(1) பக்கங்களின் எண்ணிக்கை 16

(2) புதுக்கித் திருப்பிய நாள் 23.6.20

(3) ஆதாரங்குறிப்பவர் சருக்கொப்பம்

தமிழ்நாடு ஆவணக் காப்பகம்.

(66)

தமிழ்நாடு அரசு

P.W.D. துறை

அரசாணை எண். 1286 அச்சகம்
மு. கோப்புத் தாள் எண். பலவகை

நாள் : 9-5-1891 198 .

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

8. sheets

ஆணை. கா-1—18,000—15-6-87.

Local and Municipal Department.

1286/1

CHIEF SECRETARIAT MADRAS.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following paper :—

From the Sanitary Engineer to Government,
dated 7th April 1891 No. 235

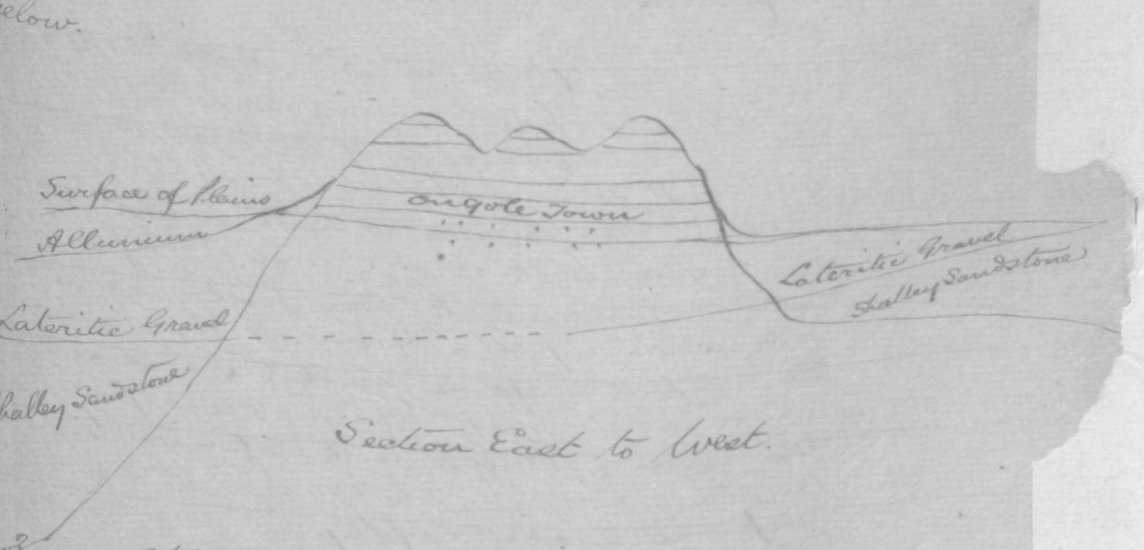
Ongole water supply

References - G.O. dated 24th Sept.r 1890 No. 1418 In Mis
G.O. dated 20th Nov.r 1890 No. 1757 In
G.O. dated 19th Nov.r 1890 No. 1735 In Mis

In accordance with the request contained in the Government Order first quoted, I have the honor to inform you that I have visited the town of Ongole with reference to an improved water supply.

2. As a preliminary to the proposals I have first to point out certain errors in accepted as facts on which unfortunately recommendations have been made, and other mistakes on which proposals have been made and theories have been based. These generally are

are to be found in letters with reference to which the first two quoted orders were issued. In order to shew the incorrect deductions howe been drawn I have to refer Government to the last quoted order, wherein are described the exact Geological conditions which are present at Ongole. So far as I can gather from the Superintendent of the Geological Surveys letter a section through Ongole passing through the Ongole Hills would be as sketched below.



Section East to West.

3. Though these strata rise the hills called Ongole and Pellur Kondas, these are practically one hill with a valley in the centre which runs east to west and a section taken from South to North through the hills would according to the

the Geological facts described be thus:-

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Section South to North.

4. These hills are of Gneiss, a metamorphic formation and the strata apparently dip as shewn.

5. The two sections above given may be taken to represent sections on the lines AB and CD on my sketch accompanying.

6. The first error I wish to refer to is one made by Mr. Hammett in his No. 212 dated 23rd July 1890 referred to in G.O. of 24th September 1890, No. 1418 M. Mis and which is accepted "as an important fact" by Dr. King in his notes (para 3) dated 4th October 1890 published with G.O. of 20th November 1890, No. 1751, M. Local and Municipal - The error is in the statement that Dr. Clough's well had been bored through rock into a sand stratum.

7.

7- This however has no basis in fact. In the first place the only rock formation (other than the lateritic gravels which overlie the whole district about Ongole) is the gneissic metamorphic rock which is of great thickness and it is most improbable that this rock could have been passed through; if further evidence of this is required Dr Clough himself describes the material passed through as large pieces of lateritic gravel having nothing in common with the gneissic strata at all, the well is in fact in the same stratum throughout. And again a well some fifty feet away sunk to the same depth passed through no hard material at all; one portion of the stratum was in fact at the former well found more dense than another.

8. The abundant supply to Dr Clough's well is due in fact to the reasons the reverse of those given, the fact of its not being in the Gneissic rocks supplies the reason, the lateritic gravels being a much more porus stratum and yielding therefore a more abundant supply.

9. Several wells in the town are sunk into the gneissic rock but their supply cannot be called abundant, the chief wells so sunk are Anklamma's and Kothundaramoodoo's wells (wells 11 and 12 on accompanying tracing).

10. It is from the former of these wells (the water is 37 feet below the surface of the ground and this in a Comparatively low lying part of the town) that Dr King proposed to start his filtration gallery but the grounds on which he did so are not at all apparent and the proposed line of gallery is based on facts which are incorrect.

11. A Comparison of the plan (copy attached) published with G. O. dated 20th November 1890, No 1751 M, with the sketch already referred to will shew that the positions of the hills and the sea on Dr Kings plan are incorrectly shewn but even had facts been as shewn a filtration gallery on the site proposed would have been of no real use in tapping the water from the plain shewn on Dr Kings' plan. The gallery

would

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would have been in the gneiss as shewn in sketch in para 3 of this letter and there is very small probability of water coming from the opposite side of the hills (the direction supposed by Dr King as being the line of flow) ever being tapped. The only water which would have been tapped would have been water in the gneissic rock derived from the rainfall on the hills or on the town area and which had passed through the superimposed lateritic gravels to the gneissic rocks below.

12- Dr King makes reference to the passage of water through a hill (the case to which I think he refers happened in Switzerland under very different conditions) and to the situation of the night soil depot which though an unfortunate one for other reasons would not affect the water in a gallery on the site he proposed nor would water from the supposed plain ever pass through the hills. The depot can only get water from it passing through the lateritic gravels in the valley

valley, affect only the wells situated in the east end of the valley between the Pallur and Ongole Roads but it has not apparently done so because Dr Clough's and other wells situated in that locality are about the best in the town. The removal of the depot is however none the less urgent.

13- Government will now understand why I am unable to accept as basis any proposals on the theories that have been put forward in regard to the circumstances quoted as existing but which do not do so.

14- What has been proved is that water can be had in the lateritic gravels on which Ongole stands if the wells are sunk sufficiently deep and at a datum to the west of the town, the subsoil flow being towards the sea, that I think water should be obtained. Good water is obtainable in that direction and a well was sunk into these gravels some five years ago by the Municipality from which the

the water supply of the village of Geddala (untapolum is derived) a rough test shews this water to be comparatively pure, this well is marked No 14 on the accompanying plan. Near this is an abandoned well No 15 (abandoned on account of its distance from the above village or the town) it yielded good water when used. It is somewhere in this locality that a filtration Gallery should be driven and I believe that a plentiful supply of water can be obtained.

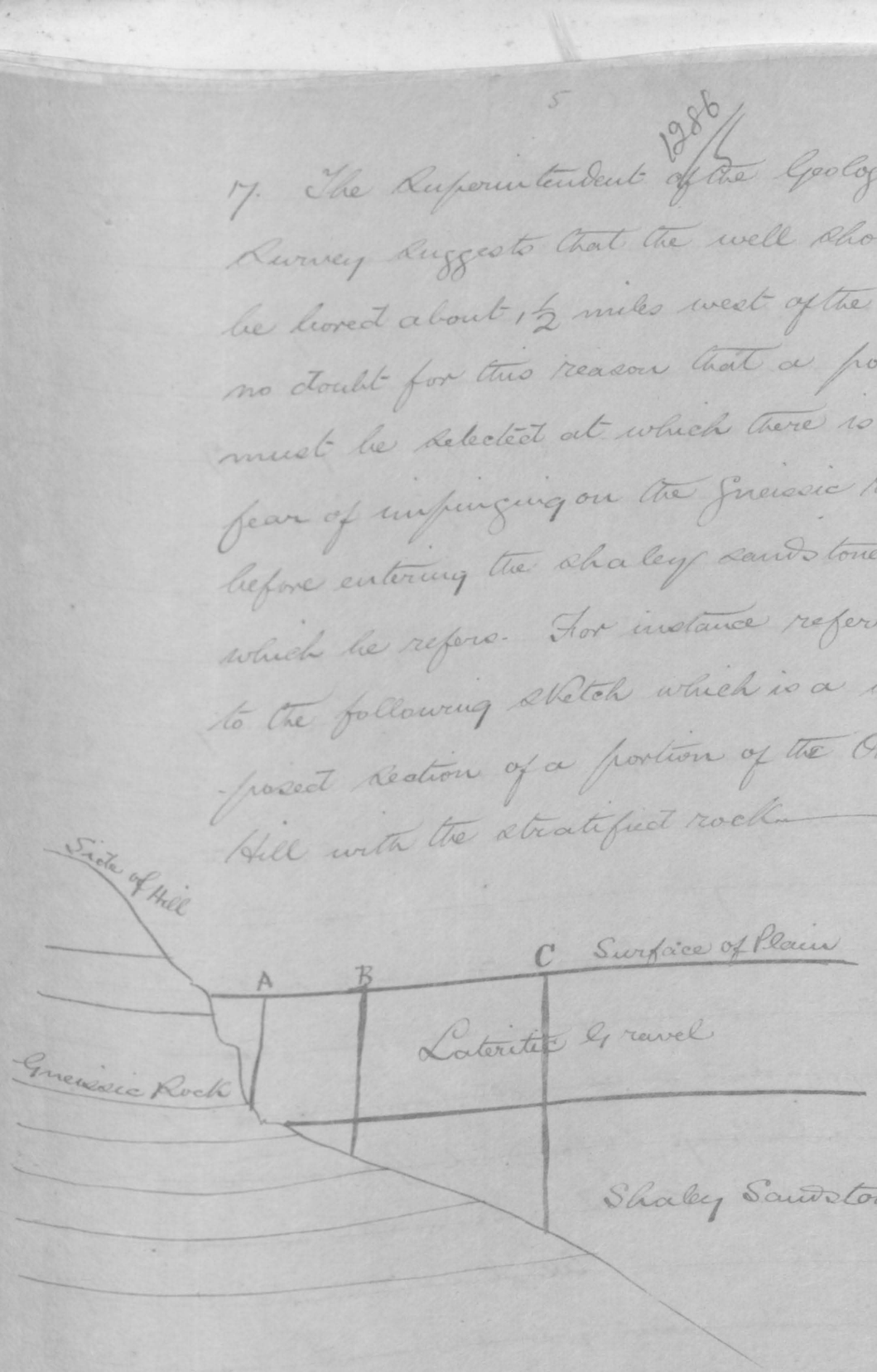
15. Government have however in their order dated 19th November 1870, No 1735 In. Mis, stated that it will be prepared to consider an application to bore an experimental Artesian well at Orgole, that application has, I believe, been made. It is well however to consider even granting the possibility of success, whether such a well would be of advantage in Connection with a General water Supply.

16. I myself do not think it would and for the following reasons.

17.

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17. The Superintendent of the Geological Survey suggests that the well should be bored about 1½ miles west of the town, no doubt for this reason that a point must be selected at which there is no fear of impinging on the Gneissic rocks before entering the shaley sandstones to which he refers. For instance referring to the following sketch which is a supposed section of a portion of the Orgole Hill with the stratified rock



to the east of it, a well at A would not strike the sandstone at all while one at B would enter it but we might have to go to C before it would be entered sufficiently.

Hence

Hence the suggestion that the well ought to be one and a half miles from the town.

18. This, I consider, introduces a fatal monetary objection to the scheme because one and a half miles extra of piping (say 8") would have to be provided say at a cost of some Rs 8000 to Rs 10,000 while there would be a considerable expense for extra lift &c.

19. Nor do I see the advantage to be obtained from the artesian well, the water is not likely to rise 40 feet above the plain, even if it rises to the level of the plain, and pumping will still have to be resorted to as in the case of a filtration gallery. With the latter we are sure of water and of the depth at which we will tap it. We know there is a considerable quantity available and that this water is good and this latter scheme has as many elements of certainty of result as the artesian scheme possesses of uncertainty. In such a case as this, I would advise

Government.

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Government not to try the experiment of an artesian well.

20. By whatever means the water is obtained it must be raised to a point above the town, and in order to have continuous pumping whether it be done by means of bullock or steam power it will be well to have a small reservoir which will be best situated on the side of the hills above the Police Hospital, thence the water may be distributed to the town.

21. The comparative water level in the locality indicated for the filtration gallery is about 36.00 (as compared with the level of 17.00 to 21.00 for the water in the wells in the gneissic rocks on side of the Orgole Konda. The water will probably have to be raised to a level of about 80.00 or a height of 80-36 say 44 feet. Whether it will be possible to arrange this lift economically for bullock power is a question which cannot

cannot be yet settled and more levels are wanted (which I have asked for) before any definite scheme can be propounded and estimates made.

22. These I will send hye and hye and by that time Government will probably have considered the advisability of proceeding with the artesian boring or the acceptance of the present proposals for a supply from the lateritic gravel stratum which yields in many places excellent water.

Order dated 24th April 1891 No 617 Dr. Iris

In the circumstances reported by the Sanitary Engineer, Government is of opinion that the proposed experimental borings in Ongole should not be undertaken at present. The detailed scheme and estimates promised in para 22 of the letter read above are awaited. On their submission, Government will be in a position to judge which of the two proposals is most likely to be for the benefit of the

the Municipality.

1386/7

(True Extract)

W. Bonthy Major R.E.

Under Secretary P.W.D.

for Chief Secretary

To

The Sanitary Engineer

Public Works Department

Chairman Municipal Council

Ongole through the Collector

of Nellore.

Bell

P.W.C. No 4700

Govt. of 189/ Madras.

Local and Municipal Department.

To

The P. W. Deptt

Rd 30-6-91

Proceedings, dated 24th April 189/.
No. 617 Mun(s)

Subject.

Stating that the proposed experimental borings at Cuyole should not be undertaken at present & awaiting the detailed scheme and estimates for the improvements of water supply there promised by the Sanitary Engineer

OBS 27.5.91
AE 4.5.91

(8)

Fr. Buc 3329 wd 15.12.90
Transmts 96 Secy 20.2.91
Fr. Buc 773 wd 17.3.91
Transmts 23 Secy 30.4.91

No. 1286 wd 9 May 1891

B

Communicated to the Supdg. Engr II circle, in continuation of G.O. No. 773 wd 17th March 1891, on which no action will be taken for the present.

2. If the boring plant at Tuticorin has already been despatched to Cuyole, the Supdg. Engr will arrange for its storage at the latter place.

OBS 1.5.91 A.D.

S.E. II circle ✓
S.E. VI circle ✓

9/5
AEC 11/5
SE 11/5
9/5 AE 26.5.91

1286/8