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HGWK:2 10th April, 1951.

MEMORANDUM:

HUON ISLAND WATER SUPPLY.

Accompanied by Dr. Ratten on Sunday 8th April, a visit was made to Huon Island to examine the possibilities of a Water Supply there.

A number of springs occur on the island and from one of these the present supply has been drawn. With the continued dry weather this spring has failed to yield sufficient water for all purposes. A general examination of the island was therefore made.

The Geological Map of Tasmania is at fault with respect to this area as is also the mapping done for the Coal Resources of Tasmania. On these published maps the greater part of the island is shown as Tertiary Basalt with the remaining area occupied by Permian Sediments. Neither of these rocks occur and the island is composed of Dolerite which has weathered to give a comparatively deep soil cover with the whole of the foreshore having solid dolerite showing.

The springs which occur, therefore, depend entirely on the soil cover of the island for the storage of water derived entirely from annual rainfall of the island. The island has a comparatively low annual rainfall of approximately 20 inches of which at least 60% must be regarded as lost by run off. The remaining 40% may be regarded as soaking into the soils to maintain the underground water supply.

Of the several springs examined it was noticed that the water issues at or near the level of the outcropping dolerite and as the general level of the outcropping dolerite is only a little above sea-level the springs occur also at or near sea-level.

The settlement is situated on the northern end of the island and the spring which has been used to provide the water supply also occurs on its northern end. The spring has been equipped with a retaining wall, behind which the issuing water is trapped, and stored, and a windmill to pump the water to a central tank for reticulation.

The present investigation was made because the Household spring has failed. The failure of the spring may be attributed to two factors.

(1) The long and continued drought conditions.

(2) The shape of the island.

(1) The drought has affected the spring because although the draw off each day has been the same, there has been no replacement by rainfall.

(2) Huon Island is more or less pear shaped with its narrowest part to the northwards and its highest point approximately at the position of the storage tank.

It is obvious therefore that the northern section of the island provides a smaller catchment for water than the southern portion and if the contour of the underlying rocks be regarded as being approximately the same as the present surface contour, the northern springs must be expected to vanish before the southern ones.

There is no doubt that with an increased and regular rainfall the spring from which the household is supplied will be rejuvenated and will again serve its useful purpose, but if an immediate improvement in the water supply be required two alternatives present themselves.

On the southern foreshore two springs occur.
(1) About 100 yards west from the beacon situated on the most southern point of the island.
(2) About 200 yards west from the beacon.

At the time of this inspection the latter spring was flowing freely. If this spring were equipped in the same manner as the northern spring has been, then an assured supply of water would be available. This would, however, necessitate the installation of upwards of half a mile of additional piping to convey the water to the existing tank.

Water may be available by Well sinking on the higher land but the quantity available would depend on the depth of soil present and the nature of the underlying rock. It is not anticipated that the depth of soil in the central portion of the island would be great so that well sinking must be regarded as being in the nature of a gamble to be undertaken only as a last resort.

It appears therefore that either the southern spring must be equipped, or water shortage must be faced until such time as the rainfall improves to rejuvenate the present supply.

Signed: H. G. W. Keid M.Sc., M.I.M.M.
CHIEF GEOLOGIST

The Director of Mines,
HOBART.