

GENERAL REPORT

OF THE

Revenue Survey Operations

OF THE

CENTRAL PROVINCES

FOR SEASON

1866-67.

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COLONEL J. E. GASTRELL,

DEPUTY SURVEYOR GENERAL AND SUPERINTENDENT OF REVENUE SURVEYS,  
UPPER CIRCLE.

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CALCUTTA :

OFFICE OF SUPERINTENDENT OF GOVERNMENT PRINTING.

1867.



FROM THE SUPDT. REVENUE SURVEYS, UPPER CIRCLE,  
 TO THE SECY. TO THE GOVT. OF INDIA, HOME DEPARTMENT.

Calcutta, 5th December 1867.

SIR,

I have the honor to submit the accompanying Report on the Revenue Survey Operations of the 1st, 2nd, 3rd and 4th Divisions, Central Provinces, during the season 1866-67.

The results of the operations of the four parties attached to the Central Provinces are embodied in the following Statement :—

Survey Divisions.	District in which employed	Village Circuits and Waste Blocks	Square miles.	Total Expenditure Rs.	REMARKS.
1st Division ...	Seonee ...	668	1,199	58,852	Besides the work in Seonee, this party resurveyed the entire length of Railway through District Jubbulpoor, <i>vide</i> para. 4 of the Report, and completed the survey of Cantonments and Civil Station of Jubbulpoor.
2nd ditto ...	Raepoor ...	413	737	46,700	This party was employed for half the season in examining the Raepoor work of 1864-65-66, by actual remeasurements in the field, <i>vide</i> para.17 of the Report.
3rd ditto ...	Jubbulpoor ...	288	653	47,560	In addition to the area surveyed in District Jubbulpoor, the boundaries of 316 newly demarcated Waste Land Blocks in District Saugor were also surveyed and mapped by this party.
4th ditto ...	Chanda ...	563	1,250	62,168	
Grand Total for 1866-67 ...		1,932	3,839	2,16,280	Average per square mile Rs. 56, and per village Rs. 111.
Ditto for 1865-66 ...		2,037	3,799	2,03,873	Average per square mile Rs. 54, and per village Rs. 101.
		- 105	+ 40	+ 9,407	

Considering that three out of the four parties were for some time employed on work which does not count towards area, the out-turn is very satisfactory.

The increased expenditure is due to the following causes, *viz.* :—

1st.—Arrears of pay drawn on the introduction of the reorganization, scheme Rs. 14,099  
 \* 2nd.—The sum granted as compensation for dearness of provisions, amounting to Rs. 4,969, against Rs. 1,850 granted in 1865-66, showing an excess of ... .. 3,119

Total Rs. 17,218

\* 1st Division during the field season in Seonee. | 3rd Division Nil.  
 2nd ditto ditto Raepoor. | 4th ditto during the field season in Chanda.

Deducting this amount, the total expenditure for 1866-67 would be Rs. 1,98,062 against Rs. 2,05,873 in 1865-66.

The following maps of the Central Provinces have been published during the past year :—

Main Circuit No. 10, Purgunnah Rampailee, District Bhundara.

Main Circuits Nos. 4 and 12, Purgunnah Sreenugur, District Nursinghpoor.

Plan of the Cantonment of Seetabuldee.

District Nursinghpoor, scale 4 miles = 1 inch.

District Hoshungabad (preliminary map), scale 4 miles = 1 inch.

District Saugor, scale 2 miles = 1 inch, at Press.

Final compilations of the following districts are in progress :—

District Hoshungabad, scale 4 miles = 1 inch.

District Dumoh, scale 4 miles = 1 inch, nearly ready.

I have the honor to be,

SIR,

Your most obedient Servant,

*Colonel,*

*Depy. Surveyor General.*

GENERAL REPORT  
OF THE  
**Revenue Survey Operations**  
OF THE  
CENTRAL PROVINCES  
For Season 1866-67.

FIRST DIVISION, CENTRAL PROVINCES.

Leaving Recess Quarters at Jubbulpoor on the 21st November 1866, the party re-entered District Seonee, and took up the survey of portions of Tehseels Lucknadown and Seonee. The country was very jungly, and it was not until the 24th December following that line cutting operations were sufficiently advanced to allow of all hands being uninterruptedly employed on actual measurements.

Captain R. E. Onkes, S. C., Revenue Surveyor, 3rd Grade.  
ASSISTANTS.  
Lieutenant W. H. Wilkins, S. C., Assistant Revenue Surveyor,  
1st Grade.  
Mr. F. Grant, Civil Assistant, 4th Grade,  
" G. Rae, Sub-Assistant, 2nd ditto.  
" T. W. Reilly, ditto, ditto.  
" E. Little, ditto, 3rd Grade.  
" G. B. Youngs, ditto, 4th ditto.  
34 Native Surveyors, &c.

2. LIMITS.—These Tehseels lie south of that part of the district surveyed last season, and are limited east by District Mundla, west by District Chindwara; on the south extends the unsurveyed portion of District Seonee.

3. AREA.—The area comprised within these limits is 1,194 square miles, distributed as follows:—

VILLAGES.		WASTE BLOCKS.		TOTAL.	
No.	Area.	No.	Area.	Traverse circuits.	Area.
365	600	57	143	422	743
229	415	10	36	239	451
598	1,015	67	179	661	1194
Add the area of the River Nerbudda touching on last year's work ...				7	5
Total out-turn of the Season ... ..				668	1,199

4. RE-SURVEY OF THE G. I. P. RAILWAY, DISTRICT JUBBULPOOR.—It being considered necessary to make a re-survey of the line of Railway through District Jubbulpoor, to note any deflections or deviations in its direction since it was first marked out and surveyed in 1861-62, the Surveyor was directed to detach a small party for this purpose before leaving the district for Seonee: the work has been successfully accomplished, and the Maps showing the survey

of the Railway along its entire length (80 miles) from Bijeragogurh on the North-East to District Nursingpoor on the West, have been lodged in this Office. The general run of the line is much the same as originally shown on the published Maps; the alterations being trifling, with one exception, *viz.*, where instead of following the direction of the Nagpoor Road, north of the Cantonments of Jubbulpore, the line diverges from the point where it crosses the Pureyt River, winds south of Cantonments, and rejoins the old line at the village of Bhudun.

5. **DETAIL SURVEY.**—The truth of the interior survey of waste-land blocks and villages was tested by extensive check surveys made by running belts 20 chains broad through the work, and “also by re-surveying blocks taking in portions of three or more villages.” The Surveyor reports the comparison most satisfactory; the few differences discovered being due to certain patches of land “fit for cultivation” having been brought under cultivation during the interval between the original and check survey. All permanent features agreed well.

6. **CONNECTION WITH G. T. S.**—A connection was effected with several stations\* of the Jubbulpoor Meridional Series. The result of comparison of direct distances as deduced from Great Trigonometrical Survey and Revenue Survey data is given below; with two exceptions the comparisons are good.

NAMES OF STATIONS.	By Great Trigonometrical Survey.	By Revenue Survey.	Error of Revenue Survey.	Error per Mile.
	Feet.	Feet.	Feet.	Feet.
Kariapahar to Talla ... ..	130653·6	130724·2	+ 70·6	2·8
Choraoghur to Talla... ..	130210·1	130333·5	+ 123·4	5·0
Kariapahar to Choraoghur ... ..	72061·4	72153·8	+ 92·4	6·8
Kariapahar to Manori ... ..	93714·7	93828·9	+ 114·2	6·4
Choraoghur to Manori ... ..	89533·0	89681·5	+ 148·5	8·7
Mundi to Manori ... ..	107395·2	107705·4	+ 310·2	15·2
Mundi to Choraoghur ... ..	46817·8	47074·5	+ 256·7	28·8
Average error ... ..	.....	.....	.....	+ 8·8

7. **MAPS AND PLANS.**—The Maps and Plans of District Seonee of this party not having been received up to date (being barely due), I am unable to say anything regarding them.

8. **JUBBULPOOR CANTONMENTS AND CIVIL STATION.**—The Plans of the City and Station of Jubbulpoor mentioned in paragraph 7 of last Report have been received; that of Nursingpoor is promised soon.

9. **DEMARCATIION.**—Regarding boundary marks the Surveyor states, “the demarcation in the village portion of the work has been found very good, and the Thakbust Maps generally carefully prepared.” Such was not the case, however, in the Government waste lands, which, he states, were but imperfectly demarcated. The same failing was observed in the Saugor waste lands or Government forest reserves.

10. **ASSISTANTS.**—The Surveyor commends all his Assistants, for their zeal and energy in Field and Reconn, but one, who has been warned to be more careful and attentive.

11. **PROGRAMME FOR 1867-68.**—The survey of District Seonee will be extended this cold season immediately south of the tract under review.

12. The Surveyor’s description of the country will be found in the Appendix.

## SECOND DIVISION, CENTRAL PROVINCES.

Major J. MacDonald, S. C., Surveyor, 1st Grade, 4th Division, Central Provinces, in charge from 1st October to 21st December 1866.  
Mr. R. B. Smart, Surveyor, 3rd Grade, transferred from 1st Division, Lower Provinces, from 21st December 1866.

## ASSISTANTS.

Mr. E. J. Jackson, Probationary Assistant Surveyor, transferred from 1st Division, Lower Provinces, from 6th March 1867.  
Mr. W. Ellison, Assistant Revenue Surveyor, under suspension up to 23rd, and dismissed from 24th July 1867.  
Mr. P. M. Brennan, Sub-Assistant Revenue Surveyor, under suspension from 7th May to 23rd July 1867, and dismissed from 24th idem.  
Mr. J. S. Pemberton, Sub-Assistant Surveyor, 2nd Grade, transferred from 3rd Division, Central Provinces, from 20th January 1867.  
Mr. W. S. Buttress, Sub-Assistant Surveyor, 2nd Grade.  
Sergeant J. Newland, Sub-Assistant Surveyor, 4th Grade.  
Corporal W. Bourne, Sub-Assistant Surveyor, 4th Grade.  
Mr. A. Hutcheon, Sub-Assistant Surveyor, 4th Grade, transferred from 3rd Division, Lower Provinces, from 1st July 1867.  
Mr. J. McHutton, Sub-Assistant Surveyor, 4th Grade, appointed from 1st July 1867.  
25 Native Surveyors, &c.

13. As mentioned in paragraph 22 of last Annual Report, Mr. R. B. Smart, Revenue Surveyor, 1st Division of Bengal, has been appointed to take charge of and re-organize this party; he reached Nagpoor on the 21st December 1866, and at once relieved Major MacDonald (Surveyor of the 4th Division, Central Provinces), who, in addition to the duties of his own Division, had, up to that date, conducted the investigation alluded to in paragraph 21 of last Report.

14. FIELD OF SURVEY.—Having re-organized the Native Establishment, to suit the requirements of the season, Mr. Smart, on the 1st January 1867, entered on the survey of Purgunnahs Singah and Raepoor, situated on the undulating table-land of the plateau of Chutteesguruh now called District Raepoor.

15. LIMITS AND AREA.—The tract surveyed is bounded on the north by Belaspoor; south by the unsurveyed portion of Purgunnah Raepoor; east by Purgunnahs Lowun and Seerpoor; west by Purgunnahs Dhumdah and Nowagurh of District Raepoor. The area thus enclosed comprises 413 villages and 737 square miles.

16. DESCRIPTION OF COUNTRY.—It is situated on a high level stretching away for many miles without any break or interruption, with but few trees to break the generally bare and bleak appearance of the landscape; is traversed from north to south by the old Mahratta Road from Nagpoor to Sumbulpoor, and is selected for the line of the Imperial Road now under construction.

17. EXAMINATION OF OLD WORK.—In addition to the new survey above noted, the value of the work of 1864-65-66,\* or an area of 1,517 square miles, was tested by actual re-measurements in the field. The result of the revision has already been fully reported† to Government and needs not to be again adverted to.

\* Vide para. 22 of Report of 1865-66.

† In Surveyor General's letter No. 615, dated 14th May 1867, to Secretary Government of India, Home Department.

18. CONSPICUOUS OBJECTS.—The Great Trigonometrical Survey operations not having yet extended over this part of the country, seven‡ conspicuous objects were fixed by traverse for future connection, and as a means of testing hereafter the absolute values of the linear and angular measurements.

‡ 1 Singah Temple.	4 Bhundar P. House.
2 Seclurra ditto.	5 Raepoor Jail Watch Tower.
3 Pendreturie ditto.	6 Raepoor Church (Cross).
	7 Raepoor Gole Bazar dome.

19. CHECK SURVEY.—The detail survey was carefully checked by the *European* Assistants. Lines were run across the work in different directions, the angles and distances of which were calculated and plotted on the congregated village sheets; the comparison was satisfactory. The Surveyor remarks "trifling discrepancies were perceptible in the items of cultivation and fit for cultivation owing to the interval which elapsed between the survey and the purtal (or check survey), but village sites, tanks, rivers, &c., agreed admirably, and I do not hesitate to pronounce the work as first-rate."

20. DEMARCATION.—The demarcation is described as very good, the village boundaries being clearly and permanently defined by stone pillars. The platforms marking the village

trijunctions are, however, stated by the Surveyor to be of a very perishable nature; the masonry not being of the best kind, and the foundations seldom more than six inches deep. Stone marks would be very preferable to brick, and should be adopted in place of them.

21. BOUNDARY COMPARISONS.—The comparison between the Professional and Thakbust Map boundaries was completed before the party quitted the field, and the results are said to have been good and satisfactory.

22. ASSISTANTS.—The Surveyor speaks in favorable terms of his Assistants and Native Surveyors. Messrs. Pemberton and Buttress are specially mentioned as having worked with zeal and cheerfulness.

23. PROGRAMME FOR 1867-68.—The work of the current season will be that portion of District Raepoor lying directly east of the area under review.

24. INSPECTION OF THE PARTY.—In September last, under instructions from the Surveyor General of India, I visited and inspected this party at Nagpoor. I was much pleased with the manner in which the officer in charge had carried out my orders, and re-established strict discipline in the Establishment. The whole work of the season was well brought up and rapidly approaching completion, and the mapping and final records were all well and carefully prepared. A marked improvement was visible in all the field records, and the standing orders of the Department appeared to have been rigidly enforced.

25. I made a careful personal scrutiny of the work in all its stages, and was well pleased with the results. I also went into the question of utilizing, as far as possible and for temporary purposes, the condemned work of previous seasons, and directed Mr. Smart how to proceed so as to secure the best general Maps that are possible from such materials. Omitting village boundaries and details of cultivation and fallow, rough Maps will be produced on the 1 inch = 1 mile scale, which will be found useful by local authorities, and must answer until opportunity offers for re-survey of these portions of the Central Provinces, when true and reliable ones can be substituted for them. From these again, Geographical Maps on the Indian Atlas scale will be prepared for present purposes, for District Officers and the public.

### THIRD DIVISION, CENTRAL PROVINCES.

Lieutenant J. H. W. Osborne, late 44th Native Infantry, Assistant Surveyor, 1st Grade, in charge, on furlough medical certificate to Europe from 24th June 1867.

Captain H. C. B. Tanner, S. C., Assistant Surveyor, 1st Grade, in charge, from 24th June 1867.

#### ASSISTANTS.

Lieutenant D. C. Andrew, S. C., Assistant Surveyor, 1st Grade, transferred to 1st Division, Oudh, from 23rd July 1867.

Mr. H. L. Pemberton, Civil Assistant, 4th Grade.

Mr. J. S. Pemberton, Sub-Assistant, 2nd Grade, transferred to 2nd Division, Central Provinces, from 20th January 1867.

Mr. A. M. Lawson, Sub-Assistant, 3rd Grade.

" J. H. Barter, ditto, ditto.

" C. W. F. Seyers, ditto, 4th Grade.

" R. L. Thompson, ditto, ditto, appointed from 19th January 1867.

25 Native Surveyors, &c.

26. This party took the field under Lieutenant Osborne, Assistant Surveyor, on the 1st November 1866, and reached the scene of operations in Bijeragogurh on the 15th December 1866.

27. CHANGE OF EXECUTIVE.—At the close of the field season, Lieutenant J. W. Osborne having been compelled by ill health to proceed to Europe on medical certificate, Captain Tanner, Assistant Revenue Surveyor, was appointed to officiate for him. He assumed charge on the 24th June.

28. LIMITS.—This tract of country which came under survey and now forms part of District Jabulpoor, as a Tehseel, was incorporated therewith under orders of the Government of India, No. 999, dated 9th May 1865. It is bounded on the north by the Kymoor Range



which separates it from the Myhere States; on the south-west and west by the remainder of the district of Jubbulpoor, and by the Native State of Punnah; and on the south and east by the Rewah State. The western corner of the Tehseel is traversed by the Jubbulpoor Extension of the East Indian Railway, and by the Trunk Road from Jubbulpoor to Mirzapoor.

29. DESCRIPTION OF COUNTRY.—The country is described as generally flat and open in the centre and south-east, undulating and broken towards the north east, while on the south-west, jungle and hilly ground prevail.

30. AREA.—The total area is 653 square miles, comprising 288 traverse circuits, viz.:—

272 Villages of Tehseel Bijeragogurh,	590 square miles.
11 " of Nagole	29 "
2 " of Myhere	2 "
and 3 blocks of Forest Reserves	32 "
Total	653 Square miles.

31. CONNECTION WITH GREAT TRIGONOMETRICAL SURVEY.—The Revenue Survey operations were connected with two\* stations of the Calcutta Longitudinal Series, and the direct distance obtained by Great Trigonometrical Survey and Revenue Survey data shows a difference of only .078 feet per mile, as the Revenue Survey error in that portion of the work.

\* Nowgaon (Sec.)  
Lakampura (P.).

32. CONSPICUOUS OBJECTS.—The objects noted in margin were connected by traverse

1 Gunespoor Temple.  
2 Kurhuta ditto.  
3 Burhee Fort.  
4 Huriya H. S.  
(Rewah Topl. Survey.)

with the work in Bijeragogurb, to serve as points of connection in the event of the Great Trigonometrical Survey operations extending to the other parts of the district.

33. DETAIL SURVEY.—The detail survey of the whole tract was conducted on the full scale of 4 inches = 1 mile, and extensive check surveys were made by the European Assistants to test the work of the Native Surveyors and ensure accuracy in all topographical details. The hills were surveyed first in blocks by Natives on the full scale, and again sketched in by European Assistants on the scale of 1 inch to the mile.

34. DEMARCATION.—No difficulty was found in identifying the village boundaries, and the Thakbust Maps agreed well with the Professional Survey. The demarcation was good in every respect.

35. BIJERAGOGURH.—The Survey of Tehseel Bijeragogurb was completed on the 27th March 1867. The party then marched back to Saugor, and a strong body of Native Surveyors under Mr. H. Pemberton, Civil Assistant, was at once told off for the survey of the boundaries of the newly demarcated Forest Reserves in District Saugor, alluded to in paragraph 37 of the Report for 1865-66, the remainder of the party being employed on the Maps and computations connected with Bijeragogurb.

36. SAUGOR RESERVES.—The survey of 316 waste blocks, the number found demarcated, was concluded, and field work ceased on the 12th June. There are still about 70 blocks for survey which had not been demarcated when the waste lands party was in the field; it will be necessary therefore to leave a small party under an Assistant to finish this work during the early part of this field season. Owing to the delay in the receipt by the Surveyor of the Settlement Officer's boundary Maps, the comparison between the Thakbust and professional survey has yet to be made, the demarcation maps not having been made over to the Officer in charge in time to do so this season. The final areas of Reserves will then be determined, and the areas of the villages containing them be corrected.

37. PROGRAMME FOR 1867-68.—During the present field season this party will be employed in the survey of District Nimar, which comprises an area of about 2,900 square miles, and will, it is calculated, take about three years to complete.

38. ASSISTANTS.—The Surveyor reports favorably of all his Assistants, and especially notices Mr. Lawson. The General Maps of Bijeragogurh executed by this Assistant have been received in this Office. They are beautiful specimens of hill drawing, and most creditable to the draftsman.

39. STATISTICS.—The Assistant Surveyor, Captain Tanner, who was not with the party in the field, and had therefore no opportunity of preparing an account of the country which came under survey, states that through the kindness of Mr. A. M. Russell, Settlement Officer, he has supplemented his professional Report with a geographical and statistical description of Tehseel Bijeragogurh prepared by that Officer. This will be found in the Appendix.

40. TOTAL AREA OF DISTRICT JUBBULPOOR.—The total area of District Jubbulpoor, inclusive of Bijeragogurh, and the villages of Nagode and Myhere lying within this Tehseel, now proves to be 4,301 square miles thus :—

As per former survey	...	...	Square miles	3,648
Surveyed in 1866-67	...	...	"	653
Total square miles				<u>4,301</u>

41. I have not yet had an opportunity of visiting and inspecting this party, but hope to do so early in the coming year.

FOURTH DIVISION, CENTRAL PROVINCES.

Major J. Macdonald, S. C., Surveyor, 1st Grade, appointed to officiate as Deputy Surveyor General, L. E., from 8th July 1867.  
Lieutenant H. L. Smith, R. A., Assistant Surveyor 2nd Grade, in temporary charge, from 8th July to 30th September 1867.

ASSISTANTS.

Mr. W. Ivey, Assistant Surveyor, invalidated on 1st June 1867.  
 " E. C. Barrett, Sub-Assistant, 2nd Grade.  
 " J. U. T. Coxen, ditto, 3rd ditto.  
 " G. C. Barrett, ditto, " ditto, transferred from Left Bank, Indus Survey, from 1st February 1867.  
 " E. Lincoln, Sub-Assistant, 4th Grade.  
 " W. Johnson, ditto, " ditto, appointed from 1st September 1867.  
 26 Native Surveyors, &c.

42. Operations were re-commenced in the Chanda District in November 1866, and embraced Purgunnahs Bhanduk, Gurborees and Berhamporee.

43. LIMITS.—The tract under review is bounded north and north-west by District Bhundara, and Purgunnahs Wurrora and Chimoor, surveyed in 1865-66; south and south-west by Berar and Pergunnah Havelee and Rujgurh; and east by Purgunnah Wyragurh of District Chanda.

44. AREA.—The total area is 1,250 square miles, containing 563 traverse circuits, as shown in the following Abstract :—

Purgunnah Bhanduk, 118 Villages	...	175-75	}	...	...	370-31
" " 15 Waste blocks	...	194-56				
" " Gurboree 176 Villages	...	227-91	}	...	...	498-31
" " 56 Waste blocks	...	270-40				
" " Berhamporee, 165 Villages	...	256-51	}	...	...	350-78
" " 29 Waste blocks	...	103-27				
						<u>1228-40</u>
Area of Rivers Wurda and Wien Gunga surveyed in four circuits	...	...	...	...	...	21-22
						<u>Total area</u> ... <u>1249-62</u>

45. DETAIL SURVEY.—The villages were surveyed on the full scale of 4 inches=1 mile; the Forest Reserves on the ½ scale, 2 inches=1 mile. eighty-three miles of purlal or check lines were run through the work, which with a few exceptions was found to agree well with the re-survey. " Where," says the Assistant Surveyor, "a comparison of the plotted purlal (check survey) has manifested error, a re-survey of the village has been made."

46. DEMARCATION.—Owing to the complete and most satisfactory state of the demarcations, the Professional Survey progressed without interruption. “The marks on the ground agreed well with those depicted on the Thakbust Maps. The stones used for boundary pillars are excellent. Standing some 4 or 5 feet above the ground they form very distinct and clearly defined objects.”

47. MOHRLEE FORESTS.—“The Chief Commissioner having,” on the representation of the Conservator of Forests, Central Provinces, “finally abandoned his original intention of marking off these jungles”—Mohrlee and Dhaba—into tracts of reserved Government Forest, “on account of the scarcity of teak, or other description of timber of sufficient value to make it worth while demarcating them” the Mohrlee Forest has been (the Surveyor states) surveyed in the usual manner, as waste lands, on the  $\frac{1}{2}$  scale of 2 inches to the mile. The Dhaba Jungle in Purgunnah Ghatkool, which falls within the limits of survey operations this season (1867-68), will be dealt with in the same way.

48. CONNECTION WITH GREAT TRIGONOMETRICAL SURVEY.—The following tower stations and minor points were taken up, but as the charts and numerical data have not yet been received in the Surveyor General’s Office, no comparison can be instituted between Great Trigonometrical and Revenue Survey direct distances :—

Sathbaini. } Ambagath. }	} Principal Stations of Jubbulpoor Meridional Series.	
Songoon. Doorgoon or Chicholee. }		} Minor Stations of the Hydrabad Topographical Survey.
Thoregaon Khoord Temple. } Oochlee Temple. }		

50. INSPECTION OF THE PARTY.—I inspected this party in September last, and was well pleased with the state in which Field and Office records and Maps were placed before me. The records of correspondence and accounts were all kept in a proper and orderly manner; Departmental Orders and circulars had been regularly circulated to, and filed in, the several Assistants’ Camps, and evidences of good discipline prevailed throughout. Field Books and Maps were equally well kept, and I was much pleased with the clean and neat way in which the original records of this party had been rendered by the Native Assistants. I made a close and searching comparison of traverses, both main and village, with field measurements. I also examined the field and final Maps and compared the check surveys with the original field plots. The results in all cases were most satisfactory.

51. CHANGE OF EXECUTIVE.—On the appointment of Major J. Macdonald to officiate as Deputy Surveyor General, Lower Provinces, in place of Lieutenant Colonel D. C. Vanrenen, who obtained leave on medical certificate to England on the 10th July 1867, the temporary charge of the survey devolved on Lieutenant Lees Smith, Assistant Surveyor, 2nd Grade. This Officer deserves much credit for the manner in which, though so young in the Department, he has conducted the duty since then. Lieutenant F. Coddington, Assistant Surveyor, 1st Grade, who has lately returned to duty from England, and is an Officer of experience, has now been nominated to the charge of this Division.

52. ASSISTANTS.—The Assistants are reported by the Surveyor to have worked satisfactorily in Field and Recess. Favorable mention is also made of the Native Surveyors.

53. PROGRAMME FOR 1867-68.—Purgunnahs Rajgurl, Havelee, and Ghatkool, will come under survey this season, with an estimated area of 1,250 square miles; this, if accomplished, will complete that portion of District Chanda lying between the River Wien Gunga on the east and Wurda on the west.

54. The ready and willing co-operation of landholders this season contrasts most favorably with the conduct of those whose apathy and unwillingness I represented last year to the Chief

Commissioner (as mentioned in para. 43 of my last Report); his measures for its remedy were most effectual. The Assistant Surveyor thus acknowledges the assistance rendered during the Field season by the native authorities:—"I beg to recommend to the special notice of the Chief Commissioner, the Tehseeldar of Berhamporee, along with Janoba Janee, the great landholder of that Purgunnah. The former Officer by his intelligence and courtesy greatly facilitated the operations" of the survey in Purgunnahs Berhamporee and Gurboree. Major Macdonald bears similar testimony.

*Deputy Surveyor General.*

DEPY. SURVEYOR GENL.'S OFFICE; }  
Calcutta, 5th December 1867. }

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# APPENDIX.

*Extract from Annual Report of the Operations of the 1st Division Central Provinces Revenue Survey, by Captain R. E. OAKES, Season 1866-67.*

17. In the north west corner of Main Circuit No. 4 along the left bank of the Sher River, the country is an open undulating plain interspersed with valleys; grass grows on the undulating plain, but the trap rock is very near the surface; in places it crops out so that this portion of the circuit is not likely to be ever brought under cultivation. In the valleys and depressions, however, soil (black cotton) has been conveyed by the action of water, and the crops grown are fine. There is a good deal of hill and jungle, much totally unfitted for cultivation, and the timber grown, is of no size and comparatively valueless. The Bigna Valley, which expands into a considerable tract to the west of the circuit, is excellent soil and well cultivated; it is skirted on either side by plateaus covered with jungle, cultivated in patches here and there.

18. No. 5 Circuit, which lies to the north of Wein Gunga River consists of both richly fertile soil and of jungley unfruitful tracts, chiefly stony hills covered with scrub and common tree jungley, the latter not of much value.

19. No. 6 Circuit comprises a fine richly cultivated tract on the Seonee plateau. The soil is generally black cotton, which produces fine crops.

20. No. 7 is also a magnificent crops district; its rich black loam extends in a continuous plain from the Wein Gunga on the north to the southern boundary of the circuit, where it is bounded by very dense heavy jungle extending in a north-easterly direction to the Wein Gunga, and south west towards the Government waste lands of Sonawanee.

21. The Wein Gunga River runs along the northern boundary of Circuit No. 7, and a short distance beyond its north-easterly end turns to the south, in which direction it continues its course to the Bhundara District, and forms the natural boundary between Seonee and Mundla Districts.

22. The crops and jungle produce are so exactly similar to those met with last season and minutely described in last report that a repetition here is unnecessary.

23. PRINCIPAL RIVERS.—The principal rivers met with are the Wein Gunga, the Sher, and Bigna; the Alonee and the Thaur.

24. The most important, the Wein Gunga enters No. 6 Circuit in the village of Powseea, a few miles north-west of the station of Seonee; flowing westerly it soon however, turns to the north a nearly parallel direction to the great Deckhan Road as far as Chupara, where it turns to the east, crossing the road under a fine bridge of 12 arches built by Mr. J. S. Heyman, Civil Engineer. It continues an easterly course between steep high banks to the eastern boundary of the district, whence, as before mentioned, it turns southward and flows down to Bhundara, throughout its course alternate deep Khoonds and broad shallows are met with; the bed is for the most part rocky; in several points barriers of rocks extend across the bed, rendering it totally unfitted for water-carriage. Perhaps during the rains timber might be floated down; but I am unable to speak positively on this point, as I have never seen the river at high flood, and am only able to judge by the marks of high water traceable on the trees along the banks. In the village of Khyranjee the course of the river is through precipitous and very high banks of granite where the hill appears to have been riven by an earthquake. I am led to this

conclusion by the angular and rugged appearance of the faces of the chasm, which indicate sudden and forcible rupture rather than the smoothing effects of long continued water action.

25. The river abounds with Mohaseer and other fish, and in the deep Khoonds large Muggers are constantly seen. In many places, on the banks especially, in the vicinity of hills and in the heavy jungles on the north-east of the circuit, spotted deer, sambur, and tigers are to be found during the hot months when water is scarce.

26. The Sher River runs in a westerly direction between circuits of season 1866-67 and circuit 4 of this year's work. It crosses the Nagpoor Road under a fine bridge of eight arches in the village of Boorhwanee; below the bridge, the banks soon become very high and jungly, increasing in height and steepness until it reaches the hilly districts at the junction of Seonee and Chindwara Districts where it is very tortuous, and is flanked by high rocky precipitous cliffs. The Sher, after emerging from the hill, debouches into the plains of Nursingpoor, which it crosses, and finally flows into the Nurbudda.

27. The Bigna rises in the east of Circuit No. 4, and flows in a westerly direction through the circuit across the line of the Nagpoor Road at Guneshgunge, where a fine bridge has been built. The valley of the Bigna for miles above and below Guneshgunge is a fine culturable plain, bounded north and south by sloping sides of the adjoining plateaus whose wild jungly sides present a striking contrast to the waving fields of cultivation which extends along the valley. All the streams in these districts abound in fish, and the jungles bordering generally hold game.

28. **TIGERS.**—In the vicinity of Guneshgunge, cattle are constantly killed by tigers which roam comparatively secure in the extensive jungles that flank the valley of the Bigna, and render their destruction by the Native Shikarees a matter of considerable difficulty. Not long ago the mail carts whilst descending a ghat was attacked by a tiger, and one of the horses slightly wounded; the coachman with admirable presence of mind sounded his bugle, and fairly put this brute to flight.

29. **STREAMS.**—Besides the principal rivers enumerated there are many minor streams intersecting the district. Most of these hold water in the deeper Khoonds throughout the year, and doubtless aid greatly by infiltration and evaporation to supply moisture to the crops extending along their bank. Almost all are wooded, and a dark fringe of verdure renders their course distinctly visible through the open parts of the district.

30. **IRRIGATION AND CULTIVATION.**—Irrigation is almost unknown excepting in the immediate vicinity of villages where sugarcane, chillies, and vegetables are produced; melons are extensively cultivated in the beds of rivers wherever sandy flats admit of it. And fields of castor oil are constantly met with on the sloping banks where the soil is good and has been cleared of jungle for the purpose; with such facilities for irrigation as are available in the many streams that intersect great parts of the country, it is wonderful that no malgoosar more enterprising than his neighbours has struck out a new line for himself and proved the advantages that must attend a thorough system of watering crops, which is evidenced by the superiority of the cultivation in the immediate vicinity of the streams.

31. **GREAT DECKHAN ROAD.**—The only made road is the Great Deckhan from Jubulpoor and Seonee to Nagpoor; it is metalled and bridged throughout, is in excellent order and contrasts most favorably with the district roads.

32. There is a Dâk Bungalow at Chuparah, and Road Engineers' Bungalow near the Sher River on the north side of Lucknadow, Guneshgunge, and Chuparah.

**SEONEE AND MUNDLA ROAD.**—The only other road met with is the Seonee and Mundla Road, which in the rain is almost impassable in places.

33. **PRINCIPAL VILLAGES.**—The principal villages are Lucknadowm, the chief village of the Tehseelee of that name: it is situated about half a mile to the west of the Nagpoor Road it is built on high ground, and the white Tehseelee is visible from some distance; there is a fine tope of mango trees near the town.

Dungareea, Chuparah, Bheemghur, and Soonawara on the Wein Gunga, Patun, and Gunsore.

34. The village of Chuparah, formerly the chief in the district, is now a small unimportant one. Dungareea is a considerable place, but the name of Chuparah has been retained to indicate the local of the Thanna and the place where the annual fair is held.

*Extracts from the Report of the Bijeragogh District by MR. A. M. RUSSELL, Settlement Department.*

**PARA. 2. GEOGRAPHICAL DESCRIPTION OF PURGUNNAH.**—Purgunnah Bijeragogh is situated at the extreme north-east quarter of the district, at a distance of some 65 miles from Jubbulpore and lies between the 23° and 24° of North Latitude, and 80° 81° East Longitude. It is bounded on the north by the Kymore range of hills and the Native State of Myhere; on the south by the Purgunnahs of Bilehree and Khaombhu in Jubbulpore Proper; on the east by the Rewah Rajah's possessions; and on the west by the Alonee River and the Punah State.

**PARA. 3. GENERAL DESCRIPTION OF PURGUNNAH.**—In general terms the Purgunnah is a flat and open tract of country, somewhat encroached upon towards the north by the Kymore Hills, and in the centre it is traversed from south-west to north-east, almost from end to end, by the Kehmijooah Hills, a low and straggling range which sometimes breaks up into two and three detached ridges, sending out off shoots on either side which sensibly effect the quality of the land. Small patches of jungle, too, occur in several localities; and the entire eastern and part of the southern boundaries are fringed with thick timber forests. The size of the Purgunnah may be approximately set down at 630 square miles, with an extreme length from east to west of some 40 miles comprising 272 villages, giving an average of 2½ square miles to each.

**PARA. 4. ROADS AND STREAMS.**—As regards roads and communications, the Purgunnah is very backward at present. There is but one made road, the high road to Mirzapoor, which passes through a small portion of the western corner of the Purgunnah, and parallel with it runs the East Indian Line of Railway within a mile or two. A Purgunnah Road has been recently marked out from Jokye on the main road to Bijeragogh and beyond it towards Burhee, a large Qusbah in the eastern part of the Purgunnah; but the line has not been well selected, as it passes over black soil for a considerable distance, and several muddy unbridged nullas have to be crossed; consequently it is not much frequented at present. There is a well traversed track, however, from Moorwarah to Buddunpoor (in Myhere), an important Qusbah with a trading population situated a few miles beyond the eastern boundary of the Purgunnah, which takes in its route the best towns in Bijeragogh, such as Kunhwara, Bhyswahce, Bijeragogh, &c., and is the favorite line with Bunjaras and others conveying goods on bullocks. Wheel carriages are unknown in the Purgunnah. In respect to streams, however the Purgunnah is very well favored. There is the Mahanuddee, the principal river of the tract, which enters it in the south, follows a northerly course until it reaches the centre of the Purgunnah, when it takes a sudden bend eastward and thus flows out of the Purgunnah. In several places the Mahanuddee opens out into a broad stream, with steep banks and a rocky bed, which makes it difficult to ford. Next in importance is the Kutney River, which entering the Purgunnah from the south-west corner flows

in a north-easterly direction until its junction with the Mahanuddee in the vicinity of Bijeragogurh Khas. The Kutney is a rapid stream, running between confined high mud banks which often overflow during the monsoons and injure the khureef crops in their vicinity. There are also the Oomrar and Bhudar Rivers in the eastern and southern parts, respectively, of the district. The Alonee to the western, and the Jurjurar, a hill torrent issuing from the Kymores in the northern parts, besides several other minor streams, among which may be mentioned Jhuppawnee, which runs immediately below the town of Bijeragogurh.

**PARA 5. CHIEF CITIES, TRADE, AND POPULATION.**—The chief towns of the Purgunnah are (1) Bijeragogurh itself, (2) Burhee, (3) Kunhwara. The trade of the Purgunnah consists chiefly of crude iron, which is largely manufactured in several villages, and is exported to Bhuddunpoor and Rajapore in the Banda District. The ore is obtained from Kehanjooeh Hills, wherever excavated and worked up into crude iron at no less than 28 villages, in the simple native method. The estimated produce of iron per annum is said to be 24,000 maunds. The most esteemed mines are said to be situated within the boundaries of Mouzahs Kantee, Bijouree, Loomree, and Huthera. The average selling price is Rs. 2 per maund for crude iron, and Rs. 5 for worked up iron. Iron furnaces are only at work during the moonsoons when the people are at leisure from agricultural pursuits. Next to iron the export trade consists of potatoes, ginger, turmeric, and chillies, which are largely carried off by traders for the consumption of the Military Cantonments of Saugor and Banda. These articles are produced all over the Purgunnah, but principally at Kunhwara and some other villages close to it, all being situated in the vicinity of the Railway. In former times large numbers of sheep also used to be bred and exported towards Saugor, Jubbulpoor, &c., but the supply is now falling off annually, as the great demand for sheep all over the country has trenched upon the brood stock. In manufactures the district can boast of nothing except a few country cloths stamped at Bijeragogurh, and a few brass utensils made at the same place. Both these are for home consumption and are not exported. Some of the rice produced in the Purgunnah, is of excellent quality, particularly the sort called "Nuturbaie," which is exported towards Myhere and Nagode. Salt, sugar, goor, English and Country cloth goods, as well as brass utensils and spices, are all imported from Mirzapoor. Enough cotton is grown in the Purgunnah for local wants, but hardly any sugar or, more properly speaking, goor. The principal trading and mercantile towns are Bijeragogurh and Burhee, each having a large Brahmin and Buneah population, whose principal occupation is trade. The best bazars are held here weekly on Sundays and Tuesdays respectively. There are several other villages in which weekly bazars are held; some of these are old established bazars and are well attended; but some are of recent origin since British occupation, and will take time to develop. The following is a list of weekly markets held in the Purgunnah:—

Sunday	...	...	Bijeragogurh Khas	...	...	( old )
Tuesday	...	...	Kunhwarah	...	...	( old )
Ditto	...	...	Burhee	...	...	( old )
Wednesday	...	...	Singanoree	...	...	( new )
Ditto	...	...	Nadawun	...	...	( new )
Thursday	...	...	Kareetullaee	...	...	( new )
Ditto	...	...	Khitoulee...	...	...	( new )
Saturday	...	...	Ghyrtullar	...	...	( new )
Ditto	...	...	Soorya	...	...	( new )
Ditto	...	...	Kantee	...	...	( old )

The population of the Purgunnah is strictly agricultural, the non-agricultural element being limited to a little more than 18 per cent., taking the figures obtained from the recent census returns, which include a large number of non-residents employed on Railway works; otherwise the resident population would have shown a smaller number of non-agriculturists. The



settlement census gives the population at 72,632, while the recent census gives it at 81,843 of whom 66,906 are returned as agriculturists, and 14,937 as non-agriculturists. The average rate of population for the whole Purgunnah including excluded waste lands, falls at the rate of 130 souls per square mile by the recent census, and 115 souls by the settlement census which is a low average comparatively speaking; yet better than the average of many other Purgunnah of the district. From all accounts which I could gather the population of the Purgunnah appears to be increased, and with it an increase in cultivation may be confidently looked for. The mass of the people have tiled houses except some of the Gonds and Koles, who have thatched ones.

PARA 6. SOILS.—There are but three well recognised descriptions of soil in the district, *viz.*, “Myr” or 1st Class soil, “Siguta,” or 2nd Class soil, and “Putree,” which is a very comprehensive term and includes all other kinds distinguished in different localities as good “Putree” indifferent “Putree” and inferior “Putree.”

PARA 7. CROPS AND STAPLES.—The principal crop of the Purgunnah is Khureef, which occupies 64 per cent. of the cultivated area at present, Rubbee crops being limited to 31 per cent., but there is a tendency for the production of the latter crops to increase, as the people find themselves in a position to lay out capital in the formation of bunds or embankments. The wheat grown in the Purgunnah is of the ordinary description, as also the gram and linseed. Some paddy, however, is of a superior kind; the till is average good, and the Kodow is considered to be above the average in quality, and constitute the staple food of the masses.

PARA 10. CASTES AND TENURES.—The population of the Purgunnah is essentially Hindoo, and Brahmins occupy the first place, whether among agriculturists or non-agriculturists, and have monopolized all professions. They number strongest among village proprietors, money lenders, bankers, cloth-merchants, and gram dealers. As a body they are a thrifty class, but precluded by caste prejudices from performing the menial services connected with agriculture, and have to be treated with consideration in consequence. They are a particularly fine looking set of men. Next to them are the Bughel Rajpoots, descendants of the Rewah family, a martial looking set, but the worst of landlords, being quarrelsome, overbearing, and oppressive to a degree. The cultivating classes are best represented by Koormees, who have the same reputation here as skilful agriculturists in the Nurbudda Districts. Next to the Koormees are Kathare Teles, who are not oilmen here, but cultivators; then come the Kachees, and then Lohars, who smelt iron as well as cultivate. Among Rajpoots are included a class called Bugrees, who are also good agriculturists. Among farm servants are Gonds and Koles, the aboriginal inhabitants. The latter are very numerous and are a hardworking set of men; Dheemas and Aheers are also numerous, and a large proportion of them are agriculturists; also Dhobees, Kullars, and Koomars. The office of village watchmen or Kotwar is generally filled by Dehais, who have been returned in the census or Mehras, and that of Putwaree by Kaiths.

PARA 11. PAST GENERAL HISTORY.—The Purgunnah Bijeragogurh is but the second half of the Myhere Raj, which was founded by Bence Huzoorie, Jogee by caste, and servant of the Punnah State; according to the tradition, the tracts now known as Bijeragogurh and its neighbour Myhere all belong to the Bugeels of Rewah, from whom they have said to have been wrested by the Punnah Chief in Bundelcund about the Sumbut era 1707, A. D. 1651, and in Sumbut 1827, A. D. 1751. Bence Huzoorie, already alluded to, was granted a small Jageer of about 10,000 in the Myhere country alone, with the appointment of Killehdar of the Myhere Fort. He is said to have been killed in some petty fight by the retainers of the Chutterpore Chief, and then the country was overrun by Pindarees, who kept possession of it for some time. In Sumbut 1853 Doorjun Sing, the son of Bence Huzoorie, was sent against the Pindarees, whom he found quite willing to give up the territory provided the arrears

of pay due to the soldiery kept up for the protection of the Fort were paid up. This was accomplished, and Doorjun Singh obtained possession of the Fort, and gradually of the surrounding country, and then threw off the Punnah yoke, eventually entering into direct Treaty as an independent Chief with the British Government in A. D. 1806, from whom he received a regular Sunnud for the Myhere State. Doorjun Sing died leaving two sons, viz., Bishen Sing, the elder, and Pragdoss the younger. The brothers could not agree together, and eventually the country was divided between them, Myhere falling to the share of the former, and Bijeragogurh or, more properly speaking, Kunhwara to the latter, as that was the place at which Pragdoss first established his Guddee, and subsequently founded the village of Bijeragogurh, and built a Fort there on the Jhuppawan Nuddee. The town of Bijeragogurh is a very modern one, and there are people still living who first saw the place established. Pragdoss was a sensible man, and under his administration the Elakah of Bijeragogurh prospered, while that of Myhere suffered under the mismanagement of his elder brother. After the death of Pragdoss, and in the absence of any qualified male or female member of the family for the management of the Elakah, the only son left by the deceased being a minor, the estate was taken at once by the British Government and placed under the charge of the Political Officer stationed at Nagode. Although managed by a British Officer, the old institutions of the country were kept up. This continued up to 1857, when the minor had nearly come of age, and the estate would then have been placed under his management, but he rebelled against the Government, and committed many acts of plunder and rapine, and the estate was therefore confiscated for his misdeeds, but remained attached to Nagode until 1865, when it was transferred to the Jubbulpur District.

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*Extract from Annual Report of the operations of 4th Division Central Provinces Revenue Survey, by LIEUTENANT H. L. SMITH, Season 1866-67.*

14. **PURGUNNAH BHANDUK**—Purgunnah Bhanduk is the eastern Purgunnah of the Wurrora Tehseel. Its general appearance is from north east to south west.

**BOUNDARIES OF PURGUNNAH.**—It is bounded on the north and north-west by the Wurrora Purgunnah; on the north east by the Gurboree Purgunnah; on the south east by the Hawelee, while on the south west the river Wurdah separates it from Berar.

**ITS WATERSHEDS.**—It is intersected in a direction almost from north to south by the Rivers Eeraie and Andarnee, and is divided into two main watersheds, which run from north to south, lying between the valleys of the Wurdah, Eeraie, and Andarnee respectively.

The eastern half of the Purgunnah is covered with hills, running from north to south and forming the continuation of the Kussurboree Range, Purgunnah Chimmorr.

**SCENERY.**—Covered with heavy jungle they are the haunts of wild animals and game of every description; while in the valleys which underlie them, or scattered amongst the jungle which sweeps their bases, detached villages are situated here and there, many of them in their wild lonely scenery extremely picturesque.

**SOIL.**—Towards the valley of the Wurdah on the west the country is well cultivated, the soil near the rivers being black cotton loam, producing cotton and grain, while towards the hills on the east the soil becomes sandy or red, in which rice is mainly grown.

**CHIEF TOWNS.**—The chief towns are Bhanduk and Chundunkhera. The former is celebrated for the numerous interesting relics of past architectural skill, which are to be found in the ancient temples and temple caves, the tanks, bridges and ruined forts which meet the eye in every direction.

The town of *Bhanduk* is believed to be the same as the ancient city of Bhudrawattee mentioned in the '*Mahabharat*.,