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00_4461

ANNUAL and FINAL REPORT

MT. ARTHUR

EL 24/98

05/06/99 to 04/06/00

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AMG REFERENCE POINTS ADDED

00_4461

Annual and Final report - Mt Arthur - EL24/98 - 5/6/1999 to 4/6/2000
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Fulton, R. EL24/1998

prepared by
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PO Box 81
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ABSTRACT

The Mt. Arthur exploration licence was taken out over ground which contains a north-north-west trending contact between a predominantly shale succession and a predominantly sandstone succession, which is interpreted to mark the north-east limb of a major anticlinal structure which extends some fifteen kilometres north, past the Lebrina Mine, and fourteen or so kilometres southwards to the flanks of Mt. Barrow. Because several occurrences of gold mineralisation are known to occur within the sandstone adjacent to the shale-sandstone contact to the north and south of Mt. Arthur, the potential for mineralisation at Mt. Arthur was tested.

Exploration consisted of digging several hundred metres of trenches in the vicinity of the shale-sandstone contact. The contact could not be located, unequivocally in any trench. Results of channel sampling in trenches was disappointing with low gold and arsenic values. The best gold assay returned 2.8 ppm gold, however follow up sampling returned a highest value of 0.03 ppm gold. A trench dug adjacent to a 10-15 metre deep old shaft sunk in silicified sandstone returned a highest assay of 0.03 ppm gold and 50 ppm arsenic. Two other samples returned gold assays of 0.63 ppm. A feature of the sampling was the consistently low arsenic.

Results to date suggest that further work is not justified, although following clear felling and deep ripping by Forestry Tasmania it may be worth a look as these activities usually result in considerable rock being brought to the surface. The contact may be more easily traced.

FIGURES

Figure No.	Title	Scale
1	E.L. 24/98 location	1:100
000		
2	E.L. 24/98 simplified geology	
1:25,000		
3	Trench location plan	
1:10,000		

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1.0 INTRODUCTION

1.1 Exploration rationale and geological setting

EL 24/98 was applied for by Mr. Peter Bardenhagen on the basis of the existence of old gold workings in the area.

In terms of regional geology the prospect falls within the Eastern Tasmanian Terrane which is the southernmost Australian expression of the Lachlan Fold Belt. In north-eastern Tasmania, the oldest rocks are a succession of turbiditic quartzwackes and pelites which range in age from early Ordovician to early Devonian, the Mathinna Group. Regional deformation in the early Devonian produced NNW trending folds within the Mathinna Group and regional very low-grade regional metamorphism. Mathinna Group rocks were intruded by NNW- to N-oriented composite granitoid batholiths during three phases from the early to the late Devonian period. Flat-lying sediments of the late Carboniferous/Early Permian to Triassic Parmeener Supergroup unconformably overlie both the Mathinna Group sediments and the Devonian granitoids. The Parmeener Supergroup rocks are intruded by thick sheets of Jurassic dolerite. Areas of Tertiary basalt are scattered through the north-east and in some areas have significantly changed pre-existing drainages. Tertiary sediments are widespread in the lower relief northern parts of the north-east. Quaternary alluvium occurs in river valleys, and on the coastal plains, windblown sands blanket much of the bedrock. Talus deposits are locally significant in some areas of more rugged relief. Primary gold mineralisation occurred during the early to middle Devonian period.

The majority of the lease is underlain by Mathinna Group sediments of Siluro-Devonian age. These area predominantly shales/mudstones to the south-west and predominantly sandstones to the north-east. The north-north-west trending contact between the shale and the sandstone is interpreted to mark the north-east limb of a major anticlinal structure (a fold) which extends some fifteen kilometres north, past the Lebrina Mine, and fourteen or so kilometres southwards to the flanks of Mt. Barrow. A few kilometres to the south at Myrtlebank there are two disseminated gold in sandstone prospects within the sandstone adjacent to the shale-sandstone contact, whilst to the north, the Lebrina mine, a quartz-sulphide reef style gold deposit, lies within the sandstone about half a kilometre from the shale-sandstone contact. Major Dunns Mine, (mineralisation style unknown) occurs just to the north of the licence area, within the sandstone a few hundred metres from the shale-sandstone contact.

These discrete occurrences of gold mineralisation within the sandstone adjacent to the shale-sandstone contact over a considerable strike length underpin the prospectivity of EL 24/98.

In the south-west portion of the licence area, some Permian sediments unconformably overlie the Mathinna Group rocks. There is a record of a palaeo-placer style gold mineralisation within these sediments, reported by the McIntosh Reid (1926). He describes a "...bed of Permo-Carboniferous mudstone conglomerate..." exposed in a road cutting (Doaks Road) and further writes that "Very little gold is associated with this member of the formation, and the quartz component is barren."

Gold mineralisation occurs in several main different styles in north-east Tasmania, and the Mt. Arthur area is prospective for the first two styles mentioned below. The different styles are:

Auriferous quartz-rich veins hosted by Mathinna Group sediments.
The vast majority of deposits are of this style. Veins vary in length up to 2,000 metres and may be as wide as 7 metres. Mined grades fall in the range of 15 to 30 g/t, but may be much higher. Vein style mineralisation occurs in two main orientations, NNW or bedding parallel and ENE.

Disseminated within sandstone
This style of mineralisation may be associated with silicification and disseminated sulphides in porous sandstones, with auriferous quartz veins absent. This style of mineralisation is reported from the nearby Denison, Golconda, Lisle and Panama fields and offers the possibility for high tonnage, low grade deposits amenable to open pitting.

Granitoid-hosted.
The Golconda-Panama area, near the Lisle field, produced about 2,000 ounces of primary gold at an average grade of about 14 g/t from narrow veins hosted within granodiorite. The granodiorites at the Lisle include magnetite series granites which are considered to be more favourable to gold mineralisation than more felsic types. The possibility of disseminated gold mineralisation within the roof zone of fractionated, high K, I-type biotite granites exists within north-east Tasmania, as similar rocks host this style of mineralisation at Timbarra, in northern NSW.

Alluvial and placer deposits.
The largest alluvial field is located within the nearby Lisle valley, and produced about 320,000 ounces of gold, Gold was present in both alluvium and elluvium, in possible lacustrine sediments and within carbonaceous horizons underlying talus. Deposits are also know from Tertiary sub-basaltic deep leads.

1.2 Tenement details

The exploration licence was granted to Mr. Frank Bardenhagen on 05/06/99 and covers an area of about 3 square kilometres.

1.3 Location

Exploration Licence 24/98 "Mt. Arthur" is located in Tasmania's north-east, approximately 30 kilometres north-east of Launceston.

1.4 Access

There is very good access to the licence area via all-weather forestry roads and good four-wheel drive tracks.

1.5 Land Status/Usage

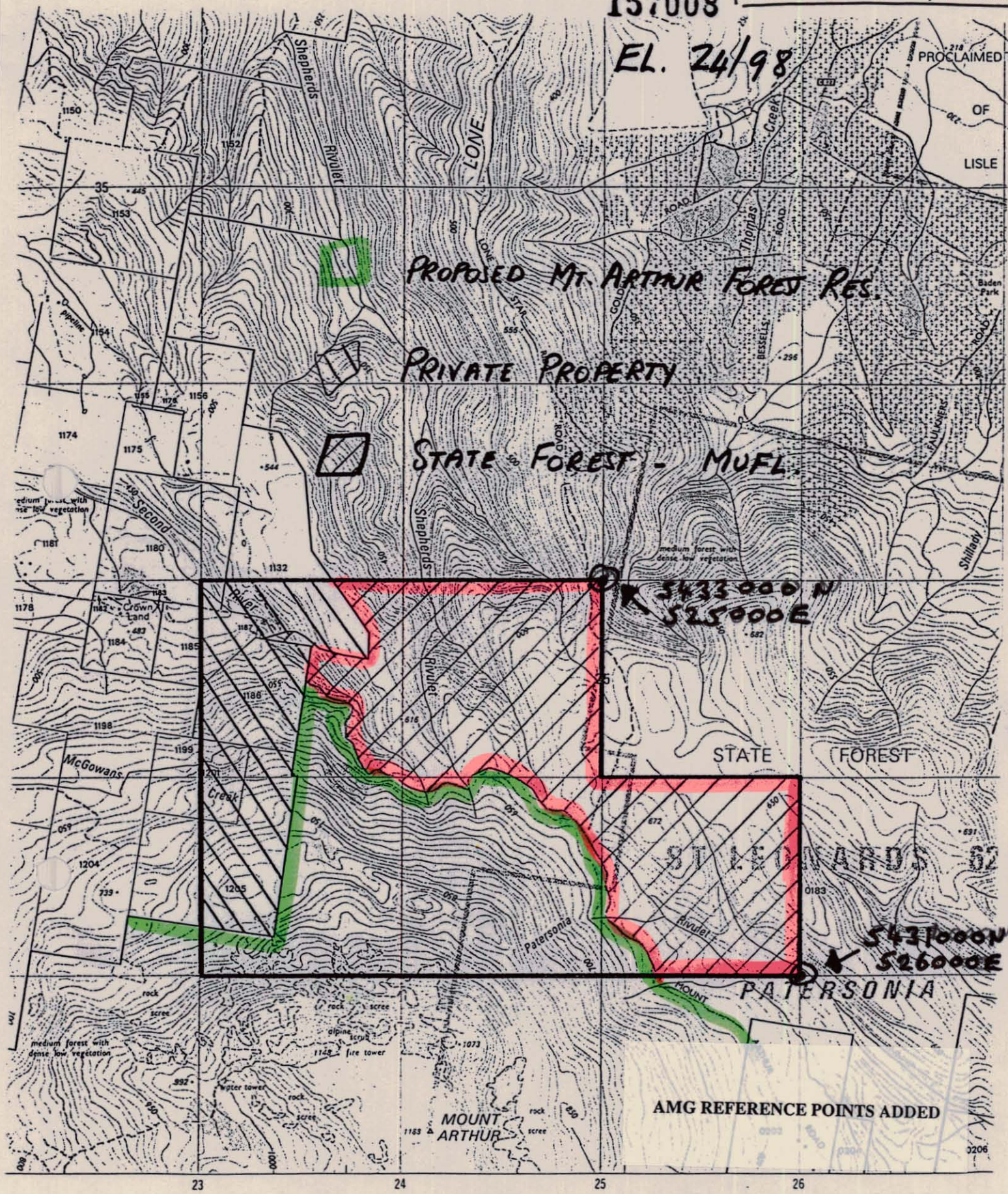
The tenement lies within one of the Strategic Prospectivity Zones which have been introduced by Tasmanian government legislation to significantly reduce the level of sovereign risk for the mining and mineral exploration industries and to guarantee resource security. The area covered by EL 24/98 is comprised entirely of State Forest. All ground within the licence area is available for exploration.

1.6 Topography and Vegetation

The licence area covers a plateau on the northern slopes of Mt. Arthur. Vegetation was predominantly myrtle and sassafras-dominated rainforest and wet sclerophyll dominated by tall eucalypts. Generally, there is relatively open going beneath the canopies of myrtle and tall eucalypts.

FROM LISLE 1:25,000 MAP SHEET

157008 | FIGURE 1 EL24/98 LOCATION



PROJECTION: Universal Transverse Mercator (UTM).
HORIZONTAL DATUM: Australian Geodetic Datum 1966.
VERTICAL DATUM: Australian Height Datum (Tasmania) excepting offshore islands whose datum is mean sea level.
GRID: 1000 metre intervals of the Universal Transverse Mercator Grid, Zone 55 (Australian Map Grid). Australian National Spheroid. Grid values are shown in full at the south west corner of the map.
CONTOUR INTERVAL: 10 metres with 50 metre index contours.

WORLD GEODETIC SYSTEM 1972: To convert co-ordinates from this system to Australian Geodetic Datum 1966, increase the value of latitudes by 5 3" and decrease the value of longitudes by 4 3". To obtain heights decrease satellite heights by 1 metre.

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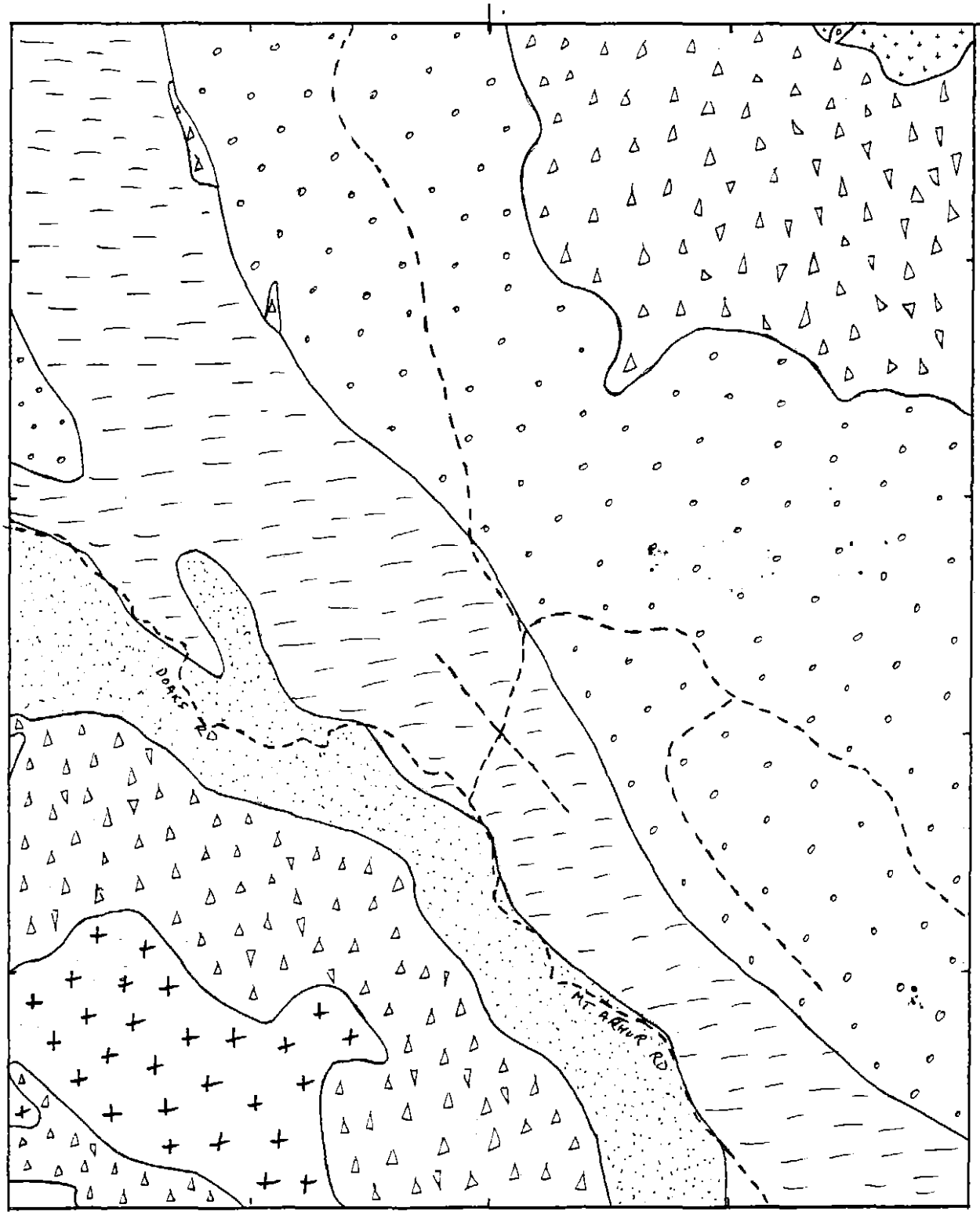
FIGURE 2
EL 24/98 Simplified geology
1:25,000



MAKHINNA GROUP predominantly mudstones

MAKHINNA GROUP predominantly sandstones

granodiorite

PERMBENNER SUPERGROUP mudstones and sandstones

Jurassic dolerite

TERTIARY & QUATERNARY talus & alluvial

road or track

Geology simplified from LISLE 1:25,000 sheet.

2.0 REVIEW OF PREVIOUS WORK

2.1 Prior to current tenement

The ground was most recently held by Macmin NL as part of EL 2/82, and was relinquished in 1998 (Hall, 1998). Macmin took 69 hand augered soil samples in a traverse along Doaks Road and 4 on the portion of the Lone Star Ridge track which falls within EL 24/98. Results from the Doaks Rd traverse were very poor with a highest gold assay of 6 ppb (most below detection) and a highest arsenic assay of 33 ppm (most samples below detection limit). The 4 samples taken on the Lone Star Ridge track showed slightly better gold values, up to 16 ppb, and arsenic values in the range 6 to 15 ppm.

An aeromagnetic survey was flown over the Lisle area by BP/Seltrust in the early nineteen eighties, and the current licence area was included in that survey. An interpretation by Roach (1992, 1994) indicates a NNW trending linear magnetic feature, interpreted as magnetic Mathinna Group rocks, running through the licence area. The linear magnetic feature is offset by an ENE trending fault.

3.0 EXPLORATION COMPLETED DURING THE REPORT PERIOD

3.1 Summary of work carried out and results

Exploration consisted of trenching using a 20 tonne excavator.
A series of trenches was excavated in an attempt to intersect the major shale-sandstone contact (Figure 3). Sampling consisted of one metre channel samples of the best looking material in trenches or grab samples, as indicated in Table 1. Samples numbered MA1 to MA25 and SBS18 to SBS28 were assayed for gold (fire assay) and arsenic at Aquatic Laboratories, Westbury. Samples numbered SBS 29 to SBS57 were assayed for gold and arsenic at Analabs, Burnie. Gold was fire assayed at both laboratories.

The area through which the sandstone-shale contact is marked on the Lisle 1:25,000 geological map is very flat with little outcrop and at the time of trenching was covered by mature myrtle forest. The area in was to be clear felled, so there were few restrictions on where the trenching could be carried out.
Trenching showed that the sandstone shale contact was not a linear feature and it could not be identified with certainty in any of the trenches.

The lithologies in trenches 6,7, and 8 were consistently fine-grained whereas in the other trenches lithologies were a mixture of shales and both fine and medium (occasionally coarser) grained sandstones. A grab sample from this area returned an assay of 2.8 ppm gold, however extensive follow-up sampling returned a high of 30 ppb gold and 7 ppm arsenic.

A small knob of very silicified sandstone occurred in the vicinity of the shaft trench, where a ten metre deep shaft has been sunk in the extremely hard rock. The shaft is very old, possibly dating back to the late nineteenth or early twentieth century. At the eastern end of the shaft trench, the silicification ends abruptly and a probable palaeo-channel was encountered with no bedrock found down to at least five metres. Samples collected in this area returned disappointing assay results with a high of 30 ppb gold and 50 ppm arsenic.

In the area of trench 2 and 5 another palaeo-channel was encountered and a big hole was excavated, the "Big Pit", to test the depth to bedrock, which is six metres and to sample the bottom of the channel for possible placer style mineralisation. Assay results were poor from both bedrock and palaeochannel samples except for one sample of silicified sandstone with pyrite casts, in trench 5 which returned 630 ppb gold.

A sample of ferruginous quartzite in trench 3 also returned 630 ppb gold, however the majority of samples returned gold assays below detection and relatively low arsenic.

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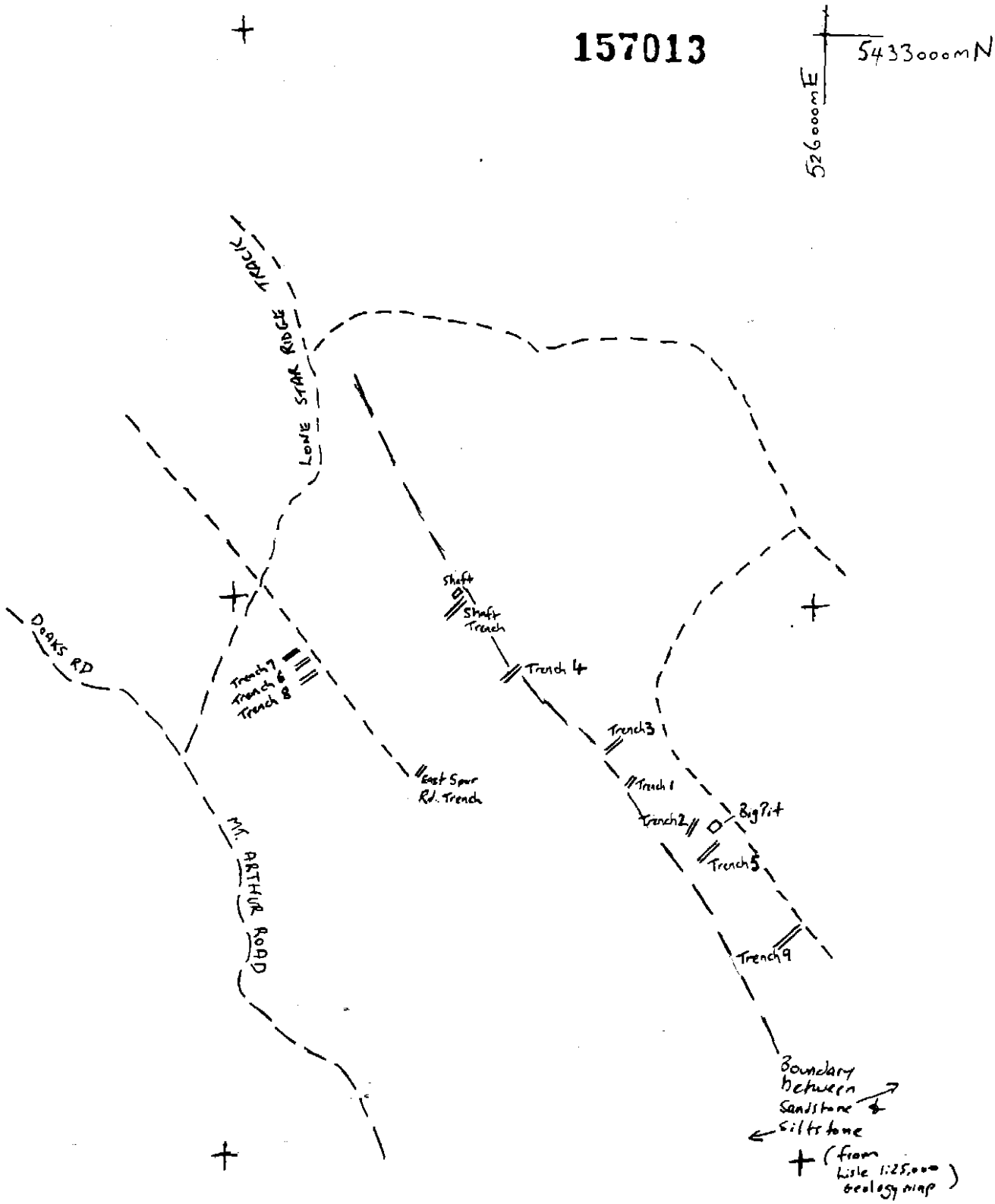

FIGURE 3
TRENCH LOCATION PLAN
SCALE 1:10,000

TRENCH SAMPLING LOG SHEET TABLE I

Trench #	Sample #	Interval From	To	Width (metres)	Assay results Au (ppb)	As (ppm)	Description
East Spur Rd	MA 1	0	10	comp	<50	<10	white buck qtz, minor mn stain
Trench 1	MA 2	0	5	comp	<50	12	white buck qtz
Trench 1	MA 3	5	10	comp	<50	23	white buck qtz
Trench 2	MA 4	8	9	1	<50	19	mg qtz SS, minor pyrite casts and fe vnlets
Shaft Trench	MA 5	5	7	2	<50	17	inten sil mg qtz SS, mod fe staining
Shaft Trench	MA 6	7	9	2	<50	13	inten sil mg qtz SS, minor fe staining
Shaft Trench	MA 7	9	10	1	<50	13	qtzite, 5% fe veinlets
Shaft Trench	MA 8	10	12	2	<50	12	green-white qtzite
Shaft Trench	MA 9	12	14	2	<50	13	green qtzite, minor fe staining
Shaft Trench	SBS 46	-	-	grab	<10	3	mg SS, minor vcg mica
Shaft Trench	SBS 47	-	-	grab	30	50	sil green SS, minor fe vnlets
Shaft Trench	SBS 48	-	-	grab	<10	2	sil green SS, 2% pyrite casts, minor fe vnlets
Shaft Trench	SBS 49	-	-	grab	20	22	vughy quartz vn, v micaceous, minor pyrite cast
Trench 3	MA 10	5	6	1	<50	<10	inten sil SS, minor qtz-fe vnlets
Trench 3	MA 11	20	21	1	630	<10	qtzite, mod ferrug
Trench 3	MA 12	15	16	1	<50	<10	qtzite, mod fe vnlets
Trench 3	MA 13	40	41	1	<50	<10	sil fg SS, mod qtz-fe vnlets, minor pyrite blebs
Trench 3	MA 14	41	42	1	<50	<10	sil fg SS, mod qtz-fe vnlets, minor pyrite blebs
Trench 3	MA 15	45	46	1	<50	<10	fl SZ, mod fe, mn staining
Trench 4	MA 16	94	95	1	110	<10	fg SS
Trench 4	MA 17	104	105	1	80	25	fg SS
Trench 4	MA 18	117	118	1	<50	<10	fg SS
Trench 4	MA 19	3.5	4	0.5	<50	<10	fg mg SS, 50% qtz vning
Trench 4	MA 20	6	7	1	<50	<10	qtzite, 20% qtz-fe vning
Trench 4	MA 21	14	15	1	<50	<10	inten sil SS, minor qtz-fe vning, pyrite casts, tr galena
Trench 4	MA 22	17	18	1	<50	15	sil SS
Trench 4	MA 23	20	21	1	<50	<10	sil SS, 10% qtz vning
Trench 4	MA 24	46	47	1	<50	15	qtzite, stockwork qtz-fe vning
Trench 4	MA 25	50	51	1	<50	<10	qtzite, fe rich
Trench 5	SBS 18	72	73	1	<50	<20	fe rich laterite c rounded SS cobbles
Trench 5	SBS 19	73	74	1	<50	<20	fe rich laterite c rounded SS cobbles
Trench 5	SBS 20	32	33	1	<50	<20	grey-green sil SS, 10% fe vnlets
Trench 5	SBS 21	18	19	1	<50	<20	grey-orange fe-ox mg SS
Trench 5	SBS 22	19	20	1	630	<20	grey-green sil mg SS, mod fe-ox, 2-5% pyrite casts
Trench 5	SBS 23	65	66	1	<50	25	blue clay, on bedrock in 5 metre deep channel
Trench 5	SBS 24	66	67	1	<50	35	fe-mn laterite
Big pit	SBS 25	-	-	grab	<50	<20	blue-grey gravel, sitting on sil SS at 6 metres depth
Big pit	SBS 26	-	-	grab	<50	<20	blue-grey gravel, sitting on sil SS at 6 metres depth
Big pit	SBS 27	-	-	grab	<50	<20	sil fg mg SS, mod dissem & blebby pyrite
Big pit	SBS 28	-	-	grab	<50	<10	sil fg mg SS, mod dissem & blebby pyrite
Trench 6	SBS 29	10	11	1	<10	<1	green fg SS, tr qtz vnlets
Trench 6	SBS 30	11	12	1	<10	<1	green fg SS, tr qtz vnlets
Trench 6	SBS 31	12	13	1	<10	3	green fg SS
Trench 6	SBS 32	22	23	1	10	<1	black fg SS
Trench 6	SBS 33	23	24	1	<10	<1	black fg SS
Trench 6	SBS 34	24	25	1	<10	<1	black fg SS
Trench 7	SBS 35	15	17	2	<10	<1	grey-black fg SS, 5% qtz vnlets
Trench 7	SBS 36	17	19	2	<10	5	grey-black fg SS
Trench 7	SBS 37	21	23	2	<10	<1	green fg SS, mod vfg fe-ox spots
Trench 7	SBS 38	23	25	2	<10	1	green fg SS, mod vfg fe-ox spots
Trench 7	SBS 39	28	29	1	<10	7	cream fg-mg SS, 5% qtz vning
Trench 7	SBS 40	29	30	1	<10	<1	green-grey fg qtz SS, 10% fe-ox qtz vnlets
Trench 7	SBS 41	30	31	1	<10	1	grey fg SS, vfg black mineral, minor fe-ox qtz vnlets
Trench 8	SBS 42	5	6	1	<10	<1	dark grey fg SS
Trench 8	SBS 43	8	10	2	30	<1	green fg SS
Trench 8	SBS 44	20	22	2	<10	4	green fg SS
Trench 8	SBS 45	22	24	2	<10	<1	grey fg SS
Trench 9	SBS 50	4	5	1	<10	8	mg qtz SS, 1-2% pyrite casts, 8mm qtz-fe vn
Trench 9	SBS 51	5	6	1	<10	3	yellow fg SS, mod-inten qtz stockwork
Trench 9	SBS 52	6	8	2	<10	1	yellow fg-mg qtz SS, 10 mm fe-qtz vnlet
Trench 9	SBS 53	15	16	1	<10	4	white qtz vn
Trench 9	SBS 54	16	17	1	<10	1	sil fg-mg SS
Trench 9	SBS 55	23	25	2	<10	3	pale green , laminated folded fg SS-SZ
Trench 9	SBS 56	25	27	2	20	33	green-orange mg SS, mod mica, qtz-fe vning
Trench 9	SBS 57	29	30	1	30	20	yellow sil mg SS,60% qtz vning

fg = fine grained, mg = medium grained, v... = very..., fe = iron, mn = manganese, grab = grab sample, comp = composite sample
SS = sandstone, SZ = siltstone, Qtzite = quartzite, qtz = qtzinten = intense, mod = moderate, tr = trace, sil = silicified

4.0 CONCLUSIONS

The sandstone/shale contact was not encountered in any of the trenches. Assay results were fairly poor, especially in the vicinity of the Shaft Trench where some old-timers had gone to considerable effort to sink a shaft through a small patch of the most indurate rocks in an area of several square kilometres. The consistently low arsenic in all samples, combined with the lack of gold, suggests that no major mineralising fluids have affected the rocks in the areas trenched. It should be noted, however, that no gridded soil/bedrock geochemical survey has been undertaken and the picture may change if such were to be carried out.

Further exploration is not justified at this stage, however following clear felling and deep ripping of the area, it may be worth a look as these forestry practices often result in considerable rock being brought to the surface in areas of poor or no outcrop.

5.0 ENVIRONMENT

All the trenching was carried out in areas that had been significantly disturbed, or were subsequently disturbed, by Forestry Tasmania. All trenches have been filled in.

6.0 REFERENCES

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APPENDIX

Appendix No 1. **Assay Sheets**

AQUATIC LABS
The Tassy Assay Professionals

Enquires:J.R.Lethborg(B.Sc.Chemistry)
Phone : 003 931 774
Your reference : Purchase Order
Our file :991111-1131

Assay laboratory
Box 126,
Westbury
Tasmania 7303

26 August, 1999

Dear Frank

Please find below the assay result on the samples collected from the Westbury bus deport.

Aquatic Labs Reg No.	Description	mg As / Kg (p.p.m) (2)	mg Au / Kg (p.p.m) (1)
991111	Frank MA 1 :	<10	<0.05
991112	Frank MA 2 :	12	<0.05
991113	Frank MA 3 :	23	<0.05
991114	Frank MA 4 :	19	<0.05
991115	Frank MA 5 :	17	<0.05
991116	Frank MA 6 :	13	<0.05
991117	Frank MA 7 :	13	<0.05
991118	Frank MA 8 :	12	<0.05
991119	Frank MA 9 :	13	<0.05
991120	Frank MA 10 :	<10	<0.05
991121	Frank MA 11:	<10	0.63 * TR3
991122	Frank MA 12 :	<10	<0.05
991123	Frank MA 13 :	<10	<0.05
991124	Frank MA 14 :	<10	<0.05
991125	Frank MA 15 :	<10	<0.05
991126	Frank nickel B1 :	<10	<0.05
991127	Frank Brewers B2:	52	<0.05
991128	Frank HR B3:	32	<0.05
991129	Frank SS B4:	52	<0.05
991130	Frank LT B5:	<10	<0.05
991131	Frank B-SS B6:	<10	<0.05
991131	Frank B-SS B6: (repeat)		<0.05

(1) Gold by fire assay

Aquatic Labs reference source for Fire assaying is "A Manual on Fire Assaying and Determination of the Noble Metals in Geological Materials" published by the American Geological Survey in 1977.

(2)Method nitric acid extraction of arsenic and flame acetylene/nitrous oxide AAS determination of extracted metal

AQUATIC LABS
The Tassy Assay Professionals

Enquires:J.R.Lethborg(B.Sc.Chemistry)
Phone : 003 931 774
Your reference : Purchase Order
Our file :991143-1158

Assay laboratory
Box 126,
Westbury
Tasmania 7303

9 September, 1999

Dear Frank

Please find below the assay result on the samples collected from the Westbury bus deport.

Aquatic Labs Reg No.	Description	mg Ni / Kg (p.p.m)	mg As / Kg (p.p.m) (2)	mg Au / Kg (p.p.m) (1)	
991143	Frank MA 16 : Assay Au & As	-	<10	0.11	* } TRT
991144	Frank MA 17 : Assay Au & As	-	25	0.08	* }
991145	Frank MA 18 : Assay Au & As	-	<10	<0.05	
991146	Frank MA 19 : Assay Au & As	-	<10	<0.05	
991147	Frank MA 20 : Assay Au & As	-	<10	<0.05	
991148	Frank MA 21 : Assay Au & As	-	<10	<0.05	
991149	Frank MA 22 : Assay Au & As	-	15	<0.05	
991150	Frank MA 23 : Assay Au & As	-	<10	<0.05	
991151	Frank MA 24 : Assay Au & As	-	15	<0.05	
991152	Frank MA 25 :	-	<10	<0.05	
991153	Frank 1 : SSMS Black stone:	-	<10	<0.05	—Ma
991154	Frank 2 : LD :		45	0.10	
991155	Frank 3 : SSMS Spot stone :	-	<10	0.13	—Ma
991156	Frank 4 : B-TIP	-	120	<0.05	
991157	Frank 5 : SSMS	-	<10	<0.05	—Ma
991158	Frank 6 : RS	-	<10	<0.05	
991126	Frank nickel B1 :	115	-	-	

(1) Gold by fire assay

Aquatic Labs reference source for Fire assaying is "A Manual on Fire Assaying and Determination of the Noble Metals in Geological Materials" published by the American Geological Survey in 1977.

(2)Method nitric acid extraction of arsenic and flame acetylene/nitrous oxide AAS determination of extracted metal

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AQUATIC LABS
The Tassy Assay Professionals

Enquires: J.R. Lethborg (B.Sc. Chemistry)
Phone : 003 931 774
Your reference : Purchase Order
Our file : 991289-1304

Assay laboratory
Box 126,
Westbury
Tasmania 7303

4 October, 1999

Dear Frank

Please find below the assay result on the samples collected from the Westbury bus deport.

Aquatic Labs Reg No.	Description	mg As / Kg (p.p.m) (2)	mg Au / Kg (p.p.m) (1)
991169	Frank Total Metals	25	0.34
991289	Frank BS-MA 1 black slate	25	<0.05
991290	Frank MD-PH-B 2	20	<0.05
991291	Frank TH-PH-HR 3	<20	<0.05
991292	Frank GS-MA 4 green slate	<20	0.53
991293	Frank LBS 5	<20	<0.05
991294	Frank SBS - 18	<20	<0.05
991295	Frank SBS - 19	<20	<0.05
991296	Frank SBS – 20	<20	<0.05
991297	Frank SBS – 21	<20	<0.05
991298	Frank SBS – 22	<20	0.63
991299	Frank SBS - 23	25	<0.05
991300	Frank SBS – 24	35	<0.05
991301	Frank SBS - 25	<20	<0.05
991302	Frank SBS – 26	<20	Lost prill Repeat next batch
991303	Frank SBS - 27	<20	<0.05
991304	Frank SBS - 28	<20	<0.05

(1) Gold by fire assay

Aquatic Labs reference source for Fire assaying is "A Manual on Fire Assaying and Determination of the Noble Metals in Geological Materials" published by the American Geological Survey in 1977.

(2)Method nitric acid extraction of arsenic and flame acetylene/nitrous oxide AAS determination of extracted metal

AQUATIC LABS
The Tassy Assay Professionals

Enquires:J.R.Lethborg(B.Sc Chemistry)
Phone : 003 931 774
Your reference : Purchase Order
Our file :991169

Assay laboratory
Box 126,
Westbury
Tasmania 7303

MT ARTHUR
SE-P94
Lian - 24/9/98

19 September

Dear Frank

Black slate

Please find below the assay result on the sample collected from the Westbury Bus Deport..

Aquatic Labs Reg No.	Description	copper mg Cu/ Kg (p.p.m) (2)	lead mg Pb / Kg (p.p.m) (2)	zinc mg Zn/ Kg (p.p.m) (2)	cadmium mg Cd / Kg (p.p.m) (2)	chromium mg Cr / Kg (p.p.m) (2)	cobalt mg Co / Kg (p.p.m) (2)	nickel mg Ni / Kg (p.p.m) (2)	arsenic mg As / Kg (p.p.m) (2)	silver mg Ag / Kg (p.p.m) (2)	gold mg Au / Kg (p.p.m) (2)
991169	Total Metals	8	7	36	<1	83	15	46	21	<1	2.8

(2)Method AQUA REGIA extraction of metals and flame acetylene/nitrous oxide AAS determination of extracted metal

Please consider Aquatic Labs for all your assaying requirements .You will not be disappointed in our service or the fees that are charged for that service.

J.R.Lethborg (B.Sc. Chemistry)

157022

157023

ANALABS

Our reference : BU017176
Your reference :
Project code : Rock Chip Samples
Report date : 06/12/99
Report status : Final
Page : 1 of 1

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Au	Au(R)	As	Sb		
SBS 29	<0.01	--	<1	<10		
SBS 30	<0.01	<0.01	<1	<10		
SBS 31	<0.01	--	3	<10		
SBS 32	0.01	--	<1	<10		
SBS 33	<0.01	--	<1	<10		
SBS 34	<0.01	--	<1	<10		
SBS 35	<0.01	--	<1	<10		
SBS 36	<0.01	--	5	<10		
SBS 37	<0.01	--	<1	<10		
SBS 38	<0.01	<0.01	1	<10		
SBS 39	<0.01	--	7	<10		
Method	F650	F650	H102	A109		
Units	ppm	ppm	ppm	ppm		
Detection Limit	0.01	0.01	1	10		

[illegible] element not determined I S = insufficient sample, L N.R. = listed not received

157024

ANALABS

Our reference : BU017201
Your reference :
Project code : Rock Chip Samples
Report date : 15/12/99
Report status : Final
Page : 1 of 1

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (03) 6431 6837
Facsimile : (03) 6431 8890

ANALYTICAL DATA

Sample	Au	Au(R)	As	Sb		
SBS 40	<0.01	--	<1	<0.05		
SBS 41	<0.01	--	1	<0.05		
SBS 42	<0.01	--	<1	<0.05		
SBS 43	0.03	--	<1	<0.05		
SBS 44	<0.01	--	4	<0.05		
SBS 45	<0.01	--	<1	<0.05		
SBS 46	<0.01	--	3	<0.05		
SBS 47	0.03	--	>50	<0.05		
SBS 48	<0.01	--	2	<0.05		
SBS 49	0.02	--	22	<0.05		
SBS 50	<0.01	--	8	<0.05		
SBS 51	<0.01	--	3	<0.05		
SBS 52	<0.01	<0.01	1	2.0		
SBS 53	<0.01	--	4	3.0		
SBS 54	<0.01	--	1	2.0		
SBS 55	<0.01	--	3	1.0		
SBS 56	0.02	--	33	<0.5		
SBS 57	0.03	--	20	<0.5		
Method	F650	F650	H102	H109		
Units	ppm	ppm	ppm	ppm		
Detection Limit	0.01	0.01	1	0.5		
Upper Method			A102			