HGWK/2

7th April, 1951.

MEMORANDUM:

Preliminary Report on Underground Water Resources of the Deloraine District

A considerable portion of the area in the Deloraine district has already been mapped by A.M.Reid in the Department of Mines publication, Mineral Resources No.8 "The Oil Shale Resources of Tasmania".

During my investigations this mapping has been checked and in places corrected. The area examined has now been extended considerably and extends from Exton to Mole Creek in a Westerly direction and from Parkham to Meander in a southerly direction. A small area in the vicinity of Whitemore and the Oaks was also examined.

In the Whitemore area the Tertiary Clays and Gravels are represented and so this area is more or less identical with the Longford district and conditions for the storage of underground water are expected to be the same.

In the immediate vicinity of Deloraine and extending from Exton to Moltema there is an area of Basalt which has weathered to a considerable depth.

In the Basaltic Soils numerous wells have been sunk to show water at shallow depths, ranging from 15 to 30 feet, from the surface. In only one instance have I seen a well which has passed through the Basalts. This is situated on the property of Little Bros. at Dunorlan and has a depth of 62 feet. The water supply at this well is good although the fact that the Basalts were passed through would suggest that here the overlying soils were dry. It would appear therefore that in this area water should be met at shallow depths in the Basaltic Soils but the farmers should be prepared to Bore through the Basalts for an assured supply.

In the Western Creek area there are extensive flats of alluvium which should yield water at shallow depth.

In the Meander district there are occurrences of Tertiary gravels but a considerable part of the area consists of Sandstones and shales of the Permian series. The Permian series extend westerly to within a couple of miles of Western Creek. They occur chiefly as the hilly country flanking alluvial flats. From the flats it is expected that supplies of water will be available but it is doubtful whether the Permian strata will be suitable aquifers. In this connection Springs occur at the upper limit of the Permian strata and below the Basalt cover on the eastern side of the road from the Needles to Western Creek. The Permian strata at this point appears to be not an aquifer.

The Mole Creek district is essentially a limestone area and water supplies in this locality will depend

chiefly on the accumulated sediments overlying the Limestone on the flat areas. That the flats are of shallow depth is suggested by the numerous small outcrops of Limestone within the limits of the flats. But the occurrence of numerous wells and springs suggests that the alluvium is more or less saturated.

In the Parkham area the hilly country is again chiefly Tertiary sediments and should be suitable aquifers. Most of the residents of the Parkham area have at present adequate supplies of water and few have displayed interest in the proposed Boring Campaign.

Of the Farmers interviewed during the present investigation the following have shown interest in the proposed Boring Campaign and have stated their intention of boring for water.

R. Cooper,	Moltema
L. Tracey,	"
N. Mellor,	"
Griffin Bros.,	"
T. O'Garey,	"
F. Cameron,	Chudleigh
Little Bros.,	Dunorlan
T. McMahon,	"
Atkins Bros.,	"
R. Atkins,	"
W. Eelis,	Weegina
C. M. Walker,	Parkham
A. P. Campbell,	"
E. L. Shaw,	Whitemore
G. Clarke,	"
W. Lee,	Mole Creek
Geo. Davey,	"

A Locality plan showing the area covered accompanies this memorandum. A final report and plan is to be prepared at a later date.

H.G.W. Keid

CHIEF GEOLOGIST.

Director of Mines,
HOBART.