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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

Cons. 20.5.1860

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Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
for the month of May 1860.*

No. 41. Read the following letter from Captain F. H. RUNDALL, Consulting Engineer for the Irrigation and Canal Company, to J. D. BOURDILLON, Esq., Secretary to Government, dated Pater's Garden, Madras, 17th April 1860, No. 71 :—

1. Since writing my letter of the 3rd April, No. 61, paragraph G, I have received from the Agent the accompanying printed copy of a letter relative to the proposed Canal from the Gorge in the River Pennair to Kistnapatam, alluded to by me as one of the desirable portions of the work to be put in hand so soon as the necessary Plans and Estimates had been approved.

2. The proposed line has certainly the advantage of effecting most quickly, and at the least cost, a connection of the Pennair with the East Coast Canal, at the same time that it will afford, by means of the intended reservoir, irrigation to a large extent of land hitherto unwatered, as well as an additional and more certain supply of water to the Channels taken off from the Pennair Anicut during the months that they are at present imperfectly supplied.

3. I regret that I am unable to accompany this letter with a tracing of the line in question, from not yet having received any drawing materials, but I will submit one as soon as it is possible to do so. A reference to the Trigonometrical Atlas will, however, distinctly show the watershed between the Rivers Pennair and Colair, along which the Chief Engineer proposes to conduct the Canal.

4. The cost of this Canal ought to be comparatively very small, owing to its crossing so little drainage, and as with the exception of the Locks, the masonry works will be trifling, it ought to be executed very rapidly. I beg to recommend the Chief Engineer's proposal to commence these works as soon as Plans and Estimates, which he states being about to "set on foot" have been received and approved.

REPORT No. 5.

Letter from Colonel H. C. COTTON, to JOHN WESTWOOD, Esq., Concerning the Nellore Division, dated Bangalore, 5th April 1860 :—

Pursuant to my instructions relative to the connection of our proposed navigable Canals and Rivers with the Coast Canal and the sea, I have inspected the present navigation from Madras to Dúrgarázpatam at the Northern extremity of the Pulicat Lake, and examined the line of its proposed extension to the Pennair, and the country bordering on that River to the Gorge at which it leaves the mountain range.

I have also fully considered the different schemes suggested, and now beg to explain the conclusions at which I have arrived on the subject.

The Coast Canal as a national work must unquestionably sooner or later be made fit for the heaviest traffic, though deficient in some respects at present, and I feel confident that the Inland navigation northward from Madras will never be diverted materially from the present line but will pass Dúrgarázpatam and the estuary of the Colair River near Kistnapatam. This circumstance appeared to me the first point for consideration, and the great advantage of the tidal supply of water, the absence of this necessity for Locks, the direct course of the time, and the smallness of the expense of completing and maintaining a good navigation along the coast, compared with a line more Inland, are in my mind such strong grounds of preference as will ensure an adherence to the line for the Great Northern Traffic, and its being perfected when the financial means and policy of the Government admit of it.

A separate line of Navigation from the Pennair at the point where it leaves the mountains to the southern extremity of the Lake, or to the Coast at Madras, or any intermediate line would be practicable and at the same expense for Locks, but, crossing the drainage of the country would in other respects be an expensive line, requiring numerous aqueducts, some of large vent and involving a proportionate outlay.

The Gorge through which the River escapes into the plain country of the Nellore Collectorate is almost precipitous on both sides, but the River bed is smooth and unobstructed and of little fall. It would be difficult to excavate a channel along either bank and the most favorable

Supply

mode of carrying the navigation through will be by the construction of a dam immediately below, throwing back the water two or three miles to a point where the banks become low and a Canal practicable. Under any circumstances, therefore, a dam at this point will be necessary for the navigation thus far. The River below is for the most part broad, with an irregular sandy bed, its chief fall being in occasional rapids and on the whole very unfavorable for navigation. It therefore leads to the consideration, what is the best line of navigation to the Coast in connection with the use of the Canal for irrigation. This line clearly and immediately presents itself to my mind as follows. Leaving the River at the proposed Dam the Channel will diverge from the course of the River round the foot of the Hills, and crossing some very unimportant water-course will in less than twenty miles reach a point near the village of Kolapanaidpully which is on the watershed of the two Rivers, the Pennair and the Colair. It will follow the watershed from thence entirely to the tide-water near Kistnapatam carrying the navigation to the proposed extension of the Coast Canal, and irrigating on its way from the Hills about 200,000 acres. Of this area part is partially watered by small Tanks dependant upon local rains, which would be fully and regularly supplied, and there is a tract of 100,000 acres quite unwatered and almost uninhabited, owing to the jungle which covers it, and renders the climate unwholesome. This will be a highly important and valuable tract when irrigated.

I have not yet had the requisite levels taken to determine the fall in the Canal, but from Aneroidal observation it appears to be about 210 feet, of which 180 feet will require to be provided for by Locks. The whole I roughly estimate at 8,00,000 Rupees. The distribution of water to 200,000 acres would cost 5,00,000 Rupees, making a total of 13 lacs of Rupees. The return for the irrigation when the whole is in operation will be 5 lacs per annum, besides the navigation to 60 miles from the Coast made complete for the most extensive traffic.

The storage of water for this irrigation is provided for collectively with that for the whole project, in my former Reports.

I have no hesitation in recommending this portion of the great project. In itself it would be a project of much beauty, aptness and value, and in its place as a portion of the whole perfectly satisfactory.

I propose at once to set on foot the Surveys necessary to Plan and Estimate the work.

For the irrigation of those parts of the District south of the Pennair, a high level Channel can be extended branching from this, near the village of Kolapanaidpully above named, and as water becomes provided, by the Establishment of the large reservoir in contemplation, this extension of the Company's project may be carried out.

From the same dam, a Channel will also be taken off to the north, which will command a large extent of waste land, above the level of the present means of irrigation, and will, as on the south side, make sure the supply of the Tanks now irregularly and imperfectly supplied.

The Madras Government has in its Budget for the present year provided for the expense of continuing the Coast Canal from the Lake to Kistnapatam, and if the work is approved by the Supreme Government and funds are found, it will, I understand be undertaken, but if not, it will, I suppose, be made over under some special management to the Company, and under any circumstances, the Canal I here propose, and the Anicut at its head, I should wish to commence amongst the first works undertaken.

No. 42.

ORDER THEREON, 14th May 1860, No. 997.

1. The Government authorize the preparation of the necessary Estimates and Plans for the proposed Anicut on the Pennair at the Gorge, and for the Canal thence to Kistnapatam; but they cannot finally approve the work till those Estimates and Plans shall be before them.

2. Due care will require to be taken that the new Anicut does not interfere with the supply required by and belonging to the existing Irrigation works in Nellore.

(Signed) J. D. BOURDILLON,
Secretary to Government.

REPORT No. 5.

LETTER FROM COLONEL H. C. COTTON TO JOHN WESTWOOD ESQ. CONCERNING THE NELLORE DIVISION.

BANGALORE, 5th April, 1860.

To J. WESTWOOD, Esq.

Secretary.

&c. &c. &c.

SIR,

Pursuant to my instructions relative to the connection of our proposed navigable Canals and Rivers with the Coast Canal and the Sea, I have inspected the present navigation from Madras to Doograjpatam at the Northern extremity of the Pulicat Lake and examined the line of its proposed extension to the Pennair, and the country bordering on that River to the Gorge at which it leaves the mountain range.

I have also fully considered the different schemes suggested and now beg to explain the conclusions at which I have arrived on the subject.

The Coast Canal as a national work must unquestionably sooner or later be made fit for the heaviest traffic, though deficient in some respects at present, and I feel confident that the inland navigation northward from Madras will never be diverted materially from the present line but will pass Doograjpatam and the estuary of the Colair River near Kistnapatam. This circumstance appeared to me the first point for consideration, and the great advantage of the tidal supply of water, the absence of this necessity for locks, the direct course of the time, and the smallness of the expense of completing and maintaining a good navigation along the coast, compared with a line more

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The Gorge through which the River escapes into the plain Country of the Nellore Collectorate is almost precipitous on both sides, but the River bed is smooth and unobstructed and of little fall. It would be difficult to excavate a channel along either Bank and the most favourable mode of carrying the navigation through will be by the construction of a dam immediately below, throwing back the water 2 or 3 miles to a point where the Banks become low and a canal practicable. Under any circumstances therefore, a dam at this point will be necessary for the navigation thus far. The River below is for the most part broad, with an irregular sandy Bed, its chief fall being in occasional rapids and on the whole very unfavourable for navigation. It therefore leads to the consideration, what is the best line of navigation to the Coast in connection with the use of the Canal for irrigation. This line clearly and immediately presents itself to my mind as follows. Leaving the River at the proposed Dam the Channel will diverge from the course of the River round the foot of the Hills, and crossing some very unimportant water-courses will in less than twenty miles reach a point near the village of Kolapanaidpully which is on the watershed of the two Rivers, the Pennair and the Colair. It will follow the watershed from thence entirely to the tide-water near Kistnapatam carrying the navigation to the proposed extension of the coast Canal, and

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I am,

Sir,

Your most obedient Servant,

H. C. COTTON.

Copy as a Letter to England
of 11th May/60 B. 26.

PM 9 37/60

Print the
envelope

No 71

From

Madras Irrigation & Canal Company
Consulting Engineer's Office

Peters garden Madras 17 April 1860

Captain F. H. Rendall

To

Consulting Engineer for Irrigation & Co.

The Secretary to Government

In the Department of Public Works

Fort St. George

Sir,

1. Since writing my letter of the 3rd April 1860 para 6 I have received from the Agent the accompanying printed copy of a letter relative to the proposed Canal from the George in the river Pennair to Kistnapatam^{to} alluded to by me as one of the desirable portions of the work to be put in hand so soon as the necessary Plans and Estimates had been approved.

2. The proposed line has certainly the advantage of effecting most quickly, and at the least cost, a connection of the Pennair with the East Coast Canal at the same time that it will afford, by means of the intended Reservoir, irrigation to a large extent of land hitherto unwatered, as well as an additional & more certain

Supply

Supply of water to the Channels taken off from the
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I have

I have the honor to be

Sir

Your most obed^t servant

J. W. Russell, Captain
Consulting Engineer for the
C. & C.

Camp. L. S.

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