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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O.-No. 325	Press Mis.
440-441	
Dated 28-2-	1862.

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department, 28th February 1862.

No. 440. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY Chief Engineer and Secretary to Government, Public Works Department, dated Chepauk, 13th February 1862, No. 80:—

SIR,

1. In forwarding to Government the accompanying letter from Captain Haig of yesterday's date, embodying a report on the progress made with the works on the Upper Godavery, up to the beginning of last month, I beg permission to offer a few remarks.

1 Letter from District Engineer Upper Godavery, dated 11th February 1862.

2. Captain Haig's former report, submitted with my letter No. 8, dated 3rd instant, was at that Officer's request not detained an hour in this Office, he being anxious that it should be in the hands of his Excellency the Governor at the earliest possible date. I was hence precluded from penning at the time any observations upon the important subject of which it treated.

3. I do not presume to suppose that this can be other than a matter of indifference; and I only make mention of the circumstance lest it should be deemed inconsistent that I now refer to Captain Haig's second report in any way.

4. I do not desire to waste public time by entering into a dissertation upon the subject before Government. I propose simply to record my opinion, an opinion based upon Captain Haig's own most candid and explicit statement of events, that difficulties still environ the development of the scheme upon which he is employed of a character more grave than was anticipated when the great undertaking of opening up the navigation of the Godavery was originally contemplated.

5. Seven years have now elapsed since Captain (then Lieutenant) Haig commenced in 1855 his adventurous operations in the valley of the great river; operations not simply embracing the objects of an exploring expedition, but *bonâ fide* attacks upon the obstacles which interposed to render the Godavery practically unnavigable.

Lieutenant Haig to Colonel Faber, 3rd May 1856.

6. During the progress of that expedition and during the intervening period, very considerable sums of money have been expended. With what result I think we should do well to consider. To me it seems that we have not even gained an equivalent in experience.

7. I find that in Captain Haig's letter above quoted, paragraph 54, the very difficulty which has now in a great measure frustrated all his efforts, viz., the unhealthiness of the climate which he has had to encounter, is set down as a thing of naught:—"The fears entertained on that head are" (in that document stated to be) "in great part unfounded," and "the fever prevalent in the cold season is" (represented as) "rarely of severe type." How far this has been sustained must be judged by the report now submitted.

8. Again as to the prospects held out of facility in assembling adequate masses of laborers and artizans, of retaining them in comparative contentment at the various sites selected for operations, of keeping the rates of pay and the cost of supply within limits: have these been realized? To me it appears they have not; and while I offer my humble meed of admiration of the energy, and, I may say, fortitude which Captain Haig displays in confronting these difficulties at every step of his arduous undertaking, I cannot refrain from expressing an opinion that he is running a race without sufficiently observing the obstacles between his starting point and his goal; or, observing them, that he does not adequately appreciate their gravity.

9. I have no desire, however, as I have before observed, to waste the time of Government by pursuing this subject into details, especially as such a course is neither invited nor likely to be acceptable; but I cannot refrain from recording what has been impressed upon my mind during my brief residence here, a mind, I may remark in passing, peculiarly predisposed to accept the most sanguine views in regard to the success of the Godavery project owing to the prominent part which, by fortuitous circumstances, I was led to take in pressing it upon the attention of the mercantile and manufacturing communities in England.

10. I am sensible of a growing distrust in this scheme: of an impression that there is a vagueness, an uncertainty, even a delusiveness in its development which may entail the most grave financial results: which may involve the State Exchequer in a labyrinth of operations, each stage vying with the last in magnitude of outlay, from which there will be no retreat but by sacrifices of vast proportions.

11. This opinion is not a mere erratic sentiment but too often excited by the contemplation of difficulties which the looker on has not the hardihood to assail; it is shared in by professional men, by members of the mercantile body, and by those who have local experience to guide them.

12. I found it wide-spread both in Manchester and in London, and I did my best to combat and refute it, but with ill-success. Looking back to this I must say that it affords me matter for warm congratulation that I did not succeed; for with the lights which are now supplied to me I judge that had the Company which was on the eve of formation on the basis of the estimates and proposals originally put forth in connection with the Godavery navigation scheme, been established, a terrible failure would have been the result; and I should have been stamped as an adventurer who had grievously, however unwittingly, misled and deluded a trusting proprietary. If allusion to this is considered irrelevant I would remark that I quote the experience I gained only because it conveys by the most forcible mode I can employ the view which I have been now led to take of the subject. Having adopted this view, and being deeply impressed with the uncertainty which through it envelopes the brilliant scheme on which Government are now embarked, I feel induced to offer the following suggestion.

13. Before proceeding further in the, as I deem it, doubtful venture before them, beyond the completion of the Tramways round each of the Barriers, I would counsel Government to take measures to obtain an unbiassed and appreciable judgment upon the entire scheme, both in its partial and also in its most comprehensive phase: let them demand to have some tangible and absolute means of estimating the cost, both as regards money and time, of whatever ultimate plan or system of engineering operations is decided upon, or reported, as the best; and then let Government, supported by such an opinion, if favorable, enter earnestly into the scheme upon the most extended scale which can be adopted for those operations; doubt and misgiving being for ever set at rest, and success rendered, humanly speaking, certain.

14. The appointment of a Committee would doubtless afford the most reliable means of attaining this end; and I feel assured that the institution of such an enquiry would be hailed with the utmost satisfaction both at Home and in this country; whether by those who, having faith in the promises of the early and brilliant projectors, would gladly see their horizon cleared of the doubts which have been forced upon the public mind, or by those who, originating those doubts, could not but be gratified by the eliciting of a demonstration of their groundlessness.

15. The loss of a season, after the Barriers shall have been fairly circuited, and the means of high water transit by the Godavery established, will not in my opinion entail any significant consequences. The Bombay Railway, with the help of the cheap and superior coal of the Nerbudda Basin, will I expect be carrying the Cotton of Berar from Oomrowtie to port at a rate both of charge and of speed which will leave but little of the crops to find its way by the Godavery, long before the practicability of that route shall have been established.

16. The Company are, as no doubt Government are aware, making the most strenuous exertions to complete the branch line from Bhosawul to Oomrowtie and Nagpore for this purpose; and as they have a branch of 11 miles now in course of construction into the heart of the Nerbudda coal field near Hosungabad, it is not too much to anticipate that these expectations will be fully and expeditiously realized.

17. In conclusion I beg to draw attention to the request conveyed in Captain Haig's P. S. to the letter under consideration, and to solicit that the lac of Rupees referred to may be placed at that Officer's disposal.

From Captain F. T. HAIG, District Engineer, Upper Godavery, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Madras, 11th February 1862.

SIR,

1. The progress made in the prosecution of the works under my charge in the Upper Godavery, was up to the beginning of January as follows:—

2. At the 1st Barrier.

Nine miles of the line of Tramway had been surveyed and laid out. The earthwork of about 3 miles was finished and that of 2 miles more was in hand.

The wood work of the road was in course of preparation, and a few hundred yards of it was laid down. About 350 Coolies were employed on these works, and 1,200 more from Hyderabad and Madras were within a few marches of Dumagudiam. Some Tramway waggons were partially completed.

3. Permanent Works 1st Barrier.

On these only about 250 men were employed, besides artificers in the Workshops.

5,000 tons of stone were ready quarried in the river bed near the line of the Anicut and entrance lock.

1,000 tons of limestone were ready at the quarry 16 miles distant, but the means of conveying them at Dumagudiam had not been provided.

3,000 tons of firewood were ready.

1 large and 3 or 4 smaller lime kilns were nearly ready.

6 Silt and 8 platforms waggons were finished and mostly in use. Others were in progress.

It will be about 600 yards of Tramway were laid and in use in the river bed, and 500 more at the limestone quarry. About 120 yards in length of the excavation for the shoot at the left end of the Anicut was finished. A considerable part of the embankment intended to connect the wingwalls of the Anicut with the high part of the island was made.

2 new cargo boats 80 feet by 14½ feet were in use.

6 more of the same dimensions, building by contract at Coringa were half finished.

2 boats, 50 feet by 17 feet, were in the same state.

4 new paddle boats and
6 cargo boats 55 feet by 10 feet } had been commenced.

9 cargo boats of smaller size were in use. The hospital, workshop sheds, 6 houses for Europeans, and extensive lines for the writers, carpenters, smiths, coolies, &c., were in great part finished.

About ¾ mile of the river bank parallel to the Canal were also finished, and materials were being collected for the masonry works at two points along the line of Canal.

4. At the 2nd Barrier.

The line of Tramway had been surveyed throughout. Some miles had been staked out.

The earthwork of 3 miles was nearly done, and the laying of the wood work had commenced.

The waggons was also commenced.

More than 1,000 coolies besides carpenters and smiths were employed, and fresh men were coming in daily.

5. At the 3rd Barrier.

The survey of the line was finished. Sheds for the accommodation of Natives and Europeans had been erected at a few points. About 200 coolies had been collected, but ground had scarcely been broken along the Tramway.

Materials and carpenters for constructing boats both above and below this Barrier were being collected.

6. During the quarter ending 31st December fever was very prevalent all along the river and has, I am sorry to say, impeded the progress of the works to a degree I had not anticipated. Shortly after its outbreak, half our coolies at the first Barrier left in the course of one week, while fully 40 per cent. of those who remained, and almost every one of the Europeans have suffered more or less. At the first Barrier it happened more than once that every European but one was either sick or attending upon the sick, while the Sub-Engineer in charge of the work at the second Barrier, and Lieutenant Roberts in charge at the third were repeatedly prostrated by attacks of fever, and such numbers of the Natives that the works at those points came at one time to a stand still. The natives employed there though mostly from the neighbouring villages suffered severely, and the men sent up from the Coast were disabled almost to a man, and either died, and ran away in terror, or were sent down river unfit for further employment. Those who returned to their homes spread exaggerated accounts of the unhealthiness of the river, and the supply of labor from the Coast Districts almost totally ceased from the middle of October. In fact we had at the first Barrier at that time twice as many men as we had two months later. The fever was at its worst from the beginning of October to the beginning of December. It then began to decline and the number of people at the second Barrier works steadily increased, but the number of those at the first and third Barriers remained much the same up to the 1st January, though as above stated a large body of fresh coolies were then on their way to join the first of these stations.

7. It will be readily understood from this account that the progress made with the works has been far from equal to our hopes. This was the first year that a large body of Natives and Europeans ever passed through the unhealthy season on the Upper Godavery, and we could form little idea beforehand as to the amount of sickness which might be expected or the effect it would have on our operations. The effect has, I may almost say, been disastrous. We cannot, I fear, complete the Tramways, as I had hoped to do; and the work which we shall be able to accomplish at the Anicut and Canal at the first Barrier, will be of comparatively trifling amount.

8. I think the Tramways at the two lower Barriers will probably be finished in time to open them for the next monsoon traffic. If we should find this impracticable at the third, I hope at least to make a good common road, which will enable us to carry goods across on carts, boats I think will be ready in time, so that the projected communication between the Coast and Nagpore Districts may be opened at the commencement of the freshes though not on such an efficient footing as was desired.

9. The difficulties which, as above described, have so greatly hindered the progress of the works have also increased their expense. We have been compelled to offer increased wages to the Natives, and to employ a larger number of Europeans than would otherwise have been necessary. The pay of the sick, the advances made and as yet unrecovered from those who ran away, the money spent on preparations for work intended to be done this season but now found to be impracticable, and other contingent expenses which could not but result when operations conducted on so extended a scale were so suddenly and seriously interrupted, all these causes have added to the expenditure during the past year and must be expected to continue to operate in a similar manner, to a greater or less degree, on future operations.

10. The Government have recorded their opinion that the permanent works should be prosecuted at all these Barriers simultaneously. I quite concur in this opinion. We have found that the work carried on this year at the second and third Barriers, while it has probably drawn off a small part of the labor which would otherwise have been concentrated at the first Barrier, had the operations been confined to that one locality, has certainly attracted numbers of people who otherwise would not have been available. Many of those employed at the second Barrier refused to come down to the first, though offered higher pay for doing so. The Public Works Department in Nagpore, and the Railway in Berar compete with us for labor, which, the prices offered by all there being nearly the same, will naturally determine towards that work which lies nearest home. Hence the works at the first Barrier are, I think, the most unfavorably

situated of all in this respect. The people of the Coast are both well to do in their own Districts, and slow to encounter the risks attendant on life in the jungles, while the more populous parts of the Hyderabad and Nagpore Provinces are at a greater distance from this locality than from either of the other Barriers. The simultaneous prosecution of the works at all three points would therefore, in my opinion, be found to retard but little the progress at any one Barrier, while it would add largely to the whole amount of available labor and proportionably accelerate the completion of the whole line of navigation. I need hardly remark what great facilities the Tramways now under construction will afford for such an extension of our present operations.

11. I would therefore respectfully suggest that as soon after my return to the Godavery as possible, steps should be taken for completing the instrumental examination of the two upper Barriers, and that as soon as the Government have decided on the dimensions to be given to the Locks, detailed estimates should be prepared for all three, that already submitted for the first Barrier being revised in accordance with the increased prices now being paid as compared with those contemplated when the estimate was originally prepared, and also with the change which is to be made in the size of the locks, and which also it will be necessary to make in two or three instances in the details of the Canal and Anicut.

12. I would further propose that operations should be commenced as soon as practicable at the two upper Barriers, on whatever scale may seem best suited to the means at out disposal. I can offer no definite proposition on this head at present.

P. S.—It was my intention to have added some further suggestions in this letter, but owing to the hurried manner in which I am obliged to leave Madras I must postpone them for the present. I would, however, request that sanction may now be given for the remaining lac allotted to the Upper Godavery, as it will be required immediately.

No. 441. ORDER THEREON, 28th February 1862, No. 325.

The report submitted with the above letter was called for by Government in Proceedings of 11th January 1862, No. 3. The progress is said to be less than that anticipated, and is attributed to the great prevalence of fever during the last quarter. Captain Haig notwithstanding expects the Tramways at the two lower Barriers will probably be finished in time to be ready for the next monsoon traffic, while a good common road will be made at the third. Boats are also expected to be completed, so that the communication will soon be opened throughout though not on so efficient a footing as was desired. The Government have already in their Proceedings of the 28th February 1862, No. 324, expressed their views on the kind and extent of work to be undertaken. They therefore sanction the additional lac remaining from the grant made by the Government of India, being placed at Captain Haig's disposal.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No 80.

Central Office of Public Works
Chepauk, 13th Feby. 1862

From Lt. Colonel Beachcroft
Actg. Depy. Chief Engineer, Northern Circle.

To Lt. Colonel W. Pasley
Chief Engineer Secretary to Govt
D.P.W.

Sir,

In forwarding to Govt. the accompanying letter from Capt. Haig of yesterday's date enclosing a report on the progress made with the works on the Upper Todavery up to the beginning of last month, I beg permission to offer a few remarks.

2. Capt. Haig's former report, submitted with my letter No. 8 dated 3d inst. was, at that officer's request, not obtained on loan in this office, he being anxious that it should be in the hands of His Excellency the Governor at the earliest possible date. I was hence precluded from penning at the time any observations upon the important subject of which it treated.

3. I do not presume to suppose that this can be other than a matter of indifference; Daily marks mention of the circumstance lest it should be deemed inconsistent that I now refer to Capt. Haig's second report in any way.

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statement of events, that difficulties still environ the development of the scheme upon which he is employed of a character more grave than was anticipated when the great undertaking of opening up the navigation of the Godavery was originally contemplated.

5. Seven years have now elapsed since Captain (then Lieutenant) Haig commenced in 1855 his adventurous operations in the valley of the great river; operations not simply embracing the objects of an exploring expedition, but bonâ fide attacks upon the obstacles which interposed to render the Godavery practically unnavigable.

Lieut.t Haig, to Col.o Fraser 3rd May 1856.

6. During the progress of that expedition and during the intervening period, very considerable sums of money have been expended. With what result I think we should do well to consider. To me it seems that we have not even gained an equivalent in experience.

I find that in Captain Haig's letter above quoted, para 54, the very difficulty which has now in a great measure frustrated all his efforts, viz.t the unhealthiness

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observing the obstacles between his starting point and his goal; or, observing them, that he does not adequately appreciate their gravity.

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stamped as an adventurer who had grievously, however unwittingly, misled and deluded a trusting proprietary. If allusion to this is considered irrelavent I would remark that I quote the experience I gained only because it conveys by the most forcible mode I can employ the view which I have been now led to take of the subject. Having adopted this view, and being deeply impressed with the uncertainty which through it envelopes the brilliant scheme on which Government are now embarked I feel induced to offer the following suggestion.

13. Before proceeding further in the – as I deem it doubtful venture before them – beyond the completion of the tramways round each of the barriers, I would counsel Government to take measures to obtain an unbiassed and appreciable judgment upon the entire scheme, both in its partial and also in its most comprehensive phase: let them demand to have some tangible and absolute means of estimating the cost, both as regards money and time, of whatever ultimate plan or system of Engineering operations is

is decided upon, or reported upon, as the best; and then let Government supported by such an opinion, if favorable, enter earnestly into the scheme upon the most extended scale which can be adopted for those operations; doubt and misgiving being for ever set at rest, and success rendered, humanly speaking, certain.

14. The appointment of a Committee would doubtless afford the most reliable means of attaining this end; and I feel assured that the institution of such an enquiry would be hailed with the utmost satisfaction both at home and in this country; whether by those who, having faith in the promises of the early and brilliant projectors, would gladly see their horizon cleared of the doubts which have been forced upon the public mind, or by those who, originating those doubts, could not but be gratified by the eliciting of a demonstration of their groundlessness.

15. The loss of a season, after the barriers shall have been fairly circuited

circuited, and the means of high water transit by the Godavery established, will not in my opinion entail any significant consequences. The Bombay railway, with the help of the cheap and superior coal of the Nerbudda basin, will I expect be carrying the cotton of Berar from Comrowtie to port at a rate both of charge and of speed which will leave but little of the crops to find its way by the Godavery, long before the practicability of that route shall have been established.

16. The Company are, as no doubt Government are aware, making the most strenuous exertions to complete the branch line from Bhosawul to Comrowtie and Nagpore for this purpose; and as they have a branch of 11 miles now in course of construction into the heart of the Nerbudda coal field near Hosungabad, it is not too much to anticipate that these expectations will be fully and expeditiously realized.

17. In conclusion I beg to draw

draw attention to the request conveyed in Captain Haig's P.S. to the letter under consideration and to solicit that the lac of Rupees referred to may be placed at that Office's disposal.

I have the honor to be
Sir,
Your Most Obedient Servant

Central Office of W.
Chepauk
13th February 1862.

J. Westenberg Lieut.t Colonel
Asst Deputy Chief Engineer N.C.

To,
Lieutenant Colonel H. H. Cordy
Chief Engineer and Secretary to Government P.W.D.
Fort Saint George.

Copy in a Letter to C. in C. dated 11th April 1862 No 73.

29-11-11 Vo-11

Rec'd Kolkata 2 Feb'y 1862
Pol. & Gen'l Dept. No 416

From

Lieut.-Col. J. Cruchley
Actg 2nd Chief Engr N. C.

To

Lieut.-Col. H. E. Corsellis
Chief Engr Fleet to Govt. S.
Fort Saint Geo.

Dated 13th
Rec'd 14th } February 1862

No 80

Rec'd 25th

Submitting with observations a report from the Executive Engineer Eastern Division on the repairs executed during the year 1861 on the Pier made with the Rock on the Jetty from the beginning of the year.

No 325 - 28th Feby

Wth an Order

No 416 of 62

C25 Feb 62

Sir

I have the honor to submit with the above letter which was called for by Government in Proceedings of 11th January 1862 No 3. The progress is said to be less than that anticipated and to be attributed to the great prevalence of fever during the last quarter. Captain Haig notwithstanding expects the Tramways at the two lower Barriers will probably be finished in time to be ready for the next monsoon Traffic, while a good common road will be made at the third. Boats are also expected to be completed so that the communication will soon be opened throughout though not on so efficient a footing as was desired. The Government have already in their Proceeding of the 28th Feby 1862 No 324 expressed their views on the kind and extent of work to be undertaken. They therefore sanction the Additional Lac remaining from the grant made by the Court of India being placed at Captain The Revd Haig's disposal.

Genl Fort St. Geo. 25th Feby