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2) Date of repair: 3-88

3) Initials of the restorer: ✓

lms

P. W. Department

Case no. 2560 W

Dated: 27.9.1887

101

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Buildings and Roads-
Civil Works.

READ—the following paper :—

From Colonel H. M. VIBART, R.E., Superintending Engineer, V Circle, to the Chief Engineer, Public Works Department, dated Chopák, 7th September 1887, No. 2313.

I have the honor to submit, for orders, copy of a letter from M. deClosets, dated 16th August 1887, reporting that the experimental artesian boring has been carried down to the depth of 300 feet (see G.O., No. 1701 W., dated 24th June 1887), and suggesting that it be continued to the depth of 420 feet.

2. The cost of the further boring is estimated by M. deClosets at Rs. 2,900, thus :—

	rs.
To the depth of 330 feet at Rs. 65 per yard	650
Do. of 330 " to 360 feet at Rs. 70 per yard	700
Do. of 360 " to 390 " at " 75 "	750
Do. of 390 " to 420 " at " 80 "	800
Total	2,900

ENCLOSURE.

From Mons. A. deCLOSETS, C.E., to the Superintending Engineer, V Circle, dated Madras, 16th August 1887.

I have the honor to send you, for the information of Government, the following report upon the trial boring for artesian waters going on at Karani near Tamarapaukam.

2. The boring has now reached the depth of 300 feet (100 yards), and from the depth of 114 feet the stratum traversed continue to be of the same nature without alternacy of other beds except some few generally thin layers of lime-stone which were encountered from time to time.

3. After reaching the depth of 200 feet Government ordered that the boring should be continued down to 300 feet. The prevailing opinion was that the thickness of the alluvium filling up the tertiary basin of the Kortalayár could not be more than 200 or 250 feet, and it was recommended by the Geological Survey that the boring should reach the gneiss.

4. Therefore arrangements were made for that purpose, a steam engine, some more lifting gears and a rocking apparatus were established, and the work prosecuted until he has now reached 300 feet.

5. The plan * here annexed will show the particulars of the boring, which is as follows, for the section from 200 feet to 300 feet :—

* Plan not received; has been called for.

- at 207 feet—bed of lime-stone, greyish and moderately hard;
- at 208 feet—fine grey clay indurated and of the same clay found above 200 feet;
- at 210 feet—hard black clay indurated;
- at 216 feet—bed of grey lime-stone;
- at 222 feet—grey sandy conglomerate containing nodules of carbonate of lime and shells, also prints of leaves and of other vegetable;
- at 233 feet—grey, coarse sand (quartzite) slightly cemented so as to form a conglomerate;
- at 249 feet—the same, but containing shells, &c., and mica;
- at 263 feet—mixture of sand and grey clay, traversed from place to place by thin layers of blue clay, very dark, it contains some iron pyrites and continue to be of the
- 300 feet—same kind as far as 300 feet.

6. In consequence of the former decision of Government the boring has been stopped at the depth of 300 feet, and I have the honor to request the order of Government as to what is to be done further.

7. My private opinion and that of my Assistant are—

"That, considering the preparation and expenditure, the nature of the strata traversed, the probability of tapping water below the 300 feet stratum, it would be desirable that the boring shall be continued."

8. The nature of the strata traversed show evidently that the boring has not yet reached the lower part of the alluvium, and that this part cannot be very far off. In fact, accordingly to the dip of the tertiary formation, north and south of the Kortalayár valley, it was presumed that this formation would have been reached, in boring, at about 200 or 250 feet, but as it is not the case it must be supposed that the tertiary formation, under the alluvium, was washed away by a prehistoric stream (probably the Pálar) and that the basin thus formed was filled up by fluvial deposits, the compositions of the stratifications leaves no doubt whatever as to this.

9. According to the Geological Survey opinion the tertiary formation of "Red Hills" overlays a bed of shingles and sand mixed, this bed itself overlaying the quartzites, therefore there is every probability that, under the alluvium now under boring process, artesian waters may be tapped; and considering that the outcrop of the shingles is seen near Chinnammápet at about 70 feet higher than the spot where the boring has been undertaken, it may be fairly expected that if such water exists there will be a fair head so as to allow these water to overflow the ground at the boring.

10. It would be therefore urgent to continue the boring through the alluvium so as to reach the bed under it and to ascertain their nature; such data would be important for the Geological Survey's information.

11. If it was decided to continue the boring as far as 420 or 400 feet, the expenditure for such work would not be large, and accordingly to the terms of my contract with Government this expenditure will be as follows:—

						Rs.
From 300 feet to 330 feet at Rs. 65 per yard ...	...	...	...	...	...	650
" 330 " to 360 " at " 70 " ...	...	...	...	...	...	700
" 360 " to 390 " at " 75 " ...	...	...	...	...	...	750
" 390 " to 420 " at " 80 " ...	...	...	...	...	...	800
Total ...						2,900

12. As regards the boring apparatus, nothing more is wanted; the steam engine is in good working order; one or two couplings for boring roads may be only wanted.

13. I must here give credit to my Assistant Mr. Adrien deClosets for the able manner into which he has put up everything and for the way the work has been done.

14. With the hope that Government will be pleased to order the continuation of the boring as a work of importance under irrigation and also geological points of view, I have the honor to wait for your orders.

ORDER—dated 27th September 1887, No. 2560 W., Public Works.

The Government consider it desirable to continue the boring to a depth of 420 feet, unless gneiss is reached or water tapped at a less depth.

2. The Superintending Engineer will submit a supplemental estimate accordingly, and will meanwhile authorise M. deClosets to proceed with the work.

3. A statement showing the expenditure already incurred and the further allotment needed should be submitted with the supplemental estimate.

(True Extract.)

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

To the Superintending Engineer, V Circle.

Exd. J. Moses.

Spare Copies

*have sent
news paper*

2560
2

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1887) Madras.
PUBLIC WORKS.

Dated September, 27th.

Recd.

Encl.

G.O., 27th Sept. 1887, No. 2560 W.

SEPTEMBER.

Artesian Well in the
Kortalayar Valley

Authorising the boring of the — to be
continued to a depth of 420 feet, with re-
marks.

Madras 16 August 1887.
20
Colonel. Vibart. R.E. 1887
Superintending Engineer
Sri:

I have the honor to send you
for the information of Government,
the following report upon the trial
boring for Artesian waters going
on at Narani near Jamrapet.

The boring has now reached
the depth of 300' (100 yds) and from
the depth of 114' the Stratum traversed
continued to be of the same nature
without predominance of other beds ex-
cept some few generally thin layers
of Limestone which were encoun-
tered from time to time.

After reaching the depth of 200 ft
Government ordered that the boring
should be continued down to 300 ft.

The prevailing opinion was that the
thickness of the alluvium filling up
the Tertiary basin of the Kortalayar
could

could not be more than 200 or 250 feet, and it was recommended by the Geological Survey, that the boring should reach ^{the} gneiss.

Therefore arrangements were made for that purpose, a Steam Engine, some more lifting gears and a rocking apparatus were established and the work prosecuted until the has now reached 300 feet.

The plan here annexed will show the particulars of the boring which is as follows for the section from 200' to 300 feet.

pt. 207. Bed of Limestone, greyish and moderately hard.

at 208' Fine grey clay unweathered and of the same clay found above 200'

210 Hard black clay unweathered

216 Bed of grey lime stone

222 Grey sandy conglomerate containing nodules of carb. bonate of Lime and shells, also prints of leaves and of other Vegetables.

at 233 Grey coarse sand (quartz) slightly cemented so as to form a conglomerate

249 the same but containing shells & mica

256
263 mixture of sand and grey clay; traversed from place to place, by thin layers of Blue clay very plastic, it contains some iron pyrites and continues to be of the

300' Same kind as far as 300 ft.

In consequence of the Government's decision, the boring has been stopped at the depth of 300 ft. and I have the honor to request the orders of Government, as to what is to be done further.

Obly private opinions, and that of my assistant are:

"That considering the preparation and expenditure, the nature of

"the strata traversed, the pro-

"= bability of tapping water below

"the 300' stratum, it would be

"desirable that the boring shall be

"continued"

The nature of the strata
traversed show evidently that
the boring has not yet reached
the lower part of the alluvium,
and that this part cannot be
very far off. In fact according
to the dip of the Tertiary for-
mation N. of the Crossley
Valley it was presumed that this
formation would have been
reached in boring, at about 200
or 250', but it is not the case,
it must be supposed that
the Tertiary formation, under
the alluvium, was washed away
by a prehistoric stream (pro-
bably the Pelah) and that the
basin thus formed was fil-
led up by alluvial deposits.
The composition of the strata
exposed leaves no doubt whatever
as to this.

According

According to the Geological
Survey opinion, the Tertiary for-
mation of "Red Hills" overlays a
bed of shingles & sand mixed,
this bed itself overlaying the
quartzites therefore there is every
probability that under the alluvium
now under boring process, pre-
historic water may be tapped,
and considering that the outcrop
of the shingles is seen near
Mammoth at about 70' higher
than the spot where the boring
has been undertaken, it may
be fairly expected that if such
water exists there will be a fair
head so as to follow the water
to our flow the ground at the
Boring.

It would be therefore, urgent, to
continue the boring through the
alluvium so as to reach the
bed under it, and to ascertain
their nature such data would
be important for the Geological
Survey's information.

If it was decided to continue
the
yard

the boring as far as 420 or 400';
the expenditure for such work
would not be large and ac-
cordingly to the terms of my
contract with Government
this expenditure will be as follows.

From 300' to 330' at Rs 65 per yard.	650.
330' to 360' — " — 70 — " —	700
360' to 390' — " — 75 — " —	750
390' to 420' — " — 80 — " —	800
Total Rs.	<u>2900</u>

As regards the Boring appa-
ratus, nothing more is wanted,
the Steam Engine is in good
working order, one or two couplings
for boring rods may be only
wanted.

I must here give credit to
my Assistant Mr. Adrain de Floate
for the able manner into which
he has put up every thing and for
the way the work has been
done.

With the hope that Govern-
ment will be pleased to order
the

the continuation of the boring
as a work of importance under
Irrigation and also Geological
points of view I have the honor
to wait for your orders.

I have the honor to
(Signed) A. de Cloots. Esq.

Office -
9 American Street
Madras.

(True Copy)

Harley Street, Calcutta.
Superintending Engineer
5 Circle

No. 2313.

SUPERINTENDING ENGINEER'S OFFICE,

V Circle, Madras,

Chepakk, 7th September 1887.

From

Col. H. M. Vibart. R.E.

SUPERINTENDING ENGINEER, V CIRCLE,

To

The

Chief Engineer
P. W. Department.

Sir,

Enclosures.

I have the honor to submit for orders, copy of a letter from M de Closets dated 16 August 1887, reporting that the experimental observation bearing has been carried down to the depth of 300 feet (see S.O. No. 1701 H dated 24 June 1887) and suggesting that it be continued to the depth of 420 feet.

2. The cost of the further boring is estimated by M de Closets at Rupees 2900. thus - to the depth of 330 feet at Rupees 65 per yard

yard	_____	650
330' to 360'	at Rs. 70 per yard	700
360' to 390'	at Rs. 75	750
390 to 420	at Rs. 80	800
		<u>2900</u>

I have the honor to be
Sir

Your Most Obedient Servant

Harish Chandra P. R.

Superintending Engineer

G.C. 1701 W. 24. 6. 87
 No 1320 C. 13. 4. 87
 No 914 W. 25. 3. 87
 " 1122 W. 10. 2. 87
 G.C. 3374 W. 22. 12. 86
 " 3479 W. 2. 12. 86
 No 3353 C. 29. 9. 86
 " 3046 C. 8. 9. 86
 " 2071 C. 7. 6. 86
 No 2670 W. 12. 10. 86

From P.W.D. 7033

The Superintending Engr.
 S.D. Circle

The Chief Engineer
 P.W. Department

Dated 20th September 1887

Received

Enclosure 1.

No. 2313.

Trial Boring for Artesian
 water going on at Karani.

Submitting for orders
 Copy of letter from Mr. de Closets
 in connection with the

For orders

Having gone so far it
 seems desirable to continue -
 it is recommended that
 an estimate for continuing boring
 to 420 feet should be
 sanctioned.

Acting J. H. M. 30. Men
 to 420 feet unless the water
 is reached or water tapped
 earlier. See Mr. de Closets' order.

10/10/87
 13/10/87

O.S.
 9/9/87

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 27th September

Read the following

From the S.D. Circle No. 2313 of 7th Sept-1887

The Govt. Consider
 it desirable to continue
 the boring to a depth
 of 420 feet, unless
 gneiss is reached or
 water tapped at a
 less depth.

2. The Engr. Super-
 will submit a supple-
 mental estimate ac-
 cording, and will
 meanwhile authorize
 Mr. de Closets to proceed
 with the work

3. A statement showing
the expenditure already
incurred, and the further
allotment needed, should
be submitted with the
supplemental estimate.



For P.P. the balance
for the year 1907

10/10/07

WCS
279.57

13 1/2 27/10

S. G. V. circle
1/2 27/10

S. G. V. circle
1/2 27/10
with 50000
24/10

2510
10

7033

GOVT. OF (1887) ~~INDIA~~

PUBLIC WORKS.

11/16/87
27th Sept: 1887. No. 2560 W.

Artesian well in the
Korbalayar Valley

authorizing the boring
of the — to be continued
to a depth of 420 feet
under with remarks.

21
15-11-87

180
2

20th 1887