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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue

DEPARTMENT

G.O. No. 587
~~B.P. No.~~

Press
~~Mis.~~

Dated 8-5-1876 196

Not to be folded or roughly handled

587

*Proceedings of the Madras Government, Revenue Department,
8th May 1876.*

No. 62. Read the following Proceedings of the Board of Revenue, dated 11th April 1876, No. 1,001:—

Read the following papers:—

Proceedings of the Madras Government, dated 5th April 1876, No. 481, Revenue Department.

ABSTRACT.—*Salt Manufacture at Harigoshi in South Arcot.*—Sanctioning the lesser of the two schemes in connection with the extension of —; requesting Dr. Ratton to report what is the difference of density of the water at A from that of sea-water; and awaiting the report called for by the Board as to the cost of the change of plan proposed by Dr. Ratton.

From J. H. GARSTIN, Esq., Collector of South Arcot, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Tindivanam, 28th March 1876, No. 131.

In reply to the requisition contained in the last portion of paragraph 5 of the Board's Proceedings of the 22nd February last, No. 520, I have the honor to forward, in original, the supplemental memorandum (requested to be returned) drawn up by the District Engineer on the probable additional expenditure entailed by shifting the head sluice from B to A, as proposed by Dr. Ratton, as well as a

copy of his letter* forwarding the said memorandum.

* Dated 22nd March 1876, No. 328.

2. From these papers the Board will see that Major Mead has no hesitation in recommending the transfer of the head sluice from B to A if careful inquiry shows that the brine at the latter place is stronger than that at the former. He, however, adheres to the original position chosen by him for the pumping station and proposes to pass the brine admitted at A under the canal by means of an under-tunnel thirty-five feet long with two vents having a sectional area of eleven-and-a-half square feet each (that is, five feet long and about two-and-a-quarter feet broad) carried under the canal at such a depth as will always admit of three feet of water over the tunnel in order to allow of boats passing over it.

3. The under-tunnel he estimates will cost about Rupees 12,000, and he considers that the banks and channel round the 16-cawny plot AH will require strengthening and widening respectively, which will probably cost Rupees 2,000 more. The cost of the remainder of the project will remain as before. This would raise the whole cost from Rupees 90,000 to Rupees 1,04,000.

4. I do not quite understand where the District Engineer proposes to cross the canal. His words are, "in a line with the northern boundary of the bund proposed to be taken up." Probably "bund" is a slip of the pen for "land," and he intends to cross at or near H on the plan.

5. He sketches an alternative plan, which he has worked out but does not recommend; and in paragraph 10 of the memorandum, while alluding to this plan, he says that the channel round the 16-cawny plot "will have to be considerably enlarged to make it hold half a-day's supply (a bottom width of sixty feet will be required)." If this width of channel at bottom is to be required in any case, then with slopes of 2 to 1 and a depth of 4 feet only, the water-surface will be 76

*Proceedings of the Madras Government, Revenue Department,
8th May 1876.*

feet or 25½ yards; and, as the whole length of the channel all round the 16-cawny is about a mile, the channel will take up about 8 of the 16 cawnies. The remaining 8 in the midst of such a brine-supply might then be worked on the most approved principles with permanent crystallizing beds really impervious to percolation, which I consider are essential to the production of a really pure salt.

6. I have communicated a copy of paragraph 3 of the District Engineer's letter to the Chief Engineer of the South Indian Railway and to the Divisional Engineer at Porto Novo with a request that a sufficient opening, as suggested by Major Mead, be left in the line.

7. I had experiments set on foot for the systematic testing of the brine at Manambadi for a distance of about a mile up the river above A on the plan. The water was tested hourly every day from 8 A.M. to 5 P.M. at seven spots including A, and I have sent the registers to Dr. Ratton for his scrutiny. So far as I could judge, the density of the water at A was nearly always 2° Beaumé between half flow and half ebb tide, while at B it was sometimes rather lower. Beaumé's hydrometers, however, are by no means delicate instruments, and it is rare to find three persons read them exactly alike, so that I consider the only general result to be deduced from these observations is that in a seasonally dry season there is always, between half flow and half ebb, a fairly good brine available at A, but not always so strong at B. On one occasion only, I think, during the flood tides at full moon, the water was registered as 3° Beaumé opposite the Manambadi pans.

ENCLOSURE No. 1.

From Major H. R. MEAD, R.E., District Engineer, South Arcot, to J. H. GARSTIN, Esq., Collector of South Arcot, dated Lalpett, 22nd March 1876, No. 328.

With reference to G.O., No. 569, dated 3rd March 1876, and your letter, No. 55, dated 10th March, forwarding Proceedings of the Board of Revenue, I have the honor to forward a supplemental memorandum on the proposed salt works at Harigoshti.

2. I regret to have to bring to notice that Dr. Ratton in his letter, No. 16, of 28th January, forgets that the plan proposed in the former memorandum was based on his own proposition, and I must say I consider, before reporting as favorable as he has done on the Harigoshti scheme, he should have satisfied himself that at the place where it was proposed to take the water good salt water was always available.

3. I would further remark that there is no reason to delay handing over the land north of the Vellaur to the Railway if they should be requested to arrange for an opening say fifteen feet span to cross a channel carrying water, the surface of which will be slightly above the ground level and the bed about four feet below it. The water in the channel will have but a slight fall and velocity.

(True Copy.)

(Signed) J. H. GARSTIN,
Collector.

ENCLOSURE No. 2.—Supplemental Memorandum drawn up by District Engineer.

THE Government Order read above will be communicated to the Collector of South Arcot, who will observe that Government are disposed to sanction the lesser of the two schemes (BK) referred to in his letter embodied in the Board's Proceedings of 22nd February 1876, No. 520.

*Proceedings of the Madras Government, Revenue Department,
8th May 1876.*

2. Referring to paragraph 7 of the Collector's letter of the 28th March the Board observe that the information regarding the relative density of the brine at the several points where it has been gauged is not sufficiently full to enable them to furnish the statement called for by Government. Before proceeding further the Board will await Dr. Ratton's report.

(True Copies and Extract.)

(Signed)

E. GIBSON,
Acting Sub-Secretary

No. 63.

ORDER THEREON, 8th May 1876, No. 587.

Separate Revenue, No. 8.

Salt.

RECORDED.

2. The Government await the report from Dr. Ratton.

(True Extract.)

(Signed)

D. F. CARMICHAEL
Secretary to Government.

To the Board of Revenue.

„ J. J. L. Ratton Esq., M.D.

Exd. J. W. Fischer

Solt. of 1876

REVENUE.

THE BOARD OF REVENUE.

Date May, 8th.

G.O. 8th May 1876, No. 587.

MAY.

Nos. 62-63.

Salt manufacture at Harigoshti in South Arcot District.—Recording Proceedings of the Board of Revenue commencing to the Collector and from Government to the lesser of the two schemes for extension of —, and awaiting the report from Dr. Ratton regarding the density of the water at the several points marked on the plan.

No. 1,001.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 11th April 1876.

Read the following papers:—

Proceedings of the Madras Government, dated 5th April 1876, No. 481, Revenue Department.

ABSTRACT.—*Salt Manufacture at Harigoshti in South Arcot.*—Sanctioning the lesser of the two schemes in connection with the extension of —, requesting Dr. Ratton to report what is the difference of density of the water at A from that of sea-water; and awaiting the report called for by the Board as to the cost of the change of plan proposed by Dr. Ratton.

From J. H. GARSTIN, Esq., Collector of South Arcot, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Tindivanam, 28th March 1876, No. 131.

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copy of his letter* forwarding the said memorandum.

* Dated 22nd March 1876, No. 32.

2. From these papers the Board will see that Major Mead has no hesitation in recommending the transfer of the head sluice from B to A if careful inquiry shows that the brine at the latter place is stronger than that at the former. He, however, adheres to the original position chosen by him for the pumping station and proposes to pass the brine admitted at A under the canal by means of an under-tunnel thirty-five feet long with two vents having a sectional area of eleven-and-a-half square feet each (that is, five feet long and about two-and-a-quarter feet broad) carried under the canal at such a depth as will always admit of three feet of water over the tunnel in order to allow of boats passing over it.

3. The under-tunnel he estimates will cost about Rupees 12,000 and he considers that the banks and channel round the 16-cawny plot AH will require strengthening and widening respectively, which will probably cost Rupees 2,000 more. The cost of the remainder of the project will remain as before. This would raise the whole cost from Rupees 90,000 to Rupees 1,04,000.

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enlarged to make it hold half a day's supply (a bottom width of sixty feet will be required)." If this width of channel at bottom is to be required in any case, then with slopes of 2 to 1 and a depth of 4 feet only, the water-surface will be 7 feet or 25½ yards; and, as the whole length of the channel all round the 16-cawny plot is about a mile, the channel will take up about 8 of the 16 cawnies. The remaining 8 in the midst of such a brine-supply might then be worked on the most approved principles with permanent crystallizing beds really impervious to percolation, which I consider are essential to the production of a really pure salt.

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7. I had experiments set on foot for the systematic testing of the brine at Manambadi for a distance of about a mile up the river above A on the plan. The water was tested hourly every day from 8 A.M. to 5 P.M. at seven spots including A, and I have sent the registers to Dr. Ratton for his scrutiny. So far as I could judge, the density of the water at A was nearly always 2° Beaumé between half flow and half ebb tide, while at B it was sometimes rather lower. Beaumé's hydrometers, however, are by no means delicate instruments, and it is rare to find three persons read them exactly alike, so that I consider the only general result to be deduced from these observations is that in an exceptionally dry season there is always, between half flow and half ebb, a fairly strong brine available at A, but not always so strong at B. On one occasion only, I think, during the flood tides at full moon, the water was registered as 3° Beaumé opposite the Manambadi pans.

ENCLOSURE No. 1.

From Major H. R. MEAD, R.E., District Engineer, South Arcot, to J. H. GARSTIN, Esq., Collector of South Arcot, dated Lalpett, 22nd March 1876, No. 328.

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3. I would further remark that there is no reason to delay handing over the land north of the Vellaur to the Railway if they should be requested to arrange for an opening say fifteen feet span to cross a channel carrying water, the surface of which will be slightly above the ground level and the bed about four feet below it. The water in the channel will have but a slight fall and velocity.

(True Copy.)

(Signed) J. H. GARSTIN,
Collector.

ENCLOSURE No. 2.—Supplemental Memorandum drawn up by District Engineer.

4
The Government Order read above will be communicated to the Collector of South Arcot, who will observe that Government are disposed to sanction the lesser of the two schemes (I K) referred to in his letter embodied in the Board's Proceedings of 22nd February 1876, No. 520.

Referring to paragraph 7 of the Collector's letter of the 23th March the Board observe that the information regarding the relative density of the brine at the several points where it has been gauged is not sufficiently full to enable them to furnish the statement called for by Government. Before proceeding further the Board will await Dr. Ratton's report.

(True Copies and Extract.)

H. W. Fischer
Acting Sub-Secretary.

To the Collector of South Arcot.

Copy to the Secretary to Government, Revenue Department.

to J. J. L. Ratton, Esq., M.B., on special salt duty.

Exd. J. W. Fischer.

No 587
Recorded
The Govt awaits the report from
Dr. Patton.

14 Ld. O. Board of Res. Dec 17/76
J. J. Le. Patton Esq. Madras

8 Jan 1876

No 5-4-76 No 46-47

24/1/76
No. 1876. Page 2
BOARD OF REVENUE,
MADRAS.

PROCEEDINGS, 11TH APRIL 1876, No. 1,001.

24/1/76

Encl.

Received

6/1/76

APRIL.
No. 1,001.

Salt Manufacture—at Harigoshi in South Arcot District.—Communicating to Collector sanction of Government to the lesser of the two schemes for extension of —, and awaiting Dr. Patton's report regarding relative density of brine at the several points where it has been gauged.

No 587: 8 Jan 1876

W. M. order