

DEPARTMENT OF MINES

SOUTH AUSTRALIA

Report on

STORAGE TANK - STONYFELL

PART SECTION 290, HD. ADELAIDE

ENGINEERING & WATER SUPPLY DEPARTMENT.

by

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ENGINEERING GEOLOGY & MINERAL RESOURCES SECTION

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Map Reference

S 1158

Title

Storage Tank Site,
Pt. Sec. 290, Hd. Adelaide.

Report Reference No.

G.S. 390
41/107

Date

16th November, 1955

DEPARTMENT OF MINES

SOUTH AUSTRALIA

STORAGE TANK - STONYFELL

PART SECTION 290, HD. ADELAIDE

INTRODUCTION

The proposed storage tank site is in allotments 9, 10, 15 and 16, part Section 290, Hd. Adelaide, in the suburb of Stonyfell.

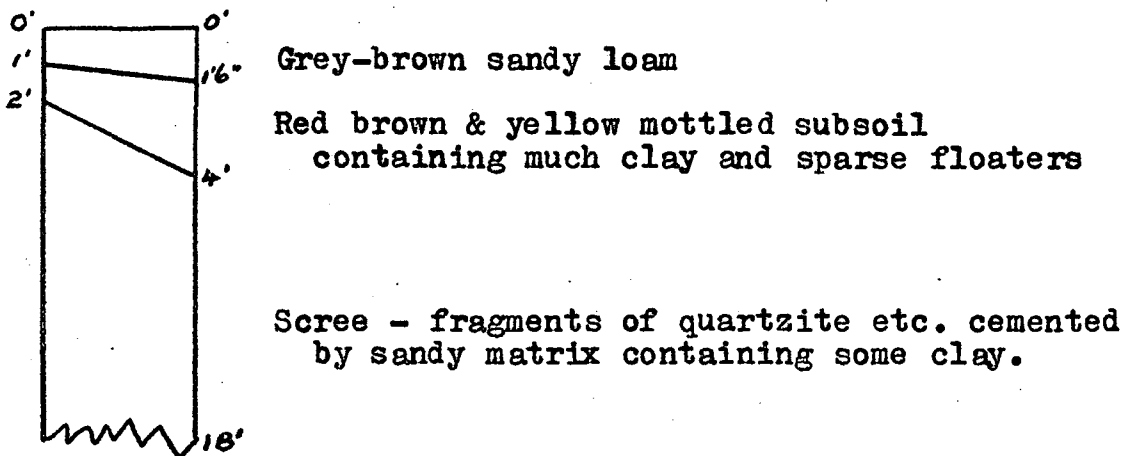
A verbal request for examination was made by the Engineering & Water Supply Department and the area was first visited on Thursday, 9th June, in the company of the Chief Geologist when the incomplete pits were examined. The completed pits were mapped on Thursday, 16th June.

GEOLOGY

The area is mapped on the Adelaide 1 Mile Geological Sheet as being underlain by Torrensian phyllites, slates and quartzites and is situated on a splinter block adjacent to the Eden Fault. However while quartzites are exposed east and west of the proposed site no outcrops were seen in the immediate vicinity.

Four test shafts have been put down on the site (See Appendix A for detailed logs and Map attached for location). These shafts disclosed a yellow podsollic soil similar to type YP 1 the dominant member of the Stonyfell Association, but here resting on recemented quartzite scree rather than on a quartzite bedrock as in the type area.

The characteristic profile developed is:-



No sign of bedrock was seen in any of the test pits.

The scree at the foundation depth consisted of 50-60% of rounded and subangular fragments of quartz, quartzite and sandstone and 10-20% of tabular fragments of shale cemented by a 20-40% sandy matrix which is slightly clayey. The fragments range from grit size to boulders 9" - 12" in diameter. The whole is extremely well cemented and should be satisfactory for the support of a storage tank.

CONCLUSIONS

A storage tank site on lots 9, 10, 15 and 16, part Sec. 290, Hd. Adelaide, is underlain by a scree of quartz, quartzite, sandstone and minor shale, strongly cemented by a sandy-clayey matrix. Even though no bedrock is exposed the site should be suitable for the support of a storage tank.

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SECTION

DEPARTMENT OF MINESSOUTH AUSTRALIASTORAGE TANK - STONYFELLPART SECTION 290, HD. ADELAIDEShaft No. 1

- 0 - 1' Grey sandy loam containing sparse floaters
- 1' - 3'9" Red-brown and yellow mottled subsoil containing much clay and sparse floaters
- 3'9" - 18' Scree consisting of 50% of rounded and subangular fragments of quartz, quartzite and sandstone and 10% of tabular fragments of shale in 40% sandy matrix which is slightly clayey. Fragments range from grit to boulders 9" - 12" in diameter.
- No bedrock visible.

Shaft No. 2

- 0 - 1'6" Grey sandy loam containing floaters as above
- 1'6" - 10'9" Scree as above but with slightly more stone, say 70%.
- No bedrock is visible.

Shaft No. 3

- 0 - 1'6" Grey sandy loam containing floaters
- 1'6" - 2'9" Red brown and yellow mottled clayey subsoil containing sparse floaters
- 2'9" - 5'6" Scree containing 70% floaters in a sandy matrix. cf. Shaft No. 2.
- No bedrock is visible.

Shaft No. 4

- 0 - 1'6" Grey sandy loam containing sparse floaters
- 1'6" - 2½' Sandy clay mottled red-brown and yellow with sparse floaters. This section has slumped.
- 2½' - 10' Scree consisting of 50% of quartz, quartzite, sandstone and minor shale fragments in 50% sandy matrix containing some clay. There is a smaller proportion of large stones in this test shaft.

APPENDIX A (Contd.)

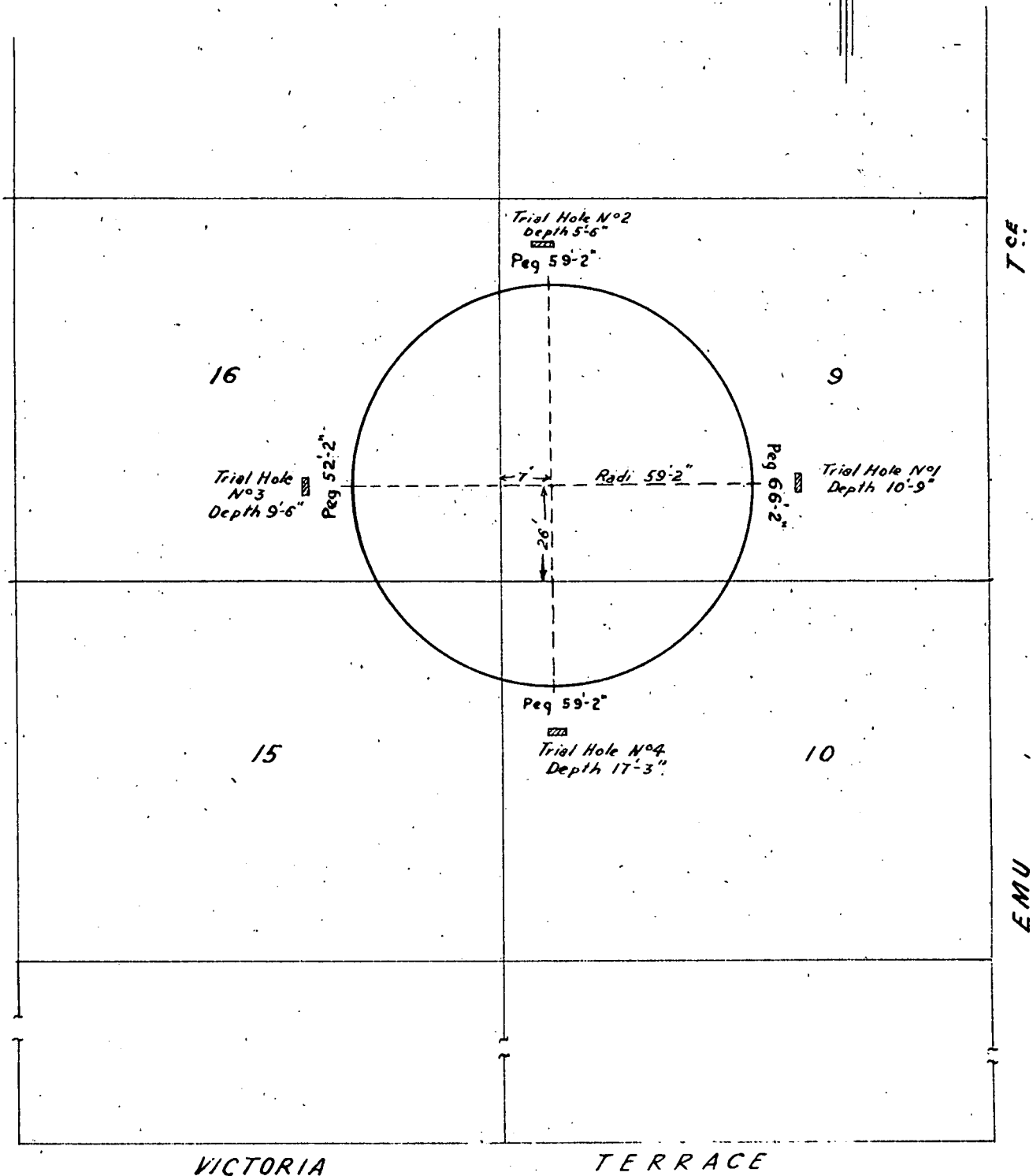
Remarks:-

In all shafts the scree has been very well cemented and it proved impossible to excavate the shafts without pneumatic tools.

Logged by G.F.W. 16/6/55

Map Reference: S 1158.

STONYFELL



Survey Data supplied by E & W. S. Dept.

S.A. DEPARTMENT OF MINES

STORAGE TANK SITE

Location of Test Pits
PT Sec. 290, H^o Adelaide.

S/1158

H.2.6

14-11-55