

CONTENTS

SUMMARY AND CONCLUSIONS

INTRODUCTION

REGIONAL GEOLOGY

WORK CONDUCTED BY J.L.DAVIS

EXPENDITURE

FIGURES

1	EL 34/89	LOCATION	1:250 000
2	EL 34/89	WILLIAMS HILL REGIONAL GEOLOGY	1: 50 000
3	LOCATION OF QUARTZ VEINS, PITS AND ROCK SAMPLES		1: 2 500

APPENDICES

1	GEOLOGICAL REPORT	VIC THREADER & ASSOCIATES PTY LTD
2	ANALYTICAL REPORTS	
3	PETROLOGICAL REPORT	

SUMMARY AND CONCLUSIONS

A NW trending set of quartz veins have been prospected for gold over a strike length of 2km. The veins have a maximum width of 1.m and have been assessed by pitting and rock sampling.

All samples returned gold values at or close to the detection limit.

Further exploration of these veins for gold is not warranted.

INTRODUCTION

EL 34/89 an area of 2kms was granted to J.L.Davis & Others on 15/12/1989 for a twelve month period.

The licence is located in NE Tasmania 16km NE of Scottsdale Fig 1. The area is covered by State Forest, consisting primarily of native dry sclerophyl forest with some Pinus radiata plantations.

Access is by the Williams Hill forestry road and 4WD tracks.

Previous mineral production has not been recorded from the licence area, a shallow pit in the SE corner is the only evidence of previous work.

REGIONAL GEOLOGY AND MINERALIZATION

The licence is underlain by contact metamorphosed Siluro-Devonian Mathinna Beds, a biotite adamellite part of the Devonian Scottsdale Batholith outcrops in the SW of the licence.

Bedding, cleavage and quartz veins in the Mathinna Beds trends NW and are subparallel to the adamellite contact.

Regional geology has been mapped by the Geological Survey of Tasmania Ringarooma 1:50 000 see Fig 2. Details of the property geology are outlined by Vic Threader and are included as Appendix 1.

WORK CONDUCTED BY J.L.DAVIS

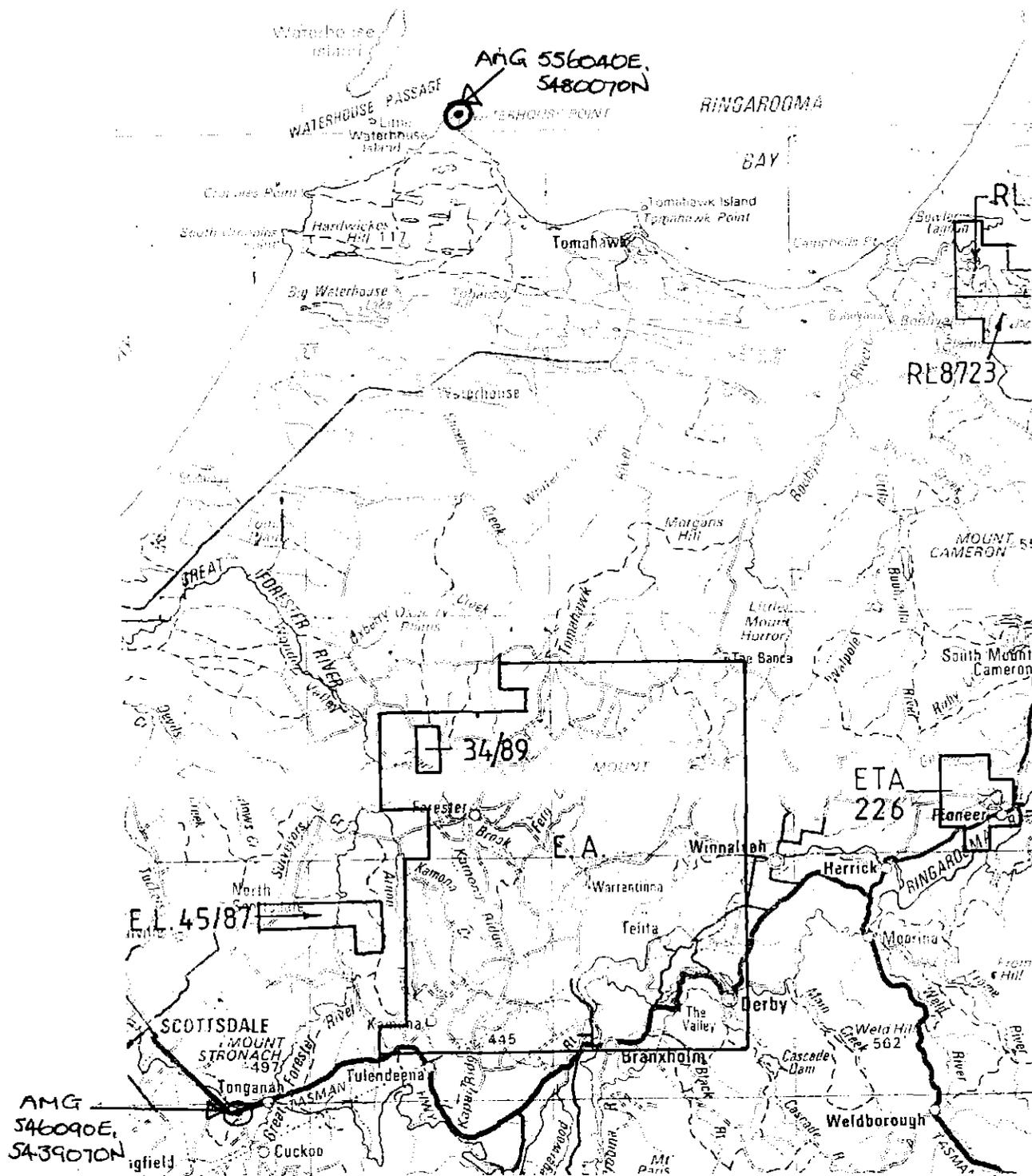
Work during the 1989/90 licence year included:

- prospecting and location of quartz veins Fig 3a,b
- exposing quartz veins by blasting and pitting
- geological assessment of the property by consultants V.Threader (Appendix 1) and R.Poltock
- assaying of 19 quartz vein samples from pits Fig 3a,b and Appendix 2
- 3 petrological descriptions of host rocks Appendix 3

EXPENDITURE

Geology	587
Geochemistry	896
Track construction and pit excavation	56975
Administration	650
TOTAL	\$59108

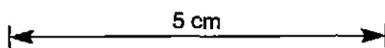
001



AMG REFERENCE POINTS ADDED

FIG 1. LOCATION EL 34/89

Scale 1:250 000



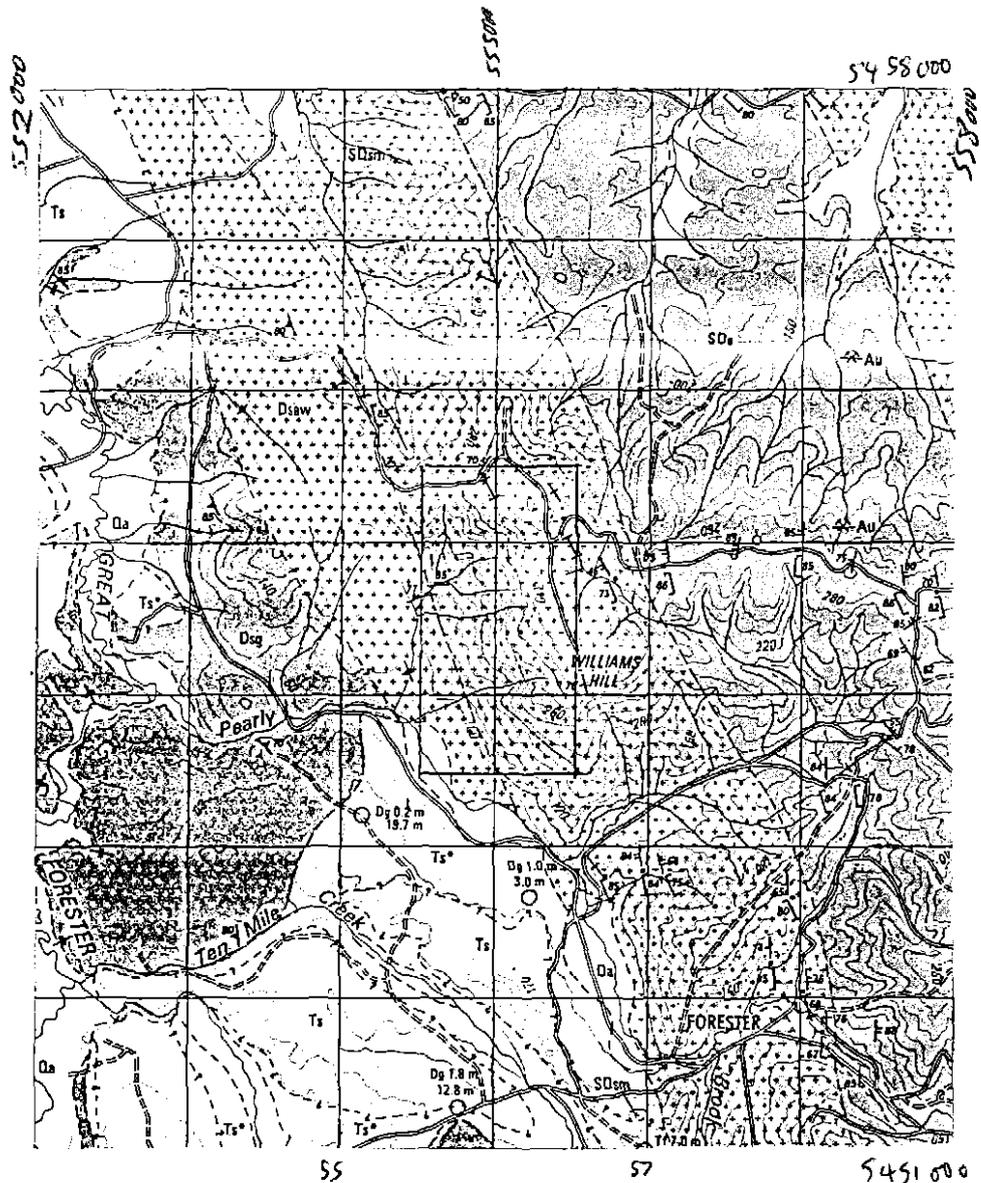


FIG 2.

E.L 34/89 WILLIAMS HILL

REGIONAL GEOLOGY

(from Geological Survey of Tasmania Ringarooma Sheet)

SCALE 1:50 000

QUATERNARY - TERTIARY

Sediments (Qa Ts)

SILURO - DEVONIAN MATHINNA BEDS

Greywacke turbidite sequence (SDs)

Contact metamorphosed psammite (SDsm)

UPPER DEVONIAN - LOWER CARBONIFEROUS SCOTTSDALE BATHOLITH

Biotite adamellite (DSaw)

Biotite hornblende granodiorite (Dsg)

54 54 000 m N

PINE PLANTATION.
FORESTRY FIRE TRAIL

55550

EL 34/89

342.90 (bedding)

342.90

145.70

902507
01-04 (6/12/90)
90/1484

CRACK

170.90

54 53 500

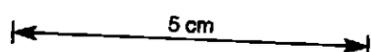
FIG 3b LOCATION OF QUARTZ VEINS, PITS AND ROCK SAMPLES

SCALE 1: 2 500

Dip and strike of quartz veins 342.90

Sample No x 902507

4WD tracks formed by Davis & Others



555000 m E

5 55 000 m E

54 55 500

E.L. 34/89

54 55 000 m N

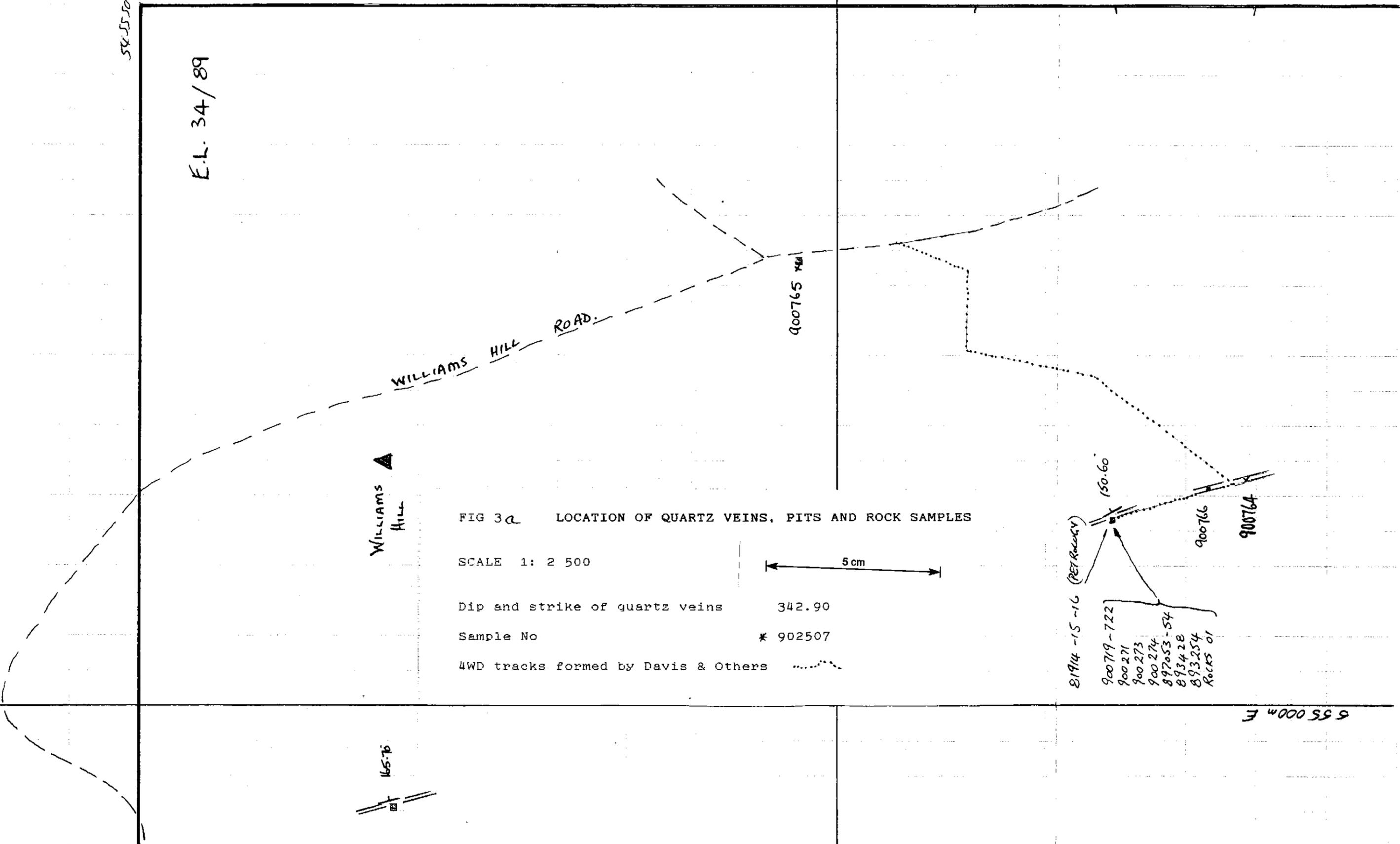


FIG 3a LOCATION OF QUARTZ VEINS, PITS AND ROCK SAMPLES

SCALE 1: 2 500

5 cm

Dip and strike of quartz veins 342.90

Sample No * 902507

4WD tracks formed by Davis & Others

81914 -15 -16 (PET Rocking)

900719-722

900271

900273

900274

897053-54

893428

893254

Rocks 01

55 000 m E

165.76

408009

008

APPENDIX 1.

GEOLOGICAL REPORT VIC THREADER & ASSOCIATES PTY LTD

E.L.34/89 (Williams Hill)Introduction

The following notes outline: (1) the present state of knowledge of the geology and mineralisation of the area, (2) the exploration to date and (3) recommendations for future work.

The attached maps consist of:

- 1) Lode map of the Mangana-Waterhouse line of goldfields (Waterhouse lies 17km NNW of Forester on the same trend), also showing location of E.L.34/89 and the approximate position of the granite boundaries (approximate scale 1 : 22 500).
- 2) A photo copy of the Pearly Brook (1 : 25 000) topographic map enlarged to 1 : 6 000 (approx.) showing the E.L. geological boundaries and main topographic features.

An (x7) enlargement of the aerial photograph has now been obtained but is not included. It will be mounted and covered with tracing film for protection so that it can be used in the field as a base map for recording of data as it is collected.

A field inspection of two prospect sites (northern and southern) was made on March 24th with M. Brown and a programme of exploration was outlined. This programme is discussed in more detail in this report.

Geology

A granitic intrusion occupies the southwestern corner of the E.L. and the remainder of the licence area is made up of Mathinna Beds which have been metamorphosed to schist by contact with the granite.

The approximate granite boundaries, the location of the E.L. and the Mangana to Waterhouse line of goldfields are shown in Figure 1.

It should be noted that gold mineralisation is not usual in the contact zone, nor is it usually associated with the type of granite which occurs here. The parent rocks are known as the Mathinna Beds, which consisted originally of siltstone/mudstone and interbedded sandstone. The siltstone/mudstone became altered (regionally metamorphosed) to low grade schist by heat and pressure generated during folding of the sediments. The reference by Analabs to post regional metamorphism means that the granitic intrusion to the west has resulted in further metamorphism and the development or addition of new minerals and the introduction of quartz veins. These effects are referred to as contact

metamorphism but are not indicators of mineralisation.

No sulphides were reported by Analabs but the specimen of schist which was collected from the southernmost outcrop during the recent field visit did contain pyrite on joint planes.

The three samples (described by Analabs) are basically the same and consisted of quartz-muscovite-chlorite schist traversed by quartz veins. The presence of the other minor and accessory mineral constituents (K feldspar, tourmaline, biotite, rutile/sphene and opaques) is not significant except to indicate metamorphism.

The prospect area is a band of quartz veining in schist which trends NNW-SSE, which appears to follow the regional axial line of folding in the Mathinna Beds and also the line of contact between the granite to the west and the country rock (Mathinna Beds).

The length of this band is stated to be greater than 1 km and has been exposed by earthworks over a width of around 5m. Its continuity in depth has yet to be established.

Exploration

To date exploration has been directed to gaining access to the area by bulldozer from Forestry Commission roads and tracks at two locations, one in the north and one in the south of the prospect area. A cross cut has been blasted in the quartz vein at the northern end and three samples, (81914, 81915, 81916) were taken for petrological examination. Results of this work have already been discussed under Geology, but it is considered that microscopic examination of these rocks is not very helpful as an exploration method.

A sample was collected from the southern end of the prospect area during the March 24 field visit. This consisted of schist containing a 40mm wide quartz vein. The vein contained well developed quartz crystals which had formed perpendicular to the vein walls with numerous cavities in the core of the vein. This texture is typical of tension stress which could be the result of folding or faulting which occurred at some later date. No mineralisation was present in the quartz vein but some scattered grains of pyrite were noted on joint planes within the schist.

The presence of sulphide minerals on joint planes in folded rocks is not uncommon and could be the result of material which is already present in the sediment becoming mobilised under the influence of heat and pressure generated during folding or in this case during the later contact metamorphism. In such cases the sulphides are of no economic significance. If however the sulphides have resulted from the introduction of minerals along structural planes in the country rocks, economic minerals may also be present. It is too early to take the matter further and will be dealt with more fully later when the exploration is further advanced and more data for study is available.

Some rock samples from the prospect contained a few particles of gold after crushing and panning (M. Brown - letter 6.4.90) and it has been claimed that streams draining the prospect area have yielded alluvial gold.

The presence of visible gold indicates that it occurs in the free milling state and not, as is frequently the case, locked in sulphide crystals. It also indicates that all the water courses in the licence area should be panned to ascertain whether there is a pattern to its distribution which would guide exploration to its primary source.

Recommendations

1. The first step in a systematic exploration of the prospect area is to define its boundaries and it is noted that some steps have already been taken to do this.

A set of southwesterly draining gullies and a roughly north-south access road on the eastern boundary provide the basic framework for the field work.

If the band of quartz veins is continuous, then traverses along the spurs between these gullies and beginning from the eastern access road would intersect it. This should be done without cut lines if possible and without earth-moving.

2. Traversing and sampling of watercourses for alluvial minerals.

When all the field work has been completed and all data recorded, the most suitable sites can then be cleared and costeamed. It is preferable and more economic to suspend bulldozing until the traverses have been completed. It should be noted that all earthworks require the

prior (written) permission from the Department of Resources and Energy, Division of Mines and Mineral Resources, as well as the Forestry Commission.

3. Mapping and sampling of costeans and analysis of samples.

4. Any encouraging results would need following up either by deeper costeaning or drilling but if no economic mineralisation has been found at this stage, further exploration would not be warranted.

APPENDIX 2.

ANALYTICAL REPORTS - ANALABS

- DEPARTMENT OF RESOURCES & ENERGY

014

DEPARTMENT OF MINES

File - 408015



TASMANIA

Launceston Office:
Chemical and Metallurgical
Laboratory,
287 Wellington Street,
LAUNCESTON 7249

Enquiries: Mr. M.B. Brown
Phone: 87 George Street
Your ref.: Scottsdale
Our file:

11th May 1989

Reg. nos 893254 & 893428

Dear Sir,

Please find below results of samples submitted to this laboratory.

Reg. No 893254 - Rocks

<u>Reg. No</u>	<u>Au g/t</u>	<u>SiO₂%</u>	<u>Scan</u>
893254	≤0,01	96.5	The black mineral was silicate mineral of no economic value.

Reg. No 893428 - Quartz Rock

<u>Reg. No</u>	<u>Ag g/t</u>	<u>Au g/t</u>	<u>Scan</u>
893428	<12	≤0.01	<u>Chromium</u> the only element identified in any quantity.

Analyses by... *R. M. Hayes*

Yours faithfully,

Fee Paid

P. I. James
(P.I. James)
Chief Chemist & Metallurgist

*Assay Done Before
we got lease,
15-12-90
on Main, Coosten)*

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.
52 Murray Road, Welshpool, W.A. 6106
FAX: 004 31 8890

Phone (09) 458 7999

Telex AA92560

ANALYTICAL REPORT No. 82.01.08.06615

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

Mr Frank Bardenhagen
Westbury Gemstone & Mineral Display
61 Main Road
Westbury
Tas 7320

ORDER No.	PROJECT
verbal	
DATE RECEIVED	RESULTS REQUIRED
24/10/89	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF SAMPLES	TOTAL No. OF SAMPLES
1	30/10/89	1	1

STATE OF SAMPLER	SAMPLE NUMBER	PRE-TREATMENT							OTHER AS SEEN REMARKS	NONE	ANALYSIS		
		DRY	CRUSH	SPLIT	PUL VERSE	SEIVE	REFER TO ANALYSIS SECTION	PREPARATION			METHOD		
	Rocks 01							RB Prep: 006,010,011,012,013,016			Cr/101, Au, AuChk/309		

Blue PIT

RESULTS TO

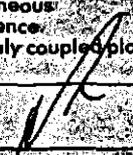
Mr Frank Bardenhagen
Westbury Gemstone & Mineral Display
61 Main Road
Westbury
Tas 7320

RESULTS TO

REMARKS

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

AUTHORISED OFFICER



ANALABS

A Division of Inncape Inspection and Testing Services Australia Pty Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

82.01.08.06615

30/10/89

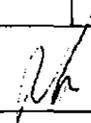
verbal

1 OF 1

TUBE No.	SAMPLE No.	Cr	Au	AuChk					
1	Rocks 01	110	0.008	0.016					
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	5	0.008	0.008					
24	UNITS	PPM	PPM	PPM					
25	METHOD	101	309	309					

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

AUTHORISED OFFICER





TASMANIA

DEPARTMENT OF MINES

408018

Launceston Office.
Chemical and Metallurgical
Laboratory,
287 Wellington Street,
LAUNCESTON 7249

Enquiries: Mr. Malcolm Brown
Phone: C/- Caltex Service Station
Your ref.: Scottsdale
Our file:

11.1.90

Reg. nos 897053-4

Dear Sir,

Please find below results of samples submitted to this laboratory and stated to be from the Williams Hill, Forester area.

Level (2) Blue.

<u>Reg. No</u>	<u>Description</u>	<u>Cr g/t</u>	<u>Ag g/t</u>	<u>Au g/t</u>	<u>Pt g/t</u>
897053	No 1 Code Blue 1	230	<12	<0.02	<0.01
897054	" " 2	160	<12	<0.02	<0.01

Analyses by.

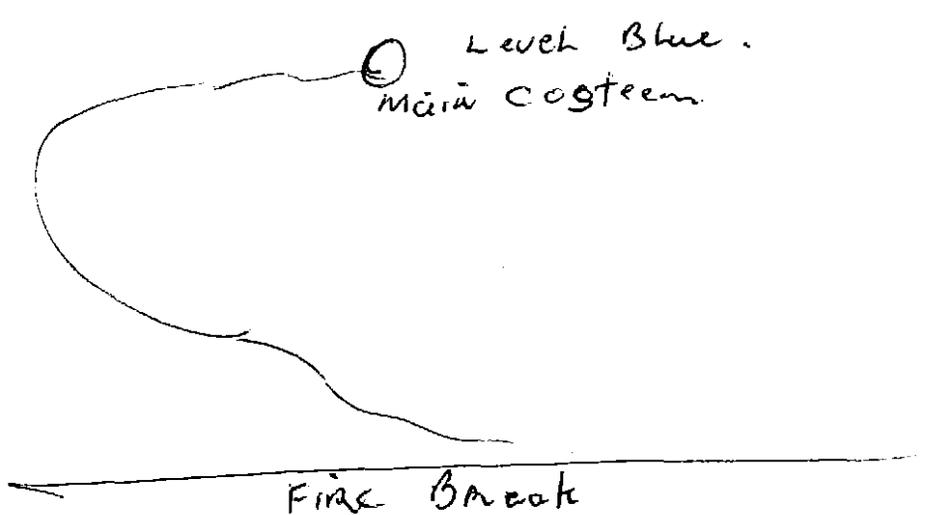
L.M. Hey.

(D. Zani)

D. Zani

Chief Chemist & Metallurgist

Fee Paid



DEPARTMENT OF MINES

408919



TASMANIA

Launceston Office:
 Chemical and Metallurgical
 Laboratory,
 287 Wellington Street,
 LAUNCESTON 7249

Enquiries: Mr. M. Brown
 Phone: C/- Caltex Service Station
 Your ref.: Scottsdale
 Our file:

22.1.90

Reg. Nos 900271 900273-4

Dear Sir,

Please find below results of samples submitted to this laboratory, and stated to be from the William Hill area.

<u>Reg. No</u>	<u>900271</u>	<u>900273</u>	<u>900274</u>
<u>Desc.</u>	<u>1 Level 3 Blue</u>	<u>2 Level Blue 3</u>	<u>3 Level Blue 3</u>
<u>Items</u>			
<i>Gold</i> Au g/t	<0.05	<u>0.05.</u>	<0.05
<i>Silver</i> Ag g/t	<12	<12	<12
<i>Copper</i> Cu g/t	< 5	< 5	< 5
<i>Chromium</i> Cr g/t	62	67	55

Analyses by, *R.P.P.*

Yours faithfully,

(D. Zani)

Chief Chemist & Metallurgist

Fee 3 x \$23.00 = \$69.00

019

DEPARTMENT OF MINES

408020



TASMANIA

Launceston Office:
Chemical and Metallurgical
Laboratory,
287 Wellington Street,
LAUNCESTON 7249

Enquiries:
Phone:
Your ref.:
Our file:

Mr. M. Brown
C/ Caltex Service Station
Scottsdale

10.4.90

Reg. No 901484

Dear Sir,

Please find below results of sample submitted to this laboratory and stated to be from the Forester area.

<u>Reg. No</u>	<u>Description</u>	<u>Au g/t</u>	<u>Ag g/t</u>
901484	Chip sample	0.06	<5

Analyses by *L.H. Gray*

Yours faithfully,

[Signature]
(D. Zani)

Chief Chemist & Metallurgist

Fee Paid

*Botten costerm
Southern End lease -*



Department of Resources & Energy

DIVISION OF MINES & MINERAL RESOURCES

237 Wellington Street
SOUTH LAUNCESTON
TASMANIA 7249
Ph (003) 44 2431
Fax (003) 44 6565

14.5.90

Mr. M. Brown
87 George Street
Scottsdale

Reg. No 900719-722

Dear Sir,

Please find below results of samples submitted to this laboratory, and stated to be from the William Hill area.

<u>Reg. No</u>	<u>Description</u>	<u>Ag</u>	<u>Cu</u>	<u>Au</u>
900719	Sample 1 level 4 Blue	<10	35	0.07
720	2 " 4 "	<10	8	0.06
721	3 " 4 "	<10	27	0.06
722	4 " 4 "	<10	14	<0.05

Analyses by *[Signature]*

[Signature]
(D. Zani)
Chief Chemist & Metallurgist

Fee \$102.00

*Main Costeen.
Level (4)
30/2/90*



Department of Resources & Energy

DIVISION OF MINES & MINERAL RESOURCES

287 Wellington Street
SOUTH LAUNCESTON
TASMANIA 7249

Tel: (003) 44 2431
Fax: (003) 44 6565

Mr. M. Brown
87 George Street
Scottsdale

18.5.90

Reg. Nos 900764 - 6

Dear Sir,

Please find below results of samples submitted to this laboratory, and stated to be from the William Hill area.

<u>Reg. Nos</u>	<u>Description</u>	<u>Au g/t</u>	<u>Ag g/t</u>	<u>Cu g/t</u>	<u>Cr g/t</u>
900764	Sample 1 Code Green Level 1	<0.05	<10	47	35
765	" " " Yellow No 2 Strike L.	<0.05	<10 ✓	22	27
766	: : : Red Level 1	<0.05	<10	24	55

Analyses by *[Signature]*

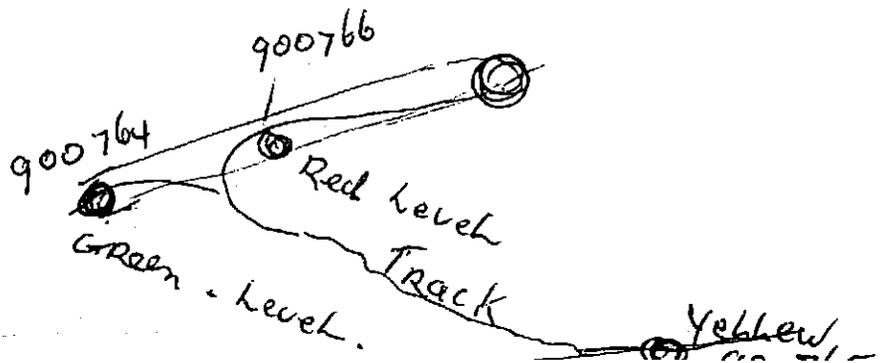
Yours faithfully,

[Signature]

(D. Zani)

Chief Chemist & Metallurgist

Fee 3 x \$28 = \$84.00





Department of Resources & Energy

DIVISION OF MINES & MINERAL RESOURCES

287 Wellington Street
SOUTH LAUNCESTON
TASMANIA 7249

Ph (003) 44 2431
Fax (003) 44 6565

13.6.90

Mr. M . Brown
87 George Street
Scottsdale

Reg. No 902507

Dear Sir,

Please find below results of sample submitted to this laboratory.

<u>Reg. No</u>	<u>Description</u>	<u>Au g/t</u>	<u>Ag g/t</u>	<u>Pt g/t</u>
902507	Rock 50 grams assay	<0.02	<1	<0.01

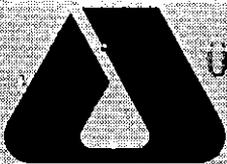
Analyses by...

L.H. King

(D. Zani)

Chief Chemist & Metallurgist

*Bottom. Foster
Down Fire Brack
Southern End
of house.*



023

ANALABS

A Division of Incharge Inspection and Testing Services Australia Pty. Ltd.

408024

Analabs - A Division of Incharge Inspection & Testing Services

Phone (004) 31 6837

14 Thirkell St. Coode Tas 7320

Fax No. (004) 31 8890

ANALYTICAL REPORT No.

103300.60.07538

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

INVOICE TO:

Mr. Malcolm Brown
2 George Street
Scottsdale
Tasmania 7260

ORDER No.

PROJECT

Wlm. Hill Mini

DATE RECEIVED

RESULTS REQUIRED

22/11/90

ASAP

No. OF PAGES OF RESULTS

DATE REPORTED

No. OF COPIES

TOTAL No. OF SAMPLES

1

06/12/90

1

4

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
01/04	RD Prep: GP009, GP012, GP016	Cu, Ag/BA101, As/BA114
01/04	RD	Au, Au(R), Au(S)/G6309, Au/RAW, Au/Wt
01/04	RD	Sn/GX401

REMARKS

RESULTS TO

Mr. Malcolm Brown
2 George Street
Scottsdale
Tasmania 7260

*Bottom corner
southern end
of house.*

RESULTS TO

[Empty box]

RESULTS TO

[Empty box]

Geneticis
AUTHORISED OFFICER

ANALABS

A Division of Inchope Inspection and Testing Services Australia Pty. Ltd

108023

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

TUBE No.	SAMPLE No.	Cu	Ag	As	Au	Au (R)	Sn			
		<i>Copper GALVANIZED</i>		103300.60.07538		06/12/90	Wilm. Hill Panel		1	OF 1
					<i>Gold</i>		<i>Tin</i>			
1	01	105	<0.5	<100	0.010	-	5			
2	02	50	<0.5	<100	<0.008	<0.008	7			
3	03	25	<0.5	<100	<0.008	-	<3			
4	04	15	<0.5	<100	<0.008	-	<3			
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21										
22										
23	DETECTION	5	0.5	100	0.008	0.008	3			
24	UNITS	ppm	ppm	ppm	ppm	ppm	ppm			
25	METHOD	GA101	GA101	GA114	GG309	GG309	GX401			

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

AUTHORISED OFFICER

[Signature]

APPENDIX 3.

PETROLOGICAL REPORT ANALABS

The Manager,
Analabs,
Tasmania

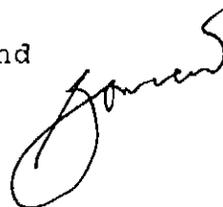
21-3-90

1000 0 07 1179

o/n 06932

Preparation of 3 thin sections
and brief petrographic descriptions
of 3 rocks.

R Townend



Sample 81914

Rock specimen

Thin section

Quartz	major
Muscovite	major
Chlorite	major
Tourmaline	accessory
Rutile/Sphene	trace
Opauques	trace

Vein
Quartz

This is a fine grained Chlorite Muscovite Quartz Schist, that is crossed by numerous quartz veins. The dominant quartz forms a non lineated 0.1mm granoblastic base through which the lesser mica and chlorite are set, of similar dimensions and moderate orientation. These latter are often dusted with limonite. Tourmaline lies in the schist fabric. This texture varies to areas of rather coarser muscovite with less er chlorite and little quartz, where the mica is poor; oriented. These appear to be associated more with the quartz veins, ie have formed post regional metamorphism. The host rock is classified as a Metasediment

Sample 81915

Rock specimen

Thin section

Quartz	major	
Muscovite	major	
Biotite/Chlorite		major
K feldspar		minor
Rutile/Sphene		accessory

Vein		
Quartz	dominant	
K feldspar		minor

This is a K Feldspar Chlorite Muscovite Quartz Schist in contact with a Quartz vein. The vein contains some K feldspar and that of the schist may be metasomatic. Recrystallization of the schist is shown by numerous mm rounded bodies composed of microcrystalline quartz and lesser chlorite, that might be precursors to porphyroblasts. The wallrock is again considered to be a Metasediment. The quartz vein is barren but displays large pyramidal terminating crystals indicating cavity filling.

Sample 81916

Rock specimen

Thin section

Muscovite	major
Chlorite	major
Quartz	minor
K feldspar	accessory
Clay	accessory
Rutile/Sphene	accessory

Vein	
Quartz	dominant
K feldspar	accessory

The slide features a Quartz vein that has minor K feldspar in contact with a schist that is probably the same rock as 81916. The fragments can be fine Chlorite Muscovite Quartz Schists with accessory TiO₂ species. Equally common are areas of coarse muscovite, which are set in areas of fine brown coloured ?clay plus vermiform chlorite. Staining shows that K feldspar has developed within the wallrock. The quartz vein is essentially composed of coarse bladed interlocking pyramidal crystals