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AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY

OPEN FILE

REPORT ON WORK PERFORMED ON

EXPLORATION LICENCE 1/69

TASMANIA

MICROFILMED

DURING THE PERIOD

JANUARY TO MAY 1972

BY

R. T. BRANDT

AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY

During the period January to May 1972, certain exploration work was done by Australia and New Zealand Exploration Company within the boundaries of E.L. 1/69, as part of the Company's programme of regional exploration of E.L. areas under the Joint Venture Agreement. The work in E.L. 1/69 was done with the approval of the licence holders, Tasminex N.L., in view of the provisional option understanding which existed in respect of this E.L.

The work consisted of geological reconnaissance and geochemical sampling of rock and stream sediment, with the objective of defining any areas of anomalous tungsten mineralization. A total of 35 rock samples and 122 panned stream sediment samples were taken and were analysed for tungsten. Special attention was paid to known occurrences of iron ore and the margins of the Hampshire granite; and a search was made for any unrecorded occurrences of limestone which might be favourable hosts for skarn-type mineralization, but none were found within E.L. 1/69.

The majority of the panned samples yielded tungsten values which ranged from less than 2 ppm W to a maximum of 50 ppm W, a range which is not considered significantly anomalous. Positive results were achieved, however, within an area of 9 square miles around Laurel Creek, where a number of panned stream sediment samples yielded anomalous values from 100 ppm W up to 1490 ppm W. Trenches put in previously by Tasminex N.L. show granite containing small bodies of talc-specularite rock with highly anomalous tungsten. Skarn-type deposits have not been found, but their existence is possible and it is intended to continue investigations by further trenching.

At the Highclere iron ore prospect (within the separate outlying part of E.L. 1/69), surface samples did not show anomalous tungsten, owing to the almost universal covering of Tertiary basalt in the area. The sample residues of the drill holes previously put down by the Mines Department were kindly made available to us by the Director of Mines and were analysed for tungsten. Some of the core and sludge residues from drill holes 1 and 2 were found to be highly anomalous, with one value as high as 2730 ppm W. It is thought possible that the completely weathered clayey material penetrated by these drill holes may be derived from limestones with skarn-type mineralization, and it is proposed to follow up these indications by trenching and further drilling.

A large percentage of the panned stream sediment samples were analysed for tin as well as for tungsten. Sporadic high values were obtained, ranging up to more than 1% Sn, but these are not considered significant in view of the known local occurrence of cassiterite veins in the Hampshire granite and the durability of cassiterite in stream sediments.



ADDITIONS & NOTES

Geology revised from G.P. Pike's and Department of Mines Geological maps.

Samples KI-KIO have had size fraction analysis, the figures shown are averages of the six size fractions.

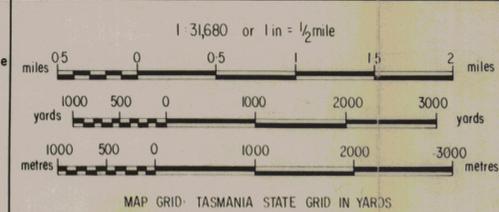
GEOLOGY

QUATERNARY [Q] Sand, gravel; clay	[€ss] Slates and shales
TERTIARY [Ts] Sand and gravel	[€r] Radford Ck. Group - siltstone and porphyry
ORDOVICIAN [Og] Gordon limestone	PRECAMBRIAN [Pb] Burnie quartzite and slate
[Oc] Chert and quartzite conglomerate	IGNEOUS [Tb] Tertiary basalt
[Ou] Undifferentiated: Maina sandstone Owen conglomerate	AND [Dg] Devonian granite
CAMBRIAN [€s] Siliceous siltstone with hematite	METAMORPHICS [Ds] Devonian specularite
[€h] Laminated calc-silicate hornfels	[Dms] Devonian magnetite - skarn, Dm - magnetite

REFERENCE

— River	X Sample location
— Creek	DK-160: rock identification no.
— Road	DK-161: stream sediment sample
— Vehicle Track	[10] W p.p.m.
— Railway	[15] Sn p.p.m.
— E.L. Boundary	[20] W p.p.m.

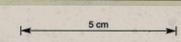
SCALE



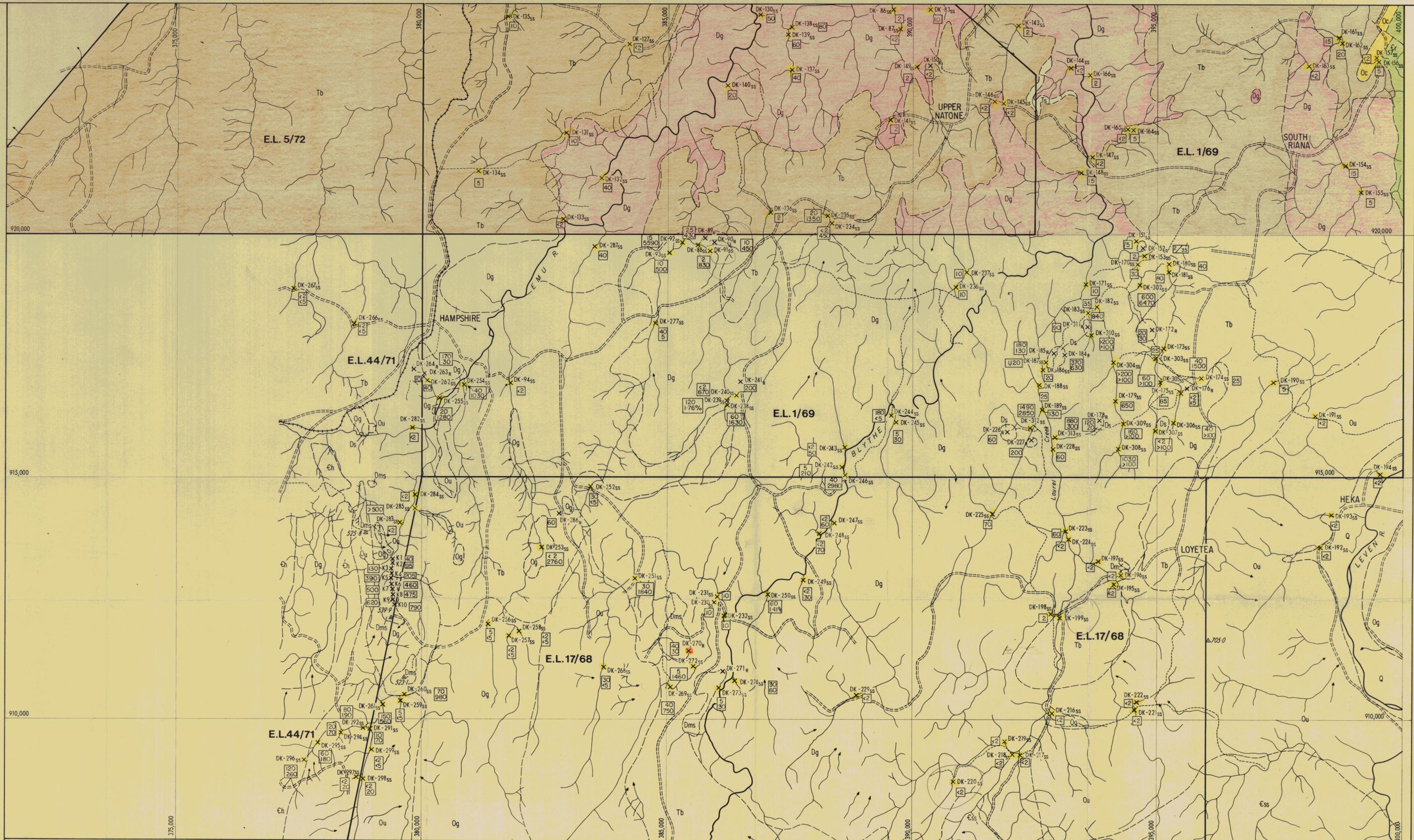
AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY

750003
EXPLORATION LICENCE AREAS
 N.W. TASMANIA
SHEET A (NORTH)
 PORTION E.L.'s 1/69 & 5/72
GEOLOGY AND GEOCHEMICAL SAMPLING 002

Prepared by: RTB & DRK	Drawn by: RTB
Scale: 1:31,680	Date: 9th May, 1972
Drawing No.	Proj. No.
Report No.	Lib. No.



MAP I



ADDITIONS & NOTES

Geology revised from G.P. Pike's and Department of Mines Geological maps.

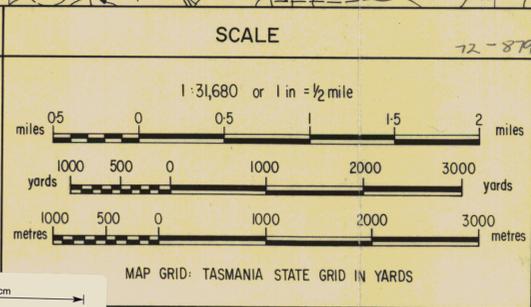
Samples K1 - K10 have had size fraction analysis, the figures shown are averages of the six size fractions.

GEOLOGY

QUATERNARY [Q] Sand, gravel; clay	[€ss] Slates and shales
TERTIARY [Ts] Sand and gravel	[€r] Radford Ck. Group - siltstone and porphyry
ORDOVICIAN [Og] Gordon limestone	PRECAMBRIAN [Eb] Burnie quartzite and slate
[Oc] Chert and quartzite conglomerate	IGNEOUS [Tb] Tertiary basalt
[Ou] Undifferentiated Moina sandstone Owen conglomerate	AND [Dg] Devonian granite
CAMBRIAN [€s] Siliceous siltstone with hematite	METAMORPHICS [Ds] Devonian specularite
[€h] Laminated calc-silicate hornfels	[Dms] Devonian magnetite - skarn
	[Dm] - magnetite

REFERENCE

— River	× Sample location
— Creek	DK-160g, rock identification no. /
--- Road	DK-161ss, stream sediment sample
--- Vehicle track	[10] W p.p.m.
— Railway	[15] Sn p.p.m.
— E. L. Boundary	[10] W p.p.m.



AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY

750004
EXPLORATION LICENCE AREAS
N.W. TASMANIA
SHEET B (CENTRAL)
PARTS OF EL's 17/68, 1/69, 44/71, 5/72.
GEOLOGY AND
GEOCHEMICAL SAMPLING 003

Prepared by: RTB & DRK Drawn by: RTB

Scale: 1:31,680 Date: 9th May, 1972 Proj. No.

Drawing No. Report No. Lib. No.

Map No. 2