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AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY

EXPLORATION LICENCE

EXPLORATION LICENCE 11/75

MOUNT STEWART AREA

TASMANIA

REPORT ON

FIELD SEASON ACTIVITY

1975-1976

BY

J.D. LOCKHART

AUGUST 2, 1976

SUMMARY

Field exploration of Exploration Licence 11/76 was undertaken with the aim of investigating the tungsten and other base metal potential of the area.

Geochemical sampling techniques were used to investigate such potential around the margins of the northern contact of the Meridith Granite. Tungsten and tin anomalies were detected in the area and these warrant delineation. Also, a zinc anomaly in the north-east of the region, arising from Cambrian Volcanics warrants further investigation, as well as magnetic anomalies in the same area.

Such work should be undertaken in the summer months of 1976-77, when conditions make access reasonable.

INTRODUCTION

As Australia and New Zealand Exploration Company has tungsten as a particular commodity interest, it was decided that particular characteristics of the Meridith Granite and surrounding host rocks, which appeared favourable for skarn mineralization, should be investigated.

The northern margin of the Meridith Granite was available to be taken up under Exploration Licence and was duly applied for. Exploration Licence 11/75, covering the abovementioned area, was granted on August 18, 1975. Australia and New Zealand Exploration Company undertook to conduct reconnaissance and evaluate potential and, if possible, delineate any mineralisation.

Initially, investigation was confined to a complete literature study and base map preparation.

Field investigations were severely hampered by high rainfall and the depth of rivers during the months of September and October, 1975. However, stream sampling of the area was commenced during this time and eventually good coverage was obtained. Effective field mapping of the Exploration Licence is determined by the stream pattern and undergrowth and terrain which in many places is impenetrable.

Dye-line prints of 1:31680 scale were obtained from the Lands Department and these were used as base maps for the area.

Diamond drill core, from holes drilled by Comstaff prior to Australia and New Zealand Exploration Company entering the area, was examined at their Warratah Store.

GEOLOGY

The primary aim of the geological investigation was to examine the margins of the Meridith Granite for signs of metasomatic/metamorphic alteration of the country rocks. The primary targets were contacts at the granite margins with Cambrian basic and ultrabasic rocks in the east and central north of the Exploration Licence respectively. The possibility of Siluro-Devonian rocks containing calcareous units was also to be investigated as a potential host. Invariably, thermal effects at the granite contact were negligible although, due to poor access and lack of outcrop, only a scant coverage was possible. Disappointing results from this approach instigated the following up of anomalous geochemical values to delineate the mineralization environment.

In the north-east of the Exploration Licence, Cambrian basic volcanics are intruded by a medium to coarse grained phase of the Meridith Granite. These volcanics vary from intermediate in the north to basic (and sometimes ultrabasic) in the south above the junction of Moor Creek and the Wilson River. No evidence of skarn alteration was noted in these rocks, even in the vicinity of a more volatile pegmatitic phase around the area of sample numbers JDL-MS-38 and 39.

Ultrabasic rocks outcrop in the central north of the Exploration Licence. Generally, they are sheared and serpentised, with small patches of green mica along shear planes. At the southern end of the Mount Stewart Track, where previous workers (Comstaff) have cleared drill sites, the ultrabasics are altered. These rocks show evidence of this alteration with small crystals of black amphiboles surrounded by epidote occurring in clusters through the rock. Drill core examined at Comstaff Office at Warratah indicates no variation from the above description.

Flanking the ultrabasic rocks in the north is a series of dark, massive, clastic sediments. The origin of these sediments is presumed to be part of the Cambrian geosynclinal pile. No alteration of these rocks was observed.

One of the principal targets in the area is the Siluro-Devonian system which contains the Gordon Limestone and Moina Sandstone. Mapping did not uncover the presence of either of these units in the area, the only identified units being fine-grained siltstones and quartzites.

The Meridith Granite has several varying phases identified in the field as a result of chasing anomalous geochemical values. A pegmatitic phase in the north-east of the Exploration Licence was mapped by earlier workers in the area but, apparently, it is not associated with any mineralization. A quartz tourmaline phase is often seen and the presence of tourmaline has been noted when taking pan concentrate samples which contain abundant tin (as cassiterite). Quartz veins are prevalent in the granite and often contain abundant large tourmaline crystals. In the vicinity of the old Mount Stewart Mine, the granite is fine-grained and more acidic than elsewhere.

GEOPHYSICS

Magnetics

Rio Tinto Exploration had previously flown the Mount Stewart area recording the total field. A large broad anomaly is located directly over the Cambrian ultrabasics in the area of the Mount Stewart Mine.

A ground traverse along the Mount Stewart Track was made using a Scintrex MF-2 Fluxgate Magnetometer and readings were taken at 50-metre intervals. The ground magnetics suffer in credibility due to near-surface interference of pisolitic laterite developed near the surface. However, qualitatively, the two magnetic investigations are comparable.

Magnetic anomalies located to the east of the Exploration Licence have not been investigated due to problems of access. Whilst these are most likely associated with the composition of the Cambrian volcanics, these bear investigation.

GEOCHEMISTRY

Remote sensing, using heavy mineral concentrates collected from stream sediments, was used in the area as the major detection method. This method was used as it is most effective in the detection of detrital scheelite and wolframite, whilst also detecting tin, chromium and osmiridium. All these minerals were known to occur in the area. Samples were analysed by A.C.S. Laboratories in South Australia, and results are presented in the Appendix.

Tungsten

All samples collected were examined under short-wave ultraviolet light for the presence of scheelite. They were sent for chemical analysis as a check for the presence of wolframite. Only in one area did results appear encouraging - samples numbers 77, 89 to 95 from a north flowing tributary of the Whyte River. Stream sediment material used for the sampling in this creek was of granite wash and probably indicative of the source of the scheelite. However, further investigation is warranted.

Tin

There is a strong correlation between this mineral and the presence of tungsten. Tin affinity of the Meridith Granite has been long known and these occurrences are generally located in placer deposits derived from cassiterite-bearing quartz veins in the granite.

Osmiridium

No platinum metals were found in the pan, or by special fire assay technique in the laboratory.

Gold

Gold was located in samples number AL-MS-6 in an upper tributary of Little Castray Creek and number JDL-MS-36 at the eastern side of the Exploration Licence. Neither of these warrant further investigation, although the high gold assay from sample 6 could be investigated if anomalous tin values are followed up.

Zinc

Consistently high zinc values were obtained from the north-east portion of the Exploration Licence derived from the Cambrian volcanics. Further work is required to clarify the source of this anomalism.

Assays for all other metals were considered insignificant.

MINERALIZATIONMount Stewart Mine

The Mount Stewart Mine was developed in the early days of the area and was a silver-lead producer. From brief examination, it was presumed to be a vein-type occurrence associated with an east-west structural lineation in the Meredith Granite. It is suspected that the occurrence in the upper reaches of the Little Castray Creek (sample number AL-MS-R3) is of similar nature.

Osmiridium

This mineral has been won from the ultrabasics near the Mount Stewart Mine by panning stream bed material. No trace was found by the stream sediment program.

Tin

Tin mineralization within the granite is common and associated with the quartz-tourmaline phase of the Meredith Granite. These are small and are not considered to be of economic significance.

APPENDIX

Statutory Report of Expenditure on Exploration Licence 11/75

Exploration Licence 11/75 - Assay Values

MAPS

- * E.L. 11/75 Mount Stewart Area - Geology and Geochemistry
- E.L. 11/75 Mount Stewart Area - Aeromagnetics
- E.L. 11/75 Mount Stewart Area - Ground Magnetics, Stewart Road
- E.L. 11/75 Mount Stewart Area - Geology and Geochemistry - Tin Values
- E.L. 11/75 Mount Stewart Area - Geology and Geochemistry - Zinc Values

- * There are 4 plans dated:
 - Aug 1975
 - 20 Jan 1976
 - 11 Apr 1976
 - 1976

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COMMONWEALTH OF AUSTRALIA

STATUTORY DECLARATION.

(1) Here insert name, address and occupation of person making the declaration.

I, ⁽¹⁾ ANTHONY AUGUST STEGMANN

of 157 Liverpool Street, Sydney, New South Wales, do solemnly and sincerely declare ⁽²⁾ that as the Accountant of Australia and New Zealand Exploration Company, I have ascertained that expenditure of the Company on Exploration Licence 11/75 during the period August 7, 1975, through June 30, 1976, was \$25,595.22, broken down as follows :-

(2) Here insert matter declared to. Where the matter is long, add the words "as follows:" and then set the matter out in numbered paragraphs.

Salaries	\$4,988.46
Wages	3,262.28
Fringe Costs	683.48
Office Rent	1,028.45
Office Electricity	42.63
Telephone	823.94
Postage & Freight	142.86
Publications	119.08
Supplies - office	398.68
Maps & Reproductions	155.38
Bank Charges	27.34
Equipment Maintenance	95.69
Air Fares	334.73
Hotels & Food	86.35
Hire Cars & Taxis	29.20
Equipment - non capital	294.41
Vehicle Expense	1,996.16
Option/Prop. Payments	98.98
Camp Accommodation	2,326.08
Assays	2,023.72
Sydney Overhead	6,637.32
Total	<u>\$25,595.22</u>

And I make this solemn declaration by virtue of the *Statutory Declarations Act* 1959, as amended, and subject to the penalties provided by that Act for the making of false statements in statutory declarations, conscientiously believing the statements contained in this declaration to be true in every particular.

(3) Signature of person making the declaration.

(3) A.A. Stegmann

Declared at SYDNEY the FOURTH

day of AUGUST, 1976

Before me,

(4) [Signature] JP.

(4) Signature of person before whom the declaration is made.

(5) JUSTICE OF THE PEACE

(5) Here insert title of person before whom the declaration is made.

007

AUSTRALIA AND NEW ZEALAND NITROGEN COMPANY

EXPLORATION LICENCE 11/75 - MOUNT STEWART AREA

ASSAY VALUES

SAMPLE NUMBER	SCHEELITE GRAIN COUNT <u>Lge/Med/SmI</u>	<u>W</u>	Wt (g)	<u>CORRECTED ASSAY</u>
AL-MS- 1	0	20	243	243
2	0	120	146	876
3	0	300	247	3705
4	0	180	134	1206
5	0/ 0/ 5	150	134	1005
6	0	2800	32	3920
7	0/ 0/ 1	2600	23	2990
8	0/ 0/33	2400	55	6600
9	0/ 0/ 5	2000	22	2200
10	0/ 0/ 6	2200	44	4840
11	0/ 0/ 9	1300	36	2340
12	0/ 0/31	1100	90	4950
JDL-MS-13	0	140	250	1750
14	0	<20	500	< 500
15	0	40	400	800
16	0/ 0/ 1	160	79	632
17	0/ 0/14	<20	270	< 270
18	0/ 0/ 3	<20	175	< 175
19	0/ 0/33	150	20	150
20	0/ 0/ 1	260	30	390
21	0/ 0/ 7	370	23	425
22	0/ 0/ 5	1660	23	1909
23	0/ 0/20	100	35	175
24	0	310	13	201
25	0/ 0/ 5	370	55	1017
26	0/ 0/ 5	1130	50	2825
27	0/ 0/ 1	280	19	266
28	0/ 0/15	270	111	1498
29	0	200	25	250
30	0	110	30	165
31	0	120	12	72
32	0	<20	336	< 336
33	0/ 0/25	< 2	20	2
34	0/ 0/ 5	5	22	6
35	0	< 2	60	6
36	0	< 2	240	24
37	0	< 2	300	30
38	0	< 2	14	1
39	0	< 2	31	3
40	0	5	24	6
41	0/ 0/10	5	240	60
42	0	< 2	12	1
43	0/ 0/ 6	< 2	11	1
44	0	5	50	13

All values in p.p.m. unless stated otherwise

AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY

SAMPLE NUMBER	SCHEELITE GRAIN COUNT Lge/Med/Sm1	W	Wt (g)	CORRECTED ASSAY
JDL-MS-45	0	5	204	51
46	0	5	270	68
47	0	5	52	13
48	0/ 0/ 5	< 2	40	4
49	0/ 0/ 4	< 2	58	6
50	0	< 2	33	3
51	0	< 2	32	3
52	0	< 2	42	4
AL-MS-53	0	870	39	1697
54	0/ 0/ 4	20	25	25
55	0	1600	22	1760
56	0/ 0/ 9	5900	12	3540
57	0/ 0/ 3	3600	8	1440
58	0	80	12	49
59	0	60	18	54
60	0	100	15	75
61	0	100	14	70
62	0	100	14	70
63	0/ 0/ 3	10	30	15
64	0	2300	26	2990
65	0/ 0/ 2	20	25	25
66	0/ 0/ 1	20	89	89
67	0/ 0/ 3	60	84	252
68	0/ 0/ 5	20	148	148
69	0/ 0/ 1	60	71	213
70	0/ 0/ 2	40	51	102
71	0/ 0/ 6	40	210	420
72	0/ 0/ 1	40	235	470
73	0/ 0/ 1	40	165	330
74	0/ 0/ 1	40	165	330
75	0/ 0/ 6	5	198	50
76	0	10	117	59
77	0/ 2/140	580	11	319
78	0	10	44	22
79	0	5	5	1
80	0	6	12	4
81	0/ 0/ 2	250	8	100
82	0	870	9	392
83	0	80	6	24
84	0	200	12	120
85	0	< 2	22	< 2
86	0	< 2	55	< 5
87	0	10	206	103
88	0	5	99	25
89	2/ 9/170	1100	10	550
90	1/ 2/210	670	16	536
91	1/ 2/ 85	530	6	159
92	4/10/ 58	1110	6	333
93	3/ 6/185	660	20	660
94	5/30/152	1470	10	735
95	1/ 1/ 2	390	29	566

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AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY

SAMPLE NUMBER	SCHEELITE GRAIN COUNT			Wt (g)	CORRECTED ASSAY
	Lge	Med	Sm1		
AL-MS- 96	0/	0/	2	20	209
97	0/	0/	6	40	80
98		0		260	255
99	0/	0/	7	260	211
100	0/	0/	2	60	240
101	0/	0/	4	1600	26
102	0/	0/	5	40	186
103	0/	0/	4	1000	29
104		0		950	11
105	0/	0/	1	730	10
106		0		180	7
107	0/	0/	1	1100	9
108	0/	0/	1	860	6
109	0/	0/	3	2000	7
110		0		20	34
111		0		40	23
112		0		10	56
113		0		20	30
114	0/	0/	38	680	30
115		0		4800	42
116	0/	0/	14	650	18
117	0/	0/	19	1600	38
118	0/	0/	3	1300	35
119	0/	0/	9	1400	23
120		0		4000	11
121	0/	0/	9	4200	30
122	0/	0/	3	1600	23
123		0		20	26
124		0		10	12

ROCK SAMPLE NUMBER	SCHEELITE FLUORESCENCE	W
JDL-MS-R1		20
R2		20
AL-MS-R3	NO	2
R4	NO	-
R5	NO	-
R6	NO	-

All values in p.p.m. unless stated otherwise.

AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY

EXPLORATION LICENCE 11/75 - MOUNT STEWART AREA

ASSAY VALUES

<u>SAMPLE NUMBER</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Sn</u>	<u>Ni</u>	<u>Ag</u>	<u>Au</u> (ppb)
AL-MS- 1	5	160	2000				
2	10	150	1900				
3	10	140	2300				
4	10	150	1800				
5	2	20	55	2800	75	<2	<20
6	5	60	70	31.10%	10	<2	>500
7	2	180	20	14.10%	10	<2	<20
8	5	80	20	4.76%	10	<2	20
9	10	120	30	2.88%	5	<2	40
10	<2	60	20	1.78%	5	<2	<20
11	<2	60	55	8600	10	<2	<20
12	<2	40	45	7000	10	<2	60
JDL-MS-13	<2	20	15	1400	45	<2	<20
14	<2	20	55	300	130	<2	<20
15	<2	20	40	50	25	<2	
16	<2	40	55	200	230	<2	
17	<2	20	45	100	35	<2	
18	2	20	65	100	100	<2	
19	<2	80	55	1000	15	<2	
20	<2	40	60	300	20	<2	
21	<2	60	65	1000	55	<2	
22	<2	80	45	1000	10	<2	
23	<2	50	40	300	110	<2	
24	<2	30	50	500	30	<2	
25	<2	20	55	300	25	<2	
26	<2	60	45	200	5	<2	
27	5	40	55	50	70	<2	
28	<2	40	55	300	70	<2	
29	10	40	30	50	20	<2	
30	5	50	55	30	55	2	
31	5	40	45	200	25	<2	
32	5	40	110	30	330	<2	
33	5	150	780	3000			
34	55	180	1300	1000			
35	10	140	1800	200			
36	10	190	1900	100			
37	10	160	1800	1000			
38	10	140	610	200			
39	5	160	3400	1000			
40	5	200	3800	1000			
41	5	160	4800	1000			
42	<2	140	620	500			
43	5	150	800	1000			
44	20	180	1900	1000			

All values in p.p.m. unless stated otherwise

AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY

SAMPLE NUMBER	Cu	Pb	Zn	Sn	Ni	Ag	Au (ppb)
JDL-MS-45	5	160	5000	1000			
46	5	190	5300	1000			
47	10	160	1900	300			
48	10	190	5200	3000			
49	10	180	7000	3000			
50	15	180	1900	1000			
51	10	180	1800	1000			
52	10	170	1600	200			
AL-MS-53	30	320	1300	15.12%	70		
54	20	300	880	25.40%	20		
55	15	360	240	2.26%	15		
56	15	330	280	4.79%	20		
57	10	1500	340	7300	10		
58	20	80	1500	5.39%	350		
59	1800	70	1000	2.74%	340		
60	1500	70	1000	4.30%	270		
61	30	140	940	2.38%	220		
62	4800	60	1100	2.07%	220		
63	20	60	1800	300	1200		
64	20	120	3000	3000	310		
65	10	120	85	5000			
66	10	200	2800	1.00%			
67	10	300	1500	1000			
68	5	300	1400	2000			
69	5	180	1700	6.01%			
70	20	240	1700	3000			
71	10	200	1900	2000			
72	10	260	1900	2000			
73	5	250	1900	2000			
74	5	250	1900	2000			
75	15	<20	1750	1000			
76	<5	30	120	10			
77	<5	90	490	6800			
78	5	70	1600	1.04%			
79	10	30	520	1000			
80	10	50	660	1000			
81	<5	30	75	2000			
82	<5	80	270	3000			
83	<5	30	35	500			
84	5	50	35	100			
85	15	185	3100	100			
86	10	65	1850	30			
87	10	160	2400	300			
88	10	165	1800	6500			
89	10	100	210	1.15%			
90	10	85	190	2500			
91	15	85	185	2000			
92	10	120	115	6100			
93	5	110	150	2200			
94	10	45	200	4900			
95	10	180	250	8400			

All values in p.p.m. unless stated otherwise

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AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY

<u>SAMPLE NUMBER</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Sn</u>	<u>Ni</u>	<u>Ag</u>	<u>Au</u> (ppb)
AL-MS- 96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
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116							
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118							
119							
120							
121							
122							
123							
124							

<u>ROCK SAMPLE NUMBER</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Sn</u>	<u>Ni</u>	<u>Ag</u>	<u>Au</u> (ppb)
JDL-MS-R1	54	120	90	50	230		2
R2	15	140	60	20	280		4
AL-MS-R3	70	6900	>1%	50	<5		
R4	10	100					
R5	45	180					
R6							

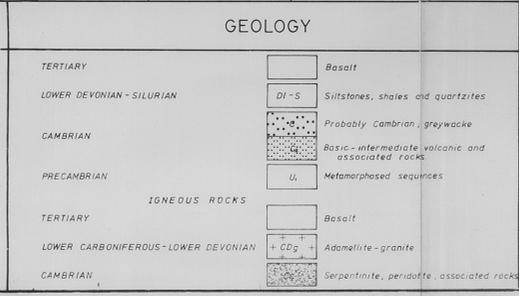
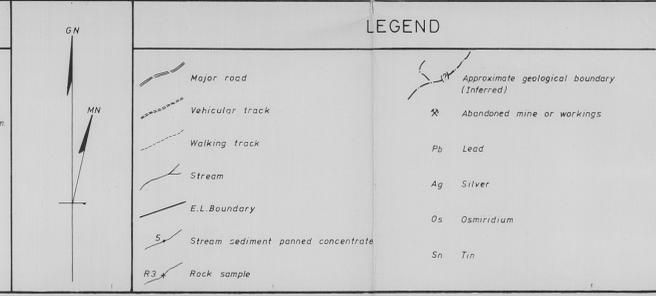
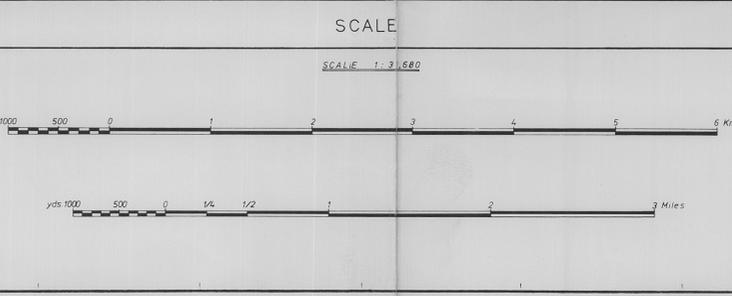
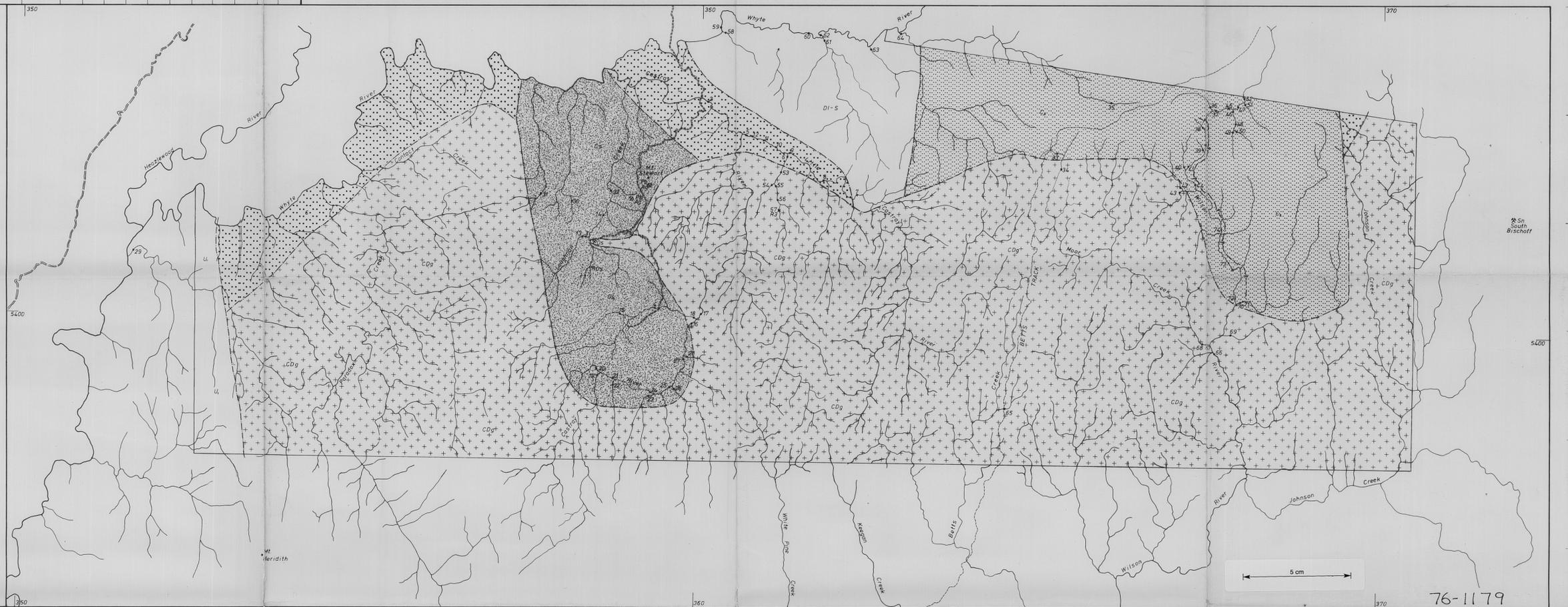
All values in p.p.m. unless stated otherwise.

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SAMPLE NUMBER	<u>Ta</u>	<u>Nb</u>	<u>Ir</u>	<u>Os</u>	<u>Pt</u>	<u>Pd</u>	<u>Mo</u>	<u>Re</u>	<u>Cr</u>
JDL-MS-45									
46									
47									
48									
49									
50									
51									
52									
AL-MS-53									
54									
55									
56									
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58									
59									
60									
61									
62									
63									
64									
65									
66									
67									
68									
69									
70									
71									
72									
73									
74									
75	10	10							
76	10	10							
77	15	390							
78	10	380							
79	55	40							
80	10	100							
81	10	170							
82	20	570							
83	10	85							
84	10	100							
85	10	15	22	10	10	10	10	3	10
86	10	10	55	10	10	10	10	3	10
87	10	25	206	10	10	10	10	3	10
88	10	290	99	10	10	10	10	3	10
89	10	1090	10	10	10	10	10	3	10
90	20	1090	16	10	10	10	10	3	10
91	15	900	6	10	10	10	10	3	10
92	10	700	6	10	10	10	10	3	10
93	10	780	20	10	10	10	10	3	10
94	10	900	10	10	10	10	10	3	10
95	10	1260	29	10	10	10	10	3	10

All values in p.p.m. unless stated otherwise

SAMPLE NUMBER	SCHAEFFER GRAIN COUNT (per med./sq. cm)	W	WT (g)	CORR ASSAY	Cu	Pb	Zn	Sn	Ni	Ag	Au (ppb)	Pt	ROCK SAMPLE NUMBER	SCHAEFFER FLUORESCENCE	W	Cu	Pb	Zn	Sn	Ni	Ag	
AL-MS-1	0	20	243	243	5	150	2000						JDL-MS-R1		+20	45	120	90	50	230	2	
2	0	120	166	876	10	150	1900						R2		+20	15	160	60	20	280	4	
3	0	300	247	3705	10	140	2300						AL-MS-R3	No	+2	70	6900	>1%	50	<5		
4	0	180	134	1206	10	150	1800															
5	0 0 5	150	134	1005	2	20	55	2800	75	+2	+20											
6	0	2800	32	3920	5	60	70	311%	10	+2	+500											
7	0 0 1	2500	23	2090	2	180	20	14.1%	10	+2	+20											
8	0 0 33	2400	55	6500	5	80	20	4.75%	10	+2	20											
9	0 0 5	2000	22	2200	10	120	30	2.88%	5	+2	40											
10	0 0 6	2200	44	4840	+2	60	20	1.78%	5	+2	+20											
11	0 0 9	1300	36	2340	+2	60	55	8500	10	+2	+20											
12	0 0 31	1100	90	4950	+2	40	45	7000	10	+2	60											
JDL-MS-13	0	140	250	1750	+2	20	15	1400	45	+2	+20											
14	0	+20	500	+500	+2	20	55	300	130	+2	+20											
15	0	40	400	800	+2	20	40	50	25	+2												
16	0 0 1	160	79	632	+2	40	55	200	230	+2												
17	0 0 14	+20	270	+270	+2	20	45	100	35	+2												
18	0 0 3	+20	175	+175	2	20	65	100	100	+2												
19	0 0 33	150	20	150	+2	80	55	1000	15	+2												
20	0 0 1	260	30	390	+2	40	60	300	20	+2												
21	0 0 7	370	23	425	+2	60	65	1000	55	+2												
22	0 0 5	1660	23	1909	+2	80	45	1000	10	+2												
23	0 0 20	100	35	175	+2	50	40	300	110	+2												
24	0	310	13	201	+2	30	50	500	30	+2												
25	0 0 5	370	55	1017	+2	20	55	300	25	+2												
26	0 0 5	1130	50	2825	+2	60	45	200	5	+2												
27	0 0 1	280	19	266	5	40	55	50	70	+2												
28	0 0 15	270	111	1498	+2	40	55	300	70	+2												
29	0	200	25	250	10	40	30	50	20	+2												
30	0	110	30	165	5	50	55	30	55	2												
31	0	120	12	72	5	40	45	200	25	+2												
32	0	+20	336	+336	5	40	110	30	330	+2												
33	0 0 25	+2	20	2	5	150	780	3000														
34	0 0 5	5	22	6	55	180	1300	1000														
35	0	+2	60	6	10	140	1800	200														
36	0	+2	240	24	10	190	1900	100														
37	0	+2	300	30	10	160	1800	1000														
38	0	+2	14	1	10	140	610	200														
39	0	+2	31	3	5	160	3400	1000														
40	0	5	24	6	5	200	3800	1000														
41	0 0 10	5	240	60	5	160	4800	1000														
42	0	+2	12	1	+2	140	520	500														
43	0 0 6	+2	11	1	5	150	800	1000														
44	0	5	50	13	20	180	1900	1000														
45	0	5	204	51	5	160	5000	1000														
46	0	5	270	68	5	190	5300	1000														
47	0	5	52	19	10	160	1900	300														
48	0 0 5	+2	40	4	10	190	5000	3000														
49	0 0 4	+2	58	6	10	180	7000	3000														
50	0	+2	33	3	15	180	1900	1000														
51	0	+2	32	3	10	180	1800	1000														
52	0	+2	42	4	10	170	1600	200														
AL-MS-53	0	870	39	1697	30	320	1300	15.12%	70													
54	0 0 4	20	25	25	20	300	880	25.40%	20													
55	0	1600	22	1760	15	350	240	2.26%	15													
56	0 0 3	5300	12	3540	15	330	280	4.73%	20													
57	0 0 3	3600	8	1440	10	1500	340	7300	10													
58	0	80	12	49	20	80	1500	5.33%	350													
59	0	60	18	54	1800	70	1000	2.7%	340													
60	0	100	15	75	1500	70	1000	4.30%	270													
61	0	100	14	70	30	140	340	2.38%	220													
62	0	100	14	70	4800	60	1100	2.07%	220													
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64	0	2300	26	2990	20	120	3000	3000	310													
65																						
66																						
67																						
68																						
69																						
70																						
71																						
72																						
73																						
74																						



AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY

E.L. 11/75

MOUNT STEWART AREA

GEOLOGY AND GEOCHEMISTRY

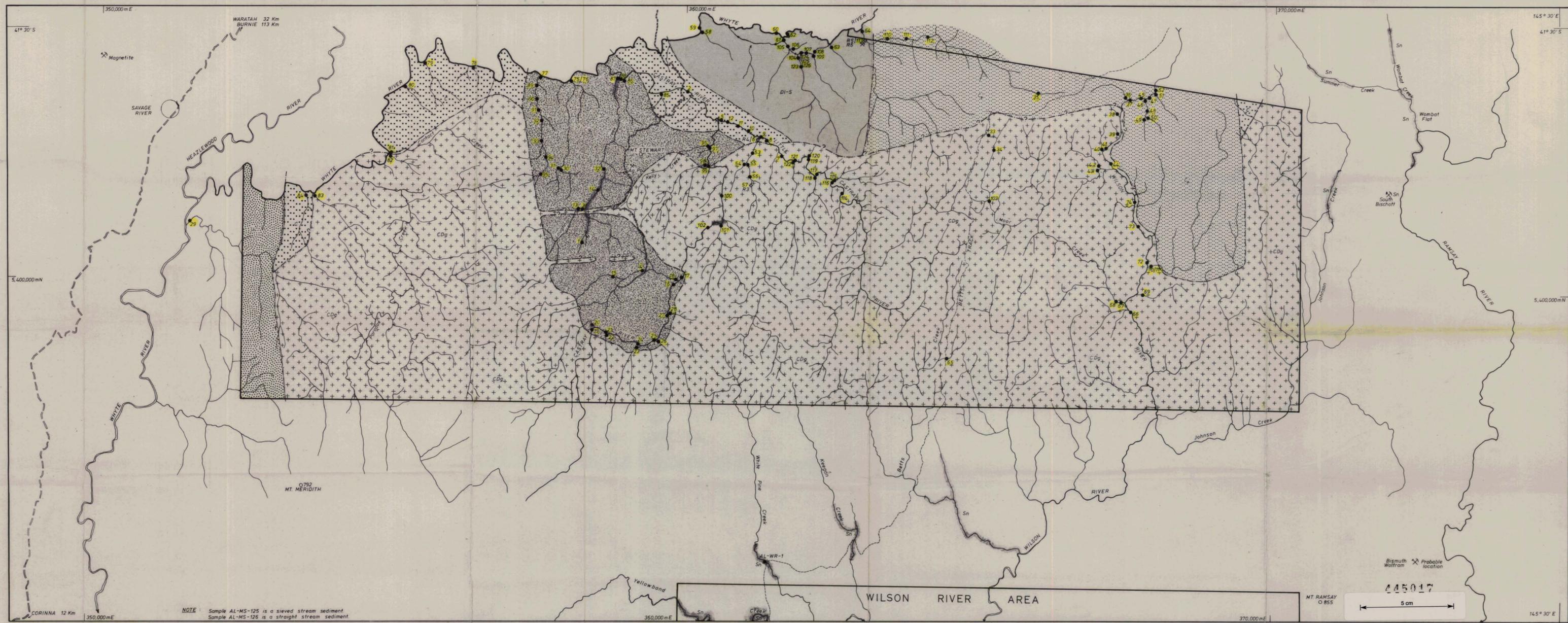
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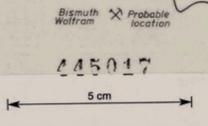
Prepared by, JDL & ALL Drawn by, ALL

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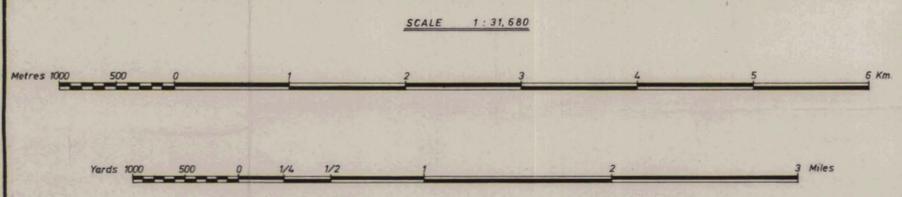
Drawing No Report No Lib. No



NOTE: Sample AL-MS-125 is a sieved stream sediment
Sample AL-MS-126 is a straight stream sediment.



SCALE



LEGEND

- Major road
- Exploration Licence boundary
- River
- Approximate geological boundary
- Abandoned mine
- Rock samples
- Ag Silver
- Pb Lead
- Sn Tin
- Os Osmidium
- Vehicular track
- Walking track
- Creek
- Inferred geological boundary
- Abandoned alluvial workings
- Stream sediment panned concentrate sample

GEOLOGY

- LOWER DEVONIAN - SILURIAN: Di-S Siltstones, shales and quartzites
- CAMBRIAN: Probably Cambrian, greywacke
- PRECAMBRIAN: Basic-intermediate volcanics and associated rocks
- PRECAMBRIAN: Metamorphic rocks - pelitic sequences
- IGNEOUS ROCKS: CDg+ Adamellite-granite
- LOWER CARBONIFEROUS - UPPER DEVONIAN: Serpentinite, peridotite and associated rocks
- CAMBRIAN: Serpentinite, peridotite and associated rocks

AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY

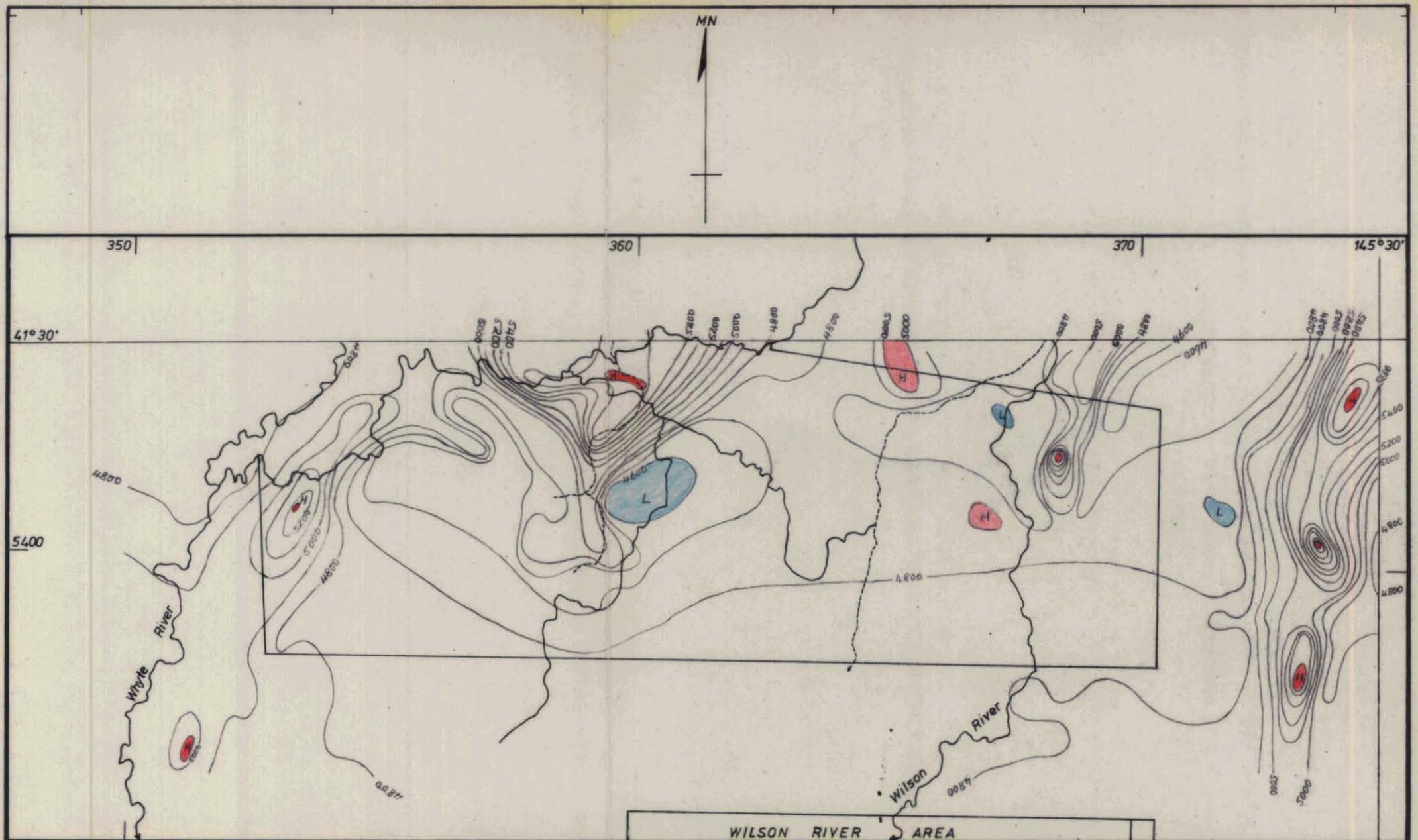
Savage River + Meridith 1:25,000 76-1179
E.L. 11/75
MOUNT STEWART AREA
GEOLOGY AND GEOCHEMISTRY Locations. 1564

Prepared by, JDL & ALL	Drawn by, ALL
Scale, 1:31,680	Date, April 11, 1975
Drawing N ^o	Report N ^o
	Lib. N ^o

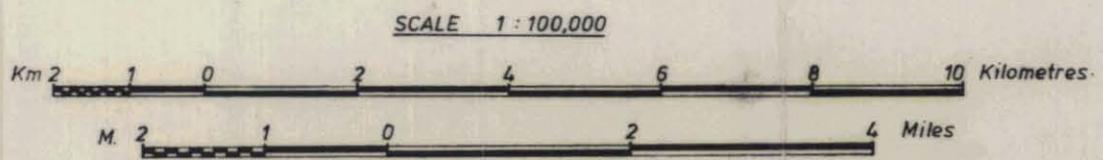
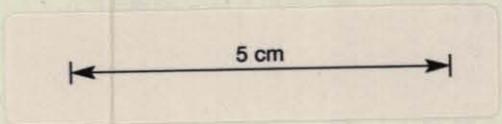
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AL-MS-1	0	20	243	243	5	150	2000					
2	0	120	145	876	10	150	1900					
3	0	300	247	3705	10	140	2300					
4	0	180	134	1206	10	150	1800					
5	0 0 5	150	134	1005	2	20	55	2800	75	+2	+20	
6	0	2800	32	3920	5	60	70	311%	10	+2	+500	
7	0 0 1	2600	23	2990	2	180	20	14.1%	10	+2	+20	
8	0 0 33	2400	55	6600	5	80	20	4.76%	10	+2	+20	
9	0 0 5	2000	22	2200	10	120	30	2.88%	5	+2	40	
10	0 0 6	2200	44	4840	+2	60	20	1.78%	5	+2	+20	
11	0 0 9	1300	36	2340	+2	60	55	8600	10	+2	+20	
12	0 0 31	1100	90	4950	+2	40	45	7000	10	+2	60	
JDL-MS-13	0	140	250	1750	+2	20	15	1400	45	+2	+20	
14	0	+20	500	+500	+2	20	55	300	130	+2	+20	
15	0	40	400	800	+2	20	40	50	25	+2		
16	0 0 1	160	79	632	+2	40	55	200	230	+2		
17	0 0 14	+20	270	+270	+2	20	45	100	35	+2		
18	0 0 3	+20	175	+175	2	20	65	100	100	+2		
19	0 0 33	150	20	150	+2	80	55	1000	15	+2		
20	0 0 1	260	30	390	+2	40	60	300	20	+2		
21	0 0 7	370	23	425	+2	60	85	1000	55	+2		
22	0 0 5	1660	23	1909	+2	80	45	1000	10	+2		
23	0 0 20	100	35	175	+2	50	40	300	110	+2		
24	0	310	13	201	+2	30	50	500	30	+2		
25	0 0 5	370	55	1017	+2	20	55	300	25	+2		
26	0 0 5	1130	50	2825	+2	60	45	200	5	+2		
27	0 0 1	280	19	266	5	40	55	50	70	+2		
28	0 0 15	270	111	1498	+2	40	55	300	70	+2		
29	0	200	25	250	10	40	30	50	20	+2		
30	0	110	30	165	5	50	55	30	55	2		
31	0	120	12	72	5	40	45	200	25	+2		
32	0	+20	336	+336	5	40	110	30	330	+2		
33	0 0 25	+2	20	2	5	150	780	3000				
34	0 0 5	5	23	6	55	180	1300	1000				
35	0	+2	60	6	10	140	1800	200				
36	0	+2	240	24	10	190	1900	100				
37	0	+2	300	30	10	160	1800	1000				
38	0	+2	14	1	10	140	610	200				
39	0	+2	31	3	5	160	3400	1000				
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44	0	5	50	13	20	180	1900	1000				
45	0	5	204	51	5	160	5000	1000				
46	0	5	270	68	5	130	5300	1000				
47	0	5	52	13	10	160	1900	300				
48	0 0 5	+2	40	4	10	190	5200	3000				
49	0 0 4	+2	58	6	10	180	7000	3000				
50	0	+2	33	3	15	180	1900	1000				
51	0	+2	32	3	10	180	1800	1000				
52	0	+2	42	4	10	170	1600	200				
AL-MS-53	0	870	39	1697	30	320	1300	15.12%	70			
54	0 0 4	20	25	75	20	300	860	25.40%	20			
55	0	1600	22	1760	15	360	240	2.26%	15			
56	0 0 9	5900	12	3540	15	330	280	4.79%	10			
57	0 0 3	3600	8	1440	10	1500	340	7.30%	10			
58	0	80	12	49	20	80	1500	5.39%	350			
59	0	60	18	54	1800	70	1000	2.74%	340			
60	0	100	15	75	1500	70	1000	4.30%	270			
61	0	100	14	70	30	140	340	2.38%	220			
62	0	100	14	70	4800	60	1100	2.07%	220			
63	0 0 3	10	30	15	20	60	1800	300	1200			
64	0	2300	26	2990	20	120	3000	3000	310			
65	0 0 2	20	25	25	10	120	85	5000				
66	0 0 1	20	89	89	10	200	2800	1.00%				
67	0 0 3	60	84	252	10	300	1500	1000				
68	0 0 5	20	148	148	5	300	1400	2000				
69	0 0 1	60	71	213	5	180	1700	6.01%				
70	0 0 2	40	51	102	20	240	1700	3000				
71	0 0 6	40	210	420	10	200	1900	2000				
72	0 0 1	40	285	470	10	260	1900	2000				
73	0 0 1	40	165	330	5	250	1900	2000				
74	0	40	147	294	10	250	3600	1000				
75	0 0 6	5	98	50	15	420	1750	1000				
76	0	10	117	59	+5	30	120	10				
77	0 2 140	580	11	319	+5	90	490	6800				
78	0	10	44	22	5	70	1600	104%				
79	0	5	5	1	10	30	520	1000				
80	0	6	12	4	10	50	660	1000				
81	0 0 2	250	8	100	+5	30	75	2000				
82	0	870	9	392	+5	80	270	3000				
83	0	80	6	24	+5	30	35	500				
84	0	200	12	120	5	50	35	100				
85	0	+2	22	+2	15	185	3100	100				
86	0	+2	55	+5	10	65	1850	30				
87	0	10	206	103	10	160	2400	300				
88	0	5	98	25	10	165	1800	6500				
89	2 9 170	1100	10	550	10	100	210	1.15%				
90	1 2 210	670	16	536	10	85	190	2500				
91	1 2 85	530	6	159	15	85	185	2000				
92	4 10 58	1110	6	333	10	120	115	6100				
93	3 6 185	650	20	650	5	110	150	2200				
94	5 30 152	1470	10	735	10	45	200	4500				
95	1 1 2	350	29	566	10	180	250	8400				
96	0 0 2		209									
97	0 0 6		80									
98	0		255									
99	0 0 7		217									
100	0 0 2		240									

SAMPLE NUMBER	SHEELITE GRAIN COUNT (g/med/cm)	W	WT (g)	CORR ASSAY	Cu	Pb	Zn	Sn	Ni	Ag
AL-MS-101	0 0 4	26								
JDL-MS-R1	0 0 5	185								
R2	0 0 4	29								
AL-MS-R3	NO	11								
R4	NO	10								
R5	NO	7								
R6	NO	9								
	0 0 1	6								
	0 0 3	7								
	0	34								
	0	23								
	0	56								
	0	30								
	0 0 38	30								
	0	42								
	0 0 14	18								
	0 0 19	38								
	0 0 3	35								
	0 0 9	23								
	0	11								
	0 0 9	30								
	0 0 3	23								

33	0 0 25	+2	20	2	5	150	780	3000				
34	0 0 5	5	23	6	55	180	1300	1000				
35	0	+2	60	6	10	140	1800	200				
36	0	+2	240	24	10	190	1900	100				
37	0	+2	300	30	10	160	1800	1000				
38	0	+2	14	1	10	140	610	200				
39	0	+2	31	3	5	160	3400	1000				
40	0	5	24	6	5	200	3800	1000				
41	0 0 10	5	240	60	5	180	4800	1000				
42	0	+2	12	1	+2	140	620	500				
43	0 0 6	+2	11	1	5	150	800	1000				
44	0	5	50	13	20	180	1900	1000				
45	0	5	204	51	5	160	5000	1000				
46	0	5	270	68	5	130	5300	1000				
47	0	5	52	13	10	160	1900	300				
48	0 0 5	+2	40	4	10	190	5200	3000				
49	0 0 4	+2	58	6	10	180	7000	3000				
50	0	+2	33	3	15	180	1900	1000				
51	0	+2	32	3	10	180	1800	1000				
52	0	+2	42	4	10	170	1600	200			</	



WILSON RIVER AREA



Reduced from 1:63,360 - Corinna sheet Aeromag - Rio Tinto Expl'n.

445019 76-1179

AUSTRALIA AND NEW ZEALAND
EXPLORATION COMPANY

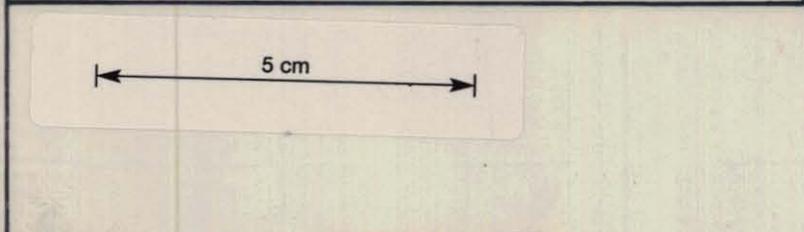
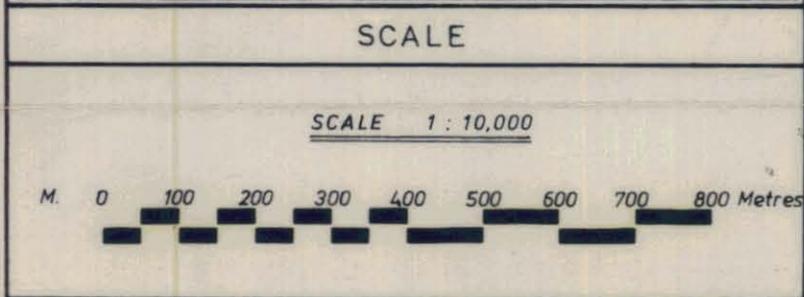
AEROMAGNETICS 014

E.L. 11/75 MT. STEWART AREA

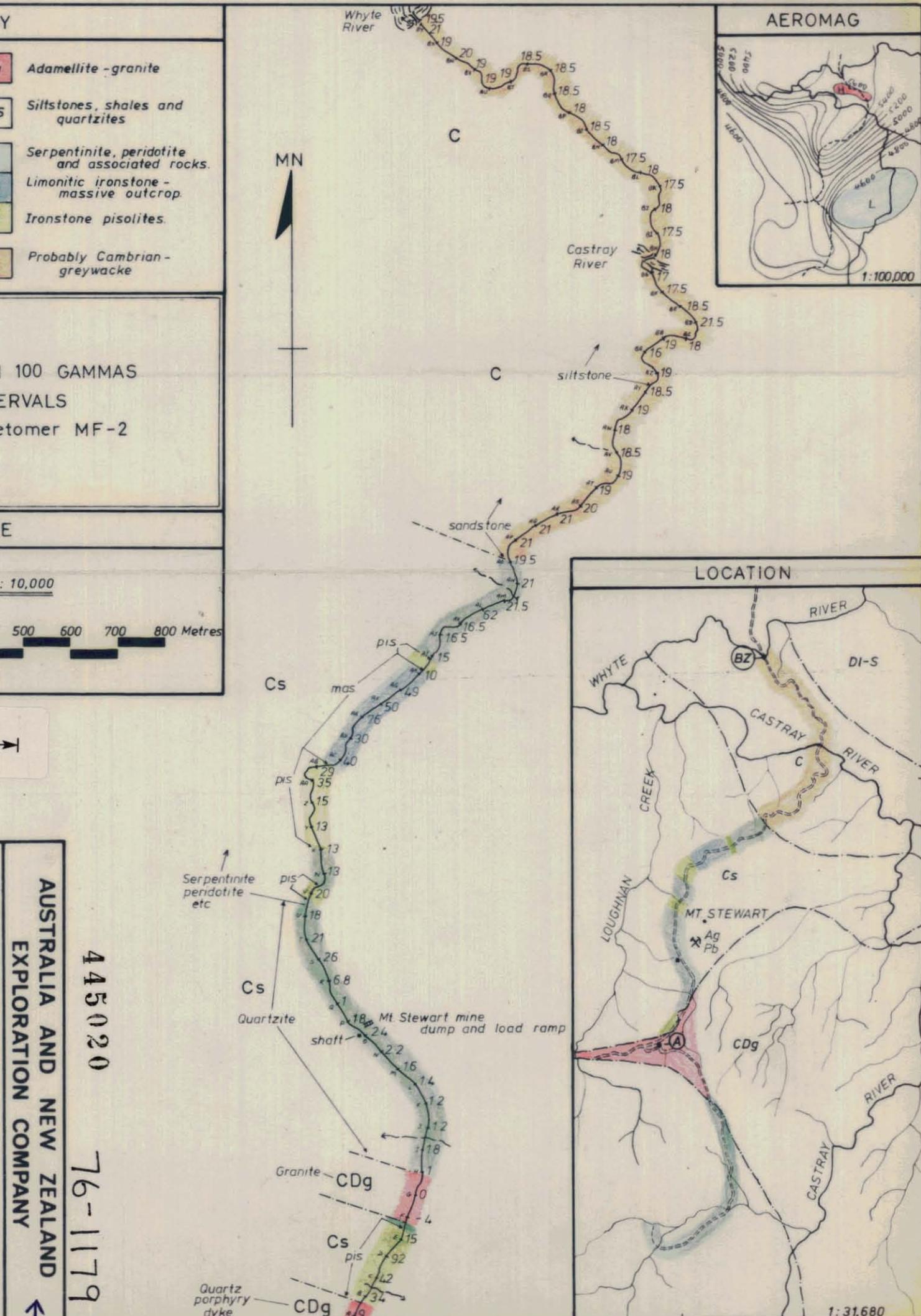
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Report N ^o	Lib. N ^o

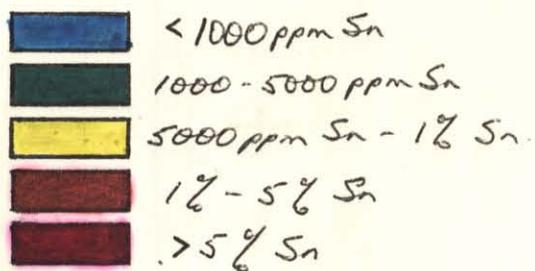
GEOLOGY		
LOWER CARBONIFEROUS - UPPER DEVONIAN	CDg	Adamellite - granite
LOWER DEVONIAN - SILURIAN	DI-S	Siltstones, shales and quartzites
CAMBRIAN	Cs	Serpentinite, peridotite and associated rocks.
	mas	Limonitic ironstone - massive outcrop.
	pis	Ironstone pisolites.
	C	Probably Cambrian - greywacke

GROUND MAGNETICS IN 100 GAMMAS AT 50 METRE INTERVALS using Fluxgate magnetomer MF-2



<p>445020 76-1179</p> <p>AUSTRALIA AND NEW ZEALAND EXPLORATION COMPANY</p>	
<p>GROUND MAGNETICS STEWART ROAD 015</p> <p>MT. STEWART AREA</p>	
Prepared by, ALL	Drawn by, ALL
Scale, 1 : 10,000	Date, March 25, '76
Drawing N ^o	Report N ^o
	Lib. N ^o





5 cm

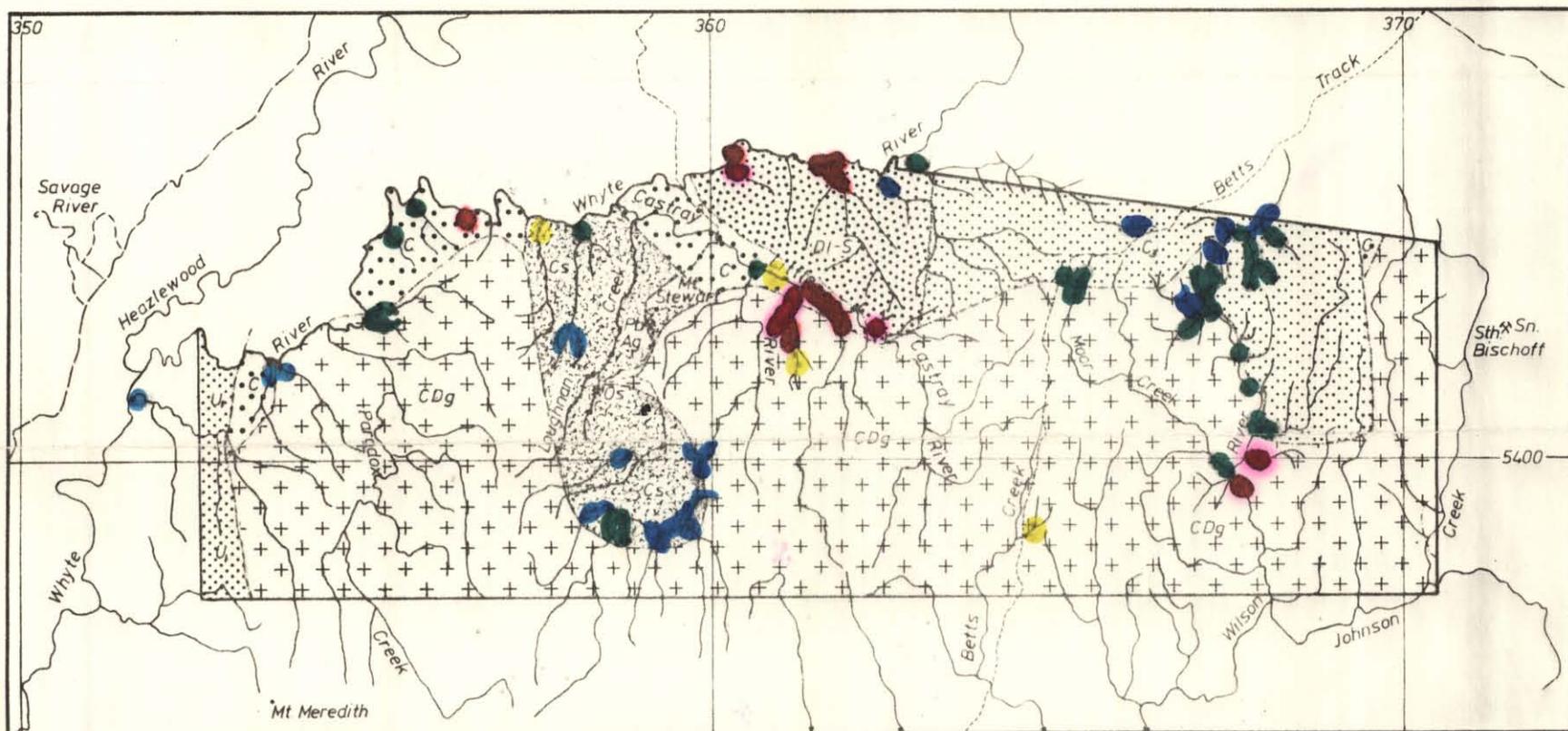
SCALE 1:100,000

Km 2 1 0 2 4 6 8 10 Kilometres

M 2 1 0 2 4 Miles

GN

MN



Drawing N^o

Scale, 1:100,000

Prepared by, JDL - ALL

Drawn by, ALL

E.L. 11/75 MT. STEWART AREA
GEOLOGY & GEOCHEMISTRY
016

TIN VALUES

AUSTRALIA AND NEW ZEALAND
EXPLORATION COMPANY

GEOLOGY

TERTIARY



Basalt

LOWER DEVONIAN - SILURIAN



Siltstones, shales, quartzites.

CAMBRIAN



Acid, intermediate and basic volcanics

Basic with intermediate volcanics

PRECAMBRIAN



Metamorphosed sequence

IGNEOUS ROCKS

TERTIARY



Basalt

LOWER CARBONIFEROUS - UPPER DEVONIAN



Adamellite-granite

CAMBRIAN



Serpentinite, peridotite and associated rocks

445021 LEGEND

Major road

Track

Stream

E.L. Boundary

Abandoned mine or workings

Approximate geological boundary

Stream sediment panned concentrate sample

Pb Lead

Ag Silver

Os Osmiridium

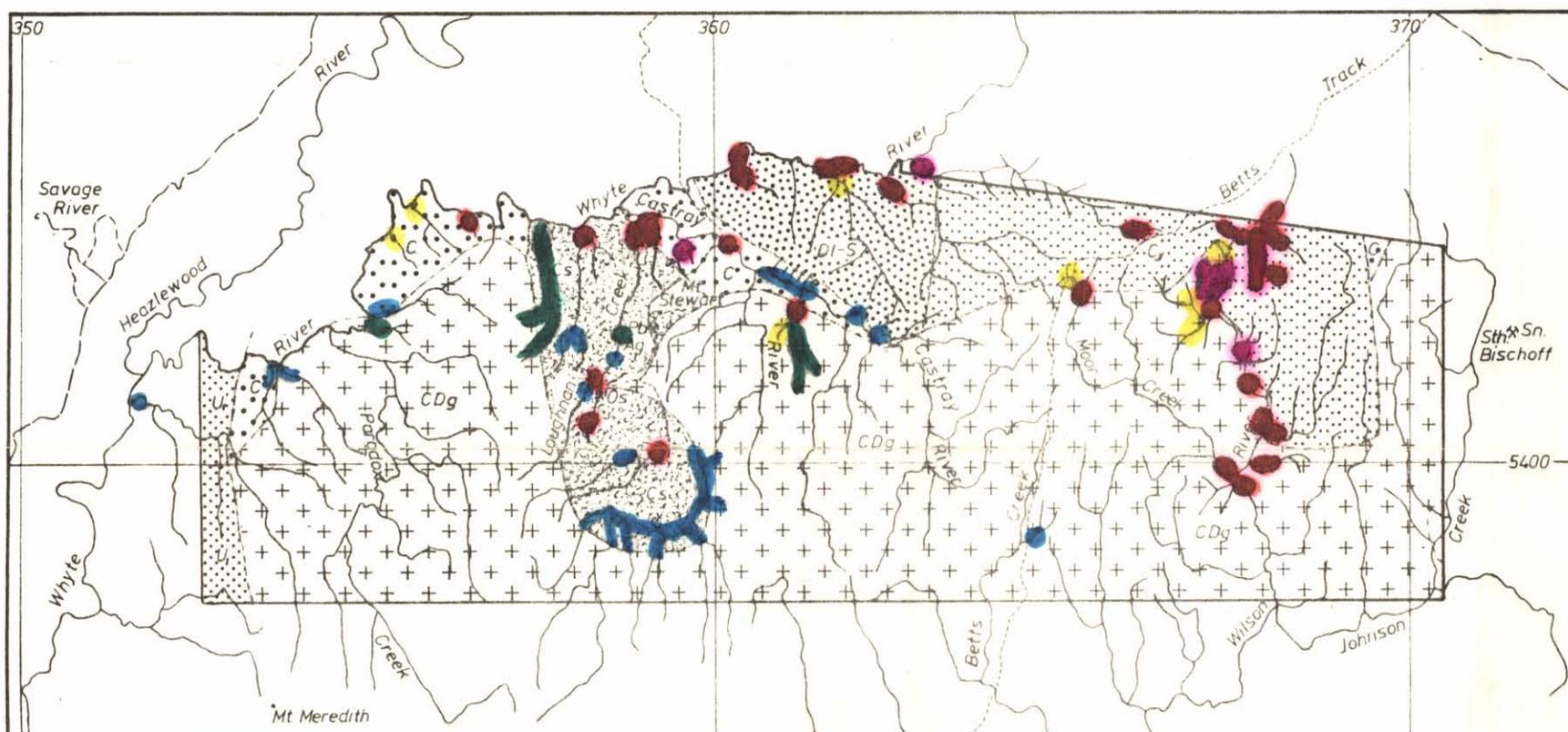
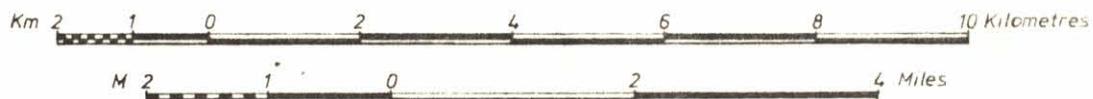
Sn Tin

76-1179



SCALE 1:100,000

5 cm



GEOLOGY		LEGEND	
TERTIARY	Basalt	Major road	76-1179
LOWER DEVONIAN - SILURIAN	Siltstones, shales, quartzites.	Track	
CAMBRIAN	Acid, intermediate and basic volcanics Basic with intermediate volcanics	Stream	
PRECAMBRIAN	Metamorphosed sequence	E L Boundary	
IGNEOUS ROCKS		Abandoned mine or workings	
TERTIARY	Basalt	Approximate geological boundary	
LOWER CARBONIFEROUS - UPPER DEVONIAN	Adamellite-granite	Stream sediment panned concentrate sample	
CAMBRIAN	Serpentinite, peridotite and associated rocks	Pb Lead	
		Ag Silver	
		Os Osmiridium	
		Sn Tin	

E.L. 11/75 MT. STEWART AREA
GEOLOGY & GEOCHEMISTRY

AUSTRALIA AND NEW ZEALAND
EXPLORATION COMPANY

445022
Zinc Values 017

Prepared by, JDL - ALL

Drawn by, ALL

Scale, 1:100,000

Date, 26-2-76

Proj. No

Drawing No

Report No

Lib. No