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DEPARTMENT OF MINES.

SOUTH AUSTRALIA.

REPORT ON GROUNDWATER PROSPECTS.

Sections 177-178-192. Hd. Waitpinga.

J. M. PHELPS.

The property was inspected on 29th April, 1954, in company with R. K. Johns, Geologist.

REQUIREMENTS:

Mr. Phelps requires water for dairy and irrigation purposes.

LOCATION, TOPOGRAPHY:

Located in the central portion of the Fleurieu Peninsula, the property is situated on a dissected plateau and is drained by streams which flow in a southerly direction to the Southern Ocean.

The topography is marked, the dissection of the plateau being quite deep. Because of the steepness of the hill slopes and the removal of natural vegetation, run-off is expected to be rapid, reducing the quantity of water which could percolate into the underlying rocks, provided these were sufficiently porous. The valley floors, however, contain comparatively thick peaty deposits which would retard run-off to some extent along the stream courses. Therefore, replenishment of underground water would be at a maximum along the streams, and increasing downstream.

GEOLOGY, HYDROLOGY:

The underlying rocks consist of micaceous, felspathic sandstones of the Kanmantoo Group which strike at about N. 30° E, with easterly dips of 60-80°. The sandstones are cross-bedded and show other structures which may be due to sub-aqueous slumping. They weather to sandy clays.

Overlying the Kanmantoo rocks is a veneer of Cainozoic laterite which formed a crust on the uplifted plateau. The laterite, which is 5-10 feet thick, has been extensively eroded and remains as a capping on the "spine" and higher hills of the Peninsula. The laterite is not significant from a water-bearing point of view.

The rocks of the Kanmantoo Group do not, as a rule, yield water in either quality or quantity suitable for irrigation. There are no bores in the vicinity, but experience of these rocks in similar areas has shown that the water is generally too saline and in low supply. It is probable that mill supplies of stock water could be obtained, although the quality is uncertain but may be suitable for dairy purposes.

If boring is contemplated, the most favourable site is near the southern boundary of Section 177 on the east side of the creek (Site "A" on the accompanying plan).

CONCLUSIONS & RECOMMENDATIONS:

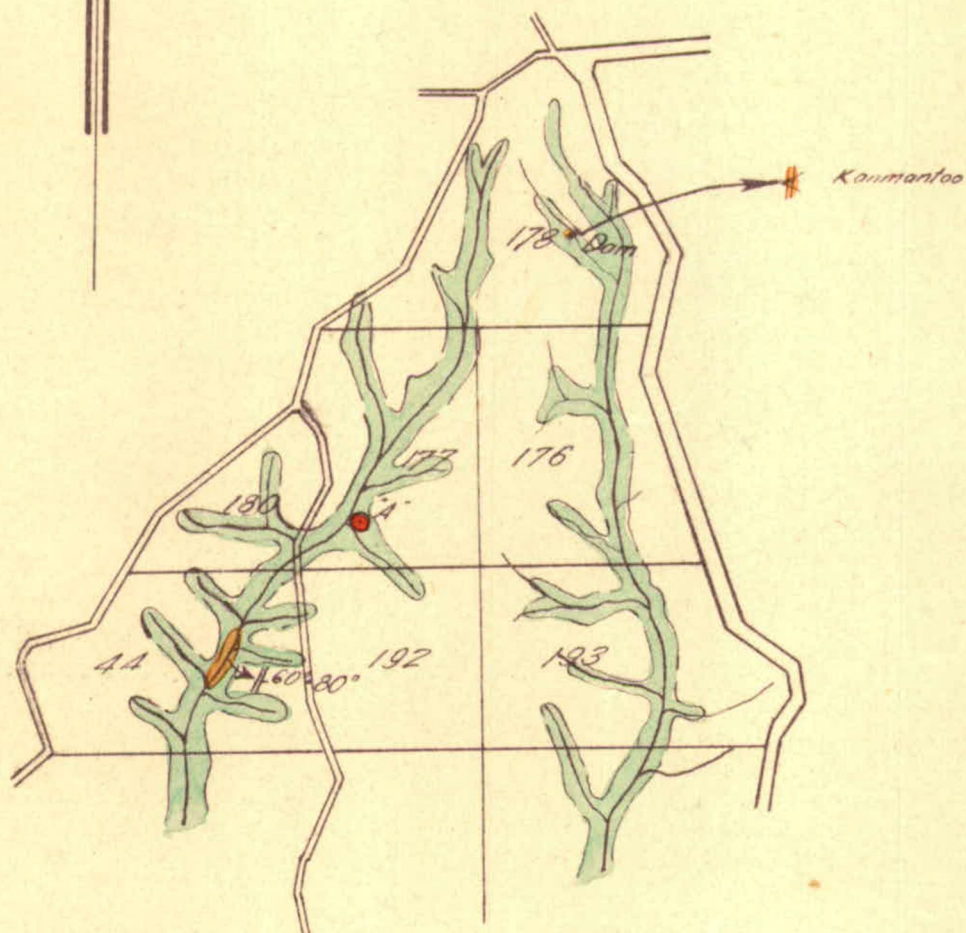
A mill supply of stock water should be obtained by boring to 100-150 feet at site "A".

Drilling for irrigation supplies cannot be recommended.

Drilling is expected to be difficult and costs would therefore be high, perhaps up to £3/-/- per foot, including casing.


(J. J. JENKIN)
ASSISTANT GEOLOGIST.

JJJ:AGK
17/5/54.



LEGEND

Shallow Alluvium	-----	
Laterite Crust	-----	
Konmantoo Group (micaceous quartzites schists etc.)	-----	
Proposed Boresite	-----	

To Accompany Report by J.J. Jenkins

S.A. DEPARTMENT OF MINES

Approved	Passed	Dtn.	UNDERGROUND WATER SURVEY SECS. 177, 178 & 192 HQ WAITPINGA J.M. PHELPS	D.M.	Scale 40 Chains to 1 inch	
		Tcd. P.J.B.		Req.	S 910	
		Ckd.			Hc II	
Director		Exd.			Date 10-5-52	