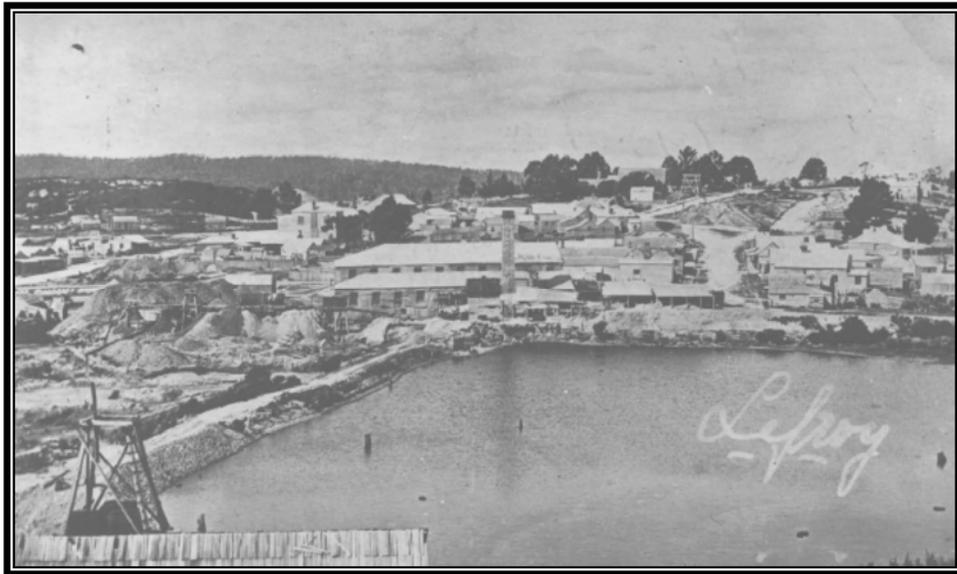


Lefroy Resources Limited

LEFROY PROJECT AREA

EL39/2004

Annual Report



Colwin Lloyd
August 2005

LEFROY PROJECT AREA

EL39/2004 - Annual Report

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SUMMARY

Exploration Licence 39/2004 was granted to Lefroy Resources (LEF) on the 17th September 2004. The license remains in force for a five year period and applies to all Category 1 Minerals.

EL39/2004 flanks the historic East Denison Goldfield, and is comprised of mostly Mathinna meta-sedimentary lithologies, which hosts the majority of Au mineralisation in the area. Data compilation is in progress with LEF intending to incorporate existing data into a 2D and 3D GIS (Geographic Information System) environment. This work is likely to include the compilation of historic plans from the late 1800's, government mapping and open file company information, old drill holes, soil geochemistry and rock chip data and remote sensing. This information will be combined with remote information such as airborne photography, satellite imagery and regional geophysics, allowing spatial interrogation through multiple datasets.

The tenement is considered to have good potential to host significant gold mineralization. LEF is developing a good understanding of the mineralization and is developing sound exploration techniques at its Lefroy project area located west of Denison. These techniques are being applied to the Denison field.

INTRODUCTION

Lefroy Resources Limited (LEF) holds a 100% owned exploration land package in the north eastern Goldfields of Tasmania. This consolidated tenement package contains at least three separate mineralised structures. The East Denison Goldfield is located within the southern portions of EL39/2004. This tenement represents an important potential zone of mineralisation within LEF tenement package. Mineralisation is having numerous similarities and is co-genetic with the Lefroy Goldfield. It is therefore included in the Lefroy Project Area.

In 2004 LEF commenced exploration activity on key target areas focusing on the historic Lefroy Goldfield. The Company is focused on the discovery and development of high grade lode-style gold deposits. Initial drilling was aimed at testing the potential for economic mineralisation beneath the historical workings and elsewhere within the tenements, as there remains significant potential for sub-surface high grade shoots that have gone undetected in the past.

The Lefroy Goldfield extends for at least 5 kilometres through the old gold-rush town of Lefroy, 40 kilometres north of Launceston. The Lefroy Goldfield contains many historic workings and shafts located on approximately 30 gold reefs which were mined and subsequently abandoned in the late 1800's.

Data compilation and incorporation into a 2D and 3D GIS (Geographic Information System) environment is in progress. This work is likely to include the compilation of historic plans from the late 1800's, government mapping and open file company information, old drill holes, soil geochemistry and rock chip data and remote sensing. This information will be combined with remote information such as airborne photography, satellite imagery and regional geophysics, allowing spatial interrogation through multiple datasets.

The tenement is considered to have good potential to host significant gold mineralization. LEF is developing a good understanding of the mineralization and is developing sound exploration techniques at its Lefroy project area located west of Denison. These techniques are being applied to the Denison field.

LOCATION

The East Denison Gold Field is located in north-east Tasmania, 20 kilometres west of Scottsdale and 20 kilometres northeast of Lilydale. The tenements cover Crown Land, Public Reserve, MDC Informal Reserve, State Forest and Private Property. Terrain is moderately undulating, and the East Denison Gold Field can be accessed via sealed roads.

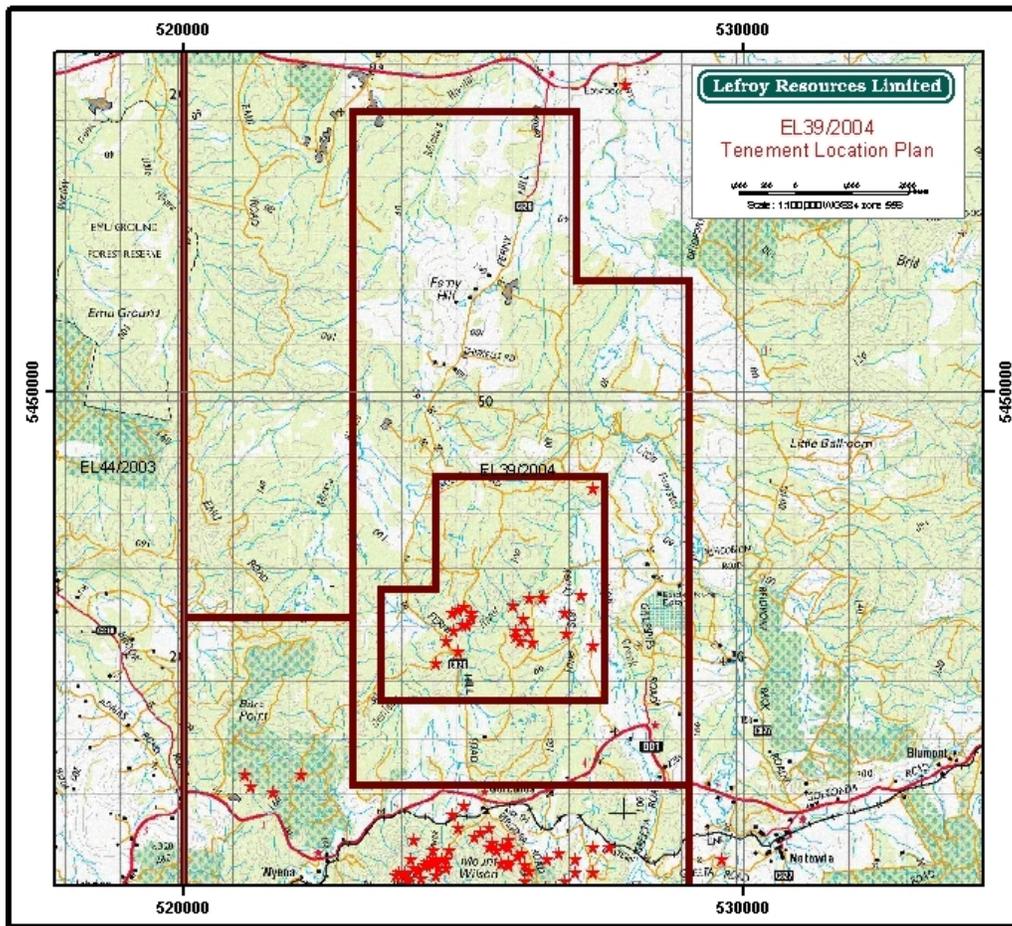


Figure 1. Tenement Location Plan

LAND TENURE

Exploration License 2/2002 was granted to Lefroy Resources on the 17th September 2004. The EL carries a tenure period of 5 years, expiring in September 2009.

The license carries a minimum expenditure commitment of \$39,000 for the first 2 years. It covers 52 square kilometers and covers Crown Land, Public Reserve, MDC Informal Reserve, State Forest and Private Property.

Within the license area but excluded from it are;

EL13/2005

EL12/2005

GEOLOGY

The majority of the tenement is underlain Mathinna Super group turbidities of Cambrian to Ordovician age, minor amounts of tertiary basalt and quaternary sands and alluvium. Siltstones and sandstones dominate the Mathinna Super group rocks in this tenement.

Structurally the Mathinna Group sediments are broadly folded in sub-horizontal NNW trending fold axes, although there is only sparse structural data available from the Mines Department mapping.

Mineralisation

Gold mineralisation occurs in ENE trending quartz reefs, veins or stockworks and shears associated with NNW trending shear systems. Mineralisation is typically associated with pyrite and/or arsenopyrite or galena. Occurrences of disseminated gold with secondary mica and varying degrees of iron enrichment within sandstone units have also been noted.

PREVIOUS EXPLORATION

Historical Production

Mining commenced at the Denison Goldfield in the 1870's and continued until about 1911 (Coroneos, 1993).

The most successful operation on the field was the Alacrity mine that produced 10.3 kg of gold at an average grade of 48g/t Au (Bottrill, 1994). The Alacrity mine worked a 0.3 to 0.45m vein to a depth of 60m with levels at 32, 46 and 60 metres.

Two narrow viens where mined at the Sir William Denison Mine to a depth of 30m. Reid (1926) reports several crushing's that averaged 45.5, 46.7 and 243g/t Au.

At the Wiangatta mine a narrow vein was mined to a depth of about 80m and averaged 68.4g/t Au.

Other mines in the area include;

- The Royal Treasury: produced 32 tonne at an average grade of 6g/t Au,
- The Brooklyn: average grade of 6g/t Au,
- The Star: averaged grade 7.5g/t Au.

Most of the mines reported veins orientations trending ENE and dipping steeply, predominantly to the North West, except for Wiangatta which dipped to the south east.

Historical Exploration

- Regional stream sediment surveys were carried out by Billiton (Randall, 1992) and CRA (Broadbent, 1982). Billiton also completed a more detailed survey in the Denison area. Minus 80 mesh As and BLEG Au anomalies were reported with no apparent follow up undertaken.
- BP Minerals (1983) flew an aeromagnetic survey over the area. This data was incorporated with additional data flown by the Tasmanian government into the NETGOLD project and together with regional gravity data.
- Argyle minerals (Cromer, 1986, 1987a,b) carried out trenching and rock chip sampling and drilled 6 shallow holes at the Denison Goldfields.

1995 – 2003 Anglo Australia Resources NL

During this period Anglo Australian Resources NL completed several phases of exploration which included activities:

- Interpretation of Satellite imagery.
- Rock Chip and mine dump sampling from the Globe, Sir William Denison and South Globe workings.
- One RC drill hole (SWD1) totaling 114.5m testing beneath the Sir William Denison workings.
- 1284 conventional soil samples collected on the local Denison grid (designed to cover all the historical workings).
- 2 trenches at Sir William Denison and 9 trenches at East Denison.
- 525 Auger like samples, near bedrock soil samples on the East Denison grid.
- Interpretation of aeromagnetic, radiometric and gravity data
- 146 MMI soil samples at East Denison.
- Rock chip sampling along NE trending structural corridor and follow up soil sampling at Little Ballroom and Tip prospects.
- Trenching at the tip prospect
- 32 RC drill holes completed for a total of 2100m.

EXPLORATION CONDUCTED DURING YEAR 1

Data Compilation and GIS – 3D Model

LEF has recovered data and information from various government archives and agencies in Tasmania which is hoped to provide an important insight into exploration previously conducted on the tenement and surround areas. This data is being verified and combined into the Company's digital database. This information includes drilling, soil and rock chip sampling, mapping and interpretation work. LEF has completed a 2D and 3D GIS (Geographic Information System) environment. Software platforms utilised include:

- ArcGIS (with Geosoft Target Extension)
- Micromine Modules and Fracsis

Work includes the compilation of historic plans from the 1800's, government mapping and open file company information, old drill holes, soil geochemistry and rock chip data and remote sensing. This information has been combined with remote information such as airborne photography, satellite imagery and regional geophysics, allowing spatial interrogation and drill target selection.

Structural Model

Due to the structural controls on mineralisation and their complexity, a structural model for mineralisation has been developed for the Lefroy Goldfield (supplied as Appendix 1) and is being applied to a detailed assessment of the tenement.

DISCUSSION

Initial data compilation and desktop planning, resulting in an integrated GIS database will serve as ongoing planning support for the project. It will be regularly added to and updated as information becomes available. The structural model will be incorporated into an integrated interpretation and form the framework for drill target picking in 2005/2006.

CONCLUSIONS & RECOMMENDATIONS

Historical and anecdotal information points to the Goldfield having significant potential. This is supported by a detailed desktop study being undertaken of the Field. LEF has recognized the need for a good geological and structural understanding of the Field and this has been a starting point for LEF's exploration work. LEF is continuing to build on both its GIS model of the field and the understanding that comes from it.

EXPENDITURE

Expenditure at the EL during the year August 2004 to August 2005 was as follows:

EXPENDITURE	Amount
Administration and Management Wages	\$408
Desktop Work/GIS/Database/Planning/Map Making	\$2200
Field Work, Field Support, Track Cutting	\$1885
TOTAL	\$4493

Table 1. Expenditure

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APPENDICES

APPENDIX 1.

LEFROY GOLDFIELD STRUCTURAL MODEL

LEFROY STRUCTURAL MODEL

LOCATION

1:25,000 Topographic Map Sheets:
Bell Bay 4844, Retreat 5044, Weymouth 5045, Low Head 4845

1:50,00 Geological Map Series:
Beaconsfield, Pipers River

PREPARED FOR
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(with contributions from John Baxter)

DATE:

1st October 2004

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- Figure 8 Structural geology sketch of the south side of the road cut at the Volunteer; note that the view has been made looking north by reversing the image.
- Figure 9 Stereonet of D3 structures (equal angle). Data is mostly from the Volunteer-Specimen Hill-Monarch Hill areas.
- Figure 10 N-S Cross–section through the Lefroy Quartz reefs (looking west). The fault lodes are marked (F) and the quartz lodes (Q). Note the convergence of the two types beneath the Native Youth (from Groves 1965).
- Figure 11 **Longitudinal section through the Volunteer, showing the secondary shear model and the potential for further ore shoots at depth (from Chisolm 2004).**

1.0 SUMMARY

The Lefroy mineralised system comprises a quartz vein array, of D3 age, arranged in a ladder style along a NNW-trending D1-D2 structural corridor. Individual E-W auriferous quartz veins formed as a result of wrench faulting in a stress regime in which σ_2 was vertical at the close of the Mid-Devonian Tabberabberan Orogeny.

D3 “saddle reefs” - formed as a result of tightening of pre-existing folds in the D1 fold-thrust zone – controlled high-grade gold shoots at the Native Youth. The 45° W plunge of the gold shoot at the Volunteer is principally due to the intersection of D2-D3 faults with the steeply S-dipping reef.

It is recommended that a conceptual deep target beneath the Native Youth and Morning Star reefs be investigated with deep sounding CSAMT with the aim of locating another D1 thrust system at depth.

2.0 INTRODUCTION

Lefroy Resources Limited (LRL) was floated on the ASX in 2004 with the aim of exploring and developing the historic gold mining field of Lefroy, situated in northeast Tasmania. The Lefroy Structural Model has been developed: (1) as a means of providing LRL with a robust targeting tool for drilling in the Lefroy goldfield, and (2) as part of a commitment to the Australian Stock Exchange.

The report has been compiled in conjunction with John Baxter of Continental Resource Management in Perth, WA.

3.0 LOCATION, ACCESSIBILITY AND PHYSIOGRAPHY

Lefroy is located on the eastern side of the Tamar River approximately 30 km NE of the Beaconsfield gold deposit (Figure 1). Although the Lefroy goldfield is easily accessible outcrop is poor (<5%). Much of the current surface structural information on the field has come from the Bridport-Georgetown Highway road cut that passes within 20m of the Volunteer reef. Tertiary basalt, and their associated gravels and sand deposits, obscure much of the geology at the north end of the field (eg. Native Youth and Pinafore-Chum).

4.0 PREVIOUS STRUCTURAL STUDIES

Thureau (1882, 1883) was the first geologist to recognise that the auriferous veins at Lefroy occurred in an anticline “almost four miles across” that was developed in slate beds, prompting an analogy with the saddle reefs in Bendigo. His reference to the Native Youth, in which he described the gold reefs as occurring in “very thinly laminated beds, exhibiting a wavy texture throughout and almost horizontally deposited” is a reference to stripey S1 cleavage commonly deformed by D3 folds in the district. He also showed that a folded quartz sandstone bed, in part, controlled the shoot geometry at the Native Youth (Figure 2).

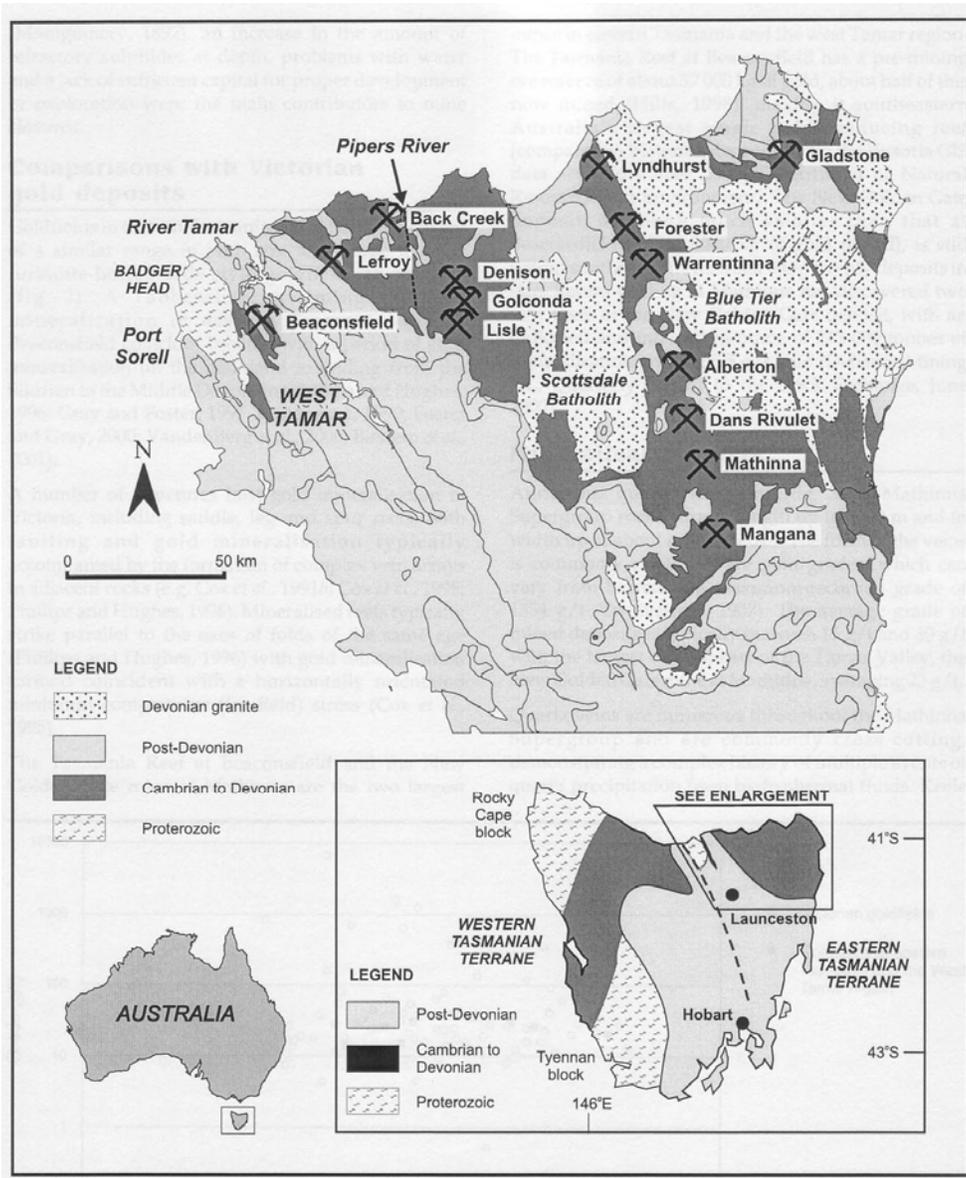


Figure 1 Location and simplified geology of the major goldfields in eastern Tasmania. Lefroy lies between the Beaconsfield and Back Creek deposits

Montgomery (1897) recognised there were two types of auriferous lode at Lefroy: these he called “mullocky lodes” and “quartz lodes” respectively. The “mullocky lode” was recognised as a fault because of the broken nature of the auriferous quartz, which had experienced considerable post-depositional disruption and dislocation. The second type of lode was called “quartz formation” because of its thick regular development of gold-bearing quartz reef. The Volunteer-Land O’Cakes, the Clarence and Pinafore reefs were good examples of the former, whereas the Native Youth, Chum and Morning Star were all excellent examples of the latter. The Golden Point & Crown was considered to be a hybrid because it showed characteristics of both. Montgomery believed that the quartz lodes formed first and that the “mullocky formation” was the result of later movements across the lodes.

Thureau and Montgomery both recognised the fact that mudstone-shale sequences tended host the mullocky lodes, whereas sandstone sequences generally hosted the quartz lode types. This demonstrated that host-rock rheologies were always considered important controls to major lode systems at Lefroy.

The landmark study Powell and Baillie (1992) showed that Lefroy lies on the overturned limb of an E-directed D1 recumbent fold in the Pipers River Recumbent Zone (Figure 3). Fold structures east of the Pipers River are upright in style, which has led other workers - notably Reed (2001) - to speculate that there is an unconformity separating these two structurally distinct domains, in which these Benambran-aged (or late Delamerian?) recumbent structures are absent to the east.

The Volunteer-Land O’Cakes reefs is a jogged fault system, in which a strong As + Au soil anomaly defined a zone of high fluid permeability at the overlap between the two faults (Keele 1996). The movement has been suggested to be dextral; however, given the orientation of the far field stress at the time of D3, the movement is likely to be sinistral. Therefore, the ore fluids had been introduced into a contractional (and not an extensional) jog.

A detailed study of the diamond drill core from Allstate’s drilling at the Volunteer (Reed 2001) concluded that the westerly plunge of the Volunteer ore body was due to the intersection of a shallow W-dipping D1 thrust with the ENE-trending D3 quartz veins. Facing evidence in drill core (DDH L1) showed that the Volunteer mineralisation coincided with a change from overturned (down-hole facing) sandstone beds in the west from normal facing (up-hole facing) siltstone-mudstone units the east (Figure 4). Reed recognised D3 by its localized folding of S1/S2 and disruption to the D1/D2 veins. Auriferous sulphide mineralisation is typically associated with D3 brecciation and folding of D1/D2 structures in core.

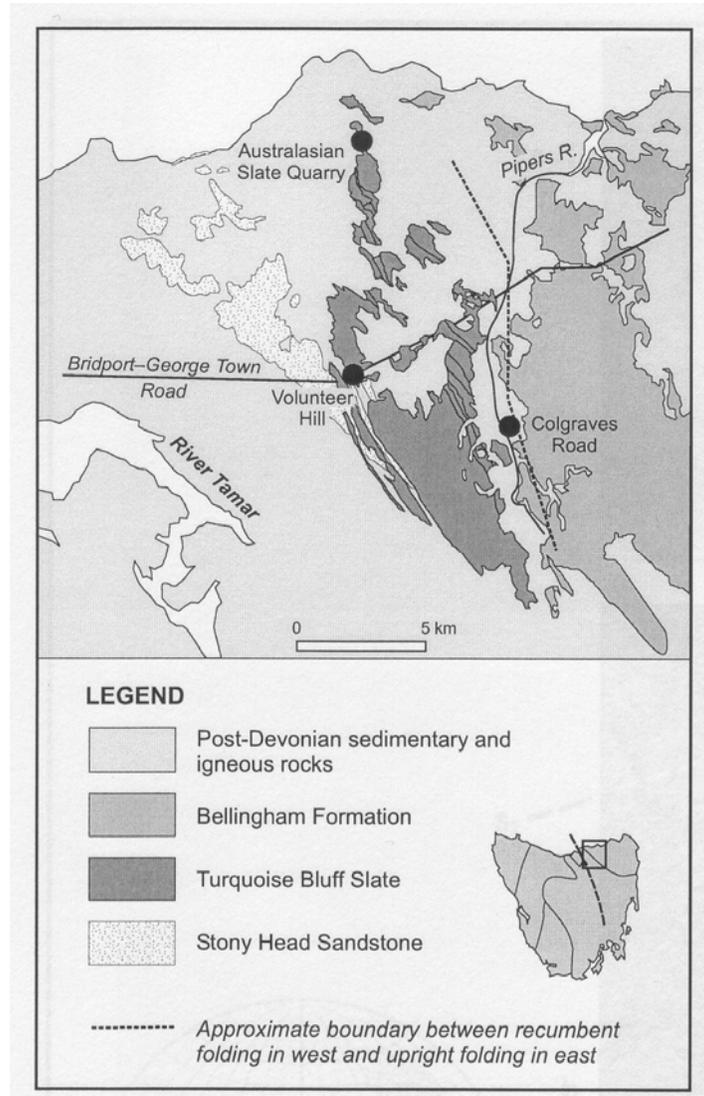


Figure 3 Location of the Volunteer lode in Lefroy showing the position of the eastern boundary to the Pipers River Recumbent Zone (from Reed 2004)

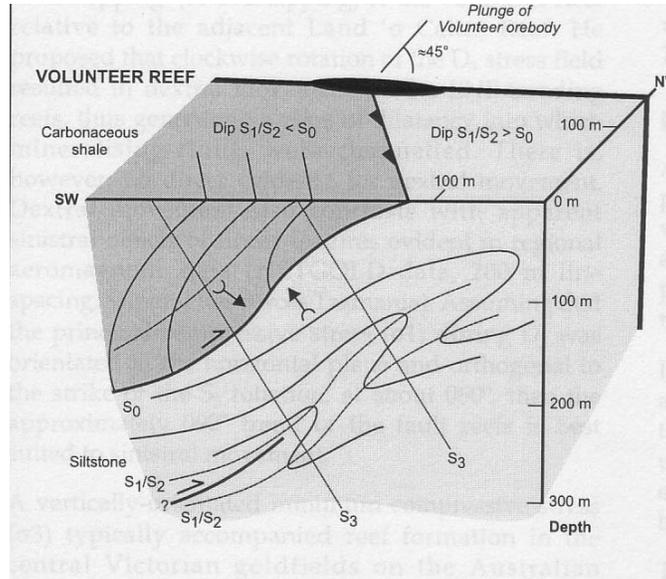


Figure 4 Block Diagram of the Volunteer D 1 thrust (from Reed 2001)

5.0 STRUCTURAL HISTORY

There are three major phases of deformation in the Lefroy district related to two orogenies (Reed 2001). D1 is an E-directed recumbent folding event that is either a very Late Delamerian (Cambro-Ordovician) or Benambran (E. Ordovician) in age. D2 is an E-directed thrusting event during the first phase of the Tabberabberan (Middle Devonian) Orogeny. D3 is a W-vergent thrusting event that stitched the eastern and western Tasmania terranes together at the close of the Tabberabberan Orogeny (Figure 5). Gold mineralisation in NE Tasmania occurred between 389-391 Ma (Reed 2004, & Black pers. com. 2004).

The extensional nature of the D2 fabric at Lefroy (see below) suggests that D2 may have been related to the emplacement of granitoids at depth, i.e., the equivalent of the (405-395 Ma) Pyengana and Georges River Plutons, east of the Scottsdale Batholith. There is little evidence for D2 folding at Lefroy.

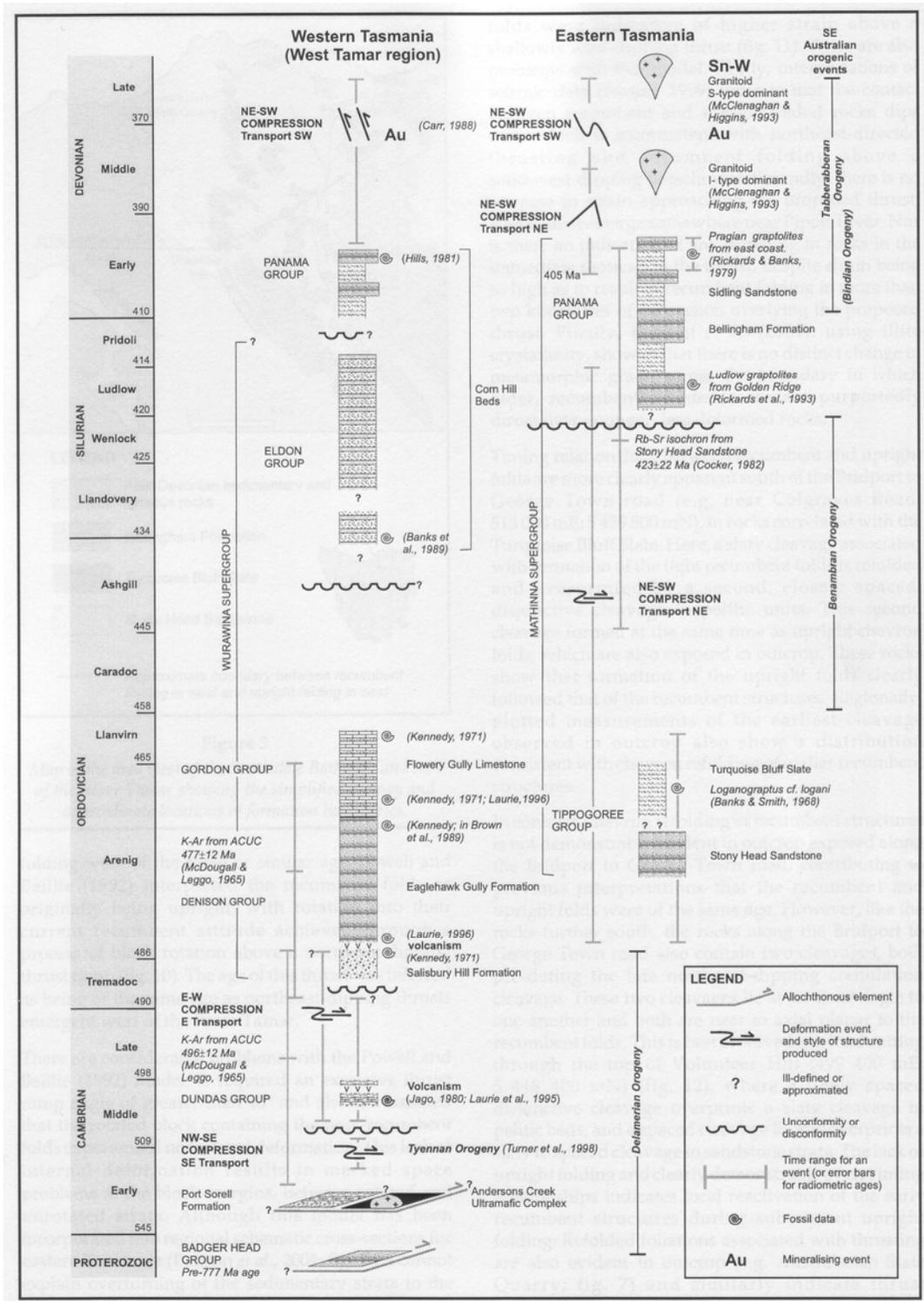


Figure 5 Time-Space diagram for eastern Tasmania (from Reed 2004).

6.0 STRUCTURAL SETTING

Regional Structures

The crustal structure beneath the Lefroy deposits has been modeled by Keele et. al., (1994) and Reed (2004). In both models the fluids are sourced from a shallowly E-dipping D3 detachment fault that daylights beyond the Beaconsfield gold mine on the western side of the Tamar Fracture Zone (Figure 6). The steeply dipping D3 vein structures and faults tapped, or “short-circuited” the gold fluids at depths of between 5 and 10 kms. Arsenopyrite geothermometry data suggests that Lefroy was closer to the fluid source than Beaconsfield: Lefroy fluids were hotter (460-470° C) than Beaconsfield (370-440°C, unpublished data).

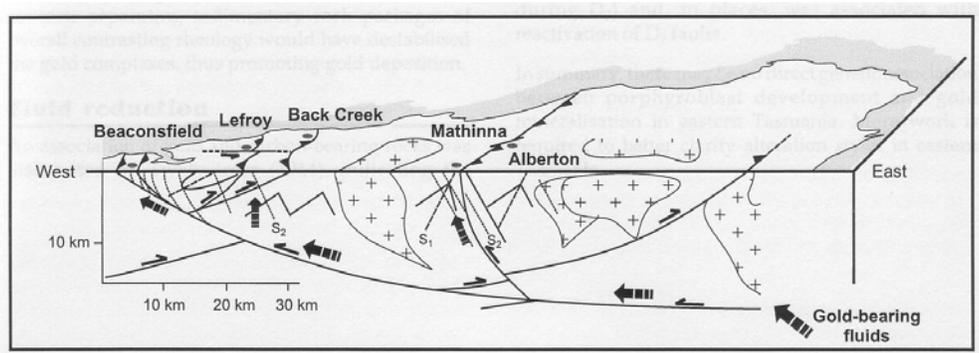


Figure 6 Block diagram sketch of eastern Tasmania showing possible fault architecture beneath the Lefroy deposit (from Reed 2004).

Local Structures

The local setting is dominated by an *en-echelon* D3 quartz vein array that trends in a NW to NNW direction along the length of the goldfield (Figure 7). Individual reefs trend ENE to NE and dip vertically or steeply S, with the exception of the Native Youth that dips N. A number of these D3 structures are faults (e.g. Volunteer, Pinafore & Clarence) with unknown displacements. The longest of these structures is the Volunteer, which may be traced for 10 km in the magnetic images. The remaining reef structures, however, do not occur beyond two important quartzite-mudstone marker beds situated east and west of the town and average from 250 m to 1.5 km in length (Figure 7). The longest of these reefs in the central part of the field is the Morning Star reef, which has been traced across the Tertiary basalt out crop, a total distance of 2-3 km.

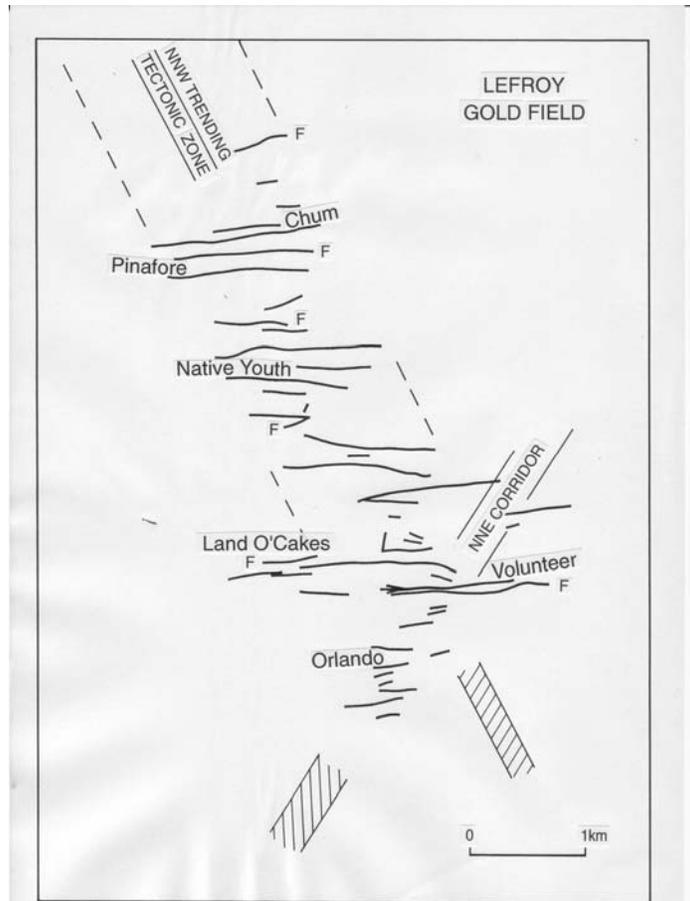


Figure 7 D3 quartz vein array in the Lefroy goldfield. Reefs marked “F” are the D3 faults (or “mullocky formation” in the old terminology)

Volunteer–Specimen Hill Area

D1

Detailed observations along the road cut show that S1 is a gently SW-dipping penetrative foliation developed in overturned sandstone-siltstone-mudstone sequences (Figure 8). A number of faults can be seen in the road cut, which make up the NW-trending D1 “corridor” that runs through the goldfield (Keele 1996) (Figure 7).

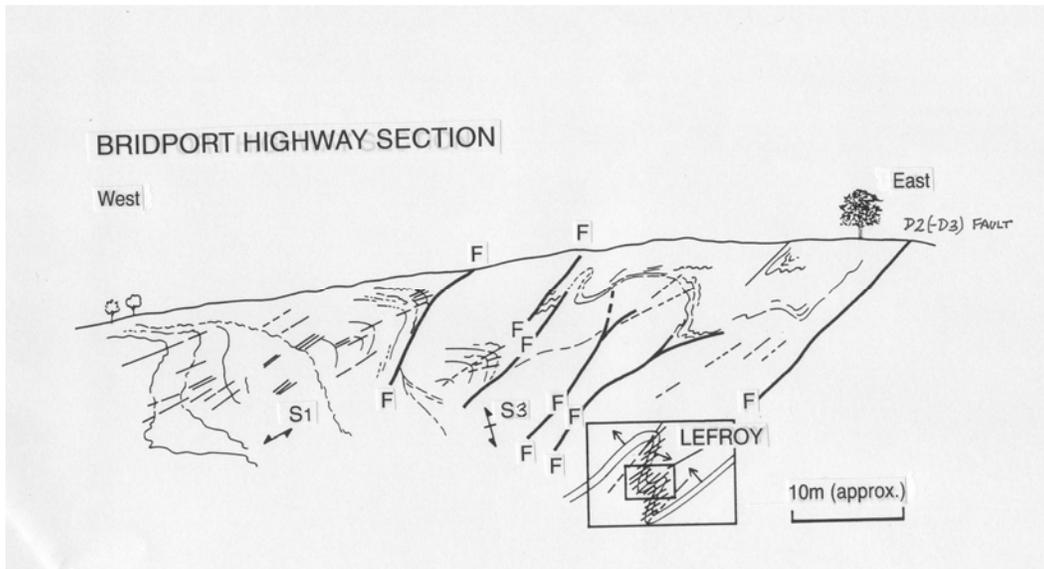


Figure 8 Structural geology sketch of the south side of the road cut at the Volunteer; note that the view has been made looking north by reversing the image.

D2

S2 is an extensional crenulation/shear band fabric in S1 that gives a consistent normal sense of shear in outcrop. D2 faults are 1-30 cm wide moderately W-dipping zones that contain quartz veining, alteration and cataclastic textures. These faults are probably re-activated during D3. The anastomosing or “stripey” S1 cleavage, which is well developed in certain units that are composed of alternating sandstone and siltstone. This indicates that shearing dominated the D2 event. The D2 faults (and shear bands) have exploited the rheological contrasts in the sandstone-siltstone-mudstones; hence these D2-D3 faults generally follow stratigraphic contacts (Figure 8).

D3

At Lefroy vein orientation is geometrically related to D3 structures (Powell 1991): S3 is a steep E-dipping NNW-trending crenulation cleavage developed in the finer grained lithologies. It strikes NNW and is related to the W-vergent collisional phase of the Devonian Orogeny. A number of structures such as quartz veins, joints, intersecting lineations, fold axes etc, are attributed to this deformation (Figure 9). The NE-trending “breakthrough veins” are related the NE vein array, which is well developed at the south end of the field (Monarch-Orlando); a NE cut-off to quartz reefs at the north end of the field (Chum-Pinafore-Golden Era) may also be an expression of this array (Figure 7). There is a high probability that these veins are mineralised.

A series of NW-trending post-ore faults with small displacements cut the reef at the Native Youth. These contain no quartz and are not mineralised.

A regional cross-section through the Lefroy field (Groves 1965) reveals that the fault lodes (F) generally have S-dips (Volunteer, Pinafore and Clarence), whereas the dilational quartz lodes (Q) have vertical or steep N-dips (Native Youth, Morning Star (Figure 10). Individual reefs at Lefroy appear to have experienced either extension (dilational quartz lodes) or wrenching (fault lodes), or a combination of both (Golden Point & Crown).

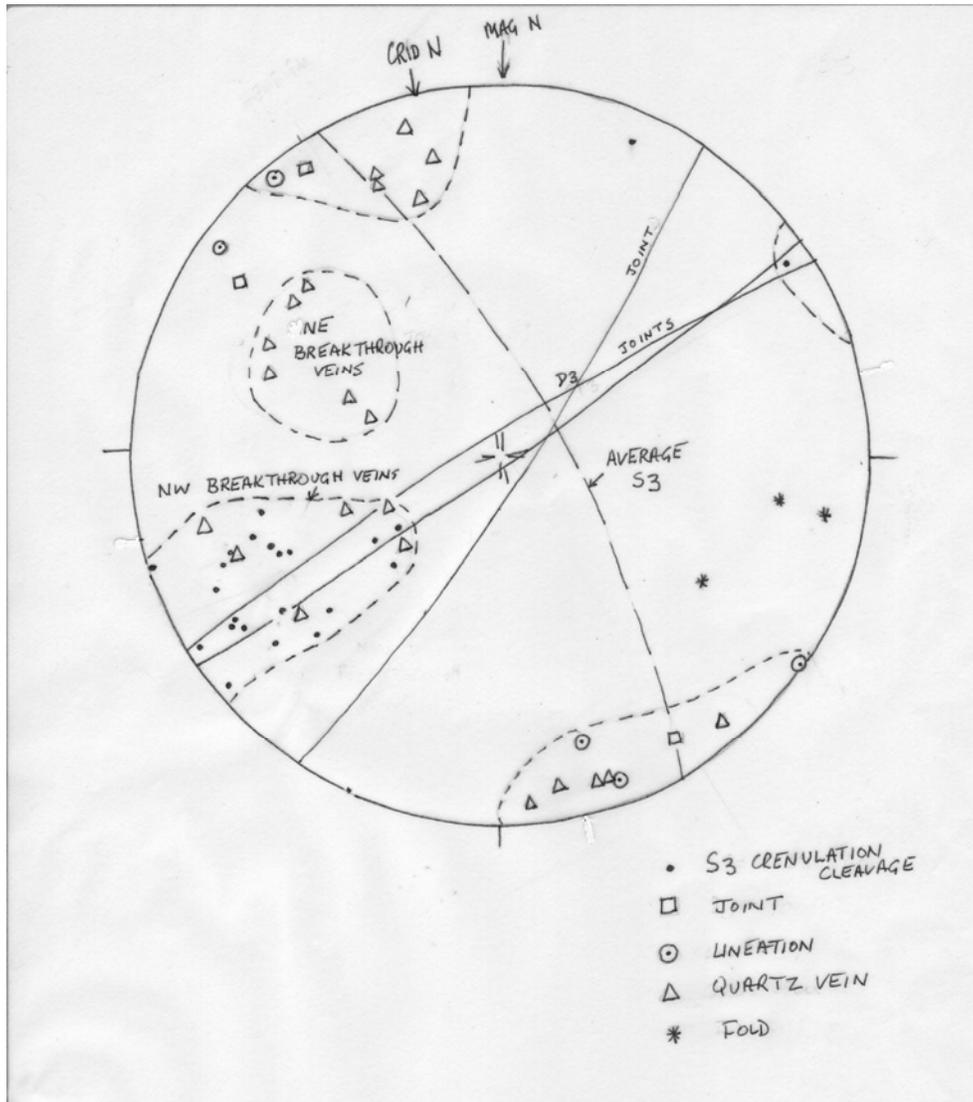


Figure 9 Stereonet of D3 structures (equal angle). Data is mostly from the Volunteer-Specimen Hill-Monarch Hill area. (Note this stereonet is plotted with Magnetic north: AMG north is 14° in an anti-clockwise direction)

7.0 MICROSTRUCTURES

Microscopically, three cleavages are present in the deformed slates associated with the reefs (e.g., Chum and Pinafore). S1 is a penetrative foliation (usually at a low

angle to bedding); S2 is an extensional crenulation cleavage - often in a conjugate relationship with the crenulation cleavage, S3, which is best developed in the siltstone-mudstone lithologies. By its very nature, S3 is a brittle-ductile event. Mineralised quartz veins, which contain small amounts of gold, arsenopyrite, chalcopyrite, tetrahedrite, bournonite, galena, sphalerite and pyrite (Bottrill 1996), are therefore syn to post-D3 in age (Reed 2001, Powell 1991).

8.0 DISCUSSION

In summary, the Lefroy Structural Model consists of a quartz vein array, of D3 age, arranged in a ladder style along a NNW-trending D1-D2 structural corridor. Individual E-W auriferous quartz veins formed as a result of wrench faulting in a stress regime in which σ_2 was vertical.

A longitudinal section through the Volunteer (Chisolm 2004) indicates that the 45° W plunge of the shoots may be the result of secondary shear movement during D3 (Figure 11). Alternatively, the 45° W plunge of the Volunteer shoot is due to the intersection of W-dipping D2-D3 faults (controlled principally by rheological differences across bedding surfaces) with the steep S-dipping reef.

The orientation of the D3 fold axes (and earlier D1 folds) suggests that the main litho-structural control to shoot development at Lefroy is sub-horizontal. The implication is that further substantial gold reserves may be found at depth in a re-make of the kind of structures found at surface. The main challenge is to find another D1 thrust system (and associated D1 to D3 anticlines) beneath the current Volunteer Thrust. If the system is stacked then there is every prospect of finding further rich ore shoots at depth.

An interesting possibility is that the reefs currently mined may merge into a single reef (or at the least a few reefs) at depth. There is some evidence that this could happen (see Figure 10).

A challenge will be to model in 3D the shallow-dipping Volunteer D1 thrust system through the goldfield.

9.0 CONCLUSIONS AND RECOMMENDATIONS

The Lefroy Structural model is able to:

- Explain the nature of the quartz vein arrays with respect to the stress field.
- Establish that the fault regime was one of wrenching (σ_2 vertical) rather than thrusting during the mineralizing event.
- Establish the timing of the gold mineralisation with respect to the Tabberabberan Orogeny of Middle Devonian age.
- Demonstrate that pre-existing geometry (due to early deformation) played a crucial role in the localizing the ore shoots
- Show the high-grade gold shoots at the Native Youth are controlled by D1 fold-thrusts that have been modified during D3 forming “saddle reefs”.
- Indicate D2 is an extensional (shear) event at Lefroy
- Suggest the permeability of the wall-rocks were enhanced by D3 reactivation of D2 faults in the vicinity of the quartz reefs (Volunteer)

- Demonstrate the slightly different orientations of the two types of reefs in the goldfield (F = “mullocky” and Q = dilational quartz) carry possibility that a target zone exists at depth.
- Explain the 45 W plunge of the Volunteer shoot as the intersection of bedding (or rheologically) controlled D2-D3 faults with the vertical reef.

It is recommended that the Deep Target (Figure 10) at the Native Youth be investigated with deep sounding CSAMT in order to locate another D1 thrust/D3 anticline system at depth.

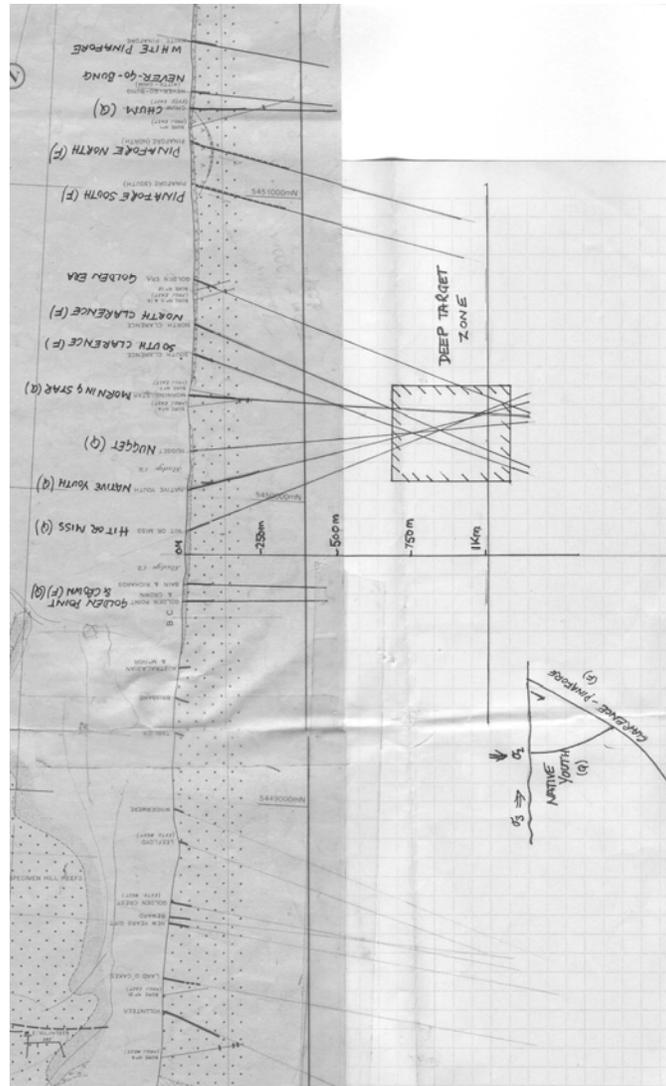


Figure 10 N-S Cross-section through the Lefroy Quartz reefs (looking west). The fault lodes are marked (F) and the quartz lodes (Q). Note the convergence of the two types beneath the Native Youth (from Groves 1965).

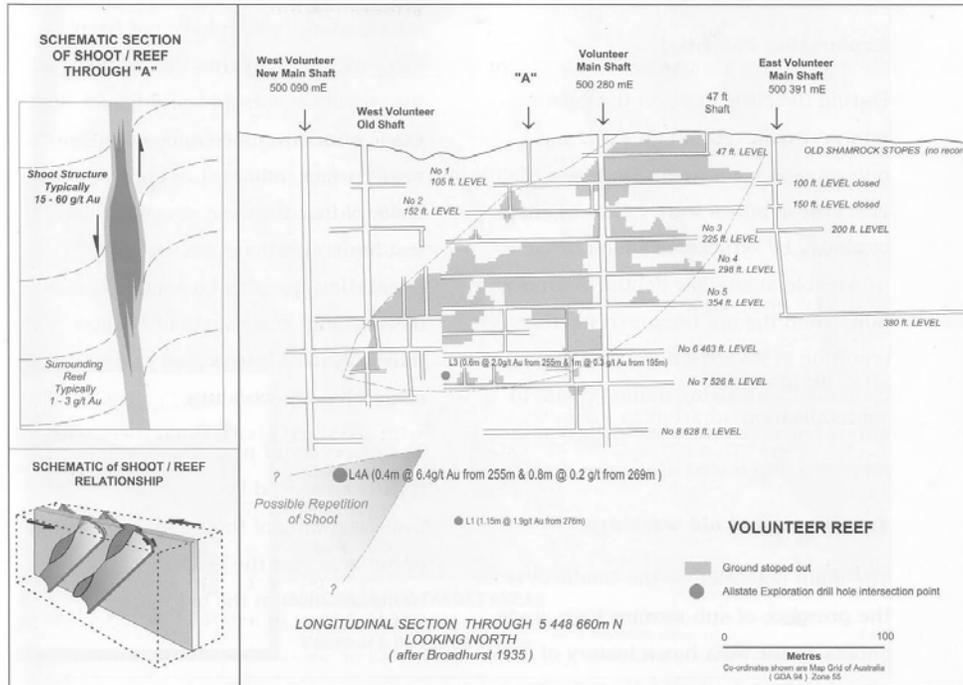


Figure 11 Longitudinal section through the Volunteer, showing the secondary shear model and the potential for further ore shoots at depth (from Chisolm 2004).

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Appendix 1 Lefroy Structural Database

Lefroy Structural Database								
AMG Aus 66				(Magnetic azimuth - add 14 degrees of declination to get grid N)				
Field No.	Easting	Northing	S0	S1	S3	Quartz Veins	Other	Comments
LF1	498,860	5,448,800	198/82w	182/39sw				Overtuned limb
LF3	500,527	5,448,499	298/26w		327/82e			Overtuned limb
LF3A	500,527	5,448,499	306/48sw	315/28sw				
LF3B	500,527	5,448,499	282/63sw					
LF5	498,947	5,448,680		177/7w				Land O'Cakes
LF19	499,173	5,448,590		335/24w				
LF27	499,672	5,448,676	326/85w	307/42w	342/90	256/79s		Specimen Hill
LF27A	499,672	5,448,676			341/71e	265/87n		
LF27B	499,672	5,448,676				346/80e		
LF27C	499,672	5,448,676				005/5w		
LF31	498,770	5,448,702		296/11sw				
LF31A	498,770	5,448,702		274/40sw				
LF32	498,720	5,448,747		323/73sw				
LF35	498,672	5,448,422		165/26w		165/26w		
LF72	499,346	5,448,255		133/29w				Monarch Hill
LF-VHT1-0	499,230	5,448,320		325/15sw		025/70se		Volunteer Hwy Section
LF-VHT1-10	499,250	5,448,320	150/32sw	325/18sw		072/85n		
LF-VHT1-20	499,270	5,448,325				286/6n		
LF-VHT1-40	499,310	5,448,330				338/75e		
LF-VHT1-70	499,330	5,448,335					058/84n	joint
LF-VHT1-90	499,350	5,448,340				065/81s	287/65sw	D2-D3 fault
LF-VHT1-90A	499,350	5,448,340				280/36s		
LF-VHT1-90B	499,350	5,448,340				065/81s		
LF-VHT1-110	499,370	5,448,350					306/61sw	D2-D3 fault
LF-VHT1-120	499,385	5,448,350				073/85s		
LF-VHT1-130	499,400	5,448,355				040/70se		
LF-VHT1-150	499,440	5,448,355	308/65sw					
LF-VHT1-170	499,470	5,448,360	282/36sw	335/23e				
LF-VHT1-170A	499,470	5,448,360		304/30sw				
LF83	499,523	5,447,851		160/38w		050/86n		Top of monarch hill
LF86	499,387	5,449,008		290/23sw	326/80e	295/17sw		Windermere tunnel
LF106A	498,095	5,448,809	138/62w	130/46sw	167/68e			
" B	"	"		160/8sw				
LF120	498,042	5,448,758		106/7n			5/330	F3 fold
LF130	499,480	5,450,400		185/24e	146/86w	155/37e		
" A	"	"				137/40e		
" B	"	"				160/48e		
" C	"	"				087/31s		
LF135	510,209	5,451,917	123/10n		295/90		027/81e	Conjugate fracture
LF136	509,945	5,451,987			292/85s		16/098	F3 fold
LF136A	509,894	5,452,005		050/6e	145/38e			
" B	509,747	5,452,011	135/58e					
LF137	508,607	5,451,587		072/9s				
LF-VHT2-0	499,030	5,448,300						Volunteer highway
-VHT2-10	499,020	5,448,300		145/29sw		130/155		section, start (east to west)
-VHT2-30	499,000	5,448,300	157/66sw			160/52w		
-VHT3-0	498,759	5,448,280						
-VHT3-10	498,745	5,448,280				066/23s		
-VHT3-20	498,732	5,448,275				015/41e		
-VHT3-30	498,720	5,448,270		143/13sw	160/76e			
-VHT3-70	498,690	5,448,260				120/25s		
-VHT3-100	498,660	5,448,240				072/72s		
-VHT4-0	498,463	5,448,100						
" -30	498,400	5,448,080		156/35sw	156/67e			
" -100	498,325	5,448,060	150/55sw	145/48sw				
" -110	498,310	5,448,060	155/62sw			198/68s		
LF229	500,764	5,448,585	337/75w	312/51sw	327/88e	153/57w		PipersRiver shop
" A	"	"				200/48e		o/turned beds
" B	"	"				080/84n		
" C	"	"				215/70e		
LF249	499,150	5,448,000	322/38e	336/42w	325/45e			Monarch Hill
	499,925	5,448,195		310/41sw				
LF-VC-14	499,920	5,448,250		272/29s				Volunteer Costean
LF-VC-35	499,920	5,448,227				266/68s		Shear=HW of Qtz-sul zone

LF-VC-35A	499,920	5,448,227		140/30sw		253/85n			
LF-VMS	499,895	5,448,220	186/12e						normal facing by main Volunteer shaft
LF274	498,913	5,447,645		155/34sw			4/160		Plunge of crenulation
LF276	499,086	5,447,636		163/30sw	140/77e				Old Lncst Rd
LF276A	499,086	5,447,636		035/16se					F3 folded S1
LF277	499,134	5,447,832		153/11sw					Old Rd
LF278	499,162	5,447,809		140/21sw					
LF279	499,200	5,447,900		140/63sw					
LF283	499,239	5,448,321		145/40w	138/64e	142/70e	3/306		S3-S1 intersection (cren)
LF283A	499,239	5,448,321				213/65nw	088/54s		Fr. Cleav. in qv
LF283B	499,239	5,448,321					055/87s		jnt. adjacent to qv
LF284	499,283	5,448,330		146/16sw	148/81e	165/15w	1/125		Lin, S3-S1 intersect.
LF285	499,350	5,448,334	138/23sw	128/35sw	338/78e	110/24s	13/165		Lination
LF285A	499,350	5,448,334	280/75s				146/48sw		D2-D3 Fault Zone
LF286	499,422	5,448,346	122/54sw	110/25s	155/65e				
LF287	498,170	5,446,810		120/52sw	158/68e				Lefroy road cut
LF287A	498,170	5,446,810		135/8s			132/75w		D2-D3 zone
LF288	500,453	5,448,549	127/40sw	125/15sw	155/81e				Beds overturned
LF289	506,339	5,450,142	130/80e	090/70s			7/100		F3 fold
LF290	502,634	5,447,960	180/10w				2/320		Lin on S1, Troopers Track
LF291	503,097	5,446,627	330/17ne	327/7ne	315/70ne				
LF292	503,071	5,446,479	315/55ne	145/14sw	135/45e		25/122		F3 fold
LF293	507,300	5,450,400	125/76e	090/36s					
LF294	507,740	5,450,700	088/57s	085/32s					
LF295	508,500	5,451,230		042/5s	140/88ne				
LF296	510,000	5,451,960		135/34ne					
LF297	502,300	5,444,980		010/8e	145/72ne				Native Industry
LF297A	502,300	5,444,980		138/45sw					
LF298	502,450	5,443,500		150/46w					