been dealt with, the varkas survey numbers averaging this year 21.7 acres against 26.6 acres of the previous season.

The distribution of working and non-working days shows a percentage of 80 against 79 of the previous season. The percentage of actual field work having increased 4 per cent., is satisfactory. Sickness has decreased 2 per cent., villagers not co-operating 1 per cent., and in-door work 3 per cent. The average strength of this establishment was much about the same as last season.

The cost per acre has increased 2 annas in consequence of the area dealt with having decreased from 33,318 to 29,879 acres.

Regarding the sub. *pro-tem.* Head Surveyor who had charge of this establishment, Mr. Wilkins reports as follows:—

“Mr. Náráyan Bhikáji Belhekar has worked well, and his supervision has been very satisfactory.”

19. The “E” Measuring Establishment was employed during the whole field season in the Mahád Táluka.

This establishment was in charge of Mr. Anant Náráyan Kalamkar, sub. *pro-tem.* Head Surveyor, from the commencement of the season to the 16th of December, and after that date up to the end of the season, in charge of Mr. Mahádeo Hari Paránjpe, Survey Mámíatdár, and under the supervision of Mr. McIver, Assistant Superintendent, Konkan Revenue Survey, till early in April, when it was placed under the supervision of Mr. Hudson, Assistant Settlement Officer, Konkan Revenue Survey, up to the end of the working season.

The work of this establishment, compared with that of the previous season, shows an increase in the number of survey numbers and trapezia, and a decrease in area dealt with. This is accounted for by the fact that 8,077 rice and rabi fields were dealt with instead of 7,414 of the previous season, and 2,453 of these numbers had to be re-measured against 1,877 of the former season. Considering that there was a slight decrease in the strength of this establishment from the previous season, the out-turn of work appears satisfactory. Mr. McIver states that—

“The fields were smaller than those dealt with last year, and there was a considerable amount of new rice fields measured with intricate bends and small area. The rice numbers were scattered, and extra trouble and time was involved in fixing their positions.”

The distribution of working and non-working days gives a percentage of the former, inclusive of in-door work, of 74 against 77 of last season. In the percentages of non-working days there is a decrease of 2 per cent. under the head of Sickness, 2 per cent. under the head of Villagers not co-operating, 1 per cent. under the head of Travelling, but an increase of 5 per cent. under the head of In-door work, and 3 per cent. under the head of Idle days, Leave and Native holidays. The increase in In-door work is due to one measurer being employed during the whole year on correction work, and the increase in idle days, leave, and holidays is due to more leave being granted on account of marriages, &c., which had to take place, as marriages were not allowed in 1897.

The cost per acre is 3 pies more than last season.

Mr. McIver says—

“The supervision exercised by Mr. Anant Náráyan and by the Survey Mámíatdár Mr. M. H. Paránjpe was satisfactory. The latter, though naturally lacking experience in survey work, made very good progress and promises to turn out a competent Survey Officer.”

20. The “F” Measuring Establishment was employed during the whole season in the Mahád Táluka of the Kolába Collectorate.

This establishment was in charge of Mr. Rámchandra Vináyak Kanitkar, Head Surveyor; from the commencement of the season to the 12th January, and from that date he was on sick leave up to the 14th March, and from the 15th he retired on medical certificate of unfitness. Mr. Gangádhár Nilkanth Tikhe, Nímíatdár, was in charge of this establishment during the absence of Mr. Rámchandra Vináyak Kanitkar up to the end of March. From April to the end of the season Mr. Anant Náráyan Kalamkar, sub. *pro-tem.* Head Surveyor, was in charge of this establishment.

This establishment was under the supervision of Mr. McIver, Assistant Superintendent, Konkan Revenue Survey, from the commencement of the season to the 7th of April, and after that period up to end of the season, under the supervision of Mr. Hudson, Assistant Settlement Officer, Konkan Revenue Survey. The work of this establishment, compared with that of the previous season, shows an increase in the number of trapezia and a decrease in the number of fields and area dealt with. This establishment was working in the portion of the Mahád Táluka, where, Mr. McIver says, it is “a rugged hilly country, the rice numbers were intricate in figure, small in area, and scattered about on the flat tops

“ of spurs and on patches of low-lying land near nálas and rivers, the theodolite work was inevitably heavier than usual.” Nine theodolite men had to be kept at work instead of six. The number of measurers employed were 2 more than the previous season. 2,491 rice numbers with an average area of 2·77 were measured against 1,704 and area 5·79 of the previous season. It is obvious that the time occupied is almost the same in examining and measuring numbers like those whose areas are shown above; in fact, in this case more time must have been taken up, as a great many more numbers had to be examined. On the whole the work appears satisfactory.

The distribution of working and non-working days shows a percentage of the former 77 against 81 of the previous season. The percentage of actual field work has decreased 5 per cent.; this can be accounted for, as this season the work was closed on the 23rd May, whilst last season it was closed on the 5th June. In the percentages of non-working days there is an increase of 1 per cent. under the head of Villagers not co-operating, 1 per cent. under the head of In-door work, and 5 per cent. under the head of Idle days, Leave, Native holidays, &c. The reason for the increase under the head of the last item mentioned above has already been given for the E Establishment.

The cost per acre is the same as last season's, *viz.*, annas 8 pies 5.

Regarding the sub. *pro-tem*. Head Surveyor who had charge of this establishment, Mr. McIver reports as follows:—

“Head Surveyor Anant Náráyan Kalamkar worked hard and performed all his duties to my satisfaction.”

21. The “G” Measuring Establishment was employed during the whole field season in the Mahád Táluka of the Kolába Collectorate.

This establishment was in charge of Mr. Trimbak Pándurang Gángal, sub. *pro-tem* Head Surveyor, and under the supervision of Mr. W. D. Wilkins, Assistant Superintendent, Konkan Revenue Survey.

The out-turn of work of this establishment, compared with that of the previous season, shows an increase in the number of trapezia and area dealt with, and a decrease in the number of fields. The average number of measurers in this establishment was 1·40 less than in the last season. The increase in area is due to a larger area of varkas being dealt with, the survey numbers averaging in area 28·6 acres against 14·8 acres of last season: the out-turn of work appears satisfactory.

The distribution of working and non-working days gives a percentage of the former, inclusive of in-door work, of 80 against 79 of last season: this is satisfactory. In the percentages of non-working days there is a decrease of 1 per cent. under the head of Sickness and 2 per cent. under the head of Travelling, an increase of 1 per cent. in Villagers not co-operating and 1 per cent. under the head of Idle days, Leave, Native holidays, &c.

The cost per acre is 2 annas 9 pies less than the previous season on account of the larger area dealt with.

Mr. Wilkins reports regarding Mr. Trimbak Pándurang Gángal as follows:—

“His supervision was slack in some matters which were brought to the notice of the Superintendent, who reprimanded him.”

22. The “H” Measuring Establishment was employed during the whole season in the Mahád Táluka of the Kolába Collectorate.

This establishment was in charge of Mr. Wáman Chintáman Gángal, Head Surveyor, during the whole season, and under the supervision of Mr. McIver, Assistant Superintendent, Konkan Revenue Survey, and Mr. Hudson, Assistant Settlement Officer, Konkan Revenue Survey, as stated in paragraphs 19 and 20 for E and F Establishments.

The out-turn of work of this establishment, compared with that of the previous season, shows an increase under all heads. The strength of the establishment was the same as the previous season; but the out-turn of work, when compared with the work of the other establishments, must be considered insufficient; the cause of this Mr. McIver explains as follows:—

"Village for village the 'H' Establishment worked in a more difficult block than either of the other establishments, many of the villages were bounded by the water-shed of the Sahyádrí mountains and, without exception, none of the villages contained any flat open land."

I think Mr. McIver's explanation satisfactory.

The distribution of working and non-working days shows a percentage of the former 80 against 71 of the previous season. The percentage of actual field work has increased 4 per cent. In the percentages of non-working days there is a decrease of 2 per cent. under Sickness, 1 per cent. under the head of Villagers not co-operating, 3 per cent. under Travelling, and also 3 per cent. under the head of Idle days, Leave and native holidays, but an increase of 5 per cent. under the head of In-door work. Two men had to be put on some correction work of the Bhiwndi and Máhim tálukas during the whole year; hence the increase in in-door work.

The cost per acre is 1 pie more than last season's.

Mr. McIver reports regarding the Head Surveyor as follows:—

"Head Surveyor Mr. Wáman Chintáman Gángal worked with commendable diligence and, on the whole, maintained discipline and administered the establishment in a satisfactory manner."

23. 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 1895-96 with that of the previous season 1894-95:—

	1894-95.	1895-96.
<i>Working days.</i>		
Measuring ... ..	63.27	64.0
Boundary-mark Inspection ... ..	9.51	8.97
Measurement of boundary disputes, tests, &c. ... ..	2.94	2.59
In-door work ... ..	1.89	3.42
Total ...	77.61	78.98
<i>Non-working days.</i>		
Sickness ... ..	6.11	4.76
Villagers not co-operating... ..	2.44	1.75
Travelling ... ..	6.73	5.78
Rain ... ..	0.02	0.02
Leave and holidays ... ..	7.09	8.71
Total ...	22.39	21.02
	100.	100.

From the above it will be seen that the percentage of working days, inclusive of in-door work, is 1.37 more than last season's. There is a small increase in the number of days devoted to measuring and a corresponding decrease in the number of days taken up for boundary-mark inspection: an increase in the days taken up for in-door work, which was unavoidable. There is a decrease under the head of Villagers not co-operating as well as Travelling. Leave and holidays have increased 1.62: this was also unavoidable on account of marriages being prohibited in 1897 and explained in paragraph 19 of this report.

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 season 1895-96, as contrasted with that of 1894-95, is deduced from the accompanying detailed Statement No. I:—



Letter of Establishment.	Name of Supervising Officer.	Name of Assistant Superintendent or Head Surveyor, Survey Mámálatdár or Nímtándár.	TEST BY EUROPEAN OFFICERS, HEAD SURVEYORS, SURVY MAM'LATDARS OR NIMTANDARS.					Average difference between Original Measurement and Test Percentage.
			Fields.	Vaslas.	Acres.	Average Vaslas per Field.	Average Acres per Field.	
1	2	3	4	5	6	7	8	9
<i>Rice, Robi and Garden.</i>								
A	Mr. Wilkins ...	Messrs. Padmákar Janárdan and Báburáo Yeshwant.	829	1,020	708	1	0.8	A. g. 0 2
	Do. ...	Mr. Báburáo Yeshwant ...	1,187	1,420	920	1	0.8	0 1
C	Mr. McIver and the Superintendent.	Mr. Laxuman Vásudeo ...	1,066	428	856	...	0.8	...
	Messrs. Hudson and Hearn.	Messrs. Gangádhar Nilkanth, Sadáshiv Amrut and Laxuman Vásudeo.	1,337	891	912	1	0.7	...
D	Mr. Wilkins ...	Mr. Trimbak Pándurang ...	1,330	1,717	1,338	1	0.9	...
	Do. ...	Mr. Náráyan Bhikáji ...	1,529	2,147	809	1	0.5	0 4
E	Messrs. Cole and McIver.	Mr. Rámchandra Vináyak ...	930	1,009	721	2	0.8	0 7
	Messrs. McIver and Hudson.	Messrs. Anant Náráyan and Mahádeo Hari.	996	3,245	424	3	0.4	0 7
F	Messrs. Cole and McIver.	Mr. Wáman Chintáman ...	1,837	2,449	1,181	2	0.7	0 5
	Messrs. McIver and Hudson.	Messrs. Rámchandra Vináyak, Gangádhar Nilkanth and Anant Náráyan.	1,334	2,052	570	2	0.4	0 3
G	Mr. Wilkins ...	Messrs. Mánkeshwar Gopál, Náráyan Bhikáji and Anant Náráyan.	1,226	2,717	1,052	2	0.8	0 1
	Do. ...	Mr. Trimbak Pándurang ...	1,208	2,602	604	2	0.5	0 4
H	Messrs. Cole and McIver.	Mr. Sadáshiv Rámchandra ...	814	943	721	1	0.9	...
	Messrs. McIver and Hudson.	Mr. Wáman Chintáman ...	1,067	2,337	429	2	0.4	0 3
J	Mr. McIver ...	Mr. Baburáo Yeshwant ...	410	50	460	...	1.2	...
L	Mr. McIver ...	Mr. Náráyan Bhikáji ...	384	553	375	1	1.0	0 1
	City Survey.	Mr. Hearn ...	8	...	2	...	0.2	...
Total for 1894-95 ...			8,526	11,786	7,257	1	0.9	0 2
Total for 1895-96 ...			8,666	14,694	4,670	2	0.5	0 3
<i>Varkas Lands.</i>								
A	Mr. Wilkins ...	Messrs. Padmákar Janárdan and Báburáo Yeshwant.	88	...	1,492	...	17.98	...
	Do. ...	Mr. Báburáo Yeshwant ...	174	...	3,021	...	17.36	...
C	Mr. McIver and the Superintendent.	Mr. Laxuman Vásudeo ...	103	...	1,437	...	19.95	...
	Messrs. Hudson and Hearn.	Messrs. Gangádhar Nilkanth, Sadáshiv Amrut and Laxuman Vásudeo.	143	...	2,776	...	19.41	...
D	Mr. Wilkins ...	Mr. Trimbak Pándurang ...	117	...	2,310	...	19.73	...
	Do. ...	Mr. Náráyan Bhikáji ...	116	...	2,347	...	20.23	...
E	Messrs. Cole and McIver.	Mr. Rámchandra Vináyak ...	151	...	2,455	...	16.26	...
	Messrs. McIver and Hudson.	Messrs. Anant Náráyan and Mahádeo Hari.	127	...	2,771	...	21.82	...
F	Messrs. Cole and McIver.	Mr. Wáman Chintáman ...	163	...	2,634	...	16.26	...
	Messrs. McIver and Hudson.	Messrs. Rámchandra Vináyak, Gangádhar Nilkanth and Anant Náráyan.	93	...	2,709	...	29.13	...
G	Mr. Wilkins ...	Messrs. Mánkeshwar Gopál, Náráyan Bhikáji and Anant Náráyan.	160	...	2,498	...	18.92	...
	Do. ...	Mr. Trimbak Pándurang ...	117	...	2,344	...	20.03	...

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

Letter of Establishment.	Name of Supervising Officer.	Name of Assistant Superintendent or Head Surveyor, Survey Mamlatdars or Nimitdars.	TEST BY EUROPEAN OFFICERS, HEAD SURVEYORS, SURVEY MAMLATDARS OR NIMITDARS.					Average difference between original measurement and test percentage.
			Fields.	Vaslas.	Acres.	Average Vaslas per Field.	Average Acres per Field.	
1	2	3	4	5	6	7	8	9
<i>Varkas Land—continued.</i>								
H	Messrs. Cole and McIver.	Mr. Sadashiv Ramchandra ...	99	...	1,980	...	19.49	...
	Messrs. McIver and Hudson.	Mr. Waman Chintaman ..	93	...	3,509	...	37.73	...
J	Mr. McIver	Mr. Baburao Yeshwant ...	59	...	1,078	...	18.27	...
	.....	.....	...	...	...	...	...	...
L	Mr. McIver	Mr. Narayan Bhikaji... ..	82	...	2,224	...	27.12	...
	.....	.....	...	...	...	...	...	...
City Survey.	Mr. Wilkins	.....	22	...	11	...	0.7	...
	.....	.....	...	...	...	...	...	...
Total for 1894-95 ...			1,411	...	18,322	...	18.76	...
Total for 1895-96 ...			863	...	19,477	...	22.57	...
Grand Total for 1894-95 ...			9,564	11,786	25,326	1	2.7	0.1
Grand Total for 1895-96 ...			9,529	14,694	24,147	2	2.5	...

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

24. The percentages of tests taken by the officers in charge of each establishment are shown in the subjoined 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. Baburao Yeshwant ... ..	14	22 1	16	16 4
C	Messrs. Hudson and Hearn.	Messrs. Gangadhar Nilkanth, Sadashiv Amrut and Laxuman Vasudeo.	11	10 3	10	10 6
D	Mr. Wilkins... ..	Mr. Narayan Bhikaji ... ..	13	18 3	10	10 6
E	Messrs. McIver and Hudson.	Messrs. Anant Narayan and Mahadeo Hari.	12	14 1	12	13 2
F	Do. do. ... ..	Messrs. Ramchandra Vinayak, Gangadhar Nilkanth and Anant Narayan.	14	22 4	12	11 7
G	Mr. Wilkins... ..	Mr. Trimbak Pandurang ... ..	14	14 7	11	9 9
H	Messrs. McIver and Hudson.	Mr. Waman Chintaman ... ..	14	22 0	12	15 4
City Survey.	Mr. Hearn ... ..	.....	4	12 5	...	...

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

25. 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. Báburáo Yeshwant ...	412	3,408
C	Messrs. Hudson and Hearn.	Messrs. Gangádhar Nilkanth, Sadáshiv Amrut and Laxuman Vasudeo...	430	1,820
D	Mr. Wilkins ...	Mr. Náráyan Bhikáji ...	429	2,512
E	Messrs. McIver and Hudson.	Messrs. Anant Náráyan and Mahádeo Hari ...	397	2,432
F	Do.	Messrs. Rámchandra Vináyak, Gangádhar Nilkanth and Anant Náráyan ...	370	3,370
G	Mr. Wilkins ...	Mr. Trimbak Pándurang ...	337	2,890
H	Messrs. McIver and Hudson.	Mr. Wáman Chintáman ...	398	3,453

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

26. 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 slightly in excess of the previous season, that the highest percentage of error found was 7 per cent. in one number only, and that no errors above that percentage were found: this speaks well for the quality of the work done.

27. 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 172 villages. The boundary-marks were put up by the villagers themselves in 65 villages and in 107 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.

28. The following statement shows the proportion of villages in which boundary-mark was done 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. Báburáo Yeshwant ...	27	13	14	Mahád.
C	Messrs. Hudson and Hearn.	Messrs. Gangádhar Nilkanth, Sadáshiv Amrut and Laxuman Vásudeo.	30	15	15	Mángaon, Máhim and Sháhápur.
D	Mr. Wilkins ...	Mr. Náráyan Bhikáji ...	28	11	17	Mahád.
E	Messrs. McIver and Hudson.	Messrs. Anant Náráyan and Mahádeo Hari.	21	3	18	Do.
F	Do.	Messrs Rámchandra Vináyak, Gangádhar Nilkanth and Anant Náráyan.	22	8	14	Do.
G	Mr. Wilkins ...	Mr. Trimbak Pándurang...	15	7	8	Do.
H	Messrs. McIver and Hudson.	Mr. Waman Chintáman ...	29	8	21	Do.
Total ...			172	65	107	

It will be observed from the above that hired labour had to be employed in more than half the villages to erect boundary-marks. Some of the officers appear to have induced many more villagers than others to put up their boundary-marks, this may be that they may have taken a great deal more trouble, however it depends a great deal who the tenants are, whether they were Kunbis or Pándarpeshas, or whether the village was khoti or not.

29. 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. The hill sketching of the fair maps of this season as well as those left over from the previous season was completed.

*Classification.*

30. 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 Mámíatdár and Head Surveyor.	CLASSED.		Average area per Survey Number.	Average cost per Acre.
				Fields.	Acres.		
1	2	3	4	5	6	7	8
B.	17.76	Messrs. Hearn and Hudson.	Mr. Parashráam Purshotam ...	46,462	70,106	1.51	Rs. a. p. 0 1 11
	16.57	Do.	Messrs. Náráyan Govind and Sadáshiv Amrut.	51,018	170,570	3.34	0 1 2
I.	22.17	Mr. Hearn	Mr. Sadáshiv Amrut ...	41,906	101,131	2.41	0 1 11
	21.68	Do.	Messrs. Laxuman Vásudeo and Náráyan Govind.	70,542	140,220	1.99	0 1 8
K.	18.46	Do.	Mr. Náráyan Govind ...	32,065	92,072	2.87	0 1 5
	16.62	Do.	Mr. Parashráam Purshotam ...	56,415	145,610	2.58	0 1 3
	58.38		Total for 1894-95 ...	120,433	263,309	2.19	0 1 7
	54.87		Total for 1895-96 ...	177,975	456,400	2.56	0 1 3
	...		Increase ...	57,542	193,091	0.08	...
	3.51		Decrease ...	...	...	...	0 0 4
Phalni Establishment.	7.29		Mr. Mánkeshwar Gopál ...	19,925	19,679	0.99	0 2 10
	20.51		Messrs. Gangádhár Vásudeo and Mánkeshwar Gopál.	52,504	67,390	1.28	0 1 10

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

31. From the above statement it will be seen that the average number of classers was less than the previous season by 3.51; yet the out-turn has been far greater; the reason for this is, that it was found that by curtailing some of the classers' work, such as boundary inspection and examining the entries of names which had all been previously done by the measuring establishments, a much higher scale of daily work could be performed by each classer. The cost per acre has decreased 4 pies. Of the totals shown above, 9,512 fields and 8,147 acres are of original classification in 9 Bhor State villages. The varkas phalni and classification work done by the Phalni Establishment is shown below the figures of regular classification work. The total out-turn of work is satisfactory and does not seem to call for any further remarks.

32. The "B" Classing Establishment was employed from the commencement of the season to the end of December in the Roha Táluka of the Kolába Collectorate, during the months of January and February in the Váda Táluka of the Thána Collectorate, and in March in the Sháhápúr Táluka of the same Collectorate. Early in April this establishment, excluding three classers who were retained in the Sháhápúr Táluka, was transferred to the Mahád Táluka of the Kolába Collectorate, where it was employed till the end of the season.

This establishment was in charge of Mr. Náráyan Govind Agarkar, Head Surveyor, from the commencement of the season to the end of February; from March to the end of the season it was in charge of Mr. Sadáshiv Amrut Bramhe, Head Surveyor; and under the supervision of Mr. E. H. Hearn, Deputy Superintendent, Konkan Revenue Survey, except when it was working in the Mahád Táluka, when it was placed under the supervision of Mr. Hudson, Assistant Settlement Officer, 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 ... ..	26,360	22,062
Rabi ... ..	1,013	2,268
Garden ... ..	27	7
Varkas ... ..	23,618	1,46,233
Total ... ..	51,018	1,70,570

Out of the total number of fields shown above, 20,421 rice fields were examined for "Dusota," *i.e.*, capability of growing second crops after a rice crop, and 19,793 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 increase in area is mostly due to the scale of work being increased, as also to the large area of varkas dealt with, the average area per survey number being 3.34 against last season's 1.51. The result obtained is very satisfactory.

The cost per acre has decreased by 9 pies owing to the increased area disposed of.

The distribution of working and non-working days shows a decrease in the percentage of the former, inclusive of in-door work, from 81 of the previous season to 67: this is accounted for by the increase of 9 per cent. under the head of Sickness and 6 per cent. under the head of Travelling, and a decrease of 1 per cent. under the head of Idle days, Leave and holidays.

Mr. Hearn reports that the Head Surveyors, Mr. Náráyan Govind Agarkar and Mr. Sadáshiv Amrut Bramhe, who had charge of this establishment at different times, performed their work and supervised their establishment satisfactorily.

33. The "I" Classing Establishment was employed from the commencement of the season to the end of January in the Roha Táluka of the Kolába Collectorate and during the month of February in the Váda Táluka of the Thána Collectorate, and from March to the end of the working season in the Sháhápur Táluka of the same Collectorate. Three classers of this establishment were employed the whole season on the original classification of nine villages of the Bhor State.

This establishment was in charge of Mr. Laxuman Vásudeo Bhide, Head Surveyor, up to the end of February 1896, and from March under the charge of Mr. Náráyan Govind Agarkar, Head Surveyor, and under the supervision of Mr. E. H. Hearn, Deputy Superintendent, Konkan Revenue Survey.

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

Description of land.		Fields.	Acres.
1		2	3
Rice	... ..	36,979	26,751
Rabi	... ..	2,599	5,629
Garden	... ..	10	5
Varkas	... ..	30,954	1,07,835
Total		70,542	1,40,220

Out of the total number of fields shown above, 27,111 rice fields were examined for "Dusota," *i.e.*, capability of growing second crops after a rice crop, and 15,338 varkas and rabi fields had position class applied to them.

The average number of classers employed in the field was much about the same as the previous season's. The increase in area is mostly due to the scale of work being increased, as also to the large area of varkas dealt with. The average area per survey number being less than last season's, *viz.*, 2.41 against this season's 1.99, yet the number of fields dealt with were nearly double that of last season's. The work on the whole is, I consider, very satisfactory.

The cost per acre has decreased by 3 pies owing to the increased area disposed of.

The distribution of working and non-working days shows a decrease in the percentage of the former, inclusive of in-door work, from 74 of the previous season to 68: this is accounted for entirely by the increase of 6 per cent. under the head Travelling and 4 per cent. under the head of Idle days, Leave and holidays, and a decrease of 4 per cent. under the head of Sickness.

Mr. Hearn reports that Mr. Laxuman Vásudeo Bhide, Head Surveyor, and Mr. Náráyan Govind Agarkar, Head Surveyor, both officers performed their work well and satisfactorily.

34. The "K" Classing Establishment was employed from the commencement of the season to the end of December in the Roha Táluka of the Kolába Collectorate, and during the months of January and February in the Váda Táluka of the Thána Collectorate, and from March to the end of the working season in the Sháhápur Táluka of the same Collectorate.

This establishment was under the charge of Mr. Parashráam Purshotam Gángal, Head Surveyor, and under the supervision of Mr. E. H. Hearn, Deputy Superintendent, Konkan Revenue Survey.

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

Description of land.		Fields.	Acres.
1		2	3
Rice	... ..	28,368	27,317
Rabi	... ..	3,237	7,559
Garden	... ..	24	42
Varkas	... ..	24,786	110,692
Total		56,415	145,610

Out of the total number of fields shown above, 23,348 rice fields were examined for "Dusota", *i.e.*, capability of growing second crops after a rice crop, and 18,095 varkas and rabi fields had position class applied to them.

The average number of classers employed in the field was less by 1·83 than the previous season's. The increase in area is mostly due to the scale of work being increased, as also to the large area of varkas dealt with. The average area per survey number being much the same as last season's, *viz.*, 2·87 against this season's 2·58, yet the number of fields dealt with nearly double that of last season's. The work on the whole is, I consider, very satisfactory.

The cost per acre has decreased by 2 pies owing to the increased area disposed of.

The distribution of working and non-working days shows a decrease in the percentage of the former, inclusive of in-door work, from 79 of the previous season to 71: this is accounted for entirely by the increase of 5 per cent. under the head of Sickness and 2 per cent. under the head of Travelling, and also 1 per cent. under the head of Idle days, Leave and holidays.

Mr. Hearn reports that the Head Surveyor Mr. Parashráam Purshotam Gángal performed his duties satisfactorily.

35. The Phalni Establishment was employed from the commencement of the season to the end of the working season in the Murbád Táluka of the Thána Collectorate; it was under the immediate charge of Head Surveyor Mr. Gangádhár Vásudeo Joshi for two months, November and December, whilst Mr. Mánkeshwar Gopál Mhaskar was away on leave: on his return he took over charge from the above Head Surveyor. The general supervision of this establishment was under the Superintendent.

The field work done during the season was Phalni of 52,504 separate occupancies covering an area of 67,390 acres, which is very creditable considering the hard work it entails.

The cost per acre was 1 anna 10 pies against last season's 2 annas 10 pies: the reason for this difference is that the establishment was employed in the field the whole of the season during the year under report and measured and classed a larger area, while last year it was only employed for two months on this work.

Mr. Mhaskar deserves to be commended for the zeal and energy he has shown in the discharge of his duties.

36. 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 1894-95:—

	1894-95.	1895-96.	Phalni Establish- ment, 1895-96.
<i>Working days.</i>			
Field classification ... ..	67·78	59·04	67·
Inspection of boundary-marks ... ..	0·11	0·05	.....
Boundary disputes, tests, &c. ... ..	6·88	6·74	4·
In-door work ... ..	3·15	2·80	6·
Total ...	77·92	68·63	77·
<i>Non-working days.</i>			
Sickness ... ..	8·75	11·71	9·
Villagers not co-operating ... ..	.....	0·25	1·
Rain ... ..	.....	.....	.....
Travelling ... ..	6·32	11·11	6·
Leave and holidays ... ..	7·01	8·30	7·
Total ..	22·08	31·37	23·
Grand Total ...	100·	100·	100·

37. From the above it will be seen that the percentage of field classification days is less than the previous season, the number of days lost to actual

field work under the heads of Tests and In-door work is much about the same as last season, which is satisfactory. The number of non-working days under the heads of Travelling, Sickness and Leave and Holidays have increased considerably, viz. 9 per cent. The large percentage of 11.11 per cent. under the head of Travelling is due to the classers having to move oftener from village to village under the new scale of work, as also having to move a long distance from the Roha Táluka in the Kolába Collectorate to the Váda Táluka of the Thána Collectorate: one establishment had to return to the Mahád Táluka of the Kolába Collectorate in April, as there was not sufficient work for all three classing establishments in the Sháhápur Táluka of the Thána Collectorate. Sickness has increased considerably, that is, 2.96 per cent. above the previous season. The reason for this increase in sickness is due to the malarious climate of Váda and Sháhápur tálukas. Unfortunately cholera broke out in a portion of the Roha Táluka, and one of the classers died from it, work had to be stopped for a time in these villages, and the classers moved on elsewhere. Leave and holidays show an increase of 1.29 above last season, the reason for this is explained in paragraphs 19, 20 and 23.

38. 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 Mámátdár 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>Rice, Rabi and Garden Lands.</i>						
B	Messrs. Hearn and Hudson ...	Mr. Parashráam Purshotam ...	1,162	1,216	1.05	0 0 6
	Do. ...	Messrs. Náráyan Govind and Sadáshiv Amrut... ..	1,035	778	0.8	0 0 9
I	Do. ...	Mr. Sadáshiv Amrut ... ..	1,728	3,224	1.87	0 0 8
	Mr. Hearn ... ..	Messrs. Laxuman Vásudeo and Náráyan Govind ... ..	1,704	1,179	0.7	0 0 7
K	Messrs. Hearn and Hudson ...	Messrs. Náráyan Govind and Laxuman Káshináth ... ..	1,639	4,083	2.49	0 0 9
	Mr. Hearn ... ..	Mr. Parashráam Purshotam ...	1,388	1,314	1.0	0 0 6
Total for 1894-95 ...			4,529	8,523	1.88	0 0 7
Total for 1895-96 ...			4,127	3,571	0.8	0 0 7
<i>Varkas Lands.</i>						
B	Messrs. Hearn and Hudson ...	Mr. Parashráam Purshotam ...	215	73	0.34	0 0 2
	Do. ...	Messrs. Náráyan Govind and Sadáshiv Amrut... ..	295	339	1.1	0 0 3
I	Do. ...	Mr. Sadáshiv Amrut ... ..	643	1,477	2.30	0 0 2
	Mr. Hearn ... ..	Messrs. Laxuman Vásudeo and Náráyan Govind ... ..	557	706	1.3	0 0 2
K	Messrs. Hearn and Hudson ...	Messrs. Náráyan Govind and Laxuman Káshináth ... ..	187	1,331	7.12	0 0 4
	Mr. Hearn ... ..	Mr. Parashráam Purshotam ...	298	177	0.6	0 0 3
Total for 1894-95 ...			1,045	2,881	2.75	0 0 2
Total for 1895-96 ...			1,150	1,222	1.1	0 0 2
Grand Total for 1894-95 ...			5,574	11,404	2.05	0 0 6
Grand Total for 1895-96 ...			5,277	4,493	0.9	0 0 6
Phadni Establishment ...	The Superintendent ... ..	Mr. Mánkeshwar Gopál ... ..	1,915	2,124	1.11	0 0 3
	Do. ...	Messrs. Mánkeshwar (Rabi ... Gopál and Gangtdhar Vásudeo. (Varkas.	231	338	1.4	0 0 3
			4,017	5,308	1.3	0 0 3
	Total ...			4,256	5,646	1.3

The aggregate average of test taken of all the classification work was 16 per cent. of fields and 12 per cent. of the area; and the average difference between test and classification is the same as the previous season.



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

Letter of Establishment.	Description.	RICE, RABY AND GARDEN.						VARRAS.					
		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 ... ..	6,268	4,482	1,035	778	17	17	1,983	5,405	295	389	15	6
	Examined for Dusota and Position Class ...	21,132	19,855	2,966	2,638	14	13	21,635	114,012	2,161	662	10	1
	Total ...	27,400	24,337	4,001	3,416	15	14	23,618	119,417	2,456	991	16	1
K	Classed ... ..	11,298	9,411	1,704	1,179	15	12	6,180	6,791	557	706	9	10
	Examined for Dusota and Position Class ...	28,290	22,974	2,912	3,013	10	13	24,774	80,720	2,595	758	10	1
	Total ...	39,588	32,385	4,616	4,192	12	13	30,954	87,511	3,152	1,464	10	2
Phalni Establishment.	Classed ... ..	7,006	9,013	1,388	1,314	29	15	1,025	1,977	298	177	29	9
	Examined for Dusota and Position Class ...	24,523	25,906	2,703	3,226	11	12	23,861	57,110	3,710	1,075	16	2
	Total ...	31,529	34,918	4,091	4,540	13	13	24,886	59,087	4,008	1,252	16	2

In consequence of the scale of work having been increased, the percentage test from 10 per cent. was reduced to 7 per cent.: this was sanctioned by the Survey Commissioner—*vide* his Memorandum No. <sup>6</sup><sub>1668</sub>, dated 22nd July 1896.

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

40. Statement No. VI of the appendices gives details of differences between test and present valuations. On the whole of the fields tested (5,277), errors over 2 annas in classification were found in 130 only, giving a percentage of 2.46. 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.
I	2	3	4	5
B	87.59	8.50	3.91	100.
I	88.41	10.17	1.42	100.
K	86.48	10.79	2.73	100.
Phalni Establishment	98.52	1.10	0.38	100.

All cases in which large errors occur 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.

41. Appendix VII shows that out of 492 villages classed during the field season, the recess examination of field books and preparation of field registers, &c., was completed in 487 villages and 5 only remained over to be done; these 5 villages belong to the Mahad Taluka of which the revision classification was only begun late last field season, and as it appeared that they were not urgently required, they were allowed to remain over: 117 villages of which phalni was done had their field registers prepared. In the above 492 villages 9 belong to the Bhor State. With the exception of the 5 villages mentioned above, no arrears whatever of the classification recess work remain.

42. Appendix VIII gives details regarding village maps supplied to the District officers.

During the season under report 243 village maps were sent to the Government Photozincographic Office for reproduction. Fair maps of 167 villages with hill shading, &c., and 3 taluka maps were prepared in the Head-quarter Office. Maps were supplied as follows:—

44 to applicants.  
116 to Forest Department.  
667 to Revenue authorities.

43. 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 a decrease in the year's expenditure on account of survey operations in British territory of Rs. 4,981. An increase of Rs. 610 is shown under the head of Superintendent's pay and Rs. 1,577 under that of Assistant Superintendent's. A general decrease under the following heads: Rs. 509 under the head of Pay of Survey and Settlement Commissioner, Rs. 5,475 Pay of establishments, Rs. 131 Contingent charges for stationery, instruments, dead-stock, &c., Rs. 1,053 Construction of field boundary-marks.

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

1st.—The increase of Rs. 610 under the head of Pay of Superintendent is due to debiting part of Colonel Godfrey's acting allowance as Survey Commissioner to this head.

2nd.—The increase of Rs. 1,577 under the head of Pay of Assistant Superintendents is due to all three Assistants having drawn full pay with allowances for the whole year, whilst last year one of the above Assistants was on leave and an officer on a lower grade was appointed for about four months to supervise the establishments.

3rd.—The decrease of Rs. 5,475 under the head of Pay of establishment is due to the reduction of two establishments from 1st April 1895.

4th.—The decrease of Rs. 131 in the Contingent charges is also due to the reduction of two establishments.

5th.—The decrease of Rs. 1,053 under the head of Construction of boundary-marks is attributable to a smaller amount having to be paid by Government for marks erected in waste lands owing to most of the villages in which work was done being khoti.

The total expenditure of this Survey, amounting to Rs. 2,03,212, is inclusive of the cost of the Bhor State Survey Rs. 3,940 and the cost of the Janjira State Survey Rs. 668; but as these amounts are paid by those Native States, no further remarks appear necessary.

44. 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 ... ..	80,950 5 10	24,638 0 4	1,05,588 6 2
2	Classification ... ..	27,050 8 3	8,377 5 3	35,427 13 6
3	Settlement ... ..	.....	46,909 7 7	46,909 7 7
4	Miscellaneous ... ..	2,293 1 1	710 2 0	3,003 3 1
	Total ...	1,10,293 15 2	*80,634 15 2	1,90,928 14 4

No.	Head of Expenditure.	Annual Cost.	Rateable proportion of Nos. 5 and 6.	Total Cost.
1	2	3	4	5
		Rs. a. p.		
5	Superintendent's salary and expenses of his office ...	67,450 15 2		
6	Proportion of the Survey Commissioner's office and of his salary ...	13,184 0 0		
	Total ...	*80,634 15 2		
	Grand Total ...	1,90,928 14 4		

The total expenditure has been distributed according to the method adopted last year.

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

Description.	Measurement per Acre.	Classification per Acre.	Total cost of both operations exclusive of Settlement and Miscellaneous.
1	2	3	4
	Rs. a. p.	Rs. a. p.	Rs. a. p.
For Survey in British Territory ...	0 8 1	0 1 3	0 9 4
Do. Bhor State ...	.....	0 3 4	0 3 4

The cost of British territory survey operations per acre under the head of Measurement is 8 annas 1 pie, the same as the previous season: there is a decrease of 4 pies per acre under the head of Classification in consequence of the greater area dealt with. The cost of combined operations being 4 pies less than in the previous season. In the Bhor State there was no measurement and, therefore, the cost of classification only is shown; it is 3 annas 4 pies per acre. In the Janjira State no field work of any kind was done.

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

	1893-94.	1894-95.	1895-96.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Konkan Survey ...	0 10 11	0 9 8	0 9 4

47. 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
Partition of estates under the Collector of Ratnágiri.	1	1st November 1895.	31st October 1895...	1 0 0
	1	Do. ...	1st April 1896 ...	0 5 0
	1	Do. ...	31st October 1896...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0

Department in which employed.	No. of men.	PERIOD OF EMPLOYMENT.		Total period of each.
		From	To	
1	2	3	4	5
				Y. m. d.
Agricultural Department in Ratnágiri District.	1	1st November 1895.	31st October 1896.	1 0 0
Forest Department	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	9th May 1896 ...	0 6 9
	1	Do. ...	6th July 1896 ...	0 8 6
	1	Do. ...	31st October 1896 .	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
Kolába ...	1	Do. ...	27th February 1896.	0 3 27
Thána ...	1	Do. ...	1st June 1896 ...	0 7 0
Sávantvádi ...	1	Do. ...	31st October 1896...	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. ...	Do. ...	1 0 0
Bhor State Survey	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	Do. ...	1 0 0
	1	Do. ...	23rd December 1895	0 1 22
	1	Do. ...	20th March 1896 ...	0 4 19
	1	Do. ...	11th December 1895.	0 1 10
	1	Do. ...	20th March 1896 ..	0 4 19
	1	Do. ...	Do. ...	0 4 19
	1	Do. ...	19th November 1895	0 0 18
1	Do. ...	20th March 1896 ...	0 4 19	
1	Do. ...	23rd December 1895	0 1 22	
1	Do. ...	20th March 1896 ...	0 4 19	
Hubli Municipality	1	Do. ...	31st October 1896...	0 1 0
Janjira State	1	Do. ...	25th February 1896.	0 3 25
Bombay Municipality	1	2nd January 1896	31st October 1896...	0 9 30
Total	41			

It will be seen from the above that during the year under report the services of no less than 41 men were alienated from ordinary survey work for various periods and of 30 men for the whole year.

48. The progress of the 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 \*197 Government villages of the Bhiwandi Táluka and †5 isáfat villages of the Karjat Táluka. Original survey rates for three inám villages in the Bhiwandi Táluka sanctioned by the Survey Commissioner's No.  $\frac{8}{1454}$  of 20th June 1896 were introduced. Original survey rates were also introduced into 54 villages of the Rájgad Táluka and 40 villages of the Vichitragad Táluka of the Bhor State.

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The following statement gives the result of the revision settlement as also the original settlement for the Bhore 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.		
Thápa	Bhiwndi	Government	Revision	197	1,30,970	1,95,251	58,281	.....
			Inám	3	725	1,518	793	.....
		Total	200	1,37,695	1,96,769	59,074	.....	
Kolápa	Karjat	Government (Isáfát)	Revision	5	1,528	2,803	1,275	.....
			Grand Total	205	1,39,223	1,99,572	60,349	.....
Bhor State	Rájgad	Government	Original	43	11,888	12,068	181	.....
			Inám	Do.	11	5,161	6,204	1,043
	Total	54	17,049	18,273	1,224	.....		
	Vichitragad	Government	Original	32	8,054	8,504	540	.....
			Inám	Do.	8	3,489	3,979	490
	Total	40	11,543	12,573	1,030	.....		
Grand Total	94	28,592	30,846	2,254	.....			

During the year under report proposals for the introduction of revised rates in 88 villages of the Sálsette Táluka, 88 villages of the Bassein Táluka, and 98 villages of the Prachandgad Táluka of the Bhore State were submitted for sanction.

49. The expenditure of advances on account of the erection of boundary-marks, flag-holders and chain-men during the year under report is given below:—

Total Advances, including previous year's Balance.	Amount recoverable.	Amount debitabie to Government.	Balance for which Vasuli Patraks are not ready.
1	2	3	4
Rs.	Rs.	Rs.	Rs.
47,913	29,487	628	17,798

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

50. From a report received from the Deputy Superintendent of this Survey, it appears that during the year under report he has submitted a settlement report on the Bassein Táluka. "Kamjásti Patraks" were prepared for 265 villages and 6,387 Vernacular Prakarnas were disposed of.

Measurement.	Classification.
1	2
Mr. G. F. Keatinge.	Mr. J. P. Q.r. Mr. E. Clements.

51. During the season under report Junior Civilians were instructed in survey matters as shown in the margin—in measurement by Mr. A. G. Hudson and in classification by Mr. E. H. Hearn.

52. During the year under report the office of Deputy Superintendent was held by—

- Mr. Hearn from 1st November 1895 to 31st May 1896.
- Mr. Hudson from 1st June 1896 to 21st June 1896.
- Mr. Hearn from 22nd June 1896 to 23rd July 1896.
- Mr. Hudson from 24th July 1896 to 31st October 1896.

The Deputy Superintendent had, during the whole season, supervising charge of the B, I and K Classing Establishments, except when Mr. Hudson returned

from furlough took over charge of the "B" Classing Establishment on the 3rd February 1896; the classification tests of this establishment, however, were taken by the Deputy Superintendent whom Mr. Hudson accompanied out in the field for instruction. Mr. Hearn examined the villages in the Alibág Táluka, where the rayats had petitioned about the fields being over-assessed; he also tested the measurements taken for the City Survey of the village Chembur in the Sálsette Táluka, as also the "Phalni," &c., of the Inám village Tis in the Kalyán Táluka; he also introduced the revision settlement in the 5 Isáfat villages of the Karjat Táluka.

53. At the beginning of the field season Colonel C. W. Godfrey as Superintendent of this Survey left Head-quarters and proceeded to Nasrápur (Rájgad Táluka) and Shirwal (Vichitragad Táluka) of the Bhor State and introduced survey rates in both the tálukas; he then proceeded at the beginning of January to the Mahád Táluka, where he examined the work of the measuring establishments working under Messrs. Wilkins and McIver; he remained in this táluka up to the beginning of February, when he proceeded to the Bhiwndi Táluka, where he introduced the revision survey rates. At the beginning of April he proceeded to the Sháhápur Táluka, where he visited the Deputy Superintendent's camp, and examined classification work with Mr. Hearn, Deputy Superintendent, Konkan Revenue Survey. Soon after the middle of April he proceeded to the Sálsette Táluka, where he examined the City Survey work of Bándra, Dándá, Andheri, Vesáva and Chembur. At the beginning of May he returned to the Head-quarters and took charge on the 20th May of the office of the Survey Commissioner and Director, Land, Records and Agriculture, which he retained till the 21st June 1896, and on the 22nd June he resumed charge of the Superintendent's office; again from the 24th July he acted as Survey Commissioner up to the end of the year under report.

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

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**PROGRESS REPORT**

OF THE

**DECCAN REVENUE SURVEY**

**For the Year ending 31st October 1896.**

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