

(1) Number of pages _____

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(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 2684

Press
Mis.

548-549

Dated 24 - 8 - 1866.

Not to be folded or roughly handled

No. 548. Read the following Endorsement of the Consulting Engineer for Irrigation and Canal Company, dated Madras, 11th August 1866, No. 51 :—

Read the following letter from the Agent and Manager, Madras Irrigation and Canal Company, to the Consulting Engineer, Madras Irrigation and Canal Company, dated Madras, 8th August 1866, No. 165.

I have the honor to append copy of a letter from Mr. Harry Cotton to the address of the Provisional Chief Engineer, reporting the occurrence of breaches and slips on the admission of water to the 25th and 27th miles.

From the Executive Engineer, to the Chief Engineer, dated Kurnool, 28th July 1866, No. 146.

1. I regret having to report that a breach took place yesterday in the twenty-fifth mile, and another breach and two dangerous slips in the twenty-seventh mile.

2. The site of the twenty-fifth mile breach is where there was a dangerous slip last season, and where there has been a good deal of leakage and a slip this season. The Maistry had passed over the line in the morning and reported the banks safe; at 9 A. M. he found a slip in the twenty-seventh mile, and set to work with the bankers to prevent its going any further, at the same time sending off a report of its occurrence to Mr.

* The Surveyor in charge of the Section. Partridge; * the man who took the message states that as he crossed the site of the present breach the bank looked a little damp, but that there was no absolute leak, after delivering his message (about 9 A. M. yesterday) he was sent back immediately; Mr. Partridge being at work in the twenty-third mile, the messenger could not have been more than fifteen or twenty minutes before he returned and found the bank gone. The breach in the twenty-seventh mile took place about 4 P. M.; it appears to have been equally sudden, the Maistry with the bankers were working hard at the slip, and had just got it in hand, when the report came to him that the bank had gone, a short distance above. The second slip is a bad one, but the water being lowered there is no danger.

3. *Present condition and measures taken for repair.*—The breach in the twenty-fifth mile, the water is still flowing through it. I am making a low dam to keep the water in the canal in front of the breach, and have arranged for a Contractor to collect people by Monday morning and to repair the bank. The bottom breadth of the opening in the bank is 83 feet, the top breadth 130 feet.

Height of bank 32 feet.

Height of bank 35 feet, mean breadth 90 feet.

4. *The twenty-seventh mile breach.*—The water is drained out of the canal; a Contractor was on the spot with me this morning; the total quantity of earthwork carried away is about 7,700 cubic yards, of this 5,500 cubic yards is in the actual gap, the remaining 1,200 cubic yards having been torn from the face of the bank adjacent. I wish to propose, for your consideration, whether a dry rubble wall of the plans shown in the accompanying tracing could not with advantage be substituted for the bank, the cost of wall and bank would be about 2,450 Rupees against about 2,350 Rupees† for the bank, the wall would take about twenty days, the bank thirty days to complete.

† The Chief Engineer does not consider my proposed section of wall sufficient, and has ordered a bank with a core of puddle.

H. C. C.

5. The repair of the slips I have given out on contract: one, eight cubic yards, the other at nine cubic yards per Rupee.

4. The bankers have ample employment in minor repairs to the banks.

5. *Cause of the banks failing.*—This is attributable mainly to the soil of which the banks are composed, viz., of gravel mixed with clay in the twenty-fifth mile, and gravel with some black cotton soil in the twenty-seventh mile. The latter was repaired last season both by throwing earth and

*Proceedings of the Madras Government, Public Works Department,
24th August 1866.*

shingle on the outside of the revetment, as well as putting in soil inside the revetment; this season the bank leaked very much at first and partially slipped, it was well weighted with stone at the foot and up to the leak on the outside of the bank; the bank was perfectly dry on Thursday last, on that day the water in the canal was raised from 3' 6" to 4' 2." I can only imagine that the water must have collected inside the bank, and that as the water in the canal rose, so did the water in the bank, until it rose over the outside packing of stone, when the bank gave way suddenly. I cannot account for the breach in the twenty-seventh mile, the Maistry in charge of the bankers declares that on that morning there was no more than the ordinary leakage in the mile between the surface of ground and the bank.

Forwarded for the information of Government.

(Signed) J. MULLINS, Captain, R. E.,
Consgr. Engr. for I. & C. Company.

No. 549. ORDER THEREON, 24th August 1866, No. 2,684.

CIVIL WORKS, No. 77.

Ordered to be recorded.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Consulting Engineer for the Madras Irrigation and Canal Company.
,, Manager for do. do.

Exd. S. T. Augustin.

Lo 165

M. I. & C. Co.

Madras 8. August 1866

From

The Agent & Manager
M. I. & C. Co.

To

The Consulting Engineer
M. I. & C. Co.

For

I have the honor to append copy of a letter from
Mr. Harry Cotton to the address of the Pool: Chy
Engineer reporting the occurrence of breaches
and slips on the admission of water to the 25
4 24 miles.

I have the honor to be
Your Most Obedt Servt
Fr. Martin Newman
Agent & Manager

8963315/86

Al. 106 6th
Madray Division
Almond 28 July 1866

From
A. C. Cotton Esq.
Executive Engineer
J. H. Latham Esq.
Chief Engineer

I regret having to report that a breach took place yesterday in the 25 mile and another breach & two dangerous slips in the 24 mile.

The site of the 25 mile breach is where there was a dangerous slip last season and where there has been a good deal of leakage and a slip this season. The Maistry had passed over the line in the morning and reported the banks safe. At 9 A.M. he found a slip in the 24 mile & set to work with the bank to prevent its going any further, at the same time sending off a report of its occurrence to Mr. Partridge, the man who took the message states that as he crossed the site of the present breach the bank looked a little damp but that there was no absolute break after delivering his message about 9 A.M. yesterday he was sent back immediately. Mr. Partridge has got work

The Surveyor in charge of the section.

in the 23rd mile the messenger could not
have been more than 15 or 20 minutes before
he returned & found the bank gone. The
breach in the 27 mile took place about
4 P. M.; it appears to have been equally
sudden, the Maistry with the bankers
were working hard at the slip, and had
just got it in hand when a report came
to him that the bank had gone a short
distance above. The second slip is a
bad one but the water being lowered
there is no danger.

Present condition & measures taken for
repairs. The breach in the 25th mile the water
is still flowing through it. I am making
a low dam to keep the water in the Canal
in front of the breach, and have arranged
for a Contractor to collect people by
Monday morning and to repair the bank.

The bottom breadth of the opening in the
bank is 83 ft. the top breadth 130 ft. Height of bank

The 24 mile breach the water drained 32 ft.
out of the Canal, a Contractor was on the spot Height of bank
with me this morning, the total quantity of 55 million ^{land to}
Earthwork carried away is about 4400 cyds
of this 5500 cyds is in the actual gap there.
- making 1200 cyds having been torn from
the face of the Bank adjacent. I wish to
propose for your consideration whether

The chief Engineer does not order
any further erection of walls or piers
as a direct Bank with a view of
prevention.

104 M.C.C.

and dry rubble wall of the plans shown in the ac-
companying tracing could not with advan-
tage be substituted for the bank the cost
of wall & bank would be about 2450 Rs.
against about 2350 Rs. for the Bank, the wall
would take about twenty days, the Bank
30 to complete.

The repair of the slips I have given out on
Contract 8 cys. the other at 9 cys. per Rupee.

The Bankers have ample employment in
minor repairs to the banks.

Cause of the bank's failing, this is at-
tributable mainly to the soil of which
the banks are composed viz of gravel
mixed with clay in the 25th mile & sand
with some black cotton soil in the 27th
mile. The latter was up and last season
both by throwing earth & chunke on the
outside of the settlement, as well as putting
in sand inside the settlement; this saved
the bank & after doing much at first
and partially clipped, it was well
strengthened with stone at the foot and
up to the bank on the outside of the
bank, the bank was perfectly dry on
Thursday last on that day the water in
the Canal was raised from 3.6 to 2. I
can only imagine that the water
must

must have collected inside the bank &
that as the water in the Canal rose,
did the water in the Bank, until it
rose over the outside packing of
stone when the bank gave way sud-
denly. I cannot account for the
breach in the 24' side, the ^{1st} party
in charge of the Bankers declares
that on that morning there was
no more than the ordinary leakage
in the side between the surface of
ground & the bank.

I have &c
/True Copy/ P/ H.C. Cotton
/s/ H.C. Cotton Es Esr

/True Copy/

To: Master New York
By: out to the manager

For: 51
Forwarded for the information of Government

Consul's Office
San Francisco
Madras 11 Aug/66
J
Island of the
Capt. R.P.
Consul for S.H. Company

Towards for the informⁿ
 of Govt. a letter from the Agent
 appending a copy of letter from Mr.
 Harry Cotton to Prov^t Chief Just.
 with reference to breaches &
 slips on the admission of water
 to the 25" x 27" inlets. —
 No. 2684-25th of Augt / 66
 With an order.