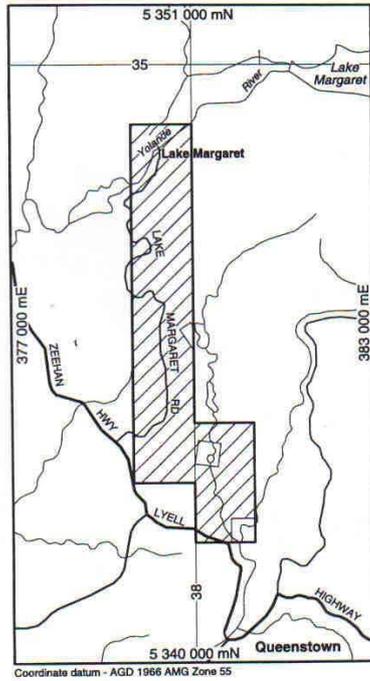


**G.WIGGINS  
EL 33/2003  
5th YEAR ANNUAL REPORT  
2009  
LAKE MARGARET ROAD**



## GOLD INDICATORS

### Alluvial

Gold has been recovered from three creeks covering the southern, middle and northern license areas.

They include McCuesick creek (weathered andesitic sediments)

Hunns siding creek (alluvial gravel)

Swan creek (alluvial gravel)

Vein gold in 1" quartz stringers has been reported from trenches alongside the Lake Margaret Road in the south license area. RGC (83)

Gold was assayed in two outcrop samples taken from the Tramway pyrite zone and reported 0.8 grams per tonne.

Gold was reported from a one metre intersection at 65 metres from Penghana 001, at 0.3 grams pt, RGC (93)

Gold was recovered from a small creek, at daws bridge on the Lake Margaret Road, a little to the west of the western license boundry in the south license area.

Poltock, RGC(84), reported fine, 80 mesh sieved, from the west Queen river suggesting it was shedding from the west bank of the river, in the southern license area.

Alluvial gold was reported from the creek between No. 2 & No.1 dam, on the eastern side of the central license area.

There are numerous, historically reported alluvial creeks, that flank both sides of the license area, as well as the north & south boundaries and there is no doubt , even though information on these creeks is relatively scarce, that many people have won alluvial gold all up and down the license area, over the last 130 years.

McCuesick creek in the south license area, is the only creek on the west coast, except for Specimen creek, that

has a reliable record of crystal gold, up to 4mm on the west coast.

## Drilling.

Three shallow, BQTK ddh's were completed, to a vertical depth of 35 metres, to test the near surface geology over an area mapped at the zone of an induced polarity anomaly. Howland Rose (76) & geochem Pb Zn anomaly RGC (81).

Drilling conditions were rough, recovery was poor and labour was hard to come by.

Time and persistence saw 8 and a half core trays of mostly competent, coarse grained meta sediments.

Two samples (fig.4&5.), sent to the S.A. museum for xray diffraction testing were both identified as Magnesiochromite.

Two samples sent to MRT for identification reported from similar representative samples as disseminated graphite.

5 cut samples from 20 to 39 metres were assayed for a wide range of minerals with only one sample showing any spike in the data, a Zn in hole 1 . Some zinc was visible in one of these samples.

Not with standing the sparse results, we learnt at least that the sediments recovered are highly probable to have been deeply buried meta sediments at one time in there long life.

They flank a mapped series of NW/SE trending black shales.

The drill site (fig.3) near Hunns siding, on the lake Margaret road was chosen for ease of access , and proximity to a geochem Pb, Zn soil anomaly and because it was centered right over the middle of the ip zone.

Howland Rose Mt Lyell 76.

To know that disseminated graphite was relatively prolific throughout the last 15 metres of each hole is to infer a deeply buried origin by weight of evidence.

Diamond drill locations

LM001,LM002,LM003 and LM004.

LM001:

BQTK bit 41mm diamond drill core 55 degrees at bearing 379508E – 5345999N in a sse direction  
Hole drilled to 42.8m  
Drill hole terminated in fine grained altered siltstone.

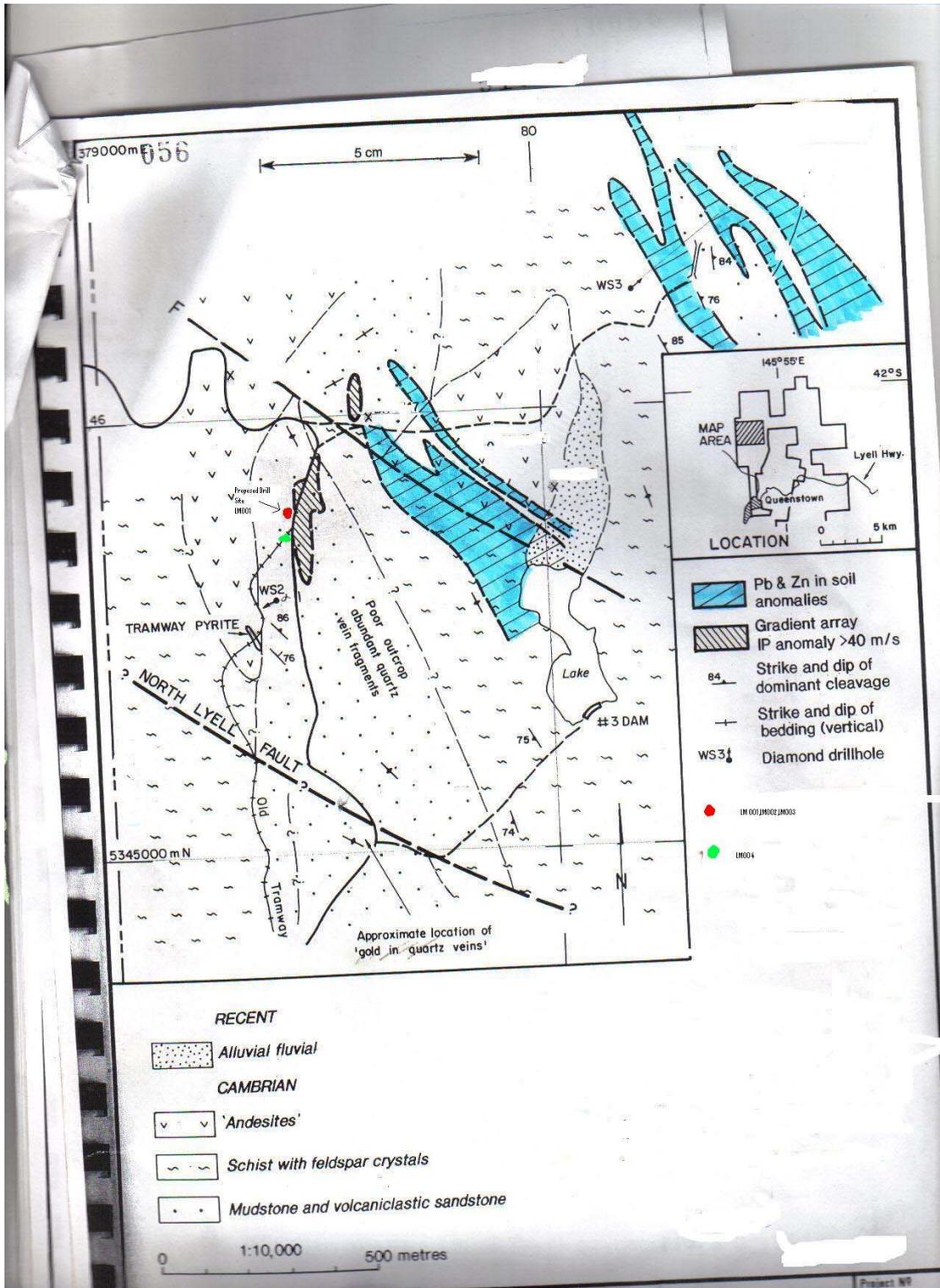
LM002:

BQTK bit 41mm diamond drill core 55 degrees at bearing 379510E- 5345996N at sse direction.  
Hole only drilled to a depth of 8m then stopped due to a change in drilling plans.

LM003:

BQTK bit 41mm diamond drill core 70 degrees at bearing 379510E-5345996N at east direction.  
Hole drilled to a depth of 38m, and then stopped due to bit failure.

LM004:BQTK 41mm diamond drill core 70 degrees at bearing 379528E – 5345955N at an east direction.



Red dot diamond drill hole LM001,LM002,Lm003  
 Green dot diamond drill hole LM004

FIG 3

MAGNESIOCHROMITE.

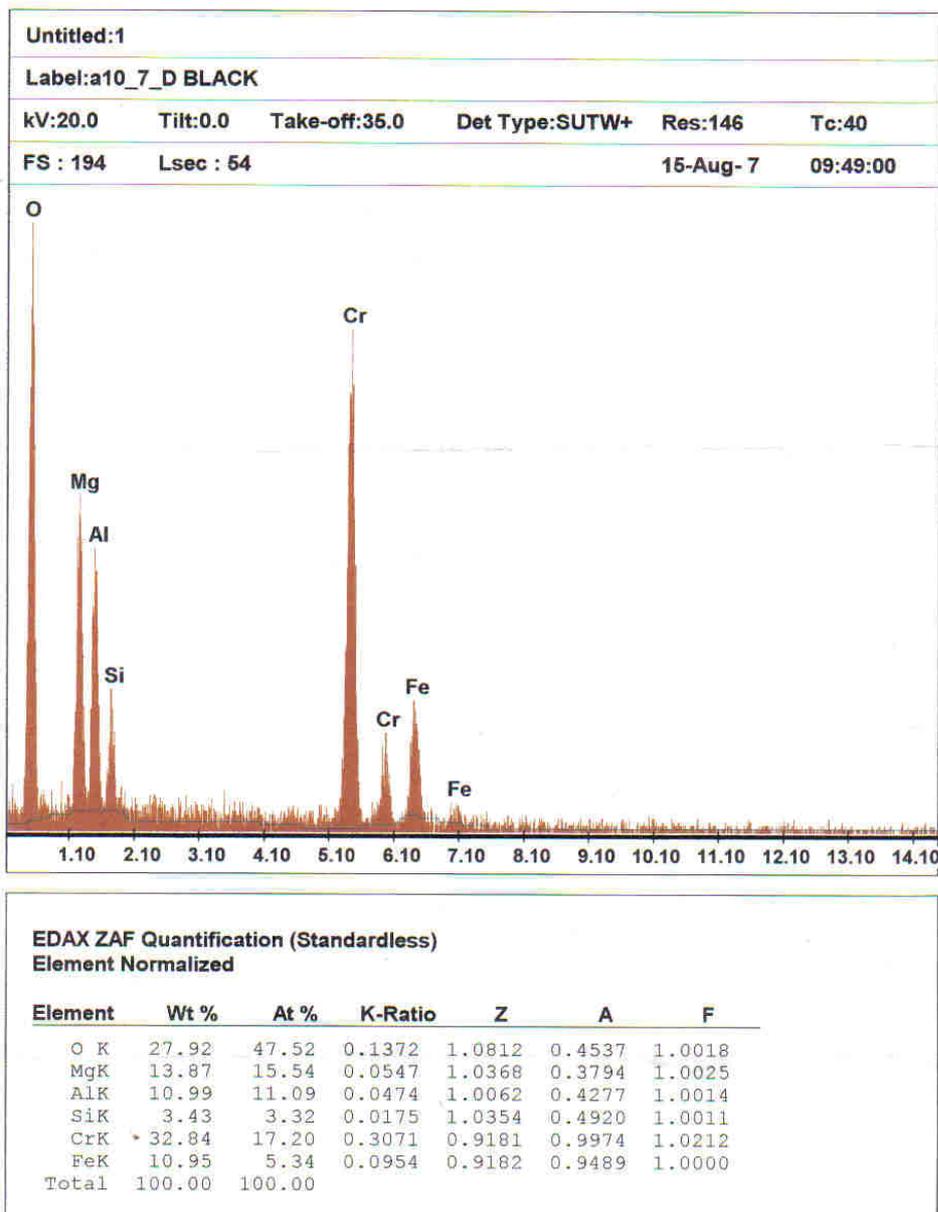
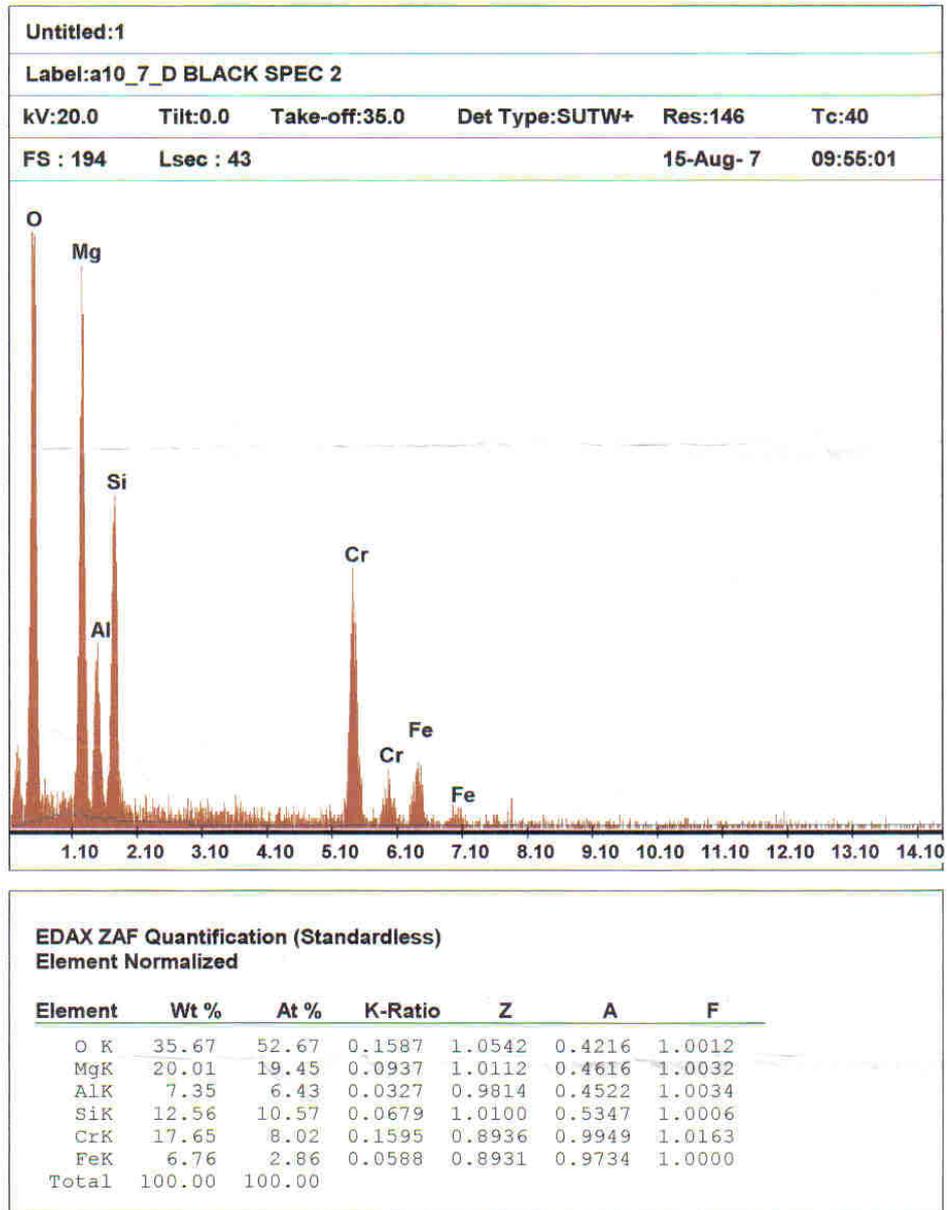


FIG 4

FIG 5



## Results for 5 core samples

Sample legend is as follows:

Sample 1 = LM001, Depth 40.5m-41.5m

Sample 2=LM001, Depth 37.5m – 38.5m

Sample 3=LM001, Depth 35.2m-36.3m

Sample 4=LM003, Depth 33m- 34.5m

Sample 5=LM004, Depth 20m-21.5m

### ANALYSIS

ELEMENTS	Au	Ag	As	Co	Cr	Cu	Fe	Mg	Ni	Pb
UNITS	ppb	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
DETECTION	1	1	10	1	5	1	0.01	20	1	5
DIGEST	FA25/	AT/	AT/	AT/	AT/	AT/	AT/	AT/	AT/	AT/
ANALYTICAL FINISH	MS	OES	OES	OES	OES	OES	OES	OES	OES	OES
SAMPLE NUMBERS										
0001 1	1	X	X	2	X	7	0.68	1730	2	X
0002 2	1	X	X	2	X	9	0.74	1627	1	5
0003 3	1	X	X	3	X	26*	1.05*	2510*	2	X
0004 4	2	X	X	3	X	9	1.17	2340	1	X
0005 5	2	X	X	4	X	7	0.99	1019	4	X

#### CHECKS

0001 1	1	X	X	2	X	6	0.65	1688	2	X
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#### STANDARDS

0001 AMIS0034	410									
0002 AMIS0045		X	108	23	285	133	2.43	2572	56	169

#### BLANKS

0001 Control Blank	1	X	X	X	X	X	X	X	X	X
0002 Control Blank		X	X	X	X	X	X	X	X	X
0003 Acid Blank		X	X	X	X	X	X	X	X	X



**ANALYSIS**

ELEMENTS	Pd	Pt	S	Zn
UNITS	ppb	ppb	ppm	ppm
DETECTION	1	1	50	1
DIGEST	FA25/	FA25/	AT/	AT/
ANALYTICAL FINISH	MS	MS	OES	OES
SAMPLE NUMBERS				
0001 1	X	X	1370	38
0002 2	X	X	1120	26
0003 3	X	X	3176*	1428*
0004 4	X	X	1785	42
0005 5	X	X	1249	78
CHECKS				
0001 1	X	X	1359	37
STANDARDS				
0001 AMIS0034	1648	3547		
0002 AMIS0045			2850	250
BLANKS				
0001 Control Blank	X	X	X	X
0002 Control Blank			X	X
0003 Acid Blank			X	X



## EXPLORATION MODEL

Throughout the duration of the license period it became clear , given the many decades of consistent failure by previous corporate entity's that retained the Lake Margaret Road license area, that new ideas were needed to achieve exploration success.

This understanding led to the development of a new exploration model for the Mt Lyell region designed to take advantage of the research into deeply buried meta sediments and komatii basalts by Tasmanian geologists Mcphie, Crawford and others over the last ten years, throughout the MRV.

This new exploration model harnesses the very wide array of geophysical techniques that are now available, which apply to the Lake Margaret license and employs the geophysical basement guidelines outlined by Tasmanian geophysicist, Dr David Leaman, in his Cambrian keys, Tasmanian tectonic overview . Leaman (92).

This model follows two fundamental exploration premises, it starts from the basement up by fully comprehending that explorer's will never find anything unless they know what they are looking for.

We are looking for West Lyell type cu,Au meta sediments.

Thick layers of once , deeply buried altered sediments derived from volcanic ejectamenta deposited in a sub aqueous ocean floor environment.

It is true to say that the West Lyell mine region, three kilometers south east of the middle zone of the Lake Margaret license , has been traversed over by some of

the worlds finest geoiical minds, and the evolution of the non magnetic, altered sediments has been discussed widely among them.

The opinions are many and varied.

No explorer to date, has found another outcropping or sub outcropping, similar altered volcanoclastic Cu,Au sediments, in the entire MRV complex to date, even though the MRV between Lake Margaret and Rosebery has had hundreds of kilometers of cut exploration grids completed over the last fifty years. Hundreds of serious geophysical surveys carried out over it.and a hundred or more kilometers of diamond drill holes.

The 8 square kilometer Lake Margaret license has only had 4 relatively shallow ddh's over it and probably fifty kilometers of cut grids, over forty years of regular campaign exploration.

Several induced polarity anomalies were identified although none were drilled.

Good stepout mapping was carried out over much of the area& several radio carbon datings were acquired along the way.

All of this regional information collected led to only three diamond drill holes that tested the Tramway pyrite zone and a series of geochem Pb zinc spike anomalies.

The Tramway pyrite zone is a patch of auriferous massive pyrite outcrop, approx three metres wide that occurs in a cutting of the old Lake Mragaret tramway, in the middle zone of the license area. Grab samples assayed 0.8 grams per tonne RGC(81).

Two holes drilled to test the pyrite at depth failed to intersect significant alteration and ended in andesitic intrusives associated with the Crown hill andesites , which were dated to 487 million years.

The geochem hole found no significant alteration and no further drilling was carried out over the area until 1993 when a hole was committed to test a magnetic bulls eye anomaly target, A 1metre intersection of 1.7% copper was identified at 60metres but no further drilling was ever carried out.

The most significant contribution to the understanding of the geology of the area has been the identification of four lamprophyre outcrops that occur in the Crown Hill zone. Corbet (86).

Two very similar lamprophyre units also outcrop 750 metres N/W of the West Lyell open cut, approximately two and a half kilometers southeast of Crown hill.

All of these above lamprophyres units trend NW/SE and take a uniformly thin, tabular, steeply dipping habit.

They are consistently fine grained crystalline , indicating a fast spreading and quick cooling, extrusive event over a very wide relatively flat area, sub aqueous certainly and quite possibly, a caldera environment.

The key to understanding the evolution and emplacement style of the lamprophyres , is to know that little or no serious research has ever been carried out on them because they have never been clearly associated with the emplacement of MRV meta sediments, e.g West Lyell.

It can now be shown that the long ignored lamprophyre , originally identified in the footwall schist of the Princ Lyell mine in the 30 series footwall decline in the early 1980's has the same thin, uniform, steeply dipping NW/SE strike and is now known to have a clear association with the mineralized graphitic black shales that comprises the B panel zone of the 1440+1415 production levels, fully six hundred metres deeper.

This little understood lamprophyre has never been dated and can be traced over 500 metre strike, 700, metres vertically and is still open all ends.

It is truncated along its length and appears to have a slight south dip and is uniformly thin , 800mm to 1.5metres wide.

At depth , this lamprophyre can now be shown to be clearly related/associated with the development of well mineralized graphitic metasediments, including VHS and carbonaceous black shales.

It is also clearly associated with several recently identified east west trending fault structures that are present in the economic ore zone and which intersect or cut through the lamprophyre indicating , it would seem several periods of tectonic uplift and associated deformation long after its emplacement.

Given the open end , strike and vertical depth of this unit, it is not hard to conclude that it is connected to the two nearby NW/SE trending surface lamprophyre outcrops. Due to lack of research and dating of any of the known lamprophyres, it is not clear if the lamprophyres were emplaced pre, post or concurrent with the main Mt Lyell mineralizing event.

What is known is that the underground exposure clearly traverses through long sections of once deeply buried mineralized meta sediments, then disappears for two and a half kilometers before reappearing , with similar strike trend and thin habit, over the Crown Hill zone on the Lake Margaret license area, in four close spaced outcrops over a kilometer N/W/SE.

Although the two lamprophyre zones are separated by a gap of two and a half kilometers , they all have similar strikes and thin tabular habit, it is not known if they are

or were once connected in a sub surface continuum , because drilling in this area is non existent.

They are all associated with nearby andesites , mapped shale units, Yolande sediments and regional anomalous mineralization, either alluvial gold, or geochem soil anomalies or disseminated sub surface sulphides.

They flank the eastside of the N/W-SE trending Owen Lyell fault which commences at the West Lyell open cut and continues to the Crown Hill zone, ending at the Yolande river.

There are other compelling reasons that when they are considered together, dispel the orthodox notion that the lamprophyres were vertically emplaced , sill like or fissure vein type igneous units that post date the main Cambrian mineralizing event. All of the mapped surface outcrops are associated with clusters of weak magnetic lows and gravity lows, indicating , high levels of sodium in the rock mass and less dense sediments.

Gravity worm geophysical surveys carried out over the lamprophyres as well as magnetic and gravity line profile surveys Leaman(2001), indicate a shallow basement 1000 to 2000 metres deep, with both lamprophyre cluster zones overlaying shallow basement gravity line profile granite basement spikes.

It is on the shoulders of these granite basement spikes that the deeply buried meta sediments can be geophysically identified.

Careful analysis of the 1 in 250000 Tasmania gravity map suggests that every major Tasmanian VHMS deposit so far identified has a similar geophysical basement profile underneath it. The shallower the basement , the better.

It is the granite basement that covers most of western Tasmania that controls the evolution of the present day surface and nearer the surface the basement is , then there will be numerous geomorphological indicators providing evidence of its shallow presence.

All of the higher elevation regional peaks are associated with these shallow granite batholiths, their affect on the landscape is perpetual. A huge amount of granite related research has already been accumulated over the last forty years by Tasmanian geoscientists but little , if any, on the lamprophyres.

Understanding the role of the lamprophyres , as a vector for identifying VHS targets is the key to locating the upturned meta sediments. The model proposed suggests that the lamprophyre units were displaced horizontally over a latterly wide, relatively flat sea floor , or shallow lacustrine environment , quite possibly a wide caldera environment , contained within a series of ancient calderas operating throughout the entire region. They were relatively quick flowing, quite fluid and quick drying extrusive events, that spread out and covered kilometers of flat lying sea floor and were later buried by layers of volcanic ash and schist. They appear, in a sense, to be a structural cut off zone of the Cambrian mineralizing event as not a lot of mineral development occurs in the footwall schists of the Prince Lyell mine. They occur , at least at Prince Lyell, mainly so far in weakly sulphidic granitic footwall schists.

It is the graphite nature of the volcanic schist that comprises the entire Mt Lyell sedimentary complex that allows for their identification overlying shallow basement, utilizing gravity image, line profile

interpretations as modeled throughout the Lake Margaret by MRT geoscientists and others over many years.

MRV outcrops such as found at the West Lyell open cut, one of Australia's few 100 tonne gold deposits, are found few and far between on the west coast of Tasmania, which is not surprising since they are 500 million + years old, easy weathering, volcanoclastic sediments that were once deeply buried.

It is the volume and weight of the volcanoclastic sediments that causes them to compress and carbon to form as a result of heat and pressure.

The carbon/graphite sediments have a replicated density value, not easily discernible, and that is repeated in many areas, of the west coast landscape and which can also be shown to be associated with mapped extrusive andesites as well as the subtle magnetic lows that occur over the Prince Lyell, Western Tharsis, Cape Horn, North Lyell, Iron Blow geology and Crown Hill lamprophyre zone.

Careful, magnetic analysis of the field intensity properties that are found over the west coast suggest that thousands of these magnetic lows are identifiable, and that virtually all of them are associated with regional sediments enclosed by unresponsive, resistive volumes of magnetically difficult material to interpret.

Many of these lows occur over mapped Gordon Limestones or Miners Ridge type sandstone, or shale units and are inevitably associated with magnetically resistive sediments, anomalous regional mineralization and gravity lows.

The magnetic lows simply indicate a magnetically resistive mass of ground that was once part of an ancient sea floor. The gravity lows that the mag lows are hosted by, can be interpreted as probable upturned meta

sediments. They cover wide areas of the west coast and in the Crown Hill zone they occupy parallel NW/SE trending sedimentary zones separated by North to N/W trending moderately magnetic andesite/hornblende Cambrian extrusives, approximately 100 meters wide. All the andesitics in the Lake Margaret area appear to dip steeply s/west, as does a similar andesitic intrusive unit encountered at the 300 meter mark of the Prince Lyell Mine north east vent rise its hardness causing sever problems for the raise bore.

It is these Cambrian andesitics that this raise bore encountered that the nearby lamprophyre unit is most likely directly related to, i.e. the lamprophyres are Cambrian events as opposed to Devonian.

To wrap this all up, it is worthwhile to consider the new basement model, in brief, so as to give future explorers an understanding of the evolution of the geology and geomorphology of the MRV.

This model uses nothing more than the physical evidence remaining after 500+ million years of landscape evolution and the geophysical interpretations now allowed by the recognition that regional lamprophyre units were expressed horizontally over wide flat sea floor environments, hosting black smoker vent systems that had been operating for many thousands of years. It is likely that the lamprophyre unit was a late Cambrian event as opposed to an unrelated Devonian vertically emplaced fissure vein type event, or sill body. It is also likelt that all the regional outcropping units were a continuous connected body when first laid down and have since been vertically challenged by several tectonic deformation events and displaced along a truncated NW/SE strike.

The physical underground exposures of the Prince Lyell lamprophyre as well as the newly recognized east west fault structures throughout the Prince Lyell orebody that all terminate at the boundary of the lamprophyre suggest that the Prince Lyell volcanics metasediments were emplaced horizontally over a long period.

The Prince Lyell mineralized schists are up to 300 meters long by 200 wide at depth. They are associated with Gordon limestones, black shale units, MRV pyroclastics, Pioneer Bed units and weathers andesitic intrusives.

The Prince Lyell lamprophyre acts as weak point where rock bursts induced by mining related ground stresses are common along its route through mineralized graphitic schists and black shales. It defines a final extrusive event that enveloped the sea bed ore zone, most likely around 487 million years ago when the nearby Crown Hill andesites were emplaced.

In a geological sense it acts as a shut off event between Cambrian mineralizing events and also acts as a tectonic structurally active spine throughout the entire Mt Lyell MRV pyroclastic unit complex.

It has been severely dislocated, truncated, deformed and displaced by periods of much later orogeny and tectonism due to expansion related causes.

It serves as both a surface and underground expression of an ancient igneous extrusive event that tells of a time and a geographical area, where mineralization occurred and when it did not.

It is a geological indicator worthy of study.



