AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY

REPORT

ON

EXPLORATION LICENCE 28/71

HEEMSKIRK, TASMANIA

SEPTEMBER 30, 1971

BY

K.J. CALLOW

INTRODUCTION.

Exploration Licence 28/71 with an area of about 20 square miles was granted to Australia and New Zealand Exploration Company on June 4, 1971 for a period of 6 months. The principle objective in taking up the area was to explore for tungsten deposits. A reconnaissance stream sediment sampling programme indicated that the tungsten potential of the area applied for is low.

LOCATION.

The area is located on the west coast of Tasmania about 10 miles due west of Zeehan. The Southern Ocean forms its western boundary.

ACCESS.

Access is by way of a dirt road from Zeehan about 13 miles in length. Another dirt road connecting Trial Harbour and Granville Harbour traverses the area along the coast.

PHYSIOGRAPHY.

The Heemskirk Range is the dominant physiographic feature. It is about 5 miles in length with Mt Heemskirk, the highest point within the licence area, attaining an elevation of about 2450 feet. The range rises rather abruptly from a fairly flat coastal plain about 2 miles in width. Drainage of the area is to the west by numerous short small streams.

The average annual rainfall of the area is about 100 inches with most rain falling in the winter months from June to December. Vegetation is sparse and mainly button grass.

GEOLOGY.

General Geology.

The licence area lies entirely within the Heemskirk granite mass. None of the contact zone was open for selection. The geology of the Heemskirk granite has been fully described by L.L Waterhouse in Geological Survey Bulletin No 21. "The South Heemskirk Tin Field", from which the following has been abstracted.

The acid group of igneous rocks in the district includes granite, granite porphyry, aplite and pegmatite all closely related. The most widespread type of granite is a pink granite, which owes its colour to the abundance of pink orthoclase feldspar. Typically the rock is of medium and fairly even grain-size, although it shows slight tendency to become porphyritic in places with phenocrysts of pink orthoclase up to 20 millimeters in length, it is usually fresh in newly broken specimens and shows good cleavages. A white plagioclase feldspar is present in rather small quantities, it is greenish when partly weathered, becoming kaolinized on further decomposition. Throughout the groundmass of the rock is fairly abundant glassy quartz in irregular masses of about 5mm. in diameter. In some localities quartz becomes quite subordinate in amount. Scattered throughout the rock are small crystals and crystal aggregates of black biotite mica; individual crystals are rarely more than 2 mm, diameter. A mineral often noticed in addition to those named is

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black tourmaline. It appears to be almost universally present but never in large amounts in the normal granite.

The other major variety of granite is a white granite which is characterised by an abundance of quartz-tourmaline nodules. The numerous tin deposits near the southern boundary of EL. 28/71 occur within this type of granite. Macroscopically white feldspars appear to form the bulk of the rock, many of the feldspars are distinctly lath-shaped 5-10mm. in length and show perfect cleavages. Glassy quartz is present in variable amounts. Black tourmaline is almost universally present and a little black biotite is usually distinguishable. The rock is meduim to fine-grained and distinctly less coarsely crystalline than the normal pink granite of the district.

MINERALIZATION.

A number of small tin deposits occur outside E.L. 28/71 close to its southern boundary. These were discovered in 1876 and were worked out at an early date. No production figures are given in Bulletin No 21, but total production from the field could not have been very large, as the mineralized veins and pipes are mostly small, with the veins no more than several hundred feet in length. Wolfram occurred in sparsely scattered rich patches in vugs within the veins. Other minerals present include bismuth and pyrite.

EXPLORATION PROGRAMME.

Stream Sediment Sampling.

Reconnaissance stream sediment samples were taken from the major streams draining the Exploration Licence area. The -80 mesh fraction and a panned concentrate were analysed from each sample.

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TABLE 1.

Stream sediment samples from E.L. 28/71.

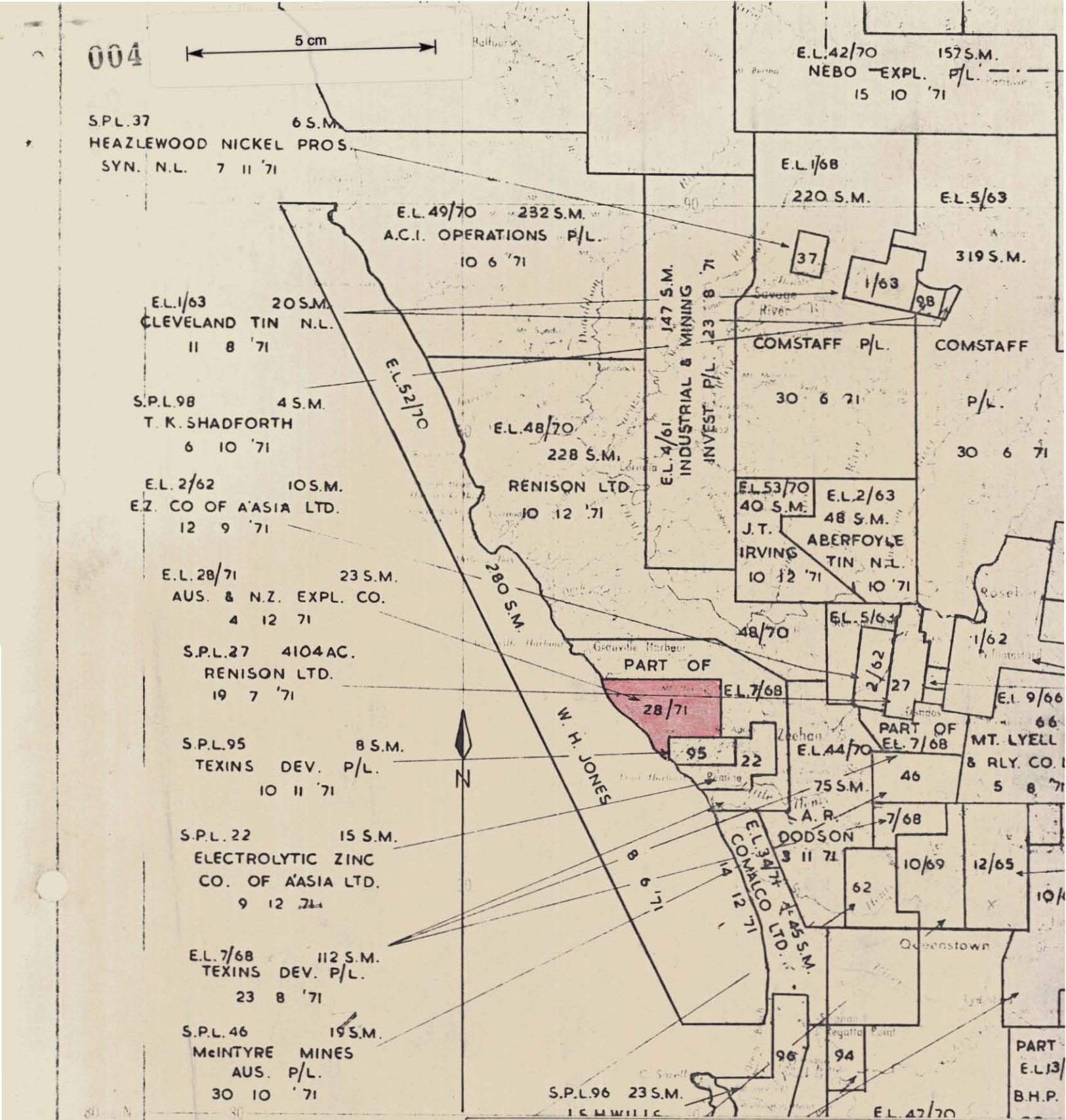
Sample Number	Type	W ppm	Mo ppm	Sn ppm	Cu ppm
12	-80 mesh	90	2	590	20
12A	panned	450	5	690	10
13	-80 mesh	2	-2	5	5
13A	panned	-2	-2	2	5
14	-80 mesh	15	-2	10	40
14A	panned	30	20	420	50
15	panned	-2	-2	2	10
16	-80 mesh	5	-2	30	5
16A	panned	-2	-2	345	5
17	-80 mesh	5	-2	10	15
17A	panned	20	-2	20	10
18	-80 mesh	-2	-2	1,525	5
18A	panned	-2	-2	2,590	2
19	-80 mesh	2	-2	10	10
19A	panned	5	-2	510	5
20	-80 mesh	-2	-2	10	10
20A	panned	-2	-2	-2	5
21	-80 mesh,	-2	-2	5	5
21A	panned	-2	-2	-2	5
22	-80 mesh	10	-2	2	10
22A	panned	10	-2	990	5

None of the samples showed any fluorescence that would indicate the presence of scheelite.

The results of the above reconnaissance sampling indicates that the Licence area is not worth exploring further for tungsten mineralization.

EXPENDITURE.

Assays	127.00
Equipment (not capitalised)	.30
Postage and Freight	9.73
Hotels and meals	3.00
Vehicle expenses (company)	7.13
Maps and Reproductions	0.62
Salary - Geologists	192.31
Exploration Licence Fee	23.00
TOTAL.	$ 363.09


004
5 cm
E.L.42/70 157 S.M.
NEBO EXPL. P/L.
15 10 '71
S.P.L.37 6 S.M.
HEAZLEWOOD NICKEL PROS.
SYN. N.L. 7 11 '71
E.L.1/68
220 S.M.
E.L.5/63
319 S.M.
E.L.49/70 232 S.M.
A.C.I. OPERATIONS P/L.
10 6 '71
37
1/63
98
E.L.1/63 20 S.M.
CLEVELAND TIN N.L.
11 8 '71
147 S.M.
INDUSTRIAL & MINING INVEST. P/L.
23 8 '71
COMSTAFF P/L.
30 6 71
COMSTAFF P/L.
30 6 71
E.L.52/70
S.P.L.98 4 S.M.
T. K. SHADFORTH
6 10 '71
E.L.48/70
228 S.M.
RENISON LTD.
10 12 '71
E.L.4/61
E.L.2/62 10 S.M.
E.Z. CO OF A'ASIA LTD.
12 9 '71
E.L.53/70
40 S.M.
J.T. IRVING
10 12 '71
E.L.2/63
48 S.M.
ABERFOYLE TIN N.L.
10 '71
E.L.28/71 23 S.M.
AUS. & N.Z. EXPL. CO.
4 12 71
280 S.M.
E.L.5/63
48/70
1/62
2/62
27
S.P.L.27 4104 AC.
RENISON LTD.
19 7 '71
PART OF
E.L.7/68
28/71
E.L.9/66
66
W. H. JONES
S.P.L.95 8 S.M.
TEXINS DEV. P/L.
10 11 '71
95
22
PART OF E.L.7/68
MT. LYELL & RLY. CO.
5 8 '71
E.L.44/70
46
75 S.M.
A. R. DODSON
3 11 71
7/68
S.P.L.22 15 S.M.
ELECTROLYTIC ZINC CO. OF A'ASIA LTD.
9 12 71
E.L.34/71 145 S.M.
COMALCO LTD.
14 12 '71
10/69
12/65
62
E.L.7/68 112 S.M.
TEXINS DEV. P/L.
23 8 '71
S.P.L.46 19 S.M.
McINTYRE MINES AUS. P/L.
30 10 '71
96
94
PART E.L.13/
B.H.P.
S.P.L.96 23 S.M.
E.L.47/70
S.P.L.62 25 S.M.
A.R.SMITH
2 10 '71
E.L.10/69 68 S.M.
MT. LYELL M & R. CO. LTD.
AUSTRALIA AND NEW ZEALAND EXPLORATION Co
LOCATION MAP
SHOWING
E.L. 28/71
HEEMSKIRK TASMANIA
Scale: 1:500,000
828005
Sept 1971

LEGEND

+ + + Heemskirk Granite

•<2 Tungsten values ppm

828006

5 cm

AUSTRALIA AND NEW ZEALAND EXPLORATION Co

LOCATION MAP

SHOWING

TUNGSTEN VALUES IN P.P.M. OF PANNED STREAM SEDIMENT SAMPLES WITHIN E.L. 28/71

HEEMSKIRK, TASMANIA

Scale: 1inch = 1mile

Sept 1971

828007

STATUTORY DECLARATION

I, ANTHONY AUGUST STEGMANN of 167-187 Kent Street, Sydney in the State of New South Wales,

do solemnly and sincerely declare as follows:

As the Accountant of Australia and New Zealand Exploration Company I have ascertained that the total expenditure incurred and paid by the company on Exploration Licence 28/71 granted to it by the Tasmanian Mines Department is $363.09 broken down as follows:

Assays	$127.00
Equipment (not capitalised)	30
Postage and Freight	9.73
Hotels and Meals	3.00
Vehicle Expenses - Company	7.13
Maps and Reproductions	62
Salary - Geologist	192.31
Exploration Licence Fee	23.00
	$363.09

And I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the "Oaths Act 1900."

Subscribed and declared at Sydney
this twenty first day of October
one thousand nine hundred and seventy one
before me

A. A. Stegmann

F 37

J.P.