M.R.O. 1—77,006—8-6-37.

(1) Number of pages 14

(2) Date of repair 22-5-42

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No.	309	Press / Mis.
Dated	26-2-	18 62.

Not to be folded or roughly handled

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following Endorsement of the Acting Deputy Chief Engineer, Central Circle, dated Chepauk, 4th February 1862, No. 10,183.

Read the following letter from Captain G. W. WALKER, District Engineer North Canara, to the Deputy Chief Engineer, Central Circle, dated Camp Beitkál, 11th January 1862, No. 184:—

SIR,

1. I have the honor to report progress with the Beitkál Harbour Works up to present date, including with them the approaches to that Port from the interior, viâ Kaiga and Unshy Ghâts, now also in hand.

2. Mr. Sub-Engineer Boesinger took charge from Mr. Merrall at Sedasheghur on the 29th October, and immediately took up his own residence at Beitkál. He had to commence from the beginning, and his first duty was the removal of the machinery, tools, and stores already in hand, from Sedasheghur to Beitkál; which might have been effected two months sooner by his predecessor; but probably he was paralyzed by rumors of annexation to Bombay, which really had a retarding influence on our works. Much, for instance of my own and Lieutenant Fraser's time was utterly wasted in attendance upon the Engineer Officer who had been deputed by the Bombay Government to relieve me. Naturally we were desirous of giving every information to a brother Officer, and could not be expected to know that his Government had sent him without previous consent of the Madras Authorities.

3. All November was taken up with arrangements for temporary Workshops and Store-rooms both for present and expected supplies, put up out of the materials of the chuppers erected for accomodation of the Governor and suite, on their late visit to Beitkál. Mr. Boesinger also cleared away a great deal of thick brushwood which covered ground to be worked over, and laid out his traces along the sides of the Cove; he had my company and assistance for eight days out of the month, and we were in constant communication. He also had charge of 200 men working on the Kaiga road at Beitkál, but this arrangement I latterly found to have been a mistake, and I put a stop to it in December. The road work at and near Beitkál is exceedingly heavy, owing to the rocky nature of the hill sides. Mr. Boesinger had not time to superintend the men properly, still less to teach them the art of blasting and moving masses of stone; their charge took him off some of his own work, especially of survey and measurement, which I had particularly pressed upon his attention; and the sudden demand for labor gave rise to strikes for higher rates. These Mr. Boesinger would have had me give in to, but I have withstood them successfully on behalf of the Ghât and road works further inland; graduating the rates so as to secure a fair share of labor in the jungles otherwise scantily peopled.

4. In December, again was Mr. Boesinger's time taken up, with necessary work indeed, but such as makes no show. Thirty tons of machinery, tools, and stores, were landed from the Steamer "Dalhousie," and 20 more from the Brig "Teak," the handling and storing of which, single-handed as regards the first cargo, was no light tax on Mr. Boesinger's energies and trial of his mechanical skill. No sooner was this effected, than I had to place him and his Assistant, Corporal Banks, with all appliances that might be useful, at the disposal of Commander Fraser of the "Falkland" Sloop of War, sent from Bombay to put down Screw Moorings in Beitkál Harbour, and Beacon Buoys at Tuddry.

5. Of his operations extending from 25th December to 8th January, the accompanying report of Captain Fraser's will give the most accurate idea that can be conveyed. I have only to add to it that Mr. Boesinger's time was entirely taken up with the Screw Moorings, which Captain Fraser could not have attempted to put down without his assistance. That the attempt failed, I do not consider to be the slightest reflection either on Captain Fraser's or Mr. Boesinger's skill and resources. They made a gallant try at a most difficult job, with such appliances as they had at hand; and I am inclined to think that Captain Fraser would have made another

and more successful attempt, had he not received peremptory orders to return to Bombay. As it is, one mooring, extra shaft and chain, are lying at the bottom, secured to a buoy; and there by Captain Fraser's advice, they had better stop till it is convenient to screw down with better appliances. The Tuddry buoys having been repaired by Mr. Boesinger will remain here for the present, Captain Fraser being of opinion that they would be much more usefully employed in marking two half sunken rocks off Carwar Head, than in defining the entrance of Tuddry Harbour; which he states to be sufficiently indicated by the two Beacon's that have been erected since Lieutenant Taylor first proposed the buoys. I shall await the Chief Engineer's orders on this subject before doing any thing further with the buoys either at Beitkál or Tuldry. I have to remark that in applying for the services of Captain Fraser and the "Falkland," to put down the buoys and moorings, I never contempleted their recall from Bombay for such a purpose; my application, made with Captain Fraser's coginzance and concurrence, was based entirely on the presence of the vessel at Beitkál.

6. Altogether, the present state of progress at Beitkál might strike a casual observer as not coming up to the ideas of Government in ordering that the works specified in Sir William Denison's Minute should be prosecuted with vigour. I have only to say that the work is of so heavy a nature that it cannot be carried on with large masses of ordinary coolies, but must be commenced on a small scale, gradually increasing as men are trained to blast and move rock; and that it must be subordinated to the Kaiga Ghát works, inasmuch as the existing Harbour and accommodation are valueless till rendered accessible from the interior. For working both on a large scale the supply of labor this season is decidedly insufficient.

7. I have also come to the conclusion that I cannot do justice to the Beitkál works without a special Assistant; who should be a professional Officer of skill and experience sufficient to plan and estimate and execute the details; and who might also take up the subject of improving the navigation of the Sedasheghur river, which should go hand in hand with the Harbour project.* Mr. Boesinger's attention would then be divided between his Workshop in which he is most at home, and which will provide for all District as well as local wants, and Executive details of all public buildings to be constructed on the spot; remaining directly subordinate to me, and not to my proposed Assistant. I have also much need of a number of Sut Overseers, skilled in blasting and quarring operations. There is scarcely a man in the District who has an idea of them, and I am powerless to attract qualified people from elsewhere, although I have one appointment of Rupees 40, and three of Rupees 25 to fill up. I would suggest that an application be made on my behalf to the Commandant of Sappers to pick me out half a dozen good workmen and well conducted men from the Corps under his command on rates varying according to qualifications. Or still better would it be to supply me at once with the professional Assistant and workmen that I want, by sending a picked Detachment of Sappers under the orders of an active and intelligent Engineer Officer to co-operate in the Beitkál Harbour Works.

8. As regards progress on the Kaiga road I think Lieutenant Fraser has done right well. Aided by Mr. Fernandez he had completed and opened to bridle-path what remained to be traced above Ghát, by the end of September. A month of his time was then well nigh lost owing to the cause noted in paragraph 2; but in November and the first fortnight of December he had pushed on so well that I was able to get my carts along an excellent dry weather road, 12 feet wide, the whole way from Iddagoonjee to the head of the Ghát a distance of 18 miles: while below I found something like 9 miles of new trace, whereof 5 or 6 were opened to bridle path, besides 1½ mile at the foot of the Ghát itself re-traced by my special instructions and opened to bridle-path. This latter improvement will make the Ghát every thing I could wish; and I have no hesitation in saying that it will be the finest work of the kind along the Western Coast of this Presidency. Another improvement I have in view at Tulkybyle between Iddagoonjee and the Ghát, which I have pointed out to Captain Searle and Lieutenant Fraser, as well as to the Officer deputed from Bombay to relieve me; when carried out I shall have no fear of an

* He might also co-operate usefully with the Assistant Conservator of Forests in improving the river for floating down teak and other timber.

unfavorable opinion of the line, even on the part of those members of the "Bombay Committee" who in 1858, condemned the line unseen.

9. Lieutenant Fraser's attention is now exclusively directed to the connexion of his traces at Mullapoor with the 10 miles of trace already opened to bridle-path immediately out of Beitkál. I have been with him over the ground, and indicated the general line to be taken, and hope to examine it in detail along his traces within this month; I dare say the section now in hand is 8 miles in length. Captain Searle is concentrating his men at the Ghát itself, working steadily down from the head; I anticipate good progress from his energy and application, and former experience on similar works. He had about 900 men on the works when I visited them from 17th to 19th December, and as he has applied to me for more tools, I trust he has secured all those coolies with whom I caused Mr. Boesinger to part. We have men from the Coondapoor, and Soopa Táluqs, as well as from Ankolah in which the work lies; and have even attracted a large gang from the Sawant Warree country. But the latter source of supply is now effectually closed by the demand for labor on the Bombay side; where free trade in labor is not recognized so absolutely as, I am happy to say, has for years been the case in this District. Fever unfortunately is very prevalent above the Ghâts, and the dread of it keeps many men away altogether, as it drives away others who have ventured and fallen ill.

10. A rough abstract of progress on the Kaiga line up to 31st December 1861, is as follows:—

	Miles.
Iddagoonjee to head of Ghát opened for dry weather cart traffic, to a width of 12 feet....	18
Ghât opened as a bridle-path throughout. Whereof about 4 miles at intervals have been widened...	9
Foot of Ghât to Mullapoor trace completed, and three-fourths opened as bridle-path	9
Mullapoor to Belloor, trace in progress. One-fourth pegged out....	8
Belloor to Beitkál traced and opened as bridle path throughout 2 miles near Beitkál 20 feet wide, but obstructed with rock. (One-third of this section nearest Beitkál is the heaviest work on the line, not excepting the Ghát)	10
Total...	54

11. Captain Searle hopes to have the Ghát 12 feet wide by the end of February, and to Mullapoor within another month, in which case possibly a 12 feet road may be opened to Beitkál without bridges before the monsoon. But I must again take the liberty to repeat that the wiser policy would be to open to full width to the head of navigation at Mullapoor, in preference to carrying a narrower line throughout to Beitkál. Local opinion here is diametrically opposed on this point, to that which prevails at Madras. Every attempt however will be made to carry out the orders received.

12. Progress on the Unshy line from the head of navigation (north bank) of the Sedasheghur river, by Soopah to Hullial, is such that the cart traffic may be carried on along a 12 feet dry weather road from Borepalli, half way up the Ghát, throughout to Hullial, a distance of about 60 miles. About 1½ miles of the Ghát itself, where much rock occurs, are now being widened to 12 feet by Lieutenant Fraser, with a small gang of 40 men, who I hope he may be able to train effectually in blasting, and otherwise dealing with rock in large masses. Bridging operations and the opening of the road to full width are in progress only from the Hullial end, so as not to interfere with the supply of labor to the Kaiga works, to which those who accept works at Hullial are not likely to resort, a lower rate of wages is paid with the same view. The three arches, each of 30 feet span, of a bridge at Rayseerholly, near Hullial, are now being turned, on piers built last season to a height of 17 feet. Another similar bridge is being commenced at Berchee Nulla, in the depth of the jungles, half way between Soopah and Hullial, which we hope to complete this season. A third in one span of 30 feet, was built last season, intermediate between the two. The jungly nature of the country, its reputed unhealthiness,

and the badness and scarcity of water for several months in the year, are all causes that retard progress and enhance the cost of works.

P. S.—My Draftsman, Mr. Smith, has also enabled me by this date to furnish the Collector with a survey of all Government land having a sea frontage along Sedasheghur Bay; divided into lots each having 70 yards frontage, and double that depth where possible, after reserving a broad esplanade for the accommodation of the public.

From Commander H. A. FRASER, I. N., Commanding H. M.'s Sloop "Falkland," I. N., to Captain G. W. WALKER, District Engineer North Canara, dated Sedasheghur Bay, 9th January 1862.

SIR,

1. Having received orders to return to Bombay without delay, I have the honor to inform you that I am therefore compelled to cease all further operations relative to the placing of the Screw Moorings in this Bay.

2. In accordance with our previous arrangements, I proceeded to Tuddry on the 20th ultimo to place the Beacon Buoys on the Bar, of the Tuddry river, intending while so employed to dispatch the Screw Moorings from thence to Sedasheghur by Pattamar, should they prove too bulky to be shipped on board the "Falkland."

3. On arriving at Tuddry, I found one of the Beacon Buoys stove in and so much damaged as to render it useless till repaired, the other was dinted and leaky, I therefore despatched both to Beitkál for repairs, intending to send an Officer and boats' crew to place them in position, while engaged screwing down the moorings at Sedasheghur.

4. The latter I found to be more unwieldy and ponderous, than the largest now constructed, I therefore despatched them per Pattamar from Tuddry on the 25th ultimo, they arrived at Beitkál on the 2nd ultimo.

5. There being no spars of sufficient length immediately available for the construction of raft shears at Beitkál, nor timber to form a raft of sufficient size and power of flotation to carry the weight of the moorings, I adopted the only course that appeared open to me, by making a raft of the vessel's spars and water casks, aided by two large canoes, scantlings, and plank supplied by the Public Works Department.

6. This raft, although possessing great floatage power was constructed of too slight materials to admit of its being solely used in screwing the mooring down; but by mooring the "Falkland" head and stern, with the aid of shears erected on the vessel's poop, and strong bearings projecting from the stern, to take the upper end of the screw shaft and maintain it perpendicular till firmly fixed; I apprehended little difficulty in completing the work. The preliminary arrangements being completed, and the weather favorable (the land wind blowing very strong and constantly off shore keeping the swell down) I moored the ship's head in-shore, rafted the moorings off on the 6th instant, and prepared to place and screw them down on the 7th.

7. During the night, the weather abruptly changed, and became overcast and cloudly, with lightning, thunder and rain, and a ground swell began to roll in from seaward.

8. With the exception of the ground swell, the weather was favorable on the 7th, and I therefore connected and lowered the screw, and two lengths of hollow shaft, with the cable rove through them. The lower part of the shaft being steadied by bearings secured to the cross beams of the raft, which was firmly secured close under the vessel's stern.

9. The screw, by the weight of the moorings alone, soon sunk to a depth of ten feet in the soft mud which, however, gave it no support, and before the third shaft could be connected, the head of the second one, when the vessel pitched, came out of the collar, and necessitated the immediate removal of the stern bearing beam, to prevent injury to the vessel.

10. Hoping that the bearings of the raft assisted by guy tackles, would keep the shaft upright and enable me to screw down the moorings, I cast off the shear tackles, but it soon became apparent, that the heave of the raft in the swell threw the shaft out of the perpendicular and that

its great weight would ere long carry away the bearings and permit the moorings to sink horzontally. I had therefore no alternative but to weigh the screw, intending to re-moor the vessel head to swell and renew the attempt.

11. This was accomplished, and the shafts and cable replaced on the raft, when by some carelessness of the men employed securing them on the raft, the screw and first shaft were allowed to sink to the bottom horizontally.

12. As they can be at any period easily got up again, and can do no possible harm in their present position, I did not consider it advisable to detain the "Falkland" to weigh them again, and therefore shackled the end of the cable which is rove through the sunk shaft to the buoy, and also secured the end of two small chains, which are also fastened to the screw, to the ring of the buoy.

13. The screw is by this time embedded in mud, and being 4 feet 6 inches diameter, and together, with the shaft and cable weighing probably 6 tons, it would, I think, securely hold any vessel likely to visit Sedashegur, and the buoy may be useful to indicate the position of the anchorages, or to help vessels to warp into a good position, &c.

14. If the moorings are not weighed before the monsoon sets in, I would recommend 10 or 12 fathoms of inch and a quarter cable being shackled to the end of the large cable, which should be lowered on the bottom, the other end of the chain being shackled to the buoy.

(True Copy.)

(Signed) G. W. WALKER, Captain,
District Engineer.

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1 Original letter No. 184, dated 11th January 1862, with one enclosure.

Submitted to Government, with reference to their Proceedings No. 2,255, dated 7th December 1861.

(Signed) J. CARPENDALE, Lieutenant-Colonel,
Acting Deputy Chief Engineer, Central Circle.

ORDER THEREON, 26th February 1862, No. 309.

Ordered that copy of this letter and its enclosure be forwarded respectively to the Government of India and to that of Bombay for information.

(True Extract.)

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

Exd. S. T. Augustin.

Sedashigur Bay 9th January/62.

To
Captain G. W. Walker
Dist Engr. N. Canara

Sir,

Having recived orders to return to Bombay without delay, I have the honor to inform you that I am therefore compelled to cease all further operations relative to the placing of the screw moorings in this Bay.

In accordance with our previous arrangements, I proceeded to Tuddry on the 20th Ultimo to place the Beacon Buoys on the Bar, of the Tuddry river, intending while so employed, to despatch the screw moorings from thence to Sedashigur by Pattamar, should they prove too bulky to be shipped on board the "Falkland."

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I have &c.
Signed H. A. Fraser
Commander I.N.
Comd. H. M. S. "Falkland" I.N.

True Copy
F. W. Wilber Capt.
Dist. Engr.

To Govt. 4 Feb. 62 No. 10183.

In a letter from the District Engineer No. 184 of 11th January 62.

No. 308/62.

Report on Screw Moorings &c. made by Commander Fraser H. M. Sloop "Falkland"

No. 10183.

Submitted to Government with reference to their Proceedings No. 2255, dated 7th December 1861.

[illegible]
Lieut. Col.
Ag. Dy. Chief Engineer C.C.

Dy. Chief Engr. Office C.C.
Chepauk,
4th February 1862.

To
Lieutenant Colonel W. H. Horsley
Chief Engineer and Secretary to Govt.
Fort Saint George.

[illegible]

7th Decr 1861 No 89-90.

Public Works 1802
Proc. of Govt. for February
From C No 308.
Lieut Col. J. Carpendale
Ag. Dy. Chief Engineer &c.
To
Lieut Col. W. H. Horsley
Chief Engineer & Secty to Govt
Fort St. George
Dated 4th Feby 1862.
Recd 5th
With an Encl:
No 10183

Forward Report received from the District Engineer of North Canara on the Progress made with the Beithool Harbour Works and Ryga and Unsky Ghauts, with reference to the Proceedings No 2255, dated 7 December 1861.
No 309 - 26 February.
With an order

No 309.
Ordered that copy of this letter and its enclosure be forwarded respectively to the Govt of India and to that of Bombay for information.

No 87

Fort St. George
26th February 1862

No 410 & 411.

C 12th Feby R 15th