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7 JUN 1982

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Prosecuple 18-6-82

S.P.L. 772 MOUNT STRONACH

FINAL (RELINQUISHMENT) EXPLORATION REPORT

for the period ending

2 FEBRUARY, 1982

C O N T E N T S

APPENDICES

LIST OF FIGURES

1. INTRODUCTION

Special Prospectors Licence 772 covers an area of 1,400 hectares in northeast Tasmania, centred approximately 5 kilometres east of the township of Scottsdale (see Figure 1).

The most recent licence term expired on 2 February, 1982, and application for transfer of the licence back to the previous licence holder has been made.

Hellyer Mining and Exploration Pty Ltd entered into an option-to-purchase agreement with the previous licence holder, Mr. B.A. Farquhar, of Scottsdale, on 13 March, 1981. The option agreement was exercised on 27 May, 1981, and the licence was transferred to Hellyer on 28 July, 1981.

2. GEOLOGICAL BACKGROUND

2.1 Geology

S.P.L. 772 covers a large portion of the Mount Stronach granitic batholith which is in turn part of the upper Devonian Scottsdale batholith. The Mount Stronach body comprises a generally uniform pink, medium-grained biotite adamellite with very minor finer-grained aplitic and pegmatitic phases.

Molybdenite mineralisation occurs as platy crystals up to 5 cm in diameter and as irregular "splashes" which often show no obvious relationship to joints, fractures or veins. Traces of pyrite and chalcopyrite have also been noted.

The mountain is surrounded by Tertiary and Quaternary alluvium containing exposures of other, largely undifferentiated, phases of the Scottsdale batholith.

2.2 Previous Exploration

The presence of molybdenite was first noted in 1914 and Loftus Hills (1916) records that occurrences of molybdenite had been found in several places on the western and upper parts of Mt. Stronach. The maximum grade was then estimated (on the basis of area comparisons) to be 0.09% MoS_2 at Meredith's Reward, with the exception of a rich vein occurrence known as Harvey's Show.

Harvey's Show comprises irregular splashes of molybdenite and a vein 1 - 2 inches wide containing molybdenite, pyrite and chalcopyrite. Samples of the vein have assayed up to 4.1% copper and 6.5 oz/ton silver.

2.2 (cont)

In 1959, Mr. B.A. Farquhar obtained a half-ton sample of molybdenite-bearing granite from approximately ½ mile north of Harvey's Show (see Figure 2). The sample assayed 0.39% MoS_2 and production of a high grade (93 - 95% MoS_2) concentrate was not difficult (Manson and Liddy, 1959) but the sample consisted of hand-picked ore.

Tasmanian Department of Mines (1960) - Two diamond drill holes of 130' (39.6m) T.D. and 101' (30.8m) T.D. were sited at Harvey's Show and Mr. Farquhar's bulk sample site respectively (Hughes, 1960). The hole at Harvey's Show was designed to intersect the molybdenite-bearing vein at approximately 85' vertical depth but encountered only irregular disseminated molybdenite mineralisation which did not show up in assay results. The second hole intersected only minor sporadic molybdenite with the best assay being 0.02% MoS_2 between 10 and 20 feet (3.05 - 6.10 m).

Aminco & Associates (1970) - The area was inspected but the apparent lack of alteration and of uniform mineralisation led to the rejection of the area.

Oceanic Exploration Company (1970) - The company was granted an exploration licence over the surrounding area and proposed a major programme of mapping and geochemical and geophysical surveying but the programme was apparently never implemented.

Australian Hanna Limited (1971) - Soil samples were collected on a 400' by 400' grid over a large part of the western and upper regions of the mountain and rock-dust

2.2 (cont)

samples were taken over a smaller area on a 100' by 100' grid. Non-coincident peaks of 80 ppm Mo (soil) and 400 ppm Mo (rock-dust) were obtained and the results were interpreted as indicating a small vein type source. The potential for economic low-grade disseminated mineralisation was regarded as insufficient to warrant further exploration.

International Mining Corporation N.L. (1970) and B.M.I. Mining Pty Ltd (1971) - Carried out exploration for alluvial tin in the vicinity of Mt. Stronach with little encouragement. International Mining completed ten drill holes and sixteen costeans and B.M.I. undertook a total of 3,647' (1,112 m) of auger drilling.

3. WORK COMPLETED

3.1 Geological Reconnaissance

The regional geology and the results of previous exploration in the area were reviewed during the option period.

Geological reconnaissance traverses of the licence area and immediately surrounding region were conducted, with particular attention being paid to identification of any variations in the texture and mineralogy of the batholith. No marked variations were observed, the granitic rocks being fairly uniform, fine to medium grained biotite adamellite/granadionite with minor aplitic phases and dykes. No signs of molybdenum mineralisation were observed outside the areas of known mineralisation and no indications of marked alteration zoning were apparent.

3.2 Stream Sediment and Check Soil Sampling

Thirteen stream sediment samples, numbers SMS1-3 and SMS5-14, were collected from creeks draining Mount Stronach at the points indicated on Figure 2. The samples were assayed for copper, lead, zinc, silver, molybdenum, tin and tungsten and assay results are contained in Appendix I. These samples did not indicate the existence of any zones of primary mineralisation, the best assay values being 10 ppm Cu, 40 ppm Pb, 14 ppm Zn, 6 ppm Mo and 34 ppm Sn, with all samples containing < 1 ppm Ag and < 10 ppm W.

As a check on the apparently anomalous metal values in soil samples detected by Australian Hanna Ltd (1971), twenty-six soil samples were collected along five traverse lines which were located so as to intersect either previously defined soil anomalies or known mineralisation. The locations

3.2 (cont)

of these traverses are shown on Figure 2 and assay results for molybdenum, tin and tungsten are included in Appendix I.

Peak assay values from the check soil sampling were 110 ppm Mo and 34 ppm Sn with all samples returning < 10 ppm W. The sampling confirmed the levels of molybdenum in soil detected by the Australian Hanna survey.

3.3 Bulk Sampling

Bulk samples were to be obtained by blasting at the site known as Harvey's Show and at the site of previous bulk sampling carried out by Mr. B.A. Farquhar. These samples were to have provided material for additional grade determinations and for beneficiation studies.

The initial attempt to obtain these samples was prevented by poor access, which resulted in the upgrading of two tracks in the area. A second attempt to carry out the blasting was unsuccessful due to bad weather and contractor failure.

3.4 Gridding, Geology and Mineralisation

A five kilometre long baseline oriented due north-south and seven crosslines each of two and a half kilometres in length were surveyed using tape and compass and abney level for a total of 22.5 line kilometres (see Figure 3). Further details are included in Appendix II.

The prospect area was geologically mapped along the surveyed traverses and the results are plotted on Figure 3 at 1:5,000 scale. The mapping confirmed that a major part

3.4 (cont)

of the licence area is underlain by monotonous medium-grained pink, white and orange coloured biotite granitic rock. The granitic rocks are notable for their lack of well developed jointing.

An area of outcrop bounded roughly by lines 3000S, 4000S and the baseline (see Figure 3) contains an abundance of finer grained biotite-poor granitic and aplitic phases together with minor pegmatite (quartz-microcline-biotite) veins. This zone appears to represent the only textural/ mineralogical variation in the Mount Stronach-Lucky Strike Peak granitic mass.

Coarse grained pods or "splashes" of molybdenite are best exposed at the two bulk sample sites (see Figure 2). Roughly circular masses of molybdenite up to 15 cm in diameter occur in fresh grey, equigranular biotite adamellite which shows no evidence of hydrothermal alteration. Occasionally, traces of chalcopyrite can be seen disseminated within the adamellite around the molybdenite pods.

The molybdenite mineralisation is not closely associated with any marked development of fractures, joints or quartz/ pegmatitic veining, although low concentrations of sub-vertical joints and thin quartz veins have been observed in the general vicinity of some molybdenite occurrences.

Overall, the few exposures of molybdenite, mineralisation indicate that a bulk grade would be very low. Further details concerning the geology of the area can be found in Appendix II.

3.5 Soil/Rockchip Sampling

Soil and, where possible, rock-chip samples were collected at 50 metre intervals along the gridlines. Outcrop is

3.5 (cont)

close to 100% on the crest and upper third of the slopes of the mountain, decreasing downslope until outcrop is virtually non-existent at the base of the hill. In general, deeply weathered granite, represented by yellow to brown sandy clays, could be found within 30 cm of the surface. A total of 278 samples were collected and assayed for copper, lead, zinc, silver, molybdenum, tin and tungsten. Assay results are tabulated in Appendix I and sample locations, together with assay data have been plotted on Figure 3 (molybdenum results), Figure 4 (tin and tungsten results), Figure 5 (copper results) and Figure 6 (lead and zinc results). Peak assays were 85 ppm Mo, 50 ppm Sn, 50 ppm W, 36 ppm Cu, 38 ppm Pb, 46 ppm Zn and 1 ppm Ag.

Further details concerning the soil and rockchip sampling are included in Appendix II.

The plots of the data (Figures 3, 4, 5 and 6) indicate that there is general agreement between the molybdenum results of the present survey and those of Australian Hanna in 1971, although the precise position of the Hanna grid is uncertain.

The most important correlation is that all the anomalous values in this survey and most of the anomalous values of Hanna's survey occur within the zone of finer-grained biotite-poor granitic/aplitic phases, generally close to the western and southern boundary of the zone. This finer grained phase can be distinguished on aerial photographs as an arcuate zone within the main granitic intrusion. There also appears to be a thin, somewhat tenuous, arcuate anomaly outlined to the south of the above anomaly which is defined by some of the Hanna sampling (see Figure 3). There is no regular or obvious relationship between molybdenum values in fresh rock and in highly weathered granite-derived sandy clays.

3.5 (cont)

The only other soil/rock-chip assays of note concern those of copper and tin. The highest copper values, on line 3000S between 600W and 700W, are located immediately west (downhill) of the zone of anomalous molybdenum values, suggesting a zoned relationship between copper and molybdenum mineralisation in this region (see Figures 3 and 5).

The highest tin assays, at 1000S 1050E and 1000S 1500E, have probably been caused by eluvial or alluvial processes, while another relatively high value (32 ppm) at 3000S 000E may be associated with quartz-feldspar veins noted in the field (see Figures 3 and 4).

Further comments on the results of the soil/rock-chip sampling are included as Appendix III.

3.6 Diamond Drilling

A fully cored diamond drill hole was sited at 2930S 270W due to availability of access and reasonable topography although the planned collar location was at 2950S 550W. The hole was located so as to intersect the Hanna molybdenum-in-soil anomaly and also to intersect the eastern edge of the anomalous molybdenum zone defined by Hellyer. The hole has an azimuth of 170°TN and an inclination of -65°. Total depth was 100.0 metres (see Figure 3).

DMS-1 obtained 100% core recovery and intersected medium grained pink to white coloured biotite-rich adamellite throughout its entire length. Sparse molybdenite mineralisation was observed between 4.0 metres and 4.2 metres depth and minor sporadic chlorite alteration

3.6 (cont)

was observed. A drill section is included as Figure 7. Assaying of any of the drill core was not warranted due to the lack of mineralisation. The core has been lodged with the Department of Mines in Hobart.

3.7 Rb/Sr Ratios

Work on the Galway Granite (Elliott & Fletcher, 1974) has indicated that the presence of mineralisation in granites may be reflected by zones of rock containing high Rb/Sr ratios, which in turn reflect the presence of fractionation and potassic alteration. A value of Rb/Sr x 100 in excess of 400 has been proposed as indicating potential for mineralisation.

Six samples from the Mount Stronach area were submitted for rubidium and strontium analysis to test the applicability of this technique. Three samples (SC1, SC2 and SC3) of core from DMS-1, supposedly associated with minor molybdenum mineralisation and three samples (located at 2000S 50E, 3000S 600E and 3500S 750E) of rock taken from areas remote from any known mineralisation returned the following results (see Appendix I for original assay data):

Sample	Rb (ppm)	Sr (ppm)	Rb/Sr x 100
SC1 (core)	690	7	9,857
SC2 (core)	410	<2	>20,500
SC3 (core)	440	3	14,667
2000S 50E (rock)	220	95	232
3000S 600E (rock)	490	<2	>24,500
3500S 750E (rock)	310	12	259

3.7 (cont)

All the core samples from the mineralised area returned high Rb/Sr ratios while only one of the rock samples from the apparently mineralised areas returned a Rb/Sr x 100 ratio of greater than 400. These results suggest that the technique may have application to the Mount Stronach batholith.

4. CONCLUSIONS

Past prospecting and previous exploration has indicated patchy occurrences of molybdenite mineralisation with associated traces of copper and silver mineralisation.

The exploration carried out by Hellyer has confirmed the sporadic nature of molybdenum mineralisation and indicates that the zone of greatest potential is located approximately between 3000s and 3800s on the western flank of Mount Stronach.

The molybdenum mineralisation does not appear to be related to any marked mineralogical alteration or structural controls although the main zone of anomalous molybdenum values is spatially associated with a finer-grained, biotite-poor phase of the granitic intrusion. The poorly defined arcuate anomaly located to the south of the main anomalous zone may be related to some circular geological feature which is not obvious on the ground. Individual pods of molybdenite show a weak relationship to poorly developed joints and there is a suggestion of a copper-molybdenum zonation from the soil/rock-chip assay data.

It is conceivable that the observed distribution of fresh, predominantly adamellite intrusive, the finer grained biotite-poor phase and deeply weathered kaolin-rich zones which surround a large part of the Mount Stronach batholith represents a zoned intrusive but the pattern does not fit any classical model of a hydrothermal alteration system. The lack of any pronounced potassic or phyllic alteration in the vicinity of the known molybdenum mineralisation (or elsewhere within the licence area) is particularly striking.

5. RECOMMENDATIONS

The confinement of anomalous molybdenum-in-soil assays to the known area of mineralisation, the lack of any marked hydrothermal alteration features and the lack of mineralisation in diamond drill hole DMS-1, located within the zones of anomalous molybdenum values, all downgrade the potential of the area to host a large tonnage, low-grade molybdenum resource.

Deeper testing of the geochemically anomalous zones may provide the geological data which would allow definition of alteration zoning and any associated mineralisation.

It is recommended that Hellyer does not commit to any further exploration on the licence in view of the results of the above work and in consideration of the current economic climate and molybdenum market outlook.

Any future work in the area should seek to more closely define the zones of anomalous molybdenum geochemistry and undertake deep testing of these zones.

6. EXPENDITURE

Expenditure on the licence area from 13 March, 1981, to 30 April, 1982, has been as follows:

. Salaries - Adelaide	153.47
. On Costs	46.04
. Aust. Travel & Accommodation	44.30
. Other Professional Services	300.00
. Labour & Material - Other	7.00
. Transportation - Materials	228.02
. Access & Site Preparation	1,362.00
. Direct Purchase	257.01
. Data Reproduction	3.84
. Geological/Geochemical	9,303.11
. Drilling	4,980.00
. Laboratory Services	2,307.80
TOTAL EXPENDITURE	$18,992.59

2,386,926
18992
290791 8

7. REFERENCES

ELLIOTT, I.L. & FLETCHER, W.K. (Eds), 1974: "Developments in Economic Geology", pp 366-369, Geochemical Exploration.Elsevier.

HUGHES, T.D., 1960: "Drilling at Mt. Stronach - Molybdenite Area", Tasmania Department of Mines Technical Report No. 5, pp 73-75.

LOFTUS HILLS, 1916: "Tungsten and Molybdenum, Part I - Northeastern and Eastern Tasmania", Tasmania Department of Mines Geol. Survey Mineral Resources No. 1.

MANSON & LIDDY, 1959: "Ore Dressing Investigation No. 351", Department of Mines Laboratory, Launceston.

APPENDIX I

ASSAY DATA

020

774020

The Australian
Mineral Development
Laboratories

Fl[redacted]gton Street, Frewville,
South Australia 5063
Phone Adelaide 79 1662
Telex AA 82520

Please address all
correspondence to
P.O. Box 114 Eastwood
SA 5063
In reply quote:

amdel

NATA CERTIFICATE

3/520/0 - AC 5189/81

22 May 1981

Mr S D Lee
Santos Limited
183 Melbourne Street
NORTH ADELAIDE SA 5006

REPORT AC 5189/81

YOUR REFERENCE:	Order No SDL/5016/010
IDENTIFICATION:	As listed
DATE RECEIVED:	24 April 1981

D.K. Rowley
Manager
Analytical Chemistry Division

for Norton Jackson
Managing Director

dam

Pilot Plant: Osman Place
Thebarton S.A.,
Telephone 43 8053
Branch Laboratories:
Perth W.A.
Telephone 325 7311
Melbourne Vic.
Telephone 645 3093

021

amdel

774021

Analysis code B1/1 Report AC 5189/81 Page 1

NATA Certificate Order SDL/5016/010 Results in ppm

STREAM SEDIMENT DATABASE NO

↓	Sample		Sn	W
3301	SMS	1	12	<10
3302	SMS	2	14	<10
3303	SMS	3	10	<10
3305	SMS	5	20	<10
3306	SMS	6	14	<10
3307	SMS	7	34	<10
3308	SMS	8	14	<10
3309	SMS	9	12	<10
3310	SMS	10	12	<10
3311	SMS	11	20	<10
3312	SMS	12	16	<10
3313	SMS	13	30	<10
3314	SMS	14	18	<10
	RMS	1	16	<10
	GMS	1	20	<10
	GMS	2	24	<10
	GMS	3	18	<10
Detn limit			(4)	(10)

022

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774022

Analysis code C1/C2 Report AC 5189/81 Page 1

NATA Certificate Order SDL/5016/010 Results in ppm

DATA BASE No ↓	Sample	Cu	Pb	Zn	Ag	Mo
3301	SMS01	10	<5	8	<1	6
2	SMS02	8	5	4	<1	5
3	SMS03	6	<5	6	<1	6
3305	SMS05	6	40	14	<1	6
6	SMS06	4	10	6	<1	6
7	SMS07	4	<5	4	<1	4
8	SMS08	6	10	12	<1	5
9	SMS09	2	5	12	<1	4
3310	SMS10	4	10	8	<1	6
3311	SMS11	2	<5	6	<1	5
3312	SMS12	4	5	6	<1	4
3313	SMS13	2	5	4	<1	5
3314	SMS14	6	10	8	<1	3
	RMS1	6	25	12	<1	3
	GMS1	--	--	--	--	75
	GMS2	--	--	--	--	110
	GMS3	--	--	--	--	49
	CLH1/9-10	14	15	46	<1	1
	CLH2/3-4	14	85	14	<1	1
	CLH2/4-5	10	95	12	<1	1
	CLH2/5-6	8	55	10	<1	3
	Detn limit	(2)	(5)	(2)	(1)	(1)

023

774023

The Australian
Mineral Development
Laboratories

Flemington Street, Frewville,
South Australia 5063
Phone Adelaide 79 1662
Telex AA 82520

Please address all
correspondence to
P.O. Box 114 Eastwood
SA 5063
In reply quote:

amdel

NATA CERTIFICATE

3/520/0 - AC 5476/81

25 May 1981

Mr Simon Lee
Santos Limited
183 Melbourne Street
NORTH ADELAIDE SA 5006

REPORT AC 5476/81

YOUR REFERENCE:	Order No SDL/5016/011
IDENTIFICATION:	As listed
DATE RECEIVED:	14 May 1981

D.K. Rowley
Manager
Analytical Chemistry Division

for Norton Jackson
Managing Director

dam

Pilot Plant: Osman Place
Thebarton S.A.,
Telephone 43 8053
Branch Laboratories:
Perth W.A.
Telephone 325 7311
Melbourne Vic.
Telephone 645 3093

024

amdel

774024

Analysis code C2 Report AC 5476/81 Page 1

NATA Certificate Order SDL/5016/C Results in ppm

Sample	Mo
GMS 1A	14
GMS 2A	27
GMS 3A	43
GMS 4	21
GMS 5	9
GMS 6	9
GMS 7	30
GMS 8	21
GMS 9	3
GMS 10	3
GMS 11	2
GMS 12	2
GMS 13	3
GMS 14	31
GMS 15	17
GMS 16	14
GMS 17	26
GMS 18	27
GMS 19	28
GMS 20	2
GMS 21	1
GMS 22	2
GMS 23	3
Detn limit	(1)

025

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Analysis code B1/1 Report AC 5476/81 Page 1

NATA Certificate Order SDL/5016/011 Results in ppm

Sample	W	Sn
GMS 1 A	<10	14
GMS 2 A	<10	26
GMS 3 A	<10	22
GMS 4	<10	20
GMS 5	<10	22
GMS 6	<10	22
GMS 7	<10	26
GMS 8	<10	24
GMS 9	<10	16
GMS 10	<10	20
GMS 11	<10	18
GMS 12	<10	24
GMS 13	<10	20
GMS 14	<10	34
GMS 15	<10	28
GMS 16	<10	16
GMS 17	<10	16
GMS 18	<10	22
GMS 19	<10	16
GMS 20	<10	30
GMS 21	<10	16
GMS 22	<10	24
GMS 23	<10	30
Detn limit	(10)	(4)

026

774026

COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

NATA REGISTERED No. 1526

Head Office and Central Laboratory
305 SOUTH ROAD,
MILE END SOUTH
STH. AUST. 5031
TEL.: (08) 43 5722
TELEX: AA89323

Queensland Preparation Laboratory
172 LAVARACK AVE.,
EAGLE FARM,
QUEENSLAND. 4007
TEL.: (07) 268 4748

OUR REF.: COM 811514

YOUR REF.: Order No SDL/5304/016

Mr. S. Lee,
Santos Ltd.,
183 Melbourne Street,
NORTH ADELAIDE. S.A. 5006.

7.10.81

Dear Simon,

RE: JOB COM 811514

Enclosed are the assays for the samples delivered to our laboratory on the 22nd September, 1981.

Yours sincerely,

Harry Fishman
Managing Director

c.c: D. Clarke

COMLABS Pty Ltd
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM811514 O/N : SPL/5304/016

Results in ppm

SAMPLE	Cu	Pb	Zn	Ag	Mo	Sn	W
00S 600W	10	10	8	<1	<4	10	<10
00S 550W	8	16	10	<1	<4	16	<10
00S 500W	8	6	6	<1	<4	8	<10
00S 450W Rock	6	10	26	<1	<4	16	<10
00S 450W Soil	14	18	10	<1	4	6	<10
00S 400W	6	18	4	<1	<4	12	<10
00S 350W Rock	6	8	32	<1	<4	14	<10
00S 350W Soil	4	<4	6	<1	4	20	<10
00S 300W	8	6	26	<1	<4	14	<10
00S 250W	6	14	12	1	4	16	<10
00S 200W	6	6	6	<1	<4	18	<10
00S 100W	6	8	6	<1	<4	16	<10
00S 50W	6	6	8	<1	<4	16	<10
00S 00E	10	8	20	<1	<4	16	15
00S 50E	8	8	8	<1	<4	20	<10
00S 100E	8	8	10	<1	4	26	<10
00S 150E	6	16	14	1	8	10	<10
00S 250E	8	4	6	<1	<4	28	<10
00S 600E	6	10	32	<1	<4	14	<10
00S 650E	8	4	34	<1	<4	12	15
00S 700E	6	6	26	<1	<4	16	<10
00S 750E	6	6	4	<1	<4	14	15
00S 800E	6	10	6	<1	<4	12	<10
00S 850E	6	8	6	<1	<4	16	<10
00S 900E	6	4	6	<1	<4	16	<10

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COMLABS Pty Ltd
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM811514 O/E : SDL/5304/016

Results in ppm

SAMPLE	Cu	Pb	Zn	Ag	Mo	Sn	W
00S 950E	12	4	10	<1	<4	12	<10
00S 1000E	6	6	8	<1	<4	18	<10
00S 1050E	6	4	8	1	<4	14	15
00S 1100E	8	4	12	<1	<4	12	<10
00S 1150E	8	<4	6	<1	<4	8	<10
00S 1200E Rock	8	4	34	<1	<4	18	<10
00S 1200E Soil	4	<4	10	<1	4	16	15
00S 1250E Rock	12	8	40	<1	4	18	<10
00S 1250E Soil	4	<4	10	<1	4	14	<10
00S 1300E	6	<4	6	<1	<4	8	15
00S 1350E	6	<4	8	<1	4	16	15
00S 1400E	6	<4	6	<1	4	6	<10
00S 1450E	10	<4	12	<1	4	8	<10
00S 1500E	8	6	8	<1	4	14	<10
1000S 50E	8	4	30	<1	<4	10	15
1000S 100E	10	8	32	<1	4	10	<10
1000S 150E RockA	6	6	14	<1	4	16	15
1000S 150E RockB	4	<4	4	<1	4	8	<10
1000S 200E	8	8	28	<1	4	10	<10
1000S 250E	8	4	26	<1	<4	16	15
1000S 300E	6	4	32	<1	<4	14	<10
1000S 350E	6	8	28	<1	<4	10	<10
1000S 400E	8	6	30	<1	<4	12	<10
1000S 450E	6	6	40	<1	<4	12	15
1000S 500E	8	8	38	<1	<4	28	<10

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COMLABS Pty Ltd
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM811514 O/N : SDL/5304/016

Results in ppm

SAMPLE	Cu	Pb	Zn	Ag	Mo	Sn	W
1000S 550E	6	4	30	<1	<4	16	15
1000S 600E	12	6	34	<1	<4	20	<10
1000S 650E	4	10	6	<1	<4	14	<10
1000S 750E	4	14	10	<1	4	16	<10
1000S 800E	6	10	14	1	4	18	<10
1000S 850E	6	8	8	<1	<4	4	<10
1000S 1050E	6	6	10	1	4	38	<10
1000S 1150E	4	<4	4	<1	<4	16	15
1000S 1200E	4	<4	8	<1	<4	26	20
1000S 1350E	4	<4	8	<1	<4	18	<10
1000S 1400E	6	14	10	1	4	14	<10
1000S 1500E	8	<4	4	<1	<4	50	15
3000S 750W	20	22	28	1	24	8	<10
3000S 700W	8	6	22	<1	4	12	<10
3000S 650W	16	6	6	<1	4	14	<10
3000S 550W	6	8	16	<1	8	14	15
3000S 500W	10	6	8	<1	40	14	<10
3000S 350W	10	12	12	<1	60	10	<10
3000S 300W	6	10	12	<1	40	14	<10
3000S 250W	4	8	14	<1	12	14	<10
3000S 200W	2	<4	12	<1	4	14	<10
3000S 100W	4	<4	6	<1	8	12	<10
3000S 50W	6	6	4	<1	4	8	<10
3000S 00E	4	4	36	<1	4	32	<10
3000S 50E	4	<4	26	<1	4	20	<10

.../ 4

COMLABS Pty Ltd
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM811514 O/N : SDL/5304/016

Results in ppm

SAMPLE	Cu	Pb	Zn	Ag	Mo	Sn	W
3000S 100E	4	6	40	<1	<4	18	<10
3000S 150E Rock	2	<4	22	<1	4	22	<10
3000S 150E Soil	4	36	18	<1	4	22	<10
3000S 150E Qtz	4	<4	8	<1	4	10	<10
3000S 250E	4	8	28	<1	<4	14	15
3000S 600E	36	6	14	<1	20	16	<10
Mud Sample	10	16	12	<1	140	6	<10
3500S 800W	12	6	28	<1	8	16	15
3500S 750W	4	8	16	<1	8	8	<10
3500S 700W	6	6	12	<1	32	12	<10
3500S 650W	6	6	24	<1	12	12	<10
3500S 600W	10	<4	18	<1	8	12	<10
3500S 550W	4	8	12	<1	8	10	15
3500S 500W	8	<4	30	<1	8	16	<10
3500S 400W	4	6	14	<1	4	12	<10
3500S 350W	4	<4	22	<1	4	14	<10
3500S 250W	4	<4	24	<1	<4	14	<10
3500S 200W	4	8	18	<1	4	16	15
3500S 150W	4	6	28	<1	4	10	15
3500S 100W	4	6	22	<1	4	10	<10
3500S 50W	4	4	20	<1	4	14	<10
3500S 00E	4	4	20	<1	4	4	15
3500S 50E	4	<4	40	1	8	6	<10
3500S 100E	2	<4	42	<1	4	10	<10
3500S 150E	2	6	18	<1	4	14	15

Method of Analysis Cu Pb Zn : AAS1 Ag : AAS3 Au : AAS5A
As : XRF1

031

774031

COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

NATA REGISTERED No. 1526

Head Office and Central Laboratory
305 SOUTH ROAD,
MILE END SOUTH
STH. AUST. 5031
TEL.: (08) 43 5722
TELEX: AA89323

Queensland Preparation Laboratory
172 LAVARACK AVE.,
EAGLE FARM,
QUEENSLAND. 4007
TEL.: (07) 268 4748

OUR REF.: COM 811536

YOUR REF.: Order No SDL/5304/019

Mr. S. Lee,
Santos Ltd.,
183 Melbourne Street,
NORTH ADELAIDE. S.A. 5006.

7.10.81

Dear Simon,

RE: JOB COM 811536

Enclosed are the assays for the samples delivered to our laboratory on the 24th September, 1981.

Yours sincerely,

Harry Fishman
Managing Director

c.c: D. Clarke

COMLABS Pty Ltd
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM811536 O/N : SDL/5304/019

Results in ppm

SAMPLE		Cu	Pb	Zn	Ag	Mo	Sn	W
1000S	00E	10	6	34	<1	<4	6	<10
1000S	50W	10	8	12	<1	<4	12	20
1000S	150W	8	8	10	<1	<4	16	15
1000S	200W	8	6	38	<1	<4	18	15
1000S	250W	8	6	34	<1	<4	14	<10
1000S	300W	10	<4	20	<1	<4	18	<10
1000S	350W	8	6	34	<1	<4	12	<10
1000S	400W	4	6	32	<1	<4	12	<10
1000S	450W	4	<4	6	<1	<4	4	15
1000S	500W	4	8	14	<1	4	16	15
1000S	550W	12	6	36	<1	<4	22	15
1000S	600W	6	6	34	<1	<4	10	<10
1000S	650W	6	6	10	<1	4	14	<10
1000S	700W	6	12	10	<1	4	14	<10
1000S	750W	6	14	12	<1	4	14	15
1000S	800W	6	10	8	<1	4	10	<10
2000S	400W	8	6	24	<1	<4	12	<10
2000S	350W	8	6	38	<1	<4	20	15
2000S	250W	8	10	38	<1	<4	14	<10
2000S	200W	6	<4	6	<1	<4	16	<10
2000S	150W	4	6	14	<1	4	26	15
2000S	100W	6	4	6	<1	<4	10	<10
2000S	50W	8	6	12	<1	<4	16	<10
2000S	00E	6	4	30	<1	<4	16	<10
2000S	50E	6	10	26	<1	<4	14	<10

.../ 2

COMLABS Pty Ltd
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM811536 O/N : SDL/5304/019

Results in ppm

SAMPLE	Cu	Pb	Zn	Ag	Mo	Sn	W
2000S 150E	4	6	28	<1	<4	16	<10
2000S 200E	8	6	32	<1	<4	10	15
2000S 250E	6	8	32	<1	<4	8	<10
2000S 300E	6	6	46	<1	<4	16	<10
2000S 350E	4	6	30	<1	<4	26	<10
2000S 400E	2	8	32	<1	4	12	<10
2000S 450E	2	8	14	<1	4	12	<10
2000S 500E	4	<4	8	<1	4	14	<10
2000S 500E	2	10	22	1	4	22	15
2000S 550E	2	<4	8	<1	4	14	<10
2000S 700E	<2	8	14	<1	4	10	15
2000S 750E	<2	4	28	<1	<4	8	15
2000S 800E	<2	12	14	<1	4	14	<10
2000S 900E	<2	10	14	<1	<4	8	<10
2000S 950E	<2	6	14	<1	<4	8	<10
2000S 1000E	<2	8	28	<1	<4	18	<10
2000S 1200E	<2	<4	6	<1	<4	12	<10
2000S 1350E	<2	10	10	<1	<4	6	<10
2000S 1450E	<2	14	12	<1	<4	12	<10
2000S 650E	4	6	18	<1	<4	6	15
2000S 850E	<2	10	30	<1	<4	16	15
2000S 1000E	<2	10	10	<1	8	18	<10
2000S 1050E	<2	8	6	<1	<4	8	<10
2000S 1100E	<2	8	12	1	4	14	<10
2000S 1150E	<2	<4	10	<1	<4	6	<10

.../ 3

COMLABS Pty Ltd
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM811536 O/N : SDL/5304/019

Results in ppm

SAMPLE	Cu	Pb	Zn	Ag	Mo	Sn	W
2000S 1250E	<2	4	22	<1	<4	12	<10
2000S 1300E	<2	<4	10	<1	<4	12	<10
2000S 1400E	<2	16	14	<1	4	8	<10
3000S 450W	<2	10	12	<1	65	14	<10
3000S 300E	<2	8	12	<1	<4	16	<10
3000S 400E	<2	<4	20	<1	<4	18	<10
3000S 450E	<2	4	14	<1	<4	18	<10
3000S 500E	<2	6	24	<1	<4	12	<10
3000S 550E	<2	8	22	<1	<4	12	15
3000S 600E	<2	<4	14	<1	<4	16	<10
3000S 650E	<2	4	18	<1	<4	14	15
3000S 700E	2	4	16	<1	<4	12	<10
3000S 750E	2	<4	18	<1	<4	14	<10
3000S 800E	2	4	24	<1	<4	12	<10
3000S 850E	2	22	12	<1	<4	8	<10
3000S 900E	2	16	16	<1	<4	10	<10
3000S 950E	4	8	10	<1	<4	14	<10
3000S 1000E	4	4	22	<1	<4	8	<10
3000S 1050E	4	<4	18	<1	<4	4	<10
3000S 1450E	4	8	24	1	4	12	<10
3000S 1500E	4	10	26	<1	4	8	<10
3500S 200E	6	<4	12	<1	<4	14	<10
3500S 250E	4	<4	20	<1	<4	10	<10
3500S 300E	6	6	42	<1	<4	16	<10
3500S 350E	4	<4	24	<1	<4	8	<10

.../ 4

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COMLABS Pty Ltd
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM811536 O/N : SDL/5304/019

Results in ppm

SAMPLE	Cu	Pb	Zn	Ag	Mo	Sn	W
3500S 400E	4	14	16	<1	<4	14	<10
3500S 450E	4	14	18	<1	<4	14	15
3500S 500E	10	8	10	<1	<4	12	<10
3500S 550E	6	8	30	<1	<4	20	15
3500S 600E	4	8	26	<1	<4	12	<10
3500S 650E	4	4	20	<1	<4	10	<10
3500S 700E	2	<4	18	<1	<4	18	<10
3500S 750E	4	4	18	<1	<4	14	<10
3500S 800E	4	6	30	<1	<4	8	<10
3500S 850E	4	16	16	<1	<4	12	<10
3500S 900E	2	14	14	<1	<4	14	<10
3500S 950E	6	6	26	<1	<4	12	15
3500S 1000E	4	24	10	1	<4	8	<10
3500S 1050E	2	6	6	<1	<4	10	<10
3500S 1100E	8	12	12	<1	4	16	15
3500S 1150E	4	4	8	<1	<4	6	<10
3500S 1250E	2	20	10	<1	4	10	<10
3500S 1300E	2	20	10	<1	4	10	15
3500S 1350E	6	38	18	1	8	14	50
3500S 1400E	4	4	30	<1	<4	12	<10
3500S 1450E	4	10	16	1	8	26	20
3500S 1500E	4	<4	10	<1	<4	14	<10
4000S 00E	6	6	18	<1	12	20	<10
4000S 50E	2	6	18	<1	<4	8	<10
4000S 100E	2	<4	18	<1	12	12	<10

.../ 5

COMLABS Pty Ltd
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM811536 O/N : SDL/5304/019

Results in ppm

SAMPLE	Cu	Pb	Zn	Ag	Mo	Sn	W
4000S 150E	2	8	32	<1	28	12	15
4000S 200E	2	8	16	<1	20	12	<10
4000S 250E	2	6	22	<1	<4	12	<10
4000S 300E	2	<4	20	<1	<4	14	<10
4000S 350E	<2	10	28	<1	<4	10	15
4000S 350E	2	<4	16	<1	<4	8	<10
4000S 400E	<2	4	18	<1	<4	12	<10
4000S 450E	2	4	10	<1	12	10	<10
4000S 500E	2	<4	20	<1	<4	12	15
4000S 550E Rock	2	4	22	<1	<4	12	15
4000S 550E Soil	2	8	18	<1	<4	10	<10
4000S 600E	2	6	18	<1	<4	16	<10
4000S 650E	2	6	20	<1	<4	10	<10
4000S 700E	2	8	22	<1	<4	<4	<10
4000S 750E	2	12	14	1	<4	6	<10
4000S 800E	4	8	10	<1	<4	8	<10
4000S 850E	2	10	10	<1	4	18	15
4000S 900E	2	32	16	<1	<4	12	<10
4000S 950E	4	18	12	<1	<4	8	<10
4000S 1000E	6	8	14	<1	<4	6	<10
4000S 1100E	2	16	14	<1	<4	4	<10
4000S 1250E	4	12	10	<1	<4	<4	15
4000S 50W	8	16	40	<1	32	8	<10
4000S 100W	4	12	22	<1	85	12	15
4000S 150W	2	8	34	<1	4	16	<10

.../ 6

COMLABS Pty Ltd
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM811536 O/N : SDL/5304/019

Results in ppm

SAMPLE		Cu	Pb	Zn	Ag	Mo	Sn	W
4000S	200W	2	6	22	<1	<4	10	15
4000S	250W	2	8	26	<1	4	14	<10
4000S	300W	2	6	20	<1	<4	18	<10
4000S	400W	<2	8	24	<1	<4	12	15
4000S	450W	2	<4	12	<1	4	12	15
4000S	500W	2	6	10	<1	4	14	<10
4000S	600W	<2	<4	4	<1	<4	8	<10
4000S	650W	2	<4	6	<1	<4	10	<10
4000S	700W	<2	6	8	<1	<4	10	<10
4000S	750W	2	10	26	<1	<4	10	<10
4000S	850W	2	10	10	<1	8	12	<10
4000S	900W	2	8	6	<1	4	<4	<10
4000S	950W	2	8	10	<1	<4	4	<10
5000S	1000W	4	16	10	<1	4	4	<10
5000S	950W	2	14	16	<1	8	10	<10
5000S	900W	4	8	38	<1	<4	10	<10
5000S	850W	4	10	44	<1	4	18	15
5000S	800W	4	<4	22	<1	<4	12	<10
5000S	750W	4	10	16	<1	4	<4	<10
5000S	700W	6	6	24	<1	4	6	15
5000S	650W	4	<4	18	<1	4	8	15
5000S	600W	2	8	28	<1	4	16	15
5000S	550W	2	12	24	<1	<4	16	<10
5000S	500W	6	6	10	<1	<4	12	15
5000S	450W	2	<4	8	<1	<4	10	<10

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COMLABS Pty Ltd
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM811536 O/N : SDL/5304/019

Results in ppm

SAMPLE		Cu	Pb	Zn	Ag	Mo	Sn	W
5000S	400W	6	4	12	<1	4	4	<10
5000S	350W	6	<4	8	<1	<4	8	<10
5000S	300W	2	4	10	<1	4	10	<10
5000S	250W	4	6	12	1	8	16	<10
5000S	150W	4	<4	16	<1	<4	<4	15
5000S	100W	4	6	16	<1	<4	16	<10
5000S	50W	2	<4	18	<1	<4	10	<10
5000S	00E	2	6	26	<1	<4	4	20
5000S	50E	4	6	24	<1	<4	8	15
5000S	100E	<2	<4	18	<1	<4	6	<10
5000S	150E	2	4	22	<1	<4	10	<10
5000S	200E	2	16	18	1	8	10	<10
5000S	250E	<2	<4	8	<1	4	10	<10
5000S	300E	4	18	20	<1	8	12	<10
5000S	350E	4	18	20	1	8	14	<10
5000S	400E	2	6	24	<1	<4	6	<10
5000S	450E	2	<4	14	<1	<4	4	<10
5000S	500E	2	<4	10	<1	<4	4	<10
5000S	550E	4	6	12	<1	<4	10	<10
5000S	600E	2	8	12	<1	<4	8	<10
5000S	650E	2	<4	8	<1	<4	8	<10
5000S	700E	2	6	28	<1	<4	8	<10
5000S	750E	2	6	24	<1	<4	10	<10
5000S	800E	4	12	16	1	4	12	<10
5000S	850E	2	6	14	<1	<4	8	<10

.../ 8

COMLABS Pty Ltd
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM811536 O/N : SDL/5304/019

Results in ppm

SAMPLE	Cu	Pb	Zn	Ag	Mo	Sn	W
5000S 900E	6	18	14	<1	4	6	<10
5000S 950E	4	14	22	<1	4	12	<10
5000S 1000E	4	14	22	1	4	12	<10

Method of Analysis : Cu Pb Zn : AAS1
Ag Mo : AAS3
Sn W : XRF1

040

COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

774040

NATA REGISTERED No. 1526

Head Office and Central Laboratory
305 SOUTH ROAD,
MILE END SOUTH
STH. AUST. 5031
TEL.: (08) 43 5722
TELEX: AA89323

Queensland Preparation Laboratory
172 LAVARACK AVE.,
EAGLE FARM,
QUEENSLAND. 4007
TEL.: (07) 268 4748

OUR REF.: COM 811726

YOUR REF.: Order No JBW/5304/003

Mr. D. Clarke,
Santos Ltd.,
183 Melbourne Street,
NORTH ADELAIDE. S.A. 5006.

3.11.81

Dear David,

RE: JOB COM 811726

Enclosed are the assays for the samples delivered to our laboratory on the 16th October, 1981.

Yours sincerely,

Harry Fishman
Managing Director

041

774041

COMLABS Pty Ltd
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM811726 O/N : JPV/5304/003

Results in ppm

SAMPLE		Pb	Sr
2000S	50E	220	95
3000S	600E	490	<2
3500S	750E	310	12
	SC 1	690	7
	SC 2	410	<2
	SC 3	440	3

Method of Analysis : Rb Sr : XRF1

APPENDIX II

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774043

MT. STRONACH S.P.L. 772

Location: Mt. Stronach - Lucky Strike Peak granite lies within S.P.L. 772 of 14 sq.km. held by Hellyer Mining and Exploration Pty. Ltd., and is about 4 km. E of Scottsdale in N.E. Tasmania.

Access: The prospect area can be reached via the North Scottsdale Road (northern section) and St. Helen's Road (southern section). A good gravel road passes through the N.E. section. Tracks of varying quality diverge from this to other parts of the mountain; the most important track passes along the ridge to the top of Mt. Stronach.

Topography: The S.P.L. is largely occupied by two considerable granite peaks, Mt. Stronach to the south, and Lucky Strike Peak to the north. Generally the E and W flanks of Mt. Stronach are very steep; the N and S flanks are more gentle. The slopes of Lucky Strike Peak are relatively gentle apart from the steep N flank.

All of the granite hills are clothed with eucalypt forest of varying inpenetrability. There are some scrub choked creeks and areas of thick re-growth.

Geology: The granite hills are a complex of Devonian granitic rocks. The Mines Department map shows them as adamellites and plagioclase was observed in fresh rock.

Most of the hills are underlain by medium to coarse grained pink, white and orange biotite "granites". The biotite is generally notably finer- grained than the quartz-felspar.

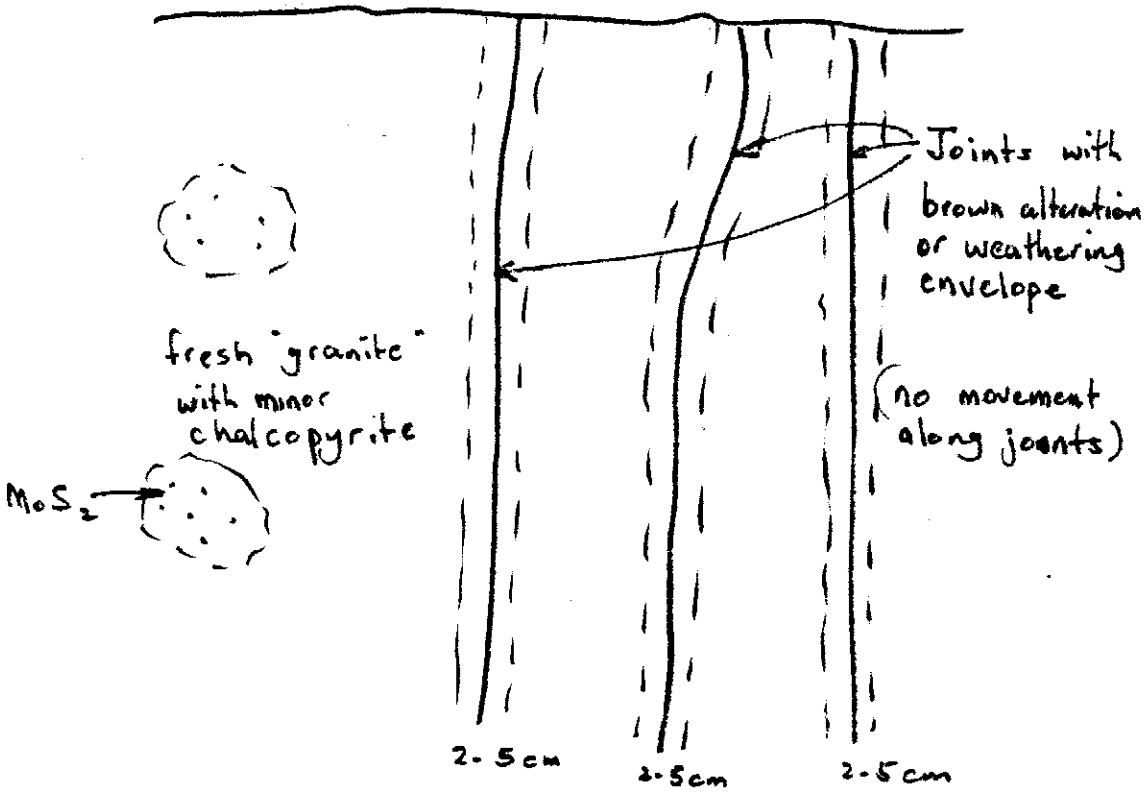
Within the area bounded by 3000 S, 4000 S and the baseline, there is an abundance of aplite and fine grained low biotite granite. The aplite is pink to dark red. Minor "pegmatite" (e.g. quartz-microcline-biotite) veins also occur in this area.

A notable feature of the granite is the poorly developed jointing; only in a few places were joints observed to be well developed.

Mineralization: Very coarse grained pods of molybdenite occur in granite on the west side of Mt. Stronach. The occurrences are well exposed in two "bulk" sample sites. Roughly circular masses up to 15 cm. diameter occur in fresh grey equigranular biotite "granite". There is no evidence of any hydrothermal alteration, and the molybdenite is not directly associated with any fracturing. Very minor chalcopyrite is disseminated within the "granite" around the molybdenite.

Please see sketch overleaf showing relationship between "joints" and molybdenite pods.

Mineralization (cont.):-



The relationship between the joints and the MoS_2 mineralization is not clear, as the pods of sulphide are not seen to be associated with any fractures. However, the joints were seen at both major molybdenite sites, and in two places where similar joints were seen, careful search found some molybdenite. Nowhere was an intense development of the joints seen.

Very small flakes of molybdenite were noted within small short quartz veins near 3000 S 0000 E, together with minor molybdic ochre. Again, nowhere was a notable concentration of quartz veins observed, although floaters are relatively common.

At the Southern "bulk sample site" on line 3500 S yellow clay has formed along some joints, probably due to preferential weathering rather than alteration. There also appears to be some secondary biotite in "clots" associated with pegmatitic veins.

Overall the grade of the molybdenite mineralization would be exceedingly low, notwithstanding that some selected specimens would show high grades.

Gridding:

A base line was laid out at 347° magnetic. This was cut 5 km. from the northern margin of the S.P.L. Slopes were measured in the field and corrections applied using tables to give a slope corrected 25m. spacing on a horizontal projection.

Crosslines were cut 1.5 km. E and 1 km. west at 0000 S, 1000 S, 2000 S, 3000 S, 3500 S, 4000 S, 5000 S. These were slope corrected also.

Sampling:

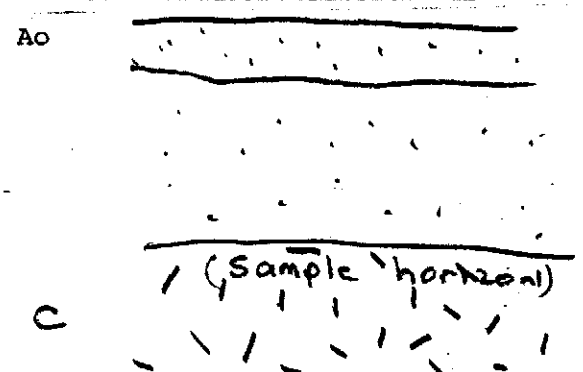
The intention was to collect soil and rock samples at each point. However this proved to be impracticable; where outcrop occurs there is generally poor development of soil and vice versa.

Outcrop is essentially 100% on the crest, and upper third of the hill slopes. Down slope outcrop becomes less common and towards the base of the hill becomes rare. Generally "soil" or deeply weathered granite can be found at depths of 30 cm. or so.

Rock samples were taken from the freshest outcrop available near the grid point. Chips were taken from a number of different outcrops at each side.

Soil samples consist of yellow to brown sandy clays, representing deeply weathered granite. Typical soil profiles are sketched below:

(1) Soil profile on lower slopes



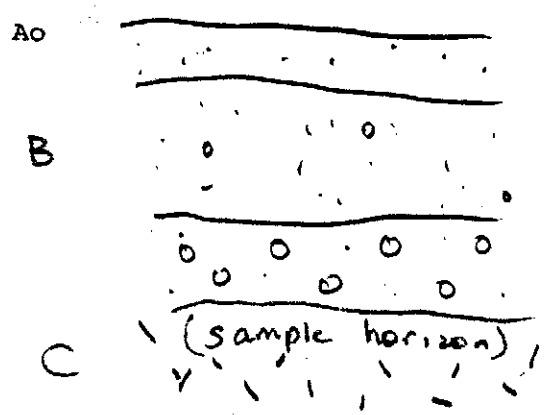
Organic layer; up to 10 cm.

Sand Coarse grained, grey to black.

Organic matter common in upper section. Up to 40 cm.

Clays Yellow-brown sandy clay. Fe oxide concentrations in upper layer. Grades down into weathered granite.

(2) Profile on flats E of hills



Organic layer; minor sand.

Sand Grey, friable, minor pebbles.

Organic matter near top.

Pebbly sand; sometimes strongly cemented. Sn wash?

Clays Yellow-brown clays, grading to deeply weathered granite.

The profile above is typical of the flats E of the hills; the pebbly sands are probably equivalent of the stanniferous drift worked extensively in the Forester River Valley.

(3) To the west, the overburden thickens rapidly from the foot of the hills.

Previous Work:

A soil sampling and rock powder sampling programme was carried out by Aust. Hanna in 1970-71. Soil samples were collected on a 400 ft. square grid. Maximum soil values were 80 ppm, threshold 25 ppm, outlining an "anomalous" area about 500m long N-S and 250m wide. This is not coincident with known mineralization.

The rock powder sampling outlined "anomalous" area near the top of Mt. Stronach. The anomaly is based on only a few samples but would be near an area of joints as described under known mineralization.

The area outlined by Hanna's soil anomaly was briefly ground checked but no mineralization detected. Some small quartz veins occur in the area.

Summary:

Past prospecting has shown that pods of molybdenite mineralization occur on the W face of Mt. Stronach.

Evidence from Hanna's work suggests that several other occurrences exist in the same general area. The same sampling suggests that:-

(i) background values are low, less than 2 ppm.

(ii) anomalies are "spotty" and suggestive of isolated poddy mineralization.

Observations of the "mineralized" area to date indicate:-

(i) sparse poddy molybdenite occurs within an area bounded by 3000 S 000 E and 3800 S.

(ii) There is no evidence of alteration or fracturing, disseminated molybednite or veinlet occurrences.

(iii) the mineralization is associated with an arcuate aplitic phase (see air photo) and locally but not directly with a minor joint set.

N.R. Langsford

October 1981

APPENDIX III

NOTES ON THE GEOLOGICAL AND GEOCHEMICAL SURVEY, MOUNT STRONACH

The data from this survey have been plotted on a base map at a scale of 1:5,000 and the following points can be made.

1. Molybdenum

There is general agreement between the molybdenum results of this survey and that of Hanna in 1970. There is some doubt, however, as to the precise co-ordinates of the Hanna base point on the current grid.

There may be some relationship between high molybdenum values and a generally fine grained, biotite poor granitic/aplitic phase within the main granitic intrusion. The approximate boundary of this phase has been tentatively drawn on the geological plan. It is interesting to note that all anomalous molybdenum values in this survey and most of those of Hanna's survey occur within this boundary, close to the western and southern edge of this phase.

There is no regular or obvious relationship between molybdenum values in fresh rock and highly weathered granitic clays.

2. Copper

There are nine samples with readings greater than a threshold of 10 ppm Cu. The three highest, between 3000S 600W and 700W, are immediately west (down hill) of the anomalous molybdenum area, indicating a relationship between copper and molybdenum mineralization in this area.

3. Zinc

Most samples of rock returned values between 10 and 40 ppm, with no really anomalous readings. Values of weathered granite and soil samples were generally considerably lower than the rock samples.

4. Lead

Most samples returned values less than 20 ppm, with only two samples greater than 30 ppm.

5. Silver

A few samples were on the detection limit of 1 ppm; most were below.

6. Wolfram

Only one sample, 3500S 1350E, at 50 ppm, can be regarded as possibly anomalous.

7. Tin

The best samples - 1000S 1050E at 38 ppm and 1000S 1500E at 50 ppm have probably been concentrated by eluvial or alluvial processes. Within the rock or weathered granite samples, there are several

7. (cont.)

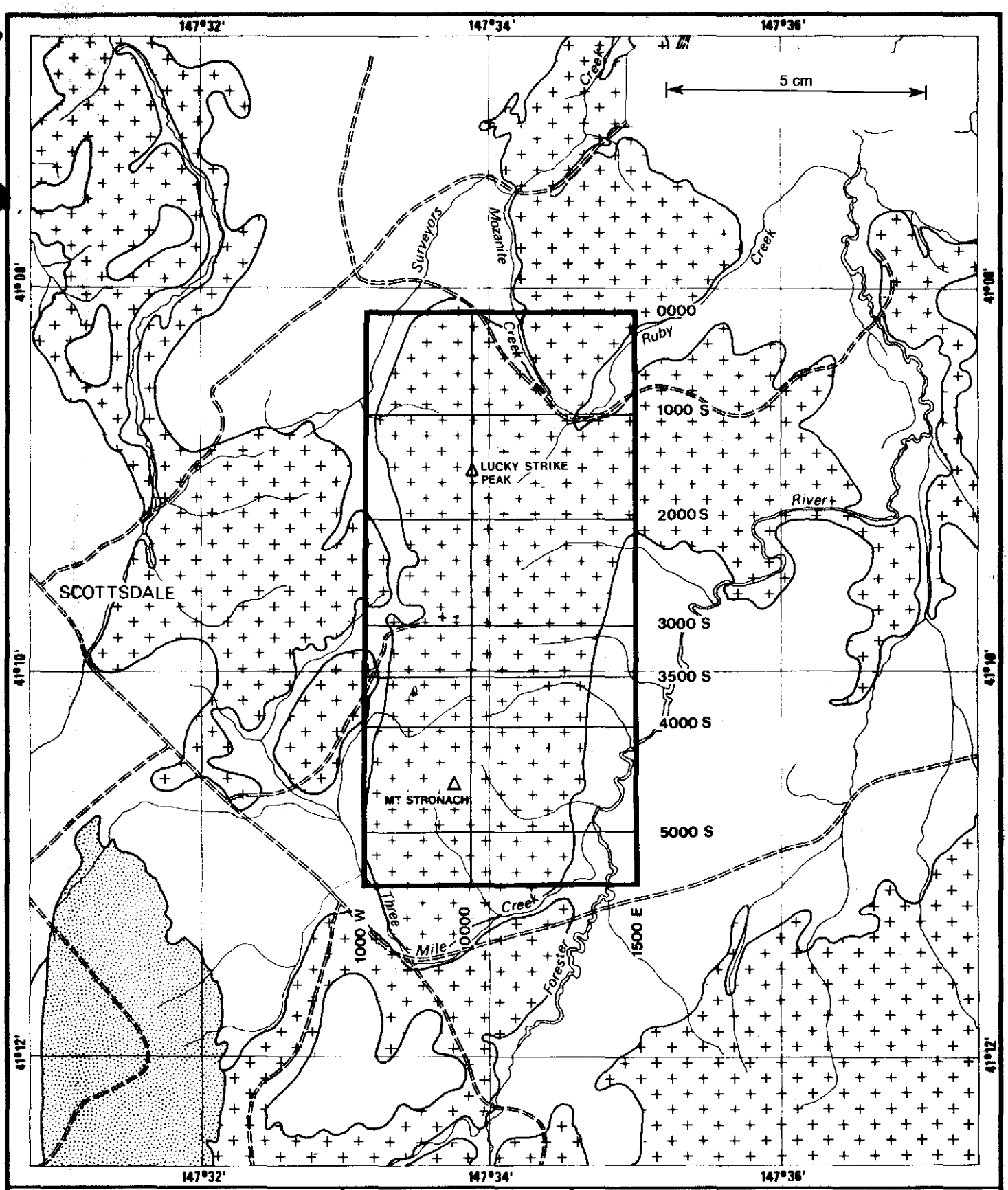
samples above a regional threshold of about 20 ppm. The highest value, at 3000S 00E at 32 ppm may be due to mineralization associated with quartz-feldspar veins noted in the field.

J. B. Westhoff

15.10.81

JBW:gj

003



LEGEND

- CAINOZOIC
- UPPER DEVONIAN–LOWER CARBONIFEROUS–Granitoids
- SILURO–DEVONIAN–Mathinna Beds

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NORTH EAST TASMANIA

SPL 772–MT. STRONACH

LOCATION PLAN

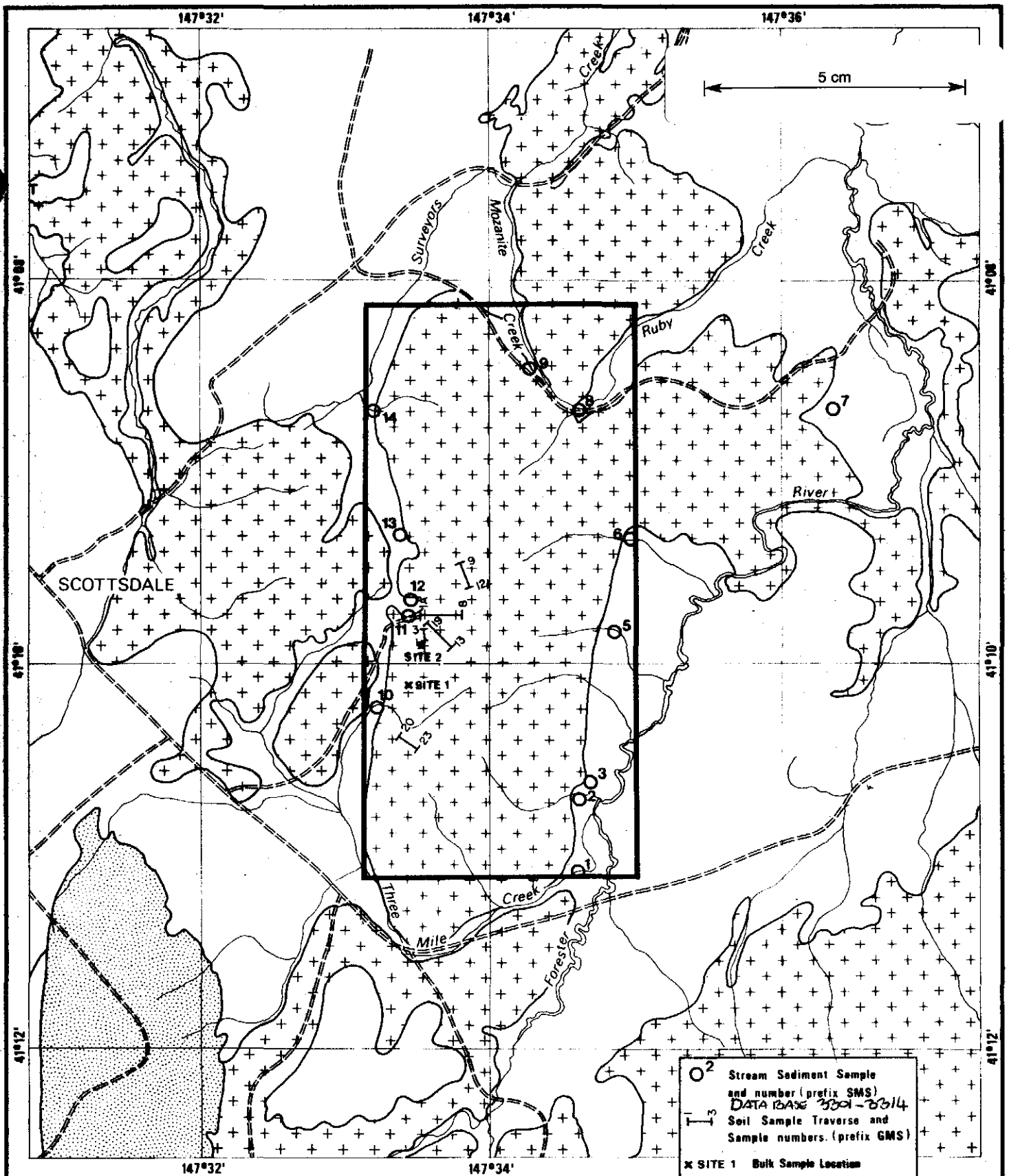
774050

SCALE 1:50000

1 0 1 2

KILOMETRES

FIG. 1



LEGEND

- CAINOZOIC
- UPPER DEVONIAN–LOWER CARBONIFEROUS–Granitoids
- SILURO–DEVONIAN–Mathinna Beds

HELLYER MINING & EXPL. PTY. LTD.

774051

NORTH EAST TASMANIA

SPL 772–MT. STRONACH

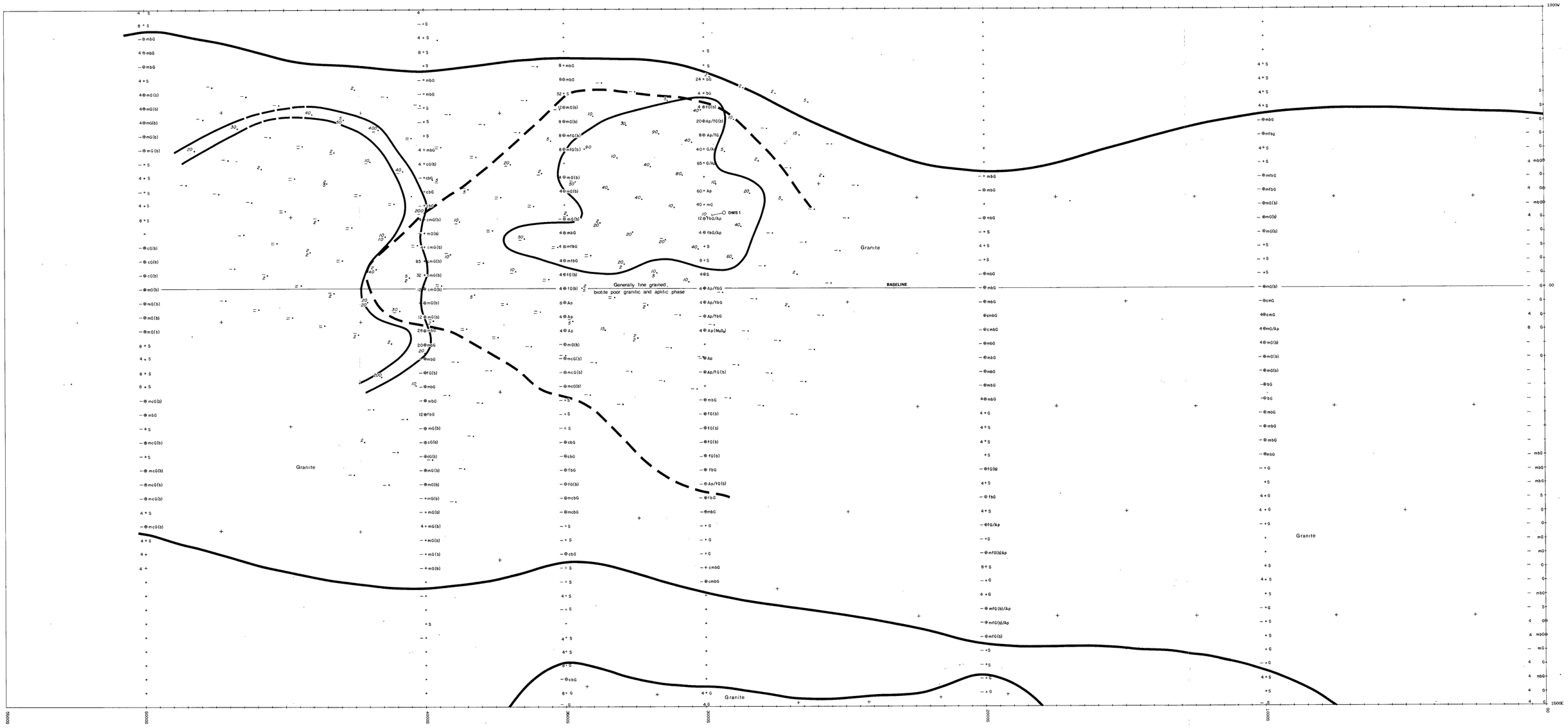
GEOLOGICAL PLAN SHOWING LOCATION OF STREAM SEDIMENT, CHECK SOIL SAMPLES & BULK SAMPLE SITES

SCALE 1:50000

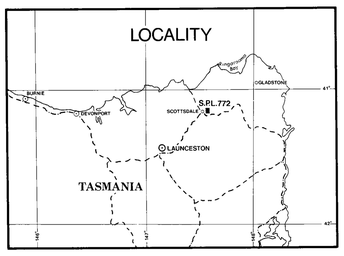
1 0 1 2

KILOMETRES

FIG.2



LOCALITY



LEGEND

c – COARSE GRAINED
m – MEDIUM GRAINED
f – FINE GRAINED
b – BIOTITE PRESENT
(b) – BIOTITE POOR or ABSENT
G – GRANITE
S – SAND, SOIL, CLAY
Ap – APLITE
⊕ – FRESH ROCK

2 — HANNA ROCK DUST SAMPLE (ppm Mo.)
5 — HANNA SOIL SAMPLE (ppm Mo.)
NOTE HANNA ROCK DUST SAMPLE ONLY WHERE ONE VALUE GIVEN

4+ MOLYBDENUM ASSAY (ppm.) (HELLYER)

+20ppm MOLYBDENUM CONTOUR

774058

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NORTH EAST TASMANIA

S.P.L. 772 MT. STRONACH

GRID PLAN SHOWING GEOLOGY, SOIL/ROCKCHIP SAMPLING & MOLYBDENUM ASSAYS

5 cm

2739

Scale 1:5000

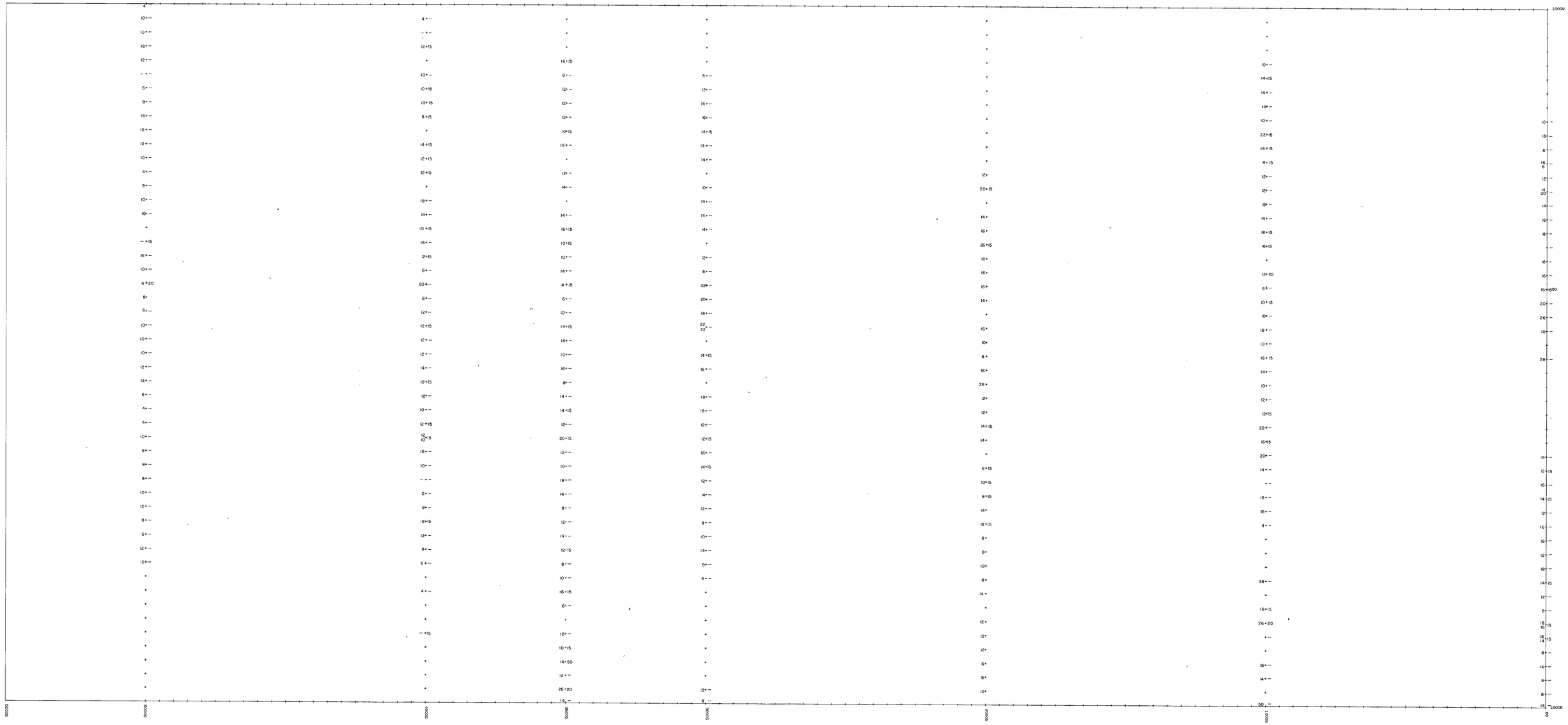
0 50 100 200 300 400 500 600

Metres

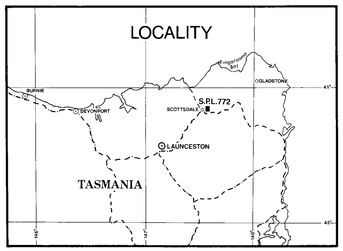
FIGURE 3

82-1763

S82-0202/5-L2



774053



LEGEND

TIN TUNGSTEN

ROCK SAMPLE — 12 + 15

SOIL SAMPLE — 10

NOTE ROCK SAMPLE ONLY WHERE ONE TIN VALUE GIVEN

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S.P.L. 772 MT. STRONACH

SOIL SAMPLE LOCATION PLAN SHOWING TIN & TUNGSTEN ASSAYS

5 cm

2740

Scale 1 5000

0 50 100 200 300 400 500 600

Metres

FIGURE 4

82-1763

882-0199/6-L1

774054

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NORTH EAST TASMANIA

S.P.L. 772 MT. STRONACH

SOIL SAMPLE LOCATION PLAN

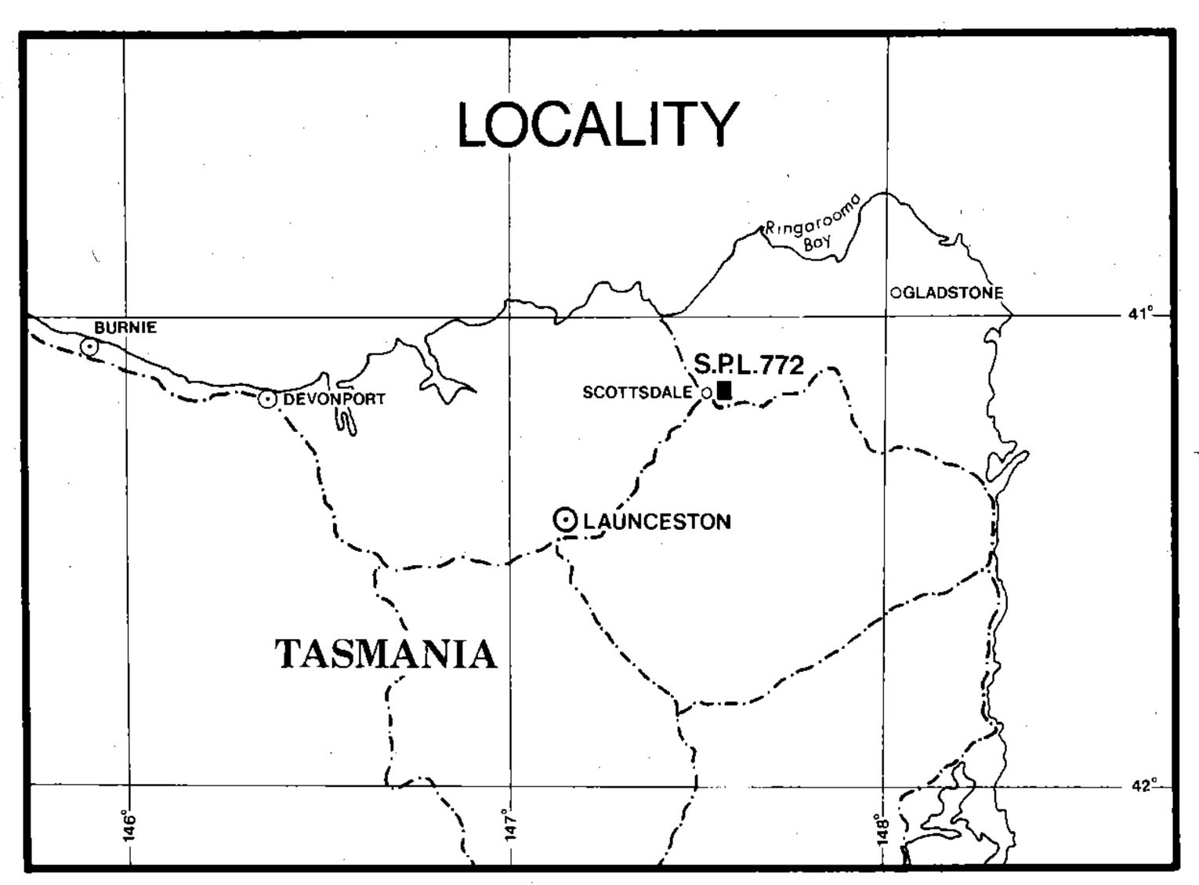
SHOWING COPPER ASSAYS

2741

Scale 1:5 000

Metres

FIGURE 5



LEGEND

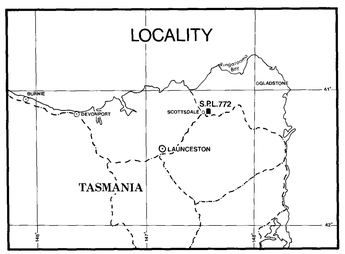
4 — ROCK SAMPLE
2 — SOIL SAMPLE

NOTE: ROCK SAMPLE ONLY WHERE ONE VALUE GIVEN

82-1763

882-0200/6-L1

1000W	500W	0	500E	1000E	1500E
10+16	10+8	+	+	+	+
16+14	6+8	+	+	+	+
38+8	10+10	+	+	+	+
44+10	+	28+6	+	+	8+10
22+—	26+10	16+8	28+22	+	12+14
16+10	8+6	12+6	22+6	+	10+12
24+6	6+—	24+6	6+6	+	10+6
18+—	4+—	18+—	14+6	+	34+6
28+8	+	12+8	16+8	+	36+6
24+12	10+6	30+—	8+6	+	14+8
10+6	12+—	+	12+10	+	6+—
8+—	24+8	14+6	+	24+6	32+6
12+4	28+10	22+—	12+12	38+6	34+6
8+—	20+6	+	12+10	+	20+—
10+4	26+8	24+—	14+8	38+10	34+6
12+6	22+6	18+8	12+—	6+—	38+6
*	34+8	28+6	+	14+6	10+8
16+—	22+12	22+6	6+—	6+4	+
16+6	40+16	20+4	4+6	12+6	12+8
18+—	18+6	20+4	36+4	30+4	34+6
26+6	18+6	40+—	26+—	26+10	30+4
24+6	18+—	42+—	40+6	22+10	32+8
18+—	32+8	18+6	22— 18 36	28+6	14 6 4 —
22+4	16+8	12+—	+	32+6	28+8
18+16	22+6	20+—	28+8	32+8	26+4
8+—	20+—	42+6	12+8	46+6	32+4
20+18	16+—	24+—	28+	30+6	28+8
20+18	+4	16+14	20+—	32+8	30+6
24+6	10+4	18+14	14+4	14+8	40+6
14+—	20+—	10+8	24+6	8+—	38+8
10+—	22 4 18 8	30+8	22+8	8+—	30+4
12+6	18+6	26+8	14+—	+	34+6
12+8	20+6	20+4	18+4	18+6	6+10
8+—	22+8	18+—	16+4	14+8	+
28+6	14+12	18+4	18+—	28+4	10+14
24+6	10+8	30+6	24+4	14+12	14+10
16+12	10+10	16+16	12+22	30 10 10	8+8
14+6	16+32	14+14	16+16	14+10	+
14+18	12+18	26+6	10+8	14+6	+
22+14	14+8	10+24	22+4	28+8	+
22+14	+	6+6	18+—	6+8	10+6
+	14+16	12+12	+	12+8	+
+	+	8+4	+	10+—	4+—
+	+	+	+	6+—	8+—
+	10+12	10+20	+	22+4	+
+	+	10+20	+	10+—	+
+	+	18+38	+	10+10	8+—
+	+	30+4	+	14+16	10+14
+	+	16+10	24+8	12+14	+
		10—	26 10		4—



LEGEND

ZINC LEAD

ROCK SAMPLE — 2 + 4 / 4 + 8 — SOIL SAMPLE

NOTE ROCK SAMPLE ONLY WHERE ONE ZINC/LEAD VALUE GIVEN

774055

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NORTH EAST TASMANIA

S.P.L. 772 MT. STRONACH

SOIL SAMPLE LOCATION PLAN SHOWING LEAD & ZINC ASSAYS

5 cm

2742

Scale 1 : 5000

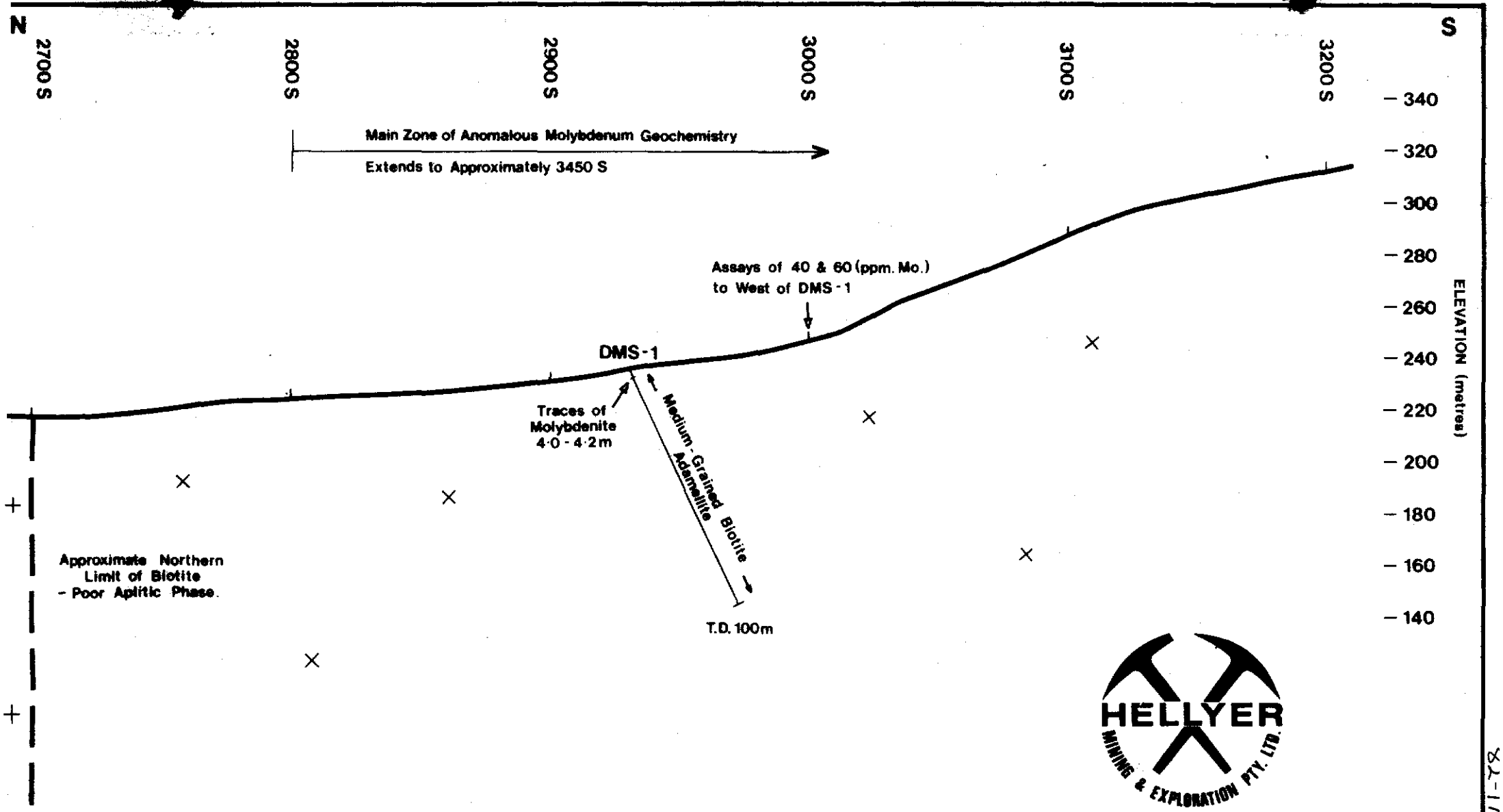
0 50 100 200 300 400 500 600

Metres

FIGURE 6

32-1763.

SS2-02017/6-L2



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GEOLOGICAL CROSS SECTION DMS-1

FIGURE 7