776001

3 JUN 1982

EXPLORATION LICENCE 12/78

SCAMANDER, TASMANIA

PROGRESS REPORT ON EXPLORATION FOR THE

SIX MONTHS ENDED 15th MARCH, 1982

CONTENTS

APPENDICES

FIGURES

EXPLORATION LICENCE 12/78

SCAMANDER, TASMANIA

PROGRESS REPORT ON EXPLORATION FOR THE SIX MONTHS ENDED 15th MARCH, 1982

1. GENERAL

Exploration Licence 12/78 of 276 square kilometres was initially granted to The Broken Hill Proprietary Company Limited on 26th September, 1978. An application for renewal to 15th March, 1983 has been submitted. This report covers operations in the six months September, 1981 to March, 1982.

2. SUMMARY OF WORK COMPLETED

a) A stream sampling programme in the north east and south west portions of the licence area;

b) Reconnaissance soil sampling and mapping on widely spaced lines between Dunns and the Paul Beahr prospects;

c) Grid establishment, soil sampling, ground magnetics and mapping of the Cramps target area;

d) Completion of a 340 metre diamond drilling programme of two holes at the North Scamander prospect, together with an accurate survey of all drillhole collars;

e) Soil sampling and mapping over aeromagnetic anomalies and tungsten-molybdenum prospects in the Wolfram Creek area;

f) Soil sampling in granitic terrain north of Wolfram Creek by way of follow-up on stream sediment anomalies.

3. SUMMARY OF WORK IN PROGRESS

Evaluation of geochemical data obtained from the summer field season.

4. SUMMARY OF PROPOSED WORK

Selection of targets for diamond drilling.

5. RESULTS

5.1 North Scamander Prospect

Appendix 1 is a report on the drilling programme carried out at the North Scamander prospect in October and November of 1981.

cont./..

5.2 Stream Sampling Programme

An infill stream sampling programme consisting of 108 samples (SEL 1-108) was completed during the six months. Samples were sieved to minus 40 mesh at the laboratory and analysed for tin, tungsten, copper, lead, zinc, silver, arsenic, antimony, gold, molybdenum, cobalt, nickel and chromium. Sample locations are plotted on Figure 12, and results are listed in Appendix 2b. Evaluation of results is in progress.

5.3 Cramps Target Area

A grid area of approximately 1 km by 2.5 km was pegged out on 100 x 50 metre lines over a large airborne magnetic anomaly in the vicinity of the Cramps and Dunns copper-silver prospects. The grid formed the control for subsequent soil sampling at 100 metre spacing (later infilled in part to 50 metre), ground magnetic surveying and geological mapping (see Figures 3-7).

A large, deep sourced anomaly (120-180 m) transected by three narrow shallow anomalies (basic dykes?) was defined by the ground magnetic programme. The deep sourced anomaly has a NNW trend, a strike length in excess of two kilometres, and a width of 200-300 metres (see Figure 2).

Rock chip samples from the old workings and ironstone outcrops within the grid area were found to be anomalous with respect to tin, tungsten, base metals, silver, gold and arsenic (see report for the six months to 15th September, 1981).

A plus 20 ppm tin-in-soil anomaly with a strike length of over 500 metres, extending north westerly from Dunns prospect towards Cramps prospect was outlined. Values peaked at 1300 ppm tin. Low order base metal values, essentially co-incident with the deep magnetic anomaly, were also recorded (see Appendix 2c).

5.4 Rock Chip Sampling

Rock chip samples from the old workings at the Scamander Bell prospect (SB 1-6) returned relatively high silver (4-780 ppm), arsenic (300-3600 ppm) and antimony values (30-400 ppm). Tin values are in the range less than 5 to 20 ppm (see Appendix 2a).

Samples from the Paul Beahr prospect (PB 1-6) on the other hand range from 0.7% to 1.9% tin with 36 to 123 ppm silver and 1-5% lead (see Appendix 2a).

cont./..

5.5 Regional Soil Sampling

Soil sampling on 21 lines ("SDS" series samples) over airborne magnetic and coincident "whale tail" Dighem anomalies (possible surface conductors) was completed during the six months (see Figure 11). Weakly anomalous values for tin and base metals in the minus 40 mesh fraction were recorded only on traverses 5 to 8 (south of the Cramps grid area) and on line 16 (300 metres NNW of the Pyramid prospect). The high tin values recorded in samples from the dumps at the Paul Beahr prospect were not reflected in soil samples from traverses close to the old workings. This is probably attributable to the extensive cover of alluvium in Arm Creek and to the small size of the mineralized structure at the surface.

Soil sampling over an aeromagnetic anomaly (Figure 8) in the Wolfram Creek area (SMS series) defined anomalous tungsten (10-160 ppm) and low order tin (5 to 280 ppm) values, minor molybdenum (to 15 ppm) and copper (to 65 ppm), lead (to 65 ppm) and zinc (to 195 ppm).

Soil sampling traverses over the Lutwyche ("LUS" series) and Baden Powell ("BPS" series) tungsten prospects were completed (Figure 9). Soils (minus 40 mesh) over the former are low in tungsten (one value only greater than 10 ppm) and weakly anomalous with respect to molybdenum (10-20 ppm) and tin (5-55 ppm). Soils over the Baden Powell prospect returned values of up to 45 ppm for molybdenum, 270 ppm for tungsten and 90 ppm for tin.

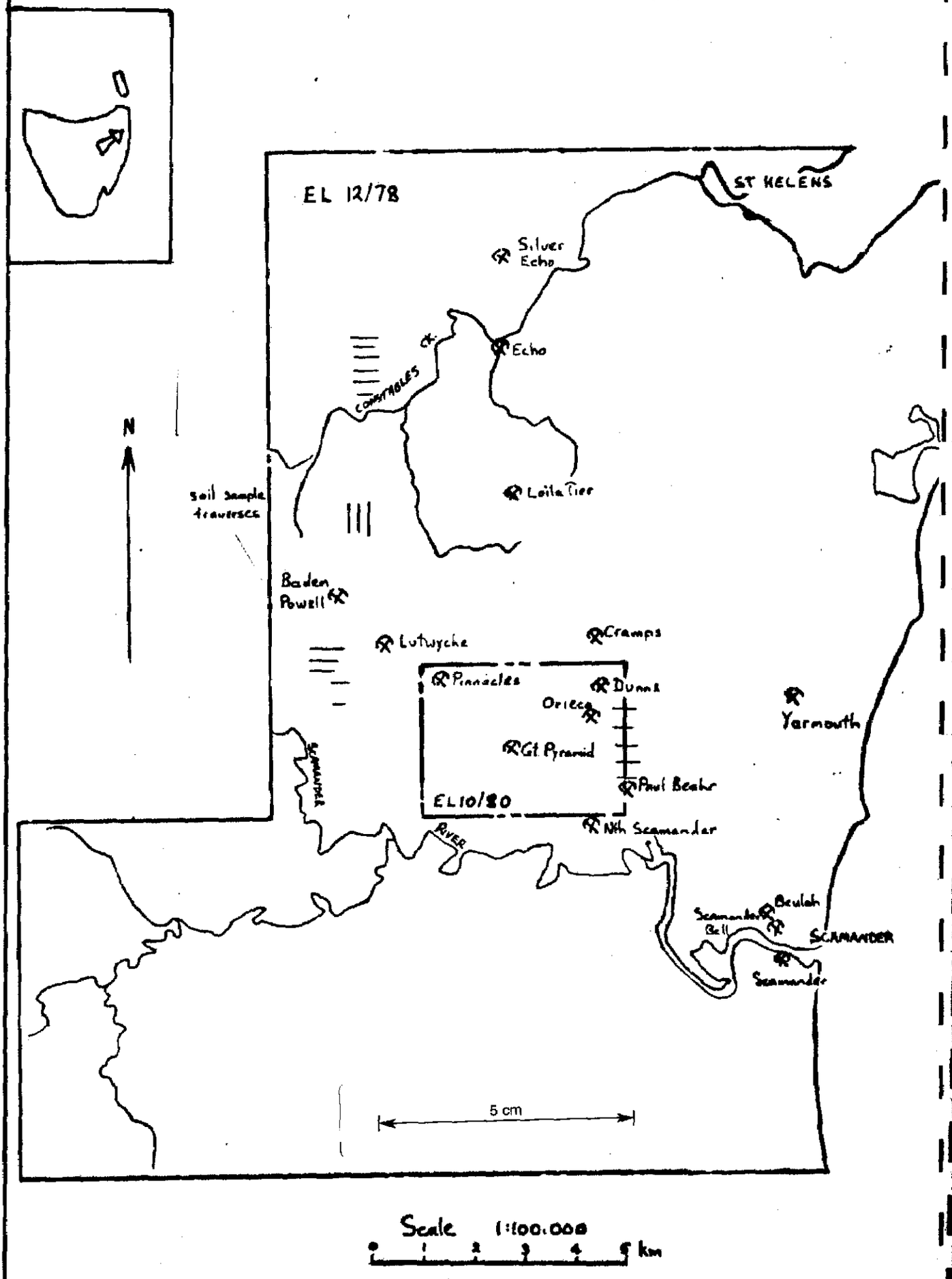
Soil samples were collected on three traverses in granite terrain in the upper reaches of Wolfram Creek, by way of follow-up on a 550 ppm tin-in-stream sediment anomaly ("SGS" series 0001-0047). These returned values of up to 215 ppm tin, 90 ppm tungsten, 20 ppm molybdenum, 40 ppm bismuth and 120 ppm arsenic in the minus 40 mesh fraction.

Six east-west soil sampling traverses were also completed in the upper reaches of Constables Creek where tin-in-stream sample anomalies had previously been recorded ("SGS" 48-131). Values peaked at 375 ppm tin, 20 ppm tungsten, 20 ppm molybdenum, 20 ppm bismuth and 9 ppm arsenic (minus 40 mesh).

Four traverses were also completed at the Echo prospect in Constable Creek ("SGS" 132-184). Values in the minus 40 mesh fraction here peaked at 245 ppm tin, 80 ppm tungsten, 25 ppm molybdenum, 40 ppm bismuth and 80 ppm arsenic.

All analysis results are in Appendix 2d.

776007 FIG. 1



Centre: HOBART

THE BROKEN HILL PROPRIETARY CO. LTD.

Scamander EL 12/78, Pyramid EL10/80, TAS.

Location of Activities

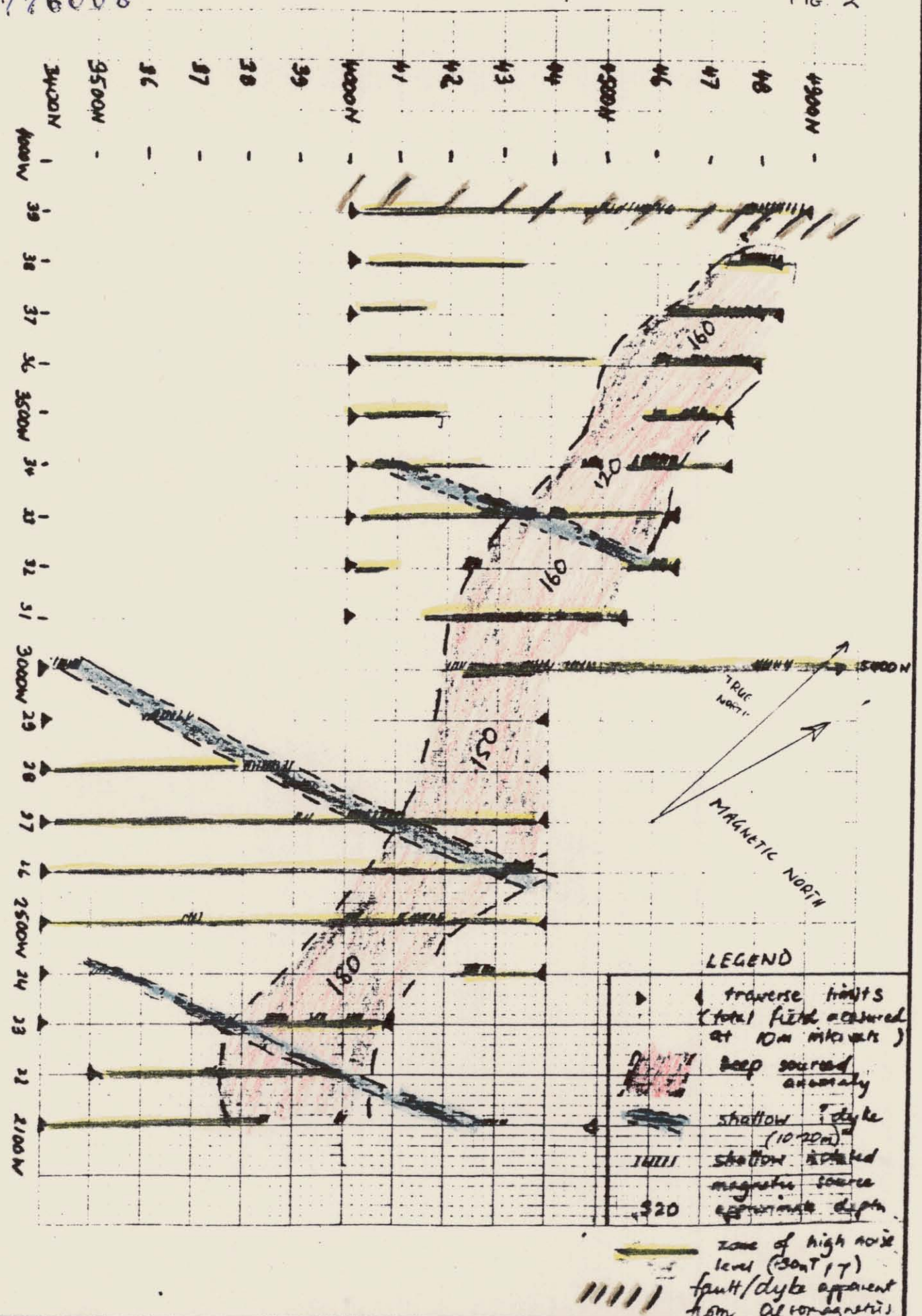
Project No: TB10:630

Date: --

Drawing No: A4-

776008

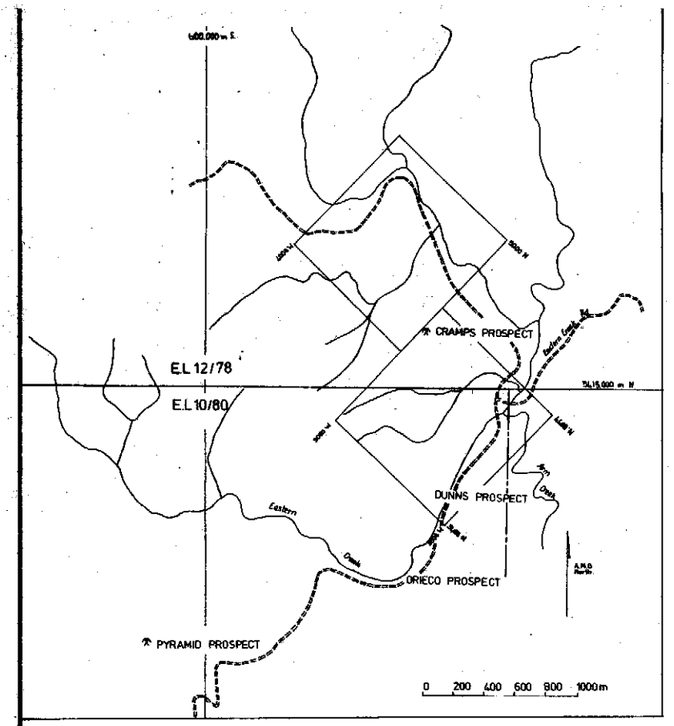
FIG. 2



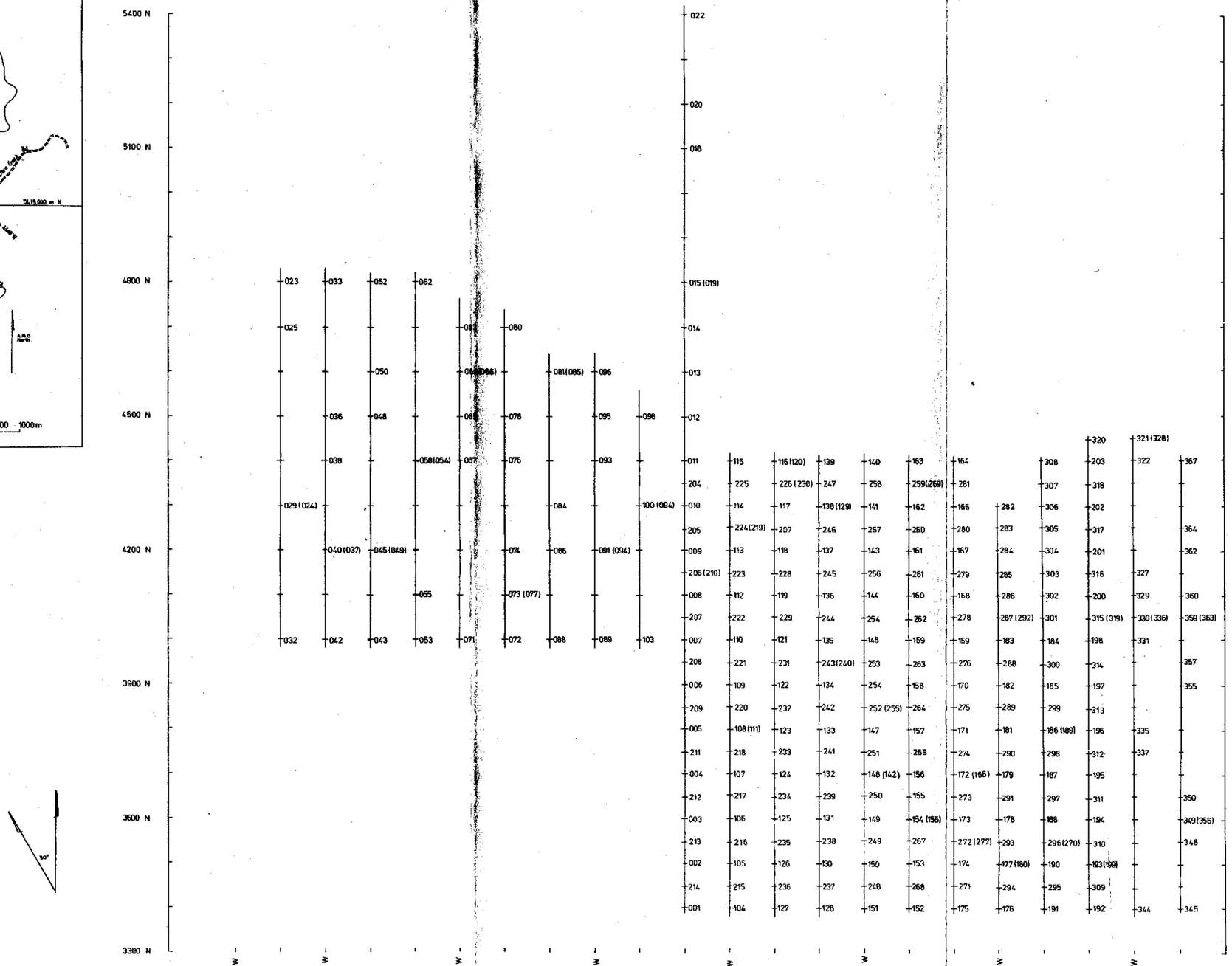
Centre Mc16 — 15k5	THE BROKEN HILL PROPRIETARY CO. LTD. SCAMANDER E.L. 12/78 — CRAMPS GRID GROUND MAGNETIC INTERPRETATION	Project No. T610
Date 3-1-82		Drawing No A4-

FIG. 3

776009



5 cm



30°

DUPLICATES

015	(019)
029	(024)
040	(037)
045	(049)
058	(054)
073	(077)
081	(085)
091	(094)
100	(097)
108	(111)
116	(120)
138	(129)
148	(142)
154	(155)
172	(166)
177	(180)
186	(189)
193	(199)
206	(210)
224	(219)
226	(230)
248	(240)
252	(250)
259	(269)
272	(277)
287	(292)
296	(270)
315	(319)
321	(328)
349	(359)
359	(363)

SCALE 1:10000

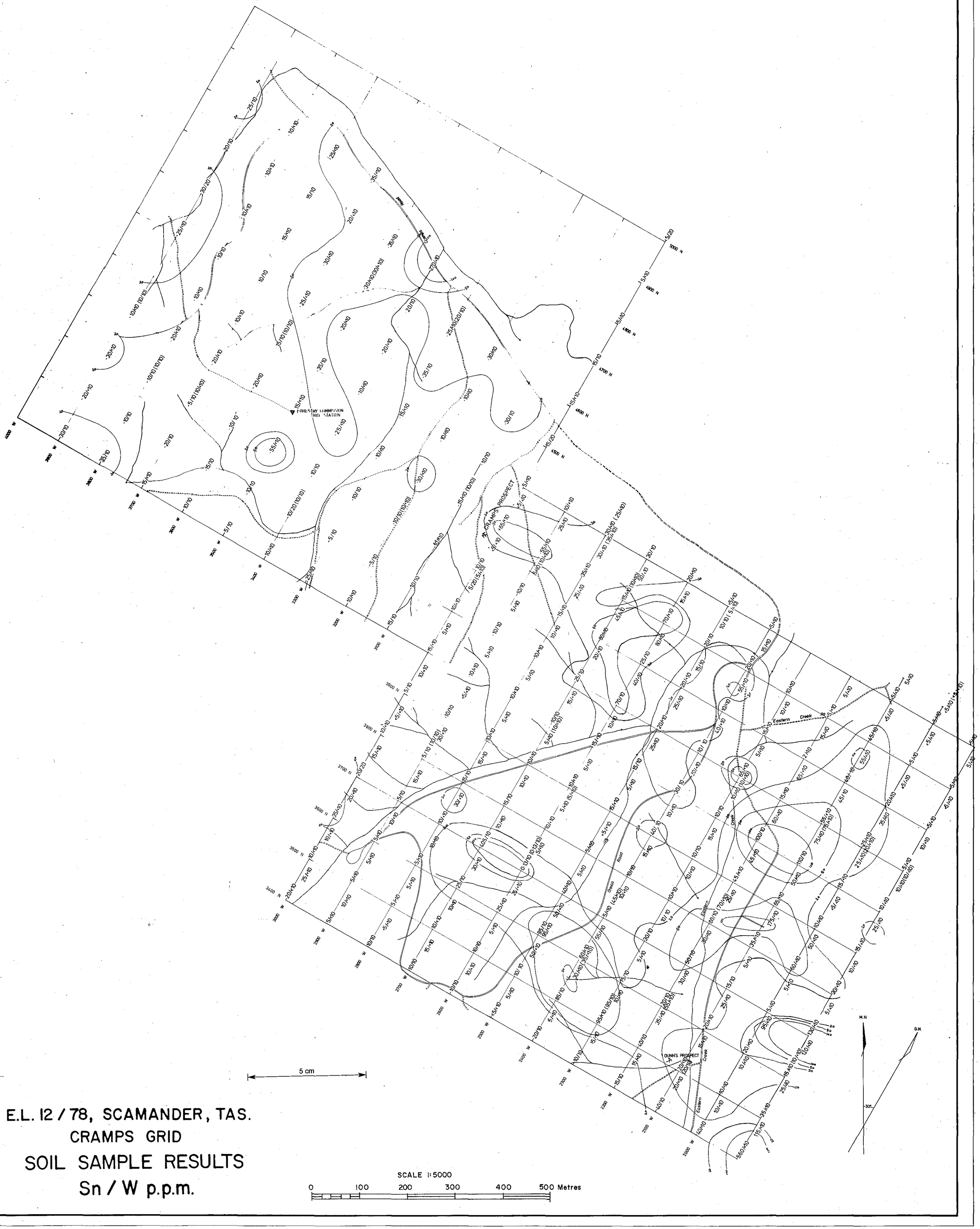
0 100 200 300 400 500m.

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

E.L. 12/78 SCAMANDER TAS
CRAMPS PROSPECT
SOIL SAMPLE LOCATIONS

Drawn: D.A.S	Date: 11 11 81	Centre: Hobart
Traced: Mary	Project NR: T610	Drawing NR: A1-12/78-70
Checked		

Revisions:

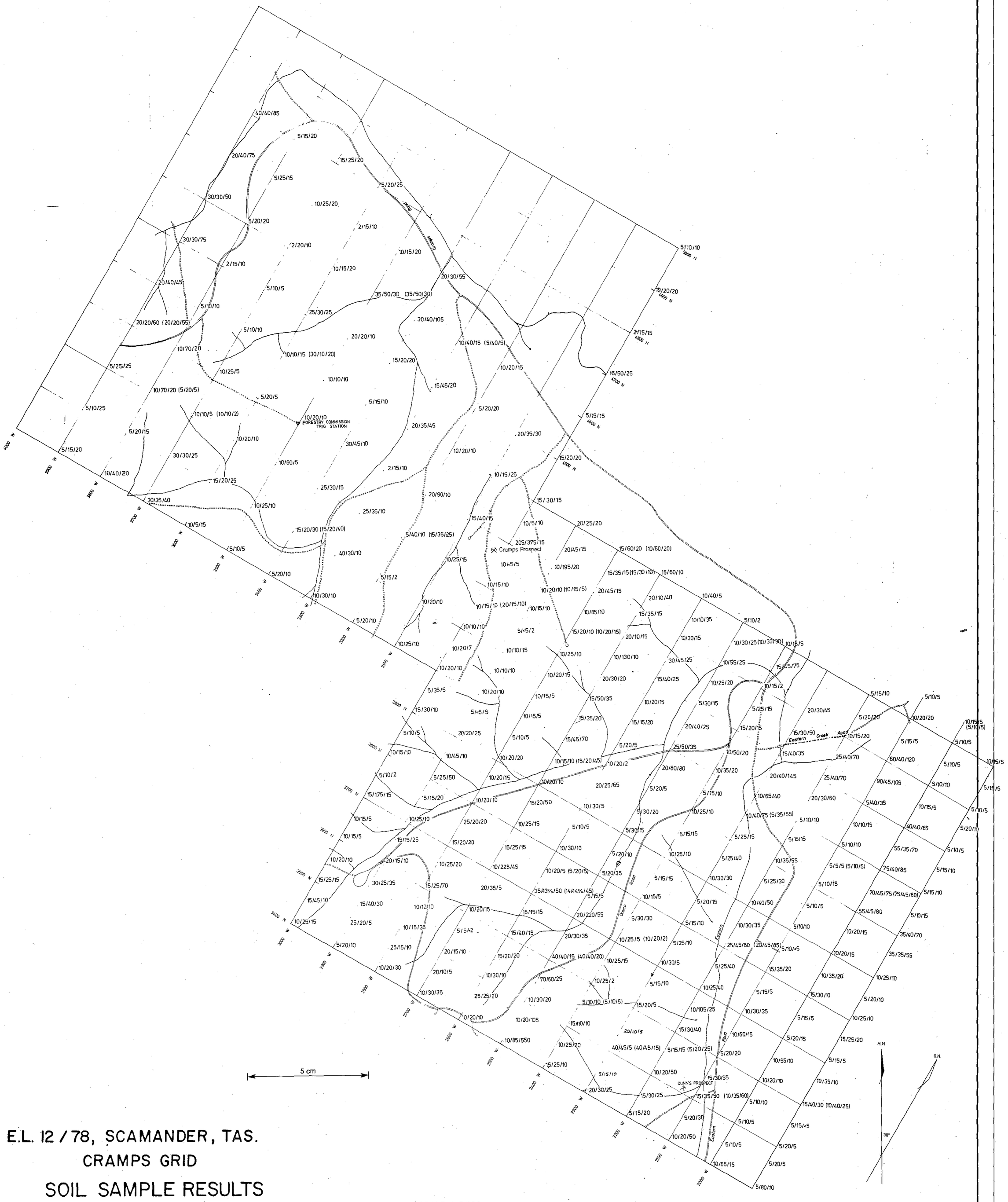


E.L. 12 / 78, SCAMANDER, TAS.

CRAMPS GRID

SOIL SAMPLE RESULTS

Sn / W p.p.m.

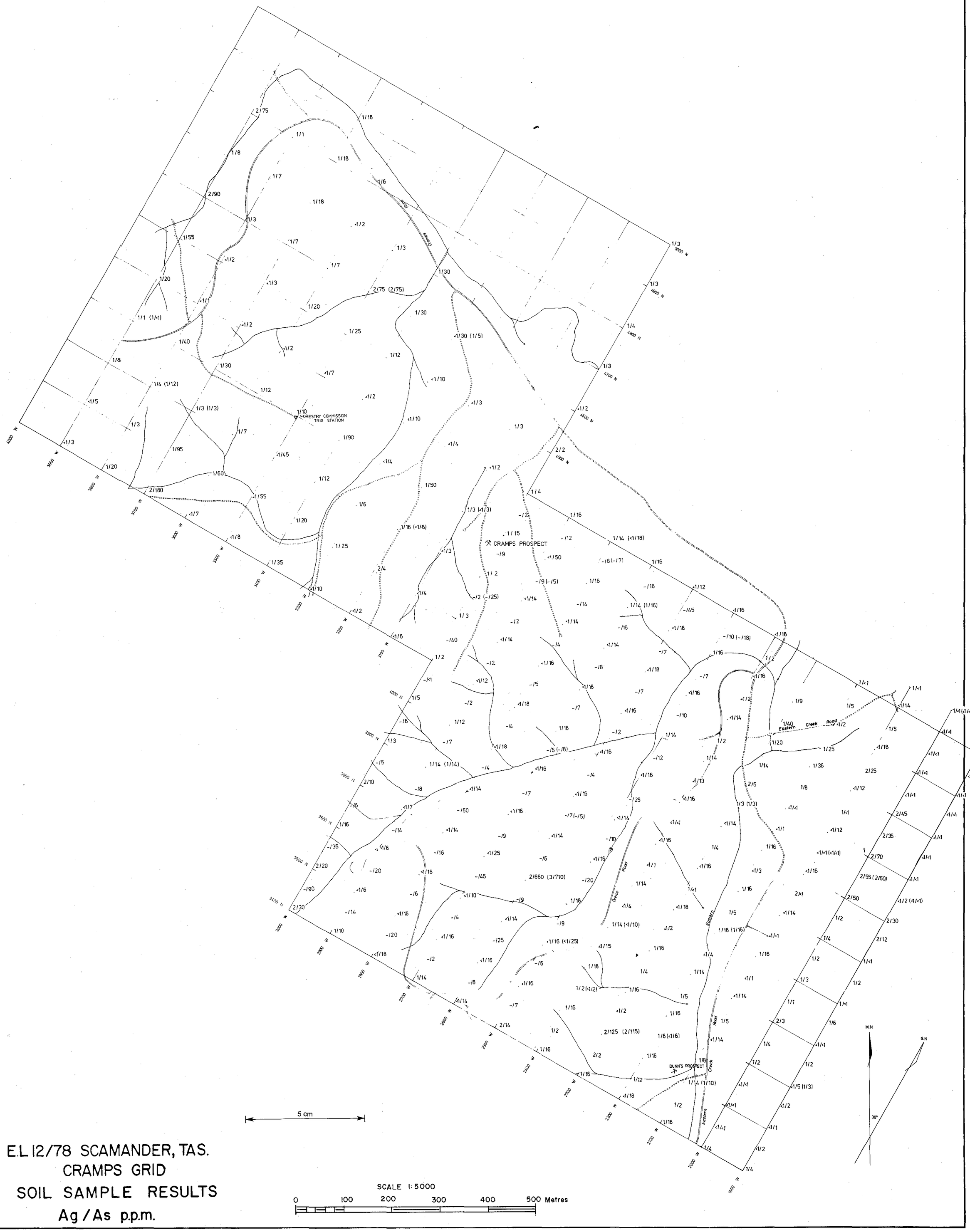


E.L. 12 / 78, SCAMANDER, TAS.

CRAMPS GRID

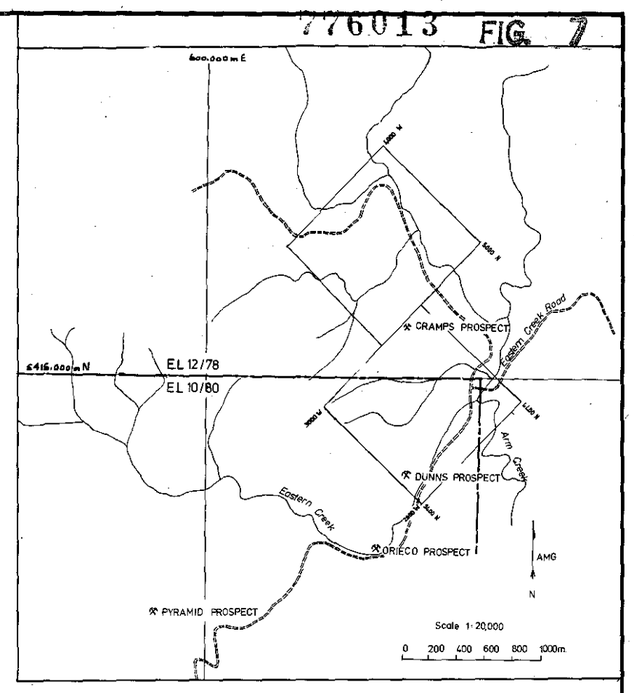
SOIL SAMPLE RESULTS

Cu/Pb/Zn p.p.m.

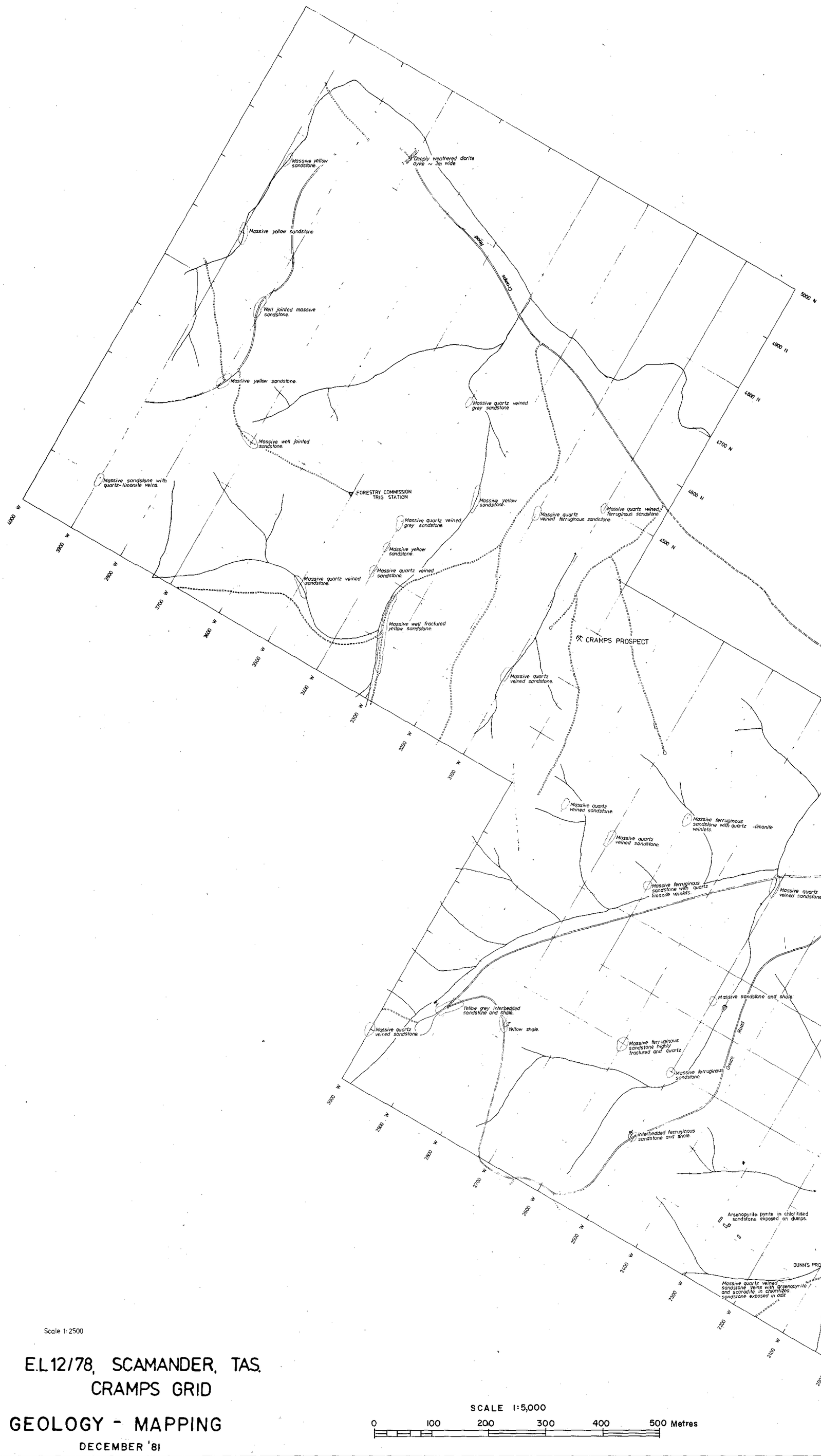


E.L 12/78 SCAMANDER, TAS.
CRAMPS GRID
SOIL SAMPLE RESULTS
Ag / As p.p.m.

776013 FIG. 7



5 cm



SCALE 1:5,000

0 100 200 300 400 500 Metres

Scale 1:2500

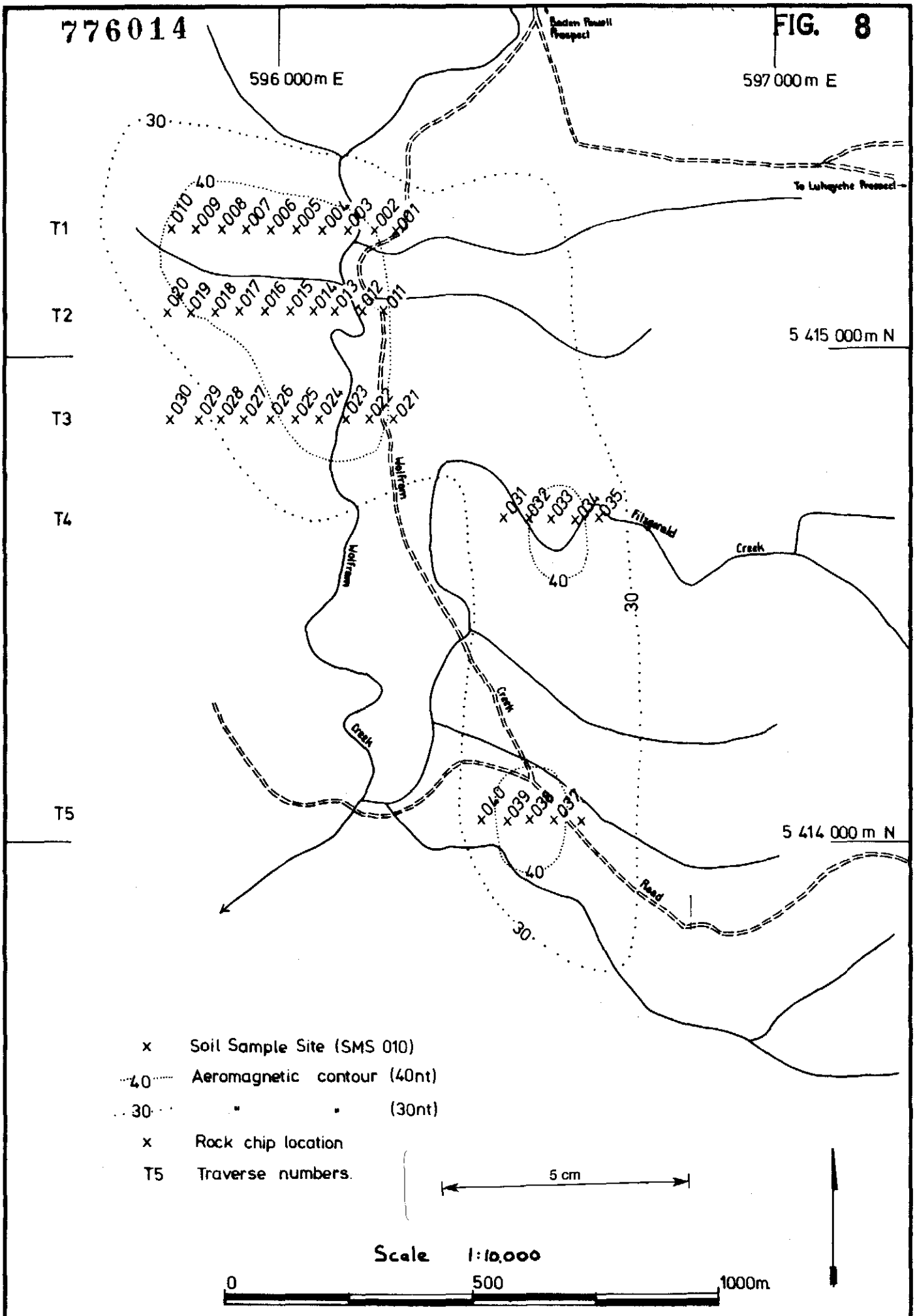
E.L 12/78, SCAMANDER, TAS.
CRAMPS GRID

GEOLOGY - MAPPING

DECEMBER '81

776014

FIG. 8

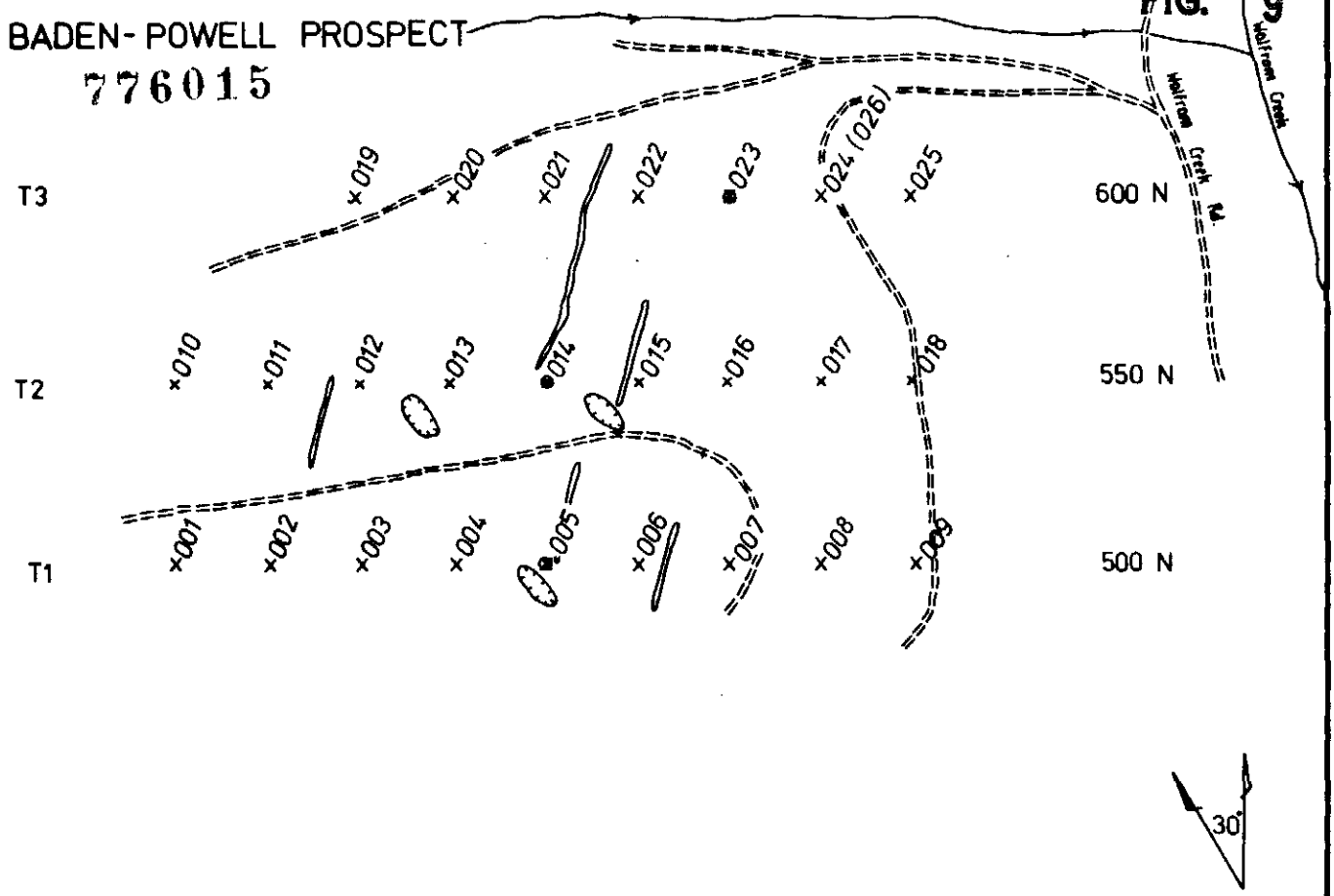


Centre: Hobart	THE BROKEN HILL PROPRIETARY CO. LTD. E.L 12/78 SCAMANDER WOLFRAM CREEK MAGNETIC ANOMALY – SOIL SAMPLE LOCATIONS	Project No: T. 610
Date: 7.1.82		Drawing No: A4-

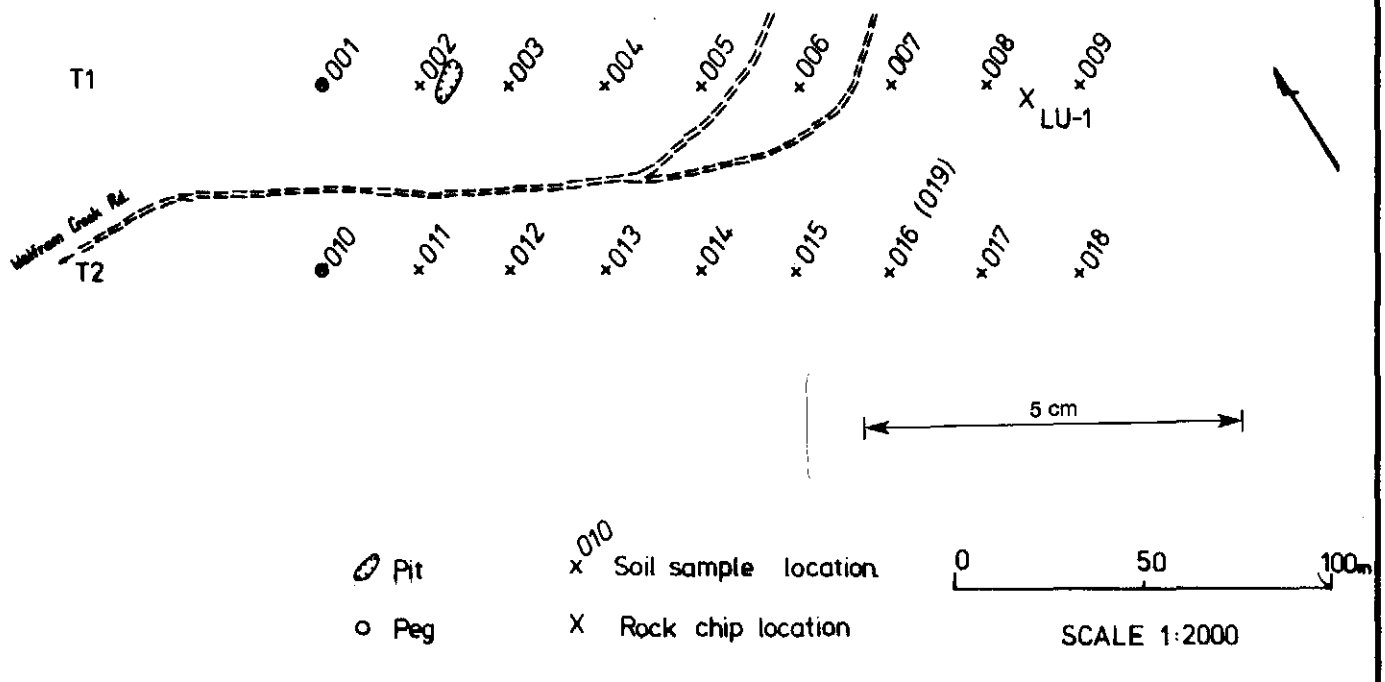
FIG. 9

BADEN-POWELL PROSPECT

776015



LUTWYCHE PROSPECT



Centre: Hobart	THE BROKEN HILL PROPRIETARY CO. LTD. E.L12/78 SCAMANDER	Project No: Tbld
Date: 14.1.82	BADEN-POWELL AND LUTWYCHE Mo, W PROSPECTS—SOIL SAMPLE LOCATIONS	Drawing No: A4-

LEGEND

- Bedding, facing determined.
- Bedding, facing not determined.
- Lineament.
- Shear Zone
- Gossanous rocks, ironstones.
- Hard rock mines, prospects
- Quartz veins.
- Aplite.
- Quartz-feldspar, porphyry.

Tu	Tertiary – undiff. — sand, silt, gravel.
Pss	Permian – sandstone, conglomerate.
Sm	Silurian – Lower Devonian, Mathinna Beds, quartzite, slate.
Igneous Rocks	
Jdl	Jurassic – dolerite.
dio	Upper Devonian (?) diorite.
+ +	Upper Devonian granitic rocks, subdivision in St Helen's area after Groves, Cocker and Jennings, 1977 (Geol. Survey Tas. Bull. 55).
× × ×	Biotite-(muscovite) granite.
(stippled)	Biotite-microgranite

5 cm

N(Amg)
Magnetic North
15°

SCALE 1:40,000

0 1 2 3 Kms

776016

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EXPLORATION DEPARTMENT

EL 12/78, SCAMANDER TAS.

GEOLOGY

Revisions:		
Drawn: R.H	Date: 15.9.81	Centre: Hobart
Traced: J.E.H. + Hilary	Project No: T 610	Drawing No: 12/78-61
Checked:		
O.I.C.		

Rock chip sample location "PG" Series
RW1-6, PRC1-11, PY1-8, EP1-3, WP1-4, WC1, GR1, LU1.
Regional Soil Traverses. GT1-9 — 50m sample intervals
Sidelines over Echo Prospect. ET1-4 — "
Wolfram Creek magnetic anamoly. M1-5 — "
Dighem anomalies D1-21 — 25m sample intervals
Lutwyche — "
Baden-Powell — "

5 cm

N

SCALE 1:40,000
0 1 2 3 Kms

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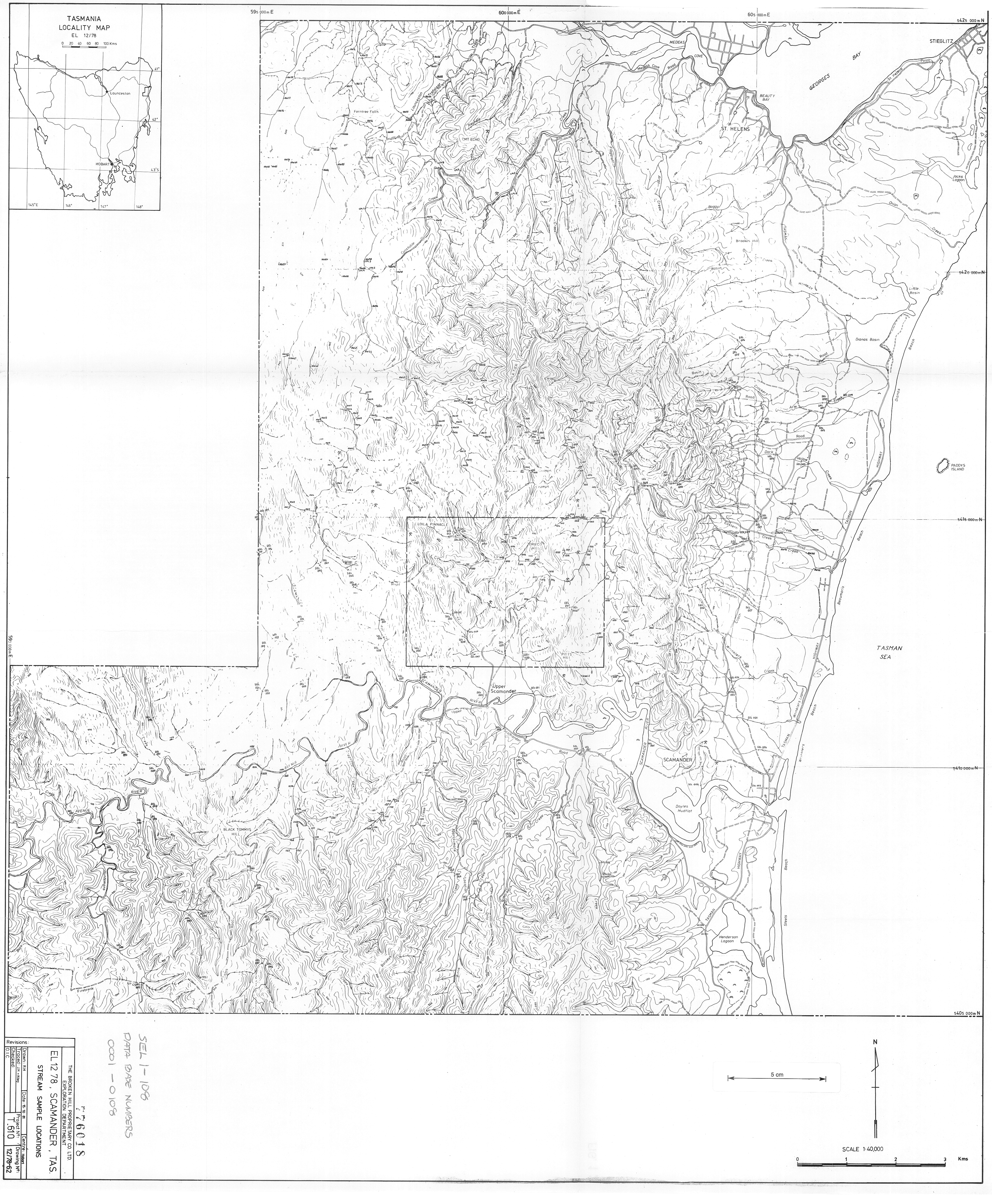
EXPLORATION DEPARTMENT

EL 12/78, SCAMANDER, TAS.

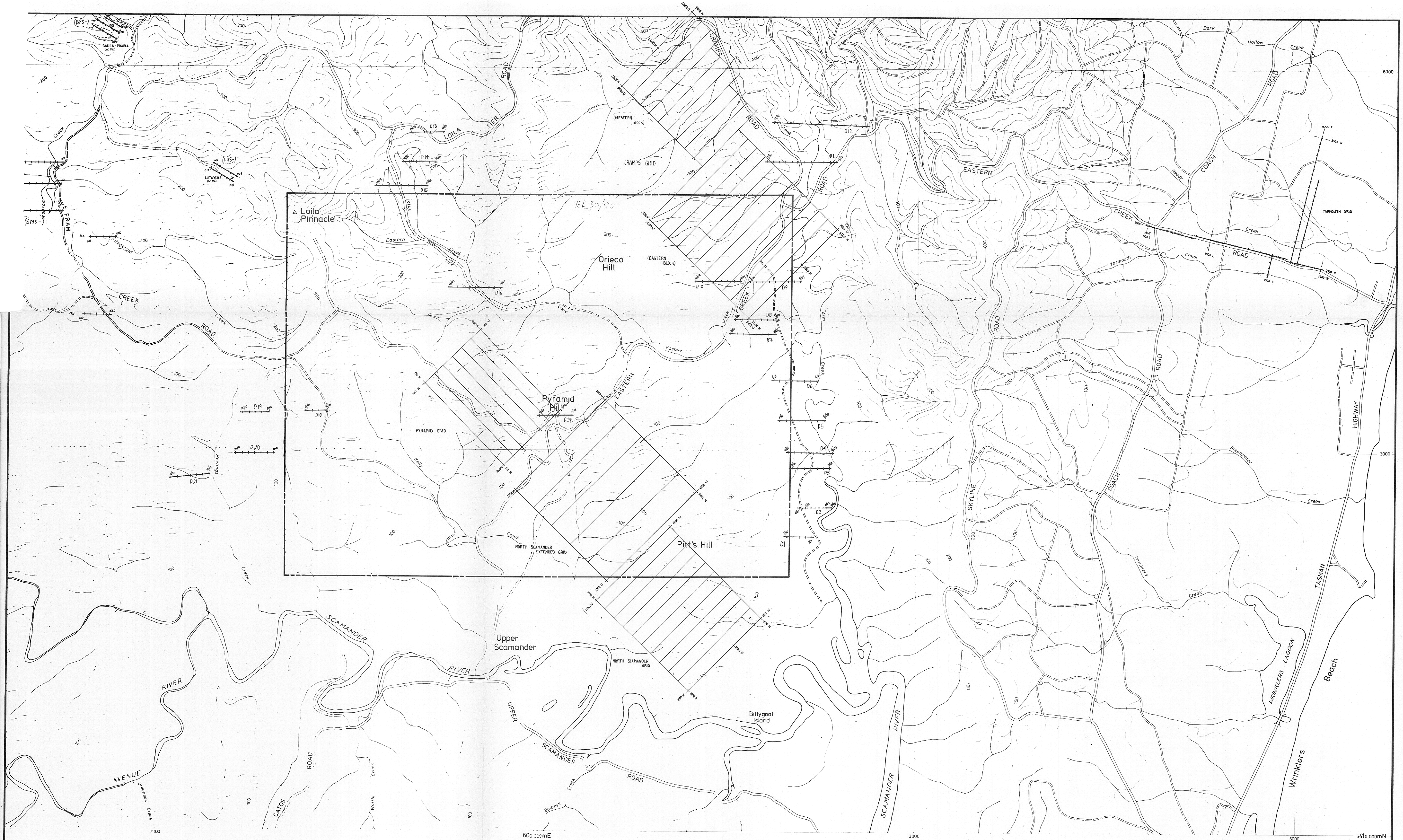
ROCK CHIP AND SOIL SAMPLE LOCATIONS

Revisions:		
Drawn: RH DAS	Date: 9-10-81	Centre: Hobart
Traced: J.H. + Hilary	Project No: T.610	Drawing No: 12/78-66
Checked:		
O.I.C.		

776017



TASMANIA
LOCALITY MAP
EL 12/78
0 20 40 60 80 100 Kms
Launceston
HOBART
41°
42°
43°S
145°E
146°
147°
148°
595 000m E
600 000m E
605 000m E
5425 000m N
5420 000m N
5415 000m N
5410 000m N
5405 000m N
590 000m E
MEDEAS
COVE
Medeas Cove Road
GEORGES
BAY
STIEGLITZ
St Helens Point
BEAUTY
BAY
ST. HELENS
Jocks
Lagoon
Onion Creek
Ferntree Falls
MT ECHO
Nephele Creek
Trafalgar Track
Launceston
Constable Creek
Argus Creek
Flagstaff Creek
Argo Creek
Boggy Creek
Brookes Hill
Basin
Creek
TASMAN HIGHWAY
SCAMANDER TIER
Little
Basin
Dianas Basin
Dianas Beach
Nevada Creek
LOILA TIER
Crockers Road
Oldings
Arm Creek
Semmens
Alps Road
Dark Hollow Creek
Reedy
Eastern Creek
Yarmouth Road
Freshwater Creek
Coach Road
SKYLINE TIER
Wrinklers Creek
Wrinklers Lagoon
Beaumaris Beach
PADDYS
ISLAND
TASMAN
SEA
LOILA PINNACLE
ORIECO
HILL
PITTS
HILL
Upper
Scamander
SCAMANDER RIVER
Scamander Road
SCAMANDER
Doyles
Mudflat
McIntyre Creek
Henderson
Lagoon
Steels Beach
Wrinklers Beach
AVENUE RIVER
BLACK TOMMYS
HILL
Huntsmans
Bark Hut Creek
Hop Creek
Catos Creek
Catos Road
Firebreak No 4
Wattle Ridge
Bolpeys Ridge
Bolpeys Creek
Binns
Approximate Location Only
Workers Creek
N
5 cm
SCALE 1:40,000
0 1 2 3 Kms
Revisions:
THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT
EL 12 78, SCAMANDER, TAS.
STREAM SAMPLE LOCATIONS
Drawn: R.H
Traced: J.H. + Hilary
Checked:
O.I.C.
Date: 15.10.81
Centre: Hobart
Project Nº: T.610
Drawing Nº: 12/78-62
76018
SEL 1-108
DATA BASE NUMBERS
0001 - 0108



Grids				Traverses		
Pyramid	50 x 50m	R40		D Series	50m intervals	SDS
North Scamander	50 x 50m			M Series	50m	SMS
North Scamander (extented)	200 x 100m			Baden Powell	20 x 50m. (3 lines)	BPS
Cramps	100 x 100m (Western block) 100 x 50m (Eastern block)	T63		Lutwyche	25 x 50m (2 lines)	LUS
Yarmouth	50 x 50m (Auger samples)					

SCALE 1:20,000

0 20 40 60 80 100 Kms

776019

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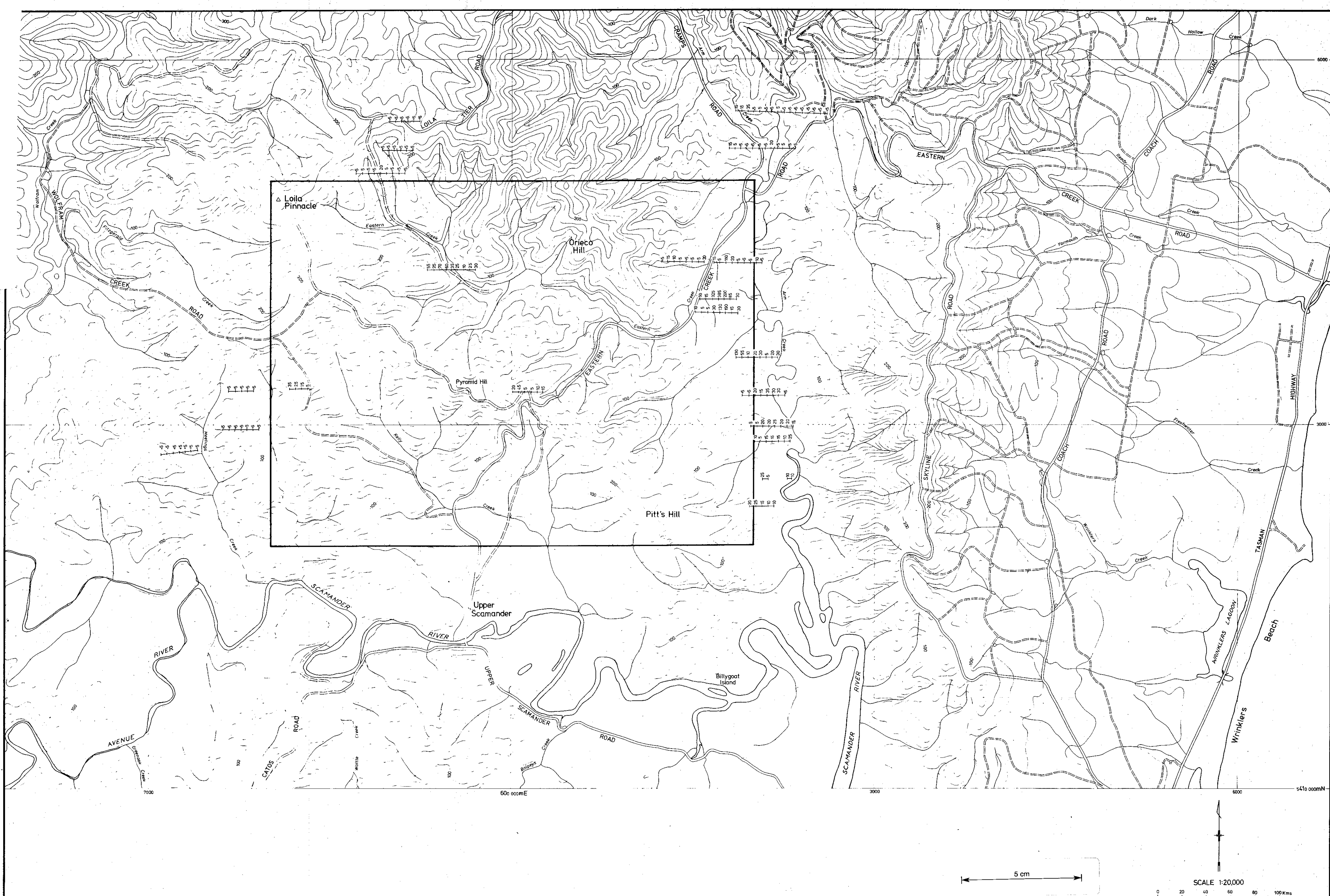
EXPLORATION DEPARTMENT

E.L.10/80 GREAT PYRAMID, N.E. TASMANIA

SOIL SAMPLE LOCATIONS

Drawn: [illegible] Date: [illegible] Centre: HOBART
Traced:
Checked:
O.I.C.:
Revisions:
Project No: T630
Drawing No: AO- 10/80-



THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

E.L.10/80 GREAT PYRAMID, N.E. TASMANIA

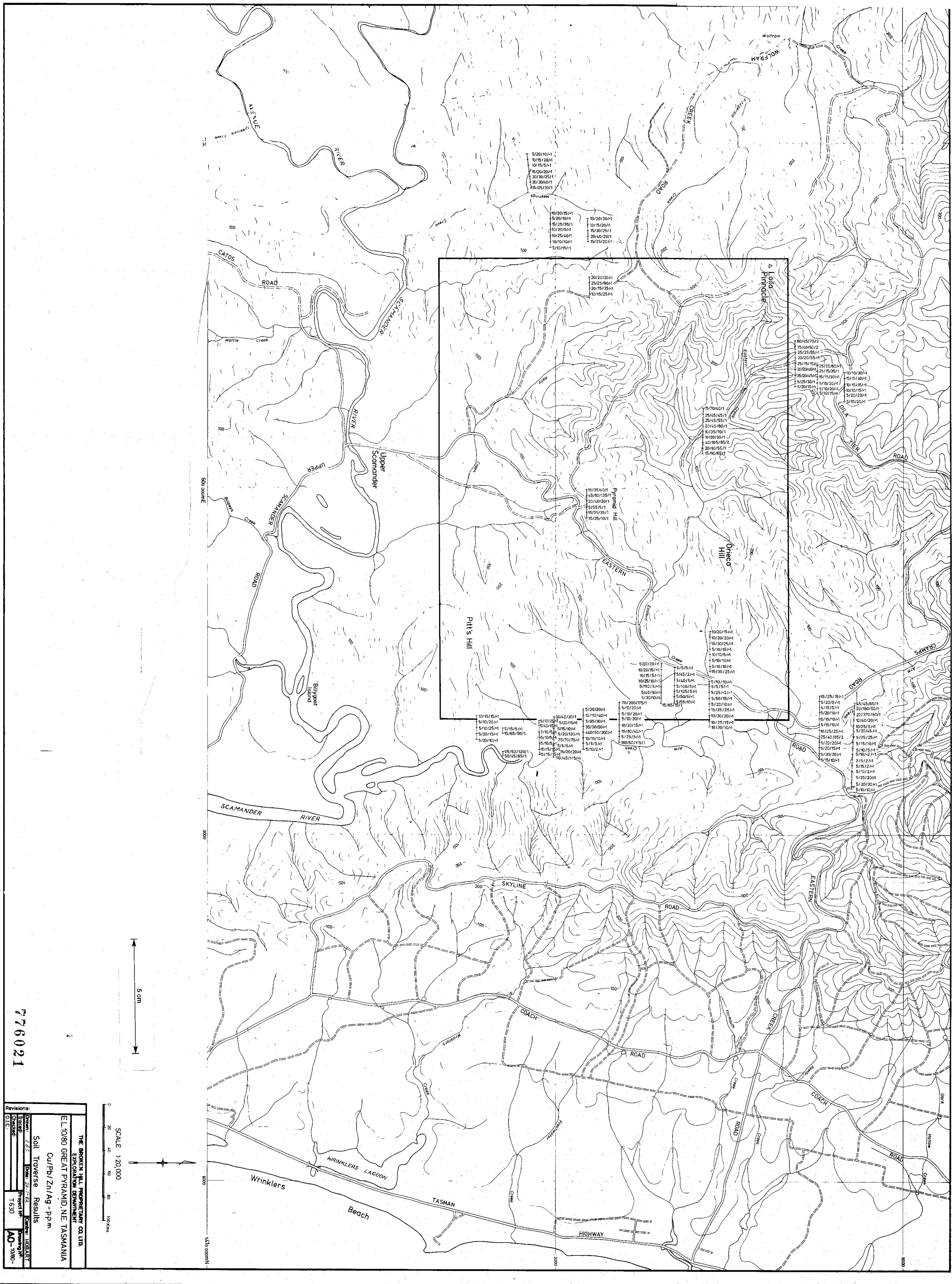
Sn - p.p.m

SOIL TRAVERSE RESULTS

Drawn: D. Steele	Date: 12-2-82	Centre: HOBART
Traced: Hilary + J.E.H	Project Nº: R400	Drawing Nº: AO-10/80-
Checked:		
O.I.C.:		

Revisions:

776020


THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT
E.L.10/80 GREAT PYRAMID, N.E. TASMANIA
Cu/Pb/Zn/Ag - p.p.m.
Soil Traverse Results
Revisions:
Drawn: D.A.S.
Date: 27-1-82
Traced:
Checked:
O.I.C.:
Centre: HOBART
Project No: T630
Drawing No: AO-10/80-
SCALE 1:20,000
0 20 40 60 80 100 Kms
5 cm
776021
SCAMANDER RIVER
CATOS ROAD
Wattle Creek
Upper Scamander
UPPER SCAMANDER ROAD
Bolpeys Creek
Billygoat Island
Pitt's Hill
Pyramid Hill
Orieco Hill
Loila Pinnacle
Kelly
Eastern Creek
EASTERN
WOLFRAM CREEK ROAD
Wolfram Creek
Fitzgerald
Meetings
LOILA TIER ROAD
CRAMPS ROAD
Arm
SKYLINE ROAD
COACH ROAD
EASTERN CREEK ROAD
Yarmouth
Reedy
Dark Hollow Creek
Freshwater Creek
Wrinklers
WRINKLERS LAGOON
Wrinklers Beach
TASMAN HIGHWAY
600 000mE
5410 000mN
3000
6000
100
200
300
5/20/10/<1
10/15/20/<1
10/15/5/<1
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30/30/25/1
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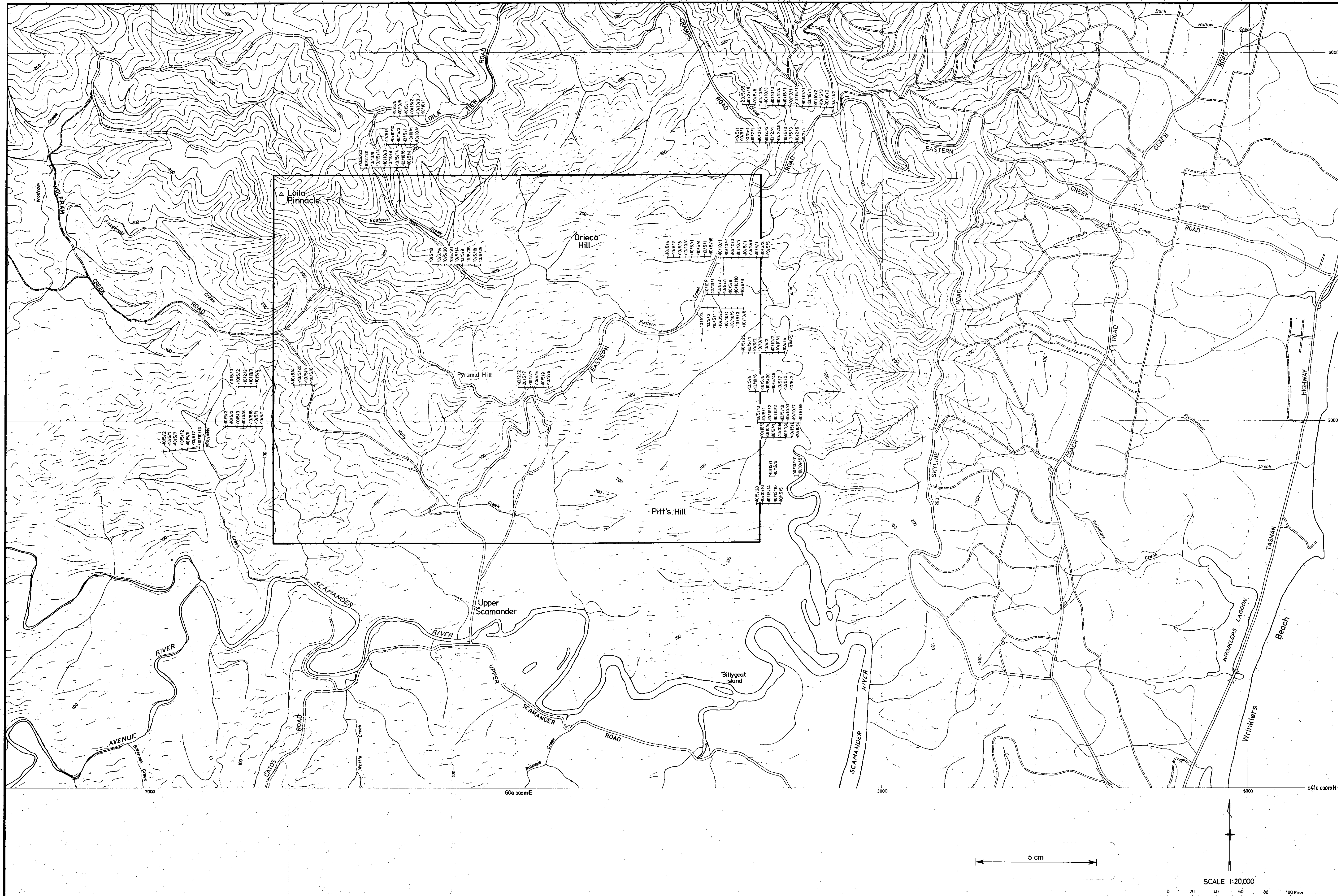
5/30/20/<1
5/15/10/<1
45/45/65/1
20/160/50/1
20/370/80/1
10/40/20/<1
10/25/5/<1
5/20/45/<1
5/25/25/<1
5/15/10/<1
5/10/5/<1
5/10/<2/<1
2/5/2/<1
5/15/2/<1
5/10/2/<1
5/25/20/<1
5/20/30/<1
5/10/10/<1



THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

E.L.10/80 GREAT PYRAMID, N.E. TASMANIA

W / Mo / As – p.p.m.

Soil Traverse Results

Drawn: D. Steele	Date: 10-2-81	Centre: HOBART	
Traced:		Project No: T630	Drawing No: AO-10/80-
Checked:			
O.I.C.:			

776022

APPENDIX 1

North Scamander Prospect

Report on Drilling

October/November, 1981

776024

NORTH SCAMANDER PROSPECT

REPORT ON DRILLING

OCTOBER/NOVEMBER, 1981

CONTENTS

APPENDICES

FIGURES

NORTH SCAMANDER PROSPECT

REPORT ON DRILLING

OCTOBER/NOVEMBER, 1981

1. INTRODUCTION

This report covers data obtained from two diamond drillholes completed at the North Scamander Prospect between the 12th October, 1981 and the 16th November, 1981.

2. DRILLING RESULTS

The programme consisted of one hole of 282.6 metres (NS4) and an extension of 67.1 metres to hole NS1 drilled in July, 1980.

Hole NS4 was drilled to test the northern extension of the geophysically anomalous zone at a point previously untested by drillhole NS3. Hole NS1 was extended in anticipation of encountering further mineralization since downhole geophysical surveys (principally SIROTEM) were interpreted as indicating that the hole had previously stopped within the mineralized zone.

Hole NS4 encountered weakly mineralized sandstone and shale to 150 metres, silicified, and again weakly mineralized sandstone/quartzite to 260 metres, then shale to 282.6 metres. A pyrrhotite rich breccia zone was intersected between 230.8 and 232.5 metres. Pyrrhotite stringers with minor sphalerite, galena and chalcopyrite were encountered within 15-20 metres above and below the zone. Massive magnetite-chlorite-sulphide mineralization of the type encountered in NS1 and NS2 was not intersected.

Hole NS1 was extended from 202.2 to 269.3 metres. One metre of massive pyrrhotite breccia was intersected at the top of the extension after which the hole passed into weakly mineralized sandstone and shale. Mineralization was of stringer style including pyrrhotite, sphalerite, galena and chalcopyrite.

Cores were logged, photographed, split by diamond saw, sampled at approximately two metre intervals and analysed for copper, lead, zinc, silver, tin and tungsten.

Trace tin in the range 40 to 520 ppm was recorded in NS4, and in the range 25-265 ppm in the NS1 extension. Minor copper, lead, zinc and silver were recorded in both holes. Results for NS4 are summarized in Table 1.

Table 1

Interval (m)	Length (m)	Sn%	Cu%	Pb%	Zn%	Ag(ppm)
24.5-35.8	11.3	0.016	0.09	0.05	0.05	10.3
224.3-234.3	10.0	0.015	0.11	0.09	0.09	10.8

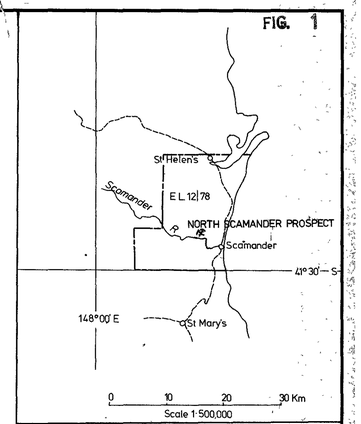
cont./..

3. CONCLUSIONS

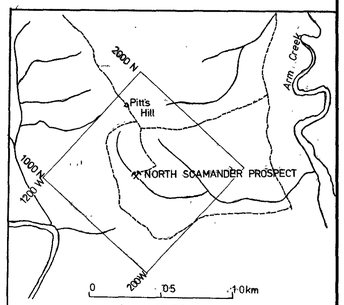
Both holes NS4 and NS1 penetrated the geophysically anomalous zone. Results from NS4 indicated that the mineralized zone thins to the north and has a steep south-westerly dip. Low tin and base metal grades in the zone at this point appear to confirm the interpretation that tin grades may be expected to increase with depth and to the south-east in the area previously tested by hole NS2.

More detailed surface mapping in conjunction with drillhole data has confirmed the presence of minor fold structures plunging to the SE in the vicinity of the collar of hole NS4. In this area the steeply dipping mineralized breccia zone apparently occupies an axial surface fault in the anticline. The fault probably displaces the NE block down with respect to the SW block. Since no marker horizons have been recognized, the extent of vertical and lateral movement along the fault has not been determined.

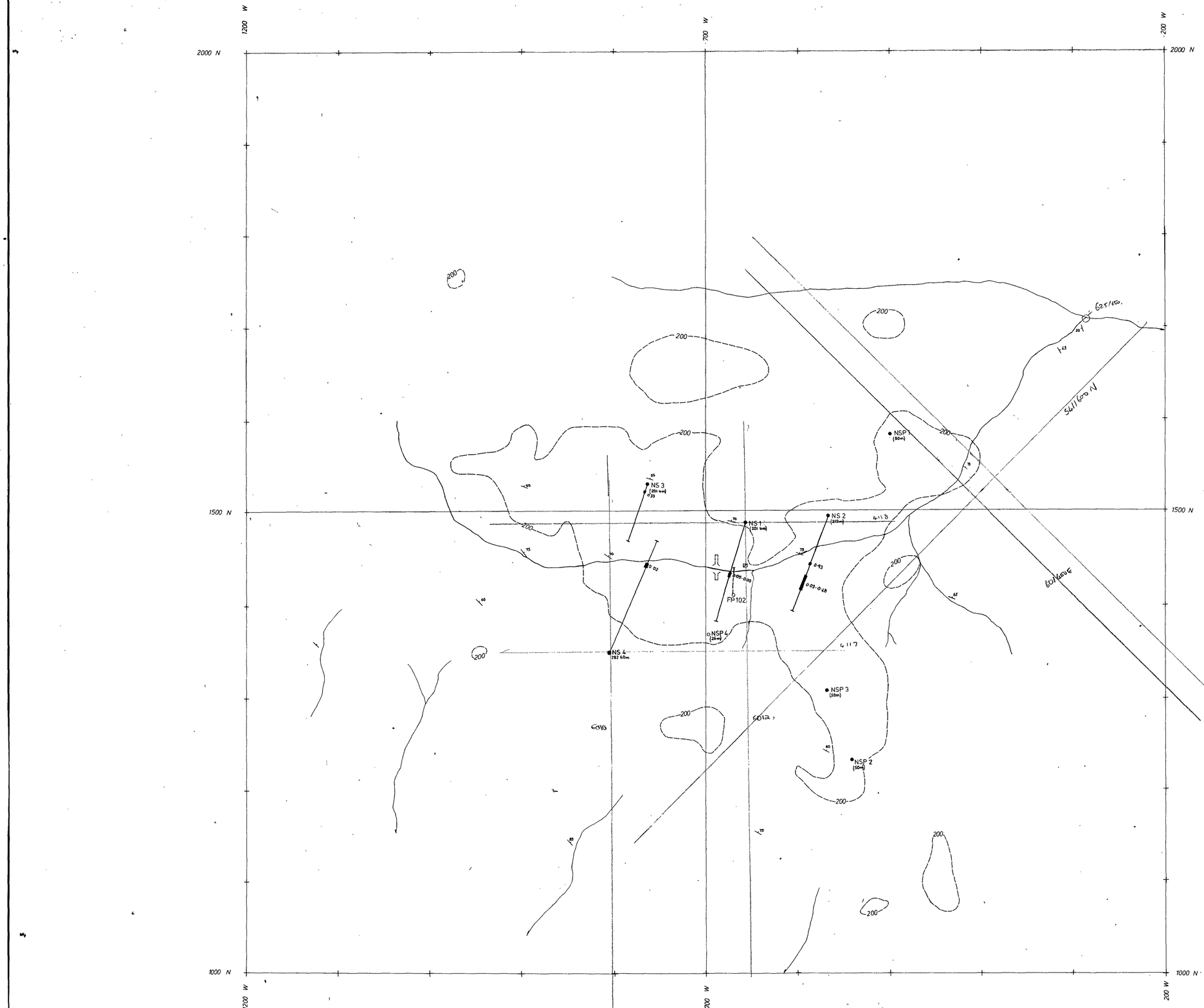
FIG. 1



LOCALITY MAP

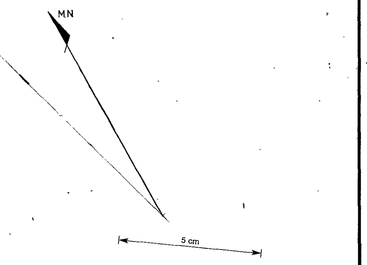


LOCATION MAP



LEGEND

- •NS BHP Diamond Drillhole.
- •NSP BHP Percussion Drillhole
- oFP EZ Diamond Drillhole
- Adit
- Shaft
- 200 ppm Sn in soil contour
- 0·33 Sn grades in mineralized intercepts (%)



Scale 1:2000

0 50 100 150 200m

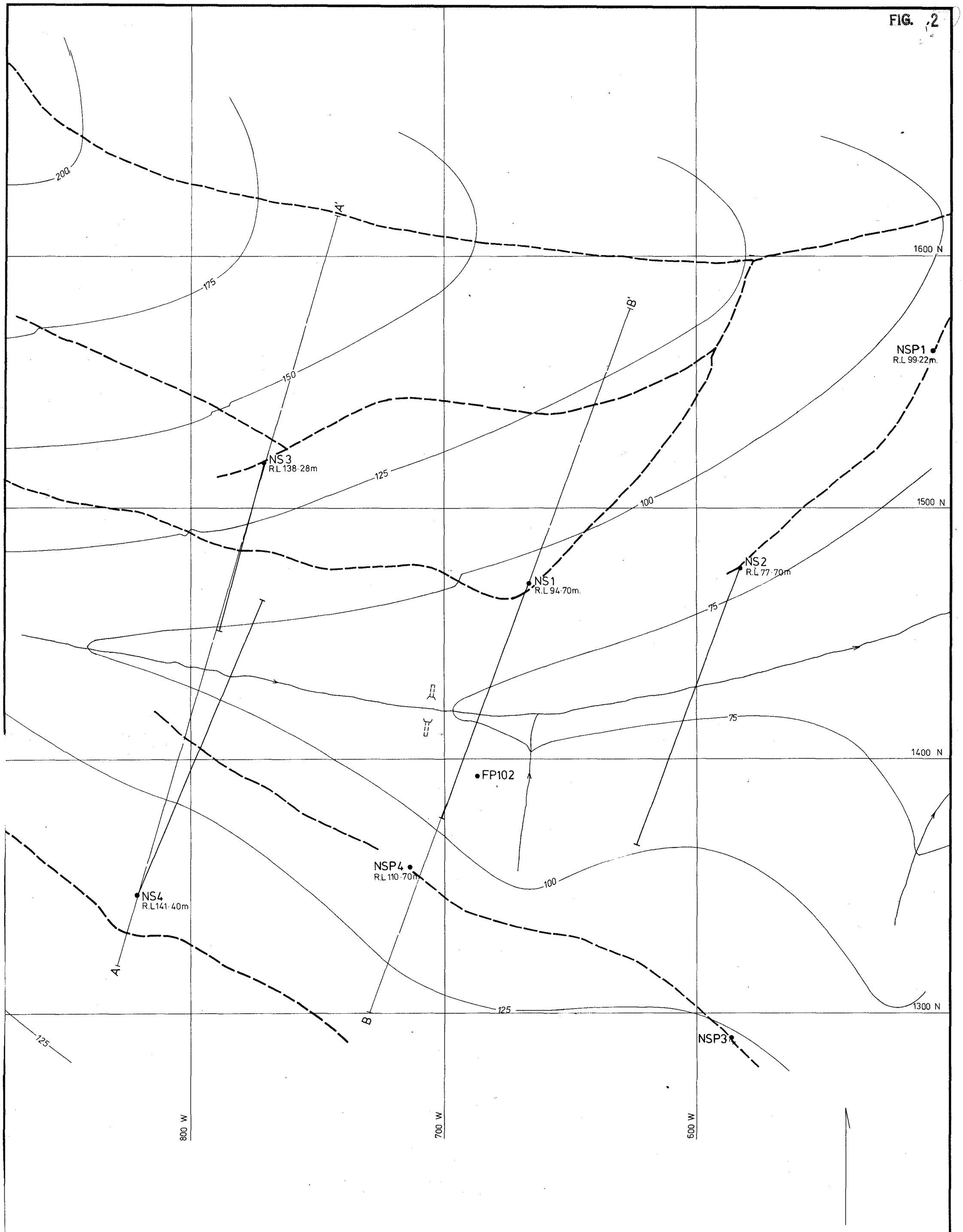
776028

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

E.L. 12/78 SCAMANDER, TASMANIA.
NORTH SCAMANDER PROSPECT
EXPLORATION RESULTS

Revisions:	Drawn. R H	Date 15/ 9 81	Centre: Hobart
	Traced: Hilary	Project No. T 610	Drawing No. A1-12/78-74
	Checked		

FIG. 2



776029

Based on survey information compiled by (G. Walkem & Co.) (Surveyors). Nov 81 (Ref Nº 1945)

Revisions:

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

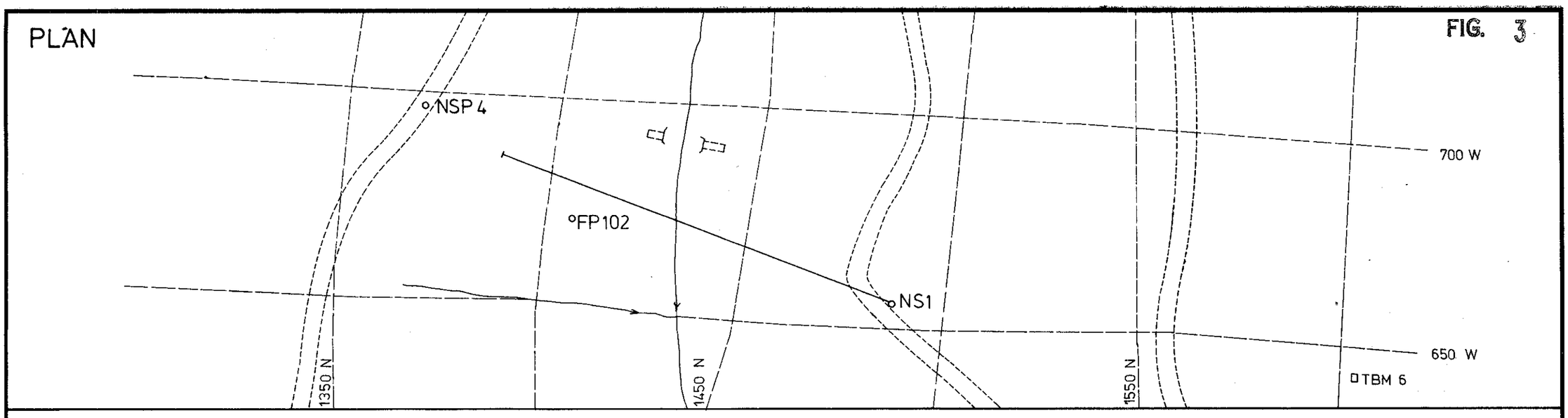
E.L 12/78 NORTH SCAMANDER TAS.

CROSS SECTION LOCATION PLAN

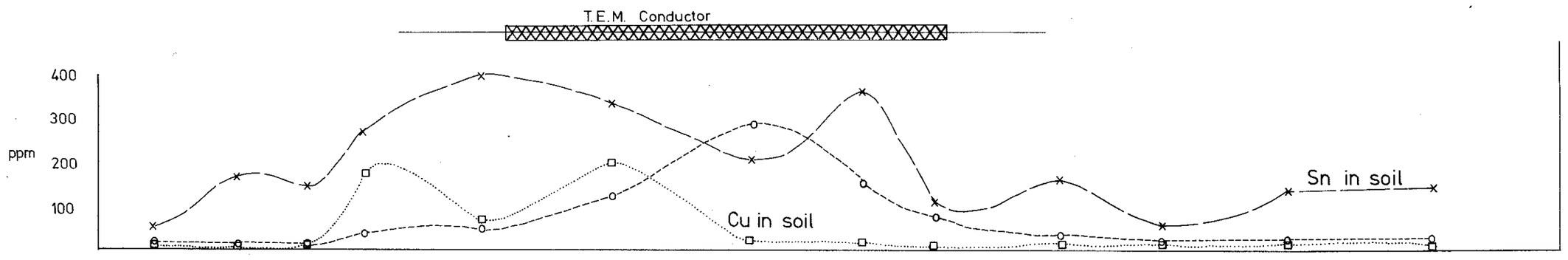
Drawn: D.A.S	Date: 13·1·82	Centre: Hobart
Traced: Hilary	Project Nº: T610	Drawing Nº: A2-12/78-71
Checked:		

FIG. 3

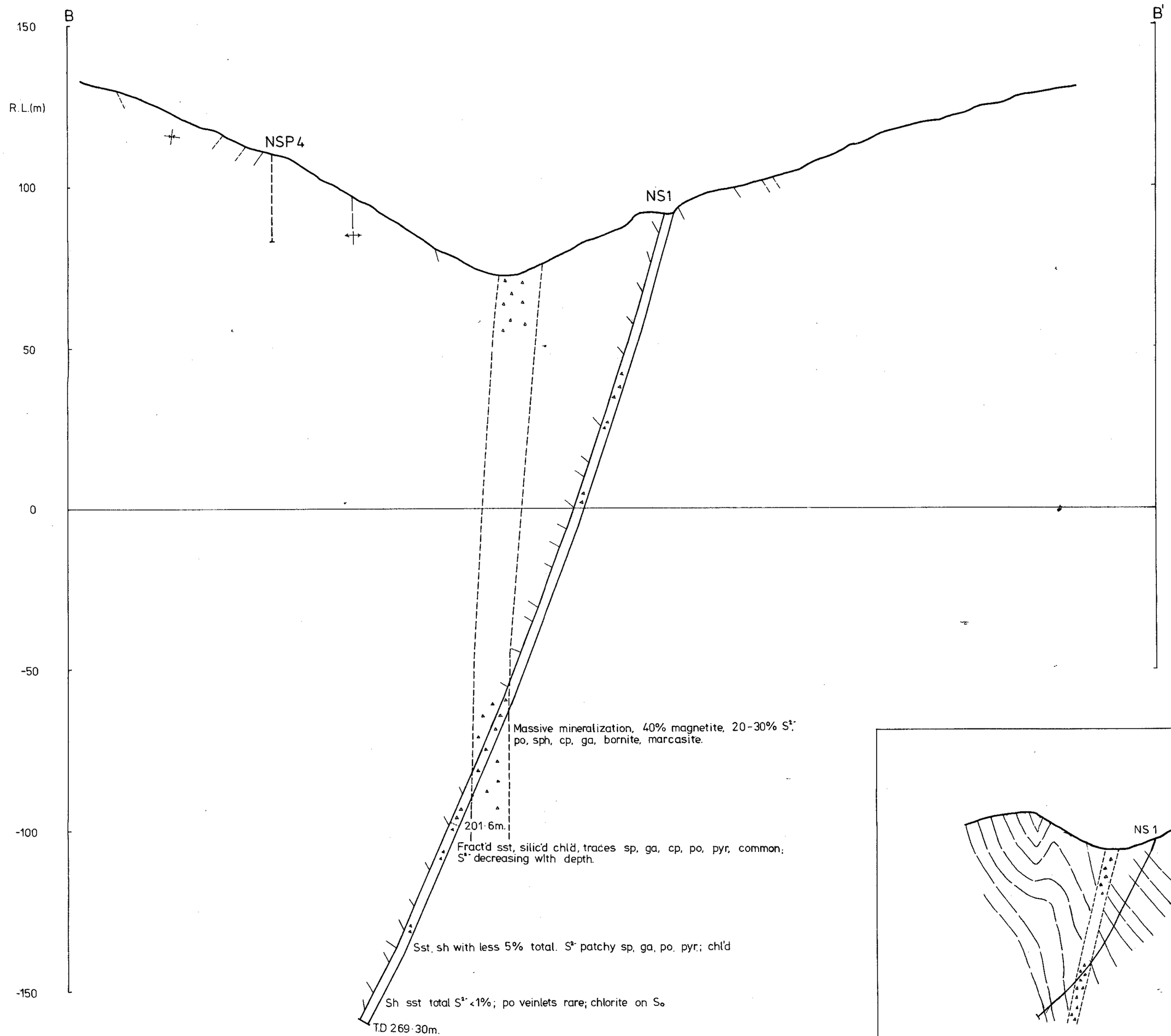
PLAN



PROFILES



SECTION (B-B')



SCHEMATIC INTERPRETATION

Scale 1:1000

776030

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EXPLORATION DEPARTMENT

E.L.12/78, NORTH SCAMANDER, TAS.

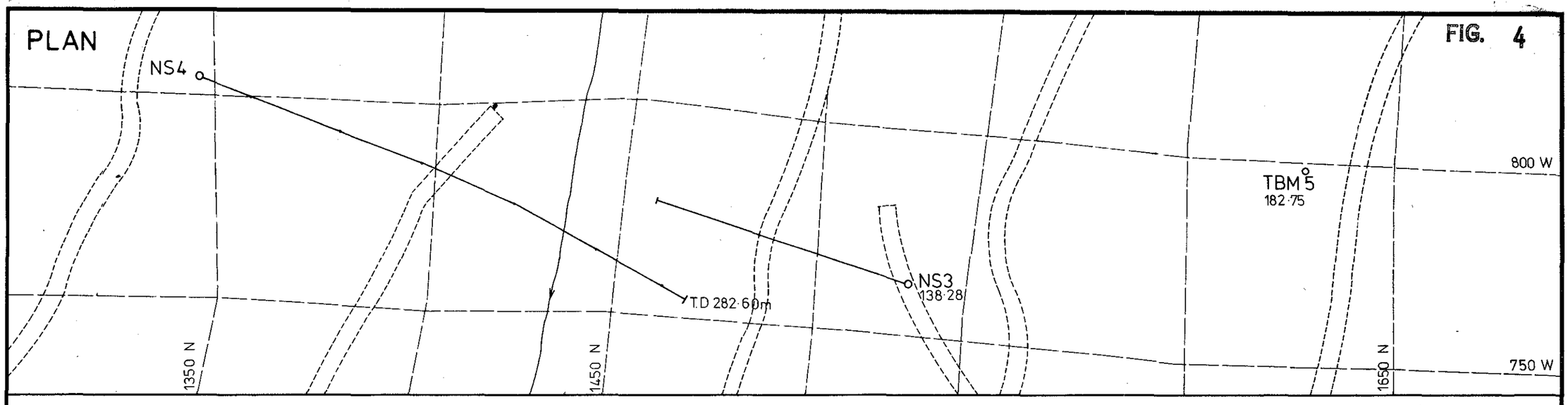
DRILLHOLE NS 1 — SECTION

Drawn: R. H. | D.A.S.	Date: 11·1·82	Centre: Hobart.
Traced: Hilary	Project No: T 610	Drawing No: A2-12/78-72
Checked:		

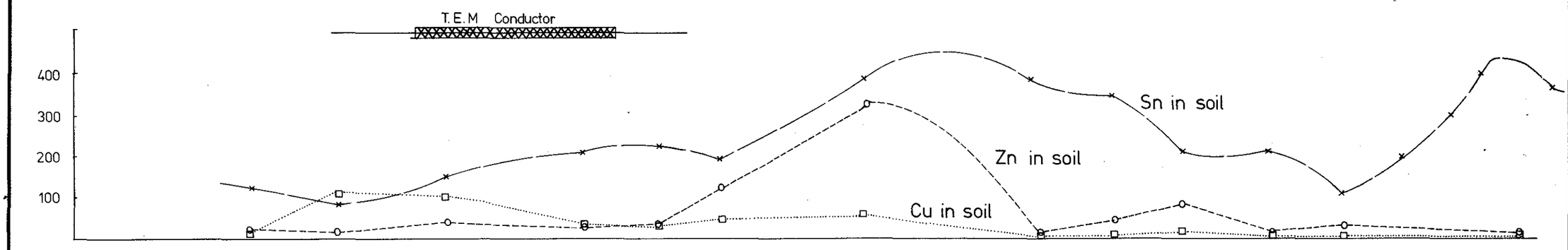
Revisions:

FIG. 4

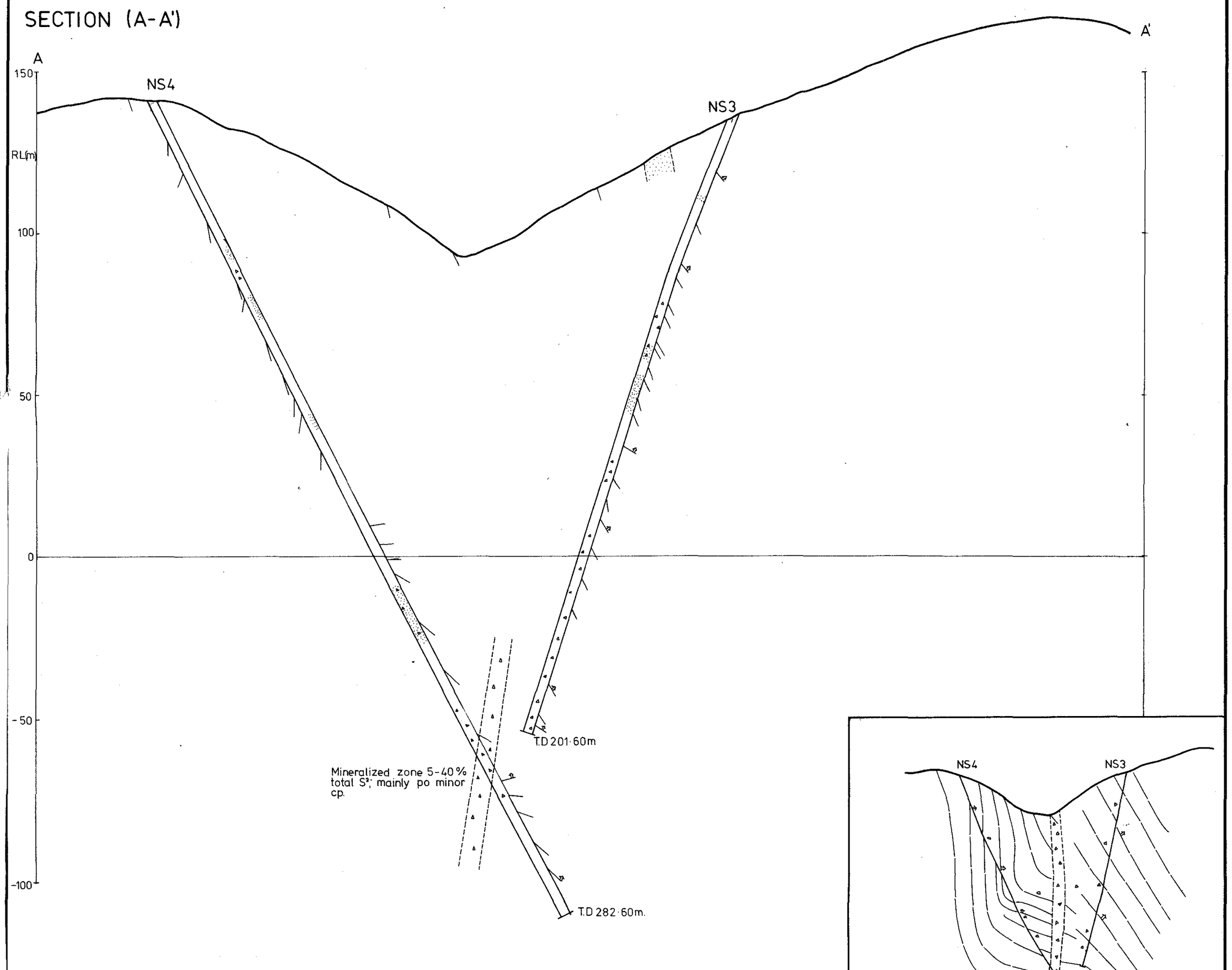
PLAN



PROFILES



SECTION (A-A')



SCHEMATIC INTERPRETATION

Scale 1:1000

0 50 100 150m

276031

THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT

E.L12/78, NORTH SCAMANDER, TAS.

DRILLHOLES Nº 3-4,— SECTIONS.

Drawn: D.A.S / R.H.	Date: 13·1·81	Centre: Hobart.
Traced: Hilary	Project Nº: T610	Drawing Nº: A2-12/78-73
Checked:		

Revisions:

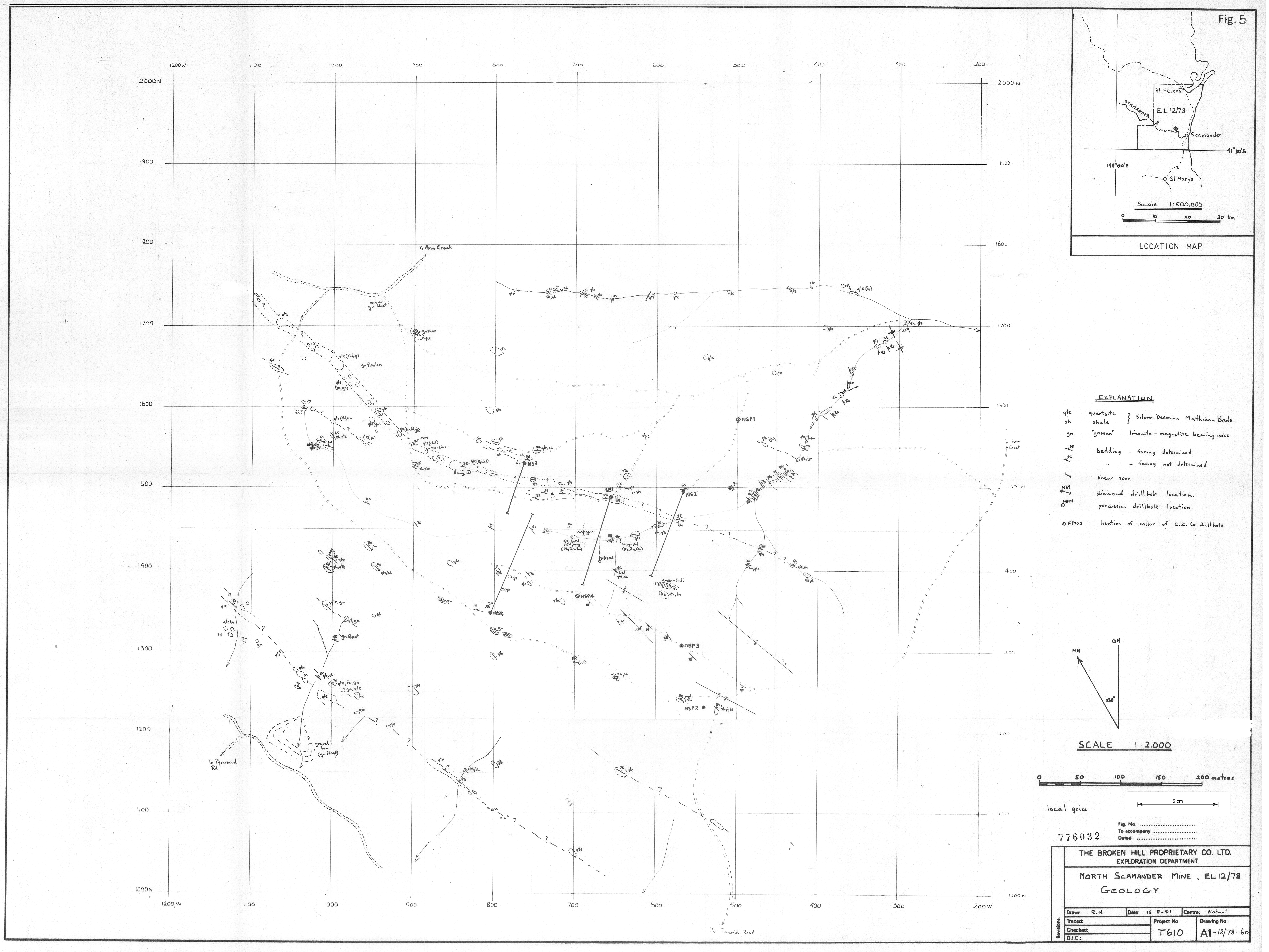


Fig. 5
LOCATION MAP
St Helens
E.L. 12/78
SCAMANDER R
Scamander
41°30'S
148°00'E
St Marys
Scale 1:500,000
0 10 20 30 km
EXPLANATION
qte quartsite } Siluro-Devonian Mathinna Beds
sh shale
gn "gossan" limonite-magnetite bearing rocks
bedding - facing determined
.. - facing not determined
shear zone
NS1 diamond drillhole location.
NSP1 percussion drillhole location.
FP102 location of collar of E.Z. Co drillhole
MN
GN
030°
SCALE 1:2,000
0 50 100 150 200 metres
local grid
5 cm
To Arm Creek
To Pyramid Rd
To Pyramid Road
NS1
NS2
NS3
NSP1
NSP2
NSP3
NSP4
FP102
2000 N
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000 N
1200 W
1100
1000
900
800
700
600
500
400
300
200 W
776032
Fig. No. ....
To accompany ....
Dated ....
THE BROKEN HILL PROPRIETARY CO. LTD.
EXPLORATION DEPARTMENT
NORTH SCAMANDER MINE, EL 12/78
GEOLOGY
Drawn: R. H.
Date: 12-8-81
Centre: Hobart
Traced:
Checked:
O.I.C.:
Project No: T610
Drawing No: A1-12/78-60
Revisions:

APPENDIX 1

Drill Log NS4 with Analysis Results

776034

BROKEN HILL PROPRIETARY CO. LTD.

Exploration Department

DRILL HOLE LOG HEADER SHEET

Project:	EL 12/78 SCAMANDER	**Hole No.:**	NS4
Prospect:	North Scamander Pb-Zn-Cu	**Total Depth:**	282.60m
Local Grid co-ords:	804mW 1346mN	**Bearing:**	047° (collar); *
AMG co-ords:	FQ010118	**Depression:**	-65° (collar); **
Drilling Co.:	Stacpoole Drilling	**R.L. Collar:**	141.40m
Drill Type:	Foxmobile B-80		
Core Size:	NQ	**Commenced:**	12/10/81
Driller:	W Bald	**Completed:**	5/11/81
		Logged by:	D A Steele
		Sampled by:	P A Dubbeld

* 053° (32.6m); 050° (82.6m); 051° (132.6m); 055° (182.6m); 061° (232.6m); 057° (274.5m); 056° (282.60m).

** -64° (32.6m); -63° (82.6m); -63°(132.6m); -63° (182.6m); -63° (232.6m); -62° (274.5m); -62° (282.60m).

Technical Data:

Overburden: 0≈2.5m of loose fill ; 2.5≈6.0m of broken, severely weathered shale; rock roller used to 4.00m, and between 32.8 and 33.8m.

Coring: HQ to 27.7m; removed upon completion of hole.

Water Return: Poor to approximately 40m; partial to full water return to 282.6 metres.

Additives: Ro-Lube, Hydropol, Ro-Trol, Fine Mica, Bentonite.

Oxidation: Approximate depth of total oxidation ~25m; base of oxide zone ~55m.

Other: Downhole survey by Eastman camera.

Project E.L12/78 NORTH SCAMANDER

THE BROKEN HILL PROPRIETARY CO LTD

Drillhole N° NS 4
Sheet 1 of 6

Box No	METRES	DRILL RUN METRES RECOV	DRILL RUN % RECOV	RQD	DESCRIPTION	VISUAL LOG	ANGLE BEDDING TO LCA	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE INTVL	MINERALISATION FRACT DENST (per m)	% FRACT MIN'SD	VEIN WIDTH mm RANGE	VEIN WIDTH mm AV	ANGL TO LCA	% BLK ROCK MIN	VEIN MINERALOGY CASSIT	WOLF	QTZ	MUSC	SULPH			WALL ROCK ALTERN.	Sulphides. Py Aspy	Cpy Sph	Ga Other	
4.50																												
1	1.30	0.30	23.08	0																								
8.00	3.00	2.35	78.33	4	Deep red brown ferruginized shale with minor 10cm interbeds of sandstone. Sh generally massive, very poorly mineralized Extremely low P.I. generally only kaolin & limonite on breakage planes (fractures) Very broken core. very low RQD Completely oxidized. fracturing sub ll to S_o.			Not Sampled	4.50	11.80																
	3.00	2.45	81.67	18																								
2							23°																					
	3.00	2.97	99.00	27	Fe stnd sandstone & rare ½m interbeds of ferruginized red brown shales. Alteration haloes around veinlets pale green to brown. possible after chlorite. No obvious mineralization. Weakly fractured. Regular fractures post-dated by rare irregular sub-vertical quartzite stringers. Other barren fractures 15/m quartzite - limonite (chlorite) at 60°-70° LCA			NSD 305	11.80	13.80	2.00																
11.80								306	13.80	15.80	2.00	15-20	60	<1-2	<1	30	<1	x	x	very rare	x	x	x	limonite	Fe stng after chl			
	3.00	2.74	91.33	40				307	15.80	17.80	2.00																	
3							25																					
	3.00	2.31	77.00	12				308	17.80	20.50	2.70																	
22.70	3.00	2.99	99.67	56	Fractured sandstone locally brecciated. severely Fe stnd brecciation. sub ll to fracturing Minor green hue to sandstone in places. Black quartzite stringers pre-date ? mineralized fractures Stringers at very low ∠ to LCA. Tension gashes <10/m. 50°-70° LCA barren			309	20.50	22.50	2.00	70	90	1-4	1	30	15	x	x	common	x	x	x	limonite remanant chl.	Fe stng, chl			
								310	22.50	24.50	2.00																	
4	3.00	2.94	98.00	21	Grey to pale brown sandstone locally grading shale. Locally well fractured and/or brecciated Three obvious fractured/veinlet sets Local chloritization of sandstone. Chlorite evident in some veinlets Quartzite stringers <5/m. <10° LCA. rarely limonitic. Other fractures <10/m. 60°-70° LCA. quartzite - limonite & Fe haloes		45	311	24.50	26.50	2.00	20	70	1-6	1-2	20-35	1-2	x	x	occasional	x	x	x	limonite	local Fe stngs			Approx base of complete oxidation.
	3.00	3.00	100.00	33				312	26.50	28.50	2.00																	
29.55					Dominantly shale & interbedded sandstone. So contorted brecciation of both sandstone and shale, very common. Severely ferruginized. Minor Fe stng, along So planes. also chlorite Dominant fractures trend cut by quartzite - limonite stringers sub ll to LCA. Local truncation of veinlets at shale Sandstone contacts. Veinlets <1/m at 50° LCA. 3-6mm, quartzite - chlorite - pyrite Stringers 1-2/m. 4mm wide <10° LCA. quartzite - limonitic. post date veinlets Fractures <10/m. 1mm wide. 60°-70° LCA. barren occassional quartzite post date stringers Fe haloes common			313	28.50	30.50	2.00																
	3.00	2.90	96.67	26			10 20	314	30.50	32.80	2.30	locally >60	90	<1-2	1	25-35	2-4	x	x	occassional	x	x	x	abundant limonite chlorite	Severe Fe stng			
	Rock Roller							N.S.	32.80	33.80	1.00																	
5	2.00	1.73	86.50	91				315	33.80	35.80	2.00																	
37.92	3.00	3.00	100.00	68	Interbedded sandstone/shale. Fe stnd adjacent to fractures Very locally brecciated. stringers sub ll to LCA. common. Weak brecciation/fracturing of sandstone at 36.60m & quartzite - chlorite - pyrite ? infilling. sub-vertical stringers vuggy. Veinlets anastomosing So poorly defined Stringers common to 10mm wide. quartz limonite		15	316	35.80	37.80	2.00	20	80	<1-3	1	35	locally sgen<2	x	x	occassional	x	x	x	chlorite	—			
								317	37.80	39.80	2.00																	
	3.00	2.94	98.00	69	Mainly siltstone grading to sandstone and shale Locally Fe stnd Generally poorly fractured. though locally brecciated Minor offsetting of So along high ∠ (>50° to LCA) fractures. Dominantly grey to brown shale but locally very pale green tinge especially towards base of interval Rare stringers quartzite - limonite - chlorite to 1mm wide 10-15° LCA	ll? graded So	12	318	39.80	41.80	2.00	<10	50	<1	<1	30	<<<1	x	x	x	x	x	x	limonite				
6								319	41.80	43.80	2.00																	
	3.00	2.66	88.67	55				320	43.80	45.80	2.00																	
45.36																												
	3.00	2.65	88.33	77			8	321	45.80	47.80	2.00	20 locally +40	80	<1-3	1	30-50	1	x	x	occasional	x	40-70	x	limonite	Fe stng (only in shale)	100			
7	3.00	3.00	100.00	57	Slumped and brecciated siltstone/sandstone locally chloritized Quartzite + chlorite ± magnetite veinlets as breccia infillings Fracturing somewhat erratic in orientation, although two dominant trends. fractures +20/m. 30-50° LCA. ~5% BRM. ~1% S²⁻ - pyrite: chalcopyrite 9:1. Normal to dominant fracture orientation.		35	322	47.80	49.80	2.00	locally +60		2-20	3	20-40	4	x	x	common	x	~10	x	abundant chlorite		15 -	<5-80	~5	
								323	49.80	51.80	2.00																	

776035

THE BROKEN HILL PROPRIETARY CO. LTD.

Project E.L12/78 NORTH SCAMANDER

Drillhole N° NS 4
Sheet: 2 of 6

METRES	DRILL RUN METRES RECOV.	DRILL RUN % RECOV.	RQD	DESCRIPTION	VISUAL LOG	ANGLE BEDDING TO LCA	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE INTVL.	MINERALISATION FRACT DENST (per m)	MINERALISATION % FRACT MIN'SD.	MINERALISATION VEIN WIDTH mm RANGE	MINERALISATION VEIN WIDTH mm AV.	MINERALISATION ANG TO LCA	MINERALISATION % BLK ROCK MIN	MINERALISATION VEIN MINERALOGY CASSIT	WOLF.	QTZ.	MUSC.	SULPH.			MINERALISATION WALL ROCK ALTERN.	ASSAYS Sn(%)	ASSAYS W(%)		
3·00	2·88	96·00	56	Pale brown-grey sandstone locally cut by abundant quartz veinlets. S_o almost ⊥l to LCA. Quartzite veinlets post dated by rare siderite bearing veinlets Very patchy chalcopyrite - pyrite ± galena ± sph Mineralization very low in places. Veinlets <5/m, <1-2mm wide 50-70° LCA, occassional quartzite - siderite, barren, post- date mineralization.		<10	NSD 324	51·80	52·80	1·00	locally 1b0 generally 25	65	<1-4	2	25	1	x	x	common	x	<5-40	x	x		50 - 80	5 - 10	5 - 10	<5 5
3·00	2·82	94·00	70				325	52·80	54·80	2·00																		
							326	54·80	56·80	2·00																		Base of oxide zone
3·10	3·14	101·29	91	Non fractured grey shale. S_o sub ⊥l to LCA. Rare quartzite stringers ⊥l to S_o		10	327	56·80	58·80	2·00																		
				Massive grey sandstone. Locally mineralized. Cut by regularly orientated quartz and sulphide veinlets. These are post dated by 1-2cm wide quartzite-siderite-pyrite veinlets. Locally sub-vertical mineralized stringers occur. S^2= chlorite-mag.-siderite stringers. <2/m. <1-6mm. ~10° LCA. 1-3% BRM. sulphide. galena. 20:1. occassional. pyrite chalcopyrite. Barren quartz - siderite veinlets. 60° LCA. Other stringers 0-10° LCA, to 5mm wide. 40% S^2 pyrite: chalcopyrite. sulphide: galena ~ 2:3:4:1 ± siderite + abundant chlorite - mag.			328	58·80	60·80	2·00	10-20	80	1-4	1	25-45	2-3	x	x	abundant	x	15-60	siderite	traces chl. mag		<5 - 70 -	5 - -	80 <5	10 -
3·00	2·96	98·67	81				329	60·80	62·80	2·00	10-15	65	<1-6	1-2	25-40	1-2	x	x	common	x	<10	x	chlorite rare mag.		10 -	<5	80	<5
3·00	3·00	00·00	75				330	62·80	64·80	2·00																		
				Dirty sandstone ± minor thin shale interbeds. Cut by quartz ± carb. ± chlorite veinlets. locally very irregular Very fine shale bands (laminae?) in sandstone. Veinlets vary from 70° to LCA to sub ⊥l ± LCA. Minor movement evident along steep veinlets.		35	331	64·80	66·80	2·00			<1-7	1-2	30	~1	x	x	✓	x	x			weakly chloritized				
3·00	2·91	97·00	75			25	332	66·80	68·80	2·00																		
				Severely slumped and brecciated sandstone grey-green shale. Locally slight Fe stringers. Abundant chlorite and magnetite + S^2 breccia infilling. Very poorly fractured. Mineralization mainly in very irregular veinlets - obvious planar deformation at ≈ 35° to LCA.			333	68·80	70·50	1·70					35°	5-7	x	x	traces	x	15-25	siderite	chlorite	chloritization				
3·00	3·00	100·00	60			?	334	70·50	72·50	2·00															25 -	15	40	20
3·00	3·00	100·00	56				335	72·50	74·40	1·90																		
				Dominantly grey sandstone. locally very pale brown, with minor shale interbeds cut by weakly mineralized quartzite veinlets. generally regular in orientation. Local brecciation ± quartz - chlorite infilling ± S^2. Veinlets very locally anastomizing. Minor offsetting of S_o apparent clay some veinlets. Patches of brecciation contains quartz + chlorite + siderite + S^2 : ± S^2 ≡ 60% py 20% sulphide + minor galena ± chalcopyrite. Magnetite also in breccia. Stringers. <1/m ≈ 2mm. 1% BRM. occassional quartz abundant chlorite ± 80% S^2 pyrite: sulphide varies 1:1 to 4:1. 5-10° LCA. Quartzite - siderite veinlets. <5/m. 1-3mm, 50-70° LCA ± up to 20% pyrite.		10	336	74·40	76·40	2·00																		
3·00	3·00	100·00	62				337	76·40	78·40	2·00																		
3·00	2·98	99·33	93				338	78·40	80·40	2·00	20	90	<1-5	1-2	25-40	2	x	x	common	x	10	x	chlorite		50 -	-	50	-
							339	80·40	82·40	2·00																		
3·00	3·00	100·00	69				340	82·40	84·40	2·00	local +60	30	<1-7	2-3	20-30	3	x	x	abundant	x	traces	traces siderite	x	chloritization	100 -	-	traces	-
3·00	2·95	98·33	85				341	84·40	86·40	2·00																		
3·00	3·05	101·67	76	Very poorly mineralized/fractured sandstone/shale. Cut by large quartz - siderite veinlets.	⇓?	7	342	86·40	88·40	2·00	<5	100	1-3	2	10	<1	x	x	common	x	10-30	x	chlorite		100 -	-	-	-
				Grey-grey/green to pale brown shale very poorly bedded and mineralized. Scour-mark ⇓. Mainly cut by barren quartz veinlets. generally rare.			343	88·40	90·40	2·00																		
3·00	3·00	100·00	89		⇓	11	344	90·40	92·40	2·00																		
							345	92·40	94·40	2·00															50 -	10	40	-
3·00	2·98	99·33	85	Grey to grey brown sandstone generally poorly mineralized except - small areas of brecciation. Generally poorly fractured. Mineralization is mainly pyrite ± very minor sulphide ± chalcopyrite. Rare barren quartzite ± siderite stringers at very low ∠ to LCA. cut by two large quartz and siderite and pyrite veinlets. Stringers ~ 2mm. <10° LCA. <1/m. quartz - siderite - chlorite to 20% S^2. pyrite : sulphide : galena - 8:1:1.			346	94·40	96·40	2·00	15	20	<1-3	1	35	<1	x	x	common	x	<5	traces siderite	chlorite rare magnetite		90 -	-	10	-
3·00	2·90	96·67	81				347	96·40	98·40	2·00																		
						26	348	98·40	100·40	2·00	35-50	80	1-8	1-2	25-35	5	x	x	common	x	10-80	siderite	chlorite		80 - 90 -	30 - 10 -	10	traces -
3·00	2·96	98·67	72			28	349	100·40	102·40	2·00																		

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Project E.L 12/78 NORTH SCAMANDER

THE BROKEN HILL PROPRIETARY CO. LTD

Drillhole N° NS 4
Sheet 3 of 6

METRES	DRILL RUN METRES RECOV	DRILL RUN % RECOV.	RQD	DESCRIPTION	VISUAL LOG	ANGLE BEDDING TO LCA	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE INTVL.	MINERALISATION FRACT. DENS° (per m)	% FRACT. MINED	VEIN WIDTH mm RANGE	VEIN WIDTH mm AV	ANGL TO LCA	% BLK ROCK MIN	VEIN MINERALOGY CASSIT	WOLF.	QTZ	MUSC	SULPH.			WALL ROCK ALTERN.	ASSAYS ~~Sn (%)~~	~~W (%)~~	
14				Interbedded shale and sandstone. locally slumped and or brecciated. Generally poorly mineralized. Veinlets locally anastomose graded So implies ↓ Minor offsets of So along fractures at low α LCA Most mineralization occure in irregular patches of veinlets; or stringers. Very pale green/brown tinge to sandstone and shale between top of interval and 104.00m Chlorite ± pyrite sheen very common on bedding surfaces Local occurrences of sub to euhedral pyrite crystals in host sandstone. Mineralized stringers. <3/m or 4mm. 5-15 LCA°. 2% BRM. quartz - siderite - chlorite - magnetite č up to 80% 5°. generally 20% . pyrite. chalcopyrite sulphide. galena - 1: trace : 1 trace, to 1 0 0 0. Veinlets ≤10/m. 50-70° LCA. quartz - siderite chlorite. pyrite																						
104.40	3.00	2.98	99.33	86		↓	37	NSD 350	102.40	104.40	2.00																
	3.00	2.97	99.00	74			35	351	104.40	106.40	2.00	<10-50	30	<1-3	1	30-40	1	x	x	abundant	x	up to 10	traces siderite.	chlorite				
15								352	106.40	108.40	2.00																
	3.00	3.10	103.33	91			30	353	108.40	110.40	2.00																
110.90								354	110.40	112.40	2.00																
	3.00	2.84	94.67	93	Generally massive grey sandstone č very minor shale Locally cut by anastomose veinlets and sub-vertical quartz ± S^{2} stringers. Flame at 113.4 indicates ↓. Clusters of pyrite crystals up to 3mm in sandstone Quartzite - chlorite stringers č 20% pyrite. <1-7mm. 5/m < 20° LCA	↓	29	355	112.40	114.40	2.00																
16								356	114.40	116.40	2.00	30-40	40	1-5	1-2	25-35	<1	x	x	common	x	up to 90	x	chlorite		80 15 - 5 -		
	3.00	3.00	100.00	82																						100 - - - -		
117.80	3.00	2.79	93.00	54	Interbedded sandstone / shale - generally fairly wide beds (20-60 cms) locally fractured. and č minor occurrences of soft sedimentary deformation. Sandier units generally better mineralized than shalier. Euhedral pyrite crystals in sandstone Veinlets locally anastomose, however fracturing generally low F1 Bulk of low grade mineralization occurs in sub vertical or steep stringers. usually discontinous Veinlets. <10/m, 80% mineralized <1-8, <10-20° LCA. quartz - 5^{2} pyrite chalcopyrite; sulphide; galena 5^{1} 3 1 galena up to 20% of sulphide veinlets BRM ~ 1% Other veinlets post date mineralized ones <5/m. 50-60° LCA. quartz - siderite - pyrite to 25%		30	357	116.40	118.40	2.00																
17								358	118.40	120.40	2.00																
	3.00	2.93	97.67	82				359	120.40	122.40	2.00																
124.95	3.00	3.14	104.67	66				360	122.40	124.40	2.00																
	3.00	3.03	101.00	100			29	361	124.40	126.40	2.00														40 - 10 25 25		
18								362	126.40	128.40	2.00	0-70	95	1-7	2-3	20-45	5	x	x	common	x	0-90	-	rare chlorite		100 - - - -		
					Massively interbedded sandstone / quartzite / and shale. Poorly mineralized and fractured Scours and flames indicate downhole younging (↓) Boudinage (pinch and swell) at 135-136m Few mineralized stringers. sub ⊥ to LCA Rare carb + quartz veinlets Chlorite sheen frequently observed along So planes Veinlets / stringers 10/m. 2-5mm; 1% BRM 20-30° LCA. quartz - siderite - chlorite - pyrite - sulphide - galena 5 4:1 Other quartz - siderite ± chlorite veinlets 50-60° LCA č occasional pyrite			363	128.40	130.40	2.00																
131.34	3.00	2.99	99.67	80			7	364	130.40	132.40	2.00	<5	100	<1-6	3-5	0-10	<1	x	x	occassional	x	50	-	chlorite		80 - - 20 -		
	3.00	2.98	99.33	93			~0	365	132.40	134.40	2.00														100 - - - -		
19						√																			50 - - 50 -		
	3.00	3.00	100.00	94			4	366	134.40	136.40	2.00	10-15	60	<1-2	1	30-50	1	x	x	common	x	10-20	x	chlorite	chloritization	40 - - 50 40		
138.65								367	136.40	138.40	2.00																
	3.00	3.00	100.00	99				368	138.40	140.40	2.00																
20								369	140.40	142.40	2.00																
	3.00	3.05	101.67	53			9	370	142.40	144.40	2.00																
145.20	3.00	3.00	100.00	96	Interbedded shale / quartzite generally grading from quartzite dominant at top of interval to shale down at base Beds vary from <1 to >30 cms in width. Uphole facings indicated by graded So Generally poorly mineralized (low Σ 5^{2}) but locally well fractured and brecciated. Mineralization better developed in quartzite / sandstone rather than shale Stringer style quartz + pyrite veinlets common. generally very steep in orientation. locally anastomosing? cut by siderite ± quartz veinlets. Local occurrence of chlorite ± mag. ± pyrite in breccias. Minor occurrences of euhedral pyrite crystals in quartzite Very minor. trace amounts of po in some veinlets Amount of pyrite in veinlets appears to ↓ as abundance of mag ↑ Occassional quartzite - siderite veinlets. <10/m. 60° LCA č occassional pyrite.	↓?	70	371	144.40	146.40	2.00	30-60	90	<1-6	2-3	10-40	2-10	x	x	abundant	x	0-75	occassional	occassional chlorite	chloritization	>80	-	<5	<10	<5	<1
21	3.00	2.99	99.67	92				372	146.40	148.40	2.00																
								373	148.40	150.40	2.00																
								374	150.40	152.40	2.00																

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Project E.L 12/78 NORTH SCAMANDER

Drillhole N° NS 4

Sheet 4 of 6

METRES	DRILL RUN METRES RECOV.	DRILL RUN % RECOV.	RQD	DESCRIPTION	VISUAL LOG	ANGLE BEDDING TO LCA	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE INTVL.	MINERALISATION FRACT. DENSITY (per m)	MINERALISATION % FRACT. MINSD	MINERALISATION VEIN WIDTH mm RANGE	MINERALISATION VEIN WIDTH mm AV.	MINERALISATION ANG. TO LCA	MINERALISATION % BLK ROCK MIN.	MINERALISATION VEIN MINERALOGY CASSIT.	WOLF.	QTZ.	MUSC.	SULPH.			MINERALISATION WALL ROCK ALTERN.	ASSAYS Sn (%)	W (%)		
157·40													varies greatly															
3·00	3·00	100·00	89																									
							NSD 375	152·40	154·40	2·00	<10-80	>50	<1-9		<10-35	gen. <2 up to 5	x	x	abundant	x	0-60	occasional	chlorite mag.	–	>75	– <5	<10	traces traces.
3·00	2·89	96·33	74			65																						
22							376	154·40	156·40	2·00																		
3·00	2·99	99·67	98																									
158·44							377	156·40	158·40	2·00																		
				Dominant black shale ± very minor 10cm quartzite / sandstone interbeds. Very poorly mineralized but locally well fractured. Fracturing locally very erratic.																									
						~ 65	378	158·40	160·40	2·00	20-110	< 10	<1-3	1	10-30	<<1	x	x	abundant	x	<5	x	abundant	–	40	– –	–	60
3·00	2·94	98·00	52	Dominant assemblage :– quartz + chlorite ± traces S^2. Total S^2 <<1%																			Chlorite.						
23							379	160·40	162·20	1·80																		
3·00	3·00	100·00	89	Massive grey quartzite ± rare 1-2cm interbeds of grey shale. Interval comprises slumped and / or brecciated quartzite + shale to ~ 166m, then a more uniform fractured quartzite. Generally very poorly mineralized except in very localized patches of brecciation. Total S^2 <<1%, barren in most places. Between 162 - 178m quartz ± chlorite ± S^2 veinlets are very erratic in orientation. Locally anastomosing. Below 176m, veinlets more regular. S^2 more common above 176m, carbonate veinlets more widespread below 176m. Pyrite - sulphide stringers fairly common between 166 - 168m. Siderite + quartz ± pyrite veinlets at 60-80° LCA common; generally 2-4 mm wide, up to 15mm. Siderite commonly occurs as a selvedge ± quartz ± pyrite centre to veinlets.			380	162·20	164·20	2·00																					
164·90							381	164·20	166·20	2·00																		
3·00	3·03	101·00	77			35																	Chloritization					
24							382	166·20	168·20	2·00																		
3·00	2·90	96·67	96				383	168·20	170·20	2·00	60-90	>75	<1-3	1	10 - 25	1	x	x	occasional	x	95	x	x	chlorization	>50	– –	≤50	≤10 ≤10
171·88							384	170·20	172·20	2·00																		
3·00	3·04	101·33	97																									
25							385	172·20	174·20	2·00																		
3·00	2·96	98·67	90				386	174·20	176·20	2·00																		
						0?																						
178·62							387	176·20	178·20	2·00	<25	30	<1-10	1	10 - 25	<1	x	x	common	x	<10-100	x	chlorite	–	0-60	– –	0-40	<5 traces
3·00	2·96	98·67	95		11	16																						
							388	178·20	180·20	2·00																		
26																												
3·00	2·98	99·33	76			~ 20	NSD 389	180·20	182·20	2·00	20	60	1-6	1-2	20-70	1-2	x	x	abundant	x	0-20	x	chlorite	chloritization	20	– –	60	10 10	Abundant siderite and quartz veinlets 60° to LCA.
							390	182·20	184·20	2·00																		
3·00	3·03	101·00	82																									
185·43							391	184·20	186·20	2·00																		
3·00	3·10	103·33	91																									
27							392	186·20	188·20	2·00																		
							393	188·20	190·20	2·00																		
3·00	3·04	101·33	89																									
191·90							394	190·20	192·20	2·00																		
3·00	2·98	99·33	89				395	192·20	193·50	1·30																		
				Interbedded slumped quartzite and shale. Weak green brown tint to shale. Quartzite locally grading to sandstone in alteration. Generally well fractured but not abundantly mineralized. Two dominant sets of veinlets - mineralized (10-40° LCA), barren carbonate (50-70° LCA). Rare stringers (po bearing) ⊥L to LCA. Local occurrences of euhedral pyrite crystals – quartzite.			396	193·50	195·50	2·00																		
28																												
3·00	2·99	99·67	92			20	397	195·50	197·50	2·00	60	50	<1-4	1	10 - 70	<1	x	x	abundant	x	0-15	x	chlorite	Silicification chloritization	>30	– –	>40	<10 <20
198·83																												
3·00	3·00	100·00	(71)			40	398	197·50	199·50	2·00																		
							399	199·50	200·90	1·40																		

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Project E.L12/78 NORTH SCAMANDER

Drillhole No NS 4

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198-83	METRES	DRILL RUN METRES RECOV.	DRILL RUN % RECOV.	RQD	DESCRIPTION	VISUAL LOG	ANGLE BEDDING TO LCA	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE INTVL.	MINERALISATION FRACT DENSITY (per m)	MINERALISATION % FRACT MINSD.	MINERALISATION VEIN WIDTH mm RANGE	MINERALISATION VEIN WIDTH mm AV.	MINERALISATION ANGLE TO LCA	MINERALISATION % BLK ROCK MIN.	MINERALISATION VEIN MINERALOGY CASSIT.	MINERALISATION VEIN MINERALOGY WOLF.	MINERALISATION VEIN MINERALOGY QTZ.	MINERALISATION VEIN MINERALOGY MUSC.	MINERALISATION VEIN MINERALOGY SULPH.	MINERALISATION VEIN MINERALOGY	MINERALISATION VEIN MINERALOGY	MINERALISATION WALL ROCK ALTERN.	ASSAYS Sn(%)	ASSAYS W(%)	ASSAYS	
29	3·00	2·97	99·00	96	Mineralized massive quartz. Locally intensely fractured, cut by anastomose veinlets. Locally servely chloritized. Po bearing veinlets and stringers becoming † abundant č † depth. Total S^{2-} ~ 1-2 %. One occurrence of magnetite in quartzite at 209·1m. Strongly mineralized stringers pre-dated by barren quartz veinlets at high ∠ to LCA. Minor offsets along barren veinlets by mineralization. Rare vuggy quartz + siderite + pyrite ± py veinlets and stringers either sub ⊥ to LCA or in to LCA.	GLACIAL		N5D 400	200·90	202·90	2·00																	
205·16	3·00	3·00	100·00	91				401	202·90	204·90	2·00	60+	80	1-3	1-7	<10-50	1-2	x	x	abundant	x	0-80	occassional	chlorite	chloritization	to 10	- <10	to 40	to 10 to 40	No magnetite č Py.
30	3·00	2·97	99·00	95				402	204·90	206·90	2·00																		
211·35	3·00	2·95	98·33	83				403	206·90	208·90	2·00	40+	40	1-6	1	ververnatic	<1	x	x	abundant	x	0-5	rare	maanetite,	chloritization silcfn.	80	- -	20	traces traces	
								404	208·90	210·90	2·00																		
								405	210·90	212·90	2·00																		
31	3·00	3·02	100·67	61	Grey shale cut by anastomose stringers and veinlets of generally barren quartz very poorly mineralized intervals. Rare po in veinlets. Very low total S^{2-}. Local stumping chloritic sheen very common along So. surfaces. Rare shallow siderite + quartz... veinlets. Generally lower RQD than previously encountered broken rock. especially ⊥ to So.		18	406	212·90	214·30	1·40																	
								407	214·30	216·30	2·00	30-80	<30	<1-2	<1	20-40	<<1	x	x	common	x	<5	rare	chlorite	chloritization	50	- -	- -	50	Mainly barren shallow quartzite veinlets pre-dating mineralization.
217·95	3·00	2·97	99·00	61			30	408	216·30	218·30	2·00																		
								409	218·30	220·30	2·00																		
32	3·00	3·00	100·00	71				410	220·30	222·30	2·00																		
	3·00	2·95	98·33	81				411	222·30	224·30	2·00																		
224·76	3·00	3·03	101·00	91	Mineralized quartzite/shale breccia. severely slumped rather than brecciated in places. Abundant anastomose veinlets and stringers. mainly po bearing. Widespread chlorite and chloritization of host rocks. Best pyrrhotite mineralization between 231 - 232·5m č minor chalcopyrite. Total S^{2-} ~5% locally 40%.			412	224·30	226·30	2·00																	
33	3·00	3·05	101·67	99				413	226·30	228·30	2·00	80+	<80	<1-5	2	<10-60	<3	x	x	common	x	0-80	x	chlorite	chloritization silcfn	traces	- -	- -	to 40	
								414	228·30	230·30	2·00																		
231·79	3·00	3·05	100·00	100				415	230·30	232·30	2·00	100+	100	<1 - 8	2	10 - 25	15	x	x	occassional	x	to 40%	x	chlorite	chloritization silcfn	-	- traces	- -	to 100	
					Interbedded quartzite and shale moderately well fractured and mineralized. Quartzite dominant. Flame at 234·5m. implies ⊼. So ∿ ⊥ to LCA. Anastomosing po stringers very common in shale. Chloritization haloes obvious.		80	416	232·30	234·30	2·00																
34	3·00	2·99	99·67	100				417	234·30	236·30	2·00	65+	90	<1-4	1-2	<10-40	2-5	x	x	occassional	x	0-80	occassional	chlorite	chloritization	to 80	to 8		to 100	
238·33	3·00	3·03	101·00	100			80	418	236·30	238·30	2·00																		
					Strongly bedded shale/quartzite, shale grey to grey/green colour. Locally well fractured and mineralized. Mainly pyrrhotite č minor pyrite. Orientation of veinlets rather common. Local truncation and/or diffraction of mineralized veinlets at shale/quartzite contacts.			419	238·30	240·30	2·00																
35	3·00	2·98	99·33	93			63	420	240·30	242·30	2·00	60+	+85	1 - 6	1 - 2	0 - 60 dom. 30	5	x	x	common	x	0 - 100	rare	-					
								421	242·30	244·30	2·00																		
	3·00	3·04	101·33	100	Mineralized quartzite č minor interbeds green/grey Shale. One dominant fracture orientation. but locally anastomose. Flame at 244·70m implies ⊼. Late siderite and quartz veinlets varies. Rare "subvertical" quartz ± S^{2-} stringers.		~45	422	244·30	246·30	2·00	80+	90	<1 - 6	1	10 - 30	2	x	x	occassional	x	0 - 100 dom. 85	x	x	chloritization	-	- -	- -	100	
245·9	3·00	3·03	101·00	96				423	246·30	248·30	2·00																		
36								424	248·30	250·30	2·00																		
	3·00	2·97	99·00	100																									

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Project E.L 12/78 NORTH SCAMANDER

Drillhole No NS 4

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METRES	DRILL RUN METRES RECOV.	DRILL RUN % RECOV.	RQD	DESCRIPTION	VISUAL LOG	ANGLE BEDDING TO LCA	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE INTVL.	MINERALISATION FRACT DENST (per m)	% FRACT MIN'SD	VEIN WIDTH mm RANGE	VEIN WIDTH mm AV.	ANG TO LCA	% BLK ROCK MIN.	VEIN MINERALOGY CASSIT.	WOLF.	QTZ.	MUSC.	SULPH.			WALL ROCK ALTERN.	ASSAYS ~~Sn(%)~~ py aspy	ASSAYS ~~W(%)~~ cp sph	ASSAYS gn po
36																											
3·00	2·97	99·00	100	Mineralized quartz ± interbedded shale, similar to above but + shale content. Locally brecciated, more erratic distribution of po. Microfracturing and offsetting of chlorite ± pyrite common on S_o planes. Mineralization occurs in anastomose veinlets and stringers more abundant in quartzite than shale. Total S^{2-} higher than previous interval (~ 10%)			NSD 425	250·30	252·30	2·00													py aspy	cp sph	gn po
253·36																											
3·00	2·99	99·67	95				426	252·30	254·30	2·00	90+	90	<1 - 6 rarely to 10	2	0 - 40	10	x	x	occassional	x	0 - 100	rare	x	silcfn	trace -	<2 -	- ~100
37																											
3·00	3·00	100·00	91			18	427	254·30	256·30	2·00																	
				Massive grey quartzite locally well fractured though generally poorly mineralized. Local occurrences of anastomosing po stringers most mineralization is sulphide and galena in chlorite veinlets. Interval is locally brecciated. Pyrite becoming prevalent over			428	256·30	258·30	2·00															
3·00	2·96	98·67	83				429	258·30	260·30	2·00	30	100	2 - 12	2 - 4	20 - 40	3	x	x	occassional	x	0 - 100 gen. 40	-	abundant chlorite		to 100 -	to 5 to 60	to 20 to 80
260·10				po. Total sulphides is <5%. Barren anastomose quartz stringers and veinlets common - pre date mineralization.																							
38																											
3·00	3·03	101·00	99				430	260·30	262·30	2·00																	
3·00	2·95	98·33	100				431	262·30	264·30	2·00																	
							432	264·30	266·30	2·00	20	85	<1 - 6	2	10 - 50	2	x	x	occassional	x	0 - 100	occassional	chlorite	Silcfn	0-100 -	- 0-20	traces 0-50
267·35				Quartzite / shale interbeds generally ½ - 1m wide, locally slumped, and brecciated at 277·9m. Only quartz as breccia infilling. Interval is very poorly mineralized. F.I. is very low. Total S^{2-} is <1%. Chlorite and pyrite veinlets very common, especially ill to S_o. One large 3cm pyrite + traces siderite veinlets at 274·8m sub ill to S_o. Very local occurrence of anastomosing veinlets, generally quartz ± pyrite - appear to be vuggy, possibly leached. RQD is low in places - core broken along veinlets and sub ill to stringers ill to LCA.		16	433	266·30	268·30	2·00															
3·00	3·05	101·67	50				434	268·30	270·30	2·00																	
39																											
3·00	3·05	101·67	79				435	270·30	272·30	2·00																	
274·68																											
3·00	3·00	100·00	67				436	272·30	274·30	2·00	40	<50	<1 - 4	1	20 - 60 erratic	<<1	x	x	common	x	<10	rare	chlorite	Silcfn chloritization	100 -	- traces	
40						15	437	274·30	276·30	2·00																	
3·00	3·04	101·33	72				438	276·30	278·30	2·00																	
							439	278·30	280·30	2·00																	
280·74																											
3·00	3·00	100·00	62				440	280·30	282·60	2·30																	
41																											
283·60 E.O.H																											

776040

Project E.L12/78 NORTH SCAMANDER

THE BROKEN HILL PROPRIETARY CO. LTD.

Drillhole N° NS4

Sheet: 1 of 6

METRES VISUAL LOG	% RECOV.	SAMPLE N°	ASSAYS Sn %	W %	As %	Cu %	Pb %	Zn %	Ag p.p.m.	Mo p.p.m.
			500 1000	0 50 100	0 1000 1·0	0 4000 2000	0 1000 2000	0 8000 16000	0 10 20	0 50 100
			Not Sampled							
10										
	99·00	305								
		306						2800		
	91·33	307								
	77·00	306								
20										
	99·67	309								
		308								
	98·00	311								
	100·00	312								
		313								
30										
	96·67	314								
	Rock	Roller			Not Sampled					
	86·50	315								
	100·00	316				2800				
		317								
40										
	98·00	318								
	88·67	319								
		320								
	88·33	321								
	100·00	322								
		323								

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Project E.L.12/78 NORTH SCAMANDER

THE BROKEN HILL PROPRIETARY CO. LTD.

Drillhole Nº NS 4

Sheet: 2 of 6

METRES VISUAL LOG	% RECOV.	SAMPLE Nº	ASSAYS Sn % (500, 1000)	W % (0, 50)	As % (0, 0·5, 1·0)	Cu % (0, 1000, 2000)	Pb % (0, 10000, 20000)	Zn % (0, 1000, 10000)	Ag p.p.m. (0, 10, 20)	Mo p.p.m. (0, 50, 100)
	96·00	324								
	94·00	325								
	94·00	326								
	101·29	327								
60		328								
	98·67	329						5500		
	00·00	330						2600		
		331								
	97·00	332								
70		333								
	100·00	334								
	100·00	335								
		336								
	100·00	337								
	99·33	338								
80		339								
	100·00	340								
	98·33	341								
		342								
	101·61	343								
90										
	100·00	344								
		345								
	99·33	346								
	96·67	347								
	1	348								
100										

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Project E.L.12/78 NORTH SCAMANDER

Drillhole No NS 4

Sheet: 3 of 6

METRES VISUAL LOG	% RECOV.	SAMPLE No.
	98·67	349
	99·33	350
	99·00	351
		352
110	103·33	353
	96·67	354
		355
	100·00	356
	93·00	357
120		358
	97·67	359
		360
	104·67	361
	101·00	362
	99·67	363
130		364
	99·33	365
	100·00	366
		367
	100·00	368
140	101·67	369
		370
	100·00	371
	99·67	372
	99·67	373
150		

ASSAYS

Sn % 500 1000

W% 30 0·5

As % 0 1000 2000

Cu% 0 1000 2000

Pb% 0 10000 20000

Zn % 0 1000 2000

Ag p.p.m. 0 10 20

Mo p.p.m. 0 50 100

776043

THE BROKEN HILL PROPRIETARY CO. LTD.

Project E.L12/78 NORTH SCAMANDER

Drillhole No NS 4

Sheet: 4 of 6

METRES VISUAL LOG	% RECOV.	SAMPLE No	ASSAYS Sn %	W %	As %	Cu %	Pb %	Zn %	Ag p.p.m.	Mo p.p.m.
150			500 1000	0 0.5	0 0.5 1.0	0 10000 20000	0 10000 20000	0 10000 20000	0 10 20	0 50 100
	100·00	374								
	96·33	375								
	96·33	376								
	99·67	377								
160		378								
	98·00	379								
	100·00	380								
		381								
	100·00	382						4100		
	96·67	383								
170		384								
	101·33	385								
	98·67	386								
		387								
	98·67	388								
180										
	99·33	389								
		390								
	101·00	391								
	103·33	392								
		393								
190										
	101·33	394								
	99·33	395								
		396								
	99·67	397								
	100·00	398								
200		399								

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THE BROKEN HILL PROPRIETARY CO LTD

Project E.L12/78 NORTH SCAMANDER

Drillhole N° NS4

Sheet 5 of 6

METRES VISUAL LOG	% RECOV	SAMPLE N°	Sn %	W %	As %	Cu %	Pb %	Zn %	Ag ppm	Mo ppm
200										
	99 00	400								
		401								
	100·00	402								
	99·00	403								
210		404								
	98 33	405								
		406								
	100 67	407								
	99 00	408								
220		409								
	100 00	410								
	98 33	411								
	101·00	412								
		413								
	101·67	414								
230		415								
	100·00	416								
	99 67	417								
		418								
	101 00	419								
240										
	99 38	420								
	101 33	421								
		422								
	101·00	423								
	99 00	424								
250										

ASSAYS

Sn %: 500, 1000

W %: 0, 0·5

As %: 0, 0·5, 1·0

Cu %: 0, 0·5, 1·0

Pb %: 0, 0·5, 1·0

Zn %: 0, 0·5, 1·0

Ag ppm: 0, 10, 20

Mo ppm: 0, 50, 100

2800

2400

776045

Project E.L 12/78 NORTH SCAMANDER

THE BROKEN HILL PROPRIETARY CO LTD

Drillhole N° NS 4

Sheet: 6 of 6

METRES VISUAL LOG	% RECOV	SAMPLE N°
	99 00	425
	99 67	426
		427
	100 00	428
260	98 67	429
	101 00	430
		431
	98 33	432
		433
270	101 67	434
	101 67	435
	100 00	436
		437
	101 33	438
280	100 00	439
		440

ASSAYS

Sn % 0 500 1000

W % 0 1000 2000

As % 0 5 10

Cu % 0 5000 10000

Pb % 0 5000 10000

Zn % 0 0·5 1·0

Ag ppm 0 10 20

Mo ppm 0 50 100

776046

APPENDIX 2

Drill Log NS1 Extension with Analysis Results

776048

BROKEN HILL PROPRIETARY CO. LTD.

Exploration Department

DRILL HOLE LOG HEADER SHEET

Project:	EL 12/78 SCAMANDER	Hole No.:	NS1 (ext)
Prospect:	North Scamander Pb-Zn-Cu	Total Depth:	269.30m
Local Grid co-ords:	657mW 1487mN	Bearing:	232°(collar); 230°(71.3m); 231°(119.3m); 229°(221.3m); 208°(EOH)
AMG co-ords:		Depression:	-74°(collar); -71°(71.3m); -68°(119.3m); -65°(221.3m); -63°(EOH)
Drilling Co.:	Stacpoole Drilling	R.L. Collar:	94.70m
Drill Type:	Longyear 38	Commenced:	9.11.81
Core Size:	NQ	Completed:	16.11.81
Driller:	G. Koop	Logged by:	D.A. Steele
		Sampled by:	P.A. Dubbeld, A. Harding

Technical Data:

Overburden:	1.5m of broken quartzite.
Casing:	3.5m of NW; remained in hole.
Water Return:	Poor to nil down entire length of extension.
Additives:	Ro-mud, Ro-Troll.
Survey:	Downhole Camera (Eastman)
Other:	Drilling is an extension to NS1 completed on 30/7/80 to 201.60m. Drilling of the extension commenced at 202.20m. The discrepancy between the end of NS1 and the start of NS1 extension is due to the raised level of the drillhole collar (by 0.6m).

Project E.L12/78 NORTH SCAMANDER

THE BROKEN HILL PROPRIETARY CO LTD

Drillhole N° NS1 ext.

Sheet 1 of 2 (202 20 - 257 80)

Box N°	METRES	DRILL RUN METRES RECOV	DRILL RUN % RECOV	RQD	DESCRIPTION	VISUAL LOG	ANGLE BEDDING TO LCA	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE INTVL	MINERALISATION FRACT DENS (per m)	% FRACT MIN'SD	VEIN WIDTH mm RANGE	VEIN WIDTH mm AV.	ANG: TO LCA	% BLK ROCK MIN	VEIN MINERALOGY CASSIT	WOLF.	QTZ	MUSC	SULPH.			WALL ROCK ALTERN.	SULPHIDES Py	Aspy	Cpy	Sph	Ba	Po	Comments
201 66	EOH-NS1		0 60*		Brecciated quartzite ± minor angular shale fragments and po infilling ± traces chalcopyrite and pyrite. S^{2-} ~ 20%			NSD 441	202 20	203 30	1 10																				* 0 60m difference between E.O.H NS1 and start of NS1 Extension. Extension is due to the collar being raised to accommodate Longyear 38 rig
202 20	1·80	1 57	87 22	92																											
	2 80	2·00	71·43	95	Dominantly grey quartzite ± ½ - 1m sections of interbedded quartzite / shale. Graded S_o and scours imply up hole youngings ↑. Very locally brecciated (< 20cms) with minor micro-faulting evident in some interbedded sequences. Brecciation generally accompanied by po filling ± pyrite ± chloritization of host S^{2-} content generally < 5% and restricted to fracture fillings. Dominant S^{2-} is po but ↓ ↑ depth. Pyrite ↑ ↑ depth. Mineralized veinlets post date steep barren quartz veinlets but pre date shallower quartz - siderite veinlets. Sulphide bearing veinlets variable in orientation locally anastomosing and occassionally discontinuous in length. Best S^{2-} occurrences at ~ 217·0 and 221·5m. Quartz siderite veinlets 3 - 10mm wide at 25 - 60° LCA. Subeuhedral to euhedral pyrite crystals common in po host, especially in wider veinlets ie at 209 4m veinlet 25mm wide comprising 75 - 80% po and 25 - 20% pyrite as euhedral crystals veinlet sub ⊥ to S_o		46																						
27								443	206 30	208 30	2·00																				
209 80	2·90	2·96	102 07	92				444	208 30	210 30	2·00																				
	3 10	3·01	97 10	90				445	210 30	212 30	2·00																				
28							53	446	212 30	214·30	2·00																				
	3·00	3 08	102 67	91				447	214 30	216 30	2·00	low	100	<1-5	2	0-40	<1	x	x	common	x	0-100 avge 60	rare	chlorite	silcfn	trace 80	-	trace 5	-	-	trace 60	
216·83	3 00	2·98	99·33	91			53	448	216 30	218 30	2 00	avge 10																			
								449	218 30	220 30	2 00																				
29	3·00	3·03	101 00	93			52	450	220 30	222·30	2 00																				
	3·00	3·00	100·00	88				451	222·30	224·30	2 00																				
223·95	3·00	2·95	98 33	100			36	452	224 30	226 30	2 00																				
30								453	226·30	228 30	2·00	relatively high 20 - 60	90	<1-10	2-3	0 - 45	5	x	x	x	x	0 - 100	x	chlorite	silcfn	to 80	-	to 5		to 60		
	3·00	3·05	101·67	94				454	228 30	230 30	2 00																				
230·94					Grey quartzite ± interbedded black/grey shale. Shale in greater abundance than previous interval. shale interbeds 3 - 40 cms thick. Graded S_o very common indicating correct way up ↑. Very locally intensely fractured / brecciated - Mineralization more sporadic, lower in abundance, and generally restricted to quartzite horizons. Total S^{2-} is < 2% as irregular stringers and sub ⊥ fractures. Sub vertical barren quartz stringers / veinlets becoming more abundant. Rare local occurrences of patches of sulphide - galena - po mineralization ± pyrite ie at 337·0m. Quartz filling of brecciated quartzite common in places. Generally barren, commonly accompanied by chloritization ± silcfn		57																						
	3·00	3 02	100·67	97				455	230·30	232 30	2·00																				
31								456	232·30	234 30	2 00																				
	1 70	2 12	124·71	77			46	457	234 30	236·30	2 00																				
	1·30	0 77	59 23	96				458	236 30	238·30	2·00	highly variable avge 30 low	90	<1-8	1-2		1	x	x	common	x	0-95	occassional	chlorite		to 20	-	traces to 10		to 20 - to 80 avge 30		
234·98	3·00	3 08	102·67	94																											
							51	459	238·30	240 30	2·00																				
32	3·00	2 72	90 67	92				460	240·30	242 30	2·00																				
							70	461	242 30	244 30	2·00																				
245 05	2·80	3·07	109·64	90			80	462	244·30	246 30	2·00																				
	3·10	3·08	99·35	82				463	246 30	248·30	2 00																				
33							50	464	248·30	250 30	2 00	20-40	80	<1-3	1	20-40	1	x	x	common	x	0 - 50	siderite	chlorite	silcfn	to 90	-	traces	traces	traces	to 60	
	3 10	3 03	97 74	80																											
257 80																															

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THE BROKEN HILL PROPRIETARY CO LTD

Project E.L12/78 NORTH SCAMANDER

Drillhole N° NS1 ext.
Sheet 2 of 2 (257 80 - 269·30)

METRES	DRILL RUN METRES RECOV	DRILL RUN % RECOV	RQD	DESCRIPTION	VISUAL LOG	ANGLE BEDDING TO LCA	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE INTVL	MINERALISATION FRACT DENST (per m)	MINERALISATION % FRACT MINSD	MINERALISATION VEIN WIDTH mm RANGE	MINERALISATION VEIN WIDTH mm AV.	MINERALISATION ANGL TO LCA	MINERALISATION %BLK ROCK MIN	MINERALISATION VEIN MINERALOGY CASSIT	WOLF	QTZ	MUSC	SULPH			MINERALISATION WALL ROCK ALTERN.	SULPHIDE Py	SULPHIDE Aspy	SULPHIDE Cpy	SULPHIDE Sph	SULPHIDE go	SULPHIDE po
257 80						58	N50 465	250 30	252 30	2·00		60	1 - 10	2 - 3	<10 - 35	1	x	x	abundant	x	0 - 60	occassion siderite	chlorite	silcfn	0 - 90	-	<5	<5	to 40
	2·60	2·72	104 62	94			466	252 30	254·30	2 00																			
31				Interbedded black, dark grey shale, and grey quartzite shale dominant Bedding varies from 5cms to 3m in thickness, quartzite never >1m Mineralization very poor - total S^{2-} << 1% Locally well fractured, but % S^{2-} in veinlets, generally < 30% Veinlets sub ⊥ to LCA very common & stringers of mineralization Local slumping of shale units common Minor movement evident along some mineralized veinlets Pyrite - po bearing veinlets common but very low F.I		57	467	254·30	256·30	2 00																				
	3 10	3·00	96·77	90			468	256·30	258 30	2 00																			
259·05	2 90	2 99	103 10	75			469	258·30	260 30	2·00	~20	80	<1-2	1	25-50	<<1	x	x	abundant	x	0 - 30	occassional siderite	chlorite		40	-	-	-	-	60
	3 00	2 78	92·61	71		50	470	260 30	262 30	2 00																			
35							471	262 30	264 30	2 00																			
	3·00	2 97	99 00	72			472	264 30	266 30	2 00	10 - 30	90	<1 - 4	<1 - 1	0 - 30	<1	x	x	abundant	x	<20	x	chlorite	-	60		traces	traces	traces	to 60
266 05						38																							
	1 70	1 68	98 82	80																									
36	0 50	0 40	80 00	0																									
269 30	0·70	0 62	88 57	19		34	473	266 30	269 30	3·00																			

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THE BROKEN HILL PROPRIETARY CO LTD

Project E.L.12/78 NORTH SCAMANDER

Drillhole N° NS1 (ext)

Sheet 1 of 2

METRES VISUAL LOG	% RECOV	SAMPLE N°	ASSAYS Sn %	W %	As %	Cu %	Pb %	Zn %	Ag ppm	Mo ppm
E.O.H NS1										
	87·22	441								
	71 43	442								
		443								
	102 07	444								
	97 10	445								
	102 67	446								
		447								
	99 33	448								
220	101 00	449								
		450								
	100·00	451								
	98 33	452								
		453								
	101·67	454								
230	100·61	455								
		456								
	124·71	457								
	102 67	458								
		459								
240	90 67	460								
	109 64	461								
		462								
	99 35	463								
	97 74	464								
250										

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Project E.L12/78 NORTH SCAMANDER

THE BROKEN HILL PROPRIETARY CO LTD

Drillhole N° NS 1 (ext)

Sheet. 2 of 2

METRES VISUAL LOG	% RECOV	SAMPLE N°
		465
	101 62	466
		467
	96 77	468
200	103 10	469
	92 67	470
	92 67	471
	99 00	472
	98 82	473
210		

ASSAYS

Sn % 500 1000

W% 0 0·5

As % 0 0·5 1·0

Cu% 0 1000 2000

Pb% 0 1000 2000

Zn% 0 1000 2000

Ag ppm 0 1·0 2·0

Mo ppm 0 50 100

776052

APPENDIX 3 2a.

Analysis Results

EUERTON BARY ALD
Ph 07 3525577
TELEX ALBEY 42346

LABORATORY REPORT

Batch No.: L229 | Client: BHP COMPANY LIMITED, | Area Contact: MR. D. STEELE
Address: P.O. BOX 559 | Address: C/- POST OFFICE
Date Received 30/11/81 | CAMBERWELL | SCAMANDER TAS
Date Completed 22/12/81 | VIC 3124

Order No.: T610/ 005070 | Sample Type: CORE/SLUDGE | No. of Samples: 177

SAMPLE NO.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Sn ppm	W ppm	El
	1	1	1	.1	XRF 1A	XRF 1A	Mc
T610 NSD 305	120	115	190	2	20	<10	
T610 NSD 306	140	170	140	3	15	<10	
T610 NSD 307	130	0.28 %	90	3	35	<10	
T610 NSD 308	320	410	85	7	50	<10	
T610 NSD 309	475	840	125	13	75	<10	
T610 NSD 310	280	260	145	5	105	<10	
T610 NSD 311	235	245	75	10	50	<10	
T610 NSD 312	395	260	70	8	90	<10	
T610 NSD 313	335	140	425	5	185	<10	
T610 NSD 314	780	320	990	11	135	<10	
T610 NSD 315	345	720	890	7	145	<10	
T610 NSD 316	0.28 %	0.12 %	450	19	330	<10	
T610 NSD 317	240	150	180	5	80	<10	
T610 NSD 318	190	120	55	3	60	10	
T610 NSD 319	600	150	55	3	65	<10	
T610 NSD 320	190	155	45	4	80	<10	
T610 NSD 321	640	300	120	13	80	<10	
T610 NSD 322	960	260	260	4	120	<10	
T610 NSD 323	0.16 %	0.12 %	200	6	190	<10	
T610 NSD 324	0.14 %	520	65	5	70	<10	
T610 NSD 325	345	120	85	2	40	<10	
T610 NSD 326	170	160	75	2	25	<10	
T610 NSD 327	60	70	125	2	40	<10	
T610 NSD 328	65	55	100	2	50	<10	
T610 NSD 329	75	135	0.55 %	2	95	<10	
T610 NSD 330	210	290	0.26 %	3	130	<10	
T610 NSD 331	395	300	650	4	180	<10	
T610 NSD 332	400	280	500	3	60	<10	
T610 NSD 333	75	80	230	2	55	<10	
T610 NSD 334	0.14 %	760	840	13	165	10	

Date Received 20/12/91 CAR[illegible]WE Address: C/- POST OFFICE

Date Completed 22/12/91 VIC 3124 [illegible]

Order No.: T610/ 005070 Sample Type: CORE/SLUDGE No. of Samples: 177

SAMPLE NO.	Cu	Pb	Zn	Ag	Sn	W
	a	a	a	a	a	a
	1	1	1	1	XRF 1A	XRF 1A
	NSA					
T610 NSD 335	0.10 %	980	940	10	290	<10
T610 NSD 336	145	90	170	3	75	<10
T610 NSD 337	145	135	165	3	120	<10
T610 NSD 338	340	240	375	4	175	<10
T610 NSD 339	130	120	180	3	95	<10
T610 NSD 340	55	65	90	3	65	<10
T610 NSD 341	95	50	135	3	115	<10
T610 NSD 342	220	55	415	3	160	<10
T610 NSD 343	25	55	150	2	50	<10
T610 NSD 344	30	170	150	1	30	<10
T610 NSD 345	50	50	150	2	65	<10
T610 NSD 346	110	85	165	2	120	<10
T610 NSD 347	290	85	130	2	170	<10
T610 NSD 348	50	55	85	2	60	<10
T610 NSD 349	100	80	205	2	65	<10
T610 NSD 350	140	55	155	2	55	<10
T610 NSD 351	115	40	80	2	45	<10
T610 NSD 352	60	25	40	1	45	<10
T610 NSD 353	50	30	35	1	35	<10
T610 NSD 354	20	20	45	4	30	<10
T610 NSD 355	25	230	55	1	10	<10
T610 NSD 356	20	25	80	1	25	<10
T610 NSD 357	30	25	65	1	25	<10
T610 NSD 358	25	30	90	1	10	<10
T610 NSD 359	30	40	130	2	30	<10
T610 NSD 360	45	120	295	1	55	<10
T610 NSD 361	110	70	190	2	45	<10
T610 NSD 362	60	0.19 %	0.19 %	5	165	<10
T610 NSD 363	180	0.10 %	710	4	100	<10
T610 NSD 364	95	110	190	2	40	<10

UNITS LEGEND ----- a - Parts per million b - Parts per billion % - percent
g - Grams s - Absorbance

Signature: [signature]

This Laboratory is registered by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its terms of registration. This Document shall not be

7760551

Da Rec ed 2/1 1 CAM WEL MAN

Date Completed 22/12/91 VIC 3124

Order No.: T610/ 005870 Sample Type: CORE/SLUDGE No. of Samples: 177

SAMPLE NO.	Cu	Pb	Zn	Ag	Sn	U
	a	a	a	a	a	a
	1	1	1	1	XRF 1A	XRF 1A
T610 NSD 365	45	195	220	2	110	<10
T610 NSD 366	40	220	265	2	110	<10
T610 NSD 367	80	460	600	2	100	<10
T610 NSD 368	225	75	195	2	70	<10
T610 NSD 369	60	50	90	1	40	<10
T610 NSD 370	35	145	295	1	60	<10
T610 NSD 371	375	55	130	2	75	<10
T610 NSD 372	30	50	115	1	35	<10
T610 NSD 373	25	330	415	2	80	<10
T610 NSD 374	35	350	590	2	120	<10
T610 NSD 375	40	175	275	2	90	<10
T610 NSD 376	60	85	120	2	85	<10
T610 NSD 377	70	480	485	2	105	<10
T610 NSD 378	20	50	100	2	50	<10
T610 NSD 379	15	100	165	2	40	<10
T610 NSD 380	20	310	730	2	165	<10
T610 NSD 381	25	0.13 %	0.18 %	3	220	<10
T610 NSD 382	50	520	0.41 %	2	520	<10
T610 NSD 383	15	85	0.10 %	1	180	<10
T610 NSD 384	35	70	425	1	110	<10
T610 NSD 385	20	120	330	1	70	<10
T610 NSD 386	40	45	305	1	95	<10
T610 NSD 387	140	50	0.21 %	2	90	<10
T610 NSD 388	20	60	235	1	50	<10
T610 NSD 389	60	30	180	1	65	<10
T610 NSD 390	15	210	295	2	70	<10
T610 NSD 391	10	340	380	1	70	<10
T610 NSD 392	20	45	115	1	70	<10
T610 NSD 393	25	30	50	2	70	<10
T610 NSD 394	245	45	60	1	75	<10

UNITS LEGEND ----- a - Parts per million b - Parts per billion % - percent
g - Grams e - Absorbance

Signature: A J Finlayson

... Contact: MR. D. STEELE

Address: P.O. BOX 559 — Ad sei m I F O CE

T... R... ive... 30/.../81 CAMBERWELL SCAMANDER

Date Completed 22/12/81 VIC 3124

Order No.: T610/ 005070 Sample Type: CORE/SLUDGE No. of Samples: 177

SAMPLE NO.		Cu	Pb	Zn	Ag	Sn	W
		m	m	m	m	m	m
		1	1	1	1	XRF 1A	XRF 1A
	NS4						
T610 NSD 395		60	45	65	1	75	<10
T610 NSD 396		120	70	290	2	175	<10
T610 NSD 397		115	60	115	1	75	<10
T610 NSD 398		70	50	120	1	55	<10
T610 NSD 399		35	30	50	1	55	<10
T610 NSD 400		75	35	45	1	60	<10
T610 NSD 401		125	60	50	1	70	<10
T610 NSD 402		60	310	220	1	100	<10
T610 NSD 403		165	105	100	1	85	<10
T610 NSD 404		195	150	130	4	100	<10
T610 NSD 405		65	20	40	1	60	<10
T610 NSD 406		70	35	50	2	70	<10
T610 NSD 407		160	85	140	2	125	<10
T610 NSD 408		130	90	110	2	80	<10
T610 NSD 409		65	75	145	2	75	<10
T610 NSD 410		55	85	130	2	70	<10
T610 NSD 411		475	170	245	5	100	<10
T610 NSD 412	224.3- 2.0	0.15 %	0.28 %	0.24 %	22	150	<10
T610 NSD 413	2.0	0.20 %	0.13 %	0.18 %	21	145	<10
T610 NSD 414	2.0	480	120	95	4	135	<10
T610 NSD 415	2.0	900	185	245	5	225	<10
T610 NSD 416	-234.3 2.0	600	30	145	2	70	<10
T610 NSD 417		100	30	80	1	35	<10
T610 NSD 418		110	40	55	1	55	<10
T610 NSD 419		110	25	60	1	45	<10
T610 NSD 420		280	20	45	1	60	<10
T610 NSD 421		200	15	40	1	60	<10
T610 NSD 422		250	15	20	1	60	<10
T610 NSD 423		245	10	15	1	95	<10
T610 NSD 424		150	20	60	1	75	<10

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

Signature:

7760057

Address: P.O. BOX 559   Address: C/- POST OFFICE

Date Received 30/[illegible]81   CA[illegible]RWELL   [illegible]AMA[illegible]R

Date Completed 22/12/81   VIC   3124

Order No.: T610/ 005070   Sample Type: CORE/SLUDGE   No. of Samples: 177

SAMPLE NO.	Cu	Pb	Zn	Ag	Sn	W
	m	m	m	m	m	m
	1	1	1	1	XRF 1A	XRF 1A
T610 NSD 425	340	20	160	1	125	<10
T610 NSD 426	410	20	25	2	85	10
T610 NSD 427	315	25	85	2	95	<10
T610 NSD 428	120	60	80	1	90	<10
T610 NSD 429	125	0.10 %	0.18 %	2	140	<10
T610 NSD 430	80	145	0.11 %	2	55	<10
T610 NSD 431	80	0.13 %	960	2	130	<10
T610 NSD 432	265	50	140	2	230	<10
T610 NSD 433	15	40	90	<1	45	<10
T610 NSD 434	20	25	100	1	70	<10
T610 NSD 435	50	35	270	1	85	<10
T610 NSD 436	15	30	670	1	35	<10
T610 NSD 437	205	35	110	2	80	<10
T610 NSD 438	45	30	80	1	90	<10
T610 NSD 439	40	70	130	1	95	<10
T610 NSD 440	20	40	660	1	90	<10
T610 NSD 441	940	30	30	2	150	10
T610 NSD 442	165	20	20	1	50	<10
T610 NSD 443	115	20	30	1	35	<10
T610 NSD 444	75	20	30	1	40	<10
T610 NSD 445	140	20	25	1	40	<10
T610 NSD 446	195	15	30	1	45	<10
T610 NSD 447	175	15	40	1	55	<10
T610 NSD 448	340	15	30	1	45	<10
T610 NSD 449	115	20	30	1	35	<10
T610 NSD 450	145	70	90	1	40	<10
T610 NSD 451	260	25	20	1	65	<10
T610 NSD 452	240	20	20	1	55	<10
T610 NSD 453	620	30	20	2	70	<10
T610 NSD 454	215	25	20	1	65	<10

UNITS LEGEND ----- m - Parts per million   b - Parts per billion   % - percent

g - Grams   a - Absorbance

Signature: [signature]

NATA

This Laboratory is registered by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its terms of regi-

77605 8

Address: P.O. BOX 559 Address: C/- POST OFFICE

Date Received 30/..,81 CAMBERWELL SALAMANDER E

Date Completed 22/12/81 VIC 3124

Order No.: T610/ 005070 Sample Type: CORE/SLUDGE No. of Samples: 177

SAMPLE NO.	Cu	Pb	Zn	Ag	Sn	W
	m	m	m	m	m	m
	1	1	1	1	XRF 1A	XRF 1A
NS1						
T610 NSD 455	85	130	0.21 %	2	90	<10
T610 NSD 456	70	300	0.12 %	2	100	<10
T610 NSD 457	50	230	0.17 %	2	260	<10
T610 NSD 458	30	310	790	2	115	<10
T610 NSD 459	20	170	345	1	175	<10
T610 NSD 460	75	95	0.23 %	2	265	<10
T610 NSD 461	75	70	120	2	125	<10
T610 NSD 462	110	30	45	1	100	<10
T610 NSD 463	95	25	30	1	110	<10
T610 NSD 464	55	20	90	1	85	<10
T610 NSD 465	80	30	910	2	100	<10
T610 NSD 466	60	20	60	1	50	<10
T610 NSD 467	35	20	90	1	10	<10
T610 NSD 468	40	30	135	2	10	<10
T610 NSD 469	40	45	130	2	25	<10
T610 NSD 470	30	100	170	2	45	<10
T610 NSD 471	25	50	80	2	70	<10
T610 NSD 472	60	130	145	2	120	<10
T610 NSD 473 -269.5 TD.	55	105	280	2	110	<10
T610 NSS 28	485	820	295	13	300	<10
T610 NSS 29	760	350	930	7	160	<10
T610 NSS 30	265	115	315	4	105	<10
T610 NSS 31	265	680	0.10 %	4	145	<10
T610 NSS 32	940	340	385	>25	205	<10
T610 NSS 33	700	300	510	>25	230	<10
T610 NSS 34	680	110	435	5	190	<10
T610 NSS 35	505	185	680	5	190	<10

(NSS 28–35 bracketed: Saw sludges)

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

Signature: [signature]

NATA

776059

APPENDIX 2

Geochemical Results

APPENDIX 2a

Rock Chip Sampling Analysis Results

SB1-6 Scamander Bell Prospect
PB1-6 Paul Beahr Prospect
CG9-12
RW1-6

REGION: NE TAS PROJECT NO.: T610 PROSPECT: Scamander Bell GRID CO-ORDS.: LOCAL A.M.G.

DESCRIPTION Sample Type: Rock Rock Type: Ironstone/Greisen/qtz Soil/Sediment Size Fraction:

SB1 emg, pale green greisenized granite, minor limonite, vein qtz
SB2 quartz vein with minor limonite
SB3 emg, weathered, altered granite as for SB1
SB4 as for SB1, 4 with 50/m qtz-limonite veinlets to 1cm wide.
SB5 " " " with some heavy ironstone from dumps.
SB6 qtz vein with limonite and altered granite (minor)

ANALYSIS Laboratory A.L.S. Batch No K133 Date Analysed 6/11/81

Element / Method / Sample #	Sn	W	Cu	Pb	Zn	Ag	Co	Ni	Mo	As	Au	Sb					
	XRF1A	XRF1A	1	1	1	1	1	1	XRF1B	5	120A	8					
SB 1	5	<10	50	1600	145	45	15	10	<4	300	5	120					
2	15	<10	10	1800	25	600	5	15	<4	1200	20	180					
3	<5	10	10	600	30	4	5	10	4	3600	5	30					
4	5	20	5	600	40	6	5	10	<4	1200	5	40					
5	<5	<10	45	2000	35	67	10	10	<4	2000	30	260					
6	20	<10	105	1900	100	780	10	10	<4	3000	380	400					

REMARKS: Au in ppb; high Ag in quartz veins; all samples from dumps with rel. high degree of weathering; high Sb for Scamander Area

Logged or Sampled by: R. HINE Date: 25/11/81

276062

REGION: NE TAS PROJECT Nº.: T610 PROSPECT: Paul Beahr GRID CO-ORDS.: LOCAL A.M.G.

DESCRIPTION Sample Type: Rock Rock Type: Sulphides/Gossan/Qtze Soil/Sediment Size Fraction:

PB1 Gossan — spongy red-yellow limonite ; local boxworkes ; float near tails dump.
PB2 Silic'd qte and slate with lim., wthr'd S^{2-} and fresh S^{2-} — dominantly galena
PB3 as for PB2 with more pyrite, minor galena, sphalerite
PB4 fractured, silic'd quartzite, grey slate, minor pyr, gal, sph; patches, vnlts chlorite
PB5 as above with more massive sulphide py-te-galena-sph'd.
PB6 as above with more slate, vein qtz & chlorite; pyr dominant minor sph, gal

ANALYSIS Laboratory A.A.S. Batch Nº K133 Date Analysed 6/11/81

Element / Method / Sample #	Sn	W	Cu	Pb	Zn	Ag	Co	Ni	Mo	As	Au	Sb					
	X 1A	X 1A	1	1	1	1	1	1	X1B	5	120A	8					
PB 1	0.69%	20	2100	0.36%	0.05%	49	30	25	<4	200	5	<10					
2	0.73%	<10	440	4.50%	0.20%	93	15	25	"	8800	40	60					
3	1.86%	"	560	5.25%	0.61%	123	15	25	"	2.0%	30	110					
4	0.03%	"	70	0.06%	0.06%	4	15	25	"	120	<3	<10					
5	0.71%	"	540	1.37%	1.12%	36	25	30	"	2000	<3	<10					
6	0.11%	"	560	0.45%	0.94%	36	35	40	"	820	<3	<10					

REMARKS: high Sn, Ag, Pb in sulphide rich samples. ; high Sn in gossan.

Logged or Sampled by: R. HINE Date: 25/11/81

REGION: NE TAS PROJECT Nº.: T610 PROSPECT: CRAMPS GRID CO-ORDS.: LOCAL A.M.G.

DESCRIPTION Sample Type: Rock Rock Type: Soil/Sediment Size Fraction:

CG9 (2700W 4000N) efg wtld dolerite, no qtz, micro-disse. pyr when fresh.
CG10 (" ") clay-limonite rock — leached, wtk'd dolerite ?
GG11 (2900W 3700N) float — massive to poorus yellow/brown ironstone, mottled.
GG12 (2950W 3600N) " — ferricrete red/blonde sandy matrix.

ANALYSIS Laboratory Batch Nº Date Analysed

Element / Method / Sample #	Sn	W	Cu	Pb	Zn	Ag	Ni	Co	Cr	As	Mo	Sb	Au				
	XRF	XRF	AI	"	"	"	"	"	"	"	"	XRF	LG20				
CG9	45	15	30	45	395	N.D.	125	45	100	1	0.5	<3	N.D.				
10	210	<10	50	150	440	0.5	55	20	175	12	0.5	<3	N.D.				
11	40	20	230	205	220	0.5	55	20	50	440	1.0	3	N.D.				
12	50	15	590	65	230	N.D.	110	20	105	1400	1.5	<3	N.D.				

REMARKS: N.D = not detected

Logged or Sampled by: R. HINE Date: 25/11/81

REGION: N.E. TAS. **PROJECT Nº.:** T610 **PROSPECT:** (WELLS')* SCAMANDER **GRID CO-ORDS.:** **LOCAL A.M.G.**

DESCRIPTION

Sample Type: ROCK Rock Type: IRONSTONE / SANDSTONE Soil/Sediment Size Fraction:

RW1 – assorted magnetic ironstones and sandstones. Sandstones limonitic.
RW2 – non-magnetic ironstones and sandstones. Limonitic. locally manganiferous(?)
RW3 Magnetic & nonmagnetic ironstone.
RW4 Ferruginous sandstone, locally magnetic.
RW5 Magnetic ironstone and ferruginous sandstone and shale
RW6 Magnetic ironstone, shale and sandstone; qtz locally [illegible]; magnetite stringers in qtz.

ANALYSIS Laboratory AMDLABS Batch Nº 14-4 08 703 Date Analysed 2/2/81

ppm.

Element / Method / Sample #	Sn	W	Cu	Pb	Zn	Ag	Ni	Co	Cr	As	Mo	Sb.	Au				
	XRF	XRF	AA									XRF	LG20				
RW 1	7	BLD	15	40	310	<0.5	185	50	40	51	1.0	8	BLD				
2	7	"	15	55	325	"	190	50	35	43	0.5	4	"				
3	BLD	"	25	75	340	"	205	50	45	35	0.5	2	"				
4	4	"	20	30	45	"	95	10	30	9	0.5	BLD	"				
5	BLD	"	30	30	150	0.5	95	20	45	14	0.5	"	"				
6	9	"	35	30	95	0.5	95	20	45	9	1.5	"	"				

REMARKS: RW 1 & 2 collected by R. Wells. RW 3-6 collected by DAS. RW 3 & 4 from approx same location as RW1 & 2. RW 5 & 6 from NW of creek, approx over weak ([illegible]) aeromag anomaly. All samples weathered.

* south bank Scamander R. at Upper Scamander.

Logged or Sampled by: D.A. STEELE Date: 24/11/81

776065

776066

APPENDIX 2b

Stream Sampling Analysis Results

SEL 1-108

Data base numbers 0001 - 0108

ANALABS

776067

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

Phone (09) 458 7999 — 52 Murray Road, Welshpool, W.A. 6106 — Telex AA92560

ANALYTICAL REPORT No. 14.4 08 793

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

B.H.P. Company
GPO Box 1140L
Hobart
Tasmania 7001

ORDER No.	PROJECT
005069	T 610

DATE RECEIVED	RESULTS REQUIRED
26.11.81	

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
	2.12.81	3	45

STATE OF SAMPLES		PRE-TREATMENT							ANALYSIS		
ORDER OF SAMPLES	SAMPLE NUMBERS	DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD
RJ	RW 1-6		1		2				Cu Pb Zn Ag As	A1	AAS
				3	4				Mo Co Ni Cr	A1	AAS
RS	SEL 1-39	1			3	2			Au		LG20
									Sb Sn W		XRF

RESULTS TO

1. As Above

2. D.A. Clarke
GPO Box 1289
Brisbane

RESULTS TO

3. D.A. Steele
B.H.P. Exploration
C/- P.O. Scamander
TAS 7215

REMARKS

STATE OF SAMPLES		ANALYSIS — PREPARATION				ANALYSIS — METHOD	
whole core	WC	perchloric acid	A1	cold acid	CA	atomic absorbtion	AAS
split core	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
cutting	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
rock	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
soil	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
pulp	PU	HF mixture	A6	ignition	IG	titration	TTN
water	WA	*HF under pressure*	A7	*pressed powder (XRF)*	PP	*other chemicals means*	CHEM
tissue	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
stream sediment	SS					fluorescence	FLUOR
heavy mineral	HM					inductively coupled plasma	ICP

AUTHORISED OFFICER B Dow

776068

ANALABS

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

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
DATA BASE NO	14.4 08 703	2.12.81	005069	1 OF 6

TUBE No.	SAMPLE No.	Cr	Co	Ni	Cu	Zn	As	Mo	Ag	Au
1	RW 1	40	50	185	15	310	51	1.0	X	X
2	RW 2	35	50	190	15	325	43	0.5	X	X
3	RW 3	45	50	205	25	340	35	0.5	X	X
4	RW 4	30	10	95	20	45	9	0.5	X	X
5	RW 5	45	20	95	30	150	14	0.5	0.5	X
6	RW 6	45	20	95	35	95	9	1.5	0.5	X
7	SEL 1 0001	90	5	10	X	10	1	X	X	X
8	SEL 2 0002	200	X	10	X	10	2	0.5	0.5	X
9	SEL 3	100	15	30	10	30	60	1.5	0.5	X
10	SEL 4	65	20	45	10	55	18	0.5	1.0	X
11	SEL 5	135	10	20	5	15	4	1.0	X	X
12	SEL 6	65	15	30	5	20	11	1.0	0.5	X
13	SEL 7	135	X	10	X	10	2	0.5	X	X
14	SEL 8	155	5	15	X	15	2	0.5	0.5	X
15	SEL 9	50	15	30	45	245	91	1.0	0.5	X
16	SEL 10 0010	50	20	30	30	140	33	1.0	0.5	X
17	SEL 11	60	15	30	30	175	23	0.5	X	X
18	SEL 12	50	20	40	40	120	68	1.0	X	X
19	SEL 13	115	20	40	40	80	14	1.5	X	X
20	SEL 14	65	20	30	25	80	10	0.5	X	X
21	SEL 15	40	10	20	10	30	4	0.5	X	X
22	SEL 16	170	15	30	10	30	4	0.5	X	X
23	SEL 17	50	10	30	10	50	16	X	X	X
24	SEL 18	50	15	40	15	60	18	X	X	X
25	SEL 19 0019	55	10	25	10	30	10	X	X	X

ROCK CHIP

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 B Dow

ANALABS

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

776069

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	14.4 88 703	2.12.81	0005069	2 OF 6

TUBE No.	SAMPLE No.	Cr	Co	Ni	Cu	Zn	As	Mo	Ag	Au
1	SEL 20 0020	225	5	10	5	10	3	0.5	X	X
2	SEL 21	150	10	10	5	15	4	X	X	X
3	SEL 22	200	10	20	5	10	4	0.5	X	X
4	SEL 23	265	10	15	5	10	5	0.5	X	X
5	SEL 24	265	10	20	5	10	7	1.0	X	X
6	SEL 25	570	15	30	5	20	10	1.5	X	X
7	SEL 26	60	10	15	5	30	7	0.5	X	X
8	SEL 27	170	10	15	X	15	12	0.5	X	X
9	SEL 28	25	15	20	5	20	15	X	X	X
10	SEL 29	20	15	30	30	260	28	X	X	X
11	SEL 30 0030	50	15	25	25	130	26	X	X	X
12	SEL 31	35	15	40	45	210	31	X	X	X
13	SEL 32	40	X	5	X	5	4	X	X	X
14	SEL 33	25	30	30	15	65	9	X	X	X
15	SEL 34	80	20	35	15	65	17	X	X	X
	SEL 35	50	20	40	20	80	22	X	X	X
17	SEL 36	105	25	40	10	55	10	X	X	X
18	SEL 37	40	20	35	10	55	10	X	X	X
19	SEL 38	30	10	20	5	20	5	X	X	X
20	SEL 39 0039	30	20	35	15	60	10	X	X	X
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 B Dow

ANALABS

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

776070

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	14.4 08 703	2.12.81	0050869	3 OF 6

TUBE No.	SAMPLE No.	Cr	Co	Ni	Cu	Zn	As	Mo	Ag	Au
1	FS4	1000	115	1750	285	670	24	1.0	1.0	
2	RW 1	40	50	100	15	300	48	1.0	X	
3	SEL 14	80	20	45	25	75	12	X	X	
4	FS4	1060	115	1700	290	700	26	1.0	0.5	
5	SEL 35	60	20	40	20	85	22	X	X	
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	5	5	1	0.5	0.5	0.008
24	DIGESTION	A1	A1	A1	A1	A1	A1	A1	A1	
25	METHOD	A1/1	A1/1	A1/1	A1/1	A1/1	A1/3	A1/6	A1/1	LG20

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 R Dore

ANALABS

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

776071

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	14.4 08 703	2.12.81	005069	4 OF 6

TUBE No.	SAMPLE No.	Pb	DATA BASE No							
1	RW 1	40								
2	RW 2	55								
3	RW 3	75								
4	RW 4	30								
5	RW 5	30								
6	RW 6	30								
7	SEL 1	5	0001							
8	SEL 2	10	0002							
9	SEL 3	35	1							
10	SEL 4	20	1							
11	SEL 5	10	1							
12	SEL 6	40	1							
13	SEL 7	5	1							
14	SEL 8	15	1							
15	SEL 9	85	1							
16	SEL 10	40	0010							
17	SEL 11	60	1							
18	SEL 12	30	1							
19	SEL 13	15	1							
20	SEL 14	20	1							
21	SEL 15	20	1							
22	SEL 16	20	1							
23	SEL 17	20	1							
24	SEL 18	20	1							
25	SEL 19	20	0019							

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

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

776072

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	14.4 88 703	2.12.81	0050069	5 OF 6

TUBE No.	SAMPLE No.	Pb	DATA BASE No.							
1	SEL 20	10	0020							
2	SEL 21	5	1							
3	SEL 22	15	1							
4	SEL 23	25	1							
5	SEL 24	10	1							
6	SEL 25	15	1							
7	SEL 26	20	1							
8	SEL 27	15	1							
9	SEL 28	20	1							
10	SEL 29	75	1							
11	SEL 30	65	0030							
12	SEL 31	75	1							
13	SEL 32	5	1							
14	SEL 33	25	1							
15	SEL 34	35	1							
16	SEL 35	35	1							
17	SEL 36	20	1							
18	SEL 37	15	1							
19	SEL 38	10	1							
20	SEL 39	15	0039							
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

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776073

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
[illegible]	14.4 88 783	2.12.81	005069	6 OF 6

TUBE No.	SAMPLE No.	Pb									
1	FS43	115									
2	RH 1	40									
3	SEL 14	15									
4	FS44	95									
5	SEL 35	40									
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23	DETECTION	5									
24	DIGESTION	A1									
25	METHOD	A1/1									

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

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776074

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	14.4 OF 783	17.12.81	005869	1 OF 2

TUBE No.	SAMPLE No.	Sn	Sb	W	DATA BASE No					
1	RW 1	7	X	X						
2	RW 2	T	1	X						
3	RW 3	X	2	X						
4	RW 4	4	X	X						
5	RW 5	X	X	X						
6	RW 6	9	X	X						
7	SEL 1	7	X	X	0001					
8	SEL 2	8	X	X	1					
9	SEL 3	9	X	X	1					
10	SEL 4	9	X	X	1					
11	SEL 5	5	X	X	1					
12	SEL 6	15	X	5	1					
13	SEL 7	8	X	10	1					
14	SEL 8	9	X	X	1					
15	SEL 9	260	X	X	1					
16	SEL 10	220	X	X	1					
17	SEL 11	320	X	X	1					
18	SEL 12	810	X	X	1					
19	SEL 13	15	X	X	1					
20	SEL 14	X	X	X	1					
21	SEL 15	5	X	X	1					
22	SEL 16	8	X	X	1					
23	SEL 17	X	X	X	1					
24	SEL 18	6	X	X	1					
25	SEL 19	7	X	X	0019					

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

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776075

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	14.4.95 783	17.12.81	865059	2 OF 2

TUBE No.	SAMPLE No.	Sn	Sb	W	DATA BASE No					
1	SEL 20	120	X	X	0020					
2	SEL 21	15	X	X	1					
3	SEL 22	15	X	X	1					
4	SEL 23	40	1/S	X	1					
5	SEL 24	15	X	X	1					
6	SEL 25	1/S	X	1/S	1					
7	SEL 26	X	X	X	1					
8	SEL 27	130	X	X	1					
9	SEL 28	15	X	X	1					
10	SEL 29	260	X	X	1					
11	SEL 30	35	X	X	0030					
12	SEL 31	70	X	X	1					
13	SEL 32	7	X	X	1					
14	SEL 33	9	X	X	1					
15	SEL 34	10	1/S	10	1					
16	SEL 35	30	X	X	1					
17	SEL 36	7	1/S	X	1					
18	SEL 37	10	X	X	1					
19	SEL 38	X	X	X	1					
20	SEL 39	9	X	X	0039					
21					1					
22	1/S means Insufficient Sample				1					
23	DETECTION		1	1	1					
24	DIGESTION		ALL		1					
25	METHOD	XRF	AAS/I	XRF	1					

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

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

Phone (09) 458 7999
52 Murray Road, Welshpool, W.A. 6106
Telex AA92560

776076

ANALYTICAL REPORT No. 14.4 82 862

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

B.H.P. Company
GPO Box 1744L
Hobart
Tasmania 7001

ORDER No.	PROJECT
005074	T 610

DATE RECEIVED	RESULTS REQUIRED
27.1.82.	

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
	12.2.82	3	69

STATE OF SAMPLES	PRE-TREATMENT							ANALYSIS		
SAMPLE NUMBERS	DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD
SEL 40-108	1			3	2			Cu Pb Zn Ag As Mo Co Ni Cr Sb Sn W Au	A1 A1	AAS AAS XRF LG2

RESULTS TO: Hs Above

RESULTS TO: G.P.O. Box 1383
Brisbane QLD

REMARKS

STATE OF SAMPLES		ANALYSIS — PREPARATION				ANALYSIS — METHOD	
whole core	WC	perchloric acid	A1	cold acid	CA	atomic absorbtion	AAS
split core	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
cutting	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
rock	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
soil	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
pulp	PU	HF mixture	A6	ignition	IG	titration	TTN
water	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemicals means	CHEM
tissue	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
stream sediment	SS					fluorescence	FLUOR
heavy mineral	HM					inductively coupled plasma	ICP

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776077

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
SEL DATA BASE No	14.4 88 862	12.2.82	005074	1 OF 8

TUBE No.	SAMPLE No.	Cr	Co	Ni	Cu	Zn	As	Mo	Ag	Au
1	40 0040	60	15	30	75	115	22	0.5	X	I/S
2	41	50	25	40	55	140	12	0.5	X	I/S
3	42	50	25	30	40	100	14	X	X	I/S
4	43	80	30	45	65	130	31	X	0.5	I/S
5	44	50	10	15	30	75	43	1.0	0.5	X
6	45	85	25	35	60	120	85	2.0	1.0	I/S
7	46	45	30	70	40	215	13	1.5	0.5	I/S
8	47	70	20	45	55	180	72	1.0	X	I/S
9	48	45	20	40	25	130	9	1.0	0.5	X
10	49	135	10	15	5	25	6	X	0.5	X
11	50 0050	90	20	20	10	50	15	2.0	0.5	X
12	51	200	10	20	10	30	7	X	X	X
13	52	50	10	15	5	25	19	0.5	0.5	X
14	53	380	5	15	10	20	2	2.5	1.0	0.040
15	54	80	10	15	X	25	21	X	X	0.012
16	55	125	10	15	5	25	4	1.5	X	0.044
17	56	470	10	20	15	25	4	2.5	X	0.064
18	57	145	55	30	15	70	17	0.5	0.5	I/S
19	58	130	15	20	15	45	3	X	0.5	X
20	59	160	15	20	5	20	41	1.5	0.5	I/S
21	60 0060	60	15	25	10	60	4	1.5	0.5	X
22	61	55	15	25	10	50	3	X	0.5	0.011
23	62	20	15	40	10	75	5	X	X	I/S
24	63	45	20	25	10	45	1	0.5	X	X
25	64 0064	50	15	25	10	55	4	0.5	0.5	I/S

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

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776078

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
SEL	14.4 03 962	12.2.82	005074	2 OF 8

TUBE No.	SAMPLE No.	Cr	Co	Ni	Cu	Zn	As	Mo	Ag	Au
1	65 0065	20	20	35	15	70	12	X	X	I/S
2	66 1	55	10	10	10	25	4	X	0.5	X
3	67 1	195	15	20	40	100	9	1.5	0.5	0.044
4	68 1	15	15	15	20	70	19	X	0.5	I/S
5	69 1	90	15	20	10	55	27	X	0.5	I/S
6	70 0070	135	20	20	15	60	29	1.0	X	I/S
7	71 1	150	10	15	10	35	5	1.5	X	0.026
8	72 1	50	30	50	20	130	7	X	X	I/S
9	73 1	15	30	35	10	100	19	X	X	I/S
10	74 1	35	30	35	25	95	15	X	X	0.040
11	75 1	175	20	20	15	40	8	X	X	I/S
12	76 1	345	20	35	20	85	23	2.0	X	I/S
13	77 1	140	10	20	30	50	31	2.0	X	I/S
14	78 1	50	15	20	20	25	51	1.5	X	X
15	79 1	125	20	25	15	55	19	X	X	X
16	80 0080	135	20	20	15	55	6	1.0	0.5	X
17	81 1	95	15	15	5	50	3	2.5	0.5	0.009
18	82 1	25	30	20	10	120	3	1.0	0.5	I/S
19	83 1	100	30	35	25	70	5	0.5	1.0	X
20	84 1	90	25	40	10	85	16	X	1.0	0.055
21	85 1	45	40	40	10	100	7	1.0	0.5	X
22	86 1	80	30	30	25	100	4	X	0.5	I/S
23	87 1	80	30	45	30	100	12	0.5	1.0	I/S
24	88 1	70	25	30	20	70	3	1.0	0.5	X
25	89 0089	55	20	30	15	55	20	X	X	0.026

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
SEL	14.4 82 062	12.2.82	0059/74	3 OF 8

TUBE No.	SAMPLE No.	Cr	Co	Ni	Cu	Zn	As	Mo	Ag	Au
1	90 0090	100	25	45	25	95	5	X	0.5	I/S
2	91	90	25	45	25	85	8	1.5	0.5	I/S
3	92	65	25	45	25	95	19	0.5	0.5	X
4	93	55	30	40	30	70	5	X	X	X
5	94	135	30	50	25	70	8	2.5	X	0.032
6	95	95	30	55	30	95	11	1.5	X	I/S
7	96	30	15	35	35	85	3	X	X	I/S
8	97	65	15	40	15	90	5	X	1.0	X
9	98	90	10	40	25	65	4	X	0.5	X
10	99	90	15	25	15	35	2	1.5	0.5	X
11	100 0100	125	5	25	10	25	3	2.0	X	X
12	101	50	10	20	5	35	3	1.0	0.5	X
13	102	130	20	35	20	65	3	0.5	0.5	I/S
14	103	130	10	20	10	50	2	X	X	X
15	104	145	5	15	5	20	1	X	X	X
16	105	100	15	35	20	85	5	X	X	I/S
17	106	125	10	30	20	95	12	1.5	X	I/S
18	107	140	10	25	10	70	9	0.5	X	0.012
19	108 0108	815	10	45	65	120	12	3.5	X	I/S
20										
21										
22										
23										
24										
25										

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

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

776079

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
SEL	14.4 82 062	12.2.82	0005074	4 OF 8

TUBE No.	SAMPLE No.	Cr	Co	Ni	Cu	Zn	As	Mo	Ag	Au
1	STD FS4	1300	115	1900	290	755	28	0.5	1.0	
2	RPT 40	50	15	35	70	110	24	1.0	0.5	
3	RPT 59	145	10	26	5	20	40	1.5	0.5	
4	STD FS4	1400	115	1850	290	725	26	X	1.5	
5	RPT 80	165	15	20	15	55	5	X	X	
6	RPT 99	110	15	25	15	30	2	X	X	
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	5	5	1	0.5	0.5	0.008
24	DIGESTION	101	101	101	101	101	101	102	101	
25	METHOD	101	101	101	101	101	114	121	101	303

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

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776080

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
SEL	14.4 88 862	12.2.82	005074	5 OF 8

TUBE No.	SAMPLE No.	Pb	DATA BASE No							
1	40	20	0040							
2	41	100	1							
3	42	165	1							
4	43	15	1							
5	44	10	1							
6	45	20	1							
7	46	90	1							
8	47	60	1							
9	48	60	1							
10	49	10	1							
11	50	35	0050							
12	51	10	1							
13	52	25	1							
14	53	10	1							
15	54	5	1							
16	55	X	1							
17	56	X	1							
18	57	10	1							
19	58	10	1							
20	59	X	1							
21	60	10	0060							
22	61	10	1							
23	62	5	1							
24	63	10	1							
25	64	5	0064							

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

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

776081

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
SEL	14.4 86 852	12.2.82	085074	6 OF 8

TUBE No.	SAMPLE No.	Pb									
1	65	20	0065								
2	66	25	1								
3	67	100	1								
4	68	20	1								
5	69	15	1								
6	70	15	0070								
7	71	X	1								
8	72	55	1								
9	73	10	1								
10	74	15	1								
11	75	X	1								
12	76	10	1								
13	77	30	1								
14	78	80	1								
15	79	15	1								
16	80	5	0080								
17	81	5	1								
18	82	5	1								
19	83	5	1								
20	84	15	1								
21	85	20	1								
22	86	5	1								
23	87	15	1								
24	88	5	1								
25	89	15	0089								

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

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776082

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
SFL	J4.4 08 862	12.2.82	005074	7 OF 8

TUBE No.	SAMPLE No.	Pb									
1	90	15	0090								
2	91	15	1								
3	92	20	1								
4	93	30	1								
5	94	45									
6	95	15	1								
7	96	20	1								
8	97	15									
9	98	20	1								
10	99	10	1								
11	100	25	0100								
12	101	35	1								
13	102	15									
14	103	10	1								
15	104	X	1								
16	105	15									
17	106	15	1								
18	107	10									
19	108	20	0108								
20											
21											
22											
23											
24											
25											

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

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

776083

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
SEL	14.4 83 852	12.2.82	005074	8 OF 8

TUBE No.	SAMPLE No.	Pb								
1	STD FS4	105								
2	RPT 40	20								
3	RPT 59	X								
4	STD FS4	100								
5	RPT 80	10								
6	RPT 93	20								
7										
8										
9										
10										
11										
12										
13										
14	NOTE: I/S - Insufficient Sample									
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5								
24	DIGESTION	101								
25	METHOD	101								

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

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

776084

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
SEL	14.4 MH 862	25.2.82	805074	1 OF 3

TUBE No.	SAMPLE No.	Sn	Sb	W	DATABASE NO				
1	40	9	X	X	0040				
2	41	15	5	X	1				
3	42	35	X	X	1				
4	43	20	X	X	1				
5	44	35	X	15	1				
6	45	30	X	10	1				
7	46	10	X	X	1				
8	47	190	X	X	1				
9	48	10	X	X	1				
10	49	15	4	X	1				
11	50	20	3	X	0050				
12	51	15	X	X	1				
13	52	20	X	X	1				
14	53	45	X	15	1				
15	54	15	X	X	1				
	55	6	X	X	1				
17	56	20	X	X	1				
18	57	9	X	15	1				
19	58	10	5	X	1				
20	59	8	3	X	1				
21	60	X	3	10	0060				
22	61	3	X	X	1				
23	62	10	3	10	1				
24	63	6	5	X	1				
25	64	4	5	X	0064				

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

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

776085

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
SEL	14.4 08 862	26.2.82	M05074	2 OF 3

TUBE No.	SAMPLE No.	Sn	Sb	W						
1	65	6	4	15	0065					
2	66	5	3	X	1					
3	67	100	X	X	1					
4	68	I/S	I/S	I/S	1					
5	69	X	X	X	1					
6	70	9	5	X	0070					
7	71	8	5	X	1					
8	72	10	X	X	1					
9	73	I/S	I/S	I/S	1					
10	74	8	3	10	1					
11	75	5	X	X	1					
12	76	7	X	X	1					
13	77	35	5	10	1					
14	78	10	X	X	1					
15	79	8	X	10	1					
16	80	4	X	X	0080					
17	81	6	X	X	1					
18	82	I/S	I/S	I/S	1					
19	83	X	X	X	1					
20	84	10	4	X	1					
21	85	7	X	10	1					
22	86	4	X	X	1					
23	87	6	X	X	1					
24	88	X	X	X	1					
25	89	4	X	X	0089					

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

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

776086

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
SEL	14.4 06 062	26.2.82	005074	3 OF 3

TUBE No.	SAMPLE No.	Sn	Sb	W						
1	90	3	4	X	0090					
2	91	6	3	X						
3	92	7	X	X	1					
4	93	6	6	X	1					
5	94	9	6	X	1					
6	95	3	4	10	1					
7	96	I/S	I/S	I/S	1					
8	97	6	4	10	1					
9	98	4	4	X	1					
10	99	5	3	X	1					
11	100	5	5	10	0099					
12	101	7	3	X	0100					
13	102	8	X	X	0101					
14	103	5	X	X	1					
15	104	3	3	10	1					
16	105	4	5	X	1					
17	106	I/S	I/S	I/S	1					
18	107	6	3	X	1					
19	108	I/S	I/S	I/S	0106					
20										
21	NOTE: I/S - Insufficient Sample									
22										
23	DETECTION	3	3	10						
24	DIGESTION									
25	METHOD	402	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

APPENDIX 2c

Soil Sampling Analysis Results

Cramps Grid

TELEX [illegible]344

ALS

Batch No.: K199 Client: BHP COMPANY LIMITED, Area Contact: MR. KELVIN KUYS

Address: P.O. BOX 559 Address: G.P.O. BOX 1140L

Date Received 29/10/81 CAMBERWELL HOBART TAS.

Date Completed 01/12/81 VIC 3124

Order No.: T610 005067 Sample Type: SOIL No. of Samples: 203

SAMPLE NO.	Cu	Pb	Zn	Ag	As	Sn	W	ELE…
	m	m	m	m	m	m	m	UN…
CRAMPS GRID SOILS	1	1	1	1	5-B	XRF 1A	XRF 1A	MET…
T61-001	10	25	15	2	30	20	<10	
T61-002	15	25	15	2	20	10	<10	
T61-003	10	15	5	1	16	35	<10	
T61-004	15	175	15	2	10	20	20	
T61-005	10	15	10	1	3	10	<10	
T61-006	15	30	10	1	5	45	10	
T61-007	10	20	10	1	2	15	<10	
T61-008	10	10	10	1	3	10	<10	
T61-009	10	15	10	1	2	10	10	
T61-010	25	375	15	2	20	65	<10	
T61-011	15	30	15	1	4	15	<10	
T61-012	15	20	20	2	2	15	20	
T61-013	5	15	15	<1	2	15	<10	
T61-014	15	50	25	1	3	15	10	
T61-015	2	15	15	1	4	5	<10	
T61-016	10	20	20	1	3	5	<10	
T61-017	5	10	10	1	3	<5	20	
T61-018	5	15	15	1	3	5	10	
T61-019	5	15	15	1	2	5	<10	
T61-020	5	25	25	1	3	5	<10	
T61-021	2	20	10	1	2	5	<10	
T61-022	5	15	15	1	1	10	10	
T61-023	40	40	85	2	75	25	10	
T61-024	20	20	55	1	<1	10	<10	
T61-025	20	40	75	1	8	20	10	
T61-026	30	30	50	2	90	30	20	
T61-027	30	30	45	1	55	25	<10	
T61-028	20	40	45	1	20	30	10	
T61-029	20	20	60	1	1	10	<10	
T61-030	5	25	25	1	8	30	<10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

27608

ALS

Batch No.: K199 Client: BHP COMPANY LIMITED, Area Contact: MR. KELVIN KUYS
Address: P.O. BOX 559 Address: G.P.O. BOX 1140L
Date Received 29/10/81 CAMBERWELL HOBART TAS.
Date Completed 01/12/81 VIC 3124

Order No.: T610 005067 Sample Type: SOIL No. of Samples: 203

SAMPLE NO.	Cu	Pb	Zn	Ag	As	Sn	W	ELE
	m	m	m	m	m	m	m	UN
	1	1	1	1	5-B	XRF 1A	XRF 1A	MET
T61-031	5	10	25	<1	5	20	<10	
T61-032	5	15	20	<1	3	30	<10	
T61-033	5	15	20	1	1	10	<10	
T61-034	5	25	15	1	7	10	<10	
T61-035	5	20	20	1	3	10	<10	
T61-036	2	15	10	<1	2	10	10	
T61-037	5	20	15	1	12	10	10	
T61-038	5	10	10	<1	1	10	<10	
T61-039	10	70	20	1	40	20	<10	
T61-040	10	20	15	1	4	10	10	
T61-041	5	20	15	1	3	10	10	
T61-042	10	40	20	1	20	35	10	
T61-043	30	35	40	2	180	15	<10	
T61-044	30	30	25	1	95	20	10	
T61-045	10	10	5	1	3	5	10	
T61-046	10	25	5	1	30	20	<10	
T61-047	5	10	10	<1	2	10	<10	
T61-048	5	10	5	<1	3	10	10	
T61-049	10	10	2	1	3	10	<10	
T61-050	2	20	10	1	7	15	<10	
T61-051	10	25	20	1	18	15	10	
T61-052	15	25	20	1	18	25	<10	
T61-053	10	15	15	<1	7	10	10	
T61-054	30	10	20	1	6	10	10	
T61-055	15	20	25	1	60	15	10	
T61-056	10	20	10	1	7	10	<10	
T61-057	5	20	5	1	12	20	<10	
T61-058	10	10	15	<1	2	15	10	
T61-059	25	30	25	1	20	25	10	
T61-060	10	15	20	1	7	30	<10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

[redacted] Address: P.O. BOX 559 CAMBERWELL VIC 3124

Date Received 29/10/81

Date Completed 01/12/81

Order No.: T610 005067 Sample Type: SOIL No. of Samples: 203

SAMPLE NO.	Cu	Pb	Zn	Ag	As	Sn	W	ELE
	m	m	m	m	m	m	m	
	1	1	1	1	5-B	XRF 1A	XRF 1A	MET
T61-061	2	15	10	<1	2	20	<10	
T61-062	5	20	25	1	6	35	<10	
T61-063	10	15	20	1	3	35	<10	
T61-064	35	50	30	2	75	30	<10	
T61-065	20	20	10	1	25	20	<10	
T61-066	35	50	30	2	75	30	<10	
T61-067	10	10	10	<1	7	35	10	
T61-068	10	20	10	1	10	15	<10	
T61-069	10	60	5	<1	45	55	<10	
T61-070	10	25	10	<1	55	10	10	
T61-071	5	10	5	<1	8	5	10	
T61-072	5	20	10	1	35	10	<10	
T61-073	15	25	30	1	20	10	20	
T61-074	25	30	15	1	12	10	10	
T61-075	30	45	10	1	90	25	<10	
T61-076	5	15	10	<1	2	10	<10	
T61-077	15	20	40	1	16	10	10	
T61-078	15	20	20	1	12	20	<10	
T61-079	30	40	105	1	30	20	10	
T61-080	20	30	55	1	30	270	<10	
T61-081	10	40	15	<1	30	25	<10	
T61-082	15	45	20	<1	10	35	10	
T61-083	20	35	45	<1	10	15	<10	
T61-084	2	15	10	<1	4	10	<10	
T61-085	5	40	15	1	5	20	10	
T61-086	20	35	10	1	6	10	10	
T61-087	40	30	10	1	125	5	10	
T61-088	10	30	10	<1	10	25	<10	
T61-089	5	20	10	<1	2	10	<10	
T61-090	5	15	2	2	4	5	10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

Signature: G. Dunn

Batch No.: K199 | Client: BHP COMPANY LIMITED, | Area Contact: MR. KELVIN KUYS
Address: P.O. BOX 559 | Address: G.P.O. BOX 1140L
Date Received 29/10/81 | CAMBERWELL | HOBART TAS. 7
Date Completed 01/12/81 | VIC 3124

Order No.: T610 005067 | Sample Type: SOIL | No. of Samples: 203

SAMPLE NO.	Cu	Pb	Zn	Ag	As	Sn	W	ELEME
	m	m	m	m	m	m	m	UNIT
	1	1	1	1	5-B	XRF 1A	XRF 1A	METH
T61-091	15	40	10	1	16	10	10	
T61-092	20	90	10	1	50	30	<10	
T61-093	10	20	10	<1	4	10	<10	
T61-094	15	35	25	<1	8	10	<10	
T61-095	5	20	20	<1	3	10	<10	
T61-096	10	20	15	<1	<1	30	<10	
T61-097	15	40	10	<1	3	15	10	
T61-098	20	35	30	1	3	30	10	
T61-099	10	15	25	<1	2	10	10	
T61-100	15	40	15	<1	3	15	<10	
T61-101	10	25	15	<1	3	10	<10	
T61-102	10	20	10	<1	4	10	<10	
T61-103	10	25	10	<1	6	15	10	
T61-104	5	20	10	1	10	5	<10	
T61-105	15	40	30	<1	6	5	<10	
T61-106	20	15	10	<1	6	5	<10	
T61-107	10	25	10	<1	7	5	10	
T61-108	15	25	50	1	14	5	10	
T61-109	20	20	25	1	12	10	10	
T61-110	10	20	10	<1	12	10	<10	
T61-111	10	20	10	1	14	10	10	
T61-112	10	10	15	<1	14	10	10	
T61-113	10	15	10	<1	14	10	10	
T61-114	10	95	20	<1	50	55	<10	
T61-115	20	25	20	1	16	10	<10	
T61-116	15	60	20	1	14	30	<10	
T61-117	20	45	15	1	16	35	<10	
T61-118	15	20	10	<1	14	15	<10	
T61-119	10	20	15	<1	16	10	<10	
T61-120	10	60	20	<1	18	25	<10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

Signature: G. Dunn

276091

Batch No.: K199 Client: BHP COMPANY LIMITED, Area Contact: MR. KELVIN KUYS

Address: P.O. BOX 559 Address: G.P.O. BOX 1140L

Date Received 29/10/81 CAMBERWELL HOBART TAS.

Date Completed 01/12/81 VIC 3124

Order No.: T610 005067 Sample Type: SOIL No. of Samples: 203

SAMPLE NO.	Cu m 1	Pb m 1	Zn m 1	Ag m 1	As m 5-B	Sn m XRF 1A	W m XRF 1A	ELE UN MET
T61-121	10	15	5	<1	18	10	<10	
T61-122	10	20	20	<1	18	10	<10	
T61-123	10	20	10	<1	14	15	10	
T61-124	15	20	20	<1	14	10	<10	
T61-125	15	25	70	<1	16	15	<10	
T61-126	10	15	35	<1	16	5	<10	
T61-127	10	20	30	<1	18	10	10	
T61-128	10	30	35	1	14	10	10	
T61-129	20	30	25	1	16	10	<10	
T61-130	20	15	10	<1	16	10	<10	
T61-131	10	20	15	<1	16	25	10	
T61-132	10	255	45	<1	25	405	10	
T61-133	10	25	15	<1	16	15	<10	
T61-134	10	20	10	<1	16	10	<10	
T61-135	15	45	70	1	16	10	10	
T61-136	15	50	35	<1	18	25	10	
T61-137	10	130	10	<1	14	180	<10	
T61-138	15	35	15	1	14	15	<10	
T61-139	15	60	10	1	16	30	10	
T61-140	10	40	5	<1	12	20	<10	
T61-141	10	30	15	<1	18	70	<10	
T61-142	40	0.14 %	45	3	710	0.13 %	<10	
T61-143	15	40	25	<1	18	25	10	
T61-144	15	50	20	<1	16	70	10	
T61-145	10	20	2	<1	16	15	<10	
T61-146	10	30	5	<1	16	10	<10	
T61-147	10	30	10	<1	14	10	<10	
T61-148	35	0.13 %	50	2	660	0.13 %	10	
T61-149	15	40	15	<1	14	25	<10	
T61-150	10	30	10	<1	16	10	10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

Signature:

Batch No.: K199 Client: BHP COMPANY LIMITED, Area Contact: MR. KELVIN KUYS

Address: P.O. BOX 559 Address: G.P.O. BOX 1140L

Date Received 29/10/81 CAMBERWELL HOBART TAS.

Date Completed 01/12/81 VIC 3124

Order No.: T610 005067 Sample Type: SOIL No. of Samples: 203

SAMPLE NO.	Cu	Pb	Zn	Ag	As	Sn	W	ELE
	m	m	m	m	m	m	m	UN
	1	1	1	1	5-B	XRF 1A	XRF 1A	MET
T61-151	10	20	10	<1	14	10	10	
T61-152	10	85	550	2	14	<5	<10	
T61-153	10	30	20	<1	16	10	<10	
T61-154	40	40	15	<1	16	95	10	
T61-155	40	40	20	<1	25	95	<10	
T61-156	20	220	55	1	18	40	<10	
T61-157	5	25	35	<1	16	5	<10	
T61-158	5	30	15	<1	14	15	<10	
T61-159	5	20	5	<1	16	15	10	
T61-160	25	50	35	1	14	20	<10	
T61-161	5	30	15	<1	16	20	<10	
T61-162	10	55	25	1	16	20	10	
T61-163	5	10	2	<1	16	<5	<10	
T61-164	10	15	5	<1	18	<5	10	
T61-165	10	15	2	<1	16	20	<10	
T61-166	10	20	2	<1	16	5	<10	
T61-167	5	20	15	<1	14	10	<10	
T61-168	10	35	20	1	14	10	<10	
T61-169	10	25	10	<1	16	30	<10	
T61-170	10	25	10	<1	16	40	<10	
T61-171	10	15	5	1	14	10	10	
T61-172	10	25	5	1	14	5	<10	
T61-173	10	25	2	<1	18	60	<10	
T61-174	15	110	10	1	16	85	10	
T61-175	15	25	10	1	16	20	10	
T61-176	20	30	25	1	16	10	10	
T61-177	40	45	5	2	125	95	<10	
T61-178	15	20	5	1	16	15	10	
T61-179	10	30	5	1	18	30	10	
T61-180	40	45	15	2	115	95	10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

Signature:

Batch No.: K199 Client: BHP COMPANY LIMITED, Area Contact: J. VIN YS

Address: P.O. BOX 559 Address: G.P.O. BOX 1140L

Date Received 29/10/81 CAMBERWELL HOBART TAS.

Date Completed 01/12/81 VIC 3124

Order No.: T610 005067 Sample Type: SOIL No. of Samples: 203

SAMPLE NO.	Cu	Pb	Zn	Ag	As	Sn	W	El
	m	m	m	m	m	m	m	
	1	1	1	1	5-B	XRF 1A	XRF 1A	Mi
T61-181	5	15	10	<1	18	10	<10	
T61-182	10	30	30	<1	16	10	10	
T61-183	5	25	15	<1	14	10	10	
T61-184	10	35	55	1	16	100	10	
T61-185	10	40	50	1	16	45	<10	
T61-186	25	45	80	1	18	80	10	
T61-187	10	25	40	1	14	50	10	
T61-188	15	30	40	1	16	20	10	
T61-189	20	45	85	1	16	70	<10	
T61-190	10	20	50	1	16	40	10	
T61-191	5	15	20	<1	18	15	10	
T61-192	10	20	50	1	16	25	10	
T61-193	15	30	50	1	14	20	<10	
T61-194	5	20	20	<1	14	20	<10	
T61-195	10	30	35	<1	14	15	10	
T61-196	15	35	20	1	16	35	<10	
T61-197	5	10	10	<1	14	65	<10	
T61-198	5	10	15	<1	16	110	10	
T61-199	10	35	60	1	10	20	10	
T61-200	5	10	10	<1	12	55	<10	
T61-201	5	40	35	<1	12	40	<10	
T61-202	60	40	120	1	18	45	10	
T61-203	10	20	20	<1	14	<5	<10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

Signature: G. Dunn

TELEX AUSEY 42344

Attn: Dr. R. Hore

Batch No.: M091-1 Client: BHP COMPANY LIMITED. Area Contact: MR. D. STEELE
Address: P.O. BOX 559 Address: C/- POST OFFICE
Date Received 15/12/81 CAMBERWELL SCAMANDER TAS
Date Completed 21/01/82 VIC 3124

Order No.: T630/005071 Sample Type: SOIL No. of Samples: 66

SAMPLE NO.	Cu	Pb	Zn	As	Sn	W	EL
	m	m	m	m	m	m	U
CRAMPS SOIL (INFILL)	1	1	1	5-B	XRF 1A	XRF 1A	ME
T63-204	10	5	10	2	<5	<10	
T63-205	10	<5	5	9	<5	<10	
T63-206	20	15	10	2	5	20	
T63-207	10	20	5	40	5	<10	
T63-208	5	35	5	<1	10	<10	
T63-209	5	10	5	6	<5	<10	
T63-210	20	15	10	25	5	<10	
T63-211	5	10	2	5	15	<10	
T63-212	10	15	5	6	20	<10	
T63-213	10	20	10	35	10	<10	
T63-214	15	45	10	90	25	<10	
T63-215	25	20	5	14	10	<10	
T63-216	30	25	35	20	5	<10	
T63-217	15	15	20	14	10	<10	
T63-218	15	15	20	8	15	<10	
T63-219	10	15	5	5	10	<10	
T63-220	10	45	10	7	30	<10	
T63-221	5	<5	5	2	<5	<10	
T63-222	10	10	10	2	5	<10	
T63-223	5	<5	2	2	5	<10	
T63-224	10	20	10	9	5	<10	
T63-225	20	45	15	12	25	<10	
T63-226	15	35	15	8	30	<10	
T63-227	10	85	10	14	25	<10	
T63-228	10	25	10	4	10	<10	
T63-229	10	15	5	5	5	<10	
T63-230	15	30	10	7	35	<10	
T63-231	5	10	5	4	5	<10	
T63-232	10	20	15	4	15	<10	
T63-233	25	20	20	50	30	<10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

Signature:

Ph 07 [illegible]
TELEX ALSEV 42344

ALS

Batch No.: M091-1 Client: BHP COMPANY LIMITED. Area Contact: MR. D. STEELE
Address: P.O. BOX 559 Address: C/- POST OFFICE
Date Received 15/12/81 CAMBERWELL SCAMANDER TAS
Date Completed 21/01/82 VIC 3124

Order No.: T630/005071 Sample Type: SOIL No. of Samples: 66

SAMPLE NO.	Cu	Pb	Zn	As	Sn	W	EL
	m	m	m	m	m	m	L
	1	1	1	5-B	XRF 1A	XRF 1A	ME
T63-234	10	25	20	16	10	<10	
T63-235	10	10	10	6	5	<10	
T63-236	25	15	10	20	<5	<10	
T63-237	20	10	5	12	15	<10	
T63-238	5	5	<2	4	10	<10	
T63-239	20	35	5	45	30	<10	
T63-240	15	20	45	8	10	<10	
T63-241	15	25	15	9	10	<10	
T63-242	15	20	50	7	10	<10	
T63-243	10	15	10	6	5	<10	
T63-244	15	35	20	7	15	<10	
T63-245	20	30	20	8	20	<10	
T63-246	20	110	15	10	45	<10	
T63-247	20	110	40	7	50	<10	
T63-248	25	25	20	18	10	<10	
T63-249	15	20	20	25	5	10	
T63-250	15	15	15	9	25	<10	
T63-251	10	35	10	6	5	<10	
T63-252	10	20	5	7	5	<10	
T63-253	5	10	5	4	5	<10	
T63-254	20	25	65	2	10	<10	
T63-255	5	20	5	5	5	<10	
T63-256	10	20	15	7	40	<10	
T63-257	30	145	25	7	80	10	
T63-258	10	40	15	45	15	<10	
T63-259	10	30	25	10	10	10	
T63-260	10	25	20	7	15	10	
T63-261	20	40	25	10	25	<10	
T63-262	20	80	80	12	25	<10	
T63-263	5	30	20	25	5	<10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

77609

EX 8E 234

Batch No.: M091-1 Client: BHP COMPANY LIMITED. Area Contact: MR. D. STEELE
Address: P.O. BOX 559 Address: C/- POST OFFICE
Date Received 15/12/81 CAMBERWELL SCAMANDER TAS
Date Completed 21/01/82 VIC 3124

Order No.: T630/005071 Sample Type: SOIL No. of Samples: 66

SAMPLE NO.	Cu	Pb	Zn	As	Sn	W	EL
	m	m	m	m	m	m	U
	1	1	1	5-B	XRF 1A	XRF 1A	ME
T63-264	5	20	10	10	<5	<10	
T63-265	5	15	5	20	5	<10	
T63-266	20	30	35	1	50	10	
T63-267	75	60	25	6	50	<10	
T63-268	10	20	105	7	5	<10	
T63-269	10	30	30	18	5	<10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

Signature:

This Laboratory is registered by

776097

Attn : Dr. R. Hine

Batch No.: A080 Client: BHP COMPANY LIMITED, Area Contact: MR. D. STEELE

Address: P.O. BOX 559 Address: C/- POST OFFICE

Date Received 18/01/82 CAMBERWELL SCAMANDER TAS

Date Completed 09/02/82 VIC 3124

Order No.: T610/005073 Sample Type: SOIL & ROCK No. of Samples: 90

SAMPLE NO.	Cu	Pb	Zn	Ag	As	Sn	W	ELE
	m	m	m	m	m	m	m	UN
	G001	G001	G001	G001	G004	XRF 1A	XRF 1A	MET
T63-270	5	20	25	<1	6	55	10	
T63-271	10	25	20	1	2	5	<10	
T63-272	5	10	10	<1	2	30	<10	
T63-273	10	25	15	<1	5	55	<10	
T63-274	5	30	30	1	4	10	<10	
T63-275	5	15	15	<1	1	15	<10	
T63-276	5	15	15	<1	<1	10	<10	
T63-277	5	10	5	<1	2	35	<10	
T63-278	5	15	10	<1	3	20	<10	
T63-279	10	50	20	1	2	40	<10	
T63-280	5	25	15	<1	2	55	<10	
T63-281	15	45	75	1	9	15	<10	
T63-282	20	30	45	1	40	10	<10	
T63-283	15	30	50	1	20	10	<10	
T63-284	15	40	35	1	14	15	<10	
T63-285	20	40	145	2	5	5	<10	
T63-286	10	65	40	1	3	65	<10	
T63-287	10	40	75	1	5	10	<10	
T63-288	5	25	40	1	4	15	<10	
T63-289	5	20	15	1	<1	10	<10	
T63-290	5	25	10	<1	2	10	<10	
T63-291	5	15	10	1	4	5	<10	
T63-292	5	35	55	1	3	10	<10	
T63-293	20	10	5	<1	2	10	<10	
T63-294	5	15	10	2	2	15	<10	
T63-295	15	30	25	1	12	15	<10	
T63-296	5	15	15	<1	6	35	<10	
T63-297	10	105	25	1	5	30	<10	
T63-298	5	25	40	<1	4	30	<10	
T63-299	10	30	35	1	5	25	<10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

860972

Batch No.: A080 Client: BHP COMPANY LIMITED, Area Contact: MR. D. STEELE

Address: P.O. BOX 559 Address: C/- POST OFFICE

Date Received 18/01/82 CAMBERWELL SCAMANDER TAS

Date Completed 09/02/82 VIC 3124

Order No.: T610/005073 Sample Type: SOIL & ROCK No. of Samples: 98

SAMPLE NO.	Cu	Pb	Zn	Ag	As	Sn	W
	m	m	m	m	m	m	m
	G001	G001	G001	G001	G004	XRF 1A	XRF 1A
T63-300	5	25	30	<1	3	45	<10
T63-301	5	15	15	<1	1	60	<10
T63-302	5	10	10	<1	<1	70	<10
T63-303	20	30	60	1	8	65	<10
T63-304	25	40	70	1	30	15	<10
T63-305	25	40	70	1	25	15	<10
T63-306	10	15	20	<1	2	10	<10
T63-307	5	20	20	1	5	5	<10
T63-308	5	15	10	1	<1	<5	<10
T63-309	5	20	30	1	2	20	<10
T63-310	15	35	65	1	8	15	<10
T63-311	10	60	15	1	5	25	<10
T63-312	5	15	5	<1	1	5	<10
T63-313	5	10	<5	<1	<1	175	<10
T63-314	5	10	5	2	<1	50	<10
T63-315	5	5	5	<1	<1	75	<10
T63-316	10	10	15	1	<1	45	10
T63-317	90	45	105	2	25	55	<10
T63-318	5	15	5	1	5	<5	<10
T63-319	5	10	5	<1	<1	75	<10
T63-320	5	10	5	<1	<1	5	<10
T63-321	10	15	5	<1	<1	<5	<10
T63-322	5	10	5	<1	<1	<5	<10
T63-323	5	10	5	<1	<1	<5	<10
T63-324	5	10	10	1	<1	<5	<10
T63-325	10	15	15	<1	<1	<5	<10
T63-326	40	40	65	2	45	20	<10
T63-327	55	35	70	2	35	35	<10
T63-328	5	10	5	<1	<1	<5	<10
T63-329	75	40	85	2	70	25	<10

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

Signature: [signature]

776099

Batch No.: A080 Client: BHP COMPANY LIMITED, Area Contact: MR. D. STEELE

Address: P.O. BOX 559 Address: C/- POST OFFICE

Date Received 18/01/82 CAMBERWELL SCAMANDER TAS

Date Completed 09/02/82 VIC 3124

Order No.: T610/005073 Sample Type: SOIL & ROCK No. of Samples: 98

SAMPLE NO.	Cu	Pb	Zn	Ag	As	Sn	W	El
	m	m	m	m	m	m	m	(
	G001	G001	G001	G001	G004	XRF 1A	XRF 1A	Mi
T63-330	70	45	75	2	55	25	<10	
T63-331	55	45	80	2	50	15	<10	
T63-332	10	20	15	1	2	<5	<10	
T63-333	10	20	15	1	4	10	<10	
T63-334	10	35	20	1	2	50	<10	
T63-335	15	30	10	1	3	60	<10	
T63-336	75	45	80	2	60	20	<10	
T63-337	5	15	5	1	1	5	<10	
T63-338	5	20	15	2	3	5	<10	
T63-339	10	55	10	1	4	95	<10	
T63-340	10	20	10	1	2	20	<10	
T63-341	5	10	10	<1	<1	10	10	
T63-342	5	10	5	<1	<1	10	<10	
T63-343	5	10	5	<1	<1	10	<10	
T63-344	10	65	15	1	14	40	<10	
T63-345	5	80	10	1	4	560	<10	
T63-346	5	20	5	<1	2	115	<10	
T63-347	5	20	5	<1	1	35	<10	
T63-348	5	15	<5	<1	2	25	<10	
T63-349	15	40	30	1	5	15	<10	
T63-350	10	35	10	1	2	120	<10	
T63-351	5	15	5	<1	<1	130	<10	
T63-352	15	25	20	1	6	5	<10	
T63-353	10	25	10	1	<1	30	<10	
T63-354	5	20	10	1	2	10	<10	
T63-355	10	25	10	1	<1	15	<10	
T63-356	10	40	25	1	3	10	<10	
T63-357	35	35	55	2	12	25	<10	
T63-358	35	40	70	2	30	10	<10	
T63-359	5	10	15	<1	2	10	<10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

This Laboratory is registered by the National Association of Testing

Signature:

27610100

Batch No.: A080 | Client: BHP COMPANY LIMITED, | Area Contact: MR. [illegible] ST[illegible]E
Address: P.O. BOX 559, CAMBERWELL, VIC 3124 | Address: C/- POST OFFICE, SCAMANDER TAS
Date Received 18/01/82
Date Completed 09/02/82

Order No.: T610/005073 | Sample Type: SOIL & ROCK | No. of Samples: 98

SAMPLE NO.	Cu	Pb	Zn	Ag	As	Sn	W	E
	m	m	m	m	m	m	m	
	G001	G001	G001	G001	G004	XRF 1A	XRF 1A	M
T63-360	5	15	10	<1	<1	5	<10	
T63-361	5	15	10	<1	<1	10	<10	
T63-362	5	10	5	<1	<1	<5	<10	
T63-363	5	10	10	<1	<1	10	<10	
T63-364	5	20	10	<1	<1	<5	<10	
T63-365	5	10	5	<1	<1	<5	<10	
T63-366	5	15	5	<1	<1	<5	<10	
T63-367	10	15	5	<1	<1	<5	<10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

Signature: [signature]

7761101

APPENDIX 2d

Regional Soil Sampling Analysis Results

REGIONAL/GENERAL SOIL SAMPLES

ANOMALY, PROSPECT	TRAVERSE LINE; mE	SAMPLE NO. (SDS)	APPROX AMG COORDS	GENERAL LOCALITY
DIGHEM	D1, - 0	1/01		Arm Ck - Trout Rd.
	- 50	02		
	-100	03		
	-150	04		
	-200	1/05		
DIGHEM	D2, 0	2/01		Arm Ck, adj to Paul Beahrs.
	50	02		*Not sampled - swamps (150m).
	*	-		
	200	03		
	250	2/04		
DIGHEM	D3, 0	3/01		Arm Ck - South Orieco
	50	02		
	100	03		
	150	04		
	200	05		
	250	06		
	300	3/07		
DIGHEM	D4, 0	4/01		Arm Ck - South Orieco
	50	02		
	100	03		
	150	04		
	200	05		
	250	06		
	300	07		
	350	4/08		
DIGHEM	D5, 0	5/01		Arm Ck - South Orieco
	50	02		
	100	03		
	150	04		
	200	05		
	250	06		
	300	07		
	350	5/08		
DIGHEM	D6, 0	6/01		Arm Ck - South Orieco
	50	02		
	100	03		
	150	6/04		

.../2

ANOMALY, PROSPECT	TRAVERSE LINE; mE	SAMPLE NO. (SDS)	APPROX AMG COORDS	GENERAL LOCALITY
DIGHEM	D6, 200	6/05		Arm Ck - South Orieco.
	250	06		
	300	07		
	350	6/08		
DIGHEM	D7, 0	7/01		South of Dunns Prospect.
	50	02		
	100	03		
	150	04		
	200	05		
	250	06		
	300	07		
	350	7/08		
DIGHEM	D8, 0	8/01		South of Dunns Prospect.
	50	02		
	100	03		
	150	04		
	200	05		
	250	06		
	300	8/07		
DIGHEM	D9, 0	9/01		Eastern Ck - Trout Rd.
	50	02		
	100	03		
	150	04		
	200	05		
	250	06		
	300	07		
	350	08		
	400	9/09		
DIGHEM	D10,- 0	10/01		Dunns Prospect.
	- 50	02		
	-100	03		
	-150	04		
	-200	05		
	-250	06		
	-300	07		
	-350	10/08		

...3

ANOMALY, PROSPECT	TRAVERSE LINE; mE	SAMPLE NO. (SDS)	APPROX AMG COORDS	GENERAL LOCALITY
DIGHEM	D11, 0	11/01		ESE of Cramps Prospect.
	50	02		
	100	03		
	150	04		
	200	05		
	250	06		
	300	07		
	350	08		
	400	09		
	450	10		
	500	11		
	550	11/12		
DIGHEM	D12, 0	12/01		ENE of Cramps Prospect.
	50	02		
	100	03		
	150	04		
	200	05		
	250	06		
	300	07		
	350	08		
	400	09		
	450	10		
	500	11		
	550	12		
	600	13		
	650	14		
	700	15		
	750	12/16		
DIGHEM	D13,- 0	13/01		Loila Tier Rd.
	- 50	02		
	-100	03		
	-150	04		
	-200	05		
	-250	13/06		
DIGHEM	D14, 0	14/01		Adjacent to Loila Tier Link.
	50	02		

.../4

ANOMALY, PROSPECT	TRAVERSE LINE; mE	SAMPLE NO. (SDS)	APPROX AMG COORDS	GENERAL LOCALITY
DIGHEM	D14,-100	14/03		Adjacent to Loila Tier Link.
	-150	04		
	-200	05		
	-250	14/06		
DIGHEM	D15,- 0	15/01		Loila Tier Link Rd, NE of Loila Pinnacle.
	- 50	02		
	-100	03		
	-150	04		
	-200	05		
	-250	06		
	-300	07		
	-350	08		
	-400	15/09		
DIGHEM	D16,- 0	16/01		Loila Tier Link, N of Pyramid.
	- 50	02		
	-100	03		
	-150	04		
	-200	05		
	-250	06		
	-300	07		
	-350	08		
	-400	09		
DIGHEM	D17,- 0	17/01		Pyramid Approach Rd.
	- 50	02		
	-100	03		
	-150	04		
	-200	05		
	-250	17/06		
DIGHEM	D18,- 0	18/01		Wolfram Ck Rd, W of Kelly Ck.
	- 50	02		
	-100	03		
	-150	18/04		
DIGHEM	D19,- 0	19/01		Meetings Ck, ridge E of ck.
	- 50	02		
	-100	03		
	-150	19/04		

.../5

D19-19/05 - D21-21/07
(T1) SMS-001 - SMS-020

ANOMALY, PROSPECT	TRAVERSE LINE; mE	SAMPLE NO. (SDS)	APPROX AMG COORDS	GENERAL LOCALITY
DIGHEM	D19,-200	19/05		Meetings Ck.
DIGHEM	D20,- 0	20/01		Meetings Ck, ridge E of ck.
	- 50	02		
	-100	03		
	-150	04		
	-200	05		
	-250	06		
	-300	20/07		
DIGHEM	D21, 0	21/01		Meetings Ck, ridge W of ck.
	50	02		
	100	03		
	150	04		
	200	05		
	250	06		
	300	21/07		
WOFRAM CK MAG ANOM.	T1, - 0	SMS-001		Wolfram Ck Rd, N of Fitzgerald Ck.
	- 50	002		
	-100	003		
	-150	004		
	-200	005		
	-250	006		
	-300	007		
	-350	008		
	-400	009		
	-450	SMS-010		
WOLFRAM CK MAG ANOM.	T2, 0	SMS-011		Wolfram Ck Rd, N of Fitzgerald Ck.
	- 50	012		
	-100	013		
	-150	014		
	-200	015		
	-250	016		
	-300	017		
	-350	018		
	-400	019		
	-450	SMS-020		

.../6

(T3) SMS-021 - SMS-040
BPS-001 - BPS-015

ANOMALY, PROSPECT	TRAVERSE LINE; mE	SAMPLE NO.	APPROX AMG COORDS	GENERAL LOCALITY
WOLFRAM CK MAG ANOM.	T3, 0	SMS-021		Wolfram Ck Rd, Nth of Fitzgerald Ck.
	- 50	022		
	-100	023		
	-150	024		
	-200	025		
	-250	026		
	-300	027		
	-350	028		
	-400	029		
	-450	SMS-030		
WOLFRAM CK MAG ANOM.	T4, 0	SMS-031		Fitzgerald Ck.
	50	032		
	100	033		
	150	034		
	200	SMS-035		
WOLFRAM CK MAG ANOM.	T5, 0	SMS-036		Wolfram Ck Rd, S of Fitzgerald Ck.
	- 50	037		
	-100	038		
	-150	039		
	-200	SMS-040		
BADEN POWELL PROSPECT (Mo, W)	T1, 500N 400E	BPS-001		
	425	002		
	450	003		
	475	004		
	500	005		
	525	006		
	550	007		
	575	008		
	600E	009		
	T2, 550N 400E	BPS-010		
	425	011		
	450	012		
	475	013		
	500	014		
	525E	BPS-015		

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BPS-016 - 026
LUS-001 - 019

ANOMALY, PROSPECT	TRAVERSE LINE; mE	SAMPLE NO.	APPROX AMG COORDS	GENERAL LOCALITY
BADEN POWELL (Mo, W)	T2, 550N 550E	BPS-016		
	575	017		
	600E	BPS-018		
	T3, 600N 450E	019		
	475	020		
	500	021		
	525	022		
	550	023		
	575	024		
	600	025		
	575	BPS-026*		(Duplicate of 024)
LUTWYCHE (W)	T1, 0	LUS-001		
	25	002		
	50	003		
	75	004		
	100	005		
	125	006		
	150	007		
	175	008		
	200	LUS-009		
	T2, 0	LUS-010		
	25	011		
	50	012		
	75	013		
	100	014		
	125	015		
	150	016		
	175	017		
	200	018		
	150	019*		(Duplicate of 016)

.../8

ANOMALY, PROSPECT	TRAVERSE LINE; mE	SAMPLE NO.	APPROX AMG COORDS	GENERAL LOCALITY
GRANITE: Sn-in-Ck ANOM.	GT1, 0m*	SGS-001		Wolfram Ck Rd - Granite Contact. *Lines run N-S.
	↓ 600m	↓ SGS-014		011 dup of 006 (250mS)
	GT2,600m	SGS-015		200m E of GT1.
	↓ 0m	↓ SGS-028		026 dup of 018 (450mS).
	GT3, 0m	SGS-029		200m E of GT2.
	↓ 800m	↓ SGS-047		037 dup of 029 (00mS). 046 dup of 044 (700mS)
GRANITE: Sn-in-Ck ANOM.	GT4, 0m	SGS-048		Transit Track, ~3km west of Echo Prospect.
	↓ 600m	↓ SGS-061		057 dup of 052 (200mE)
	GT5,600m	SGS-062		250m S of GT4.
	↓ 0m	↓ SGS-075		070 dup of 063 (550mE)
	GT6,600m	SGS-076		250m S of GT5.
	↓ 0m	↓ SGS-089		083 dup of 077 (550mE)
	GT7, 0m	SGS-090		250m S of GT6.
	↓ 600m	↓ SGS-103		100 dup of 093 (150mE)
	GT8,600m	SGS-104		250m S of GT7.
	↓ 0m	↓ SGS-117		115 dup of 108 (400mE)
	GT9, 0m	SGS-118		250m S of GT8.
	↓ 600m	↓ SGS-131		127 dup of 121 (150mE)
ECHO W, Mo PROSPECT	ET1,750mE	SGS-132		
	↓ 0m	↓ SGS-148		140 dup of 136 (550mE)
	ET2,600m	SGS-149		Line 200m S of ET1.
	↓ 0m	↓ SGS-162		162 dup of 154 (350mE)

SGS-163 - SGS-184

ANOMALY, PROSPECT	TRAVERSE LINE; mE	SAMPLE NO.	APPROX AMG COORDS	GENERAL LOCALITY
ECHO W, Mo PROSPECT	ET3,600m	SGS-163		Line 200mS of ET2
	↓	↓		
	0m	SGS-176		173 dup of 168 (350mE)
	ET4, 0m	SGS-177		Line 200m S of ET3.
	↓	↓		
	350m	SGS-184		184 dup of 179 (100mE)

copy to [illegible]

Ph 07 352[illegible]
TELEX ALSEY 42[illegible]

ALS

Attn: Dr R. [illegible]

Batch No.: M091 Client: BHP COMPANY LIMITED. Address: P.O. BOX 559 CAMBERWELL VIC 3124

Area Contact: MR. D. STEELE Address: C/- POST OFFICE SCAMANDER T[illegible]

Date Received 14/12/81
Date Completed 21/01/82

Order No.: T630/005071 Sample Type: SOIL No. of Samples: 160

SAMPLE NO.	Cu	Pb	Zn	Ag	Mo	As	Sn	W
	m	m	m	m	m	m	m	m
DIGHEM ANOMALY SOILS	1	1	1	1	2	5-B	XRF 1A	XRF 1A
SDS 1/01	5	20	10	<1	5	20	10	<10
SDS 1/02	5	30	15	<1	10	10	10	<10
SDS 1/03	5	10	25	<1	15	14	15	<10
SDS 1/04	5	10	20	<1	15	10	25	<10
SDS 1/05	10	15	15	<1	15	5	20	<10
SDS 2/01	5	15	5	<1	15	1	20	<10
SDS 2/02	15	65	60	1	15	6	5	<10
SDS 2/03	95	50	120	1	10	20	10	<10
SDS 2/04	50	45	85	1	10	45	10	<10
SDS 3/01	5	10	25	<1	10	3	10	<10
SDS 3/02	5	40	15	<1	10	4	5	<10
SDS 3/03	2	10	5	<1	5	<1	15	<10
SDS 3/04	5	10	5	<1	10	<1	15	<10
SDS 3/05	5	10	5	<1	10	<1	15	<10
SDS 3/06	10	15	15	<1	15	1	10	<10
SDS 3/07	5	15	15	<1	10	2	25	<10
SDS 4/01	30	40	30	1	5	10	<5	10
SDS 4/02	5	20	15	<1	5	1	<5	<10
SDS 4/03	5	15	10	<1	10	2	20	<10
SDS 4/04	5	20	130	<1	10	2	20	<10
SDS 4/05	25	70	75	1	5	10	25	<10
SDS 4/06	5	5	5	<1	10	<1	20	<10
SDS 4/07	15	20	20	<1	10	7	20	10
SDS 4/08	110	45	115	1	5	65	15	10
SDS 5/01	5	20	20	<1	5	4	<5	<10
SDS 5/02	10	110	40	<1	10	6	<5	<10
SDS 5/03	5	95	30	<1	5	5	20	<10
SDS 5/04	35	30	50	<1	5	30	15	10
SDS 5/05	440	50	200	1	5	45	35	<10
SDS 5/06	10	10	10	<1	5	7	30	10

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent
[illegible]

7761112

TELEX AUSEV 21344

Batch No.: M091 Client: BHP COMPANY LIMITED. Area Contact: MR. D. STEELE
Address: P.O. BOX 559 Address: C/- POST OFFICE
Date Received 14/12/81 CAMBERWELL SCAMANDER TAS
Date Completed 21/01/82 VIC 3124

Order No.: T630/005071 Sample Type: SOIL No. of Samples: 160

SAMPLE NO.	Cu	Pb	Zn	Ag	Mo	As	Sn	W	El
	p	p	p	p	p	p	p	p	
	1	1	1	1	2	5-B	XRF 1A	XRF 1A	ME
SDS 5/07	5	5	5	<1	5	2	30	10	
SDS 5/08	5	10	2	<1	5	2	<5	10	
SDS 6/01	70	200	175	1	5	25	130	<10	
SDS 6/01 A	5	20	5	<1	5	1	<5	<10	
SDS 6/02	5	10	20	<1	5	<1	<5	<10	
SDS 6/03	5	20	10	<1	5	2	10	10	
SDS 6/04	5	10	20	<1	10	1	20	10	
SDS 6/05	10	30	15	<1	5	3	30	10	
SDS 6/06	15	80	40	<1	10	7	5	<10	
SDS 6/07	5	25	5	<1	10	<1	20	10	
SDS 6/08	185	50	115	1	10	45	30	<10	
SDS 7/01	10	20	20	<1	5	2	10	10	
SDS 7/02	10	20	15	<1	5	3	<5	10	
SDS 7/03	10	15	5	<1	5	1	<5	<10	
SDS 7/04	10	25	5	<1	35	6	30	<10	
SDS 7/05	5	110	10	<1	10	<1	130	<10	
SDS 7/06	5	40	5	<1	10	5	190	<10	
SDS 7/07	5	30	10	<1	5	3	75	<10	
SDS 7/08	15	65	15	1	10	8	35	<10	
SDS 8/01	5	5	5	<1	10	<1	50	<10	
SDS 8/02	5	<5	2	<1	10	1	15	<10	
SDS 8/03	5	40	5	<1	5	3	325	<10	
SDS 8/04	5	100	5	<1	5	<1	385	<10	
SDS 8/05	5	125	5	<1	5	9	200	<10	
SDS 8/06	5	50	5	<1	10	10	85	<10	
SDS 8/07	5	55	10	<1	5	3	50	<10	
SDS 9/01	5	10	10	<1	10	1	15	<10	
SDS 9/02	5	5	5	<1	10	<1	5	<10	
SDS 9/03	5	25	<2	<1	10	3	110	<10	
SDS 9/04	5	50	15	<1	10	1	20	<10	

UNITS LEGEND ----- p - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

Signature:

276113

Ph 07 3525577
TELEX ALSAV 42344

Batch No.: M091 Client: BHP COMPANY LIMITED Area Contact: MR. D. STEELE
Address: P.O. BOX 559 Address: C/- POST OFFICE
Date Received 14/12/81 CAMBERWELL SCAMANDER TA
Date Completed 21/01/82 VIC 3124

Order No.: T630/005071 Sample Type: SOIL No. of Samples: 160

SAMPLE NO.	Cu	Pb	Zn	Ag	Mo	As	Sn	W
	m	m	m	m	m	m	m	m
	1	1	1	1	2	5-B	XRF 1A	XRF 1A
SDS 9/05	5	20	10	<1	5	1	5	<10
SDS 9/06	15	25	25	<1	10	9	<5	<10
SDS 9/07	10	30	20	<1	5	1	5	10
SDS 9/08	10	25	15	<1	5	2	10	<10
SDS 9/09	10	20	10	<1	5	5	<5	<10
SDS 10/01	15	35	25	<1	5	16	20	<10
SDS 10/02	5	10	10	<1	5	1	5	<10
SDS 10/03	5	10	10	<1	5	<1	5	<10
SDS 10/04	10	10	5	<1	10	<1	<5	<10
SDS 10/05	5	10	15	<1	5	<1	5	<10
SDS 10/06	15	30	25	<1	5	8	10	<10
SDS 10/07	10	20	20	<1	5	2	15	10
SDS 10/08	10	20	15	<1	5	4	<5	<10
SDS 11/01	15	25	15	<1	5	1	15	<10
SDS 11/02	5	20	5	<1	5	1	10	<10
SDS 11/03	5	15	5	<1	5	<1	<5	10
SDS 11/04	5	20	10	1	2	1	<5	10
SDS 11/05	5	15	10	<1	2	2	<5	<10
SDS 11/06	5	15	10	<1	2	<1	<5	<10
SDS 11/07	10	25	25	<1	2	<1	<5	<10
SDS 11/08	25	40	65	2	2	45	20	10
SDS 11/09	5	20	20	<1	5	3	<5	10
SDS 11/10	5	20	15	<1	5	3	5	<10
SDS 11/11	5	30	20	<1	2	6	<5	<10
SDS 11/12	5	15	10	<1	2	1	<5	<10
SDS 12/01	45	45	65	1	5	55	15	20
SDS 12/02	20	160	50	1	2	16	15	<10
SDS 12/03	20	370	80	1	5	8	35	<10
SDS 12/04	10	40	20	<1	10	5	<5	<10
SDS 12/05	10	25	5	<1	10	3	<5	<10

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

Batch No.: M091 Client: BHP COMPANY LIMITED, Area Contact: MR. D. STEELE

Address: P.O. BOX 559 Address: C/- POST OFFICE

Date Received 14/12/81 CAMBERWELL SCAMANDER TAS

Date Completed 21/01/82 VIC 3124

Order No.: T630/005071 Sample Type: SOIL No. of Samples: 160

SAMPLE NO.	Cu	Pb	Zn	Ag	Mo	As	Sn	W	ELE
	m	m	m	m	m	m	m	m	UI
	1	1	1	1	2	5-B	XRF 1A	XRF 1A	ME
SDS 12/06	5	20	45	<1	10	3	5	<10	
SDS 12/07	5	25	25	1	10	4	<5	<10	
SDS 12/08	5	15	10	<1	15	1	<5	<10	
SDS 12/09	5	10	5	<1	10	1	<5	<10	
SDS 12/10	5	10	<2	<1	15	1	<5	<10	
SDS 12/11	2	5	2	<1	10	<1	<5	<10	
SDS 12/12	5	15	2	<1	15	1	<5	<10	
SDS 12/13	5	10	2	<1	10	2	<5	<10	
SDS 12/14	5	25	20	<1	15	3	<5	<10	
SDS 12/15	5	20	30	<1	10	3	<5	<10	
SDS 12/16	5	10	10	<1	10	2	<5	<10	
SDS 13/01	5	15	20	<1	10	1	<5	<10	
SDS 13/02	5	20	20	<1	10	3	<5	<10	
SDS 13/03	10	10	15	<1	15	2	<5	<10	
SDS 13/04	10	15	15	<1	5	1	<5	<10	
SDS 13/05	15	15	40	<1	10	2	<5	<10	
SDS 13/06	10	10	30	<1	5	6	<5	<10	
SDS 14/01	5	10	15	<1	10	<1	<5	<10	
SDS 14/02	5	10	20	<1	10	<1	<5	<10	
SDS 14/03	5	10	20	<1	5	1	<5	<10	
SDS 14/04	15	15	30	<1	15	3	<5	<10	
SDS 14/05	25	15	35	1	10	10	<5	<10	
SDS 14/06	25	20	60	<1	5	5	<5	<10	
SDS 15/01	5	20	15	<1	5	<1	<5	<10	
SDS 15/02	5	25	30	1	10	8	<5	<10	
SDS 15/03	35	20	45	<1	5	14	<5	<10	
SDS 15/04	30	20	40	<1	10	9	5	10	
SDS 15/05	25	15	15	<1	10	3	20	<10	
SDS 15/06	30	20	55	<1	15	14	<5	10	
SDS 15/07	35	25	55	<1	10	9	<5	10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

Signature:

This Laboratory is registered by

27611 5

Batch No.: M091 Client: BHP COMPANY LIMITED, Area Contact: MR. D. STEELE
Address: P.O. BOX 559 Address: C/- POST OFFICE
Date Received 14/12/81 CAMBERWELL SCAMANDER TAS
Date Completed 21/01/82 VIC 3124

Order No.: T630/005071 Sample Type: SOIL No. of Samples: 160

SAMPLE NO.	Cu	Pb	Zn	Ag	Mo	As	Sn	W	F
	m	m	m	m	m	m	m	m	
	1	1	1	1	2	5-B	XRF 1A	XRF 1A	M
SDS 15/08	75	40	60	2	2	20	5	10	
SDS 15/09	60	45	70	2	5	20	<5	<10	
SDS 16/01	15	90	65	1	5	25	30	<10	
SDS 16/02	20	60	55	1	5	18	25	<10	
SDS 16/03	40	105	85	2	5	35	10	<10	
SDS 16/04	10	20	30	1	5	9	25	<10	
SDS 16/05	10	35	70	1	5	14	35	<10	
SDS 16/06	20	45	80	1	5	20	60	<10	
SDS 16/07	25	45	55	1	5	30	70	<10	
SDS 16/08	25	45	45	1	5	14	25	<10	
SDS 16/09	15	70	40	1	5	10	55	<10	
SDS 17/01	15	35	10	1	2	6	15	10	
SDS 17/02	15	35	35	1	5	9	10	<10	
SDS 17/03	5	55	5	1	5	6	5	<10	
SDS 17/04	20	40	20	1	2	7	5	<10	
SDS 17/05	45	80	135	1	5	7	45	20	
SDS 17/06	15	35	40	1	2	2	20	<10	
SDS 18/01	10	15	25	<1	5	6	5	<10	
SDS 18/02	20	15	35	<1	5	9	15	<10	
SDS 18/03	25	25	90	<1	5	20	25	10	
SDS 18/04	20	20	20	<1	5	4	35	<10	
SDS 19/01	15	25	20	<1	5	4	<5	<10	
SDS 19/02	20	40	20	1	10	3	<5	<10	
SDS 19/03	15	30	25	1	2	3	<5	<10	
SDS 19/04	10	15	20	<1	5	2	5	<10	
SDS 19/05	10	20	30	<1	5	3	<5	<10	
SDS 20/01	5	10	15	<1	5	1	<5	<10	
SDS 20/02	10	10	10	<1	5	1	<5	<10	
SDS 20/03	10	25	40	1	5	6	<5	<10	
SDS 20/04	10	20	5	<1	5	8	<5	<10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

Signature:

Batch No.: [illegible] Client: BHP COMPANY LIMITED. | Area Contact: MR. D. STEELE
Address: P.O. BOX 559 | Address: C/- POST OFFICE
Date Received 14/12/81 | CAMBERWELL | SCAMANDER TAS
Date Completed 21/01/82 | VIC 3124

Order No.: T630/005071 | Sample Type: SOIL | No. of Samples: 160

SAMPLE NO.	Cu	Pb	Zn	Ag	Mo	As	Sn	W	EL
	m	m	m	m	m	m	m	m	U
	1	1	1	1	2	5-B	XRF 1A	XRF 1A	ME
SDS 20/05	15	25	35	1	5	3	<5	<10	
SDS 20/06	5	20	10	<1	5	2	<5	<10	
SDS 20/07	10	20	15	<1	5	3	<5	<10	
SDS 21/01	5	20	30	<1	5	2	<5	<10	
SDS 21/02	10	15	20	<1	5	1	<5	<10	
SDS 21/03	10	15	5	<1	5	7	<5	<10	
SDS 21/04	15	20	20	<1	5	12	<5	<10	
SDS 21/05	30	30	25	1	5	8	<5	<10	
SDS 21/06	20	30	40	1	5	7	<5	<10	
SDS 21/07	15	25	30	1	10	3	<5	<10	

UNITS LEGEND ----- m - Parts per million   b - Parts per billion   % - percent
g - Grams   a - Absorbance

Signature: G. [signature]

776117

Batch No.: A080-1 Client: BHP COMPANY LIMITED. Area Contact: MR. D. STEELE

Address: P.O. BOX 559 Address: C/- POST OFFICE

Date Received 19/01/82 CAMBERWELL SCAMANDER TAS

Date Completed 05/02/82 VIC 3124

Order No.: T610 005073 Sample Type: SOIL No. of Samples: 184

SAMPLE NO.	Cu	Pb	Zn	Ag	Bi	As	Mo	Sn	W	EL
	m	m	m	m	m	m	m	m	m	
SGS 1-47 Upper Wolfram Ck Soils	G001	G001	G001	G001	G001	G004	G010	XRF 1A	XRF 1A	MF
SGS-0001	2	45	15	2	40	1	10	5	90	
SGS-0002	5	10	10	<1	10	<1	10	5	<10	
SGS-0003	5	10	10	<1	10	<1	5	<5	<10	
SGS-0004	5	60	20	1	5	7	5	<5	10	
SGS-0005	2	10	5	<1	5	<1	5	5	10	
SGS-0006	2	15	10	1	10	<1	10	10	10	
SGS-0007	2	15	10	<1	10	<1	10	15	<10	
SGS-0008	2	35	10	<1	15	<1	10	20	<10	
SGS-0009	2	20	10	1	10	4	10	5	<10	
SGS-0010	2	20	10	<1	5	4	10	215	<10	
SGS-0011	2	15	10	1	10	1	10	10	10	
SGS-0012	2	30	10	<1	5	14	15	155	<10	
SGS-0013	2	60	10	<1	10	35	15	165	<10	
SGS-0014	10	10	15	<1	10	<1	10	<5	<10	
SGS-0015	2	50	10	<1	10	8	15	30	10	
SGS-0016	2	15	5	<1	5	<1	15	40	<10	
SGS-0017	2	20	5	<1	15	8	10	55	<10	
SGS-0018	10	65	15	2	5	5	15	110	10	
SGS-0019	5	25	40	1	10	12	10	65	10	
SGS-0020	5	15	5	<1	10	9	10	20	<10	
SGS-0021	2	20	10	1	10	<1	10	10	<10	
SGS-0022	2	10	5	<1	5	<1	10	180	10	
SGS-0023	5	35	15	2	20	65	10	30	20	
SGS-0024	10	40	15	<1	10	<1	15	<5	<10	
SGS-0025	5	20	10	2	10	6	10	5	20	
SGS-0026	10	65	15	2	10	9	15	100	10	
SGS-0027	5	15	10	<1	5	<1	15	10	20	
SGS-0028	5	10	10	<1	5	<1	15	30	<10	
SGS-0029	5	10	10	<1	5	<1	10	10	10	
SGS-0030	5	55	15	1	15	1	10	10	<10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

Signature:

776118

Batch No.: A080-1 Client: BHP COMPANY LIMITED. Area Contact: MR. D. STEELE

Address: P.O. BOX 559 Address: C/- POST OFFICE

Date Received 19/01/82 CAMBERWELL SCAMANDER TAS

Date Completed 05/02/82 VIC 3124

Order No.: T610 005073 Sample Type: SOIL No. of Samples: 184

SAMPLE NO.	Cu	Pb	Zn	Ag	Bi	As	Mo	Sn	W	E
	m	m	m	m	m	m	m	m	m	
	G001	G001	G001	G001	G001	G004	G010	XRF 1A	XRF 1A	M
SGS-0031	5	15	10	<1	15	<1	10	<5	<10	
SGS-0032	2	10	5	<1	15	<1	10	5	10	
SGS-0033	5	25	5	<1	10	2	10	60	<10	
SGS-0034	5	10	5	<1	10	<1	10	40	<10	
SGS-0035	5	15	<2	<1	10	<1	15	40	10	
SGS-0036	20	270	45	2	25	120	10	45	<10	
SGS-0037	5	15	10	<1	10	2	20	15	<10	
SGS-0038	2	20	25	<1	10	9	10	55	<10	
SGS-0039	5	20	25	<1	15	1	15	<5	<10	
SGS-0040	5	15	5	<1	10	3	2	<5	<10	
SGS-0041	2	20	10	1	15	6	10	30	10	
SGS-0042	5	15	<2	<1	10	<1	10	20	<10	
SGS-0043	5	20	10	<1	10	1	10	15	10	
SGS-0044	5	35	5	1	10	5	15	15	<10	
SGS-0045	10	20	10	1	5	<1	15	15	<10	
SGS-0046	5	35	10	<1	5	7	10	15	10	
SGS-0047	5	15	10	<1	10	3	20	15	<10	
SGS-0048 Upper Constables Ck Transit track	5	15	5	<1	10	<1	15	<5	<10	
SGS-0049	10	15	5	<1	10	<1	20	<5	<10	
SGS-0050	5	15	5	<1	10	<1	10	<5	<10	
SGS-0051	5	25	5	<1	5	<1	15	<5	<10	
SGS-0052	2	15	5	<1	10	<1	10	<5	<10	
SGS-0053	5	70	25	2	15	4	10	5	<10	
SGS-0054	2	10	5	<1	5	<1	10	10	<10	
SGS-0055	2	20	10	<1	5	2	15	5	<10	
SGS-0056	2	15	2	<1	5	<1	10	15	<10	
SGS-0057	2	15	2	<1	5	<1	10	5	10	
SGS-0058	5	20	15	<1	5	<1	2	35	<10	
SGS-0059	2	15	5	<1	15	<1	10	20	<10	
SGS-0060	2	15	5	<1	15	<1	10	15	<10	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

Signature: A.F. Finlayson

This laboratory is

7761119

Batch No.: A080-1 Client: BHP COMPANY LIMITED. Area Contact: MR. D. STEELE
Address: P.O. BOX 559 Address: C/- POST OFFICE
Date Received 19/01/82 CAMBERWELL SCAMANDER TA
Date Completed 05/02/82 VIC 3124

Order No.: T610 005073 Sample Type: SOIL No. of Samples: 104

SAMPLE NO.	Cu	Pb	Zn	Ag	Bi	As	Mo	Sn	W
	m	m	m	m	m	m	m	m	m
	G001	G001	G001	G001	G001	G004	G010	XRF 1A	XRF 1A
SGS-0061	2	25	15	1	15	14	10	20	10
SGS-0062	2	10	5	<1	5	<1	10	15	<10
SGS-0063	2	15	5	<1	10	<1	10	20	<10
SGS-0064	5	15	5	<1	5	<1	10	20	<10
SGS-0065	2	15	<2	<1	5	<1	10	30	<10
SGS-0066	2	15	15	1	10	<1	10	100	<10
SGS-0067	2	15	5	<1	10	<1	5	20	<10
SGS-0068	2	40	5	<1	10	<1	5	<5	<10
SGS-0069	2	35	5	1	20	2	2	5	10
SGS-0070	2	15	2	<1	15	<1	15	20	10
SGS-0071	2	10	5	<1	15	<1	15	30	10
SGS-0072	2	10	5	<1	20	<1	15	10	10
SGS-0073	2	15	10	<1	15	<1	5	<5	<10
SGS-0074	2	20	10	<1	20	<1	10	10	10
SGS-0075	2	15	5	<1	15	<1	10	5	10
SGS-0076	2	15	15	<1	20	4	15	130	<10
SGS-0077	2	10	5	<1	20	<1	5	20	<10
SGS-0078	2	15	5	<1	5	<1	5	55	<10
SGS-0079	2	10	5	<1	10	<1	10	120	10
SGS-0080	2	15	10	<1	10	1	5	75	10
SGS-0081	2	10	5	<1	10	<1	10	45	<10
SGS-0082	2	15	15	<1	5	<1	10	90	20
SGS-0083	2	10	5	<1	10	<1	5	25	<10
SGS-0084	2	40	10	1	15	<1	5	<5	<10
SGS-0085	5	35	10	1	10	<1	10	<5	<10
SGS-0086	2	20	10	<1	5	<1	5	25	10
SGS-0087	2	10	2	<1	10	<1	10	50	10
SGS-0088	5	15	5	<1	10	<1	10	10	20
SGS-0089	2	10	5	<1	15	<1	10	15	10
SGS-0090	2	10	5	<1	10	<1	10	5	10

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

Signature: [signature]

776120

Batch No.: A080-1 | Client: BHP COMPANY LIMITED, | Area Contact: MR. D. STEELE

Address: P.O. BOX 559, CAMBERWELL, VIC 3124

Address: C/- POST OFFICE, SCAMANDER, TAS

Date Received 19/01/82

Date Completed 05/02/82

Order No.: T610 005073 | Sample Type: SOIL | No. of Samples: 104

SAMPLE NO.	Cu	Pb	Zn	Ag	Bi	As	Mo	Sn	W	E
	m	m	m	m	m	m	m	m	m	
	G001	G001	G001	G001	G001	G004	G010	XRF 1A	XRF 1A	M
SGS-0091	2	10	5	<1	5	<1	15	<5	10	
SGS-0092	2	15	5	<1	10	<1	10	<5	<10	
SGS-0093	2	10	5	<1	5	<1	10	<5	20	
SGS-0094	2	50	10	1	15	<1	5	5	10	
SGS-0095	2	15	5	<1	5	<1	10	5	10	
SGS-0096	2	10	5	<1	10	<1	20	30	10	
SGS-0097	2	60	20	2	20	9	10	120	10	
SGS-0098	2	10	5	<1	10	<1	10	35	<10	
SGS-0099	2	15	10	<1	15	<1	10	35	10	
SGS-0100	2	10	5	<1	10	<1	15	<5	10	
SGS-0101	2	10	10	<1	15	<1	10	10	10	
SGS-0102	2	15	10	<1	15	<1	10	25	<10	
SGS-0103	2	15	10	<1	10	<1	10	30	10	
SGS-0104	2	35	10	<1	15	<1	5	5	<10	
SGS-0105	2	35	20	1	20	14	10	215	20	
SGS-0106	2	10	5	<1	10	<1	15	235	10	
SGS-0107	5	10	10	<1	10	<1	15	150	10	
SGS-0108	5	20	20	1	15	<1	5	25	<10	
SGS-0109	2	20	75	2	20	2	5	25	<10	
SGS-0110	5	10	10	<1	10	<1	10	60	<10	
SGS-0111	5	10	10	<1	10	<1	10	30	<10	
SGS-0112	2	10	10	<1	10	<1	10	5	<10	
SGS-0113	5	10	5	1	15	<1	15	5	10	
SGS-0114	2	10	5	<1	15	<1	15	10	<10	
SGS-0115	2	20	20	1	15	<1	10	25	10	
SGS-0116	2	15	10	1	15	<1	10	15	10	
SGS-0117	5	20	15	2	20	3	10	10	20	
SGS-0118	2	10	10	<1	10	<1	5	<5	10	
SGS-0119	2	15	10	<1	15	<1	5	5	10	
SGS-0120	2	10	10	<1	10	<1	5	10	10	

UNITS LEGEND ----- m - Parts per million   b - Parts per billion   % - percent

g - Grams   a - Absorbance

Signature: A.F. Wilkinson.

776121

Batch No.: A080-1 Client: BHP COMPANY LIMITED. Area Contact: MR. D. STEELE
Address: P.O. BOX 359 Address: C/- POST OFFICE
Date Received 19/01/82 CAMBERWELL SCAMANDER TA
Date Completed 05/02/82 VIC 3124

Order No.: T610 005073 Sample Type: SOIL No. of Samples: 184

SAMPLE NO.	Cu	Pb	Zn	Ag	Bi	As	Mo	Sn	W
	p	p	p	p	p	p	p	p	p
	G001	G001	G001	G001	G001	G004	G010	XRF 1A	XRF 1A
SGS-0121	2	10	5	<1	10	<1	10	45	10
SGS-0122	5	65	5	1	15	1	10	5	10
SGS-0123	2	10	5	<1	15	<1	5	110	10
SGS-0124	2	10	10	<1	10	<1	5	20	<10
SGS-0125	2	10	10	1	10	1	10	15	<10
SGS-0126	2	10	10	<1	5	<1	5	150	<10
SGS-0127	5	15	10	<1	5	<1	10	35	<10
SGS-0128	5	10	10	<1	5	<1	15	245	<10
SGS-0129	5	10	10	<1	5	<1	15	375	10
SGS-0130	2	10	10	1	10	<1	5	10	<10
SGS-0131	2	20	5	1	5	1	10	10	10
SGS-0132 Echo Peak Soils	5	10	10	1	5	6	5	40	<10
SGS-0133	5	20	10	<1	15	2	10	30	<10
SGS-0134	15	35	40	1	15	20	5	105	10
SGS-0135	15	20	40	<1	15	10	15	30	40
SGS-0136	5	10	10	<1	10	3	5	15	40
SGS-0137	10	15	10	<1	10	2	15	5	20
SGS-0138	15	30	30	1	25	35	10	30	60
SGS-0139	10	15	40	<1	20	10	10	5	10
SGS-0140	5	10	15	<1	15	4	10	15	40
SGS-0141	5	10	10	<1	10	2	5	5	<10
SGS-0142	10	15	10	<1	10	3	10	10	<10
SGS-0143	10	10	15	<1	15	1	5	5	10
SGS-0144	5	20	15	<1	15	4	10	5	10
SGS-0145	5	10	10	<1	15	5	10	5	<10
SGS-0146	5	20	10	<1	20	18	10	<5	10
SGS-0147	20	50	85	1	40	50	25	55	50
SGS-0148	30	30	35	<1	20	14	15	5	<10
SGS-0149	15	20	10	<1	20	25	10	5	<10
SGS-0150	10	15	10	<1	20	12	5	<5	<10

UNITS LEGEND ----- p - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

Signature

7761122

Batch No.: A080-1 Client: BHP COMPANY LIMITED. Area Contact: MR. D. STEELE
Address: P.O. BOX 559 Address: C/- POST OFFICE
Date Received 19/01/82 CAMBERWELL SCAMANDER TAS 7
Date Completed 05/02/82 VIC 3124

Order No.: T610 005073 Sample Type: SOIL No. of Samples: 184

SAMPLE NO.	Cu	Pb	Zn	Ag	Bi	As	Mo	Sn	W	ELE
	m	m	m	m	m	m	m	m	m	UN
	G001	G001	G001	G001	G001	G004	G010	XRF 1A	XRF 1A	MET
SGS-0151	5	15	10	<1	20	3	10	5	<10	
SGS-0152	5	20	10	<1	20	4	5	5	<10	
SGS-0153	10	20	20	1	30	35	10	245	20	
SGS-0154	5	10	20	<1	20	9	5	200	20	
SGS-0155	5	15	15	<1	20	20	10	60	10	
SGS-0156	15	25	25	<1	15	30	10	30	10	
SGS-0157	10	10	10	<1	15	1	10	30	10	
SGS-0158	10	10	10	<1	10	<1	10	50	<10	
SGS-0159	5	15	10	<1	15	<1	5	25	10	
SGS-0160	10	20	10	<1	15	3	5	30	<10	
SGS-0161	5	10	15	<1	15	5	5	180	20	
SGS-0162	10	20	10	<1	15	2	5	25	<10	
SGS-0163	5	10	10	<1	15	6	10	5	<10	
SGS-0164	10	15	10	<1	10	12	10	<5	10	
SGS-0165	10	15	10	<1	15	3	5	5	<10	
SGS-0166	15	15	10	<1	15	4	5	10	<10	
SGS-0167	15	10	15	<1	10	3	10	5	<10	
SGS-0168	5	10	10	<1	10	1	5	5	10	
SGS-0169	10	45	25	<1	25	16	5	10	40	
SGS-0170	5	20	10	<1	20	9	5	5	30	
SGS-0171	5	10	10	<1	20	4	10	5	30	
SGS-0172	5	20	15	<1	30	25	10	20	20	
SGS-0173	5	10	10	<1	15	1	5	5	10	
SGS-0174	5	10	5	<1	15	1	5	90	20	
SGS-0175	10	20	15	<1	20	<1	10	5	10	
SGS-0176	5	10	5	<1	20	<1	5	10	<10	
SGS-0177	5	10	10	<1	20	1	5	10	60	
SGS-0178	5	10	5	<1	15	<1	5	20	50	
SGS-0179	25	25	35	<1	30	80	5	50	70	
SGS-0180	10	20	10	<1	25	25	15	10	80	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

Signature: A.J. [signature]

NATA ... The National Association of Testing Authorities, Australia ...

776123

Batch No.: A080-1 Client: BHP COMPANY LIMITED. Area Contact: MR. D. STEELE
Address: P.O. BOX 559 Address: C/- POST OFFICE
Date Received 19/01/82 CAMBERWELL SCAMANDER TAS
Date Completed 05/02/82 VIC 3124

Order No.: T610 005073 Sample Type: SOIL No. of Samples: 184

SAMPLE NO.	Cu	Pb	Zn	Ag	Bi	As	Mo	Sn	W	ELE
	m	m	m	m	m	m	m	m	m	UN
	G001	G001	G001	G001	G001	G004	G010	XRF 1A	XRF 1A	MET
SGS-0181	10	25	10	<1	30	30	5	5	60	
SGS-0182	10	10	10	<1	15	3	10	<5	<10	
SGS-0183	10	5	10	<1	10	2	5	<5	<10	
SGS-0184	30	25	40	1	20	70	10	50	60	

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

Signature: [signature]

776124

TEL AL AL

Batch No.: A080-2 Client: BHP COMPANY LIMITED. Area Contact: MR. D. STEELE
Address: P.O. BOX 559 Address: C/- POST OFFICE
Date Received 19/01/82 CAMBERWELL SCAMANDER T
Date Completed 05/02/82 VIC 3124

Order No.: T610 005073 Sample Type: ROCK No. of Samples: 1

SAMPLE NO.	Cu	Pb	Zn	Ag	Ni	Cr	Bi	As	Mo	Sn
	a	a	a	a	a	a	a	a	a	a
	G001	G001	G001	G001	G001	G001	G001	G004	G010	XRF 1A
GR-1	105	60	15	<1	15	230	10	35	5	45

UNITS LEGEND ----- a - Parts per million b - Parts per billion % - percent
g - Grams s - Absorbance

Signature: [signature]

4761125

Batch No.: A080-3 Client: BHP COMPANY LIMITED. Area Contact: MR. D. STEELE

Address: P.O. BOX 559 Address: C/- POST OFFICE

Date Received 19/01/82 CAMBERWELL SCAMANDER

Date Completed 05/02/82 VIC 3124

Order No.: T610 005073 Sample Type: ROCK No. of Samples: 1

SAMPLE NO.	W	Co
	p	p
	XRF 1A	G001
GR-1	<10	5

UNITS LEGEND ----- p - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

This Laboratory is registered by

Signature:

776126

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TELEX : ALGEV 4234[illegible]

Attention Dr. R [illegible]

Batch No.: A027 Client: BHP COMPANY LIMITED, Area Contact: MR. D. STEELE

Address: P.O. BOX 559 Address: C/- POST OFFICE

Date Received 04/01/82 CAMBERWELL SCAMANDER TAS

Date Completed 20/01/82 VIC 3124

Order No.: T630 - 005072 Sample Type: SOIL, ROCK No. of Samples: 85

SAMPLE NO.	Cu	Pb	Zn	Ag	Mo	As	Sn	W
	m	m	m	m	m	m	m	m
Wolfram Creek Mag Anomaly SOILS	G001	G001	G001	G001	G010	G004	XRF 1A	XRF 1A
SMS-001	10	20	20	1	5	30	5	70
SMS-002	10	25	15	1	5	8	5	30
SMS-003	20	30	55	1	2	45	140	160
SMS-004	5	15	15	1	5	3	<5	20
SMS-005	10	25	15	<1	5	10	5	20
SMS-006	20	30	30	1	5	80	15	10
SMS-007	10	10	10	<1	5	12	10	20
SMS-008	10	25	5	1	15	30	25	20
SMS-009	5	5	5	<1	10	8	5	20
SMS-010	10	10	5	<1	10	12	10	10
SMS-011	5	10	10	<1	10	<1	<5	10
SMS-012	25	35	45	1	10	40	20	30
SMS-013	10	25	20	1	5	8	25	<10
SMS-014	10	25	20	1	5	4	5	<10
SMS-015	10	30	15	1	5	5	<5	<10
SMS-016	15	35	25	1	5	1	10	20
SMS-017	10	25	20	<1	5	<1	5	10
SMS-018	10	15	10	<1	5	1	<5	<10
SMS-019	10	20	20	<1	5	2	<5	<10
SMS-020	10	15	15	<1	10	4	<5	60
SMS-021	5	15	10	<1	10	<1	<5	20
SMS-022	5	15	25	<1	5	1	5	10
SMS-023	20	35	45	1	10	40	20	50
SMS-024	5	10	10	<1	5	1	10	10
SMS-025	5	15	15	<1	2	<1	15	10
SMS-026	5	15	10	1	10	1	<5	<10
SMS-027	10	20	15	1	15	3	5	10
SMS-028	2	15	15	<1	5	1	<5	<10
SMS-029	5	15	15	<1	10	<1	<5	10
SMS-030	5	25	15	1	5	3	<5	10

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

776127

Batch No.: A027 Client: BHP COMPANY LIMITED, Area Contact: MR. D. STEELE

Address: P.O. BOX 555 Address: C/- POST OFFICE

Date Received 04/01/82 CAMBERWELL SCAMANDER TA

Date Completed 29/01/82 VIC 3124

Order No.: T630 - 005072 Sample Type: SOIL, ROCK No. of Samples: 65

Baden Powell Prospect - Soils

SAMPLE NO.	Cu	Pb	Zn	Ag	Mo	As	Sn	W
	m	m	m	m	m	m	m	m
	G001	G001	G001	G001	G010	G004	XRF 1A	XRF 1A
SMS-031	30	35	35	1	5	18	<5	<10
SMS-032	20	35	25	1	10	29	<5	<10
SMS-033	10	15	10	<1	15	9	15	10
SMS-034	25	45	85	1	10	60	165	<10
SMS-035	65	65	195	1	5	85	280	10
SMS-036	15	45	40	1	5	10	5	10
SMS-037	20	40	30	1	5	12	<5	<10
SMS-038	35	40	40	1	10	9	<5	<10
SMS-039	20	35	35	1	5	<1	5	<10
SMS-040	20	30	50	1	10	5	<5	<10
BPS-001	25	35	35	1	5	18	5	<10
BPS-002	20	30	20	<1	5	5	<5	<10
BPS-003	20	25	20	<1	15	8	20	130
BPS-004	15	25	15	<1	10	2	10	40
BPS-005	20	25	30	1	5	5	10	10
BPS-006	15	25	25	1	5	4	5	60
BPS-007	35	35	35	1	10	8	10	60
BPS-008	20	30	35	1	10	8	15	30
BPS-009	20	25	30	1	10	4	15	30
BPS-010	20	30	40	1	5	12	90	20
BPS-011	35	25	35	1	10	7	15	20
BPS-012	35	30	45	1	15	18	30	140
BPS-013	25	30	60	1	10	8	10	30
BPS-014	15	25	25	<1	5	3	15	30
BPS-015	40	35	45	1	15	12	10	70
BPS-016	20	25	25	1	10	5	20	30
BPS-017	20	25	25	1	10	6	25	30
BPS-018	25	25	25	1	10	7	70	30
BPS-019	35	35	55	1	10	18	20	40
BPS-020	45	35	50	1	5	30	15	30

UNITS LEGEND ----- m - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

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Signature:

776128

Ph [illegible] 352[illegible]7
TELEX AUSEV 42349

Batch No.: A027 Client: BHP COMPANY LIMITED, Area Contact: MR. D. STEELE
Address: P.O. BOX 539 Address: C/- POST OFFICE
Date Received 04/01/82 CAMBERWELL SCAMANDER
Date Completed 20/01/82 VIC 3124

Order No.: T630 - 005072 Sample Type: SOIL, ROCK No. of Samples: 85

SAMPLE NO.	Cu	Pb	Zn	Ag	Mo	As	Sn	W
	p	p	p	p	p	p	p	p
	G001	G001	G001	G001	G010	G004	XRF 1A	XRF 1A
BPS-021	45	35	35	1	10	8	15	30
BPS-022	45	35	35	1	45	6	40	270
BPS-023	20	25	30	1	10	2	35	30
BPS-024	20	25	25	1	5	4	35	30
BPS-025	10	25	25	1	5	<1	30	10
BPS-026	20	30	30	1	10	7	40	40
LUS-001 Lutwyche Report Soils	5	15	10	<1	10	6	5	<10
LUS-002	40	15	10	<1	15	60	30	70
LUS-003	10	15	15	<1	15	4	10	<10
LUS-004	10	15	15	<1	15	4	30	<10
LUS-005	45	35	35	1	10	25	30	<10
LUS-006	20	40	35	1	15	14	30	<10
LUS-007	20	35	20	1	10	9	20	<10
LUS-008	10	30	25	<1	15	7	15	<10
LUS-009	15	25	30	1	10	<1	20	<10
LUS-010	20	35	25	1	10	25	15	<10
LUS-011	10	20	20	<1	10	9	10	<10
LUS-012	5	15	30	<1	10	14	15	10
LUS-013	5	15	<5	<1	15	3	30	<10
LUS-014	10	15	5	<1	20	4	55	<10
LUS-015	10	20	10	<1	15	20	25	<10
LUS-016	10	20	10	<1	15	16	10	10
LUS-017	5	15	15	<1	10	3	35	10
LUS-018	10	35	15	<1	10	9	30	<10
LUS-019	10	20	10	<1	10	25	15	10

UNITS LEGEND ----- p - Parts per million b - Parts per billion % - percent
g - Grams a - Absorbance

Signature: [signature]

176129

Batch No.: A027-1 | Client: BHP COMPANY LIMITED, | Area Contact: MR. D. STEELE
Address: P.O. BOX 559 | Address: C/- POST OFFICE
Date Received 05/01/82 | CAMBERWELL | SCAMANDER
Date Completed 28/01/82 | VIC 3124

Order No.: T630 - 005072 | Sample Type: ROCK | No. of Samples: 2

SAMPLE NO.	Cu	Pb	Zn	Ag	Ni	Co	Cr	Mo	As	Sb
	m	m	m	m	m	m	m	m	m	m
	G001	G001	G001	G001	G001	G001	G001	G010	G004	G014
WC-1 Rock Clif WolfCk [illegible]	115	145	60	3	25	25	50	5	110	<1
LU-1	70	90	30	2	25	15	25	10	140	<1

UNITS LEGEND ----- m - Parts per million   b - Parts per billion   % - percent
g - Grams   a - Absorbance

Signature: [signature]

This Laboratory is registered by [illegible]

776130

Batch No.: A027-2 Client: BHP COMPANY LIMITED, Area Contact: MR. D. STEELE

Address: P.O. BOX 559 Address: C/- POST OFFICE

Date Received 05/01/82 CAMBERWELL SCAMANDER

Date Completed 28/01/82 VIC 3124

Order No.: T630 - 005072 Sample Type: ROCK No. of Samples: 2

SAMPLE NO.	Au	Sn	W
	a	a	a
	PM202	XRF 1A	XRF 1A
WC-1	<0.1	<5	<10
LU-1	<0.1	20	10

UNITS LEGEND ----- a - Parts per million b - Parts per billion % - percent

g - Grams a - Absorbance

Signature:

This Laboratory is registered by the National Association of Testing

Computer Research Company

7761131

APPENDIX 3

Petrological Reports

REPORT CMS 81/9/49

Samples MRL 13.347 - 13.362

Sixteen rock samples were received for section preparation and petrological study; thin-sections of all samples, and polished sections of four samples, were prepared and examined; offcuts were stained where relevant. In addition, one sample was digested in acid and the residue was studied mineralogically.

Summary

This is a miscellaneous suite of rocks mainly comprising igneous types, but including metasediments and vein-type rocks; one of these contains fine cassiterite embedded in sulphides.

The metasediments are a low-grade quartz-dolomite schist representing a chemical sediment, and a low-grade hornfels derived from a quartz-rich clastic rock. Vein-type rocks are a quartz-adularia assemblage in which the thin platy quartz is pseudomorphous after ?carbonate, and two sulphide-rich samples.

The igneous rocks range from a near-ultramafic picrite-basalt with minor leucite (feldspathoid) through dolerites (?Tertiary), to granites, micro-granodiorites (at least two types - CDIA, GRD 1/2 LT), and a porphyritic rhyolite. No nodules were seen in Oat 1.

Sample DNS 1 is of particular interest as it contains appreciable amounts (about 1 %) of cassiterite, as generally very irregular grains and small prismatic crystals 5 μ to 150 μ in size, but mostly < 50 μ, singly and in clusters, embedded in scorodite. The grainshapes suggest corrosion after deposition, possibly related to oxidation/scorodite formation; thus, fresh material may contain better, coarser cassiterite. The identity of the mineral was confirmed by crushing a portion of the rock, treating with aqua regia to remove most of the minerals, and examining the residue and hand-picking crystals for confirmatory optical checks.

H.W. Fander, M. Sc.

Sample No.	Rock Type - Composition	Fabric	Minor Minerals	Comments
May 1 MRL 13.347 (T.S. 38890)	Quartz-Dolomite Schist. Angular porphyroblasts of granular dolomite, with quartz rims; set in schistose mass of fine quartz and dolomite with pyrite streaks.	Porphyroblasts are recrystallized single crystals. Relict banding.	Pyrite films, small aggregates of fine crystals.	Mildly metamorphosed chemical sediment, originally large dolomite rhombs in dolomite-chert laminated matrix.
Oat 1 MRL 13.348	Picrite-Basalt(Limburgite). Small phenocrysts of olivine and eustatite in fine groundmass of magnetite, augite, minor interstitial ?leucite.	Phenocrysts are random, often fragmentary; structureless groundmass.	Clinopyroxene rims around eustatite. Fragments of dark ?spinel or glass.	Almost ultramafic (except for feldspathoid); fabric suggests a minor intrusive, not extrusive rock. No nodules.
DNS 1 MRL 13.349	Sulphide-Scorodite Rock. Mostly corroded and supergene sulphides laced with fine network of white to pale green scorodite, massive and crystalline.	Structureless; originally massive sulphides, but severely corroded.	Sulphides are corroded pyrite, arsenopyrite, abundant fine covellite throughout.	Green mineral is clear, well-crystallized scorodite lining open spaces in veins of milky white scorodite. Contains CASSITERITE (see notes).
SE 3 MRL 13.350	Quartz-Sulphide Rock. Coarse sulphide masses and coarsely-crystalline, vein-type quartz; small siderite crystals embedded in sulphides.	Coarsely-granular vein structure; "birds-eye" texture in sulphide.	Sulphides are pyrite, fresh and altered pyrrhotite, coarse chalcopyrite; native Bi 10v - 300 v. Trace arsenopyrite.	Relatively fresh vein-type rock; no oxidation-products, but pyrrhotite extensively pyritised, causing cavities.
CD 1A MRL 13.351	Porphyritic Microgranodiorite. Large Ca-andesine/labradorite phenocrysts, smaller biotite, hornblende crystals. Quartz-orthoclase-andesine groundmass.	Groundmass medium-grained, verging on fine-grained. Intrusive fabric.	Accessory apatite needles, magnetite. Secondary chlorite, calcite, sericite.	Probably a minor intrusive. Composition not far removed from a monzonite, with excess quartz.
CD 1B MRL 13.352	Quartz-Adularia Rock. Tabular quartz pseudomorphs after carbonate or gypsum; very abundant, well-defined adularia is major component.	Random fabric; tabular crystals in sheaves; relict textures not clear.	Traces of fine carbonate. Small sericite aggregates.	May have been a type of sinter or vein; adularia regarded as low-temperature fog of K-feldspar.
CD 2 MRL 13.353	Quartz-Mica Hornfels. Quartz grains, random small interstitial chlorite (?altered biotite) and hydromuscovite flakes. Premetamorphic quartz veins.	Relict clastic textures recognisable. Very uniform, fine/medium-grained.	Quartz veins contain biotite, coarse muscovite/chlorite masses.	Rock was orthoquartzite/feldspathic sandstone with minor clays; very mildly contact-metamorphosed after veining.
CE 2 MRL 13.354	Greisenised Microgranite/Aplite. Strongly stressed quartz, prismatic albite (partly sericitised), orthoclase. Abundant replacive muscovite.	A few small phenocrysts. Otherwise uniform, medium-grained.	Wide veins of stressed quartz, apparently barren.	Evidently the rock was stressed after greisening, veining. Intensity of greisening diminishes away from vein.
CE 3 MRL 13.355 (T.S. 38898)	Stressed Biotite Granite. Large anhedral crystals of perthitic orthoclase/microcline, coarse quartz patches, minor prismatic albite, shreds of dark biotite.	Coarse granitic fabric; all components stressed. Induced microcline twinning.	Accessory zircon. Traces of replacive muscovite shreds.	Featureless, orthodox granite of igneous/magmatic origin. Incipient greisening (muscovitisation).

Sample No.	Rock Type - Composition	Fabric	Minor Minerals	Comments
CE 12 MRL 13.356 (T.S. 38899)	Stressed Biotite Granite. Mainly coarse and finer stressed orthoclase/microcline, subordinate stressed quartz and prismatic albite; biotite shreds.	Variable grainsizes, with a few phenocrysts. Stress-induced microcline twinning.	Radioactive inclusions in biotite. Minor trace colourless fluorite and muscovite.	Very similar to CE 3, and most probably genetically related. Incipient greisening - muscovite, fluorite.
CE 13 MRL 13.357	Biotite Granite. About 40 % coarse perthitic orthoclase/microcline, 40 % stressed anhedral quartz, 15-20 % albite-oligoclase, 2-3 % dark biotite.	Coarse granitic fabric with a few phenocrysts. All minerals stressed.	Radioactive inclusions in biotite. Leucoxene-rutile. Trace fine muscovite.	Genetically related to CE 3, CE 12; not as strongly stressed. Minor trace only of introduced muscovite.
GRD 1LT MRL 13.358	Porphyritic Microgranodiorite. Rounded andesine phenocrysts and a few quartz crystals, conspicuous brown biotite; quartz-orthoclase groundmass.	Faint preferred orientation; micrographic textures - quartz/feldspar.	Accessory apatite, zircon, magnetite. A few hornblende crystals.	This rock differs from the granites, thought to be unrelated. Perhaps from margin of intrusive, with platy flow-structures.
GRD 2LT MRL 13.359	Porphyritic Microgranodiorite. Phenocrysts of andesine, poikilitic quartz, biotite in medium-grained mass of quartz, orthoclase and biotite.	Random orientation, bimodal size distribution. Intrusive fabric.	Rare augite with hornblende rims. Accessory apatite, zircon, ?allanite.	Related to GRD 1LT, but more potassic and verging on adamellite composition.
D 102 MRL 13.360	Dolerite. Granular tosubhedral pigeonite, prismatic crystals of partly altered andesine, magnetite, platy ilmenite, minor primary quartz.	Subparallel orientation of plagioclase. Medium-grained. Intersertal textures.	Fine secondary chlorite. Dendritic pyrite patches. Apatite, sphene.	Orthodox, featureless dolerite, verging on gabbro. Intrusive or from interior of thick flow.
D 103 MRL 13.361	Dolerite. Random laths and a few phenocrysts of andesine, with interstitial subhedral pigeonite crystals, magnetite, very minor primary quartz.	Random, medium-grained fabric, verging on coarse-grained.	Accessory apatite needles. Secondary sphene, chlorite. Trace pyrite.	Closely resembles D 102, but no preferred orientation. Both rocks are presumably Tertiary.
QFP 1 MRL 13.362 (T.S. 38905)	Porphyritic Rhyolite. Embayed, corroded phenocrysts of quartzand andesine, in felsitic, flow-banded groundmass of devitrified K-silicate.	Excellent fine flow-banding and flow-alignment of phenocrysts.	Small biotite flakes throughout. Quartz veins.	Probably a lava, but depends on field data. Fresh, unalatered rock apart from devitrification.