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80-1444.

079001

PROGRESS REPORT ON EXPLORATION OF

EL 12/78, SCAMANDER, TASMANIA

Between 15th September, 1979 and 15th March, 1980.

001

079002

CONTENTS

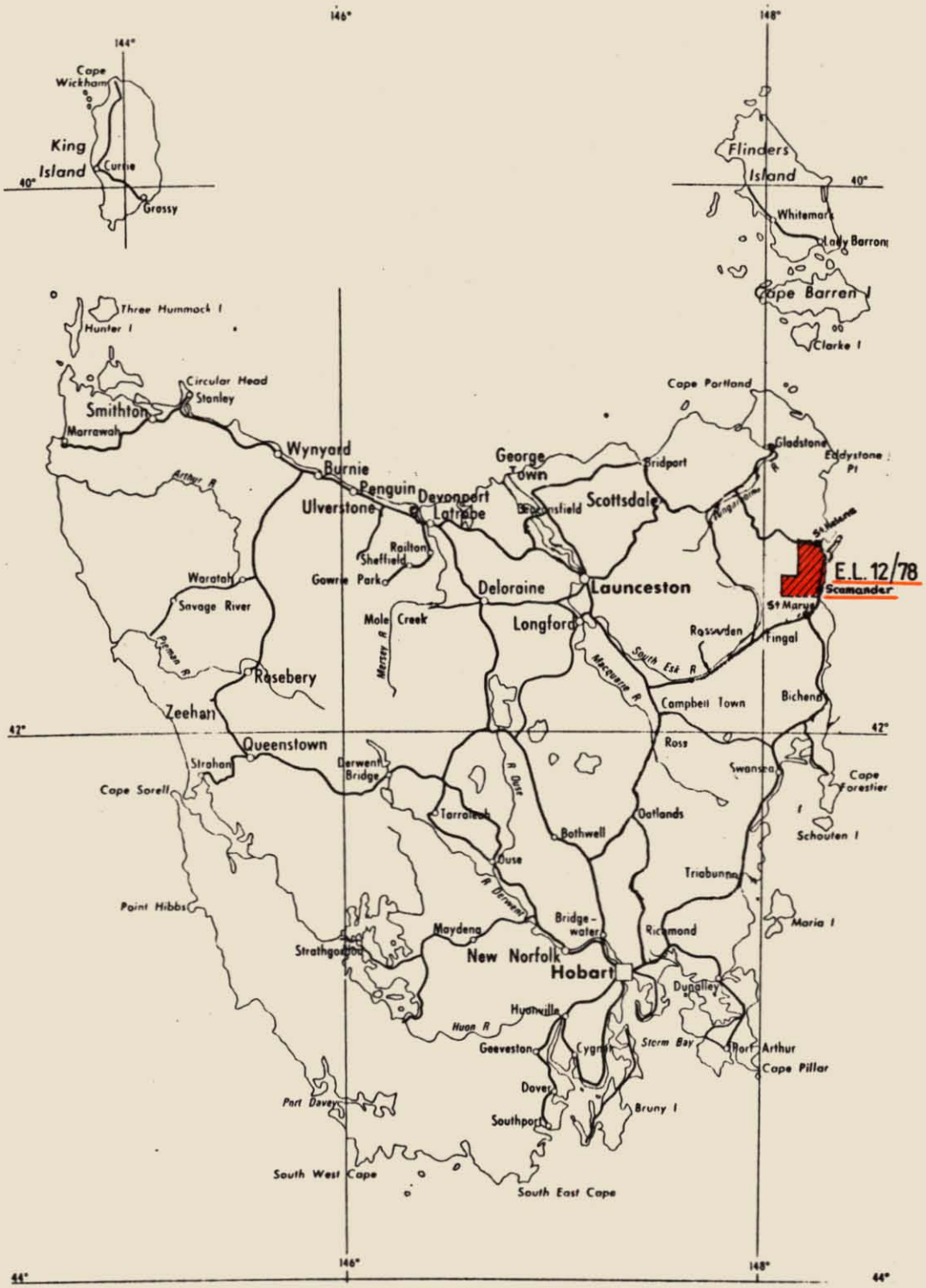
FIGURES

APPENDICES

FIG. 1

079004

003



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KILOMETRES

Centre Melbourne	THE BROKEN HILL PROPRIETARY CO. LTD.	Project No. 9-T610-1
Date 22·1·80	E.L. 12 78 SCAMANDER TAS. LOCATION MAP	Drawing No. A4-2052

1. GENERAL STATEMENT

During the period, a review of all data generated by our current exploration programme was completed. This work involved: reconnaissance and detailed geological mapping; grid preparation; soil, stream and rock sampling; ground magnetic traversing; and an airborne Dighem II E.M. survey.

At the North Scamander prospect, soil geochemistry combined with magnetics, T.E.M. and I.P. has outlined an anomalous target worthy of drill testing.

The Dighem II E.M. survey of an area including the North Scamander Mine, failed to locate any anomalies attributable to massive sulphide mineralisation.

2. NORTH SCAMANDER PROSPECT

Investigation of the North Scamander prospect has advanced to the stage where drill targets can be defined. A 1000 x 1000m grid centred on the old mine workings was surveyed by rope and compass to form the basis for detailed mapping, geochemical sampling and ground geophysical work.

Outcrop is poor, and is restricted essentially to small patches in creek beds and on ridge tops. Rocks present include Mathinna Beds sandstone, siltstone and slate, with a reasonably consistent NNW strike and steep NE dip. Minor fold structures are rare, and tight fold hinges were not observed. The evidence suggests that the prospect is located on the north east limb of a large, open, NNW trending anticline.

The mineralisation at the mine consists of a magnetite-sulphide assemblage contained within several (?), narrow, apparently tabular steeply dipping bodies that are sub-parallel to the enclosing strata. The largest body is surrounded (?) by a network of pyrrhotite-pyrite bearing stringers in a silicified sandstone. Sulphides associated with the magnetite bearing body include sphalerite, galena, chalcopyrite, pyrrhotite, pyrite and arsenopyrite. The host rocks are fractured and silicified, and have been invaded by a network of magnetite - chlorite - sulphide veinlets which locally form a breccia with angular fragments of chloritized quartzite in a magnetite-chlorite-sulphide matrix. Late stage siderite veinlets are abundant and much of the "gossany" material in floaters has evidently been derived from this source.

Rock chip sample and soil sample results suggest the presence of tin in both the magnetite bearing bodies and the host rocks, although as yet, the tin bearing phases have not been identified.

Quartz veining is intense over large portions of the grid area, although few measurements of vein orientation were possible, due to the nature of the outcrop. North east to easterly trends are evident.

Soil sampling of the grid area between 300W to 1100W and 1050N to 1750N was completed. Samples were collected at 25m to 50m intervals, depending on proximity to the mine, sieved to minus 80 mesh and analysed for tin, copper, lead, zinc, silver and in some instances tungsten. Copper and zinc are anomalous in the mine area and in a zone up to 200m to the NNW. The pattern of anomalous lead distribution is complex, although NNW and easterly trends appear to dominate. Tin is also anomalous at +100 ppm over a large part of the grid area, and its distribution appears to be similar to that of lead, with NNW and easterly trends the most prominent. Significant tin-in-soil anomalies were located up to 250m from the mine itself, thus forming a roughly concentric pattern of anomalies around the mine.

3. GENERAL RECONNAISSANCE

3.1 Nevada-Wolfram Creek Area

Creeks labelled on Geochem. Sample locations A1 - Sheet 2 Fig 2

A total of 96 stream sediment samples and 76 rock chip samples were collected from the area drained by the Saxelby, Launceston, Argonaut, Nevada and Wolfram creeks. The results of this work were not to hand at the time of preparation of this report.

Our exploration in this area has been oriented towards the location of an Anchor style disseminated tin deposit, as well as to the follow-up of aeromagnetic anomalies coinciding with Mathinna Beds sediments adjacent to major granitic bodies.

The granitic rocks are members of the Blue Tier Batholith suite and include a biotite granodiorite and a muscovite-biotite granite. Tourmaline is a common constituent of the muscovite granite, and is most abundant in rocks in the upper reaches of Launceston Creek. Pegmatite, aplite and quartz vein material is present in both of the principal granitoids. A strong vertical joint set with a 320° strike also penetrates both of these intrusive bodies. Pegmatite dykes and quartz veins trend between 310° and 350°. Some alteration on the margin of the veins was observed, although no visible tin mineralisation could be located.

The intrusives invade a monotonous sequence of Mathinna Beds sandstone, siltstone, slate and locally spotted hornfels. Minor quartz veins with NE to ENE trends were also noted. These veins are associated with limonite rich material derived from sulphides and/or siderite. At the Baden Powell and Price's prospects, the quartz veins carry wolframite, molybdenite and minor bismuthinite, and have reached sufficient size to warrant mining on a small scale. Small patches of gossany rock similar to those in the North Scamander area were also located within the granite and close to its margins.

At this stage, no drill targets have been defined in this part of the licence area.

3.2 Yarmouth Creek Area

In the Yarmouth Creek area, a complex group of aeromagnetic anomalies was followed up by ground magnetic traverses with rock chip and stream sampling. Minor lead-silver mineralisation is reported from the area (Yarmouth Prospect), although this occurrence could not be located during reconnaissance mapping. A thick cover of Tertiary overburden is known to overlie Mathinna Beds sandstone, quartzite, siltstone and slate, together with small granitic bodies.

4. EXPENDITURE

Total expenditure debited to EL 12/78 to 31st January, 1980 is $88,197.

5. RECOMMENDATIONS FOR FURTHER WORK

Upon renewal of the licence area, the following work programme could be undertaken:

(i) construction of access roads and drill site preparation at the North Scamander prospect.

(ii) diamond drilling of one 200m hole at the North Scamander prospect;

(iii) follow-up work, as necessary, in the Nevada-Wolfram Creek and Yarmouth Creek areas, consisting of detailed mapping and sampling;

(iv) drilling of targets outlined by the above work as considered appropriate.

APPENDIX 1

GEOCHEMICAL

RESULTS

003

CONSULTING CHEMISTS & ANALYSTS

079009

OFFICE & LABORATORY
44 BALACLAVA ST., WOOLLOONGABBA 4102
Phone (07) 391 6986 A/H 355 0776
TELEX ALSEV 42344

LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: 69K CLIENT B H P CO LTD - EXPLORATION DEPT
ORDER No.: 000603 AREA: DATE RECEIVED: 9.10.79
SAMPLE TYPE: SOIL STM SED No.: 115 DATE COMPLETED 30.10.79
ATTENTION: R HINE

NORTH SCAMANDER PROSPECT, -80 mesh soils

SAMPLE No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sn ppm	W ppm	Ni ppm	Co ppm	Cr ppm	As ppm
1.8	20	20	70	1	5	<10	200W	125W		
1.9	5	30	10	1	<5	<10	225W	"		
1.10	5	25	10	1	<5	<10				
1.11	10	25	15	1	5	<10				
1.12	5	35	10	1	5	<10				
1.13	10	25	20	1	5	<10				
1.14	15	55	20	1	60	<10				
1.15	10	50	10	1	95	<10				
1.16	20	75	20	1	80	<10				
1.17	10	65	10	1	25	<10				
1.18	5	60	10	1	50	<10				
1.19	5	30	10	1	55	<10				
1.20	10	45	10	1	60	<10				
1.21	5	35	10	1	65	<10				
1.22	15	115	10	2	95	<10				
1.23	5	45	10	1	60	<10				
1.24	5	25	10	1	40	<10				
1.25	5	90	10	1	85	<10				
1.26	10	45	10	1	105	<10				
1.27	SAMPLE NOT RECEIVED									
1.28	5	20	10	1	65	<10				
1.29	2	15	10	1	55	<10				
1.30	10	165	10	1	85	<10				
1.31	15	60	15	1	110	<10				

METHODS C Pb Zn Ag Ni Co Cr Method 1

009

ALS

LABORATORY REPORT

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OFFICE & LABORATORY
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TELEX ALSEV 42344

R. W. YERBURY
DIRECTOR

BATCH No.: 69K CLIENT B.H.P. CO LTD

ORDER No.: AREA: DATE RECEIVED:

SAMPLE TYPE: No.: DATE COMPLETED:

ATTENTION:

SAMPLE No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sn ppm	W ppm				
2.10	2	35	10	1	5	<10	250 W	1075		
2.11	5	15	10	1	<5	<10				
2.12	5	25	10	1	<5	<10				
2.13	2	40	10	1	<5	<10				
2.14	2	40	10	<1	<5	<10				
2.15	5	60	10	1	10	<10				
2.16	5	40	10	1	20	<10				
2.17	20	180	30	1	150	<10				
2.18	20	220	40	1	245	<10				
2.19	10	60	10	1	95	<10				
2.20	5	90	10	1	150	10				
2.21	10	140	10	1	370	<10				
2.22	10	85	10	1	60	<10				
2.23	5	80	10	1	125	<10				
2.24	5	175	10	1	105	<10				
2.25	2	30	10	1	50	10				
2.26	2	15	10	1	25	<10				
2.27	5	30	5	1	45	<10				
2.28	5	20	10	1	65	<10				
2.29	15	35	10	1	65	<10				
2.30	10	35	10	1	75	<10				
2.31	10	35	15	1	70	<10				
3.10	2	20	5	1	5	<10				
3.11	< 2	35	5	1	5	<10				
3.12	2	45	10	1	5	<10				
3.13	5	40	10	1	5	<10				
3.14	2	95	10	1	15	<10				
3.15	15	70	20	2	10	<10				
3.16	10	35	10	1	<5	<10				
3.17	15	55	20	1	15	20				

METHODS:

010

CONSULTING CHEMISTS & ANALYSTS

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TELEX ALSEV 42344

LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: 69K CLIENT B H P CO LTD

ORDER No.: AREA: DATE RECEIVED:

SAMPLE TYPE: No.: DATE COMPLETED:

ATTENTION:

SAMPLE No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sn ppm	W ppm
3.18	35	350	20	1	380	<10
3.19	5	125	10	1	180	10
3.20	5	120	15	1	80	<10
3.21	5	70	15	1	40	10
3.22	2	50	15	1	65	<10
3.23	10	110	10	1	85	<10
3.24	10	115	10	1	100	<10
3.25	10	65	10	1	85	10
3.26	5	15	10	1	25	<10
3.27	10	30	10	1	30	10
3.28	5	25	10	1	50	<10
3.29	10	30	10	1	60	<10
3.30	10	25	10	1	70	20
3.31	15	80	20	1	90	10
4.10	5	20	10	1	<5	20
4.11	5	105	10	1	<5	<10
4.12	2	75	10	1	5	<10
4.13	5	30	10	1	<5	20
4.14	2	70	10	1	10	<10
4.15	5	55	10	1	<5	<10
4.16	5	75	15	1	<5	<10
4.17	15	55	15	1	15	<10
4.18	10	240	20	1	570	10
4.19	2	80	10	1	115	<10
4.20	2	85	15	1	130	<10
4.21	5	70	20	1	65	<10
4.22	2	25	10	1	20	<10
4.23	2	20	10	1	35	<10
4.24	5	40	10	1	70	<10
4.25	5	55	10	1	50	<10

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CONSULTING CHEMISTS & ANALYSTS

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LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: 69K CLIENT B.H.P. CO LTD

ORDER No.: AREA: DATE RECEIVED:

SAMPLE TYPE: No.: DATE COMPLETED:

ATTENTION:

SAMPLE No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sn ppm	W ppm
4.26	10	25	10	1	70	< 10
4.27	5	35	10	1	75	< 10
4.28	10	25	10	1	65	10
4.29	15	10	10	1	35	< 10
4.30	10	80	10	< 1	90	< 10
4.31	20	35	15	< 1	50	< 10
5.10	2	15	10	< 1	< 5	< 10
5.11	2	25	10	1	< 5	10
5.12	2	55	10	1	20	< 10
5.13	2	10	10	1	5	< 10
5.14	5	110	10	1	10	< 10
5.15	5	80	10	1	5	< 10
5.16	5	35	15	1	< 5	< 10
5.17	10	30	10	1	10	< 10
5.18	30	320	50	2	205	10
5.19	10	165	20	1	155	< 10
6.10	2	30	10	1	25	< 10
6.11	5	15	10	1	< 5	< 10
6.12	2	40	10	1	10	< 10
6.13	5	55	10	1	10	< 10
6.14	15	190	15	1	25	< 10
6.15	15	155	25	1	10	< 10
6.16	5	50	10	2	10	< 10
6.17	5	30	10	1	10	10
6.18	10	175	30	1	5	< 10
6.19	5	130	15	1	120	< 10

012

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LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: 196K CLIENT B.H.P. CO. LTD. - EXPLORATION DEPARTMENT
ORDER No.: T 610/500 AREA: DATE RECEIVED: 25.10.
SAMPLE TYPE: SOIL No.: 360 DATE COMPLETED: 21.11.
ATTENTION: DR. R. HINE

SAMPLE No.	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm
5-20	65	10	5	50	10	-1
21	60	-10	5	65	10	-1
22	50	-10	5	50	10	-1
23	50	-10	5	45	10	-1
24	40	-10	5	60	10	-1
25	120	-10	15	115	10	-1
26	75	-10	15	80	10	-1
27	85	-10	10	45	10	-1
28	45	-10	10	50	5	-1
29	30	10	15	30	10	-1
5-30	25	-10	25	35	10	-1
31	55	-10	25	65	10	-1
32	45	-10	30	45	15	-1
33	40	-10	10	25	5	-1
34	35	-10	20	40	5	-1
35	90	-10	20	150	10	-1
36	45	-10	30	55	15	1
6-20	60	-10	5	45	10	-1
21	65	-10	5	60	10	-1
22	55	-10	5	45	5	-1
23	45	-10	10	45	10	-1
24	40	-10	5	55	10	-1
25	45	-10	10	70	10	-1
26	45	-10	10	105	5	1
27	70	-10	15	50	10	-1
28	50	-10	15	70	5	-1
29	60	-10	10	45	5	-1
6-30	25	-10	10	35	2	-1
31	25	-10	15	35	2	-1
6-32	45	-10	30	125	10	1

 METHODS: Cu, Pb, Zn, Ag BY METHOD 1

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LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: 196K CLIENT B.H.P. CO. LTD. - EXPLORATION DEPARTMENT
ORDER No.: AREA: DATE RECEIVED:
SAMPLE TYPE: No.: DATE COMPLETED:
ATTENTION:

SAMPLE No.	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm
6-33	40	-10	10	25	5	-1
34	25	-10	10	30	2	1
35	20	-10	10	35	10	-1
36	20	-10	15	30	10	-1
7-14	20	-10	15	100	15	-1
15	15	10	10	70	10	-1
16	20	-10	15	110	10	-1
17	5	-10	10	50	10	-1
18	5	-10	15	55	10	-1
19	25	-10	15	140	30	-1
7-20	105	-10	10	105	10	-1
21	170	-10	10	200	10	-1
22	225	-10	10	220	15	-1
23	695	-10	15	380	30	-1
24	90	10	10	80	10	-1
25	30	-10	5	100	5	-1
26	35	-10	5	25	5	-1
27	20	-10	10	35	2	-1
28	25	10	10	45	5	-1
29	20	-10	15	40	5	-1
7-30	35	-10	10	25	2	-1
31	65	-10	10	60	2	-1
32	55	-10	15	105	10	-1
33	45	10	15	45	5	-1
34	60	-10	15	80	5	-1
35	40	10	25	80	10	-1
36	45	-10	30	60	5	-1
8-14	35	-10	5	95	5	-1
15	10	-10	10	45	10	-1
8-16	5	-10	25	170	20	1

NATA

This laboratory is registered by the National Association of Testing Authorities, Australia. The tests reported herein have been per

METHODS:

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TELEX ALSEV 42344

LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: 196K CLIENT B.H.P. CO. LTD. - EXPLORATION DEPARTMENT
ORDER No.: AREA: DATE RECEIVED:
SAMPLE TYPE: No.: DATE COMPLETED:
ATTENTION:

SAMPLE No.	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm
8-17	15	10	10	70	2	-1
18	-5	-10	10	50	2	-1
19	10	-10	5	70	10	-1
8-20	55	-10	5	180	10	-1
21	65	10	5	60	10	-1
22	505	-10	15	540	50	-1
23	40	-10	10	60	15	-1
24	220	-10	5	40	10	-1
25	50	-10	15	90	15	-1
26	20	-10	5	30	5	-1
27	30	-10	5	40	2	-1
28	35	-10	5	20	2	-1
29	30	-10	10	30	10	-1
8-30	70	10	5	15	2	-1
31	80	-10	10	50	5	-1
32	105	-10	10	45	5	-1
33	35	-10	5	20	5	-1
34	45	-10	15	35	10	-1
35	30	-10	10	25	10	-1
36	55	-10	15	45	15	-1
9-14	70	-10	5	80	5	-1
15	205	10	5	95	10	-1
16	15	-10	10	140	10	-1
17	45	-10	45	380	15	1
18	-5	-10	15	75	15	-1
19	35	-10	10	80	20	-1
9-20	95	-10	5	60	10	-1
21	510	10	15	340	15	-1
22	480	-10	10	350	15	-1
9-23	110	-10	10	80	15	-1

015

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LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: 196K CLIENT B.H.P. CO. LTD. - EXPLORATION DEPARTMENT

ORDER No.: AREA: DATE RECEIVED:

SAMPLE TYPE: No.: DATE COMPLETED:

ATTENTION:

SAMPLE No.	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm
9-24	65	-10	10	40	10	-1
25	135	-10	10	70	10	1
26	95	-10	10	30	10	-1
27	75	-10	10	55	10	-1
28	215	10	5	85	2	-1
29	125	-10	10	35	5	-1
9-30	155	-10	20	70	10	-1
31	85	-10	15	80	10	-1
32	115	-10	15	70	10	-1
33	40	-10	10	30	10	-1
34	30	-10	10	20	5	-1
35	35	-10	15	30	10	-1
36	50	-10	20	40	10	-1
10-14	15	-10	5	30	5	-1
15	50	-10	10	50	5	-1
16	110	10	5	70	10	-1
17	30	-10	10	65	10	-1
18	20	-10	15	90	10	-1
19	35	-10	15	55	15	-1
10-20	185	10	10	70	15	-1
21	290	-10	10	80	15	-1
22	840	-10	10	170	10	-1
23	180	-10	10	110	15	-1
24	80	-10	10	40	10	-1
25	90	-10	10	35	10	-1
26	170	-10	10	40	15	-1
27	100	-10	10	30	10	-1
28	665	-10	10	75	10	-1
29	205	-10	10	70	10	-1
10-30	265	-10	15	145	10	-1

016

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LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: 196K CLIENT B.H.P. CO. LTD. - EXPLORATION DEPARTMENT
ORDER No.: AREA: DATE RECEIVED:
SAMPLE TYPE: No.: DATE COMPLETED:
ATTENTION:

SAMPLE No.	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm
10-31	150	10	20	130	10	-1
32	110	-10	10	70	10	-1
11-14	10	-10	5	15	5	-1
15	45	-10	5	20	-2	-1
16	135	-10	10	95	10	-1
17	15	-10	5	35	10	-1
18	5	-10	15	50	20	-1
19	15	-10	15	45	15	-1
11-20	120	-10	10	40	15	-1
21	390	-10	10	15	10	-1
22	385	-10	20	180	20	-1
23	890	-10	15	105	15	-1
24	140	-10	10	55	10	-1
25	130	-10	10	40	5	-1
26	130	10	15	30	10	-1
27	115	-10	10	30	5	-1
28	115	-10	10	25	5	-1
29	60	-10	15	45	15	-1
11-30	135	-10	20	50	10	-1
31	90	-10	15	35	5	-1
32	80	-10	15	120	10	-1
12-14	5	-10	5	35	2	-1
15	40	-10	5	25	-2	-1
16	60	-10	10	40	2	-1
17	25	10	2	25	-2	-1
18	50	-10	5	85	5	-1
19	5	-10	10	60	15	-1
12-20	185	-10	5	40	10	-1
21	305	-10	2	70	10	-1
12-22	315	-10	5	50	10	-1

METHODS:

017

079018

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LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: 196K CLIENT B.H.P. CO. LTD. - EXPLORATION DEPARTMENT
ORDER No.: AREA: DATE RECEIVED:
SAMPLE TYPE: No.: DATE COMPLETED:
ATTENTION:

SAMPLE No.	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm
12-23	205	-10	2	65	10	-1
24	405	-10	-2	55	5	1
25	85	10	15	90	15	1
26	180	-10	10	40	10	1
27	90	-10	10	50	10	1
28	170	-10	-2	20	2	-1
29	135	-10	-2	35	10	-1
12-30	140	-10	5	70	10	-1
31	50	-10	10	80	10	-1
32	85	-10	2	150	5	-1
13-14	10	-10	-2	20	10	-1
15	85	-10	-2	50	5	-1
16	55	-10	2	45	5	-1
17	55	-10	5	110	10	-1
18	40	-10	5	95	10	1
19	20	-10	10	50	15	1
13-20	20	-10	10	40	10	-1
21	215	-10	15	90	15	1
22	320	-10	10	130	15	-1
23	180	-10	20	125	10	1
24	230	-10	15	80	5	-1
25	200	10	10	75	10	1
26	135	-10	15	75	10	1
27	80	-10	15	45	10	-1
28	150	-10	10	30	10	-1
29	120	-10	5	70	10	-1
13-30	105	-10	10	40	15	-1
31	105	-10	5	55	10	-1
32	75	-10	15	50	15	-1
14-14	-5	-10	2	45	10	-1

018

CONSULTING CHEMISTS & ANALYSTS

079019

OFFICE & LABORATORY
44 BALACLAVA ST., WOOLLOONGABBA 4102
Phone (07) 391 6986 A/H 355 0776
TELEX ALSEV 42344

LABORATORY REPORT

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R. W. YERBURY
DIRECTOR

BATCH No.: 196K CLIENT B.H.P. CO. LTD. - EXPLORATION DEPARTMENT
ORDER No.: AREA: DATE RECEIVED:
SAMPLE TYPE: No.: DATE COMPLETED:
ATTENTION:

SAMPLE No.	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm
14-15	10	-10	2	70	10	-1
16	25	-10	2	20	10	-1
17	120	-10	5	170	10	-1
18	30	-10	5	70	5	-1
19	65	-10	5	30	5	-1
14-20	15	-10	10	40	10	-1
21	95	-10	10	85	15	1
22	280	-10	5	55	10	1
23	345	-10	15	140	20	1
24	340	-10	20	150	10	1
25	360	-10	15	130	10	1
26	170	-10	20	160	15	1
27	195	-10	50	105	25	1
28	265	-10	180	205	40	2
29	365	-10	95	140	30	1
14-30	450	-10	45	130	20	-1
31	300	10	80	190	30	1
32	160	-10	110	105	40	1
15-14	-5	-10	5	30	10	1
15	25	-10	2	50	10	-1
16	30	-10	10	85	20	-1
17	85	-10	5	95	10	1
18	15	10	5	40	15	-1
19	45	-10	10	90	10	-1
15-20	90	10	15	50	10	-1
21	55	-10	10	40	5	-1
22	130	-10	10	70	15	-1
23	280	-10	20	85	10	1
24	560	-10	20	190	15	1
15-25	445	-10	20	220	10	1

019

CONSULTING CHEMISTS & ANALYSTS

079020

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Phone (07) 391 6986 A/H 355 0776
TELEX ALSEV 42344

LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: 196K CLIENT B.H.P. CO. LTD. - EXPLORATION DEPARTMENT
ORDER No.: AREA: DATE RECEIVED:
SAMPLE TYPE: No.: DATE COMPLETED:
ATTENTION:

SAMPLE No.	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm				
15-26	515	-10	380	660	40	6				
27	410	-10	105	265	30	2				
28	400	-10	55	170	45	1				
29	330	-10	65	105	30	1				
15-30	305	-10	145	210	35	1				
31	185	-10	65	250	25	-1				
32	220	-10	45	120	40	1				
16-14	-5	-10	-2	30	10	1				
15	50	-10	2	140	15	1				
16	15	-10	-2	60	10	1				
17	60	-10	5	95	10	1				
18	25	-10	10	85	20	1				
19	155	10	10	90	15	1				
16-20	315	-10	5	80	10	1				
21	130	-10	2	60	20	-1				
22	175	-10	5	55	20	1				
23	225	-10	15	90	20	1				
24	420	-10	50	230	30	2				
25	470	-10	105	370	45	2				
26	715	-10	120	420	65	3				
27	335	-10	155	660	860	3				
28	250	-10	200	310	130	6				
29	345	-10	190	340	80	3				
16-30	135	10	90	340	55	2				
31	355	-10	130	340	80	2				
32	230	-10	45	150	40	1				
17-14	-5	-10	-2	25	2	-1				
15	35	-10	-2	55	10	-1				
16	145	-10	5	70	10	1				
17-17	35	-10	5	60	10	1				

020

CONSULTING CHEMISTS & ANALYSTS

079021

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TELEX ALSEV 42344

LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: 196K CLIENT B.H.P. CO. LTD. - EXPLORATION DEPARTMENT

ORDER No.: AREA: DATE RECEIVED:

SAMPLE TYPE: No.: DATE COMPLETED:

ATTENTION:

SAMPLE No.	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm
17-18	35	-10	5	60	10	1
19	285	-10	2	60	15	1
17-20	190	-10	-2	30	10	1
21	140	-10	5	30	5	1
22	270	-10	10	125	10	1
23	200	-10	15	150	10	1
24	300	-10	70	400	30	2
25	345	-10	15	340	100	2
26	150	-10	25	410	110	3
27	205	-10	25	370	210	4
28	345	-10	25	430	290	3
29	380	-10	30	380	350	3
17-30	210	10	50	460	480	3
31	235	-10	125	640	500	5
32	165	-10	55	390	130	2
18-14	5	10	2	45	20	-1
15	40	-10	-2	45	5	-1
16	90	10	2	40	10	-1
17	50	-10	5	95	25	1
18	15	-10	2	40	20	1
19	15	-10	15	65	40	1
18-20	SAMPLE NOT RECEIVED					
21	450	-10	15	480	45	2
22	175	10	30	620	60	4
23	215	10	10	520	50	1
24	255	-10	10	520	95	3
25	105	-10	15	340	70	2
26	190	-10	5	350	80	1
27	370	-10	15	580	155	3
18-28	380	-10	5	260	140	2

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CONSULTING CHEMISTS & ANALYSTS

079022

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Phone (07) 391 6986 A/H 355 0776
TELEX ALSEV 42344

LABORATORY REPORT

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R. W. YERBURY
DIRECTOR

BATCH No.: 196K CLIENT B.H.P. CO. LTD. - EXPLORATION DEPARTMENT
ORDER No.: AREA: DATE RECEIVED:
SAMPLE TYPE: No.: DATE COMPLETED:
ATTENTION:

SAMPLE No.	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm
18-29	580	-10	5	175	70	1
18-30	395	20	10	250	70	1
31	395	-10	65	500	330	2
32	375	-10	10	190	60	1
19-14	-5	-10	-2	25	10	1
15	120	-10	2	70	20	1
16	80	-10	-2	50	10	1
17	110	-10	2	110	10	1
18	65	-10	2	60	10	-1
19	10	-10	5	45	15	1
19-20	310	10	2	150	35	1
21	310	10	5	230	25	1
22	240	10	10	460	40	1
23	225	-10	2	330	40	1
24	285	-10	5	390	45	1
25	135	-10	-2	170	20	-1
26	50	10	5	310	45	1
27	105	10	2	500	80	1
28	185	-10	2	240	50	1
29	530	-10	10	370	160	1
19-30	510	-10	5	300	70	-1
31	390	-10	2	70	10	-1
32	820	-10	15	400	90	1
20-14	-5	-10	-2	20	2	1
15	-5	-10	-2	30	10	1
16	90	-10	5	60	10	1
17	90	-10	5	180	10	1
18	805	-10	15	340	20	1
19	300	10	15	250	15	-1
20-20	240	10	2	300	10	1

022

CONSULTING CHEMISTS & ANALYSTS

079023

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TELEX ALSEV 42344

LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: 196K CLIENT B.H.P. CO. LTD. - EXPLORATION DEPARTMENT
ORDER No.: AREA: DATE RECEIVED:
SAMPLE TYPE: No.: DATE COMPLETED:
ATTENTION:

SAMPLE No.	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm
20-21	140	-10	5	290	20	1
22	125	10	-2	60	5	-1
23	155	-10	-2	70	5	-1
24	45	-10	-2	105	10	1
25	60	-10	5	60	10	1
26	35	-10	10	90	30	1
27	165	-10	5	195	20	1
28	150	-10	5	85	10	-1
29	385	-10	5	310	20	-1
20-30	320	10	5	45	5	-1
31	355	-10	5	260	50	-1
32	355	10	-2	70	5	-1
21-14	-5	-10	5	20	-5	-1
15	15	-10	2	40	5	1
16	155	-10	5	95	10	1
17	0.16%	-10	15	800	30	1
18	605	-10	10	260	20	1
19	355	10	5	140	10	-1
21-20	230	-10	5	125	10	-1
21	190	10	2	215	10	1
22	35	-10	15	210	30	1
23	20	10	5	55	10	-1
24	60	-10	10	195	30	1
25	60	10	5	70	20	1
26	40	-10	10	95	20	1
27	130	10	5	230	20	1
28	160	-10	2	90	20	-1
29	505	10	5	200	20	-1
21-30	400	-10	5	50	20	-1
21-31	210	-10	10	265	90	1

023

CONSULTING CHEMISTS & ANALYSTS

079024

OFFICE & LABORATORY
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Phone (07) 391 6986 A/H 355 0776
TELEX ALSEV 42344

LABORATORY REPORT

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R. W. YERBURY
DIRECTOR

BATCH No.: 196K CLIENT B.H.P. CO. LTD. - EXPLORATION DEPARTMENT
ORDER No.: AREA: DATE RECEIVED:
SAMPLE TYPE: No.: DATE COMPLETED:
ATTENTION:

SAMPLE No.	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm
21-32	320	-10	5	110	15	-1
23-14	5	-10	10	55	10	-1
16	10	10	15	420	20	-1
18	15	-10	5	180	10	1
23-20	205	-10	10	340	15	1
22	20	-10	-2	65	10	-1
24	25	-10	5	260	20	1
26	135	-10	10	300	30	1
28	150	-10	2	60	20	-1
30	110	-10	5	105	35	-1
32	150	-10	5	160	15	-1
25-14	15	10	5	45	10	-1
16	30	-10	10	105	10	-1
18	20	20	5	35	10	-1
25-20	45	10	10	60	15	1
22	130	10	5	110	10	-1
24	145	-10	5	155	10	-1
26	252	20	5	110	10	-1
28	368	-10	5	70	10	-1
25-30	614	-10	5	290	10	-1
32	112	-10	10	140	20	-1
27-14	15	20	20	80	30	-1
16	30	20	20	280	20	1
18	45	10	20	480	20	1
27-20	405	-10	15	280	20	1
22	155	-10	20	280	40	1
24	185	-10	10	145	15	-1
26	125	-10	15	90	20	-1
28	120	-10	20	165	20	-1
27-30	145	-10	20	215	25	-1
27-32	155	-10	10	75	10	-1

024

079025

ALS

LABORATORY REPORT

OFFICE & LABORATORY
44 BALACLAVA ST., WOOLLOONGABBA 4102
Phone (07) 391 6986 A/H 355 0776
TELEX ALSEV 42344

R. W. YERBURY
DIRECTOR

BATCH No.: M 109 CLIENT: B.H.P. CO. LTD.
ORDER No.: Z 010/500 AREA: TASMANIA DATE RECEIVED: 14.12.7
SAMPLE TYPE: SOIL No.: 219 DATE COMPLETED: 26.2.80
ATTENTION: DR. R. HINE

SAMPLE No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sn ppm
10-32	25	35	10	1	65
33	15	15	10	1	45
34	10	15	20	2	40
35	15	35	10	2	50
36	10	15	10	1	30
37	15	15	15	1	35
38	15	15	15	1	55
39	30	15	15	2	45
10-40	30	35	10	2	75
41	10	15	15	2	55
42	15	15	15	1	65
43	40	5	15	1	75
44	10	5	10	1	20
11-32	10	80	15	2	120
33	5	60	15	1	55
34	10	25	10	2	30
35	5	5	15	2	40
36	5	25	15	2	35
37	20	35	20	2	35
38	10	15	20	2	30
39	70	35	160	1	45
11-40	10	25	20	-1	55
41	25	25	15	1	45
42	15	15	20	-1	40
43	15	50	25	1	55
44	55	40	25	1	30
12-32	10	15	15	-1	50
33	15	75	30	-1	130
34	5	5	20	2	45
12-35	5	5	10	1	25

This Laboratory is registered by

METHODS: Sn BY METHOD XRF 1-A

025

ALS

079026
OFFICE & LABORATORY
44 BALACLAVA ST WOOLLOONGABBA QLD
Phone (07) 391 6988 A/H 359 0776
TELEX ALSEV 42344

LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: M 109 CLIENT B.H.P. CO. LTD.
ORDER No.: AREA: DATE RECEIVED:
SAMPLE TYPE: No.: DATE COMPLETED:
ATTENTION:

SAMPLE No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sn ppm
12-36	20	2	10	1	45
37	10	15	10	1	35
38	10	15	25	1	50
39	-5	5	15	1	65
12-40	15	40	10	2	75
41	30	35	10	1	70
42	35	60	20	1	60
43	40	35	20	2	90
44	40	35	20	1	65
13-32	20	65	10	1	80
33	125	190	20	1	90
34	20	50	10	1	75
35	25	40	10	1	80
36	35	70	10	1	95
37	25	70	10	1	145
38	65	170	10	-1	265
39	25	110	20	1	105
13-40	30	65	10	-1	50
41	20	30	10	1	50
42	60	30	15	-1	35
43	30	20	10	1	55
13-44	30	30	15	-1	55
14-32	115	170	35	2	190
33	40	50	25	1	115
34	30	40	20	1	100
35	40	35	10	-1	185
36	35	50	10	1	115
37	110	115	50	1	125
38	95	110	25	-1	95
39	70	100	25	1	70
14-40	70	130	15	1	60
41	40	80	10	-1	75

METHODS:

026

CONSULTING CHEMISTS & ANALYSTS

079027

OFFICE & LABORATORY
44 BALACLAVA ST., WOOLLOONGABBA 4102
Phone (07) 391 6986 A/H 355 0776
TELEX ALSEV 42344

LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: M 109 CLIENT: B.H.P. CO. LTD.

ORDER No.: AREA: DATE RECEIVED:

SAMPLE TYPE: No.: DATE COMPLETED:

ATTENTION:

SAMPLE No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sn ppm
14-42	20	25	10	-1	135
14-43	25	20	20	1	95
44	45	25	15	-1	75
15-32	70	140	45	1	70
33	55	120	40	-1	25
34	30	35	25	-1	65
35	30	50	20	-1	35
36	60	50	20	-1	40
37	60	80	30	1	75
38	50	95	20	-1	100
39	140	115	40	1	75
15-40	40	30	15	-1	70
41	80	60	20	1	150
42	40	20	10	-1	60
43	45	20	10	1	50
44	30	20	10	-1	85
16-32	160	600	120	1	250
33	130	440	35	1	230
34	50	125	25	1	110
35	70	75	45	1	60
36	30	50	25	1	55
37	50	40	25	-1	45
38	95	90	40	1	60
39	45	45	25	-1	85
16-40	50	60	20	1	75
41	65	50	15	1	70
42	20	20	10	1	50
43	30	20	15	1	85
44	15	15	10	-1	105
17-32	55	490	260	2	180
17-33	60	380	300	2	295

METHODS

027

CONSULTING CHEMISTS & ANALYSTS

079028

OFFICE & LABORATORY
44 BALACLAVA ST., WOOLLOONGABBA 4102
Phone (07) 391 6986 A/H 355 0776
TELEX ALSEV 42344

LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: M 109 CLIENT B.H.P. CO. LTD.

ORDER No.: AREA: DATE RECEIVED:

SAMPLE TYPE: No.: DATE COMPLETED:

ATTENTION:

SAMPLE No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sn ppm
17-34	65	300	190	1	145
35	140	320	170	1	120
36	60	135	40	1	130
37	70	60	60	1	105
38	60	65	20	1	80
39	20	25	15	1	55
17-40	105	40	20	1	65
41	95	40	15	1	85
42	20	20	10	-1	60
43	60	40	15	-1	55
44	35	15	10	-1	135
18-32	30	420	140	1	605
33	50	390	180	1	425
34	80	450	270	1	145
35	50	640	120	1	215
36	95	360	170	1	140
37	65	240	145	1	130
38	25	70	40	1	115
39	20	40	10	-1	120
18-40	10	40	10	-1	70
41	15	25	15	-1	55
42	25	25	10	-1	65
43	25	25	5	-1	65
44	30	20	10	-1	75
19-32	50	420	230	1	310
33	40	200	250	1	540
34	40	310	220	1	285
19-35	50	520	95	1	230
36	15	125	35	1	345
19-37	30	105	30	1	180

028

CONSULTING CHEMISTS & ANALYSTS

079029

OFFICE & LABORATORY
44 BALACLAVA ST., WOOLLOONGABBA 4102
Phone (07) 391 6986 A/H 355 0776
TELEX ALSEV 42344

LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: M 109 CLIENT B.H.P. CO. LTD.

ORDER No.: AREA: DATE RECEIVED:

SAMPLE TYPE: No.: DATE COMPLETED:

ATTENTION:

SAMPLE No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sn ppm
19-38	20	65	40	-1	150
39	50	100	90	-1	125
19-40	20	35	15	-1	120
41	10	15	10	-1	85
42	50	50	20	-1	105
43	20	20	10	-1	115
44	30	20	10	-1	85
20-32	20	310	100	1	340
33	15	165	40	1	385
34	20	600	80	1	235
35	15	220	40	1	430
36	25	180	40	-1	210
37	35	100	45	1	200
38	45	95	65	1	180
39	40	110	70	1	140
20-40	45	175	45	1	185
41	20	30	20	-1	120
42	40	40	20	1	150
43	75	75	30	1	115
44	35	30	15	-1	100
21-32	5	85	10	-1	390
34	10	200	15	-1	450
36	20	210	30	-1	315
38	40	140	60	1	215
40	70	140	70	1	125
41	60	125	60	1	145
42	15	45	20	-1	120
43	35	40	10	1	145
21-44	40	35	15	1	85

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CONSULTING CHEMISTS & ANALYSTS

079030

ALS

OFFICE & LABORATORY
44 BALACLAVA ST., WOOLLOONGABBA 4102
Phone (07) 391 6986 A/H 355 0776
TELEX ALSEV 42344

LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: M 109 CLIENT B.H.P. CO. LTD.

ORDER No.: AREA: DATE RECEIVED:

SAMPLE TYPE: No.: DATE COMPLETED:

ATTENTION:

SAMPLE No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sn ppm					
22-18	15	400	20	1	0.32%					
19	20	640	20	1	0.28%					
22-20	10	175	5	1	0.30%					
21	10	240	15	1	170					
22	10	40	10	-1	70					
23	10	90	10	1	55					
24	15	130	25	1	50					
25	10	45	10	1	115					
26	10	190	20	1	130					
27	INSUFFICIENT SAMPLE				95					
28	5	75	10	1	330					
29	5	340	20	1	160					
22-30	2	125	10	1	210					
31	2	70	10	-1	120					
32	5	160	35	1	370					
33	15	440	65	1	220					
34	5	185	20	1	375					
35	5	170	20	1	185					
36	5	470	15	1	420					
37	5	75	10	1	170					
38	10	95	20	1	175					
39	5	95	15	1	110					
22-40	15	110	20	1	105					
41	50	90	40	1	125					
42	50	60	30	1	90					
43	60	95	25	1	110					
44	55	45	30	1	60					
25-32	10	195	25	1	115					
33	10	290	20	1	135					
25-34	5	70	15	1	55					

030

079031

OFFICE & LABORATORY
44 BALACLAVA ST., WOOLLOONGABBA 4102
Phone (07) 391 6986 A/H 355 0776
TELEX ALSEV 42344

LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: M 109 CLIENT B.H.P. CO. LTD.

ORDER No.: AREA: DATE RECEIVED:

SAMPLE TYPE: No.: DATE COMPLETED:

ATTENTION:

SAMPLE No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sn ppm
25-35	----	SAMPLE	NOT RECEIVED	----	
36	5	35	10	1	120
37	2	60	5	-1	85
38	15	80	15	1	125
39	20	130	35	1	115
25-40	15	70	20	1	125
41	10	110	10	1	100
42	25	110	25	1	120
43	40	65	25	1	90
44	10	30	15	-1	90
29-16	5	40	10	-1	20
17	5	40	10	-1	10
18	5	50	15	-1	15
19	5	20	5	-1	10
29-20	10	100	15	1	55
21	10	85	10	-1	70
22	20	135	10	-1	115
23	15	95	10	1	70
24	10	50	10	1	105
25	20	60	10	1	50
26	95	190	30	2	115
27	70	210	30	2	120
28	25	100	25	1	60
29	40	150	30	1	175
29-30	30	150	25	1	115
31	25	110	20	1	175
32	60	200	35	2	185
33	35	180	20	1	110
34	10	20	10	1	45
29-35	30	50	35	1	35

031

CONSULTING CHEMISTS & ANALYSTS

079032

OFFICE & LABORATORY
44 BALACLAVA ST., WOOLLOONGABBA 4102
Phone (07) 391 6986 A/H 355 0776
TELEX ALSEV 42344

LABORATORY REPORT

R. W. YERBURY
DIRECTOR

BATCH No.: M 109 CLIENT B.H.P. CO. LTD.

ORDER No.: AREA: DATE RECEIVED:

SAMPLE TYPE: No.: DATE COMPLETED:

ATTENTION:

SAMPLE No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sn ppm
29-36	10	35	20	1	35
37	5	20	15	1	30
38	10	50	10	1	95
39	5	75	10	1	225
29-40	10	160	10	1	80
41	10	55	5	1	80
42	5	45	5	2	75
43	10	190	15	2	80
29-44	25	170	10	3	105

APPENDIX 2

NORTH SCAMANDER PROSPECT

PETROLOGICAL REPORT

EXPLORATION DEPARTMENT
Petrology Section

Clayton, Victoria 3168
P.O. Box 264, Clayton
Telephone 560-7066

Memo to: DR. A. GOODE

Date 30.1.80
Our Ref: DS:AW
Your Ref:
File: M520
Date:

Subject: RECONNAISSANCE SAMPLES FROM TASMANIA

A. North Scamander Prospect, Scamander, NE Tasmania

The six samples supplied (MRL11,473A-F) come from the Lower Devonian-Tremadocian-Cambrian(?) Mathinna Beds. The rocks are poorly sorted, texturally immature siltstones and sandstones which have undergone varying degrees of hydrothermal alteration producing either sphalerite-galena-chalco pyrite, hematite-ilmenite, or magnetite-bearing mineral assemblages, generally with accompanying chloritization of the sediments. Evidence for subsequent "carbonation" is frequently observed.

MRL 11,473A

This sample is of a poorly sorted immature siltstone cut by an irregular network of magnetite veinlets and patches. The siltstone comprises angular quartz grains, recrystallized in parts, in a fine grained quartz-chlorite matrix. Rutile and zircon and calcite are accessory phases. Occasional small muscovite flakes occur throughout.

Magnetite is the major vein component, commonly as subhedral cuboids, however in places it is severely martitised. Geothite is commonly associated with the magnetite-hematite veins, together with large flakes of chlorite and sideritic calcite. The Fe-rich calcite also occurs in microveinlets sometimes with fine chlorite flakes. Blebs of galena occur in the magnetite and disseminated pyrite, chalcopyrite and ilmenite are found in the sedimentary matrix.

The magnetite is of hydrothermal origin, indicated by its veined mode of occurrence and the galena inclusions. Chloritization and partial recrystallization of the siltstone probably accompanied magnetite formation. The sideritic calcite is derived from the breakdown of the iron phases during an influx of permeating carbonate fluids.

MRL 11,473B

This rock is essentially the same as MRL11,473A except that it contains more magnetite and chlorite. It is a silty sandstone made up on angular quartz in a quartz-chlorite matrix. Irregular magnetite-chlorite-Fe-calcite veinlets are common. Hematite and goethite are not as abundant as in MRL 11,473A. Galena occurs in the magnetite and disseminated sulphides occur in the matrix.

. . ./2

MRL 11,473C

The specimen submitted comprises poorly sorted,angular, sand sized quartz in a silty quartz-clay matrix. Accessory minerals are mainly opaques - fine subhedral magnetite and rare subhedral pyrite - and fine flakes of museovite. Small patches of fine grained calcite occur throughout the sample. Limonite staining is uncommon. Quartz microveinlets crosscut the rock. No sedimentary structures-bedding, laminating, etc., - occur in the sample.

MRL 11,473D

The sample is a weathered chloritized siltstone with minor mineralization. The sediment comprises angular, deformed, recrystallized quartz grains in a very fine grained recrystallized quartz-chlorite matrix. Muscovite is an accessory phase found as large flakes surrounded by clusters of small muscovite flakes. Calcite occurs infrequently in the matrix, but is abundant in the opaque-bearing portions of the rock.

Sphalerite and goethite are the most abundant opaque phases; sphalerite occurring as subhedral grains usually surrounded by amorphous geothite. Hematite commonly occurs as intergrowths with goethite. Pyrite and chalcopyrite occur as small (10-15μm) disseminated grains and blebs but tend to be concentrated in and around sphalerite and goethite. Rarely chalcopyrite occurs as anhedral grains up to 300μm in size. Galena occurs as small blebs within sphalerite but more commonly as irregular grains up to 500μm displaying the characteristic triangular pits.

The overall appearance of the rock in this section suggests that it is brecciated; consistent with the strained quartz grains, the recrystallized matrix and an abundance of chlorite. Brecciation may have been accompanied by hydrothermal activity producing the sphalerite-galena-chalcopyrite mineralization. The abundant geothite results from the breakdown of iron-bearing sulphides*, with the iron-rich calcite being possibly derived from the geothite.

MRL 11,473E

The sample is a muddy fine grained sandstone comprising angular quartz grains in a fine grained quartz-sericite matrix. Small patches of micritic calcite commonly occur within the matrix material. Scattered throughout the rock are muscovite flakes. Opaques are uncommon and comprise very fine grained pyrite, galena, chalcopyrite and magnetite.

The rock is undeformed and not recrystallized, and is cut by coarse quartz microveinlets often with coarser micritic calcite nearby.

MRL 11,473F

The rock consists essentially of fine grained chlorite and muscovite with lesser amounts of angular quartz and is cut by an irregular network of opaque patches and veins. It could be classified as a severely chloritized silty mudstone. The opaques comprise deformed and fractured hematite-ilmenite intergrowths with minor amounts of secondary geothite. Limonite staining is abundant throughout the specimen.

* The geothite could be derived from hydrothermal(?) hematite.

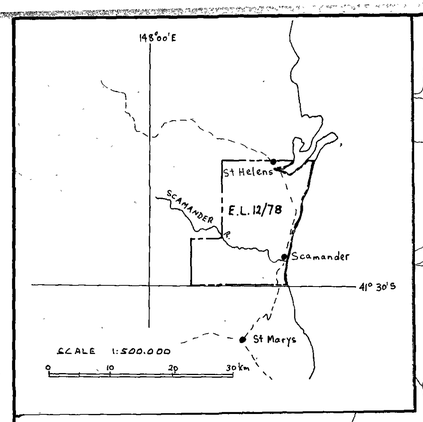


Fig.2¹

UPPER SCAMANDER AREA

GEOCHEMICAL SAMPLE LOCATIONS

Explanation

╱	BHP Stream sample : – 40 mesh (Cu. Pb. Zn. Ag. As. Sn. Au)
●	BHP Rock Chip sample (Cu. Pb. Zn. Ag. As. Sn. Au)

Fig. No. ....
To accompany ....
Dated ....
80-1444

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

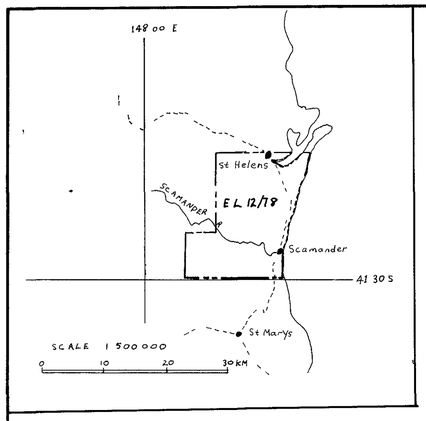
UPPER SCAMANDER AREA. 3225
STREAM & ROCK SAMPLE LOC'NS
SHEET 1

Drawn: R.H.	Date: 8-8-79	Centre: HOBART
Traced:	Project No: Z010	Drawing No: A1-
Checked:		
O.I.C.:		

Revisions:

079036

Fig 2[2]



5 cm

SCALE 1 25,000

0 1 2 3 4 5 Km

5 cm

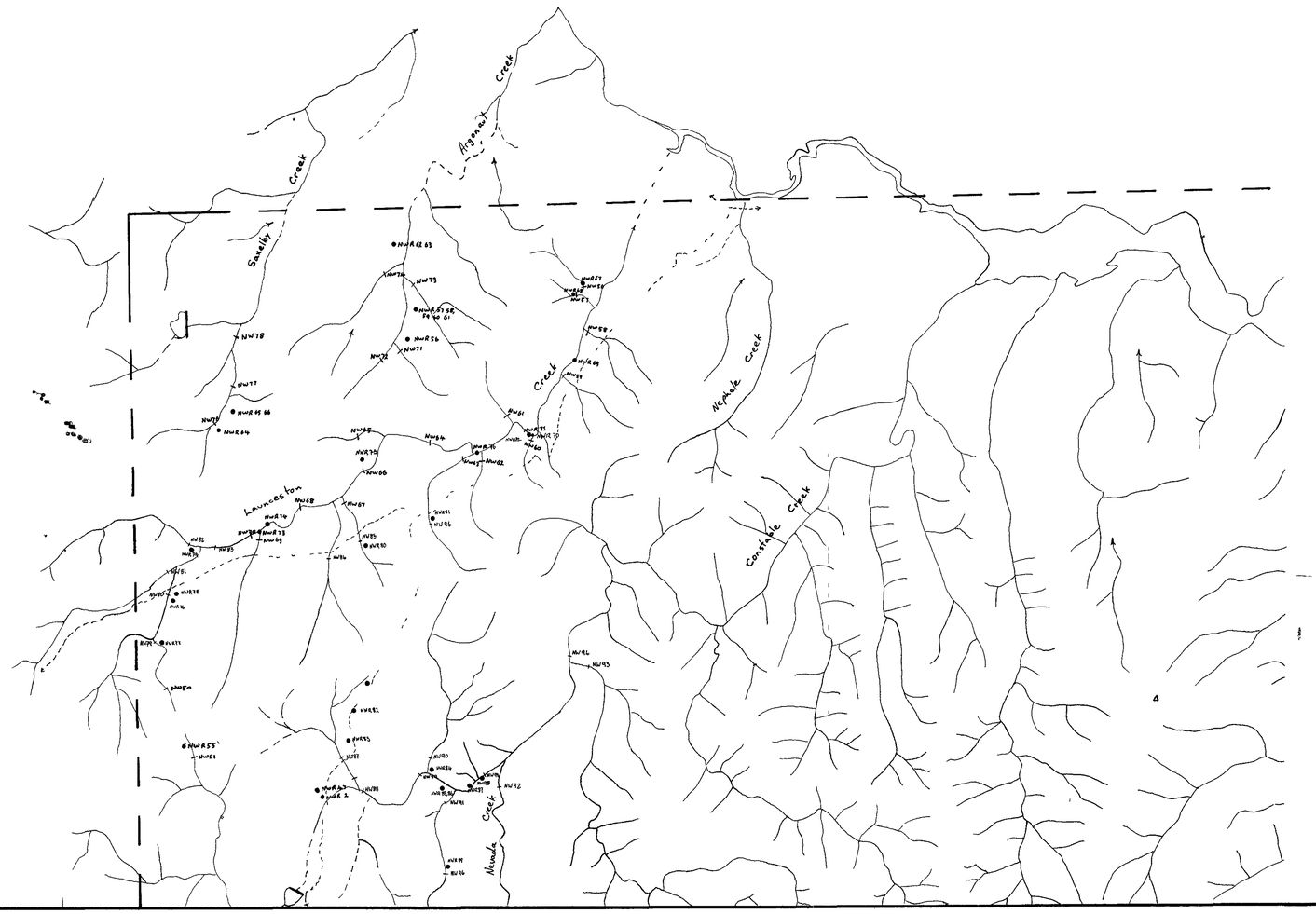


Fig No
To accompany
Dated 80-14444

THE BROKEN HILL PROPRIETARY CO LTD
EXPLORATION DEPARTMENT

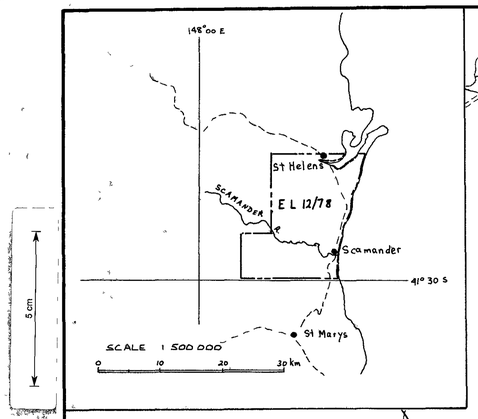
SCAMANDER EL 12/78 3226
GEOCHEMICAL SAMPLE LOCATIONS
SHEET 2

Drawn RL AD	Date FEB 80	Centre HOBART
Traced	Project No T610	Drawing No A1-
Checked		
OIC		

Revisions

079037

Fig 3.1



UPPER SCAMANDER AREA

GEOLOGY

LEGEND

T	Tertiary & Quaternary gravel alluvium
Dg_1	Devonian granite — St Helens Pluton, biotite-hornblende granodiorite
Dg_2	Devonian granite — Mt Pearson Pluton, biotite ± muscovite granite, greisen veins
Sm	Silurian ? Mathinna Beds (? L Devonian) greywacke sandstone shale
Sm_d	Mathinna Beds laminated dark shales in sequence
	Major Faults . lineaments
g	Gossans
	Mines and prospects

-geology M Page 19-3-79 compilation RH 7-8-79
basemap compiled from 1 31 680 forestry maps
- revised 12-2-80

SCALE 1 25,000

0 1000 2000 3000 4000 metres

5 cm

SIMILAR TO D.o.M 3326-41 D.I.GROVES.

Fig No
To accompany
Dated 80-1444

THE BROKEN HILL PROPRIETARY CO LTD
EXPLORATION DEPARTMENT

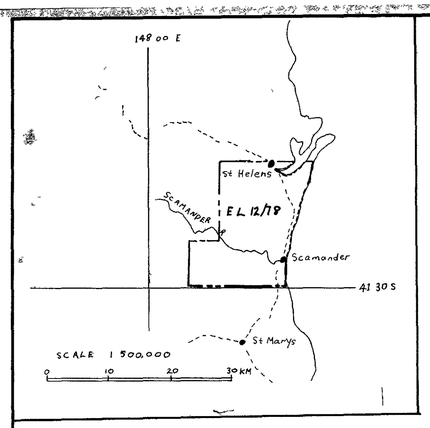
UPPER SCAMANDER AREA 3227
GEOLOGY — SHEET 1

Drawn R H	Date 8-8-79	Centre HOBART	
Traced		Project No 2010	Drawing No A1-
Checked			
OIC			

Revisions

079038

Fig 3²



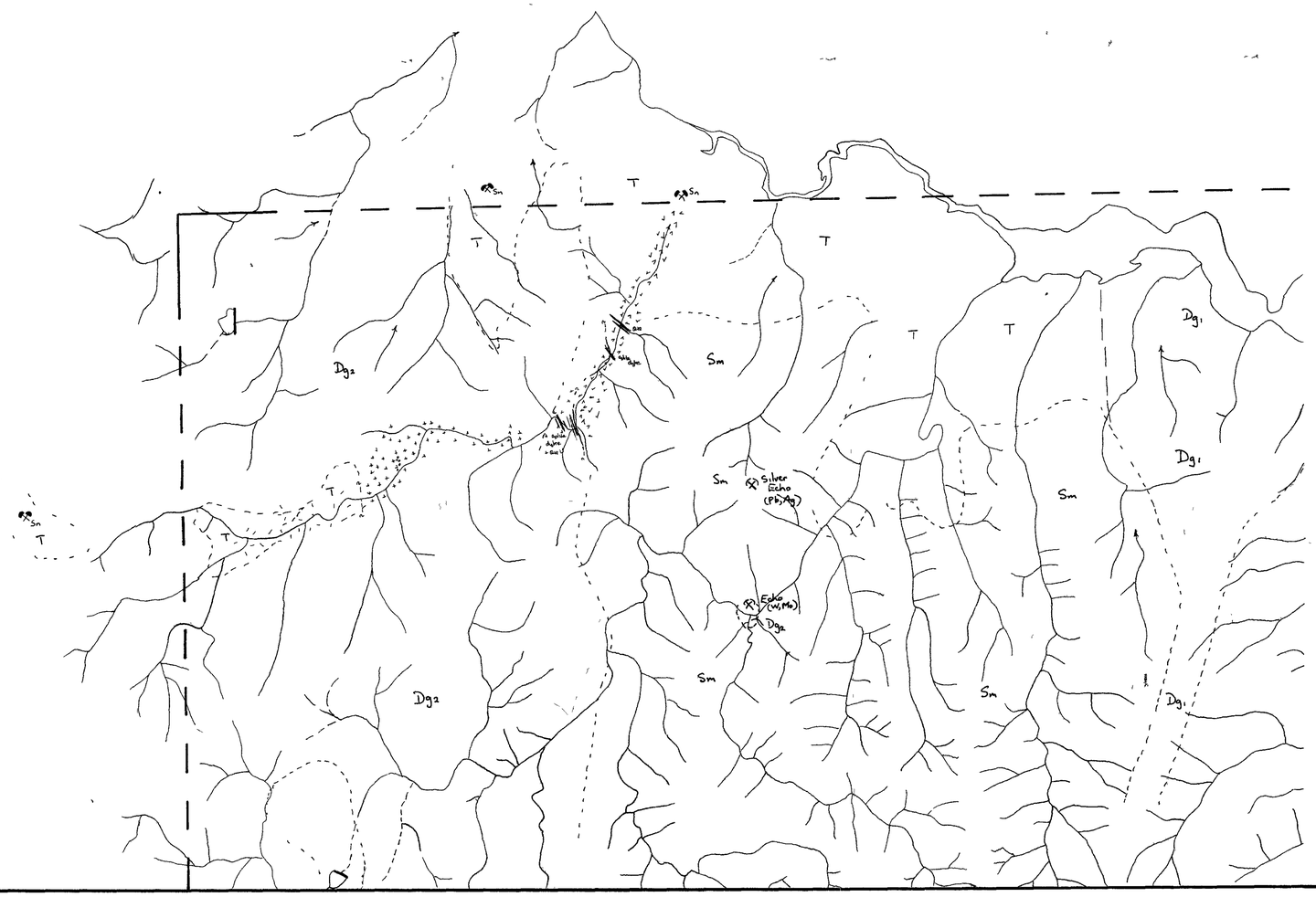
SHEET 2

SHEET 1

SCALE 1 25,000

0 1 2 3 4 5 Km

5 cm



SIMILAR TO
D.O.M. 3326-41

D.I. GROVES etc.

Fig No
To accompany
Dated 80-1444

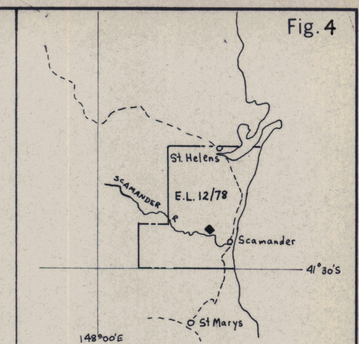
THE BROKEN HILL PROPRIETARY CO LTD
EXPLORATION DEPARTMENT

SCAMANDER EL 12/78 3226
GEOLOGY - SHEET 2

Drawn AD R.L. R.H	Date FEB 1980	Centre HOBART	
Traced	Project No T610	Drawing No. A1-	
Checked			
OIC			

Revisions

079039



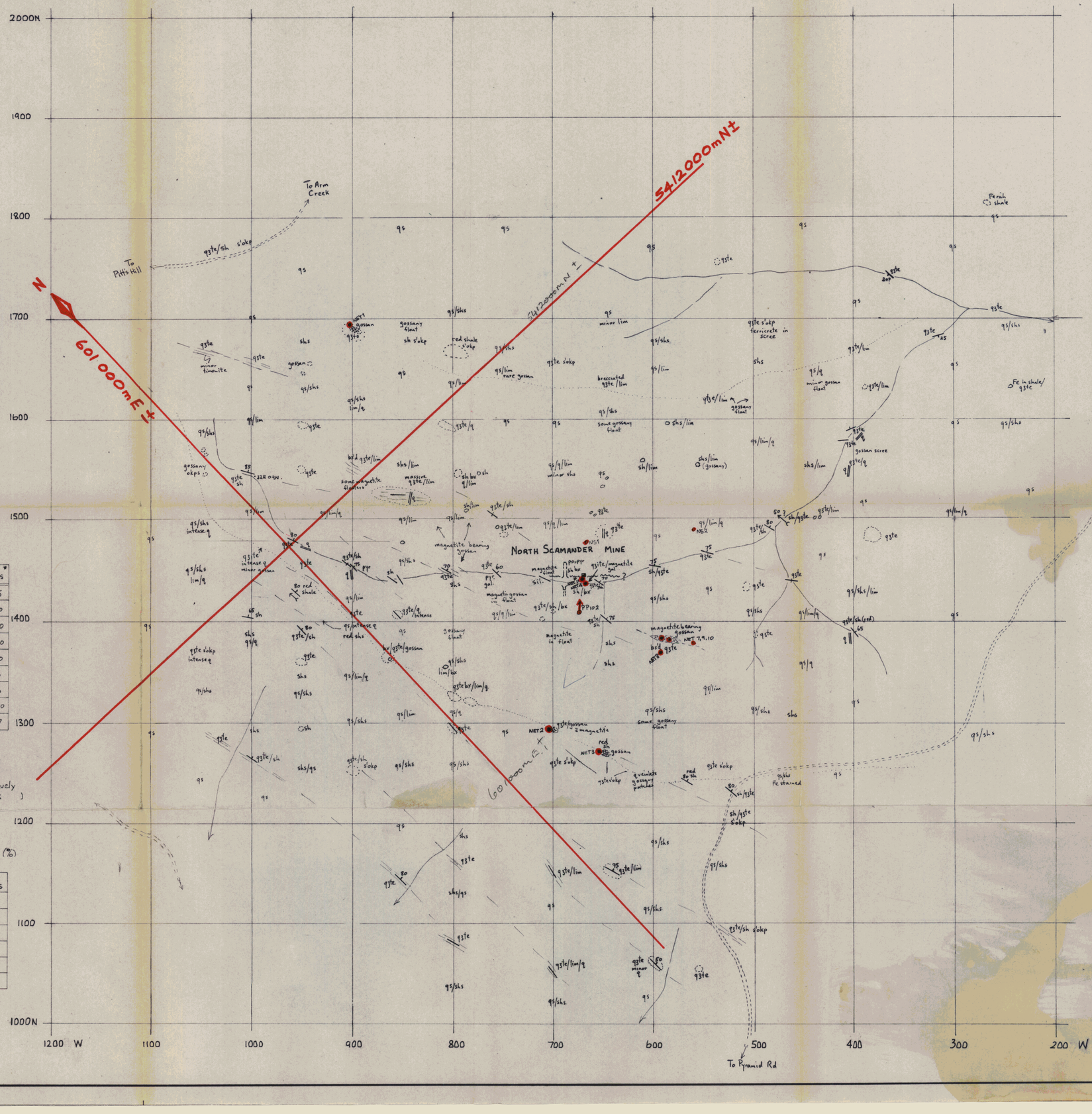


Fig. 4

EXPLANATION

qzte	quartzite — Siluro-Devonian Mathinna Beds
sh	shale .. ..
qs	quartzite scree
shs	shale scree
lim	limonite
q	quartz veinlets
bx	breccia
po	pyrrhotite
py	pyrite
gal	galena
70/	dip & strike of strata
/	dip indeterminate
//	strike of veinlets.
⊙→	E Z DDH 5.5' of — { 4.4 % Zn 1.5 % Pb 0.1 % Cu

local grid

5 cm

Rock Chip Assay Data (%)

	Sn	W*	Cu	Pb	Zn	Ag*	As*
✓ NET1	0.06	<10	0.08	0.06	0.16	3	95
✓ .. 2	0.02	..	0.05	0.34	0.03	20	60
✓ .. 3	0.07	..	0.06	0.18	0.01	12	190
✓ .. 4	0.08	..	0.19	0.12	0.07	33	50
✓ .. 7	0.23	..	0.06	0.26	0.02	30	60
✓ .. 8	0.04	..	0.01	0.08	<0.01	11	6
✓ .. 9	0.50	..	0.04	0.30	0.01	14	16
✓ .. 10	1.07	..	0.05	0.54	0.01	11	150
✓ .. 11	0.07	60	0.11	0.12	3.02	25	7

* ppm

(Au — 20.15.10 ppb respectively on samples NET 1.2.3)

E. Z.
Rock Chip Assay Data (%)

	Sn	W	Cu	Pb	Zn	Ag*	As
NS108			1.45	0.26	7.8	85	
.. 109			3.1	0.22	37.2	105	
.. 110			0.1	0.49	4.0	40	
.. 111			0.2	1.00	2.9	60	
NB57A			-	0.32	0.84	-	
.. 7B			0.5	0.65	0.86	-	

* ppm

NS108 - 111 dump samples
NB 57 A, B gossan samples

Fig. No.
To accompany
Dated

80-1444

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

NORTH SCAMANDER MINE . EL 12/78

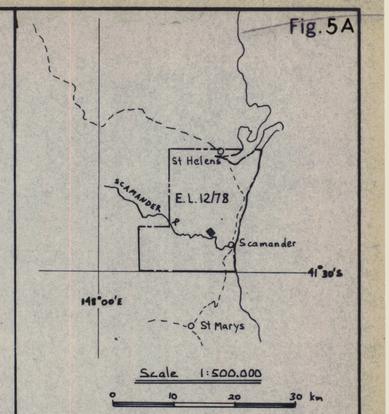
GEOLOGY 3229

Drawn: R.H.	Date: ~~5-10-79~~ 5-3-80	Centre: HOBART
Traced:	Project No: T610	Drawing No: A1-
Checked:		
O.I.C.:		

Revisions:

079040

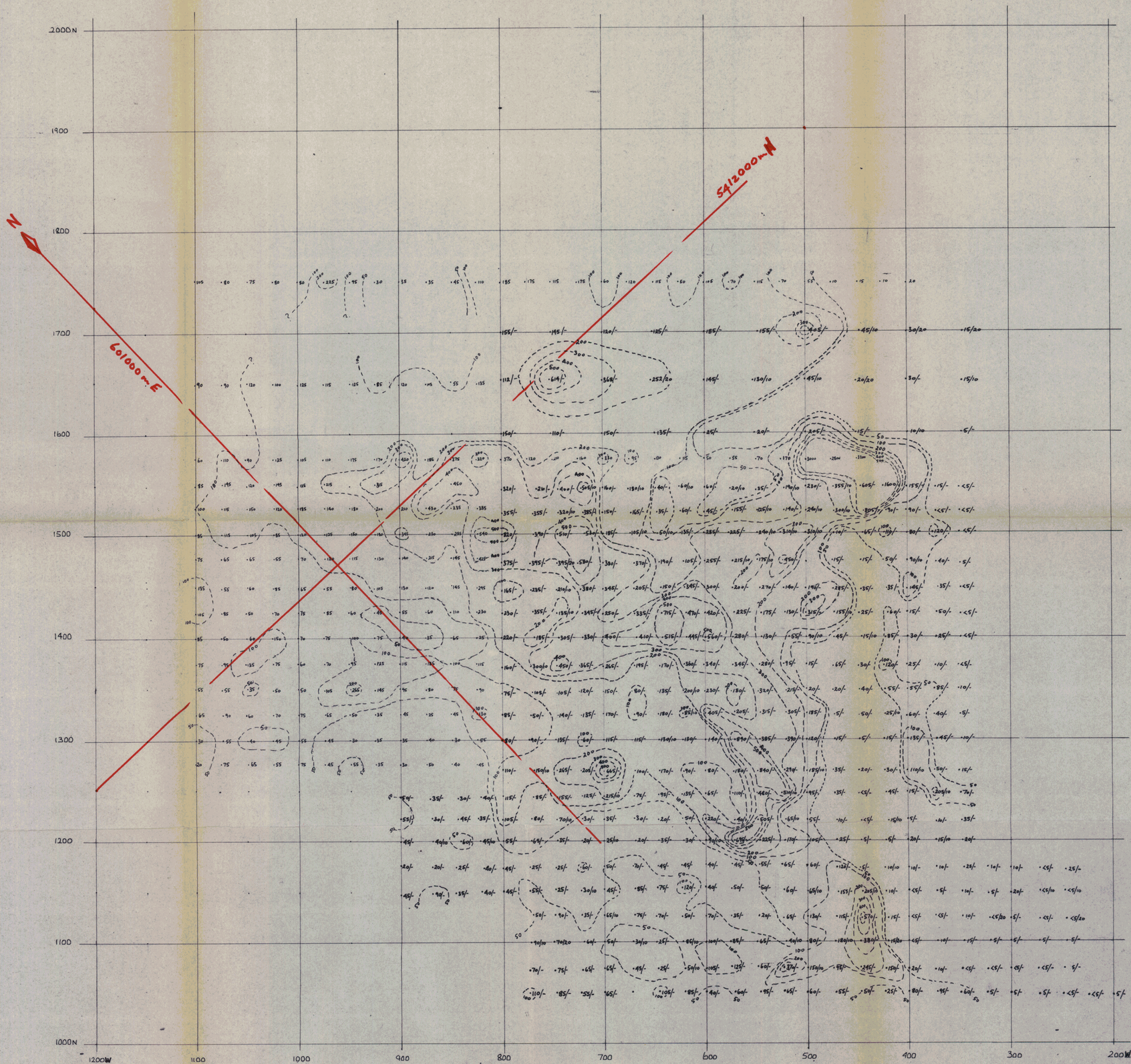
Fig. 5A

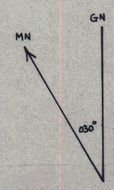


LOCATION MAP

Sn / W in soil
(-80 mesh)

Sn 50-100 ppm
100-200 ..
200-300 ..
300-400 ..
400-500 ..
>500 ..





SCALE 1:2.000

0 50 100 150 200 metres

local grid

5 cm

Fig. No. .....
To accompany .....
Dated .....

80-14444

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

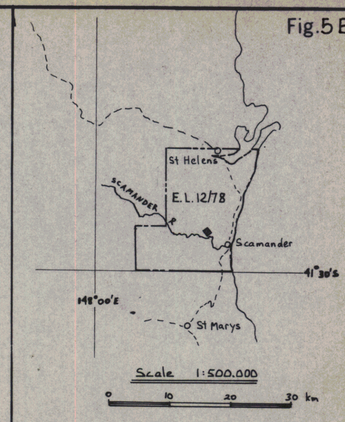
NORTH SCAMANDER MINE, EL12/78
GEOCHEMICAL RESULTS
Sn / W ppm, -80# soil

Drawn: R.H.	Date: 5-3-80	Centre: HOBART	
Traced:		Project No: T610	Drawing No: A1-3230
Checked:			
O.I.C.:			

Revisions:

079041

Fig.5B

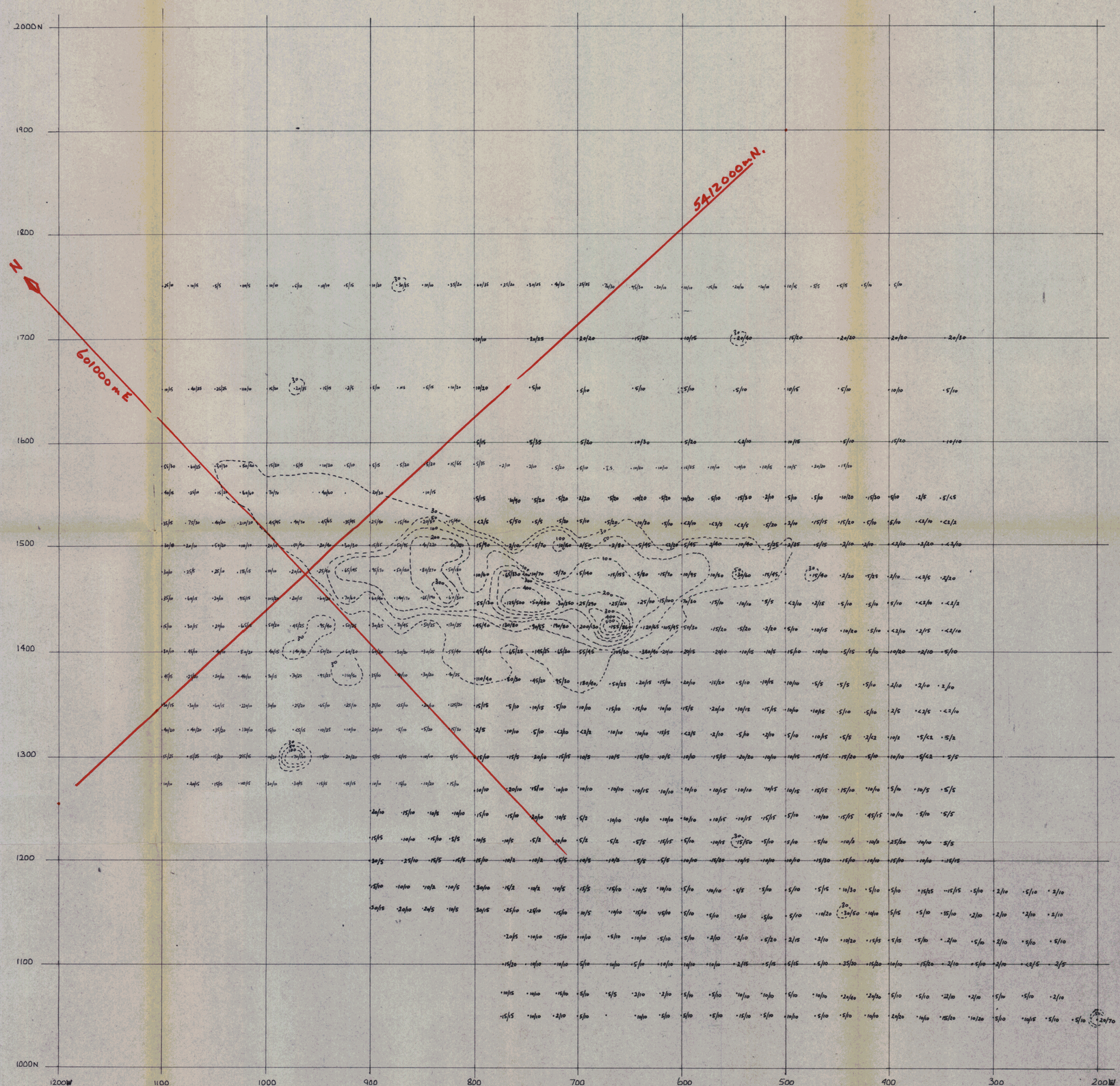


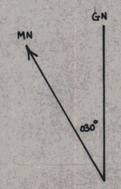
LOCATION MAP

Cu / Zn in soil

(-80 mesh)

Zn	
	30-50 ppm
	50-100 "
	100-200 "
	200-300 "
	300-400 "
	400-500 "
	> 500 "





SCALE 1:2.000

0 50 100 150 200 metres

5 cm

local grid

Fig. No. .....
To accompany .....
Dated 80-1444

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

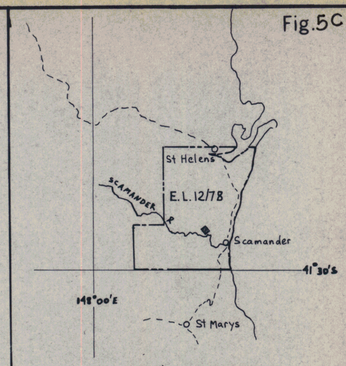
NORTH SCAMANDER MINE, EL12/78
GEOCHEMICAL RESULTS
Cu / Zn ppm. -80# soil

Drawn: C.W.	Date: 5-3-80	Centre: HOBART	
Traced:	Project No: T610	Drawing No: A1-3231	
Checked:			
O.I.C.:			

Revisions:

079042

Fig.5C

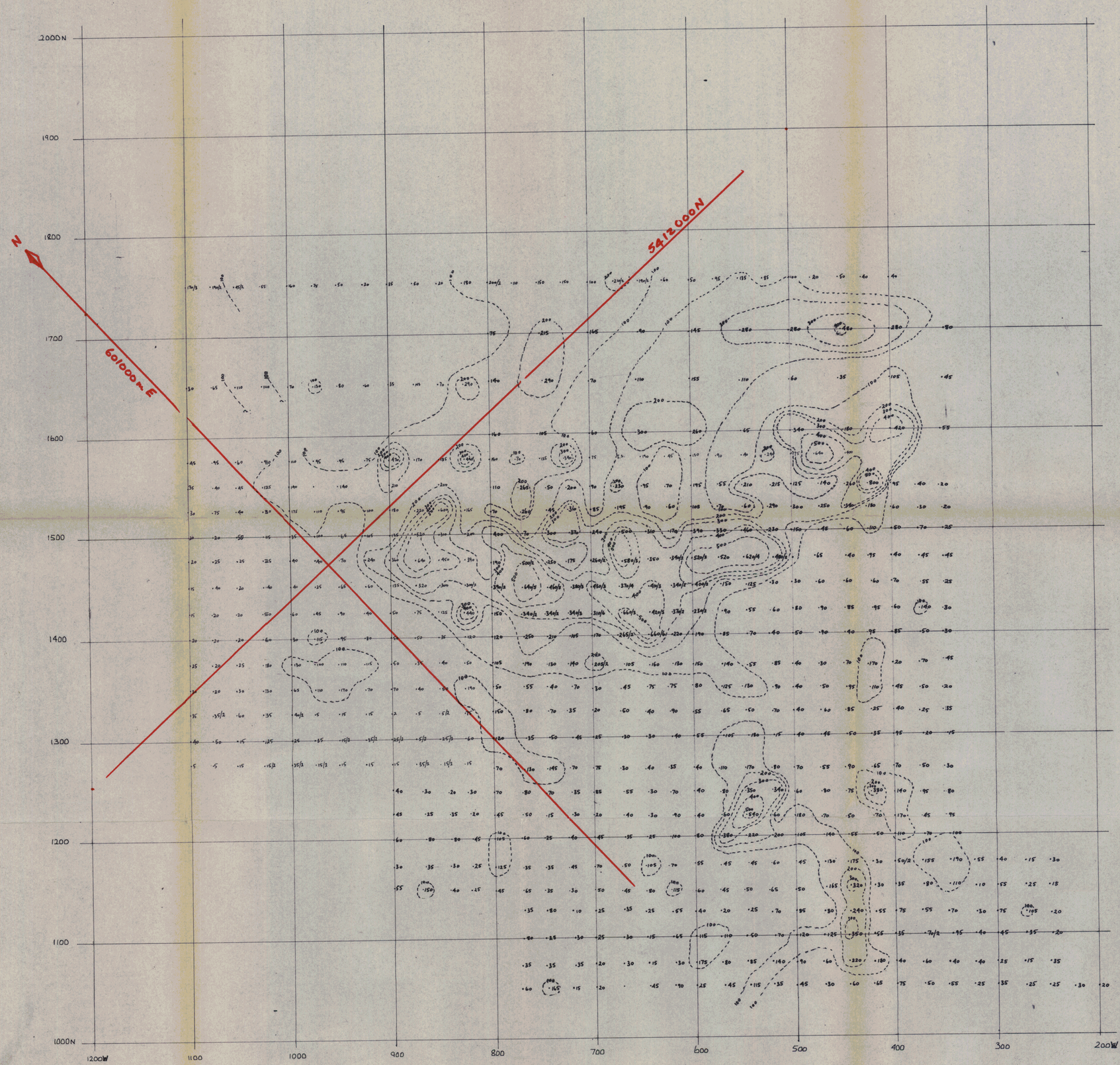


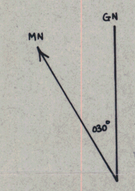
LOCATION MAP

Pb / Ag in soil

(-80 mesh)

Pb		
	0 - 100	ppm
	100 - 200	"
	200 - 300	"
	300 - 400	"
	400 - 500	"
	> 500	"





SCALE 1:2,000

0 50 100 150 200 metres

5 cm

local grid

Fig. No. .....
To accompany .....
Dated .....

80-1444

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

NORTH SCAMANDER MINE, EL12/78
GEOCHEMICAL RESULTS
Pb / (Ag) ppm -80# soil

Drawn: R.H.	Date:	Centre: HOBART	
Traced:		Project No: T610	Drawing No: A1-3232
Checked:			
O.I.C.:			

Revisions:

079043

Fig.5D

Cu in soil

-80 mesh (ppm)

20 - 40
40 - 50
50 - 100
100 - 200
> 200

5412000 m N

6010000 m E

1700N
1600N
1500N
1400N
1300N
1200N
1100N
1000N

1700 N
1600 N
1500 N
1400 N
1300 N
1200 N
1100 N
1000 N

10000W
9000W
8000W
7000W
6000W
5000W
4000W
3000W

Fig. No. .....
To accompany .....
Dated .....

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT 80-14444

NORTH SCAMANDER MINE
GEOCHEMICAL RESULTS
Cu ppm -80 mesh in soil

Revisions:

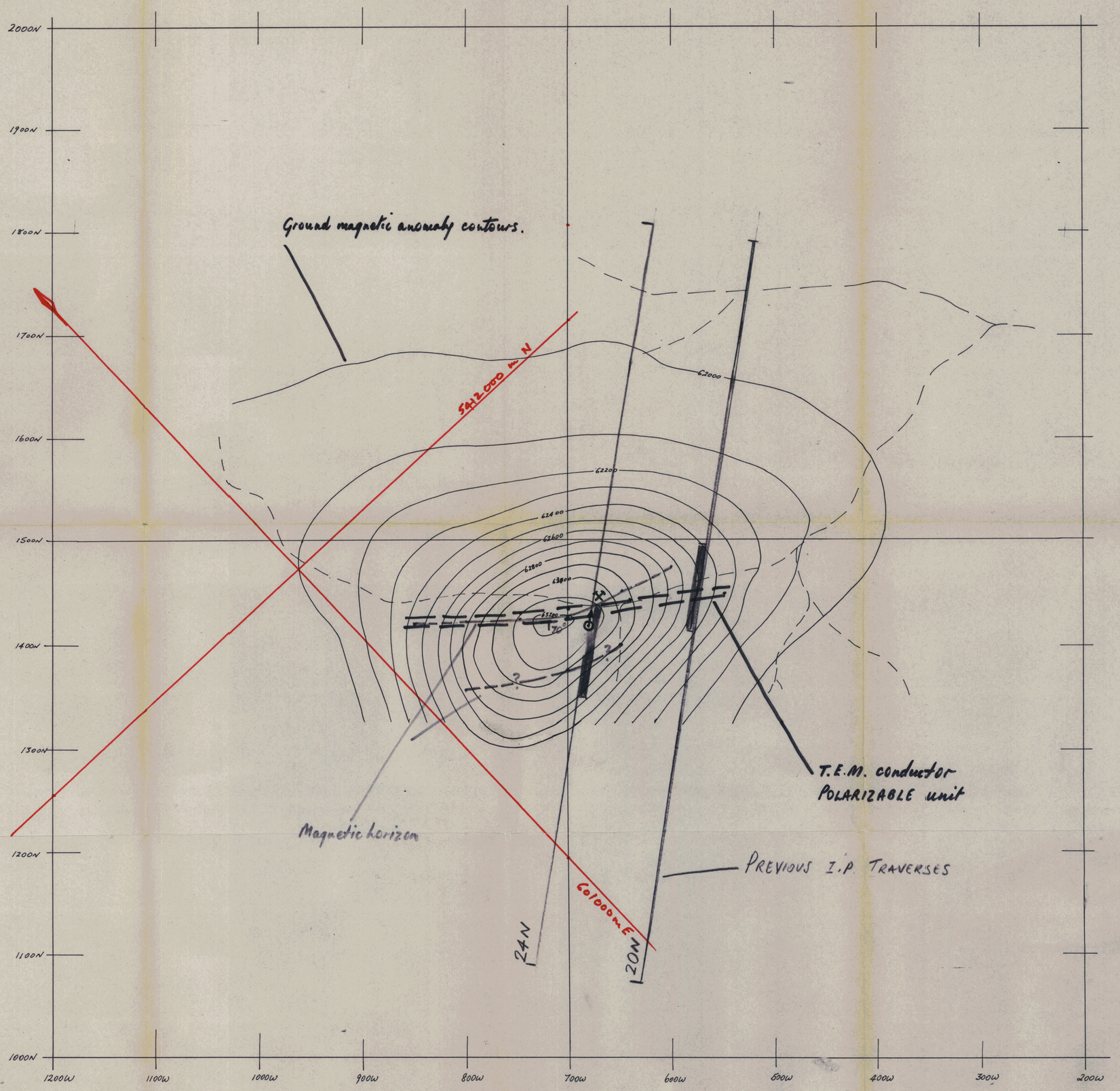
Drawn: R.H.	Date: 16-2-80	Centre: HOBART	Drawing No.
Traced:	Project No.: T610		A2-3233
Checked:			

07904 4

5 cm

FIG. 6

GEOPHYSICAL RESULTS



80-1444

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

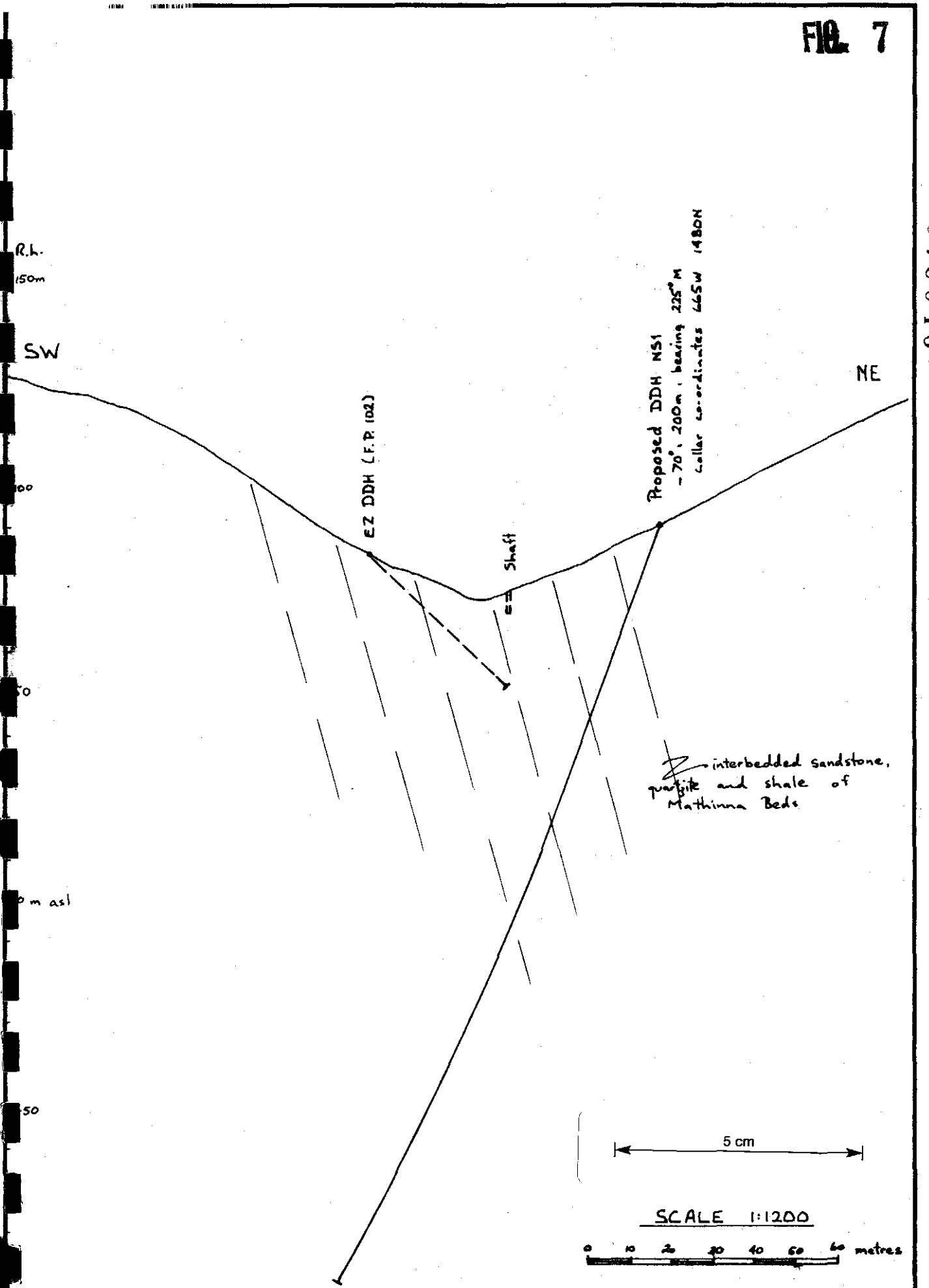
NORTH SCAMANDER MINE
GEOPHYSICAL RESULTS
1:2000
3234

Revisions:			
	Drawn: G. STALTARI	Date: 5-3-80	Centre: MELB.
	Traced:	Project No: T610	Drawing No: A1-
	Checked:		

079045

FIG. 7

035



THE BROKEN HILL PROPRIETARY CO. LTD.

NORTH SCAMANDER PROSPECT

Diamond Drillhole Specification — NS 1

Centre: HOBART

Date: 29/1/80

Project No: T.610

Drawing No: A4-