(1) பக்கங்களின் எண்ணிக்கை 20

(2) புதுக்கித் திருப்பிய நாள் 12/89

(3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம்

தமிழ்நாடு ஆவணக் காப்பகம்.

79

தமிழ்நாடு அரசு

PWD துறை

அரசாணை எண். — 1213-A அச்சகம்
மு. கோப்புத் தாள் எண். பலவகை

நாள் : 7. 5. 1889 ~~198~~ . .

மடிக்கவோ. கண்டபடி கையாளவோ கூடாது

10 Sheets

ஆவண; கா-1—18,000—15-6-87.

1213 A

7th May 1889, No. $\frac{1213}{A}$ W., Public Works.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following papers:—

From A. P. deCLOSETS, Esq., C.E., to the Secretary to Government, Public Works Department, dated Madras, 25th April 1889.

I have the honor to inform that I have reported to the Superintending Engineer of the V Circle as follows:—

"I have the honor to inform you that the boring of a hole and the sinking of a pipe 8 inches diameter have been completed near the canal at Karani, and that the water sheet at 42 feet is flowing in the canal and has been gauged.

"The water from this water sheet rose into the pipe to 6 feet 6 inches below bench-mark, then an orifice of 1 square inch was cut on the pipe at 6 inches below the hydrostatic level of the water in the pipe.

"The liquid flowed out under a head of 1·25 inches measured from the surface of the water to the centre of the orifice, the efflux being at 2 feet 6 inches above the bed of the canal and 6 inches above the stream in this canal.

"The velocity of discharge corrected for an orifice in thin sheet and for a head of 1·25 inches being 26·80 inches per second, I found that the delivery from the pipe of 8 inches diameter was as follows.—

	C. INCHES.
Discharge in 1 second	26·80
Do. per minute	1,608·00
Do. per hour	96,480·00
Do. in 24 hours	2,315,520·00
	C. FEET.
Or in cubic feet per 24 hours	1,340·00
Or in cubic yards	49·62

"As to the quality of the water, it is good and wholesome, running now in the canal being in fact an artesian well.

"Supposing that instead of a borehole of 8 inches diameter a well of 6 feet diameter should be sunk at the depth of 42 feet, and admitting that the volume of delivery is proportional to the sectional areas, the delivery in 24 hours from such a well will be 4,019 cubic yards or gallons 679,638·00.

"I come now to a very important point.

"During the gauging process I have ascertained that the hydrostatic level of the water in the old pipe of the 420 feet boring was 4 feet 8 inches below bench-mark, and that the hydrostatic level in the new pipe of 42 feet was 6 feet 6 inches below bench-mark; this shows that the waters rising in both pipes belong to two different water-bearing strata.

"But if we refer to the schedule of the strata passed through by the 420 feet boring, we are led to infer that the water now rising in the 420 feet borehole must be percolating through the lower strata by the reason that between stratum No. 7 (at 42 feet) and the lowest stratum at 420 feet all the strata being clayey could not offer any chance of containing water sheets, whilst the lower stratum being sandy would be more likely percolated by waters from below and cause the hydrostatic level of the water in the 420 feet pipe to rise at 4 feet 8 inches below bench-mark in this dry season.

"My opinion is therefore that if this water come from percolation through the lower strata, there must be great probability that other ascending sheets exist below 420 feet.

"In such circumstance I observe that it would be well to continue the boring and pursue more investigations; but for this it will be advisable to postpone the removal of the boring apparatus in order to ascertain the true nature of the strata below down to 420 feet or 500 feet.

"The depth of 420 feet arrived at is trifling as boring work; according to a section published in volume X of the Geological Survey of India, the gneiss seems to be about 800 or 900 feet below the level of the ground, and there is no reason to say that between the borehole of 420 feet and the granite no water-bearing stratum could be found, especially when a new ascending sheet is just noticed.

"I have the honor to be, &c.,
"(Signed) A. P. deCLOSETS."

2. Pending your opinion, I am making some observation trials to see whether the hydrostatic level cannot be raised.

3. I have the honor, therefore, to ask Government to reconsider their G.O., dated 5th of February 1889, and to agree to give orders to continue the boring down to 450 feet so as to ascertain practically the condition of the sandy strata below 420 feet, and for such object I have the honor to ask Government to be willing to grant an expenditure of Rs. 500 estimated for this work.

4. After having expended Rs. 8,000 upon this important work, it would not be creditable to abandon it without being practically certain that there is no hope of finding more ascending water sheets below 420 feet, the fact of another water sheet with an hydrostatic level of nearly 2 feet higher having lately been discovered and being an indication of the probability for the existence of more ascending waters below 420 feet.

Telegram from the Superintending Engineer, V Circle, to the Chief Engineer, Public Works Department, dated 7th May 1889.

Boring plant at Karani not yet removed by Executive Engineer as he was ordered in February; work finished as also new 42-foot boring.

ORDER—dated 7th May 1889, No. $\frac{1213}{A}$ W., Public Works.

The boring may be continued to 450 feet as proposed by Mr. deClosets, an allotment of Rs. 500 being made for the work from the Provincial reserve.

2. Ordered that the following telegram be sent to the Superintending Engineer, V Circle:—

"Government sanction Rs. 500 to Mr. deClosets to carry down borehole to 450 feet. Work can proceed and should be energetically carried through. Order follows."

(True Extract.)

Captain, R.E.,
Under-Secy. to Govt., P.W.D.

To the Superintending Engineer, V Circle.
" Examiner, Public Works Accounts.
To Mr. A. P. deClosets.

Exd. J. Henricus
Spare Copies

1213A

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1889} Madras.

PUBLIC WORKS.

Dated May, 7th.

Recd.

Encl.

G.O., 7th May 1889, No. $\frac{1213}{A}$ W.

MAY.

Boring near Canal at Karani

Orders authorizing the — being continued to 450 feet and allotting Rs. 500 for the work.

H.W./A

1213A

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the

READ the following

Letter from A. P. De Closets, Esqre. C.E. H.E. No. — d/ 25 April /89

Superseded

Ordered that the following letter be sent.

(H.E. No. d/)

To
W. King, Esqre. D.SC.
Director, Geological Survey of India.

Sir,

In continuation of Col: Mead's letter No. 3935 W d/ 17 December /88, I am directed to forward the accompanying copy of a letter from Mr. de Closets d/ 25 April /89, and to inquire whether there is anything in the circumstances now reported to alter the opinion expressed in your letter of the 26 January /89 No. 63 that further boring should be discontinued.

7/5/89

Is there any use in this reference? Mr. De [illegible]ts does not bring forward any geological fact or argument on wh. Dr. King could give opinion but only something which I don't understand about hydrostatic level. Can W. explain his point?

HCS
2 May

R.P. 3

1213A

Mr de Closets in his letter of the 25 April/89 brings to notice the fact that in the two contiguous boreholes 42' and 420' in depth respectively the still water level in the pipes stand respectively at 6.50 and 4.66 feet below the B.M. that to which all the levels have hitherto been referred. This he states points conclusively to the fact that the water-bearing strata which the pipes have tapped have no connection with one another, and that inasmuch as the water in the deeper borehole stands at 1.84 feet higher than that in the shallow pipe, a fortiori, the deeper the borehole is sunk, the higher will the water rise, until probably an ascending sheet of water is struck which may overflow the head of the pipe and prove to be an Artesian spring.

There are, judging from the results obtained, probabilities that favor his contention, and I should feel inclined to comply with his request for a further expenditure of R 500 to take the bore hole down to 450' –

The gauging of discharge from the 8" pipe of the 42' borehole shows the discharge to be ~~[illegible]~~ 8375 galls. per 24 hours. That from a well 6' in diameter would therefore be 81 times as great or 678,375 galls or sufficient for a population of 67,837 at 10 galls. a head –

Rhedes
3.5.89

Ory. 8074. Hm 3/5.

HM.

I have no objection if the plant is not removed and the works closed as ordered in G.O. 5 Feb. This point might be ascertained from the S.E.

HCS
4 May

Wire to S.E. whether the plant is still at site of the 420' borehole at Karani –

4.5.89

1213A

P.W.D

Telegram – Ordinary

S E V Circle

Report whether plant artesian boring in Kortalayar is still at site of the 420 feet borehole at Karani ~~and~~ or whether the work is closed as ordered in G.O. 5th February.

Rhedes

despd. 6.5.89

HM

5

№ 319W d/ 5-2-89
" 3935W d/ 17-12-88
" 3934W d/ 17-12-88
" 2560W d/ 27-9-87
" 1701W d/ 24-6-87
" 3374W d/ 22-12-86
" 3179W d/ 2-12-86
" 2914W d/ 5-11-86
" 1129W d/ 5-5-86
" 1128W d/ 5-5-86

1213W
A

№ 1432 d/ 6–

Cy.8074. Hm 3/5.

Madras 25-4-1889.

12130/A

18

To

Colonel Mead R.E.
Actg. Secretary to Government D.P.W.
Ootacamund.

SECRETARY TO GOVERNMENT, P.W. DEPARTMENT, MADRAS.
29 APR. 89

Sir:

I have the honor to inform that I have reported to the Superintending Engineer of the V Circle, as follows: —

= Sir:

I have the honor to inform you that the boring of a hole and the sinking of a pipe 8in diam. have been completed near the Canal at Karani, and that the water sheet at 42ft. is flowing in the Canal, and has been guaged.

The water from this water sheet rose into the pipe to 6ft. 6in below B.M. then an orifice of 1 square inch was cut in the pipe, at 6 inches below the hydrostatic level of the water in the pipe.

The liquid flowed out under a head of 1in.25 measured from the surface of the water to the centre of the orifice, the efflux being at 2ft 6in above the bed of the Canal and 6 inches above the stream in this Canal.

The velocity of discharge corrected for an orifice in thin sheet, and for a head of 1in.25 being 26in.80 per second I found that the delivery from the pipe of 8in in diameter was as follows:

Discharge in 1 second — 26.80 c.in
Do per minute — 1608.00 c.i
Do per hour — 96480.00 c.i
Do in 24 hours — 2315520.00 c.in
or in cubic feet per 24 hours — 1340.00 c.f
in cubic yards — 49.62 c.y

As to the quality of the water

6

It is good and Wholesome, running now in the Canal beeing in fact an Artesian well.

Supposing that instead of a bore hole of 8 in. diam. a well of 6 feet dia. should be sunk, at the depht of 42 ft and admitting that the volume of delivery is proportionnal to the sectional areas, the delivery in 24 hours from such a Well will be 4019 Cub. yards or gallons: 679638 &c

I come now to a very important point.

During the guaging process I, have ascertained that the hydrostatic level of the water in the old pipe of the 420 ft boring, was 4' 8" below bench mark and that the hydrostatic level in the new pipe of 42 ft, was 6 ft. 6 in. below B.M this shew that the waters rising in both pipes, belongs to two different water bearing strata

But if we refer to the schedule of the strata passed through by the 420 ft boring, we are led to infer that the water now rising in the 420' bore hole must be percolating through the lower strata, by the reason that between stratum No 7 (at 42 ft) and the lowest stratum at 420 ft. all the strata beeing clayey, could not offer any chance of containing water sheets, whilst the lower stratum beeing sandy would be more likely percolated by waters from below, and cause the hydrostatic level of the water in the 420 ft pipe to rise at 4 ft. 8 in below B.M, in this dry season.

My opinion is therefore that if the water come from percolation

through the lower strata, there must be great probability that other ascending sheets exists below 420 ft

In such circumstance, I observe that it would be well to continue the boring, and pursue more investigations, but for this it will be advisable to postpone the removal of the boring apparatus, in order to ascertain the true nature of the strata below down to 450 ft or 500 ft.

The depht of 420 arrived at is trifling as boring work, according to a section published in Volume X of the Geol. Survey of India, the gneiss seems to be about 800 or 900 feet below the level of the ground and there is no reason to say that between the bore hole of 420 ft, and the granite no water bearing stratum could be found, specially when a new ascending sheet is just noticed.

I have the honor
To be &c &c
Signed A. P. de Clovets.

= Pending your opinion, I am making some observation trials to see whether the hydrostatic level cannot be rised

I have the honor therefore to ask Government to reconsider their G. O. dated 5th of February 1889 and to agree to give orders to continue the boring down to 460 ft so as to ascertain practically the condition of the sandy strata below 420 ft. and for such object I have the honor to ask Government

to be willing to grant an
expenditure of Rs 500 Estimated
for this work.

After having expended 2000 Rs
upon this important work, it
would not be creditable to
abandon it without seeing
practically certain that there
is no hope of finding more
ascending water sheets below
420 ft, the fact of another water
sheet with an hydrostatic level
of nearly 2 feet higher having
lately been discovered, and being
an indication of the probability
for the existance of more ascending
waters below 420 feet.

I have the honor
to be
Sir,
your most obedient
A De Closets C.E.

Office
9 Armenian Street
Madras

4086
C. No. of 6/5/89
Rg 6.5.89

C.S. 80/4

W
30.4.89

3P

F C
Class
INDIAN TELEGRAPH.
Local No. 408
To (Station) Ootacamund
From (Station) Triplicane
Words 35/5
Day 7 Hour 12 Minute 40
Official Instructions. Urgt-
To (Person) Chief Engineer P.W. Department
From (Person) Superintending Engineer 5th Circle

Boring plant at Kardnis not yet removed by Executive Engineer as he was ordered in February work finished as also new 42 foot boring-

12BA

SECRETARY TO GOVERNMENT, P.W. DEPARTMENT, MADRAS
-7 MAY. 89

Geo Van Derwart

Recd. from L. N.
At Hrs. Mts., By
Sent to L. N.
At Hrs. Mts., By
Date
OOTACAMUND 7 5-89 .8
Telegraph Master.

~~808~~ 1218

RATES OF CHARGE FOR INLAND TELEGRAMS.

The address (including name of Sender and name and residence of addressee) is transmitted free.

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	First 8 words.	Each additional word.	
Deferred Message	... 8 Annas	... 1 Anna.	A group of 3, or less figures, is reckoned as one word.
Ordinary "	... 1 Rupee	... 2 Annas.	
Urgent "	... 2 Rupees	... 4 Annas.	

No charge for delivery within a distance of 5 miles.

AE 251

R 7.5.89

Telegram to S.E.

R 10.5.89

Govt. sanction

R 500 to Mr. de Closet

to carry down borehole

to 450 [illegible]

Can [illegible]

be energetically

carried through

Order follows

SECRETARY TO GOVERNMENT, P.W. DEPARTMENT, MADRAS. 7 MAY 89

A.S. 7.5.89

O.S. 80/4

From [illegible] A

No. 1213 / A d/ 7th May 1889

B & R
Civil works

PUBLIC WORKS DEPARTMENT.

4P

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 1213A

READ the following

Letter from A. P. De Closets, Esqr. C.E. A.S. No. — d/ 25 April/89

Telg: from the S.E. V. Circle — " " — d/ 7th May/89

The boring may be continued to 450 feet, as proposed by Mr. de Closets, an allotment of Rs. 500 being made for the work from the Provincial reserve.

2. Ordered that the following telegram be sent to the Supdg: Engr: V. Circle.

Govt: sanction Rupees 500 to Mr. de Closet to carry down borehole to 450' + work can proceed and should be energetically carried through × order follows ×

desp. 7.5.89

S.E. V. Circle ✓
Ex: A.P.W. accts: ✓
Mr. de Closets. ✓

D 11/5/89

10.5.89

B May

O.S. 39/5. Dn 8/5.

1213A

5

Govt. of {1889} Madras.
PUBLIC WORKS.

Dated 13/5/89

Recd.

Encl.

G.O., 7 May 1889 No. 1213/4 W

Boring near Canal

=

at Karani

=

Orders sanctioning the boring continued to 450 feet and allotting Rs 500 for the work

110/6

9/11/5

11/5