Drill Hole Completion Report

DDH SV1

E.L. 4/73, Sterling Valley
Tasmania

by

D.C. Simpson

June 7, 1977

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309003

INTRODUCTION

In late 1976 Abminco and Asarco agreed to test for tin mineralisation beneath a trench exposure of slates in Sterling Valley containing 0.65% Sn over 3 metres. One diamond drill hole of 150 metres length was planned to test the down-dip extent of this mineralisation.

Following an IP survey the inclination of the hole was changed from -60^{o} to -45^{o} to provide information on a frequency effect/resistivity anomaly which lies to the east of the tin values in the trench.

The hole was subsequently drilled and completed on March 30, 1977 without intersecting significant tin mineralisation or fully explaining all geophysical anomalies.

This report summarises the results of the drilling and a subsequent geophysical interpretation.

DIAMOND DRILL HOLE SV1

This hole was commenced on March 22, 1977 and completed on March 30 at 150 metres.

Target

The target was the down dip extension of an exposure in a trench about 5 metres north of line 4040N. This exposure is pyritic shale which averaged 0.65% Sn over 3 metres. The easting of this zone is 5062E to 5065E.

Geology

The shale which was intersected in the drill hole, was established as prospective for tin mineralisation following a geochemical survey carried out in the previous year.

Three major rock units were intersected in the drill hole. These are (in order down hole and in descending stratigraphic order):

1) massive sandstone with interbedded black shale - 5.5 to 51.5m

2) grey graphitic shale with interbedded siltstone - 51.5 to 99.8m, true thickness about 48m.

3) green-grey sericite quartz schist - 99.8 to 150m, true thickness 50m plus.

Thin section examination of rocks from this latter unit (see Appendix III) show that it consists primarily of schistose, sericitised, devitrified fine grained rhyolitic crystal vitric tuffs. Potash and felspar-carbonate-sphalerite-pyrite veinlets are common and there are traces of disseminated pyrite.

Core bedding angles in core are 70 to 80 degrees. The simplest structural interpretation is a sequence dipping west 50 degrees. The core/bedding angles suggest the dip may have steepened as much as 10 degrees in depth, or that some minor fault displacement is present.

Mineralisation

Disseminated pyrite occurs throughout the shale unit. Weak disseminations and veinlets of pyrite with traces of pyrrhotite and sphalerite were observed in the quartz-chlorite schist.

The entire shale section from 52.0 to 99.8 metres was sampled at one metre intervals and assayed for Sn by X-ray fluorescence and Cu, Pb, Zn by AAS at the laboratory of Abminco at the Cleveland tin mine. Spot samples of the quartz-sericite schist were also assayed. The results of all assays appear in Appendix II.

The highest Sn value, was 0.2% from 68.0 to 69.0m, corresponding with a zone of slight silicification. All remaining values were in the range 0.01 to 0.05%. Calibration of the XRF technique restricted the lower limit of detection. Consequently some values will undoubtedly be less than 0.01% Sn.

Highest Cu value was 0.2% but most samples within the shale unit showed 0.1% or above. Lead and zinc values were uniformly low.

GEOPHYSICS

The main geophysical anomalies in the vicinity of line 4040N are Induced Polarisation and Resistivity anomalies between 5000E and 5200E At other proposed drill targets in the property a magnetic anomaly coincides with the IP and resistivity target.

The electrical anomaly pattern from 5000E to 5200E is very complex, indicative of multiple broad sources. Between 5025E and 5075E a broad resistivity low (60 to 200 Ωm) correlates with a frequency effect high (8 to 12%) to give a moderate metal factor anomaly (20 to 50). This zone has been adequately tested by drill hole SV1 and is explained by the graphite content of the grey shale with interbedded siltstones.

At large dipole spacings (n= 3 to 6), between 5100E and 5200E, the resistivity values decrease to less than 10 Ωm. This is a very strong reduction in amplitude and can only be explained by possible source geometrics:

1) a large, strong conductor centred at 5125E at a depth of approximately 50 metres,
2) a second black shale unit at approximately 5175E to 5200E, of similar electrical properties to the intersected unit at 5050E. The effects of these two sources would have to overlap to produce the pattern beneath 5125E.

A second parallel black shale unit, containing pyrite, has been mapped some 100 metres to the east of the intersected shale unit, and possibly contributes to the deep IP anomaly. However, little other evidence exists in the data to confirm that the second alternative is definitely the explanation of the strong resistivity low.

The possible presence of a large conductive source cannot be totally ignored, especially if it occurs in the quartz-sericite schist. A quick cheap method to check this interpretation would be to extend SV1 by 50 to 100m, with the second black shale unit as a secondary target.

CONCLUSION

The very low tin values in core from both the shale sequence and the quartz-chlorite schist show that the mineralisation at surface has very little depth extent. The results of SV1 provide no encouragement to further follow-up the tin mineralisation in the trench.

Provided it is feasible, and after the remainder of proposed holes are drilled, SV1 should be extended up to 100 metres to complete the test of the IP anomaly between 5100E and 5200E.

Submitted D.C. Simpson
per S. Hughes
D.C. Simpson
Geologist

Endorsed K.R. Yates
K.R. Yates
Chief Geologist

June 7, 1977

DCS:IMM

APPENDIX I

Drill Hole Record SV1

309008

007

Dominco

DRILL HOLE RECORD

Location Tasmania Property Sterling Valley District

Commenced 22/3/77 Completed 30/3/77 Core size HQ-44.6; NQ-150m

Objective To test the subsurface extent of tin mineralisation in trench on 4040N.

Alt./R.L. Co-ordinate 4973E 4040N Bearing (M) 102° Grid bearing (M) 102°

Hole N° SV1 Date May 1977 Logged DCS Dip 45°

SURVEY DATA			
DEPTH	DIP	BEARING(M)	INSTRUMENT TYPE
0	45°	102°	compass clinometer
71m	37.5°	100	Eastman
149m	30°	102°	"

GRAPH DERIVED DATA						REMARKS
DEPTH	DIP	BEARING(M)	NORTHING	EASTING	ALTITUDE	

Abminco Exploration

DRILL LOG

Hole No SV 1 Page N° 1

Feature: Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization: Trace 1-5% · Common 5-15% · Abundant 15-60% · Massive > 60%

309009

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
		Not cored			
	4.0	Quartz sericite schist - probably of tuffaceous origin. Water-worn pebbles 0-5cm.			
	5.5	Interbedded sandstones and shales. Sandstone is fine to medium grained often sericitic and locally containing minor carbonate as disseminations and veinlets.			
	10	Shales generally grey to black, phyllitic in parts. Graphite developed on some planes.			
	20	Quartz vein with wallrock fragments (sst) and minor carbonate.			
		Interbedded sandstones and shales. Sandstones predominate. Some of the sandstones, eg 32-35m, contain abundant carbonate (calcite on siderite) disseminated. Fractures at 65° to bedding and 40° to core axis contain calcite and possibly fine grained green tourmaline.			Occasional specks of pyrite seen on fractures.
		Graphite is common on shale cleavage.			
	30	Occasional veins, with minute <1mm quartz crystals, occur in sandstones. Core bedding angles 60-80°.			
	40	Quartz vein - similar to above vein and walls irregular.			
		As for 20-43.1 except less carbonate.			
	50				

5 cm

Abminco Exploration

DRILL LOG

Hole N° SV 1

600

Feature: Bedding, Foliation, Fragment (size & shape) G2, Shearing, Fault, Vein, c carbonate, q quartz

Mineralization: 309010

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		Grey shales with interbedded siltstones and carbonate beds.							
		Medium grey shales showing strong graphitic cleavage.							
	60	Minor slumping is evident in parts. Some carbonate is in the form of beds - other is as veins often associated with quartz.							
		Core bedding angle averages 70° although local variations occur.							Minor dissem. py.
	70								
	80								
								90	
	90							70	
								65 to 70	Dissem. py Trace vein py.
	100								

5 cm

Abminco Exploration

DRILL LOG

Hole N° SV1 Page N° 3

Feature: Bedding, Foliation, Fragment size & shape; Shearing, Fault, Vein; c carbonate, q quartz

Mineralization: Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive > 60%

309011

CORE REC'D	DEPTH m	GEOLOGY	MINERALIZATION
		Quartz-sericite schist	Rare py, po dissem. throughout also occasional py veins up to 5mm wide. Very rare galena specks in veinlets.
		This is a fine grained pale green to pale grey foliated rock showing considerable tectonic metamorphic effect, eg rock particles are deformed to be up to 30 times as long as they are thick. Some sections are shaley eg ~112	
	110		
		Quartz fragments constitute ~10% of the total rock - they are equigranular and angular. Feldspar fragments are characterised by diffuse grain boundaries.	
	120		
		Bedding where visible is parallel to schistosity at 70 to 80 degrees to core axis.	
			Small (2mm) vein sph
		Up to 10% carbonate is developed locally this appears to be calcite or siderite.	
	130		
		Quartz and/or carbonate veins developed locally - minor wallrock alteration is evident as slight silicification. These veinlets cut across foliation at angles up to 45°	Tr. dissem po
	140		
		Schist is assumed to be derived from vitric tuffs - see thin section report.	
	150	E O H	

VISUAL LOG | TRACE | COMMON | ABUNDANT | MASSIVE | DEPTH m

150

5 cm

APPENDIX II

Assay Results DDH SV1

012

Assay Results DDH SV 1, Sterling Valley.

309013

Sample No.	From	To	% Sn	% Cu	% Pb	% Zn
138209	52.0	53.0	0.04	0.06	0.01	0.05
138210	53.0	54.0	0.01	0.12	0.01	0.05
138211	54.0	55.0	0.01	0.10	0.01	0.02
138212	55.0	56.0	0.01	0.08	x	0.01
138213	56.0	57.0	0.02	0.12	0.01	0.12
138214	57.0	58.0	0.02	0.14	0.01	0.06
138215	58.0	59.0	0.02	0.12	x	0.01
138216	59.0	60.0	0.02	0.16	x	0.01
138217	60.0	61.0	0.02	0.10	x	0.01
138218	61.0	62.0	0.02	0.10	x	0.01
138219	62.0	63.0	0.02	0.10	0.01	0.01
138220	63.0	64.0	0.03	0.12	x	0.01
138221	64.0	65.0	0.03	0.08	x	0.01
138222	65.0	66.0	0.04	0.08	x	0.01
138223	66.0	67.0	0.05	0.20	x	0.01
138224	67.0	68.0	0.04	0.10	0.01	0.01
138225	68.0	69.0	0.20	0.10	x	0.01
138226	69.0	70.0	0.02	0.18	0.02	0.12
138227	70.0	71.0	0.02	0.14	0.01	0.11
138228	71.0	72.0	0.02	0.06	0.01	0.10
138229	72.0	73.0	0.01	0.04	x	0.03
138230	73.0	74.0	0.01	0.10	0.01	0.02
138231	74.0	75.0	0.02	0.16	0.01	0.13
138232	75.0	76.0	0.01	0.14	0.01	0.13
138233	76.0	77.0	0.01	0.16	0.02	0.12
138234	77.0	78.0	0.01	0.12	x	0.04
138235	78.0	79.0	0.01	0.14	x	0.03
138236	79.0	80.0	0.01	0.12	x	0.05
138237	80.0	81.0	0.01	0.14	x	0.03
138238	81.0	82.0	0.01	0.16	x	0.03
138239	82.0	83.0	0.01	0.18	x	0.02
138240	83.0	84.0	0.01	0.14	x	0.02
138241	84.0	85.0	0.01	0.14	x	0.03
138242	85.0	86.0	0.01	0.14	0.07	0.10
138243	86.0	87.0	0.01	0.10	0.01	0.05
138244	87.0	88.0	0.02	0.14	0.01	0.04
138245	88.0	89.0	0.02	0.14	x	0.03
138246	89.0	90.0	0.02	0.10	0.04	0.09
138247	90.0	91.0	0.01	0.16	0.02	0.04

Sample No.	From	To	% Sn	% Cu	% Pb	% Zn
138248	91.0	92.0	0.02	0.16	0.01	0.03
138249	92.0	93.0	0.02	0.12	x	0.01
138250	93.0	94.0	0.02	0.10	0.01	0.02
138251	94.0	95.0	0.02	0.12	0.01	0.01
138252	95.0	96.0	0.02	0.12	0.01	0.02
138253	96.0	97.0	0.05	0.10	x	0.01
138254	97.0	98.0	0.02	0.04	0.01	0.01
138255	98.0	99.0	0.01	0.04	0.01	0.01
138256	99.0	99.8	0.01	0.02	x	0.01
138257	105.0	106.0	0.01	0.02	x	0.01
138258	110.0	111.0	0.01	0.02	0.01	0.01
138259	115.0	116.0	0.01	0.02	0.01	0.01
138260	120.0	121.0	0.02	0.02	0.01	0.02
138261	125.0	126.0	0.01	0.02	x	0.01
138262	130.0	131.0	0.01	0.02	x	x
138263	135.0	136.0	0.01	0.02	0.01	x
138264	140.0	141.0	0.02	0.02	0.01	0.01
138265	145.0	146.0	0.01	0.02	x	0.01

x = Below detection limit

Assays carried out by Abminco N.L. assay laboratory at Cleveland Mine, Luina, Tasmania.

APPENDIX III

MINERALOGICAL REPORT ON SAMPLES FROM SV1.

015

309016

Ian R. Pontifex & Associates

TEL. 332 6744
A.H. 31 3816

26 KENSINGTON ROAD, ROSE PARK
SOUTH AUSTRALIA

P.O. BOX 91, NORWOOD
SOUTH AUSTRALIA 5067

MINERALOGICAL REPORT NO. 2155

3rd June, 1977

TO:	Mr. D. Simpson, Abminco N.L. P.O. Box 105, ZEEHAN, Tasmania 7469
YOUR REFERENCE:	Order No. 6112 Charge S. Valley 1400
MATERIAL:	Drill core from one hole at Stirling Valley south of Tullah
IDENTIFICATION:	88957 - 88962
WORK REQUESTED:	Petrographic description
SAMPLES & SECTIONS:	Returned to you by post to above address

PONTIFEX & ASSOCIATES PTY. LTD.

COMMENTS

All of these rocks have essentially the same genesis. Vague layering reflects a primary bedding, but this tends to be dominated by a cleavage, generally coincidental with bedding.

The primary rock consisted largely of glass, which is now devitrified to cryptocrystalline-microcrystalline quartz, locally mixed with ultra fine potash felspar (most clearly manifest on the stained offcuts of 957, 959).

These devitrification products preserve the textures of a primary compact mass of glass shards, which very slightly in abundance throughout the suite from greatest to least in the following order : 962, 961, 960, 957, 959, 958. In 958 they may have been destroyed by slightly more intense metamorphic recrystallisation.

Tuff crystals of quartz, lesser plagioclase and potash felspar are scattered throughout, in accessory abundance, except in 960 and 961 where they form 15% of the rock.

The other major component in all samples is sericite, as variably continuous, streaky, braided foliae through devitrified glass. At least some of this derived from thin, intercalated lutite material, which is carbonaceous in 958 and 959; but much of it also probably formed from glass.

.../

Fragments of black shale are common in 960 and 961,(which also contain the most abundant tuff crystals).

The potash-felspar-carbonate-sphalerite-pyrite veinlets (+ essential chlorite in 960) may be tentatively considered to have a volcanogenic origin. Fine disseminated pyrite is fairly common.

Thus the rocks are primarily acid crystal vitric tuffs, which in view of abundant shards may be considered ignimbritic. Superimposed metamorphic recrystallisation has produced (potassic) quartz sericite slates (or fine schists).

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018

309019

SV1 106.0 metres

88957: ignimbritic, rhyolitic (crystal) vitric tuff; (weakly sheared to quartz potash felspar sericite slate); minor quartz-carbonate-pyrite-sphalerite veinlets

This is a fairly homogeneous, very fine grained rock with thin layering at about 45° to the core axis. Accessory discontinuous veinlets of carbonate-sphalerite-pyrite are obvious in hand specimen. Staining the slide offcut indicates widespread distribution of fine potash felspar.

Petrologically the rock is seen to consist largely of a layered (bedded) compact mass of glass shards, which have devitrified to cryptocrystalline quartz. These occur within a matrix of cryptocrystalline quartz and potash felspar, intimately mixed with fine sericite - in shredded streaks due to minor shear, and thus forming a weak cleavage. This matrix also appears to be mainly altered glass, although minor argillaceous clastic material may contribute to the sericite.

Accessory small crystals of quartz, felspar, and carbonate are randomly scattered. Variably continuous veinlets composed of variable amounts of quartz, carbonate, potash felspar and generally lesser sphalerite and pyrite occur at random.

The rock is a predominantly vitric tuff with a minor "crystal" component. The abundant shards forming weakly sheared eutexitic texture indicates ignimbritic affinities. The veinlets probably represent deuteric-volcanogenic mineralisation.

SV1 113.8 metres

88958: quartz sericite slate derived from an extremely fine, largely vitric acid tuff; minor streaks of carbonaceous-lutite material; minor veins of potash felspar-carbonate carrying trace sphalerite

This is also a fairly homogeneous extremely fine-grained rock, with a fine layering and more or less coincidental cleavage oblique to the core axis. Staining of the section offcut indicates trace, extremely fine dispersed potash felspar, with several erratic veinlets and a small vein composed largely of this mineral.

In thin section it is seen to consist of a compact sequence of streaky extremely fine schistose layers of sericite, with subordinate, microscopic, attenuated lenses of micro-crystalline to cryptocrystalline quartz mosaic ± trace potash felspar. Thus the rock is a quartz-sericite slate, but the mode of occurrence of the quartz, compared with other samples in this suite, indicates that the original rock was a fine vitric tuff, but slightly more advanced shearing has destroyed primary shard textures.

Accessory, extremely small quartz and felspar (tuff) grains, and small crystals of carbonate are scattered.

Fairly abundant (10-15%), streaky slivers of carbonaceous-lutite ("black shale"), occur sporadically along the cleavage, and indicates a contribution of extremely fine "clastic" material to the original rock. Much of the sericite may have a similar origin.

Small veins of well crystalline potash felspar, minor carbonate and trace sphalerite occur through small fractures where incipient buckling and dislocation has taken place across the layering. These veins locally penetrate adjacent cleavages.

020

309021

SV1 129.8 metres

88959: ignimbritic, rhyolitic (crystal) vitric tuff; metamorphically recrystallised to potassic quartz sericite slate; minor veins of quartz, carbonate, potash felspar pyrite sphalerite and chlorite, notably a kink-dislocation axis across the cleavage

Macroscopically this core is vaguely layered, but this is dominated by a fairly well developed cleavage, in essentially the same plane, almost at right angles to the core axis. The cleavage is locally kinked with minor dislocation along an axis cutting sharply across the cleavage over a distance of about 50 mm. Staining of the slide offcut indicates that extremely fine potash felspar is widespread as an essential component.

Petrographically it is seen to consist of streaky, shredded and braided, extremely fine sericite cutting through, and intimately mixed with cryptocrystalline to microcrystalline quartz and potash felspar. Abundant, relict deformed shards are more abundant in some layers than in others, and defined by extremely small irregular clumps of devitrified glass densely clouded with secondary titanic minerals.

Accessory small (tuff) crystals of quartz and potash felspar, also small slivers of "black shale" are randomly scattered along the bedding-cleavage. The kink-axis is occupied by a discontinuous "vein" of fine crystalline quartz, lesser chlorite, potash felspar, carbonate pyrite and sphalerite. These components locally penetrate cleavages which have opened up adjacent to this "kink-axis".

SV1 138.4 metres

88960: ignimbritic, rhyolitic (crystal) vitric tuff; metamorphosed to (chlorite) quartz sericite slate; minor streaks of mete-lutite and black shale fragments; numerous quartz veinlets and a vein of chlorite-pyrite + minor quartz

This is an extremely fine grained rock with a fine-lenticular layering, including possible attenuated-perlitic textures, on a scale of about 15 mm, seen on the flat cut core surface to be virtually at right angles to the core axis. Cleavage appears to be at least partly independent of this layering and is oblique to the axis. Several, variably continuous chlorite-pyrite "veins" may be coincidental with cleavage, or locally in a plane independent of cleavage and layering.

In thin section the rock is seen to consist essentially of a layered, compact mass of devitrified and sericitised glass shards, i.e. an ignimbritic vitric tuff.

Minor streaky lenses of ultra fine quartz-sericite are probably metamorphosed lutite layers, and indeed several discrete fragments of lutite (slate) and black shale are present. Accessory small (tuff) quartz crystals are scattered.

Fine quartz veinlets ± chlorite, generally along the cleavage are quite widespread. Small spots of chlorite, and a prominent vein of chlorite-pyrite + minor quartz cuts the rock.

SV1 143.1 metres

88961: acid, crystal vitric tuff, with minor fragments of black shale; metamorphically recrystallised to quartz sericite slate; accessory disseminated pyrite

This is very similar to the rocks described above, but characterised by far more abundant quartz (and felspar) crystals of tuffeceous origin, and by larger more clearly defined black shale fragments.

Shredded, streaky and braided, variably continuous folise of sericite are ubiquitous through a patchy mass of cryptocrystelline to microcrystelline quartz and trace potash felspar, which is essentially devitrified glass. Very abundant relict shards are poorly preserved in the devitrified glass.

Stressed, broken, subrounded, rarely euhedral and embayed small crystals of quartz, plagioclase and potash felspar (total about 15%) are scattered throughout. Several fragments of black shale (3 x 10 mm) and trace small carbonate clumps are also present in the sericitic altered glass matrix.

Accessory extremely fine pyrite is fairly widely disseminated.

SV1 148.2 metres

88962: acid, crystal vitric tuff, recrystallised to quartz sericite slate, with minor fragments of black shale, and streaks of meta-lutite; single lens of "vein" quartz + trace sphalerite and barite; disseminated pyrite

Macroscopically, and in thin section, this core sample is very similar to 88961.

Streaky, fine braided, variably continuous foliae of sericite, in somewhat variable concentration in different layers are ubiquitous through a compact mass of devitrified glass shards. Small variably euhedral, broken and rarely embayed tuffaceous crystals of quartz, lesser plagioclase and potash felspar (total about 15%) are randomly scattered, more or less along the layering.

Minor streaky lenses of concentrated sericite, appear to be after intercalated lutite. Minor small, discrete, angular fragments of black shale are also scattered. A short lens of "vein" quartz has trace sphalerite and barite associated with it. Accessory extremely fine pyrite is disseminated.

E.L. 4/73

AMG 384350E 5374700N

AMG 383140E 5371050N

Midson

Sterling Valley Mine

MC. 1M/55 (E.Z.)

MC. 2M/55 (E.Z.)

Trench Tx3 — Mineralised tuff east of conductor, conductor not exposed

Swampy Tx21

Trench did not reach bedrock Tx22

Im blk. slate band with 3m qt vein, weathered tuffs at about 30% py, trace Cu

Trench Tx5

Full exposure, conductor coincident with 62cm chl blk slate 15-20%py interbedded slate/tuff sequence. 9m: 42 ppm Cu, 353 ppm Pb, 37 ppm Zn

Trench Tx23

Conductor exposed by old trench. Highly Py quartz veins at bulk slate/tuff contact.

Trench Swampy

SV1 Length 150 metres

Tx8 Tx9 Tx10 Tx17 Tx16 Tx15 Tx12

Note Trenches at 404 N, 392 N, 380 N, expose blk slate with py along cleavage and joints.

STP 105 Lenght 1062 ft, traces mineralization only.

STP 101 Length 870 ft, traces mineralization only.

Boss line: 500 N, 488 N, 476 N, 464 N, 452 N, 440 N, 428 N, 416 N, 404 N, 392 N, 380 N, 368 N, 356 N, 344 N, 332 N, 320 N, 308 N, 296 N, 284 N, 272 N, 260 N, 248 N, 236 N, 224 N, 135 N, 125 N

To Tullah; To Rosebery; Pit; Sterling River; Boss line

19514 19515 19516 19517 19520 19521 19522 19523 19524 19525 19526 19527 19528 19531 19533 19534 19535 19536 19537 19539

SCALE

100 50 0 100 200 300 400 500 metres

1 5000

5 cm

AMG REFERENCE POINTS ADDED

GN MN TN

GEOLOGICAL LEGEND OUTCROP MAP

- bi — Altered basic intrusion
- r — Fine grained devitrified rhyolite
- pr — Porphyritic rhyolite (quartz phenocryst)
- ts lt rs — Tuffaceous lithic sandstone (ts) and rhyolitic crystal lithic tuff (lt) Sheared phorphyritic rhyolite (tuff?).
- fp — Porphyritic rhyolite (feldspar phenocryst).
- qt — Fine grained porphyritic rhyolite (quartz phenocryst)
- mr — Sericitised rhyolite ? tuff
- sr — Sericite schist (Sheared sericitised phorphyritic rhyolite and dacite) Black slate inclusions common.
- st — Fine grained rhyolitic tuff, chlorite schist, sericite schist and sandstone
- dt — Sericitised fine grained rhyolite and dacite.
- c — Black slate
- pt — Altered trachytic tuff - lava and lithic tuff
- bt — Altered basic crystal lithic tuff, basalt.

Road; Vechicle track; Walking track; Creek; Abandoned railway; Abandoned mine

VERTICAL LOOP E.M (SS15)

Strong conductor; Intermediate conductor; Weak conductor

Bedding; Foliation; Cleavage.

Diamond drill hole, surface projection.

Outcrop boundary

(fp) Float or sub outcrop

19526 Petrographic sample location

E.L. 4/73

Area of E.L 4/73 covered by this plan

TASMANIA

Location code	K55/6/51
Drawn by	"ASARCO"
Checked by	
Traced by	P.F.
Scale	1:5000
Date	May 1974
Plate	SV 2

COMINCO EXPLORATION PTY. LTD.

NORTH WEST TASMANIA

E.L. 4/73 STERLING VALLEY

GEOLOGY - FACT

309025

TCR 77 - 1215

5000E

5050E

5100E

Trench projected 5metres south

Power line

3.0m of 0.65% Sn

SV 1

No Core

Alluvium

sh

py

qss

qtz

1.0m of 0.20% Sn

150m

End of hole

LEGEND

69 sh — Shale

Breccia

45 qss — Quartz - sericite schist

10 ss sh — Interbedded sandstone and shale (ss predominates)

12 py — Pyrite

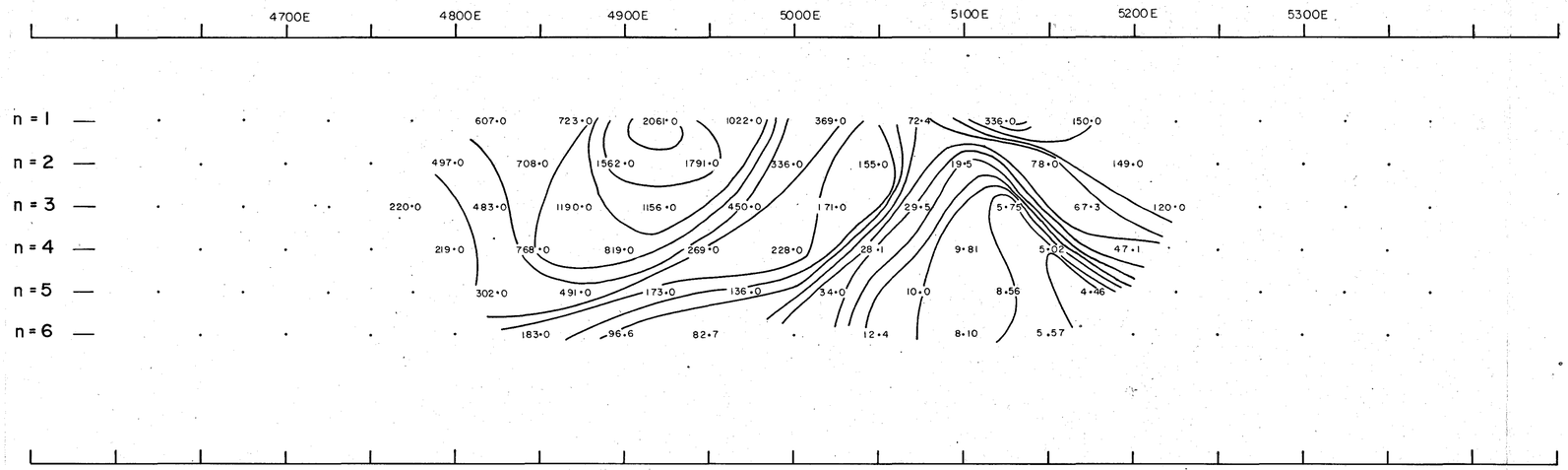
5 qtz — Quartz vein

5 cm

309026 024

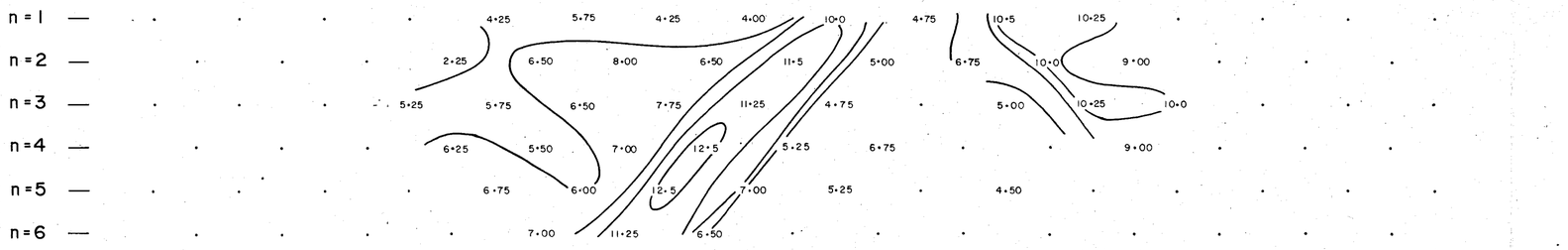
ABMINCO N.L. 78-1215

Drawn D.C.S.	NORTH WEST TASMANIA	Location code
Traced A.E.R.	STERLING VALLEY	Scale 1 500
Checked	Cross Section 4040N (looking north)	Date May 1977
Revised — Date —	Showing SV 1 & Surface Geology	Plate N° SV 15



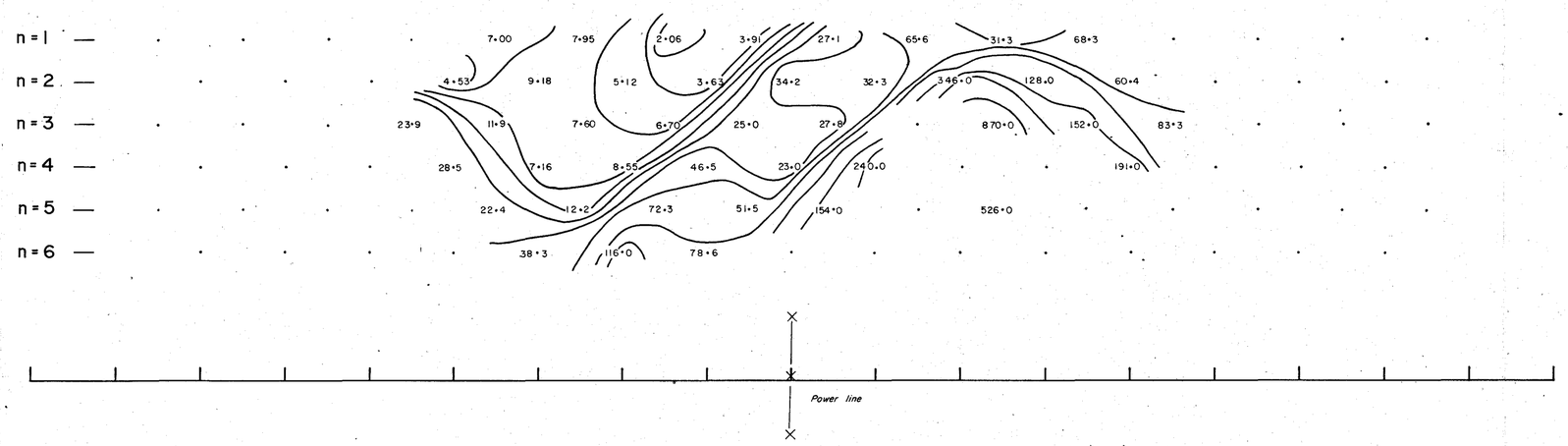
APPARENT RESISTIVITY – OHM METRES

(Logarithmic contours)



PERCENTAGE FREQUENCY EFFECT (mV/V)

(Linear contour interval)



METALLIC CONDUCTION FACTOR

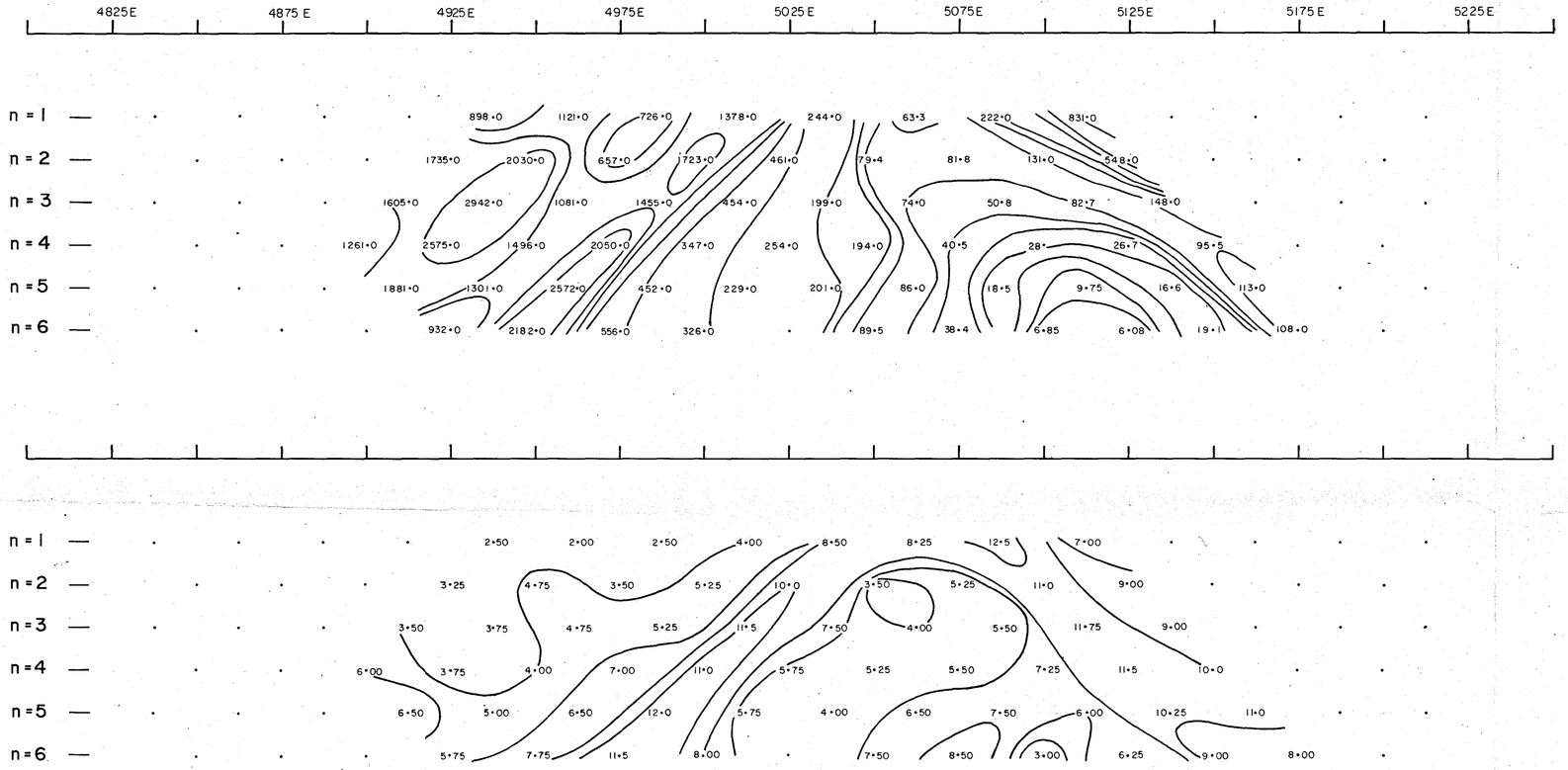
(Logarithmic contours)

5 cm

309027 77-1215 025

COMINCO EXPLORATION PTY. LTD.

Drawn by : Geoquest Pty Ltd.	Traced by : P.F.	NORTH WEST TASMANIA
Checked by :		STERLING VALLEY
		TRAVERSE 4040 N
		FREQUENCY: 2·5 - 0·3 SPACING : 50 m
Location code :	Scale: 1 : 2,500	Date : October 1976 Plate : SV 11

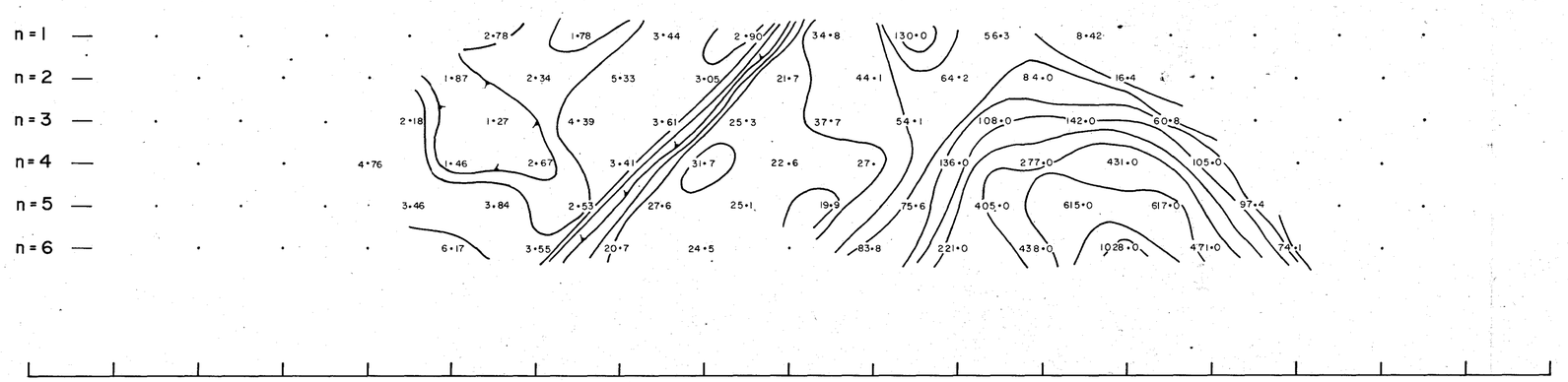


APPARENT RESISTIVITY – OHM METRES

(Logarithmic contours)

PERCENTAGE FREQUENCY EFFECT (mV/V)

(Linear contour interval)



METALLIC CONDUCTION FACTOR

(Logarithmic contours)

5 cm

309028 026

COMINCO EXPLORATION PTY. LTD. 77-1215

Drawn by: Geoquest Pty. Ltd.	Traced by: P.F.	NORTH WEST TASMANIA
Checked by:		STERLING VALLEY
		TRAVERSE 4040 N
		FREQUENCY: 2·5 - 0·3 . SPACING : 25 m
Location code:	Scale: 1:1,250	Date: October 1976 — Plate: SV 12