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COMMONWEALTH OF AUSTRALIA.

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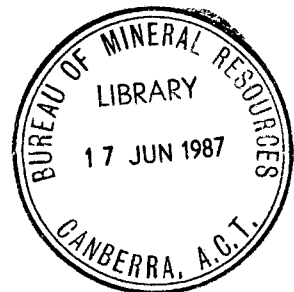
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INTERMEDIATE PROSPECT (1951)

Rum Jungle, N.T.

by

N.J. Mackay.



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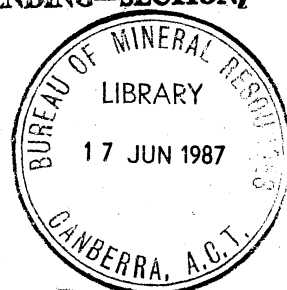
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PLANS

PLATE NO.

SCALE

1 Geological Plan
 Intermediate Prospect

20 ft. to 1 inch.

INTRODUCTION

This prospect is situated on the northern bank of the East Pinniss River, approximately 500 yards north-east of Brown's workings and 800 yards south-west of White's workings. About 50 years ago the area was prospected for copper and abandoned after several costeans had been dug.

A small radiometric anomaly was discovered in 1950 and the area was radiometrically contoured. A geological map on a scale of 20 feet to one inch was prepared by the writer during the 1951 field season, and accompanies this report (Plate I).

GEOLOGY

The metamorphosed sedimentary rocks, which are a continuation of the beds outcropping at Brown's workings, occur in the area and consist of carbonaceous slates and grey-white crystalline limestone. Interbedded with the carbonaceous slates are sericitic and talcose slates. The limestone which outcrops to the north of the slates, has been extensively silicified and lateritised. Sandy and slaty intercalations occur in the limestone.

STRUCTURE

The beds strike $N70^{\circ}E$ and have a dip ranging from 75° to $76^{\circ}S$. A fault which strikes in a north-west direction displaces the bed on the south-west side of the fault approximately 35 feet to the north. The radiometric anomaly is on this south-west side of the fault, and in slates adjacent to the limestone-slate junction.

Regional mapping (Matheson, 1953) indicates that a fault which trends $N30^{\circ}W$ passes through the Intermediate Prospect. The milky-white quartz and quartz-breccia, outcropping in the north-east portion of the area, probably mark the position of the fault. The displacement of the slates and limestone is obscured by soil and alluvium.

MINERALISATION

No secondary uranium minerals were observed in the vicinity of the radiometric anomaly. Malachite, cerussite, calcite and manganese oxide are present in the silicified limestone. Malachite is also found in the carbonaceous slates. The copper mineralisation appears to be the easterly extension of the line of mineralisation at Brown's workings.

WORKINGS

Apart from the costeaning done by the early prospectors, approximately 300 feet of costeaning was carried out by a bulldozer at the end of the 1950 field season. This work did not reveal any additional radioactivity.

DIAMOND DRILLING

One drillhole (IDA) was commenced in November 1951, but due to mechanical defects, the hole was abandoned at a bore depth of 53 feet. The estimated depth for an intersection of the radioactive lode is 115 feet. Sludge samples from IDA gave low assay results.

Listed below are the sludge assay results and geological log of the drillhole:

Drillhole IDA

Bearing: 141° Magnetic. Length of drillhole: 53 ft.

Depression: 60°s

<u>Sludge Sample No.</u>	<u>Bore Depth</u>	<u>Sludge Assay</u> (% U ₃ O ₈)	<u>Geological Log.</u>
D79	0-10	0.01	Limestone, with slaty and sandy intercalations. (Based on core fragments and sludge)
D80	10-15	0.01	
	15-20		
D81	20-25	0.011	
	25-30		
D82	30-35	0.010	
D83	35-40	0.010	
D84	40-45	0.016	43-46 Green Talcose slate
	45-53		46-53 Carbonaceous slate

PROSPECTING RECOMMENDATIONS

Surface indications of radioactivity do not warrant extensive surface prospecting. Further drilling is required to test the radiometric anomaly at this prospect. Drillhole IDA should be completed as it did not reach the position of the radiometric lode estimated to occur at a bore depth of 115 feet.

Detailed Geiger-Muller testing of outcrops of carbonaceous slates to the south of the Intermediate Prospect might reveal other places to be examined by costeaning and drilling.

REFERENCES

- Matheson, R.S. 1950: Report on the Geology of the Rum Jungle Uranium-Bearing Area, N.T.
Bur.Min.Res., Geol.Records Rept. 1950/47.
- _____, 1953: Rum Jungle Investigations 1951 and 1952.
Bur.Min.Res., Geol.Records Rept. 1953/24.

INTERMEDIATE PROSPECT.

Plate I.

RUM JUNGLE N.T.

Scale: 20 feet = 1 inch.

Geology by N.J. Mackay, July 1951. Plane Table and Telescopic Alidade Survey.

REFERENCE TO SIGNS.

- Approximate Geological Boundaries.
- Possible Geological Boundaries.
- E - Faults.
- To° Strike and dip of Bedding.
- + Vertical dip.
- To° Strike and dip of Jointing.
- Trand of Bedding.
- + Isolated Outcrops.
- (R) Specimens.
- △ Base Pegs.
- KK Geger-Müller Contours (times background).
- 30' Topographical Contours (feet above sea level).
- Contours.
- Dumps.
- Drill hole IDA.

LEGEND

- Alluvium.
- Laterite.
- Carbonaceous Slates with interbedded Sericitic Slates.
- Talcose Slates.
- Limestone, decomposed & silicified.
- Quartz Breccia.
- Quartz.

Magnetic

N

Brown Soil and
Quartz Rubble.

Outcrops of
Cherty
Silicified
Limestone.

Silicified Limestone
Debris.

Silicified Limestone
& Laterite
Debris.

