ABN 31 109 933 995

WHYTE RIVER PROJECT
TASMANIA
EL36/2003

ANNUAL PROGRESS REPORT
FOR PERIOD 30TH JULY 2011 – 29TH JULY 2012

Tenement Holder/Manager
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Joint Venture Partner (70% Fe, Sn, W)
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181 Roberts Road
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Joint Venture Partner (earning into all except Fe,Sn,W)
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Bass Metals Ltd
Pioneer Nickel Ltd
Venture Minerals Ltd (Stellar reporting removed)
Stellar Resources Ltd (Venture reporting removed)

Disclaimer

The conclusions and recommendations expressed in this report / table represent the opinions of the Authors based upon the data available and provided to them. The opinions and recommendations provided from this information are in response to a request from the client and no liability is accepted for commercial decisions or actions resulting from them.

Note: All figures and grids are according to the GDA94, Zone 55 datum unless otherwise stated

EXECUTIVE SUMMARY

Bass Metals Ltd (BSM) commenced management of the Whyte River exploration licence (EL36/2003) in April 2005. On 13th August 2008 Bass Metals and Venture Minerals Ltd initiated a joint venture. Under the joint venture agreement between Venture Minerals and Bass Metals, Venture Minerals solely fund all exploration expenditure in respect of exploration for Iron, Tin and Tungsten on the Joint Venture tenements during the farm-in period (2009-2012). On the 9th December 2010 Bass Metals and Stellar Resources Ltd entered into a commodity based (all except Iron, Tin and Tungsten) joint venture.

For the 8th year of tenure ended 29th July 2012 work conducted on the licence was completed by Venture Minerals and Stellar Resources and includes:

For Venture Minerals:

- 15 stream sediment samples collected from the ridge between Rocky River and Paradise River (assays pending).

For Stellar Resources:

- A field reconnaissance visit to Rocky River Mine / Lucy Spur area and aeromagnetic modeling of an area to the west of the Meredith Granite

Expenditure –	Reporting period	$ 21,564 (BSM)
		$ 41,251 (VMS)
		$ 9,808 (SRZ)
	Total to date	$194,387 (BSM)
		$550,505 (VMS)
		$ 21,013 (SRZ)

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1 INTRODUCTION

This report is a summary of the exploration activities conducted on the Whyte River licence EL36/2003, for the period of 30th July 2011 to 29th July 2012.

1.1 Tenure

Pioneer Nickel Ltd. (PIO) was the sole owner of this tenement until it entered a Farm-in Joint Venture Agreement with Bass Metals Ltd (BSM) on 27th April 2005. The Pioneer Agreement granted Bass Metals an option over the farm-in to earn a 70% interest in the Pioneer Tenements (EL31/2003 & EL36/2003). BSM fulfilled the PIO earn-in option requirements and the 70% interest was transferred to BSM on 9th December 2009. PIO retained the remaining 30%.

On 13 August 2008 BSM and PIO entered into a commodity based Joint Venture Agreement with Venture Minerals Ltd (VMS). This agreement gave VMS the option to earn a 70% interest in respect of Fe, Sn & W only and PIO to revert to a 2% NSR, while BSM retain 30%.

VMS fulfilled the earn-in option requirements and the 70% interest was transferred to VMS on 12th January 2011 with BMS retaining the remaining 30%.

A commodity based agreement with Stellar Resources (SRZ) has now been entered on the same terms as the agreement with VMS excluding Fe, Sn and W, on 9th December 2010.

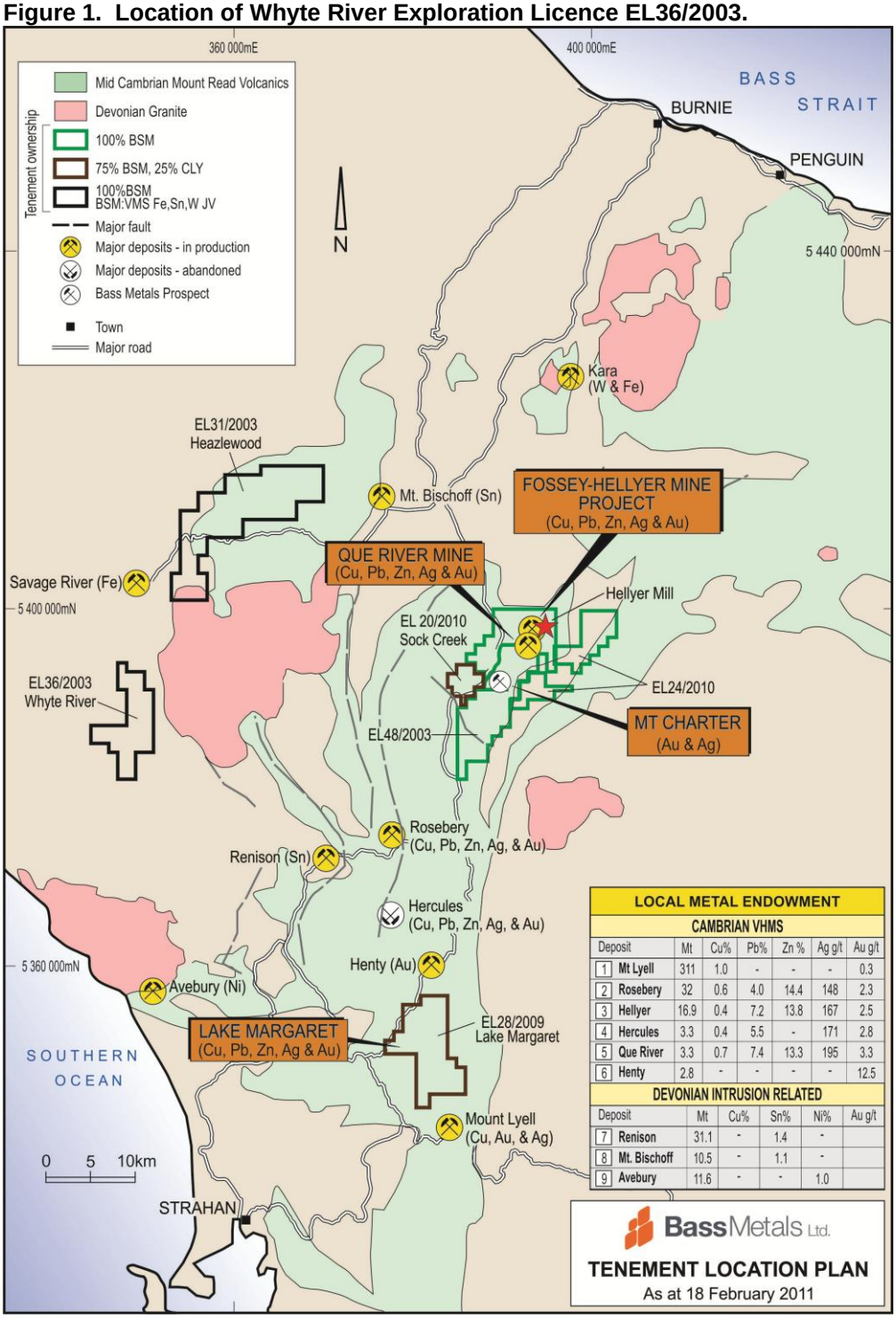
On 23rd September 2011 an extension was granted for another year. This licence covers an area of 44km² and comprises:

- Informal Reserve
- Regional Reserve
- State Forest

1.2 Location and Access

Exploration Licence 36/2003 is located approximately 30 km southwest of Waratah and 10 km south of the Savage River township on the west coast of Tasmania (Figure 1). The unsealed Corinna Road cuts across the northern part of the licence and access to the historic alluvial gold mining area around the confluence of Rocky River with Whyte River is relatively simple via a number of 4WD tracks. Access to the remainder of the licence is much more difficult because of the deeply gorged terrain and very thick vegetation (much of it regrowth after forest fires). The most common vegetation communities in the area are rainforest and related scrub, and wet eucalyptus forest. Detailed descriptions of access into the various prospects within the licence are described in the 2011 Annual Report.

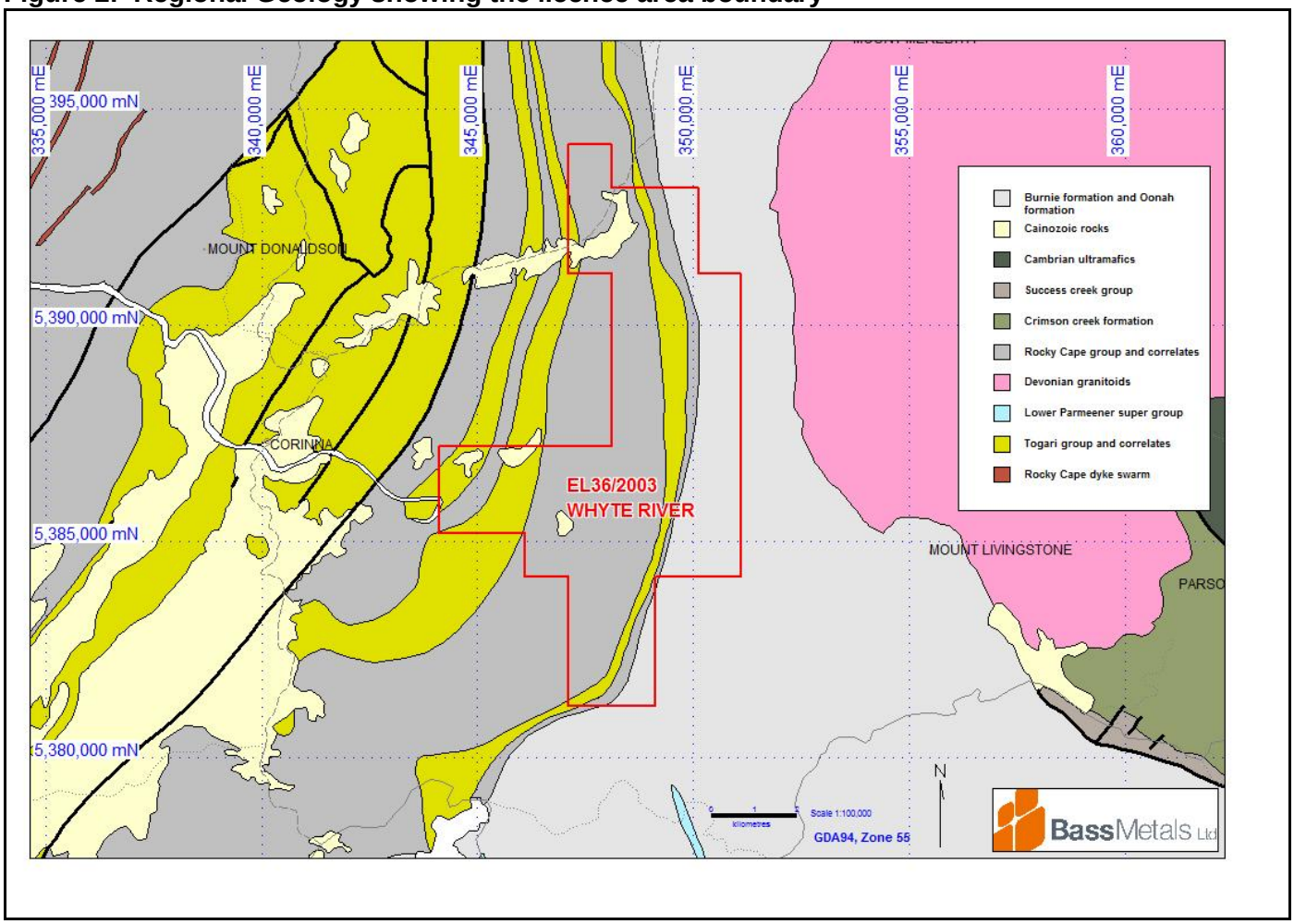
Figure 1. Location of Whyte River Exploration Licence EL36/2003.



1.3 Geology Overview

EL36/2003 is located in an area generally referred to as the Corinna Goldfields, an area of historically significant alluvial gold production in north-western Tasmania. Quartz-rich Tertiary gravels are widespread as remnant deposits on ridge tops throughout the tenement, and immediately underlain by a sequence of north striking, strongly deformed Neoproterozoic meta-sedimentary and meta-igneous rocks of the Arthur Metamorphic Complex, Keith Schist and Oonah Formation (Figure 2). The western part of the licence is underlain by chloritic schists with lesser amphibolite, and minor phyllite, dolomite, magnesite, and ultramafic schists (Arthur Metamorphic Complex), and the eastern part by quartz-mica schist, quartzite, phyllite and rare dolomite (Keith Schist and Oonah Formation). A distinctive belt of strongly deformed serpentinite, amphibolite, albitic schist (albitite), magnesite, talc schist, magnetite-chlorite schist, and massive magnetite rock loosely referred to the Bowry Formation runs approximately north-south through the centre of the licence. The very distinctive magnetic ridge associated with this unit no doubt reflects the presence of magnetite-rich schists and massive magnetite bodies. A mixture of quartz-rich sedimentary and mafic igneous protoliths has been widely recognised with the Bowry Formation, and recent work by Bottril & Taheri (2007) suggests the unit also includes dismembered and highly metamorphosed iron skarns.

Figure 2: Regional Geology showing the licence area boundary



1.4 Exploration Rationale

The Whyte River licence was originally acquired through a joint venture arrangement with Pioneer because of the perceived gold, iron-ore and nickel potential within the tenement.

Hard rock results to date do not explain the level of alluvial gold reported within the licence. Gold grain morphology studies conclude a local source for the gold grains studied. Previous companies have systematically explored the tenement area; however they do not appear to have followed up the low level soil anomalies generated in sampling programmes on the Lucy Spur, Lefroy Ridge East and Rocky River prospects.

A large magnetic feature within the Tyennan Metamorphics, which host the Savage River Iron ore deposit, is of a similar size and intensity to other iron ore resources known along strike. The iron ore target is less than 20km via road from Savage River Mine.

Also of interest is an interpreted ultramafic unit identified as a nickel-skarn target by Geoinformatics. The interpreted unit is located adjacent to a major belt-parallel structure in the vicinity of the Meredith Granite.

Venture Minerals investigated the Iron Ore potential and more recently are investigating the skarn potential near the Meredith Granite in the eastern part of the tenement,

Stellar Resources are investigating the potential for Cu-Au mineralisation associated with Proterozoic metasediments and Devonian granites.

2 EXPLORATION HISTORY

Historic and previous modern exploration work covering EL36/2003 has been summarised in the 2011 Annual Report (Bates 2011).

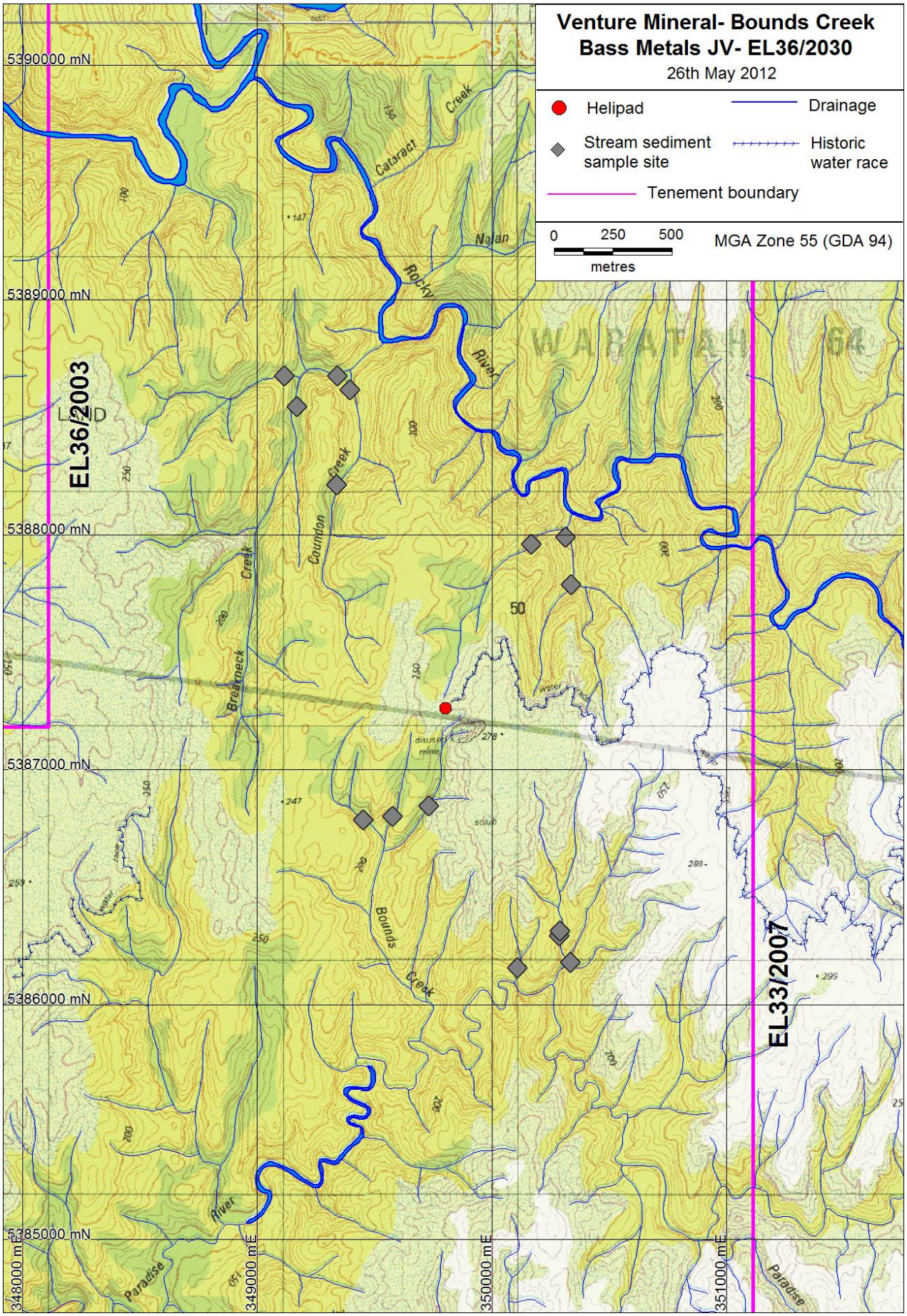
3 EXPLORATION ACTIVITIES – VENTURE MINERALS

3.1 Exploration for the Current Reporting Period

During the 2011-2012 period, a review of historic stream sediment data was conducted, which indicated that the creeks draining the ridge between Rocky River and Paradise River were anomalous for Sn (Bounds Creek). The historic Lucy Spur gold mine is situated 3.5km to the south-west of Bounds Creek. The geology of the mine consists of chloritic schists intruded by a greisenised porphyritic granite, with an additional intrusion identified underlying the hydraulic workings. The presence of greisenised granites in the local area represents a potential source for the Sn, occurring in cassiterite bearing greisens.

To investigate the source of the Sn anomalism, a five day helicopter program was undertaken by a team of two geologists. Works were focused on stream sediment sampling, undertaken concurrently with geological mapping and rock chip sampling. To gain access to the work area a helipad was established in a central location on the ridge between the Rocky and Paradise Rivers, in close proximity to a disused mine and near the Lucy Spur water race. A temporary campsite was set up neighbouring the helipad. Travel in the work area was extremely time-consuming, due to the steep and thickly vegetated terrain. Therefore the quantity of data and the amount of stream sediment samples that could be collected was severely restricted. 15 stream sediment samples (BCSS001 to BCSS015) were collected during the campaign; the locations of the samples are indicated in Figure 3. A split proportion of each stream sediment sample has been submitted for assay by XRF at ALS Chemex Perth, results are currently pending.

Figure 3 Bounds Creek Stream Sediment Location Diagram



3.2 Proposed Exploration

- Ventures 2011-2012 fieldwork program was finished prematurely due to difficult weather conditions. Venture Minerals is planning a 5-10 day helicopter supported fieldwork program for the summer of 2012-2013, in order to complete the stream sediment geochemistry program and to conduct follow up geological mapping in the Bounds Creek area.

- If positive Sn anomalism is reflected in Ventures pending stream sediment sample assay results, selected samples will be subjected to heavy mineral separation and mineral identification.

A preliminary budget for this work is tabulated below in Table 1.

Table 1. Preliminary 2012-2013 Budget Proposed by Venture Minerals

EL36/2003 Bass Metals-Venture Minerals JV	Proposed Budget
Stream sediment sampling, geological mapping and rock chip sampling	$ 7,000.00
Geochemical analysis	$ 1,250.00
Helicopter support	$ 5,000.00
Modelling and interpretation of results	$ 2,000.00
Other	$ 500.00
Contingency (20%)	$ 3,150.00
TOTAL	**$ 18,900.00**

4 EXPLORATION ACTIVITIES – STELLAR RESOURCES

4.1 Exploration Activities for the Current Reporting Period

Exploration activity by Stellar Resources for the current reporting period has been confined to:

- A helicopter supported field visit to the Lucy Spur and Rocky River Prospects. Details of this reconnaissance visit and a follow up progress report are attached as Appendix 1.

- A review of aeromagnetic data from the area west of the Meredith Granite, in the vicinity of the Rocky River Mine workings, was undertaken. Modeling of several flight lines was completed to estimate source body depths and shapes to act as a guide for any future drill testing. A summary of this review is attached as Appendix 2.

  This modeling suggested that there is a magnetic alteration zone underlying Whyte River at a depth of around 200-400m (possibly as deep as 600m). This zone may be the source of fluids giving rise to scattered Cu and Au anomalism at surface. Similarly the magnetic bodies at surface are also thin and somewhat discontinuous, but underlain by this deeper magnetic source, which gives rise to the regional magnetic "blowout" obvious on regional magnetic images. Adding to this are the various patterns of magnetite addition and subtraction obvious in the aeromagnetic data that support areal variations in alteration at this prospect.

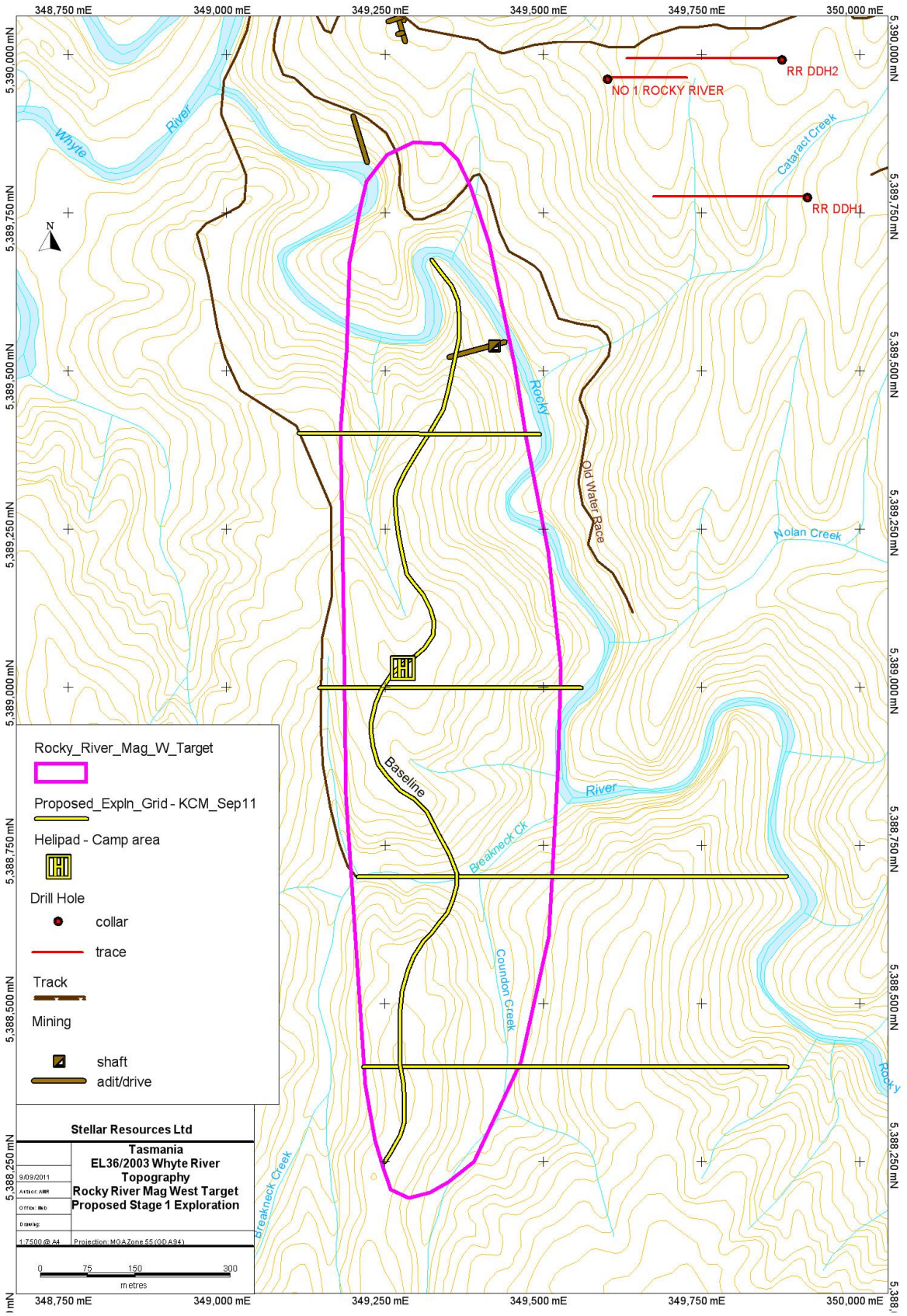
4.2 Proposed Exploration

Stellar Resources

During the summer of 2012-2013 Stellar Resources propose to test their model of a deeper magnetic alteration zone west of the Rocky River. Approximately 4km of line-cutting is planned followed by geological mapping and a 100 sample soil sampling program. The location of this proposed program is summarized on Figure 4. Stellars budget for the gridding, mapping and soil sampling program is $22,000.

If evidence for the modeled alteration zone is found, a drilling program will be proposed.

Figure 4: Summary of Proposed Stellar Resources 2012-2013 Gridding, Mapping and Soil Sampling Program

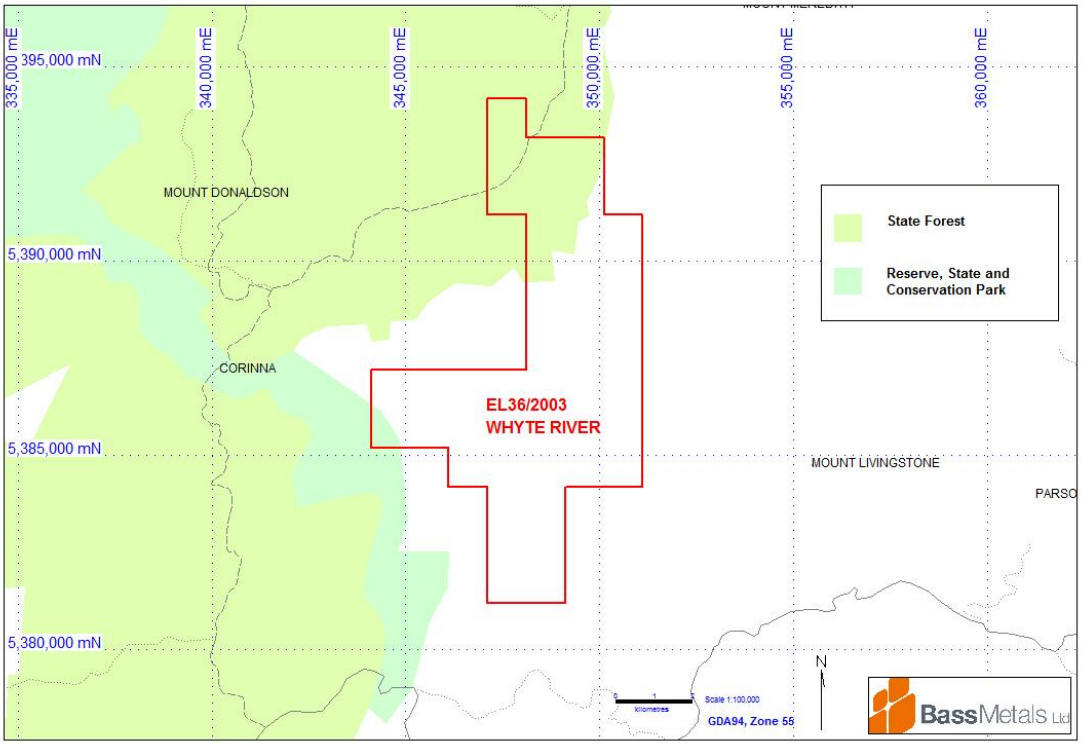


5 ENVIRONMENT

The companies have environmental policies in place that minimise the impact that exploration activities have on the environment. The policies include guidelines on how to reduce the risk of spreading plant diseases and weeds as a result of day-to-day exploration tasks.

The attached Environmental Activity Map (Figure 5) shows the location of the Exploration Licence relative to conservation areas. The companies are aware that the Whyte River EL contains environmentally sensitive areas and all guidelines have been adhered to in relation to those detailed below.

Figure 5: Environmental Activity Map



6. EXPENDITURE

Table 2. Expenditure for the Current Reporting Period
**Includes expenditure figures up to 31st May 2011*

July 2010 - July 2011		
Geoscientific Costs	**Geology**	43,844
	Geochemistry	934
	Geophysics	9,808
	Remote Sensing	2,141
Drilling & Gridding Costs	**Gridding**	
	Drilling	
	Land Access Costs	
	Rehabilitation Costs	
	Feasibility Study Costs	
	Other Costs	12,146
	Admin Costs	3,750
	Total - eligible	**$72,623**

9 References

Bates, S., 2011. Whyte River Project, Tasmania, EL36/2003. Annual Progress Report, 30th July 2010 – 29th July 2011. Unpublished Report to Mineral Resources Tasmania

Appendix 1

Field Report of visit to Rocky River and Lucy Spur

EL 36/2003 Rocky River-Whyte River
Prospect Evaluation Progress Report #1
April 18, 2011

Project Status

On Saturday April 16 Ken Morrison and Ron Gregory conducted a helicopter reconnaissance over the Lucy Spur and Rock River prospect areas. Ron worked in both areas for Goldstream in 1997-98 and knows the country well. On the way, we flew over the proposed campsites and helipad sites for the Ramsay River RY15 and RY36 grids and the pilot confirmed that he was OK to land at both sites once they were cleared. (Approval from MRT for the Ramsay River camp based work came in last week). The main component of the trip was an east-west walking traverse along the Rocky River vehicle track from a good landing site at 350425E, 5389754N, across to the Whyte River vehicle track crossing. This traverse crossed all the Proterozoic rock units shown on the geology map over the Rocky River prospect and there is quite good exposure along the track. We also located collars for the Goldstream drill holes RRDDH2 and 3, the underground hard rock and alluvial workings at Whyte River, the diversion tunnel from Rocky River to Whyte River (to allow hydraulic working of the Rocky River gravels) and walked a few hundred metres along the Rocky River-Whyte River water race.

Prior to the field trip, core from the three Goldstream holes was located in the MRT core store and a quick scan of RRDDH3 (The hole drilled under the trend of the Whyte River hard rock workings) was conducted. It has not yet been determined if core from the two 1966 IMI holes exists at Mornington. More work is needed on the core and on the CD of reports which Adrian sent down.

Prospectivity Overview

The Proterozoic geology comprises a central sequence of chloritic schist and interbanded, less foliated, felsic and mafic rocks, bounded on the western side by mica schists grading to phyllite, and on the eastern side by quartz-mica schists and cleaved quartzites further to the east. A pervasive north-south striking foliation is present in all units and foliation parallel quartz veining is abundant in the quartz rich schists on the eastern side of the area and Cainozoic erosion has produced a thin blanket of milky white vein quartz gravel over the eastern half of the area traversed. The vein quartz is of tectonic origin and shows no signs of mineralization. The quartz-mica and mica schists and the phyllite on the eastern and western sides of the area traversed show no evidence of hydrothermal alteration but have been regionally metamorphosed and compressed in the east-west direction.

The central chloritic schist sequence appears to contain all the observed evidence of alteration and mineralization, as well as the five previous drill holes and the abandoned workings. Along the western side of this sequence, minor weathered outcrop of bleached cream felsic rock with a probable crystalline texture (? intrusive) was noted. These rocks are potentially the albitised granitoids referred to in the literature. A treasure trove of fresh and mineralised broken rock exists on dumps around the underground workings immediately south of Rocky River, on the western edge of the chlorite schist sequence. The workings are either collapsed or water filled and not suitable for entering. Several samples were taken from the dumps and there is potential to take more/larger samples when wheeled transport can get closer to the workings. Locally these rocks are intensely magnetite-sulphide-quartz altered, with secondary sulphate crystals common. Some of the precursor rocks have intrusive textures and a chloritised mafic component (perhaps quartz gabbro or granodiorite precursers). Examples of oxidized gossanous magnetic-suphide occur as lumps of float in the general vicinity of the workings and apparently many of the large

detrital nuggets recovered from Rocky River gravels were gold in ironstone pebbles (Ron Gregory, pers comm). At the hand specimen scale fresh banded magnetite-pyrite samples in schistose chloritic host rock look similar to rocks drilled by Stellar at Alpine and Gourlays Creek but on present evidence we cannot take that comparison any further.

The outcrop distribution observed during the reconnaissance suggests the mineralization is very localized but so are the probable intrusives spatially linked to the mineralisation, so the potential exists for a larger subsurface development of the system to be targeted by more exploration. The mineralisation observed is highly magnetic but we cannot assume magnetite exists throughout the system. It is reasonable to assume disseminated or massive sulphide exists throughout if an ore grade deposit of ore grade gold/copper exists, so future exploration should cater for high magnetite and low magnetite options.

Environmental and Logistical Considerations

Helicopter support will be essential for field work at Rocky River and Lucy Spur. At Rocky River, no suitable landing sites were identified west of the position we landed and there is no suitable landing site at Lucy Spur until some pad cutting is conducted. The pilot can hover to allow a cutting crew with light weight camping gear to disembark. There is no road or walking track into Lucy Spur and with near total vegetation cover, it is a substantially more remote and challenging prospect to explore than Rocky River.

The Whyte River vehicle track crossing looked reasonably safe on the day of the traverse, with water depth estimated at about 50-80 cm, moderate flow and a stable flat gravel bed in the river. East of the crossing the track is steep and especially over the chloritic schist unit Pactd, is very slippery when damp. I doubt it is suitable for 4WD without chains, except in prolonged dry summer conditions. Quad bikes and possibly a tracked bombardier style vehicle will be needed and safety issues will require constant monitoring. There is a flying fox cable strung across the Whyte River near the track crossing. There is no cage on the eastern side and we will check the western side when we drive in from Corinna Road. If the cable is sound it should be possible to get the flying fox operational again and that would be a useful back up.

It may be cost effective to establish an exploration base at Corinna, if suitable accommodation is available.

Both Rocky River and Lucy Spur are heavily vegetated and it is unlikely that airborne infra red alteration mapping methods would be effective. We can partly compensate for this by PIMA scanning existing drill core and possibly outcrop, if sufficient fresh rock can be obtained from the grid lines proposed.

Tarkine related conservation considerations can be anticipated for the approval process in this area. We should submit a work program as soon as possible.

Conclusions and Recommendations

- Reconnaissance field traversing of the geology combined with first pass scanning of Goldstream drill core and exploration reports support the view that the only worthwhile exploration target is the conceptual large scale intrusion related gold- magnetite-+/- copper model (as proposed by Tom Whiting). On present evidence it is equally likely that the mineralization is another magnetite-pyrite system with variable copper and gold, analogous to both Alpine and Gourlays Creek, and located in the contact aureole of the Meredith Granite.

- The next phase of work should take a proof of concept approach and on logistical and cost grounds, as well as having established substantial gold anomalism, the Rocky River area is superior to the Lucy Spur area.
- There does not appear to be much potential for additional soil and steam sediment geochemistry to add to the previous exploration results sufficiently to generate new drill targets. Given the conceptual model, a combination of broad scale alteration zonation mapping, aeromagnetics interpretation and ground based electrical geophysics (IP?) is probably the best approach. Thin section and assay data on mineralised samples from the underground workings would be helpful in further understanding the target.
- The vegetation cover is too thick to warrant an airborne infra red alteration mapping survey but a PIMA survey of Goldstream core at the MRT Mornington core store, combined with sawn outcrop samples collected from east-west grid lines, could be effective. Assuming that sufficient aeromagnetic data exist, the priority field work should be to re-establish the Goldstream east-west grid (approx 5 line km) and conduct a program of alteration mapping and an ?IP survey. Together with further review of previous exploration results and interpretation of drill core and aeromagnetic data, this approach should identify the best drill targets for next summer.

Regional Exploration Progress Report
K Morrison – 30 May 2011

EL 36/2003 Rocky River (Whyte River)

Reading of the comprehensive set of reports on previous exploration sent by Adrian is complete, some core has been scanned at the MRT Mornington core shed (1-2 more days needed) and preliminary discussions with Nic Turner (geologist who managed the Goldstream project) resulted in an arrangement for a longer meeting to discuss Nic's thoughts on remaining prospectivity. Rock chip samples from the initial reconnaissance trip around the Rocky River mine workings (located on the south bank of the Whyte River) have been sent to MRT for petrology and Ralph Bottrill (MRT petrologist) will incorporate the results into a larger study underway, of the magnetite occurrences in the Savage River-Zeehan region. This study will potentially benefit Stellar by adding to our understanding of the Alpine, St Dizier and Gourlays Creek mineralisation. Overall the geology and mineralisation of this prospect is complicated and erratic, with no simple model yet emerging as a compelling guide to further exploration. A report on Rocky River will be completed when all the above tasks are finished but current findings/impressions of relevance to prospectivity ranking are summarised below.

- Mafic precursers to the chloritic schist appear to be the source of the modest copper anomalism common across the prospect, whereas known gold mineralization is associated either with granitic intrusives and felsic volcanics (especially at Lucy Spur), or with ironstone/weathered magnetite(especially alluvial gold in Rocky River). It is not yet clear (to me at least) whether the granites and felsic rocks at Lucy Spur are Devonian, Cambrian or Proterozoic.
- The relatively high grade magnetite lenses are part of the Savage River suite within the Arthur Metamorphic Complex. Magnetite age is unknown but petrographically at Rocky River it overprints the albitisation event and shows no convincing correlation with either copper or gold. Other non massive magnetite occurrences are common within the chlorite schist unit and these may have a different origin to the Savage River style lenses.
- Extreme rock type variability occurs within the chlorite and white mica schists and phyllites which comprise the Arthur Metamorphic Complex at Rocky River, which in places appears as a tectonic melange. For example, wall rocks underground in the Rocky River mine are described as including slate, talc, serpentinite, diorite and gabbro. Surface mapping nearby suggests zones of albitite conforming to the rock fabric, ie not suggestive of a zoned alteration system around a mineralizing intrusion. In these highly deformed and foliated rocks it is difficult to distinguish hydrothermal alteration from metamorphism.
- A lot of work has been done on the area by previous explorers and it has down graded the potential for magnetite and copper but not adequately explained the gold mineralisation. Historically most of the gold mined has been alluvial but significant high grade samples (albeit erratic and discontinuous) have been taken from hard rock workings at Lucy Spur. The high nugget effect at Lucy Spur is consistent with large detrital nuggets recovered from Rocky River. Any future work by Stellar should be focused on gold rather than copper-gold, which may require a shift in exploration strategy away from targeting disseminated sulphide and towards attempting to delineate zones of specific rock types.

Appendix 2

Aeromagnetic Modeling – Meredith Granite Western Margin
(Digital Copy Only)

Notes for Aeromagnetic Modelling

Notes for file: 201206_5_Aeromagnetic_Modelling_1.pdf

The idea behind this exercise was to produce a rapid depth assessment of the anomalies of interest using three differing yet common techniques for depth estimation. These included:

- Straight slope method (pencil & ruler!)
- 2D forward modelling, and
- 3D Euler Deconvolution (automated method).

The resulting observation was able to define a given range of depths to the causative source(s) to act as a guide for any future sampling/modelling/drilling exercise.

Notes: with the 2D forward modelling results, the figure of 330m is relatively higher than the other two (2) methods because the flying height of the aircraft and the relative level of the terrain has not been taken into account. This separation distance needs to be subtracted from the modelling results.

Also, caution is advised with the 3D Euler Deconvolution technique results. Although the structural indexes are almost defined as deterministic, the resulting depth estimates are probabilistic and are shown as a distribution. This means the modelling shows the range of possible depth estimates and which depths within that range are most likely.

Notes for file: 201206_6_Aeromagnetic_Modelling_2.pdf

With regards to the depth models, a possible idea was put forward to explain the nature of the complex magnetic signature of the underlying geology – to be tested via 2D forward modelling. This idea involved the possible existence of an underlying alteration zone beneath the shallower target sources. This was tested with two competing models to demonstrate that a better fit to the data was possible with the introduction of a deeper alteration zone than having geologically unsound modelled bodies with relatively 'large' depth extents.

In essence the thought is that there is a magnetic alteration zone underlying Whyte River at a depth of around 200-400m (possibly as deep as 600m). This may be the source of fluids giving rise to the shallow but scattered Cu and Au anomalism at surface. Similarly the magnetic bodies at surface are also thin and somewhat discontinuous, but underlain by this deeper magnetic source which gives rise to the regional magnetic "blowout" obvious on regional magnetic images.

Adding to this thought are the various patterns of magnetite addition and subtraction obvious in the aeromagnetic data that support areal variations in alteration at this prospect.

The proposed follow-up program to date has been to take another look for evidence of this deeper alteration zone by mapping any areal alteration patterns at surface, trying to find an alteration and/or geochemical vector which adds credibility to the modelling.

If we can get that then we will drill the target.

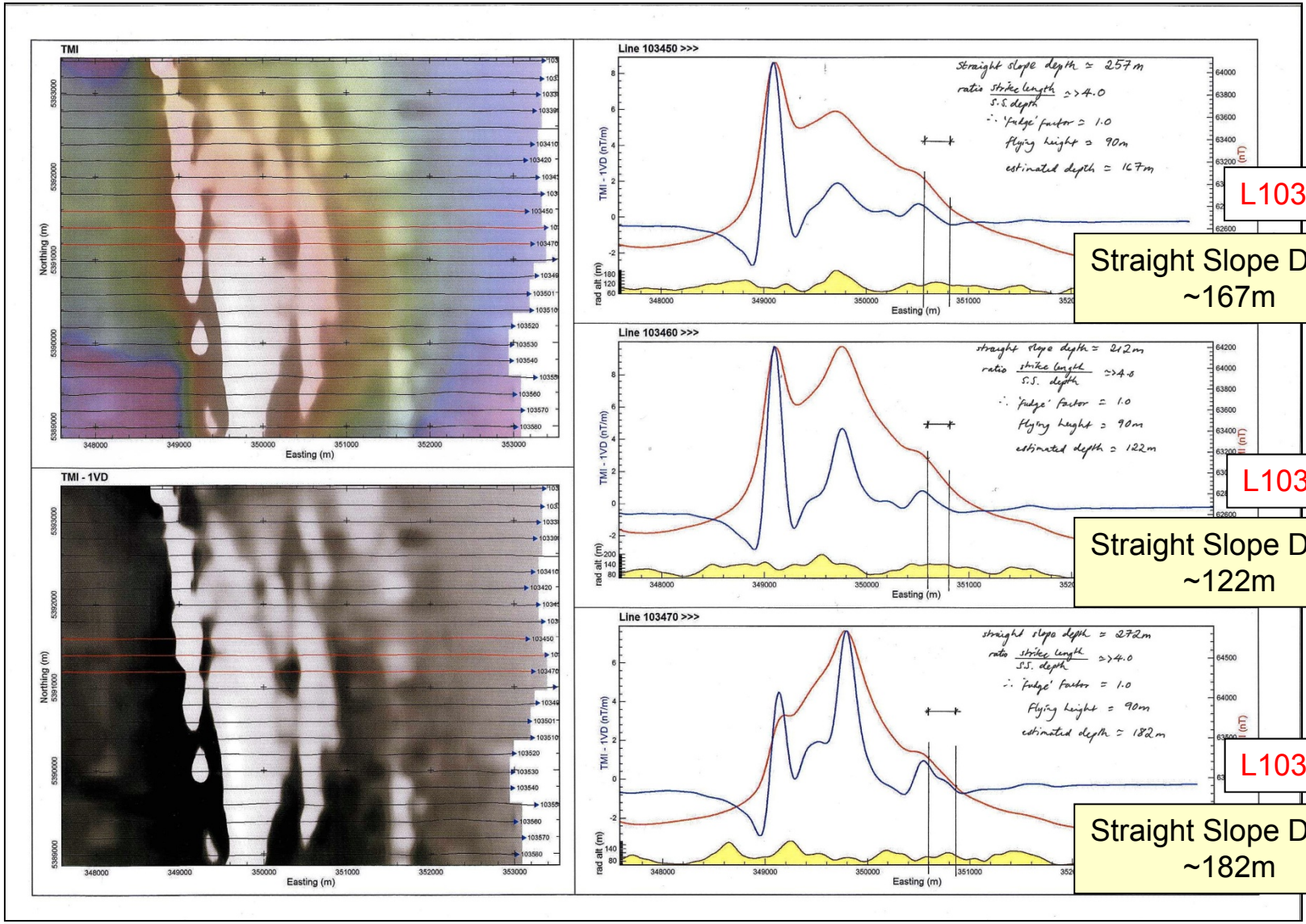
Meredith Granite Margin West Anomalies

Depth Assessment

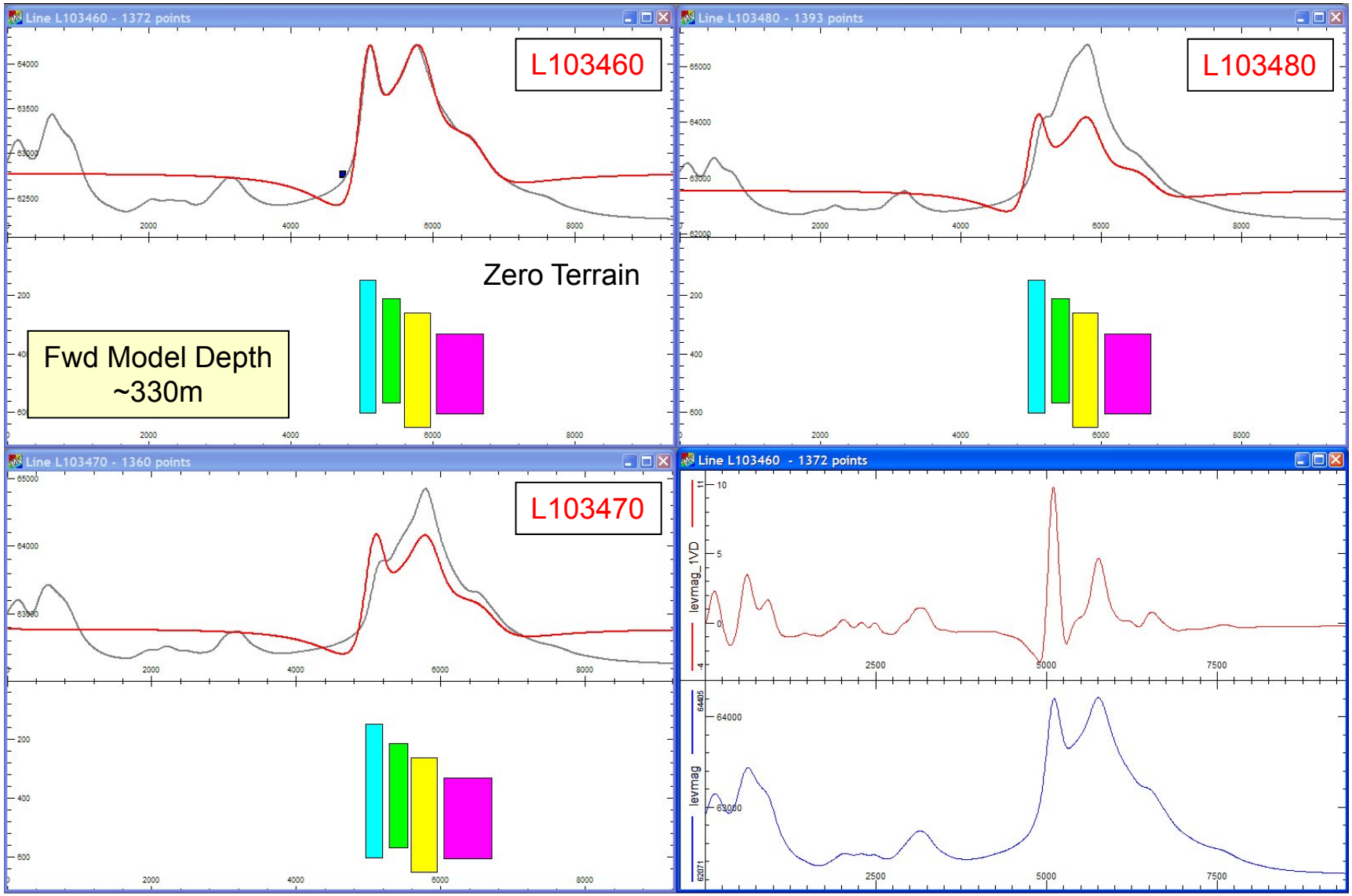
Depth Determination Techniques

- Graphical Method
  - ‘straight-slope’ method
- Forward Modelling
  - Using ModelVision
- 3-D Euler
  - Automated depth determination

Meredith Granite - West; Straight-Slope Method

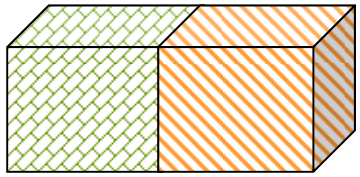


Meredith Granite – West : Forward Modelling



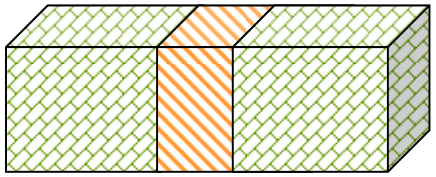
Euler Deconvolution; Structural Index – ‘Rules of Thumb’

contact



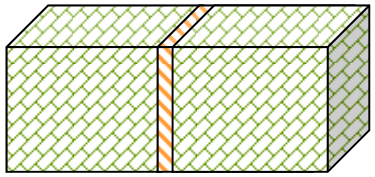
0.0

dyke



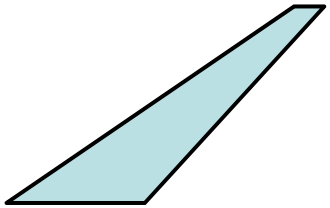
0.5

thin sheet/edge



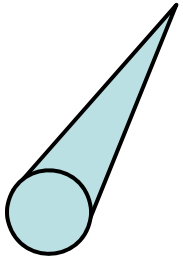
1.0

ribbon/line source



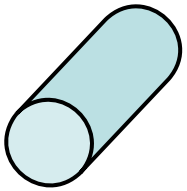
1.5

horizontal pipe



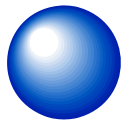
2.0

finite pipe



2.5

sphere



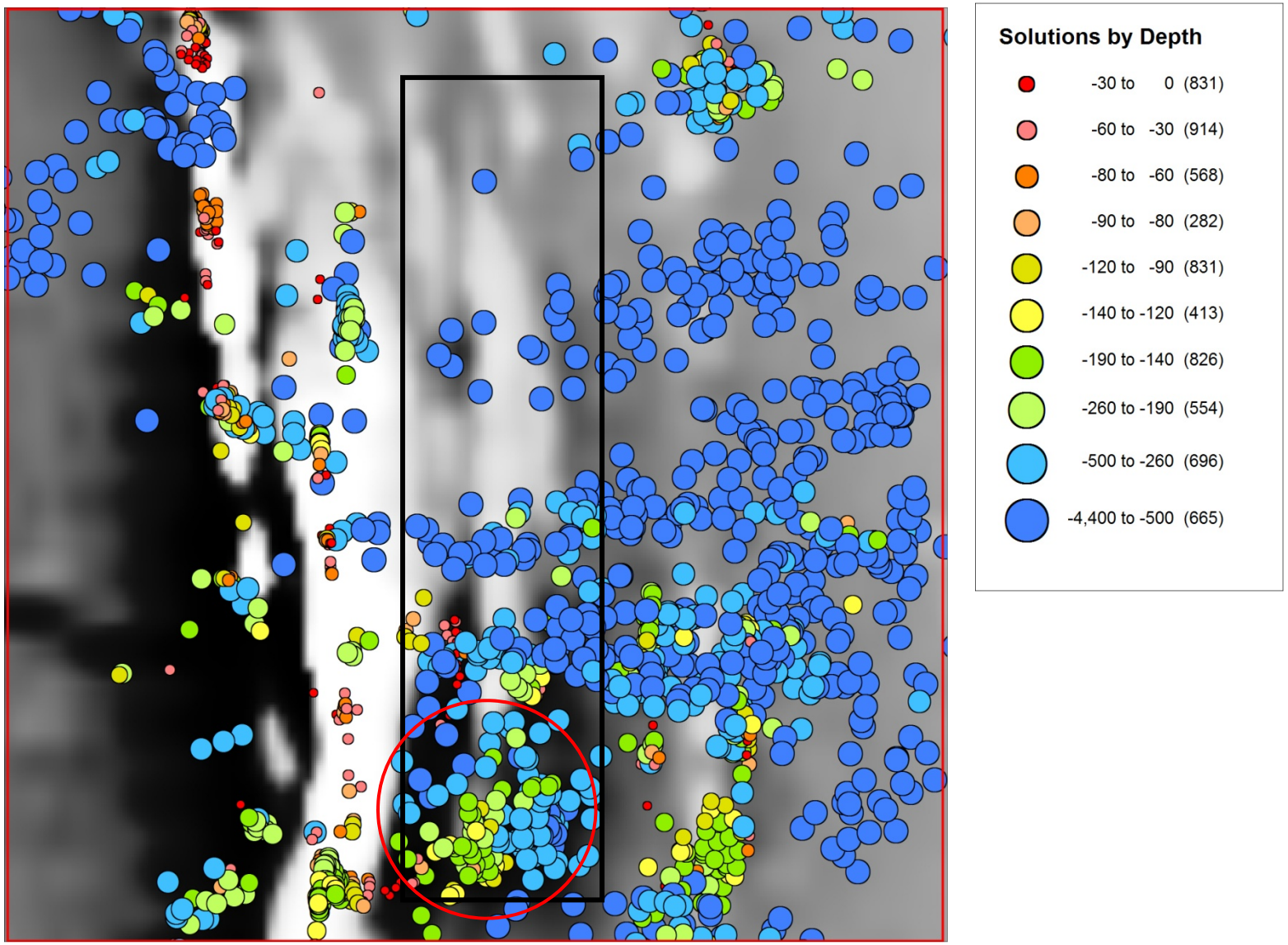
3.0

The structural index is a function of the geometry of the causative body and is defined by the decay response/power drop-off of the source

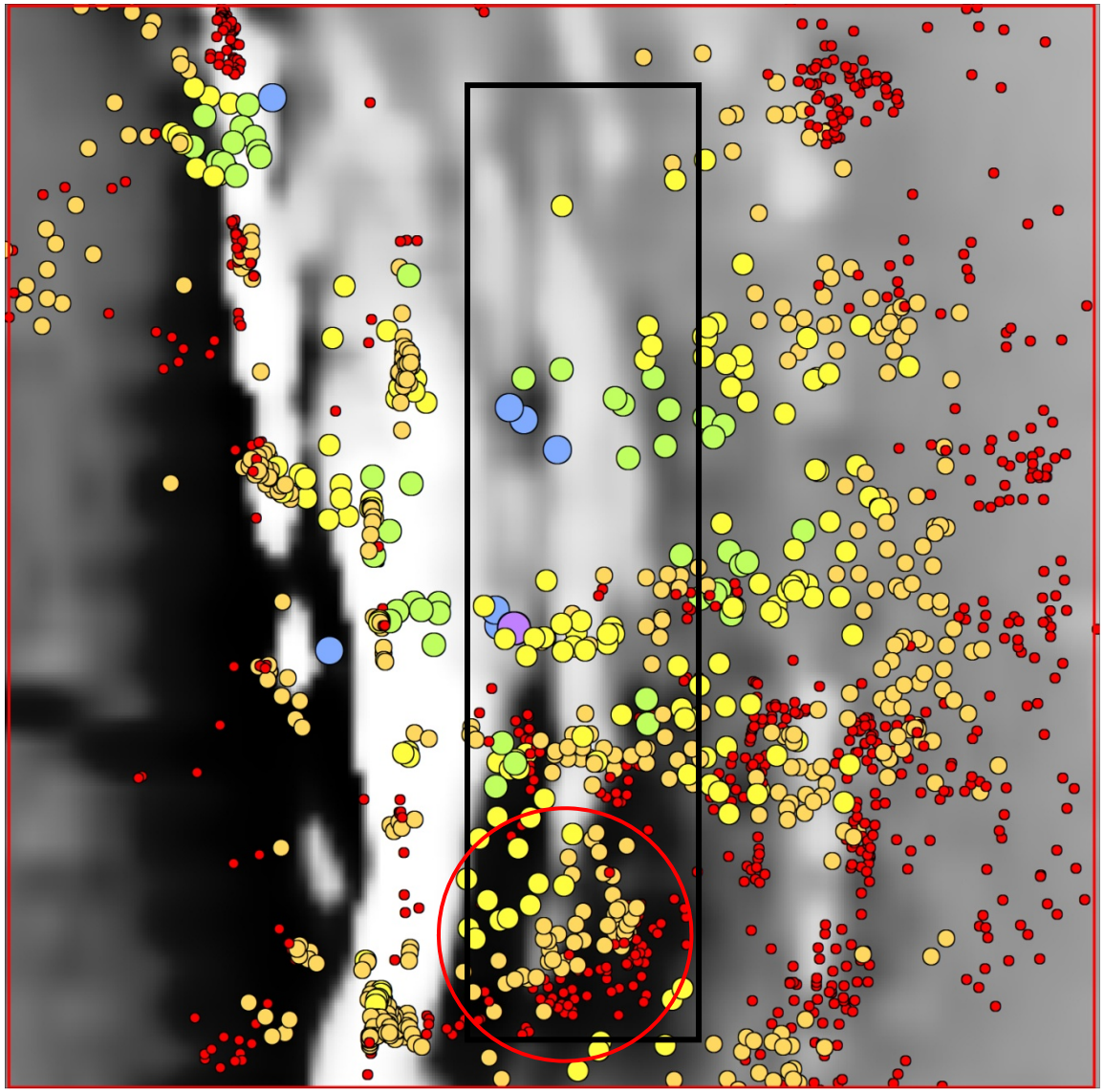
Discrimination Techniques For Solution Sorting

- Rejection of bodies with inadmissible S.I. values
- Rejection of bodies with a high S.I. error value
- Rejection of solutions where the observed dip to the causative body has an inclination that is too low eg. < 45º etc.
- Rejection of estimated depth error that is too high eg. > 50% etc.
- Analysis of clustering of solutions

Meredith Granite - West Margin: Solutions by Depth

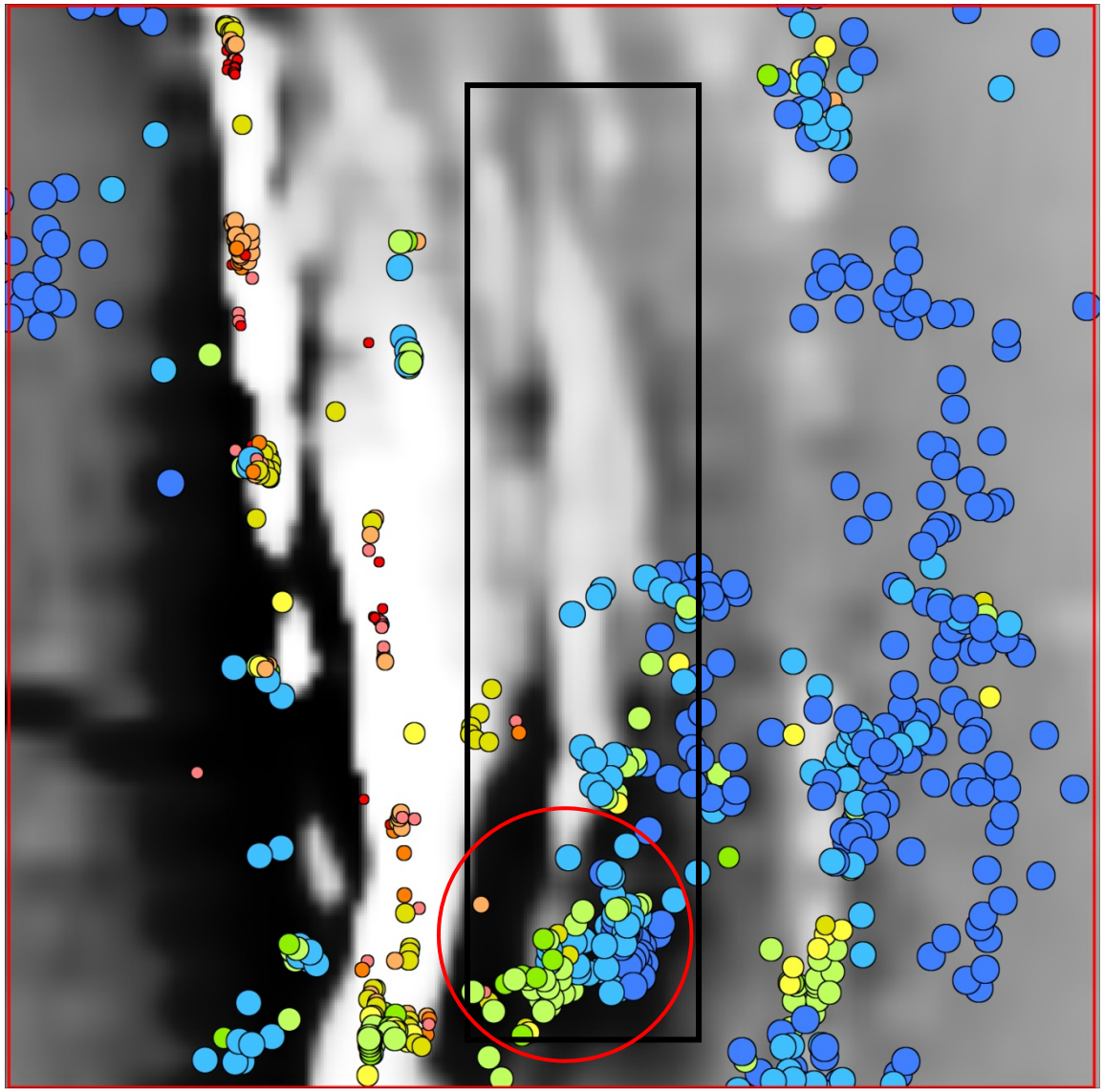


Meredith Granite - West Margin: Solutions by S.I.



S.I. values suggests a ‘dyke-like’ body

Meredith Granite - West Margin: 0.25 ≤ S.I.≤ 0.75



Estimated Depths
~210m – 420m

Summary

Technique	Meredith Granite West
Graphical	122m - 182m
Forward Modelling	~330m
3-D Euler	210m - 420m

Meredith Granite Margin West Anomalies

Depth Models

Summary

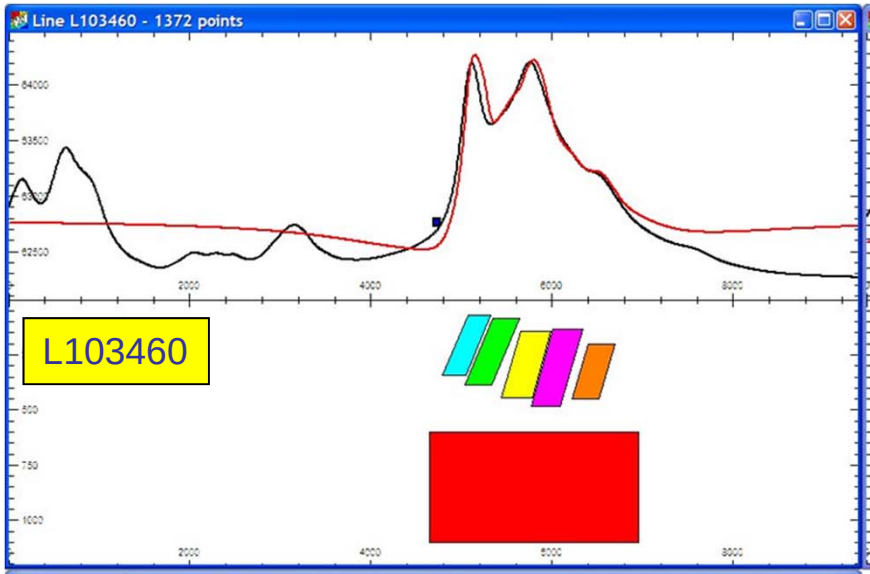
- Model consists of west dipping tabular bodies
- Bodies are east-deepening from 70m to 200m below aircraft height
  - ~90m flying height
- General increase in magnetic susceptibility from north to south
- Inclusion of underlying alteration zone provides better match of observed field with respect to longer wavelength component(s)

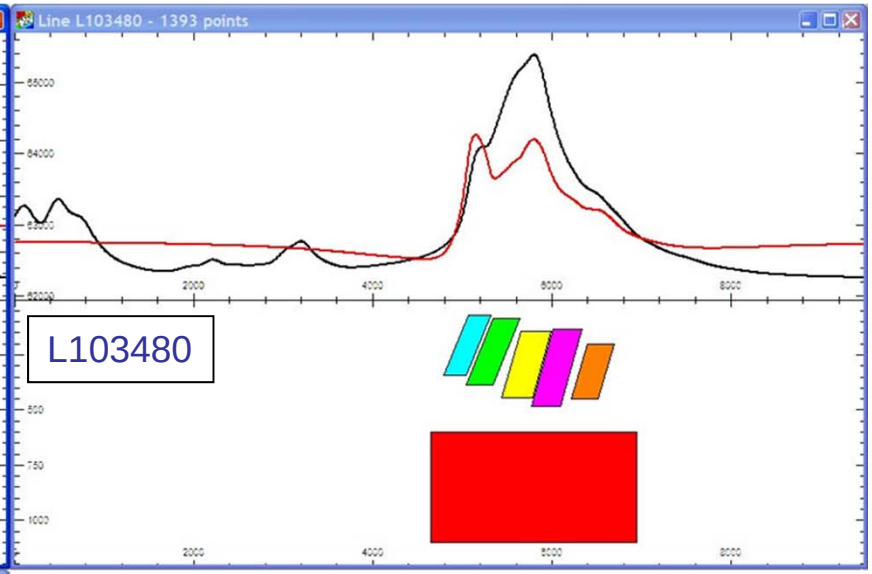
Parameters

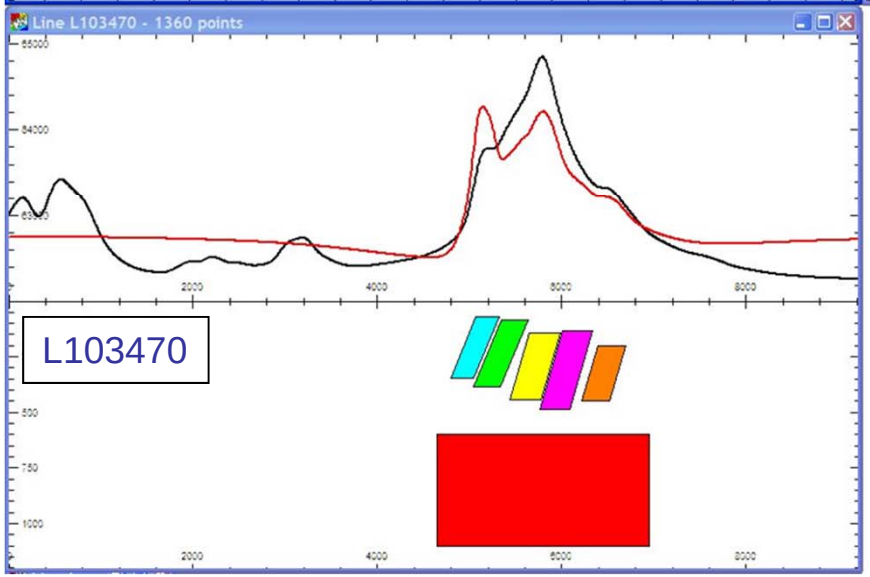
- Model with alteration zone
  - Depths to top of dipping bodies constant across all 3 lines
  - Vertical thickness of dipping bodies constant across all 3 lines

- Model with NO alteration zone
  - Depths to top of dipping bodies constant across all 3 lines
  - Vertical thickness of dipping bodies 650m except orange body = 750m across all 3 lines

Meredith Granite West - Line L103460 with alteration zone

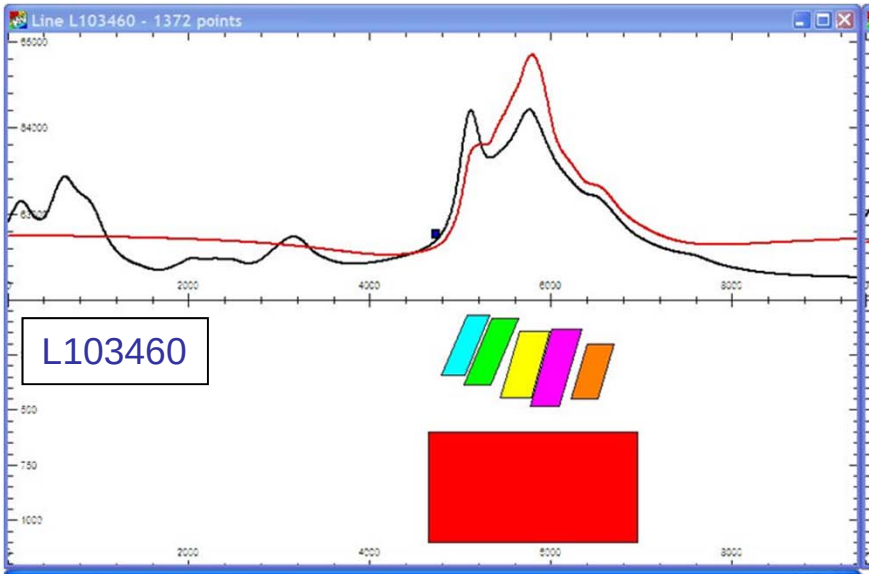


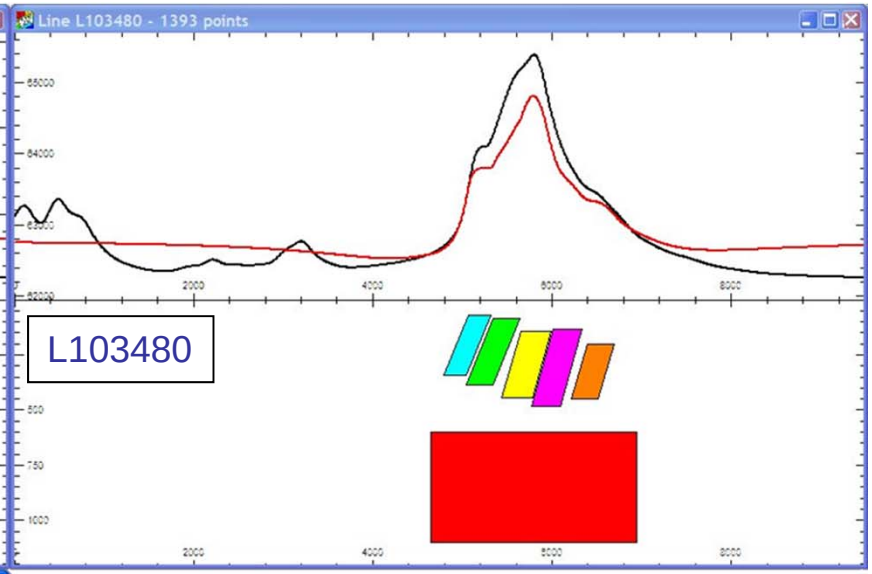


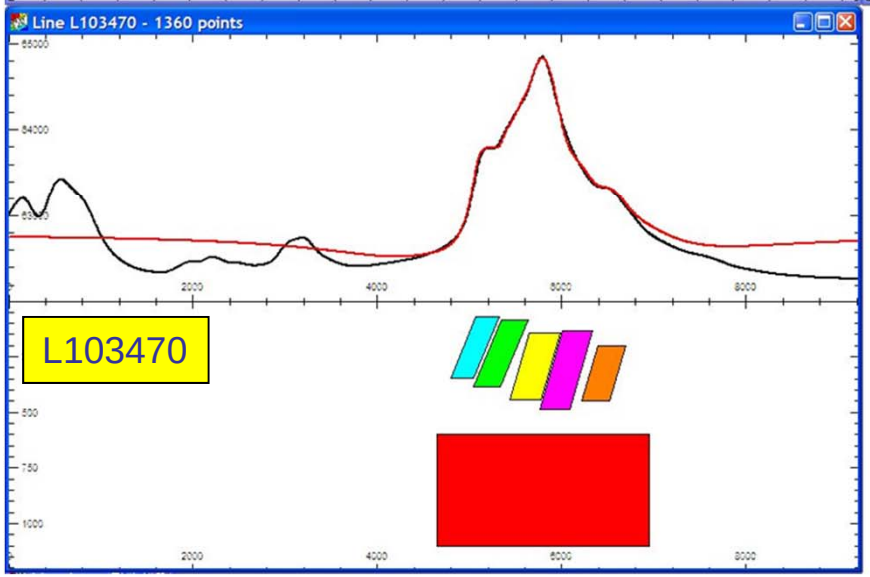


	depth to top	*k*
	70m	0.12000
	85m	0.08000
	145m	0.15000
	135m	0.05000
	200m	0.05000
	600m	0.07000

Meredith Granite West - Line L103470 with alteration zone

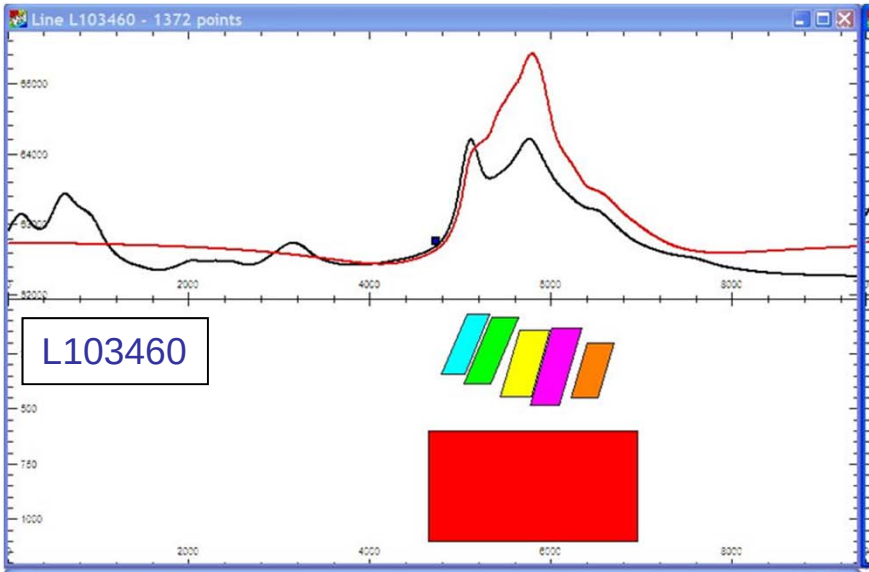


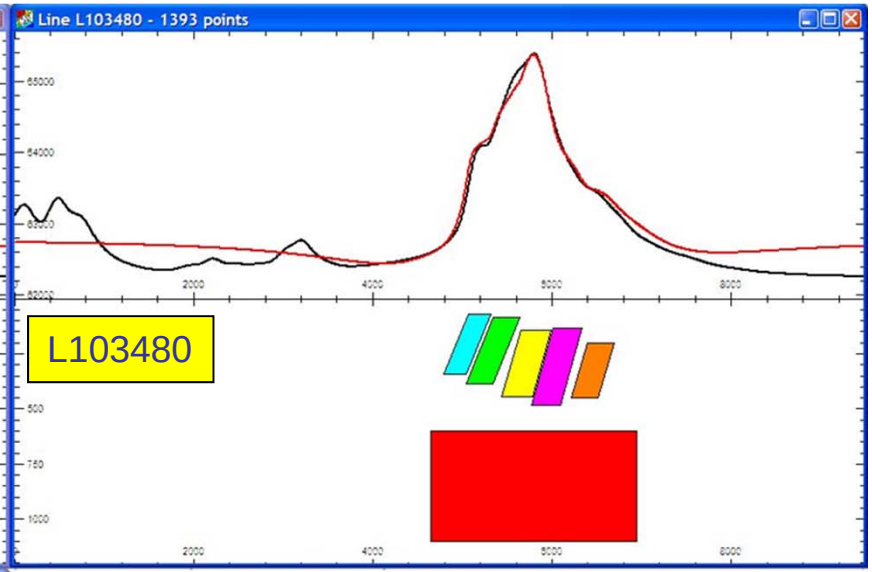


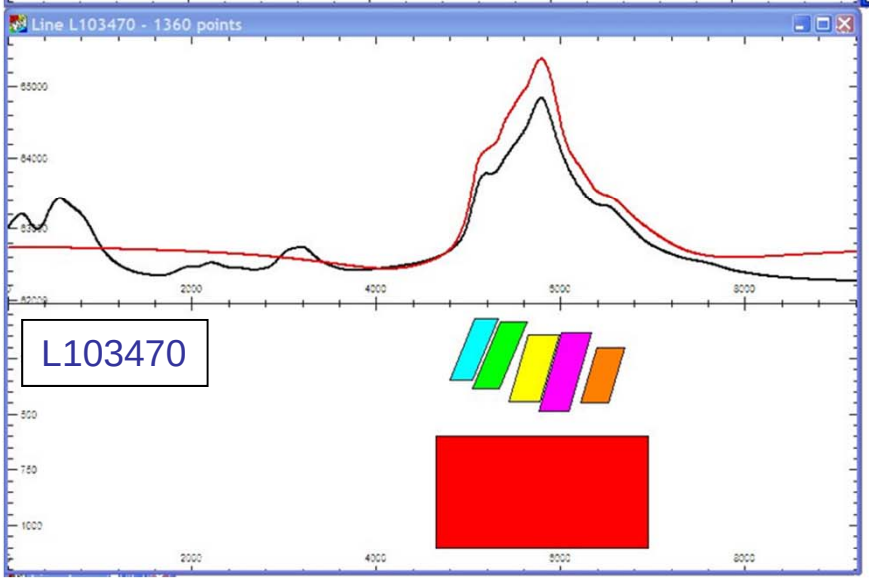


	depth to top	*k*
	70m	0.07000
	85m	0.09000
	145m	0.20000
	135m	0.06000
	200m	0.05000
	600m	0.10000

Meredith Granite West - Line L103480 with alteration zone

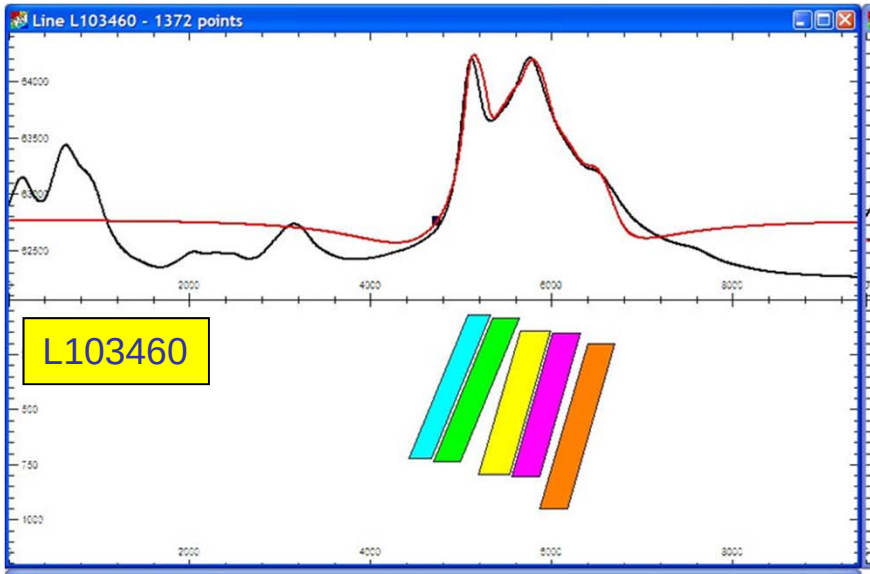


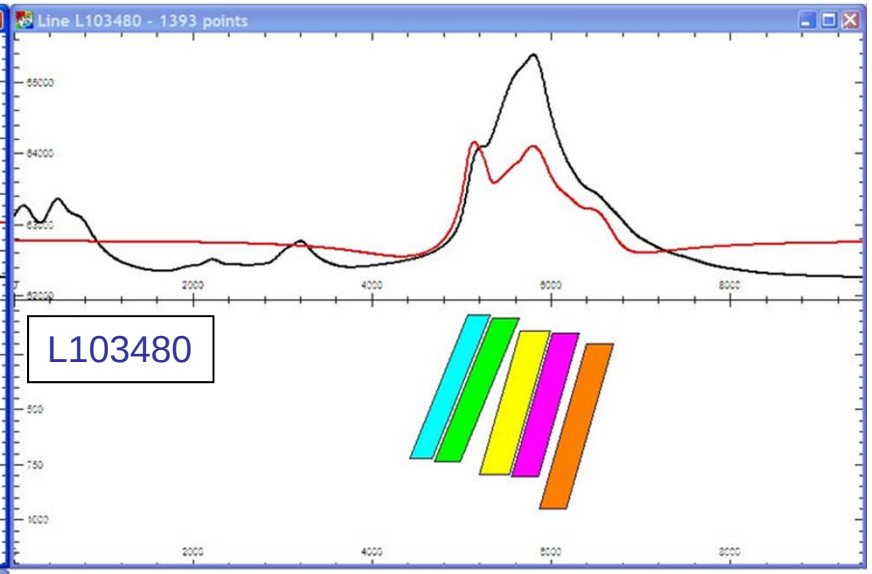


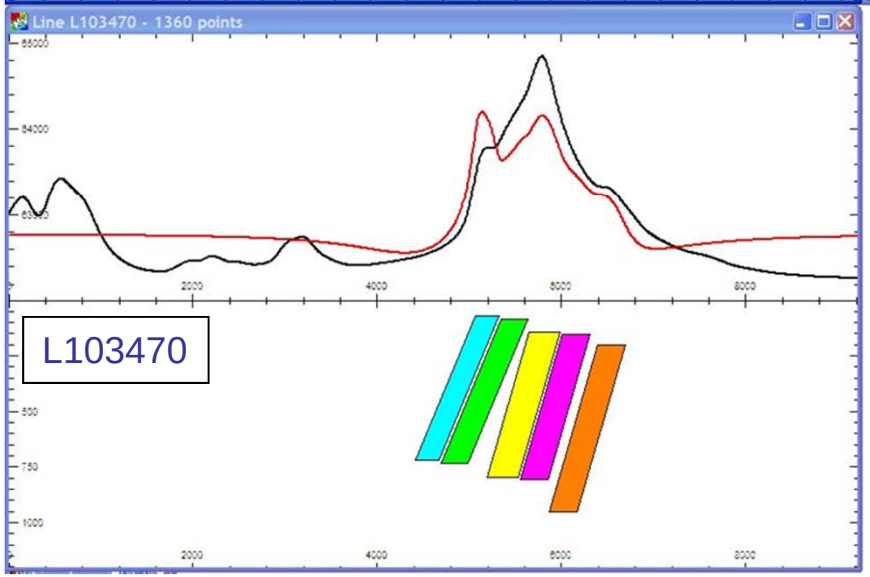


	depth to top	*k*
	70m	0.08000
	85m	0.12000
	145m	0.24000
	135m	0.07000
	200m	0.04000
	600m	0.15000

Meredith Granite West - Line L103460 NO alteration zone

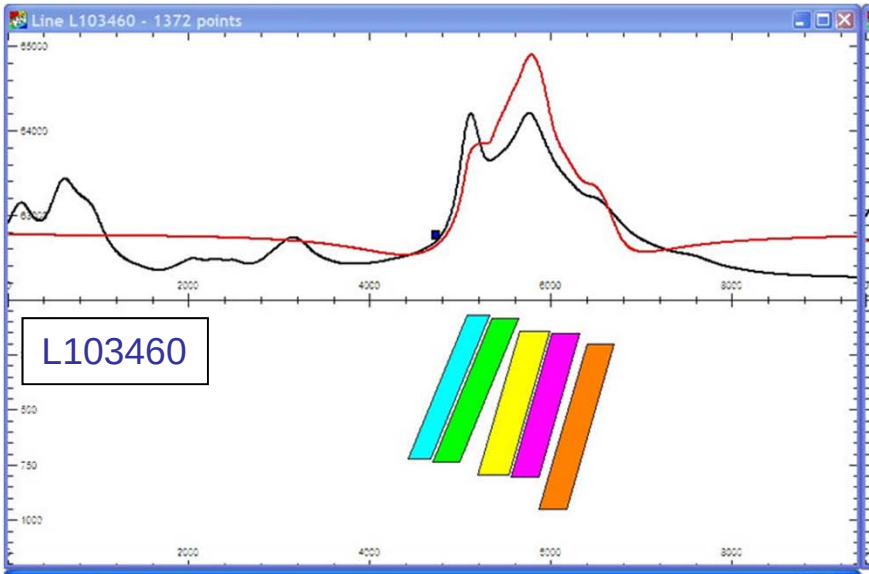


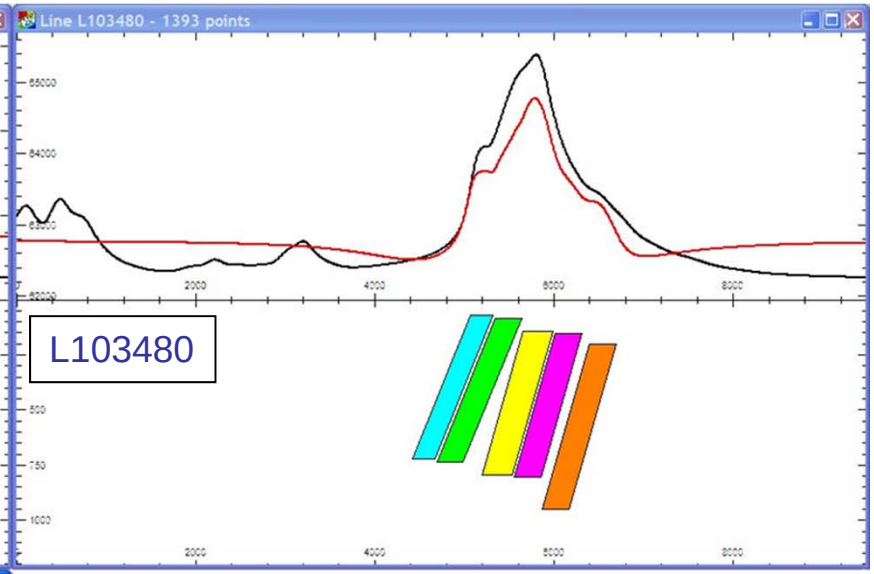


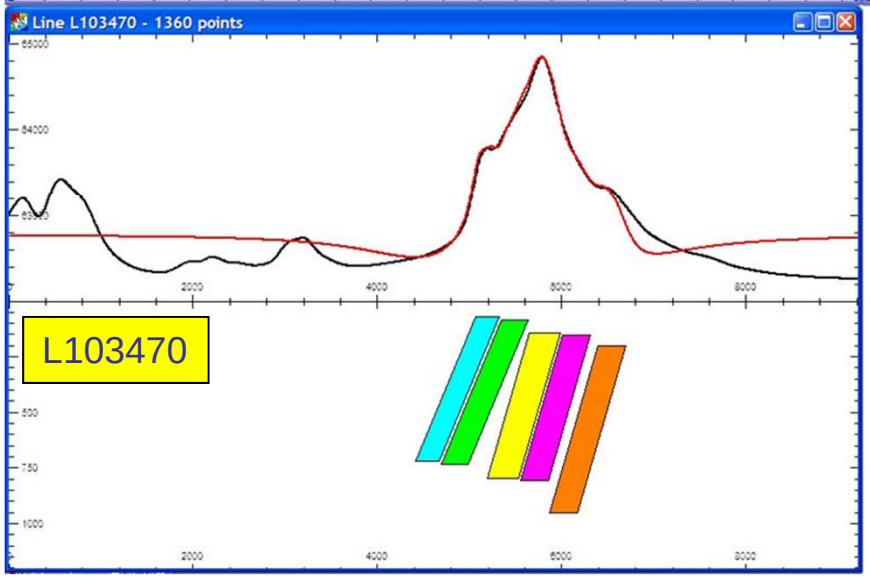


	depth to top	*k*
	70m	0.11000
	85m	0.07000
	145m	0.13500
	135m	0.07000
	200m	0.08000

Meredith Granite West - Line L103470 NO alteration zone

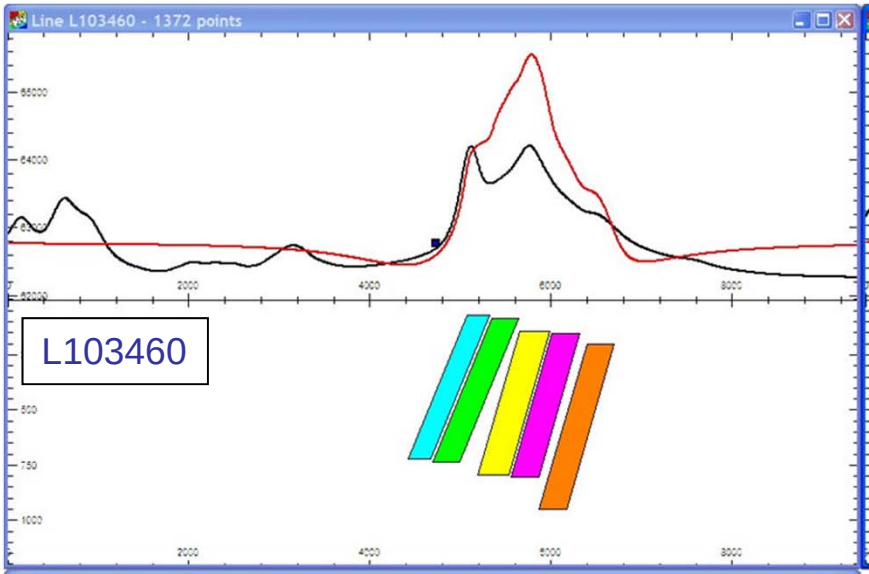


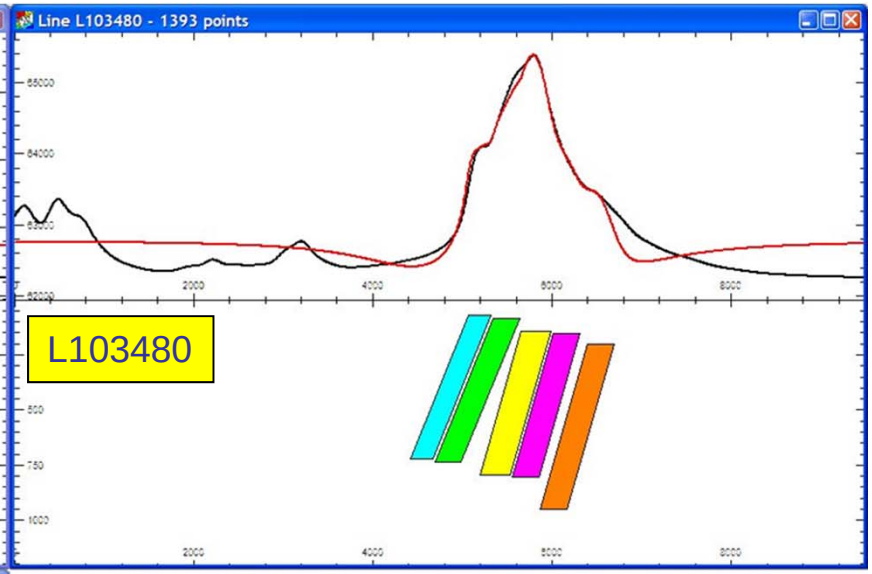


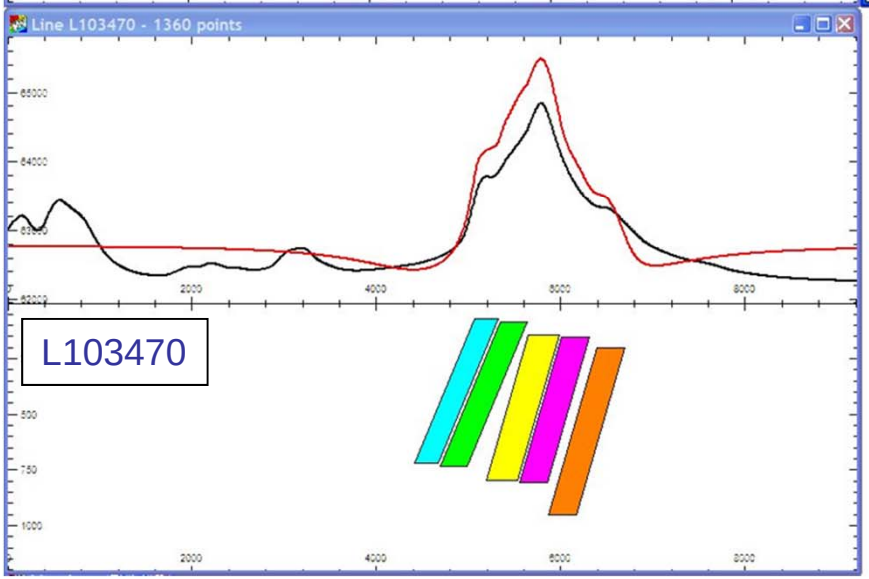


	depth to top	*k*
	70m	0.07000
	85m	0.09000
	145m	0.19500
	135m	0.00850
	200m	0.10000

Meredith Granite West - Line L103480 NO alteration zone







	depth to top	*k*
	70m	0.09000
	85m	0.13000
	145m	0.25500
	135m	0.12500
	200m	0.13000

Meredith Granite West - Changes in Susceptibility - N to S

With under-lying alteration zone

	L103460	L103470	L103480	comment
	k	*k*	*k*	
	0.12000	0.07000	0.08000	variable
	0.08000	0.09000	0.12000	increase
	0.15000	0.20000	0.24000	increase
	0.05000	0.06000	0.07000	increase
	0.05000	0.05000	0.04000	steady
	0.07000	0.10000	0.15000	increase

With NO alteration zone

	L103460	L103470	L103480	comment
	k	*k*	*k*	
	0.11000	0.07000	0.09000	variable
	0.07000	0.09000	0.13000	increase
	0.13500	0.19500	0.25500	increase
	0.07000	0.08500	0.12500	increase
	0.08000	0.10000	0.13000	increase