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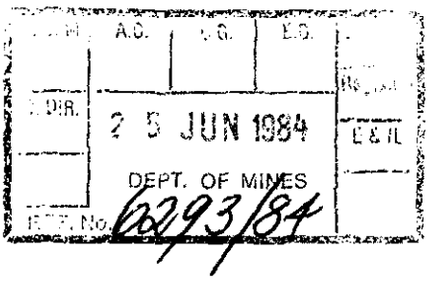
411001



EXPLORATION LICENCE 18/83

LAKE CHISHOLM, TASMANIA

FINAL REPORT

May, 1984

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411002

CONTENTS

APPENDICES

FIGURES

FIG. 1

004

411004

Centre: Melbourne	THE BROKEN HILL PROPRIETARY CO. LTD.	Project No. T68-1
Date: 26-1-84	E.L. 18/83, LAKE CHISHOLM, TASMANIA. LOCATION MAP	Drawing No: A4-2442

EXPLORATION LICENCE 18/83
LAKE CHISHOLM, TASMANIA
FINAL REPORT

1. INTRODUCTION AND SUMMARY

Exploration Licence 18/83 of 177 square kilometres was granted to BHP Minerals Limited on 1st August 1983. The principal target was a carbonate-replacement cassiterite-sulphide tin deposit.

Initial interest in the area resulted from re-evaluation of Esso and RTZ INPUT and aeromagnetic data over our recent Arthur River EL 18/80. A broadly coincident INPUT/aeromagnetic anomaly was noted to the west of the licence area in E.L. 1/77, held at the time by CRA but subsequently relinquished in 1983.

Other criteria relevant to area selection were the presence of the Rapid River lineament in the vicinity of the geophysical anomalies, the occurrence of dolomites and calcareous sediments, and subtle anomalous tin values recorded in several drainages.

An extensive grid was cut over the main zone of interest at Lake Chisholm, and soil sampling, geophysical surveys and geological mapping were carried out. Elsewhere in the Licence area pan-concentrate sampling was used to follow up anomalous tin geochemistry reported from earlier work.

The exploration programme succeeded in explaining observed geophysical and geochemical anomalies but no indications of potentially economic mineralisation were encountered. Continued exploration was not considered warranted.

2. GENERAL

2.1 Location and Access (Fig. 1)

The licence area is rectangular in shape and is situated 40 kilometres south of Smithton in Northwest Tasmania. It is linked to the town by a bitumen road, and numerous forestry and farm tracks provide good access. As a result of the extensive logging, very few parts of the licence are inaccessible.

2.2 Topography and Land Use

Drainage is provided by the westerly-flowing Arthur River, and by the Roger River and its tributaries in the north. Most of the licence area consists of an undulating plateau at about 200 metres elevation, with the main drainages being quite deeply incised. The grain of the country trends northeast, reflecting the geological control. A major fault scarp is present in the northwest of the licence, with the Montagu Plains to the west.

Most of the land is covered by State Forest that is currently being logged. In the northeast dairy and sheep farming is dominant on cleared pastures.

3. PREVIOUS EXPLORATION

Three previous Exploration Licences are known to have included E.L. 18/83. These were held by ANZECO (E.L. 6/72), Esso (E.L. 2/73) and CRA (E.L. 1/77). An aeromagnetic survey carried out by Rio Tinto in 1956 over much of Northwest Tasmania also covered the licence area. Figure 2 shows relevant details of these previous licences.

ANZECO began work on E.L. 6/72 during 1972 and relinquished the area during the following year. Their target was a tungsten deposit similar to the carbonate hosted scheelite-bearing orebodies on King Island, and the work programme consisted of stream sediment sampling and geological reconnaissance over the dolomites and dolomitic sediments in the area.

Stream samples were panned to concentrate form and analysed for copper, lead, zinc, molybdenum, chromium, tin and tungsten. Samples collected from within the area now covered by E.L. 18/83 gave several anomalous values for tin (to 470 ppm - Figure 3). ANZECO attributed all their tin anomalies as being due to distal sources since the samples had a high chromite content. The chromite was assumed to have been derived from the Bald Hill Ultramafic Complex some 50 to 60 kilometres to the south, and redistributed from Tertiary gravels. Similarly, the tin was assumed to have been derived from primary deposits in the Bischoff-Cleveland-Meredith area. Consequently no detailed follow-up was attempted.

Esso took up E.L. 2/73 after completing a study of the mineral potential of Australia in 1971. During March of 1973 they contracted Geoterrex Limited of Canada to perform an airborne INPUT, magnetic and scintillometer survey over the licence area to locate suitable base metal targets. A total of 1499 line kilometres (931 line miles) were flown at 1 mile spacing and a height of 400 feet which locally exceeded 700 feet to allow for the rugged terrain encountered.

Limited ground checks suggested that many of the elongate belts of anomalies shown by the survey results were caused by beds of black "graphitic" slates. Of the 62 anomalies detected only 13 were checked out on the ground. Geological reconnaissance and follow-up failed to locate any significant prospects.

CRA included Lake Chisholm in their current E.L. 1/77 until 1983, when part of the licence area was relinquished. During the period 1981-1983, a major programme of regional stream sediment sampling was conducted to search for Selwyn basin (Canada)- style shale-hosted lead-zinc mineralization.

Tin was analysed for as standard procedure using XRF techniques but all assays appeared to fall in the background category. No panned concentrate samples were collected. Aeromagnetic and INPUT targets were also examined with most being attributed to basalt and black shales respectively.

4. REGIONAL GEOLOGY

No new regional mapping of the licence area was attempted other than observations at sample sites and detailed mapping of the Lake Chisholm grid. Mapping completed by other companies and the Geological Survey provided most information needed, this being summarised in the following notes and in figure 3.

The licence area lies in the southeastern part of the early Proterozoic Smithton Trough. Sequences of Precambrian and Cambrian deposits fill the Trough which rests unconformably on early Precambrian siltstones, greywackes and quartzites.

4.1 Stratigraphy

"Younger" Precambrian

Green Chloritic Siltstones - These occur in the south-eastern corner of the licence. The siltstones are green, often highly chloritic and show compositional banding.

Black Pyritic Shales - As the name implies, pyrite is commonly developed as euhedral crystals along bedding planes in this massive to thinly bedded unit.

Siltstone, greywacke, quartzite unit - A sequence of interbedded greywacke, white to grey quartzite and massive pale cream to grey siltstone comprise this unit. Sedimentary structures are common.

Bryant Hill Quartzite - This is believed to unconformably underlie the Smithton Dolomite and consists of over 600 metres of well sorted quartzite bands with minor lenses of quartz conglomerate.

Smithton Dolomite

This formation has been described as a 600 metre sequence of interbedded shallow-marine, stromatolite bearing, oolitic limestone, chert and carbonaceous siltstone.

It is widely distributed throughout the region and is considered to be a potentially favourable host rock for tungsten and base metal mineralization. In places the cream-white dolomite and limestone are strongly silicified and in these localities associated with a great deal of deformation and brecciation. Blue-grey chert has been mapped by many geologists as a separate unit whilst others consider it to be a highly silicified form of dolomite.

Cambrian

Dolomite Breccia - This unit disconformably overlies the Smithton Dolomite and varies in thickness from 7 to over 40 metres. It consists of angular and rounded fragments of dolomite and chert set in a fine grained dolomitic matrix. North of the Arthur River the rock changes to a dolomitic siltstone still retaining angular fragments of chert and dolostone set in a pyritic, black carbonaceous matrix.

Siltstones - A grey to black, fine grained, well bedded siltstone-greywacke unit rests conformably on and grades out of the breccia. It is generally well sorted, has no grading, contains finely disseminated pyrite and weathers to an orange-brown colour.

Volcanics - Basalts, tuffs, greywacke and a tuffaceous breccia (west of the Julius River) comprise this unit. The basalts are tholeiitic spilites, typically fine grained and composed of plagioclase, pyroxene, chlorite and magnetite, and are often amygdaloidal. The weathered outcrop is typically red-brown in colour and the rocks cover a sizeable portion of the licence area. Angular to sub-angular volcanic fragments are present in the green chloritic breccia.

Tertiary

Several small outcrops of Tertiary basalt and patches of gravel, silt and sand have been recorded in and around the licence area but as yet few have been mapped.

Quaternary

Extensive deposits up to 10 metres thick of interbedded quartzite gravel, sand, clay and peat overlie the Smithton Dolomite. High level gravels occur in the ranges bordering the Arthur River and these appear to be remnant river gravels from their well rounded pebble constituents. Fragments appear locally derived and include quartzite and dolomite. Cassiterite and chromite content of these gravels is reportedly high.

4.2 Structure

All the Precambrian rocks have been complexly folded. The dominant trends are north-east and north-west but some east-west trending folds have been observed.

The north-east trending Duck River fault in the west and the Rapid River lineament which trends north-west, are the only major structures in the area.

4.3 Lake Chisholm Grid Geology (Figure 4)

Useful outcrop over the grid is limited because of the presence of Tertiary and Quaternary gravels, thick rain-forest and severe disruption by bulldozing and clearing. Where seen the Smithton Dolomite sequence is poorly bedded.

Mapping was confined to road cuttings and streams, as well as incorporating rock chips identified during auger sampling. The majority of the area is covered by Smithton Dolomite as a sequence of blocky blue-grey cherts, finely bedded grey siltstones and poorly bedded white to grey dolomite. The dolomite is often silicified and rarely oolitic. The rocks are highly deformed and bedding directions vary greatly. Massive quartzite beds outcrop in two small patches in the southern part of the grid area.

At grid reference 11200N 10650E thinly laminated black shales were observed as flat and partial sub-crop. No evidence of pyrite was found. Other rocks of interest were a small plug of amphibolite weathered to a yellow rock and red soils and a piece of iron rich chert-shale breccia found in the approximate location of the Rapid River lineament (local grid 10850E 11560N).

As mentioned, well rounded quartzite pebbles 2-3 cm in size formed a layer of gravels covering many of the ridges in the northern part of the grid where land has been cleared for logging.

5. GEOCHEMISTRY

5.1 Soil Sampling

A soil auger programme was conducted over the western half of the Lake Chisholm grid during December, 1983. A total of 83 shallow holes were drilled at 100 metre intervals. Unfortunately rapid lateral variations in the soil profile are apparent and the C - horizon was not always reached. Samples were collected every 30 centimetres where possible. Overall, 140 samples were taken (numbered T68/700 to T68/839) and analysed by AMDEL in Adelaide for copper, lead, zinc, nickel, chromium, tin, tungsten and arsenic (Appendix 1). The best analytical results for each hole and element are presented in Figures 5 and 6.

Samples were split and one half retained for sieving and identification of the geology. This information is shown in Figure 4.

In general the assay results were quite low but a few holes with anomalous copper, lead, zinc and nickel were recorded. These proved to be close to river banks (hole numbers 1, 19, 37) or in the case of hole number 48 (62 ppm Cu) explained by geology (in this case out-cropping amphibolite).

5.2 Stream Sampling

A total of 16 pan-concentrate samples were taken from the Lake Chisholm grid and from the Ekberg, Dobson, Montague and Chester rivers draining aeromagnetic anomalies in the north (Figures 3 and 4). All samples were sent to Analabs in Burnie where they were weighed and analysed for tin and tungsten. Results can be found in Appendix 1.

The 6 samples from the grid area all recorded tin, three in anomalous proportions (T68/301 - 170 ppm, T68/302 - 285 ppm, T68/303 - 102 ppm). Those samples from the north failed to duplicate results produced by CRA and ANZECO and recorded very little tin. The sample sites chosen by BHP were further upstream to those of CRA and ANZECO to avoid contamination from tin cans and metal strips observed in the river. It is possible that this may have had some effect on previous sample results.

5.3 Rock Chip Sampling

Six samples for analysis were collected from the licence area, four being from the grid. Assay results and descriptions are in Appendix 1. A fault breccia and amphibolite both recorded high copper and lead values.

Three petrology samples were collected from the roads in the grid area. Locations are shown in Figure 4, with descriptions included in Appendix 2.

6. GEOPHYSICS

Interest was focussed on an untested INPUT anomaly on the 1973 Esso Australia Pieman River Survey (Figure 7). The anomaly was present on two adjacent lines approximately 2 km apart. A followup ground electromagnetic survey was instigated to locate the anomaly accurately on the ground, to establish if it was continuous between the two flight lines and to provide data on the nature of the causative body.

6.1 Survey Details

Due to the uncertain positioning of the anomaly it was necessary to employ a ground EM system which could rapidly and cheaply cover a large grid with a good chance of identifying the conductor. The SCINTREX SE -88 GENIE System was selected to meet these criteria. Scintrex Pty. Ltd. were contracted to provide a 2 man crew and all equipment to conduct the survey. The SE - 88 GENIE (GEometry Normalized Electromagnetic) System is a frequency domain instrument which utilises a number of frequency pairs. It measures the ratio of the amplitudes of these pairs as a measure of earth conductivity. Its design provides a minimum of geometric errors which is important in such a difficult terrain. The field readings require no further reduction and are readily interpretable. As the GENIE system was new and untried within the Company it was decided to utilize three frequency pairs (measured one after the other) at each station. The frequency pairs selected were 112.5 Hz reference with 337 Hz, 1012 Hz and 3037.5 Hz (Figures 10-12). In this instance the 112.5/ 3037.5 Hz pair provided the most definitive results. An interdipole separation of 100 metres with a reading interval of 25 metres was used. A detailed quantitative interpretation was not carried out as the conductor was clearly not of economic interest.

6.2 Results

The Genie EM survey clearly identified a narrow dipping continuous conductor which has been interpreted as a shale (or similar) unit of no economic significance.

7. CONCLUSIONS

The geophysical surveys carried out over the Lake Chisholm grid did not produce any anomalies worthy of follow-up. A small amphibolite body located on the grid appears to have caused the magnetic anomaly visible on the RTZ data. The deeply dissected north-south flowing stream and the presence of black shales indicate a possible combined source for the linear conductor delineated by the Genie EM data.

Pan-concentrate sampling failed to duplicate low-order anomalous tin values recorded by CRA and ANZECO in the Ekberg Creek and Dobson Creek areas. Mapping carried out during our sampling programme located very magnetically-susceptible basalts which explain the aeromagnetic anomalies that are spatially coincident with the anomalous geochemistry.

Anomalous tin values in streams draining the Lake Chisholm grid are believed to be derived from local gravels. Chromite and cassiterite have been recorded in previous work on similar gravels elsewhere in the region. ANZECO inferred distal sources for their tin anomalies and this is probably correct.

The carbonate-replacement model is obviously dependent on there being a buried granitic pluton at relatively shallow depth. There is no concrete evidence for this hypothesis and the regional potential was not upgraded by the current work programme. It is concluded that a significant replacement cassiterite-sulphide deposit does not occur in the licence area and relinquishment of the title is recommended.

8. EXPENDITURE

Expenditure debited to E.L. 18/83 was:

Wages and Salaries	10,647
Field Support	4,117
Vehicles	1,207
Equipment	227
Geochemistry	1,479
Geophysics	6,025
Surveys	8,195
Refunds on Tenement fees	-6
Sundries	460
Services	3,571
Administration and Overheads	3,592
	$39,514

APPENDIX 1

GEOCHEMICAL ANALYSES

018

411018

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
T67	14.4 08 1738	5.1.88	006695	1 OF 1

TUBE No.	SAMPLE No.	Wt(gm)	Sn	W						
1	301P	32.53	170 ✓	X	LCG					
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION		8	10						
24	QUESTION									
25	METHOD		402	401						

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

019

411019

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
T67	14.4 08 1737	29.12.82	006604	1 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Cr	Sn	W
1	300	8	4	14	400	45	X
2							
3	This is a -80# sample from same locality as 301						
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20	STD FS4	280	89	740	800		
21	RPT 300	8	4	14	380		
22							
23	DETECTION	1	1	1	1	3	10
24	DIGESTION	102	102	102	102		
25	METHOD	102	102	102	102	402	401

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

020

411020

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	14.4 08 2342B	24.2.84	005601	1 OF 1

TUBE No.	SAMPLE No.	wt(gm)	Sn	W						
1	T68/302	56.85	285 ✓	X	LCG					
2	T68/303	37.68	102 ✓	X	"					
3	T68/304	47.19	X	X						
4	T68/305	65.80	X	X						
5	T68/306	87.34	X	X						
6	T68/307	49.40	X	X						
7	T68/308	101.44	8	X						
8	T68/309	111.08	18	11						
9	T68/310	97.23	X	X						
10	T68/311	93.62	X	X						
11	T68/312	66.00	9	X						
12	T68/313	76.72	20	X	LCG					
13	T68/314	82.12	11	X	"					
14	T68/315	73.58	21	X	"					
15	T68/316	32.95	9	X						
16	T68/502	–	X	X						
17	T68/503	–	X	11						
18	T68/504	–	X	X						
19	T68/505	–	X	X						
20	T68/506	–	X	X						
21										
22										
23	DETECTION		3	10						
24	DIGESTION									
25	METHOD		402	401						

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
– = element not determined

AUTHORISED OFFICER

021

411021

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	14.4 08 2342	15.2.84	005601	1 OF 2

TUBE No.	SAMPLE No.		Cu	Pb	Zn	Cr	As			
1	T68 502		245	65	160	40	X			
2	T68 503		365	65	70	385	X			
3	T68 504		80	5	120	80	X			
4	T68 505		90	10	90	45	X			
5	T68 506		15	10	60	50	X			
6										
7										
8										
9										
10										
11										
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21										
22										
23										
24										
25										

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

022

411022

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
T67	999.0 08 1739	30.12.82	006606	1 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Cr	As	Sn	W	
1										
2	501	X	X	5	X	110	X	3	X	
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20	STD FS4	300	100	770	0.5	1200	20			
21	RPT 500	20	15	50	X	5	11			
22										
23	DETECTION	5	5	5	0.5	5	1	3	10	
24	DIGESTION	101	101	101	101	101	101			
25	METHOD	101	101	101	101	101	114	402	401	

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ROCK CHIP SAMPLE DESCRIPTION

THE BROKEN HILL PROPRIETARY CO. LTD.

Base | Centre

REGION: NORTHWEST TASMANIA. **SHEET:** BURNIE 250,000 ARTHUR RIVER 100,000 **PROSPECT:** LAKE CHISHOLM **PROJECT No:** T68

Sample No	Grid Ref. Local AMG	Description	
T68/502	LOCAL 10800E 11300N	ROCK CHIP - Amphibolite - Very weathered to red brown soils. Yellow mch.	OUTCROP
503	LOCAL 10850E 11560N	" " - Fe rich breccia - Dark brown Fe rich matrix. Angular fragments of chert, shale.	FLOAT
504	AMG 331504	" " - Cambrian basalts - Exposure in creek bed.	OUTCROP
505	AMG 337484	" " - " " - High magnetic susceptibility.	OUTCROP
506	LOCAL 11200N 1065DE	" " - Black Shales. - Close to /it not outcrop. In ditched and dozed area.	SUBCROP
501		Fe stained silicified dolomite. Sumac Spur 4-4	

ANALYSIS: Laboratory: ANALABS Batch No: Date Submitted: 10-2-84 Date Analysed: 24-2-84

Element / Method / Sample No.	Cu	Pb	Zn	Cr	As	Sn	W										
T68/502	245	65	160	40	–	–	–										
503	365	65	70	385	–	–	11										
504	80	5	120	80	–	–	–										
505	90	10	90	45	–	–	–										
506	15	10	60	50	–	–	–										
501	–	–	5	110	–	3	–										

REMARKS: 501 Collected by D. Steele co T67/501.

Logged or Sampled by: S.P. KERBER Date: 2/84

Project No. | Sheet No.

024

411024

amdel

SOIL AUGER SAMPLING

Analysis code B3 Report AC 2605/84 Page 1

NATA Certificate Results in ppm

	Sample	Sn	W	As
HOLE 1	0-30 T68/700	<4	<10	<2
	30-60 T68/701	6	<10	<2
	60-90 T68/702	6	<10	7
	90-120 T68/703	4	10	5
	120-150 T68/704	<4	<10	3
	150-180 T68/705	<4	10	<2
	180-200 T68/706	8	10	<2
HOLE 2	0-30 T68/707	<4	15	<2
	30-25 T68/708	<4	<10	<2
HOLE 3	0-30 T68/709	10	<10	<2
	30-60 T68/710	8	<10	3
	60-90 T68/711	6	10	6
	90-110 T68/712	<4	10	5
HOLE 4	0-30 T68/713	4	10	4
HOLE 5	0-20 T68/714	4	<10	<2
HOLE 6	0-30 T68/715	<4	<10	<2
HOLE 7	0-10 T68/716	4	<10	<2
HOLE 8	0-30 T68/717	<4	10	<2
HOLE 9	0-30 T68/718	4	10	4
HOLE 10	0-30 T68/719 ← 120	4	10	10
	0-30 T68/721	4	10	2
	30-60 T68/722	<4	15	<2
	60-90 T68/723	6	10	<2
HOLE 11	90-120 T68/724	6	10	<2
	120-150 T68/725	8	<10	4
	150-180 T68/726	8	15	3
	180-200 T68/727	4	10	2
	0-30 T68/728	4	<10	2
HOLE 12	30-40 T68/729	6	<10	<2
13	0-30 T68/730	<4	<10	<2
14	0-30 T68/731	10	<10	<2
15	0-20 T68/732	<4	<10	<2
16	0-15 T68/733	4	10	8
	0-30 T68/734	4	<10	3
17	30-50 T68/735	4	10	2
18	0-15 T68/736	<4	<10	<2
	0-30 T68/737	<4	<10	<2
	30-60 T68/738	4	<10	10
19	60-90 T68/739	<4	<10	9
	90-120 T68/740	<4	<10	10
	Detn limit	(4)	(10)	(2)

amdel

Analysis code B3 Report AC 2605/84 Page 2

NATA Certificate Results in ppm

	Sample	Sn	W	As
Hole 19 (cont.)	120-150 T68/741	4	15	10
	150-180 T68/742	<4	<10	11
	180-200 T68/743	<4	<10	8
20	0-20 T68/744	<4	<10	<2
21	0-30 T68/745	<4	10	<2
22	0-30 T68/746	<4	10	<2
	0-30 T68/747	6	10	9
23	30-60 T68/748	4	10	24
	0-30 T68/749	10	10	9
24	30-40 T68/750	12	<10	12
	0-30 T68/751	8	10	3
	30-60 T68/752	6	<10	4
25	60-90 T68/753	5	<10	5
	90-120 T68/754	6	15	5
	120-140 T68/755	5	15	7
26	0-25 T68/756	<4	10	<2
27	0-30 T68/757	6	15	<2
28	0-30 T68/758	<4	<10	<2
29	0-20 T68/759	<4	<10	<2
	0-30 T68/760	4	15	<2
30	30-60 T68/761	<4	10	<2
	60-70 T68/762	<4	<10	<2
31	0-30 T68/763	<4	10	<2
	0-30 T68/764	6	15	4
	30-60 T68/765	<4	10	9
32	60-90 T68/766	6	10	17
	90-100 T68/767	6	10	21
33	0-30 T68/768	8	10	10
34	0-30 T68/769	<4	10	<2
35	0-30 T68/770	<4	<10	<2
36	0-15 T68/771	<4	<10	<2
37	0-30 T68/772	4	<10	24
	0-30 T68/773	10	10	8
	30-60 T68/774	4	10	9
38	60-90 T68/775	6	15	11
	90-110 T68/776	<4	10	16
39	0-30 T68/777	4	10	9
40	0-30 T68/778	6	10	<2
41	0-20 T68/779	4	10	<2
42	0-30 T68/780	<4	<10	<2
	Detn limit	(4)	(10)	(2)

026

amdel

Analysis code B3 Report AC 2605/84 Page 3

NATA Certificate Results in ppm

	Sample	Sn	W	As
HOLE 43	0-30 T68/781	4	<10	<2
44	0-30 T68/782	4	<10	4
45	0-30 T68/783	4	15	5
46	0-30 T68/784	4	<10	5
47	0-30 T68/785	4	<10	<2
48	0-30 T68/786	4	<10	2
49	0-25 T68/787	4	<10	<2
	0-30 T68/788	4	10	<2
50	30-50 T68/789	4	<10	<2
51	0-30 T68/790	<4	<10	<2
	0-30 T68/791	<4	10	<2
52	30-40 T68/792	<4	<10	<2
	0-30 T68/793	4	<10	7
53	30-60 T68/794	8	<10	22
	60-70 T68/795	4	15	19
54	0-30 T68/796	4	10	2
55	0-30 T68/797	4	10	<2
	0-30 T68/798	<4	10	<2
56	30-50 T68/799	4	<10	3
57	0-20 T68/800	<4	<10	<2
58	0-30 T68/801	4	<10	4
	0-30 T68/802	<4	<10	<2
59	30-60 T68/803	<4	<10	3
	0-30 T68/804	12	15	<2
60	30-60 T68/805	4	10	4
61	0-30 T68/806	4	10	3
	0-30 T68/807	<4	<10	<2
62	30-60 T68/808	<4	10	<2
63	0-30 T68/809	<4	<10	<2
	0-30 T68/810	<4	10	<2
64	30-60 T68/811	4	<10	<2
65	0-20 T68/812	<4	<10	<2
66	0-30 T68/813	<4	<10	<2
	0-30 T68/814	<4	<10	<2
67	30-50 T68/815	4	<10	<2
	0-30 T68/816	<4	15	<2
68	30-60 T68/817	<4	10	<2
	60-70 T68/818	<4	10	<2
69	0-30 T68/819	<4	<10	<2
70	0-30 T68/820	<4	10	<2
	Detn limit	(4)	(10)	(2)

027

amdel

411027

Analysis code B3 Report AC 2605/84 Page 4

NATA Certificate Results in ppm

	Sample	Sn	W	As
Hole 70 (cont.)	30-45 T68/821	4	<10	<2
	0-30 T68/822	<4	<10	<2
71	30-40 T68/823	4	<10	<2
72	0-30 T68/824	4	<10	<2
73	0-30 T68/825	<4	<10	<2
74	0-30 T68/826	<4	<10	<2
75	0-30 T68/827	4	10	5
76	0-30 T68/828	<4	10	4
77	0-30 T68/829	4	10	2
	0-30 T68/830	4	<10	<2
78	30-60 T68/831	<4	<10	<2
79	0-30 T68/832	4	<10	<2
	0-30 T68/833	<4	<10	2
80	30-60 T68/834	4	10	3
	60-70 T68/835	6	15	<2
81	0-30 T68/836 — 837	<4	<10	<2
82	0-30 T68/838	4	10	3
83	0-30 T68/839	<4	<10	<2
	T68-720 30-60	6	<10	9
	T68-837 30-50	4	<10	3
	Detn limit	(4)	(10)	(2)

028

411028

amdel

Analysis code C1 Report AC 2565/84 Page 5

NATA Certificate Results in ppm

	Sample	Cu	Pb	Zn	Ni	Cr
HOLE 1	0-30 T68/700	4	8	8	6	10
	30-60 T68/701	2	<5	7	<5	10
	60-90 T68/702	10	28	47	44	20
	90-120 T68/703	12	28	44	44	15
	120-150 T68/704	10	36	48	48	20
	150-180 T68/705	10	30	27	22	10
	180-200 T68/706	13	42	26	20	10
	0-30 T68/707	2	12	6	<5	<10
2	30-35 T68/708	3	10	9	<5	<10
	0-30 T68/709	2	12	5	<5	<10
	30-60 T68/710	4	12	4	<5	<10
3	60-90 T68/711	6	12	12	<5	<10
	90-110 T68/712	9	6	7	<5	<10
4	0-30 T68/713	6	10	12	<5	<10
5	0-20 T68/714	4	12	5	<5	<10
6	0-30 T68/715	4	8	5	<5	<10
7	0-10 T68/716	2	<5	5	<5	<10
8	0-30 T68/717	5	<5	10	<5	<10
9	0-30 T68/718	5	8	8	<5	<10
10	0-30 T68/719 ← 720	9	10	11	<5	<10
	0-30 T68/721	4	12	8	<5	<10
	30-60 T68/722	2	16	7	<5	<10
	60-90 T68/723	2	<5	5	<5	<10
11	90-120 T68/724	2	12	7	<5	<10
	120-150 T68/725	3	18	6	<5	<10
	150-180 T68/726	<2	14	8	<5	<10
	180-200 T68/727	2	8	7	<5	<10
	0-30 T68/728	6	14	12	8	10
12	30-40 T68/729	7	10	14	8	10
13	0-30 T68/730	3	<5	7	<5	<10
14	0-30 T68/731	<2	<5	4	<5	<10
15	0-20 T68/732	2	<5	6	<5	<10
16	0-15 T68/733	4	12	13	6	<10
	0-30 T68/734	3	<5	6	<5	<10
17	30-50 T68/735	2	<5	3	<5	<10
18	0-15 T68/736	5	10	10	<5	<10
	0-30 T68/737	<2	46	40	16	20
	30-60 T68/738	4	80	125	68	85
19	60-90 T68/739	4	70	140	50	50
↓	90-120 T68/740	5	82	175	48	50
	Detn limit	(2)	(5)	(2)	(5)	(10)

029

amdel

411029

Analysis code C1 Report AC 2665/84 Page 6

NATA Certificate Results in ppm

	Sample		Cu	Pb	Zn	Ni	Cr
HOLE A (cont.)	120-150	T68/741	5	90	190	28	45
	150-180	T68/742	8	94	195	26	50
	180-200	T68/743	9	76	210	24	50
20	0-20	T68/744	4	<5	2	<5	<10
21	0-30	T68/745	<2	<5	4	<5	<10
22	0-30	T68/746	5	6	13	6	<10
23	0-30	T68/747	3	6	28	10	15
	30-50	T68/748	5	32	60	12	45
24	0-30	T68/749	11	12	8	<5	<10
	30-40	T68/750	14	12	6	<5	<10
25	0-30	T68/751	2	<5	<2	<5	<10
	30-60	T68/752	3	<5	2	<5	<10
	60-90	T68/753	6	6	3	<5	<10
	90-120	T68/754	9	<5	2	<5	<10
	120-140	T68/755	6	<5	<2	<5	<10
26	0-25	T68/756	4	8	5	<5	<10
27	0-30	T68/757	2	8	<2	<5	<10
28	0-30	T68/758	3	12	3	<5	<10
29	0-20	T68/759	<2	<5	4	<5	15
30	0-30	T68/760	2	<5	5	<5	<10
	30-60	T68/761	2	<5	<2	<5	<10
	60-70	T68/762	2	8	<2	<5	<10
31	0-30	T68/763	7	12	4	<5	<10
	0-30	T68/764	4	<5	7	<5	<10
32	30-60	T68/765	6	10	8	<5	<10
	60-90	T68/766	12	16	12	<5	<10
	90-100	T68/767	19	22	23	6	<10
33	0-30	T68/768	4	12	5	<5	<10
34	0-30	T68/769	3	<5	<2	<5	<10
35	0-30	T68/770	2	<5	<2	<5	<10
36	0-15	T68/771	<2	<5	<2	<5	10
37	0-30	T68/772	5	36	16	6	30
38	0-30	T68/773	4	8	4	<5	<10
	30-60	T68/774	4	8	6	<5	<10
	60-90	T68/775	5	14	17	<5	<10
	90-110	T68/776	7	12	9	<5	<10
39	0-30	T68/777	5	14	7	<5	<10
40	0-30	T68/778	3	8	5	<5	<10
41	0-20	T68/779	2	<5	4	<5	<10
42	0-30	T68/780	2	8	2	<5	<10
	Detn limit		(2)	(5)	(2)	(5)	(10)

030

amdel

411030

Analysis code C1 Report AC 2655/84 Page 7

NATA Certificate Results in ppm

	Sample	Cu	Pb	Zn	Ni	Cr
HOLE 43	0-30 T68/781	2	10	<2	<5	<10
44	0-30 T68/782	5	8	4	<5	10
45	0-30 T68/783	2	10	<2	6	<10
46	0-30 T68/784	2	<5	5	<5	<10
47	0-30 T68/785	6	8	7	<5	<10
48	0-30 T68/786	62	12	49	10	<10
49	0-25 T68/787	2	<5	<2	<5	<10
50	0-30 T68/788	5	12	6	<5	<10
	30-50 T68/789	3	<5	3	<5	<10
51	0-30 T68/790	2	<5	<2	<5	<10
52	0-30 T68/791	3	8	3	<5	<10
	30-40 T68/792	2	8	2	<5	<10
53	0-30 T68/793	6	12	6	<5	<10
	30-60 T68/794	10	14	7	8	<10
	60-70 T68/795	9	20	9	10	<10
54	0-30 T68/796	6	18	9	<5	<10
55	0-30 T68/797	<2	<5	<2	6	<10
56	0-30 T68/798	2	<5	2	<5	<10
	30-50 T68/799	<2	<5	3	<5	<10
57	0-20 T68/800	2	<5	3	<5	<10
58	0-30 T68/801	2	<5	2	<5	<10
59	0-30 T68/802	3	<5	9	<5	<10
	30-60 T68/803	2	<5	2	<5	<10
60	0-30 T68/804	7	<5	3	<5	<10
	30-60 T68/805	10	<5	4	6	<10
61	0-30 T68/806	4	<5	3	<5	<10
62	0-30 T68/807	6	<5	4	<5	<10
	30-60 T68/808	4	<5	3	<5	<10
63	0-30 T68/809	<2	<5	5	<5	<10
64	0-30 T68/810	2	<5	5	<5	<10
	30-60 T68/811	<2	<5	2	<5	<10
65	0-20 T68/812	<2	<5	7	<5	<10
66	0-30 T68/813	<2	<5	2	<5	<10
67	0-30 T68/814	5	8	9	<5	<10
	30-50 T68/815	4	<5	7	<5	<10
68	0-30 T68/816	<2	<5	3	<5	<10
	30-60 T68/817	<2	10	4	<5	<10
	60-70 T68/818	<2	18	6	6	<10
69	0-30 T68/819	<2	<5	2	<5	<10
70	0-30 T68/820	6	<5	9	<5	<10
	Detn limit	(2)	(5)	(2)	(5)	(10)

031

amdel

411031

Analysis code C1 | Report AC 2665/84 | Page 8

NATA Certificate | Results in ppm

	Sample		Cu	Pb	Zn	Ni	Cr
HOLE 70 (cont.)	30-45	T68/821	4	<5	5	<5	<10
	0-30	T68/822	5	8	9	<5	<10
71	30-40	T68/823	<2	6	3	<5	<10
72	0-30	T68/824	2	6	6	<5	<10
73	0-30	T68/825	<2	<5	5	<5	<10
74	0-30	T68/826	3	<5	10	<5	<10
75	0-30	T68/827	<2	6	6	6	<10
76	0-30	T68/828	3	<5	8	<5	<10
77	0-30	T68/829	3	6	5	<5	<10
78	0-30	T68/830	4	<5	9	<5	<10
	30-60	T68/831	<2	6	<2	<5	<10
79	0-30	T68/832	2	<5	9	<5	<10
80	0-30	T68/833	8	6	18	<5	<10
	30-60	T68/834	<2	<5	3	<5	<10
	60-70	T68/835	<2	<5	8	<5	<10
81	0-30	T68/836 ← 837	2	6	6	<5	<10
82	0-30	T68/838	3	<5	8	<5	<10
83	0-30	T68/839	2	<5	5	<5	<10
10		T68-720 30-60	6	10	8	<5	<10
81		T68-837 30-50	2	<5	6	<5	<10
	Detn limit		(2)	(5)	(2)	(5)	(10)

APPENDIX 2

PETROLOGY REPORT

033

411033

Central Mineralogical Services

39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

Mr. D.A. Steele
Exploration Office
The Broken Hill Proprietary Co. Ltd.
G.P.O. Box 1207
HOBART / TAS. 7001

25th January, 1983

REPORT CMS 82/12/33

YOUR REFERENCE:	Letter dated 22.12.1982
DATE RECEIVED:	24th December, 1982
SAMPLE NOS.:	PT 1 - PT 16
SUBMITTED BY:	D.A. Steele
WORK REQUESTED:	Petrology

NOTE E-18/83 PT 6, 7, 11 only

H.W. Fander, M. Sc.

REPORT CMS 82/12/33

Rock Samples PT 1 - PT 16

Eleven rock samples were received for petrological examination, with special reference to potential host rocks, particularly carbonates, for metasomatic Sn mineralisation. Thin-sections were prepared of all rocks; where sulphides were seen, these were identified under the stereobinocular microscope only at this stage.

Summary

This suite consists of a variety of igneous, pyroclastic and sedimentary rocks; the igneous and pyroclastic rocks are generally severely altered and classification/interpretation is tentative or broad, and some of the sediments are weakly metamorphosed.

One rock (PT 6) is a thoroughly silicified carbonate breccia; it is believed, from textural evidence, that this rock was brecciated prior to being silicified. It was probably a fairly featureless chemical sediment with chert bands.

The pyroclastic rocks are thoroughly altered, as is commonly the case with this group; thus, diagnostic textures are variably preserved and it is possible that PT 2 is partly clastic, just as PT 7, 8 and 9 could contain an ash component. None of the pyroclastics resemble, say, units of the Crimson Creek formation, but PT 5 could be part of the Mt. Read Volcanics.

H.W. Fander, M. Sc.

Sample No.	Rock Type - Composition	Fabric	Minor Minerals	Comments
PT 1 (T.S. 5008)	Argillised Porphyritic ?Trachyte. Sericitised small feldspar phenocrysts set in matted mass of altered fine feldspar, minor quartz, leucoxenised magnetite.	Random, fine-grained fabric, phenocrysts mostly ½ to 1 mm. Minor intrusive.	A few small chlorite patches after ferromagnesian minerals.	Fresh rock was largely feldspathic, leucocratic, hence inferred trachyt though complex alteration precludes exact classification.
T 2	Altered Ash. Now composed of fine quartz and clays, with wisps and stylolitic veins of carbon, small albite concretions, fine detrital minerals.	Bedded, with fine nodular development (soft pebbles), soft-sediment deformation.	Crosscutting quartz veinlets. A few small chert concretions.	Probably subaqueously deposited in reducing environment. Albite is diagenetic. Shows the usual alteration.
T 3	Nodular Metasiltstone. Small subspherical chert nodules set in a fine semi-schistose mass of illite-sericite flakes, microcrystalline quartz.	Two directions of preferred orientation, at 40°. Uniform, fine-grained.	Fine limonite films and streaks. Thin layers of fine heavy minerals.	Weakly metamorphosed sediment of partly chemical, partly clastic formation. Featureless.
PT 5	Altered Tuff. Mostly argillised, silicified shards, fragments of glassy and scoriaceous lavas, altered crystal fragments, all pervasively ferruginised.	Medium/fine-grained, with coarser lithic grains. Faintly bedded.	Limonite veins; goethite patches.	No doubt of pyroclastic nature of this rock, but composition not known. Unlike Crimson Creek pyroclastics.
T 6	Silicified Carbonate Breccia. Large and small angular fragments of extensively silicified carbonate mosaics, with quartz cement and quartz veining.	Original rock was medium-grained, crystalline and uniform. Relict carbonate textures.	Fragmented cherty bands or lenses. Relict ultrafine carbonate in quartz.	Rock may have been brecciated, cemented by carbonate before being silicified. Most details of original rock obliterated.
T 7	Argillaceous Siltstone. Silt-sized subangular quartz grains, shreds of white mica, abundant matrix-cement of very fine kaolinite-illite.	Uniform, virtually structureless, with only faint bedding.	Detrital heavy mineral grains (zircon, tourmaline). Quartz veinlets.	Orthodox, featureless clastic sediment. Well-indurated but not metamorphosed.
T 8	Argillaceous Siltstone. Framework of silt-sized subangular quartz and white mica shreds, with matrix of semi-schistose illite-sericite flakes.	Uniform, with scattered clay pellets; faint bedding, superimposed semi-schistose fabric.	Quartz veins and patches, with oxidised pyrite crystals.	Very similar to PT 7, but incipientl metamorphosed, with phyllitic fabric developed.
T 9	Phyllite (Metasiltstone). Silt-sized quartz grains, fine quartz streaks, and muscovite flakes in a schistose fine matted masssof sericite flakes.	Strong preferred orientation, but very fine-grained. Uniform.	Small cavities representing leached pyrite, with fibrous quartz rims.	Low-grade, mainly dynamic metamorphism of pyritic shale/siltstone. Featureless rock.

Sample No.	Rock Type - Composition	Fabric	Minor Minerals	Comments
PT 11	Pebbly Lithic Sandstone. Pebbles, granules of siltstone, shale/argillite; host rock of rounded quartz grains with fine quartzose-kaolinitic cement.	Pebbles are mostly flat, subparallel; deformed and indented, i.e. soft when deposited.	Chert pebbles and concretions.	Rock incorporates pebbles and grit-sized grains of finer-grained rocks which were semi-consolidated when deposited.
PT 14	Altered ?Microsyenite. Small random laths of completely argillised feldspar, with interstitial pale chlorite after ?ferro-magnesian minerals.	Medium-grained, with random fabric. A few feldspar phenocrysts.	Ultrafine secondary leucoxene released from ferromagnesians.	Exact composition not known because of alteration, but in intermediate range. Minor intrusive.
PT 16 (T.S. 5018)	Altered ?Microdiorite. Argillised plagioclase laths, abundant chloritised ferromagnesian minerals, leucoxenised primary oxide opaques.	Medium-grained, with random fabric, verging on coarse-grained.	Pervasive ferruginisation. Quartz veins.	Completely altered. Similar to PT 14 in some respects, but believe to be more basic; perhaps doleritic.

APPENDIX 3

REFERENCES

The following references were used in the compilation of this Final Report:-

CRA Relinquishment report E.L. 1/77

GEE, R.D., 1968, A revised stratigraphy for the Precambrian in North-west Tasmania. Vol. 102, pp. 7-10. Pap. Proc.R. Soc. Tasm.

HINE,R., 1980, Arthur River Area, N W Tasmania, Reconnaissance Report and Specification for exploration. BHP Internal Report (unpubl.)

KINNANE, N.R.,1972,Report on the geological reconnaissance and stream sediment sampling programme - North -west Tasmania. ANZECO.

LONGMAN,M.J. and MATTHEWS, W.L., 1961, The geology of the Bluff Point and Trowutta Quadrangles. Tech. Report No. 6, Tas. Dept. of Mines.

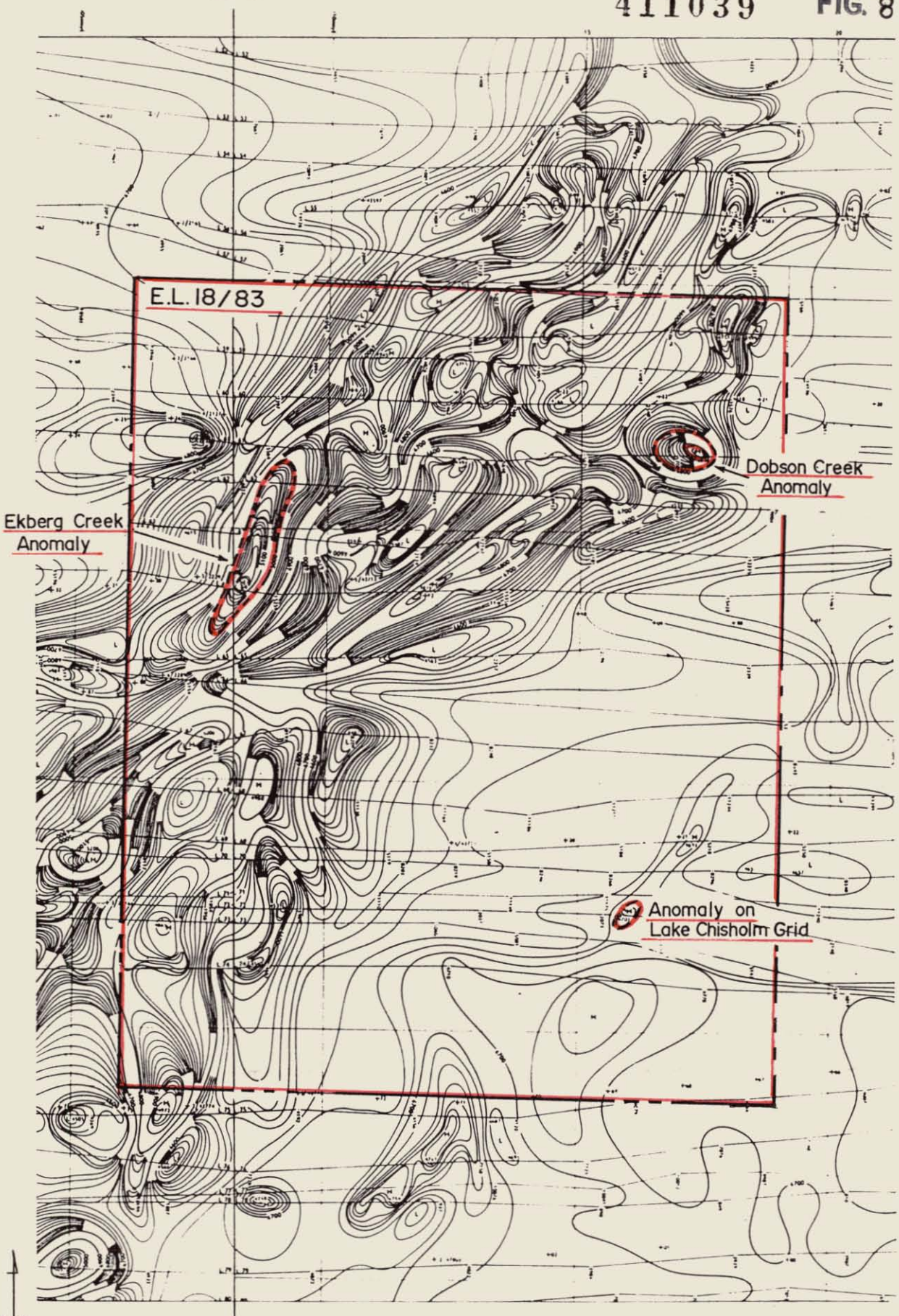
MATTHEWS, W.L., 1960, Geology of the Rapid River area. Tech. Report No. 5, Tas. Dept. of Mines.

McNEIL, R.D., 1961, Geological Reconnaissance of part of the Arthur River area. Tech. Report No. 5, Tas. Dept. of Mines.

WILLIAMS, E., 1979, Tasman Fold Belt system in Tasmania. Dept. of Mines, Tasmania.

048

411039 FIG. 8



Note: Survey flown by Adastra Hunting Geophysics Pty Ltd for Rio Aust. Expln.

Centre Melbourne	THE BROKEN HILL PROPRIETARY CO. LTD. E.L. 18/83 - LAKE CHISHOLM, TASMANIA	Project No. T68-13
Date May 1984	AEROMAGNETIC CONTOURS FROM 1956 RTZ SURVEY	Drawing No. A4- 2457

145°00'
41°30'
145° 30'
42°00'

BASS STRAIT

SOUTHERN OCEAN

Smithton
Wynyard
Burnie
Balfour

Arthur River

Pieman River

SCALE 1:500 000

0 10 20 30 40 50 kms

LEGEND

- Esso Input/Aeromagnetic survey coverage 1973
- EL 6/72 ANZECO
- EL 1/77 CRA (in Sept.77)
- EL 18/80 BHP - Arthur River
- CURRENT LICENCE EL 18/83 Lake Chisholm

NOTE:- Total area covered by RTZ aeromagnetics 1956

5 cm

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

NORTHWEST TASMANIA
PREVIOUS EXPLORATION LICENCES
AND GEOPHYSICAL SURVEYS

039

Revisions:

Prepared by: S. P Kerber
Date: March 84
Drawn: A Hansen

Centre: Melbourne
Project No T68-3
Drawing No A3-1661

411040

FIG. 2

330000mE 31 32 33 34 35000mE 36 37 38 39 340000mE 41 42

5455000mN 54 53 52 5450000mN 51 49 48 47 46 5445000mN 44 43 42 41 5440000mN

McDonald Creek
Spinifex Creek
Creek
Trowutta
Coronation Creek
Boundary Creek
Roger River
Dobson Creek
316 9 (230)
Popowski Creek
River
304 (470)
Montague River
305 504
Ekberg Creek
FAULT
306 307 (180)
Chester RIVER
Duck Creek (170)
308 8
310
311
309 18
505
312 9
Ekberg Creek
KANNUNAH BRIDGE
ARTHUR RIVER
Keppel Creek
Cannon Creek
RAPID
Jay Ck.
Lake Chisholm
Wents Creek
301 170
303 102
315 21
302 285
313 20
314
506
503
502
12 600N
10 200E
11 400E
10 200N
LAKE CHISHOLM GRID
RAPID LINEAMENT
RIVER
Rivulet
Rapid Creek
Lamprey Creek
Sumac
Julius River
20 Julius Quarry
18 12 Sumac Quarry
Rapid Quarry 14
43
E.L. 18/83

εs
εvu
pεc
pεd
pεdb
pεq
pεsh
pεg
εt
pεs

Sands and gravels
Cambrian volcanics
Tuffaceous breccia
Cambrian siltstones
Dolomite breccia
Chert (siliceous dolomite) } Smithton Dolomite
Dolomite } Smithton Dolomite
Quartzite (Bryant Hill)
Siltstone, greywacke and quartzite
Black pyritic shale
Green banded chloritic siltstones

303 o Pan concentrate locality, Analysis results Sn ppm - 230, Anzeco Sn results - (230)
506 x Rock chip locality
20 Dip and strike of bedding
Geological boundary

501 dolomite
502 amphibolite
503 Fe rich lox (cht, ith) float?
504 basalt (Camb)
505 basalt (Camb)
506 black shales.

Geology compiled from :- R.C. NEALE G.W. WREN - ESSO. AUST. LTD. 1974
CRA REPORT EL 1/77 1983

GN MN 11°

SCALE 1:25 000
0 1 2 kms

EL 18/83
LOCATION MAP

Revisions:

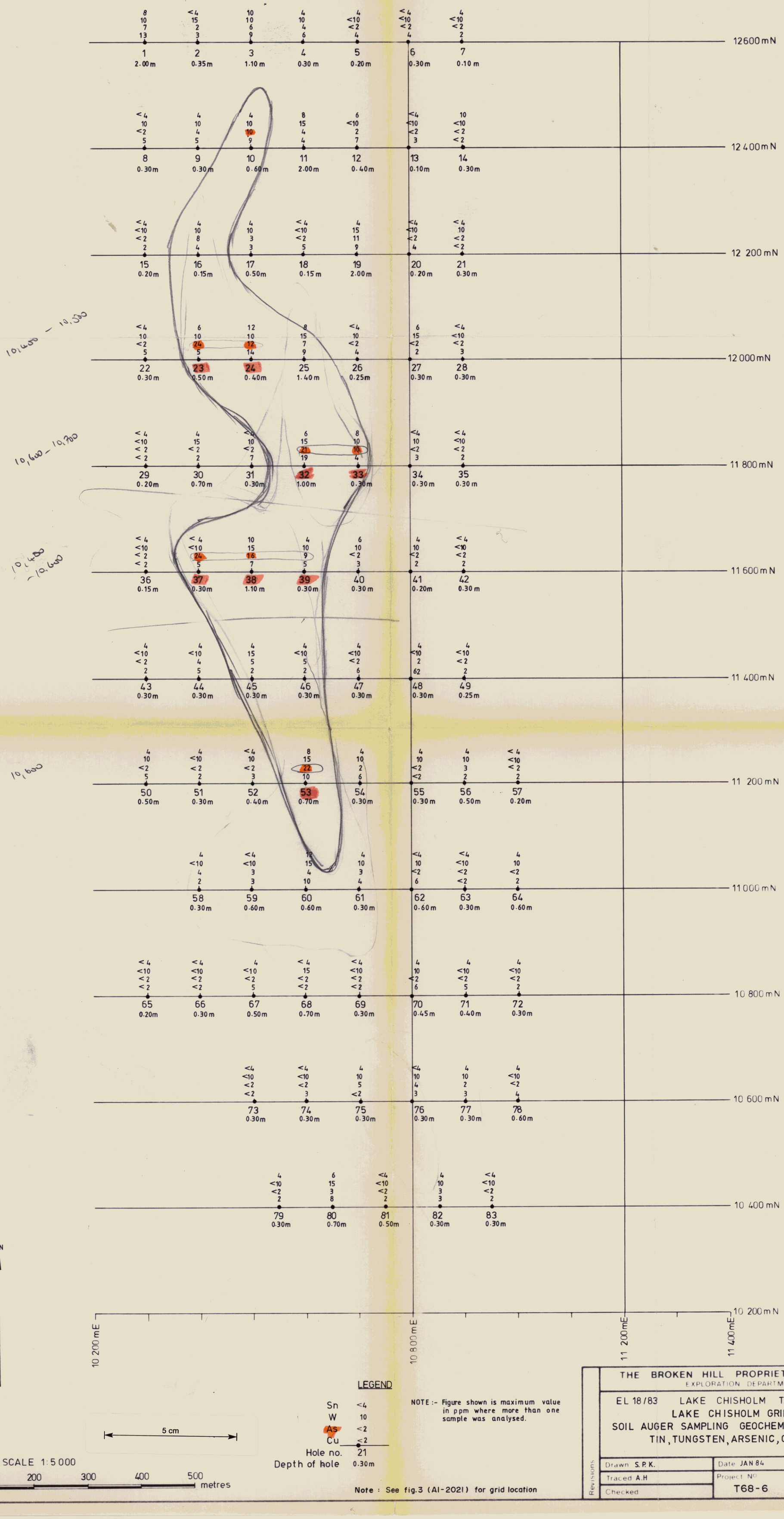
THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

EL 18/83 LAKE CHISHOLM, TASMANIA
GEOLOGY AND GEOCHEMICAL
SAMPLE LOCATIONS 040

Drawn: S.P.K.
Traced: A.H.
Checked:
Date: Jan. 84
Project No: T68-4
Centre: Melbourne
Drawing No: A1-2021

411041 FIG. 3

411042 FIG. 5

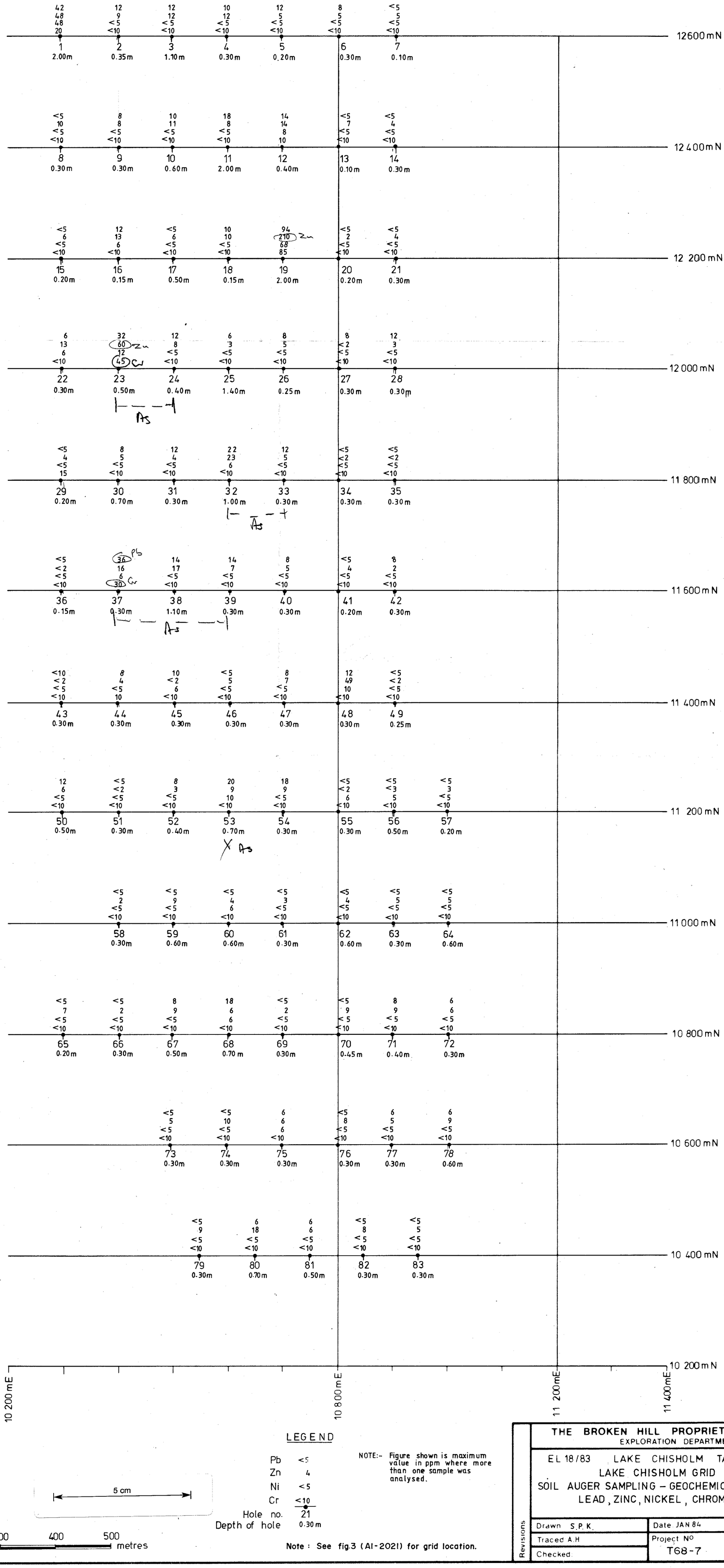


THE BROKEN HILL PROPRIETARY CO LTD
EXPLORATION DEPARTMENT

EL 18/83 LAKE CHISHOLM TASMANIA
LAKE CHISHOLM GRID
SOIL AUGER SAMPLING GEOCHEMICAL ANALYSES
TIN, TUNGSTEN, ARSENIC, COPPER 042

Drawn S.P.K.	Date JAN 84	Centre Melbourne
Traced A.H	Project N° T68-6	Drawing N° A2-1513
Checked		

Revisions



LEGEND

Pb	<5
Zn	4
Ni	<5
Cr	<10
Hole no.	21
Depth of hole	0.30m

NOTE:- Figure shown is maximum value in ppm where more than one sample was analysed.

Note : See fig.3 (AI-2021) for grid location.

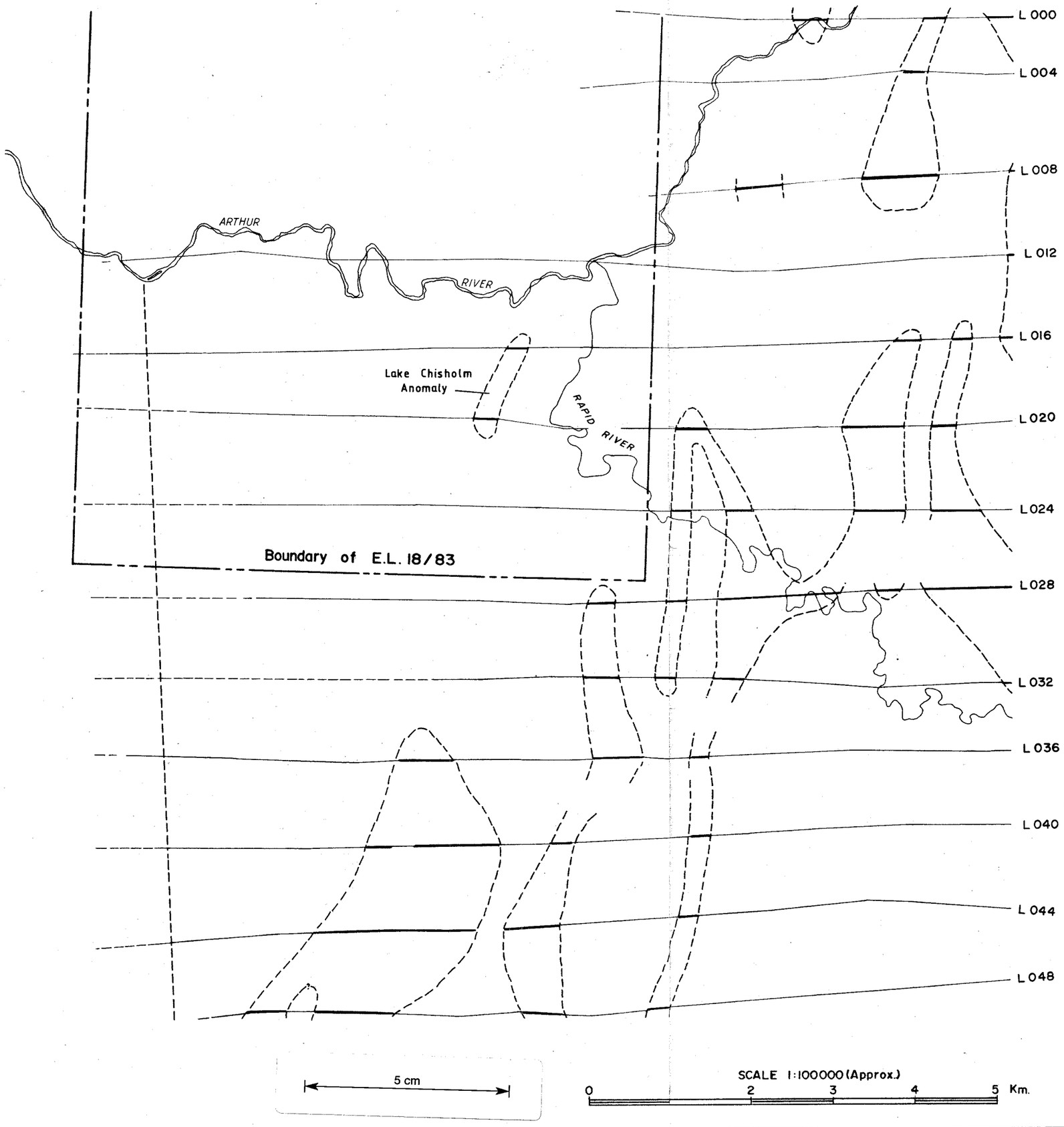
THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

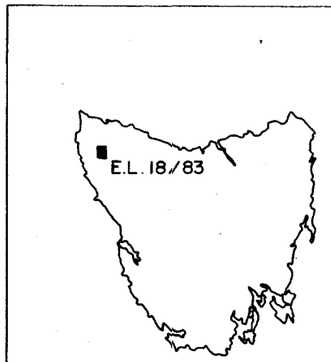
EL 18/83 LAKE CHISHOLM TASMANIA
LAKE CHISHOLM GRID
SOIL AUGER SAMPLING – GEOCHEMICAL ANALYSES
LEAD, ZINC, NICKEL, CHROMIUM 043

Drawn S.P.K.	Date JAN 84	Centre Melbourne
Traced A.H	Project NO T68-7	Drawing NO A2-1514
Checked		

Revisions

FIG. 7





LOCATION MAP

411044

LEGEND

L 020 — Flight line and number with interpreted input anomaly (Esso E.M. Survey 1973)

Revisions:

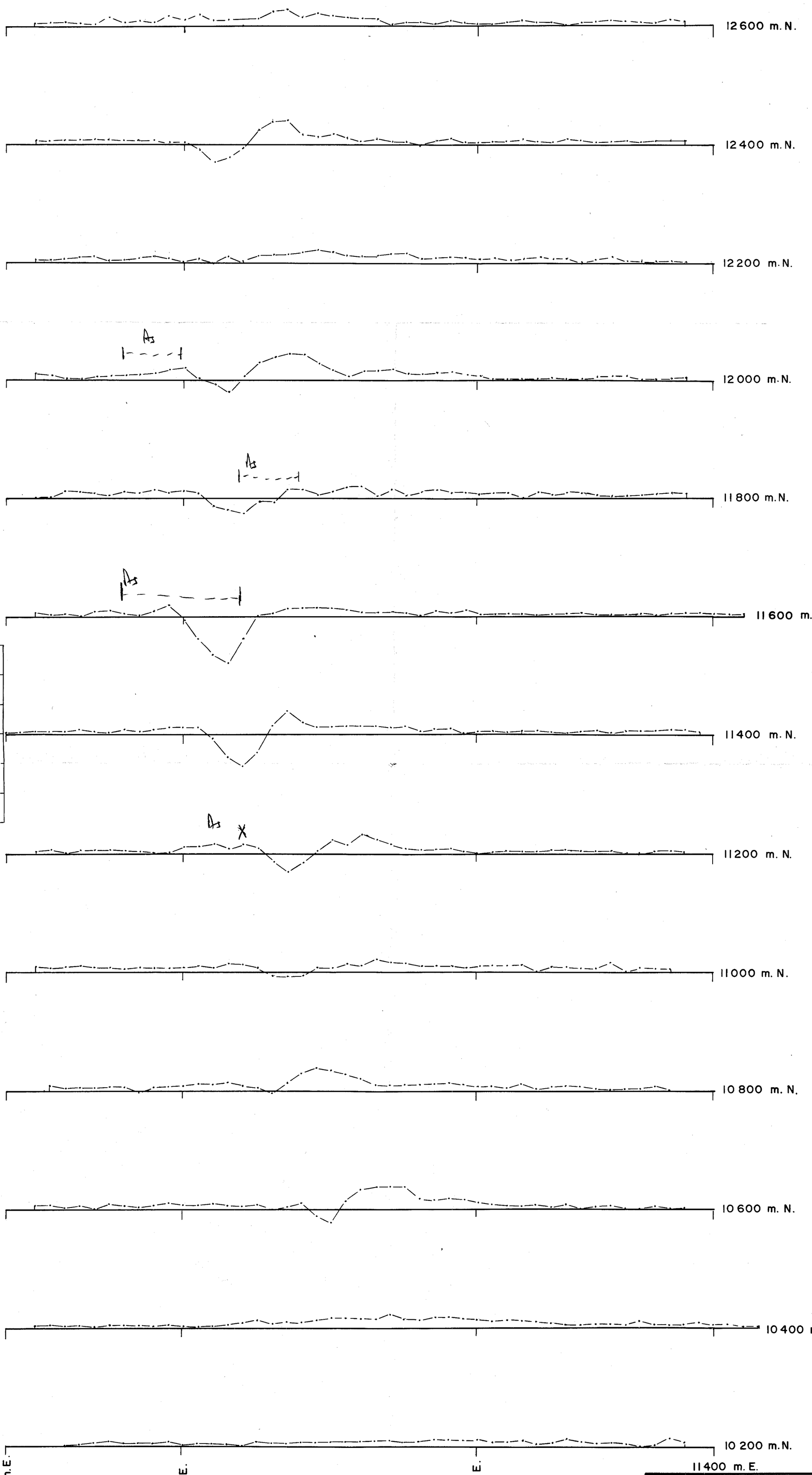
THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

EL18/83 LAKE CHISHOLM TASMANIA

INPUT ANOMALY LOCATION PLAN 044

Prepared by: N. LIMB	Centre: CAMBERWELL	
Date: MARCH 84	Project Nº T68-2	Drawing Nº A3- 1660
Drawn: A. HANSEN		

FIG. 9



SCALE 1:5000

0 100 200 300 400 500 Metres

Note : See fig. 3 (AI-2021) for grid location.

411045

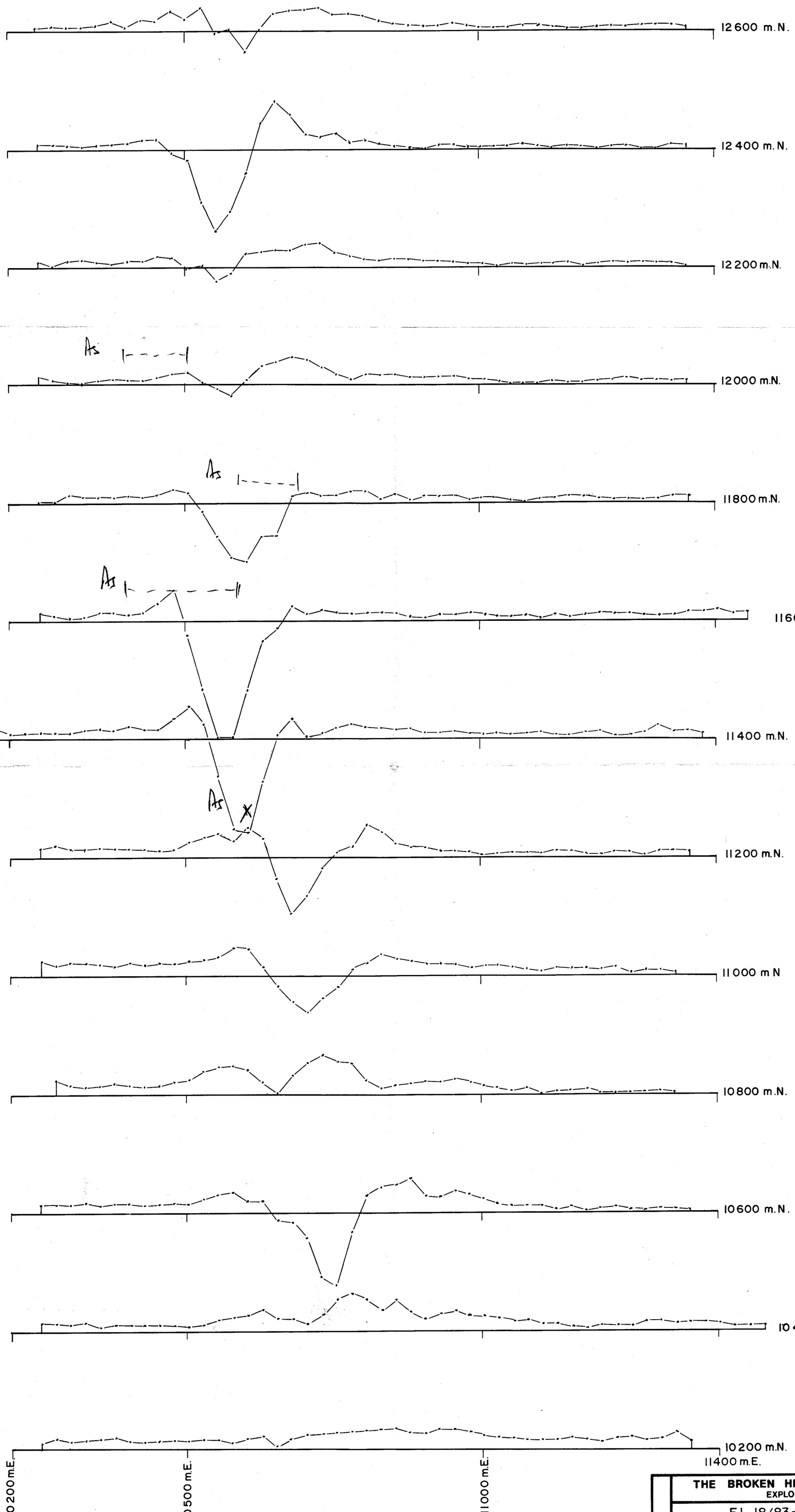
THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

E.L. 18/83 - LAKE CHISOLM, TAS.
GENIE E.M. SURVEY
112·5 Hz./337 Hz.
RATIO RESPONSE PROFILES

045

Revisions:			
	Drawn: N.Limb	Date: Jan. 84	Centre: Melb.
	Traced: N.Limb	Project No: T68-10	Drawing No: A2- 1515
	Checked:		

FIG. 10



SCALE 1:5000

0 100 200 300 400 500 Metres

5 cm

Note : See fig. 3 (AI-2021) for grid location.

411046

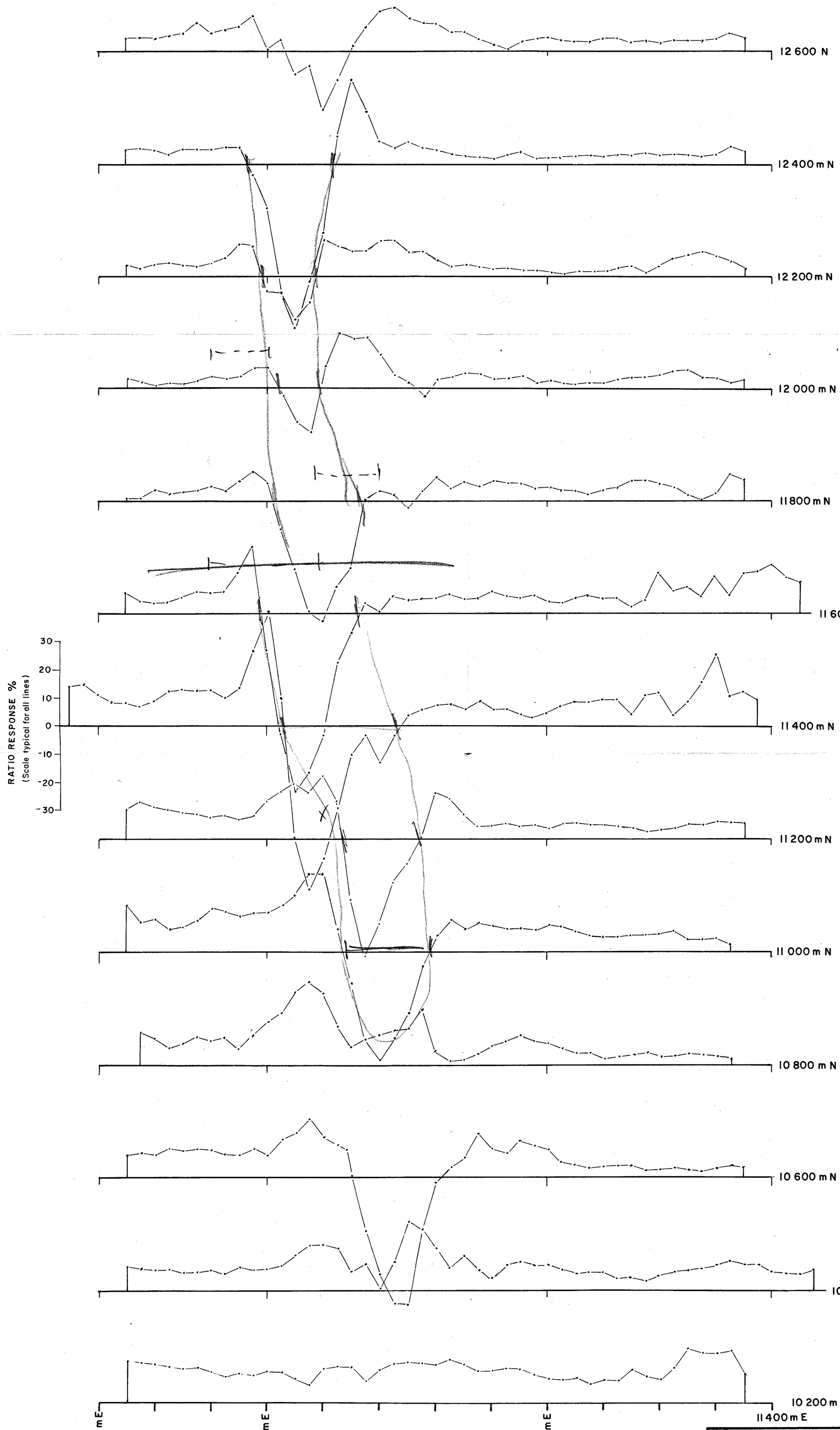
THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

E.L. 18/83 – LAKE CHISOLM, TAS
GENIE E.M. SURVEY
112·5 Hz. / 1012 Hz.
RATIO RESPONSE PROFILES

046

Revisions:			
	Drawn: N. Limb	Date: Jan. 84	Centre: Melb.
	Traced: N. Limb	Project No: T68-11	Drawing No: A2- 1516
	Checked:		

FIG. 11



411047

5 cm

SCALE 1: 5000

0 500 metres

Note : See fig. 3 (A1-2021) for grid location.

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

E.L. 18/83 - LAKE CHISOLM, TAS.
GENIE E.M. SURVEY
112·5 Hz / 3037·5 Hz
RATIO RESPONSE PROFILES

047

Revisions:			
Drawn: N. Limb	Date: Jan. 82	Centre: Melb.
Traced: N. Limb	Project No: T68-12	Drawing No: A2-1517
Checked:		