

# REPORT

ON THE

# SURVEY OPERATIONS

OF THE

LOWER PROVINCES,

FROM

1st OCTOBER 1852 TO 30th SEPTEMBER 1853.

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CALCUTTA:

THOS. JONES, "CALCUTTA GAZETTE" OFFICE.

1854.



FROM

## THE CONTROLLER OF SURVEYS

TO

THE OFFICIATING SECRETARY TO THE  
BOARD OF REVENUE, LOWER PROVINCES,

FORT WILLIAM,

*Dated Camp Sontamookey, Zillah Bankoorah,**The 31st December, 1853.*

SIR,

I have the honor to submit the Survey Returns for the First, Second, Third, and Fourth Superintendencies for the year 1852-53, ending 30th

No. 685, dated the 26th November, from the Officiating Superintendent, 1st or Northern Division.

No. 13, dated the 4th idem, from the Superintendent, 3rd or Eastern Division.

No. 622 and 623, dated the 11th idem, from the Superintendent, 4th or Western Division.

September last, together with the original communications noted in the margin, and with advertence thereto, to place on record the following remarks regarding the progress which has been made and the present state of the work in

each of the Divisions.

2. The annexed memo. exhibits the nature and extent of the work effected by the several Officers attached to the First or Northern

First or Northern Division.

Division during the period under review:—

Name and description of Officer and period during which employed.	Villages demarcated & rendered in every respect ready for the Surveyor, internal measurement inclusive.	Boundary disputes decided.	Enquiries regarding excess and missing lands.	Other miscellaneous cases.	Appeals.	Areas of khushreh villages disposed of.	Registers, Mouzawaree and Mehawaree, disposed of.	Duplicate copies of Maps.	Purneah Milliks traced out.
Mr. H. Pratt, Officiating Superintendent, from 1st October, 1852, to 28th February, 1853, 5 months .....	...	5	227	683	57	...	6	138	...
Mr. E. G. Birch, ditto ditto, from 1st March to 30th September, 1853, 7 months .....	...	...	...	...	...	234	...	...	...
Mr. E. G. Birch, Assistant Superintendent, from 1st October, 1852, to 28th February, 1853, 5 months .....	...	61	87	330	...	...	...	207	...
Mr. G. G. Morris, ditto ditto, from 1st March to 30th September, 1853, 7 months .....	...	...	...	...	...	...	...	...	...
Baboo Khettur Mohun Mookerjee, Deputy Collector, from 1st October to 30th September, 1853 .....	68	80	552	18	...	56	...	37	...
Baboo Radhanath Bose, Deputy Collector, from ditto to ditto .....	...	135	42	398	...	...	...	...	421
Melovee Alli Ahmad, Deputy Collector, from ditto to ditto	...	4	26	150	...	...	7	...	...
<b>Total.....</b>	<b>68</b>	<b>235</b>	<b>934</b>	<b>1,574</b>	<b>57</b>	<b>290</b>	<b>12</b>	<b>382</b>	<b>421</b>

3. It will be seen from the above statement that the actual quantity of new work which has been effected during the year, has been comparatively small, and that the time and attention of the Superintendent and his subordinates have been almost entirely engaged in the disposal of the arrears of khusreh in the Districts now under Survey and Demarcation, and in tracing out the rent-free holdings in the Havelly estate in Zillah Purneah, which were omitted to be accounted for at the period when that District was under Survey. The manner in which the different Officers have been employed may be briefly stated as under. The Superintendent has had the general management of the whole affairs of the Division under his control, inclusive of the work going on in the distant District of Purneah, to which latter two visits were paid by the successive Superintendents (one by Mr. Pratt, and one by Mr. Birch), within the year. The Superintendent had moreover in hand the preparation of the Maldah Registers. The Assistant Superintendent was entrusted with the duty of disposing of the khusreh arrears in Rajshaye. One Deputy Collector was employed in the Purneah work, and another (exclusively) in preparing the Rajshaye Registers. The third Deputy Collector had to co-operate with the Revenue Surveyor, and to make complete, in every respect, for that Officer, whatever happened to be imperfect in the tract of country which is under Survey during the current Field Season.

4. It will be seen from the above detail of the duties which had to be transacted by each of the Divisional Officers, that the services of one Deputy Collector only were available for the Superintendence of the current Demarcation work, and that even his time and attention were partly taken up with other work, the disposal of which could not be postponed. The new Demarcation only aggregate sixty-eight villages. No necessity, however, existed for more being effected, as the Demarcations in Rajshaye were already considerably in advance of the Survey. It was required of the Deputy Collector that he should render complete for the Surveyor the tract of country which was under Survey during the past Field Season, wherever the Demarcation Operations in the tract in question were defective, owing to the non-decision of boundary disputes, the omission of villages and parts of villages, or any other cause. He was also required to make the present season's tract similarly complete. These combined operations have been effected by Deputy Collector Khetur Mohun Mookerjee, with the aid of his authorized Field Establishment of three Pescars and thirty Ameens, and although the work got through is a very small out-turn for so large an Establishment, yet it appears to have been done in an efficient manner, and it is satisfactory to observe that no embarrassment has been met with by the Surveyor in his season's work, owing to the non-decision of boundary disputes or to other causes connected with the non-professional branch of the Department. It must be remarked, too, that the Deputy Collector has, with the aid of his Field Establishment, disposed of fifty-six cases of arrears of internal measurement in Bograh and Rajshaye.

5. The clearing off of the arrears of khusreh in the Districts under Demarcation and Survey (Rajshaye, Pubna and Bograh) has contained, as heretofore, in the hands of the Assistant Superintendent. Mr. Birch had first of all the charge of this duty, but on his being appointed to officiate as Superintendent, he made over the khusreh to his

successor in the Assistantship, Mr. G. G. Morris. The result has been that during the year 234 villages of Rajshaye have been cleared off by the Assistant Superintendent, with the aid of his Extra Establishment of four Pescars and forty Ameens, besides the eleven villages of Rajshaye and forty-five of Bograh alluded to in the preceding paragraph, as having been disposed of by Deputy Collector Khettur Mohun Mookerjee. The total number of villages disposed of in both Districts is 290. This out-turn is certainly much less than I had reason to anticipate, when framing my last year's Report, but as explained at considerable length in my letter to your address, No. 515, dated the 22d October last, the difficulties which had to be encountered were much greater than I expected they would have been, although the Officers who have been entrusted with the supervision of the work have, I feel assured, done their best to expedite its progress and to ensure its correctness. For more easy reference I beg to annex extract (paragraphs part of 5th and 6th and 7th) of my letter above alluded to, on the subject of the khusreh arrears:—

*Extract paras. part of 5th and 6th and 7th, No. 515, dated 22d October, 1853.*

“ The total number of fields measured by simple khusreh is no less than 67,002, while the number of plots is 7,132, the total area thus measured and plotted aggregating 2,39,834 beegahs. Besides this work, fifty-nine boundary disputes, which were met with in the course of it, have been settled, and 311 miscellaneous cases have been disposed of.

6th. “ Considering the difficulties of the work, and the inexperience at first starting of many of the Ameens, I have no hesitation in reiterating the opinion before expressed by me, to the effect, that the above out-turn may be considered adequate to the outlay. I would beg to call the Board's particular attention to the 4th paragraph of Mr. Birch's letter, No. 589, to show the difficulty of the work in Pergunnah Luskerpore, and that in his opinion the Ameens have not been idle. I annex it for easy reference. “ I have from time to time, since the operations in Luskerpore commenced, drawn your attention to the intermixed state of property and minute subdivision of lands in that Pergunnah and the consequent slow progress in disposing of the arrears; how intricate the measurement is in the villages measured throughout by khusreh you will not fail to perceive from the accompanying statement, this shows 23,804 daghs measured by simple khusreh with an area of 39,192 beegahs, the average size of the daghs in these villages is therefore one beegah twelve chittacks each. Where the fields are so small as this, the work is much more difficult, particularly if the small fields are on the boundary line where two bearings have to be taken for every field; on calculating the gross area of the Mehalwaree chucks and khusreh daghs, I find that the Ameens, have measured 2,39,834 beegahs during the season, taking the average of fifty-six men for six months, this allows twenty-three beegahs per diem as the daily work of each Ameen, and I think that taking into consideration the difficulties they had to contend with at first in commencing measurements in such a difficult Pergunnah as Luskerpore, the Ameens attached to the Establishment have done as much as could fairly be expected from them. The rate of work towards the end of the season improved considerably, and I doubt not that with the present experienced set of Ameens the work will proceed with nearly double speed next season.” This return gives an average of about fourteen and a half fields or plots each man per diem. Baboo Tarachand Ghose, Deputy Collector of the 2nd Division, whom I have consulted on the subject, considers fifteen to sixteen fields measured or chucks plotted, a fair average day's work for an Ameen, of course there are many days on which an Ameen will do much more in the field, but the average may be taken at fifteen to sixteen plots, for a continuance, an Ameen occasionally losing a day in travelling, in procuring the attendance of the villagers and from other like causes. I think, therefore, that the work

‘ done by the khusreh Establishment, in Rajshaye, may be considered adequate. The  
 ‘ Ameens, it will be observed, were many of them at first untaught and inexperienced,  
 ‘ and some little delay and inconvenience were the necessary consequences.

“ 7th. More might possibly have been done with a body of well trained and ex-  
 ‘ perience Ameens at hand to effect it, but still I think as much has been accomplished  
 ‘ as could reasonably have been expected, at any rate, I in nowise attribute the com-  
 ‘ parative paucity of the results to any laxity of supervision on the part of the Officers  
 ‘ entrusted with the duty. On the contrary, Messrs. Pratt, Birch and Morris, who were  
 ‘ successively in charge of the duty, have conducted it to my entire satisfaction. I  
 ‘ may mention in support of this, that on the occasion of my late visit to Berhampore, I  
 ‘ took the opportunity of personally examining the memoranda which had been kept  
 ‘ up by the Assistant Superintendent regarding the weekly and monthly progress effected  
 ‘ by the khusreh Establishment, and the sums monthly disbursed in liquidation thereof.  
 ‘ The inspection of these memoranda and accounts fully convinced me that the Esta-  
 ‘ blishment had been properly and zealously supervised, and that the best was done by  
 ‘ the Supervising Officers, by carefully checking the expenditure to secure the Go-  
 ‘ vernment interests, and at the same time to give the greatest possible impulse to the  
 ‘ measurement operations.”

It will be observed that the most difficult Pergunnahs of the District have been first  
 commenced on, that in a large number of villages, (some of which are very extensive ones)  
 a field by field measurement has had to be resorted to, and that on calculating the actual  
 work done by each Ameen, the average out-turn is by no means inadequate, especially as  
 many of the Ameens were new to the work. It is very difficult to arrive at a correct  
 estimate of the expenses incurred in this khusreh work, but taking into account  
 the Assistant Superintendent's salary, deputation allowance, and contingent charges,  
 together with the expenses of his Office Establishment, &c., and the sum expended out  
 of the grant especially sanctioned by Government for the purpose, I find that the  
 khusreh work effected with the aid of the additional grant under the orders of the  
 Assistant Superintendent, has been disposed of at the rate of Rs. 83-10-7 per village,  
 This will, no doubt, be considered a very expensive rate, but it must be borne in mind  
 that all the arrears are not legitimately arrears of this Department, some of them  
 having been made over to the Superintendent by the Revenue Surveyor, in whose  
 hands this part of the operations used formerly to be, and that it is of the utmost im-  
 portance, both to the Government and to all parties concerned, that a correct detail of  
 the holdings in each village should be obtained, and be placed on record.

G. It will be seen that the arrears of villages for internal delineation, which were en-  
 tered in the last Annual Returns at 1,192, have aggregated, instead of having decreased  
 during the period under review, and this, notwithstanding 290 villages, have been disposed  
 of within that period. This excess (the arrear now stands at 1,294) is owing to a large  
 number of Pubna and Bograh villages having been brought on the file as arrears, which  
 were not before exhibited as such, owing to the Pergunnahs in which they are comprised,  
 not having until recently been brought under Survey. This accumulation of arrears,  
 though unavoidable, is under the present unfavorable position of affairs in the first Divi-  
 sion, much to be regretted. The only, at all consolatory circumstance, connected with  
 these extra arrears, is the expectation held out by the Superintendent to the effect that com-  
 paratively very little internal measurement will be necessary to be resorted to in respect

to them. In providing for the conduct of the duties of this Superintendency during the current Field Season as per details recorded in para. 13 of this Report, it will be observed that I have not thought it advisable to apply for any further Establishment for the special purpose of working off the arrears which have now been brought to light. The Extra Establishment which has been sanctioned for the Rajshaye khusreh work, together with one moiety of the regular Establishment, or in other words, the Superintendence of seven Pescars and seventy Ameens, will afford ample employment for the only two Officers available for the purpose, and I think therefore it will be the best plan to allow these arrears to be disposed of by degrees, instead of making an attempt to clear them off all at once.

7. The tracing out of the omitted Purneah Miliks has continued as heretofore under the management of Deputy Collector Baboo Radhanath Bose, aided by three Pescars and thirty Ameens. The Deputy Collector has disposed of 421 of these cases during the year, leaving 359 incomplete at its close. Portions, however, of about one-third of the cases still outstanding have been enquired into and traced out. The area of the untraced Miliks, inclusive of those partially traced, is estimated by Mr. Birch at about 82,000 beegahs, while the Miliks already disposed of are stated to contain a somewhat larger area. The Board are aware that the late Superintendent, Mr. Pratt, proceeded to the Purneah District at the commencement of the Field Season, for the purpose of co-operating with the Deputy Collector and supervising his work. Mr. Pratt thoroughly instructed the Deputy Collector as to the course proper to be adopted by him in dealing with the Miliks, and drew up a set of Rules for his guidance, which, as long as he remained in the District, he insisted on the Deputy Collector strictly adhering to, Mr. Pratt also took a portion of the Field Establishment under his own immediate controul, and it was his intention to have remained at Purneah until all the arrears were disposed of. This intention was, however, frustrated by his removal to another appointment, and it was thought most advisable that his successor, Mr. Birch, should not immediately proceed to Purneah, but that he should rather for the present devote all his energies to the Rajshaye work. He was, however, directed to pay a visit to Purneah during July, to inspect and report upon the work done by the Deputy Collector. These instructions were duly carried out, and the conclusions arrived at by Mr. Birch regarding the quantity and the quality of the work effected by the Deputy Collector, have been duly communicated to the Board in my letter, No. 463, dated the 19th September, 1853. The result is that the Deputy Collector has not done so much as he ought to have done, and as he doubtless would have done, had there been a Superior Officer near at hand *throughout* the year, to give him the benefit of his advice, and to supervise his proceedings. The work which the Deputy Collector has had to perform has been beset with difficulties, but making every allowance for its arduous nature, I am constrained to attribute the paucity of the results partly to the want of energy and system displayed by the Deputy Collector himself. Neither the Superintendent, however, nor myself, are prepared to recommend, resort being had to the extreme measure of temporarily reducing Baboo Radhanath Bose to a lower grade than that which he at present fills. The Deputy Collector is by no means wanting in intelligence. What he requires, is somebody at hand

to advise him and to urge him to exert himself. This he will have during the current year, Mr. Morris having been entrusted with the special management of the Purneah work, and acting under that Officer's guidance, I confidently anticipate that Baboo Radhanath Bose, will do much better than he has done during the past two years.

8. Under the other headings a good deal of work has been gone through, but the arrears are heavy under many of the items. For instance, there are 171 boundary disputes pending on the file of Deputy Collector Radhanath Bose, one hundred and twenty-six (126) Izad and Adumnishan cases on the file of that Officer, and 170 on the file of Khettur Mohun Mookerjee. The number of Maps in arrears (chiefly on the files of the Superintendent and the Assistant Superintendent) is 437, while the miscellaneous cases, chiefly appertaining to the Offices of the Superintendent and Deputy Collector Radhanath Bose, aggregate 915 cases.

9. The progress made in bringing up the Registers cannot be deemed satisfactory. All that have been completed are five (four of Maldah and one of Rajshaye) by the Superintendent, and seven of Rajshaye, by Deputy Collector Alli Ahmad, who was specially appointed for the purpose of clearing off the arrears of the latter District. Mr. Birch, in his 22d para., explains why nothing could be done towards completing the Purneah Registers, and he has afforded the like explanation in the case of the deficient out-turn of Rajshaye and Maldah ones, but he has omitted to explain why the one outstanding Pergunnah of North Blaugulpore has not yet been disposed of. This Pergunnah has long been outstanding, and ought to be disposed of as soon as possible, The result of the labours of Deputy Collector Alli Ahmad is extremely small, but the Superintendent states that he is satisfied with the exertions made by that Officer and records his conviction that much more would have been done by him, but for the incomplete state of the khusreh arrears. As the Rajshaye Registers would not appear to be in a sufficiently forward state to be proceeded with, I propose instructing the Superintendent to employ his Deputy Collector for the present, in bringing up the Maldah ones. The arrears of Registers in all the Districts of this Division continue excessively heavy.

10. It will be observed that Mr. Birch chiefly attributes the delay in bringing up the Maldah Registers to the incompleteness of the information obtainable from the Deputy Collector of that District regarding the shares of Mehals appertaining to the different Land-holders, in some cases the aggregate of the above shares being more, and in others less, than sixteen annas. In such cases it has been the usual practice for the Superintendent to make a reference to the Deputy Collector of Maldah, but these references have invariably been attended with an unsatisfactory result, the Deputy Collector merely replying that his records afforded no further information than that originally furnished. The same thing has occurred in Rajshaye, with precisely similar results. Failing to procure any information from the Collectorate, it has then been the custom to seek it from the Zemindars, and if they failed to give it on the first notice issued, to fine them under Act XX. of 1848, until they produced it. As the Collectors state their inability to afford any further information beyond what has been recorded by them in the original lists, I concur with Mr. Birch as to the inexpediency of making



reiterated and fruitless references to those Officers for information which they cannot supply. The Zemindars should be at once called on to furnish the required particulars. I would remark in this place that it has already been ruled by the Board in the 78th para. of their letter, No. 86, dated the 16th July, 1852, that where the aggregate fractional shares held by Zemindars stand recorded at less than sixteen annas, and there are no other claimants to any portion of the village, the whole sixteen annas should be registered against the names of the recorded Shareholders, the share held by each being calculated rateably to his recorded fractional interest. Where the fractional shares give an aggregate *in excess* of sixteen annas, a proportionate reduction should in like manner be made, unless the Zemindars, when called upon, are enabled to agree among themselves as to the extent of the fractional shares held by each of them, and in furtherance of such agreement, give in a list of the shares in question, in which case the latter may be upheld.

11. There are two points alluded to in Mr. Birch's Report, which I must, Superintendent's 9th para. briefly advert to here. The first is that the Superintendent experiences great difficulty in obtaining any information whatsoever from the Zemindars, and that he has generally to enforce the provisions of Act XX. of 1848, before he can obtain it. Mr. Birch wishes there were a more summary mode of enforcing the attendance of the Land-holders than that afforded by the latter regulation. What more summary method he would wish to be introduced I find it difficult to surmise. Act XX. appears to me quite summary enough for all purposes connected with the Survey. I am inclined to attribute the disinclination of the Zemindars to attend and afford information to other causes than those assigned by Mr. Birch. They must naturally dislike being now called on so long after Demarcation and Survey proceedings have been completed in many of the Pergunnals, to furnish information, which ought to have been compiled by the Ameens on the spot at the time the original Demarcations were made. For the omission, to make these enquiries at the time, the present Superintendent is of course, in nowise, responsible. It was a part and parcel of the old system to postpone them until after the completion of the Survey. The enquiries must now, however, be carried through, and it is to this subsequent harassment, after the Demarcations have long since been completed, that I think it very probable the Land-holders may entertain (not altogether unreasonable) objections.

12. The other point is that alluded to in Mr. Birch's 10th para. and also brought to notice by the Superintendent, 4th Division, in the 9th para. of his Report. Both Messrs. Birch and Money state that the Land-holders have a great objection to the khusreh measurement and to internal plotting where the hulkas are large and contain numerous plots, because it entails on them the trouble and expense of providing three men to attend on the Ameen until the work is completed. Both the Superintendents remark that the Land-holder is bound to provide one man to point out the boundary, and they are of opinion that this one man may be made use of to hold the flag for the Ameen. They think, however, that to make the Zemindar provide two extra men to carry the chain, is opposed to the spirit of the new Rules of Practice, and they suggest that each Ameen, when measuring a hulka of large extent, should be allowed two chainmen, whose salaries (three Rupees each per mensem) should be defrayed by

Government. Messrs. Money and Birch are of opinion that this plan, if adopted, would materially expedite the work, and would satisfy the Zemindars by relieving them of what they consider to be a heavy tax. Mr. Money remarks, "I have had more than one complaint made to me of the oppressive nature of this demand." I do not at all concur in the views expressed by Messrs. Money and Birch on this subject. In this (the 2nd) Division of the Survey, I have always found the Zemindars most ready to aid the work, and, however large the hulka, or tedious the duty of measuring it, I have always found them ready to give any number of men that might be required. The *Halshana* being a Zemindaree servant, it is not to be supposed that the Land-holder would pay *him* any thing extra, for pointing out the boundaries to the Demarcation parties. Where a khusreh or field by field measurement has to be resorted to, the ryots are parties personally interested, and they will always be found in attendance to see the limits of their own fields correctly defined, and will not object, when necessary, to assist in the measurement themselves. Again, where a village has to be internally plotted, the several proprietors in it will be careful to see that their respective portions of the village are properly defined and plotted. In short, I cannot imagine a case where any objection could reasonably be made by the Land-holders, to supply men to carry the chain, and I think the Zemindars, as well as the ryots themselves, would infinitely prefer this description of work being done by their own men, than that extra men should be attached to the Ameen's retinue for the purpose of completing it. I have certainly no wish to put the Land-holders to any extra expense on this account, and would recommend, should the Board think that any alteration in the present system of conducting the measurements is desirable, that the Superintendents, 1st and 4th Divisions, be instructed to inform the Zemindars that they will be re-imbursed for any bonâ fide expenses which may be incurred by them by having to pay chain-men. The Superintendents could then submit Contingent Bills for the sums disbursed for my counter-signature, and for transmission to the Civil Auditor.

13. Having thus sufficiently adverted to what has been done during the past season, I will briefly mention the plan of operations which has been approved of for the current season's work. The Superintendent and one Deputy Collector (Baboo Khettur Mohun Mookerjee,) will be engaged in rendering complete, a sufficient tract of country for the Revenue Surveyor's next year's work, and they will also co-operate, as far as may be necessary, with the Revenue Surveyor, during his current season's work. These two duties will (I anticipate) not occupy much of their time. The remainder of it will be engrossed with the khusreh arrears in the Districts under Survey (Rajshaye, Bograh and ubPna.) During the recess they will be occupied in bringing up duplicate copies of Maps and in preparing Registers. These two Officers will have under them seven Pescars and seventy Ameens. The Purneah work has been placed by the Board under the management of Mr. Assistant Morris, who will be aided by Deputy Collector Radhanath Bose. Mr. Morris will remain at Purneah until all that remains to be done in that District, including the preparation of the Registers, has been finally disposed of. To Molovee Alli Ahmad, Deputy Collector, will be entrusted the duty of preparing the Rajshaye and Maldah Registers.

14. It only remains for me to make mention of the Officers who have been employed in the Division within the year. Of Mr. H. Pratt, the late Officiating Superintendent, who was in charge of the Division during the first five months of the year, I have no reason to alter the favorable opinion expressed in my last year's report. His successor Mr. Birch is an intelligent and able Officer, and I am satisfied that he has done his best to put the Division into a more efficient state than it has lately been in. He has had, however, a difficult duty to perform, and as pointed out by him, he has had to patch up old work, instead of commencing on a new field in new Districts.

15. Mr. Morris the Assistant Superintendent is stated by the Superintendent to have made himself acquainted with the duties of a Survey Officer, and to have materially assisted the Superintendent. I consider Mr. Morris an able and intelligent Officer.

16. I am happy to be able to record a more favorable opinion regarding Deputy Collector Khetur Mohun Mookerjee than that recorded by me in my last year's report. The Deputy Collector is stated to have conducted his duties to the Superintendent's satisfaction.

17. Of Baboo Radanauth Bose, I have spoken in a preceding paragraph of this report. He is deficient in system and energy, but is stated to have exerted himself somewhat more satisfactorily than formerly. I have not seen sufficient work of Deputy Collector Allee Ahmed's to enable me to judge of his merits, but the Superintendent Mr. Birch is satisfied with the manner in which he has exerted himself.

18. The 2nd or Southern Division has had attached to it the same Officers  
 Second or Southern Division. as in the preceding year, viz:—

MR. H. M. REID ..... Superintendent.

MR. J. R. WARD ..... Assistant.

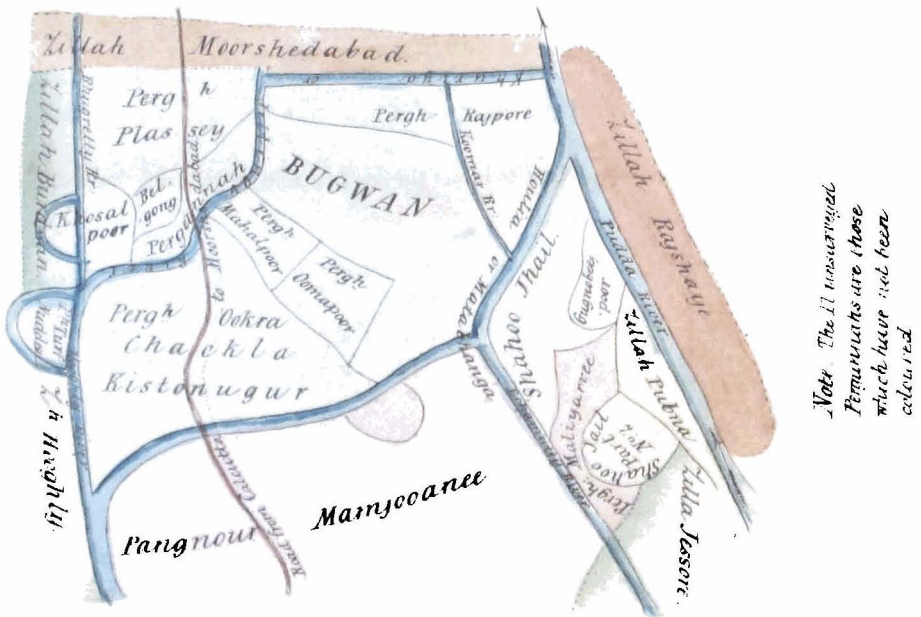
BABOOS DOORGAPERSAUD GHOSE and TARACHAND GHOSE.. Deputy Collectors.

The following memorandum exhibits the nature and extent of the work effected during the period under review:—

Name and designation of Officer.	Villages demarcated and rendered in every respect ready for the Survey, internal measurement, &c, inclusive.	Boundary disputes decided.	Enquiries regarding excess and missing lands.	Appeals.	Other miscellaneous cases.	Arrears of villages for khushreh measurement in 24 Pergunnahs, disposed of.	Registers, Mouzavar and Mehalwar completed.	Duplicate copies of Maps.
Superintendent of Surveys .....	.....	51	342	106	530	...	29	1,018
Assistant.....	.....	146	...	...	429	113	2	767
Baboo Doorgapersaud Ghose, Deputy Collector .....	925	239	614	...	462	...	1	951
Baboo Tarachand Ghose, Deputy Collector.....	936	317	332	...	781	...	...	1,250
Total,....	1,861	753	1,288	106	2,202	113	32	3,986

19. The thakbusts of the tract of country demarcated during the field season, 1851-52, having been duly made over to the Revenue Surveyor about the middle of November, 1852, there was nothing to prevent myself and the Deputy Collectors

re-commencing operations in the District of Nuddea towards the latter end of that month. The field parties continued as heretofore under the management of the Deputy Collectors, and the Superintendent remained encamped during four months of the season in central spots from whence he was enabled to co-operate readily with those Officers, and to supervise and regulate their proceedings as well as those of their subordinate Pescars and Ameens. The Board had expressed an earnest wish that the demarcation of the District of Nuddea should, if possible, be completed during the field season, 1852-53, so that the services of the 2d Division parties might be available to commence on the District of Bancoorah during the current season, 1853-54. It therefore became necessary to use every exertion to attain the object desired. The out-turn of the field work of the two preceding seasons, owing to reasons fully entered into in the Annual Reports for those years, had been comparatively small, but the out-lay had also been less than it would have been had more extensive demarcations been attempted. There was therefore a considerable sum of savings in hand of those two seasons, and they could not be appropriated better than in aid of the current season's field work. I accordingly authorised the Deputy Collectors to employ extra Ameens during a portion of the field season, and to remunerate them from the fund which had accumulated. The result has been that the remaining portion of Nuddea which awaited demarcation has been completed, internal measurement, wherever necessary, inclusive, and all boundary disputes decided. The Revenue Surveyor estimates this tract of country at about 1,500 square miles. It has been demarcated in hulkas comprising 1,861 villages. The work was completed, and the demarcation parties had left the field by the end of June, a much earlier period than in the two preceding seasons.



20. The annexed rough sketch will serve to shew the portion of the tract of country in question. It comprises eleven whole Pergunnahs, six and a half of which (viz. Pergunnah Turuf Nuddea, and five and a half of the Pergunnahs lying to the eastward of the Khurree or Jellinghy River) have been made over for Survey during the current season, the thakbusts of the remaining four and a half Pergunnahs (Guznobepore,

Plassy, Belgong, Khosulpore and one half of Bugwan) having been retained in my office for the present at the request of the Revenue Surveyor, who thinks that it will be impossible for him to complete them during the present season. These four and a half Pergunnabs comprise an area of not less than 350 square miles, and they will be surveyed next year; the three and a half of them which are situated to the westward, by Captain Smyth detaching a party from Bancoorah for the purpose; the remaining one to the extreme eastward (Guznobepore) being either disposed of in the same manner, or by the Revenue Surveyor of the 1st Division including it in his season's work, as may be decided on as most convenient by the two Surveyors.

21. A convenient line boundary between Nuddea, belonging to this Division, and Moorshedabad, appertaining to the 4th or Western Division, was determined upon early in the field season, and laid down by the Officers of this Division. Large mounds of earth have been erected at the tri-boundary points of the several villages abutting the line, and the Superintendent 4th Division has been furnished with a correct scale and compass map of the whole tract. Ten villages only of Moorshedabad have fallen within the Nuddea boundary, and one only (I believe) of Nuddea within that of Moorshedabad.

22. I was anxious for the Superintendent 1st Division to proceed himself, or to depute one of his subordinates to determine, in conjunction with Deputy Collector Baboo Doorgapersaud Ghose, on the boundary between the Districts of Rajshaye and Pubna, belonging to his Division on the one hand, and that of Nuddea belonging to the 2nd Division on the other, but as neither the Superintendent nor any of the other Officers of the Division had sufficient leisure for the purpose, I with the concurrence of the Superintendent, directed Deputy Collector Baboo Doorgapersaud Ghose to lay down the line. This difficult duty he has effected in a very satisfactory manner. In the tract of country through which the boundary runs, there is a great intermixture of Pubna, Jessore and Nuddea villages, but the Deputy Collector has been successful in laying down a continuous line of boundary on the Nuddea side, in which only twenty Pubna villages have been included, while on the Pubna side of it seven Nuddea villages only have fallen. Of this tract the Superintendent 1st Division has been furnished with a correct scale and compass sketch, together with a map shewing the exact position of the Pubna villages which have been included within the Nuddea boundary. It was at one time in contemplation to make the Matabhanga River at this particular point the boundary between the two Divisions, but to have done so would have been to exclude from the Nuddea District two of its Pergunnabs, aggregating upwards of 400 villages, and covering a tract of about 300 square miles. As therefore the demarcation parties of the 2nd Division were the first to reach that part of the country, I decided on having it demarcated by them, and to leave the subject of its Survey to be subsequently determined upon by the Officers of the professional branch.

23. In the course of the demarcation work under review, a large number of boundary disputes were met with, but they were so promptly and efficiently accounted for by the Deputy Collectors, that no inconvenience, owing to boundaries remaining unad-

justed, is likely to be felt by the Revenue Surveyor, and the decisions arrived at appear to have given such general satisfaction, that comparatively very few appeals have been preferred against the Deputy Collector's orders.

24. The season's out-turn shews no more than five villages subjected to a field by field measurement, against 1,119, the internal details of which were plotted with chain and compass, and 737 demarcated externally only, owing to their not having any internal details. In some of the more southern Pergunnahs, situate in the vicinity of the station of Kishennugur, the sub-division of property was found to be very minute, but in the northern Pergunnahs, though the majority of the villages were large ones, the work was on the whole less difficult than that of preceding years. I cannot quit this branch of the subject without reiterating the opinion I have before expressed as to the advantages possessed by the new over the old system, as illustrated in the demarcation work effected in the District of Nuddea during the past season. I think the results warrant my assuming that in a fair average country there ought to be experienced no difficulty whatsoever in a Superintendent, (aided by the authorised rate of Field Establishment) keeping pace with his Surveyor, always provided that the Superintendent is not embarrassed by heavy arrears. One of the chief advantages of the new system is, or rather ought to be, that it leaves nothing to be done after the Survey is finished, excepting the preparation of the Registers, which process, owing to the complete manner in which the demarcation proceedings have been effected, may be expected to be a comparatively easy one.

25. Taking the area demarcated at 1,500 square miles, and the cost of the work including my own salary and every other item at Rs. 52,637, we find an average rate per square mile of Rs. 35-1-6. Included in the sum expended is Rs. 1,920 from former years' savings, and if it be calculated that the demarcation work effected with the aid of the savings, and the demarcation work effected with the aid of the current year's funds, have both progressed at the same rate, it will be found that the authorised Field Establishment has completed a tract of country aggregating about 1,445 square miles; and it may be assumed that what it has done once it ought to be able to do again, due allowances being of course made, should the District next to come under demarcation prove to be a more difficult one.

26. The other headings connected with the new work in Zillah Nuddea call for no special remarks. There are no arrears to speak of under any of the headings.

27. The clearing off of the arrears of khusreh of 24-Pergunnahs District continued as heretofore under the Superintendence of Mr. Assistant J. R. Ward. They consisted at the close of the preceding year (30th September, 1852) of 113 villages, and I am happy to be able to report that Mr. Ward has been successful in finally disposing of them. One half of Mr. Ward's authorized Extra Establishment of four Pescars and forty Ameens was dispensed with by my orders, from the 1st October, 1852, but he continued to draw bills for the remaining moiety till the 1st June, 1853, when under my directions he left off doing so. He had, however, a sufficient amount of savings in hand to enable him finally to clear off what was

still outstanding. The work which Mr. Ward had to effect was scattered all over the District, and some of it lay in the low swampy Pergunnahs to the south-eastward, and had to be personally visited by him. Many of the villages which remained for measurement were most intricate, in one especially, Nundunbatee, Pergunnah Haveleeshuhur, there were found lands appertaining to no less a number than 141 different mehals. This village was, as a matter of course, measured by khusreh. Mr. Ward has also prepared ten volumes (in duplicate) of mehalwaree and khusreh Maps, being in full for thirty-nine out of the forty-nine Pergunnahs of the 24-Pergunnahs District, the number of Maps included in the volumes for transmission to the Board and the Collector, respectively, being 637 copies, or for the two, aggregating 1,274 copies.

28. The expense of the khusreh work effected by Mr. Ward, inclusive of the preparation and binding up of the duplicate and triplicate copies of the Maps, aggregates Rs. 9,815, and the number of villages measured being 113, gives an average rate of Rs. 86-13-9 for each village. This, considering the great difficulty of the work, I do not consider excessive, the more especially as the out-lay includes the expense incurred for making copies of many Maps, the originals only of which had been prepared in previous years. The other work performed by the Assistant Superintendent (the cost of effecting which is also included in the above out-lay) does not require to be more particularly adverted to at present.

29. While on the subject of these Maps, it seems in place to mention that ten volumes of mehalwaree and khusreh Maps (in duplicate) for the District of Nuddea have been duly prepared and transmitted to the Board and the Collector. The number of the Maps is 914, or counting both copies 1,828, and they are in full for the sixteen Pergunnahs demarcated from the commencement of the Survey Operations in Nuddea up to the close of the field season 1851-52. Of course the like Maps for the eleven Pergunnahs which have been more recently demarcated, and which still await Survey, cannot be transmitted until the latter process has been completed, and the calculation of the mehalwaree areas has been effected by the Revenue Surveyor, and the results communicated to this office for entry at the back of the Maps. The Maps, however, are in all other respects prepared. It is a satisfaction to me to be enabled to report that we are in possession of such useful records as mehalwaree or khusreh Maps for every single village of the Nuddea District, which at the time of demarcation contained any sub-division of property, and I believe the same may be said in respect to the 24-Pergunnahs, with the exception perhaps of a few stray villages demarcated and surveyed during the earlier stages of the Survey.

30. It only remains for me to mention, in connection with the work effected during the year, the progress made in clearing off the Registers. Up to the close of 1851-52 ten (10) Registers of the 24-Pergunnahs District had been completed, comprising 1,109 villages. Thirty-two (32) others of the same District have been disposed of during the year under review, with an aggregate number of 3,098 villages, making the total number of completed Pergunnahs forty-two, with an aggregate number of 4,207 villages. The number of Pergunnahs still incomplete is seven, but of these, four comprising 1,173 villages, are nearly ready, and the remaining three, comprising 770

villages, have been commenced on. All of these, it is expected, will be shortly cleared off. The preparation of the 24-Pergunnahs Registers has been a task of considerable difficulty, and their completion has necessarily been much retarded, owing to the non-disposal, until very recently, of the outstanding khusreh work.

31. Being anxious to clear off the Registers of the 24-Pergunnahs District in the first instance, I did not commence on any of the Nuddea Pergunnahs, excepting one (Ookra) which was obliged to be prepared simultaneously with Pergunnah Chowrasee, of the 24-Pergunnahs District, with which latter, owing to the great intermixture of lands, it had been demarcated and surveyed. This Pergunnah contains 287 villages, and its Registers have been under preparation by Mr. Assistant Ward : very little remains to be done in them, but they are not as yet quite completed. In consequence of the very complete manner in which the demarcation proceedings have been carried out under the new system in Zillah Nuddea, I do not anticipate that any difficulty whatsoever will be experienced in the preparation of the Registers of that District, and though the Registers may perhaps be considered as being somewhat in arrears at present, yet when once rid of the 24-Pergunnahs work I expect to be able to bring them up without much delay.

32. Having thus sufficiently alluded to the work which has been effected, I will proceed to consider briefly the plan of operations for the current season. The demarcation work is in the District of Bancoorah, and it is being carried on as heretofore under the superintendence of the two Deputy Collectors, aided by their regular field Establishments. Only sufficient work will be effected to meet the requirements of the Revenue Surveyor during the field season, 1854-55, and the extent of the latter will be timely ascertained from Captain Smyth. Proper arrangements have been made for co-operating with the Surveyor during his current season's operations in Nuddea, and for obviating any difficulties connected with the demarcations which may be encountered by him in the course of his proceedings. Enquiries are being instituted, under orders of the Board contained in your letter No. 68, dated the 1st July last, with a view to ascertain whether a re-survey of the District of Hooghly can be dispensed with, the details of property in each village being plotted in enlarged copies of the professional Village Plans. It has first of all to be ascertained how far the Village Plans shew the correct boundary, and whether there will be much difficulty in correcting the Maps, where faulty. If this can be done, there will of course be nothing to prevent the details of property being shewn in the enlarged copies of the corrected Maps, and in preparing the Registers, and in such case a re-survey of the District may perhaps be dispensed with, although the village areas, wherever it has been ascertained that the boundaries laid down in the first instance were erroneous, must of course be re-calculated and re-adjusted. The necessary local enquiries have already been conducted under the superintendence of Deputy Collectors Baboos Doorgapersaud Ghose and Tarachand Ghose, in Pergunnah Boroo, copies of the Village Plans of that Pergunnah having been made over by the Deputy Surveyor General to this Department for the purpose. The subject is now under report. Before quitting the Presidency, I made over to the Collector as many of the Survey Records of the 24-Pergunnahs District as I possibly could, merely retaining such as were absolutely necessary to enable me to complete the Registers of



the few Pergunnahs still outstanding. During the coming recess I purpose fixing my head quarters either at Bankoorah or at Burdwan, whichever I may find best suited to the purpose. The Revenue Surveyor, Captain Smyth, has arranged to make Burdwan his head quarters, and if I can procure house accommodation there, it will perhaps be as well for me to do the same. If otherwise, I shall go to Bankoorah.

33. Mr. J. R. Ward continued as Assistant Superintendent throughout the year, and conducted to my satisfaction the by no means easy operations entrusted to his management. Mr. Ward is an able and intelligent Officer, and I have found him at all times prepared to do promptly and with a good will whatever I pointed out to him, as being likely to expedite and facilitate the progress of his operations. Mr. Ward was removed at the close of the year on being promoted to the Acting Magistracy of Howrah, but I trust that the Department may at some, not far distant period, again have the benefit of his services. I consider him fully competent to the charge of a Superintendency, not only on account of his practical acquaintance with the details of the work, but also because he feels an interest in its success, and possesses qualifications which in the head of an office must always go a great way to ensure it.

34. Baboos Doorgapersaud Ghose and Tarachand Ghose have (as heretofore) been employed in the 2nd or Southern Division. I cannot speak too highly of these valuable Officers. They have continued to merit my fullest approbation. They are indefatigable in the field, thoroughly conversant with thakbust work, and their enquiries are so complete, and their proceedings in boundary disputes and all other cases are drawn up with so much care and minuteness, that appeals from their decisions are now but seldom preferred. Carried out by two such Officers, with the aid of their intelligent and well-trained Pescars and Ameens, demarcation operations on the new system cannot fail to be successful.

35. The following memorandum shews the names and designations of the Officers who have been engaged in the 3rd or Eastern Division, during the period under review, together with the nature and extent of the work effected by each of the Officers in question :—

Name and designation of Officers.	Villages demarcated and rendered in every respect ready for the Surveyor.	Boundary dispute cases.	Enquiries regarding excess and missing land.	Other miscellaneous cases.	Appeals.	Arrears of khusrh villages.	Duplicates of Maps.	Registers.
Superintendent of Surveys.....	111	7	8	917	248	19	...	...
Assistant.....	536	64	...	160	...	...	801	...
Mr. DeRosario, Deputy Collector, from 23rd June to 30th Sept. 1853.....	...	23	...	...	...	...	...	...
Frankissen Roy, Deputy Collector, from 1st October, 1852, to 22nd June, 1853.....	505	116	...	68	...	...	250	...
Moulvee Abdool Hamed, Deputy Collector, from 1st October, 1852, to 8th February 1853.....	48	84	...	45	...	...	...	...
Joychunder M. Joomdar, Deputy Collector, from 9th February, 1853, to 30th September, 1853.....	...	216	69	2,121	...	...	1,103	...
Total...	1,200	510	77	3,311	248	19	2,154	...

36. The Agency employed is as nearly as possible equivalent to the Superintendent and two Deputy Collectors for the whole year, and the Assistant Superintendent, Mr. Harrison, for eleven months, but due allowance must be made for the circumstance of both the Deputy Collectors having been changed within the year, and of Mr. Harrison having been away on leave for one month during that period, and having subsequently, for some time, been placed in charge of the Dacca Collee-torate. The demarcations have continued as heretofore in the District of Mymensingh, and the tract of country which has been demarcated comprises 1,200 villages, with an estimated area of about 850 square miles, and completes that portion of the Mymensingh District which is situate on the right bank of the river Burrapooter. Mr. Campbell reports that a more extensive tract could have been demarcated, had it been desirable, but he was anxious not to cross the Burrapooter unless it was absolutely necessary. The Revenue Surveyor assures him that the demarcated tract is quite sufficient for his current season's work, and I think therefore that the Superintendent acted for the best, considering that his boundary dispute file was somewhat in arrears, not to press forward the demarcations more than he did.

37. All the villages which have been demarcated are complete in every respect as far as internal measurement, wheresoever required, is concerned. The only obstacle which the Superintendent had to contend with, was the large number of boundary disputes which were met with in the year's work : although a very considerable number of these cases was disposed of within the year, and the whole of the previous year's arrears were promptly cleared off, yet the arrears are still very heavy, being on the 1st October no less than 265. Owing to the unusual heat of the latter portion of the field season, the Superintendent and his Deputy Collectors were deterred from visiting the sites of a great many of the disputed villages. Of course the necessary visits could not be paid during the rainy season, and as the disputes could not be decided until the several spots had been examined, they have necessarily been obliged to stand over till the current season. The Superintendent has adopted energetic measures to clear them off at the very commencement of the field season, and I have no doubt his endeavour will prove successful. Mr. Campbell does not anticipate that the Surveyor will experience any inconvenience from the disputes not having been sooner adjusted. The number of this description of cases disposed of is creditable to the several Officers employed, especially to the newly appointed Deputy Collector, Joy Chunder Mojoomdar, who decided no less than 216.

38. Judging from the results exhibited in Statement No. 2, the sub-division of property would appear to be less minute in the villages which have come under demarcation during the past year, than was the case in previous seasons. Of the 1,200 villages demarcated, in no less a number than 693 external demarcation was found to be sufficient, while of the residue six only have been disposed of by simple field by field measurement, twenty-five partly by that process and partly by plotting, and 476 wholly by plotting. The villages which were subjected to the last mentioned process contain 10,394 plots. Those subjected to the combined operations of plotting and simple khuresb, comprise thirty-nine plots and 2,542 fields, while the number of fields

in the six villages wholly measured by khusreh amounts to 2,096. The gross area measured by simple khusreh aggregates beegahs 8,071-4-12. It will be seen from these figures that the internal work during the past season in Mymensingh has been less intricate than in the 2nd and 4th Divisions during the like period, while a simple field by field measurement has been found necessary to be wholly resorted to in six villages only, that is to say in about 1 per cent. and a fraction out of the total number of villages requiring internal demarcation. Under the old system, the whole of the 507 villages which required internal delineation would have had to be measured field by field, and as the fields in Mymensingh would not appear to be large ones, only averaging about beegahs 13-4 each, it may readily be conceived that the operation would have been one involving immense delay. Mr. Campbell remarks that the system of internal plotting has been found to answer exceedingly well in his Division, that where mistakes do occur, they have generally been found to have arisen from the Maps having been incorrectly plotted, not from the demarcations having been wrongly effected, and that he has generally been able to make the necessary alteration in the Office without having recourse to a re-investigation on the spot. Out of the total number of villages demarcated, the Superintendent has himself disposed of 111, Mr. Harrison 536, and Deputy Collector Baboo Prankissen Roy 505, which results I consider creditable to the several Officers enumerated.

39. It is satisfactory to observe that the few villages (19) of former years for internal measurement, have now been finally disposed of. The duplicate copies of Maps for transmission to the Board and the Collector would also appear from the returns to have been well brought up. The appeals to the Superintendent from the decisions of the Deputy Collectors in boundary disputes and other cases have been very numerous, but Mr. Campbell has not allowed them to accumulate, having disposed of no less a number than 248, and fifteen only remaining on his file at the close of the year.

40. Good progress has been made during the year under review in forwarding the Registers, but no one Pergunnah of Mymensingh has yet been finally completed, none of them being sufficiently advanced as respects Survey operations, to admit of their being finished at present.

41. I am happy, however, to be able to report that the two last Registers of Tirthoot, which were under preparation by the late Superintendent, Mr. Chapman, have been finally completed by that gentleman, and have been forwarded through this office to the Collector of Tirthoot.

42. It will be observed that the expense incurred in effecting the *new* work in Mymensingh during the year under review, inclusive of the Superintendent's own salary and every other charge, has been 48,631 Rupees. Until the completion of the Survey, it will of course be impossible to say exactly what has been the expense per square mile of the season's demarcations, but if we may be allowed to consider the approximate area demarcated at the figure estimated by the Revenue Surveyor, that is to say at about 850 square miles, we find that the cost of demarcation has been Rs. 57-3-5 per square mile.

43. In this place I beg leave to repeat the recommendation made by me in my letter to your address, No. 321, dated the 4th July last, for an increase to the salary of the Serishtadar of the Superintendent's Office, 3rd Division, and to request that the pay of that officer may be assimilated to that drawn by persons of the same rank in the other Superintendencies. The duties to be performed in the 3rd or Eastern Division are fully as onerous as those required to be done in the other Divisions, and I have every reason to believe that they are transacted with equal zeal and ability as in the Divisions in question. I also beg to recommend that the salary of the Record-keeper and the two head Mohurers may be in like manner assimilated to that drawn in the other Divisions by the same class of officers. The total increase would be Rs. 25 per mensem, and I request the Board will obtain the sanction of Government to it as detailed below :—

Present salary drawn by ministerial Officers, 3rd Division.	Proposed salary to be drawn by ditto, being similar to that drawn by like class of Officers in the other Divisions.
Serishtadar..... 50 0 0	60 0 0
Record-keeper ..... 15 0 0	20 0 0
Two Mohurers at 10 Rs. each ..... 20 0 0	At 15 each ..... 30 0 0

44. During the current season the field operations are as heretofore progressing in the Mymensingh District. The Superintendent and his Deputy Collectors have taken the field early and have turned their attention first of all to the disposal of the arrears of boundary disputes, so that the progress of the Survey may not be impeded. These completed, the new demarcations may be expected to proceed without interruption.

45. Mr. Campbell, the Superintendent of the Division, is in my opinion a most energetic and successful Officer. He allows no difficulties to daunt him, and his conduct of his duties, which have been far from light, has been in every respect most creditable.

46. I fully concur in the opinion expressed by Mr. Campbell concerning his Assistant, Mr. Harrison, whom I consider a clever and able Officer, and whose removal from a Department with the duties of which he was so thoroughly acquainted, I much regret. The removal of the junior Survey Officers from the Department, it appears to me, should be avoided as far as possible, and I have before stated that in my opinion all vacancies occurring in the line should be filled up by promoting the juniors who are already in it. The understanding that such would be the rule followed, would serve as an inducement to the junior Officers to remain in the Department, instead of seeking acting appointments in the other branches of the service.

47. Of the Deputy Collectors, I concur with the Superintendent in considering Prankissen Roy in every respect a most excellent Officer, and I much regret that the failure of his health rendered it necessary for him to quit the Department. Joychunder Mojoondar has exerted himself most creditably since he joined, and promises to be a highly efficient Officer. Moulvee Abdool Hamed quitted the Department on the 8th Feb-

ruary, he would not appear to have done so well latterly as previously, but the Superintendent attributes the falling off to his increasing age and to the failure of health. Mr. D'Rosario only joined on the 22nd June, 1853. The Superintendent does not consider him at all suited for Survey work. Mr. D'Rosario has been in the Department once before, and although a willing and zealous Officer, he is too far advanced in life to be well adapted for the arduous duties required of a Survey Deputy Collector.

48. The following are the particulars of the work effected in the 4th or Western Fourth or Western Division. Division.

Name of Officer and period during which employed.	Villages demarcated and rendered in every respect ready for the Surveyor.	Boundary disputes decided.	Enquiries regarding excess and missing lands.	Other miscellaneous cases.	Appeals.	Arrears of khurech villages.	Duplicates of Maps.	Registers.
Mr. A. Money, Superintendent .....	727	79	14	1,300	26	...	...	...
Mr. J. Watson, Assistant .....	...	2	988	2,197	...	...	...	13
Baboo Issenchunder Dutt, Deputy Collector .....	...	27	835	1,117	...	...	...	20
Baboo Tarucknath Ghose, ditto .....	1,430	53	34	111	...	...	2,191	..
Moulvee Ahsan Ahmed, Officiating Deputy Collector, from 30th May to 30th September, 1853 .....	210	69	...	37	...	...	317	...
Total.....	2,367	250	1,871	4,762	26	...	2,508	33

49. The demarcations in this Division were as heretofore in the District of Moorshedabad, and were carried on during the earlier portion of the season under the personal supervision of Mr. Money, the Superintendent, aided by Deputy Collector Tarucknath Ghose. Towards the close of the season an additional Deputy Collector (Moulvee Ahsan Ahmed) was appointed to aid in the work, which was thenceforward conducted under the joint management of the two Deputy Collectors. The number of villages demarcated externally and internally is 1,863;\* of these 169

\* Note.—This does not correspond with the entry (2,367), given in the Statement. In the latter number are included 504 villages, which having been externally demarcated during the field season 1851-52, were shown in that year's Statement "as completed," although they were still in arrears for internal demarcation.

covering a tract of 166 square miles, were at once made over to the Surveyor, and were included by him in his season's work for 1852-53. The remaining villages, 1,694 in number, together with 112 others, which have been externally demarcated within the year but are still in arrear for internal delineation, the whole covering a tract of about 1,000 square miles, have been subsequently made over, and are now under Survey.

50. It will be borne in mind by the Board, that at the close of the field season 1851-52, there were 400 Moorshedabad villages which, although they had been externally demarcated, were incomplete as respected their internal measurement. For the clearing of these the Superintendent was allowed, on the Board's recommendation, an extra establishment of twenty Ameens for five months. 368 of these villages have been disposed of, but how many of them have been worked off with the aid of the additional Establishment above specified, I am unable to ascertain, owing to the Superintendent having employed the latter partly in new, and partly in old work, and having,

in like manner, employed his fixed Establishment to some extent in bringing up the arrears. Owing to the inability of the Superintendent to inform me as to the actual extent of work effected by the fixed and the extra Establishment respectively, I am prevented giving any opinion as to whether the separate out-turn of either party is a sufficient one. The joint out-turn, however, of the two parties, consisting as it does of 377 arrears of villages disposed of, 1,863 fresh villages externally demarcated, (out of which latter 716 hulkas have been internally plotted and two measured by khushreh) is, I consider, an adequate one. I am not satisfied, however, with the manner in which the Superintendent has availed himself of the means which were at his disposal. It will be observed that no less than 163 villages are still entered as being in arrear for internal measurement. Fifty-one of these were demarcated during 1851-52, the remaining 112 during the season 1852-53. These villages are scattered all over the District, and many of them are reported to be large ones, and to require a great deal of internal work. It should have been Mr. Money's endeavour to clear off all the arrears of 1850-51, with the aid of the extra Establishment which had been specially sanctioned for the purpose, and with his own authorised rate of field Establishment he should have commenced upon only such an extent of fresh country as he could render complete in every respect, before making it over to the Surveyor. This he has not done; 112 of the newly demarcated villages are still in arrear for internal measurement, and are obliged to be made over to the Revenue Surveyor in that unsatisfactory state. I have observed above that these villages are stated by Mr. Money to be scattered all over the District, so there remains no alternative but to make them over as they are to the Surveyor. If the Board's orders, which are to the effect "that no tract of country is to be made over for Survey until all the internal work of the villages has been completed," were in this instance to be enforced, the Surveyor's work would be brought to a stand still.

51. It will be seen from the returns, that the internal work effected during the season has been much more intricate than heretofore, no less than 42,000 plots have been laid down with scale and compass, or measured with the chain. Of these 18,652 plots appertain to this season's, and 16,469 plots and 5,811 fields to the preceding season's demarcations. I would remark, with advertence to Mr. Money's 8th para., that the subject of the large size of many of the Moorshedabad hulkas was duly brought to my notice by the Superintendent himself, when I was at Berhampore, and the context of my letter, No. 463 (para. 22), will shew that it was duly taken into my consideration when reviewing the progress which had been effected, and estimating what was still outstanding.

52. Mr. Money repeats in his 5th para., that it has been discovered during the year that the lists received from the Collectorate are quite wrong. This discovery was not made till August, 1853. The local enquiries must have been carried out in a defective manner at the time the demarcations were being effected, otherwise the discovery of the incorrectness of the lists would necessarily have been sooner brought to light. I would remark that the Collectorate lists are frequently incorrect when first made over to the Superintendents. A reference to the Collector after enquiry

made on the spot by the Superintendent, sometimes gives the former Officer an opportunity of consulting records before overlooked, and revising the incorrect lists. At other times again the original lists furnished are all that the Collector can give, and whatever the Superintendent may find in excess or in diminution of the entries therein shewn, he must register accordingly, taking the Collector's lists as the basis of his proceedings.

53. It is very difficult, for the reasons given in the 50th para. of this Report, to form a correct estimate of the cost of the old, and of the new work in Moorshedabad. The Revenue Surveyor, however, estimates the tract of country newly demarcated during the season at 1,166 square miles, and as the Superintendent calculates the expense of effecting this work at Rs. 58,712, this gives an average rate of Rs. 50-5-8 per square mile. But 100 of the villages have been shewn still to await internal measurement, and by the time it shall have been effected, the average cost per square mile will of course have been materially increased.

54. The Monghyr and Bhaugulpore work has continued as before, under the management of the Assistant Superintendent, Mr. Watson, who, it will be seen from the statements, besides completing thirteen Registers, comprising 2,322 villages, has effected a large quantity of miscellaneous work. The eight Pergunnahs which are still outstanding in respect to their Registers, contain no less than 4,326 villages, but the preparation of the Registers has already been considerably advanced, and both Mr. Watson, as well as Mr. Money are sanguine in their expectation that the Registers, as well as all the other arrears in the Districts under Mr. Watson's management, will be finally cleared off by the end of March, 1854, at the latest. I consider that Mr. Watson has made satisfactory progress during the year in disposing of the Bhaugulpore and Monghyr work, a task requiring considerable patience and industry. It will be observed that the arrears of each description in these two Districts have been materially reduced within the year.

55. The preparation of the Beerbhoom Registers has been entrusted to Deputy Collector Issenchunder Dutt, who has completed twenty of them containing 1,194 villages, and has so far advanced the remaining eighteen (comprising 4,910 villages) that the Superintendent is confident that the work will be completed by the end of March at the farthest. The Deputy Collector has also, in the course of his labors in preparing the Registers, disposed of twenty-seven boundary dispute cases, and a large number of enquiries, (817) regarding missing and excess lands, also 1,117 miscellaneous cases. The Superintendent expresses himself well satisfied with the Deputy Collector's exertions.

56. No progress has yet been made towards preparing the Moorshedabad Registers.

57. During the current season, it has been arranged that the Superintendent, with the aid of his two Deputy Collectors, Tarucknath Ghose and Ahsan Ahmud, shall complete what remains to be done in Moorshedabad (some 550 to 600 new hulkas,) and that they shall also bring up the 169 villages alluded to in preceding paras. as being in arrears of internal measurement. Such portion of the above 550 to 600 hulkas, as may be

necessary, will be made over as soon as ready to the Surveyor, to be included in his present season's work. The rest will stand over for Survey until next year. It has been decided by the Board that the 4th Division Officers shall take up the District of Jessore on that of Moorshedabad being completed, but whether they are to commence in Jessore during the present season has not yet been determined. It will, perhaps, be better for the Superintendent to confine his attention to the completion of Moorshedabad during the present season, so that he may be enabled to commence on Jessore unencumbered by arrears as early as possible next field season. Mr. Watson is engaged as before in bringing up the Bhaugulpore and Monghyr work, and Deputy Collector Issenchunder Dutt, in completing the Beerbhoom Registers. But both these duties are expected to be finished by the end of March, when the services of Mr. Watson and the Deputy Collector would be available elsewhere. Either Issenchunder Dutt, or one of the other Deputy Collectors attached to the 4th Division, might then be placed under the Superintendent 1st Division, to assist him in bringing up the khusreh arrears in Rajshaye, as by that period the season will have become too far advanced to admit of Mr. Birch himself remaining much longer in the field.

58. This Superintendency has remained under the management of Mr. A. Money throughout the year, and I consider the duties of it to have been conducted with zeal and assiduity, although the results (as pointed out in para. 50) are not exactly such as might have been desired. This I would attribute to an error of judgment on the part of the Superintendent, and to his not having sufficiently adhered to the rules laid down for his guidance. Mr. Money is an Officer of considerable talent, and he has, I feel assured, exerted himself to the utmost during the period under review, but as pointed out above, his labors have not been entirely successful.

59. I concur with the Superintendent in the favorable mention made by him relative to his Assistant, Mr. Watson, whom I consider a very intelligent and industrious Officer.

60. Mr. Money speaks favorably of the services of his three Deputy Collectors, and I am happy to believe that the commendation is well merited by each of those Officers. Issenchunder Dutt, regarding whom the Superintendent reports unfavorably in his last year's Report, is stated to have worked hard and well during 1852-53, and the arrangement of his office is reported to be systematic. Tarucknath Ghose is reported to be untiring in zeal and energy, and to be as intelligent as he is industrious. The acting Deputy Collector Ahsan Ahmud, who was only appointed in June, is also stated to have worked exceedingly hard, and to be thoroughly efficient as a Deputy Collector. This Officer's appointment having only been sanctioned for one year, I would suggest that a timely application be made to Government for sanction to retain his services as a Survey Deputy Collector on the expiry of that period. He might, in such case, be kept on the 4th Division, or be transferred to the 1st or 3rd Division, as might seem most advisable. If transferred to the 1st Division, he could assist the Superintendent in clearing off the arrears of khusreh in Rajshaye and the neighbouring Districts, or if removed to the 3rd Division, he might take Mr. D'Rosario's place. In the former case, he (or



such other one of the Deputy Collectors of the Division as might be decided on) might be transferred in March, by which time the Beerbhoom Registers, which are under preparation by Issenchunder Dutt, Deputy Collector, are expected to be completed. In the latter, transfer might take place on the sanction of Government to his further employment being received.

I have the honour to be, &c.,

(Signed) H. M. REID,

*Controller of Surveys.*

No 685.

To

H. M. REID, Esq.,

*Controller of Surveys,**Calcutta.*

SIR,

I have the honor to forward the Annual Statements for the past official year, and with reference thereto, to submit the following remarks regarding the amount of work effected in each District during the year :—

## PURNEAH.

2. But little progress has been made in the preparation of the Registers of this District during the year ; this is owing to the Havellee Pergunnahs being incomplete. All the other Pergunnahs remaining for registry are more or less intermixed with these, and until the measurements now going on in the Havellee Pergunnahs are completed, no progress can be made with the Purneah Registers.

## MALDAH.

3. The Registers of four Pergunnahs of this District have been completed during the year, and a fifth more than half finished. Twelve Pergunnahs remain for registry.

*Rajnuggur.* The Bengali mehalwar and mouzawar Registers are being fairly copied, and the Registers will, I hope, be transmitted to the Collector during the present quarter.

*Bhautea Gopalpoor.* Ditto.

*Gourhaud.* Investigations are pending regarding three villages, and it may be necessary to send an Ameen to investigate these cases. After they are settled, the Register will be fit for completion.

*Mukrain.* Investigations pending regarding four villages ; rough copy of the mehalwar and mouzawar in the vernacular ready.

*Akberpoor.* Considerable progress has been made in the preparation of this Register, but there is much remaining to be done.

*Akburabad Soojanuggur Kotwalee.* Rough copies of the mouzawar Registers have been prepared.

*Kankjole.* Cannot be taken up until the Register of Pergunnah Kankjole of Purneah is completed.

*Amgachee.* Ditto. This is a very small Pergunnah.

*Baees Hazaree.* Cannot be completed till the Survey of Dinagepore is commenced.

*Chandlaie.* This is a large Pergunnah, and the discrepancies between the khulreh missils and Collectorate lists are so numerous, that the Register work progresses slowly. This Register will now be made over to Deputy Collector Moulvee Ally Ahmed for completion.

4. The progress of the Maldah Registers has been impeded in consequence of the necessity of the frequent references to the Collector and the proprietors of the estates. The Collector's lists supplied at the time the Survey commenced, were very inaccurate, and several resumed mehals were left out, these were entered in the lists subsequently furnished at the time of commencing the Registers, and it has been necessary to demarcate the parcels of land belonging to these mehals within the surveyed villages, and enter the area thus obtained in the Registers. The imperfect nature of the original thakbust enquiries has given a great deal of trouble, and rendered a re-investigation necessary in many instances. Zemindars have neglected to attend upon the Ameens in spite of fines imposed, on the plea that they had attended the first investigation. The fractional shares of villages recorded in the Collector's lists have been found, in many cases, to be inaccurate; in some cases the aggregate of the shares has been twenty and twenty-four annas, in others only a four anna or eight anna share is recorded, and no mention has been made of the remaining eight annas. On referring to the Collector for explanation, he has been unable to account for the excess or missing shares, and I have then been obliged to call upon the Zemindar to state the amount of his share, and record it in the Registers according to his statement. In consequence of my being at such a distance from the Maldah District, I have had considerable difficulty in getting the information I required from the Zemindars, there has been hardly one case in which they have attended to my first order, after a fine has been imposed and partially levied, they furnish the information required, and not before. To prevent delays of this kind during the field season, I propose making over to Deputy Collector Ally Ahmed those Maldah Pergunnahs, in which Mofussil investigation or information from the Zemindars may be required. The Deputy Collector will be able, if necessary, to go for a short time to Maldah, and by this arrangement I trust that the remaining Pergunnahs will shortly be disposed of.

RAJSHAYE.

5. The Bengali Registers of seven Pergunnahs of this District have been completed during the year, and some progress has been made in disposing of six other Pergunnahs. The difficulties experienced in the Maldah Pergunnahs have arisen in the preparation of the Registers of these thirteen Pergunnahs, the inaccuracy of the old khusreh missils discovered at the time of preparing the khutteeans previous to registry, has been productive of considerable delay, it has been found necessary, in some cases, to reject the khusreh measurement as worthless, and send an Ameen to trace the mehalwaree lands with the compass.

6. The discrepancies and inaccuracies in the Collectorate lists supplied to our Office from this District, appear to be greater than those of Maldah, and much time has been lost attempting to reconcile these discrepancies. It appears from Reports received from the Collector that the lists furnished to us were prepared partly from the Canoongoe's papers, and partly from the mouzawarree list supplied by the Zemindars; after the settlement, neither of these records, it seems, are to be depended upon; the Collector allows that several of the villages and shares are incorrectly recorded, and that he cannot reconcile the discrepancies found to exist, by reference to any papers in his Office.

7. It has always been the practice, in this Division, to make the Collectorate lists the basis of the Registers, and to endeavour to reconcile any discrepancies found at the time of registry to exist between our thakbust or khusreh records and the Collectorate lists. When any such discrepancy has been discovered, reference has been made to the Collector, and if he has been unable to account for it, the possession of the proprietors, as ascertained by our measurement, has regulated the entry in the Register. Where, however, as is the case in this District, the accuracy of the Collectorate lists is allowed to be doubtful, it seems to me an unnecessary waste of time to attempt to make our Registers agree with them. I would therefore recommend that we should record in our Registers the state of property as found by our measurements, whether it agrees with the Collectorate lists or not, without referring to the Collector to account for the discrepancies. At present the Deputy Collector is obliged to make daily references to the Collector, and the progress of the Registers is consequently considerably retarded. The general reply to the references has been that there are no papers in the Collectorate, but those from which the lists furnished to us were prepared and that the discrepancies can only be accounted for by Mofussil investigation.

8. The only records in the Collectorate, at the time of the decennial settlement, were the doul and kubooleut of Rajah Ramkisto Rai, with whom a Pergunnah-waree settlement of the District was concluded, in these the name of the Pergunnahs only are specified; there is no detail of the villages comprising the Pergunnahs, and therefore no villages can be recorded as izad in those Pergunnahs. There were several izad cases on the file, but they have been struck off on this account.

9. Another cause which retards the progress of the Registers in this District, is the difficulty of obtaining information of any kind from the Zemindars. My Deputy Collector, though resident in the District, has experienced this difficulty, and Mr. Morris and myself, when employed in the District last year, found that we had generally to have recourse to fines to enforce our orders. There appears to be an idea prevalent here that the Survey operations and the preparation of the Registers are only preparatory to a revision of the settlement, and the proprietors think that it will be to their interest to withhold any information they may be called upon to give. It is owing to this opposition on the part of the land owners, that myself and my subordinates are obliged to have such frequent recourse to the provisions of Act XX. of 1848. The Survey and demarcation operations in this District have certainly been unusually protracted and the Zemindars have been rather harassed by the constant calls upon them to attend on the demarcation, survey and khusreh Ameens, since 1846. I should be glad if there were a more summary mode of enforcing the attendance of land proprietors, than that allowed under Act XX. of 1848, the fines imposed under that Act, by the Superintendent, have to be realized through the Collector in most cases, and there is so much delay in realizing the fine in this manner, that it is little cared for. I am aware that I have the authority to realize fines as soon as imposed, by the sale of the personal property of the defaulter, but this mode of levying the fine can seldom be resorted to.

10. The Zemindars have a great objection to the khusreh measurement, on

account of the expense they are put to in providing men to carry the chain and bamboo, in addition to the simanadars to point out the boundary. In large villages which take three or four months to measure, it is a great tax upon the Zemindar to be obliged to retain these chain-bearers and flagmen, they generally have to pay coolies for the purpose, and they strongly object to this. My predecessor passed an order to the effect that the Zemindars were bound to provide only a simanadar to attend upon the Ameen, but I was obliged to modify this order as I found that the measurements were at a stand still, in consequence. The custom now is, for each proprietor to provide a simanadar and a man to carry the chain or bamboo, but I doubt whether the Zemindars could be obliged to furnish men for this purpose, if they refused to do so. There is one great objection to the system of the chain-bearers being provided by the Zemindars, the men take some time to learn how to use the chain, and care little whether they measure right or wrong. If two chain-bearers were allowed to each Ameen, the work would be done much better and much quicker, the pay for the two chain-bearers would not exceed five Rupees a month, and the savings effected in the increased speed of the work would, I think, cover the extra expenditure. It would be impossible for the Ameen to pay for his own chain-bearer, he has to provide as it is, the pay of his peadah out of his salary, and as his pay is liable to deductions for slack work, &c., he has often difficulty in paying him. I would beg to draw the attention of the Board to this subject, and recommend that some allowance should be made to the Ameens for chain-bearers. The settlement Ameens are allowed twenty-seven Rupees a month, if the thakbust Ameens were allowed twenty during the field season, it would, I think be advantageous, and lead to an increase of work. Our khusreh Ameens perform very much the same kind of work as the settlement Ameens, and only receive sixteen Rupees a month, whatever amount of work they get through out of this, they have to pay for their peadahs and stationery.

#### BOGRAH.

11. Four Pergunnahs of this District have come under Survey during the year. The Survey volumes have not yet been received, and there are arrears of khusreh measurement, which must be disposed of before the Registers can be commenced.

12. I have reported fully in previous letters upon the state of the work in the Purneah District, and upon the progress made in disposing of the khusreh arrears in Rajshaye, I therefore deem it unnecessary to allude to those arrears in this letter.

13. The regular Establishment has been occupied during the year almost entirely in bringing up arrears of khusreh and internal measurement in Purneah, Bograhi, and Rajshaye. The only new demarcations have been effected by the Ameens under Baboo Khettur Mohun Mookerjee, the number of villages disposed of will be found in Statement No. 2. No District account of the sums expended in the measurement of these villages has been kept in the Cash Book, and I am therefore *unable* to show the relative expense of the old and new work.

14. Since March the extra khusreh Establishment has been entirely under the Superintendence of Mr. Assistant Morris, during the recess he has also disposed of several miscellaneous cases, Adinnishan, Izad, &c., and while I was absent at Purneah,

took charge of my work. Mr. Morris has made himself acquainted with the duties of a Survey Officer, and has materially assisted me in my work.

15. Baboo Khettur Mohun Mookerjee has made good progress in disposing of the Izad and Adimnishan cases pending at the close of the last year; he has also decided all the boundary dispute cases on his file, including those made over for re-trial, the latter were widely separated, but the Deputy Collector made every exertion to dispose of them before he returned to Berhampore, and succeeded in so doing. The progress made by his Establishment in disposing of the khusreh arrears in Rajshaye and Bograh, is not so great as could be wished, but the Deputy Collector had other duties to perform in rendering complete the circuit which will come under Survey this year, and attending to the requisitions of the Surveyor. Baboo Khettur Mohun Mookerjee has done his best to retrieve his former character, and I hope that I shall have to report favorably of his work during this season.

16. I have had occasion to speak of Baboo Radhanath Bose in former letters, this Deputy Collector is by no means wanting in ability, but I have not been satisfied with what I have seen of his work; he has not the control over his subordinate Officers which he ought to have, and there is a want of system in his way of doing business. I have had only a few of his cases before me in appeal; in most of these, his decisions have been judicious, and I have not thought it necessary to interfere with them.

17. Moulvee Alee Ahmed has remained at Bauleah during the recess, while I have been at Berhampore. I have therefore had little opportunity of judging from personal experience of this Officer's capabilities, but as far as I have seen, I have reason to be satisfied with his work. I believe that he has done all he could to expedite the preparation of the Registers, but having had many difficulties to contend with, he has not been able to get through so much work as would justly have been expected from him, had the thakbust Records been correct; in consequence of our being at different Stations there has been unavoidable delay in answering references and forwarding papers, and the Deputy Collector has been consequently impeded in the preparation of the Registers.

18. In comparing the results of the year's operations in this Division, with those of other Divisions, it must be borne in mind that a change has taken place during the year in the head of the Office; it is useless for me to advert the confusion consequent upon this in an Office like mine. I have done all I could to get the Division into better order, and I hope that I have, in some measure, succeeded, but where an Officer has to overlook such a widely scattered range of operations, as the Superintendent of this Division has, the task is any thing but easy. No Superintendent can be expected to control with satisfaction to himself or his superiors, operations in three Districts and at the same time prepare the Registers of a fourth District in his own Office. I labor under one great disadvantage, while other Superintendents are carrying on the thakbust operations under the new system, in new Districts, and making their Registers as they go on from these correct papers, I have the unenviable task of patching up old and incorrect work, detecting and remedying mistakes, and preparing the Registers from the wretchedly inaccurate papers prepared under the old system. The consequence is, that though the work in the Division is most laborious, I have not half so much to shew

for the labor as I should have, if I were working in a new District. I can only say that I shall be glad when I have an opportunity of commencing work under the new system, in a new District.

19. I have now to take upon myself the duties of a Deputy Collector besides the general Superintendence of the Division. I shall have thirty Ameens and three Pescars under my own control. I have already commenced work, but as I have not yet received the compasses I indented for, and those sent to Calcutta for repair, I am not able to employ the whole Establishment.

20. I shall leave two of my Amlahs and the head Clerk at the Station, under the Superintendence of Moulvee Alee Ahmed while I remain in the interior of the District. They will complete those Maldah Registers which are fit for completion. It has been the practice, hitherto, to leave these Amlahs at the Sudder Station, but I have thought it better to leave them with the Deputy Collector, who will see that they perform their work properly.

21. The Annual Statement of expenditure shall be forwarded as soon as possible, but I have lately had so much work on my hands, in consequence of Mr. Morris making over to me the khusreh establishment, and I have had to make arrangements for the field season, I have therefore not been able to look over the statement yet, but I have thought it better not to delay the other statements on this account.

I have, &c.,

(Signed) E. G. BIRCH,

*Offy. Supdt. of Survey, 1st or Northern Division.*

*Camp Bauleah,  
the 26th November, 1853. }*

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No. 13.

To

H. M. REID, Esq.,

*Controller of Surveys,*

*Calcutta.*

*Dated Dacca, the 4th November, 1853.*

SIR,

I have the honor to forward, herewith, the statements of this Office, for the year 1852-53 :—

2. During the past field season the demarcation, &c., of Pergunnahs Alapsing and Rungbhowal, and the remaining portions of Pergunnah Pookereah, a tract of country comprising 1,200 villages, has been completed, and with them that part of the District which is situated on the right bank of the Burrampooter.

3. Our field operations terminated rather earlier than usual, otherwise a greater number of villages might have been got through, but I did not think advisable to cross the Burrampooter, as we were already as far in advance of the Surveyor as in my opinion was desirable.

4. In 1851-52 1,634 villages were demarcated, &c. The actual area, however, of the 1,200 of the year under review, is at the least, fully as large as that of the 1,634, and Mr. Wyatt assures me that the former are quite sufficient for his ensuing season's Survey.

5. The great obstacle to the work proceeding rapidly, was the frequency of boundary disputes, especially in Alapsing. The boundary of every village nearly in that Pergunnah, was contested more or less often on the most frivolous grounds. Indeed the Ameens at one time could hardly progress at all.

6. You will observe that there was but little khusreh measurement required, internal demarcation being sufficient in most instances. The system of internal demarcation,—the areas being calculated in the Surveyor's Office, is found to answer admirably. Discrepancies to a greater extent than the 5 per cent. limit do not often occur. When they do, the error is generally found to consist in the plotting of the thakbust Map. A re-plotting and comparison with the surrounding villages, usually enables us to rectify the error. It is very seldom that a re-measurement on the ground is declared necessary.

7. The khusreh measurements are also found nearly all to agree sufficiently closely with the professional areas.

8. I am happy to say that the Registers have lately been considerably advanced, and I hope that in future they will go hand-in-hand with the demarcations, the areas being entered when procured from the Surveyor's Office, opposite the respective Mehals.

9. Nothing was done towards their preparation during the first two years of the Mymensing Survey. Great mis-apprehension appears then to have existed as to the description of Lakheraj lands, which ought to be shewn in the Maps. In many instances land had been shewn as Lakheraj, but without any explanation of its right to be so. Further investigation, and the correction of the Maps, long after demarcation, thus became necessary.

10. The file of pending boundary disputes is very heavy. But little could be done towards reducing their number during the recess, on account of the disputed localities not having been visited. They will, however, be taken up as soon as the state of the country admits of it, and I trust the Surveyor will experience no inconvenience from them.

11. Mr. Harrison, up to the date of his leaving the Department, afforded me every satisfaction. He is a most able Officer, and I much regret the loss of his assistance.

12. With Baboo Prankissen Roy I had also every reason to be satisfied. I am sorry his health did not admit of his remaining in the Survey. Moulvee Abdool Hamed Khan was attached to this Office, up to the 8th February, 1853. He latterly shewed great want of zeal, investigating the cases made over to him in a very negligent manner, but I believe that age and ill-health had incapacitated him for the active discharge of his duties. The Department has, however, obtained a most excellent substitute for him in Baboo Joy Chunder Mojomdar, who has proved himself a most zealous, energetic and efficient Officer. He was engaged during the field season in the



disposal of a large number of boundary dispute cases, which he investigated with great ability.

Mr. D'Rosario only joined on the 23d June, 1853, and consequently has been unable to do much; I consider him as I have stated on previous occasions, most unsuited for Survey work.

I have, &c.,

(Signed) C. H. CAMPBELL,  
*Supdt. of Survey, 3rd Division.*

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No. 622.

FROM

THE SUPERINTENDENT OF THE 4TH OR  
WESTERN SURVEY DIVISION,

To

THE CONTROLLER OF SURVEYS,

*Calcutta.*

*Dated Berhampore, 11th November, 1853.*

SIR,

I have the honor to forward my yearly Statements up to September 30th.

2. After the many Statements and Reports I have lately submitted, it seems unnecessary to make any lengthened remarks.

MOORSHEDABAD.

During this year 169 hulkas were made over to the Surveyor of this year's thakbust work. The amount of land thus given to the Surveyor, turned out to be larger than I expected. I mentioned last year that the tract of country for Survey was I thought, about 600 square miles. From a communication of the Surveyor's, it appears that the real area was as follows:—

Area 1,035 square miles	
„ 84 „	of Ganges
—	
951 square miles of bonâ fide land.	
—	

3. The number of internal blocks or chucks measured this year, above thirty-five thousand, is a proof of the great intermixture of property. It is owing to this excessive intermixture that the arrears of duplicates of Maps were still heavy at the end of the year. These arrears are, at this moment, however, almost entirely cleared off, not above 100 Maps remaining to be copied.

4. More work has been done than the Board expected, when writing last year 1,300 odd hulkas are ready for Survey. The Maps of all these the Surveyor will get before the 15th instant. In addition to this, 169 hulkas were takd. this year, and given to the Surveyor, making an aggregate of more than 1,500 hulkas new work, and 377 hulkas, arrears of former season.

5. During the year the lists received from the Collectorate were discovered to be quite wrong. Fresh lists are being prepared, some are ready. The worthlessness of these lists, the foundation of our work, has been the cause of much extra labor and the source of much confusion. It will give rise to yet more. The lists now sent are found to contain the names of many new villages; the appearance of these necessitates fresh enquiries, and sometimes measurements.

6. 163 Hulkas externally tâkd. remain for internal measurement, some of the khusreh hulkas are very large, ranging from two to fourteen thousand beegahs. The very large ones will not be finished this season at the rate of thirty beegahs a day, an Ameen measures khusreh 900 beegahs a month; a hulka of 14,000 beegahs will therefore take him fifteen and a half months, supposing the elakadars to be always present and the season propitious. Allowing for occasional absence of proprietors and rainy season, such a hulka is not likely to be completed under two years. There are however but two of this enormous size. I would divide these into three or four hulkas, and measure them by so many Ameens, but as the proprietors can only attend upon one Ameen at a time, this would be useless.

7. A few, but only few, large hulkas will remain incomplete at the end of the season of 1853-54. The remainder of the measurement work in the District will be completed, I believe.

8. In your letter to the Board, No. 463, of the 19th September, para. 23, referring to the small number of hulkas remaining in the District, you say "you do not consider 550 to 600 fresh demarcations added to 169 hulkas in arrear of khusreh, by any means a heavy season's work." You were then probably unaware of the size of some of these hulkas. I would respectfully submit that the quantity of work cannot be estimated by the number of hulkas, but by the contents of those hulkas. I may point to the amount of measurement work executed this year as a proof that this Division will not fall in doing as much as can be expected from it during the coming season, more particularly as I shall work with two Deputy Collectors, instead of one.

9. With reference to this subject of large khusreh hulkas, I beg to submit a few remarks. Every Ameen obtains in each village he measures the assistance of three men, one to hold the flag, and two to carry the chain. The proprietors do not object to give this assistance in hulkas, which a few days' work will complete, but the case is different in very large hulkas. The continued furnishing of three men daily for months becomes a heavy tax. I have had more than one complaint made to me of the oppressive nature of this demand. It may be said that the Ameen ought to pay for his own chain-men, but out of his sixteen Rupees the Ameen pays already three for a peedah, whom he must have, he can scarcely be expected to pay six more for two chain-men, as that would reduce his salary to seven Rupees a month. The result is that the Zemindar finds himself obliged to give them, as the only means of finally getting the Ameen out of the village. In large hulkas, however, the chain-men thus supplied get tired of the daily attendance; they are often absent, their places have to be filled up, and meantime work is delayed. The Zemindars moreover are constantly obliged to pay in cash

for the hire of these men. This is against the spirit of the new rules, which would relieve the Land-holders from all expences incidental to Survey. I believe myself more work in proportion would be got, if each Ameen was allowed two chain-men, but my present object is not to propose any change involving so great a nominal increase of expenditure. I would, however, beg to suggest that in all khusreh hulkas or mehal-waree, the measurement of which cannot, at the average rate of work, be done in a month, I be allowed to grant the Ameen two chain-men at six Rupees, charging it as may be directed. I have heard of no hulkas in any Division so large as in this. No law exists to oblige the Zemindars to give the assistance required in these large hulkas and as before explained, the Ameen, out of sixteen Rupees a month, can scarcely be expected to furnish it himself. It is only with reference to the chain-men that any difficulty exists. The man who holds the flag is the same who points out the boundary whom the Zemindar must nominate.

MONGHYR AND BHAUGULPORE.

10. These Districts have been, during the year, under Mr. Watson. I have nothing to add, with regard to them, to the remarks contained in my letter, No. 605, of the 30th ultimo, the existence of numberless petty invalid jagheers, the continual increase of Izad and Adimnishan cases to which these give rise, and the necessity of engrafting new work on the old incorrect work, both Thak and Survey have delayed the completion of the Bhaugulpore Registers. I trust, however, they will soon be finished. The work Mr. Watson is engaged on is a work of patching up, of which the result, at the best, must be unsatisfactory.

BEERBHOOM.

11. In my letter, No. 605, of the 30th ultimo, I entered at length into the state of things in this District. To the information supplied in that letter, and the two statements accompanying, I am not aware that I can add anything.

12. Mr. Watson has been in almost independent charge of Monghyr and Bhaugulpore. The statements will prove that he has worked hard. I have every cause to be satisfied with his discharge of his duties, which are of a disagreeable and onerous nature. I consider him an industrious officer, very intelligent and clear-headed.

Deputy Collector Issen Chunder Dutt has been, during the year, at Beerbhoom. Last year I did not report favorably of him. I am happy to say that I consider him this year entitled to commendation. His health, which was not good last year, has been restored. He has worked hard and well, in bringing up the Registers; I was much pleased, when lately at Beerbhoom, with the systematic arrangement of his Office.

Deputy Collector Tarucknath Ghose has been employed this year in the new thakbust of Moorshedabad, further experience only enables me to repeat, with still greater confidence, what I said last year of this Officer. He is untiring in zeal and energy, and as intelligent as he is industrious. Acting Deputy Collector Moulvee Ahsan Ahmed was appointed in June. He is thoroughly conversant with the thakbust system. He has worked exceedingly hard, both in office, and in visiting his Ameens and boundary disputes. I consider him thoroughly efficient as a thakbust Deputy Collector.

I have, &c.,

(Signed) A. MONEY,

*Superintendent of Survey.*

No. 623.

FROM

THE SUPERINTENDENT OF THE 4<sup>TH</sup> OR  
WESTERN SURVEY DIVISION,

To

THE CONTROLLER OF SURVEYS,

*Calcutta.**Dated Berhampore, 11th November, 1853.*

SIR,

In para. 14 of the Board's letter to you, No. 92, of the 10th September, appears a remark which I have delayed referring to until I could send you the last year's statements of work done. These statements accompany this letter—the remark I mean is to the following effect: "But Mr. Money's ability to accomplish a given quantity of work has, generally, the Board observe, been overrated." In answer to this observation, which seems to me to imply on the part of the Board, censure for the past, and want of confidence for the future, I respectfully beg to place now before you what the Board expected of this Division last year, and what this Division has really done.

2. In para. 2 of their letter to you, No. 133, of the 23d November, 1852, the Board say: "But what the Board do expect is that the Superintendent will be able to keep the Survey Establishment fully employed this season, and have a sufficient number of hulkas prepared; a head of the Survey for the professional party to commence upon next season, and that as you suppose in the latter part of your 3rd para., the rest of the necessary number of hulkas will be ready to be made over during a sufficiently early state of the field season of 1853-54, to admit of their being surveyed, and a full season's work being effected. They do not expect that he will be able to demarcate enough during the present season, to employ the Survey Officers during the whole season of 1853-54, nor is it desirable, they observe, that the thakbust should be so far in advance." This was what the Board expected in addition to 400 hulkas of internal work remaining as arrears.

3. This Division during the year has supplied the Survey with full work, about 1,000 square miles, and it makes over to the professional Survey at the beginning of 1853-54, not sufficient work to begin on (as the Board expected) but a whole Season's work, consisting of above 1,300 hulkas, in a country the intermixture of property in which is shewn by the fact that above 35,000 chucks were measured this year. All the arrears have not been cleared off, it is true, but 377 hulkas have, and taking the whole out-turn of work, more has certainly been done than the Board expected. In this instance, therefore, my ability to accomplish a certain amount of work was not over-rated. If there be other instances, to which the Board may have referred, I am unaware of them. I have certainly not promised myself more than I have performed. All my letters of last year will shew that I held out no hopes of doing as much as has been done.

I have, &amp;c.,

(Signed) A. MONEY,

*Superintendent of Survey.*

ANNUAL STATEMENT of work performed in the Office of the four Survey Superintendencies in Bengal, for the year ending the 30th September, 1853.

1. Name of Division.	2. No. of Districts in which operations are in progress.	3. Name of Officers.	4. No. of villages demarcated as shown in Statement No. 2, column 4.	5. No. of complete thakbusts made over to the Surveyor.	6. Boundary disputes.			7. Izad and Adumnsihan cases.			8. Duplicate of Maps.			9. Miscellaneous cases not embraced in the foregoing columns.			10. Appeals from the decisions of Deputy Collectors.			REMARKS.
					On the file during the year.	Disposed of.	Pending.	On the file during the year.	Disposed of.	Pending.	On the file during the year.	Disposed of.	Pending.	On the file during the year.	Disposed of.	Pending.	On the file during the year.	Disposed of.	Pending.	
1st Division.	Purneah .....	Superintendent of Survey...	...	1,025	5	5	...	265	227	38	421	138	283	1,102	683	419	62	57	5	
	Meldah ...	Assistant Superintendent ... Baboo Khetter Mohan Mookerjee, Deputy Collector. Baboo Radhanauth Bose, Deputy Collector Moulvee Alee Ahmed, Deputy Collector.....	...	...	76	61	15	124	87	37	332	207	125	351	330	21	...	...	...	
	Rajshaye ...		...	...	30	30	...	722	559	170	56	37	19	21	13	8	...	...	...	
	Pubnah ...		...	...	306	135	171	168	42	126	...	...	...	844	398	446	...	...	...	
	Bograh ...		...	...	4	4	...	29	26	3	...	...	...	171	150	21	...	...	...	
Total...			68	1,025	421	235	186	1,308	934	374	809	382	427	2,489	1,574	915	62	57	5	
2nd Division.	24-Pergunnahs Nuddeah.	Superintendent of Surveys.	...	846	51	51	...	348	342	1	1,018	1,018	...	556	530	26	115	106	9	
		Assistant Superintendent ...	...	149	146	3	...	...	...	...	767	714	53	439	429	10	...	...	...	
		Baboo Doorgapersaud Ghose, Deputy Collector. Baboo Tarachand Ghose, Deputy Collector .....	925	...	239	239	...	621	614	7	951	951	...	465	462	3	...	...	...	
Total...			936	...	317	317	...	332	332	...	1,250	1,250	...	782	761	1	...	...	...	
3rd Division.	Mymensing ...	Superintendent of Surveys..	111	1,352	7	7	...	20	8	12	...	...	...	923	917	6	263	248	615	
		Assistant Superintendent...	536	...	223	264	159	...	...	...	801	801	...	172	160	12	...	...	...	
		Mr. E. DeRosario, Deputy Collector .....	...	129	223	106	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Baboo Prankissen Roy, Deputy Collector.....	505	...	116	116	...	...	...	...	250	250	...	68	68	...	...	...	...	
		Moulvee Abdool Hamed, Deputy Collector .....	48	...	84	84	...	...	...	...	...	...	...	45	45	...	...	...	...	
Total...			...	216	216	...	83	69	14	1,103	1,103	...	2,163	2,121	42	...	...	...		
4th Division.	Moorshedabad ... Monghyr & Bhagulpore Beerbhoom	Superintendent of Surveys..	727	1,185	82	79	3	77	14	63	563	...	563	1,639	1,300	339	37	26	11	
		Baboo Tarucknath Ghose, Deputy Collector .....	1,430	...	53	53	...	49	34	15	3,236	2,191	1,045	155	111	44	...	...	...	
		Moulvee Ashan Ahmed, Acting Deputy Collector.....	210	...	97	89	8	3	...	3	913	317	596	124	37	87	...	...	...	
		Assistant Superintendent...	...	...	2	2	...	1,896	988	908	...	...	...	2,556	2,197	359	...	...	...	
		Baboo Issenchunder Dutt, Deputy Collector .....	...	...	34	27	7	1,108	835	273	...	...	...	1,359	1,117	242	...	...	...	
Total ..			2,307	1,185	268	250	18	3,133	1,871	1,262	4,712	2,508	2,204	5,833	4,762	1,071	37	26	11	

(a) Of these 297\* were appeals from the decisions of the Deputy Collectors in boundary dispute cases. In 194 the orders were upheld, 3 were modified and 20 were restored to the file, 11 were appeals in miscellaneous cases, of which 8 were upheld, 1 reversed, and 2 restored to the file.  
 (b) Of these 9 are boundary dispute appeals.  
 (c) 66 on their merits, and 8 by Razenamah.  
 (d) 16 on their merits, and 7 struck off.  
 (e) 89 on their merits, 24 by Razenamah, and 10 struck off.  
 (f) 57 on their merits, and 27 struck off.  
 (g) 184 on their merits, 7 by Razenamah, and 25 struck off.

\* These appeals were distributed as follows :-

Name of Officers.	Upheld.	Reversed	Modified	Restored to the file	Struck off
From Assistant Superintendent	5	0	0	0	5
Baboo Prankissen Roy.....	18	0	1	10	29
Moulvee Abdool Hamed .....	89	13	1	14	117
Baboo Joychunder Mojoondar .....	78	0	1	2	81
Mr. E. DeRosario .....	4	1	0	0	5
Total..	104	14	3	26	237

(h) Besides the duplicates of Maps here specified, there were prepared during the year a quantity of Maps of the former seasons' work—which were sent to the Surveyor in January, February and March last. These are not entered. No duplicates of this year's work were done in the Superintendent's Office during the year. The copies in the Deputy Collector's Offices have been finished first, and since then those in the Superintendent's Office. There were not sufficient Aimeens to copy at once in all three Offices.

(i) Of appeals, the results were as follows :-  
 Deputy Collector, Issenchunder Dutt, 1 returned for re-investigation, 4 affirmed.  
 Deputy Collector, Tarucknath Ghose, 2 returned for re-investigation, 1 order upset, 7 affirmed.  
 Deputy Collector (Acting) Moolvee Ashan Ahmed, 4 returned for re-investigation, 2 order amended, 4 affirmed, 1 appeal was struck off the file.  
 (A) 10 of these are villages demarcated.

ANNUAL STATEMENT shewing the condition of the demarcation operations, including khusreh, for the four Survey Superintendents, during the season of 1852-53.

1.	2.	3.	4.	5.	6.	7.																																
Name of Division.	Incomplete villages remaining from last year.	Villages taken up during the year.	Total in hand during the year.	Completed externally and internally, during the year.	Remaining in hand to be carried to next return.	Remarks and explanations of the arrears shewn in the preceding column.																																
1st Division....	...	68	68	68	...	NONE.																																
				By khusreh. 0	By khusreh. 0																																	
				By internally plotted. 9	By internally plotted. 0																																	
				By demarcation. 59	By demarcation. 0																																	
2nd Division ...	...	1,861	1,861	1,861	...	<p>The internal khusreh measurements have been completed by the two Deputy Collectors in the following proportions:—</p> <p>By Baboo Doorgapersad Ghose, Deputy Collector.</p> <table border="1"> <thead> <tr> <th></th> <th>Villages.</th> <th>Field or Plots.</th> <th>Area.</th> </tr> </thead> <tbody> <tr> <td>By khusreh .....</td> <td>3</td> <td>3,603</td> <td>6,083 1 0</td> </tr> <tr> <td>By internally plotted .....</td> <td>435</td> <td>11,276</td> <td>0 0 0</td> </tr> <tr> <td>Total... 438</td> <td></td> <td>14,879</td> <td></td> </tr> </tbody> </table> <p>By Deputy Collector Tarachand Ghose.</p> <table border="1"> <tbody> <tr> <td>By khusreh .....</td> <td>2</td> <td>803</td> <td>900 3 0</td> </tr> <tr> <td>By internally plotted .....</td> <td>484</td> <td>12,456</td> <td>0 0 0</td> </tr> <tr> <td>Total... 486</td> <td></td> <td>13,259</td> <td></td> </tr> <tr> <td>Grand Total... 924</td> <td></td> <td>28,138</td> <td>6,983 4 0</td> </tr> </tbody> </table>		Villages.	Field or Plots.	Area.	By khusreh .....	3	3,603	6,083 1 0	By internally plotted .....	435	11,276	0 0 0	Total... 438		14,879		By khusreh .....	2	803	900 3 0	By internally plotted .....	484	12,456	0 0 0	Total... 486		13,259		Grand Total... 924		28,138	6,983 4 0
	Villages.	Field or Plots.	Area.																																			
By khusreh .....	3	3,603	6,083 1 0																																			
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By internally plotted .....	484	12,456	0 0 0																																			
Total... 486		13,259																																				
Grand Total... 924		28,138	6,983 4 0																																			
3rd Division....	...	1,200	1,200	1,200	...	<p>The Villages internally measured were as under:—</p> <p>By Mr. Campbell } By simple khusreh to containing 2,096 daghs, with an area of 3,146 7 10 and Mr. Harrison, }</p> <p>Partly simple khusreh 25, contg. 2,542 daghs, with an area of 4,924 17 2 By internal plotting 356, ditto 7,611 hulkas. By partly internal plotting 25, ditto 39 hulkas.</p> <p>By Baboo Frankish- } By simple khusreh—none. en Roy, Deputy } Collector. .... }</p> <p>By internal plotting 120, containing 2,783 hulkas.</p>																																
				By khusreh. 6	By khusreh. 0																																	
				Partly internally de- marcated and partly measured by khusreh. 25	By internally plotted. 0																																	
				Internally plotted. 476	By demarcation. 0																																	
				By demarcation. 693	By demarcation. 0																																	
4th Division....	555	1,975	2,530	2,367 or 1,801 hulkas.	163	<p>By Superintendent of Surveys.</p> <p>By internal plotting... 396 hulkas of 8,444 chucks. " khusreh ..... 6 hulkas of 776 fields of beegahs ..... 3,306 10 0</p> <p>By Baboo Tarucknath Ghose, Deputy Collector.</p> <p>By internal plotting... 570 hulkas of 23,770 chucks. " khusreh ..... 4 hulkas of 5,045 fields of beegahs..... 10,420 7 12</p> <p>By Moolbee Ashan Ahmed, Acting Deputy Collector.</p> <p>By internal plotting... 118 hulkas of 2,907 chucks. " khusreh ..... 1 hulka of 1,371 fields of beegahs..... 2,175 4 0½</p> <p>Total..... 1,084 hulkas.</p> <p>The 163 villages in column 5, have all been externally demarcated (112 this year, 51 in the former season) in addition to those in column 4. They remain over for want of time to finish them at the end of the season.</p>																																
				By khusreh. 11 of 7,192 fields of 15,902-1-12½ beegahs.	By khusreh. 96																																	
				Internally plotted. 1,084 of 3,521 chucks	Internally plotted. 67																																	
				By demarcation. 706	By demarcation. 0																																	

Camp Sonamokey, Zillah Bankoorah,  
The 31st December, 1853. }

(Signed) H. M. REID,  
Controller of Surveys.

ANNUAL STATEMENT shewing the condition of the Registers in the Office of the four Survey Superintendencies, for the Year ending 30th September, 1853.

Name of Division.	Name of Districts.	No. of Pergunnahs in each District.		MEHALWAREE REGISTERS.										MOUZAWAR REGISTERS.										REMARKS.						
				ENGLISH.					BENGALEE.					ENGLISH.					BENGALEE.											
				Survey completed.	Survey not completed.	Registers completed and forwarded to the Collector.	Registers completed, but not forwarded to the Collector.	Total completed.	Half finished.	Less than half finished.	Registers completed and forwarded to the Collector.	Registers completed, but not forwarded to the Collector.	Total completed.	Half finished.	Less than half finished.	Registers completed and forwarded to the Collector.	No. of villages entered in Registers of preceding column.	Registers completed, but not forwarded to the Collector.	Total completed.	Half finished.	Less than half finished.	No. of villages entered and to be entered in the Registers entered in preceding column.	Registers completed and forwarded to the Collector.		No. of villages entered in Registers of preceding column.	Registers completed, but not forwarded to the Collector.	Total completed.	Half finished.	Less than half finished.	
1st Division.	Maldah .....	39	89	...	24	2	26	1	12	24	2	26	1	12	24	...	2	99	26	1	12	2,894	24	...	3	286	27	...	12	Of the 24 Maldah Registers completed, and forwarded to the Collector, 22 were forwarded in previous years. During the present year 4 Registers have been completed, 2 of these were sent to the Collector during the year, and the other 2 have been sent since the close of the Official year. 1 Register has been nearly completed. Bengalee mehalwar and mouzawar Registers of 7 Rajshaye Pergunnahs have been forwarded to the Superintendent's Office, by Deputy Collector Moulvee Alee Ahmed, during the year. One Register of Rajshaye, has been completed in the Superintendent's Office, during the year. The 4 Pergunnahs of Dinagepore cannot be completed until the Survey of Dinagepore is commenced.
	Bhaugulpore ....	...	4	...	3	...	3	...	...	3	...	3	1	...	3	...	...	3	...	...	224	3	...	...	...	3	1	...		
	Purneah .....	35	35	...	18	...	18	...	17	18	...	18	1	16	18	...	...	...	18	...	17	...	18	...	...	18	1	16		
	Rajshaye .....	55	37	...	...	3	3	2	50	...	7	7	1	47	2	...	3	40	3	2	50	...	...	7	481	7	1	47		
	Pubnah .....	42	..	...	...	...	...	...	42	...	...	...	...	42	...	...	...	...	...	42	...	...	...	...	...	...	...	42		
	Bograh .....	26	1	3	...	...	...	...	26	...	...	...	...	26	...	...	...	...	...	...	26	...	...	...	...	...	...	26		
	Dinagepore .....	...	4	...	...	...	...	...	4	...	...	...	...	4	...	...	...	...	...	4	...	1,317	...	...	...	...	...	4		
Total...	197	120	3	45	5	50	3	151	45	9	54	4	147	47	...	5	189	50	9	151	4,436	45	...	10	767	55	3	147		
2nd Division.	24-Pergunnahs..	49	49	...	36	6	42	...	...	36	6	42	...	...	37	3,325	5	882	42	4	3	1,949	37	3,325	5	882	42	4	9	The Registers which have been completed within the years are as under :—
	Nuddea.....	27	16	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	15			
	Total...	76	65	11	36	6	42	...	...	36	6	42	...	...	37	3,325	5	882	42	4	3	1,949	37	3,325	5	882	42	5	18	
3rd Division.	Mymensing .....	...	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	1,785	...	...	...	...	...	6	1	The mehalwaree Registers will be taken in hand during the current year.	
	Total...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
4th Division.	Moorshedabad ..	72	...	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	This Statement shews the whole work of Registers done, not during the present year, but up to the end of the present year. During the present year the work done is as follows :—	
	Beerbhoom .....	39	39	...	14	7	21	9	9	14	7	21	9	9	14	637	7	735	21	9	9	4,910	14	637	7	735	21	9		9
	Monghyr .....	26	26	...	24	1	25	1	...	24	1	25	1	...	24	3,072	1	277	25	...	1	380	24	3,072	1	277	25	1		...
	Bhagulpore .....	33	33	...	26	...	26	...	7	26	...	26	4	3	26	2,597	...	...	26	...	7	3,946	26	2,597	...	...	26	4		3
Total...	170	98	72	64	8	72	10	16	64	8	72	14	12	64	6,306	8	1,012	72	9	17	9,656	64	6,306	8	1,012	72	14	12		

ANNUAL STATEMENT of sums actually drawn, including Travelling Allowance, &c., for the four Survey Superintendents, during the season of 1852-53.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	REMARKS.
Name of months.	Superintendents' salary.	Covenanted Assistants' Salary.	Deputy Collectors' salary, including Office Establishment.	Superintendents' Establishment.	Assistant Superintendents' ditto.	Extra Establishment under Deputy Collector.	Ditto under Superintendent.	Ditto under Assistant Superintendent.	Cutchery rent.	Field Establishment under Assistant & Deputy Collector.	Contingent charge including Travelling Allowance.	Peons under the Superintendent, Assistant & Deputy Collector.	Total.	
October, 1852.....	5,000 0 0	2,100 0 0	4,500 0 0	1,339 0 0	393 0 0	300 0 0	55 0 0	0 0 0	235 0 0	3,148 15 8	412 3 1	189 14 6	17,680 2 3	<p>PARTICULARS OF CONTINGENT CHARGES IN COLUMN 12.</p> <p><i>1st or Northern Division.</i></p> <p>Superintendents' Office Contingent..... 623 8 11</p> <p>Ditto Tent ..... 350 0 0</p> <p>Ditto Stationery..... 153 11 5</p> <p>Assistants' Office Contingent... 212 5 3</p> <p>Ditto Stationery..... 83 9 2</p> <p>Deputy Collectors' Contingent. 99 14 6</p> <hr/> <p>1,523 1 3</p> <p>Superintendents' Deputation Allowance ..... 1,099 3 11</p> <p>Assistants' Ditto..... 954 13 5</p> <hr/> <p>2,054 1 4</p> <p>Superintendents' Travelling Allowance ..... 905 0 0</p> <p>Ditto Establishment Ditto ... 440 5 8</p> <p>Assistants' Travelling Allowance ..... 895 0 0</p> <p>Ditto Establishment Ditto ... 198 7 6½</p> <p>Deputy Collectors' Ditto ..... 1,539 0 0</p> <p>Ditto Establishment Ditto ... 457 5 2½</p> <hr/> <p>4,435 2 5½</p> <p><i>2nd or Southern Division.</i></p> <p>Superintendents' Contingent... 1,052 9 7½</p> <p>Ditto Stationery..... 95 11 3</p> <p>Assistants' Contingent ..... 225 7 6</p> <p>Deputy Collectors' Ditto ..... 50 11 6</p> <hr/> <p>1,424 7 10½</p> <p>Superintendents' Travelling Allowance ..... 590 0 0</p> <p>Assistants' Ditto..... 530 0 0</p> <p>Deputy Collectors' Ditto ..... 1,149 0 0</p> <p>Superintendents' Establishment 247 3 6</p> <p>Assistants' Ditto..... 153 5 6</p> <p>Deputy Collectors' Ditto ..... 358 8 0</p> <hr/> <p>3,028 1 0</p> <p><i>3rd or Eastern Division.</i></p> <p>Superintendents' Contingent... 273 4 9</p> <p>Assistants' Ditto..... 141 5 3</p> <p>Ditto Tent ..... 350 0 0</p> <p>Deputy Collectors' Ditto ..... 173 12 11</p> <hr/> <p>938 6 11</p> <p>Assistants Superintendents' Allowance of Deputation ... 1,015 6 8</p> <hr/> <p>1,015 6 8</p> <p>Superintendents' Travelling Allowance..... 830 0 0</p> <p>Assistants' Ditto ..... 624 0 0</p> <p>Deputy Collectors' Ditto ..... 1,236 0 0</p> <p>Superintendents' Establishment 435 15 8</p> <p>Assistants' Ditto ..... 157 4 0</p> <p>Deputy Collectors' Ditto ..... 187 4 1</p> <hr/> <p>3,470 7 9</p> <p><i>4th or Western Division.</i></p> <p>Superintendents' Contingent... 2,632 14 4</p> <p>Assistant's Ditto ..... 208 1 3</p> <p>Deputy Collector's Ditto ..... 145 3 1</p> <hr/> <p>2,986 2 8</p> <p>Superintendents' Travelling Allowance ..... 485 0 0</p> <p>Assistants' Ditto..... 360 0 0</p> <p>Deputy Collectors' Ditto ..... 858 0 0</p> <p>Ministerial Officers..... 610 9 6</p> <hr/> <p>2,313 9 6</p> <p>5,299 12 2</p>
November .....	5,000 0 0	2,100 0 0	4,308 5 4	1,334 8 0	393 0 0	300 0 0	55 0 0	0 0 0	231 0 0	3,855 12 3	1,950 2 10½	219 4 4	19,754 0 9½	
December .....	5,000 0 0	2,100 0 0	4,250 0 0	1,520 5 3	400 0 0	387 0 0	800 0 0	0 0 0	213 9 8	5,899 0 0	3,002 2 10½	315 11 3	23,722 13 ¾	
January, 1853.....	5,000 0 0	2,100 0 0	4,345 2 6	1,364 0 0	400 0 0	387 0 0	800 0 0	0 0 0	207 4 3	5,685 9 3	3,426 12 5½	430 11 6	24,146 7 9½	
February.....	5,000 0 0	2,100 0 0	4,212 7 11	1,364 0 0	400 0 0	387 0 0	800 0 0	0 0 0	209 0 0	5,657 2 0	2,544 15 6½	425 2 0	23,099 12 5½	
March .....	5,000 0 0	2,100 0 0	4,249 3 1	1,364 0 0	400 0 0	387 0 0	800 0 0	0 0 0	224 0 0	5,849 0 0	3,385 2 0	440 0 0	24,198 5 1	
April .....	5,000 0 0	2,100 0 0	4,300 0 0	1,364 0 0	400 0 0	332 0 0	800 0 0	0 0 0	224 0 0	5,810 0 0	2,198 8 5½	480 0 0	23,008 8 5½	
May .....	5,000 0 0	2,100 0 0	4,319 5 8	1,364 0 0	400 0 0	332 0 0	800 0 0	50 0 0	224 0 0	4,949 1 3	1,814 8 4	461 8 6	21,814 6 9	
June .....	5,000 0 0	2,100 0 0	4,599 0 0	1,364 0 0	400 0 0	340 0 0	480 0 0	50 0 0	224 0 0	3,276 14 10	1,602 6 8½	411 15 8	19,858 5 2½	
July.....	5,000 0 0	2,100 0 0	4,600 0 0	1,364 0 0	400 0 0	340 0 0	480 0 0	50 0 0	225 11 1½	3,290 11 11	1,021 2 3½	381 2 8	19,252 11 0½	
August .....	5,000 0 0	2,100 0 0	4,600 0 0	1,362 11 4	396 2 1	340 0 0	480 0 0	50 0 0	250 0 0	3,275 11 8	850 1 3½	281 8 3	18,986 2 7½	
September .....	5,000 0 0	1,726 10 8	4,600 0 0	1,364 0 0	291 10 8	387 14 9	480 0 0	50 0 0	250 0 0	3,265 11 5	980 12 3	236 6 3	18,593 2 0	
Total drawn for each class.....	60,000 0 0	24,826 10 8	52,883 8 6	16,286 8 7	4,673 12 9	4,179 14 9	6,830 0 0	250 0 0	2,717 9 ½	53,963 10 3	23,188 15 5½	4,300 4 11	2,54,100 14 10½	
Total passed for each class ...	60,000 0 0	24,826 10 8	52,883 8 6	16,361 8 7	4,706 10 8	4,179 14 9	6,830 0 0	250 0 0	2,717 9 ½	54,965 0 0	23,188 15 5½	4,320 10 5	2,55,230 8 0½	
Total Savings.....	0 0 0	0 0 0	0 0 0	75 0 0	32 13 11	0 0 0	0 0 0	0 0 0	0 0 0	1,001 5 9	0 0 0	20 5 6	1,129 9 2	

Of the above Statement the following Table exhibits the Expense under each class and the Savings to Government.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Name of Division.	Superintendents' Salary.	Covenanted Assistants' Salary.	Deputy Collectors' salary, including Office Establishment.	Superintendent and Assistant Superintendents' Office Establishment.	Extra Establishment under the Superintendent, Assistant Superintendent, and Deputy Collectors.	Cutchery Rent.	Field Establishment under Assistant Superintendent and Deputy Collector.	Peons under the Superintendent, Assistant Superintendent and Deputy Collector.	Contingent Charges.	Total Expenses.	Total Savings.
First Division ...	12,000 0 0	9,600 0 0	16,208 1 0	5,422 0 0	7,920 0 0	72 11 1½	12,168 0 0	529 1 6	8,012 5 0½	72,632 2 8	14 0 0
Second Ditto .....	18,000 0 0	4,800 0 0	11,804 8 10	5,890 10 8	1,200 0 0	100 0 0	12,918 10 3	866 10 2	4,452 8 10½	60,533 0 9½	1,040 9 2
Third Ditto .....	12,000 0 0	4,426 10 8	11,651 9 0	4,211 10 8	.....	100 0 0	12,225 0 0	963 0 0	5,424 5 4	51,502 3 8	76 0 0
Fourth Ditto .....	18,000 0 0	6,000 0 0	13,219 5 8	5,436 0 0	2,139 14 9	144 13 11	16,652 0 0	1,941 9 3	5,299 12 2	69,433 7 9	0 0 0
Total...	60,000 0 0	24,826 10 8	52,883 8 6	20,960 5 4	11,259 14 9	277 9 0½	53,963 10 3	4,300 4 11	23,188 15 5½	2,54,100 14 10½	1,129 9 2

Grand Total, Co.'s Rs... 23,188 15 5½

Camp Sonamookey, }  
The 31st December, 1853. }

(Signed) H. M. REID,  
Controller of Surveys.



Memorandum of Expenses during the Season of 1852-53.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	REMARKS.
Name of Division.	Description of Charges.	Superintendents' salary.	Covenanted Assistants' salary.	Deputy Collectors' ditto, including Office Establishment.	Superintendents' Office Establishment.	Assistants' Office Establishment.	Extra Establishment under Deputy Collectors.	Ditto under the Superintendent.	Ditto under the Assistant Superintendent.	Cutchery Rent.	Field Establishment under the Assistant Deputy Collector.	Contingent Charges.)	Peons of Superintendent, Assistant and Deputy Collectors.	Total.	
1st Division.	Total sum drawn under each heading .....	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	NOTE.—The Officiating Superintendent, 1st Division, in his Letter, No. 716, dated the 13th December, 1853, states his inability to furnish this Memorandum, no separate account of the sums expended in effecting the old and the new works respectively having been kept in his Office.
	Deduct chargeable to old work .....	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	
	Remains chargeable to new work .....	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	
2nd Division.	Total sum drawn under each heading .....	18,000 0 0	4,800 0 0	11,804 8 10	4,707 8 7	1,181 2 1	1,200 0 0	0 0 0	0 0 0	600 0 0	12,918 10 3	4,452 8 10 <sup>3</sup> / <sub>4</sub>	866 10 2	60,533 0 9 <sup>3</sup> / <sub>4</sub>	
	Deduct chargeable to old work .....	0 0 0	4,800 0 0	0 0 0	0 0 0	1,181 2 0	0 0 0	0 0 0	0 0 0	240 0 0	2,400 0 0	955 4 11	238 15 8	9,815 6 8	
	Remains chargeable to new work .....	18,000 0 0	0 0 0	11,804 8 10	4,707 8 7	0 0 0	1,200 0 0	0 0 0	0 0 0	360 0 0	10,518 10 3	3,497 3 11 <sup>3</sup> / <sub>4</sub>	627 10 6	50,717 10 1 <sup>3</sup> / <sub>4</sub>	
3rd Division.	Total sum drawn under each heading .....	12,000 0 0	4,426 10 8	11,651 9 0	3,105 0 0	1,106 10 8	0 0 0	0 0 0	0 0 0	600 0 0	12,225 0 0	5,424 5 4	963 0 0	51,502 3 8	
	Deduct chargeable to old work .....	0 0 0	1,200 0 0	0 0 0	0 0 0	300 0 0	0 0 0	0 0 0	0 0 0	0 0 0	417 0 0	953 14 6	0 0 0	2,870 14 6	
	Remains chargeable to new work .....	12,000 0 0	3,226 10 8	11,651 9 0	3,105 0 0	806 10 8	0 0 0	0 0 0	0 0 0	600 0 0	11,808 0 0	4,470 6 10	963 0 0	48,631 5 2	
4th Division.	Total sum drawn under each heading ..	18,000 0 0	6,000 0 0	13,219 5 8	4,236 0 0	1,200 0 0	1,779 14 9	110 0 0	250 0 0	744 13 11	16,652 0 0	5,299 12 2	1,941 9 3	69,433 7 9	
	Deduct chargeable to old work .....	0 0 0	6,000 0 0	0 0 0	0 0 0	1,200 0 0	0 0 0	0 0 0	250 0 0	285 0 0	2,212 6 7	625 11 5	147 11 10	10,720 13 10	
	Remains chargeable to new work .....	18,000 0 0	0 0 0	13,219 5 8	4,236 0 0	0 0 0	1,779 14 9	110 0 0	0 0 0	459 13 11	14,439 9 5	4,674 0 9	1,793 13 5	58,712 9 11	

Camp Sonamookey, Zillah Bancoorah, }  
The 31st December, 1853.

(Signed) H. M. REID,  
Controller of Surveys.

*ANNUAL STATEMENT showing the number of Purneah Mills disposed of by Baboo Radhanath Bose, Uncovenanted Deputy Collector, during the year ending the 30th September, 1853.*

Name of Zillah.	Name of Deputy Collector.	Pending at the close of last year.	Disposed of during this year.	Balance.	REMARKS.
Purneah .....	{ Baboo Radhanath Bose, Deputy Collector .....	780	421	359	

*Camp Bauleah, Superintendent Surveys' Office,*  
*1st or Northern Division, the 26th No-*  
*vember, 1853.*

(Signed) **E. G. BIRCH,**  
*Offg. Supdt. of Survey,*  
*1st or Northern Division.*

ANNUAL STATEMENT showing the Progress made in disposing of the *Khusreh Arrears in Zillah Rajshaye and Bograh, during the year ending the 30th September, 1853.*

Name of Zillah.	Names of Superintendents, Assistant Superintendents and Deputy Collector.	Pending at the close of last year.	Instituted in this year.	Total.	Disposed of in this year.	Balance.	REMARKS.
Rajshaye .....	Mr. H. Pratt, Officiating Superintendent of Survey, from 1st October to December, 1852. Mr. E. G. Birch, Assistant Superintendent of Survey, from 1st January, 1853, to February, 1853, and Mr. G. G. Morris, Assistant, from March to September, 1853.	Dt. sent to Khetter Mohun, D. C. .... } 1,190 169 Remains... 1,021	1	1,022	234	788	At the close of last year, 1,192 was given as the aggregate of the arrears, but this appears to have been incorrect, the number now remaining, is supposed to be 946. This will possibly be found incorrect hereafter.
Ditto .....	{ Khetter Mohun Mookerjee, Deputy Collector .....	.....	169	169	11	158	
Bograh .....	{ Khetter Mohun Mookerjee, Deputy Collector .....	.....	393	393	45	348	

Camp Bauleah, Superintendent of Surveys' Office. }  
1st or Northern Division, the 26th November, 1853. }

(Signed) E. G. BIRCH,  
Offg. Supt. of Survey,  
1st or Northern Division.



No. 23.

FROM

THE DEPUTY SURVEYOR GENERAL,

To

A. GROTE, Esq.,

*Secretary, Board of Revenue, Lower Provinces.**Dated Calcutta, 6th February, 1854.*

SIR,

The Revenue Survey Operations in Bengal having been so fully discussed and reported on, for several years past, and my two last Reports, dated respectively as

No. 54, dated 25th March, 1852.  
No. 31, „ 29th ditto, 1853.

per margin, being still before the Government of Bengal, it does not appear to me necessary that I should, so soon again, enter into the lengthy details usually observed in the Annual Reports emanating from this Department, I propose, therefore, to content myself with a brief statement of the progress made by the several Executive Officers employed, and for which purpose I have the honor of submitting, for the information of the Board of Revenue, as well as of the Most Noble the Governor of Bengal, the usual returns and detailed Tabular

Marked A. B. E. F.

Statements embracing the various accounts and items which are required to be put on record.

2. The continuation of the Survey of the Bengal Province has been effected by the same experienced Officers and Establishments as last reported, the progress has been made in the following Districts:—

Districts under Survey.

1st or Northern Division, Mr. J. J. Pemberton.....	<i>Rajshaye.</i>
2nd or Southern Division, Capt. R. Smyth .....	<i>Nuddea.</i>
3rd or Eastern Division, Mr. A. Wyatt .....	<i>Mymensing.</i>
4th or Western Division, Capt. Sherwill .....	<i>Moorshedabad.</i>
5th Assam, Mr. J. Kelso .....	<i>Goalparah.</i>

3. The first named District, Rajshaye, has been completed, its exterior limits having been sufficiently defined, to admit of the Maps being adjusted, a large portion of the Bograh District, or Joint Magistracy, however, has been taken up with the Survey, this will stand over until the remainder of the District can be prosecuted, the direction of the operations of this party in the meantime extending southwards into the Pubna District. The Rajshaye District, with its contained portions of Maldah, Dinagepore, Bograh and Pubna, contains an area of 2,991 square miles, and is tolerably compact. The other four Districts above noted, are only partially finished. Nuddea, Moorshedabad and Goalparah will require another entire season, whilst Mymensing, being a very heavy District, will not be completed for some years.

4. The annexed Index Map shews, at a glance, the area surveyed, colored pink —in progress, green—and remaining for survey, yellow. In round numbers the extent of country surveyed, and remaining at the close of the season under review, was as 83,135 square miles to 34,533 square

Present state of operations in Bengal.

miles, being in proportion as nearly five to two for the regulation Districts, but in addition to this, the S. W. Frontier agency, containing Chota Nagpore, Hazareebaugh, Ramghur, &c., will have to be provided for, and this large tract estimated at about 37,000 square miles, being totally unknown, urgently demands the presence of the Surveyor.

5. A total area of 4,246 square miles, in the several Districts before named, has

Area completed.

been effected as the out-turn of the season's work (vide Table A. Appendix.) This gives an average for the four regular and equal Establishments, (excluding Assam) of  $914\frac{3}{4}$  square miles each, which is in excess of the previous seasons' results. This area is divided into thirty-seven entire Pergunnahs, with portions of thirty-eight others, containing 6,142 mouzahs within 5,162 separate hulkas or circuits, as laid down by the demarcation Officers. The average number of hulkas surveyed by each party amounts to  $1,290\frac{1}{2}$ , and the average size of these village circuits is 427 acres, or two-thirds of a square mile, which is also favorable when contrasted with the previous season.

6. The contribution of each Surveyor towards the general results, is detailed in the following Statement, the totals being placed in juxtaposition with those of 1851-52, for comparison.

General Results.

Names of Survey Divisions.	Name of Superintending Officers.	Pergunnahs.		Number of hulkas or traverse circuits.	Average size of traverse circuits.	Total area surveyed in square miles.	Total cost.		Average rate per square mile.		Average rate per traverse circuit.				
		Completed.	Portion of.				Rs.	as. p.	Rs.	as. p.	Rs.	as. p.			
1st or Northern Division ..	Mr. J. J. Pemberton.	11	30	1,010	344	860.00	27,797	9	6	31	15	3	2		
2nd or Southern Ditto ..	Capt. R. Smyth ...	9	..	900	550	824.43	29,020	13	9	35	0	11	30	1	7
3rd or Eastern Ditto ..	Mr. Alex. Wyatt ..	..	8	1,374	372	920.32	29,061	8	1	31	2	7	21	1	3
4th or Western Ditto ..	Capt. W. S. Sherwill.	16	..	1,212	502	1,035.30	31,285	8	0	30	3	6	25	13	0
5th, Assam, Goalparah ..	Mr. J. Kelso ..	1	..	25	..	587.03	13,833	7	3	29	9	10	0	0	0
	Total	37	38	5,187	427	4,246.04	1,31,798	12	6	31	0	8	33	8	0
	Total for Season 1851-52..	35	41	4,086	372	3,626.25	1,29,197	13	6	31	6	0	19	5	6
	Difference..	+2	-3	+201	+55	+419.79	+2,600	15	1	-0	4	4	+4	2	4

7. It will be seen that a larger area, by 419 square miles, has been surveyed at a slightly lower average cost than that of the previous season, viz.,

Total cost and rate.

31-8 per square mile. The rate per circuit is slightly in excess, owing to their increased size. The total expense incurred amounts to Rs. 1,31,798-12-6, the details of which will be found in Table E. This deducted from the fixed annual grants, leaves a balance of 7,414-1-6 as savings to Government, as marginally specified. On the whole the result is decidedly favorable, evincing a steady perseverance on the part of the several Revenue Surveyors to produce, not only as much work as possible, but at the lowest cost to the state. The nature and style of the work thus produced, will be presently remarked upon.

Grants for the five	
Surveys ..	1,39,213-0-0
Expended ..	1,31,798-12-6
Balance to credit of Department ..	7,414-1-6

8. The original returns furnished by the Surveyors, marked No. 2 in Appendix, exhibit the extent of Maps and Records prepared and furnished, amounting in the aggregate as follows :—

Records prepared and lodged.  
Thirty-nine folio volumes, containing 5,192 separate village Plans and Registers—all in duplicate.

Sixteen Pergunnah Topographical Plans. Scale, one inch to the mile—in duplicate.

Three Civil Stations or City Maps. Scale, eight inches to the mile—in duplicate.

Five Index or Skeleton Maps, explanatory of the season's operations, on a reduced scale.

Thirty-one Main Circuit Traverse Computations, being the numerical data on which the General Survey is based.

9. Of these records, all the Pergunnah Maps, with a few exceptions, as well as City Maps and Computations, have been duly lodged in this Office, and the duplicates made over to the civil authorities of Districts for whom they were intended, and receipts for the same rendered. The village plan volumes, as usual, are necessarily detained in many instances, pending the completion of the Survey of Pergunnahs having out lying, and widely scattered villages. With reference to what was stated in the 13th para. of my last

*Extract of a letter, No. 40, dated 19th September, 1853, from the Surveyor General of India to the Offg. Secy. to the Govt. of India, Military Department.*

\* \* \* \* \*  
Para 274. " Under his (the Deputy Surveyor General's) management, great improvements have been introduced into the Revenue Surveys of Bengal, and as the system now established, is progressing satisfactorily, it is in my humble opinion expedient that the advantages which long practice and experience always affords, should not be disturbed by any innovations of a radical character, but that the system should be worked out in all its integrity, until the Survey of the remaining Revenue Provinces is completed."

*Extract of a Despatch, No. 579, dated the 16th November, 1863, from the Offg. Secy. to the Govt. of India, Military Department, to the Surveyor General of India.*

Para. " The testimony borne by you to the zeal and ability of Captains Smyth and Sherwill, Revenue Surveyors, and to the excellency of the Maps prepared by them, appears to His Lordship in Council to be fully supported by the detailed account of their proceedings given in your Report."

afforded both myself and the Department, generally, the highest gratification.

10. Whilst on this subject, it may not be out of place to allude to the opinion of the Hon'ble Court of Directors, whose attention has been drawn to the system of Survey now in progress in the N. W. Provinces, and whose sentiments are thus expressed in a Despatch, No. 8, dated the 20th April last. " We fully concur in the observations of the Lieut.-Governor, that

Opinion of Hon'ble Court on system of Survey.  
" in all subsequent propositions regarding this Survey (in Rohilcund), it is most important to bear in mind the difficult nature of the country, and the natural obstacles to rapid and accurate Surveying. The efficiency of the Survey must not be tested by the number of square miles surveyed in the season, but by the style of the work given in, something more is necessary than satisfies the ordinary requisitions of a Revenue Survey. No persons are better able, or more willing, to do all that is requisite than the Officers now employed on the work, but they must not attempt to slur over the work,

‘ from any mistaken notion, that it is necessary to complete, within the season, an area of some fixed extent, which elsewhere, and under other more favorable circumstances, they have been able to perform.’ It is precisely this opinion of something more than used to satisfy the ordinary requisitions of a Revenue Survey, being in the present day necessary, which has actuated me in the guidance of the operations, not only in the N. W. Provinces and the Punjaub, but in Bengal, and the minds of the several Officers of the Department have been impressed accordingly, and they have, with equal alacrity, responded to the call. If, therefore, the work now executed, entails a slightly enhanced cost per square mile, there can be no doubt whatever of the superior value of that which is so obtained, and it is far cheaper in the end.

11. The recent orders of the Government for the deputation of an Officer from the Revenue Survey Department, for the purpose of re-adjusting, in communication with the several Judges and Magistrates of Districts in Behar and Bengal, the civil and criminal jurisdictions has led to the nomination of Captain Sherwill, Revenue Surveyor of the 4th or Western Division, on a deputation allowance of 200 Rupees per mensem, in addition to his pay and allowances which he held whilst employed in the Survey of Darjeeling. Captain Sherwill, whilst so employed, is to receive his staff salary as a Surveyor from the savings of the Department, and Captain Gastrell, an experienced Assistant from the Punjaub Surveys, has been brought down as locum tenens, in charge of the Moorshedabad Survey. It is also proposed to provide the salary of a full Surveyor for this latter Officer, from the present grant. In order to carry out the views of Government, explicit instructions have been issued, that in all future operations, the boundaries of thannahs and the Mofussil names of villages, are to be carefully marked and recorded, so that the needful adjustments may take place hereafter, by simple reference to the Survey Records—and for this purpose the Surveyors have been directed to place themselves in communication with the Magistrates of Districts, who have been likewise instructed to co-operate for the attainment of the object in view.

12. The prospect of the application of the results of the Revenue Survey Operations in these Provinces, to some practical useful purpose, as I endeavoured to urge in several of my late Annual Reports, is a matter of congratulation, and with the Maps now available on the one inch scale, shewing village boundaries, which are, to a considerable extent, published, and fast undergoing lithography. I have every hope that the energetic and able Officer deputed for the purpose, will be able to carry out the duty with efficiency and promptitude.

13. The details of each Surveyor’s proceedings will now be adverted to in the order of Divisions.

14. This party, as specified in the margin, took the field on the 15th November, 1852, leaving Berhampore, the recess quarters on that date, and proceeding to the north eastern portion of the Rajshaye District, in the immediate vicinity of Bograh, a large portion of which Joint-Magistracy has been necessarily included in the season’s operations.

1ST OR NORTHERN DIVISION.  
 Revenue Surveyor.—Mr. J. J. Pemberton.  
 Assistant.—Mr. J. O’Donel.  
 Sub-Assistants.—Mr. J. R. Pringle, Mr. R. Smith, Mr. C. Mullens, Mr. W. Beatson.  
 19 Native Assistants.  
 Area performed, 869.96 sq. miles.  
 Cost per square mile, Rs. 31-15-3.



15. The tract surveyed, comprises the several Pergunnahs and parts of Districts enumerated in the following Table, embracing six Districts and forty-one Pergunnahs, the chief of which are named in the margin—the whole aggregating 869.96 square miles, in 1,616 hulkas, as separately demarcated, containing 1,665 mouzas, besides 553 arazees (averaging about eight acres each in size), which have been divided off by professional means, thus dispensing with the expense of about 900 Rupees, which would have been necessitated, had a khusreh measurement been made of them.

NAME OF DISTRICTS.	Number of Pergunnahs.	Number of hulkas.	Detached small uslee villages.	Arazees.	Total.	Area in square miles.
Rajshaye.....	21	897	33	201	1,131	540.46
Bograh .....	9	648	16	346	1,010	301.96
Rungpore .....	2	44	...	3	47	17.05
Pubna .....	3	5	...	...	5	3.60
Dinagepore.....	4	17	...	2	19	4.96
Mymensing.....	2	5	...	1	6	1.93
Total.....	41	1,616	49	553	2,218	869.96

16. The limits of the District of Rajshaye, on the Bogra side, have been adopted in communication with the Controller of Surveys, of taking the Kurruttea Nullah running through the Pergunnah of Mehmanshahee as the boundary; this Division, while it makes the Rajshaye Map compact, is in conformity with the limits of the criminal jurisdiction of Bogra, which is so far convenient, indeed, in no other way, could an approximate boundary for Rajshaye be arrived at. The 301 square miles of Bogra, which have been laid down, extending a distance of twelve miles to the north of the civil station of that name, will stand over until the remainder of the District can be taken up, which will not be until the Survey of the Pubna District, over which the demarcations have extended, is completed.

17. The outlay incurred for this Establishment amounts to Rupees 27,797-9-5, giving an average on the square mile of Rupees 31-15-3, and on the circuit 17-3-2, which contrasts very favorably with the results of the previous season, being a decrease in the milage cost of Rs. 2-7-11, and an increase of area of 143 square miles, as below tabulated:—

Seasons.	Area surveyed in square miles.	No. of village hulkas.	Average size of village circuits in acres.	Cost.		Average rate per square mile.		Average rate per hulka circuit.	
				Rs.	As. P.	Rs.	As. P.	Rs.	As. P.
1851-52 .....	726.62	1,494	811	Rs. 25,022	As. 12 7	Rs. 34 7 2	As. 16 11 11	As. 16 11 11	
1852-53 .....	869.96	1,616	344½	27,797	9 5	31 15 3	17 3 2	17 3 2	
Difference .....	+ 143.34	+ 122	+ 33½	+ 2,774	12 10	-2 7 11	+ 0 7 3	+ 0 7 3	

18. Mr. Pemberton has, under the usual difficulties met with in his Division, thus succeeded in giving a very favorable out-turn for the season, the completion of such an area and number of hulkas in Eastern Bengal demanding the utmost exertions of a party of the strength notified. The average cost is the next lowest to that produced by the 4th or Western Division, and the total expenditure is below the

Annual Grant.. Rs.	28,276	0	0
Expended..... "	27,797	9	5
Savings..... ,	478	6	7

authorized grant, by Rs. 478-6-7, as shewn in the margin. The smallness of the savings on this Survey, compared to previous seasons, is accounted for by the orders of Government, No. 530, dated 28th June, 1853, authorizing Mr. Pemberton to draw an additional 100 Rupees as contingent allowance, similar to the other Bengal Surveyors.

19. The several Maps specified in the margin are shewn in this Surveyor's original

8 Pergunnah Maps, in duplicate.

1 Map of the Station of Bograh, in duplicate.

1 Map of the large town of Mehmanshahee, in duplicate.

2,218 village Plans, in duplicate, comprising 48 Pergunnah volumes, inclusive of duplicates.

return to have been prepared, and of which the Pergunnah and Station Plans have been lodged in this Office, with the exception of one Pergunnah (Protapbagoo) which is incomplete, in consequence of out-standing villages not yet surveyed. The village Plan and Register volumes, both of this and the two previous seasons, however, have not yet reached me, owing to the confused intermixture of villages, but advice has been received of the despatch, by steamer, of the greater portion of them, and they may therefore be shortly expected. The Pergunnah Plans, although exhibiting a wonderful intricacy of estates, are sufficiently clear, and intelligible, and satisfactorily compiled; a few details, which seemed to require amendment, having been pointed out, especially as regards the style of the topography shewn on the Plans of the civil stations, which are on the large scale of eight inches to the mile, and therefore demanding the utmost nicety in the delineation of the features of the ground. The duplicate Maps have been furnished for the use of the local authorities, and receipts for the same filed in this Office.

20. The thakbust Sketch Maps have all been on the old system (excepting a few of the doweoba churs or dearahs of the Ganges) and the assimilation with the Professional Plans has been sufficient for all practical purposes, described by the Surveyor as "remarkably good; the few discrepancies discovered, having been adjusted previous to leaving the field, and in every case the Professional Survey proved correct." The result of the comparison made by the Civil Superintendent, between the areas derived respectively from the professional and the khusreh measurements, is stated to have been satisfactory. The demarcations for the current season are likewise without scale and compass Maps.

21. The European Assistants are reported to have been zealous in the discharge of their duties, and to have given every satisfaction. Mr. O'Donel, Senior Assistant, has been placed in charge of the Assam Survey, and joined his new appointment at Goalpara, on the 20th December last, under the orders of Government, No. 1029, dated the 9th idem—the loss of this Assistant will be much felt by Mr. Pemberton, but under the able Superintendence of this indefatigable Officer, I trust that his Establishment will soon recover from the effects of such a transfer. Both Mr. J. R. Pringle and Mr. Robert Smith are described as most promising and deserving Sub-Assistants, and the latter has

been recommended for promotion, which has been authorized to the extent noted in the margin subject to the usual confirmation. The junior grades have been filled up by competent apprentices to preserve the proper strength. The efficiency of this party, in Native Assistants, is well maintained.

22. The orders of the Board of Revenue, for the future distribution of Districts to each Survey party, as contained in your letter, No. 93, dated the 18th October last, has allotted to Mr. Pemberton's party a very extensive sphere of action, as shewn in the margin, whilst to Captain Sherwill's Establishment, the District of Jessore alone appertains, after Moorshedabad is completed. The probable area made over to the former party, is about square miles 12,713, and to the latter not more than 3,363 square miles. It is also on record that the demarcations for the 1st or Northern Division, are very well in advance, whilst those for the 4th or Western are just the reverse. It appears to me, therefore, advisable on both these accounts, that the portion of the Pubna Districts, south of the Ganges, which has been already demarcated, should be taken up by Capt. Sherwill's party as soon as they have finished the District on which they are now engaged. This portion of Pubna is in direct contact, and much intermixed with Jessore. The Ganges (or Puddah) River forms a better line of demarcation between the two parties, and the finding of so much work ready demarcated, will give the 4th Division an ample field for employment, and enable the Superintendent to proceed a season in advance of the Survey into Jessore (a matter of great moment) whilst the 1st Division party will the sooner be able to direct their steps northwards, to finish Bograh, already begun, and proceed on with the extensive Districts of Rungpore and Dinagepore, of which latter a considerable area has also been included with Maldah and Rajshaye. I am not myself aware of any difficulty in one Survey party taking up a portion of country demarcated and intended for another party, but I have to solicit the Board's consideration to the proposal, and early orders thereon, before Mr. Pemberton crosses the Ganges.

23. Capt. Smyth's Establishment of the strength specified in the margin, left Dum-Dum, the recess quarters, for the field, on the 24th November, 1852, and continued the Survey of the Nuddea District on the 1st December ensuing. The tract demarcated lying between the Echamuttee and the Cobadduk Rivers, the latter of which forms the eastern boundary of the District, comprised 956 hulkas, the whole of which were made over in a very complete and satisfactory manner, at the commencement of the season. These have accordingly been all surveyed, with the exception of forty, which being inconveniently situated, running into the work of the current season, could not be taken up. The number of hulkas surveyed is therefore 916, containing 1,044 villages, inclusive of forty-four small chunks of detached villages.

24. The nine Pergunnahs enumerated in the margin, aggregating an area of 823.43 square miles, have thus been effected. The average size of the village circuits (or hulkas) being as high as 550 acres, which is a great improvement on the usual average for Bengal. The total expenses for the season amount to Rs. 29,920-13-9, which is under the allowed maximum by Rupees 1,366-2-3, as noted in the margin. Of this sum, 28,896-13-9 has been expended on account of the professional Operations, the

balance, Rupees 1,024, will be carried to the account of the mehalwaree or khusreh calculations, having been actually incurred for that purpose. The mileage average will, on this distribution, come to Rupees 35-0-11, and per village circuits, to Rupees 30-1-7, the comparative results of which, with the previous season, will appear from the following statement :—

Season.	Description of Survey.	Area surveyed in square miles.	No. of village or traverse circuits.	Average size of village circuits in acres.	Total cost.			Average rate per square miles.			Average rate per traverse circuit.		
					Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
1851-52.	District Survey, 24-Pergunnahs ...	110.00	101	498	17,476	10	2	32	9	3	26	5	9
	Ditto ditto, Nuddea .....	426.44	562										
	Portion of Establishment employed in bringing up the arrears of 24-Pergunnahs .....	...	...	...	9,100	1	10						
	Ditto ditto, for the calculation of mehalwaree area in Nuddea.....	...	...	...	724	1	6						
1852-53.	District Survey, Nuddea .....	824.43	960	550	28,896	13	9	35	0	11	30	1	7
	Portion of Establishment employed for the calculation of mehalwaree area .....	...	...	...	1,024	0	0						
	Difference ..	+ 287.99	+ 297	+ 52	+ 2,620	0-3	+ 2	7	8	+ 3	11	10	

25. Although there is an increase of 288 square miles on the past season's area, still the average rates per square mile and per circuit are in excess of those of the season 1851-52, by 2-7-8 on the former, and 3-11-10 on the latter. This arises chiefly from the difficult nature of Captain Smyth's operations in the Soonderbuns, during the preceding seasons, and the entire expense not having been thrown on the mere area performed for the District Survey. The rate, although the highest for the season in the Lower Provinces, is considerably below that of some of the Surveys in other parts of the country, and viewing the high value of what Captain Smyth turns out, the result is, in my opinion, satisfactory, and as encouraging as we can now expect in the difficult Districts of Eastern Bengal.

26. The several Maps and Records prepared and furnished, as specified in the margin, are in the usual excellent style of this Surveyor.

*Records.*  
3 Pergunnah Maps in duplicate, on the scale of 1 mile to the inch.

1 Index Map.  
1 copy of main circuits.  
933 village Plans in duplicate, bound up in six folio volumes in duplicate.

No pains appear to have been spared in making them as complete and perfect as possible. The District of Nuddea, from its open and fertile nature, studded with factories, and, consequently, improved to a considerable extent by English capital and Superintendence, affords a fine field for the ingenuity of the Surveyor, in shewing the topography of the country, and of this Captain Smyth has fully availed himself. As regards the preparation of the village plans, the remarks con-

tained in the 48th para. of my last Report, are equally applicable in the present instance. Duplicates of the above have been made over to the civil authorities, and receipts of the same lodged in this Office.

27. The remaining portion of the Nuddea District is estimated at about 1,500 square miles, comprising 11 Pergunnahs, of which Captain Smyth hopes to get through about 1,000 square miles during the current season, leaving about 500 square miles for 1854-55, on the completion of which, the Establishment will, under the provisions of the Board's orders, as conveyed in your letter, No. 95, dated the 18th October last, proceed to Bancoorah, to take up that District prior to entering on the intervening District of Burdwan. This arrangement which draws the Survey Operations out of their usual course, from one continued and connected line, has been necessitated, as I understand, owing to matters connected with the land tenures. The Burdwan District forming an un-surveyed gap between the completed Districts of Hooghly, Beerbhoom, Moorsheadabad and Nuddea, is in every other point of view most urgently required, and has long been a desideratum, especially for Geological and Railway purposes. It is also expected by the Hon'ble Court for sheet No. 120, of the Indian Atlas, the trigonometrical points for which have been fixed, the delay which must now necessarily arise in its compilation, is therefore to be regretted.

28. The result of the connection of this Survey, with the triangulation of the Calcutta meridional series of the Great Trigonometrical Survey, will be detailed in full on the completion of the District in hand, but I may state that the difference between the only two points met with during the last season north end base, to "Arbandee Station," is found to be 290 feet in defect, in a side of 218,328 or 7.04 feet per mile, the difference in azimuth of the same line being 2.37. This is highly satisfactory, and affords full proof of the care and skill observed by Captain Smyth.

29. The duty devolved on the Surveyors of determining the contents of all the mehalwaree chucks, as laid down by the native khusreh Ameen, on the thakbust Maps, has become, as I duly stated it would be, a very laborious one. No less than 49,401 chucks, or parcels of land, appertaining to 1,007 mouzas, have been thus triangulated, and recorded by this Establishment for the past season. Of these mouzas 518 belong to the 24-Pergunnahs District, and 489 to Nuddea. The sum of Rs. 1,024 expended on this account, and deducted from the estimate of the professional cost, still comes out of the fixed annual grants, and includes merely the salaries of the Mootsuddes employed exclusively on this duty, no allowance being made for the European Superintendence, which has been considerable. The average cost per village for this operation, is one Rupee and three pie.

30. The number of mouzas measured by khusreh, and by khusreh and thakbust combined, amounts only to eighteen, all that required such a detailed investigation. The comparison of these results, with those produced by the pro-

essional Survey, is stated to be satisfactory. Captain Smyth remarks that the necessity of khusrh (daghwar) measurements, is gradually diminishing, as the Ameens become familiar with their work. The thakbusts did not shew much interlacing of lands, although the chucks to be calculated were very numerous.

### 31. The system adopted by Captain Smyth in the collection of statistical information and check exercised over the Returns, as detailed in the accompanying extracts from this Report, appears to be very judicious, and likely to insure trust-worthy results.

#### EXTRACTS.

Para. 18. "I think it as well to mention the system adopted by me for collecting these items. Each Native Surveyor is furnished with a form in which is to be entered the number of barees, or enclosures, agricultural and non-agricultural, of Hindoos and Mussulmen separately. In one out of eight or ten barees, the number of male adults is counted, the barees being selected indiscriminately, half Hindoo and half Mussulmen. The sum of the adults of each kind thus selected and divided by the number of barees, gives a mean which, applied to the total number of barees in the village, gives the male adult population. I here give the form filled in."

*Statistical Return of a village of Pergunnah Koosdoh, District Nuddea.*

No. of thakbust.	Name of mouza.	Name of Pergunnah.	No. of Hindoo cultivator barees.	No. of Mussulmen cultivator barees.	Total.	No. of Hindoo non-cultivator barees.	No. of Mussulmen non-cultivator barees.	Total.	Ploughs.	Hackeries.	REMARKS.
33	Kalanchee.	Koosdoh.	30	10	40	9	3	11	25	13	Gorachand Bose..... 4 Gooropersaud Ghose..... 4 Govindpersaud Dutt..... 4 Ibrahim..... 2 Nadir Bux..... 5 Shaik Kanoo..... 3  This village contains 4 pukka houses, about 10 annas of it is cultivated. The produce is chiefly Rice, Tobacco, Linseed, Date, and Gram. Markets, Friday and Tuesday.

"It will be seen that the total number of barees is fifty-one. The total number of adults in the six barees, given under the column of remarks, is twenty-two, equal to 3.66 per baree, but the mean of the Hindoos is per baree four, and for Mussulmen 3.33. The population of the village will be as follows":—

Hindoo, agricultural	30	×	4	=	120
Ditto, non-ditto	8	×	4	=	32
Mussulmen, agricultural	10	×	3.33	=	33.33
Ditto, non-ditto	3	×	3.33	=	9.99

Total population ..... 195.32

"Of which 152 are Hindoos, and 42 are Mussulmen. I believe this is the nearest approximation short of an actual census that can be obtained."

Para. 19. "In a very careful census taken of these Divisions of the Bengal Indigo Company's property, which I obtained from a Gentleman in the Mofussil, the population is as follows":—

No. of villages.	No. of houses.	No. of men, Musn. and Hindoo.	No. of women.	No. of boys.	No. of girls.	Total.
910	6,102	1,26,013	1,18,678	54,609	42,861	3,42,161

Being at the rate of 5.87 per house of all kinds, and (taking the number of villages at 900 square miles, which is about the average there) 380 per square mile. In this the proportion of

#### Hindoo.

Women to men is.....	.97 to 1.
Boys to women .....	.47 to 1.
Girls to ditto .....	.37 to 1.

#### Mussulmen.

Women to men.....	.92 to 1.
Boys to women.....	.44 to 1.
Girls to ditto .....	.34 to 1.

"In my statistics I have therefore proportioned women to men as above, in making up the total population of each Pergunnah."

### 32. With reference to what was stated in the 56th and 57th paras. of my last

Punchannogram Survey.

Report, regarding the Punchannogram work, the whole of the Establishment has been discharged, with the exception of a

few Native Draftsmen retained to complete the block plans as fast as the settlement operations permit. The expense occasioned during the season, amounts to Rs. 1,491-7-7, or about one-third only of the sum sanctioned. Two copies of each block have been made—these will be bound up and prefixed by a good Index for facility of reference. The blocks of Mr. Crow's work will also be completed in the course of two months.

An extract of the general Plan of the town and suburbs has been lithographed, and will appear immediately, it has been printed for the Conservancy Department, by orders of the Government.

33. Of the Assistants on this Survey, Captain Smyth speaks in terms of praise.

Assistants.

Mr. N. T. Davey	200 to 250
Mr. W. Davey...	125 „ 150

Mr. W. H. Pringle has been transferred to Arracan from the 1st of November last, on the increased salary of 225 Rupees under the Board's orders. The vacancy thus caused, has made room for the promotion of two of the other Assistants, as per margin, who have been strongly recommended by the Revenue Surveyor. Mr. N.

T. Davey is in every way qualified for the post of Assistant Surveyor, and it is desirable on all accounts, that a subordinate of this grade should be attached to this party as with all the others. These promotions have been made from the 1st January, subject to the usual confirmation.

34. Mr. Wyatt, with the party detailed in the margin, was unable to commence

3RD OR EASTERN DIVISION,	
MYMENSING.	
Revenue Surveyor.—Mr. A. Wyatt.	
Asst. Surveyor.—Mr. C. Bell.	
Sub-Asssts.—Mr. G. S. Swiney,	
Mr. S. Phillips, Mr. A. Phillips,	
Mr. J. K. Moran.	
Draftsman.—Mr. G. C. Bolst.	
20 Native Assistants.	
Area, 929.32 sq. miles.	
Average cost, Rs. 31-2-7.	

field operations before the beginning of January, 1853, which he reports, arose partly from his own illness and leave of absence to the Sand-heads, but chiefly owing to the inability of procuring boats on his return to Dacca, whilst the relief of regiments was taking place. This delay, however, in commencing the Survey for the season, was fortunately attended with no inconvenience, as no portion of the

demarcated tract allotted to him was left unfinished by the end of May, when the party returned to Dacca for the recess.

35. The country traversed during the season, lying to the north and west of what was before completed of this District, extends about fifty-six miles in length and forty miles in breadth, on both banks of the Janaee or Jumoonna River, and embraces

Attea .....	3
Kaghmaree .....	154
Burbazoo .....	615
Pokhurree .....	164
Juffurshahee .....	368
Alapsingh .....	5
Sherpore .....	7
Shokeemabad .....	5
Isolated villages of Raj- shaye and Pubna } .....	17
	<hr/> 1,338
River circuits .....	2

all that part of the District situated between the Town of Serajunge and the military cantonments of Jumalpoor on the Brahmapootre River. The chief Pergunnahs met with are specified in the margin, and comprise, an area of 594,765 acres, or 929.32 square miles, within 1,372 hulkas as separately demarcated, or 1,338 mouzas. The mouzawar work equals 797.55 square miles, and the two circuits of the Jumoonna

River 131.77 square miles. The average on the former area gives 372 acres per hulka. The three first-named Pergunnahs were brought under Survey in 1849-50, these, together with Pergunnahs Jaffurshahee, taken up in 1851-52, are reported to be completed as far as their geographical boundaries are concerned. The few outstanding villages located in the Pubna District, will fall within the operations of the 1st Division party. About one-third of the Mymensing District appears to have been completed, and the remainder will occupy four seasons more at the same rate of progress.

36. The total cost of the Establishment has been Rs. 28,961-8-1, from which Rs. 1,191-8 has to be deducted on account of the mehal-ware calculations. On the balance, Rs. 27,770-0-1, the

Cost and Rate.

average cost of the professional work has been struck. This comes to 31-2-7 per square mile, and to 21-1-3 per circuit. The former is in favor of the season under review by Rs. 2-3-3, and is shewn to be gradually diminishing from the commencement of operations in this District. The cost per circuit is in excess, owing to the average of the previous season having been favorably struck by the exclusion of large tracts of jungle. The amount expended is within the sanctioned reduced grant by Rupees 2,325, as shewn in the margin. The following is the comparative results of the two seasons' work.

Annual maximum.. 31,287-0-0  
Expended ..... 28,961-8-1  
Savings ..... 2,325-7-11

Seasons.	Area surveyed in square miles.	No. of village circuits.	Average size of village circuits.	Cost.		Average rate per square mile.		Average rate per village circuits.	
				Rs.	As. P.	Rs.	As. P.	Rs.	As. P.
1851-52.....	748.72	1,089	288	24,981	0 9	33	5 10	15	0 2
On account of mehalware calculations...	.....	.....	.....	1,539	0 0	0	0 0	0	0 0
1852-53.....	929.32	1,374	372	27,770	0 1	31	2 7	21	1 3
On account of mehalware calculations...	.....	.....	.....	1,191	8 0	0	0 0	0	0 0
<b>Difference .....</b>	<b>+180.60</b>	<b>+285</b>	<b>+84</b>	<b>+2,441</b>	<b>7 4</b>	<b>- 2</b>	<b>3 3</b>	<b>+ 6</b>	<b>1 1</b>

37. With the exception of a reduced skeleton Index Map of the season's operations, none of the Plans said in the original return, No. 2, to have been prepared, have as yet reached this Office. The extent to which these records

*Extract.*  
Para. 14. "Five general Maps (Office copy) on a scale of one mile to the inch, comprising the work of season 1852-53, have been prepared. The above have been reduced to three Maps for the Deputy Surveyor General's Office, and are partly completed, being more than half finished, while the general Map of Pergunnah Pokhurea (Deputy Surveyor General's copy) embraced within portions of circuits Nos. 7, 11, 12, 13 and 14 of the past and present seasons' Surveys, has been finally completed. Moreover, one Index skeleton Map of the season's Survey, on a scale of two miles to the inch, two copies of the Map of the Jamalpoor cantonments, on a scale of sixteen inches to the mile; and three Maps of small tracts of land situated within the city of Dacca, proposed to be purchased for the site of the new Mitford Hospital drawn on scales of forty and twenty inches to the mile, at the request of the Commissioner of Revenue, have been prepared; and the two last named sets of Maps have been furnished to the local authorities. The Index Map will be shortly submitted with this Report, and other Annual Returns and Statements, to the Deputy Surveyor General, and the Pergunnah Maps will shortly follow. Six main circuit traverses of the season's Survey have been completed and fair copied for transmission to Calcutta. And 1,394 village plans, in duplicate, have been completed, with the exception of the transfer of areas of detached portions of land in the Register columns, on the plan side. These entries are delayed, pending the completion of the remaining thakbut computation, otherwise the village plans are ready for binding up into volumes."

have been finished, will be apparent from the annexed extract of the Surveyor's Report. The delay in thus rendering the Plans of the season's work has, I believe, been caused by Mr. Wyatt's absence on leave, but I

have called his attention to the point, as it is impossible to speak so fully as I could wish, without the Survey results are before me. My Report is also submitted at a much earlier date this year, to meet the wishes of the Board, and it is most difficult to obtain from the Surveyors and examine in a proper manner, in so short a time, the proceeds of Survey Operations, of the elaborate character of those now in force.

38. Eight volumes of village Plans, of the three previous seasons' Survey, have been recently lodged by Mr. Wyatt. The names of the sites of villages or tolahs, where two or three are found in one circuit on many of these Plans, having been omitted, it will be necessary to return the whole for the purpose of comparing them with the original field sketches, or, if necessary, for further local enquiry, as it is of the utmost importance to identify all village sites for the purposes of the re-adjustment of the civil and criminal boundaries, and this defect has long been apparent on the Maps of this Surveyor, and frequently complained of.



## 39. The comparison between the professional Survey, and thakbust Maps has

*Extract.*

Para. 18 "The comparison of the boundary inflections between the professional Survey Maps and the thakbusts, have proved satisfactory. A few trifling discrepancies were found, but readily rectified by the Superintendent's Ameen, by personal inspection of the field marks, and by re-plotting. Two thakbust Maps only, adjoining the Rungpoor District, differed considerably from the Professional Survey; the boundaries of these were disputed at the time of Survey, and have been ordered by the Superintendent to be re-measured and re-plotted. Serious inconvenience and interruption to the field operations were felt however from want of clear boundaries. The thakbust Maps, of upwards of 150 villages of Pergunnahs Jafurshahee, Kagmaree, and Burbazoo, had disputed tracts recorded in them, and nearly the whole of these were obliged to be surveyed "in dispute," shewing both boundaries. This was effected with great difficulty, owing to the vexatious interference of the contending parties, and the impossibility of identifying field marks put up during the past season by the thakbust Ameen. These cases required personal inspection and enquiry on the spot, by the Superintendent's Deputy Collectors, and notwithstanding every endeavour on the part of the Superintendent to dispose of them speedily, the intricate nature of the cases appeared to have been such, as to have precluded their adjustment prior to the retirement of the Establishment for the recess, and the revised thakbust Maps were not received, till months after Survey; hence the destruction of numerous village Plans, and re-calculation of areas, was the consequence, although the Superintendent has afforded every co-operation to the advancement of the professional Operations, yet this Department has, nevertheless, been the sufferer, and additional labor been entailed in the preparation and completion of the season's records."

proved very satisfactory, but from the annexed extract of the Surveyor's Report, it appears that considerable difficulty and detention was caused by the number of unsettled disputes, amounting to 150 cases, the double

measurements of which, owing to the vexatious interference of the contending parties, and the impossibility of identifying the field marks, throwing additional labor both in the field and office. The intricate nature of these disputes, however, is stated to have precluded their earlier adjustment, the delay was therefore unavoidable.

40. The extent of the mehalwaree calculations has been very great. The Khusreh calculations, number of thakbust Maps, with internal holdings, and detached pieces of lands, the areas of which have been completed, amounts to 889, of which 611 have been totally calculated and compared with the professional areas, and 278 have been partially calculated, and the remaining mehal area deduced from the professional total. An area of 6,12,563 beegahs, equalling 316 square miles, nearly one-third of the entire area executed professionally, has thus been calculated by scale and compass. The maximum error found was nine beegahs four cottahs in excess, and six beegahs two cottahs in defect per cent. The total cost amounts to Rupees 1,191-8, including half of the salary of a Sub-Assistant specially employed on the duty, which gives an average of Rupees 1-5-5 per hulka.

41. The number of bona-fide khusreh villages sent for comparison by the Civil Superintendent, amounts to forty, of which twenty-four appertain to the previous season's arrears. The maximum error on this work appears to be six beegahs, fourteen cottahs per cent in excess, and eight beegahs and seven cottahs in defect.

42. For the current season 1,173 mouzas, within 872 hulkas, have been demarcated, and made over for Survey. Of these, eighty-five contain disputed boundaries, which it is hoped will be cleared off prior to Survey, so as to preclude the necessity of showing double boundaries on the Maps.

43. Mr. Wyatt reports satisfactorily of his Assistants, who have worked zealously, and under the disadvantages of very bad climate in the vicinity of the Maddoopoor jungle. The two Sub-Assistants named in the margin, are recommended for a slight increase of salary as specified, which

Mr. S. Phillips from 180 to 175  
Mr. A. Phillips " 125 " 120

with reference to the length of time they have been in their present grades, has been approved from the 1st January, subject to the usual confirmation, the additional expense coming within the allowed maximum.

44. The Moorshedabad District, lying to the east of that of Beerbhoom, was

4TH ON WESTERN DIVISION,  
MOORSHEDABAD.  
Revenue Surveyor.—Capt. W. S. Sherwill.  
Assistant.—Mr. Bradly.  
Sub-Assistants.—Mr. Robert Smart, Baboo Lulla Ram, Mr. A. Smart, Mr. J. Parker, Mr. J. Pickard, Mr. G. Thompson.  
25 Native Assistants.  
Area performed, 1,035.30 sqr. mls.  
Cost per sqr. ml., Rs. 30-3-6.

commenced on by this party, as detailed in the margin, under Captain Sherwill's superintendence, on the 11th December, 1852, and all the northern portion of the District, subtended between the Ganges and the western boundary of the Bhaugulpoor District, and extending almost in equal portions on both sides of the Bhaugeruttee River, as far as Bogwangola on the east, and Gysabad or Budrehat on

the south, has been included in the season's operations, which terminated on the 1st June last.

45. The area embraced in this tract, amounts to 1,035.30 square miles, of which 84.18 square miles appertain to the Ganges River, included in

Cost and rate.

four circuits—the balance 951.12 square miles is the bonâ-fide mouzawar work, consisting of 2,095 mouzas in 1,212 separately demarcated hulkas belonging to sixteen Pergunnahs, as specified in the margin, with interlaced portions of others. The average size of the village circuits is 502 acres, which is very favorable. The cost of the Establishment, inclusive of the Surveyor's salary, amounts to Rs. 31,285-8-0 which, distributed on the above total area, gives an average cost of Rs. 30-3-6 per square mile, and of Rupees 25-13 per village circuit. This rate is likewise inclusive of the expense incurred for the mehalwaree calculations, which Captain Sherwill did not keep separate, and the extent of which will be shewn presently. This expenditure leaves a balance of only Re. 1-8 as savings, as marginally detailed. This very close approach to the allowed maximum was caused by the half staff salary of Lieut. Thompson having been drawn for three months, and seven days after his transfer to officiate in another appointment, and, owing to the junction of the Darjeeling Establishment on the termination of that Survey, and the necessity for gradual decrease.

Annual max. ....	Rs. 31,287 0 0
Expended .....	31,285 8 0
Savings.....	1 8 0

nally detailed. This very close approach to the allowed maximum was caused by the half staff salary of Lieut. Thompson having been drawn for three months, and seven

46. The results of the two last seasons are placed in juxta position for future reference.

Season.	Districts.	Area surveyed in square miles.	No. of hulkas or traverse circuits.	Average size of circuits.	Cost.			Average rate per square mile.			Average rate per hulka circuit.		
					Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
1851-52 ... {	Beerbhoom .....	711.00	1,644	276	28,147	3	8	27	6	2	17	1	11
	Darjeeling .....	630.18	25	7,682	8,581	5	3	0	0	0	0	0	0
1852-53 .....	Moorshedabad .....	1,035.30	1,212	502	31,285	8	0	30	3	6	25	13	0
	Difference ...	- 305.88	- 457	+ 226	+ 5,443	0	11	+ 2	13	4	+ 8	11	1

The average rate is higher by 2-13-4 than the combined work of the previous season, but it is considerably lower than the District Survey taken separately. The village circuit rate is also higher, owing to their larger area, and smaller number met with. These results are the most favorable of the season for Bengal, and when the delays

caused by the want of prepared boundaries are taken into consideration, the out-turn must be viewed, as highly satisfactory, and attributable to the great energy and perseverance always exhibited by this Surveyor.

47. The number and description of Maps and Registers prepared, are cited in the margin. Those for this Office have been duly lodged, and

*Extent of Records prepared.*

- 4 Pergunnah Maps, scale 1 mile to the inch, in duplicate.
- 10 Main Circuit Traverses.
- 4 Ganges Circuits.
- 1,231 Village Plans, bound up in 12 vols. in duplicates.
- 1 Index Map of the season's work, upon a scale of 4 miles to the inch.

the duplicates also rendered to the civil authorities. The Pergunnah Plans are most useful records, clear and distinct in all their details. The line of Railway from Burdwan to Rajmuhul, passing through these Pergunnahs, it has been a great object to publish them as speedily as possible, and

I am happy to say the whole line of Rail is now represented on the useful scale of one inch to the mile by the published Pergunnah Maps throughout Bengal, from the Adji River up to the Kurrumnassa River, and they are eagerly sought for by the Railway Engineers, Contractors and others.

48. The new system of thakbust Maps having come into operation in this District a vast extent of mehalwaree calculations have had to be made. The first batch of Maps were made over for that

*Demarcations.*

*Extract.*

*Para. 6th.* "The thakbust Maps, upon the new system, have proved to be of a very superior kind to what Surveyors have been in the habit of receiving as guides. The errors that have occurred in these Maps, have been so small and trifling, as not to be worth mentioning. Although the thakbust Maps, upon comparison with the professional boundaries, as surveyed according to the land-marks upon the ground, have proved to be so correct, I beg to observe that the thakbust Maps were not used upon the ground to trace out the boundaries; they were only used in Office to ascertain whether the Professional Surveyors had followed the correct boundaries or not, and I am happy to be able to record the fact that, with the exception of four small offsets, no one single instance occurred during the whole season where the wrong boundary had been surveyed by the professional parties, the land-marks and the zamindars alone having proved sufficient guides."

about 20,000 chucks still remain, which demand attention during the current season, and must be cared for during the field season, and special native Surveyors will now be employed for this purpose, and without which the work cannot be expected to be got out of hand. Of the style, and value of the thakbust Maps as guides to the Surveyors, there is but one opinion, as the annexed extract from Captain Sherwill's Report will prove. Great difficulty, however, appears to have been experienced by the

Civil Superintendent, in furnishing the thakbust in sufficient quantity for Survey purposes.

284	in	December,	1852.
154	"	January,	1853.
166	"	February,	"
208	"	March,	"
177	"	April,	"
86	"	May,	"
20	"	June,	"

The dates of receipt are given in the margin, and as before stated, the completion of the Survey of the whole must have taxed the Establishment to the utmost. In consequence, the Assistants were kept out very late in the field, and some extra expense was incurred on account of the

Classics. It is satisfactory, however, to find, that the demarcations are better in advance this season, 1,335 hulkas having been already made over for Survey, the remainder of the Moorshedabad District, being said to contain about 1,900 hulkas and 1,200 square miles, will more than occupy this party for the current season.

49. Statistical and Geographical Reports for both Darjeeling and Beerbhoom, have been furnished, the former, accompanied by some valuable notes on a tour into Sikhime, illustrated by several Drawings, and a sketch Map of the route taken, were submitted to the Government of Bengal, with my letter, No. 25, dated the 11th June last, and furnished by the Government to the Asiatic Society, for publication in their Journal. The

paper was accordingly published in No. 6, of the Journal for 1853. The Beerbhoom Report will be submitted as soon as the adjusted areas can be properly checked, and before the printing of the other Reports of the Maldah, Bhaugulpoor and Tirhoot, now at the Press, can be completed.

50. In addition to the results furnished in the statement given in the 92nd paragraph of my last Report, a further comparison has been established between the Revenue, and the Great Trigonometrical Survey Operations in the Bhaugulpoor and Beerbhoom Districts, on eight direct distances, as below specified. The error per mile ranges from two feet four inches to thirty-three feet 8 inches as a maximum, or to twenty feet as an average on the whole. This is slightly better than what was detailed in the last Report, and with reference to the rough nature of the ground traversed, is perhaps as satisfactory as could be expected from this Survey. In the more favoured and level Districts of 24-Pergunnahs and Nuddea, a much closer approximation to the standard measurement has been attained by Captain Smyth.

Distances of G. T. Survey Stations.	From Revenue Survey.		From G. T. Survey.		Error of Revenue Survey.		Error per mile.	
	Feet.	In.	Feet.		Feet.		Feet.	In.
Dooli to Rangsar .....	1,53,632	1	1,54,596	7	—	964	33	nearly
Bharam to Bararee .....	1,23,968	4	1,23,630	3	+	338	14	39
Bharam to Barkop .....	1,36,153	3	1,36,090	7	+	63	2	4
Barkop to Bararee .....	1,42,563	3	1,43,262	3	—	699	25	8
Bharam to Rangsar .....	1,27,937	0	1,27,115	5	+	822	33	8
Rangsar to Barkop .....	1,27,258	5	1,27,039	0	+	219	9	0
Phooljoorce to Rangsar .....	1,54,171	3	1,54,486	4	—	315	10	8
Dooli to Bharam .....	1,82,016	7	1,83,567	6	—	951	27	4

51. Captain Sherwill speaks favorably of his Assistants, both European and native.

Assistants.

I regret to record the death of Mr. J. Parker, Sub-Assistant on this Establishment, on the 15th December last. Mr. Parker's qualifications, as a Draftsman, were of a high order, and his loss will be severely felt in this branch of the work. The Establishment has been further reduced by the transfer of a junior Sub-Assistant, Mr. G. Thompson, to the Assam Survey, to fill a vacancy, and two or three native Mootsuddees to the Railway Department; by these reductions, the expenses of this party will be kept down, and the extra calls made on the savings of the Department to meet Captain Sherwill's salary, whilst on deputation on special duty in Behar provided for.

52. Adverting to what has been stated in the 11th paragraph of this Report,

Change of Superintendence.

Captain Gastrell of the 13th Regiment N. I., was placed at the disposal of the Bengal Government, by General Orders of the Governor-General of India in Council, dated the 23rd November, 1853, and proceeded down by dawk and relieved Captain Sherwill on the 6th January, of the charge of this Establishment. The latter Officer proceeded by forced marches to Patna, and entered on his new duties at that Station on the 6th February. These arrangements have already met the approval of Government, and I have full expectation from the high character borne by Captain Gastrell, and from the experience he has already gained in the Department, that the Moorshedabad Division Survey will be efficiently carried on. The loss of so able and so excellent an Officer as Captain Sherwill, even temporarily,

Secretary to Government to  
Deputy Surveyor General, No. 49,  
dated the 31st January, 1854.

from the immediate executive duties of the Department, cannot be otherwise than a matter of regret, but I trust he may still be considered as co-operating and connected with us. The intercourse between this Surveyor and this Office has been one of continued and unmixed gratification.

53. Mr. J. Kelso, with the small Establishment as per margin, proceeded with the Survey of the Goalparah District, on the 15th December, 1852.

ASSAM DIVISION.  
District Goalparah.  
Assistant Surveyor in charge.—  
Mr. John Kelso.  
Sub-Assistant.—Mr. H. M. Smith.  
12 Native Assistants.  
Area performed, 587.03 sqr. mls.  
Cost per sqr. mile, Rs. 23-9-1.

Owing to various circumstances, the out-turn for the season is small, although the party kept the field until the end of May. Only one Pergunnah, Koontaghat, situated north of the Brahmapootra River, on the borders of the Kamroop

District, and extending to the Bhootan Frontier, has been accomplished. This includes an area of 3,75,696 acres, or 587.03 square miles, of which only sixty-one square miles has been divided mouzawar, consisting of twenty-five lakhiraj tenures, the remainder of the Pergunnah containing only sixty mouzas, has been laid down topographically in conformity with the instruction contained in the Commissioner's letter, No. 365, dated 21st November, 1849, to the Surveyor's address. In this extensive wild tract, all the details of cultivation and waste have been carefully shewn, as the only means of arriving at a fair representation of the state of the Pergunnah.

54. In addition to the above, the adjoining Pergunnah of Purbutjoar, estimated at 200 square miles, was attempted, and the exterior boundary surveyed to within seven or eight miles to completion, but owing to the lateness of the season, and the severe sickness with which the Establishment was visited, by which an apprentice, Mr. Ford, met his death, besides several of the classics, and the interruption caused by the want of sufficient assistance in cutting the jungle, it was found impossible to finish the Pergunnah and as none of the interior details were commenced, no allowance has been made in returning any area on account of this work, which occupied a considerable time, and caused much anxiety and labor.

55. The total expense incurred, amounts to Rs. 13,833-7-3, which is short of the allowed annual maximum by 3,242-8-9, as per margin.

COST AND RATE.

	Rs.	As.	P.
Annual Maximum..	17,076	0	0
Expended .....	13,833	7	3
Savings .....	3,242	8	9

The average rate per square mile is 23-9-1, and as so little has been done mouzawar, it is not necessary or practicable to estimate the cost of the circuits. The mileage cost is lower than that of the former season by Rs. 5-3-6, as will appear

from the following comparative statement.

Seasons.	Description of Survey.	Area surveyed in square miles	No. of village circuits.	Average size of village circuits in acres.	Total expense.	Average rate per square mile.
1851-52 ...	Mouzawar Survey of lakhiraj villages .....	53.72	61	539	13,625 9 8	28 12 7
	Geographical Survey .....	419.57	...	...		
1852-53 ...	Mouzawar Survey of lakhiraj villages .....	60.00	19	2,021	13,833 7 3	23 9 1
	Geographical Survey .....	527.03	...	...		
	Difference ..	+ 113. 74	- 45	+ 1,483	+ 207 13 7	- 5 3 6

56. During the season, Mr. Kelso's declining health and physical incapacity from active exertion, doubtless, tended to a smaller return of work than might have been obtained, and on the representation

*Change of Superintendence.*

of the Collector of Goalparah, his case was brought to the notice of the Board, in my letter, No. 52, dated the 28th July last, when it was determined to relieve him from the charge of the Assam Survey, and to depute Mr. J. O'Donel, Senior Assistant on the Bengal Surveys, and attached to the 1st or Northern Division in his place. The order of Government, for this change, were received with the Board's proceedings, No. 257, of 20th December, 1853, and Mr. O'Donel accordingly proceeded to Goalparah and assumed charge of the party on the 21st December last, when Mr. Kelso applied for leave of absence for three months, to visit Calcutta preparatory to obtaining the orders of Government on his application for a Superannuation Pension, which I have been as yet unable to submit, for want of information as to his services, but which I hope to be in a position to forward in a complete and satisfactory form in a few days. Mr. Kelso has done good service in the Department, and is now retiring from it. I beg to recommend him to the favorable consideration of the Government.

57. The remainder of the Goalparah District to be surveyed, consists of eight Per-

*Remaining for Survey.*

gunnahs noted in the margin, the four last are very small and unimportant. These Pergunnahs, estimated at about 600 square miles, constitute each a separate Zemindaree, they will, therefore, only require to be taken up geographically—the few lakhiraj villages even not being deemed necessary to be divided off, as instructed in your letter, No. 47, dated 21st October last.

The completion of the Survey of these Pergunnahs, has been sanctioned by the Government of Bengal, and under the above circumstances, there being little more than the boundaries of the Pergunnahs to be defined, the Assistant Surveyor has been invested with the powers of a Sub-Assistant to the Commissioner for laying down boundaries with the aid of such portion of the thakbust Establishment as may be necessary. For the decision of boundary disputes, the powers above described, are to be subject to the orders of the Collector of Goalparah.

*Vide No. 1,029, dated 9th December, 1853.*

58. In addition to the above Surveys, the Arracan Province has now been placed

*ARRACAN DIVISION.*

*Assistant Surveyor in charge.—*

*Mr. H. A. Porteous.*

*Senior Sub-Assistant.—Mr. W. H. Pringle.*

under the control of this Office by orders of Government of Bengal, No. 860, dated the 15th October last. Mr. Porteous, Assistant Revenue Surveyor, who has been for some

time employed on the Survey of the Town of Akyab, has been placed in charge of an Establishment at an annual cost of Rs. 18,612, with a view of making a complete Survey of the whole Province. Mr. W. H. Pringle, a Senior Sub-Assistant, has been drafted from the 24-Pergunnahs' Survey, and joined at Akyab, on the 8th November last. The island of Akyab has been first taken up for Survey under orders of the Commissioner, and full instructions and a due equipment of instruments have been furnished for the guidance of the Surveyor from this Office. The instruction of, and superintendence over, another new Survey party, forms another addition to the already rapid

progressive increase of work thrown on my hands, since the date of my assuming charge of this Office, in 1847.

59. The out-turn of the several Surveys in the Punjaub, the North Western Provinces and Bengal, for the season under review has, in the aggregate, thrown an area of  $9,720\frac{1}{4}$  square miles, comprised in fifty-four Pergunnah Maps of twenty-one Districts on this Office for compilation, reduction, and general examination. The object is to advance the compilations of the several Districts simultaneously, and so that the Map may be found ready for the Press at the earliest possible moment after the completion of the Survey. Since the last Report (vide paras. 113 to 117) the following compilations have been perfected or advanced :—

Geographical Maps.	}	1. 24-Pergunnahs District, including Baraset. Fair copy and half of original.	}	Scale, 4 miles, 1 inch.
		2. Beerbhoom District, half finished.		
		3. Darjeeling.		
		4. Nowgong.		
		5. Durrung.		
Index or Preliminary Maps.	}	1. Rajshaye District.	}	„ 4 miles, 1 inch.
		2. New General Index of Bengal, Behar, Orissa, Arracan and Pegu.		„ 32 miles, 1 inch.
Reduced for separate publication.	}	Rajmahal Hills, or Damin-i-koh.	}	„ 2 miles, 1 inch.
Reduced district Maps for Statistical Reports.	}	1. Maldah.	}	„ 8 miles, 1 inch.
		2. Tirhoot.		
		3. Monghyr.		
Village Maps of Assam on twenty chains to the inch reduced.	}	1. Kamroop District, Northern Division.	}	„ 1 mile, 1 inch.
		2. Mehal Chardoar.		
		3. Ditto Nowdoar.		
		4. Ditto Choutea.		

60. The completed Maps of the 24-Pergunnahs and Darjeeling Territory have been despatched to the India House, through the Surveyor General of India. Beerbhoom will follow shortly, and the preliminary Map of Rajshaye, which is a very full and complete one, has been sent to the Press for lithography, and will be speedily issued. This latter District will now be taken in hand on the same scale, and compiled for transmission to England, and is the only Map remaining on hand, of which all the materials have been lodged in this Office.

61. 270 copies, each of the Geographical Maps of the Districts Purneah, Tirhoot and Chittagong have been received from the India House, since last Report. These and other available lithographed Maps have been distributed to official authorities, to the extent specified in the following statement, the whole of these 862 copies having been colored by the permanent establishment. The number sold and amount realized is likewise added.

Description of Maps.	Supplied to officials.	Sold.	Amount realized.		
			Rs.	A.	P.
District Maps shewing village boundaries, comprising 153 sections .....	6	6	157	4	0
District Geographical Maps—scale four miles to the inch .....	181	135	434	0	0
Index Maps of ditto.....	66	38	158	8	0
Pergunnah Maps .....	163	80	135	8	0
City Maps .....	127	13	34	0	0
General Maps .....	236	66	226	11	0
Geological Maps .....	30	...	0	0	0
Location Maps of Darjeeling .....	63	...	0	0	0
Total...	862	360	1,145	15	0
Earnings of press for printing Maps for private parties, by order of Government .....			730	0	0
Balance from last year .....			801	2	0
Total...			2,677	1	0
Deduct charges for coloring 428 Maps by extra Draftsmen.....			142	1	0
Total assets .....			2,535	0	0
Lodged in General Treasury .....			1,935	0	0
Balance still due .....			600	0	0

62. Of the Maps lithographed and received from the Press attached to the Surveyor General's Office, sixty-three copies of each of the Pergunnah Maps, as specified in the margin, have been struck off and distributed largely to the Railway and Geological Survey Departments, where they were much in demand, and have, I believe, been found particularly useful. The Beerbhoom and 24-Pergunnahs District preliminary Maps have also been issued, the latter including the Soonderbuns—both these Maps have been well filled up, and will be found to answer every practical purpose, pending the receipt of the final Geographical Maps from the India House. The large Map of the Allipore Magistrate's jurisdiction of the 24-Pergunnahs District, on the one inch scale, shewing village boundaries, in four sections, will supply a great desideratum, it has been a laborious job, and will be ready in the course of a few days.

*Perg. Maps.*—One inch scale.  
 2 of Bhaugulpore.  
 2 of Monghyr.  
 3 of Beerbhoom.  
 2 of Moorshedabad.  
 9

*Dist. Maps.*—4 mile scale.  
 Beerbhoom.  
 24-Pergunnahs.  
 Allipore Division of } One inch  
 the 24-Perg. shewing } scale.  
 village boundaries. }

63. In addition to the above, several useful Maps have been lithographed and distributed, appertaining to the N. W. Provinces and the Punjab, and all available Maps have been regularly advertized in the Government Gazette, and a steady demand is kept for them. The sum of 1,145 Rupees has been realized during the year, as the net balance on account of sales of Maps, and this sum has been duly lodged in the General Treasury, to the credit of Government, and is included in the receipt from the Sub-Treasurer, No. 39, herewith attached. For the purpose of sale to the public, 428 Maps have been colored at an expense of Rupees 142-1, which sum has been defrayed from the above proceeds.

64. The labors of the Lithographic Press have been very great, the influx of work from every Department of the service has been sufficient to keep an Establishment of three times the strength in full work. The statement given in para. 124 of last Report, included the three first months of the year, up to the end of March last, but as it is desirable to keep the accounts

Lithographic Press.



according to the Calendar year, the following statement embraces only a period of nine months, or up to the 31st December last.

No.	Description of Maps.	No. of Plans.	Number of impressions.	Remarks.
1	General .....	11	3,525	Punjab and adjoining countries. Out-line* Map of Punjab—Settlement* of and approaches* to Nainee Tal—*Northern Trans-Indus Frontier*—Topographical Survey of Delhi District*—Geographical Survey of Huzara*—Geological Map of Salt Range*—Boundary of the Jummoo Territory*—Valley of the Great Runjeet river. Hoshiarpore—24 Pergunnahs—Bhutteeana*—Muttra,* (Oordoo and Nagree) Allipore Division, 24-Pergunnahs, in 4 Sections. Of Moorshedabad, Bhaugulpore and Beerbhoom. Maldah*—Bhaugulpore*—City of Gour*—Ruins of Gour*—Locations of Darjeeling*—Sections of Roads in Punjab*—Dangoo (proposed passage)*—Geological Structure and Mineral Resources of the Singbhoom Division*—Geological Sections,*—Tumlook Salt Agency* Double and Single Fives Court—Standard Dead House—Town of Rangoon—Vicinity of the New Medical College—Belles of Arms*—Topographical Items. Sketch of the Irrawaddy—Bassein River—Plan of James and Mary's.
2	District .....	5	2,300	
3	Pergunnah .....	9	567	
4	Miscellaneous.....	9	7,150	
5	Plans and Sketches	6	1,700	
6	Marine Charts ...	3	1,124	
7	Survey Department Forms, &c...	33	1,34,054	
	Total...	76	1,50,420	

65. Many of these Maps are of an elaborate character, that of Punjab and adjoining Countries especially has occupied nearly one year in the transferring to the stone, it is now just printing, and will, I trust, repay the labor it has cost—such a Map is doubtless beyond the proper range of Lithographers, and ought to have been engraved on copper, but owing to the pressing demand for it, I was induced to carry it through the Press here. The Maps marked thus,\* under the head of remarks, have been copied on transfer paper by means of extra Draftsmen, and paid for separately, but all the printing has been executed by the fixed Establishment. With only four native and two European Draftsmen, the present extent of the Press Establishment, the progress in such delicate and tedious work must, of course, be very limited, and with reference to the extension and rapid execution of the Surveys, the miscellaneous current demands from other branches of the service, as well as the still heavy arrears of Maps existing in this Office, and all urgently requiring lithography. I am most anxious to see the Press better able to compete with the duties devolving on it, and for which purpose, an increase of its Establishment and material is absolutely necessary and regarding which, a separate Report will be shortly submitted.

Permanent total cost 730 Rs.  
per mensem.  
Contingent ditto 127 Rs.

66. The sum of Rs. 730 has been earned by the Press for striking off impressions of Maps for private parties, the Asiatic Society, the Council of Education, and the Post Master General, with the concurrence of Government. This sum has been added to the proceeds of the sale of Maps, making a total of 1,935 Rupees, as shown in para. 61, and duly paid into the General Treasury. The Maps sold by the N. W. Government at Agra, are not credited in this Department, but accounted for by the Curator of Books to that Government direct. The value of the Maps supplied to officials would, if paid for, amount to 2,978-8, which, added to the other proceeds above detailed, gives a total

of Rs. 48,547 or about 404 Rupees per month, nearly two-thirds of the entire expense of the Press Establishment. Besides which, there is a vast stock of Maps on hand for the purposes of Government. The entire value of the work executed from the commencement of our operations, 15th March, 1852, to November last, a period of twenty months, estimated at the absolute cost price, exclusive of paper, the cost of which is not known, shews a balance of nearly 3,000 Rupees to the credit of Government, according to the subjoined statement, and if calculated at the selling price of each Map, would yield a very large profit indeed. This, I trust, is a sufficient proof of the economy of the Press, and of its general usefulness.

Description of Work.	No. of Copies Printed.	Value of Paper used.	Value of Drawing.	Value of Printing.	Total amount of Drawing and Printing	Amount of Establishment, charges from March, 1852, to November, 1853.			
District Maps.....	3,37,112	Cannot be properly ascertained.	8,154 0 0	11,663 8 0	19,817 8 0	16,850 9 10			
Road Map from Bombay to Agra.....									
Territorial Maps.....									
Pergunnah Maps.....									
Cantonment Plans.....									
Geological Maps.....									
Military Maps, Plans, Drawings and Views..									
Charts of Rivers—Sketches—Botanical and other Drawings—Rail-road Maps—Geological Sections of Fossils—Revenue and Trigonometrical Survey—Forms, &c. ....									
Note.—Total amount of Drawing and Printing .....							19,817	8	0
Amount of Establishment, charges from March, 1852, to November, 1853							16,850	9	10
Amount to credit of Government, Rs.....	2,966	14	2						

67. The efficiency of the Press, as far as the small Establishment extends, is rapidly developing itself, under the energetic and able Superintendence of Mr. H. M. Smith, to whom great praise is due for the trouble he takes in improving and instructing the native Draftsmen, and some very creditable specimens of Lithography have lately been issued. With good Draftsmen and good Presses, it is however essential that the impressions should be struck off on suitable paper, otherwise the labour is half lost, and the Maps, when issued, are not stout enough to bear handling. Since the transfer of the Press to this Office, great endeavours have been made to obtain a better article of paper more suitable to such Maps as are now emanating from the Press, but I regret to say the Stationery Department has failed to supply us either in quality or quantity, and as the Stationery Office is especially under the orders of the Board of Revenue, I would beg to bring the subject prominently to notice, in the hopes of early remedial measures being taken. The paper, when it is available, is of so small a size as to entail innumerable joins in a Map, which is a serious defect. My special annual Indent, for paper of particular size, was submitted on the 7th of August, 1852, but up to the present time, none of it has been supplied. The description of paper of the Maps lithographed and sent out by the Honorable Company's Hydrographer in England, is what is required, and can easily be obtained by ordering it from home, and I beg to state that I can, if permitted, procure what is wanted, within four or five months from

Necessity of better arrangements for a supply of lithographic paper.

England. There ought therefore to be no difficulty whatever, in the Superintendent of Stationery doing the same.

68. The rapid increase of Records in the Revenue Branch of this Office, demands additional furniture for their protection, and a separate application will be shortly submitted to this effect.

69. I have much reason to be satisfied with the manner in which the duties of my Office are conducted by my Assistants. I have alone been enabled to perform all the multifarious duties devolving on me by the hearty assistance of Mr. Alexander Daniell, of whose invaluable aid and commendable zeal for the public service, I cannot speak in too high terms. Mr. Walter Graham, the Superintendent of the Drawing Branch, is likewise a very deserving and able Assistant, regarding whom I have continued annually to speak in terms of commendation, and in the hope of obtaining for him a very small increase of salary, in order to prevent a supercession by the Assistants in the Surveys, and which I regret to say has now taken place. Mr. Graham's case was alluded to in the 110th para. of my last Report, and again submitted to the Government under a separate cover as shewn in the correspondence as per margin, but up to the present moment no reply has been received.

Deputy Surveyor General  
to Board, No. 39, dated 7th  
May, 1853.  
Board to Government, No. 281,  
dated 22nd July, 1853.

I have, &c.,

(Signed) H. L. THUILLIER,

*Deputy Surveyor General.*



**TABLE A.**

**GENERAL RETURN of Professional Work for Season 1852-53, namely from the 1st of October, 1852, to the 30th September, 1853, exhibiting Cost, Area and Average Rates per Square Mile and per Circuit.**

Divisions.	Name of Superintending Officers.	Name of Districts.	PROFESSIONAL WORK.																
			4.	5.	6.	7.	8.	Area Surveyed.		Cost of work including Guard.		Average rate per Square Mile.		Average rate per Circuit.					
1.	2.	3.	Number of Per- gunnals.	Number of Main Circuits.	Number of Mouzas.	Number of Hulks or Traverse Cir- cuits.	Average size of Traverse Circuits.	9.	10.	11.	12.	13.							
1st	Mr. J. J. Pemberton.....	Rajshaye.....	21	6	930	897	385	3,45,892	540.46	17,269	5	10	31	15	3	19	4	0	
		Bograh.....	9		664	648	298	1,93,257	301.96	9,648	8	10	31	15	3	14	14	3	
		Rungpore.....	2	6	44	44	248	10,912	17.05	544	12	10	32	0	9	12	6	1	
		Pubna.....	3		5	5	460	2,302	3.60	115	0	6	31	15	1	23	0	1	
		Mymensing.....	2		5	5	246	1,234	1.93	61	5	7	31	9	8	12	6	4	
2nd	Captain R. Smyth.....	Dinajpoor.....	4		17	17	187	3,179	4.96	158	7	10	31	13	8	9	5	2	
		Total.....	41	6	1,665	1,616	344	5,56,776	869.96	27,797	9	5	31	15	3	17	3	2	
		Nuddeah.....	9	4	1,044	960	550	5,27,638	824.43	28,896	13	9	35	0	11	30	1	7	
		On account of the portion of Estab- lishment employed on the cal- culation of mehalwaree areas in the Districts of 24-Pergunnahs and Nuddeah.....									1,024	0	0						
		Total.....	9	4	1,044	960	550	5,27,638	824.43	29,920	13	9	35	0	11	30	1	7	
3rd	Mr. Alex. Wyatt.....	Mymensing.....	8	6	1,338	1,372	372	5,10,435	797.55	27,770	0	1	31	2	7	21	1	3	
		Jumooona River and Sand.....		2		2		84,330	131.77										
		Portion of Establishment employ- ed on the calculation of mehal- waree areas.....									1,191	8	0						
		Total.....	8	8	1,338	1,374	372	5,94,765	929.32	28,961	8	1	31	2	7	21	1	3	
		Total.....	16	10	2,095	1,212	502	6,08,717	931.12	31,285	8	0	30	3	6	25	13	0	
4th	Capt. W. S. Sherwill ...	Moorshedabad.....		4															
		Ditto River Ganges.....																	
		Total.....	16	14	2,095	1,212	502	6,62,594	1,035.30	31,285	8	0	30	3	6	25	13	0	
5th	Mr. John Kelso.....	Mouzarwar.....	1	1	25	25	1,562	39,046	61.01	13,833	7	3	23	9	1				
		Geographically.....			60														
		Total.....	1	1	85	25	1,562	3,75,696	587.03	13,833	7	3	23	9	1				
Total and Average.....	75	33	6,227	5,187	427	27,17,469	4,246.04	1,31,798	14	6	31	0	8	23	8	0			

(Signed) **H. L. THULLIER,**  
*Deputy Surveyor General.*

*Revenue Surveyor General's Office, Calcutta,*  
*The 6th February, 1854.*

TABLE B.

GENERAL STATEMENT of Expense of Native Establishment of each Survey (Professional Operations) for 1852-53.

No.	Surveys or Divisions.	Superintending Officers.	Professional Survey, including Guard.		Total.	
			Rs.	As. Pic.	Rs.	As. Pic.
1.	1st or Northern Division, Rajshaye .....	Mr. J. J. Pemberton.....	9,229	9 11	9,229	9 11
2.	2nd or Southern Ditto, Nuddeah .....	Captain R. Smyth .....	12,061	13 9	12,061	13 9
3.	3rd or Eastern Ditto, Mymensing .....	Mr. Alexander Wyatt .....	10,282	4 11	10,282	4 11
4.	4th or Western Ditto, Moorshedabad .....	Captain W. S. Sherwill .....	10,627	4 0	10,627	4 0
5.	5th Assam, Goalparah .....	Mr. John Kelso.....	6,002	7 3	6,002	7 3
		Total, Native Establishment...	48,203	7 10	48,203	7 10
		Add for European Superintendence...	83,595	6 8	83,595	6 8
		Total carried to Table A....	1,31,798	14 6	1,31,798	14 6

Revenue Surveyor General's Office, Calcutta, }  
 The 6th February, 1854.

(Signed) H. L. THULLIER,  
 Deputy Surveyor General

TABLE E.

GENERAL STATEMENT OF SUMS actually drawn, inclusive of Guards, for the five Revenue Surveys, during the Season 1852-53, exhibiting amount short drawn in each class.

Months.	Superintending Officers and Contingent Allowance.			European Assistants.			Native Establishment, inclusive of unchalwaree Establishment.			Guards.			Total.			
	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	
October, 1852	3,292	0	0	3,382	0	0	2,789	3	10	93	0	0	9,506	3	10	
November	3,134	3	2	3,135	0	0	3,323	4	0	109	0	0	9,701	7	2	
December	3,292	0	0	3,460	0	0	4,711	11	10	189	5	7	11,653	1	5	
January, 1853	3,292	0	0	3,560	0	0	4,996	9	0	208	0	0	12,056	9	0	
February	3,292	0	0	3,941	4	0	5,150	5	0	220	0	0	12,591	9	0	
March	3,292	0	0	3,815	0	0	5,153	10	6	200	0	0	12,480	10	6	
April	3,292	0	0	3,650	0	0	5,175	8	3	220	0	0	12,337	8	3	
May	3,292	0	0	3,650	0	0	4,302	4	1	179	3	7	11,423	7	8	
June	3,292	0	0	3,700	0	0	3,042	4	0	94	0	0	10,128	4	0	
July	3,402	0	0	3,850	0	0	2,632	1	3	94	0	0	9,978	1	3	
August	3,392	0	0	4,020	15	6	2,355	6	3	94	0	0	10,092	5	9	
September	3,392	0	0	3,825	0	0	2,538	10	8	94	0	0	9,849	10	8	
Total drawn for each Class...	39,656	3	2	43,939	3	6	46,400	14	8	1,802	9	2	1,31,798	14	6	
Total passed for ditto...	40,704	0	0	50,812	0	0	45,705	0	0	1,992	0	0	1,39,213	0	0	
Total Savings to Government...	—	1,047	12	10	—	6,872	12	6	—	695	14	8	—	189	6	10

Of the above Statement, the following Table exhibits the Expense under each class and the Savings on each of the five Revenue Surveys.

No.	Surveys.	Surveyors and Contingent Allowance.		Assistants.		Guards.		Native Surveyors.		No.	Classes or measurers.		Mchhalwaree calculation Establishment.		Total Expense.		Total Savings.								
		Rs.	As.	P.	No.	Rs.	As.	P.	No.		Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.						
1st	Or Northern Survey Division.....	7,822	0	0	5	10,745	15	6	352	4	1	21	3,858	11	0	110	5,018	10	10	27,797	9	5	478	6	7
2nd	Or Southern Ditto .....	8,712	0	0	5	9,147	0	0	4,410	13	0	27	4,410	13	0	132	6,156	1	3	29,930	13	9	1,366	2	3
3rd	Or Eastern Ditto .....	8,554	3	2	6	10,125	0	0	4,381	7	3	107	4,803	8	1	107	4,803	8	1	28,961	8	1	2,325	7	11
4th	Or Western Ditto .....	8,712	0	0	8	11,946	4	0	5,573	0	0	98	4,710	4	0	98	4,710	4	0	31,285	8	0	1	8	0
5th	Assam, Goalparah.....	5,856	0	0	1	1,975	0	0	2,092	10	0	13	3,717	13	3	74	3,717	13	3	13,833	7	3	3,242	8	9
	Grand Total.....	39,656	3	2	43,939	3	6	20,316	9	3	1,802	9	2	24,406	5	5	1,678	0	0	1,31,798	14	6	7,414	1	6

Revenue Surveyor General's Office, Calcutta,

(Signed)

H. L. THULLIER,

The 6th February, 1854.

Deputy Surveyor General.

TABLE F.

STATEMENT of the Savings in each class of the undermentioned Surveys respectively, for Season 1852-53.

No.	Surveys.	Superintending Officers.		Superintending Officers and contingent allowance.		Assistants.		Native Establishment, inclusive of calculations.		Guards.		Total.
		Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	
1st	Or Northern Division, Rajshaye.....	890	0 0	0	0 0	0	0 0	0	0 0	97	11 11	Rs. A. P. 987 11 11
2nd	Or Southern Division, Nudda .....	0	0 0	2,409	0 0	0	0 0	0	0 0	0	0 0	2,409 0 0
3rd	Or Eastern Division, Mymensing .....	157	12 10	1,431	0 0	730	0 8	6	10 5	2,325	7 11	2,325 7 11
4th	Or Western Division, Moorsheadabad.....	0	0 0	53	12 0	0	0 0	106	0 0	0	0 0	159 12 0
5th	Assam, Goalparah .....	0	0 0	3,225	0 0	17	8 9	0	0 0	0	0 0	3,242 8 9
	Total.....	1,047	12 10	7,118	12 0	747	9 5	210	6 4	9,124	8 7	9,124 8 7
	Overdrawn as detailed below .....	0	0 0	245	15 6	1,443	8 1	20	15 6	1,710	7 1	1,710 7 1
	Balance as shewn in Table E.....	1,047	12 10	6,872	12 6	695	14 8	180	6 10	7,414	1 6	7,414 1 6

No.	Surveys.	Excess for Superintending Officers.		Excess for Assistants.		Excess for Native Establishment.		Excess for Guards.	
		Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	As. P.
1st	Or Northern Division, Rajshaye....	0	0 0	245	15 6	263	5 10	0	0 0
2nd	Or Southern Ditto, Nudda .....	0	0 0	0	0 0	1,021	14 3	20	15 6
3rd	Or Eastern Ditto, Mymensing .....	0	0 0	0	0 0	0	0 0	0	0 0
4th	Or Western Ditto, Moorsheadabad..	0	0 0	0	0 0	158	4 0	0	0 0
5th	Assam, Goalparah.....	0	0 0	0	0 0	0	0 0	0	0 0
	Total.....	0	0 0	245	15 6	1,443	8 1	20	15 6

Revenue Surveyor General's Office, Calcutta,  
The 6th February, 1854.

(Signed) H. L. THULLIER,  
Deputy Surveyor General.



RETURN of Professional Field and Office Work of the *Rajshaye Revenue Survey* for Season 1852-53, namely from 1st October, 1852, to 30th September, 1853, exhibiting Cost, Area and Average Rate per square mile and per circuit.

Name of Superintendent Officer.	Number of detail or interior parties.	Number of boundary parties.	Names of Districts.	Names of Pergunnahs.	Number of Pergunnahs or main circuits.	Number of hulkas.	Number of villages.	Average size of circuits in acres.	Area.		Total cost.		Average rate per square mile.		Average rate per village circuit.	REMARKS.	
									Total in Acres.	Total in square miles.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.			
Mr. J. J. Pemberton.	6	12	Rajshaye, Bognral, Rungpoor, Pubna, Mymensing, Dinajpoor.	<p><i>District of Rajshaye.</i>                      Kuttaraul, Hurree, Gaechutta, Gungarampoer, Chapeela, Mehman-shahee, Souabajoo, Silburas, Beas, Protapbajoo, Seepoor, Koosumbee, Gurhurhat, Lushkurpoor, Tahirpoor, Kalligaon, Barbukpoor, Khutta, Amrool, Ourunnuger, Hinda.</p> <p><i>District of Bognral.</i>                      Silburas, Protapbajoo, Mehman-shahee, Apail, Khutta, Khettal, Futeh, Juhangeerpoor, Dyanuger, Koosumbee .....</p> <p><i>District of Rungpoor.</i>                      Bamoonkoonda, Puidusee .....</p> <p><i>District of Pubna.</i>                      Sindooree, Dateea, Juhanaugceerpoore, Esuphsahee .....</p> <p><i>District of Mymensing.</i>                      Jafurshahee, Burbajoo .....</p> <p><i>District of Dinajpoor.</i>                      Khutta, Futeh, Juhangeerpoor, Apail, Chatnuger .....</p>	6	1,616	2,218	344½	5,50,776	2 13	869.96	27,797	9 5	31 15	3 17	3	<p><i>Records prepared.</i>                      8 Pergunnah Maps.                      1 Map of the Station of Bognral, in duplicate, scale 8 inches to a mile.                      1 Map of the large Town of Seerpore, Pergunnah Mehmanshahee, in duplicate, scale 8 inches to a mile.                      1,616 Uslee Village Plans, with Traverses and Registers for Deputy Surveyor Genl.                      1,616 Ditto ditto, only with Registers for the Civil Authorities.                      49 Uslee Village Plans, in duplicate only with Registers.                      553 Arazee Plans in duplicate.                      4,436 total.                      6 Main Circuit Traverses for Deputy Surveyor General's Office.                      1 Index Map.</p>

Revenue Surveyor's Office, 1st or Northern }  
 Division, Berhampoor, Nov. 8, 1853.

(Signed) H. L. THUILLIER,  
 Deputy Surveyor General.

(Signed) J. J. PEMBERTON,  
 Revenue Surveyor.

*RETURN of Professional Field and Office Work for Season 1852-53, namely from the 1st October, 1852, to the 30th September, 1853, exhibiting Cost, Area, and Average Rates per mile and per circuit.*

Name of Superintending Officer.	Number of details or interior parties.	Number of boundary parties.	Names of Districts.	Names of Pergunnahs.	Number of Pergunnahs or main circuits.	Number of bulkas.	Number of village circuits.	Average size of circuits in acres.	AREA.				Total cost.	Average rate per square mile.		Average rate per village circuit.	Number and description of Maps prepared and furnished.						
									Cultivation in acres.	Waste in acres.	Total area in acres.	Total in square miles.		Rs.	Rs.								
Capt. R. Smyth...	12	7	Nuddeah	Names of Pergunnahs: Baugmarah..... Kullara Hosseinpoor..... Moolghur..... Huldoh..... Joypoor..... Soottanpoor..... Alumpoor..... Mamjoanec, & Oomurpoor..... Muttearee & Fyzoolapoor..	4	960	1,044	550	..	..	5,27,698 0 0	824.43	29,920	13	9	36	4	10	31	2	8	1	Map No. 4 .....
													..	..	..	..	..	..	..	..	..	..	..
													*35	0	11	30	1	7	1	1	1	1	Ditto ditto of Pergunnahs Huldoh, Alumpoor and Soottanpoor. Ditto ditto of Pergunnahs Mamjoanec, Muttearee, Oomurpoor and Fyzoolapoor. Index Map of above Pergunnahs as Surveyed in season 1852-53. 1 Copy of Main Circuits of season 1852-53. NOTE.—The duplicates of the above have been furnished to the Civil Superintendent's Office.

\* Exclusive of Rs. 1,024 cost of mahalwaree work.

2nd or Southern Division Revenue Survey Office,

(Signed) H. L. THUILLIER,

Dum-Dum, the 15th November, 1853.

Deputy Surveyor General.

(Signed) R. SMYTH, Capt.,

Revenue Surveyor, 2nd Division.

TABLE B. OR No. 2.

RETURN of Professional Field and Office Work for Season 1852-53, namely from the 1st of October, 1852, to the 30th September, 1853, exhibiting Cost, Area and Average Rate per square mile and per circuit.

Name of Superintendent Officer.	Number of detail or interior parties.	Number of Boundary parties.	Name of District.	Names of Pergunnahs.	Number of Pergunnahs or main circuits.	Number of hulks or traversed circuits.	Number of villages or plans.	Average size of circuits in acres.	AREA.			Total Cost.	Average rate per square mile.	Average rate per Village circuit.			
									Cultivation in Acres.	Waste in Acres.	Total Area in Square Miles.						
									Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
Mr. A. Wyllie.	Seven for about 5 months.	Seven for about 5 months.	Mymensingh.	Portions of Kagmaree, Burbazoo, Pokharaee, Jafurshabee, Alapsing and Sherepoor, &c.....	6	1,372	1,338	372.03	...	...	5,10,434.90	797.55	27,770 0 1	31 2 7.2	..		
				Jamooona River and Land, regularly surveyed and traversed. Portion of Establishment employed on the calculation of Mehalwaree areas .....	2	2	...	...	84,330.50	131.77	1,191 8 0						
				Total...	8	1,374	1,340	372.03	...	...	5,94,765.40	929.32	28,961 8 1	31 2 7.2	21 1 3.0		

Five general Maps (Office Copy) on a scale of 1 mile to the inch, comprised within Main Circuits, Nos. 14 and 15, 16, 17, 18 and 19 have been prepared. One General Map, (Deputy Surveyor General's Copy) of Pergunnah Pekkurea, embraced within portions of Circuits, Nos. 7, 11, 12, 13 and 14 of the past and present season's Surveys, has been completed; and three other Maps of this season's Survey, comprising Pergunnahs Kagmaree, Jafurshabee, and Burbazoo, all on a scale of one mile to the inch, have been partially completed, being more than half finished, the printing of the internal and adjoining names, alone remaining. One Index Map of the season's Survey, on a scale of two miles to the inch, has likewise been completed. Two copies of the Map of the Jumalpoor Cantonments, exhibiting the revised boundary of the Cantonment limits, have moreover been completed, on a scale of sixteen inches to the mile, and one copy was made over to Lieut. Colonel Mathic, commanding the Station, in February last; and another copy, after approval of the new boundary by Government, to Major Graham, Executive Officer, D. P. W., Dacca, in November last. A third copy is under preparation for the Office of the Deputy Surveyor General. In addition to the above, three small tracts of land situate within the City of Dacca, was surveyed during the recess, at the request of the Commissioner of Revenue, proposed to be purchased for the Mitford Hospital, and mapped with all internal details, holdings, &c., on scales of forty and twenty inches to the mile; and furnished to the Collector and Civil Surgeon of Dacca.

Six Main Circuit Traverses of the season's Survey have been completed, with products, &c., and fair copies made for the Deputy Surveyor General's Office.

1,338 Village Plans, in duplicate, have been completed, with the exception of the area Registers on the face of the plans:—i. e., the transfer of detailed areas of detached portions of land, additive and subtractive, for the recorded area of the village, remain to be brought up. These entries are in abeyance pending the completion of about 200 more Thakbust Mehalwaree calculations, otherwise the Village Plans are ready for binding up.

NOTE.—In district Mymensingh, from the commencement of the Survey Pergunnahs Attia, Kagmaree, Burbazoo, and Jafurshabee have been completed, excepting a few detached outstanding villages located within district Pubna, which will be taken up by the 1st Division Survey Party. Of Pergunnah Pokhurea, the greater portion has been surveyed, and the remaining villages may be completed during the approaching season. Of Pergunnahs Alapsing, Sherepoor, and Mokeemabad, only a few detached villages have as yet come under Survey.

Revenue Surveyor's Office, 3rd or Eastern Division, }  
 Camp Issamutty, the 1st December, 1853. }  
 (Signed) H. L. THULLIER, Deputy Surveyor General.  
 (Signed) A. WYATT, Revenue Surveyor.

*RETURN of Professional Field and Office Work for Season 1852-53, namely from the 1st October, 1852, to the 30th September, 1853, exhibiting Cost, Area and Average Rates per square mile and per circuit.*

1. Name of Superintendent- ing Officer.	2. Number of detail or interior parties.	3. Number of boundary parties.	4. Name of Districts.	5. Names of Pergunnahs.	6. Number of Pergunnahs or main circuits.	7. Number of hulks.	8. Number of villages.	9. Average size of cir- cuits in acres.	10. AREA.		11. Total in square miles.	12. Total Cost.	Average rate per square mile.	Average rate per village circuit.	Number and Description of Maps prepared and furnished.
									Total area in acres.	Difference...					
1. Captain W. S. Sherwill—Revenue Surveyor.	4	9	Moorshedabad.	1. Furukabad ..... Kankjole ..... Dushazaree ..... Kassimnuggur ..... 5. Rajshaye ..... Murgulpoor ..... Chungnudea ..... Nowanuggur ..... Dhawa ..... 10. Gunkur ..... Sooltanoojial ..... Jowar Ibrahim- poor ..... Kooarpurtap ..... Chuklich Bonhat... 15. Chandpoor ..... 16. Gysabad .....	14 main circuits, including 16 Pergunnahs and portions of numerous other Pergunnahs or 10 ladd circuits and 4 Ganges circuits.	1,212 Traverse Circuits and 19 Chucks.	2,095	502 acres. Excluding Ganges.	6,62,694 with Ganges. 6,08,717 without Ganges.	Difference... 53,877 area of Ganges. 1,035 30 with Ganges. 951 12 without Ganges.	84 18 Ganges.	Rs. 31,285 8	30 3 0 with Ganges. 32 14 3 without Ganges.	Rs. 25 13 without Ganges.	Four Pergunnah Maps upon a scale of 1 mile to the inch, containing 16 Pergunnahs and portions of several other Pergunnahs for the Deputy Sur- veyor General's Office. A copy of the above four Maps for the Collector. 14 Main Circuit Traverses; single copy for Deputy Surveyor General's Office. 1,231 Village Plans bound up in 12* volumes for the Deputy Surveyor General's Office. 1,231 Village Plans in 12* volumes or duplicates of the above for Col- lector. An Index Map of the year's work upon a scale of 4 miles to an inch. The area of 2,641 Chucks have been calculated for the Superintendent of Thakbust's Office. One volume containing 4 Ganges Main Circuits; single copy, for the Deputy Surveyor General. * Of these 12 volumes of Village Plans, 10 have been lodged both in the Deputy Surveyor General's and in the Superintendent's Offices. Two volumes for the Deputy Surveyor General's Office and two volumes for the Superintendent's Office remain; awaiting the decision by the Su- perintendent of several boundary disputes.

Revenue Surveyor's Office, Berhampore,  
The 7th November, 1853.

\* With letter No. 13, dated 7th November, 1853.  
(Signed) H. L. THULLIER,  
Deputy Surveyor General.

(Signed) W. S. SHERWILL, Capt.,  
Revenue Surveyor.

No. 2.

RETURN of Professional Field and Office Work for Season 1852-53, namely from the 1st of October, 1852, to the 30th September, 1853, exhibiting Cost, Area and Average Rate per square mile and per circuit.

1. Name of Superintendent- ing Officer.	2. Number of detail or interior parties.	3. Number of boundary parties.	4. Name of District.	5. Name of Pergunnah.	6. AREA.				9. Total in square miles.	8. Total area in acres.	7. Waste in acres.	6. Cultivation in acres.	Total cost.	Average rate		Average rate per village circuits.	Number and description of Maps.						
					10. Cultivation in acres.	11. Waste in acres.	12. Total area in acres.	13. Total in square miles.						Rs. A. P.	Rs. A. P.								
Mr. John Kelso...	5	5	Goalparah.	Khoontaghat.	1	7	85	...	88,821.2	2,86,874.2	30,375,696.0	30,587,616	13,833	7	3	23	9	1	0	0	0	17.	2 Pergunnah Maps on the scale of 1 inch to the mile. 1 Main Circuit Traverse, single copy, for the Deputy Surveyor General's Office. 25 Village Plans in duplicate, bound up in two volumes, 4 inches to the mile. 1 Index Map of the season's work, on the scale of 16 miles to an inch. 7 Hulka Traverses, single copy, for the Deputy Surveyor General's Office. 9 Boundary Maps, on the scale of 4 inches to the mile, single copies, for the Collector of Goalparah.

Gowahatee, Revenue Surveyor's Office,  
The 15th November, 1853.

(Signed) H. L. THULLIER,  
Deputy Surveyor General.

(Signed) JOHN KELSO,  
Assistant Revenue Surveyor.



No. 86.

FROM

THE OFFICIATING SECRETARY TO THE  
BOARD OF REVENUE, LOWER PROVINCES,

To

CECIL BEADON, Esq.,

*Secretary to the Government of Bengal,**Dated Fort William, the 23rd March, 1854.*

SIR,

I am directed by the Board of Revenue to lay before Government their Annual Report on Survey operations for the past year, 1852-53, together with the papers noted in the margin.

*Land Revenue.*  
E. Currie and T. Bruce, Esqrs.  
Controller's Report, dated 31st December last, No. 610, with enclosures.  
Deputy Surveyor General's Report, dated 6th ultimo, No. 23, with enclosures.  
Comparative Statement of expenditure in 1851-52 and 1852-53.

2. It is unnecessary to repeat the contents of former Reports. Particulars of the improved system of demarcation introduced in 1850-51, and of the advantages which have resulted from its adoption, have already been entered into

in two successive Reports, and on this point it only remains to show whether the progress made last season continues to support the views which led the Board to advocate the change.

3. The following memorandum is intended to show what Districts were under Survey at the commencement of 1852-53, and what were awaiting Survey, and in the case of the first, what stage operations had reached in each District:—

DISTRICTS UNDER SURVEY ON 30TH SEPT., 1852.  
*Partly demarcated, 1st Division.*—Rajshaye, Pubna, Bograh, Dinagepore.  
*3rd Division.*—Mymensing.  
*4th Division.*—Moorshedabad.  
*Demarcated completely, 2nd Division.*—Nudda.  
*Surveyed, but khushreh and mehalwaree work not yet complete.*  
*1st Division.*—Rajshaye (partially), Purneah.  
*2nd Division.*—24-Pergunnahs.  
*4th Division.*—Moorsheelabad (partially).  
*Surveyed, but Registers yet incomplete.*  
*1st Division.*—Maldah, Purneah.  
*2nd Division.*—Hooghly, 24-Pergunnahs.  
*3rd Division.*—Tirhoot.  
*4th Division.*—South Bhaugulpore, Monghyr, Beerbhoom.

DISTRICTS AWAITING SURVEY ON 30TH SEPTEMBER, 1852.

Jessore.  
Rungpore.  
Sylhet.  
Tipperah.  
Bullooah.  
Furreedpore.  
Dacca.  
Buckergunge.  
Burdwan.  
Bancoorah.  
S. W. Frontier Agency.

NOTE.—Besides these, it is a question whether Hooghly and Midnapore are to be re-surveyed.

## 1ST DIVISION.

4. The demarcation and Survey parties here are the same as were employed in 1851-52, with the exception of the Superintendent, which post was for a few months filled by Mr. Pratt, and latterly by the Assistant Mr. Birch. An Assistant Mr. Morris, too, was in March added to the strength of the demarcation party. The Establishment, regular and extra, have been kept up on the same scale.

5. The demarcation was stated in my last Report to be far ahead of the Survey, the efforts therefore of the party were directed against the heavy arrears of khushreh measurement and Register compilation. New demarcations were not wanted, but it was necessary that a Deputy

Demarcation—Rajshaye, Pubna and Bograh, khushreh arrears.

Collector should be in attendance on the Survey party, in case of previous years' thakbusts proving faulty; and in the intervals of this duty, Khetter Mohun Mookerjee demarcated sixty-eight new villages and disposed of the khusreh measurement of fifty-six others. These inclusive, the number of villages in which khusreh arrears have been reduced, is but 290, a number far below what the Controller had led this Board to expect would be disposed of in the course of the year.

6. On this subject explanations were called for in October last, and these, when well weighed, convinced the Board that no blame could attach to the Superintendent of this Division, nor to the Officers on whom the measuring duties directly devolved. The difficulties of the task had been underrated, estates proving to be more intricately interlaced than could have been expected, even in Rajshaye and Bograh. More than 67,000 fields and 7,132 plots were measured and demarcated, the total area reaching 2,39,834 beegahs, or nearly 125 square miles. This gives fourteen and a half fields or plots per diem as the average work of each Ameen, sixteen being considered by the more experienced Officers in the Department a fair average for a competent Ameen, and several of those employed under Mr. Morris were but learning their business.

7. So far as the Controller has been able to calculate the cost of this khusreh work, falls at the rate of Rs. 83-10-7 per village. This calculation includes the Assistant Superintendent's salary and everything; but the charge, it must be remembered, belongs to previous year's work, and not to demarcation under the new system.

8. The khusreh work done during the year has not had the effect of diminishing the total number of villages requiring internal demarcation, which stands now at 1,294 instead of 1,192, as at the end of 1851-52. The true number could not be ascertained till the whole field demarcated under the old system was brought under Survey, and the additions were found to be largely in excess of the number disposed of. This result is discouraging, but the character of the work, in these additional villages, does not threaten the same difficulties that have checked progress hitherto. No extra establishment is asked for. The arrears will be gradually worked off, the already demarcated field being ample to employ the Survey party.

9. The nature of the Purneah work was explained in last year's Report. More than half of the miliks have been traced, but there remain  
 Purneah arrears. 359, with an estimated area of bgs. 82,000 for identification. But for Mr. Pratt's transfer, more progress would have been made. Deputy Collector Radhanath Bose has not fulfilled the Superintendent's expectations, and Mr. Assistant Morris has now been deputed to Purneah, to supervise his proceedings, and see them brought to a completion.

10. The aggregate of boundary disputes decided is 235, and there were fifty-seven  
 Rajshaye and Maldah Register arrears. appeals, many of which must, however, have been from decisions of the previous year. The Register arrears have not been reduced to the extent hoped for—in Rajshaye the preparation of these Registers is of course retarded by the arrears of khusreh measurement. Deputy Collector Ally Ahmed, who was employed on arrears of both kinds in Rajshaye, is not blamed for inactivity.



The Maldah Registers have been kept back by the incompleteness of the information procured from the Deputy Collectorate, the main difficulty however being to collect in the Sudder Station what should have been collected on the spot as demarcation proceeded.

11. A suggestion has been made for indemnifying the Zemindars for such expence as they bonâ fide incur in providing chain-men with the khusreh parties, and will be acted on by the Board.

12. The arrangements for the current season have been modified since the Controller's report was drawn up. Mr. Birch had commenced in person on demarcation duties, but he found that this work interfered with his duties of general Superintendence, and the Board have lately, on the Controller's requisition, transferred Deputy Collector Issenchunder Dutt from the 4th Division, who will, with Deputy Collector Khetter Mohun Mookerjee, complete the necessary demarcation in Rajshaye, Bograh and Pubna.

13. Though nominally employed in Rajshaye, it will be seen that the Survey party surveyed not only a large portion of Bograh, but detached villages of Rungpore, Pubna, Dinagepore, and Mymensing. The square mile number of hulkas was 2,218, inclusive of arazees, the area surveyed being 143 square miles in excess of the previous season's work, and the cost per mile being 2-7-11 less. The whole cost of the party has been Rs. 478 within the grant. The necessary Maps and Plans have all been filed.

1851-52 .....	726.62
1852-53 .....	869.96

14. The party experienced no detention as they proceeded, the old demarcations being generally sufficiently accurate, and where not so, being at once amended by the Deputy Collector in attendance. The Deputy Surveyor General's proposal in his 22nd para., to transfer to the 4th Division the demarcated portion of Pubna, south of the Puddah would, the Board find, disconcert the arrangements made by Mr. Birch, who would be unable to furnish his Survey party with a sufficient demarcated field for 1854-55.

15. Here too the demarcation and Survey parties are the same as were employed last year. Nothing can be more satisfactory than the progress made, and the character of the work done in this Division. The 24-Pergunnahs khusreh arrears have been brought up by the Assistant since transferred to another Department, and the whole remaining portion of Nuddeah, comprising some 1,500 square miles of country, has been completely prepared for Survey. Besides the thakbusts made over to the Surveyor as the supply for the current season, there is a reserve available of four and a half Pergunnahs, covering an area of 350 square miles.

16. The general lines for regulating demarcation work on the frontier abutting on Moorshedabad, Pubna and Jessore, seem to have been laid down with great judgment, and the necessary precautions taken against a double demarcation of the same villages by parties from the 4th and 1st Divisions.

17. The appeals decided were 106, and the original boundary disputes 753. In future the Controller will be requested to explain the true relation of the appeals decided to the original decisions of the year, and to report the per centage of orders reversed or modified.

18. No less than 1,124 villages would have been marked for khusreh measurement under the old system, as containing intermixture of property, but in only five of these was a field by field measurement found necessary. In 1,119 the internal details admitted of being demarcated by chain and compass. The cost of such work as this, is calculated by the Controller at Rs. 35-1-6 per square mile, inclusive of Superintendent's salary. That of the old khusreh arrears brought up by Mr. Ward, is calculated to have been 86-13-9 per square mile, but this includes heavy copying work and the compilation of Registers for the 24-Pergunnahs. How intricate this measurement occasionally was, may be gathered from the Controller's 27th para., which mentions that one village, Nundunbattie, contained lands belonging to 141 mehals.

19. The Registers for the 24-Pergunnahs District have been completed for all but seven Pergunnahs and they are nearly ready for four of these, as well as for one Nuddeah Pergunnah. The record of property in the thakbust Maps being complete in every respect, the remaining Registers for this District will soon be brought up. The party is now engaged in demarcating Bancoorah to such extent as

N.B.—While this Report is being copied, the Board learn that the demarcated field in Nuddeah has proved to be larger than is above estimated, and will occupy the Surveyor for the whole of next season.

soon be reported.

may be necessary to give a sufficient field to the Surveyor for 1854-55. An enquiry having for its object to ascertain whether a re-survey of the Hooghly District is indispensable, has been made since the close of the year, and its results will

20. The tract of country surveyed lay between the Ishamuttee and the Cobudduk Rivers, covering an area of 824.43 square miles, and consisting

of 916 hulkas, of an average size of 550 acres, a high average for Bengal. The total expense was less than the amount of the annual grant by Rs. 1,366-2-3, the cost per square mile being 35-0-11 and per circuit 30-1-7. Both these rates

\* The accuracy of Capt. Smyth's work is well proved by the mention made in para. 29 of the results of connecting this Survey with the Great Trigonometrical Survey.

are higher\* by 2-7-8 and 35-0-11, respectively, than the rates of last year's work, which is accounted for in the Deputy Surveyor General's 25th para. The cost of District work during the season in which Capt. Smyth was

\* This estimate has since been reduced—from 9 to 900 square miles only will be surveyed.

engaged in the Soonderbuns was, it seems, more favorably represented than it ought to have been. It is expected that 1,000 square miles\* will be surveyed during the current season.

21. In his 27th para., the Deputy Surveyor General has pointed out how much more convenient it would have been for professional operations, had the eastern portion of Burdwan been demarcated before Bancoorah. The state of the Ghatwaly tenures in the latter District was what led the Board to commence demarcations there. It may however yet be possible to ascertain the extent to meet Capt. Thuillier's views, and the Controller will be consulted on the subject.

22. The mehalwar calculations, which devolved on Capt. Smyth's Office, was heavy, no less than 49,401 chucks, in 1,007 villages, having been triangulated. More than half of this work however belonged to the 24-Pergunnahs. The charge for it is calculated at Rs. 1,024, averaging 1-0-3 per village, which the Deputy Surveyor General deducts from his estimate of professional cost, though he meets it from the annual grant.

23. The changes in the details of the demarcation party in this Division, were the  
 2nd Division. transfer from the Department towards the close of the year, of Mr. Assistant Harrison, and the relief of the two Deputy Collectors, of whom one retired on pension, and the other was disabled for field duties by ill health. It will be the Board's endeavour to confine all such changes as much as possible to the two closing months of the Survey year.

24. The tract demarcated comprised 1,200 villages and an estimated area of 850 square miles, thus preparing for Survey all that portion of Mymensing which is on the right bank of the Berhampooter. More might have been done, but for the numerous boundary disputes which, altogether 775, were in heavy arrear at the end of the year. Another Deputy Collector has since been attached to the party to bring down this arrear, consisting of no less than 265 cases. The number of appeals from the decisions seems large, being 248, but the remark above made on the same subject in the 2nd Division, applies equally here.

25. These boundary disputes prevented the Superintendent from making over his thakbusts to the Surveyor so complete as they were made in the 2nd Division. All internal demarcations, however, were laid down, and here again it was found that a complete field by field measurement was necessary only in six villages out of 507, in all the rest the details of property were either wholly plotted, or partially plotted, and partially measured. The area of such plots is determined by triangulation, their number amounted to 10,433, and that of fields measured to 4,638, the average size of the field being one and three-quarters of a beegah.

26. Such arrears of internal demarcation as remained over at the close of 1851-52, have been brought up, and the Tirhoot Registers have been finally disposed of. Registers are not yet ready for any one Mymensing Pergunnah, nor can they probably be finished until the field now demarcated shall have been surveyed.

27. Approximately the cost of the demarcation work in this Division is estimated at 57-3-5 per square mile.

28. Though the Survey party took the field rather late in this District, the whole  
 Survey. tract demarcated in the previous year was surveyed by the end of May. This tract comprised 929 square miles of country between Serajunge and Jumal-pore, in 1,372 hulkas of an average size of 372 acres. The bed of the Jumoona occupied two circuits containing nearly 132 square miles. The cost of the season's work, which is 180 square miles in excess of last season's falls, at the rate of 31-2-7 per square mile and 21-1-3 per circuit, the first rate is an improvement on last year's rate by 2-3-3 per square mile, but the circuit rate appears much higher, owing to the inclusion last year of large

tracts of jungle, which lowered the average. The savings on the annual grant are Rs. 2,325, after assigning Rs. 1,191-8 for the calculation of mehalwaree details.

29. The calculation of these details was here also an onerous task, the areas required being for 889 chucks and equalling 316 square miles, or nearly one-third of the area surveyed. In 611 of these chucks, the whole village area had been plotted, and when compared with the professional area, the maximum discrepancy proved to be within 10 per cent. The Ameens, it will be seen, had resorted to khusreh or field by field measurement in sixteen villages only, though the previous seasons' arrears made the total number sent to the Surveyor for comparison amount to forty.

N. B.—The Controllor says G. Possibly the Surveyor has here included Villages partly demarcated.

30. The only inconvenience experienced by the party, was due to the non-disposal of boundary disputes, which are in these Eastern Pergunnahs very numerous and troublesome; and will, the Board fear, occasion further delay this season, though an additional Deputy Collector, Mulovee Sulaamatoollah, has been detached to the Superintendent's assistance.

31. The demarcation party here was temporarily strengthened towards the end of the season, by an additional Deputy Collector appointed for one year. It was feared that the tract previously prepared for the Surveyor might not be sufficiently large to give him full employment, and of the 1,863 villages demarcated in Moorshedabad, more than a third of which were disposed of by the Superintendent in person, 169 were at once handed over and were surveyed in the same season. For this season's Survey there were prepared 1,694 villages completely, and 112 others partially, covering an area estimated at 1,000 square miles. These remain incomplete, several demarcations of previous years, which the Board agree with the Controllor it would have been better had the Superintendent brought up, even though such a course would have been attended by a smaller area of new demarcations. The necessity of making over to the Survey parties thakbusts complete in every respect, cannot be too strongly insisted on.

32. The internal demarcation consisted of 42,000 plots of the tract prepared in the two last seasons. The average rate at which the expenditure falls on the square mile of newly demarcated country (assuming this complete and incomplete to be 1,166 square miles) is Rs. 50-5-8, but this calculation professes merely to be approximate, it being difficult to separate the items truly chargeable to arrears.

33. The terms in which the Controllor in his 52nd para., characterizes Mr. Money's failure to discover in due time the worthlessness of the Collector's lists of estates, are somewhat qualified by his subsequent letter, No. 66, dated 21st ultimo. The Board do not attach any blame to Mr. Money specially of the subject of these lists. The fault lies in his system, the defects of which were pointed out last year, and which have again just been noticed. Had all enquiries connected with the ascertainment of the distribution of property been made at the time the hulka was externally demarcated, the discrepancies in the Collector's list must have forced themselves on his notice.

34. The arrears in Bhagulpore, Monghyr and Beerbhoom have at length been all but

brought up by Mr. Watson and Deputy Collector Issenchunder Dutt. This month is expected to see Mr. Watson take charge of his Sudder Office at Berhampore, and Issenchunder Dutt will be proceeding immediately to join Mr. Birch at Pubna Freed from these arrears, the new Superintendent will, the Board hope, succeed in placing his Division in the satisfactory condition in which the 2nd Division has already been shewn to be. The arrangements which have been made for the current season's work, are judicious. Though the area remaining for external demarcation in Moorsheadabad is not large, there are the omissions of internal work of last year to be supplied, and the Registers have, apparently, yet to be commenced. Such being the case, it is wise not to commence with Jessore till next season.

35. The northern portion of the Moorshedabad District, or an area of 1,035 square miles between Bogwangolah on the east, Gysabad on the south, and the Bhaugulpore frontier on the west, has been surveyed by Captain Sherwill's party. Only 951 square miles of this area is mouzawar work, the difference representing the bed of the Ganges. 2,095 villages had been demarcated in 1,212 hulkas of an average size of 502 acres. The average cost of Survey is by square miles Rs. 30-3 6, and Pergunnah circuit Rs. 25-13. This rate includes the cost of mehalwaree calculation which, in the other Divisions, has been excluded from the account. In 1851-52 the Darjeeling Survey occupied a part of the Establishment, so that a comparison between the area surveyed in the two seasons would not be a fair one.

36. The area of 2,641 chucks only has been calculated by triangulation, but heavy work of this description (about 20,000 chucks) has been reserved for this season. The thakbust Maps were found to be very accurate, but inconvenience attended their being made over by instalments, instead of in full at the beginning of the season. The Surveyor, however, would seem, from an extract quoted in the Deputy Surveyor General's 48th para., not to have used these Maps at all on the field, but to have reserved them for comparison after following the boundaries by the land-marks erected by the Ameens.

37. There remain for Survey in Moorshedabad some 1,200 square miles of country, which will occupy the party now under the control of Captain Gastrell for more than one season. Captain Sherwill has commenced at Patna his task of re-casting the boundaries of the several Bengal Districts.

38. Mr. Kelso's small party surveyed Pergunnah Koonta-Ghaut in the north of Assam. Gawalparah or 587 square miles, an area which, with the exception of sixty-one square miles of mouzawar work consisting of lakeraj tenures, has only been laid down topographically. Pergunnah Purbutoar was also nearly completed, but sickness overtaking the party, the task was abandoned, and an area estimated at 200 square miles was consequently lost to Mr. Kelso's returns. The season's work is however 113 square miles in excess of that of last season, and the average rate of cost 23-9-1 per square mile is lower by Rs. 5-3-6.

39. Mr. Kelso has since applied for pension and been replaced by Mr. O'Donnell,

This Mr. O'Donnell has since reported himself unable to do, the disputes being too numerous.

who has eight more Pergunnahs in the same district to occupy him in the current season and who has been made a Sub-

Assistant in the Province in order to admit of his laying down his own boundaries. Each Pergunnah is a separate estate and their aggregate area, some 600 square miles, will require only to be surveyed geographically.

40. The Survey party in this Province was organized with a view to their commencing with the Survey of Akyab this season. A sixth Division has thus been added to those already constituted in the Lower Provinces, and will of course contribute further to the mass of work imposed on the Deputy Surveyor General.

41. On the whole, the Survey results are satisfactory, inasmuch as they shew an increased area and a greater number of circuits with a reduced rate of cost. This is the case not only in the aggregate work of all the Surveys, but also in the mouzawar work of each separate Survey, although in the 2nd Division the comparative rate is apparently higher from a portion of last year's expenses having been charged to the Soonderbuns' boundary, and in the 4th Division the area returned is less, because nearly one-half of the whole shewn last year was on account of the Survey of Darjeeling, where there was no mouzawar work.

42. The Board find in the Reports of both the Controller and the Deputy Surveyor General gratifying testimony to the efficiency of their respective subordinates. Among the heads of Divisions, Messrs. Birch and Campbell, Captains Sherwill and Smyth, are especially mentioned. The terms in which the two Assistants transferred to the ordinary line of the service, Messrs. Harrison and Ward, are spoken of, will, the Board hope, attract the notice of Government when considering the question of vacancies in this Department. Among the Deputy Collectors, the Board are glad to find that Issenchunder Dutt and Kbetter Mohun Mookerjee are more favorably spoken of than they were last year. With the exception of Radhanath Bose, all the other Deputy Collectors have worked diligently and successfully.

43. The Controller has repeated in his 43rd para. an application made last year for increasing the salaries of four Officers on the Establishment of the Superintendent of the 3rd Division, so as to equalize the scale of allowances in the Department. An addition of Rs. 25 per mensem would raise these exceptional amounts of salary to the general standard, and the work being equally arduous in all the Divisions, the Board think the measure advisable, and have supported it in the accompanying proposition statement.

44. Another proposition from the same quarter is, that Assan Ahmed, whose period of employment temporarily as a Deputy Collector will expire in May next, should be re-appointed for another year. This measure the Board also recommend for sanction, and submit the usual Tabular Statement with that object. A second Deputy Collector is indispensable in the 4th Division, and the Board have no means at present of relieving Assan Ahmed.

45. The concluding paras. of Capt. Thuillier's Report give interesting particulars of the work done in the Drawing and Lithograph Departments of his Office, and announce his intention of applying to Government for extra strength in the way of both Estab-

lishments and materials to enable him to comply with the requisitions made on him. It will be seen that the proceeds of the Press, added to the value of the Maps supplied to Public Offices, amount to Rs. 4,854-7-0, a sum equal to two-thirds of the entire expense of Press Establishment.

46. The Board have called the attention of the Superintendent of Stationery to the complaint made by the Deputy Surveyor General, of the inferior quality of the paper furnished from that Office. The proposition for increasing Mr. Graham's salary alluded to in Captain Thuillier's last para. was sent up to Government with their separate letter, No. 281, dated 22nd July, 1853, and orders were solicited on the subject so late as the 3rd instant, No. 69.

47. The Board will communicate to the Deputy Surveyor General their approval of the promotions of the Assistants in the professional branch, recommended in his 21st, 33rd, and 43rd paras. viz :—

1st Division, Mr. R. SMITH, from 175 to 200 Rupees.	} From 1st Jany. last.
2nd Division, Mr. W. DAVEY, from 125 to 150 Rupees.	
„ „ Mr. N. T. DAVEY, from 200 to 250 Rupees.	
3rd Division, Mr. A. PHILLIPS, from 125 to 150 Rupees.	
„ „ Mr. S. PHILLIPS, from 150 to 175 Rupees.	

48. The Board now revert to the subject mooted in Mr. W. Jackson's Report on the District of Moorshedabad, from which extracts paras. 27 to 69 were furnished to them, with Mr. Under-Secretary Young's endorsement of the 20th ultimo, for consideration in connexion with this Report.

49. Mr. Money's scheme, which has been adopted by Mr. Jackson, is the modification of another which was considered by the Board last year, and was after full discussion pronounced unsound. The enquiries then made furnish the Board with the means of coming to a similar decision on the modified suggestion.

50. Instead of restricting the professional parties to the Survey of topographical details, which was the essential feature of Mr. Money's first scheme, he would now simply disconnect the professional from the Civil Department, allowing the former to lay down all village boundaries and to proceed independently of the latter, the duties of which would be confined to the demarcation of details of property within enlarged Plans of the villages to be furnished to it by the Surveyor. In cases of disputed boundaries the lines pointed out by both parties are to be laid down, and to be left for decision by the Civil branch.

51. The advantages which this Plan proposes to secure are two-fold, to save the labor and expence of a double Survey, professional and semi-professional, of the external boundaries of villages, and to enable the professional parties to survey a larger aggregate area than they now can, having to wait as they do, for a prepared field.

52. Of these two reasons for change, the first only, should the new scheme promise success, is that which will recommend it for adoption, the last in no way entitles it to preference over the system in force, for as has been shewn above in reviewing the work of the 2nd Division, a demarcation party can in one season complete its

semi-professional Survey of a much larger tract than can be professionally surveyed in the same period. In the face of this fact an important assumption in Mr. Jackson's argument falls to the ground.

53. The Board will now examine how far the first advantage, which they admit would be a positive one, and would warrant the abandonment of the present double process, is likely to be secured by Mr. Money's scheme.

54. An objection may be raised on principle to dividing the duty of demarcation, which Mr. Money's plan involves. The village boundary is very frequently that of the Estate; this is to be laid down by the Surveyor, while other boundaries of estates, which fall within villages, are left for demarcation to the non-professional party.

55. The objection is by no means insuperable, provided the same guarantees for accuracy are to be found in the proceedings of both parties, and this subject it is which raises the first practical objection, viz., the inexpediency of leaving to Surveyors the duty of finding their own boundaries.

56. Captain Sherwill a Surveyor of experience and more than ordinary intelligence, has, Mr. Jackson says, assured him, "that the professional Survey can find the boundaries without difficulty." Doubtless Captain Sherwill met with no difficulty in this respect in Darjeeling, where the Jote represents the village, and where each Jotedar was ready enough to point out the boundaries of his Jote. In an extract marginally quoted in the Deputy Surveyor General's Report, para. 48, Captain Sherwill says that he only used his thakbust Maps in Moorshedabad for comparison in office after surveying a village, but then the land-marks which the demarcation party had placed were his guides.

57. The Board would not be understood as maintaining that it is impossible for the Surveyor and his Assistant to do that which is done by the Superintendent and his Deputy Collectors; but the fact is undeniable that wherever a Surveyor has attempted to lay down boundaries for himself, loss and embarrassment have been the result. How little to be trusted Captain Matheson's boundaries are in Midnapore, has been shewn by the partial revision which took place in that District in 1845. In Hooghly Mr. Wilson's inability to follow the Maps of the Revenue parties determined him on taking a similar course, and led to his own dismissal and to the condemnation of his Survey.

58. If the civil duty of laying down their own boundaries is to be made over to Surveyors and their Assistants, it should be after their passing the examinations in Revenue Law now prescribed for Junior Civilians, and after acquainting themselves with Revenue practice by serving for a year or two in a Collector's Office. That a Surveyor without thus qualifying himself should be in a condition to appreciate the peculiarities of our Revenue system, or to surmount the difficulties which must offer themselves to a demarcation Officer, is, the Board think, an unreasonable expectation. The converse proceeding that of placing a sufficiently able man with no practical knowledge of surveying in charge of a Survey party failed, and that signally, as Government will remember, in Bhaugulpore.



59. The next objection is to the change which will leave disputes in the external boundaries of villages for after decision by the Civil Officer. In all such cases the Surveyor would have to lay down two lines of boundary, and a glance at the Controller's Statements will enable Government to conjecture what a troublesome task this would be,

1st Division.....	235	supposing that of the 1,748 boundary disputes decided in the four Divisions during the past season a half or even a third occurred on external boundaries, the double Survey work imposed on the Surveyor would be very considerable and the delay thus caused would be a serious set off against the improved rate of progress which is expected from him, when rendered independent of the demarcation Officer.
2nd Ditto.....	753	
3rd Ditto.....	510	
4th Ditto.....	250	

60. On a proposal lately made by the British Indian Association to refrain from No. 14, 31st December, 1852. deciding such disputes at all, the Board consulted the Deputy Surveyor General, whose views in that question apply to some extent to that of deferring their decision. They were as follows :—

“The adjustment of all boundaries being the basis of a Revenue Survey, it seems to me impracticable to define, or record, mehals or mouzas with any approach to correctness, without the limits of those holdings are in the first place ascertained. Neither could indefinite and unmeaning areas of parcels of ground comprising neither a mehal or a mouza, be prepared with any sort of convenience or system.

“Your letter under acknowledgment simply throws out an allusion, as to leaving disputes undecided, but if so great a change, involving the whole system of the present operations, is really in contemplation, I shall be able to offer sufficient reasons for the opinion expressed above on learning the Board's sentiments on the subject.”

61. A third practical objection offers itself to the enlargement of the village Plans, which are to be made over to the demarcation parties. It is obvious that the ratio of error must increase during the enlarging process. But this difficulty being a professional one, should be explained by a professional authority, and the Board will accordingly quote from Captain Smyth and Thuillier's *Manual of Surveying*.

“The process of enlarging drawings is a similar operation to reducing, the points

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‘being determined in the smaller squares of the original and transferred to the larger squares of the copy, or by removing the tracing point and pencil of the pentagraph as before directed, but the process of enlarging, under any circumstances, does not admit of the same accuracy as that of reducing, and while the pentagraph affords the most ample means of reducing a plan, it cannot be recommended for enlarging a copy or even copying in the same scale. In the Survey of a Town, Civil Station or Cantonment, which is always required on an enlarged scale, the work must be specially plotted for that scale, and never transferred from a smaller one.

62. Any one of these three objections would prove fatal to the success of an

N. B.—On this subject see Hint to Surveyors, given at page 236 of the *Manual* above quoted from.

immediate change, such as Mr. W. Jackson has proposed, and the two last are such as cannot be surmounted so long as there are boundaries to be disputed and chain measurement is subject to error.

63. The Board notice a mistake in Mr. Jackson's 57th para., in which it is stated that the Surveyors laid down their own boundaries in the N. W. Provinces and in Behar.

Para. 22 of the Western Board's Directions for Settlement Officers, published in 1849, will shew that the Survey of a village never commenced till the boundaries had been "marked off and finished," and the same course was observed in Behar.

64. The rate of demarcation cost in the 2nd Division, where the work is progressing most satisfactorily, is above shewn to have been 35-1-6 per square mile, and that of Survey cost to have been 35-0-11, the rate of cost for the combined operations here therefore has been 70-2-5 per square mile, or something under 11 per cent. of area in acres. It may be admitted that this is a high rate, being as much again as Selections from Public Correspondence, No. 10, the rate at which Survey charges are calculated in the N. W. Board's Report of the 9th August, 1850, but it is a rate it must be remembered which is not yet reduced to its minimum. The comparative statement appended to this Report, shews an improvement on the total Survey charges of the season of annas 14-8 per 100 acres, though in two Divisions the new system has not yet had fair play. Moreover, it is doubtful whether the North Western rate just quoted does not exclude the cost of laying down boundaries which is more probably charged to settlement, a process of which the cost is rated at Rs. 7-0-9 per 100 acres.

65. Granted the competency of the Surveyor to lay down his own boundaries and putting out of consideration the professional difficulty attending the enlargement of Plans, the Board doubt whether any considerable saving would follow the introduction of the proposed measure. The internal demarcation party would still require an experienced head, and any reduction which could be effected in his present scale of Establishment would, it seems to the Board, be met by the additional cost of the Survey party, for the enlarging process in the case of every village must entail additional Draftsmen and a Surveyor, who has to look carefully for his own boundaries and to measure a double line in the case of all disputes, can never be expected to make such rapid progress as a Surveyor who has bearings and land-marks to guide him and who has no double lines to measure.

66. The Board therefore deprecate any change at all in the present system which, if expensive, ensures work of a character to be depended on, and if more elaborate than is necessary to satisfy the ordinary requisitions of a Revenue Survey, is not more than what the Honorable Court, in the Despatch quoted in Captain Thuillier's 10th para., has directly prescribed as the aim of all Survey operations. The perusal of this extract has given the Board great gratification.

67. As regards minor points adverted to in Mr. Jackson's Report, it will be seen that the Board have already sanctioned an allowance for chain-men temporarily employed, and the complaints in regard to the compasses were brought to the notice of the proper Department, some month's back. The imperfection of the Collector's lists and the precautions required for the permanent preservation of the Survey Registers, are subjects on which the Board will consult the necessary authorities. The appeal to Commissioners from the Superintendent's decision is one allowed by law, and though the Board

have intimated to Commissioners that the power of interference is one which should be sparingly exercised, they are of course unable to restrict their discretion.

I have the honor to be, Sir,

Your most obedient Servant,

(Signed)

A. GROTE,

*Officiating Secretary.*

*Comparative Statement of Expenditure in 1851-1852, and 1852-1853.*

Civil Establishments in 1851-1852.....	Rs.	2,41,057	0	0
Professional ditto in ditto .....	„	1,29,197	0	0
	Total ...	3,70,254	0	0

Area surveyed in 1851-1852, square miles 3,826 $\frac{1}{4}$ , being  
at the rate per 100 acres of .....Rs. 15 1 11

Civil Establishments in 1852-1853.....	Rs.	2,54,100	14	10 $\frac{3}{4}$
Professional ditto in ditto .....	„	1,31,798	12	6
	Total ...	3,85,899	11	4 $\frac{3}{4}$

Area surveyed in 1852-1853, square miles 4,246, being  
at the rate per 100 acres of .....Rs. 14 3 3

Decrease per 100 acres in 1852-1853 ..... 0 14 8

