No. 5 a
1894-57

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MADRAS RECORD OFFICE.

Government of Madras.

DEPARTMENT.

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1894

No. 13. Read the following letter from Colonel C. E. FABER, Chief Engineer; to H. FORBES, Esq., Acting Secretary to Government, dated 15th September 1857, No. 3707.

SIR,

The Examination of the account of the Chetwye Dam in Malabar, having now been completed, I have the honor to submit copy of a report* thereon by Lieutenant Tennant, who was employed in this scrutiny for six weeks, aided by the Head Accountant of Malabar, whose exclusive services, were kindly afforded to the D. P. W., for this purpose. The report is accompanied by 17 Statements, and a letter† from Lieutenant Bean. The results will, I think, fully hear out the opinions I have already formed and expressed, of the serious neglect of duty on the part of Major Selby, whose accounts evince such a total absence of any thing like system or "accuracy," as to render the task of scrutinizing, and checking the expenditure, most laborious, and difficult.

* No. 187 of the 12th August 1857.
1 Copy of letter No. 1095, of the 25th August 1857, from the District Engineer of Malabar.
1 Do. No. 187 of the 12th August 1857, from Lieutenant Tennant Assistant Engineer.
1 Do. No. 4718, of the 14th August 1857, from the Acting Collector of Malabar.
With 17 Original Enclosures marked from A to R.
† No. 1095, of 25th August 1857.

2. The errors, and inaccuracies of these accounts are explained, in para. 6 of Lieutenant Tennant's letter, and it is stated, that there is little doubt "that great delinquencies and frauds were committed during the time Mr. F. Clark was in charge of the work," and it is impossible not to share in Lieutenant Tennant's regret, that his accounts of public expenditure received so little check, or scrutiny from Major Selby.

3. Lieutenant Tennant, not only scrutinized the accounts, but also inspected the work already executed, as well as the plant and materials at Chetwye, and the Quarries near Trichoor and other places, and the results are thus summarized.

Value of work executed	11,654	6	6
Materials at Chetwye...	1,284	15	5
Do. at Quarries	5,474	9	9
Plant at Chetwye, excluding 3000 Rupees for 3 pumps ...	3,986	0	4
Do. do. at Yelliancoonoo	4,332	11	6
	26,732	5	6
Difference ...	8,378	10	6
Total Expenditure.....	35,111	0	0

4. From this statement it appears that a sum of Rupees 8,378-10-6 remains unaccounted for, and although it may, to a certain extent, be true as urged by Lieutenant Bean, in para. 4 of his letter, that accurate measurements could not be made of the work actually covered by water, yet it is evident, that the depth only could not be so ascertained the length and breadth of the Dam being easily found, and the Executive Overseer (Adam) being present, there is little doubt that Lieutenant Tennant's examination was quite accurate enough to establish the fact of a most serious, and culpable discrepancy, between the value, and alleged cost of the work.

5. Lieutenant Tennant proceeds to shew, that the material employed in the construction, was inferior in quality and higher in cost, than could have been obtained, the larger laterite stones from Yelliancoonoo which are "soft and porous costing 2 annas 3 pice each to convey to "the work, while stones of equal size from Yeddiacherry quarries, of a harder and denser des- "cription" would cost only 1 anna each for carriage. Cut granite stones for this work, were found "scattered over 50 and 60 square miles" and of so bad a quality in material, and workmanship, that the expediency of collecting and conveying them to the work is considered doubtful at 3 Rupees each stone, the Trikoonatha granite, superior in quality, and facility of transport was not used.

6. It seems perfectly clear from Lieutenant Tennant's report, that the mismanagement so conspicuous in the accounts of this work, was equally flagrant in the constructive agency and

provision of materials, and that the loss to Government cannot be considered limited to the actual defalcation exhibited in the valuation statement.

7. It is not now proposed to enter on the questions of construction, and site mooted by the Superintending Engineer Southern Circle, which will be reported on, separately, as soon as certain information is received and it is therfore needless for me to consider those parts of Lieutenant Bean's letter, or supply any estimate of the cost of completing the work, which must greatly depend on the correctness of Major Lawford's views; but I am satisfied, that in submitting these papers, I afford Government ample means of deciding on the mismanagement evinced in this important Works.

8. Statement A, shews the amount of advances made by the Collector, to have been Rupees 40,080-14-3, from which the sums taken up by Major Selby, and Mr. Clark, and those disbursed by the Collector, amount to Rupees 35,132-4-0. The amount undrawn and refunded, and the available balance on the 30th April 1857, amount to Rupees 4,948-10-3, leaving a net expenditure of Rupees 35,132-4-0.

Statement B, is an abstract of expenditure, which shews an outlay of Rupees 35,111 differring from the former by Rupees 21-4.

Statement C, is a corrected abstract of Major Selby's account current, shewing a balance due by him of Rupees 21-4.

Statement D, is a comparison of the accounts of expenditure rendered by the Executive Officers, with the revised accounts now prepared, shewing a decrease in the latter of Rupees 1261-8-5.

Statement E, is the amount of work actually measured by Lieutenant Tennant, F, is that officer's valuation of materials at the Dam. G, being a similar estimate of the materials at the Quarries. H, is the value of Plant at the Dam also estimated by Lieutenant Tyrrell, and I, is that of Railways plant at the Quarries. K, is a sketch of the country near the Quarries, shewing that good granite could have been more easily procured, than the inferior stone actually used. L, are copies of agreements, or contracts, entered into for the supply of stones for the work, but Lieutenant Tennant, observes in Para. 6, of his letter that there are no vouchers to shew, if the several contractors have, or have not fulfilled, their contracts.

M, is a paper of notes on the proceedings of the officers concerned in the construction calling for no particular remark. N, is an abstract of Major Selby's Day Book, and O, is called a copy of his Account Current, but appears to be only an entry of disbursement from November 1854, to a date not very clearly shewn this paper seems of little value.

P, is a copy of Overseer Harrold's Day Book, on which Lieutenant Tennant observes that "none of the transfers from it, agree, with those entered in the Account Current."

Q, is an abstract of Mr. F. Clark's Day Book, on the accuracy of which, no reliance can be placed and R, is an abstract of the account of expenditure, by the Collector and Tahsildar.

9. On the whole, it appears to me, that the examination of these accounts has been conducted by Lieutenant Tennant, with great carefulness, and that the result has been established with as much accuracy as the case admits.

No. 4718, dated 14th August 1857.

10. I think it my duty, in submitting these papers, to forward also copy of a letter from the Acting Collector on the same subject.

Letter from Lieutenant J. BEAN, District Engineer Malabar; to Colonel C. E. FABER, Chief Engineer, dated Cannanore, 25th August 1857, No. 1095.

SIR,

Agreeably to the instructions contained in your Extract of Proceedings under date 10th June and 17th July 1857, and Nos. 1038, and 2077 respectively, I have the honor to forward a report on the examination into the accounts of the Chetwye Dam, and accompanying this letter is

a report with enclosures from Assistant Engineer Lieutenant Tennant, who has been exclusively engaged in this investigation. As you will observe from his lucid account of this examination, the investigation has been a laborious one, and has occupied his time for the space of 6 weeks, to the exclusion of other business I have thought it desirable to send up the papers in original to avoid delay in copying them, and I beg to state that they were only received by me on Saturday the 22nd instant.

2. From the results which have been arrived at, it will be seen that a sum of Rupees 35,111 has been expended according to the Statements of expenditure furnished by the Collector and this amount has been accounted for in the various Statements which accompany Lieutenant Tennant's letter and which give the expenditure incurred by the various Officers after correcting the numerous errors which have crept into Major Selby's accounts.

3. To account for the reason of such great discrepancies it must be evident from a perusal of the papers enclosed that Major Selby was not impressed with the necessity of keeping his accounts in a correct and regular form. As long as the works progressed he does not appear to have concerned himself with the preparation of the expenditure accounts of the money which passed through his hands for this object, and his subordinates also were allowed to carry on a large expenditure without a periodical check or scrutiny of their books and papers by those in superior authority to them. Mr. F. Clark's proceedings, when in Superintendence of the Chetwye Dam, is an exemplification of the effects of such a want of scrutiny, and it is difficult to understand how a man of his character obtained a post of such responsibility.

4. After a careful examination of the works, and a measurement and valuation of the material and plant, Lieutenant Tennant considers that a sum of Rupees 26,732-5-6 has been fairly expended, leaving a balance of Rupees 8,378-10-6 unaccounted for. With regard however to his valuation and the measurement of the Dam itself, I may observe that as soon as the work and baling was stopped, the water necessarily rose over the work, and when he visited Chetwye, in July last, there were 3 feet depth of water on the Body, and though his measurements were carefully taken, I do not consider that under such circumstances correct dimensions could have been obtained, and sufficiently so to justify any great faith being placed in their accuracy.

5. With reference to the large expenditure incurred when so great a portion of the work remains to be completed, I would observe as one cause that a Railway was constructed to the Yelliancoonnoo Quarry from the Yedencherry Lake at the cost, as Lieutenant Tennant computes, of nearly 6,000 Rupees, of the cost of labor and other items be added to the valuation of Rupees 4,500 which he has entered in his Statement. This amount also, it is very probable, might have been in great part saved had the Latterite stone been cut at Yedencherry which is on the border of the Lake of the same name in place of at the above quarry, as it appears there is abundance of better material at the spot. The Trikoonatha Quarry in the neighbourhood of Yennamakul, appears to have the close grained and much the finer Granite, yet it was not worked, though its facilities as regards the transport of the stone to Chetwye at a lower cost might have alone pointed it out for preference.

6. Another reason which I consider might have increased the expenditure was the excavation of a Canal opening out and connecting the whole line and face of the work with the backwaters. This Canal, though doubtless affording facilities for the transport of material in boats to the edge of the work, must have, in my opinion, increased considerably the springing of water from the foundation and necessitated extra baling.

7. As regards the construction of the Dam on its present plan and site, and the objects intended by its erection, you have already the valuable Judgment of experienced Officers viz. Major Lawford and Colonel F. Cotton, and it would not be necessary therefore for me to offer my opinion, unless as is the case, I had been called upon to make a special report.

8. From the sections of the Dam which have been formed in my records, it would appear that the height from the bottom of foundation to top of Dam is to be 9 feet including the thickness of cut stone capping, but I believe that the work as carried out is eight feet in height, and I do not consider that this is sufficient to keep out Salt water, especially as the bed of the backwaters is below the level. Though the bottom course was laid in chunam, the top courses had their in-

terstices filled with clay with very little chunam, and I do not consider such a mode of construction would render the weir impervious to the tidal water, especially as the Latterite blocks were not carefully fitted together. The top of the Dam being on spring tide level, I do not see the object of the Caffer boxes which I presume were to be adapted on Major Selby's order and it does not appear that the fresh water was to be used for irrigation.

9. As the Chetwye backwaters are in communication with those extending along the coast to Cochin, I presume there must be a bund thrown across the Canal (to the impediment of the Navigation) to exclude the Salt water, though certainly it does not appear that there is any outlet to the sea until 30 miles to the southward of the Chetwye Dam. The inlet to the Trichoor lake has already been cut off by an earthern bank thrown across its course.

10. Though there is no outlet to the sea, as mentioned above, I must notice, that on my inspection of the site on the 5th May, I perceived beyond the extremity of the southern bank, which abuts against the ruins of an old Fort, that the ground was extremely low, and that but a small rise of tide or backwater would be sufficient to open out a communication with the sea. Since this date from Lieutenant Tennant's observation it appears, that such an occurrence had actually taken place when he visited the work, and it appears to me that this southern embankment should have been extended a long way beyond the Fort. As regards the material used for these embankments, it is probable *that* no better was procurable, but the greater portion consisted of sand, and for the northern and principal backwater 600 yards in breadth a more durable and tenacious material would have better withstood the effect which will naturally arise from Damming up such an outlet. The latterite also in the work is porous and of bad quality.

11. There is a still a considerable amount of valuable plant at the work which I trust will prove useful for other works, but if the operations at the place are definitely stopped, I do not believe that the chunam on hand, which has deteriorated, will have sufficient binding quality to make it of any use for building purposes.

Letter from Lieutenant T. E. TENNANT, Assistant Engineer Malabar; to Lieutenant J. BEAN. District Enginer of Malabar, dated Calicut, 12th August 1857 No. 187.

Sir,

I do myself the honor to forward, with the abstracts and documents as per margin, my report on the Chetwey Dam.

A Abstract of advances by Collector.
B Ditto of expenditure.
C Ditto of Major Selby's Account Current.
D Comparative Statement of expenditure.
E Statement of work executed.
F Value of materials at Chetwye.
G Do. do. at the Quarries.
H Do. of Plant at Chetwye.
I Do. of Railway and plant at Yelliancoonoo Quarry.
K Plan of Yeddeacherry Lake &c.
L Translation of Contracts.
M Notes.
N Classification of Major Selby's Day Book.
O Do. do. do. Account Current.
P Do. of Overseeer Harrold's Day Book.
Q Do. of Mr. F. Clark's Day Book.
R Do. of Collector and Tahsildar's accounts.

2. The original estimate amounting to Rupees 36,215-14 for the construction of a Dam at Chetwye, was sanctioned on the 4th August 1853, and on the report of the Acting Civil Engineer of the District, Captain Ludlow, a supplemental estimate of Rupees 9,900-5 was sanctioned on the 19th August 1854, making a total amount of Rupees 46,116-3.

3. Abstract A. will shew the total amount viz. Rupees 40,080-14-3 placed at the disposal of the Engineer's Department by the Collector from the commencement of the work, on the 20th of September 1853, to the 30th April 1857, and the actual amount taken up by each executive Officer. Abstracts B, C, and D, shew the expenditure of the different Officers the discrepancies in Major Selby's accounts and comparative statement of the original and revised expenditure And Statements E, F, G, H, and I, exhibit the amount of the work executed, the value of materials and plant collected for the construction of the Dam.

4. It appears that during the period Major Selby was in charge of the Chetwye Dam, he frequently requested and obtained from the Collector and Tahsildar, a statement of the various sums disbursed to him from their Treasuries. Whether Major Selby kept any regular account

of his receipts and disbursements, we have not been able to discover, as neither his Cash Book nor any original document by which he could, or ought to have prepared his accounts is forthcoming.

5. The Acting Collector (Mr. Robinson) has most kindly placed at my disposal the services of his Head Accountant, Mr. Bates, who is, I believe, considered one of the ablest and most experienced Accountant in the Madras Presidency, and we have been engaged together daily from 11 A. M. to 7 P. M. for a period of 6 weeks in this examination: but a total absence of any thing like system or accuracy in Major Selby's accounts has rendered the task of scrutinizing and checking the expenditure most laborious and difficult.

6. The discrepancies and differences between Major Selby's accounts and those of the Collector, have arisen 1st from Major Selby's not having entered in his accounts the disbursements made according to his orders by the Tahsildar 2ndly the credit side of his Account Current does not shew the correct advances made from the Collector's Treasury, and his debit side contains many double entries and irregularities. Major Selby's diary for May 1853, shews that he commenced on the work of the Chetwye Dam from that period, but his Account Current purporting to be the particulars of his expenditure during the time he was in charge of the work commences on the 13th of November 1854. 3rdly a very considerable Item of Major Selby's expenditure is entered in his Account Current as advances to "Stone and Laterite Contractors" with the exception of one receipt granted in September 1855, for Rupees 350, we have not been able to discover any vouchers or acknowledgements for the sums advanced, or documents which shew if the several contractors have, or have not fulfilled their contracts. 4thly with the exception of one or two items, none of the transfers made from Overseer Harrold's Day Book agrees with those entered in his Account Current. 5thly. The credit side of Mr. F. Clark's Account Current, does not coincide with his debit side, nevertheless these accounts bear the signature of Major Selby. There seems to be but little doubt that great delinquencies and frauds were committed during the time Mr. F. Clark was in charge of the work. The fact of his ordering the writer and the maistries on the work not to keep any memorandum of the coolies employed, and his pilfering from the effects of the late Overseer Armstrong, are matters well known to all persons employed with him on the Chetwye work. And I think it is much to be regretted that Mr. F. Clark's accounts were not properly audited, and his expenditure scrutinized, and the work executed by him carefully measured up, before they received Major Selby's signature; the detection of fraud might have been difficult to prove from his accounts, but by calculating the average number of coolies employed daily, and the work executed, and comparing these results with his receipts from the Talook Treasury much light might have been thrown on that individuals proceedings. 6thly. Overseer Adan's account for May 1856, opens with the charge of Rupees 459-15-7, for work done in the month of April 1856, by Mr. F. Clark, but no accounts are forthcoming by which this charge can be tested, the items of salaries entered in Overseer Adan's bill for 1856-57, do not correspond with those entered in his Cash Book.

7. To shew the total indifference and singular inaptitude that Major Selby had for keeping accounts he frequently granted receipts for money without date, and in one instance drew an order dated "Ootacamund 1st May 1855," and also an order bearing the same date from "Chetwye" the distance between the two places being upwards of 130 miles.

8. An epitome of my Report may be expressed as follows :—

	Rs.	A.	P.
Value of work executed.....	11,654	0	6
Do. of materials at Chetwye.....	1,284	15	5
Do. of Do. at Quarries.....	5,474	9	9
Do. of Plant at Chetwye exclusive of Rupees 3,000 value of 3 pumps.....	3,986	0	4
Do. of do. at Yelliancoonoo.....	4,332	11	6
	26,732	5	6
Difference.....	8,378	10	6
Total expenditure as per Statement D, ...	35,111	0	0

9. The Superintending Engineer has, I believe, already reported on the execution of the work, and therefore any remark from me on that subject would be uncalled for, but with a view of ascertaining how so large an amount had been expended in proportion to the value of work executed, during the time I was at Chetwye and Trichoor in July last, I carefully examined not only the materials and quarries, but also the sites of other quarries situated in the neighbourhood.

10. It appears to me that our cause, if it is not the principal reason, of the large expenditure results from the difficulty and expense of transporting the materials from the present quarries to Chetwye it is however with exceeding diffidence that I now offer any opinion on the subject as both Major Ludlow and Major Selby remained the quarries in the neighbourhood, and although they expressed their opinion in May 1854 with regard to the quarries to be worked naming the Yeddeacherry for Laterite and the Trikoonatha quarries for granite, yet the former which, both in quality and situation is superior to the present quarry, has not been worked, and the latter only for rubble stone.

11. The appended translation of the contracts marked L, will shew that contract No. 3 was drawn up by the Chowghaut Tahsildar in August 1854, for cutting Laterite stones at Yelliancoonoo, these quarries are situated 1500 yards from the banks of the Yeddeacherry Lake, and about 4½ miles from Chetwye. The laterite is soft and porous and of a very inferior quality and crushes with a moderate weight for the purpose of transporting the Stones from the quarries to the lake, Major Selby, was obliged to construct a Railway of 1780 yards in length at a cost of about 4,500 Rupees from the Railway trucks the Stones are transferred by Cranes and derricks into barges to convey them to Chetwye. The expense of the transport of a stone 2′ 4″ × 2′ 4″ × 1′ 6″ from the quarry to the barge is 1 anna and 3 pie and from the Yeddeacherry lake to Chetwye 1 anna for small Stones 2′ 0× 1′ 0×0 6″ from the quarry to the lake 4 pies and from the lake to Chetwye 2 pies each in both cases these charges are exclusive of Superintendence, wear and tear of Railway and Plant. At the above rate the Stones now at Yelliancoonoo will as shewn in the margin cost Rupees 6,305-3-6 to convey them to Chetwye. The laterite at Yeddeacherry quarries is (as will appear from the Specimen forwarded) of a harder and denser description than that found at Yelliancoonoo, there is water carriage from where the Stone is cut to Chetwye, the cost of conveying to the work a large stone, 2′ 4″ × 2′ 4″ × 1′ 6″ would be 1 anna, and of a small Stone 2′0″ × 1′0″ × 0′6″ 2 pies exclusive of Superintendence and wear and tear of barges.

Vide plan marked K.

I here forward a Specimen used in the Dam.

7738	large Stones at 2 annas 3 pice each	...	994	5	6
26266	small do at 0 „ 6 „ „	..	810	13	0
Add	cost of Railway	..	4,500	0	0
	Total cost Rupees..		6,305	3	6

12.. Contracts Nos. 1 and 2 were made before Mr. Collett, the Sub Collector, on the 22nd and 29th June 1855, for quarrying and hewing granite stones from such places as might be selected by Major Selby, on visiting the quarries around Trichoor, I found that the cut granite Stones were Scattered over an area of between 50 and 60 square miles. I experienced considerable difficulty in discovering the blocks as some had been quarried on the tops of hills, some in rivers and some in thick Jungle, the greater portion of them are cut from the bastard granite,* and both the material and workmanship are of so inferior and bad a quality that I should doubt the expediency of Government endeavouring to collect and convey them to Chetwye even at a cost of 3 Rupees a stone. Mr. Adan, the assistant Overseer in charge of the work, made a contract to convey some of the most accessible stones to Trichoor at 1 Rupee each and the cost of conveying them from thence to the Yenamakal Dam where they have to be transferred from the boat to the shore and re-shipped, cannot be estimated under 2 Rupees each.

* A Specimen forwarded.

13. The Trikoanutha granite of which I also forwarded a specimen is much superior to any I have met with around Trichoor. One of the principal advantages of these quarries consists in being so situated that the transfer of the stones from the west to the east side of the Yenamakel Dam would be avoided, and by concentrating the quarries, rubble and cut stone might be advantageously worked together and a considerable saving of plant effected, and lastly the carriage of each stone from the quarry to Chetwye would, I calculate, be under 12 annas.

14. If from any expression in my report it may be inferred that I have exceeded my duty in offering any remarks on the execution of the work or quantity of materials I beg that it may not be supposed that I deem my opinion is to be compared with other Engineer and Executive Officers who have examined and been engaged on the work, as I have no doubt that many difficulties have been developed and causes of expenditure have arisen since the commencement of the work, which no foresight could provide, for, or prudence avoid.

Letter from W. ROBINSON, Esq., Acting Collector of Malabar ; to Colonel C. E. FABER, Chief Engineer, dated Malaporam, 14th August 1857, No. 4718.

SIR,

No. 218. With reference to you letter dated 11th May last para. 5 I have the honor to report that the thorough, scrutiny of the account of expenditure &c. on the Chetwye Dam has been closed shewing a result as per margin.

		Rs.	A.	P.
Aggregate of advances from Colls's. Treasury up to 30th April 1857, as per Statement A,		40,080	14	3
Deduct Refunds into the Collector's Treasury as per do. ...	4,464 12 9			
Cash Balance on 30th April 1857,	483 13 6			
Do. against Major Selby	21 4 0			
		4,969	14	3
Difference being net amount of expenditure up to 30th April 1857, as per Statement B,		35,111	0	0

I could not have undertaken it with my establishment had I foreseen this I have absolutely lost the Services of my Head Accountant and others during the whole of the period.

The examination has been conducted by Lieutenant Tennant, aided by the Head Accountant of my office and two of the most practised of the Marahmut Gomastahs employed under the former rule in my office. Lieutenant Tennant proceeded to Chetwye and there, with Overseer Adan, who was in charge of the work at the time operations ceased, measured up all work, took an inventory of all Plant on the spot and material at the quarries, so that the work has been most thoroughly executed, but in consequence of the confusion in the account, and a

general want of system and absence of original Vouchers, scrutiny has occupied the period of 6 weeks incessant labor.

I beg to submit the memorandum of my Head Accountant on the details of these accounts, it shews that agreement between Major Selby's account and mine was impossible. The result of this and Lieutenant Tennant's valuation of the work performed, is, that there is a balance of Rupees 8,378-10-6 to be accounted for after allowing full rates for every thing that can be brought to account.

On the subject of the work completed you have the valuable opinion of the Superintending Engineer Southern Circle, and Lieutenant Tennant and Overseer Adan, fear that subsidence in the weir is already perceptible. This fact no doubt the District Engineer, will carefully scrutinize.

Valued by measurement at Rupees 11,654-0-6, large margin being left.

The greater part of the material is, it will be observed still at the quarries, the detail of which will be no doubt reported upon by Lieutenant Tennant. Plant it will be observed is valued at Rupees 8,318-11-10.

With reference to the closing part of para. 5 of your letter alluding to the difference of Rupees 8,208-7-5 between the Treasury expenditure and Major Selby's own outlay, the explanation offered in Mr. Bates, memo : will sufficiently account for it. It is impossible that they should agree from omissions of credits, and over charge of Debits.

Memo.

The examination of the accounts of the Chetwye Dam has been fuller than was at first supposed to be necessary, for the necessity of a thorough scrutiny into Major Selby's accounts of expenditure, became apparent, so soon as the draft* of his Account Current, and the Documents noted in the margin (being the only accounts made over to Lieutenant Tennant and produced at this office) were partially compared with the Collector's accounts. In order to this being effectually done, the Account Current with enclosures, as furnished by Major Selby's to the Chief Engineer had to be called for and were received on the 11th Ultimo.

* A.

Abstract (B) Overseer Adan's expenditure for 1856-57.
Statement (C) of expenditure received from Collector, dated 12th July 1856.
Plans marked D to F.
Statement of Progress Report for March 1856, by Mr. F. Clark marked G.
Collector's letter to Lieutenant Bean dated 24th April 1857, marked H.
15 Vouchers to Major Selby's Account Current marked A. to P.

The very great want of any thing like method, or even accuracy, in the accounts furnished by Major Selby, added to the absence of his *Cash Book* or any other original account, has likewise rendered the task of scrutinizing and checking the accounts connected with the advances and expenditure on the Chetwye Dam from the commencement (September 1853,) up to the end of the past Official year, most difficult and laborious.

Moreover Major Selby's Account Current *professes* to be an account of receipts and exepnditure extending only over the period that the work was executed under his immediate orders, but in fact it is not so as great confusion in the items has occurred by admitting some, and altogether omitting various other items of expenditure which were incurred under his own instructions by the Collector and Tahsildar and their entire sifting therefore became quite unavoidable before any thing like a true result could be obtained.

Vide statement of expenditure by Collector and Tashildar dated 7th November 1856, which formed an original enclosure (marked A.) to some of Captain Ouchterlony's correspondence with the Chief Engineer, a similar statement having been furnished to Major Selby on the 10th May 1856.

The accompanying abstracts marked A to D exhibit the aggregate advances, expenditure, and actual Cash balance on the Chetwye Dam from the commencement up to 30th April 1857, these Statements have been most carefully tested, and will therefore exhibit the present true state of the advances and expenditure on the Chetwye Dam. Such details as seemed actually necessary to clear up the various disagreements between the several accounts have been given in the body of the Statements themselves, and will it is hoped suffice to render the transaction sufficiently clear.

The large differences that are apparent between Major Selby's and the Collector's accounts may be briefly summed up as follows.

1st. The accounts furnished by Major Selby, neither comprize all the advances taken up, nor all the expenditure actually incurred during the period which they profess to represent.

2nd. The credit side of his Account Current, besides being composed of extraneous receipts does not exhibit the correct amount of advances taken up from the Collector's Treasuries from the Chetwye work.

3rd. His debit side is equally deranged, from containing numerous double and irregular entries.

4th. His accounts further do not agree with those furnished to him by Overseer Harrold, whose expenditure for March does not appear in his (Major Selby's) accounts till June 1856.

5th. Nearly the whole of the transfer under the head of "Superintendence" from Overseer Harrold's Day Book to his Account Current have been found to disagree.

6th. The account which professes to be Mr. F. Clark's Day Book, does not in many particulars agree with the entries in his Account Current.

7th. His receipts for May 1856, (Rupees 132) though credited in his Account Current for that month, appear to have been credited a *second* time in Overseer Adan's accounts for 1856-57, and the balances of expenditure in his favor for April, and expenditure for May 1856, though *debited*, do not appear to have been ever disbursed.

8th. The first charge exhibited in Mr. Adan's account for May 1856, is a sum of Rupees 459-15-7, for work done in the previous month of April (probably by Mr. Clark), but no accounts are forthcoming by which the correctness or otherwise of this charge may be ascertained. Mr. Adan might perhaps have been able to clear up much of these discrepancies, if his attendance at the Collector's Office could have been obtained for a few days, but though ordered in, he left his station to rejoin his Regiment under the recent orders of Government.

9. No accounts are traceable by which the sums charged under the Head of "Superintendence" in the Overseer's accounts may be verified.

10th. There are no accounts of any description whatever to shew whether any of the several stone contractor's, to whom large advances appear to have been made, have fulfilled their contracts to any and what extent.

11th. Overseer Adan has furnished a Bill of expenditure for 1856-57, amounting to *Rupees* 7303-2-10, but many entries in it, especially under the head of "Superintendence" do not agree with those given in his Cash Book.

Calicut,
11th August 1857.

(Signed) W. BATES,

(True Copy.)

(,,) W. ROBINSON,
Acting Collector.

A

CHETWYE DAM.

Abstract of Advances by Collector and amount taken up by Executive Officers on Account of Chetwye Dam from commencement to 30th April 1857.

	Rs.	A.	P.	Rs.	A.	P.
Total amount placed at the disposal of the Executive Officers of the Engineer's Department by the Collector of Malabar for the construction of the Chetwye Dam from the 20th September 1853 to the 30th April 1856, as exhibited by his Accounts, vide his Progress Report for April 1856	.....	.....	.....	30,914	8	5
Do. do. from 1st May 1856 to 30th April 1857, vide his Progress Report for April 1857	...	.....	.....	9,166	5	10
Total advance	.....	.....	.....	40,080	14	3
Particulars of Expenditure.						
Amount disbursed by Collector and Tahsildar as shewn by his Accounts from 20th September 1853 to 30th April 1856, vide Statement dated 7th November 1856	1,588	2	7			
Do. do. in 1856-57, vide do.	29	5	6			
Amount taken up by Major Selby from 13th November 1854 to 30th April 1856, vide Abstract C.	21,054	7	5	1,617	8	1
Do. do. in 1856-57, vide his Account Current	1,689	10	10			
Deduct Refunds into the Collector's Treasury in do. vide Abstract C.	866	3	8			
	823	7	2			
Amount taken up by Mr. F. Clark from 1st March to 30th April 1856, vide Statement dated 7th November 1856	4,761	0	0	21,877	14	7
Do. do. in May 1856, vide his Account Current	132	4	0			
	4,893	4	0			
Deduct refunded in the Collector's Treasury	87	10	8			
	4,805	9	4			
Amount taken up by Overseer Adan in 1856-57	...	...	.....	4,805	9	4
Do. do. by do. Vigor in do.	...	...	.....	5,628	0	0
	...	...	.....	1,687	1	6
Total expenditure	.....	.....	.....	*35,616	1	6
Add amount undrawn and re-credited in the Collector's accounts for September 1856	3,510	14	5			
Do. re-funded in 1866-57, by Major Selby and Mr. Clark as above shewn	953	14	4			
				4,464	12	9
Rupees	.....	.....	.....	40,080	14	3

* From this amount there was an available balance in Overseer Adan's hands on the 30th April 1857, of Rupees 483-13-6, which will reduce the net amount to be accounted for to Rupees 35,132-4.

Calicut, 12th August 1857.

E. E.

(Signed) T. E. TENNANT,
Assistant Engineer, Malabar.

B.

CHETWYE DAM.

Abstract of expenditure from commencement up to 30th April 1857, shewing present classification and result.

Particulars.	Plant.			Labor.			Material.			Sundries.			Salaries.			Original Total.			Revised Total.			Difference. Increase.			Difference. Decrease.			Remarks.
1	2			3			4			5			6			8			7			9			10			11
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	
1855-56.																											
Collector and Tahsildar's accounts particular	300	2	1	459	9	4	556	8	...	95	10	11	22	12	3	1,588	2	7	1,434	10	7	...	...	...	153	8	...	Vide Statement D.
Major Selby's Day-Book	915	7	4	5,062	4	10	126	4	...	457	14	2	245	12	8	6,739	4	10	6,807	11	...	68	6	2	...	...	...	Net decrease Rupees 974-5-9 Vide Statement D.
Ditto. Account Current	4,717	3	5	367	12	3	4,650	4	...	164	10	7	...	...	...	10,942	7	2	9,899	11	3	...	...	...	1,042	11	11	
Overseer Harrold's Ditto	21	3	8	1,784	7	5	699	1	...	89	3	1	516	4	...	3,036	...	...	3,110	3	2	74	3	2	...	...	...	Vide Statement D.
Ditto. Adan's Ditto	...	...	...	191	8	...	...	...	...	17	1	4	260	...	...	470	...	...	468	9	4	...	...	...	1	6	8	Ditto, Ditto,
Mr. F. Clark's, Ditto	224	10	2	3,586	5	9	435	5	...	112	11	9	314	4	8	4,777	9	4	4,673	5	4	...	...	...	104	4	...	Ditto, Ditto,
Total	6,178	10	8	11,451	15	7	6,467	6	...	937	3	10	1,359	1	7	27,553	7	11	26,394	2	8	142	9	4	1,301	14	7	
1856-57.																											
Collector and Tahsildar's Accounts particular	...	...	...	...	...	...	...	...	...	29	5	6	...	...	...	29	5	6	29	5	6	...	...	...	...	...	...	
Major Selby's account	1,350	...	...	...	7	...	33	14	...	...	...	...	...	...	...	1,458	8	2	1,384	5	...	74	3	2	...	...	...	Ditto. Ditto.
Overseer Adan's Ditto	623	13	2	4,246	12	9	253	4	2	195	7	9	1,978	13	...	7,303	2	10	7,303	2	10	...	...	...	28	...	...	
Mr. F. Clark's Acct. Current	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28	0	...	...	...	...	...	...	...	...	...	...	Ditto. Ditto.
Total	1,978	13	2	4,247	3	9	287	2	2	224	13	3	1,978	13	...	8,819	...	6	8,716	13	4	...	...	...	102	3	2	
Grand Total	8,157	7	10	15,699	3	4	6,754	8	2	1,162	1	1	3,337	14	7	36,372	8	5	35,111	...	...	Deduct Increase			1,404	1	9	
																						142	9	4	142	9	4	
																						Net Decrease			1,261	8	5	

E. E.

(Signed) T. E. TENNANT,
Assistant Engineer Malabar.

Calicut,
12th August 1857.

C.

CHETWYE

Abstract of Major Selby's Account Current as now revised shewing the

		Rs.	A.	P.	Rs.	A.	P.
	Total amount of Credit side of Major Selby's Account Current ending 30th April 1856...				21,687	7	2
	Deduct recoveries from Contractors, &c., *(a)*	491	0	9			
	Do. being portion of an advance made by the Chowghaut Tahsildar and not debited in Major Selby's Account Current	53	8	0			
	Do. errors composed of sums *(b)* not received from Collector or Tahsildar	88	7	0			
					632	15	9
	Difference being amount actually taken up from the Collector up to 30th April 1856				21,054	7	5
	Major Selby debits Rupees 200 in his Account for June 1855 to Overseer Harold, of this sum Rupees 100 was paid by the Chowghaut Tahsildar on Major Selby's order, but the amount has not, as it should have been, credited in his (Major Selby's) Account Current				100	0	0
	Total.....				21,154	7	5
1856 May	Blance				942	7	10
	Add Receipts from Collector...	1,350	0	0			
	Amount recovered from Contractor for Tahsildar as shown above	53	8	0			
					1,403	8	0
	Total.....				2,345	15	10

(a)

	Rs.	A.	P.
In March 1855...	0	3	0
,, April ,, ...	0	4	0
,, May ,, ...	0	6	0
,, June ,, ...	13	1	0
,, July ,, ...	0	4	0
,, Novr. ,, ...	11	10	6
,, Decr. ,, ...	109	7	6
,, January 1856, Less recovery of Rupees 53-8, appertaining to an advance originally debited only in the Tahsildar's Account.	273	0	0
,, February 1856	4	4	9
,, March ,, ...	78	8	0
Total...	491	0	9

(b)

	Rs.	A.	P.
In April 1855... ...	50	0	0
,, May ,, ...	5	0	0
,, June ,, ...	33	2	5
,, Octr. ,, ...	0	4	7
Total...	88	7	0

Calicut,
12th August 1856.

DAM.

discrepancies in his Receipts and disbursements and the correct result.

		Rs.	A.	P.	Rs.	A.	P.
	Major Selby's Debit side of the Account Current amounts to.....				21,187	12	0
	But shews the following discrepancies:						
	Deduct errors *(c)* in addition of Day-Book shewing a net excess of.....	43	8	0			
	Ditto double entry in charging 360 Rupees in Account Current for January 1856, as per Voucher H. thereto attached, a similar amount having been charged in Day-Book on the 29th of the same month.....	10	0	0			
	Ditto being charge incurred and debited in February 1856 by Tahsildar and repeated in Major Selby's Day-Book for the same month.....	16	3	0			
	Ditto amount recovered (in June 1856) from Overseer Adan's expenditure.....	1	6	8			
	Ditto being advances recovered from Contractors, &c. *(a)*	491	0	9			
	Ditto being expenditure charged to Chetwye Dam but incurred on account of Segoor bridge and since refunded, Vide Captain Francis' letter to Collector, dated 2nd February 1857, No. 53 *Enc. (e)*	363	10	0			
	Ditto being value of a Poney purchased by Overseer Drysdale and charged in August 1855 to the Chetwye Dam (but refunded in December 1856)..... ...	50	0	0			
					975	12	5
					20,211	15	7
	Balance on the 30th April 1856.....				942	7	10
	Total.....				21,154	7	5
1856 May	Expenditure as per Account Current for June 1856.....				1,458	8	2
	Refunded into Collector's Treasury *(d)*	866	3	8			
	Balance due by Major Selby.....	21	4	0			
					887	7	8
	Total.....				2,345	15	10

(c)

	Omissions in favor of Major Selby.			Excess against Major Selby.		
	Rs.	A.	P.	Rs.	A.	P.
In March 1855	3	0	0	0	0	0
,, May ,, ...	0	0	0	0	0	10
,, July ,, ...	5	2	6	0	0	0
,, August ,, ...	0	0	0	53	14	0
,, Decr. ,, ...	10	0	0	0	0	0
,, Febr. 1856	0	0	0	7	11	8
,, March ,, ...	10	0	0	0	0	0
,, April ,, ...	0	0	0	10	0	0
Total...	28	2	6	71	10	6
Deduct omissions...				28	2	6
Net overcharge.....				43	8	0

(d)

		Rs.	A.	P.
In May	1856.....	51	0	0
,, August	,, ...	60	0	0
,, October	,, ...	341	9	8
,, December	,, ...	50	0	0
,, January	1857.....	363	10	0
Total.....		866	3	8

E. E.

(Signed) T. E. TENNANT,
Assistant Engineer Malabar.

D. CHETWYE DAM.

Comparative Statement of Expenditure as given by the Executive Officers and as at present revised from Commencement up to 30th April 1857.

Executive Officers.	Original.			Revised.			Difference. Increase.			Difference. Decrease.			Remarks.
	Rs.	A.	P.	Rs.	A.	P.	R.	A.	P.	Rs.	A.	P.	
1855-56.													
Major Selby's Account Current and Day-book	17,681	12	„	16,707	6	3	„	„	„	974	5	9	Vide Statement C.
Overseer Harrold's do.	3,036	„	„	3,110	3	2	74	3	2	„	„	„	Charged by Overseer Harrold in March and by Major Selby in June 1856.
Do. Adan's Account Current	470	„	„	468	9	4	„	„	„	1	6	8	Vide Statement C.
Total...	21,187	12	„	20,286	2	9	74	3	2	975	12	5	
										74	3	2	Deduct Increase.
										901	9	3	Net Decrease.
Mr. F. Clark's Account Current	4,777	9	4	4,673	5	4	„	„	„	104	4	„	Not paid Rs. 16-9-4 Refunded „ 87-10-8
Collector and Tahsildar's Accounts Particular	1,588	2	7	1,434	10	7	„	„	„	153	8	,	Admitted in Overseer Harrold's Account Current 100 Recovered and credited by Major Selby in June 1856, 53-8.
Total...	6,365	11	11	6,107	15	11	„	„	„	257	12	„	
G. Total for 1855-56.	27,553	7	11	26,394	2	8	„	„	„	1,159	5	3	
1856-57.													
Collector's and Tahsildar's Account Particular	29	5	6	29	5	6	„	„	„	„	„	„	
Major Selby's Account Current	1,458	8	2	1,384	5	„	„	„	„	74	3	2	Vide remark above.
Mr. F. Clark's do do	28	„	„	„	„	„	„	„	„	28	„	„	Does not appear to have been paid.
Overseer Adan's bill....	7,303	2	10	7,303	2	10	„	„	„	„	„	„	
Total...	8,819	0	6	8,716	13	4	„	„	„	102	3	2	
Grand Total from commencement up to 30th April 1857	36,372	8	5	35,111	„	„	„	„	„	1,261	8	5	
Add cash balance of 30th April	483	13	6										
Due by Major Selby....	21	4	„	505	1	6							
Total as per Collector's Statement of advances A	.....	.....	.....	35,616	1	6							

E. E.

Calicut, 12th August 1857.

(Signed) T. E. TENNANT,
Assistant Engineer Malabar.

E. CHETWYE DAM.

Statement shewing the amount of work executed as measured by Lieutenant T. E. Tennant, Assistant Engineer of Malabar, on the 13th July 1857.

	Work.	Cubical Contents.	Rate. R.	A.	P.	Per.	Amount of Valuation. Rs.	A.	P.	Total. Rs.	A.	P.	Remarks.
Foundation.	*Earth-work.*												
	North embankment.....	9,698	0	1	6	C. Yd.	909	3	0	0	0	0	Sand embankment slopes 2 to 1 about 2,000 cubic yards have been washed away by the present monsoon.
	South do.	42,245	0	1	6	do.	3,960	7	6	4,869	10	6	Sand embankment slope 2 to 1 and 1½ to 1.
	Foundation to wing walls and abutments.....	120·8											
	do. to body of work.	710·1											
	do. to apron..... ...	534·19											
	Total Cub. Yards.	1,365·1	0	1	0	do.	85	5	0	85	5	0	
	Rough laterite stone work.												
	North wing walls and abutments.....	2,929½	...	...	...	.....	.....	...	...	.....	...	...	Laterite blocks laid without chunam.
	South do. do ...	2,929½	...	...	...	.....	.....	...	...	.....	...	...	
	Body of weir.....	25,725	...	...	...	.....	.....	...	...	.....	...	...	
	Apron.....	11,290	...	...	...	.....	.....	...	...	.....	...	...	
	Total Cub. Feet...	42,874	0	2	6	C. Feet	6,699	1	0	6,699	1	0	
	Total.....	.....	...	...	...	.....	.....	...	...	11,654	0	6	

E. E.

Calicut, 12th August 1857.

(Signed) T. E. TENNANT,
Assistant Engineer Malabar.

F. CHETWYE DAM.

Value of Materials as estimated by Lieutenant T. E. Tennant, Assistant Engineer of Malabar at Chetwye.

Materials. 1		Rate. 2			Per. 3	Amount. 4		
1,54,629	Seers Chunam	4	0	0	1,000	618	12	3
67,320	do Mortar	4	0	0	do.	269	4	5
1	Diamond shaped Granite stone 5′-7″ cubic ...	0	0	0	„	5	0	0
1	Trapezoid do do 6′ 2¼″ do ...	0	0	0	„	5	12	0
106	Cubic yards Granite Rubble stone	0	10	0	Pr. C. yrd..	66	4	0
95	Laterite stones 2′-4″ × 2′-4″ × 1′ 2″	0	5	3	do.	31	2	9
385	Cubic feet Hydraulic cement	0	12	0	C. F.	288	12	0
					Rupees.....	1284	15	5

E. E.

Calicut, 12th August 1857.

(Signed) T. E. TENNANT,
Assistant Engineer Malabar.

G.

Value of Materials at the Quarries as estimated by Lieutenant T. E. Tennant Assistant Engineer of Malabar

CHETWYE DAM.

Names of Quarries.	Materials.	Rate.	Per.	Amount of valuation.	Total.	Remarks.
		Rs. A. P.		Rs. A. P.	Rs. A. P.	
	Laterite.					
Yelliencoonoo	26,266 Cut stones 2′×1′×$\frac{3}{4}$′	25	1,000 each.	656 10 5		
	7,738 Do. 2′ 4″×2′ 4″×1′ 2″	... 3 ...		1,450 14 ...	2,107 8 5	
	Granite.					
Trikumatha	1,942-9 Cubic yards Rubble stone	... 10 ...	C. Yds.	1,213 15 4	1,213 15 4	
Chittapully	274 Cubic yards ditto. ditto	... 10 ...	do.	171 9 ...		
	20 Diamond shaped cut stones 112$\frac{1}{2}$ cubic feet	... 11 ...	C. F.	77 5 6		
	47 Trapezoid do. do. 291-9$\frac{1}{2}$	... 11 ...	do.	200 10 3	449 8 9	
Velledom	48 Diamond shaped do. do. 270	... 11 ...	do.	185 10 ...		
	88 Trapezoid do. do. 544$\frac{1}{2}$	... 11 ...	do.	374 5 6	559 15 6	
Veemboo and Cootally	13 Diamond do. do. 73-11$\frac{1}{2}$	... 11 ...	do.	50 4 2		
	16 Trapezoid do. do. 99-1$\frac{1}{2}$	... 11 ...	do.	68 1 ...	118 5 2	
Sying at Trichore	80 Diamond do. do. 450	... 11 ...	do.	389 6 ...		A contract was made for the carriage of these stones from the Quarries at Veemboo at 1 Rupee each.
	Carriage of ditto	... 1 ...	each.			
	121 Trapezoid shaped cut stones 748 Cubic feet 8$\frac{1}{4}$	... 11 ...	C. F.	635 14 7	1,025 4 7	
	Carriage of ditto	... 1 ...	each.			
				Total Rupees.....	5,474 9 9	

E. E.
(Signed) T. E. TENNANT,
Assistant Engineer Malabar.

Calicut,
12th August 1857.

H.

Value of plant at the Chetwye Dam as estimated by Lieutenant T. E. Tennant, Assistant Engineer of Malabar.

No.		Weight. Tons.	Cwts.	Qrs.	lbs.	Rate.	Value. Rs.	A.	P.
24	English steel 5′ 5″×1′×1″	...	4	...	...	3 as. per lb.	84	...	...
	Do. do.	...	2	2	19	3 as. „	56	1	...
	Iron nails	...	...	2	6	4 as. „	15	8	...
6	Iron straps and hooks for monkeys	...	...	3	14	„ „	12	...	...
	Screws	...	...	...	20	8 as. „	10	...	...
35	Iron staple nails	...	...	...	26	4 as. „	6	8	...
	Old iron straps, Caps, &c	...	2	3	20	2 as. „	41	...	...
47	Iron bolts, nuts, washers, 1′ 7″	...	2	2	16	160 Rs. per ton.	21	2	3
4	Crabs	...	1	2	16	3 as. per lb.	34	8	...
2	Pile monkey levers	...	...	2	12	4 as. „	17	...	...
21	Crow bars	...	2	3	25	3 as. „	62	7	...
2	Hand jumpers 5′ long	...	...	2	13	13 as. „	56	1	...
43	Blasting hammers	...	3	1	11	4 as. „	93	12	...
5	Pile shoes	...	...	2	8	2 as. „	8	...	...
10	Pick axes very old	...	...	2	14	1 R. each.	10	...	...
4	Windlass handles	...	...	3	16	2 as. per lb.	12	8	...
6	Wrought iron axles	...	1	...	22	160 Rs. per ton.	9	9	2
4	Large bolts 3′	...	...	3	11	160 „ „	6	12	7
1	Monkey crab	...	...	1	16	2 as. per lb.	5	8	...
	Iron bolts from 3′ 6″ to 9″	...	...	2	17	100 Rs. per ton.	3	4	2
	Spare nuts, washers, hooks, thimbles and staples all old	...	...	1	10	2 as. per lb.	4	12	...
27	Hooks, rings and couples	...	...	2	18	2$\frac{1}{2}$ as. „	11	9	...
	Spare beam hook for monkey	...	...	...	19	2 as. „	2	6	...
	6 Feet of iron chain	...	...	...	5		2	15	...
178 ft.	Rails for Railway in 5 feet and 3 feet lengths	1	...	3	16	85 Rs. per ton.	88	12	8
4	Broken jumpers	...	...	...	15	2 as. per lb.	1	14	...
	Sheet lead	...	...	...	3½	1 R. 11 as. 6 p.	6	...	3
	Brass wire	...	...	...	1⅛	2 „ „ „	3	...	...
	Pitch	...	...	1	21	9 „ per mds.	39	14	4
	Coir yarn	...	1	1	25	1 „ „	5	8	...
	Cotton for boats	...	...	...	13½	6 „ „	2	11	2
21	Steel jumpers	...	...	1	13	13 as. per lb.	33	5	...
6	Bill hooks	...	...	...	8	4 as. „	2	...	...
13	Axes	...	...	2	19	4½ as. „	21	1	6
11	Coupling hooks	...	...	1	3	3 as. „	5	13	...
9	Esses	...	...	...	20	„ „	2	13	...
3	Wrenches	...				1 R. each.	3	...	...
1	Gimlet	...				„	...	4	...
2	Small files	...				8 as. each.	1	...	...
4	Rasps	...				12 as. „	3	...	...
13	Mamoties very old	...				4 as. „	3	4	...
12	English shovels, good	...				2 Rs. „	24	...	...
7	Stone axes (very old)	...				„	2	...	...
58	Cast iron wheels for barrows (some old and broken)	..				1¼ Rs. each.	72	8	...
6	Do. for Railway	...				2 „ „	12	...	...
19	Wooden road rammers	...				6 as. „	7	2	...
3	Water wheels with boxes complete	...				20 Rs. „	60	...	...
5	Do. do. old and broken	..				10 „ „	50	...	...
1	Wire screan	...				„	2	...	...
2	English 4 wheeled trucks	...				60 Rs. each.	120	...	...
1	Cross staff	...				„	1	...	...
26	Chunam rollars 3′ 3″×5¼ girt	...				12 as. each.	19	8	...
135	Wheel barrows	...				5½ Rs. „	742	8	...
22	Granite chunam blocks 2′ 6″×1′ 6′×9″	...				2 „ „	44	...	...
24	Wheel barrow frames	...				2 „ „	48	...	...
14	Do. do. broken and old	...				8 as. „	7	...	...
1	Skeleton frame of Railway trucks	...				„	1	...	...
2	Saws	...				1½ Rs. each.	3	...	...

Value of Plant at the Chetwye Dam, &c.—(Continued.)

No.		Rate.			Value.		
		Rs.	A.	P.	Rs.	A.	P.
13	Pricks and cleaners for quarry	0	8	0 eacl	6	8	0
2	Screw drivers	1	0	0 each	2	0	0
4	Chisels	0	8	0 eacl	2	0	0
4	Hand hammers.	0	8	0 eacl	2	0	0
10	Trowels, very old	0	2	0 eacl	1	4	0
2	Pairs of Blacksmith's pincers, 1 broken	1	0	0 eacl	2	0	0
1	Do. compasses	0	0	0	12	0	0
1	Boring brace	0	0	0	1	0	0
1	Large auger	0	0	0	1	8	0
3	Small do.	0	8	0 eacl	1	8	0
1	Mason's line, 400 yards	0	0	0	2	8	0
8	Paddles for canoes	0	8	0 each	4	0	0
8	Rings	0	4	0 eacl	2	0	0
48	Sleepers 10′ 10″ × 10″ × 5″	1	4	0 eacl	60	0	0
6	2 Wheel stone trucks, 5 old and broken	4	0	0 eacl	24	0	0
	Part of an old harness	0	0	0	0	8	0
1	Stone waggon	0	0	0	5	0	0
1	Bandy and pair of bullocks	0	0	0	72	0	0
5	Good double blocks...	2	8	0 each	12	8	0
20	Good single blocks	1	8	0 eacl	30	0	0
3	Old double do.	1	0	0 each	3	0	0
1	Old single do.	0	8	0 eacl	0	8	0
3	Parrah measures for lime	0	8	0 each	1	8	0
1	Water scoop	0	0	0	1	8	0
1	Set of wooden stairs, 8 feet long	0	0	0	16	0	0
1	Hand monkey	0	0	0	2	0	0
3	Wooden windlass complete	0	3	0 eacl	9	0	0
4	Bivels and squares	1	0	0 eacl	4	0	0
2	Plum rods	1	0	0 each	2	0	0
1	Native Carpenter's lathe	0	0	0	1	0	0
4	Half casks	2	8	0 eacl	10	0	0
2	Teak wood spars 36′ × 8″ quarter girt	3	8	0 eacl	7	0	0
1	Derrick complete	0	0	0	15	0	0
1	Wooden bridge, 39 feet long	1	4	0 ₹ ft.	48	12	0
2	Do. pile drivers incomplete	32	0	0 each	64	0	0
1	Crane (old and incomplete)	0	0	0	8	0	0
2	Wooden pumps, 11′ 6″ long complete... ...	20	0	0 each	40	0	0
1	Do. incomplete and broken	10	0	0 eacl	10	0	0
7	Sheds, total No. of feet 337	15	0	0 each	105	0	0
1	Cask blasting gun powder, bad	0	0	0	25	0	0
20	Casks...	7	0	0 each	140	0	0
724 ft.	1¼″ Coir rope tackle 3 double and 3 single block ...	0	0	0	34	0	0
112 ft.	1½″ Coir rope and tackle with 2 double block ...	0	0	0	20	0	0
12	Old bolts rotten and useless	2	0	0 each	24	0	0
1	Large barge, prime cost 325 Rs.	0	0	0	200	0	0
1	Large barge	0	0	0	200	0	0
1	Boat 36′ 6″ long	0	0	0	30	0	0
1	Do. 32′ long	0	0	0	25	0	0
2	Do. 29′ long prime cost Rs. 80 the pair ...	30	0	0 each	60	0	0
2	Do. 27′ long prime cost „ 120 the pair ...	50	0	0 each	100	0	0
1	Do. 27′ long	0	0	0	20	0	0
2	Do. 23′ long	15	0	0 eacl	30	0	0
1	Do. 25′ long	0	0	0	20	0	0
1	Do. 25½′ long prime cost 20 Rs.	0	0	0	7	0	0
3	Do. platform	5	0	0 each	15	0	0
3	Cast iron double pumps each consisting of 1 pump rod, 2 standards, 1 cistern, 2 barrels, 2 piston rods with pins and cottars, 6 pipes with flanges, 1 wind bore, 4 blocks with covers and bars, 4 rubbers for blocks, 2 buckets with covers, rubbers, spindles and cottars, (2 flanges, 2 pipes broken.)	1,000	0	0 each	3,000	0	0
158¼	Cubic feet of old planks	0	3	0 c. ft.	29	10	9

Value of Plant at the Chetwye Dam &c.—(Continued.)

No.		Rates.			Value.		
		Rs.	A.	P.	Rs.	A.	P.
3,222	Cubic yards earth work for canal and basin	0	0	6 c.yd.	100	11	0
12	Old and broken boats	1	0	0 each	12	0	0
	Mortar mill with granite grind stone for chunam and lime	0	0	0	75	0	0
	Chunam and Hydraulic cement kilns	0	0	0	200	0	0
	Total.....	0	0	0	6,986	0	4

E. E.

Caliut, 12th August 1857.

(Signed) T. E. TENNANT,
Assistant Engineer, Malabar.

	Rs.	As.	P.
NOTE.—Total brought down	6,986	0	4
Deduct value of pumps which do not appear to have been paid for from the estimate	3,000	0	0
Balance.....	3,986	0	4

I. CHETWYE DAM.

Value of Railway and Plant at Yelliancoonoo Quarry.

Articles.	Weight. Tons.	Cwt.	Qrs.	Lbs.	Rate. Rs.	A.	P.	Per.	Amount. Rs.	A.	P.
10,686 Feet of Railway, ...	37	8	...	6	85	...	...	ton.	3,179	3	7
Nails for Railway, ...	...	...	...	...	...	...	...	.....	100	...	...
10,686 Feet of Sleepers, 3,710 cubic feet, ...	...	...	...	...	12	...	...	100 ft.	80	2	...
350 Feet of cocoanut piling, ...	...	...	...	...	81	8	...	do.	285	4	...
3 Derricks, ...	...	...	...	...	15	...	...	each	45	...	...
3 Windlasses, ...	...	...	...	...	12	...	...	do.	36	...	...
10 Railway Trucks, ...	...	...	...	...	25	...	...	do.	250	...	...
19 Do. wheels, ...	...	...	...	...	2	...	...	do.	38	...	...
8 Wrought iron axles for Trucks, ...	...	...	1	2	19	160	...	ton.	13	5	8
848 Spare rails, ...	...	2	13	...	...	85	...	do.	225	4	...
3 Wooden stone Trucks, ...	...	...	...	...	...	3	8	each	10	8	...
16 Spare Sleepers, ...	...	...	...	...	...	1	4	do.	20	...	...
5 Coupling hooks, ...	...	...	...	...	14	...	3	lb.	2	10	...
9 Bolts with washers, ...	...	...	...	...	14	100	...	ton.	...	10	...
2 Long bolts, ...	...	...	...	1	19½	160	...	do.	3	6	3
4 Railway Truck frames, ...	...	...	...	...	...	3	...	each	12	...	...
2 Wooden stone Truck axles, ...	...	...	...	...	...	...	4	do.	...	8	...
5 Do. wheels, ...	...	...	...	...	...	...	8	do.	2	8	...
5 Iron axle bearings, ...	...	1	...	13	...	3	...	lb.	23	7	...
1 Shed, ...	...	...	...	...	...	...	...	...	5	...	...
								Total Rupees.....	4,332	11	6

Calicut, 12th August 1857.

E. E.

(Signed) T. E. TENNANT,
Assistant Engineer, Malabar.

L No. 1.

The joint agreement entered into with the Honorable Company by Poothenvittil Krishnen of Cherpoolcherry Deshom and Amshom in the Nedinganad Talook, and Toorkote Kittoo of Kooticod Deshom, Tricoodoovelly Amshom in the aforesaid Talook, for granite Stones.

Six hundred Granite Stones, 200 of one and 400 of another model, being required for the work of the Dam which is being newly erected at Chetwye in the Chowghat Talook, the Engineer Mr. Selby has got models in wood of each of these 200 and 400 Granite Stones made. We

hereby engage to cut 300 granite stones, viz. 100 of the model of which 200 are required, and 200 of the model of which 400 are required, from the spots which the aforesaid gentleman may point out according to the above models, and to dress and get them ready at the quarry; the Government paying us the hire that may be due, at the rate of 11 annas per cubic foot. We hereby promise to employ not less than 20 persons daily for this work and to complete the whole of it, to get the 300 stones ready and to deliver them over within 3 months, commencing from 20th Mithoonam 1030, or 2nd July 1855; the Government advancing us now 200 Rupees at the rate of 100 Rupees each on the above account, and afterwards such further monthly advances as may from the state of the work be deemed requisite. Both parties having mutually agreed to abide by this agreement it has been accordingly drawn out and executed.

On the fulfilment of this agreement for the aforesaid granite stones according to the above models, within the stipulated period of 3 months, we shall receive the balance due to us, deducting the advances that have been made.

In the event of our failing to act up to the terms of this karar, we bind ourselves to make good to the Sircar any loss which they may be subjected to thereby, and within 90 *Narighas* (36 hours) from the hour that we are directed to do so, and shall submit to any order that may be given us.

We have therefore of our own accord and in the presence of the undermentioned 2 witnesses affixed our signatures to this agreement.

Witness.
1 Deloyet Kassim.
2 Do. Rama Coorpoo.

Signature of the Contractors.

Dated 9*th Mithunam* 1030.
22nd June 1855.

No. 2.

Agreement entered into with the Honorable Company by Chodala, Son of Cally, a granite Stone Cutter, inhabitant of Parra, in Ellapully Umshom of the Palghaut Talook for Granite Stones.

Six hundred Granite Stones, 200 of one and 400 of another model, being required for the work of the Dam which is being newly erected at Chetwye in the Chowghat Talook, the Engineer Mr. Selby has got models in wood of each of these 200 and 400 granite stones made. I hereby engage to cut 300 Granite Stones, viz. 100 of the model of which 200 are required, and 200 of the model of which 400 are required, from the spots which the said gentleman may point out to me according to the aforesaid models, and to cut, dress and get them ready at the quarry, the Government paying me for the same at the rate of 11 annas per every cubic foot. I promise to employ not less than 15 persons daily for this work, to complete the same, get ready and deliver over, the 300 stones within 4 months, commencing from the 1st Karkadagom 1030, or 15th July 1855. A sum of 200 Rupees shall now be advanced to me by the Government on the above account and afterwards such further monthly advances as may, from the state of the work done, be deemed requisite. The parties having mutually agreed to conform to this agreement, it has been drawn out and executed.

On the fulfilment of the agreement for the Granite Stones alluded to above according to the models aforementioned and within the period above stipulated, I shall receive the balance amount deducting the advances that have been made.

In the event of my failing to act up to the terms of this agreement, I hereby agree to make good any loss which the Sircar may sustain thereby within 90 *Narighas* (36 hours) from the time that I may be ordered to do so and to obey any order that may be given me.

I have therefore of my own accord and in the presence of the undermentioned two witnesses, affixed my signature to this agreement.

Witness.
1 Seyed Moodeen, Deloyet.
2 Yucoobsa, Peon.

Signature of the Contractor Chodala.

Dated 17*th Mithunam* 1030.
29th June 1855.

(Signed) before me June 29th, 1855.
(Signed) C. COLLETT,
Sub Collector.

No. 3.

Agreement entered into with the Honorable Company by Cossambgagatha Ahmod, residing in the town of Ponany of the Kootnad Talook.

I have this day entered into an agreement to supply 40,000 Laterite Stones, each measuring 2 feet long 1 do. broad and ½ do. thick at 25 Rupees per mill. to be cut an inch more in length and ½ do. in breadth and thickness to admit of their being dressed, and to be counted and delivered at the quarry on the Ellya Coonoor (Hill), for the work of the Dam which is in course of erection at Chetwye in the Talook of Chowghat.

I shall within 5 days from this date tender the necessary security at the Cootnad Talook Cutcherry for the due fulfilment of this agreement.

I hereby engage to cause the aforesaid stones, all of them of good quality, and without any defect or being in any way deficient in the measurement above shewn, to be cut, counted and delivered at the quarry within the next 30th Toolam 1030.

The Government will be pleased to pay the price of the aforesaid stones viz., Rupees 1,000, in advance as follows, Rupees 250, to be paid down now, Rupees 250, on the 30th of this month, Rupees 250 on the 30th Kany and Rupees 250 on the 25th Toolam next, all which I shall receive in advance and grant acknowledgments.

In the event of my failing to act up to the term of this agreement and the work being obstructed from a failure in the supply of stones, or the Government subjected to any loss thereby, I bind myself to make good the loss arising from such a cause and to refund to the Government whenever they may require it the advances which I may have received, and to abide by any order which may be passed.

In proof whereof I have of my own accord affixed my signature to this agreement in the presence of the undermentioned 2 witnesses.

Signature.

Dated 9*th Chingom* 1029.
23rd August 1854.

No. 4.

I, Parlee Cawtoo Sungoo, agree, with full consent to hew and deliver in a finished state stones of 2 feet in length, 1 foot in breadth and ½ do. in thickness at the rate of Rupees 25 per thousand. I have received on account of the above, Rupees 11 and Rupees 5 towards the repairing of axes.

Signature.

True Translation.
(Signed) T. E. TENNANT,
Assistant Engineer Malabar.

Dated 13th December 1855.

CHETWYE DAM.

M.

Notes.

1853, June 6th—First Report from Chowghat Tahsildar, forwarding a list of Granite Quarries in accordance with the late Mr. Conolly's verbal instructions.

„ August 16th—Mr. Conolly directed Tahsildar to procure 25 specimens of Granite from the nearest Quarries.

„ October 17th—First advance of Rupees 7-8-7 from the Collector's Treasury on this date for testing the quality of stones in the neighbourhood of the Chetwye Dam.

„ „ 21st—Chowghat Tahsildar reported in a Yadust to Sub Collector, that Captain Ludlow and Maistry Vedamootoo had visited the Quarries on the 17th and did not approve of the quality of the stone, that Captain Ludlow had directed that 5 or 600 stones should be brought from the Quarries west of Palinkincolom near the Idyasherra Dam, and requested the sanction of an advance for the above purpose. Captain Ludlow at the same time ordered the Tahsildar to make his report to the Sub Collector.

1854, May 10th—Captain Selby engaged in surveying the river at Chetwye.

„ Sept. 1st and 23rd October 25th and November 15th, stone contractor Bossanby Agatha Ahmed, received from the Talook Treasury Rs. 500, but fulfilled his contract to the extent of only Rs. 446-8, and the balance, viz. Rupees 53-8, was recovered by Major Selby, with other sums, making a total of Rupees 303-8 and credited in his account for January 1856.

„ Novr. 15th—Captain Selby directed the Chowghat Tahsildar to pay Rupees 250 to stone contractor "if so much is due." The amount was paid but no corresponding entry appears in Captain Selby's Account Current. The Chowghat Tahsildar paid two drafts drawn by Major Selby for Rupees 20 and 25 respectively, neither of which bore any date.

„ „ 18th—Captain Selby ordered the Chowghat Tahsildar not to make any payment whatever on account of the Chetwye Dam without his express order.

„ „ 20th—Captain Selby called upon the Tahsildar to render his account and particulars of all expenditure from commencement up to that date on the Chetwye Dam.

„ „ „ —Captain Selby enters a sum of Rupees 14 in his Account Current supposed to be as per his receipt for that amount without date.

1855, March 13th—Captain Selby on this date granted a receipt to the Tahsildar of Ponany for Rupees 35 on account of Tools, thereby acknowledging the validity of the charge, nevertheless he neglects to enter this item in his accounts.

„ „ 22nd—Captain Francis inspected the Stone Quarries both laterite and granite on this date.

„ „ „ —Captain Selby's Day Book of this month shews a total of	Rs.	287	6	4
The proved total amounts to	„	290	6	4
leaving a difference in his favor of	„	3	0	0

„ April 3rd—Captain Selby credits in his Account Current Rs 50 on this date, but which does not appear by the Collector's Accountants to have been disbursed to him or to his order.

„ May 1st—Captain Selby was at Ootacamund on this date, he signed an order on the Tahsildar of Chowghat for Rupees 200, dated "Chetwye, 1st May 1855" also an order for Rupees 100, dated "Ootacamund, 1st May 1855."

„ „ „ —Captain Selby's Day Book for this month shews a total of	Rs.	1,149	9	1
The correct total amounts to	„	1,149	8	3
Difference against him is	„	0	0	10

„ June 22nd—Captain Selby drew an order on this date on the Chowghat Tahsildar in favor of Mr. Harrold for Rupees 100 which was paid, but the amount is not entered in his Account Current.

„ July 12th—There is an entry of Rupees 5-10-6 in Captain Selby's Day Book of this date, made in *red* ink which is not included in the total of that month's expenditure or in his Account Current and does not appear to have been brought in any other account.

„ „ „ —Captain Selby's Day Book for this month is	Rs.	644	10	9
The correct total	„	649	13	3
Difference in favor of Captain Selby	„	5	2	6

„ Augt. 18th—Captain Selby requested a statement of the Tahsildar's disbursements to him since 20th July 1855, on account of the Chetwye Dam.

1855, Augt. 18th—Captain Selby gives the aggregate of his Day Book for this month is	Rupees	439	8	11
Exclusive of Salary of establishment	„	11	0	0
Total Rupees		450	8	11

The correct aggregate of the former is found to be	Rs.	372	10	11	
Do. of the latter	„	24	0	0	396 10 11
Excess charged by Captain Selby	Rs.				53 14 0

„ December Aggregate of Captain Selby's Day Book for this month	Rs.	611	10	1
Correct total	„	621	10	1
Difference in his favor	„	10	0	0

1856, January—The aggregate of Major Selby's Day Book for this month, viz. Rupees 785-13-10 includes a sum of Rs. 10 which is again entered in his Account Current under the head of granite contractor Rs. 360 and which in his voucher marked H, is shewn to include the said sum of Rs. 10 which amounts to a double entry leaving a difference against him of Rs. 10.

„ February—Aggregate of Captain Selby's Day Book for this month	Rs.	714	9	1
Correct total	„	706	13	5
Difference against him	„	7	11	8
Add double entry being amount charged on 25th February for planks paid by the Tahsildar according to Captain Selby's order and receipt of that date and at the same time entered in Captain Selby's Day Book	„	16	3	0
Total	„	23	14	8

„ March—Major Selby's Day Book gives a total of	Rs.	29	15	0
Correct total	„	39	15	0
Difference in his favor	„	10	0	0

„ April—Aggregate of Major Selby's Day Book is	Rs.	49	6	8
Correct total	„	39	6	8
Difference against Major Selby	„	10	0	0

1857, January 5th—The sum of Rupees 50 was recovered from Overseer Deysdall for a Pony the property of Government sold to him by Major Selby.

„ February 19th—Rupees 363-10-0 was paid to the credit of the Chetwye Dam work by Captain Francis for iron supplied for the Seegoor bridge.

(Signed) T. E. TENNANT,

Assistant Engineer, Malabar.

N.

CHETWYE DAM.

Abstract of Major G. Selby's Day Book.

Plant.

			Rs.	A.	P.
1854 Novr.	13th,	Nail	0	6	0
„ „	23rd,	Hut for Stores ...	20	0	0
			20	6	0
1855 Jan.	9th,	3 Ropes (coils) ...	15	0	0
		Iron bolts, &c. &c.	75	0	0
		1 Augur, large ...	2	8	0
		Saw... ...	2	0	0
			94	8	0
„	March 2nd,	1 Gross 3″screws...	3	0	0
		3 Gimlets... ...	0	9	0
		1 Pincer	3	0	0
		2 Rasps	2	8	0
		2 Files	2	8	0
		1 Saw	1	12	0
		3 Chisels	0	15	0
		3 „	1	14	0
		1 Slate Book ...	1	8	0
„ „	3rd,	2 Hammers ...	2	0	0
		2 Bill-hooks ...	4	0	0
„ „	5th,	Wood for bandy...	0	4	8
„ „	15th,	Wood... ...	3	0	0
„ „	21st,	Bar steel tools ...	15	0	0
			41	14	8
„	April	2 Trees... ...	0	4	8
„	May 17th,	2 Turn screws ...	2	8	0
		1 lb Brass wire ...	2	0	0
		Timber for shed ...	3	0	0
„ „	22nd,	1 Large Boat ...	50	0	0
		1 do. ...	30	0	0
„ „	31st,	Value of 2 Boats @ 70 and 80...	150	0	0
			237	8	0
„	June 5th,	150 Fathams small rope... ...	0	1	3
		Wood 219 coles...	15	6	0
„ „	11th,	do. 115 do....	6	10	0
		Hut and trees ...	5	0	0
		1 Pair of bullocks.	50	0	0
		Repairing Theodolite... ...	1	0	0
		Levelling Staff ...	7	0	0
			85	1	3
„	July 4th,	Nails... ...	2	12	8
		300 lbs. Steel ...	46	8	0
		20 Rammers ...	6	7	5
		Advance for Sledge hammer... ...	10	0	0
„	„ 9th,	2 Knives ...	0	10	0
„	„ 16th,	Mango planks ...	3	0	0
„	„ 17th,	Boat... ...	45	0	0
„	„ 18th,	Cadjans... ...	4	6	5
„	„ 19th,	2 Small boats ...	24	0	0
			142	12	6

Plant (Continued)

			Rs.	A.	P.
1855 Aug.	18th,	102 Mango planks	7	1	6
„ „	18th,	Pony... ...	50	0	0
		Hammer ...	1	8	0
		Iron for Nails ...	1	0	0
		Boat for mortar...	3	12	0
			63	5	6
„	Sept. 10th,	1 Cart and pair of bullocks ...	75	0	0
„	Nov. 14th,	Hoop iron ...	1	5	0
„ „	20th,	3 Bill-hooks ...	0	6	0
			1	11	0
„	Decr. 12th,	Wire, &c. ...	8	10	0
„ „	12th,	Derrick... ...	11	15	5
„ „	14th,	Planks.. ...	6	0	0
„ „	17th,	do.	3	8	0
„ „	21st,	do.	5	8	4
			35	9	9
1856 Feby.	13th,	13 Wheelbarrows	65	0	0
		Derrick ...	61	8	0
„ „	25th,	Planks... ...	16	3	0
			142	11	0
„	March 3rd,	Rings for Derricks	3	8	0
		Rope... ...	13	14	0
			17	6	0
„	April 3rd,	Turn screws ...	2	8	0
		1 lb. of brass wire	1	8	0
		12 Shovels ...	19	8	0
			23	8	0
		Total Plant...	981	10	4

Labor.

			Rs.	A.	P.
1854 Nov.	13th,	Carpenters ...	0	10	0
		Coolies ...	0	4	0
		Tailor ...	1	0	0
		Carpenter ...	0	3	0
„ „	21st,	8 Coolies ...	1	0	0
„ „	22nd,	8 do. ...	1	0	0
„ „	23rd,	17 do. ...	2	2	0
„ „	„	Iron Smith ...	0	3	0
„ „	24th,	18 Coolies ...	2	4	0
„ „	25th,	27 do. ...	2	5	6
„ „	„	Carpenters ...	0	6	0
„ „	27th,	35 Coolies ...	3	5	0
„ „	28th,	10 do. ...	1	4	0
„ „	29th,	12 do. ...	1	8	0
„ „	„	Boat hire ...	1	0	0
			18	6	6

Labor (Continued.)

			Rs.	A.	P.
1854 Jan.	9th,	Bullock hire	4	0	0
„ „	„	Coolies ...	0	10	0
„ „	„	Bandy hire ...	8	4	0
„ „	30th,	Carpenter ...	0	3	0
„ „	„	4 Coolies ...	0	8	0
„ „	31st,	76 do. ...	9	8	0
„ „	„	71 do. ...	8	14	0
„ „	„	6 do, ...	0	12	0
			32	11	0
„	Feb. 4th,	Taring large boat..	15	0	0
„ „	„	96 Coolies ...	14	0	0
„ „	„	30 Iron Smiths ...	4	11	0
„ „	„	Coolies ...	0	8	0
„ „	19th,	Taring small boats.	2	0	0
„ „	„	77½ Carpenters ...	19	6	0
„ „	„	61 do. ...	11	7	0
„ „	„	45½ Sawyers ...	11	6	0
„ „	„	12 Coolies ...	1	8	0
			79	14	0
„	March 3rd,	154 Coolies... ...	19	4	0
„ „	„	27 Boys ...	1	11	0
„ „	„	Boat hire ...	1	8	0
„ „	5th,	27 Coolies ...	10	8	8
„ „	„	41 Carpenters ...	10	4	0
„ „	„	21 do. ...	3	15	0
„ „	„	29 Sawyers ...	7	4	0
„ „	„	8 Coolies ...	1	0	0
„ „	„	38 do. ...	4	12	0
„ „	6th,	14 Carpenters ...	3	8	0
„ „	„	8 Sawyers ...	2	0	0
„ „	„	8 Carpenters ...	1	8	0
„ „	15th,	46 Coolies ...	5	12	0
1855 „	„	77 Coolies ...	9	10	0
„ „	„	6 Iron Smiths ...	0	12	0
„ „	„	7 Coolies ...	0	10	6
„ „	„	50 Boys ...	3	2	0
„ „	„	4 Coolies ...	0	4	0
„ „	„	Cooly hire ...	4	15	0
„ „	„	37 Carpenters ...	9	4	0
„ „	„	21 do. ...	3	15	0
„ „	„	19 Sawyers ...	4	12	0
„ „	„	3 Coolies ...	0	6	0
„ „	„	1 do. ...	0	2	0
„ „	„	Iron Smith ...	8	0	0
„ „	17th,	9 Carpenters ...	2	4	0
„ „	„	4 Sawyers ...	1	0	0
„ „	„	2 Coolies ...	0	8	0
„ „	19th,	32 do. ...	4	0	0
„ „	„	44 do. ...	5	8	0
„ „	20th,	4 Carpenters ...	1	0	0
„ „	„	2 do. ...	0	6	0
„ „	„	4 Sawyers ...	1	0	0
„ „	„	4 do. ...	1	0	0
„ „	„	9 Coolies ...	1	2	0
„ „	„	1 Carpenter ...	0	4	0
„ „	„	9 Coolies ...	1	2	0
„ „	„	1 do. ...	0	3	0
„ „	„	4 Sawyers ...	1	0	0
„ „	21st	11 Coolies ...	1	6	0
„ „	„	Carriage of iron bar.	2	5	8
„ „	„	100 Carpenters ...	25	0	0
„ „	„	22 do. ...	4	2	0
„ „	„	36 do. ...	9	0	0

Labor (Continued.)

			Rs.	A.	P.
1855 Mar.	21st	19 Coolies ...	2	6	0
„ „	23rd,	Iron Smith ...	8	0	0
„ „	„	1 Cooly ...	0	3	0
„ „	„	242½ do. ...	30	5	0
„ „	„	Cooly ...	0	2	0
„ „	„	do. ...	0	3	0
„ „	„	Boat hire ...	0	8	0
„ „	„	93 Coolies ...	11	10	0
„ „	„	12 do. ...	1	8	0
„ „	„	31 do. ...	1	15	0
			237	9	10
„	Apl. 11th,	Iron Smith ...	2	0	0
„ „	13th,	173 Coolies ...	21	10	0
„ „	„	8 Carpenters ..	2	0	0
„ „	„	4 do. ...	0	12	0
„ „	„	Cooly hire ...	0	9	0
„ „	14th,	69 Coolies ...	8	10	0
„ „	„	26 do. ...	2	7	0
„ „	„	6 do- ...	0	6	0
„ „	„	16 Carpenters ..	4	0	0
„ „	„	2 do. ...	0	7	0
„ „	„	4 do. ...	0	12	0
„ „	„	6 Sawyers ...	1	8	0
„ „	17th,	65 Coolies ...	8	2	0
„ „	„	26 do. ...	2	7	0
„ „	„	6 do. ...	0	6	0
„ „	„	8 do. ...	1	0	0
„ „	„	10 do. ...	1	4	0
„ „	„	10 Carpenters ...	2	8	0
„ „	„	4 do. ...	0	14	0
„ „	„	2 Sawyers ...	0	8	0
			62	2	0
„	May 17th,	1090 Coolies ...	136	4	4
„ „	„	501 do. ...	46	15	6
„ „	„	82 do. ...	5	2	0
„ „	„	1407 do. ...	175	14	0
„ „	„	720 do. ...	67	8	0
„ „	„	20 do. ...	1	4	0
„ „	„	156 Carpenters	39	8	0
„ „	„	32 do. ...	7	0	0
„ „	„	26 Sawyers ...	6	8	0
„ „	„	2 Iron Smiths and 16 boys	14	0	0
„ „	„	Repair of boat	1	0	9
„ „	„	30 Coolies ...	4	12	0
„ „	„	6 do. ...	0	12	0
„ „	„	10 do. ...	0	15	0
„ „	„	do. ...	0	10	0
„ „	„	do. ...	5	0	0
„ „	„	407½ do. ...	50	15	0
„ „	„	do. ...	0	3	0
„ „	19th,	457 do. ...	57	2	0
„ „	20th,	do. ...	1	0	0
„ „	22nd,	do. ...	1	12	0
„ „	„	18 do. ...	2	4	0
„ „	„	100 do. ...	12	8	0
„ „	„	80 do. ...	7	8	0
„ „	„	200 do. ...	25	0	0
„ „	„	84 do. ...	7	14	0
„ „	„	46 do. ...	5	12	0
„ „	„	22 Carpenters..	5	8	0
„ „	„	7 do. ...	1	8	6
„ „	„	4 Sawyers ...	1	0	0

LABOR (*Continued.*)

					Rs.	A.	P.
1855	May	23rd,	Coolies,	...	0	12	0
,,	,,	24th,	do.	...	0	12	0
,,	,,	,,	Boat hire	...	0	10	0
,,	,,	,,	do.	...	0	3	0
,,	,,	,,	Iron Smith's pay.		16	0	0
,,	,,	27th	16 Coolies	...	2	0	0
,,	,,	,,	16 do.	...	2	0	0
,,	,,	,,	36 do.	...	4	8	0
,,	,,	,,	260 do.	...	26	4	0
,,	,,	,,	104 do.	...	10	11	0
,,	,,	,,	29 do.	...	1	13	0
,,	,,	,,	24 Carpenters	...	6	0	0
,,	,,	,,	6 do.	...	1	5	0
,,	,,	,,	6 Sawyers	...	1	8	0
,,	,,	,,	1 Cooly	...	0	2	0
,,	,,	,,	1 do.	...	0	6	0
,,	,,	,,	5 do.	...	2	0	0
,,	,,	,,	2 do.	...	0	8	0
,,	,,	,,	4 do.	...	0	4	0
,,	,,	31st	Coolies	...	1	8	0
,,	,,	,,	15 do.	...	5	8	0
,,	,,	,,	Boat hire	...	1	0	0
					778	9	9
,,	June	1st,	28 Coolies	...	3	1	0
,,	,,	,,	75 do.	...	8	3	3
,,	,,	,,	2 do.	...	0	2	6
,,	,,	,,	20 do.	...	2	4	9
,,	,,	,,	1 do.	...	0	1	3
,,	,,	,,	8 do.	...	0	14	0
,,	,,	,,	29 do.	...	2	4	3
,,	,,	2nd,	18 do.	...	1	15	6
,,	,,	,,	28 do.	...	3	1	0
,,	,,	,,	6 do.	...	0	10	6
,,	,,	,,	6 do.	...	0	10	6
,,	,,	,,	13 do.	...	1	6	9
,,	,,	,,	10 do.	...	1	1	6
,,	,,	,,	2 do.	...	0	3	6
,,	,,	,,	8 do.	...	0	14	0
,,	,,	,,	2 do.	...	0	3	6
,,	,,	,,	34 Carpenters	...	8	8	0
,,	,,	,,	12 do.	...	2	10	0
,,	,,	,,	8 Sawyers	...	2	0	0
,,	,,	,,	Caulkers	...	0	9	0
,,	,,	5th,	Bandy hire	...	4	8	0
,,	,,	,,	23 Coolies	...	2	8	3
,,	,,	,,	6 do.	...	0	10	6
,,	,,	,,	12 do.	...	1	5	0
,,	,,	,,	4 do.	...	0	5	0
,,	,,	,,	4 do.	...	0	12	0
,,	,,	,,	18 do.	...	1	15	6
,,	,,	,,	4 do.	...	0	5	0
,,	,,	,,	1 do.	...	0	3	0
,,	,,	,,	27 do.	...	2	15	3
,,	,,	,,	6 do.	...	0	9	0
,,	,,	,,	4 do.	...	0	7	0
,,	,,	,,	2 do.	...	0	3	6
,,	,,	,,	1 do.	...	0	1	9
,,	,,	,,	6 do.	...	0	7	6
,,	,,	,,	13 Carpenters	...	3	4	0
,,	,,	,,	2 do.	...	0	7	0
,,	,,	,,	4 Sawyers	...	1	0	0
,,	,,	8th,	Bandy and cooly hire...	...	28	0	0
,,	,,	,,	Bricklayer Maistry...	...	9	0	0

LABOR (*Continued.*)

					Rs.	A.	P.
1855,	June	9th	2 Coolies	...	0	3	0
,,	,,	11th	do.	...	0	2	0
,,	,,	,,	Cooly.	...	0	6	0
					100	7	0
,,	July	4th,	23 Coolies	...	2	8	3
,,	,,	,,	37½ do.	...	4	1	7
,,	,,	,,	8 do.	...	0	14	0
,,	,,	,,	2 do.	...	0	2	6
,,	,,	,,	1 do.	...	0	1	9
,,	,,	,,	5 do.	...	0	15	0
,,	,,	,,	10 do.	...	1	1	6
,,	,,	,,	5 do.	...	0	7	6
,,	,,	,,	5 do.	...	0	5	0
,,	,,	,,	45 do.	...	4	14	9
,,	,,	,,	25 do.	...	2	5	6
,,	,,	,,	4 do.	...	0	5	0
,,	,,	,,	7 do.	...	0	12	3
,,	,,	,,	51 do.	...	3	3	0
,,	,,	,,	2 *do. carriage.*		0	7	0
,,	,,	,,	27 Carpenters	...	6	10	6
,,	,,	,,	10 Sawyers	...	2	8	0
,,	,,	,,	103 Coolies	...	10	7	9
,,	,,	,,	51 do.	...	5	9	3
,,	,,	,,	50 do.	...	3	13	0
,,	,,	,,	25 do.	...	1	9	0
,,	,,	,,	3 do.	...	0	5	3
,,	,,	,,	4 do.	...	0	7	0
,,	,,	,,	8 do.	...	0	14	0
,,	,,	,,	2 do.	...	0	3	6
,,	,,	,,	15 do.	...	1	11	3
,,	,,	,,	39 do.	...	8	13	0
,,	,,	,,	8 Sawyers	...	2	0	0
,,	,,	,,	1 Cooly	...	0	1	9
,,	,,	,,	Coolies	...	1	0	0
,,	,,	,,	Carpenter	...	0	3	0
,,	,,	,,	Boat hire	...	3	0	0
,,	,,	,,	Cooly hire	...	7	1	0
,,	,,	,,	Bandy hire	...	9	0	0
,,	,,	5th,	2 Coolies	...	0	4	0
,,	,,	,,	30 do.	...	2	15	3
,,	,,	,,	2 Sawyers ... 3 Capenters ... 7 Coolies ...		1	15	6
,,	,,	,,	Carpenters	...	3	0	0
,,	,,	,,	36 Coolies	...	3	11	0
,,	,,	,,	6 do.	...	0	10	6
,,	,,	,,	50 do.	...	3	11	0
,,	,,	,,	61 Carpenters, 14 Sawyers	...	17	6	6
,,	,,	6th,	44 Coolies	...	4	8	0
,,	,,	,,	2 Carpenters, 2 Sawyers	...	1	6	6
,,	,,	7th,	3 Carpenters	...	0	14	6
,,	,,	,,	41 Coolies	...	5	0	3
,,	,,	,,	1 Bricklayer Maistry.....		9	0	0
,,	,,	,,	Iron Smith	...	7	0	0
,,	,,	,,	Bellows Boy...		2	0	0
,,	,,	,,	Coolies	...	0	5	0
,,	,,	9th,	Boat hire	...	0	10	0
,,	,,	,,	Sawyers, Carpenters	...	1	14	0
,,	,,	,,	44 Coolies	...	5	3	9
,,	,,	,,	Boat hire	...	2	0	0
,,	,,	,,	5 Carpenters	...	1	2	0

LABOR (*Continued.*)

					Rs.	A.	P.
1855,	July	9th,	49 Coolies	...	4	13	0
,,	,,	,,	5 do.	...	0	10	0
,,	,,	,,	6 Carpenters	...	1	5	6
,,	,,	11th,	5 Coolies	...	0	10	0
,,	,,	,,	68 do.	...	5	6	9
,,	,,	12th,	5 do.	...	0	10	0
,,	,,	,,	57 do.	...	5	10	6
,,	,,	,,	7 Carpenters	...	1	9	6
,,	,,	13th,	2 Sawyers	...	3	0	0
,,	,,	,,	7 Carpenters,	...	1	9	6
,,	,,	,,	57 Coolies	...	6	11	6
,,	,,	14th;	52 do.	...	5	4	0
,,	,,	16th,	do.	...	6	0	0
,,	,,	,,	2 Carpenters	...	0	7	0
,,	,,	,,	72 Coolies, 2 Sawyers	...	7	13	0
,,	,,	17th,	80 Coolies	...	8	1	9
,,	,,	18th,	12 Carpenters, 4 Sawyers	...	3	11	6
,,	,,	,,	84 Coolies	...	8	3	9
,,	,,	,,	Carpenters hire		0	8	0
,,	,,	,,	Boat hire	...	1	0	0
,,	,,	,,	Peon hire	...	0	4	0
,,	,,	19th,	Advanced lock party	...	3	0	0
,,	,,	,,	Peon	...	2	0	0
,,	,,	,,	106 Coolies, 5 Carpenters	...	8	1	9
,,	,,	20th,	8 do.	...	1	13	0
,,	,,	,,	62 Coolies	...	6	0	9
,,	,,	21st	8 Carpenters, 2 Sawyers	...	2	5	0
,,	,,	,,	106 Coolies	...	6	15	6
,,	,,	23rd	2 do.	...	2	0	0
,,	,,	,,	5 Carpenters, 2 Sawyers	...	1	10	0
,,	,,	,,	74 Coolies	...	7	13	3
,,	,,	24th,	8 Carpenters, 2 Sawyers	...	2	5	0
,,	,,	,,	109 Coolies	...	8	0	3
,,	,,	,,	Carriage	...	0	8	0
,,	,,	25th,	8 Carpenters	...	1	13	0
,,	,,	,,	75 Coolies	...	7	15	0
,,	,,	,,	Carriage	...	0	10	4
,,	,,	26th,	8 Carpenters, 2 Sawyers	...	2	5	0
,,	,,	,,	82 Coolies	...	8	10	6
,,	,,	,,	Carriage	...	0	8	0
,,	,,	27th,	8 Carpenters	...	1	13	0
,,	,,	,,	83 Coolies	...	8	7	6
,,	,,	,,	Carriage	...	0	4	0
,,	,,	28th,	8 Carpenters, 2 Sawyers	...	2	5	0
,,	,,	,,	86 Coolies	...	8	13	6
,,	,,	,,	4 Carpenters	...	0	14	0
,,	,,	30th	83 Coolies	...	8	14	3
,,	,,	,,	Carriage	...	0	8	0
,,	,,	31st	7 Carpenters, 2 Sawyers	...	2	1	6
,,	,,	,,	98 Coolies	...	10	6	3
,,	,,	,,	Carriage	...	0	8	0
					354	15	10

LABOR (*Continued.*)

					Rs.	A.	P.
1855,	Aug.	1st,	7 Carpenters, 2 Sawyers		2	1	6
,,	,,	,,	85 Coolies	...	9	2	0
,,	,,	2nd,	7 Carpenters, 2 Sawyers		2	1	6
,,	,,	,,	79 Coolies	...	9	9	0
,,	,,	,,	Carriage	...	0	8	0
,,	,,	3rd,	9 Carpenters	...	2	0	6
,,	,,	,,	80 Coolies	...	9	8	3
,,	,,	,,	Carriage	...	0	8	0
,,	,,	,,	Sawyers	...	1	11	10
,,	,,	4th,	9 Carpenters	...	2	0	6
,,	,,	,,	89 Coolies	...	9	4	0
,,	,,	,,	139 do.	...	8	11	0
,,	,,	,,	Cart hire	...	0	8	0
,,	,,	,,	122 Coolies	...	14	12	9
,,	,,	,,	72 do.	...	8	11	6
,,	,,	,,	52 do.	...	6	6	9
,,	,,	6th,	8 Carpenters	...	1	13	0
,,	,,	,,	69 Coolies	...	6	13	9
,,	,,	7th,	8 Carpenters	...	1	13	0
,,	,,	,,	80 Coolies	...	8	0	3
,,	,,	,,	Cart hire	...	0	8	0
,,	,,	8th,	8 Carpenters	...	1	13	0
,,	,,	,,	71 Coolies	...	7	4	0
,,	,,	,,	Cart hire	...	0	8	0
,,	,,	9th,	8 Carpenters	...	1	13	0
,,	,,	,,	75 Coolies	...	7	11	3
,,	,,	9th,	Cart hire	...	0	8	0
,,	,,	10th,	8 Carpenters	...	1	13	0
,,	,,	,,	92 Coolies	...	9	3	0
,,	,,	,,	Cart hire	...	0	8	0
,,	,,	11th,	8 Carpenters	...	1	13	0
,,	,,	,,	91 Coolies	...	9	2	6
,,	,,	,,	Cart hire	...	0	8	0
,,	,,	13th,	7 Carpenters	...	1	9	6
,,	,,	,,	96 Coolies	...	9	8	9
,,	,,	,,	Cart hire	...	0	8	0
,,	,,	14th,	6 Carpenters	...	1	6	0
,,	,,	,,	99 Coolies	...	9	10	6
,,	,,	,,	Cart hire	...	0	8	0
,,	,,	15th,	6 Carpenters	...	1	6	0
,,	,,	,,	2 Sawyers	...	0	8	0
,,	,,	,,	81 Coolies	...	8	2	9
,,	,,	,,	Cart hire	...	0	8	0
,,	,,	16th,	8 Carpenters, 2 Sawyers		2	5	0
,,	,,	,,	86 Coolies	...	8	12	6
,,	,,	,,	Cart hire	...	0	8	0
,,	,,	17th,	1 Carpenter	...	0	3	6
,,	,,	,,	33 Coolies	...	6	8	6
,,	,,	,,	Cart hire	...	0	8	0
,,	,,	18th,	8 Carpenters	...	1	13	0
,,	,,	,,	94 Coolies	...	9	15	6
,,	,,	,,	Cart hire	...	0	8	0
,,	,,	,,	Sawyers	...	2	5	9
,,	,,	,,	2 Coolies	...	0	4	0
,,	,,	,,	49 do.	...	6	0	3
,,	,,	,,	Bricklayers	...	6	0	0
,,	,,	20th,	5 Carpenters	...	1	2	6
,,	,,	,,	56 Coolies	...	5	14	0
,,	,,	21st,	7 Carpenters	...	1	9	0
,,	,,	,,	60 Coolies	...	6	5	3
,,	,,	,,	Cart hire	...	0	10	0
,,	,,	22nd,	Bricklayers	...	3	0	0
,,	,,	,,	Iron Smith	...	7	0	0

LABOR *(Continued.)*

			Rs.	A.	P.
1855, Aug. 22nd,	Bellow's Boy	...	2	0	0
„ „ „	5 Carpenters	...	1	2	0
„ „ „	41 Coolies	...	4	1	0
„ „ „	Cart hire	...	0	10	0
„ „ 23rd,	6 Carpenters	...	1	6	0
„ „ „	22 Coolies	...	2	8	9
„ „ 24th,	Bandyman	...	5	0	0
„ „ „	Blacksmith	...	3	8	0
„ „ 27th,	4 Coolies	...	0	8	0
„ „ „	Cart hire	...	0	10	0
„ „ 28th,	6 Coolies	...	0	12	0
„ „ 29th,	11 do.	...	1	6	0
„ „ „	Cart hire	...	0	10	0
„ „ 30th,	33 Coolies	...	3	12	3
„ „ „	Cart hire	...	0	10	0
„ „ 31st,	5 Carpenters	...	1	2	0
„ „ „	416 Coolies	...	5	2	9
„ „ „	Cart hire	...	0	10	0
„ „ „	4 Coolies	...	0	8	0
„ „ „	Cart hire	...	0	10	0
			290	10	10
„ Sept. 3rd,	Bricklayer	...	4	0	0
„ „ 8th,	Boat hire	...	0	4	0
„ „ 10th,	*Earthwork*	...	104	7	6
„ „ „	Bricklayers	...	5	0	0
„ „ „	Bandy hire	...	2	0	0
„ „ „	*Labor*	...	387	7	6
			503	3	0
„ Oct. „	*Labor*	...	384	6	9
„ Novr. 10th,	*do.*	...	93	11	0
„ „ 14th,	Blacksmith	...	3	8	0
„ „ „	Boat hire	...	2	0	0
„ „ „	Blacksmith	...	2	5	4
„ „ „	Bellow's Boy	...	0	10	8
„ „ „	Hammer Man	...	1	14	0
„ „ „	Blacksmith	...	1	2	10
„ „ „	do.	...	0	7	5
„ „ „	Bricklayer	...	5	0	0
„ „ „	Cooly hire	...	0	6	0
„ „ „	Bricklayer	...	1	12	6
„ „ „	Cooly	...	1	0	0
„ „ „	Coolies	...	16	9	6
„ „ „	Cooly hire	...	0	4	0
„ „ 20th,	10 Coolies	...	8	8	6
„ „ „	*Labor*	...	90	11	3
„ „ 23rd,	*Chowghat Tahsildar*...	...	57	15	2
„ „ 24th,	*Labor*...	...	129	15	0
„ „ „	Coolies...	...	0	6	0
„ „ „	do. ...	...	8	8	6
„ „ „	Boat hire	...	0	4	0
			426	15	8
„ Dec. 1st,	*Labor*...	...	126	12	3
„ „ „	Coolies...	...	0	4	0
„ „ 6th,	do. ...	...	6	1	6
„ „ 10th,	*Labor* ...	...	138	9	6
„ „ „	Blacksmith	...	3	3	6
„ „ „	Labor ...	...	5	10	0
„ „ 14th,	Boat hire...	...	0	4	0
„ „ 15th,	*Labor* ...	...	146	5	3

LABOR *(Continued.)*

			Rs.	A.	P.
1855 Dec. 15th,	Coolies ...	...	23	0	6
„ „ 18th,	do. ...	...	1	0	0
„ „ „	do. ...	...	5	10	0
„ „ 20th,	do. ...	...	1	0	0
			457	12	6
1856, Jany. 25th,	Coolies ...	...	0	2	0
„ „ 28th,	*Labor* ...	...	146	2	0
„ „ „	*do.* ...	...	73	9	0
„ „ „	*do.* ...	...	107	3	9
„ „ „	*do.* ...	...	75	0	3
„ „ „	*do.* ...	...	94	7	3
„ „ „	*do.* ...	...	114	1	3
„ „ „	do. ...	...	30	0	0
„ „ „	do. ...	...	4	8	0
„ „ 29th,	do. ...	...	10	0	0
„ „ 30th,	*do.* ...	...	92	15	3
„ „ „	Peon ...	...	1	0	0
			749	0	9
„ Feb. 1st,	Coolies ...	...	6	0	0
„ „ „	Bricklayer ...	...	2	0	0
„ „ „	*Labor* ...	...	51	2	3
„ „ „	Bricklayers ...	...	3	0	0
„ „ 16th,	Labor ...	...	5	0	0
„ „ „	Bricklayers ...	...	6	2	0
„ „ 18th,	Coolies ...	...	0	2	0
„ „ „	*Labor* ...	...	107	7	9
„ „ „	do. ...	...	83	12	0
„ „ „	Coolies ...	...	18	6	0
„ „ „	Labor ...	...	4	6	0
„ „ „	Carpenters ...	...	7	5	0
„ „ „	Iron Smith ...	...	3	0	0
„ „ 21st,	Bricklayer ...	...	51	1	11
„ „ 25th,	*Labor* ...	...	166	10	6
„ „ „	Coolies ...	...	47	7	0
			562	14	5
„ March 3rd,	Coolies ...	...	12	0	0
„ „ 27th,	Bandy hire ...	...	10	0	0
„ „ „	Coolies ...	...	0	9	0
			22	9	0
	Total Labor.....		5,062	4	10

MATERIALS.

„ Feb. 19th,	15 Cocoanut trees..		7	0	0
			7	0	0
„ Apl. 13th,	25 Stones ...		0	6	0
			0	6	0
„ May 17th,	1,000 Seer chunam..		33	0	0
„ „ „	1,500 Bricks ...		5	0	0
„ „ 24th,	Lime ...		3	0	0
„ „ 27th,	4,000 Parah shell chunam ...		2	0	0
„ „ 31st,	85 Cocoanut trees ...		55	0	0
			98	0	0
„ June 8th,	Stone Cutter... ...		2	0	0
			2	0	0

MATERIALS *(Continued.)*

			Rs.	A.	P.
1856, July 19th,	48 Parahs shell ...		1	8	0
			1	8	0
„ Aug. 18th,	30 Parahs shell ...		1	0	0
„ „ 20th,	*Stone Contractor* ...		3	0	0
			4	0	0
„ Sep. 11th,	Stone Contractor laterite ...		3	0	0
			3	0	0
„ Dec. 1st,	Chunam ...		3	14	0
„ „ „	do. ...		3	8	0
„ „ 18th,	Stone Contractor laterite ...		3	0	0
			10	6	0
	Total Material.....		126	4	0

SUNDRIES.

1854, Nov. 13th,	Account Book ...		0	6	0
„ „ „	Red cloth flag ...		0	11	5
„ „ „	White cloth ...		2	2	0
„ „ 25th,	Ropes for wood and carriage... ...		1	8	0
			4	11	5
1855, Jan. 9th,	4 Quires Foolscap paper... ...		2	0	0
			2	0	0
„ Feb. 19th,	Charcoal		0	4	0
„ „ 24th,	1 Blank book ...		2	0	0
„ „ „	1 do. ...		1	8	0
„ „ „	1 Long do. ...		0	12	0
„ „ „	1 Ruled do. ...		1	0	0
			5	8	0
„ Mar. 5th,	Rope for shed ...		0	3	4
„ „ „	Charcoal ...		0	6	0
„ „ 17th,	do. ...		0	12	0
„ „ 21st,	Rope for shed ...		0	3	0
„ „ „	20 lbs. Powder ...		6	4	0
„ „ 23rd,	Rope ...		0	3	0
„ „ „	Charcoal ...		0	12	0
„ „ „	Gun powder, &c.,..		0	6	0
„ „ „	Baskets ...		0	0	6
„ „ „	do. ...		1	0	0
			10	1	10
„ April 11th,	Gunpowder ...		5	0	0
„ „ 14th,	Stand		4	10	3
			9	10	3
„ May 17th,	Large paper ½ quire		1	4	0
„ „ „	do.		1	0	0
„ „ „	do.		0	12	0
„ „ „	Bamboos		3	0	0

SUNDRIES *(Continued.)*

			Rs.	A.	P.
1855, May 17th,	Leaves ...		3	0	0
„ „ „	Rope for shed ...		0	10	6
„ „ „	Leaves for shed ...		5	12	0
„ „ „	50 Bamboos ...		3	0	0
„ „ „	Powder 15 seers ...		10	0	0
„ „ „	Charcoal ...		3	0	0
„ „ 21st,	Bamboos ...		2	0	0
„ „ 22d,	Oil for boat ...		2	0	0
			35	6	6
„ June 5th,	Leaves ...		0	12	0
„ „ „	4 Bottles oil ...		0	11	8
„ „ 11th,	Leaves ...		0	1	0
„ „ „	2,200 Tickets for coolies... ...		30	0	0
„ „ „	Banghy carriage for coolies... ...		4	4	0
„ „ „	Box for do. ...		2	0	0
			37	12	8
„ July 4th,	2 Chatties for tar...		0	2	0
„ „ „	7 Bottles of oil ...		1	4	5
„ „ „	250 Fathoms of yarn		0	2	6
„ „ „	10 Bundle leaves ...		1	2	8
„ „ „	2 Pad Locks ...		0	14	0
„ „ „	3 Locks ...		1	10	0
„ „ „	Cotton 3 maunds...		15	0	0
„ „ „	Dammer 7½ maunds		15	0	0
„ „ „	White paint 10 lbs.		2	8	0
„ „ „	Black paint ...		2	8	0
„ „ „	Linseed oil ...		8	0	0
„ „ „	Straw		1	2	0
„ „ „	Value of tree on Railway... ...		24	14	0
„ „ 9th,	Do. of land ...		25	0	0
„ „ 11th,	Trees, &c. value for Railway		11	8	0
„ „ 12th,	Do.		4	8	0
„ „ 14th,	Storehouserent July		5	0	0
„ „ „	Value of land & trees		6	0	0
„ „ „	Do. grain ...		1	4	0
„ „ 16th,	Land & trees on rail		15	0	0
„ „ 19th,	Rope yarn ...		0	9	10
„ „ 28th,	Rope, oil, Cadjans..		0	7	6
			143	8	11
„ Aug. 3rd,	Oil and paper ...		0	7	0
„ „ 4th,	Oil and dammer ...		0	8	0
„ „ 11th,	Oil chatties ...		0	2	6
„ „ „	Rope ...		0	8	9
„ „ 18th,	Oil ...		0	2	0
„ „ „	Cumbly ...		0	14	0
„ „ „	Basket ...		0	0	4
„ „ 21st,	60 lbs. Gun powder		10	0	0
„ „ 31st,	200 Baskets ...		2	0	0
			14	10	7
„ Sep. 8th,	Grease Railway ...		1	0	0
„ „ „	Shoeing Pony ...		1	0	0
„ „ „	Gram and Grass ...		5	12	10
„ „ 11th,	Oil for Carriages ...		2	0	0
„ „ 13th,	Collar for horse ...		1	0	0
			10	12	10

SUNDRIES *(Continued.)*

		Rs.	A.	P.
1855, Nov.	14th, Leather and rope..	1	8	0
„ „	„ Straw for bullocks	0	12	0
„ „	„ Paper chatties....	0	4	8
„ „	„ Grass straw ...	0	10	6
„ „	„ Do.	1	5	0
„ „	„ Basket	0	2	6
„ „	„ Gram and grass...	11	12	11
„ „	20th, Horse shoes ...	1	0	0
„ „	„ Gunpowder ...	8	4	0
„ „	„ Oil for wheelbarrows	0	8	8
„ „	24th, Gram	5	8	4
„ „	„ Grass	0	8	0
		32	4	7
„ Dec.	1st, Bamboos ...	25	0	0
„ „	6th, Baskets ...	2	0	0
„ „	„ do. ...	0	2	0
„ „	10th, Keep of Bullocks...	1	4	0
„ „	„ Oil for Trucks ...	1	1	0
„ „	15th, Oil for boat ...	1	0	0
„ „	„ Damage to land ...	81	6	10
		111	13	10
1856, Jan.	25th, Gun powder ...	18	4	0
„ „	„ Baskets ...	2	0	0
„ „	„ Gram ...	5	5	1
„ „	28th, Tar and oil ...	2	0	0
„ „	30th, Baskets ...	5	4	0
		32	13	1
„ Feb.	18th, Oil &c., ...	1	4	0
		1	4	0
„ April	3rd, Poney keep ...	5	7	8
		5	7	8
	Total Sundries...	457	14	2

SALARIES.

		Rs.	A.	P.
1855, Jan.	31st, Maistry, 20 days...	6	10	8
		6	10	8
„ Feb.	2nd, Pay, man in charge of stores for December 1854 ...	5	0	0
„ January	1855 ...	5	0	0
„ „	4th, Maistry in charge 12 days at 10 Rs.	4	0	0
		14	0	0
„ Mrh.	15th, Man in charge of stores, February..	5	0	0
„ „	16th, Maistry 20 days ...	4	10	0
„ „	20th, Maistry 3 days ...	0	12	0
		10	6	0
„ April	11th, Overseer Martin....	16	0	0
„ „	„ Overseer Martin, 24 days balance ...	8	0	0
„ „	„ Peon 1 month ...	5	0	0
„ „	14th, Maistry Quarry ...	1	0	0
„ „	„ Store man, March.	5	0	0
		35	0	0

SALARIES *(Continued.)*

		Rs.	A.	P.
1855, May	17th, Man in charge store for April... ...	5	0	0
„ „	„ Maistry for March.	10	0	0
„ „	„ Do. April ...	10	0	0
„ „	19th, Maistry, 1 month..	4	0	0
„ „	21st, Maistry, Blasting party	7	0	0
		36	0	0
„ June	1st, Maistry's pay ...	10	0	0
„ „	5th, Storeman for May.	5	0	0
		15	0	0
„ July	4th, Sappers' pay in advance	2	0	0
„ „	„ Bandyman's wages..	5	0	0
„ „	7th, Storekeeper, June..	6	0	0
„ „	„ Maistry	6	0	0
		19	0	0
„ Aug.	4th, Maistry's Pay ...	3	0	0
„ „	18th, Horsekeeper ...	3	0	0
„ „	20th, Accountant's Pay..	7	0	0
„ „	„ Cooly Maistry ...	2	0	0
„ „	22nd, Storekeeper ...	6	0	0
„ „	31st, Maistry ...	3	0	0
		24	0	0
„ Sept.	8th, Horsekeeper ...	4	0	0
„ „	11th, Cooly Maistry ...	6	0	0
		10	0	0
„ Nov.	14th, Horsekeeper's pay.	4	0	0
„ „	„ Cooly Maistry ...	3	4	6
„ „	„ Bullockman ...	2	8	6
„ „	„ Storekeeper for Sep.	6	0	0
„ „	„ Horsekeeper's pay.	10	0	0
„ „	20th, Storekeeper ...	5	8	0
„ „	„ Bandyman ...	6	0	0
		37	5	0
„ Dec.	10th, Bandyman ...	1	0	0
„ „	19th, do. ...	3	0	0
„ „	21st, ½ *month's pay to a man hurt on work no authority found..*	2	0	0
		6	0	0
1856 Jany.	30th, Storekeeper 3 months... ...	18	0	0
„ „	„ Bandyman ...	4	0	0
		22	0	0
„ April	3rd, Pay to injured workmen ...	10	7	0
		10	7	0
	Total Salaries...	245	12	8

(Signed) T. E. TENNANT, Lieut.
Assistant Engineer.

Major Selby's Account Current.

0.

PLANT.

			Rs.	A.	P.
1854, Novr.	2 Boats	...	45	0	0
„	100 Planks	...	50	0	0
„	100 Sleepers				
			95	0	0
1855, Feby.	Collector for tools	...	330	8	3
„	Iron Company do.	...	500	0	0
			830	8	3
June 8th,	Oughterson&Co. for steel		190	11	0
„	Sleepers...	...	8	3	0
„	Mr. Fritz for Wheel-barrows...	...	117	9	0
			316	7	0
July.	Iron Company	...	1,500	0	0
„	Mr. Fritz...	...	200	0	0
„	Plant...	...	25	0	0
			1,725	0	0
Augt.	Iron Company	...	2,000	0	0
Septr.	Veda Mootoo for nails		15	0	0
Novr.	Do. do.	...	20	0	0
1857, Jany.	Mr. Fritz...	...	204	3	6
Feby.	Veda Mootoo for nails		7	11	8
			231	15	2
			5,213	14	5
	Deduct recoveries...		133	1	0
			5,080	13	5

LABOR.

			Rs.	A.	P.
1854, Novr.	Coolies...	...	3	0	0
„	Carriage...	...	14	0	0
			17	0	0
1855, May	Coolies...	...	5	0	0
July	Ditto...	...	180	0	0
1857, Jany.	Bricklayer...	...	150	0	0
	Carriage...	...	7	9	0
Feby.	Bricklayer...	...	20	0	0
			177	9	0
			379	9	0
	Deduct recoveries...		11	12	9
	Rupees...		367	12	3

MATERIALS.

			Rs.	A.	P.
1856. Feby.	Hajee Cootty contractor...	...	400	0	0
„	Mamoo Cootty...	...	200	0	0
			600	0	0
March	Hajee Cootty	...	300	0	0
April 6th,	Mamoo Cootty	...	50	0	0
„ 13th	Do. do.	...	500	0	0
			550	0	0
June 8th,	Laterite contractor...		8	0	0
	Granite do. through the Sub Collector.		400	0	0
			408	0	0
July	Mamoo Cootty	...	500	0	0
„	Laterite contractor ...		28	0	0
			528	0	0
1856, Augt.	Mamoo Cootty	...	515	0	0
„	Krishna, Granite Contractor...	...	100	0	0
			615	0	0
Septr.	Mamoo Cootty....	...	350	0	0
„	Krishna, stone contractor.		300	0	0
„	Small stone do.	...	5	0	0
			655	0	0
Novr.	Mamoo Cootty...	...	16	0	0
„	Granite contractor	...	200	0	0
Decr.	Mamoo Cootty...	...	200	0	0
„	Granite contractor	...	200	0	0
„	Small Laterite do.	...	16	0	0
1857, Jany.	Do. do.	...	50	0	0
„	Granite do.	...	350	0	0
Feby.	Do. do.	...	300	0	0
March	Do. do.	...	8	4	0
			1,350	4	0
	Deduct...	...	5,006	4	0
Double entry...	...	10 0 0			
Refunded in Dec. 1855		96 0 0			
Do. Hoopenter Ahmed in Jany. 1856...		...250 0 0	356	0	0
	Rupees...		4,650	4	0

SUNDRIES.

			Rs.	A.	P.
1855, March,	Gun Powder...	...	9	12	4
June	Charcoal ..	...	11	7	6
„	Pendals...	...	13	7	11
„	Gun Powder...	...	76	1	3
			101	0	8
Septr.	Gun Powder...	...	53	9	0
Octr.	Cooly hire with money...		0	4	7
			53	13	7
			164	10	7
	Deduct recoveries...	...	0	3	0
	Rupees...		164	7	7

Calicut,
12th August 1857,

E. E.

(Signed) T. E. TENNANT,
Assistant Engineer, Malabar.

P.

CHETWYE DAM.

Overseer Harrold's Day Book.

Labor R.

		Rs.	A.	P.
1855, May 29th,	7 Carpenters ...	1	5	0
,, ,, ,,	12 Coolies ...	1	5	0
,, ,, 30th,	206 do.	25	12	0
,, ,, ,,	7 do.	0	12	3
		29	2	3
,, June 1st,	10 Carpenters ...	1	14	0
,, ,, 5th,	5 do. ...	1	1	6
,, ,, ,,	3 Coolies ...	0	8	3
,, ,, 8th,	10 Blacksmiths ...	1	4	0
,, ,, ,,	170 Coolies ...	17	15	6
,, ,, ,,	9 do. ...	0	15	9
,, ,, ,,	6 Carpenters ...	1	8	0
,, ,, 12th,	6 do. ...	1	8	0
,, ,, 14th,	10 Blacksmiths ...	1	4	0
,, ,, ,,	1 do. ...	0	5	0
,, ,, ,,	116 Coolies ...	12	11	0
,, ,, ,,	8 do. ...	0	8	0
,, ,, 20th,	10 Blacksmiths ...	1	4	0
,, ,, ,,	170 Coolies ...	17	15	0
,, ,, ,,	10 Blacksmiths ...	1	4	0
,, ,, ,,	155 Coolies ...	16	15	3
,, ,, 25th,	Laterite stone quarry coolies ...	6	0	0
,, ,, ,,	Sawyers	2	12	0
		87	9	3
,, July,	10 Blacksmiths ...	1	4	0
,, ,,	132 Coolies ...	14	9	3
,, ,,	10 Blacksmiths ...	1	4	0
,, ,,	153 Coolies ...	16	14	0
,, ,,	20 Blacksmiths ...	2	8	0
,, ,,	Coolies ...	0	5	0
,, ,,	345 do. ...	37	9	3
,, ,, 14th,	20 Blacksmiths ...	2	8	0
,, ,, ,,	334 Coolies ...	34	10	0
,, ,, 26th,	24 Blacksmiths ...	3	0	0
,, ,, ,,	483 Coolies ...	50	13	9
,, ,, ,,	4 do. ...	0	7	0
,, ,, 28th,	16 Blacksmiths ...	2	0	0
,, ,, 31st,	355 Coolies ...	38	13	3
		206	9	6
,, Aug. 26th,	36 do. ...	10	12	9
		10	12	9
,, Sept. 3rd,	10 Blacksmiths ...	1	4	0
,, ,, ,,	122 Coolies ...	12	4	0
,, ,, ,,	12 Blacksmiths ...	1	8	0
,, ,, ,,	240 Coolies ...	26	4	0
,, ,, 19th,	12 Blacksmiths ...	1	8	0
,, ,, ,,	231 Coolies ...	25	7	9
,, ,, 27th,	12 Blacksmiths ...	1	8	0
,, ,, ,,	256 Coolies ...	26	14	6
		96	10	3
,, Oct. 4th,	12 Blacksmiths ...	1	8	0
,, ,, ,,	161 Coolies ...	28	15	9
,, ,, 11th,	12 Blacksmiths ...	1	8	0

Labor R, *(Continued.)*

		Rs.	A.	P.
1855, Oct. 11th,	280 Coolies ...	31	3	3
,, ,, 18th,	12 Blacksmiths ...	1	8	0
,, ,, ,,	247 Coolies ...	27	0	3
,, ,, 26th,	12 Blacksmiths ...	1	8	0
,, ,, ,,	238 Coolies ...	25	14	3
		119	1	6
,, Nov. 3rd,	12 Blacksmiths ...	1	8	0
,, ,, ,,	246 Coolies ...	27	0	3
,, ,, 16th,	24 Blacksmiths ...	3	0	0
,, ,, ,,	483 Coolies ...	52	1	6
,, ,, ,,	3 Carpenters ...	0	10	0
,, ,, 23rd,	12 Blacksmiths ...	1	8	0
,, ,, ,,	236 Coolies ...	25	11	3
,, ,, 29th,	12 Blacksmiths ...	1	8	0
,, ,, ,,	270 Coolies ...	21	15	9
,, ,, ,,	9 do. ...	0	15	9
,, ,, ,,	2 Carpenters ...	0	7	0
		136	6	0
,, Dec. 7th,	10 Blacksmiths ...	1	4	0
,, ,, ,,	174 Coolies ...	19	0	6
,, ,, 14th,	12 Blacksmiths ...	1	8	0
,, ,, ,,	170 Coolies ...	18	9	6
,, ,, 15th,	8 Blacksmiths ...	1	0	0
,, ,, ,,	84 Coolies ...	10	6	6
,, ,, 21st,	12 Blacksmiths ...	1	8	0
,, ,, ,,	169 Coolies ...	18	7	9
,, ,, 22nd,	10 Blacksmiths ...	1	4	0
,, ,, ,,	66 Coolies ...	8	4	0
,, ,, 29th,	12 Blacksmiths ...	1	8	0
,, ,, ,,	171 Coolies ...	10	11	3
,, ,, ,,	10 Blacksmiths ...	1	4	0
,, ,, ,,	68 Coolies ...	8	8	0
		103	3	6
1856 Jany. 5th,	12 Blacksmiths ...	1	8	0
,, ,, ,,	180 Coolies ...	19	11	0
,, ,, ,,	12 Blacksmiths ...	1	8	0
,, ,, ,,	96 Coolies ...	12	0	0
,, ,, ,,	Sawyers ...	2	8	0
,, ,, 12th,	12 Blacksmiths ...	1	8	0
,, ,, ,,	180 Coolies ...	19	11	0
,, ,, ,,	8 Blacksmiths ...	1	0	0
,, ,, ,,	86 Coolies ...	10	12	0
,, ,, 14th,	12 Blacksmiths ...	1	8	0
,, ,, ,,	180 Coolies ...	19	11	0
,, ,, 19th,	8 Blacksmiths ...	1	0	0
,, ,, ,,	72 Coolies ...	9	0	0
,, ,, 26th,	12 Blacksmiths ...	1	8	0
,, ,, ,,	160 Coolies ...	17	8	0
,, ,, ,,	4 Blacksmiths ...	0	8	0
,, ,, ,,	45 Coolies ...	5	10	0
		126	7	0
,, Feby. 2nd,	6 Blacksmiths ...	0	12	0
,, ,, ,,	48 Coolies ...	6	0	0
,, ,, 9th,	Sawyers ...	1	9	0
,, ,, ,,	12 Blacksmiths ...	1	8	0

Labor R, *(Continued.)*

		Rs.	A.	P.
1856 Feby. 9th,	173 Coolies... ...	18	14	9
,, ,, ,,	12 Blacksmiths ...	1	8	0
,, ,, ,,	162 Coolies ...	17	11	6
,, ,, ,,	8 Blacksmiths ...	1	0	0
,, ,, ,,	64 Coolies ...	8	0	0
,, ,, 16th,	12 Blacksmiths ...	1	8	0
,, ,, ,,	168 Coolies ...	18	6	0
,, ,, ,,	4 Blacksmiths ...	0	8	0
,, ,, ,,	64 Coolies ...	8	0	0
,, ,, 23rd,	89 do. ...	11	2	0
,, ,, ,,	12 Blacksmiths ...	1	8	0
,, ,, ,,	184 Coolies ...	18	6	0
		116	5	3
Mar. 1st.	12 Blacksmiths ...	1	8	0
,, ,,	166 Coolies ...	18	2	0
,, ,,	2 Blacksmiths ...	0	4	0
,, ,,	31 Coolies ...	3	14	0
		23	12	6
	Total Labor R.....	1,055	15	9

Labor S.

		Rs.	A.	P.
1855 July 10th,	5 Coolies ...	0	8	9
,, ,, 11th,	11 do. ...	1	12	0
,, ,, ,,	2 do. ...	0	3	6
,, ,, 12th,	32 do. ...	3	8	0
,, ,, ,,	4 do. ...	0	7	0
,, ,, ,,	2 Carpenters ...	0	7	0
,, ,, 13th,	20 Coolies ...	2	3	0
,, ,, ,,	30 do. ...	3	4	6
,, ,, ,,	9 do. ...	0	15	9
,, ,, ,,	5 Carpenters ...	1	1	6
,, ,, 14th,	42 Coolies ...	4	9	6
,, ,, ,,	15 do. ...	1	10	3
,, ,, ,,	1 Carpenter ...	0	3	6
,, ,, ,,	5 do. ...	0	8	9
,, ,, ,,	2 Basket makers..	0	3	6
,, ,, 16th,	35 Coolies ...	3	13	3
,, ,, ,,	38 do. ...	4	2	6
,, ,, ,,	2 Basket makers..	0	3	6
,, ,, 17th,	29 Coolies ...	3	2	9
,, ,, ,,	43 do. ...	4	11	3
,, ,, 18th,	29 do. ...	3	2	9
,, ,, ,,	43 do. ...	4	11	3
,, ,, 19th,	30 do. ...	3	4	6
,, ,, ,,	55 do. ...	6	0	3
,, ,, ,,	6 do. ...	0	10	6
,, ,, ,,	2 Carpenters ...	0	7	0
,, ,, 20th,	36 Coolies ...	3	15	0
,, ,, ,,	51 do. ...	5	9	3
,, ,, ,,	10 Men ...	1	1	6
,, ,, ,,	2 Carpenters ...	0	7	0
,, ,, 21st,	46 Coolies ...	5	0	6
,, ,, ,,	59 do. ...	6	7	3
,, ,, ,,	2 Basket makers.	0	3	6
,, ,, 23rd,	46 Coolies ...	5	0	6
,, ,, ,,	59 do. ...	6	7	3
,, ,, ,,	2 Basket makers.	0	3	6
,, ,, 24th,	40 Coolies ...	4	6	0
,, ,, ,,	30 do. ...	3	4	6
,, ,, 25th,	40 do. ...	4	6	0
,, ,, ,,	30 do. ...	3	4	6
,, ,, 26th,	30 do. ...	3	4	6
,, ,, ,,	38 do. ...	4	2	6

Labor S, *(Continued.)*

		Rs.	A.	P.
1855 July 27th,	2 Basket makers..	0	3	6
,, ,, ,,	36 Coolies ...	3	15	0
,, ,, ,,	30 do. ...	3	4	6
,, ,, ,,	2 Basket makers..	0	3	6
,, ,, 28th,	36 Coolies ...	3	15	0
,, ,, ,,	30 do. ...	3	4	6
,, ,, ,,	2 Basket makers..	0	3	6
,, ,, 30th,	68 Coolies ...	7	7	0
,, ,, 31st,	15 do. ...	1	10	3
,, ,, ,,	25 do. ...	2	11	9
,, ,, ,,	2 Carpenters ...	0	7	0
		140	8	9
,, Aug. 1st,	15 Coolies ...	1	10	3
,, ,, ,,	25 do. ...	2	11	9
,, ,, ,,	2 Carpenters ...	0	7	0
,, ,, 2nd,	15 Coolies ...	1	10	3
,, ,, ,,	25 do. ...	2	11	9
,, ,, ,,	2 Carpenters ...	0	7	0
,, ,, ,,	15 Coolies ...	1	10	3
,, ,, ,,	25 do. ...	2	11	9
,, ,, ,,	2 Carpenters ...	0	7	0
,, ,, 4th,	5 Coolies ...	0	8	9
,, ,, ,,	18 do. ...	1	15	6
,, ,, ,,	2 Carpenters ...	0	7	0
,, ,, 6th,	5 Coolies ...	0	8	9
,, ,, ,,	18 do. ...	1	15	6
,, ,, 7th,	10 do. ...	1	1	6
,, ,, ,,	20 do. ...	2	3	0
,, ,, ,,	25 do. ...	2	11	9
,, ,, 8th,	5 do. ...	0	8	9
,, ,, ,,	55 do. ...	3	4	6
,, ,, 9th,	5 do. ...	0	8	9
,, ,, ,,	19 do. ...	2	1	3
,, ,, 10th,	5 do. ...	0	8	9
,, ,, ,,	20 do. ...	2	3	0
,, ,, 11th,	12 do. ...	1	5	0
,, ,, ,,	13 do. ...	1	6	9
,, ,, 13th,	1 Carpenter ...	0	3	6
,, ,, ,,	22 Coolies ...	2	6	6
,, ,, ,,	3 do. ...	0	8	9
,, ,, 14th,	10 Coolies ...	1	1	6
,, ,, 15th,	1 Carpenter ...	0	3	6
,, ,, ,,	10 Coolies ...	1	1	6
,, ,, ,,	3 Carpenters ...	0	9	6
,, ,, 16th,	10 Coolies ...	1	1	6
,, ,, ,,	3 Carpenters ...	0	10	6
,, ,, 17th,	10 Coolies ...	1	1	6
,, ,, ,,	8 do. ...	0	14	0
,, ,, ,,	17 do. ...	1	13	9
,, ,, 20th,	1 Carpenter ...	0	3	6
,, ,, ,,	6 Coolies ...	0	10	6
,, ,, ,,	4 do. ...	0	7	0
,, ,, ,,	18 do. ...	1	15	6
,, ,, ,,	11 do. ...	1	3	3
,, ,, ,,	2 Carpenters ...	0	10	6
,, ,, 21st,	13 Coolies ...	1	5	0
,, ,, ,,	27 do. ...	2	15	3
,, ,, ,,	4 Carpenters ...	0	14	0
,, ,, 22nd,	9 Coolies ...	0	15	9
,, ,, ,,	12 do. ...	1	5	0
,, ,, ,,	5 do. ...	0	8	9
,, ,, ,,	3 do. ...	0	5	3
,, ,, ,,	1 do. ...	0	1	9
,, ,, ,,	8 do. ...	0	14	0
,, ,, ,,	3 Carpenters ...	0	10	6

LABOR S, *(Continued.)*

				Rs.	A.	P.
1855 Aug.	22nd,	2 Carpenters	...	0	7	0
,, ,,	23rd,	9 Coolies	...	0	15	9
,, ,,	,,	20 do.	...	2	3	0
,, ,,	,,	5 do.	...	0	8	9
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	3 Carpenters	...	0	10	6
,, ,,	24th,	2 do.	...	0	7	0
,, ,,	,,	9 Coolies	...	0	15	9
,, ,,	,,	20 do.	...	2	3	0
,, ,,	,,	5 do.	...	0	8	9
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	3 Carpenters	...	0	10	6
,, ,,	,,	2 do.	...	0	7	0
,, ,,	30th,	9 Coolies	...	0	15	9
,, ,,	,,	5 do.	...	0	8	9
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	1 do.	...	0	1	9
,, ,,	,,	5 do.	...	0	8	9
,, ,,	,,	13 do.	...	1	6	9
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	2 do.	...	0	5	6
,, ,,	31st,	9 Coolies	...	0	15	9
,, ,,	,,	5 do.	...	0	8	9
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	1 do.	...	0	1	9
,, ,,	,,	5 do.	...	0	8	9
,, ,,	,,	13 do.	...	1	6	9
,, ,,	,,	4 Carpenters	...	0	14	0
				85	6	0
,, Sept.	1st,	2 Carpenters	...	0	5	6
,, ,,	,,	9 Coolies	...	0	15	9
,, ,,	,,	4 do.	...	0	8	9
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	7 do.	...	0	12	9
,, ,,	,,	13 do.	...	1	6	9
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	2 do.	...	0	5	6
,, ,,	3rd,	9 Coolies	...	0	15	9
,, ,,	,,	4 do.	...	0	7	0
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	7 do.	...	0	12	3
,, ,,	,,	13 do.	...	1	6	9
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	2 do.	...	0	5	6
,, ,,	4th,	9 Coolies	...	0	15	9
,, ,,	,,	4 do.	...	0	7	0
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	7 do.	...	0	12	3
,, ,,	,,	13 do.	...	1	6	9
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	2 do.	...	0	5	6
,, ,,	5th,	9 Coolies	...	0	15	9
,, ,,	,,	4 do.	...	0	7	0
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	7 do.	...	0	12	3
,, ,,	,,	13 do.	...	1	6	9
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	2 do.	...	0	5	6
,, ,,	6th,	9 Coolies	...	0	15	9
,, ,,	,,	7 do.	...	0	12	3
,, ,,	,,	4 do.	...	0	7	0
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	11 do.	...	1	3	3

LABOR S, *(Continued.)*

				Rs.	A.	P.
1855 Aug.	6th,	4 Carpenters	...	0	14	0
,, ,,	,,	2 do.	...	0	5	6
,, ,,	7th,	9 Coolies	...	0	15	9
,, ,,	,,	7 do.	...	0	12	3
,, ,,	,,	4 do.	...	0	7	0
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	11 do.	...	1	3	3
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	2 do.	...	0	5	6
,, ,,	,,	9 Coolies	...	0	15	9
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	8 do.	...	0	14	0
,, ,,	,,	10 do.	...	1	1	6
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	2 do.	...	0	5	6
,, ,,	,,	9 Coolies	...	0	15	9
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	8 do.	...	0	14	0
,, ,,	,,	10 do.	...	1	1	6
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	2 do.	...	0	5	6
,, ,,	12th,	9 Coolies	...	0	15	9
,, ,,	,,	8 do.	...	0	14	0
,, ,,	,,	5 do.	...	0	8	9
,, ,,	,,	4 do.	...	0	7	0
,, ,,	,,	7 do.	...	0	12	3
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	2 do.	...	0	5	6
,, ,,	13th,	9 Coolies	...	0	15	9
,, ,,	,,	8 do.	...	0	14	0
,, ,,	,,	5 do.	...	0	8	9
,, ,,	,,	4 do.	...	0	7	0
,, ,,	,,	7 do.	...	0	12	3
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	2 do.	...	0	5	6
,, ,,	14th,	9 Coolies	...	0	15	9
,, ,,	,,	8 do.	...	0	14	0
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	5 do.	...	0	8	9
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	3 Carpenters	...	0	10	6
,, ,,	,,	2 do.	...	0	7	0
,, ,,	15th,	9 Coolies	...	0	15	9
,, ,,	,,	8 do.	...	0	14	0
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	4 do.	...	0	7	0
,, ,,	,,	3 Carpenters	...	0	10	6
,, Sept.	15th,	2 Carpenters	...	0	7	0
,, ,,	17th,	9 Coolies	...	0	15	9
,, ,,	,,	8 do.	...	0	14	0
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	4 do.	...	0	7	0
,, ,,	,,	3 Carpenters	...	0	10	6
,, ,,	,,	2 do.	...	0	7	0
,, ,,	18th,	9 Coolies	...	0	15	9
,, ,,	,,	8 do.	...	0	14	0
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	4 do.	...	0	7	0
,, ,,	,,	3 Carpenters	...	0	10	6
,, ,,	,,	2 do.	...	0	7	0
,, ,,	20th,	9 Coolies	...	0	15	9

LABOR S, *(Continued.)*

				Rs.	A.	P.
			...	0	7	0
185[illegible] Sept.	20th,	8 Coolies	...	0	5	3
,, ,,	,,	3 do. ...	...	0	5	3
,, ,,	,,	3 do. ...	...	0	7	0
,, ,,	,,	4 do. ...	...	0	10	6
,, ,,	,,	3 Carpenters	...	0	5	0
,, ,,	,,	2 do.	...	0	10	6
,, ,,	21st,	6 Coolies	...	1	1	6
,, ,,	,,	10 do.	...	0	7	0
,, ,,	,,	4 do.	...	1	1	6
,, ,,	,,	5 Carpenters	...	0	10	6
,, ,,	24th,	6 Coolies	...	0	8	9
,, ,,	,,	5 do.	...	0	8	9
,, ,,	,,	5 do.	...	0	7	0
,, ,,	,,	4 do.	...	1	1	6
,, ,,	25th,	5 Carpenters	...	0	10	6
,, ,,	,,	6 Coolies	...	0	8	9
,, ,,	,,	5 do.	...	0	8	9
,, ,,	,,	5 do.	...	0	7	0
,, ,,	,,	4 do.	...	1	1	6
,, ,,	26th,	5 Carpenters	...	0	10	6
,, ,,	,,	6 do.	...	0	8	9
,, ,,	,,	5 Coolies	...	0	8	9
,, ,,	,,	5 do.	...	0	7	0
,, ,,	,,	4 do.	...	1	1	6
,, ,,	27th,	5 Carpenters	...	0	8	9
,, ,,	,,	5 Coolies	...	0	8	9
,, ,,	,,	5 do.	...	0	7	0
,, ,,	,,	4 do.	...	1	1	6
,, ,,	,,	5 Carpenters	...	0	5	3
,, ,,	28th,	3 Coolies	...	0	5	3
,, ,,	,,	3 do.	...	0	5	3
,, ,,	,,	3 do.	...	0	14	0
,, ,,	,,	4 Carpenters	...	0	15	9
,, ,,	29th,	9 Coolies	...	1	1	6
,, ,,	,,	5 Carpenters	...			
				93	13	0
,, Oct.	1st,	6 Coolies	...	0	10	6
,, ,,	,,	5 Carpenters	...	1	1	6
,, ,,	2nd,	6 Coolies	...	0	10	6
,, ,,	3rd,	5 Carpenters	...	1	1	6
,, ,,	,,	6 Coolies	...	0	10	6
,, ,,	4th,	3 do.	...	0	5	3
,, ,,	5th,	5 Carpenters	...	1	1	6
,, ,,	,,	6 Coolies	...	0	10	6
,, ,,	6th,	5 Carpenters	...	1	1	6
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	4 do.	...	0	14	0
,, ,,	,,	6 Coolies	...	0	10	6
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	6 Coolies	...	0	10	6
,, ,,	9th,	4 Carpenters	...	0	14	0
,, ,,	,,	6 do.	...	0	10	6
,, ,,	10th,	4 Carpenters	...	0	14	0
,, ,,	11th,	6 Coolies	...	0	10	6
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	12th,	6 Coolies	...	0	10	6
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	16th,	9 Coolies	...	0	15	9
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	17th,	9 Coolies	...	0	15	9
,, ,,	,,	2 Carpenters	...	0	7	0
,, ,,	,,	2 do.	...	0	6	0
,, ,,	,,	4 do.	...	0	14	0
,, ,,	18th,	5 Coolies	...	0	8	9
,, ,,	,,	4 do.	...	0	7	0
,, ,,	,,	2 Carpenters	...	0	7	0

LABOR S, *(Continued.)*

				Rs.	A.	P.
1856, Oct.	18th,	2 Carpenters	...	0	6	0
,, ,,	,,	4 do.	...	0	14	0
,, ,,	19th,	3 Coolies	...	0	5	3
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	2 Carpenters	...	0	7	0
,, ,,	,,	2 do.	...	0	6	0
,, ,,	,,	4 do.	...	0	14	0
,, ,,	20th,	3 Coolies	...	0	5	3
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	2 Carpenters	...	0	7	0
,, ,,	,,	2 do.	...	0	6	0
,, ,,	,,	4 do.	...	0	14	0
,, ,,	22nd,	6 Coolies	...	0	5	3
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	2 Carpenters	...	0	7	0
,, ,,	,,	2 do.	...	0	6	0
,, ,,	,,	4 do.	...	0	14	0
,, ,,	,,	2 Coolies	...	0	3	6
,, ,,	,,	3 do.	...	0	5	3
,, ,,	,,	4 do.	...	0	7	0
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	4 do.	...	0	14	0
,, ,,	24th,	1 Cooly	...	0	1	9
,, ,,	,,	1 do.	...	0	5	3
,, ,,	,,	3 do.	...	0	7	0
,, ,,	,,	4 do.	...	0	14	0
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	4 do.	...	0	1	9
,, ,,	25th,	1 Cooly	...	0	1	9
,, ,,	,,	1 do.	...	0	12	3
,, ,,	,,	7 do.	...	0	14	0
,, ,,	,,	4 Carpenters	...	0	14	0
,, ,,	,,	4 do.	...	0	5	3
,, ,,	26th,	3 Coolies	...	0	3	6
,, ,,	,,	2 Coolies	...	0	3	6
,, ,,	,,	2 do.	...	0	10	6
,, ,,	,,	6 do.	...	0	8	9
,, ,,	,,	do.	...	0	14	0
,, ,,	,,	4 Carpenters	...	0	10	6
,, ,,	,,	3 do.	...	0	5	3
,, ,,	27th,	3 Coolies	...	0	3	6
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	2 do.	...	0	10	6
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	6 do.	...	0	14	0
,, ,,	,,	4 Carpenters	...	0	7	0
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	1 do.	...	0	5	3
,, ,,	29th,	3 Coolies	...	0	3	6
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	2 Carpenters	...	0	14	0
,, ,,	,,	4 do.	...	0	10	6
,, ,,	30th,	6 Coolies	...	0	5	3
,, ,,	,,	3 do.	...	0	3	6
,, ,,	,,	2 do.	...	0	1	9
,, ,,	,,	10 do.	...	1	1	6
,, ,,	,,	2 Carpenters	...	0	7	0
,, ,,	,,	2 do.	...	0	7	0
,, ,,	,,	6 Coolies	...	0	10	6
,, ,,	,,	6 do.	...	0	10	6
,, ,,	,,	10 do.	...	1	1	6
,, ,,	,,	4 Carpenters	...	0	14	0
				57	0	0

LABOR S, *(Continued.)*

				Rs.	A.	P.
1856, Novr.	1st,	3 Coolies	...	0	5	3
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	15 do.	...	1	10	3
,, ,,	,,	2 Carpenters	...	0	7	0
,, ,,	2nd,	2 Coolies	...	0	3	6
,, ,,	,,	1 do.	...	0	1	9
,, ,,	,,	2 do.	...	0	3	6
,, ,,	,,	17 do.	...	1	13	9
,, ,,	,,	1 Carpenter	...	0	3	6
,, ,,	3rd,	2 Coolies	...	0	3	6
,, ,,	,,	20 do.	...	2	3	0
,, ,,	5th,	3 do.	...	0	5	3
,, ,,	,,	20 do.	...	2	3	0
,, ,,	7th,	3 do.	...	0	5	3
,, ,,	9th,	2 Carpenters	...	0	5	6
,, ,,	10th,	2 do.	...	0	5	6
,, ,,	16th,	2 do.	...	0	7	0
,, ,,	17th,	2 do.	...	0	7	0
,, ,,	,,	10 Coolies	...	1	1	6
,, ,,	19th,	5 do.	...	0	8	9
,, ,,	20th,	5 do.	...	0	8	9
,, ,,	21st,	10 do.	...	1	1	6
,, ,,	22nd,	9 do.	...	1	2	0
,, ,,	23rd,	8 do.	...	1	0	0
,, ,,	24th,	8 do.	...	1	0	0
,, ,,	,,	1 Carpenter	...	0	3	6
,, ,,	26th,	10 Coolies	...	1	4	0
,, ,,	,,	1 Carpenter	...	0	3	0
,, ,,	27th,	4 Coolies	...	0	8	0
,, ,,	,,	17 do.	...	2	0	9
,, ,,	,,	1 Carpenter	...	0	3	0
,, ,,	,,	27 Coolies	...	3	4	9
,, ,,	28th,	6 do.	...	0	12	0
,, ,,	,,	4 do.	...	0	8	0
,, ,,	29th.	1 Carpenter	..	0	3	0
,, ,,	,,	4 Coolies	...	0	8	0
,, ,,	,,	23 do.	...	2	12	9
,, ,,	30th,	1 Carpenter	...	0	3	0
,, ,,	,,	32 Coolies	...	3	14	6
,, ,,	,,	1 Carpenter	...	0	3	0
				35	2	9
,, Decr.	1st,	35 Coolies	...	4	4	6
,, ,,	,,	2 Carpenters	...	0	6	0
,, ,,	3rd,	Perro Cutty for making hedges...		6	0	0
,, ,,	,,	36 Coolies	...	1	13	2
,, ,,	,,	2 Carpenters	...	0	6	6
,, ,,	,,	1 do.	...	0	4	0
,, ,,	4th,	26 Coolies	...	3	2	9
,, ,,	,,	4 do.	...	0	7	6
,, ,,	,,	2 Carpenters	...	0	7	6
,, ,,	5th,	31 Coolies	...	3	12	3
,, ,,	,,	1 do.	...	0	2	0
,, ,,	,,	1 do.	...	0	4	0
,, ,,	,,	1 do.	...	0	3	6
,, ,,	6th,	24 do.	...	3	0	0
,, ,,	,,	8 do.	...	0	14	3
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	,,	1 do.	...	0	3	6
,, ,,	7th,	24 Coolies	...	3	0	0
,, ,,	,,	8 do.	...	0	14	3
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	,,	1 do.	...	0	3	6
,, ,,	8th,	28 Coolies	..	3	7	3
,, ,,	,,	4 do.	...	0	7	0

LABOR S, *(Continued.)*

				Rs.	A.	P.
1856, Decr.	8th,	1 Carpenter	...	0	4	0
,, ,,	,,	1 do.	...	0	3	6
,, ,,	10th,	22 Coolies	...	2	12	0
,, ,,	,,	4 do.	...	0	8	0
,, ,,	,,	1 Carpenter	...	0	3	6
,, ,,	,,	1 do.	...	0	4	0
,, ,,	11th,	25 Coolies	...	3	2	0
,, ,,	,,	1 Carpenter	...	0	3	6
,, ,,	,,	1 do.	...	0	4	0
,, ,,	,,	25 Coolies	...	3	2	0
,, ,,	,,	1 Carpenter	...	0	3	6
,, ,,	,,	1 do.	...	0	4	0
,, ,,	12th,	17 Coolies	...	2	2	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	,,	17 Coolies	...	2	2	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	,,	1 do.	...	0	3	6
,, ,,	13th,	10 Coolies	...	1	4	0
,, ,,	,,	11 do.	...	1	6	0
,, ,,	,,	2 Carpenters	...	0	7	6
,, ,,	14th,	14 Coolies	...	1	12	0
,, ,,	,,	2 Carpenters	...	0	7	6
,, ,,	15th,	16 Coolies	...	2	0	0
,, ,,	,,	1 Carpenter	...	0	3	6
,, ,,	,,	1 do.	...	0	4	0
,, ,,	,,	1 Man	...	1	0	0
,, ,,	17th,	8 Coolies	...	1	0	0
,, ,,	18th,	8 do.	...	1	0	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	20th,	8 Coolies	...	1	0	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	21st,	8 Coolies	...	1	0	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	22nd,	8 Coolies	...	1	0	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	24th,	1 do.	...	0	4	0
,, ,,	26th,	8 Coolies	...	0	15	9
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	27th,	9 Coolies	...	1	1	9
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	28th,	6 Coolies	...	0	11	9
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	29th,	8 Coolies	...	0	15	9
,, ,,	,,	1 Carpenter	...	0	4	0
				70	6	5
1857, Jan.	5th,	6 Carpenters	...	1	8	0
,, ,,	7th,	9 Coolies	...	1	1	9
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	8th,	13 Coolies	...	1	9	9
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	9th,	7 Coolies	...	0	13	9
,, ,,	,,	8 do.	...	1	0	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	10th,	7 Coolies	...	0	14	0
,, ,,	,,	8 do.	...	1	0	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	11th,	6 Coolies	...	0	12	0
,, ,,	,,	6 do.	...	0	12	0
,, ,,	,,	1 do.	...	0	2	0
,, ,,	12th,	1 Carpenter	...	0	4	0
,, ,,	,,	13 Coolies	...	1	10	0
,, ,,	14th,	1 Carpenter	...	0	4	0
,, ,,	,,	6 Coolies	...	0	12	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	16th,	7 Coolies	...	0	14	0

LABOR S, *(Continued.)*

				Rs.	A.	P.
1857, Jan.	16th,	8 Coolies	...	1	0	0
,, ,,	17th,	6 do.	...	0	12	0
,, ,,	,,	7 do.	...	0	14	0
,, ,,	,,	1 do.	...	0	2	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	18th,	8 Coolies	...	1	0	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	19th,	6 Coolies	...	0	12	0
,, ,,	,,	8 do.	...	1	0	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	21st,	6 Coolies	...	0	6	0
,, ,,	,,	4 do.	...	0	8	0
,, ,,	,,	1 do.	...	0	2	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	23rd,	6 Coolies	...	0	12	0
,, ,,	,,	8 do.	...	1	0	0
,, ,,	24th,	14 do.	...	1	12	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	25th,	26 Coolies	...	3	4	0
,, ,,	,,	12 do.	...	1	8	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	26th,	22 Coolies	...	2	12	0
,, ,,	,,	12 do.	...	1	8	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	28th,	16 Coolies	...	2	0	0
,, ,,	,,	8 do.	...	1	0	0
,, ,,	,,	1 do.	...	0	2	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	29th,	12 Coolies	...	1	8	0
,, ,,	,,	3 do.	...	0	6	0
,, ,,	,,	16 do.	...	2	0	0
,, ,,	,,	1 do.	...	0	2	0
,, ,,	30th,	1 Carpenter	...	0	4	0
,, ,,	,,	10 Coolies	...	1	4	0
,, ,,	,,	12 do.	...	1	8	0
,, ,,	,,	10 do.	...	1	4	0
,, ,,	,,	1 do.	...	0	2	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	,,	1 do.	...	0	3	0
,, ,,	31st,	6 Coolies	...	0	12	0
,, ,,	,,	14 do.	...	1	12	0
,, ,,	,,	20 do.	...	2	8	0
,, ,,	,,	1 Carpenter	...	0	3	0
,, ,,	,,	1 do.	...	0	4	0
				52	15	3
,, Feb.	1st,	12 Coolies	...	1	8	0
,, ,,	,,	10 do.	...	1	4	0
,, ,,	,,	1 do.	...	0	2	0
,, ,,	,,	18 do.	...	2	4	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	,,	1 do.	...	0	3	0
,, ,,	2nd	12 Coolies	...	1	8	0
,, ,,	,,	10 do.	...	1	4	0
,, ,,	,,	22 do.	...	2	12	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	,,	1 do.	...	0	3	6
,, ,,	4th,	10 Coolies	...	1	4	0
,, ,,	,,	12 do.	...	1	8	0
,, ,,	,,	26 do.	...	3	4	0
,, ,,	,,	2 Carpenters	...	0	8	0
,, ,,	5th,	8 Coolies	...	1	0	0
,, ,,	,,	38 do.	...	4	12	0
,, ,,	,,	6 do.	...	4	6	0
,, ,,	6th,	35 do.	...	0	8	0
,, ,,	,,	2 Carpenters	...	1	4	0
,, ,,	7th,	10 Coolies	...			

LABOR S, *(Continued.)*

				Rs.	A.	P.
1857, Feb.	7th,	2 Coolies	...	0	4	0
,, ,,	,,	3 do.	...	0	6	0
,, ,,	,,	31 do.	...	3	14	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	8th,	10 Coolies	...	1	4	0
,, ,,	,,	10 do.	...	2	4	0
,, ,,	,,	18 do.	...	0	4	0
,, ,,	,,	2 do.	...	0	2	0
,, ,,	,,	1 do.	...	0	4	0
,, ,,	,,	1 Carpenter	...	0	4	0
,, ,,	,,	1 do.	...	2	4	0
,, ,,	9th,	16 Coolies	...	1	2	0
,, ,,	,,	9 do.	...	2	0	0
,, ,,	,,	16 do.	...	0	2	0
,, ,,	,,	1 do.	...	0	8	0
,, ,,	,,	2 Carpenters	...	2	11	0
,, ,,	11th,	20 Coolies	...	2	4	0
,, ,,	,,	18 do.	...	0	4	0
,, ,,	,,	1 Carpenter	...	0	10	0
,, ,,	12th,	4 Coolies	...	1	5	0
,, ,,	,,	10 do.	...	4	2	0
,, ,,	,,	33 do.	...	0	8	0
,, ,,	,,	2 Carpenters	...	1	6	0
,, ,,	,,	10 do.	...	4	1	0
,, ,,	13th,	22 Coolies	...	0	6	0
,, ,,	,,	3 do.	...	0	8	0
,, ,,	,,	2 Carpenters	...	0	10	0
,, ,,	14th,	5 Coolies	...	4	6	6
,, ,,	,,	33 do.	...	0	4	0
,, ,,	,,	2 Carpenters	...	0	2	0
,, ,,	,,	1 Cooly	...	0	8	0
,, ,,	,,	2 Carpenters	...	6	0	6
,, ,,	15th,	46 Coolies	...	0	8	0
,, ,,	,,	2 Carpenters	...	0	10	0
,, ,,	16th,	5 Coolies	...	5	8	6
,, ,,	,,	42 do.	...	0	2	0
,, ,,	,,	1 do.	...	0	8	0
,, ,,	,,	2 Carpenters	...	8	8	0
,, ,,	23rd,	208 Coolies	...	32	8	0
,, ,,	,,	10 Carpenters	...	2	8	0
				118	9	0
,, Mar.	1st,	177 Coolies	...	27	10	6
,, ,,	,,	Carpenters	...	3	0	0
				30	10	6
		Total Labor S.....		684	7	8

PLANT R.

					Rs.	A.	P.
1855, June	1st,	Rope	...	...	0	3	8
,, Augt.	1st,	Boat	...	...	21	0	0
		Total Plant.....			21	3	8

SUNDRIES R.

					Rs.	A.	P.
,, May	29th,	Value of tree	...	...	2	8	0
,, June	5th,	Leaves ...	...	...	0	7	0
,, ,,	15th,	Bamboo and leaves			0	8	0
					0	15	0
,, July	8th,	Leaves, &c.	...	...	0	12	0
,, ,,	,,	Thread ...	...	...	0	4	0
					1	0	0

SUNDRIES R, *(Continued.)*

		Rs.	A.	P.
1855, Sept. 29th, Gunpowder	...	4	0	0
„ Nov. 1st, do.	...	9	0	0
„ „ 29th, Thread	...	0	4	0
		9	4	0
„ Dec. 13th, Value of tree	...	1	8	0
„ „ „ Leaves	...	0	9	2
		2	1	2
1856, Jan. 31st, Thread	...	1	0	0
„ Feb. 9th, Wood	...	1	1	9
„ „ 23rd, do.	...	0	5	0
		1	6	9
Total Sundries...		22	2	11

SUNDRIES S.

		Rs.	A.	P.
1855, July 23rd, Cocoanut trees	...	8	0	0
„ Aug. 4th, do. do.	...	4	8	0
„ „ 13th, do. do.	...	3	2	5
„ „ „ Bamboos	...	3	4	0
„ „ 18th, Cocoanut trees	...	0	4	7
„ „ 21st, Rope	...	1	0	0
„ „ „ Cocoanut trees	...	12	11	3
		24	14	3
„ Sep. 1st, Cocoanut trees	...	5	4	0
„ „ 13th, do. do.	...	1	11	0
„ „ 28th, do. do.	...	2	6	0
		9	5	0
„ Oct. 12th, do. do.	...	2	4	8
„ Nov. 24th, do. do.	...	0	5	0
„ „ „ Oil for bandy	...	0	12	8
		1	1	8
„ Dec. 3rd, Cocoanut trees	...	1	14	0
„ „ „ *Jackwood and house rent*	.....	9	0	0
„ „ „ *Bath room Maty.*		2	0	0
„ „ „ *1 Man close to Jackoo's compound.*		1	0	0
„ „ „ Oil for bandies...		0	9	0
„ „ „ Leaves	...	0	8	7
„ „ „ *Present to cooly for keeping rails in his house*	...	1	0	0
		15	15	7
„ Jany. 28th, Cocoanut trees	...	1	2	0
„ Feby. 4th, do.	...	3	9	0

SUNDRIES S, *(Continued.)*

		Rs.	A.	P.
1855, March 1st, Oil	...	0	12	0
		5	7	0
Total Sundries.....		67	0	2

SALARY R.

		Rs.	A.	P.
1855, June 25th, Maistry	...	5	0	0
„ „ „ *Sick men*	...	7	15	3
		12	15	3
„ July 8th, Maistry	...	4	0	0
„ Aug. 15th, Maistry	...	3	0	0
„ „ 17th, *Sick men*	...	4	11	3
„ „ 26th, Maistry	...	7	0	0
		14	11	3
„ Sept. 3rd, Maistry	...	1	10	3
„ „ 27th, Maistry	...	5	3	2
		6	13	5
„ Nov. 1st, Maistry	...	6	0	0
„ Dec. 7th, *Sick men*	...	1	15	6
„ „ „ Maistry	...	6	0	0
		7	15	6
1856, Jan. 31st, Maistry {6- 0-0 / 4-10-8}		10	10	8
„ „ „ *Maistry*	...	6	0	0
„ „ 26th, *Sick men*	...	3	0	0
		19	10	8
„ Feb. 23rd, *do.*	...	1	0	0
„ „ „ Maistry	...	6	0	0
		7	0	0
Total Salaries.....		79	2	1

SALARY S.

		Rs.	A.	P.
1855, Aug. 13th, Maistry	...	3	9	0
„ „ 14th, do.	...	5	0	0
„ „ 24th, Boy as Interpreter		3	0	0
		11	9	0
„ Sept. 12th, Maistry	...	5	8	0
„ „ „ Boy as Interpreter		3	0	0
		8	8	0
„ Oct. 21st, do.	...	3	0	0
Total Salary.....		23	1	0

(Signed) T. E. TENNANT, Lieut.
Assistant Engineer.

Q.

CHETWYE DAM.

Abstract of Mr. F. Clark's Day Book.

PLANT.

		Rs.	A.	P.
1856, Mar. 1st, 2 Boats for cement.		10	0	0
„ „ 10th, Planks for boats.		15	8	0
„ „ 16th, Baskets for baling.		1	1	4
„ „ „ Planks...	...	21	3	0
„ „ 25th Baling baskets.....		4	9	0
„ „ „ Casks at 7 Rs. each		140	0	0
		192	5	4
„ April 1st, 1—2-20 Cwt. of coir rope 4½ Rs. ₱ cwt.		7	8	10
„ „ „ 2 Water casks	...	14	0	0
„ „ „ 56 lbs. of coir yarn...		1	12	0
„ „ „ 90 Coles of planking.		9	0	0
		32	4	10
Total Plant...		224	10	2

LABOR.

			Rs.	A.	P.
„ Feby. 25th,	Coolies	...	24	7	3
„ „ 26th,	Do.	...	23	12	9
„ „ 27th,	Do.	...	23	12	9
„ „ 28th,	Do.	...	27	4	9
„ „ 29th,	Do.	...	25	8	0
„ „ 25th to 29th,	Do.	...	12	8	0
„ „ „	Do.	...	6	1	6
„ No month 1st,	Do.	...	7	13	0
„ „ „ 2nd,	Do.	...	7	0	6
„ „ „ 3rd,	Do.	...	3	14	6
„ „ „ 4th,	Do.	...	4	11	0
„ „ „ 5th,	Do.	...	3	12	0
„ „ „ one on the top...		...	0	10	0
„ „ „		...	15	0	0
„ March 1st, Boat coolies...		...	3	7	0
„ „ „ Boat men		...	7	5	0
„ „ „ Coolies		...			
„ „ „ Hire of pair of bullocks 5 days		...	2	8	0
„ „ „ To contractor for earthwork...		...	39	2	0
„ „ „ Bricklayers...		...	4	8	0
„ „ 8th, Carpenters		...	9	4	0
„ „ 10th, Blacksmiths		...	2	0	0
„ „ „ Repairing Boat		...	4	1	9
„ „ „ Coolies...		...	40	10	0
„ „ „ Boat men...		...	24	1	0
„ „ „ Hire of saw...		...	1	0	0
„ „ 12th, Bricklayers..		...	1	3	6
„ Mar. 16th, Carriage...		...	23	12	0
„ „ „ Repair of Boats		...	3	3	0
„ „ „ Coolies...		...	46	0	0
„ „ „ Carpenters...		...	11	2	6
„ „ „ Blacksmiths...		...	6	8	0
„ „ „ Hire of pair of bullocks 20 days at 8 annas.		...	10	0	0
„ „ 25th, Coolies...		...	43	0	0
„ „ „ Carpenters / „ „ „ Blacksmiths		...	15	8	6
„ „ „ Sawyers		...	3	0	0
„ „ „ Coolies...		...	7	8	0
„ „ „ Bricklayers		...	2	7	0
„ „ „ Contractor		...	0	15	0
„ „ „ Coolies...		...	39	4	6
„ „ „ Boat hire		...	5	0	0

LABOR *(Continued.)*

			Rs.	A.	P.
1856, Mar. 30th, Blacksmith		...	4	0	0
„ „ „ Carpenters		...	9	0	6
„ „ „ Sawyers...		...	1	0	0
			556	11	3
„ April 1st, Bricklayers		...	4	7	6
„ „ „ Coolies paid by Adan...		...	28	2	0
„ „ 8th, 319 Coolies...		...	28	12	5
„ „ „ Repairing boat		...	1	15	0
„ „ „ Cart hire		...	8	0	0
„ „ 5th, Earthwork...		...	29	14	0
„ „ „ Blacksmiths		...	3	0	0
„ „ „ Carpenters		...	12	2	0
„ „ 10th, Coolies...		...	1	3	0
„ „ „ do.		.....	11	5	0
„ „ 12th, Carpenters		...	5	3	6
„ „ „ Blacksmiths...		...	1	13	0
„ „ „ Earthwork contractor		...	30	0	0
„ „ 19th, Carpenters		...	3	11	0
„ „ „ Blacksmiths...		...	1	5	0
„ „ „ Carriage of Gunpowder...		...	2	4	0
„ „ 26th, Coolies...		...	20	0	0
„ „ „ do.		.....	27	6	0
„ „ „ Carpenters		...	5	13	0
„ „ „ Blacksmiths...		...	2	8	0
			228	12	5
„ June „ Sawyers		...	2	0	0
			2	0	0
Total Labor.....			787	7	8

MATERIAL.

		Rs.	A.	P.
„ Mar. 16th, Advance stone contractor	...	7	0	0
		7	0	0
„ April 5th, Laterite Quarry	...	28	7	0
„ „ „ do.	...	19	14	0
		48	5	0
Total Material.....		55	5	0

SUNDRIES.

			Rs.	A.	P.
„ Mar. 1st, Cloth for sails...		...	2	4	0
„ „ „ Rope		...	0	12	0
„ „ „ Fodder for bullocks			1	12	0
„ „ „ Oil, twine thread...			2	10	5
„ „ „ Baskets		...	0	15	4
„ „ „ do.		...	1	0	0
„ „ „ *1 Mat for sail*		...	1	0	0
„ „ 16th, Fodder for bullocks			2	10	0
„ „ „ Cadjans		...	6	14	0
„ „ „ 100 Bamboos...		...	5	0	0
„ „ 25th, Fodder for bullocks			0	14	0
„ „ „ Bamboos 200		...	10	0	0
„ „ „ Baskets		...	2	8	0
„ „ „ Paid to bricklayers for returning bricks			3	4	0

SUNDRIES *(Continued.)*

		Rs.	A.	P.
1856, Mar. 25th, Oil greases, &c.	...	4	14	0
" " 30th, Palmyrah trees	...	5	0	0
		51	5	9
" April 1st, *Medicine Castor oil*		1	8	0
" " " Baskets...	...	2	0	0
" " " Bamboos 200 and carriage to Chetwye...	...	4	5	0
" " 5th, 100 Baskets	...	1	8	0
" " " Stationery...	...	3	0	0
" " 8th, Firewood...	...	2	5	6
" " " 100 lbs. Gunpowder		18	4	0
" " 19th, 400 Baskets	...	10	0	0
" " " Straw...		2	0	0
" " " Firewood !!!	...	2	5	6
" " " *Baskets, &c...*	...	2	13	6
" " 26th *Firewood...*	...	2	5	6
" " 30th, *Oil and chatties*	...	1	0	0
		53	7	0
Total Sundries...		104	12	9

SALARIES.

		Rs.	A.	P.
1856, Mar. 1st, 2 Peons 4 Rs. each for February.....		8	0	0
" " " 1 do. in charge of stores...	...	6	0	0
1856, Mar. 1st, Bullock man to 19th February 1856 ...		4	0	0
" " 8th, Bullock driver for February...	...	4	0	0
" " 25th, Do. to 19th Mar.		5	0	0
" " " Horse keeper and grass cutter...	...	4	8	0
" " 30th, Bullock driver four day's...	...	0	8	4
		32	0	4
" April 1st, *Pensioners*	...	4	0	0
" " 19th, *Do.*	...	2	0	0
" " 26th, *Do.*	...	2	0	0
" " 30th, Bandyman	...	1	0	0
		9	0	0
" June Bandyman...	...	2	0	0
" " *Paid blind man at Quarry at the request of Major Selby 8 annas a week 10 weeks.*		5	0	0
		7	0	0
Total Salaries...		48	0	4

(Signed) T. E. TENNANT,
Assistant Engineer Malabar.

R.

CHETWYE DAM.

Abstract of the Collector and Chowghat Tahsildar's Expenditure.

PLANT.

Tahsildar.

		Rs.	A.	P.
1853, Oct. 19th, 200 stones...	...	2	0	0
1854, " 17th, 2 Stone axes	...	1	1	2
" " " Iron...	...	0	4	0
" Augt. 31st, 15 Jumpers to 6 Sledge hammers " Oct. 30th, 5 Boring scoops 4 Tamping pins		68	12	4
" Sept. 8th, 1½ Maunds of iron		6	8	0
1856, Mar. 10th, Planks...	...	16	3	0
		94	12	6

Collector.

1853, Nov. 3rd, Boat...	...	200	0	0
1854, Jan. 24th, Iron rod...	...	5	5	7
		205	5	7
Total Plant.....		300	2	1

LABOR.

Tahsildar.

		Rs.	A.	P.
1853, Oct. 19th, 153 Coolies quarry		12	11	1
1854, July 29th, 184 Coolies " Oct. 30th, Boat hire	...	15	0	11
" Augt 31st, Sepoy in charge of blasting...	...	4	0	0
" Augt. 31st " Oct. 11th Carriage tools		0	8	0
" Sept. 8th " Jan. 27th 1564 Coolies blasting		224	7	5

LABOR *(Continued.)*

		Rs.	A.	P.
1854, Sept. 13th, Cooly hire, carriage of money				
" " 18th, and weights..		1	1	0
" Oct. 5th, Sepoy in charge of blasting.....		3	0	0
" Novr. 8th, Coolies rail...	...	3	14	4
" Decr. 5th, Sepoy in charge of blasting.....		7	0	0
" " 10th, Carriage tools ...		7	0	0
" July 29th to Oct. 30th Do. of stores 1084 coolies...		128	14	7
" Feb. 4th, Carriage hire gunpowder...	...	1	8	0
" Nov. 1st to Feb. 21st Sepoy in charge of blasting from October to 20th February ..	...	33	0	0
1855, Mar. 15th, Boat hire...	...	5	0	0
" June 22nd, Overseer Harrold.		100	0	0
Collector.				
1853, Nov. 28th, Carriage of boat..		12	8	0
		559	9	4
Deduct advance to Overseer Harrold, transferred to Major Selby's, Acting Collector.....		100	0	0
Total Labor.....		459	9	4

MATERIAL.

		Rs.	A.	P.
1854, Aug. 7th to 14th, Cutting and shaping 2800 laterite stone At Yelliencoonoo.		60	0	0
" Sept. 1st, To stone contractor.				
" Oct. 25th, Oossambygatha.		500	0	0
" Nov. 15th, Ahmod.				
" Oct. 7th, Do. Iddykunden Nair do. do.		50	0	0
		610	0	0
Deduct.				
Amount recovered by Major Selby in February 1856.	...	53	8	0
Rupees...		556	8	0

SUNDRIES.

		Rs.	A.	P.
1853, Oct. 19th Repairing tools...		0	2	0
1854, Jan. 8th " Feb. 21st Gunpowder.....		0	11	5
" April 3rd " " 21st For taking levels Do. do.		1	11	6
" May 12th Do. do. ...		1	4	3
" " " Surveying by Capt. Selby...	...	2	15	2

SUNDRIES *(Continued.)*

		Rs.	A.	P.
1854, July 29th to Oct. 30th Coir rope..... Bamboos...	...	8	8	6
		1	1	2
" Aug. 31st 1855, Jan. 29th Gunpowder	...	26	6	10
1854, Oct. 12th, Repairing boat ...		5	0	0
" Sep. 8th to 1855, Jan. 27th 100 Leaves... 1 Bamboo...	...	0	7	3
	...	0	0	10
1855, Jan. 27th Brass...	.....	0	13	9
1854, Sep. 8th Charcoal...	.....	3	3	6
1855, Jan. 27th Thread...	...	1	4	9
" Feb. 26th, Paid to Sepoy attending to blasting...	...	7*	0	0
		60	10	11

* Captain Francis' order, vide Sub Collector, 22nd Feb. 1855. *Huzzoor Treasury.*

1856, April 21st, Gunpowder...	...	35	0	0
Total Sundries...		95	10	11

SALARIES.

		Rs.	A.	P.
1854, June 12th, A man for ascertaining rise and fall of tide...	...	3	6	5
" July 13th, Do. do.	...	3	0	0
" Nov. 17th, Do. do.	...	12	8	0
" Sep. 8th to 1855 Jan. 27th Asst. Maistry...		3	13	10
Total Salaries...		22	12	3

(Signed) T. E. TENNANT,
Assistant Engineer Malabar.

No. 14. ORDER THEREON, No. 2097; dated 13th November 1857.

In his Proceedings of the 12th May last No. 208, the Chief Engineer reported that Major Lawford, the Superintending Engineer Southern Circle, had ordered the discontinuance of work on the Chetwye Dam in the District of Malabar, in consequence of great negligence in keeping the accounts of the Dam, faultiness in the plan, and unskilful construction. Major Lawford stated that, if the Dam was still to be built at Chetwye, the whole structure must be raised on new foundations, and that this could not be done properly for less than Rupees 20,000 in addition to Rupees 46,116 already sanctioned for the Dam. Major Lawford, at the same time, expressed a preference for Yennamakul, the original site; but was of opinion that, before any decision could safely be formed respecting the construction of a Dam at Chetwye, or the renewal of that at Yennamakul, the Revenue objects of the work should be carefully ascertained, in view to its being considered whether any further outlay was expedient or not. In laying this report before Government, the Chief Engineer also submitted three letters; one that he had addressed to Lieutenant Colonel F. Cotton, the original projector of the Dam at Chetwye, calling for his opinion on Major Lawford's proposals; the other two being letters that he had written to the District Engineer and the Collector of Malabar, on the subject of the accounts, and as regards the latter Officer, on the work itself. Upon this the Government directed* the Chief Engineer to submit a complete report on the Dam, on receipt of the replies of the Officers whom he had addressed; and the letter from Colonel Faber above recorded, replies to this requisition so far as it relates to the accounts. He submits a letter from the District Engineer, enclosing a report from Lieutenant Tennant, the Assistant Engineer, who conducted the examination into the accounts, and one from the Collector of Malabar, with its enclosure from his Head Accountant, who aided Lieutenant Tennant in the examination.

* Extract Minutes Consultation, 4th June 1857. No. 1069.

2. The Construction of the Chetwye Dam, at an estimated cost of Rupees 36,216, was authorized in Extract from the Minutes of Consultation of the 4th August 1853, in pursuance of the sanction granted by the Honorable Court in their Despatch of the 15th December 1852, No. 19.

† Extract Minutes Consultation, 19th August 1854, No. 974.

A further sum of Rupees 9,900 was subsequently† sanctioned by this Government, on a representation from the then Acting Civil Engineer Captain Ludlow, that the rates allowed in the original estimate were insufficient; and the total amount sanctioned for the Dam was thus increased to Rupees 46,116.

3. Until a very late period, the Chetwye Dam has been under the Executive charge of Major Selby; and it appears from the papers now submitted, that that Officer's Superintendence of the work has not only been bad, but that his accounts have been kept in so irregular a manner, and with such a marked want of system and accuracy, as to render the task of scrutinizing and checking the expenditure, most laborious and difficult.

4. The particulars of the errors and discrepancies between Major Selby's accounts and those of the Collector, are fully explained in para. 6 of Lieutenant Tennant's report, and need not here be detailed. It is sufficient to observe that, after a careful scrutiny of the accounts, and an examination and valuation of the work executed, as well as of the plant and materials on hand, Lieutenant Tennant considers that a sum of Rupees 8,378 remains to be accounted for, as shown in the margin; and the Chief Engineer, notwithstanding the doubt expressed by the District Engineer, as to the correctness of Lieutenant Tennant's measurements and valuation of the work actually covered by water, expresses his conviction‡ that that Officer's examination was sufficiently accurate to establish the fact of a "most serious and culpable discrepancy between the value and alleged cost of the work."

	Rs.	A.	P.
Value of work executed	11,654	0	6
Do. of materials at Chetwye	1,284	15	5
Do. do. at Quarries	5,474	9	9
Do. of plant at Chetwye exclusive of 3,000 Rs. the value of 3 Pumps	3,986	0	4
Do. do. at Yelliancoonoo	4,332	11	6
	26,732	5	6
Difference	8,378	10	6
Total expenditure as per Statement D.	35,111	0	0

‡ Para. 4.

5. It also appears that there has been great neglect on the part of Major Selby, in the provision of materials for the work. It is stated that one of the principal causes of the large expenditure that has been incurred, in proportion to the extent of work executed, is to be attributed to the selection of the Yelliancoonoo quarry, instead of that at Yeddeacherry. The former quarry not only contains laterite of an inferior description to that procurable at the latter place, but is likewise situated at so great a distance from Chetwye, as to have rendered necessary the construction of a Railway, for the transport of the material, at a cost of Rupees 4,500. This neglect is stated to have been further evinced in the provision of cut granite stones, which were found to be scattered over an area of between 50 and 60 square miles, and of so inferior a quality both in material and workmanship, as to render doubtful the expediency of collecting and conveying them to the work at a cost of 3 Rupees a stone; and this inferior and distantly situated stone was prepared by Major Selby, while the Trikoonatha granite, superior in quality and facility of transport, was set aside.

6. The Right Honorable the Governor in Council has carefully read the reports now laid before him, and he is constrained to remark that they afford evidence of serious neglect on the part of Major Selby, both in the matter of account, and the constructive agency of the Chetwye Dam. Before however passing such orders as the circumstances of the case appear to call for His Lordship in Council deems it but fair to give Major Selby, who is now in England on sic certificate, an opportunity of replying to the charges alleged against him; and he according' resolves to forward the Chief Engineer's letter, and its enclosures, to the Honorable Cou with a request that they will call on Major Selby for any explanation that he may have to off on the subject.

7. With regard to the questions of construction and site, mooted by the Superintend Engineer Southern Circle, the Chief Engineer, it is observed, proposes to report separately soon as he has received certain information which he has called for.

8. Resolved that the attention of the Acting Collector of Malabar be called to Extract from the Minutes of Consultation of the 14th July last No. 1349, in which he was requested to obtain, and forward at an early date, a report of the result of the examination into the accounts of the Mundoor road, ordered in Extract from the Minutes of Consultation of the 28th February preceding.

(Signed) H. FORBES,
Acting Secretary to Government.

43

N° 187
1857

Calicut 12th August 1857

To

The District Engineer
of Malabar

Sir

1. I do myself the honor to forward, with the abstracts and documents

A Abstract of advances by Collector
B Ditto of Expenditure
C Ditto of Major Selby's account current.
D Comparative Statement of Expenditure.
E Statement of work Executed.
F Value of materials at Chetwye.
G D° D° at the Quarries.
H D° of Plant at Chetwye.
I D° of Railway & Plant at Yelliancoonoo Quarry.
K Plan of Yeddeacherry Lattre &c
L Translation of Contracts.
M Notes.
N Classification of Major Selby's day Book.
O D° D° D° account Current.
P D° of Overseer Kurrold's day Book.
Q D° of Mr H Clark's day Book.
R D° of Collector and Tahsildar's Accounts.

as per margin, my Report on the Chetwye Dam.

2. The Original Estimate amounting to Rupees 36215-14-0 for the Construction of a Dam at Chetwye was Sanctioned on the 4th August 1853, and on the Report of the Acting Civil Engineer of the District Captain Ludlow, a Supplemental Estimate of Rupees 9900-5-0 was Sanctioned on the 19th August 1854, making a total Amount of Rupees 46116-3-0.

3. Abstract A will shew the total

† Extract Minutes Consultation, 19th August 1854, No. 974.

A further sum of Rupees 9,900 was subsequently† sanctioned by this Government, on a representation from the then Acting Civil Engineer Captain Ludlow, that the rates allowed in the original estimate were insufficient; and the total amount sanctioned for the Dam was thus increased to Rupees 46,116.

3. Until a very late period, the Chetwye Dam has been under the Executive charge of Major Selby; and it appears from the papers now submitted, that that Officer's Superintendence of the work has not only been bad, but that his accounts have been kept in so irregular a manner, and with such a marked want of system and accuracy, as to render the task of scrutinizing and checking the expenditure, most laborious and difficult.

4. The particulars of the errors and discrepancies between Major Selby's accounts and those of the Collector, are fully explained in para. 6 of Lieutenant Tennant's report, and need not here be detailed. It is sufficient to observe that, after a careful scrutiny of the accounts, and an examination and valuation of the work executed, as well as of the plant and materials on hand, Lieutenant Tennant considers that a sum of Rupees 8,378 remains to be accounted for, as shown in the margin; and the Chief Engineer, notwithstanding the doubt expressed by the District Engineer, as to the correctness of Lieutenant Tennant's measurements and valuation of the work actually covered by water, expresses his conviction‡ that that Officer's examination was sufficiently accurate to establish the fact of a "most serious and culpable discrepancy between the value and alleged cost of the work."

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	26,732	5	6
Difference	8,378	10	6
Total expenditure as per Statement D.	35,111	0	0

‡ Para. 4.

5. It also appears that there has been great neglect on the part of Major Selby, in the provision of materials for the work. It is stated that one of the principal causes of the large expenditure that has been incurred, in proportion to the extent of work executed, is to be attributed to the selection of the Yelliancoonoo quarry, instead of that at Yeddeacherry. The former quarry not only contains laterite of an inferior description to that procurable at the latter place, but is likewise situated at so great a distance from Chetwye, as to have rendered necessary the construction of a Railway, for the transport of the material, at a cost of Rupees 4,500. This neglect is stated to have been further evinced in the provision of cut granite stones, which were found to be scattered over an area of between 50 and 60 square miles, and of so inferior a quality both in material and workmanship, as to render doubtful the expediency of collecting and conveying them to the work at a cost of 3 Rupees a stone; and this inferior and distantly situated stone was prepared by Major Selby, while the Trikoonatha granite, superior in quality and facility of transport, was set aside.

6. The Right Honorable the Governor in Council has carefully read the reports now laid before him, and he is constrained to remark that they afford evidence of serious neglect on the part of Major Selby, both in the matter of account, and the constructive agency of the Chetwye Dam. Before however passing such orders as the circumstances of the case appear to call for His Lordship in Council deems it but fair to give Major Selby, who is now in England on sic certificate, an opportunity of replying to the charges alleged against him; and he according' resolves to forward the Chief Engineer's letter, and its enclosures, to the Honorable Cou with a request that they will call on Major Selby for any explanation that he may have to off on the subject.

7. With regard to the questions of construction and site, mooted by the Superintend Engineer Southern Circle, the Chief Engineer, it is observed, proposes to report separately soon as he has received certain information which he has called for.

8. Resolved that the attention of the Acting Collector of Malabar be called to Extract from the Minutes of Consultation of the 14th July last No. 1349, in which he was requested to obtain, and forward at an early date, a report of the result of the examination into the accounts of the Mundoor road, ordered in Extract from the Minutes of Consultation of the 28th February preceding.

(Signed) H. FORBES,
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3. Abstract A will shew the total

total Amount Viz^t Rupees 40,080-14-3 placed at the disposal of the Engineer's Department by the Collector from the Commencement of the work, on the 20^th of September 1853, to the 30^th April 1857, and the actual Amount taken up by each Executive Officer. Abstracts B C, & D, shew the Expenditure of the different Offices: the discrepancies in Major Selby's Accounts and a Comparative Statement of the Original and Revised Expenditure. And Statements E, F, G, H, and I Exhibit the Amount of the work Executed, the value of materials and Plant Collected for the construction of the Dam.

4. It appears that during the period Major Selby was in Charge of the Chelurge Dam, he frequently requested and obtained from the Collector and Tahsildar, a Statement of the various Sums disbursed to him from their Treasuries - whether Major Selby kept any regular account of his receipts and Disbursements, we have not been able to discover, as neither

neither his cash Book nor any Original document by which he could, or ought to have prepared his accounts is forthcoming.

5. The Acting Collector (Mr. Robinson) has most kindly placed at my disposal the Services of his Head Accountant, Mr. Bates, who is, I believe, considered one of the ablest and most Experienced Accountant in the Madras Presidency, and we have been engaged together daily from 11 A.M. to 7 P.M. for a period of 6 weeks in this Examination: but a total absence of any thing like System or accuracy in Major Selby's Accounts has rendered the task of Scrutinizing and Checking the Expenditure most laborious and difficult.

6. The discrepancies and differences between Major Selby's accounts and those of the Collector, have arisen 1st from Major Selby's not having entered in his accounts the disbursements made according to his orders, by

by the Tahsildar. 2ndly the credit side of his account current does not shew the correct advances made from the Collector's Treasury, and his debit side contains many double entries and irregularities. Major Selby's Diary for may 1853, shews that he commenced on the work of the Chetwaye Dam from that period, but his account current purporting to be the particulars of his Expenditure during the time he was in Charge of the work Commences on the 13th of November 1854. 3dly a very considerable item of Major Selby's Expenditure is entered in his account Current as advances to "Stone and Laterite Contractors" with the exception of one Receipt granted in September 1855 for Rupees 350, we have not been able to discover any Vouchers or acknowledgments for the Sums advanced, or documents which shew if the several contractors have, or have not fulfilled their

their contracts- 4thly with the exception of one or two items, none of the transfers made from Overseer Harrold's Day Book agree with those entered in his account current. 5thly The credit side of Mr F. Clark's account Current, does not coincide with his debit side, neverthelefs these accounts bear the signature of Major Selby. There seems to be but little doubt that great deliquencies and frauds were committed during the time Mr F. Clark was in Charge of the work. The fact of his ordering the writer and the maistries on the work not to keep any memorandum of the coolies employed, and his pilfering from the effects of the late Overseer Armstrong are matters well known to all persons employed with him on the Chetwaye work. and I think it is much to be regretted that Mr F. Clark's accounts were not properly audited, and his Expenditure scrutinized,

and

and the work Executed by him care-
fully measured up, before they re-
ceived Major Selby's Signature,
the detection of fraud might have
been difficult to prove from his
accounts, but by calculating the
average number of Coolies employed
daily, and the work Executed, and
comparing these Results with his
Receipts from the Talook Treasury
much light might have been thrown
on that individual's proceedings.

6th Overseer Adam's account for May
1856, opens with the Charge of Rupees
459-15-7. for work done in the
month of April 1856 by Mr. H
Blank, but no accounts are forth
coming by which this Charge can
be tested. the items of Salaries
entered in Overseer Adam's Bill for
1856/57 do not correspond with those
entered in his Cash Book.

7 To shew the total indifference
and singular inaptitude that Major
Selby had for Keeping accounts
he frequently granted Receipts for
money

money without date, and in one
instance drew an Order dated "Cota-
-camund 1st May 1855" and also an
order bearing the same date from
"Chetwye" the distance between the
two places being upwards of 130 miles.

8. An Epitome of my Re-
-port may be Expressed as follows.

Value of work Executed ——	11,654-- 6
Ditto of materials at Chetwye	1,284-15-5
Ditto of Ditto at Quarries	5,474-9-9
Ditto of Plant at Chetwye Exclusive of Rupees 3000 value of 3 pumps ——	3,986-- 4
Ditto of Ditto at Yellamcoondo	4,332-11-6
	26,732-5-6
Difference	8,378-10-6
Total Expenditure as per Statement D	35,111-- 0

9. The Superintending Engineer
has, I believe, already reported on the
Execution of the work, and therefore
any remark from me on that Subject
would be uncalled for, but with a
view of Ascertaining how so large an
amount had been Expended in
proportion

proportion to the value of work
Executed, during the time I was at
Chetwye and Trichoor in July last.
I carefully Examined, not only the
materials and quarries, but also the
sites of other quarries Situated in
the neighbourhood.

10 It appears to me that one
cause, if it is not the principal rea
=son, of the large Expenditure re=
=sults from the difficulty and
Expense of transporting the materials
from the present quarries to Chetwye
it is however with Exceeding diffe=
=dence that I now offer any opinion
on the Subject as both Major Ludlow
and Major Selby Examined the
quarries in the neighbourhood, and
although they Expressed their opinion
in May 1854 with regard to the quar=
=ries to be worked naming the
Yeddeacherry for Laterite and the
Trikoonatha quarries for granite, yet
the former which, both in quality
and Situation is Superior to the
present

present quarry, has not been worked,
and the latter only for rubble Stone.

11 The appended translation
of the contracts marked L, will shew
that Contract N° 3 was drawn up
by the Chowghaut Tahsildar in august
1854, for cutting laterite Stones at
Yellianoonoo. these quarries are situ=
=ated 1500 yards from the banks of the
Yeddeacherry Lake, and about 4½
miles from Chetwye. The laterite
is soft and porous and of a very
inferior quality and crushes with a
moderate weight. for the purpose
of transporting the Stones from the
quarries to the lake, Major Selby
was obliged to construct a Railway
of 1780 yds in length at a cost of
about 4,500 Rs. from the railway
trucks the Stones are transferred
by cranes and derricks into barges
to convey them to Chetwye. The Expense
of the transport of a stone 2.4 × 2.4 × 16
from the quarry to the barge is 1 anna
& 3 pies and from the Yeddeacherry
lake

Vide Plan marked K

There forward a Specimen used in the Dam

Lake to Chetwye 1 anna for Small Stones 2:„ x 1:„ x „6 from the quarry to the Lake 4 pies and from the Lake to Chetwye 2 pies each - in both cases these Charges are Exclusive of Superintendence, wear and tear of Railway & Plant.

At the above rate the Stones mown at Yelliancoonoo will as shewn in the margin cost Rupees 6305-3-6 to convey them to Chetwye -

7738 large Stones at 2 0 each	994	6 6
26266 Small Do at 0 6 Do	810	13 „
Add Cost of Railway	4,500	„ „
Total Cost Rs	6,305	3 6

The laterite at Yeddiacherry quarries is (as will appear from the Specimen forwarded) of a harder and denser description than that found at Yelliancoonoo. There is water carriage from where the Stones is cut to Chetwye, the cost of conveying to the wall a large Stone, 2.4" x 2.4" x 1.6" would be 1 anna, and of a Small Stone 2.0" x 1.0" x 0.6" 2 pies Exclusive of Superintendence and wear and tear of barges.

12. Contracts Nos 172 were made before Mr Collett, the Sub Collector, on the 22nd & 29th June 1855 for quarrying and hewing granite Stones from such places as might be Selected by Major Selby. On visiting the quarries around Trichoor, I found that the cut granite Stones were Scattered over an area of between 50 & 60 Square miles - I Experienced considerable difficulty in discovering the blocks as some had been quarried on the tops of hills. Some in rivers and some in thick jungle. The greater portion of them are cut from the bastard granite, and both the material and workmanship are of so inferior & bad a quality that I Should doubt the Expediency of Government endeavouring to collect and convey them to Chetwye even at a cost of 3 Rupees a Stone - Mr Adam, the Assistant Overseer in charge of the work made a contract to convey Some of the most accesible Stones to Chichoor at 1 Rupee each and the cost of conveying them from thence to the Veeram Sal Dam where they have to be

x Specimen forwarded

transferred

transferred from the boat to the shore and re-shipped cannot be estimated under 2 rupees each.

13. The Trikoonattha granite of which I also forwarded a Specimen is much Superior to any I have met with around Trichoor. One of the principal advantages of these quarries consists in being so situated that the transfer of the Stones from the west to the east side of the Yenamakel Dam would be avoided and by careening-stating the quarries, rubble and cut stone might be advantageously worked together and a considerable saving of plant effected - and lastly the carriage of each stone from the quarry to Chetuye would, I calculate, be under 12 annas.-

14 If from any Expression in my report it may be inferred that I have Exceeded my duty in offering any Remarks on the Execution of the work or quantity of materials I beg that it may not be supposed that I deem my opinion is to be compared

compared with other Engineer and Executive Officers who have Examined and been engaged on the work, as I have no doubt that many difficulties have been developed and causes of Expenditure have arisen since the commencement of the work, which no foresight could provide, for, or prudence avoid.-

I have the honor to be &c.

(Signed) T. E. Tennant
Assistant Engineer
Malabar

(True Copy)
A. Taylor Colonel
Chief Engineer

Comp'd [illegible]

57

District Engineers Office
Natchez

Commencing 20th September 1857.

No 1092.-

Major
Lieutenant Colonel Long
Corps of Engineers Natchez

Colonel G.W. Long
Chief Engineer D.C.M.

Washington, 21st October 1857

Sir,

I herewith submit Captain Comstock's Report, dated 10th inst. and the Drawings accompanying the same, relative to the examination with the accompanying Letters of Lieutenant Comstock, relative to the Chetimaches Pass, and the Lake Bruin Cut-off.

Very respectfully Your obedient Servant
J. G. Totten
Brevet Colonel
Chief Engineer

Copy in A to B
of 30th Nov. 1857 No. 22

Enclosure in a Letter
from the Chief Engineer
To The Secretary of War
Dated 15th Sept 1857
Rec'd
No. 3707
P.M. 1841 of 57.
Copy of Lieut. to
Comstock's Report on the
Chetimaches Pass—

Saturday the 22d instant.—

2 From the results which have been arrived at it will be seen that a sum of Rupees 35,111 has been expended according to the Statements of expenditure furnished by the Collector and this amount has been accounted for in the various Statements which accompany Lieutenant Lemmant's Letter and which give the expenditure incurred by the various Officers after Correcting the numerous errors which have Crept into Major Selby's accounts.—

3 To account for the reason of such great discrepancies it must be evident from a perusal of the papers enclosed that Major Selby was not interested with the necessity of keeping his accounts in a Correct and regular form. As long as the works progressed he does not appear to have Concerned himself with the preparation of the expenditure accounts of the Money which passed through his hands for this object, and his Subordinates also were allowed to Carry on a large expenditure without a periodical Check or scrutiny of their books and papers by those in superior Authority to them. Mr. F. Clarke's proceedings, when in Superintendence of the Chetwye Dam, is an exemplification of the effects of such a want of scrutiny, and it is difficult to understand how

know a man of his Character obtained a post of such responsibility.—

4 After a Careful examination of the work, and a measurement and Valuation of the Material and plant, Lieutenant Lemmant Considers that a sum of Rupees 26,732—5—6 has been fairly expended, leaving a balance of Rupees 83,78—10—6 un-accounted for. With regard however to his Valuation and the measurement of the Dam itself, I may observe that as soon as the work and balings was stopped, the water necessarily rose over the works, and when he visited on the Chetwye, in July last, there were 3 feet depth of water on the Body, and though his measurements were Carefully taken, I do not Consider that under such Circumstances Correct dimensions Could have been obtained, and sufficiently so to justify any great faith being placed in their accuracy.—

5 With reference to the large expenditure incurred when so great a portion of the work remains to be Completed, I would observe as one Cause that a Railway was Constructed to the Gellianconnoo Quarry from the Gedercherry Lake at the East, as Lieutenant Lemmant Computes of nearly 6000 Rupees, of the Cost of labor and other

other items be added to the Valuation of Rupees 4,500 which he has entered in his Statement. This amount also, it is very probable, might have been in great part saved had the Lattente stone been cut at Geddencherry which is on the border of the Lake of the same name, in place of at the above Quarry, as it appears there is abundance of better material at the spot. The Trikonmatha Quarry in the neighbourhood of Gomamakul, appears to have the close grained and much the finer Granite, yet it was not worked, though its facilities as regards the transport of the stone to Ichelunge at a lower Cost might have alone pointed it out for preference.—

6 Another reason which I consider might have increased the expenditure was the excavation of a Canal opening out and Connecting the whole line and face of the work with the Backwaters. This Canal, though doubtless affording facilities for the transport of Material in boats to the edge of the works, must have, in my opinion, increased considerably the Springs of water from the foundation and necessitated extra baling.—

7 As regards the Construction of the Dam on its present plan and Site, and the objects

objects intended by its erection, you have already the valuable judgment of experienced Officers viz. Major Lawford and Colonel F. Sutton, and it would not be necessary therefore for me to offer my opinion, unless as in the Case, I had been called upon to make a special report.—

8 From the Sections of the Dam which have been formed in my records, it would appear that the height from the bottom of foundation to top of Dam is to be 9 feet including the thickness of Cut stone Capping, but I believe that the work as carried out is eight feet in height, and I do not consider that this is sufficient to keep out Salt water, especially as the bed of the backwaters is below the level. Though the bottom Course was laid in Sumam, the top Courses had their interstices filled with Clay with very little Sumam, and I do not consider such a mode of Construction would render the weirs impervious to the tidal water, especially as the Lattente blocks were not carefully fitted together. The top of the Dam being on spring tide level, I do not see the object of the Caffer boxes which I presume were to be adapted on Major Lebby's order and it does not appear that the fresh water was to be used for irrigation.—

&c

9 As the Chelwye backwaters are in Communication with those extending along the Coast to Cochin, I presume there must be a Bund thrown across the Canal (to the impediment of the navigation) to exclude the Salt water, though certainly it does not appear that there is any outlet to the sea until 30 miles to the Southward of the Chelwye Dam. The inlet to the Vechoor Lake has already been cut off by an earthen bank thrown across its Course.—

10 Though there is no outlet to the sea, as mentioned above, I must notice, that on my inspection of the 5th May, I perceived beyond the extremity of the Southern bank, which abuts against the ruins of Candoth Fort, that the ground was extremely low, and that but a small rise of tide or backwater would be sufficient to open out a Communication with the sea. Since this date from Lieut. Lemmon's observation it appears that such an occurrence had actually taken place when he visited the work, and it appears to me that this Southern Embankment should have been extended a long way beyond the Fort. As regards the material used for these embankments, it is probable that no better was procurable, but the greater portion

portion consisted of sand, and for the northern and principal Backwaters 600 yards in breadth a more durable and tenacious material would have better withstood the effect which will naturally arise from damming up such an Outlet. The Latter is also in the worst possible and of bad quality.—

11 There is an Estimate of a considerable amount of Valuable plant at the works which I trust will prove useful for other works, but of the operations at this place are definitely stopped, I do not believe that the Covenant on hand, which has deteriorated, will have sufficient binding quality to make it of any use for building purposes.

I have the honor to be Sir
Your most obedient
Servant
(Signed) J. Bean
District Engineer Malabar.

True Copy
W. Scott Colonel
Chief Engineer

Copy

Central Office of P.W.
Fort Saint George
15th September 1857.

№ 3707

From,

The Chief Engineer,

To,

The Secretary to Government P.W.D.

Revenue

Irrigation

Sir,

Enclosures &c.

* Letter dated 12th Augt 1857

The examination of the account of the Chetlore Dam, in Malabar, having now been completed, I have the honor to submit copy of a report thereon, by Lieut. Tennant, who was employed in the service for six weeks, aided by the Head Accountant of Malabar, whose exclusive services, were kindly afforded to the P.W. for this purpose. The report is accompanied by 17 Statements, and a letter from Lieut. Tean. The results will, I think, fully bear out the opinions I have already formed, and expressed, of the serious neglect of duty on the part of Major Selby, whose accounts since such a total absence of anything like system or accuracy, as to render the task of scrutinizing and checking the expenditure, most laborious, and difficult.

Copy of letter No 1095 of the 25th Augt 57 from the Dy Engr of Malabar

1 Do No 4710 of the 14th Augt 57 from the Agent of Malabar

2 with the 17 Orgl Enclosures marked from A to R

+ No 1095 of 25 Augt 57

Enclosure in a letter from the Chief Engineer to the Secretary to Govt P.W.D. dated 15th Septr 1857

Copy in C.L.B. 30th Novr 1857 No 22

Taken by [illegible] Sept 57

Recd 15th Sept 57

Chief Engineer
The Secretary to Government
Fort St George

Sir

I have the honor to forward a letter with Enclosures from Lieut. Tean, relative to the examination of the accounts of the Chetlore Dam, and to request that you will lay the same before the Right Honorable the Governor in Council.

I have &c.

2 The errors and inaccuracies of these accounts are explained in para 6 of Lieutenant Tennants letter, and it is stated that there is little doubt that great delinquencies and frauds were committed during the time Mr. T. Clark was in charge of the work:- and it is impossible not to share in Lieut. Tennants regret, that his accounts of public expenditure received so little check, or scrutiny from Major Selby.

3 Lieutenant Tennant, not only scrutinized the accounts, but also inspected the work already executed, as well as the plant and materials at Chetuye, and the Quarries near Trichoor and other places, and the results are thus summarised:-

Value of work executed	11,654-6-6
Materials at Chetuye	1,284-15-8
Do at Quarries	5,474-9-9
Plant at Chetuye, excluding 3000 Rupees for 3 pumps	3,986-4
Do Do at Yellancoonoo	4332-11-6
	26,732-5-6
Difference	8,378-10-6
Total expenditure	35111-4

4 From this statement it appears, that a sum of Rupees 8378.10.6 remains unaccounted for, and although it may to a certain extent, be true as urged by Lieut. Bean, in Para 4 of his letter, that accurate measurements could not be made of the work actually covered by water, yet it is evident, that the depth only could not be so ascertained, the length and breadth of the Dam being easily found, and the Executive Overseer (Adam) being present, there is little doubt, that Lieutenant Tennants' examination was quite accurate enough to establish the fact of a most serious, and culpable discrepancy between the value, and alleged cost of the work.

5 Lieutenant Tennant proceeds to shew, that the material employed in the construction, was inferior in quality and higher in cost, than could have been obtained, the larger laterite stones from Yellancoonoo which are soft and porous costing 2-3 each to convey to the work, while stones of equal size from Yeddicherry quarries, of a harder and denser description would cost only 1 anna each for

carriage. Cut granite stones for this work were found scattered over 50, and 60 square miles and of so bad a quality in materials and workmanship, that the expediency of collecting and conveying them to the work is considered doubtful at 3 Rupees each stone. The Trichoonathy granite, superior in quality, and facility of transport, was not used.

6. It seems perfectly clear from Lieut. Tennant's report, that the mismanagement so conspicuous in the account of this work, was equally flagrant in the constructive agency and provision of materials, and that the loss to Government cannot be considered limited to the actual defalcation exhibited in the valuation statements.

7. It is not now proposed, to enter on the questions of construction, and site mooted by the Superintending Engineer Southern Circle, which will be reported on separately, as soon as certain information is received, and it is therefore needless for me to consider those parts of Lieut. Bean's letter, or to supply any estimate of the cost of completing the work; which must greatly depend on the correctness of Major Lawford's views; but I am satisfied, that in submitting these papers, Lawford Govt. ample means of deciding on the management evinced in this important Work.

8. Statement A, shews the amount of advances made by the Collector, to have been Rupees 40,080-12-3. from which the sums taken up by Major Selby, and Mr. Clark, and shewn credited by the Collector, amount to Rupees 35,132-4-... The amount undrawn and refunded, and the available balance on the 30th April 1857 amount to Rupees 4,948-10-3. leaving a net expenditure of Rs 35,132-4-...

Statement B, is an abstract of expenditure, which shews an outlay of Rupees 35,111. differing from the former by Rs 21-4-...

Statement C, is a corrected abstract of Major Selby's account current, shewing a balance due by him of Rupees 21-4

Statement D, is a comparison of the accounts of expenditure rendered by the Executive Officers, with the revised Accounts now prepared, shewing a decrease in the latter of Rupees 1261-8-5.

Statement E, is the amount of work actually measured by Lieut Tennant,
F is that officer's valuation of material at the Dam.— G being a similar estimate of the material at the Quarries.
H, is the value of Plant at the Dam also estimated by Lieut Tyrrell, and
I, is that of Railways plant at the Quarries.
K, is a sketch of the country near the Quarries, shewing that good granite could have been more easily procured, than the inferior stone actually used.—
L, are copies of agreements or contracts entered into for the supply of stones for the work, but Lieut Tennant observes in Para 6, of his letter that there are no vouchers to shew, if the several contractors have, or have not fulfilled their contracts.

M, is a paper of notes on the proceedings of the officers concerned in the construction, calling for no particular remark.

N, is an abstract of Major Selby's day book, and O, is called a copy of his account current, but appears to be, only an entry of disbursements from November 1835 to a date not very clearly shewn this paper seems of little value.

P, is a copy of Overseer Harold's Day Book, on which Lieutenant Tennant observes, that none of the transfer from it, agree with those entered in the account current.

Q, is an abstract of Mr. F. Clark's Day Book, on the accuracy of which no reliance can be placed; and—

R, is an abstract of the account of expenditure, by the Collector & Tahsildar

On the whole, it appears to me, that the examination of these accounts has been conducted by Lieut Tennant with great carefulness, and that the result has been established with as much accuracy as the case admits.

I think it my duty, in submitting these papers, to forward also copy of a letter from the acting Collector on the same subject

No 4718. dated 14th Augt 1837.

Central Office of P.W.
Fort Saint George
5 Septr 1837

I have the honor to be
Sir
Your most Obedt St
[illegible] Colonel
Chief Engineer.

S.E.S.C.

Copd

For Orders.

Public Works Department No. 1841.

From the Chief Engineer 15th September 1857.

These reports show that Major Kelley is very unfit to conduct a large work — & his permanent position in the Dept of P.W. is beyond his qualifications.

He is now at home on sick certificate — a copy of these papers should be sent to him for any

Le may Lan Depper.

P. W.D.

N° 2097

Extract from the Minutes of Consultation

Held

Under date the 13th October, 1857.

Read the following

Letter from the Chief Engineer

/Here enter 15th Sept. 1857 N°707/

In his Proceedings

of the 12th May last N°208, the

Chief Engineer reported that

Major Crawford, the Superintending

Engineer Southern Circle, had

ordered the discontinuance of

work on the Chetaye Dam

in the District of Matale,

in consequence of great negli-

gence in keeping the crest

of the Dam, faultings in the

plan, and unskilful construc-

tion. Major Crawford stated

that, if the Dam was still

to be built at Chetaye, the

whole structure must be raised

on

on new foundations, and that this could not be done properly for less than Rupees 20,000, in addition to Rupees 46,116 already sanctioned for the dam. Major Lawford, at the same time, expressed a preference for Yennamakul, the original site, but was of opinion that, before any decision could safely be formed respecting the construction of the Dam at Chetuyee, or the renewal of that at Yennamakul, the revenue objects of the work should be carefully ascertained, in which light being considered either any further outlay was expedient or not. In laying this report before Government, the Chief Engineer also submitted three letters, one that he had addressed to Lieut Col J. Cotton, the original projector of the Dam at Chetuyee, calling for his opinion on Major Lawford's proposals, the other two, being letters that he had written to the District Engineer, and the Collector of Malabar, on the subject of the accounts, and as regards the latter Officer, on the work itself. Upon this the Government directed the Chief Engineer to submit a complete report on the Dam, on receipt of the replies of the officers whom he had addressed, and the letter from Lt Colt Farber above recorded, replies to the requisition so far as it relates to the accounts, the Chief submitted a letter from the District Engineer, enclosing a report from Lieut Tennant, the Assistant Engineer, who conducted the examination into the accounts, and one from the Collector of Malabar, with its

* Est: Mins: Cons 4th June 57 No 1069

its enclosure from his Head Assistt, who aided Lieut Tennant in the examination.

The construction of the Chetwye Dam, at an estimated cost of Rs 36,216, was authorized in Extract from the Minutes of Consultation of the 4th August 1853, in pursuance of the Sanction granted by the Honorable Court in their Despatch of the 15th December 1852, No 19. A further sum of Rs 9900 was subsequently + sanctioned by this Government, on a representation from the then acting Civil Engineer Captain Ludlow, that the rates allowed in the original estimate were insufficient, and the total amount sanctioned for the Dam was thus increased to Rs 46,116.

Until a very late

+ E. M. C. 19th Aug 1854 No 974.

period, the Chetwye Dam has been under the executive charge of Major Selby; and it appears from the papers now submitted, that the Officer's Superintendence of the work has not only been lax, but that his Accounts have been kept in so irregular a manner, and with such a marked want of System and accuracy, as to render the task of scrutinizing and checking the expenditure, most laborious and difficult.

The particulars of the errors and discrepancies between Major Selby's accounts and those of the Collector, are fully explained in para 6 of Lieut Tennants report, and need not be here detailed. It is sufficient to observe that, after a careful scrutiny of

of the accounts, and an examination and valuation of the work executed, as well as of the plant and materials on hand, Lieut. Tennant considers that a Sum of Rupees 8378 remains to be accounted for, as shown in the margin, and the Chief Engineer notwithstanding the doubt expressed by the District Engineer, as to the correctness of Lieut. Tennants measurement and valuation of the work actually covered by water, expresses his conviction that that Officers examination was sufficiently accurate to establish the fact of a "most serious and culpable disparity between the value and alleged cost of the work".

	Rs	A	P
Value of work executed	11654	-	6
Do of materials at Chetwye	1284	15	5
Do Do at Quarries	5474	9	9
Do of plant at Chetwye exclusive of 3000 Rs the value of 3 pumps	3986	-	4
Do Do at Yellimcoorroo	4332	11	6
	26732	5	6
Difference	8378	10	6
Total expenditure as per Statement D.	35111	-	-

+ para 4

It also appears that there has been great neglect

neglect on the part of Major Selby, in the provision of materials for the work. It is stated that one of the principal causes of the larger expenditure that has been incurred, in proportion to the extent of work executed, is to be attributed to the selection of the Yellimcoorroo quarry, instead of that at Yeddeachery. The former quarry not only contains talcite of an inferior description to that procurable at the latter place, but is likewise situated at so great a distance from Chetwye as to have rendered necessary the construction of a Railway for the transport of the materials at a cost of Rupees 4,500. This neglect is stated to have been further evinced in the provision of cut granite

stones

stones, which were found to be scattered over an area of between 50 and 60 Square miles, and of the inferior quality both in material and workmanship, as to render doubtful the expediency of collecting and conveying them to the work at a cost of 3 Rs. a stone. This inferior and distantly situated stone was prepared by Major Selby, while the Trikoonatta granite, superior in quality and facility of transport, was set aside.

The Right Honorable the Governor in Council has carefully read the reports now laid before him, and he is constrained to remark, that they afford ~~the~~ evidence of serious neglect on the part of Major Selby, both in the matter of account and the constructive agency of the Chetwye Dam. Before however passing such orders as the circumstances of the case appear to call for, His Lordship in Council deems it but fair to give Major Selby, who is now in England on Sick certificate, an opportunity of replying to the charges alleged against him; and he accordingly resolves to forward the Chief Engineer's letter, and its enclosures, to the Honorable Court, with a request that they will call on Major Selby for any explanation that he may have to offer on the subject.

With regard to the questions of construction and site, mooted by the Superintending Engineer Southern Circle, the Chief Engineer, it is observed, proposes to report — se-parately, as soon as he has received

received certain information which he has called for.

Resolved that the attention of the Acting Collector of Malabar be called to Extract from the Minutes of Consultation of the 11th July last N. 1319, in which he was requested to obtain, and forward at an early date, a report of the result of the examination into the accounts of the Nundoor ryot ordered in Extract from the Minutes of Consultation of the 28th February preceding.

J. H. S.

To Geo. Spottiswoode Esqr
Collr of Malabar

received certain information which he has called for.

Resolved that the attention of the Acting Collector of Malabar be called to Extract from the Minutes of Consultation of the 11th July last N. 1319, in which he was requested to obtain, and forward at an early date, a report of the result of the examination into the accounts of the Nundoor ryot ordered in Extract from the Minutes of Consultation of the 28th February preceding.

J. H. S.

To Geo. Spottiswoode Esqr
Collr of Malabar

Cons.ns 14th July 57 R.s 84.
" 3d March " 35 & 37
Copy sent to Lt.Col. Pelletto Engr.
Dft. 30th November 1857 No. 22

R

Public Works 1857 Dep.t No.4
Dft. to Cons. 17th November

No. 2097.

Extract Mins. of Cons.
Dated 13th Nov.r 57.

From the Secy. Govt. of Malabar
28th Nov.r 57 & 8th Jan.y 58

From the Chief Engr. 7th April 58 & 23rd ult.o
C. M. C. 6 Sept. 58 R. 1816.

Observing that the examination of the Accounts of the Chetwye Dam in Malabar afford evidence of serious neglect on the part of Major Selby and resolving to request the Honorable Court to call on that Officer who is now in Engd. on Sick certificate for any explanations he may have to offer on the subject and requesting the collector of Malabar to forward the report on the result of the examination into the accounts of the Mundoor Road.

From the Major Genl. Commg. Bengal Engrs. Dep.t 25th Jany. 1858 No. 184

No. 13 & 14.

184

Let 83 Nov.r