

DEPARTMENT OF MINES.

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WILD DOG URBAN PROTECT.

SECTION 75 RE. MICHIGAN.

by

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DEPARTMENT OF MINES.
SOUTH AUSTRALIA.

WILD DOG URANIUM PROSPECT

SECTION 75 ED. MYPONGA.

PROGRESS REPORT F.B. 1.

Two earlier reports dated 26th October and 3rd November have called attention to this prospect and suggested the desirability of close mapping and sampling. This work is now proceeding and the following summarises the results available to date:

Radioactivity was first discovered on top of a northerly trending spur in the Myponga range and the initial two reports refer to this prospect - now named No. 1 Lode. Subsequently, the lease applicant made a further discovery 500 feet to the north west, which has been designated the No. 2 lode. Both these lodges have been trenched to a limited extent but all information as yet is confined to the oxidised portions of the lodges.

A highly radioactive boulder weighing some 50 lbs. or more was unearthed from the soil above No. 2 lode. This has been submitted to detailed examination by the Petrologist who has established that the primary mineral present is pitchblende, with associated gummite and meta-autunite.

GEOLOGY.

Detailed mapping of the prospect is in the hands of Geologist, B.P. Webb, and Assistant Geologist, F.B. Hughes. They have established two distinctive regional rock types namely, a biotite felspar gneiss and a felspar actinolite gneiss, both being Archaean metasediments with development of bedding foliation. Mineralisation appears to favour the biotite felspar

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gneiss. Both rock types have been intruded and altered by later pegmatites. Mineralisation is similar in type in each lode but there appears to be a difference in structural conditions. (A detailed geological report will be submitted when the work is completed).

No. 1 Lode. There is no clearly defined structure though there is a possible plane of shearing along the eastern side. The lode which trends north west has been opened up by trenching along a length of 20 feet with an average width of 5 feet. The limit to the south has not been determined. Secondary uranium minerals are disseminated through the biotite feldspar gneiss.

This lode has been sampled on three trenches (see Fig. 1) with the following result:

<u>No. 1 Lode</u>		<u>Assay (U_3O_8 lbs/long ton)</u>	
		<u>Radiometric</u>	<u>Chemical.</u>
Sample No. 1	width 6'	82.9	98.6
2	5'	35.8	40.1
3	5'	38.1	41.7

No. 2 Lode. Mineralisation here follows a defined linear shear zone, trending north-west, and dipping steeply to the west, in which secondary uranium minerals are associated with bronze and black biotite. Trenching across the shear has shown the width of mineralisation to average 3 feet, and has established a length of 100 feet without determining limits in either direction.

The following assays are available (Radiometric only, see Fig. 2.)

<u>No. 2 Lode.</u>		<u>Assay (U_3O_8 lbs/long ton)</u>
Sample No. 1	width 2'6"	21.1
2	3'4"	16.4
3	3'2"	1.8
4	5'6"	2.5

GENERAL DISCUSSION.

The fortunate discovery of an incompletely weathered boulder containing pitchblende has established the type of

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primary mineralization to be expected below the zone of weathering. This discovery is extremely significant. It points to the fact that the surface minerals now in evidence have resulted from a process of leaching and reprecipitation by superficial weathering out of primary pitchblende. It is difficult to forecast the depth at which primary ore could be expected but the extremely soluble nature of the secondary minerals and the fact that a few pitchblende remnants have been located suggest that it will be found at reasonably shallow depth.

The No. 1 lode is exposed on a flat zone on top of a spur, from which surface run-off would not be vigorous, consequently, it is considered that leaching and removal of uranium would not be as complete as in the case with No. 2 lode, situated on the steep soil covered slope. In both cases however, surface samples must be considerably below the grade of the primary lode, which, however, could be more restricted in width.

For these reasons it is too early to make any estimate of possible tonnage and grade but ore in sight on No. 1 lode amounts to 8-10 tons per vertical foot, on No. 2 lode 25-30 tons per vertical foot.

RECOMMENDATIONS.

If it is proposed to investigate the prospect thoroughly at this stage, there is no alternative to shaft sinking. This has the advantage of providing good sample material at the same time enabling a better understanding of lode behaviour. Diamond drilling has the advantage over shaft sinking in that for a comparable expenditure, information can be obtained from several points along each lode. On the other hand, it is expected that there may be difficulties in obtaining good core recovery from the shear zone. Furthermore, although the No. 2 lode shear is sufficiently defined to provide a suitable diamond drilling target, this is not the case with No. 1 lode which is little understood.

It is recommended that a shaft be sunk on each lode, ~~initially to depths of say 30 feet. Diamond drilling could~~ follow as soon as it is felt that the lode behaviour is sufficiently

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defined. If as a matter of policy it is felt that development in ore should not proceed at this stage, diamond drilling could be undertaken immediately, with all necessary precautions for good core recovery.

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