

DEPARTMENT OF MINES.SOUTH AUSTRALIA.REPORT ON GROUNDWATER PROSPECTS.SECTS. 653, 654, ETC. HD. PARA WIRRA.D. F. COWELL.

The property was inspected on 7th June, 1954.

REQUIREMENTS:

Mr. Cowell requires large supplies of water (2000 + gallons per hour) of a quality suitable for irrigation, and also intends to utilize surface runoff by means of dams.

LOCATION, TOPOGRAPHY:

The property, located about 2 miles north-east of Mt. Crawford, is drained by westerly-flowing tributaries of South Para Creek. The valleys of these tributaries are broad and shallow and contain deposits of alluvium of variable thickness. As the fall is not very great, swampy conditions prevail during the winter, although these streams dry up during the summer.

GEOLOGY, HYDROLOGY:

The bedrock of the area consists of quartzofelspathic schists of the Kanmantoo Group with meridional strike and dips of approximately 60°E. There are no bores in the immediate vicinity, but two bores south of the Williamstown road near South Para Creek obtained very poor supplies only. This, together with the restricted area of catchment, and the generally poor water-yielding properties of Kanmantoo rocks, indicate that drilling for large supplies of irrigation water cannot be recommended. It is also likely that any water obtained would not be of irrigation quality.

On the other hand, the area of catchment is ample for the

establishment of dams in this relatively high rainfall area. As the streams flood rapidly after heavy rain, it would be necessary to construct the dams in such a position that the walls would not be damaged by flood waters.

Two dam sites ("A" and "B") proposed by Mr. Cowell have been examined and found to be satisfactory, provided a sufficient depth of clay is found at each locality. It has been suggested that the depth and extent of clay be tested by means of a post-hole borer.

No other sites were found to be suitable owing to danger from flooding or proximity of bedrock to the surface.

CONCLUSIONS & RECOMMENDATIONS:

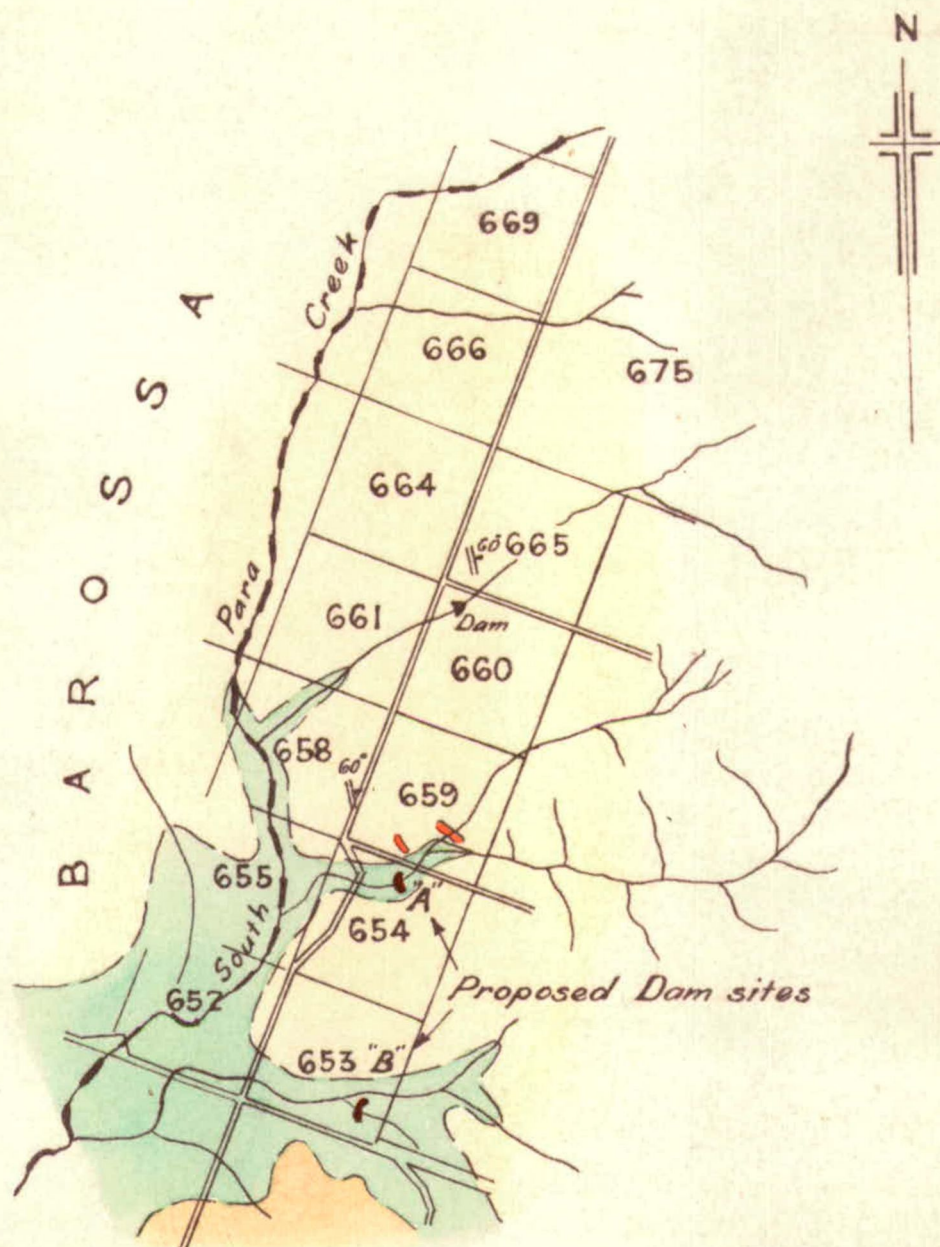
Drilling for irrigation supplies of underground water cannot be recommended owing to:

1. Impermeable nature of the bedrock.
2. Restricted area of catchment.
3. Evidence from bores further downstream.

Dams constructed at sites "A" and "B" should be successful provided a sufficient depth of clay is present.

.....
(J. J. JENKIN).
ASSISTANT GEOLOGIST.

JJJ:AGK
15/6/54.



LEGEND

Shallow alluvial deposits of creek channels	
Tertiary sands etc.	
Kanmantoo group - Quartzofelspathic schists	
Pegmatites	

To accompany report by J.J. Jenkin.

S.A. DEPARTMENT OF MINES

Approved

Passed

Drn.

UNDERGROUND WATER SURVEY

D.M.

Scale 40 Chns. to 1 in.

Tcd. A.R.

Req.

S 927
Ha 4

Ckd.

H^o PARA WIRRA SECS. 653/4 ETC.

D.F. COWELL

Date 17.6.54

Director

4.9

Exd.