

00\_4472

661001

JERVOIS MINING N.L.

**MICROFILMED**  
FICHE No. -

STORMONT EL 20/92

TASMANIA

REPORT FOR PERIOD

AUGUST 1999 – JUNE 2000

MINERAL RESOURCES		
FILE REF: EL20/92		
14 AUG 2000 PTB		
DOC. REF:		
OFFICER:	FOR ACTION:	FOR INFO:
See folio 55.		
RESUBMIT TO:	DATE:	



Low Impact Diamond Drilling Specialists in action on hole TC04 at Ti-Tree Creek, January 2000

00\_4472

Report for Period August 1999-June 2000 - Stormont  
EL20/92

Jervois Mining NL\*

Purvis, J.G.

EL20/1992

J. G. PURVIS

J. G. Purvis & Associates P/L

June 2000

## TABLE OF CONTENTS

	Page No.
1. SUMMARY	1
2. INTRODUCTION	2
3. TENURE	3
4. GEOLOGY	4
5. PREVIOUS EXPLORATION & MINING	5
6. 1999 – 2000 RESULTS	8
6.1 Drilling at Ti-Tree Creek	8
6.2 Drilling at Stormont Mine	11
6.2.1 Background	11
6.2.2 Holes ST01 - 04	11
6.3 Stormont Resource Estimation	15
7. COMMENTS ON AEROMAGNETICS	17
8. DISCUSSION	19
8.1 Setting of Skarn-Hosted Gold Mineralization	19
8.2 Results on EL 20/92	20
8.3 Potential for Auriferous Vein Stockworks	21
9. CONCLUSIONS	23
10. RECOMMENDATIONS	24
11. REFERENCES	25

**LIST OF FIGURES**

Figure 1	Location Plan	1: 250,000
Figure 2	Geology – Moina Area	1: 25,000
Figure 3	Aeromagnetics – Moina Area (RMI Upward Observed 100m, NE Sun)	1: 25,000
Figure 4	Ti-Tree Creek Geology & Drillhole Plan	1: 2,500
Figure 5	Drill Section TC01	1: 250
Figure 6	Drill Section TC02	1: 250
Figure 7	Drill Section TC03	1: 250
Figure 8	Drill Section TC04	1: 250
Figure 9	Drill Section TC05	1: 250
Figure 10	Stormont Mine Geology & Drillhole Plan	1: 2,000
Figure 11	Drill Section ST01 – ST02	1: 250
Figure 12	Drill Section ST03	1: 250
Figure 13	Drill Section ST04	1: 250

**LIST OF APPENDICES**

Appendix 1	Ti-Tree Creek Drill Logs, Holes TC01 – TC05
Appendix 2	Stormont Mine Drill Logs, Holes ST01 – ST04

## 1. SUMMARY

In August 1999 Jervois Mining N.L. obtained the rights to Stormont EL 20/92 covering 12.5 sq km at Moina, NW Tasmania. This report details exploration results on the tenement in the 10 months since its acquisition and makes recommendations for the future direction of the programme.

The licence is contiguous with Jervois' existing EL 37/97, giving the Company 25 sq km of the highly-mineralized aureole around the Devonian Dolcoath Granite. Ordovician sediments adjacent to the intrusion contain significant gold, bismuth, lead-zinc, fluorine, tin and tungsten, including four sub-economic drill-indicated resources.

One of these resources lies within EL 20/92 at the old Stormont Mine and is estimated to contain 135,000 tonnes grading 3.44 g/t Au & 0.21% Bi.

After a review of existing data diamond drilling was undertaken on the mineralized skarns at Ti-Tree Creek and Stormont Mine. Five short vertical holes totalling 188m were drilled at Ti-Tree Creek and four short vertical holes totalling 171m at Stormont.

Best intersection was 2m @ 3.5 g/t Au & 0.21% Bi from magnetite skarn in ST04 at Stormont Mine. This indicates potential for a new gold body in untested western and southern parts of the Western Syncline. The potential is significant as the magnetic anomaly over this syncline is larger and stronger than that over the adjacent known deposit. Drilling of at least eight 40m holes is recommended NW and SE of ST04.

Elsewhere at Stormont the drilling has closed off the SE extension of the main mineralized zone which hosts the deposit in the Central Syncline.

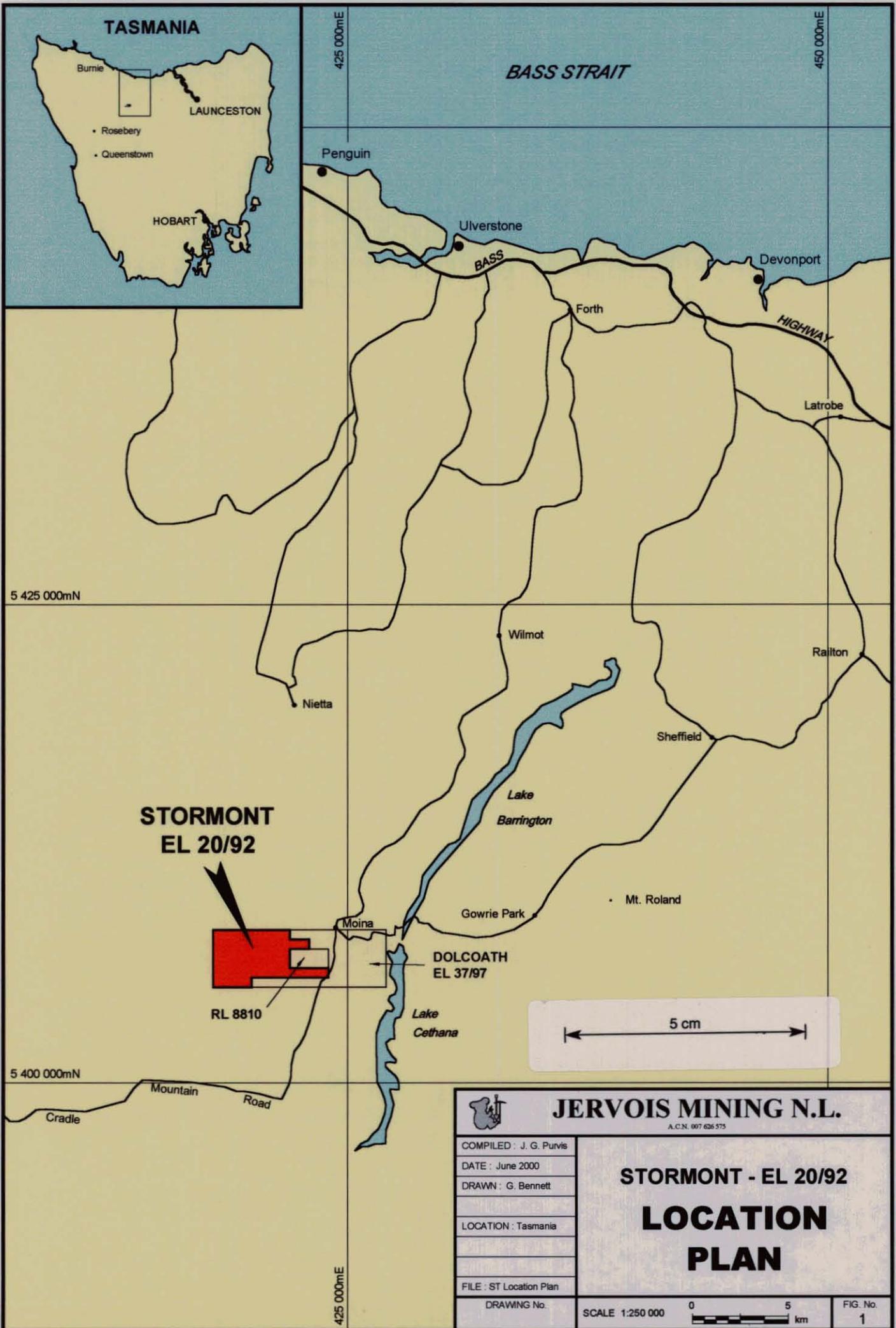
At Ti-Tree Creek best intersections of 1m @ 1.32 g/t Au & 0.18% Bi in TC04, and 1m @ 1.2 g/t Au in TC05, were disappointing. However, the area of potentially-mineralized skarn is sizeable and several targets, including magnetic anomalies and extensions of outcropping auriferous skarn, remain to be tested. An IP and ground magnetic survey is recommended prior to further drilling.

East of Ti-Tree Creek two 300-500m long magnetic anomalies over wiggly magnetite-fluorite skarns, previously tested with one hole each by Comalco, require more-comprehensive drilling. Both skarns are less than 30m from surface.

Fletchers Adit is a large skarn (possibly larger than Ti-Tree) warranting further work. Drilling is recommended in the vicinity of the gold mineralization in GFEL's holes FD7 and FD8, and adjacent to the projected thrust fault trace SE of the adit.

Systematic rock sampling is suggested to try and trace the gold that occurs in streams draining a wide area of siliceous Ordovician sandstone and conglomerate on the northern slopes of Mt Stormont. Fine auriferous veining is the suspected source.

Mineralization in skarns in the Dolcoath Granite aureole is structurally controlled and gold is often (not always) associated with sulphidic parts of the magnetite-bearing skarns. It is considered greater use could productively be made of electrical geophysics to delineate the sulphidic zones.



**STORMONT  
EL 20/92**

RL 8810

**DOLCOATH  
EL 37/97**

**JERVOIS MINING N.L.**

A.C.N. 007 626 575

COMPILED : J. G. Purvis

DATE : June 2000

DRAWN : G. Bennett

LOCATION : Tasmania

FILE : ST Location Plan

DRAWING No.

**STORMONT - EL 20/92**

**LOCATION  
PLAN**

SCALE 1:250 000

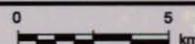


FIG. No.

1

661005

661006

## 2. INTRODUCTION

Stormont EL 20/92 (12.5 sq km) lies immediately west of the old township of Moina, 40 km south of Ulverstone in NW Tasmania. The area is hilly and mostly forested. Access is reasonable, via unsealed roads and all-weather 4WD tracks. The sealed Cradle Mountain Road traverses the eastern end of the licence. See *Figures 1 & 2*.

The EL covers Ordovician sediments, principally the quartzose Moina Sandstone and the Gordon Limestone, intruded and underlain by the Devonian Dolcoath Granite. The granite has extensively altered the sediments including converting the basal part of the limestone to skarn. The Palaeozoic rocks are extensively covered by a veneer of Tertiary basalt and sediments.

There are several sizeable exposures of skarn on the tenement. Magnetics and drilling shows these extend beneath the Tertiary cover. The skarns are patchily mineralized with gold, bismuth, fluorine, tin and tungsten. Past mining on the licence area has been insignificant.

In April 1998 Jervis Mining N.L. was granted Dolcoath EL 37/97 and commenced exploration to test the gold and associated basemetal potential of the Dolcoath Granite aureole. Following favourable drilling results (Purvis, 1999) Jervis acquired the adjacent Stormont EL 20/92 in August 1999 from the previous holder, the Goldstream – Titan Joint Venture, under a royalty agreement.

Drilling by Goldstream-Titan (and Gold Fields previously) at the old Stormont Mine on the EL, had outlined a small outcropping gold-bismuth deposit which they estimated at 100-150,000 tonnes @ 2-4 g/t Au (Newnham, 1996).

EL 20/92 lies immediately west of Australia's largest undeveloped fluorite resource, the skarn-hosted Moina deposit of 26 million tonnes @ 18% CaF<sub>2</sub> (Askins, 1979). The deposit contains patchy gold values, generally in the 0.1-0.4 g/t Au range. Higher grade gold is hosted by peripheral pyrrhotite and sphalerite-rich parts of the skarn, where the Hugo Deposit contains 250,000t @ 5-6% Zn, 1 g/t Au & 0.1% Bi (Newnham, 1997).

This report outlines the results of the exploration programme undertaken in the period August 1999 to June 2000, which centred around a 9-hole 359m diamond drilling programme in January-February 2000.

Five holes were drilled into auriferous skarn at Ti-Tree Creek which had been scantily tested by previous explorers. Four holes were put down at Stormont Mine to test for extensions to skarn-hosted gold-bismuth mineralization defined by earlier drilling.

The report also makes recommendations for the future direction of exploration on the EL, including further drill testing.

661007

### 3. **TENURE**

Stormont EL 20/92 covers 12.5 sq km. The tenement originally covered 25 sq km when it was granted to Goldstream Mining N.L. on 11<sup>th</sup> September 1992. Goldstream explored the EL in a Joint Venture with Titan Resources N.L.

In September 1997 the Goldstream-Titan JV made a statutory reduction of the licence area by relinquishing the eastern 50%. This relinquished 12.5 sq km was won at tender by Jervois Mining N.L. and granted on 3<sup>rd</sup> April 1998 as Dolcoath EL 37/97.

The remaining part of EL 20/92 was acquired from the Goldstream – Titan JV by Jervois Mining N.L. on 24<sup>th</sup> August 1999, the consideration being a 2% gross production royalty.

Stormont EL 20/92 will expire on 11<sup>th</sup> September 2002.

The majority of the EL is Crown Land, mostly State Forest (Multiple Use Forest Land). Lake Gairdner occupies about 0.4 sq km of the tenement and is designated Land Vested in the HEC. There are areas of Private Property in the eastern half of the licence (the Ti-Tree Creek skarn is on Private Land).

Gravel Lease 45M/82 occupies less than 5 excluded hectares in the far SE corner of the EL. There are no other Mining Leases on the licence.

The EL abuts the western and southern boundaries of Retention Licence 8810, held by Acacia Metals and Rio Tinto over the Moina fluorite deposit.

See *Figure 2*.

661008

#### 4. GEOLOGY

EL 20/92 covers Ordovician Denison Group and Gordon Group sediments intruded by the shallowly-buried Devonian Dolcoath Granite. Tertiary basalt and sediments cover more than 50% of the licence, but drilling shows that much of this cover is less than 20m thick. Most of the basalt appears magnetically "transparent".

Cambrian dacitic Mt Read Volcanics outcrop along the southern edge of the EL, and are known from drilling and magnetics to underlie the Ordovician sediments in the NW part of the tenement. Volcanic remnants probably underlie the sediments in other places where they may have escaped destruction by the intruding granite.

Within the licence area the Ordovician comprises a restricted basal unit of siliciclastic conglomerate, a thick middle unit of quartzose sandstone (Moina Sandstone), and an upper unit of limestone (Gordon Limestone). Between the Moina Sandstone and Gordon Limestone, the "Transition Beds" comprise mainly calcareous siltstone with lesser intercalated calcareous sandstone and limestone.

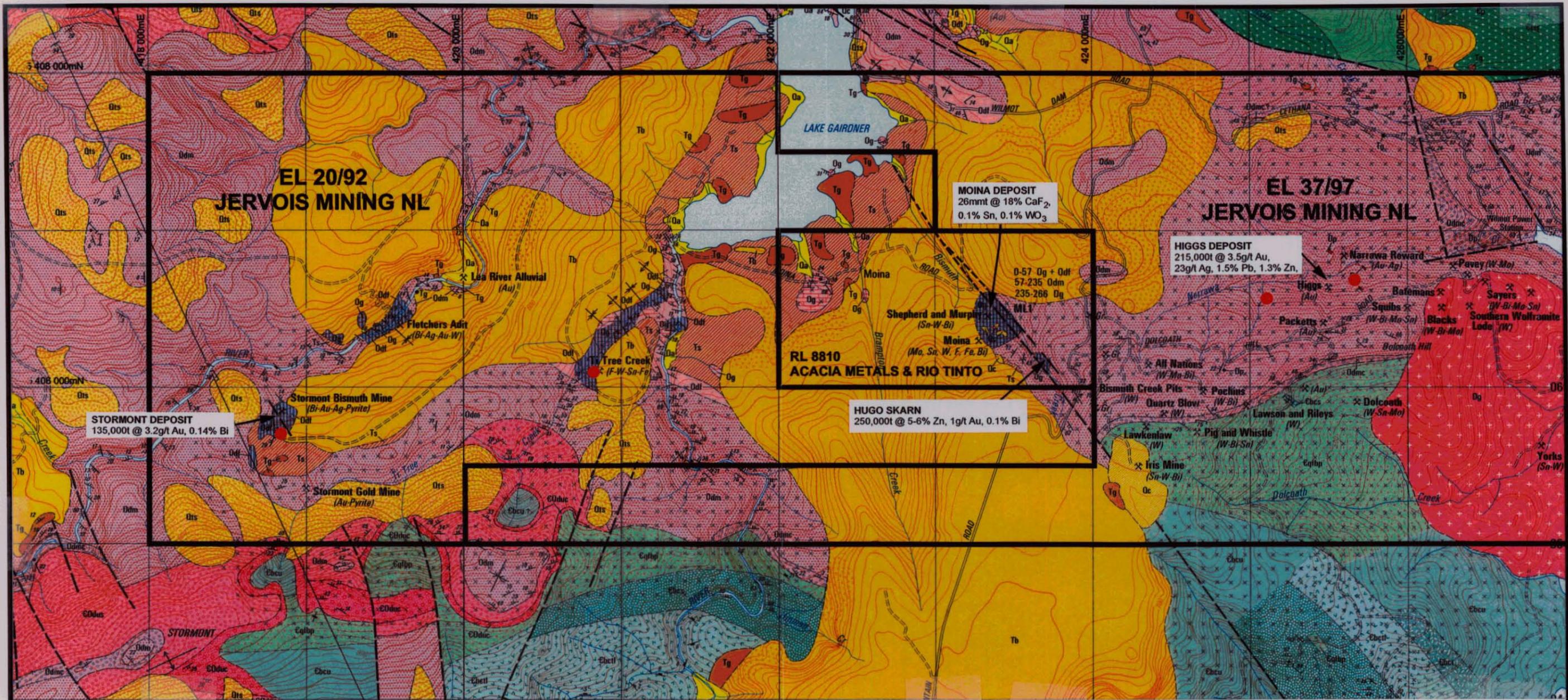
The Dolcoath Granite is a medium to coarse grained alkali-feldspar I-type granite. It does not outcrop on the EL but has been intersected 200m below surface in drillholes at Moina near the tenement's eastern end. The granite outcrops 2km further east on EL 37/97. Gravity data (Leaman, 1988) indicates this outcrop lies at the eastern end of a shallowly-buried E-W trending granite crest, that slopes gently west and directly underlies both licences at depths mostly <500m.

The intrusion has extensively altered and mineralized the adjacent Ordovician sediments. Mineralization comprises gold, bismuth, zinc, fluorine, tin and tungsten, with lesser amounts of lead, silver and molybdenum. Styles range from veins and lodes to massive or disseminated stratiform bodies.

The basal section of the limestone and parts of the "Transition Beds" have been converted to various unmineralized and mineralized skarn facies. These include chlorite-magnetite-sulphide skarn, pyroxene/amphibole-garnet skarn, and the finely and irregularly-banded magnetite-fluorite skarn or "wrigglite", which forms the huge stratiform Moina fluorite deposit and for which the area is particularly noted.

On EL 20/92 skarns are largely preserved in NW-trending synclines, having been eroded in the pre-Tertiary off anticlinal folds and other uplifted areas. Known occurrences of stronger mineralization within the skarns, at Stormont Mine, Ti-Tree Creek and Fletchers Adit, are associated with NW-trending thrust faults.

There is also widespread silica-biotite alteration and mineralization in the Moina Sandstone. Only minor mineralization is known within the sandstone on EL 20/92 but to the east on RL 8810 and EL 37/97 it is significant, including tin-tungsten bearing veins (eg: Shepherd and Murphy Mine at Moina) and auriferous stratiform sulphide bodies (eg: Higgs Deposit at Narrawa Creek). The effects are most common in the upper sections of the sandstone where it was apparently partly calcareous (Purvis, 2000).



- ⊗ (Ag-Pb) Prospect or abandoned mine with commodity indicated.
- ⊗ Gr Gravel pit or quarry.
- Prominent quartz vein.
- ⊙ Macro fossil locality.
- ⊙ Plant fossil locality (Tertiary).
- Geological boundary - accurate or approximate.
- - - Geological boundary - inferred or concealed.
- Fault - accurate or approximate.
- - - Fault - inferred or concealed.
- ↗ ↘ Axial surface trend or major anticline, syncline with plunge where known.
- ↗ ↘ Minor fold with plunge where known, anticline, syncline, unspecified.
- ↗ ↘ Strike and dip of bedding - facing known, unknown, overturned, vertical, horizontal.
- ↗ ↘ Banding in volcanic or igneous rock, vertical banding.
- ↗ ↘ Strike and dip of dominant cleavage of unspecified type in Cambrian or younger rocks, vertical cleavage.
- ↗ ↘ Joint-dipping, vertical.

● AREAS DRILLED 1999-2000

**QUATERNARY**

- Qt** Talus, scree, slope deposits — derived from siliciclastic rocks (Qts), Cambrian volcanics (Qtv) and Tertiary basalt (Qtb).
- Qa** Alluvium, swamp deposits — may include older alluvium.

**TERTIARY**

- Ts** Unconsolidated sediments — gravel, sand, clay and minor lignite with some horizons of plant fossils.
- Tb** Vesicular to massive basalt flows. Columnar jointing common. Overprint indicates areas of hyaloclastic breccias.
- Tg** Silicified gravel and/or breccia of locally derived rock type ("Greybilly").

**ORDOVICIAN**

- Og** Limestone and minor shale. Commonly stromatolitic and fossiliferous — Gordon Group.
- Area of skarn replacement of calcareous rocks (Gordon Limestone — Florentine Valley Mudstone). Mineral assemblages include garnet, diopside, epidote, actinolite, magnetite, pyrite, vesuvianite and fluorite. Associated economic minerals include wolframite, cassiterite, bismuthinite, gold and silver.

**LATE CAMBRIAN - EARLY ORDOVICIAN DENISON GROUP - OWEN CONGLOMERATE**

- Odl** Fawn weathering siltstone and calcareous sandstone — Correlate of Florentine Valley Mudstone.
- Odm** Grey siliciclastic sandstone, thick bedded to massive, commonly bioturbated and with tubular burrows — Moina Sandstone.
- Odmc** Grey medium to coarse-grained sandstone and pebble-cobble conglomerate, rarely bioturbated.
- Ods** Pink medium to coarse-grained sandstone and granule-pebble conglomerate. Clasts of chert common but not ubiquitous. (COds). Localised thin flows of purple weathering hematite altered fine grained basalt (COdub): Massive to brecciated generally well cleaved, vesicular, rare pillow structures and feldspar rich. Overprint indicates related unit of basaltic volcanoclastic sediment.
- COdub** Pink pebble to pebble-cobble conglomerate with minor lenses of coarse sandstone.
- COdus** Commonly chert-bearing. Base transgressive and erosional in some areas. Minor basic lava at base (COdub).
- Oca** Contact aureole associated with Dolcoath Granite. Variable effects include pervasive silicification, epidote-chlorite-actinolite alteration and local formation of epidote knots in Cambrian rocks; recrystallisation, silicification and local muscovite alteration in Moina Sandstone. Local quartz-wolframite-muscovite mineralisation in country rocks.

**CAMBRIAN MT. READ VOLCANICS**

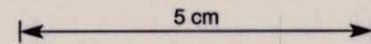
- Eqfhp** Quartz-feldspar-biotite ± hornblende porphyry ("Bond Range Porphyry").
- Ebcu** Interbedded tuffaceous sandstone, vitric tuff and minor crystal lithic tuffs, generally quartz-phyric.

**INTRUSIVE ROCKS LATE DEVONIAN**

- Dp** Quartz-feldspar porphyry with associated muscovite-rich greisen zones.
- Dg** Alkali-feldspar granite. Cream to pink medium to coarse grained equigranular to porphyritic with minor microgranite aplite, pegmatite and greisen — Dolcoath Granite.

**CAMBRIAN**

- Eqfhp** Quartz-feldspar-biotite ± hornblende porphyry — "Bond Range Porphyry".



**JERVOIS MINING N.L.**  
A.C.N. 007 626 575

**MOINA AREA**

**GEOLOGY**

FROM MAP 9 - MT READ VOLCANICS PROJECT  
GEOLOGICAL SURVEY OF TASMANIA

COMPILED: J.G. Purvis	DATE: January 2000	DRAWN: G.M.B.	
LOCATION: Tasmania			
FILE:			
DRAWING No.	SCALE 1:25,000	0 500 m	FIG. No. 2

6610199

661010

## 5. PREVIOUS EXPLORATION & MINING

The Moina district has had a long history of small-scale mining and prospecting, commencing in the 1890's and continuing intermittently until the 1980's. However, within EL 20/92 historic operations were minor.

Largest was the Stormont Mine, where a 40m long and 8m deep opencut with 40m long adit were excavated in a body of mineralized skarn between 1928-34. The mine produced 6.3t of bismuth concentrate containing 63% bismuth and 91 oz of gold (Roberts, 1986).

A similar but more weakly mineralized Au-Bi skarn was prospected at Fletchers Adit on the south bank of the Lea River 1km NE of Stormont Mine. There is no record of production from Fletchers.

Alluvial gold was worked in the Lea River downstream of the Stormont Mine and Fletchers Adit occurrences. Hard rock gold, hosted by thin quartz veins in a fault in Ordovician sandstone with conglomerate bands, was prospected by shafts 15m deep at the Stormont Gold Mine on the northern slopes of Mt Stormont (Twelvetrees, 1913). Again, there is no record of production.

There is no record or visible sign of historic prospecting in the Ti-Tree Creek skarn.

Modern large-scale systematic exploration of the EL 20/92 area was initiated by Mt Lyell Co. in 1965. After an aeromagnetic survey they cut a grid extending from the Lea River to the Cradle Mountain Road. They followed up with detailed grids over the skarns at Ti-Tree Creek and the Stormont Mine - Fletchers Adit area.

Magnetic and bismuth-in-soil anomalies delineated over the Ti-Tree skarn were investigated by 700m of costeaming and two test lines of pole-dipole IP. IP anomalies and costean rock chip intersections up to 10m @ 0.48% Bi were obtained. Drilling was recommended but not done.

In the Stormont Mine - Fletchers Adit area Mt Lyell undertook soil sampling and gradient array IP. They delineated a large skarn with modest bismuth-in-soil and IP anomalies north of the Lea River opposite Fletchers Adit, but did no drilling. No further work was done at Stormont Mine because their estimate for the mineralized skarn body (250,000 tons) was regarded as too small (McKibben, 1971). Mt Lyell withdrew in 1972.

In 1972-73 the Department of Mines drilled two holes into the Ti-Tree Creek skarn. DOM2 (101m) intersected 15m of skarn at surface with a best interval of 3.2m @ 0.19% Bi & "trace" Au. DOM3 (95m) intersected 13m of skarn and calc-silicate under 10m of Tertiary basalt, for a best result of 1m @ 0.11% Sn.

From 1974-79 the licence area was part of a major exploration effort by Comalco, who discovered and drilled out the Moina Deposit (26 million tonnes @ 18% CaF<sub>2</sub>).

661011

They searched the surroundings for similar mineralization, gridding almost the entire area at 50m spacing and carrying out mapping, soil sampling, magnetics, some IP and drilling.

At Ti-Tree Creek Comalco determined the DOM2 skarn contained up to 5.6% F. Chip sampling of outcropping magnetite-pyrite skarn returned values up to 0.65 g/t Au over 4m. They drilled hole SMD31 (41m) to test a magnetic peak, intersecting 7m of magnetite skarn with low values: 0.15 g/t Au & 1% F. They did a gradient array IP survey over Stormont Mine and Fletchers Adit which indicated skarn extensions SW of Stormont, and east and west of Fletchers. However, they did no drilling at either prospect.

On the Tertiary-covered lowlands 1km north and east of Ti-Tree Creek, Comalco drilled three holes within EL 20/92. SMD17 (5406800N / 421550E), SMD20 (5406480N / 421960E) and SMD23 (5406060N / 421970E). Mines Department's 1972 hole DOM1 was sited on the EL / RL boundary at 5406850N / 422000E.

SMD17 (74m) and SMD23 (37m) tested magnetic anomalies. Both intersected wriggite (magnetite-fluorite skarn) averaging 10.7% CaF<sub>2</sub>: 17m in SMD17 and 21m in SMD23, but no gold. SMD20's target MIP anomaly proved to be clay-filled limestone caverns, but 16m of calc-silicate under the limestone was not assayed.

DOM1, a 325m vertical stratigraphic hole, intersected the thickest limestone section at Moina at 21-179m downhole. The basal 9m of the limestone comprised calc-silicate skarn and minor wriggite, containing 0.5m @ 8% F, 0.13% Bi and "trace" Au.

Comalco was followed on the Moina project by two JV partners: Shell and CRA. CRA reassayed most of the Comalco holes for gold, concentrating on those in and around the Moina Deposit. They confirmed the higher gold values in the Hugo skarn and showed the eastern part of the Moina Deposit contained irregular spotty values of 0.2-0.4 g/t Au (Funnell, 1988).

In 1981 Shell drilled LGD1 (254m) at 5407500N / 420650E within EL 20/92, to test a coincident magnetic / gravity anomaly on the Moina Sandstone ridge west of Lake Gairdner. Below 101m the hole was in magnetite-veined Mt Read Volcanics. It was devoid of mineralization.

In 1983 Gold Fields Exploration took up the Stormont area after it was dropped by the Comalco JV. GFEL's target was gold and they determined all streams draining north from Mt Stormont were anomalous in gold. Channel sampling of the old workings at Stormont Mine returned values up to 42m @ 9.56 g/t Au & 0.5% Bi. Sampling of the final face in the adit showed the old miners stopped in ore grading 36.5 g/t Au and 1.1% Bi !

From 1988-90 GFEL drilled 21 holes at Stormont Mine and 9 near Fletchers Adit. The most significant intersections were in the Stormont skarn: 13m @ 4.1g/t Au, 0.46% Bi (SD1); 2.1m @ 12.8 g/t Au, 0.35% Bi (SD3); and 5.4m @ 2.5 g/t Au, 0.1% Bi (SD10).

661012

At Fletchers the holes were all north of the Lea River and outlined a large area of weakly auriferous skarn mostly beneath thin Tertiary basalt. Best intersection was 2m @ 1.5 g/t Au in FD7. One hundred metres away the northern-most hole (FD8) had a 35m gold-anomalous section with 21m assaying 0.3 g/t Au.

Despite the encouraging drill results GFEL withdrew in 1991.

In the 5 years Goldstream-Titan had EL 20/92 the exclusive focus of groundwork on the licence was drilling at Stormont Mine. They put down a further 32 short holes, mostly in peripheral areas for generally poor results. Better intersections were all in the main mineralized zone: 10.5m @ 1.4 g/t Au (SD33); 9.5m @ 2.7 g/t Au (SD36); 19.6m @ 2.9 g/t Au (SD39) and 8m @ 1.8 g/t Au (SD44).

They estimated the deposit contained 100,000 - 150,000t @ 2-4 g/t Au (Newnham, 1996).

The only work done by Goldstream-Titan on the EL outside Stormont was a high-resolution helicopter-borne aeromagnetic survey of the whole 25 sq km tenement in 1996.

They also drilled the Hugo Skarn (Zn-Au-Bi) on RL 8810, where they had a JV from 1993-97 with the present owners, RTZ and Acacia Resources.

661013



*View east from track to Stormont Mine. Old Moina townsite in centre middle distance.*



*Looking south-east across Lake Gairdner towards the old Moina townsite.  
Moina Deposit in trees in middle distance to left of centre.*

## 6. 1999 – 2000 RESULTS

661014

### 6.1. Drilling at Ti-Tree Creek

A review of the data suggested this area of skarn had received insufficient testing by previous explorers – Mt Lyell, Department of Mines and Comalco.

As can be seen in *Figures 3 & 4* there are two prominent parallel NW-trending magnetic anomalies. These are flanked to the south by a smaller anomaly associated with an area of high magnetic gradient. The latter occurs over outcropping auriferous magnetite-pyrite skarn adjacent to a NW-trending thrust fault.

Only two holes had tested these targets. The NW peak of the main (central) anomaly had been drilled by Comalco with SMD31 (41m), intersecting 7m of magnetite skarn with a maximum of 0.15 g/t Au. The small southern anomaly had been drilled by DOM2, intersecting 12m of magnetite-sulphide skarn containing 3.2m @ 0.19% Bi and "trace" Au.

Left untested had been the northern anomaly, the SE peak of the main anomaly and the area of outcropping magnetite-pyrite skarn. The latter was where Comalco had obtained values up to 0.65 g/t Au in chip sampling and their peak Bi-in-soil value of 1990 ppm. No attempt had been made to test the best of the IP anomalies discovered by Mt Lyell's reconnaissance survey.

Five short vertical diamond drillholes, TC01-05 totalling 188m, were put down in January-February 2000 to test all these targets. Results were disappointing, with the best intersection being 1m @ 1.32 g/t Au & 0.18% Bi in TC04.

The hole locations are shown in *Figure 4*. The drillsections are in *Figures 5 - 9* and the drill logs in *Appendix 1*.

Holes TC01 and TC02 were aimed at the strongest of the IP responses: two separate anomalies 90m apart. The holes encountered a near-horizontal 10-12m thick band of barren epidote-garnet skarn, underlain by a thinner band of chlorite-magnetite-pyrite/pyrrhotite skarn.

In TC01 this lower band was 5.3m thick and contained 3m @ 0.21 g/t Au. In TC02 the band was thinner at 1.3m and essentially barren (0.03 g/t Au). While the sulphides in TC01 were possibly sufficient to cause an IP anomaly, this does not appear to be the case in TC02.

Summary Logs:

661015

**TC01:** 5406144N / 420888E (838S / 1264W, Comalco grid)

0 – 2.4m:	Alluvium	
2.4 – 12.25m:	Garnet-epidote skarn	
12.25 – 17.55m:	Chlorite-magnetite skarn	semi-massive mag>po-py
17.55 – 22.75m:	Skarn & hornfels	3% mag>po-py
22.75 – 33.5m:	Silicified quartz sandstone	
33.5 – 36.7m:	Hornfels & skarn	
36.7 – 46.4m:	Altered siltstone & sandstone	
EOH		

**TC02:** 5406116N / 420974E (845S / 1175W, Comalco grid)

0 – 9.2m:	Tertiary basalt & sediments	40cm lignite 8.4-8.8m
9.2 – 20.8m:	Epidote-garnet skarn	
20.8 – 22.1m:	Chlorite-magnetite skarn	10-15% mag>>py
22.1 – 23.2m:	Fractured calc-silicate	
23.2 – 31.85m:	Faulted quartz sandstone	
31.85 – 43.4m:	Altered siltstone & sandstone	
EOH		

TC03 was designed to test the northern magnetic anomaly. The hole was entirely in altered Moina Sandstone devoid of mineralization or magnetic material. This is not the unit in which a magnetic anomaly would be expected, being stratigraphically lower than the skarn horizon which here has been removed by erosion.

Although the Comalco grid pegs were relocated and TC03 accurately sited in relation to them, it seems the ground magnetic data may have been misplotted on the old Comalco maps. The 1996 Goldstream aeromagnetics suggest the magnetic peak is actually on the next gridline 50m to the west – see *Figure 4*.

*The northern magnetic anomaly thus remains untested.*

Summary Log:

**TC03:** 5406375N / 420957E (600S / 1250W, Comalco grid)

0 – 2.8m:	Siltstone	
2.8 – 28.9m:	Altered silicified quartz sandstone	1-3% py>po
EOH		

TC04 was sited directly on outcropping pyritic magnetite skarn (see report cover photograph). Massive and semi-massive magnetite-pyrite-pyrrhotite skarn extended to 8.75m. This passed directly into silicified and fractured Moina Sandstone that continued to the end of the hole at 29.8m.

The top 1m of the hole assayed 1.32 g/t Au & 0.18% Bi, part of a 5m interval assaying 0.56 g/t Au & 0.13% Bi. The mineralization also contained up to 0.15% Sn and 0.2% Cu.

A major fault at 24-26m downhole was almost certainly the down-dip continuation of the NW-trending thrust extending along the SW side of the mineralized skarn outcrop (see *Figures 4 & 8*). The close spatial relationship of better Au-Bi mineralization with a NW-trending thrust is analogous to the situation at Stormont Mine.

Summary Log:

**TC04:** 5406072N / 420786E (930S / 1345W, Comalco grid)

0 – 4.9m:	Massive magnetite-sulphide skarn	massive mag-po-py
4.9 – 8.75m:	Sulphidic skarn	25% po-py-mag
8.75 – 18.3m:	Silicified quartz sandstone	minor to 2% py
18.3 – 24.3m:	Fractured siltstone & hornfels	2-3% py below 21.3m
24.3 – 25.8m:	Strong fault	2% py
25.8 – 29.8m:	Biotitized sandstone & siltstone	1% py
EOH		

TC05 tested the SE peak of the main magnetic anomaly. Under 9m of Tertiary basalt the hole encountered 4m of garnetiferous skarn underlain by 7m of massive pyrrhotite-magnetite skarn.

The latter was clearly the source of the magnetic response and contained a 1m section assaying 1.2 g/t Au. Chloritic and siliceous skarn with patchy magnetite-pyrite continued to a strong fault at 24-25m, below which the hole passed into silicified quartz sandstone.

The mineralization in TC05 is stronger than that in Comalco hole SMD31, 115m further to the NW and which tested the larger NW peak of the magnetic anomaly.

Summary Log:

**TC05:** 5406234N / 420873E (755S / 1300W, Comalco grid)

0 – 9.05m:	Tertiary basalt	
9.05 – 12.75m:	Garnetiferous skarn	
12.75 – 19.75m:	Massive pyrrhotite-magnetite skarn	massive po-mag minor py
19.75 – 21.65m:	Chlorite skarn	5% mag>py-po
21.65 – 26.1m:	Siliceous sandy skarn	pyritic fault 24.3-25.25m
26.1 – 36.25m:	Quartz sandstone & siltstone	1-2% py
36.25 – 39.3m:	Chlorite skarn & biotite hornfels	2% py
EOH		

661017



*Bridge over the Iris River near Ti-Tree Creek skarn.*



*Hole ST01 in progress on the Stormont Mine access track.*

661018

## 6.2 *Drilling at Stormont Mine*

### 6.2.1 *Background*

After the two drilling programmes by Goldstream-Titan at Stormont, the main mineralized zone hosting the Au-Bi deposit in the Central Syncline remained open to the SE, as did mineralization in the adjacent Western Syncline. See *Figure 10*.

These possible extensions were obvious drill targets. As part of the drill planning process a review was undertaken of all information on Stormont Mine, including recalculation of the size of the deposit (see 6.3).

Disconcerting errors exist in some of the Goldstream-Titan data. These include discrepancies between drill log data and its display on the plan and sections, and discrepancies in spacing between drillholes in the field versus their positions on the plan and sections. The hole spacing errors are up to 20m and although this doesn't sound much, they are significant considering the deposit itself is only 30m wide.

On their plan Goldstream-Titan incorrectly plot the Stormont Fault, the SE-trending and NE-dipping thrust forming the eastern margin of the Central Syncline, as being separated from the mineralized zone for much of its length. This undoubtedly influenced their conclusion that "there is little evidence (one way or the other) to suggest this fault is genetically associated with the mineralisation" (Newnham, 1997).

The Stormont Fault position shown in *Figure 10* more accurately reflects the drillhole data. Demonstrably, there is a close spatial relationship between the fault and the 350m long main mineralized zone which lies hard along the SW side of the structure. A genetic association of some sort seems obvious.

Jervois' drilling results suggest the fault also disrupts the Tertiary cover, indicative of some very late-stage post-mineralization movement.

### 6.2.2 *Holes ST01 - 04*

In February 2000 four short vertical diamond holes totalling 171m were drilled at Stormont Mine. Three holes, ST01-03, tested the possible south-eastward extension of the main mineralized zone. ST01 and ST02 were placed 20m apart on the mine access road, 50-65m SE of Goldstream hole SD44 (the most southerly mineralized hole with 8m @ 1.81 g/t Au). ST03 was drilled 50m SE of the road.

The results from these three holes were extremely poor, the best being 1m @ 0.23g/t Au in ST01.

ST04 was put between existing holes SD20 and SD50 which had encountered modest gold values in the Western Syncline. ST04 intersected the strongest mineralization discovered to date outside the Central Syncline: 2m @ 3.5g/t Au.

## 661019

The result points to the potential for a new body of gold mineralization in the untested western and southern parts of the Western Syncline.

Hole locations are shown in *Figure 10*. Drillsections are in *Figures 11 to 13* and the drill logs in *Appendix 2*.

Hole ST01 intersected 10m of Tertiary basalt with 0.6m of Tertiary quartz conglomerate ("Grey Billy") at its base. Below the Tertiary was 35m of partly-oxidized ferromagnesian-epidote-garnet skarn underlain by silicified quartz sandstone.

The skarn generally contained only minor pyrite and magnetite, apart from 2m of crumbly pyritic skarn (possibly a fault) at 34.4-36.3m. The top 1m of this pyritic zone assayed 0.23 g/t Au – the only mineralization in the hole.

The ST01 result effectively closes off the main mineralized zone midway between SD44 and ST01, giving the zone a total length of about 350m.

Twenty metres to the east of ST01, ST02 encountered a substantially different Tertiary section: 5m of basalt, 6m of loose quartz sand and 3m of conglomerate. Under the Tertiary the hole intersected 14m of Ordovician siltstone, obviously east of the Stormont Fault.

The structure itself was intersected at 28-33m as a zone of highly sheared serpentinous skarn. Below the fault 11m of ferromagnesian-epidote-garnet skarn was underlain by a mixed sequence of sandy siliceous skarn and silicified quartz sandstone.

There was little sulphide or magnetite in the skarns and all gold values in the hole were <0.03 g/t Au.

As can be seen in *Figure 11*, the variations in the Tertiary between ST01 and ST02 are more easily explained by movement on the Stormont Fault than as facies variations over a topographic feature on the pre-Tertiary surface.

#### Summary Logs:

#### **ST01:** 5405734N / 419089E

0 – 9.9m:	Tertiary basalt	
9.9 – 10.5m:	Tertiary quartz conglomerate	
10.5 – 27.25m:	Clayey oxidized skarn	3% py 24.6 - 25m
27.25 – 34.4m:	Partly-oxidized ferromag skarn	Minor to 2% py & mag
34.4 – 36.3m:	Pyritic skarn (fault?)	20% py
36.3 – 45.3m:	Ferromag-garnet-epidote skarn	7cm massive po at 45m
45.3 – 47.4m:	Silicified quartz sandstone	
EOH		

## 661020

**ST02:** 5405726N / 419108E

0 – 4.8m:	Tertiary basalt	
4.8 – 11.2m:	Tertiary quartz sand	
11.2 – 14.3m:	Tertiary quartz conglomerate	
14.3 – 28.05m:	Fractured biotitized sandy siltstone	
28.5 – 32.9m:	Sheared serpentinous skarn	
32.9 – 43.5m:	Ferromag-epidote-garnet skarn	5% py 40-41m
43.5 – 44.1m:	Quartz-carbonate-tourmaline band	2% py
44.1 – 48.1m:	Siliceous skarn & silicified sandstone	
EOH		

ST03 was put in 50m SE of the ST01-02 section, along the expected trend of the mineralized zone. However, beneath a 17m thickness of Tertiary of similar make-up to that in ST02, the hole passed directly into Ordovician quartzose sandstone and stayed in it until its end at 36.4m.

The hole was obviously east of the Stormont Fault. This means the structure is either offset at least 20m to the west or takes a +40° swing westward. The latter option is more likely as its position in ST02 suggests a swing has already commenced there.

Three samples from ST03 were contaminated by a broken pulverizing bowl in the Analabs laboratory. As seen in the log in *Appendix 2*, every third sample contained gold with the amount decreasing from 2.6 g/t to 0.2 g/t downhole. All other samples assayed <0.01 g/t Au.

Analabs used three separate pulverizing units to prepare the samples. On examination they found a crack in the offending pulverizing bowl, which had previously been used to treat ore samples from a local goldmine.

It is confidently believed, both from the barren reliable sample results and the geology in the hole, that no gold values were encountered by ST03.

Summary Log:

**ST03:** 5405687N / 419125E

0 – 5.3m:	Tertiary basalt	
5.3 – 15.4m:	Tertiary quartz sand	
15.4 – 17.2m:	Tertiary quartz conglomerate	
17.2 – 36.4m:	Quartzose sandstone	Minor to 3% py
EOH		

ST04 was sited approximately midway between SD20 and SD50 in the southern part of the Western Syncline. These two holes, spaced 46m apart across strike, had encountered modest gold values in skarn: SD20 2m @ 0.89 g/t Au; SD50 3m @ 1.33 g/t Au. It was hoped better values might exist in the interpreted synclinal axis position between these holes.

Below 3.4m of Tertiary conglomerate and yellow clay, ST04 intersected 6m of black clay after oxidized skarn and then a 22m skarn interval underlain by altered quartzose sandstone. Within the overall ferromagnesian-epidote-garnet skarn there was a 5.7m section (16.5-22.2m) of wrigglytic chlorite-magnetite(-fluorite) skarn containing very little sulphides.

A 2m interval of this wrigglyte assayed 3.5 g/t Au, 0.21% Bi and 2.6% F. This is the best gold intersection obtained to date at Stormont outside the Central Syncline.

Elsewhere within the skarn in ST04 there were scattered gold values up to 0.34 g/t Au (not including four samples in the upper part of the hole considered to be slightly contaminated by Analabs' malfunctioning pulverizer).

The ST04 result, along with those in SD20 and SD50, suggest there is a zone of gold mineralization in the southern part of the Western Syncline as shown in *Figures 10 & 13*. On the SD20-ST04-SD50 section and using a 1 g/t cut-off, this zone is about 45m wide and 2-3m thick, with an open synclinal cross-sectional shape.

It is associated with (superimposed on?) the wrigglytic skarn band in SD50 and ST04, but not in SD20 (according to GFEL's logging). From the shape of the base of the skarn unit, the Western "Syncline" here is very gentle and broad with no clear axis.

The strike length of the gold zone is unknown – it was not intersected in SD21 170m to the NNW and to the SE there has been no drilling. However, the magnetics suggest it could extend at least 150m to the NW across the undrilled western part of the syncline (see section 7.).

#### Summary Log:

**ST04:** 5405750N / 418820E

0 – 3.4m:	Tertiary conglomerate & yellow clay	
3.4 – 9.55m:	Black clay after oxidized skarn	
9.55 – 16.55m:	Ferromagnesian-epidote-garnet skarn	1-2% mag
16.55 – 22.25m:	Wrigglytic chlorite-magnetite skarn	20% mag, rare py
22.25 – 31.7m:	Calcareous epidote skarn	2% mag, to 10%
31.7 – 39.1m:	Altered quartzose sandstone	3% mag, to 10%
EOH		

## 661022

## 6.3 Stormont Resource Estimation

See Figure 10.

The main mineralized zone in the Central Syncline extends for 350m along the SW side of the Stormont Fault. It is hosted by skarn folded into a narrow syncline with the steeply NE-dipping thrust forming its eastern margin. The zone is defined by 24 short diamond drillholes put down within and around it.

The historic opencut and adit are at the NW end of the mineralized zone, and here occur the better grade and thicknesses that constitute the deposit. There is a noticeable weakening in the tenor of the mineralization towards the SW.

The host rock is partly-oxidized pyroxene-garnet-magnetite skarn with low overall sulphide content, but common bismuthinite and native bismuth (Taylor 1990 in Newnham, 1996). From the drill log descriptions there appears to be an association in places (not everywhere) of better gold-bismuth grades with zones of faulting / brecciation.

Three drillholes and channel samples of the old workings provide data for the resource calculation:

Opencut west wall:	32m @ 4.8 g/t Au, 0.56% Bi	along strike
No.2 Cross-cut:	10m @ 5.34 g/t Au, 0.31% Bi	across strike
SD1: (vertical)	13m @ 4.12 g/t Au, 0.46% Bi	(4.5 – 17.5m)
SD36: (vertical)	16.7m @ 1.98 g/t Au, 0.03%Bi	(0 – 16.7m)
SD39: (-70° to ENE)	19.6m @ 2.95 g/t Au, 0.09% Bi	(0 – 19.6m)

The top 4.5m of SD1 was triconed, but as shown by SD36 & 39, the mineralized skarn outcrops in this vicinity and it is probable the zone in SD1 is 17.5m thick. Core recovery from the mineralized zone in SD1 was 80%, in SD36 70% and in SD39 100%. Given that some of the better grades are in faulted / brecciated material, the core losses are more likely to have lowered the grade than raised it.

Channel sampling along-strike in the adit, although within the resource, has not been used as it was apparently driven on a relatively narrow unrepresentative high-grade zone:

Adit east wall:	42m @ 9.56 g/t Au, 0.50% Bi	along strike
-----------------	-----------------------------	--------------

The main body of the resource extends 90m SE from the opencut, incorporating the adit, SD1, SD36 and SD39. Forty-one metres SSW of SD36, SD3 intersected 2.1m @ 12.8 g/t Au & 0.35% Bi (16.9–19m). This was beneath an interval of clayey skarn that was triconed (unsampled) to 11m and had only 10% recovery from 11–14m.

The southern boundary of the resource has been drawn midway between SD36 and SD3, but there is a good chance there are additional resources in the vicinity of SD3.

661023

The average width of the body outlined above is 30m (this is conservative to allow for the synclinal shape). The average thickness, from the true width of the three drill intersections, is 17m. Grade is obtained from the weighted average of the cross-cut channel results and the three drillholes.

Results are as follows:

Length:	90m
Width:	30m
Thickness:	17m
SG:	2.75 (assumes 15% magnetite and 10% oxidation loss)

Tonnage & grade: 126,000 tonnes @ 3.34 g/t Au & 0.19% Bi

Remanent ore exists around and beneath the old opencut, in a wedge with a total length of 40m and a width at the SW end of 25m. This remanent zone is estimated at between 9,000t and 14,000t, depending on the thickness of skarn below the opencut. Grade, from the opencut channel samples, is 4.8 g/t Au & 0.56% Bi.

*Overall Stormont Resource total: 135,000 tonnes @ 3.44 g/t Au & 0.21% Bi*

661024

## 7. COMMENTS ON AEROMAGNETICS

### *General*

In May 1996 Goldstream-Titan completed a helicopter-borne high-resolution aeromagnetic survey over the ground now covered by EL 20/92, RL 8810 and EL 37/97. The data was re-imaged for Jervis by Dr Bob Richardson of Mineral Resources Tasmania in September 1999.

Because of the prominent NW grain of the majority of magnetic features, the NE sun angle proved effective and the 100m upward-continued RMI data displayed the most useful detail. This image is shown at 1:25,000 scale in *Figure 3*.

The NW magnetic trends are very clear even though overall rock strike is E-W or WSW-ENE. This stratigraphic trend is seen in the strongly magnetic ridge on the NW part of EL 20/92, which here is due to magnetite-veined Mt Read Volcanics in the sub-surface.

The NW magnetic grain reflects superimposed Devonian structural trends, notably NW-striking folds and thrust faults. The latter are associated with many of the mineralized skarn occurrences. Post-mineralization movements on some of these structures, which have seen the mineralized skarns truncated or offset, are evident in the magnetics (eg: around the Moina Deposit).

Within EL 20/92 the variably auriferous magnetite-bearing skarns at Ti-Tree Creek and Stormont Mine show clearly on the aeromagnetics. Both comprise twin close-spaced NW-trending anomalies. The anomalies are from 150m to 300m long.

### *Stormont Mine*

At Stormont Mine the stronger and larger (150-200m) western anomaly lies over the skarn in the lightly-drilled Western Syncline. The smaller and substantially weaker eastern anomaly lies directly over the known mineralization, including the Au-Bi resource, in the Central Syncline. This suggests there is a lot more potentially-auriferous magnetite-bearing skarn yet to be discovered in the Western Syncline.

The aeromagnetic anomaly outlines at Stormont are plotted in *Figure 10*. The eastern anomaly has the same 315° AMG trend as the coincident main mineralized zone, as would be expected. But the peak of the western anomaly trends approximately 300° AMG, extending about 150m from the vicinity of SD50 - ST04 to SW of SD51. This varies considerably from the 340° AMG trend of the Western Syncline mapped by Goldstream-Titan (Newnham, 1997).

The indications are that holes might be profitably sited in the untested western part of the Western Syncline (as mapped), ie: to the west of hole SD21 and north of SD20.

Both the eastern and western magnetic anomalies have abrupt SE terminations. These align with an interpreted NE-trending cross-structure causing a small jog in the Stormont Fault and adjacent main mineralized zone (see *Figure 10*).

The western magnetic anomaly termination is just to the SE of ST04 – SD50. Although this is not a good pointer for the gold potential to the SE of the ST04 intersection, it is worth noting that gold mineralization does occur in the Central Syncline SE of the eastern magnetic anomaly termination: 5.4m @ 2.5 g/t Au in SD10 and 8m @ 1.81 g/t Au in SD44.

There are two weaker magnetic anomalies at Stormont further to the west and east of the two discussed above. The far eastern response coincides with some weak gold mineralization, drilled by GFEL under 25m of Tertiary cover in the southern part of the Eastern Syncline (2m @ 0.4 g/t Au in SD18 and 4.5m @ 0.25 g/t Au in SD17). The geological context of the weaker far western response is not known.

#### *Ti-Tree Creek*

The two parallel NW-trending aeromagnetic anomalies at Ti-Tree Creek are shown in *Figure 4*. The western anomaly is much the stronger and larger (+300m long). The upward-continued RMI data in *Figure 3* shows there are weak discrete responses under Tertiary basalt along strike to the SE and NW of the dominant anomaly.

There is also a weak response under basalt about 400m to the NW (along the strike of the thrust) of the auriferous skarn outcrop drilled by TC04.

#### *Other Magnetic Anomalies on EL 20/92*

On EL 20/92 near the west boundary of RL 8810 are two prominent elongated NW-trending magnetic anomalies. Both received one-hole tests from Comalco. The northern anomaly is about 300m long and was tested by SMD17 (74m) sited at 5406800N / 421550E. The hole intersected 17m of wrigglytic magnetite-fluorite skarn containing 10.7% CaF<sub>2</sub> but no gold.

The southern anomaly is +500m long. It cuts the SW corner of RL 8810 but 90% of it is within EL 20/92. The anomaly was tested by SMD23 (37m) sited at 5406060N / 421970E. The result was identical to SMD17 except the wrigglyte was 21m thick.

Both anomalies have never been further tested, despite clearly being skarn bands of very significant extent.

#### *Magnetic Arc*

The northern anomaly mentioned above lies at the NW end of a major 5km long arc of magnetic anomalies. These extend back eastwards through the Brampton Creek, Moina and Hugo skarns, through subdued (deeper?) responses north of All Nations Mine, to a NE-trending line of bulls-eye anomalies east and sub-parallel to the Narrawa Creek Fault (Purvis, 2000). The arc is visibly chopped up and dislocated by a swarm of NW-trending faults, some of which have been mapped on the ground.

This arc is one of the most eye-catching features of the magnetics and may be a reflection of a fundamental crack in the rocks roofing the granite intrusion.

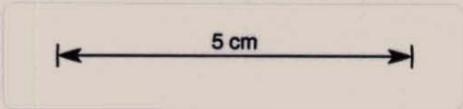
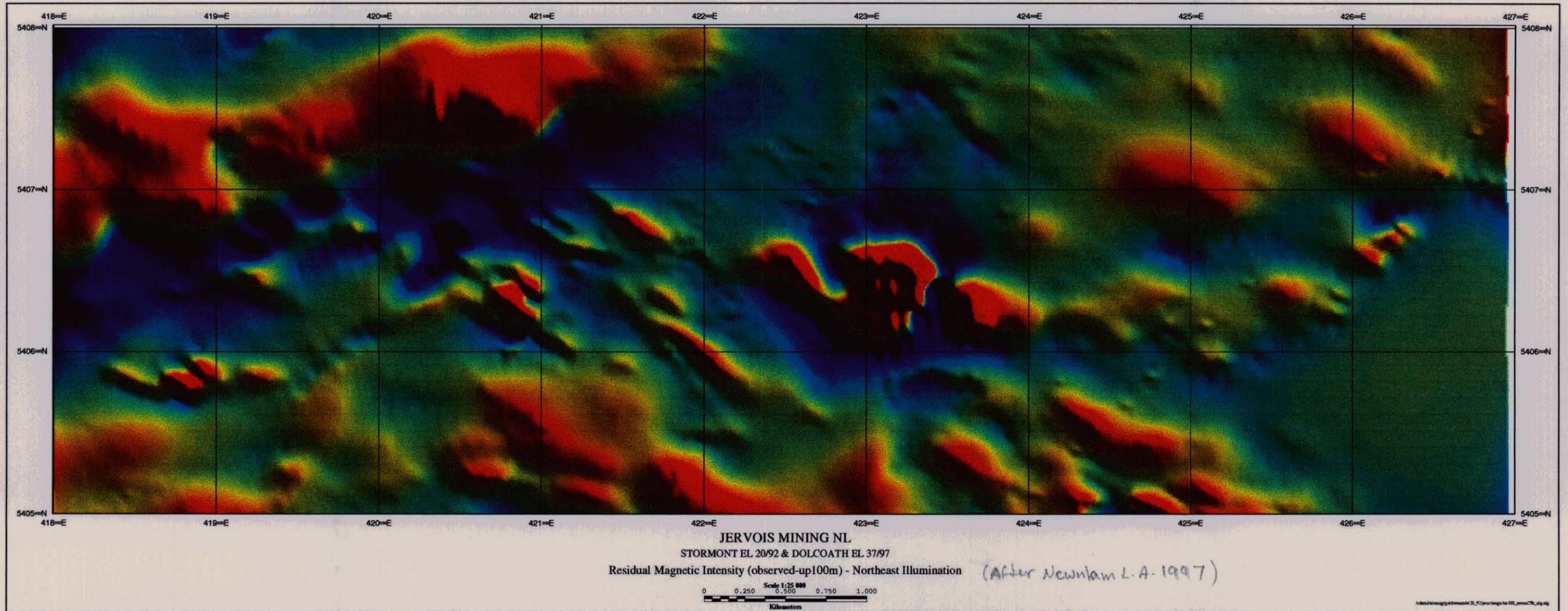


Figure 3

## 8. DISCUSSION

### 8.1 Setting of Skarn-Hosted Gold Mineralization

Testing by explorers of skarns within the Dolcoath Granite aureole shows that economic mineralization is confined to structurally-controlled sites within the skarns. Generally these are proximal to NW-trending thrust faults that were presumably feeder conduits for the mineralized fluids. The structures apparently also had a ground-preparation role by subsidiary faulting, fracturing and brecciating the host limestone and/or skarn.

It appears that most if not all the stronger magnetite-bearing zones are aligned along such NW-trending faults. Although commonly the causative structure itself has yet to be located by the holes put into these zones.

Thus although the skarns cover substantial areas, significant mineralization within them does not. In fact, as the Stormont Mine situation demonstrates, the bodies can be very narrow and easily missed unless drill spacing is kept extremely tight.

This is not the case at the Moina Deposit itself, where not only are large areas of skarn mineralized, they are also the thickest seen anywhere - up to 95m of wrigglyite. Presumably the Bismuth Creek Fault helped provide near-perfect conditions for mineralization.

It must have facilitated the passage of huge amounts of mineralizing fluid and also prepared the ground with large peripheral zones of faulting, fracturing and brecciation, that allowed the fluids access to substantial volumes of limestone. Comalco mapped seven parallel NW-trending subsidiary faults cutting through the main deposit just west of the Bismuth Creek Fault (Askins, 1978).

Near Lake Gairdner on the EL / RL boundary the limestone is actually thicker than at Moina, but the basal skarn interval is thin (DOM1: 9m of skarn in 158m of limestone).

The magnetics show that there is not another Moina-sized system in the aureole. Within EL 20/92 the magnetics suggest the potential is for several discrete magnetite-bearing bodies, all more than an order of magnitude smaller than Moina.

However, better *gold* values in the Dolcoath aureole don't necessarily simply occur in magnetite-bearing skarn. In many instances relatively 'pure' (ie: sulphide-poor) high-grade wrigglyitic magnetite-fluorite skarns are essentially barren of gold. Examples are holes SMD17 & 23 within EL 20/92.

In the majority of cases where gold mineralization is present in the magnetite-bearing skarns the other important ingredient is *sulphides*, both iron-sulphides and basemetal sulphides. Stormont excepted, some significant gold mineralization in the aureole occurs in sulphide-rich skarn facies peripheral to magnetite-dominant skarn.

661028

Excellent examples are provided by skarns flanking the Moina Deposit: the Hugo skarn (250,000t @ 1 g/t Au & 5-6% Zn, Newnham 1997) and the Brampton Creek pyrrhotitic skarn (8m @ 1.5 g/t Au in SMD9).

*The best potential for gold in the whole aureole is probably in less-magnetic sulphide-rich skarns under Tertiary cover on the periphery of the main Moina Deposit.*

In the Ti-Tree Creek skarn the best gold values (holes TC04 & 05) are in magnetite skarn containing high levels of sulphides, dominantly pyrrhotite with lesser pyrite. Detailed sampling shows the sulphide-gold association is not that intimate: within sulphidic skarn, gold values can occur in massive magnetite bands while adjacent massive pyrrhotite contains almost none (see log of TC05 in *Appendix 1*).

The notable exception to this theme is at Stormont Mine, where the strongly auriferous deposit (135,000t @ 3.44 g/t Au) is dominantly magnetite-bearing with (generally) very minor sulphides.

This leads to the conclusion that while the magnetics are the primary locator of potentially mineralized skarn, they will not provide the full story. The search for gold has also to pay heed to sulphide-rich facies within or peripheral to the dominant magnetite-bearing skarn.

Modern electrical geophysics therefore could have an important role to play in the ore-finding process in the Dolcoath Granite aureole. Both IP and EM have been rather sparingly used by explorers to date.

## **8.2 Results on EL 20/92**

Bearing in mind the comments made above, it would be dangerous to write off the large Ti-Tree Creek skarn. The disappointing drill results downgrade but do not eliminate the gold potential.

The general tenor of Au-Bi mineralization in the 7 holes drilled to date has been modest at best. But only 2 holes have tested the +300m long main magnetic anomaly. The sulphide-magnetite skarn in the prospective position beside the NW-trending thrust has been tested by only one hole, TC04, producing the best result (1m @ 1.32 g/t Au & 0.18% Bi).

Given that any mineralized bodies could be as discrete as that at Stormont, and the smaller untested northern magnetic anomaly is still of almost identical size and strength to that over the Stormont Deposit, there is plenty of room for more drilling at Ti-Tree.

Modern IP and ground magnetics would also be productive here, the former to locate sulphidic skarn facies and the latter to more accurately locate/delineate the magnetic responses. If this approach was adopted it should be done before any further drilling.

## 661029

At Stormont, the ST01 result appears to have finally closed off the south-eastward extension of the main mineralized zone and the Stormont Fault appears to have departed from its normal regular SE trend. Although there may still be potential further to the SE, this is not supported by the lack of magnetic response. (Remembering this is one mineralized skarn where magnetite appears more important than any sulphides).

However, the ST04 result indicates there could be a body of gold mineralization in the Western Syncline. The magnetics are also encouraging, not only suggesting there is more magnetic material here than in the deposit-hosting Central Syncline, but also that past drilling in the Western Syncline was sited too far east.

This has left the 150m long magnetic peak undrilled except for SD50 and ST04 at the SE end, and these are the holes with the best gold values to date (3m @ 1.33 g/t Au and 2m @ 3.5 g/t Au respectively).

The gold mineralized zone in the Western Syncline thus appears open both to the NW and SE. The magnetics would suggest, by analogy with the anomaly over the deposit in the Central Syncline, that the NW extensions offer much the best chance for economic mineralization. However, the entirely untested SE extensions should also be drilled.

At Fletchers Adit, 1km to the NE of Stormont, both New Consolidated Gold Fields (Wilson, 1962) and Comalco (Poltok *in* Askins, 1978) mapped a large fault beside the outcropping Au-Bi mineralized skarn at the adit. Jennings (1979) described it as a thrust and GFEL's 1987 drilling on the north side of the river opposite the adit showed the structure had a NW trend. It was unmineralized where intersected.

The only significant gold values from GFEL's 9 holes at Fletchers were from FD7 and FD8, drilled the furthest to the north and north-west (200-275m from the adit), broadly along the trend of the thrust. FD7 (2m @ 1.5 g/t Au) and FD8 (21m @ 0.3 g/t Au) were collared 100m apart.

Fletchers is a large skarn (possibly larger than Ti-Tree) warranting further investigation. A fence of close-spaced holes is needed between and just beyond FD7 and FD8, and also across the projected trace of the thrust in the completely undrilled area to the SE of the adit.

To the east of Ti-Tree, the two 300-500m long magnetic anomalies tested by Comalco with holes SMD17 & 23, require further drilling. The depths to target are very shallow (<30m).

### **8.3 Potential for Auriferous Vein Stockworks**

GFEL (Roberts, 1986) reported a 1.6 sq km area of anomalous gold in drainage on the northern slopes of Mt Stormont, in the SW corner of EL 20/92. The local geology is dominated by Ordovician sandstone and conglomerate, as well as Quaternary scree of the same.

661030

The only known mineralized occurrence in this area is the old Stormont Gold Mine, a minor working on thin auriferous quartz veins in a fault zone within Ordovician sandstone with conglomerate bands (Twelvetrees, 1913).

(GFEL supposedly located and chip sampled this sandstone-hosted occurrence with poor results. But their description of the location as being 120m SE of the Stormont Mine, Fleming 1988, places it beside the mineralized skarn. No other reports have described the two workings as being close together, so there has to be some doubt they did actually find the old goldmine.)

GFEL had trouble duplicating many of their stream anomalies, but had no doubt that the original -80 +150 mesh samples genuinely contained gold. Follow-up seems to have been limited to further drainage sampling (Fleming, 1988).

It is possible that the gold anomalism is pointing to a swarm of auriferous veining or fracture-filling over a wide area in these very siliceous and brittle rocks. The Ordovician sediments in this area are underlain by Mt Read Volcanics and it may be the gold has been remobilized or "stewed" out of the underlying volcanics by the intruding granite. Any veins or fractures must be very thin or they would have been located and worked by the old miners.

It is unlikely the gold is coming from stratiform disseminated gold bodies similar to the Higgs Deposit at Narrawa Creek (Purvis, 1999), as this style is hosted by the partly-calcareous upper section of the Moira Sandstone. The rocks on Mt Stormont appear to be much lower in the sequence.

Testing of the hard rock in outcrop and scree would seem to be justified, with initial testing guided by the GFEL drainage results.

## 661031

9. **CONCLUSIONS**

1. Drilling at the Stormont Mine has closed off the SE extension of the main mineralized zone, but indicates potential for a new body of gold mineralization in untested parts of the Western Syncline NW and SE of Jervis hole ST04. The magnetics suggest this potential is significant.
2. Results of drilling at Ti-Tree Creek skarn are disappointing. However, the potentially-mineralized areas are sizeable and targets worthy of drilling remain.
3. Elsewhere on the EL, two magnetic anomalies (sites of Comalco holes SMD17 & 23) and two mineralized occurrences outlined by earlier exploration, gold-bismuth in the Fletchers Adit skarn and drainage gold on the north slopes of Mt Stormont, warrant further testing.
4. Mineralization in the skarns is structurally controlled and gold mineralization is often associated with sulphidic parts of the magnetite-bearing skarns. Modern electrical geophysics may be useful in delineating the sulphidic zones. These techniques have been too sparingly used by explorers to date.

## 10. RECOMMENDATIONS

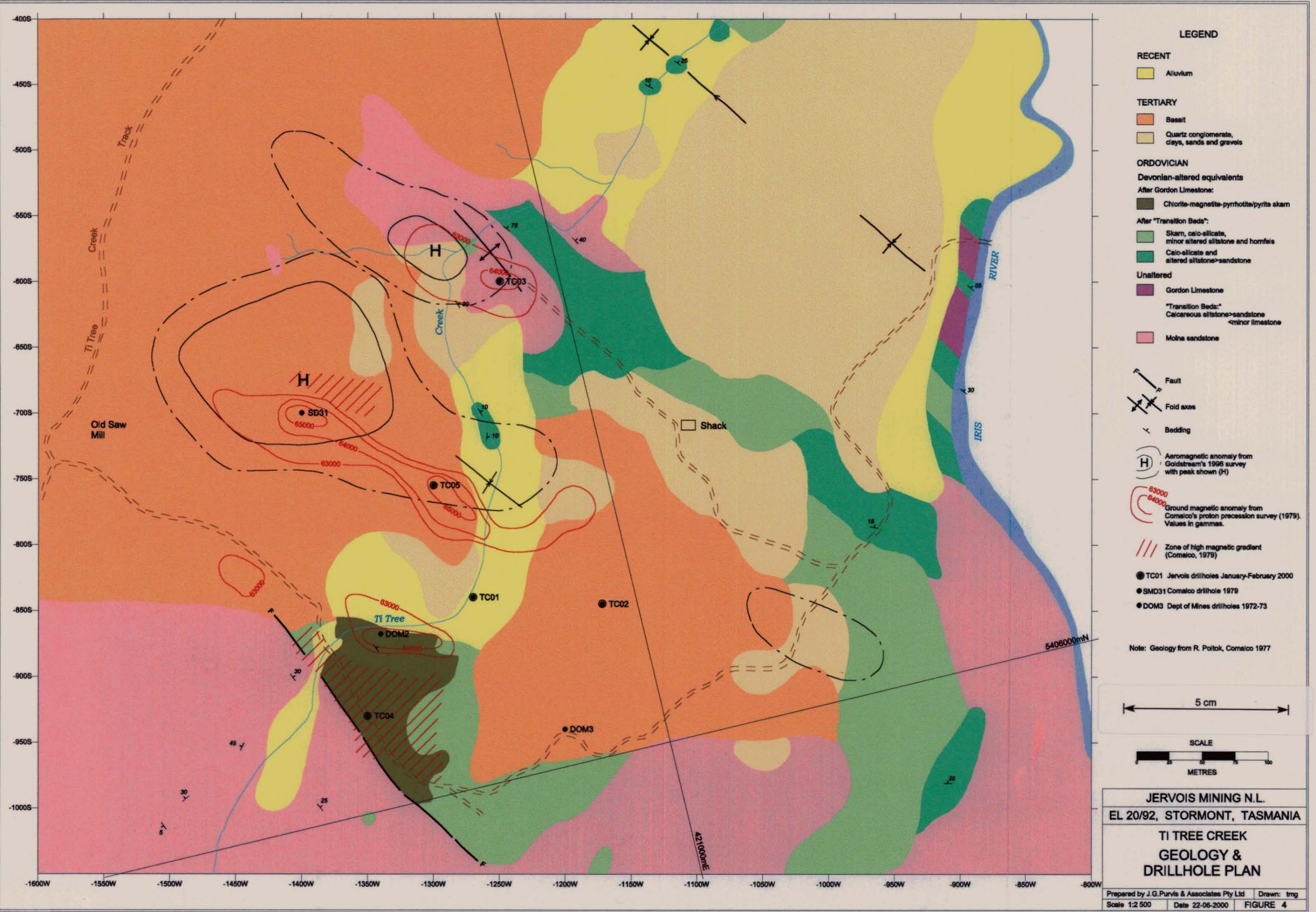
(In order of priority):

1. Drilling is recommended in the Western Syncline at Stormont Mine to test for extensions NW and SE of the gold zone in holes ST04 - SD50. At least eight 40m holes are required. Six holes to be sited along the trend of the aeromagnetic anomaly west of existing drilling in the northern part of the syncline, and two holes to be sited SE of ST04.
2. IP and ground magnetic surveys are recommended at Ti-Tree Creek to delineate sulphidic parts of the skarn and more accurately locate the magnetic anomalies.
3. Following the above, further short-hole drilling should be undertaken at Ti-Tree Creek to test targets including the main magnetic anomaly, the northern magnetic anomaly and the strike extensions of the auriferous skarn beside the NW-trending thrust.
4. More-comprehensive drill testing is recommended on the magnetic anomalies tested by Comalco holes SMD17 & 23. Depths to target are <30m.
5. At Fletchers Adit, single fences of close-spaced holes are recommended in two areas: a) between and beyond the gold-mineralized GFEL holes FD7 & 8; and b) across the projected thrust fault trace immediately SE of the adit. Most targets are at depths of <30m.
6. Systematic outcrop and scree rock chip sampling is recommended on the northern slopes of Mt Stormont to locate the source of the widespread anomalous gold in drainage.

661033

## 11. REFERENCES

- Askins, P.W. 1978 EL 774 Moina. Areas Covered by Moina Sheets 1, 2, 3, Report on all Investigations to September 1978. *Comalco Unpub Rep (Open File)*. September 1978.
- Askins, P.W. 1979 EL 774 Moina. Areas Covered by Moina Sheets 1, 2, 3, 1979 Update and Moina Sheet A. Report on all Investigations to August 1979. *Comalco Unpub Rep (Open File)*. August 1979.
- Fleming, M.J. 1988 EL 41/83 Lake Lea, Annual Report 1988. *RGC Exploration Unpub Rep (Open File)*. November 1988.
- Funnell, F. 1988 EL 774 Moina (Extension). Report on Area to be Relinquished on 19<sup>th</sup> July, 1988. *CRAE Unpub Rep (Open File)*. June 1988.
- Jennings, I.B. 1979 Sheffield. *Geol Surv Explan Rep, Geol Atlas 1 Mile Series*.
- Leaman, D.E. 1988 Gravity and Magnetic Evaluation, Moina Region. *Unpub Rep for RGC Exploration*. August 1988.
- McKibben, J.P. 1971 Annual Report on Moina Area – EL 8/65, 1970-71. *Mt Lyell Co Unpub Rep (Open file)*. August 1971.
- Newnham, L.A. 1996 EL 20/92, Moina Area, Stormont Mine Drilling Program 1995-96. *Goldstream Mining Unpub Rep (Closed File)*. May 1996.
- Newnham, L.A. 1997 EL 20/92, Moina Area – Northern Tasmania. Report for 12-Month Period Ending 30 April, 1997. *Goldstream Mining Unpub Rep (Closed File)*. April 1997.
- Purvis, J.G. 1999 Dolcoath EL 37/97, Tasmania. First Progress Report. *Jervois Mining Unpub Rep (Closed File)*. January 1999.
- Purvis, J.G. 2000 Dolcoath EL 37/97, Tasmania. Second Progress Report. *Jervois Mining Unpub Rep (Closed File)*. March 2000.
- Roberts, R.H. 1986 EL 41/83 Lake Lea Area. Annual Report 1985/86. *Gold Fields Exploration Unpub Rep (Open File)*. December 1986.
- Twelvetrees, W.H. 1913 The Middlesex and Mount Claude Mining Field. *Geol Surv Tas Bull 14*. pp 108-110.
- Wilson, G.I. 1962 Report on Special Prospector's Licence No. 378, Mt Stormont Area, Tasmania. *New Consol Gold Fields Unpub Rep (Open File)*. April 1962



WEST

EAST

420900mE

TC01  
Vertical

Ti Tree Creek

Swampy Creek

Comalco peg 880S/1200W  
8m north of section  
Track

GARNET-EPIDOTE SKARN

3.75m @ 0.21g/t Au

semi-massive mag>po-py  
0.5m MASSIVE PYRRHOTITE  
10-25% mag>po-py

CHLORITE-MAGNETITE SKARN

CHLORITE-EPIDOTE-GARNET SKARN

3% mag>po-py

CHLORITE-SILICA HORNFELS

500mRL

SILICIFIED QUARTZ SANDSTONE

ADJOINS DRILL SECTION TC02

BIOTITIZED SILTSTONE

HORNFELS AND SKARN

BIOTITIZED SILTSTONE

BIOTITIZED SILICIFIED QUARTZOSE SANDSTONE

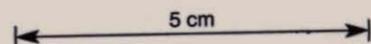
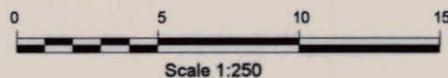
EOH  
46.4m

2% py

ABBREVIATIONS

aspy	arsenopyrite
bi	bismuthinite
cb	carbonate
chl	chlorite
cp	chalcopyrite
ferromag	ferromagnesian minerals
fluor	fluorite
gar	garnet
gn	galena
lim	limonite
mag	magnetite
musc	muscovite
po	pyrrhotite
py	pyrite
qtz	quartz
sil	silicified
sp	sphalerite
wol	wolframite

LEGEND



JERVOIS MINING N. L.

EL 20/92, STORMONT, TASMANIA

TI TREE CREEK

DRILL SECTION TC01

LOOKING NORTH, SECTION BEARS 108 AMG

Prepared by: J. G. Purvis and Associates Pty. Ltd.

Drawn: tmg

SCALE 1:250

DATE: 30-06-2000

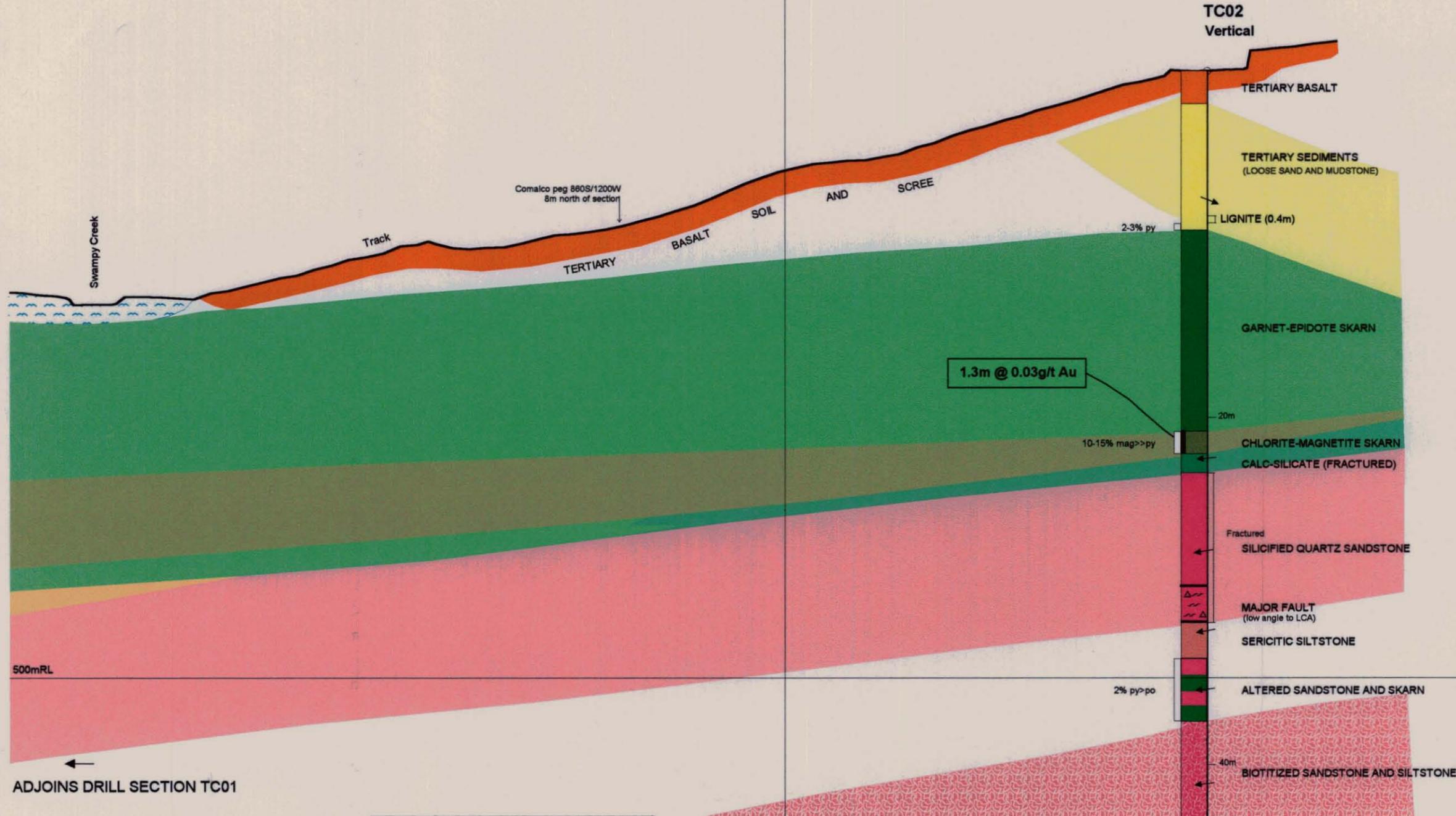
FIGURE 5

661035

WEST

EAST

420950mE



1.3m @ 0.03g/t Au

10-15% mag>>py

2-3% py

2% py>po

TC02  
Vertical

TERTIARY BASALT

TERTIARY SEDIMENTS  
(LOOSE SAND AND MUDSTONE)

LIGNITE (0.4m)

GARNET-EPIDOTE SKARN

CHLORITE-MAGNETITE SKARN  
CALC-SILICATE (FRACTURED)

Fractured  
SILICIFIED QUARTZ SANDSTONE

MAJOR FAULT  
(low angle to LCA)

SERICITIC SILTSTONE

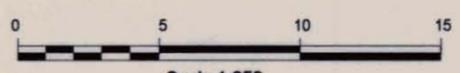
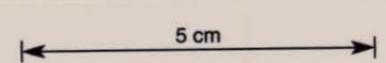
ALTERED SANDSTONE AND SKARN

BIOTITIZED SANDSTONE AND SILTSTONE

EOH  
43.4m

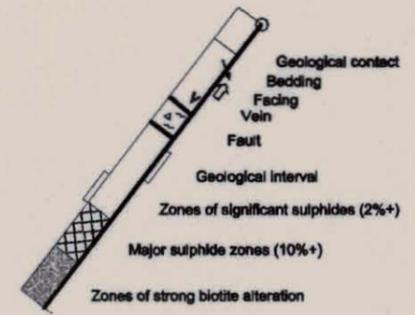
500mRL

ADJOINS DRILL SECTION TC01



Scale 1:250

LEGEND



ABBREVIATIONS

aspy	arsenopyrite
bi	bismuthinite
cb	carbonate
chl	chlorite
cp	chalcopyrite
ferromag	ferromagnesian minerals
fluor	fluorite
gar	garnet
gn	galena
ilm	ilmenite
mag	magnetite
musc	muscovite
po	pyrrhotite
py	pyrite
qtz	quartz
sil	silicified
sp	sphalerite
wolf	wolframite

JERVOIS MINING N. L.

EL 20/92, STORMONT, TASMANIA

TI TREE CREEK

DRILL SECTION TC02

LOOKING NORTH, SECTION BEARS 108 AMG

Prepared by: J. G. Purvis and Associates Pty. Ltd.

Drawn: tmg

SCALE 1:250

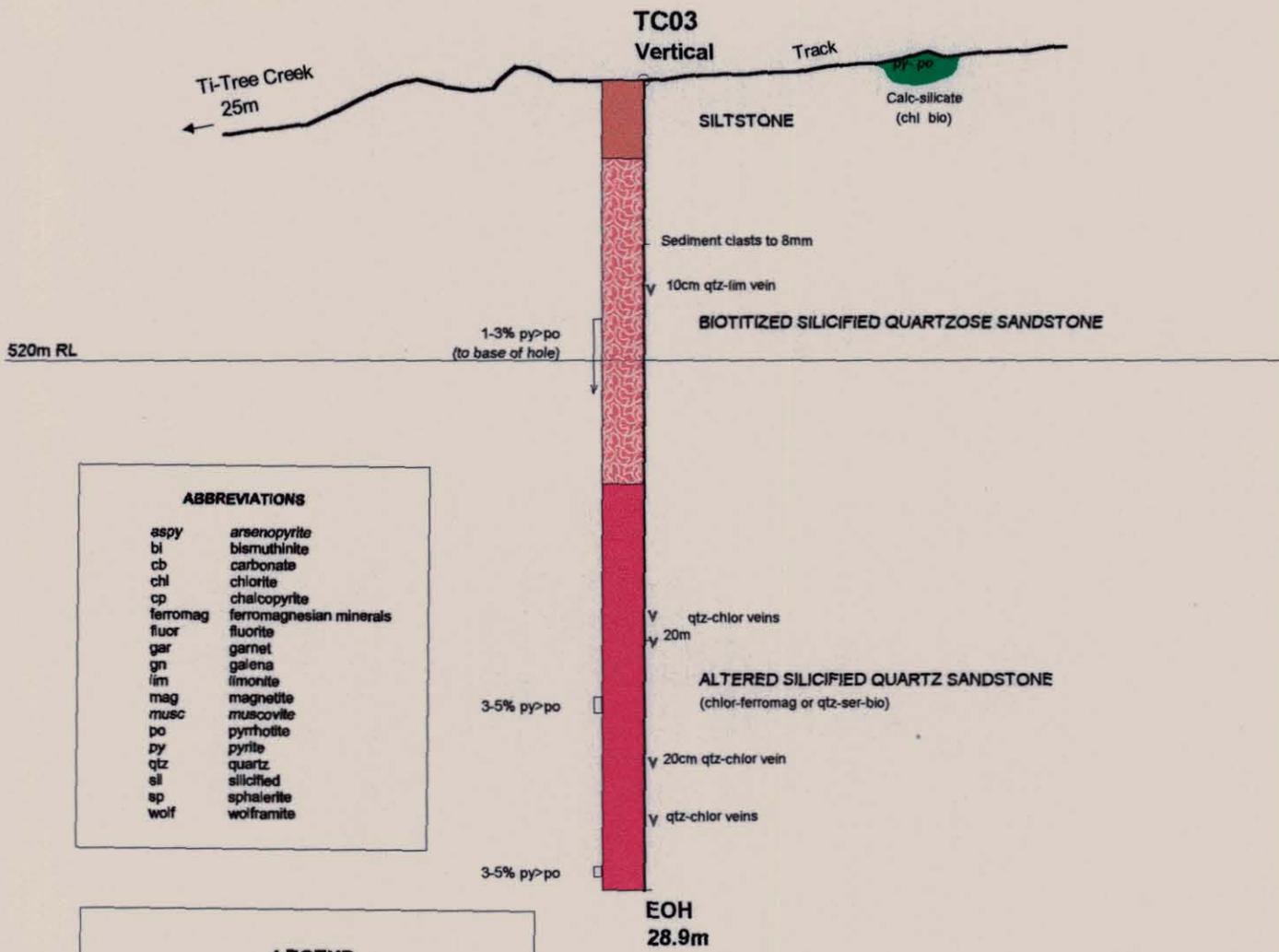
DATE: 30-06-2000

FIGURE 6

661036

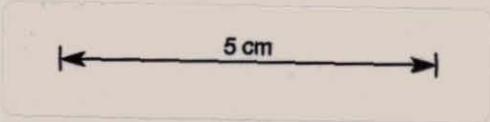
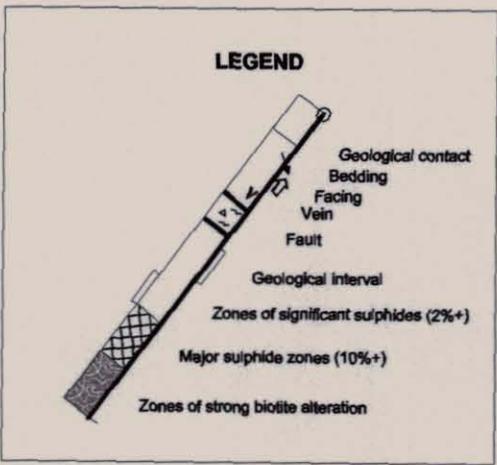
WEST

EAST

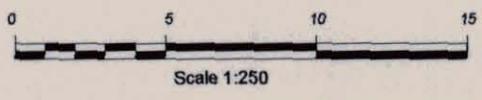


**ABBREVIATIONS**

aspy	arsenopyrite
bi	bismuthinite
cb	carbonate
chl	chlorite
cp	chalcopyrite
ferromag	ferromagnesian minerals
fluor	fluorite
gar	garnet
gn	galena
lim	limonite
mag	magnetite
musc	muscovite
po	pyrrhotite
py	pyrite
qtz	quartz
sil	silicified
sp	sphaerite
wolf	wolframite



NOTE: All gold values in hole <0.1g/t



**JERVOIS MINING N. L.**  
**EL 20/92, STORMONT, TASMANIA**  
**TI TREE CREEK**  
**DRILL SECTION TC03**  
**LOOKING NORTH, SECTION BEARS 103 AMG**

Prepared by : J. G. Purvis and Associates Pty. Ltd.      Drawn : tmg  
 SCALE 1:250      DATE: 30-06-2000      FIGURE 7

WEST

EAST

1m @ 1.32g/t Au, 0.18% Bi,  
0.15% Sn, 0.2% Cu

5m @ 0.56g/t Au, 0.13% Bi,  
0.12% Sn

TC04  
Vertical

Ti-Tree Creek  
40m

Track

py, mag  
MASSIVE MAGNETITE-PYRRHOTITE-PYRITE SKARN

**ABBREVIATIONS**

aspy	arsenopyrite
bi	bismuthinite
cb	carbonate
chl	chlorite
cp	chaicopyrite
ferromag	ferromagnesian minerals
fluor	fluorite
gar	garnet
gn	galena
lim	limonite
mag	magnetite
musc	muscovite
po	pyrrhotite
py	pyrite
qtz	quartz
sil	silicified
sp	sphaerite
wolf	wolframite

25% po-py-mag

SULPHIDIC SKARN  
chlor-ferromag-gar-epi

3cm qtz-py vein

SILICIFIED QUARTZ SANDSTONE

Fractured and broken  
(to base of hole)

FRACTURED SILTSTONE

20m

QUARTZ-CHLORITE-BIOTITE HORNFELS

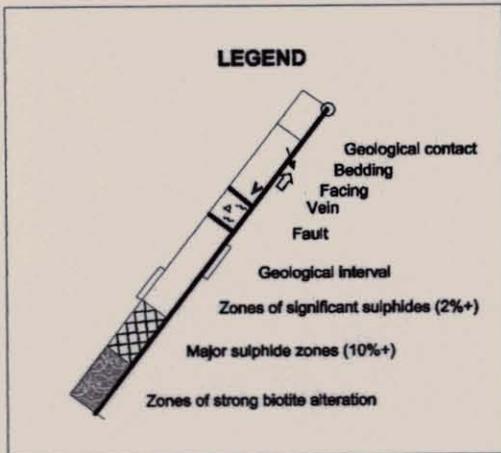
2-3% py

STRONG FAULT  
in biotitized quartzose sandstone  
8cm qtz-py vein

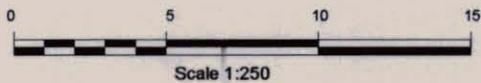
BIOTITIZED QUARTZOSE SANDSTONE AND SILTSTONE

EOH  
29.8m

525m RL



5 cm



JERVOIS MINING N. L.

EL 20/92, STORMONT, TASMANIA

TI TREE CREEK

DRILL SECTION TC04

LOOKING NORTH, SECTION BEARS 103 AMG

Prepared by : J. G. Purvis and Associates Pty. Ltd.

Drawn : tmg

SCALE 1:250

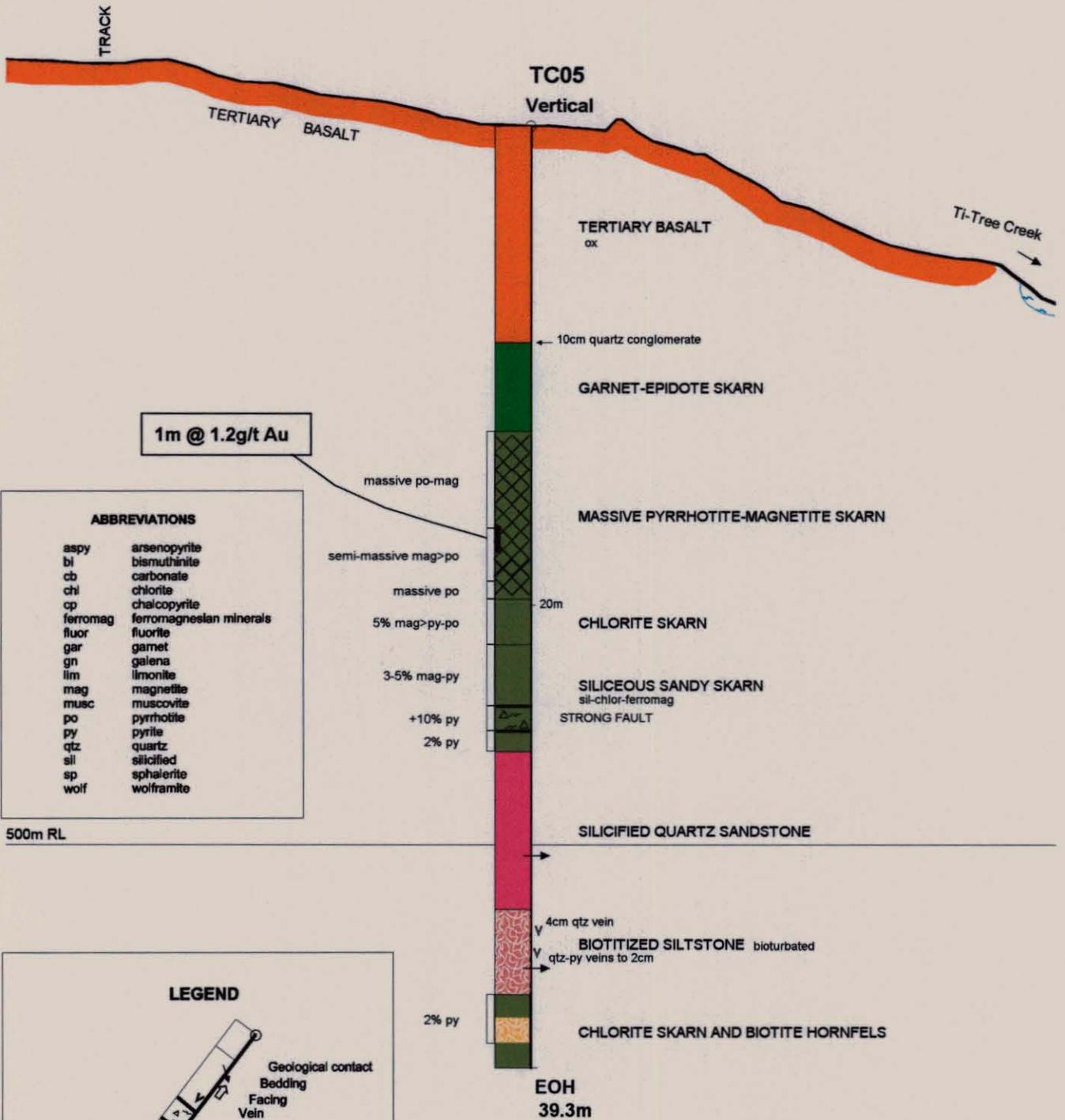
DATE: 30-06-2000

FIGURE 8

661038

WEST

EAST

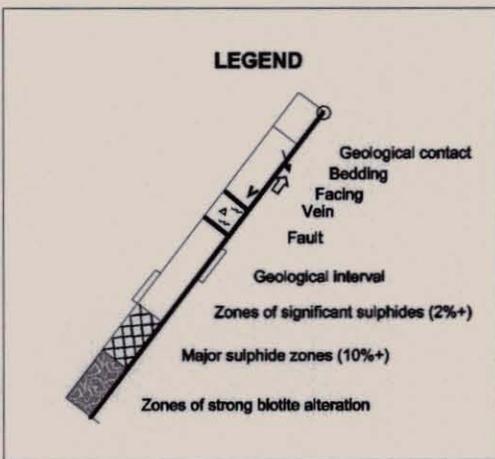


1m @ 1.2g/t Au

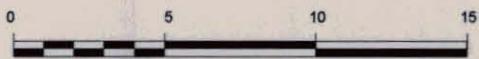
**ABBREVIATIONS**

aspy	arsenopyrite
bl	bismuthinite
cb	carbonate
chl	chlorite
cp	chalcopyrite
ferromag	ferromagnesian minerals
fluor	fluorite
gar	garnet
gn	galena
lim	limonite
mag	magnetite
musc	muscovite
po	pyrrhotite
py	pyrite
qtz	quartz
sil	silicified
sp	sphalerite
wolf	wolframite

500m RL



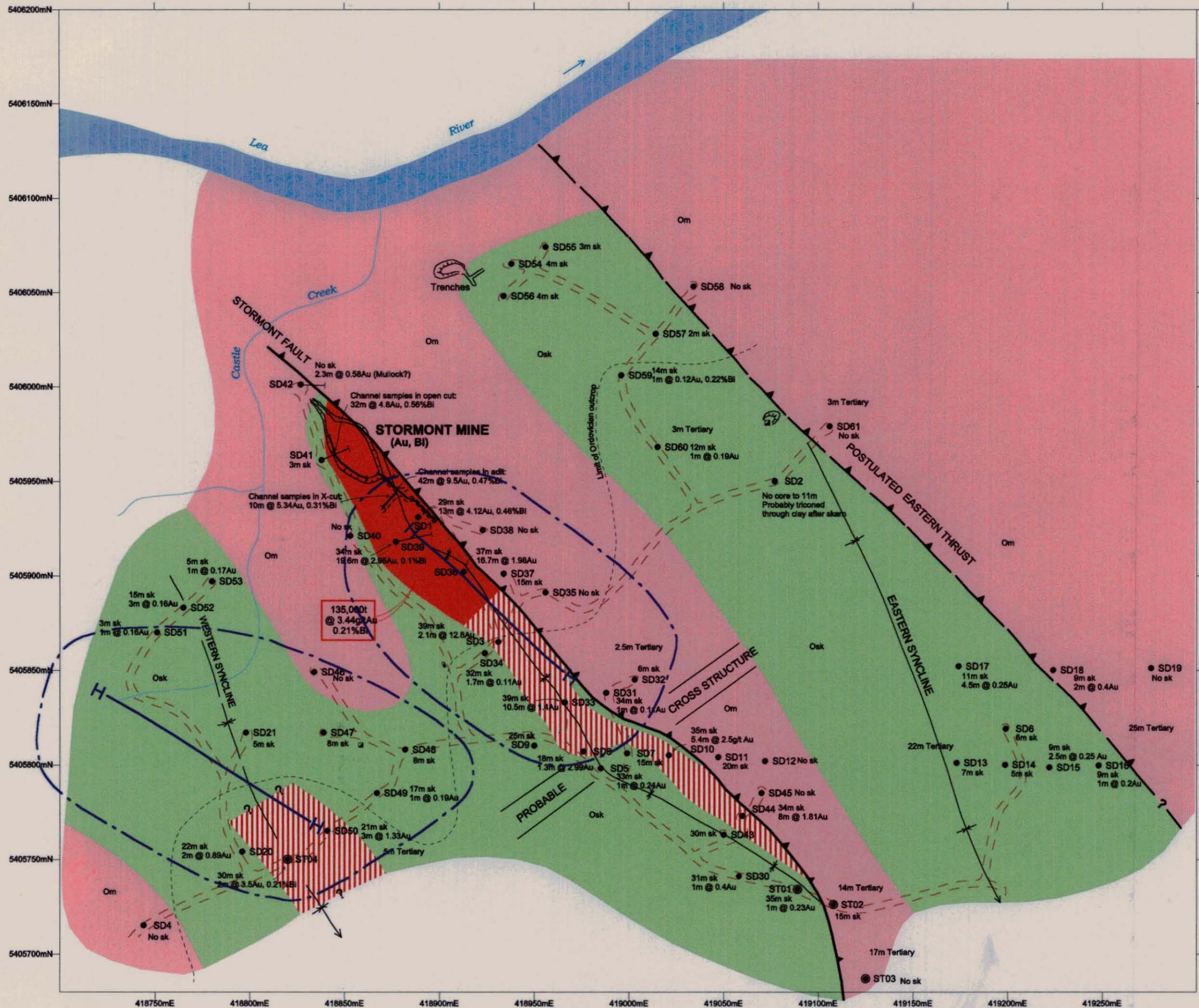
5 cm



Scale 1:250

<b>JERVOIS MINING N. L.</b>	
<b>EL 20/92, STORMONT, TASMANIA</b>	
<b>TI TREE CREEK</b>	
<b>DRILL SECTION TC05</b>	
<b>LOOKING NORTH, SECTION BEARS 103 AMG</b>	
Prepared by : J. G. Purvis and Associates Pty. Ltd.	Drawn : tmg
SCALE 1:250	DATE: 30-06-2000
FIGURE 9	

661039



**LEGEND**

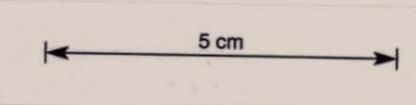
**Ordovician**

- Oak Skarn (altered Gordon Limestone)
- Om Molna Sandstone
- Stormont skarn-hosted gold-bismuth deposit (135,000t @ 3.44g/t Au, 0.21%Bi)
- Mineralized Zones (>1g/tAu)

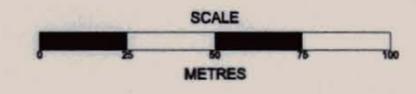
- SD6 Drillholes put down by GFEL or Goldstream/Titan pre 1998
- ST01 Drillholes put down by Jervois, February 2000

Gold values in g/t (only intersections >0.1g/t Au shown)

- Synclinal axes (As mapped by Newnham 1997)
- sk Skarn
- Outline of aeromagnetic anomaly
- Peak of aeromagnetic anomaly



**NOTE:**  
Based on a plan by L. A. Newnham (1997), which field examination shows contains errors up to 20m in the spacings between holes, especially in the eastern and western synclines.



**JERVOIS MINING N.L.**  
**EL 20/92, STORMONT, TASMANIA**  
**STORMONT MINE**  
**GEOLOGY**  
**(SUB-TERTIARY)**  
**& DRILLHOLE PLAN**

Prepared by J. G. Purvis & Associates Pty Ltd Drawn: tmg  
 Scale 1:2 000 Date 20-06-2000 FIGURE 10

WEST

EAST

Survey Point  
Star 03  
419000E

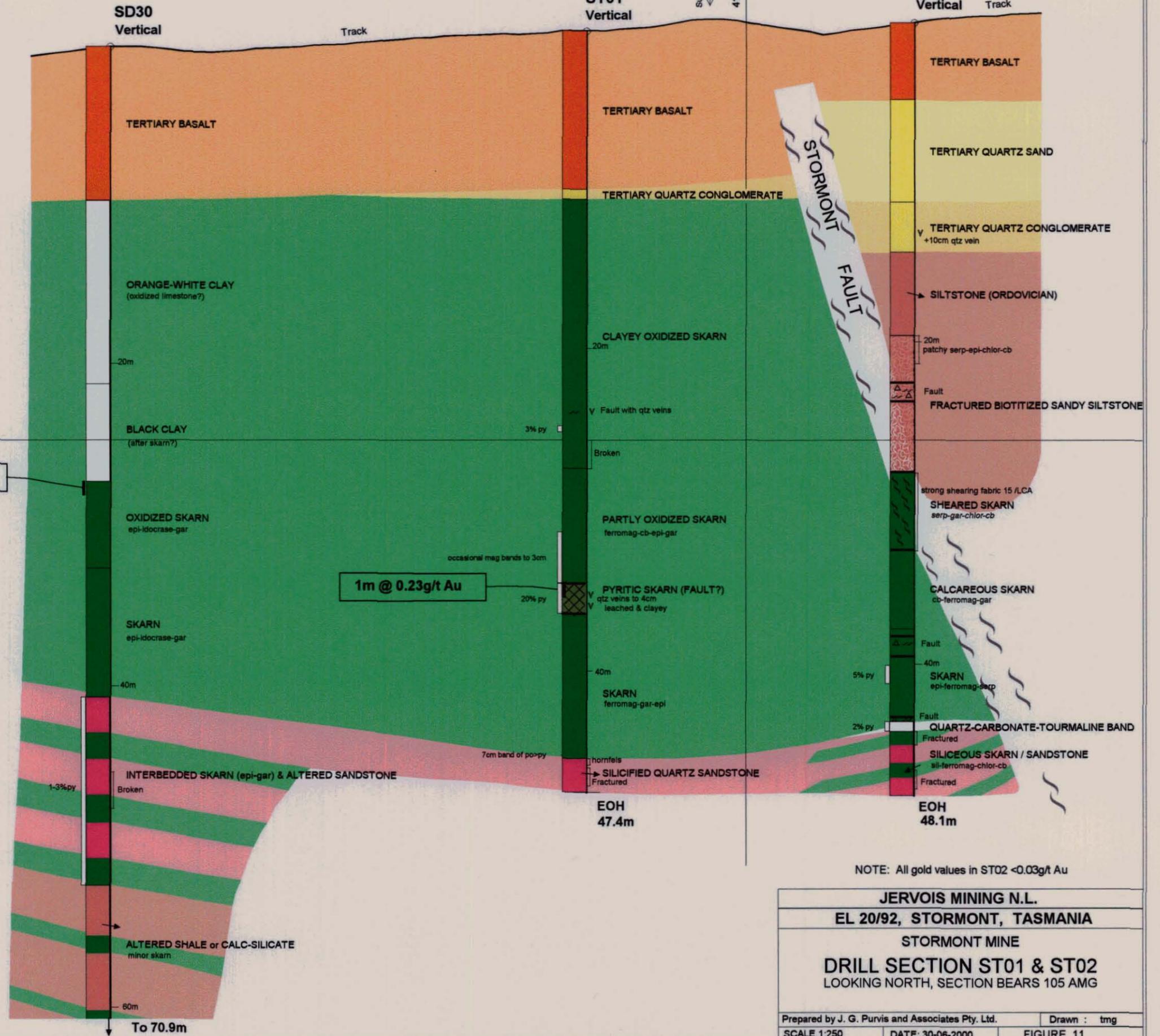
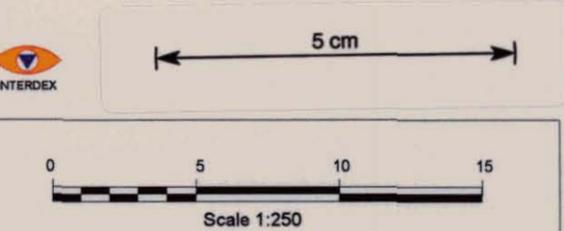
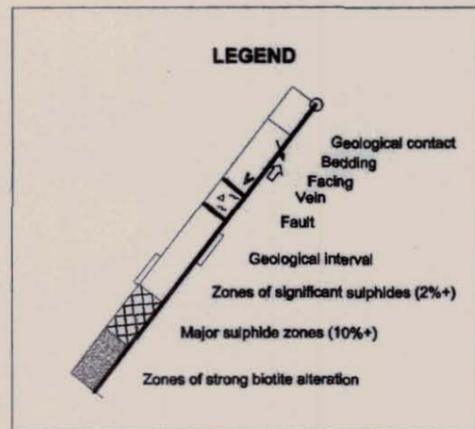
SD30  
Vertical

ST01  
Vertical

ST02  
Vertical

**ABBREVIATIONS**

aspy	arsenopyrite
bi	bismuthinite
cb	carbonate
chl	chlorite
cp	chalcopyrite
ferromag	ferromagnesian minerals
fluor	fluorite
gar	garnet
gn	galena
ilm	ilmenite
mag	magnetite
musc	muscovite
po	pyrrhotite
py	pyrite
qtz	quartz
sil	silicified
sp	sphalerite
wol	wolframite



NOTE: All gold values in ST02 <0.03g/t Au

**JERVOIS MINING N.L.**  
**EL 20/92, STORMONT, TASMANIA**  
**STORMONT MINE**  
**DRILL SECTION ST01 & ST02**  
 LOOKING NORTH, SECTION BEARS 105 AMG

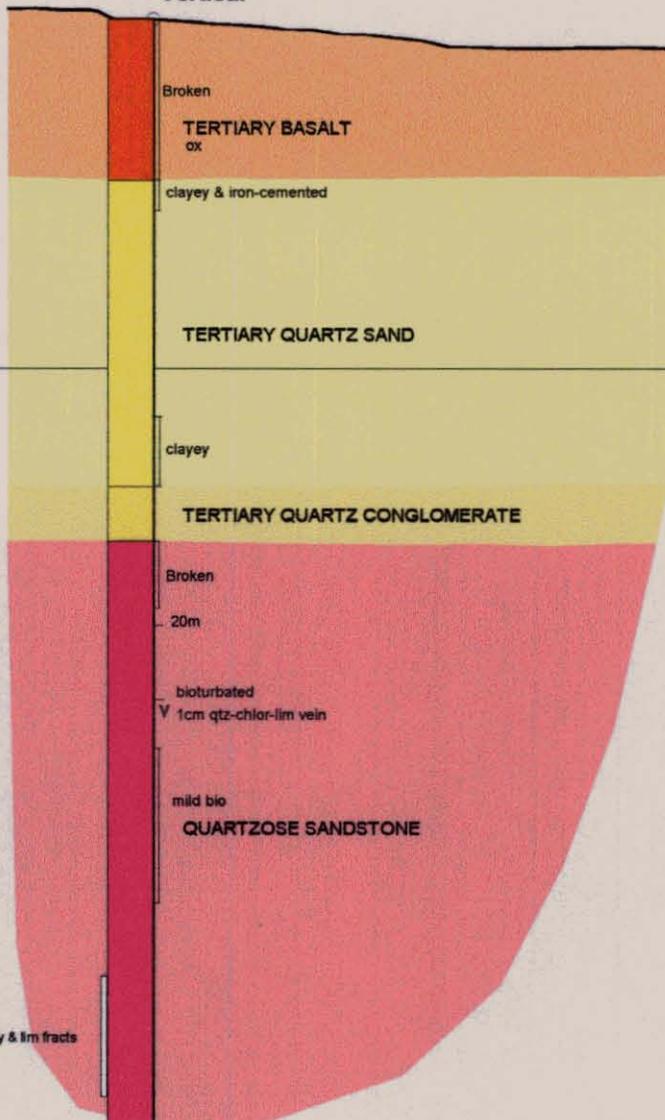
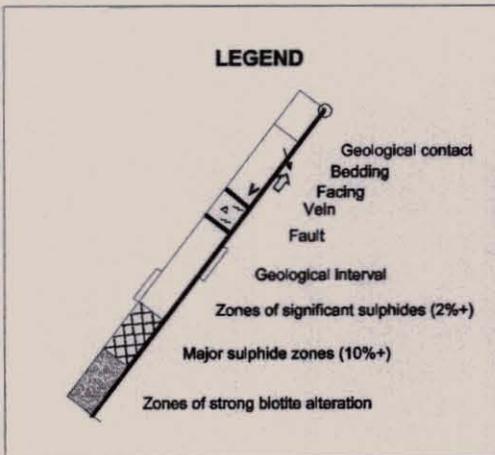
Prepared by J. G. Purvis and Associates Pty. Ltd.      Drawn : tmg  
 SCALE 1:250      DATE: 30-06-2000      FIGURE 11

SW

NE

ST03  
Vertical

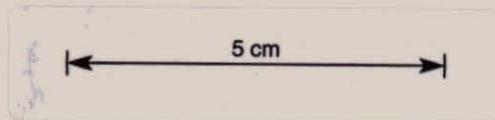
675mRL



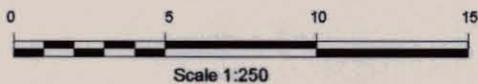
EOH  
36.4m

**ABBREVIATIONS**

aspy	arsenopyrite
bl	bismuthinite
cb	carbonate
chl	chlorite
cp	chalcopyrite
ferromag	ferromagnesian minerals
fluor	fluorite
gar	garnet
gn	galena
lim	limonite
mag	magnetite
musc	muscovite
po	pyrrhotite
py	pyrite
qtz	quartz
sil	silicified
sp	sphalerite
wolf	wolframite



NOTE: All gold values in hole <0.01g/t Au



**JERVOIS MINING N.L.**  
**EL 20/92, STORMONT, TASMANIA**  
**STORMONT MINE**  
**DRILL SECTION ST03**  
 LOOKING NW, SECTION BEARS 041 AMG

Prepared by J. G. Purvis and Associates Pty. Ltd.    Drawn : tmg  
 SCALE 1:250    DATE: 30-06-2000    FIGURE 12

661042

SW

NE

SD20  
(15m N)

ST04  
Vertical

SD50  
Vertical

SD49  
Vertical

Creek

650m RL

2m @  
0.89g/t Au

2m @ 3.5g/t Au,  
0.2% Bi, 2.6% F

3m @ 1.33g/t Au

1m @ 0.19g/t Au

0.9m @  
0.24g/t Au

GOLD MINERALIZATION

10% mag

20m

30% mag

5% mag

5% py

ACTINOLITE SKARN

WRIGGLITE SKARN

ACTINOLITE SKARN

SANDSTONE

EOH  
32.5m

Detrital qtz grains  
FERROMAG-EPIDOTE-GARNET SKARN

remnant limestone patches

WRIGGLITIC CHLORITE-MAGNETITE SKARN

20m

5cm chlor-mag-py vein  
EPIDOTE SKARN

1cm chlor-mag-py-bi veins

10% mag

musc veins to 1cm

ALTERED QUARTZOSE SANDSTONE  
patchy fluor-ferromag-epi-sil

EOH  
39.1m

TERTIARY QUARTZ CONGLOMERATE

BLACK CLAY (OXIDIZED SKARN)

OXIDIZED SKARN

WRIGGLITIC AMPHIBOLE-MAGNETITE SKARN

GARNET-AMPHIBOLE-MAGNETITE SKARN

SANDSTONE  
minor shale and skarn

EOH  
50.0m

BLACK CLAY (OXIDIZED SKARN)

OXIDIZED SKARN

MAGNETITE SKARN

OXIDIZED SKARN  
minor magnetite

Broken

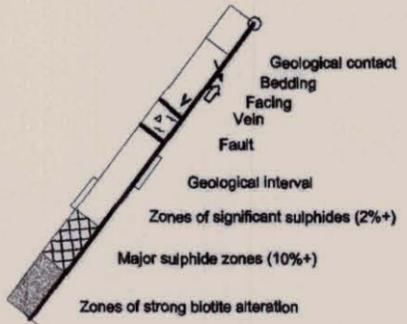
SHALE (HORNFELS) & SANDSTONE

SANDSTONE  
bioturbated,  
minor hornfels

EOH  
50.0m

5 cm

LEGEND



ABBREVIATIONS

aspy	arsenopyrite
bi	bismuthinite
cb	carbonate
chl	chlorite
cp	chalcopyrite
ferromag	ferromagnesian minerals
fluor	fluorite
gar	garnet
gn	galena
lim	limonite
mag	magnetite
musc	muscovite
po	pyrrhotite
py	pyrite
qtz	quartz
sil	silicified
sp	sphaerite
wolf	wolframite



Scale 1:250

JERVOIS MINING N.L.  
 EL 20/92, STORMONT, TASMANIA  
 STORMONT MINE  
 DRILL SECTION ST04  
 LOOKING NW, SECTION BEARS 053 AMG

Prepared by J. G. Purvis and Associates Pty. Ltd.      Drawn : tmg  
 SCALE 1:250      DATE: 01-07-2000      FIGURE 13

661043

**APPENDIX 1**

**DRILL LOGS  
HOLES TC01 – TC05**

**TI-TREE CREEK**

## JERVOIS MINING NL - DRILLHOLE LOG

DRILLHOLE: TC01					Logged by: J.G.Purvis			Date: 17.1.00	Depth: 46.4m	Size: NTW
					Co-ords: 5 406144N / 420888E . 838S / 1264W Grid			RL: 523m	Dip: -90	Azimuth:
DRILL ADVANCE					LITHOLOGY					
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION
2.4	2.9	0.5	0.5	0	0	2.4	SOIL & COARSE ALLUVIUM.			
2.9	4.4	1.5	1.5	0						
4.4	5.9	1.5	1.4	0.1	2.4	12.25	GARNET-EPIDOTE SKARN.	Minor oxidized sections intensely altered.	Unbroken. Weakly-developed banding	To 4.4m: trace dissem py-cp>mag, with 1-2% mag 3.2-4.2m.
5.9	7.4	1.5	1.5	0			Pale pinkish-green, massive, heavy.			
7.4	8.9	1.5	1.5	0			Composed mainly of garnet, epidote & bluish-green chlorite(?). Minor blebs of calcite &	Rare calcite veinlets, otherwise unveined.	(rarely wigglyitic) 85/LCA.	4.4-12.3m: trace dissem py.
8.9	10.4	1.5	1.5	0			fluorite. Non-magnetic, except for few clots of magnetite at 3 - 4.4m).		11.25-11.5m: hornfels band with So 80/LCA.	
10.4	11.9	1.5	1.5	0					Abrupt change at base.	
11.9	13.4	1.5	1.5	0						
13.4	14.9	1.5	1.5	0						
14.9	16.4	1.5	1.5	0	12.25	17.55	CHLORITE-MAGNETITE SKARN.	Intensely altered.	Unbroken.	12.25-13m: 15% mag>>py-po-cp
16.4	17.9	1.5	1.5	0			Dark green & black, massive, very heavy.	Minor tiny veinlets of chlorite, & pyrite.	Banded 75-90/LCA.	13-14.75m: SEMI-MASSIVE to locally MASSIVE, fi gr banded
17.9	19.4	1.5	1.5	0			Magnetite, + sulphides & minor fi gr fluorite(?), assoc with chlorite in slightly diffuse bleby		12.5m: wigglyitic banding.	mag>py-po, minor cp.
19.4	20.9	1.5	1.5	0			bands typically 1-3cm thick. Garnet & epidote common in sections with less magnetite.		Gradational basal contact	
20.9	22.4	1.5	1.5	0						14.75-15.25m: MASSIVE banded fi gr po>>mag-py, 1-2% cp.
22.4	23.9	1.5	1.5	0						15.25-17.55m: 10-25% (decrease with depth) mag>po-py, minor cp
23.9	24.3	0.4	0.4	0						
24.3	25.4	1.1	1.1	0						
25.4	26.9	1.5	1.5	0						
26.9	28.4	1.5	1.5	0	17.55	22.75	INTERCALATED SKARN & HORNFELS.	Very strongly altered & baked.	Largely unbroken.	17.55-19.4m: 1% py in regular veinlets to 2mm, with chloritic selvages with dissem po or mag.
28.4	29.9	1.5	1.5	0			Green & dark grey, generally hard to very hard.		Banding 80-85/LCA	
29.9	31.4	1.5	1.5	0			Massive, blotchy, chlorite-epidote-garnet skarn at top. Below 19m predominantly chlorite-silica	Hematite on some fractures.	after bedding.	Basal contact abrupt, 19.4-21m: 3-5% mag-po-py, mainly as dissem extending from po-py veinlets 40/LCA.
31.4	32.9	1.5	1.5	0			hornfels with detrital qtz grains to 2mm (after		80/LCA.	
32.9	34.4	1.5	1.5	0			qtzose sandstone), & minor thin bands of fawn			
34.4	35.9	1.5	1.5	0			fi gr siliceous hornfels (after siltstone).			21-22.75m: 2-3% mag-py-po, patchy veinlets & dissem.
35.9	36.7	0.8	0.8	0						
36.7	38	1.3	1.25	0.05						
38	39.6	1.6	1.6	0						
39.6	40.5	0.9	0.9	0	22.75	30.6	SILICIFIED QUARTZ SANDSTONE.	Strongly silicified.	Bedding in siltst: 85/LCA	To 28m: 1% py, mainly dissem.
40.5	41.9	1.4	1.4	0			Pale grey, very hard. Fi-med gr massive qtz	Mild pervasive chlorite	at 23m, 90/LCA at 27m.	28-30.6m: minor py.
41.9	43.4	1.5	1.5	0			sst. Very minor thin (2-20mm) beds of fawny	alt in places. Biotite	Low-angle fractures filled	
43.4	44.9	1.5	1.5	0			unsilicified sericitic siltstone.	occurs adjacent to siltst.	with chlorite-epidote.	

661045

## JERVOIS MINING NL - DRILLHOLE LOG

<b>DRILLHOLE: TC01</b>					<b>Logged by: J.G.Purvis</b>			<b>Date: 17.1.00</b>		<b>Depth: 46.4m</b>		<b>Size: NTW</b>	
					<b>Co-ords: 5 406144N / 420888E. 838S / 1264W Grid</b>			<b>RL: 523m</b>		<b>Dip - 90</b>		<b>Azimuth:</b>	
<b>DRILL ADVANCE</b>					<b>LITHOLOGY</b>								
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION			
44.9	46.4	1.5	1.5	0	30.6	33.5	BIOTITIZED SILTSTONE. Pale fawny-brown. Softish (non-siliceous & slightly sericitic) siltstone, with characteristic thin bioturbated bleby qtz sand laminae. Minor interbeds of chloritic qtz sst, mainly in upper 0.8m.	Mild biotitization, esp in sandy bioturbations. Fine biotite spotting of siltst. Sst beds strongly qtz-chlorite alt. Fine calcite veinlets.	Finely bedded 80-85/LCA Basal contact abrupt, 80/LCA.	Py best in qtz-chlor alt zones. 30.6-31.5m: 1% dissem py, trace cp. 31.5-33.5m: minor dissem py>po 31.9m: 4mm qtz-py veinlet 40/LCA.			
					33.5	36.7	MIXED HORNFELS & SKARN. Green & fawny-brown, hard to very hard. Complex variable zone with blotchy & swirly appearance. Mainly a qtz-chlorite-epidote rock with fine detrital qtz, evidently after variably-calcareous qtzose sst. Finer-gr qtz-sericite-biotite zones (after sandy siltst).	Strong baking & silica-chlorite alt, with lesser epidote & biotite. Minor hematite colouration in places (assoc with albite?).	Unbroken. Basal contact a small fault, 60/LCA.	To 35.2m: 1-2% dissem py-po. 35.2-36.7m: minor to 1% py-po.			
					36.7	41.9	BIOTITIZED SANDY SILTSTONE. Dark grey-brown, massive. Altered dark grey chloritic sandy siltstone with modest qtz content (rock is not hard).	Biotite>>chlorite alt moderate to strong at top, decreasing to weak at base.	Bedding 85/LCA at 41m. Slightly fractured (both high & low angle), broken 39.8-40.8m. Basal contact bedding 83/LCA.	Minor to 2% py>po, mainly dissem & best around 39m. 38.8m: 4mm py veinlet 50/LCA with bleached selvages.			
					41.9	46.4	ALTERED QUARTZOSE SANDSTONE. Dark grey-brown to pale green, hard to very hard. Massive fine to coarse gr sst, qtzofeldspathic above silty section at 43.45-43.8m, then qtz-rich (almost qtz sst). Siliceous clasts to 5mm at 45.2m.	Strong qtz-biotite alt overprinted by blotchy qtz-chlorite-actinolite. Minor calcite veinlets.	Generally unbroken.	Better sulphides assoc with qtz-chlorite-actinolite alt. 41.9-44.7m: minor to 1% dissem py>mag or po. 44.7-45.5m: 2% dissem py. 45.5-46.4m: minor to 1% py.			
					<b>END OF HOLE</b>								

661046

JERVOIS MINING NL - ASSAY SHEET														DRILLHOLE: TC01	
SAMPLED DEPTH		INTERVAL (m)	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
From	To		Au	Au(R)	Au(R2)	Au(S)	Au(SR)	Cu	Pb	Zn	Ag	As	Sn	W	Bi
2.4	3.2	0.8	<0.01					367	64	198	<1	10			20
3.2	4.2	1	0.02					378	86	136	<1	36			86
4.2	5.2	1	<0.01					30	57	86	<1	11			42
5.2	6.3	1.1	<0.01					9	100	108	<1	3			43
6.3	7.3	1	<0.01					16	20	92	<1	8			<10
7.3	8.3	1	0.01					9	16	36	<1	11			<10
8.3	9.3	1	<0.01					4	8	42	<1	3			<10
9.3	10.3	1	<0.01					5	5	30	<1	8			<10
10.3	11.3	1	<0.01					3	8	29	<1	<1			<10
11.3	12.25	0.95	<0.01	<0.01				25	18	52	<1	<1			<10
12.25	13	0.75	0.32	0.3				340	42	60	<1	12	640	27	1040
13	13.85	0.85	0.21					662	7	111	<1	1	552	18	350
13.85	14.75	0.9	0.11	0.1				124	4	94	<1	6	1210	<10	160
14.75	15.25	0.5	0.26	0.28				1480	24	80	<1	2	537	14	1350
15.25	16	0.75	0.2					216	11	74	<1	4	660	20	190
16	16.75	0.75	<0.01					296	20	80	<1	<1	700	11	320
16.75	17.55	0.8	0.03					92	14	63	<1	2	428	26	135
17.55	18.5	0.95	0.38	0.33				84	17	47	<1	1			325
18.5	19.5	1	0.21					95	8	46	<1	2			99
19.5	20.5	1	<0.01					255	3	36	<1	<1			74
20.5	21.6	1.1	<0.01					170	18	58	<1	<1			115
21.6	22.75	1.15	<0.01					164	15	54	<1	2			23
22.75	24	1.25	<0.01					27	11	38	<1	1			<10
24	25	1	<0.01					69	15	58	<1	1			<10
25	26	1	<0.01					65	19	53	<1	2			<10
26	27	1	<0.01					52	9	33	<1	3			<10
30.6	31.5	0.9	<0.01					156	12	51	<1	3			<10
31.5	32.5	1	<0.01					41	6	23	<1	1			<10
32.5	33.5	1	<0.01					23	5	22	<1	<1			<10
33.5	34.5	1	<0.01					68	10	29	<1	<1			<10
34.5	35.5	1	<0.01	<0.01				57	14	31	<1	3			<10
Laboratory: Analabs, Coeece		Method :	F650	F650	F650	F650	F650	A102	A102	A102	A102	H102	X401	X401	A102



## JERVOIS MINING NL - DRILLHOLE LOG

<b>DRILLHOLE: TC02</b>					<b>Logged by: J.G.Purvis</b>			<b>Date: 20.1.00</b>		<b>Depth: 43.4m</b>		<b>Size: NTW</b>	
					<b>Co-ords: 5 406116N / 420974E. 845S / 1175W Grid</b>			<b>RL: 535m</b>		<b>Dip: - 90</b>		<b>Azimuth:</b>	
<b>DRILL ADVANCE</b>					<b>LITHOLOGY</b>								
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION			
0	1.9	1.9	0.1	1.8	0	1.9	TERTIARY BASALT SOIL & FRAGMENTS.						
1.9	3.4	1.5	0.2	1.3			Weakly magnetic.						
3.4	4.9	1.5	0.1	1.4									
4.9	6.4	1.5	0.3	1.2	1.9	7.6	FINE QUARTZ SAND (TERTIARY).	Oxidized.					
6.4	7.6	1.2	0.05	1.15			Mainly fine white loose qtz sand (cuttings), with						
7.6	7.9	0.3	0.2	0.1			yellow clayey sections (cored). At approx 4m,						
7.9	9	1.1	0.75	0.35			thin band of Ordovician qtz sst pebbles to 4cm.						
9	10.3	1.3	0.8	0.5									
10.3	10.9	0.6	0.6	0	7.6	8.4	MUDSTONE (TERTIARY).	Oxidized.	Bedding 55/LCA at base				
10.9	12.4	1.5	1.45	0.05			Soft grey sticky mudstone, becoming lignitic						
12.4	13.2	0.8	0.75	0.05			below 7.9m. Orange sandy layers above 7.9m						
13.2	13.9	0.7	0.7	0									
13.9	15.4	1.5	1.5	0	8.4	8.8	LIGNITE (TERTIARY). Dark brown. Soft.		Bedding 70/LCA.				
15.4	16.9	1.5	1.5	0					Abrupt basal contact.				
16.9	18.4	1.5	1.5	0									
18.4	19.9	1.5	1.5	0	8.8	9.2	BLACK PYRITIC MUDSTONE (TERTIARY).		Abrupt basal contact	2-3% dissem pyrite.			
19.9	21.4	1.5	1.5	0			Highly carbonaceous. Partly-consolidated.		along bedding 70/LCA.				
21.4	22.9	1.5	1.5	0									
22.9	23.9	1	0.9	0.1	9.2	20.8	EPIDOTE-GARNET SKARN.	Intensely altered.	Crumbly & leached to	Generally rare dissem py.			
23.9	24.6	0.7	0.7	0			Pale pinkish green. Massive med gr rock	Minor low-angle calcite	10.3m, then unbroken.	16-19m: very minor thin chlorite-			
24.6	25.8	1.2	1.1	0.1			composed mainly of epidote & garnet, with	veinlets.	Crude banding 85/LCA.	magnetite bands with py, cp & bi			
25.8	26.9	1.1	1.1	0			lesser calcite & chlorite-actinolite. Blotchy &		Abrupt change at base.				
26.9	27.3	0.4	0.4	0			streaky "pseudoclastic" texture.						
27.3	27.6	0.3	0.3	0									
27.6	28.9	1.3	1.25	0.05	20.8	22.1	CHLORITE-MAGNETITE SKARN.	Intensely altered.	Fractured (only slightly	10-15% magnetite>>py in dissem.			
28.9	29.4	0.5	0.5	0			Green & black, med gr, heavy, magnetic.		broken). Diffuse & irreg	patches & semi-massive bands			
29.4	30.1	0.7	0.15	0.55			Banded chlorite-magnetite rock with lesser		banding 85/LCA. Basal	to 2cm. Py veinlets to 5mm 50/			
30.1	30.2	0.1	0.1	0			garnet, epidote & calcite.		contact abrupt, 85/LCA.	LCA in opp sense to banding.			
30.2	31.2	1	1	0									
31.2	31.8	0.6	0.55	0.05	22.1	23.2	FRACTURED CALC-SILICATE.	Strongly altered.	Abundant fracturing,	1-2% dissem & veinlet hematite.			
31.8	32.9	1.1	1.05	0.05			Grey-green, fi-med gr rock composed largely	Abundant calcite & qtz	becoming shattered &	No sulphides or magnetite.			
32.9	34.5	1.6	1.6	0			of qtz, yellowish carbonate & chlorite. After	veinlets //LCA & 90/LCA	badly broken by faulting				

## JERVOIS MINING NL - DRILLHOLE LOG

DRILLHOLE: TC02	Logged by: J.G.Purvis	Date: 20.1.00	Depth: 43.4m	Size: NTW
	Co-ords: 5 406116N / 420974E. 845S / 1175W Grid	RL: 535m	Dip - 90	Azimuth:

DRILL ADVANCE					LITHOLOGY					
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION
34.5	36.1	1.6	1.5	0.1			fine partly-qtzose sst with minor interbeds of non-siliceous siltstone.	hematite & greasy chlor-sericite on fractures.	below 23m. Bedding 75-85/LCA.	
36.1	37.7	1.6	1.5	0.1						
37.7	39.3	1.6	1.6	0						
39.3	40.3	1	1	0	23.2	31.85	<b>FAULTED QUARTZ SANDSTONE.</b> Grey, fi-med gr, very hard. Slightly impure qtz sst, shattered & badly broken by major fault. Minor sericitic siltstone laminae.	Strongly silicified & sl oxidized. Patchy chlor-sericite-cb alt where impure. Fract-fillings & veinlets of qtz, chlorite, sericite, hematite, calcite epidote or limonite.	Abund fracts (some with crush seams), strongest 5-25/LCA. Fault centred below 30m with intense shattering & cleavage 70/LCA. So in siltst 80/LCA. Basal contact So 90/LCA.	To 25m: minor py or limonite/hematite after py. 25-25.6m: 1% py (or limonite) in high-angle veinlets & dissem. 25.6-31.85m: minor py, dissem & high-angle veinlets, incl qtz-py veins to 15mm at 30.8-31.4m.
40.3	41.9	1.6	1.55	0.05						
41.9	43.4	1.5	1.5	0						
					31.85	33.9	<b>SERICITIC SILTSTONE.</b> Pale fawny brown, softish, fi gr thinly-bedded sericitic siltstone.	Weakly biotitized, conc around qtz sst lenses & laminae. Veinlets of pink hematitic calcite.	So 80/LCA. Fractured & broken in places (strongest fracts near //LCA). Basal contact So 80/LCA	Minor veinlet > dissem py. Veinlets qtz-py & high-angle. 32.05m: 1cm qtz-py vein //So.
					33.9	37.5	<b>ALTERED SILTY SANDSTONE &amp; SKARN.</b> Dark green & fawny brown, hard. Complex mixed zone, incl altered fine qtzose sst, chlorite-actinolite-qtz skarn (minor detrital qtz), & sericitic siltstone.	Strongly altered: mainly chlorite (+-cb), silica & biotite. Common red hematitic calcite veinlets (+-py).	Unusual wavy & streaky bedding 85/LCA. Small fault 90/LCA at base.	2% py>po, dissem & in calcite veinlets. Sulphides best in strongest chlorite or biotite alt. 37.1m: 1cm qtz-py vein 90/LCA.
					37.5	43.4	<b>BIOTITIZED SANDSTONE &amp; SILTSTONE.</b> Dark brownish-grey, fi gr, moderately siliceous silty sandstone & siltstone (latter increasingly common with depth).	Mild biotite>chlorite alt, decreasing with depth. Calcite veins (red to 41m then white).	Finely bedded 85/LCA. Slightly broken to 40m by low-angle fractures faced with hematitic calcite.	Minor py, dissem & in occasional strong high-angle calcite(-qtz)-py veins. 38.1-38.4m: 3 x 5-15mm calcite-py veins 60-80/LCA.
							<b>END OF HOLE</b>			

JERVOIS MINING NL - ASSAY SHEET													DRILLHOLE: TC02		
SAMPLED DEPTH		INTERVAL	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
From	To	(m)	Au	Au(R)	Au(R2)	Au(S)	Au(SR)	Cu	Pb	Zn	Ag	As	Sn	W	Bi
8.8	9.2	0.4	0.04					22	39	78	1	14			<10
9.2	10.3	1.1	0.02					44	64	1035	<1	26	213	55	38
10.3	11	0.7	0.02					26	31	240	1	9	370	22	10
11	12	1	<0.01					47	14	123	<1	5	233	45	<10
12	13	1	<0.01					69	20	81	1	12	294	27	13
13	14	1	0.02					31	22	59	<1	22	1025	19	31
14	15	1	0.01					34	28	125	<1	8	1140	35	36
15	16	1	<0.01					10	16	49	<1	8	1025	53	<10
16	17	1	<0.01					614	94	79	11	5	1120	18	76
17	18	1	<0.01	<0.01				78	62	90	1	7	460	18	73
18	19	1	<0.01					68	46	64	1	5	976	<10	33
19	20	1	<0.01					21	15	70	<1	9	379	10	<10
20	20.8	0.8	<0.01	<0.01				18	16	62	1	7	408	21	<10
20.8	21.4	0.6	0.02					260	76	79	<1	5	317	<10	310
21.4	22.1	0.7	0.03					202	12	63	<1	6	605	165	185
22.1	23.2	1.1	<0.01					81	23	85	<1	2			<10
23.2	24	0.8	<0.01					24	13	65	<1	2			<10
24	25	1	<0.01					33	20	89	<1	2			<10
25	26	1	<0.01					110	13	42	<1	6			<10
26	27	1	<0.01					33	8	31	<1	2			<10
27	28	1	<0.01					37	14	46	<1	4			<10
28	29	1	<0.01					56	12	31	<1	8			<10
29	30	1	<0.01					42	13	32	<1	3			<10
30	31	1	<0.01					30	7	37	<1	4			<10
31	31.9	0.9	<0.01					72	7	39	<1	2			<10
31.9	32.9	1	<0.01					27	11	27	<1	1			<10
32.9	33.9	1	<0.01					25	12	18	<1	1			<10
33.9	34.8	0.9	<0.01					98	13	33	<1	4			<10
34.8	35.7	0.9	<0.01					100	16	51	<1	2			<10
35.7	36.6	0.9	<0.01					84	13	30	<1	2			<10
36.6	37.5	0.9	<0.01					52	12	29	<1	8			<10
37.5	38.5	1	<0.01					13	12	32	<1	3			<10
Laboratory: Analabs, Cooee		Method :	F650	F650	F650	F650	F650	A102	A102	A102	A102	H102	X401	X401	A102

661051



## JERVOIS MINING NL - DRILLHOLE LOG

<b>DRILLHOLE: TC03</b>					<b>Logged by: J.G.Purvis</b>			<b>Date: 23.1.00</b>		<b>Depth: 28.9m</b>		<b>Size: NTW</b>	
					<b>Co-ords: 5 406375N / 420957E. 1250W / 600S (Grid)</b>			<b>RL: 530m</b>		<b>Dip: - 90</b>		<b>Azimuth:</b>	
<b>DRILL ADVANCE</b>					<b>LITHOLOGY</b>								
From	To	Interval	Recovered	Lost		To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION			
0	1	1	0.4	0.6	0	2.8	SILTSTONE.	Moderately oxidized.	So 65-75/LCA. Broken,	Common limonite on fractures			
1	1.9	0.9	0.7	0.2			Pale grey. Softish, finely-bedded, non-siliceous siltstone. Minor thin sandstone interbeds.	Weakly biotitized, conc around sst & at base.	badly 2.2-2.6m. Basal contact bedding 75/LCA.	& bedding planes.			
1.9	2.7	0.8	0.55	0.25									
2.7	3.4	0.7	0.65	0.05									
3.4	4.6	1.2	1.15	0.05	2.8	14.4	BIOTITIZED SILICIFIED QUARTZOSE	Mildly oxidized to 6.2m.	Mildly fractured to 11.2m.	Limonite on fractures to 11.2m.			
4.6	6.2	1.6	1.6	0			SANDSTONE.	Strongly silicified below	Small fault 15/LCA at	2.8-6.2m: trace py, rare mag.			
6.2	6.8	0.6	0.6	0			Brown with green patches. Below 6.2m hard to very hard. Fine to coarse grained altered	6.2m with mod to strong biotitization. This over-	11.1m.	6.2-8.5m: 1% disseminated py>po, best in chlor-ferromag zones.			
6.8	7.9	1.1	1.1	0			qtzose sst. Fine gr sediment clasts to 8mm	printed in places by	Basal contact gradational	7.3m: 10cm qtz-lim vein, 60/LCA.			
7.9	8.9	1	0.95	0.05			at 5.9m. Weakly magnetic in places.	blotchy silica-chlorite-ferromag alt (some is		8.5-14.4m: 1-3% disseminated py>po, sulphides increasing with depth.			
8.9	9.4	0.5	0.5	0				assoc with low-angle		Minor low angle py veinlets.			
9.4	10.4	1	1	0				ferromag veinlets).					
10.4	10.9	0.5	0.5	0									
10.9	11.2	0.3	0.3	0									
11.2	12.4	1.2	1.2	0									
12.4	13.9	1.5	1.5	0	14.4	28.9	ALTERED SILICIFIED QUARTZ SANDSTONE.	Very strongly silicified.	Slightly broken by minor	1-3% py>po, mainly disseminated, in all alteration types. Low-angle			
13.9	15.4	1.5	1.5	0			Greenish-grey. Very hard. Fine to coarse grained, massive, strongly & variably altered	Common diffuse zones of skarny chlor-ferromag	low-angle fract. Broken around small fault 80/	epidote-py veinlets below 24m.			
15.4	16.9	1.5	1.5	0			qtz/qtzose sandstone. Where more impure	(+-epidote & calcite) alt.	LCA at 25.85m.	3-5% py>po at 22.0-22.6m & 28.05-28.45m.			
16.9	17.9	1	1	0			has unusual flecked appearance.	Lesser patches of qtz-sericite(+biotite) alt.					
17.9	18.4	0.5	0.5	0			Weakly magnetic in places.	High angle qtz>chlor (+py) veins 2-20cm thick					
18.4	19.9	1.5	1.5	0				18.6-20.4m & 24-27m					
19.9	21.4	1.5	1.5	0				(largest 24.2-24.4m, 60/LCA). Minor pink/white calcite veinlets.					
21.4	22.9	1.5	1.5	0									
22.9	24.4	1.5	1.5	0									
24.4	25.9	1.5	1.25	0.25									
25.9	27.4	1.5	1.5	0									
27.4	28.9	1.5	1.5	0									
							END OF HOLE						



## JERVOIS MINING NL - DRILLHOLE LOG

DRILLHOLE: TC04					Logged by: J.G.Purvis			Date: 28.1.00		Depth: 29.8m		Size: NTW	
					Co-ords: 5 406072N / 420786E. 930S / 1345W (Grid)			RL: 545m		Dip: - 90		Azimuth:	
DRILL ADVANCE					LITHOLOGY								
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION			
0	0.5	0.5	0.45	0.05	0	4.9	MASSIVE MAGNETITE-SULPHIDE SKARN.	Intense alteration.	Slightly diffuse bleby	MASSIVE to SEMI-MASSIVE			
0.5	1.8	1.3	1.1	0.2			Dark green & brownish-black, heavy, strongly magnetic. Massive to semi-massive fine grained interbanded magnetite, pyrrhotite & pyrite, in subordinate chlorite-ferromag gangue. Minor mod soft leucocratic mineral some in diffuse bands (fluorite?).	Mildly oxidized & broken to 2m, then unbroken.	Banding 65/LCA. Bands typically 1-3cm thick, but locally to 20cm.	mag, po & py. Minor dissem cp. Py predom above 2m, po below. Minor regular 1-3mm veinlets of qtz-py (+-bismuthinite) often sub-// banding, cut by 1-3mm veinlets of cb-cp(+bismuthinite) at all angles. Some bismuthinite dissem in chlorite gangue.			
1.8	3.3	1.5	1.5	0									
3.3	4.8	1.5	1.5	0									
4.8	6.3	1.5	1.5	0									
6.3	7.8	1.5	1.5	0									
7.8	9.3	1.5	1.25	0.25									
9.3	10.4	1.1	1.1	0									
10.4	10.8	0.4	0.4	0									
10.8	11.6	0.8	0.8	0									
11.6	12.2	0.6	0.6	0	4.9	8.75	SULPHIDIC SKARN.	Intense alteration.	Bleby banding 70/LCA.	25% po-py-mag. Dissem mag			
12.2	13.1	0.9	0.9	0			Dark greenish-grey, hard, moderately to strongly magnetic. Similar to above but less sulphides & magnetite. A banded chlorite/ferromag-silica-garnet/epidote-pyrrhotite-pyrite-magnetite rock. Minor thin bands of siliceous hornfels, after qtzose siltstone.	Some baking.	Largely unbroken.	in chlor, overprinted by dissem to massive banded po>py, often as selvages to the common regular po-py (+cp & bismuthinite) veinlets sub-// the banding.			
13.1	13.8	0.7	0.7	0					Abrupt change along bedding at base 70/LCA.	At 5.3m: 5mm qtz-py-po-cp-bi veinlet 45/LCA. At 6.7m: 4mm qtz-py-bi veinlet 70/LCA.			
13.8	15.3	1.5	1.3	0.2									
15.3	16.3	1	0.85	0.15									
16.3	17.7	1.4	1.2	0.2									
17.7	18.6	0.9	0.9	0									
18.6	19.8	1.2	1.2	0									
19.8	20.3	0.5	0.5	0									
20.3	20.8	0.5	0.5	0									
20.8	21.7	0.9	0.9	0	8.75	18.3	SILICIFIED QUARTZ SANDSTONE.	Strong (locally intense) silicification. Minor chlorite-ferromag alt in upper 1m. Minor biotite in sst around siltst beds	Highly fractured & broken below 14.4m, with slight crushing of siltst beds. Bedding (siltst) 75/LCA.	8.75-12.7m: 1-2% py, dissem & on chloritic fract. Bismuthinite in 2mm qtz-py veinlets at 9.8m. 10.85m: 3cm qtz>py vein 65/LCA 12.5m: 20cm fractured zone 30/LCA with 5% coarse gr pyrite. 12.7-17.4m: minor to 1% py, dissem & in fract. Bi on fract & 1mm qtz veinlets to 14.5m. 17.4-18.3m: 1-2% py & minor bi, dissem, on fract & in qtz veinlets			
21.7	22	0.3	0.3	0			Grey, very hard. Fine to medium grained qtz sst. Thin beds of unsilicified sericitic siltstone above 11m and below 14m.						
22	22.55	0.55	0.45	0.1									
22.55	22.9	0.35	0.35	0									
22.9	23.8	0.9	0.9	0									
23.8	24.5	0.7	0.7	0									
24.5	25.2	0.7	0.5	0.2									
25.2	25.8	0.6	0.4	0.2									
25.8	26.4	0.6	0.6	0									
26.4	27.3	0.9	0.85	0.05									
27.3	28.3	1	1	0									

661055

## JERVOIS MINING NL - DRILLHOLE LOG

<b>DRILLHOLE: TC04</b>					<b>Logged by: J.G.Purvis</b>			<b>Date 28.1.00:</b>		<b>Depth: 29.8m</b>		<b>Size: NTW</b>	
					<b>Co-ords: 5 406072N / 420786E. 930S / 1345W (Grid)</b>			<b>RL: 545m</b>		<b>Dip: - 90</b>		<b>Azimuth:</b>	
<b>DRILL ADVANCE</b>					<b>LITHOLOGY</b>								
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION			
28.3	29.8	1.5	1.5	0	18.3	21.3	FRACTURED SILTSTONE. Interbedded fawny-brown sericitic siltstone & lesser greenish-grey med gr qtz sst. Below 20m siltst beds wrap around common small sst lenses suggestive of worm burrows.	Biotite-silica alteration of sst adjacent to siltst beds. Thicker sst beds are chloritized. Minor tiny qtz veinlets.	Strongly fractured & broken. Fine, weakly warped, bedding 65-70/LCA. Abrupt basal contact 70/LCA (bedding).	To 20.2m: 1% py, dissem in sst & on fract. Trace bismuthinite in tiny qtz veinlets (to 1mm max). 20.2-21.3m: minor py.			
					21.3	24.3	SILICA-CHLORITE-BIOTITE HORNFELS. Greenish & brownish grey. Hard. Strongly altered & partly baked zone in qtz sst & sericitic siltstone. Now a fine to medium grained silica-chlorite-ferromag-biotite-sericite rock.	Very strongly silica-chlorite-ferromag-biotite altered.	Fractured (strongest <25/LCA) & partly broken, with several small crush zones.	2-3% py, dissem & tiny veinlets. Hematite & py on fractures.			
					24.3	25.8	FAULT. Badly shattered & broken zone, mainly in brown biotitized fine qtzose sst. Minor siltstone & chloritic hornfels as above.	Strongly biotitized.	Strong fault - angle unknown.	2% patchy py, dissem & on fractures (+-hematite). At 24.9m: 8cm laminated qtz>py vein 70/LCA.			
					25.8	29.8	BIOTITIZED QUARTZOSE SANDSTONE & SILTSTONE. Brownish-grey, fine to medium grained qtzose sst & interbedded mildly siliceous siltstone. Siltstone predominates below 27m.	Moderate to strong biotitization.	Fine regular bedding 70-75/LCA. Moderately fractured & broken, with several thin high-angle crush seams.	1% patchy py: dissem & in qtz-py veinlets (thickest - 27.6m: 7mm, 65/LCA; 29.2m: 5mm, 65/LCA), & on fractures +-hematite.			
END OF HOLE													

661056



## JERVOIS MINING NL - DRILLHOLE LOG

DRILLHOLE: TC05					Logged by: J.G.Purvis			Date 2.2.00		Depth: 39.3m		Size: NTW	
					Co-ords: 5 406234N / 420873E. 755S / 1300W (Grid)			RL: 530m		Dip: -90		Azimuth:	
DRILL ADVANCE					LITHOLOGY								
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION			
0	1.4	1.4	0.35	1.05	0	2	TERTIARY BASALT.						
1.4	1.8	0.4	0.2	0.2			Unox grey basalt rubble. Weakly magnetic.						
1.8	3.3	1.5	1.25	0.25									
3.3	4.8	1.5	1.4	0.1	2	9.05	WEATHERED TERTIARY BASALT.						
4.8	6.3	1.5	0.7	0.8			Orange-brown clay after highly oxidized basalt.						
6.3	7.8	1.5	1.3	0.2			Some small (<10cm) remanents of unoxidized						
7.8	9.3	1.5	0.95	0.55			basalt in the clay below 5.5m. Rubble of fine						
9.3	10.8	1.5	1.5	0			qtz conglomerate ("Grey Billy") in basal 10cm.						
10.8	12.3	1.5	1.5	0									
12.3	13.8	1.5	1.5	0	9.05	12.75	GARNETIFEROUS SKARN.	Unoxidized.	Weak banding 80-90/LCA	Rare dissem py, except for 1cm			
13.8	15.3	1.5	1.5	0			Creamy-green & pink. Massive med-gr skarn	Intensely altered.	Largely unbroken.	py-rich band at top contact.			
15.3	16.8	1.5	1.5	0			mainly composed of pale green minerals (poss	Minor baking in places					
16.8	18.3	1.5	1.5	0			a chlorite-epidote mixture as both minerals	(eg: at basal contact).					
18.3	19.8	1.5	1.5	0			are evident in places). Garnet generally conc						
19.8	21.3	1.5	1.5	0			in diffuse bands & patches. Minor carbonate.						
21.3	22.8	1.5	1.5	0									
22.8	24.3	1.5	1.4	0.1	12.75	19.75	MASSIVE PYRRHOTITE-MAGNETITE SKARN.	Intensely altered.	Banding 85/LCA.	To 16.8m: MASSIVE PO-MAG,			
24.3	24.8	0.5	0.35	0.15			Brownish-black, very heavy, hard. To 16.8m		Fairly abrupt change at	lesser py & 1-2% dissem cp.			
24.8	25.1	0.3	0.3	0			essentially-massive 1:1 pyrrhotite-magnetite in		base, 85/LCA.	16.8-19m: SEMI-MASSIVE MAG			
25.1	25.5	0.4	0.4	0			bleby interbands 1-5cm thick. Some po bands		Largely unbroken.	>>po. Minor cp & py, incl 4 high-			
25.5	26.9	1.4	1.35	0.05			have biotite gangue & some magnetite bands			angle qtz-py veinlets to 8mm.			
26.9	28.4	1.5	1.5	0			contain qtz-chlor. Below 16.8m: semi-massive			19-19.75m: NEAR-MASSIVE PO			
28.4	28.8	0.4	0.4	0			magnetite>>po in chlorite (+-qtz), with 75cm of			trace mag & py, 1-2% cp.			
28.8	30.3	1.5	1.5	0			near-massive banded po in qtz gangue at base.						
30.3	31.8	1.5	1.5	0									
31.8	33.3	1.5	1.5	0	19.75	21.65	CHLORITE SKARN.	Intensely altered, with	Weak banding (after So)	5% mag>py-po, trace cp, dissem			
33.3	34.8	1.5	1.5	0			Dark green with creamy patches. Blotchy &	chlorite dominant.	80/LCA. Basal contact	in chlorite bands & decreasing			
34.8	36.3	1.5	1.5	0			weakly-banded. Chlorite-ferromag-epidote-	Some late-stage chlor	gradational (appearance	with depth (+10% at top).			
36.3	37.8	1.5	1.5	0			garnet skarn overprinted by bands of chlorite-	introduced along	of detrital qtz).	Occasional pyrite veinlets			
37.8	39.3	1.5	1.5	0			magnetite-sulphide skarn. Bands of fi gr	fractures.		(largest 1cm, 35/LCA at 21.6m).			
							silic hornfels after siltstone.						

## JERVOIS MINING NL - DRILLHOLE LOG

<b>DRILLHOLE: TC05</b>					<b>Logged by: J.G.Purvis</b>			<b>Date: 2.2.00</b>		<b>Depth: 39.3m</b>		<b>Size: NTW</b>	
					<b>Co-ords: 5 406234N / 420873E. 755S / 1300W (Grid)</b>			<b>RL: 530m</b>		<b>Dip: - 90</b>		<b>Azimuth:</b>	
<b>DRILL ADVANCE</b>					<b>LITHOLOGY</b>								
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION			
					21.65	26.1	SILICEOUS SANDY SKARN. Dark greyish-green. At top (to approx 23.5m), silica-chlorite-ferromag+epidote skarn with med-coarse gr detrital qtz (to 3mm in places). Alteration decreases with depth to chloritized silicified sst at base. Below 24m several bands of silicified & biotitized sericitic siltstone.	Intense chlorite-ferromag alt at top, decreasing gradually to moderate chlor>biotite alt at base Strong silicification throughout. Mg chlor in fault at 24.3-25.25m.	Bedding 85/LCA. Badly broken strong pyritic fault 24.3-25.25m.	To 24.2m: 3-5% patchy mag-py, mostly dissem. Py often on fract & in veinlets to 2mm 35/LCA. 24.2-25.25m: +10% py>>mag in fault: as massive botryoidal bx-fill, loose py sand, & veinlets to 1cm. 25.25-26.1m: 2% py, dissem & thin veinlets.			
					26.1	32.7	SILICIFIED QUARTZ SANDSTONE. Grey, very hard. Massive fi-med gr qtz sst. Band of thinly-bedded unsilicified sericitic siltstone 29-30m.	Very strongly silicified. Weak chloritization to 29m. Biotitization of sst around siltst.	Mildly broken by fractures strongest low angle to LCA. Bedding in siltst 75-90/LCA. Basal contact bedding 80/LCA.	To 29m: 1-2% py, dissem & on fract (+qtz or chlor). 29-30m: trace py. 30-32.7m: 1% py, dissem & in 1-2mm qtz-py veinlets 30-90/LCA			
					32.7	36.25	BIOTITIZED SILTSTONE. Fawny brown, thinly-bedded sericitic siltstone. Minor beds to 10cm of green chloritized silicif qtz sst & silica-chlor-ferromag skarn. Small sst lenses in siltst appear to be worm burrows.	Moderate biotitization, conc in sandy lenses but incl fine biotite spotting of siltst. 4cm qtz vein 90/LCA, 33.3m	Bedding 85-90/LCA. Largely unbroken. Basal contact wavy bedding 85/LCA.	1-2% py, dissem (best in sst) & in high-angle qtz-py veinlets 1-20 mm & most common 33.9-34.9m			
					36.25	39.3	CHLORITE SKARN & BIOTITE HORNFELS. Green & brown, very hard. Blotchy appearance. Mainly med gr silica-chlorite-ferromag-epidote skarn with abundant sand-sized qtz (probably detrital). Lesser fi gr silica-biotite (+chlorite) hornfels after sericitic siltstone.	Strong silicification / baking, with chlorite & biotite alteration. Hematite+calcite on fractures.	Massive & unbedded.	2% py, dissem & in high-angle veinlets. 37.7m: 4mm py veinlet, 60/LCA. 37.85m: 3mm py-mag veinlet, 60/LCA. Sulphs decrease in basal 1m.			
<b>END OF HOLE</b>													

**JERVOIS MINING NL - ASSAY SHEET** **DRILLHOLE: TC05**

SAMPLED DEPTH		INTERVAL (m)	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
From	To		Au	Au(R)	Au(R2)	Au(S)	F	Cu	Pb	Zn	Ag	As	Sn	W	Bi	
9.05	10	0.95	<0.01				740	8	19	120	<1	5	56	32	<10	
10	11	1	<0.01				460	36	25	117	<1	14	322	18	16	
11	12	1	<0.01				460	21	11	331	<1	8	263	25	<10	
12	12.75	0.75	<0.01				1030	7	10	48	<1	3	113	<10	<10	
12.75	13.75	1	0.1	0.06		0.09	5400	814	43	81	<1	5	223	175	1390	
13.75	14.75	1	<0.01	<0.01			3930	1430	<3	61	<1	<1	76	94	215	
14.75	15.75	1	<0.01				5100	1130	<3	60	<1	6	80	27	44	
15.75	16.75	1	<0.01				4600	1635	<3	55	<1	1	110	10	805	
16.75	17.75	1	1.17	1.19		1.23	3600	267	<3	88	<1	3	596	<10	360	
17.75	18.75	1	0.11	0.11		0.11	4300	287	<3	89	<1	4	414	<10	64	
18.75	19.75	1	0.13			0.14	7700	1970	<3	62	<1	5	656	55	470	
19.75	20.75	1	0.1					125	36	57	<1	8			67	
20.75	21.75	1	<0.01					145	8	43	<1	5			<10	
21.75	22.9	1.15	<0.01					133	9	34	<1	9			<10	
22.9	24.05	1.15	<0.01					128	14	28	<1	7			<10	
24.05	25.25	1.2	0.03					193	6	63	<1	11			55	
25.25	sand	0.95	<0.01					90	9	34	<1	9			<10	
25.25	26.1	0.85	<0.01					434	7	69	<1	55			31	
26.1	27	0.9	<0.01					59	11	25	<1	3			<10	
27	28	1	<0.01					31	12	27	<1	7			<10	
28	29	1	<0.01	<0.01				65	7	29	<1	1			<10	
29	30	1	<0.01					37	3	15	<1	5			<10	
30	31	1	<0.01					41	9	26	<1	4			<10	
31	32	1	<0.01					9	5	16	<1	6			<10	
32	33	1	<0.01					26	5	22	<1	8			<10	
33	34	1	<0.01					62	5	21	<1	1			<10	
34	35	1	<0.01					33	4	14	<1	4			<10	
35	36	1	0.02					34	5	29	<1	5			<10	
36	37.1	1.1	<0.01					69	4	17	<1	1			<10	
37.1	38.2	1.1	<0.01	<0.01				111	10	30	<1	<1			<10	
38.2	39.3	1.1	<0.01					59	6	24	<1	1			<10	
Laboratory: Analabs, Coee			Method:	F650	F650	F650	F650	C801	A102	A102	A102	A102	H102	X401	X401	A102

661060

**APPENDIX 2**

**DRILL LOGS  
HOLES ST01 - ST05**

**STORMONT MINE**

## JERVOIS MINING NL - DRILLHOLE LOG

DRILL ADVANCE					LITHOLOGY					
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION
DRILLHOLE: ST01					Logged by: J.G.Purvis			Date: 8.2.00	Depth: 47.4m	Size NTW
					Co-ords: 5 405734N / 419089E			RL: 675.5m	Dip: - 90	Azimuth:
0	1.9	1.9	0.25	1.65	0	9.9	TERTIARY BASALT.			
1.9	3.4	1.5	1.4	0.1			0 - 2m: Yellow-brown, highly oxidized, limonitic clayey basalt.		Rubble.	
3.4	3.9	0.5	0.45	0.05			2 - 4.3m: Grey, hard, fi-med gr basalt. Weakly magnetic. Limonitic oxidation along fractures.		Moderately broken.	
4.9	5.5	0.6	0.5	0.1			4.3 - 9.9m: Yellow-brown, highly oxidized & clayey, basalt breccia (hyaloclastite).		Rubble.	
5.5	6.4	0.9	0.55	0.35						
6.4	7.9	1.5	0.35	1.15						
7.9	8.4	0.5	0.35	0.15						
8.4	9.2	0.8	0.75	0.05	9.9	10.5	TERTIARY QUARTZ CONGLOMERATE.		Massive & unbroken.	
9.2	9.9	0.7	0.6	0.1			("Grey Billy"). Creamy-grey, very hard, with rounded clasts to 9cm of qtz, qtz sst & qtzite.		Both contacts abrupt.	
9.9	10.9	1	0.85	0.15						
10.9	12.4	1.5	1.45	0.05						
12.4	13.9	1.5	1.5	0	10.5	27.25	CLAYEY OXIDIZED SKARN.	Totally oxidized & rotten throughout (rock is lightweight).	10.5-17m: very soft but largely unbroken. Basal contact sharp, 45/LCA.	To 15m: common Mnox seams & spots, & slight limonite stains.
13.9	15.4	1.5	1.5	0			10.5 - 17.0m: Creamy-yellow clay with remanent fine or med gr rock texture, including irregular low-angle banding. Minor remanent epidote below 13m.		17-25m: as above with crumbly zones 23-25m.	
15.4	16.9	1.5	1.5	0						
16.9	18.4	1.5	1.4	0.1						
18.4	19.9	1.5	1.5	0						
19.9	21.4	1.5	1.5	0			17.0 - 25.0m: Black, grey & dark khaki greasy clay with fine or med gr remanent rock texture. Much fine mica in places.		23.6m: 20cm fault with leached vein qtz frags to 3cm. 19-23m: irregular banding av 45/LCA.	Minor dissem py in black clay below 22.3m. 24.6-25m: 3% py dissem in black clay with minor leached vein qtz.
21.4	22.9	1.5	1.5	0						
22.9	24.4	1.5	1.45	0.05						
24.4	25.9	1.5	1.35	0.15			25.0 - 27.25m: Yellow-brown & pale green, clayey skarn with less-ox sections. Remanent banding, some incompletely-ox ferromags & garnet, & detrital qtz grains in places.		25-27.25m: Banding 55/LCA. Badly broken below 25.6m.	Strong limonite seams & stains below 25m.
25.9	26.3	0.4	0.15	0.25						
26.3	27.4	1.1	0.5	0.6						
27.4	28.9	1.5	1.5	0						
28.9	30.4	1.5	1.5	0						
30.4	31.4	1	1	0	27.25	34.4	PARTLY-OXIDIZED FERROMAG-CALCITE SKARN.	Intensely altered.	Generally massive & unbanded, except for banded section 65/LCA	To 31.2m: minor to 2% dissem mag.
31.4	31.9	0.5	0.3	0.2						
31.9	32.3	0.4	0.4	0			Pale green. To 30.4m: massive unoxidized med gr ferromag>calcite-epidote-garnet skarn, largely unbroken. Below 30.4m skarn is mod oxidized, leached (no calcite) & crumbly.		31.9-32.5m (incl 10cm of hornfels & mag bands). Basal contact 20/LCA.	Below 31.2m: occasional mag-bearing bands to 3cm or solid Feox after same.
32.3	33.4	1.1	1.1	0						
33.4	33.8	0.4	0.3	0.1						
33.8	34.5	0.7	0.55	0.15						



JERVOIS MINING NL - ASSAY SHEET															DRILLHOLE: ST01	
SAMPLED DEPTH		INTERVAL	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
From	To	(m)	Au	Au(R)	Au(R2)	Au(S)	Au(SR)	Cu	Pb	Zn	Ag	As	Sn	W	Bi	
10.5	11.5	1	0.06	0.05				33	208	316	<1	22	192	22	25	
11.5	12.5	1	<0.01					51	615	797	<1	1	106	18	<10	
12.5	13.5	1	<0.01					27	620	261	<1	6	69	16	<10	
13.5	14.5	1	<0.01					21	370	291	<1	<1	77	18	<10	
14.5	15.5	1	<0.01					36	368	612	<1	<1	99	22	<10	
15.5	16.5	1	0.03					27	34	784	<1	<1	354	49	18	
16.5	17	0.5	<0.01					27	205	927	<1	6	276	23	16	
17	18	1	<0.01					107	77	378	<1	40	9	23	<10	
18	19	1	<0.01					13	141	366	<1	48	7	11	<10	
19	20	1	<0.01	<0.01				12	139	364	<1	65	7	<10	<10	
20	21	1	<0.01					13	181	530	<1	315	<3	18	<10	
21	22	1	<0.01					17	308	764	<1	105	10	23	<10	
22	23	1	<0.01					27	801	683	<1	16	8	17	<10	
23	24	1	<0.01					26	239	828	<1	215	8	14	<10	
24	25	1	<0.01					25	65	593	<1	4	4	16	<10	
25	26	1	0.03					9	25	640	<1	9	62	<10	<10	
26	27.25	1.25	<0.01					5	12	1000	<1	6	45	<10	<10	
27.25	28.25	1	<0.01					5	8	142	<1	<1	9	<10	<10	
28.25	29.25	1	<0.01					10	5	142	<1	2	14	<10	<10	
29.25	30.25	1	<0.01	<0.01				4	<3	180	<1	<1	17	<10	<10	
30.25	31.25	1	<0.01					3	<3	174	<1	<1	42	<10	<10	
31.25	32.5	1.25	<0.01					6	5	327	<1	1	55	<10	<10	
32.5	33.5	1	<0.01					11	46	67	<1	3	66	<10	<10	
33.5	34.4	0.9	<0.01	<0.01				16	135	189	<1	3	79	<10	<10	
34.4	35.4	1	0.23	0.24				84	380	453	2	310	63	48	200	
35.4	36.3	0.9	0.05					181	78	243	<1	120	64	40	31	
36.3	37.3	1	<0.01					51	6	171	<1	<1	75	<10	<10	
37.3	38.3	1	<0.01					22	15	168	1	<1	68	14	13	
38.3	39.3	1	<0.01					9	14	221	<1	<1	42	<10	<10	
39.3	40.3	1	<0.01					5	14	140	<1	<1	46	<10	<10	
40.3	41.3	1	<0.01					5	18	89	<1	<1	52	<10	<10	
41.3	42.3	1	<0.01					3	20	104	1	<1	28	<10	<10	
Laboratory: Analabs, Coosee		Method :	F650	F650	F650	F650	F650	A102	A102	A102	A102	H102	X401	X401	A102	

661064



## JERVOIS MINING NL - DRILLHOLE LOG

DRILL ADVANCE					LITHOLOGY						
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION	
DRILLHOLE: ST02					Logged by: J.G.Purvis			Date: 13.2.00	Depth: 48.1m	Size: NTW	
					Co-ords: 5 405726N / 419108E			RL: 676m	Dip: - 90	Azimuth:	
0	1.8	1.8	0.75	1.05	0	4.8	TERTIARY BASALT.				
1.8	3.3	1.5	0.9	0.6			To 1.7m yellow-brown clay after oxidized basalt,				
3.3	4.8	1.5	0.35	1.15			then dark grey fi-med gr weakly magnetic basalt				
4.8	5.6	0.8	0.05	0.75			with clayey sections due to ox along fractures.				
5.6	6.3	0.7	0	0.7							
6.3	7.8	1.5	0.1	1.4	4.8	11.2	QUARTZ SAND (TERTIARY).				
7.8	8.1	0.3	0.15	0.15			Loose yellow qtz sand with leached fragments				
8.1	9.3	1.2	0.2	1			of ox qtz sst. Below 7.8m sand is yellowish-				
9.3	10.8	1.5	0.3	1.2			white, more consolidated & clayey. Thin 'pans'				
10.8	11.3	0.5	0.4	0.1			of Feox-cemented qtz sand.				
11.3	11.5	0.2	0.2	0							
11.5	12.1	0.6	0.6	0	11.2	14.3	QUARTZ CONGLOMERATE (TERTIARY).	Silicified.	Below 13m rubbly with	Hematitic or pyritic (locally 2%	
12.1	13.6	1.5	1.2	0.3			Grey & pale red, hard. Med-coarse gr poorly-	Strong qtz vein (+10cm)	much core loss. Vague	dissem py).	
13.6	13.9	0.3	0.1	0.2			sorted sst with abund elongated clasts to 2cm	at 13m.	lineation of clasts 35/LCA		
13.9	14.4	0.5	0.1	0.4			of qtz sst.		Basal contact broken.		
14.4	14.8	0.4	0.4	0							
14.8	15.3	0.5	0.5	0	14.3	19.5	SILTSTONE (ORDOVICIAN).	Weakly biotitized	Fractured & broken.	Limonite & Mnox stains on	
15.3	16.4	1.1	1.1	0			Pale grey. Thinly-bedded softish siltstone.	around sst lenses.	Bedding 65-75/LCA,	fractures & in some sst.	
16.4	17.6	1.2	1.2	0			Below 18m is more massive & slightly harder	Slightly oxidized, esp	commonly weakly warped	Nil sulphides until 1% dissem	
17.6	18.1	0.5	0.3	0.2			due to increased baking. Small lenses & thin	sst beds 18-19m.	along fractures.	py below 18.7m.	
18.1	19.6	1.5	1.5	0			beds of qtzose sst, more common & thicker		Fault at 16.2m.		
19.6	20	0.4	0.35	0.05			(to 10cm) below 18m.				
20	20.2	0.2	0.2	0							
20.2	21.1	0.9	0.8	0.1	19.5	28.05	FRACTURED BIOTITIZED SANDY SILTSTONE	Biotitization moderate	Badly fractured & broken	To 21.5m: minor dissem py.	
21.1	22	0.9	0.9	0			Grey & brown. Massive fi gr silty qtzose sst at	to 23m then strong.	with thin crush seams,	21.5-23.5m: 1% dissem py.	
22	22.5	0.5	0.4	0.1			top, becoming massive siltstone with depth.	Patchy serp-epidote-	esp in fault at 22.7-23.8m	Below 23.5m minor dissem py	
22.5	23.1	0.6	0.55	0.05			Above 21.4m zones to 40cm of yellow-green	chlor-cb alt as noted,	Strongest fract<30/LCA	reducing to trace at base.	
23.1	23.2	0.1	0.1	0			greasy serpentinous epidote-chlorite skarn &	with assoc baking.	No bedding visible.		
23.2	23.4	0.2	0.2	0			calc-silicate. Below 21.4m this material only		Basal contact a fault		
23.4	23.8	0.4	0.4	0			on fractures & in small patches overprinting the		20/LCA.		
23.8	25.3	1.5	1.4	0.1			biotitization.				

661066

## JERVOIS MINING NL - DRILLHOLE LOG

DRILL ADVANCE					LITHOLOGY										
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION					
DRILLHOLE: ST02					Logged by: J.G.Purvis					Date: 13.2.00		Depth: 48.1m		Size: NTW	
					Co-ords: 5 405726N / 419108E					RL: 676m		Dip: - 90		Azimuth:	
DRILL ADVANCE					LITHOLOGY										
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION					
25.3	25.9	0.6	0.6	0	28.05	32.9	SHEARED SKARN. Dark yellowish or	Intensely altered.	Strong sl lensoid tectonic	No sulphides or magnetite,					
25.9	27.1	1.2	1.2	0			Dark yellowish or brownish green. Ranges	Partly oxidized.	banding due to shearing	apart from minor py in basal					
27.1	27.7	0.6	0.6	0			from soapy to moderately hard. Banded skarn	Almost no veining.	15-20/LCA. Common	qtz vein. Tiny stringers of Feox					
27.7	28.3	0.6	0.6	0			composed of serpentine (alt of dark green		badly broken or crumbly	in places.					
28.3	28.8	0.5	0.5	0			bladed ferromag seen in patchy remnants),		zones. Basal contact						
28.8	30	1.2	1.1	0.1			garnet-rich & chlorite-rich bands (latter some-		abrupt - a 1cm qtz-chlor-						
30	30.1	0.1	0.1	0			times silicified), yellowish carbonate, & epidote		py vein 15/LCA.						
30.1	30.8	0.7	0.7	0											
30.8	31.8	1	0.85	0.15	32.9	37.75	CALCAREOUS FERROMAG-GARNET SKARN.	Intensely altered.	Unbroken. Very poorly-	No sulphides or magnetite.					
31.8	33.3	1.5	1.5	0			Pale pinkish-green, massive & heavy, garnet-	No veining apart from a	developed banding in						
33.3	34.8	1.5	1.5	0			ferromag-chlorite skarn. Little visible carbonate	few tiny threads of	places 25-45/LCA. Basal						
34.8	36.3	1.5	1.5	0			but strong reaction to HCl.	calcite.	contact gradational.						
36.3	37.8	1.5	1.5	0											
37.8	39.3	1.5	1.5	0	37.75	43.5	EPIDOTE-FERROMAG-SERPENTINE SKARN.	Intensely altered.	Weak banding 35-55/LCA	To 40m: no sulphides or mag					
39.3	40.5	1.2	1.2	0			Green. Epidote, bladed ferromags & serp,	Leached & clayey in &	Broken by several faults:	except py in 5cm black band at					
40.5	42.1	1.6	1.6	0			lesser carbonate & garnet. To 42.5m, several	around faults.	38.25-39.35m: fault //LCA	37.9m, 40-41.15m: 5% dissem					
42.1	43.7	1.6	1.6	0			5-80cm bands of black softish mg-chlorite(?) -		40.4m: fault 15/LCA	& banded py, trace mag.					
43.7	44.9	1.2	1.2	0			some are pyritic (esp largest band at 40-40.8m)		43.2-43.5m: fault 25/LCA	41.15-43.5m: no sulphides.					
44.9	46.5	1.6	1.6	0											
46.5	48.1	1.6	1.6	0	43.5	44.1	QUARTZ-CARBONATE-TOURMALINE? BAND	Leached & crumbly.	Upper contact 20/LCA,	2% dissem py.					
							Pale grey, sandy-textured qtz, apricot-coloured		lower broken.						
							carbonate & black mineral (tourmaline?).								
					44.1	48.1	SILICEOUS SKARN / SANDSTONE.	Strong alteration,	Fractured, leached &	To 44.9m: no sulphides.					
							Mixed zone intermediate between skarn &	dominated by silica,	broken to 45m & 46.5m	Below 44.9m: minor brown sp>					
							silicified qtz sst (mainly the latter). Greenish-	chlorite & carbonate.	to 47.7m.	py in patches in both skarn & sst					
							grey, hard. Ranges from silicified calcareous		46.8m: banding after						
							ferromag-chlorite-epidote skarn with detrital		bedding 70/LCA.						
							qtz, to fine-coarse gr silicified qtz sst with								
							patches & fracture-fillings of epidotic carbonate								
							END OF HOLE								

JERVOIS MINING NL - ASSAY SHEET													DRILLHOLE: ST02		
SAMPLED DEPTH		INTERVAL (m)	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
From	To		Au	Au(R)	Au(R2)	Au(S)	Au(SR)	Cu	Pb	Zn	Ag	As	Sn	W	Bi
11.2	12.2	1	<0.01				29	6	5	<1	5			<10	
12.2	13.2	1	<0.01				14	8	15	<1	35			<10	
18.5	19.5	1	<0.01				20	180	96	<1	24			<10	
19.5	20.5	1	<0.01				42	38	253	<1	32			<10	
20.5	21.5	1	<0.01	<0.01			5	60	141	<1	50			<10	
21.5	22.5	1	<0.01				21	22	88	<1	105			<10	
22.5	23.5	1	<0.01				10	14	275	<1	225			<10	
28	29	1	<0.01				4	13	274	<1	12			<10	
29	30	1	<0.01				5	8	225	<1	<1			<10	
30	31	1	<0.01	<0.01			3	10	197	<1	<1			<10	
31	32	1	<0.01				3	8	196	<1	2			<10	
32	33	1	<0.01				4	9	132	<1	4			<10	
33	34	1	<0.01				5	<3	51	<1	3			<10	
34	35	1	<0.01				3	<3	36	<1	<1			<10	
35	36	1	<0.01				2	<3	47	<1	<1			<10	
36	37	1	<0.01				3	3	41	<1	13			<10	
37	38	1	<0.01				45	9	57	<1	1			<10	
38	39	1	<0.01				13	23	150	<1	4			<10	
39	40	1	<0.01				4	15	210	<1	2			<10	
40	41.15	1.15	<0.01				36	121	230	<1	70			<10	
41.15	42.3	1.15	<0.01				3	6	112	<1	<1			<10	
42.3	43.5	1.2	0.02				3	9	123	<1	3			<10	
43.5	44.1	0.6	<0.01				17	<3	536	<1	45			<10	
44.1	44.9	0.8	<0.01				10	11	150	<1	<1			<10	
44.9	46	1.1	<0.01				9	14	805	<1	9			<10	
46	47	1	<0.01				9	102	724	<1	<1			<10	
47	48.1	1.1	<0.01	<0.01			24	8	2400	<1	7			<10	
Laboratory: Analabs, Cocee		Method :	F650	F650	F650	F650	F650	A102	A102	A102	A102	H102	X401	X401	A102

661068

## JERVOIS MINING NL - DRILLHOLE LOG

<b>DRILLHOLE: ST03</b>					<b>Logged by: J.G.Purvis</b>			<b>Date: 18.2.00</b>		<b>Depth: 36.4m</b>		<b>Size: NTW</b>	
					<b>Co-ords: 5 405687N / 419125E</b>			<b>RL: 686.5m</b>		<b>Dip: -90</b>		<b>Azimuth:</b>	
<b>DRILL ADVANCE</b>					<b>LITHOLOGY</b>								
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION			
0	1.9	1.9	0.25	1.65	0	5.3	PARTLY-OXIDIZED TERTIARY BASALT.	Oxidized.	Badly broken.				
1.9	3.4	1.5	1.4	0.1			Orange-brown clay after oxidized basalt with kernals of unox grey weakly-magnetic basalt.	Several white veinlets to 5mm (zeolite?).	Basal contact broken.				
3.4	3.7	0.3	0.3	0									
3.7	4.9	1.2	1.2	0									
4.9	6	1.1	0.7	0.4	5.3	6.1	CLAY & IRON-CEMENTED SAND (TERTIARY).	Oxidized.	Bedding 75/LCA.				
6	7.5	1.5	0.05	1.45			Upper half soft yellow sandy clay, lower half						
7.5	9.4	1.9	0	1.9			qtz sand cemented by hard lateritic iron oxide.						
9.4	10.9	1.5	0.7	0.8									
10.9	12.4	1.5	0.15	1.35	6.1	13	LOOSE QUARTZ SAND (TERTIARY).						
12.4	13.9	1.5	0.15	1.35			Fine to very coarse gr white running qtz sand.						
13.9	15.4	1.5	0.25	1.25			Grainsize increases with depth. A few						
15.4	16.4	1	0.35	0.65			Ordovician qtz sst fragments below 11m.						
16.4	16.9	0.5	0.4	0.1									
16.9	18.4	1.5	0.3	1.2	13	15.4	CLAYEY SAND (TERTIARY).	Oxidized.					
18.4	18.8	0.4	0.25	0.15			Yellow soft clayey qtzose sand. Some layers						
18.8	19.4	0.6	0.3	0.3			Feox-cemented. Frags of qtz & qtz sst.						
19.4	19.9	0.5	0.5	0									
19.9	21.4	1.5	1.5	0	15.4	17.2	SILICEOUS BRECCIO-CONGLOMERATE	Stongly silicified.		Minor limonite & pyrite in matrix.			
21.4	22.9	1.5	1.5	0			(TERTIARY "GREY BILLY").	Partly oxidized &					
22.9	24.4	1.5	1.5	0			White, very hard. Angular to rounded clasts to	leached.					
24.4	25.9	1.5	1.5	0			10cm of qtz & qtz sst, in silif qtz sand matrix.						
25.9	27.4	1.5	1.5	0									
27.4	28.9	1.5	1.5	0	17.2	36.4	QUARTZOSE SANDSTONE.	Mildly oxidized to 24m	Sl clayey & badly broken	Minor to locally 2% py>sp-gn			
28.9	30.4	1.5	1.5	0			Grey, hard. Medium to coarse gr massive	then weakly ox to EOH.	to 19.4m. Below 19.4m	(mainly as fi gr dissem), except:			
30.4	31.9	1.5	1.5	0			qtzose sandstone & quartz sandstone.	Weak biotite-chlorite alt	mildly fractured & broken,	26-28.3m: nil sulphides, &			
31.9	33.4	1.5	1.5	0			Common probable worm burrows in places	(bio moderate 24-29m,	esp along strong set of	31.5-35.5m: 2-3% py, rare sp-gn,			
33.4	34.9	1.5	1.5	0			(eg: 22.4m), always near-parallel LCA.	& chlor best around qtz-	qtz-chlor-lim(+py) veins	in zone of qtz-ser alt.			
34.9	36.4	1.5	1.5	0				chlor veins: these post-	10/LCA (to 1cm thick at	Limonite stains & bxwks on fract			
								date bio). Patchy silica	22.7m).	esp above 24m & 32.5-35.5m.			
								sericite alt in qtz sst					
<b>END OF HOLE</b>													



DRILL ADVANCE					LITHOLOGY						
From	To	Interval	Recovered	Lost	From	To	DESCRIPTION	ALTERATION	STRUCTURE	MINERALIZATION	
DRILLHOLE: ST04					Logged by: J.G.Purvis			Date: 23.2.00	Depth: 39.1m	Size: NTW	
					Co-ords: 5 405750N / 418820E (approx)			RL: 657m (approx)	Dip: - 90	Azimuth:	
0	1.7	1.7	0.45	1.25	0	1.7	SILICEOUS CONGLOMERATE (TERTIARY).			1% pyrite in matrix of breccio-conglomerate.	
1.7	3.3	1.6	1	0.6			Fawn & black clayey soil then hard grey silic breccio-conglomerate ("Grey Billy").				
3.3	4.8	1.5	1.1	0.4							
4.8	6.3	1.5	1.45	0.05							
6.3	7.8	1.5	1.5	0	1.7	3.4	YELLOW STICKY CLAY.				
7.8	9.3	1.5	1.5	0			After totally oxidized unidentifiable rock.				
9.3	10.8	1.5	1.4	0.1							
10.8	12.3	1.5	1.5	0	3.4	9.55	BLACK CLAY.			Trace dissem pyrite, increasing below 7m to 1% at base.	
12.3	13.8	1.5	1.5	0			Dark brownish-black clay after totally oxidized skarn. Much remanent mica in places.				
13.8	15.3	1.5	1.5	0							
15.3	16.8	1.5	1.5	0							
16.8	18.3	1.5	1.5	0	9.55	16.55	CALCAREOUS FERROMAG-EPIDOTE - GARNET SKARN.	Partly oxidized & clayey to 12.4m, then unox.	Crumbly & broken in places to 12.4m, then unbroken.	Patchy magnetite (1-2% overall), often assoc with chlorite in diffuse bands & patches.	
18.3	19.8	1.5	1.5	0			Green, blotchy & weakly banded med gr skarn, comprising ferromag, epidote, calcite, chlorite & garnet. Remanent detrital qtz grains at 12-13m	Intensely altered.	Weak banding 80-90/LCA	Trace pyrite.	
19.8	21.3	1.5	1.5	0				No veining.			
21.3	22.8	1.5	1.45	0.05							
22.8	24.3	1.5	1.5	0							
24.3	25.8	1.5	1.5	0							
25.8	27.3	1.5	1.5	0	16.55	22.25	CALCAREOUS WRIGGLITIC CHLORITE-MAGNETITE SKARN.	Very strongly altered.	Unbroken, except basal 15cm.	20% (10-30%) magnetite in fine wigglytic bands & thicker chlor-mag bands.	
27.3	28.8	1.5	1.5	0			Dark green & black, chlor-epidote-calcite skarn	No veining.	Weak non-wigglytic banding 85-90/LCA.	Very rare pyrite & brown sp.	
28.8	30.3	1.5	1.5	0			Much magnetite, mostly in fine irreg wigglytic bands. Some ferromags (incl actinolite).		Basal contact leached & broken.		
30.3	31.8	1.5	1.3	0.15							
31.8	33.3	1.5	1.45	0.05			Some remanent unalt limestone in upper 1m.				
33.3	34.8	1.5	1.5	0							
34.8	36.3	1.5	1.5	0							
36.3	37.8	1.5	1.5	0	22.25	31.7	CALCAREOUS EPIDOTE SKARN.	Intensely altered.	Largely unbroken.	Patchy magnetite, mostly to 2%, but 3-5% in chlor zone to 24m & 10% (+minor py) below 30.5m.	
37.8	38.7	0.9	0.9	0			Dark green, mildly calcareous variable skarn, epidotic, with chlorite(+magnetite) & garnet-rich sections. Siliceous patches below 26m.	1mm veinlets of calcite or epidote, low angles to LCA.	Weak banding 85/LCA. Basal contact abrupt & irregular.	Trace py & rare bismuthinite, in chlor veins. 23.75m: 1cm chlor-mag-py vein 80/LCA. Ditto, 5cm, 25.2m. 26.9m: 1cm calcite-chlor-	
								Several 1cm greisenous musc veins 85/LCA in basal 1m.			



JERVOIS MINING NL - ASSAY SHEET															DRILLHOLE: ST04	
SAMPLED DEPTH		INTERVAL	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
From	To	(m)	Au	Au(R)	Au(R2)	Au(S)	F	Cu	Pb	Zn	Ag	As	Sn	W	Bi	
1.7	3.3	1.6	<0.01					83	39	66	<1	26			27	
3.3	4.8	1.5	0.1*	0.16*				39	136	708	<1	42			12	
4.8	6.3	1.5	<0.01					22	59	1605	<1	10			<10	
6.3	7.5	1.2	<0.01					26	128	724	<1	70			<10	
7.5	8.5	1	0.1*	0.11*				25	67	746	<1	24			<10	
8.5	9.5	1	<0.01					29	104	853	1	235			<10	
9.5	10.5	1	0.16					24	11	849	<1	7			22	
10.5	11.5	1	0.54*	0.3*				6	8	175	<1	7			<10	
11.5	12.5	1	0.11	<0.01				<2	7	220	<1	<1			<10	
12.5	13.5	1	<0.01	<0.01				3	5	91	<1	3			<10	
13.5	14.5	1	0.22*	0.19*				11	14	125	<1	2			<10	
14.5	15.5	1	0.13					4	31	67	1	<1			17	
15.5	16.5	1	0.14					6	28	68	<1	1			10	
16.5	17.5	1	0.03				2370	7	17	144	<1	<1	83	57	<10	
17.5	18.5	1	0.36	0.32			2.60%	11	94	237	1	5	128	130	135	
18.5	19.5	1	0.02				1170	4	14	97	<1	<1	80	98	<10	
19.5	20.5	1	0.18				2.90%	10	46	207	<1	<1	115	165	99	
20.5	21.5	1	4.55	4.3			4.40%	14	230	278	3	3	95	225	350	
21.5	22.5	1	2.6	2.55			8300	37	1680	247	13	6	72	32	3910	
22.5	23.5	1	0.05				1750	8	28	112	<1	2	59	<10	<10	
23.5	24.5	1	0.05				4700	40	82	130	<1	1	76	14	120	
24.5	25.5	1	<0.01					20	27	175	1	2			225	
25.5	26.5	1	<0.01					3	60	164	1	5			51	
26.5	27.5	1	<0.01					4	40	136	1	1			45	
27.5	28.5	1	<0.01					9	15	211	1	3			51	
28.5	29.5	1	<0.01					5	6	186	<1	2			10	
29.5	30.6	1.1	<0.01					10	28	146	<1	<1			115	
30.6	31.7	1.1	<0.01					20	13	143	<1	11			335	
31.7	32.7	1	<0.01					11	12	90	<1	<1			135	
32.7	33.7	1	<0.01					7	17	59	<1	3			90	
33.7	34.7	1	<0.01					14	33	82	<1	1			225	
34.7	35.8	1.1	<0.01					31	53	111	<1	<1			110	
Laboratory: Analabs, Coee		Method :	F650	F650	F650	F650	C801	A102	A102	A102	A102	H102	X401	X401	A102	

\* These results slightly elevated by weak gold contamination from malfunction of Analabs' grinding equipment.

