

DKS9

861001

C. 000

71-0779

E. L. 54/70

TERMINAL REPORT ON 6 MONTHS EXPLORATION

Duncan C. Russell

TUNDRA MINERALS PTY. LTD.

5TH JULY, 1971

ISG REFER REPORT 70-0676

001

861002

SUMMARY

As shown on the geological fact map acid intrusive rocks occur on the Eastern and Western extremities of E. L. 54/70. Floaters of Cambrian and Pre-Cambrian shales have been tentatively identified as indicated. However, by far the majority of all rock types are hidden by sand dunes and rock outcrops are extremely sparse.

It is a fair assumption that a contact zone between the Upper Devonian intrusive granites and the Cambrian and Pre-Cambrian meta-sediments exists in the approximate position indicated. It's exact position is obscured by dune deposits. *|| Camb.?*

This postulated contact zone represents in our view the prime exploration target in this Exploration Licence.

A secondary target exists, in that previous exploration work in the area has not ruled out the possibility of the discovery of economic grade rutile deposits.

The presence of a little gold with the alluvial tin mineralisation shows that there is some exploration potential for gold also in the area.

A programme of power auger drilling to isolate geochemical anomalies across the suspected contact zone is recommended.

This could be followed by a limited programme of deep power auger holes (To 150') to the further check for rutile, zircon and gold.

TENEMENT/LOCATION

The Exploration Licence covers 18 square miles and is situated in the North West corner of King Island. The Yellow Rock and Pass Rivers form the Northern and Southern boundaries of the licence. North Road forms the Eastern boundary and Bass Strait the Western boundary.

Good access exists, usually throughout the year due to the relatively good drainage on the Dunes.

PREVIOUS EXPLORATION

The only previous Exploration Programmes of any consequence done on the area were completed by Mount Costigan Mines Ltd. in 1967 and Naracoopa Rutile Ltd. between 1967 and 1970. Only hand auger techniques were used to an average depth of 16 feet and this explains our contention that the possibility of economic rutile deposits can not be ruled out.

The contact zone between intrusive and Pre-Cambrian rocks was noted by Mount Costigan Mines near the junction of North Road and South Yellow Rock road. No follow up work was done. However, some stream sediment samples taken from areas situated along the Southern and Northern boundaries revealed several geochemical anomalies.

These anomalies were as follows:-

- (a) PASS RIVER: Two out of eight sampled localities were anomalous.

003

<u>ANOMALY NO. 1</u>	Lead	35 PPM
	Zinc	15 PPM

<u>ANOMALY NO. 2</u>	Lead	35 PPM
	Zinc	35 PPM

(b) YELLOW ROCK RIVER

Three out of ten sampled localities were anomalous.

<u>ANOMALY NO. 1</u>	Lead	25 PPM
	Zinc	20 PPM

<u>ANOMALY NO. 2</u>	Lead	25 PPM
	Zinc	20 PPM

<u>ANOMALY NO. 3</u>	Lead	30 PPM
	Zinc	35 PPM

Mount Costigan Mines considered these anomalies to be insignificant, but when viewed in relation to the deeply weathered bedrock which is covered by thick soil and sand covers and the fact that the anomalies occur in the vicinity of the previously mentioned contact zone, they should be regarded as highly significant.

004

It is highly probable that a large contact zone between intrusive rocks and Pre-Cambrian shales and slates lies concealed within the Exploration Licence area.

This contact zone is the most important exploration target on this licence in our opinion. We propose to concentrate future geochemical work along the postulated North - South trend of this zone.

The intrusive granite mentioned above is believed to be a source of the alluvial tin deposits of Hawkes Alluvial. (The aeromagnetic contours also indicate the presence of an acid intrusive)

As has been established by previous explorers extensive dune systems occur on the Exploration Licence, as indicated. Programmes of shallow drilling (average hole depth 16') have shown rutile and zircon to be present in probably sub-economic grades. As a good second exploration target on this area, the occurrence of possibly economic rutile and zircon deposits to depths of 150 feet should be investigated with deep power auger holes. We believe that exploration to date has only confirmed the presence of rutile and zircon. The possibility of an economic rutile occurrence has certainly not been eliminated.

MINERALISATION POTENTIAL

<u>Contact Type Minerals</u>	-	Tungsten Molybdenum Bismuth
<u>Acid Intrusive</u>	-	Base Metals
<u>Alluvial</u>	-	Rutile, Zircon, Tin, Gold

PRESENT WORKGENERAL

During the six month period that the Exploration Licence was held the following work was completed:-

- (1) Reports completed by previous Exploration companies who had held the area were summarised and re-evaluated.
- (2) Some photo mapping was completed.
- (3) Outcrop mapping on East - West traverses spaced 2,000 feet apart were completed.

The mapping revealed a definite contact zone near the junction of North Road and South Yellow Rock road and sufficient fragments of granitic rocks and Pre-Cambrian shales, slates etcetera to postulate the continuation of the contact zone in an approximately North - South attached direction. (This information is shown on an attached plan.)

GEOLOGY - POSSIBLE MINERAL POTENTIAL

Geological fields mapping by this company (and confirmed by others) has shown that a large acid intrusive granite and its offshoots occur along the Eastern boundary of the Exploration Licence. Mapping also shows that the main intrusive is bounded to the west by Pre-Cambrian rocks. Most of these rocks have a sub-outcrop underneath extensive sand and alluvial cover, and are thus concealed.

006

861007

PROPOSED FUTURE EXPLORATION

It is recommended that regional exploration be continued on the Exploration Licence the vicinity of the contact zone discussed elsewhere in this report.

It is further recommended that a limited programme of deep auger holes to depths exceeding 100 feet be undertaken to check for buried marine terraces which might contain economic rutile deposits.

The approximate position for geochemical traverse across the contact zone are indicated on the attached plan along with suggested positions for deep auger holes.

EXPLORATION BUDGET

<u>PRELIMINARY PHASE</u>	\$
Gridding and magnetics	500
Auger Drilling	3,000
Assaying	2,000
Professional Services	2,000
Sundries	500
TOTAL	<u><u>\$8,000</u></u>

007

861008

TUNDRA MINERALS P/L

ISG REFER REPORT 70-0676

AM9
229800E
5599500N

YELLOW ROCK RIVER

WHISTLER POINT

DUCK BAY

MAIN NORTH ROAD

SOUTH YELLOW ROCK ROAD

FLOATERS
SHALES/SLATES

E.L. 59/70

18 S M

CONTACT ZONE
SHALES/SLATES

SHALY FRAGMENTS

GRANITE
NORTH ROAD

FLOATERS
SAND

CONTACT ZONE?

GRANITE
FRAGMENTS

GRANITE

PRE-CAMBRIAN

CONTACT ZONE

PASS RIVER

AM9
253000E
5563300N

LEAD/ZINC ANOMALIES

REGIONAL GEOLOGY
KING ISLAND

1" = 1 MILE

PROPOSED DEEP ANGER HOLES

FUTURE GEOCHEMICAL
TRAVERSE

5 cm

