# MAIDEN MEADOWS PASTORAL PTY.LTD

ABN
56 062 087 316

## EXPLORATION LICENCE 34/01 – CYGNET

## THIRD ANNUAL EXPLORATION REPORT FOR THE YEAR ENDED 25 OCTOBER 2004

## VOLUME 1 OF 2

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# SUMMARY

The work programme in EL 34/2001 has focussed exclusively on the Langdon's Hill project. The objective has been to prove up a low grade/ bulk tonnage Au deposit or a smaller, high grade, structurally controlled deposit. On the basis of structural control and magnetics, the genetic model proposed for Langdon's Hill is an Au-Cu-Mo deposit either within a major NW trending fault zone, at the intersection of lineaments or in altered sediments adjacent to those structures.

A two-staged work programme was undertaken, utilising soil and rock geochemistry and float mapping in the first instance, followed by an induced polarisation survey.

The Au results obtained are erratically distributed and contouring of values was not possible. However, when the distribution of Au is overlain with the magnetics, a clear spatial relationship exists. Five gold values, greater than 50ppb, are located on the immediate perimeter of a feature termed the 'Linear' magnetic anomaly, in a peripheral zone of low magnetics.

In an absolute sense the base metal values obtained are disappointing in comparison to other prospects and other genetic models. However in a relative sense, there is a marked, significant and spatial relationship between the highest base metal values and magnetic character of the underlying rocks. The highest Cu, Pb and Zn values recorded occur as a well defined cluster within and immediately adjacent to a feature termed the 'Bullseye' magnetic anomaly.

The average crustal abundance for Mo in granites is 1.3 to2ppm; in shales 2 to 2.6ppm and in soils 2.5 to 4ppm. The results obtained indicate a substantial deviation from the norm for the lithotypes mapped at Langdon's Hill. 7% of all soil samples returned Mo values in the range of 10 to 139ppm. On the periphery of the western edge of the 'Linear' magnetic feature, Mo anomalism was recorded over a continuous distance of 125m with values in the range of 23 – 39ppm. The distribution of Cu also mimics this sediment-intrusive contact.

The Induced polarisation survey identified thru gradient and dipole-dipole arrays, two significant chargeability trends, which warrant drill testing:

Trend A striking in a N.W., direction presents as a linear feature in excess of 400m long. A coincident resistivity high and magnetic low indicates possible disseminated sulphides and alteration. Arsenic anomalism flanks both sides of this trend and at its NW terminus.
Trend B also striking in a NW direction is a gradient and dipole chargeability and a dipole resistivity anomaly that parallels the 'Linear' magnetic feature referred to above.

An interpreted geophysical section indicates that the pyrite and associated alteration occurs on the contact between the syenite and the overlying sediments in a roof pendant relationship. A burial thickness of 80m is inferred.

Two diamond drill holes, totalling 350m, are recommended.

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## 1. INTRODUCTION

Maiden Meadows Pastoral Pty Ltd holds the Cygnet property, in Southern Tasmania, as EL 34/2001.

The 47km$^2$ property is located 50 kilometres south of the state capital Hobart and centred upon the rural town of Cygnet.

Permo-Carboniferous sedimentary rocks of the Parmeener supergroup that have been folded into a dome structure underlie the exploration licence. This sequence has been intruded by an extensive system of Jurassic dolerite dykes and sills. The gold mineralisation at Cygnet is genetically related to a Cretaceous alkaline igneous complex that has intruded the entire sequence.

This Third Annual Report summarises the results of exploration work completed on Exploration Licence 34/2001 – Cygnet – during the year to 25$^{th}$ October 2004.

For each year since the granting of EL 34/2001, the fieldwork component of the exploration programme has focussed entirely on the Langdon's Hill prospect, to the exclusion of the balance of the lease. Anomalous areas exist within the remainder of the E.L. that require follow up investigations. (See Vanzino June 2002)

## 2. REVIEW OF PREVIOUS WORK

On the basis of the geological, geochemical and geophysical evidence at Langdon's Hill, the author proposed a multiphase, staged exploration programme. Phase 1 of this programme, with a budget of 62K, commenced in November 2002 with the MRT approval process, community and landowner liaison, the generation of digital topographic resources and the sourcing of contractors and consultants. As an adjunct to this work Hungerford Geophysical Consultants were engaged to provide an interpretation of the specific magnetic features located at Langdon's Hill.

Fieldwork commenced in February 2003 with the establishment of a 15 kilometre, slope corrected grid that was cut, surveyed and pegged at 25metre intervals. Six hundred and one soil samples were collected by hand auger during the months of April and August. Analysis of this data set was undertaken during the current reporting period. Geological mapping of the coastal exposure that surrounds the prospect, in conjunction with grid controlled mapping and rock sampling was also undertaken.

Reid GIS Services were engaged to construct relevant databases and to collate, interpret and present the geochemical results. As a result of the anomalous geochemical values obtained, a ground geophysical programme with a budget of 48K was recommended by the writer in November 2003. Hungerford Geophysical Consultants provided technical direction and survey specifications for an initial gradient array Induced Polarisation/Resistivity survey and a subsequent dipole – dipole follow up survey. These were carried out by Zonge Engineering and Research Organisation in January 2004.

## 3. EXPLORATION WORK COMPLETED

### 3.1 Geology

Geological mapping in the prospect is severely limited by the paucity of outcrop. The exception being the coastal rock platforms, which provide near continuous exposure and confirms the government mapping from the *Kingborough* 1:50000 map sheet.

Due to the scarcity of outcrop, the entire grid was float mapped at a scale of 1:2500. Lithological boundaries were defined arbitrarily however the objective was to map the surface float where it existed as a discrete and continuous entity for a distance greater than 25metres. Isolated float boulders were excluded from the mapping process. Slopes were up to 40 degrees locally but generally in the 15-25 degree range. The veracity of this method is problematic and open to conjecture at the 'base of slope' where transported soil mantles accumulate and reliable lithological definition was not feasible.

However four intrusive and three sedimentary lithotypes were defined. The characteristics of each lithology are described below:

- **Intrusive Type 1 – Syenite Porphyry**

  Leucocratic;Variably porphyritic from near equigranular thru to coarsely phenocrystic with individual sanidine crystals up to 2cm. High quartz content in a relative sense for a syenite. Spatially the most extensive intrusive noted on the prospect.

  **Intrusive type 2 – Syenite Porphyry**

  Mesocratic; Fine darker groundmass with finer sanidine phenocrysts and characterised by black lath like phenocrysts of hornblende, a lower quartz content and a brick red weathering rind.

- **Intrusive Type 3 – Tinguaite**

  Porphyritic, with a dark green groundmass and distinctive swirling flow textures of 5mm white sanidine crystals. Spatially restricted to Line 5.4N/4850E to 4925E and to Langdon's Point where it is the *raison d'etre* of a geological monument. Here it occurs as a differentially weathered dyke amongst the fossiliferous marine sediment of the Bundella Formation.

- **Intrusive Type 4 – Dolerite**

  Isolated exposure of large float boulders at 5525N / 4980E

- **Sediment Type 1 – Fossiliferous Siltstone**

Pale brown to fawn in colour, variably fossiliferous. (shells, corals) Predominately in the south and south west of the grid.

- **Sediment Type 2 – Mudstone**
  Mid grey, dark grey or black in colour, red brown weathering rind. No graphite content. No fossil content. Dominates in the northern portion of the grid. Local gritstone horizons.

- **Sediment Type 3 – Quartzite**

  Contact metamorphosed sediment rather than regionally metamorphosed or hydrothermally altered. Protolith sediment type is variable. Spatially restricted to readily identifiable margins of T1 intrusive.

No true outcrops exist within the grid with only a few individual subcrops observed often less than 1 m in length and < 30cm in height. None the less two significant features were noted:

1. At 6.2N / 4920-4935E, hydrothermally altered and gossanous, strongly argillised T2 intrusive exhibits mesh network structures of limonite filled fractures 0.5 – 2mm wide. This is the best example of alteration found to date and is coincident with the western edge of the linear magnetic feature targeted by the survey. Further supportive evidence is the discovery of an historical trench; 4m X 1m located 75 m to the north.

2. The small, high intensity magnetic feature termed the 'Bullseye' magnetic anomaly provided the initial interest in the Langdon's Hill area. Subsequent mapping has located 4 small areas proximal to this feature that exhibit readily observed mineralisation and alteration.

    - Site1 (5075N/5075E). Pyritised and contact MM siltstones

    - Site2. (5300N/5000E to4875E) Highly silicified pale green metasediment, protolith of fossiliferous siltstone. Pistachio green, cryptocrystalline silica altered, possibly skarnified with secondary hornblende.

    - Site3 (5200N/4775 to 4920E) Fresh dark grey massive mudstone with alteration front/contact of pistachio green silica and secondary carbonate. Skarn?

    - Site4 (5400N/5075E) Strong, pervasively pyritised Type 1 intrusive.

Hungerford (2002) has modelled the depth of the 'Bullseye' target to be 40m below surface level and coincident with a mapped syenite exposure. This magnetic feature expresses itself topographically as a flat circular area at the nose of a spur that defines the NW/SE trend of Langdon's Hill. These four locations noted above, form a girdle or skirt where significant (in a local

context) pyritisation is noted. Importantly all four sites are approximately 20-40 vertical metres in relief **below** the crest of the spur. This places their position as laterally equivalent to the top most position of the bullseye target. Whilst no anomalous Au values were obtained, the spatial distribution of alteration in a vertical and horizontal sense is significant and indicative of a lateral geochemical 'bleed' from a mineralised body.

### 3.2.1. Geochemistry – Soil

During the grid establishment it was readily apparent that the local soil profiles were skeletal in nature. Numerous road cuttings indicated bedrock within 1 metre of the surface with a thin A horizon veneer over a poorly developed, undifferentiated and rubbly B horizon. The soils lack significant profile development and consist of little more than modified parent material. Thus the soil samples collected were from the maximum readily penetrable depth at each location.

Reconnaissance mapping indicated that there is no Quaternary, surficial, alluvial gravel deposits anywhere on the prospect that could contaminate the sampling programme. Furthermore whilst there are localised examples of accumulation of transported soil mantles at the base of steep slopes, the low order Au anomalism delineated from the survey is located on ridge and spur crests indicative of a point source, near surface origin.

The 601 soil samples collected were analysed by SGS (Analabs) in Burnie for Cu, Pb, Zn, Ag and Mo utilising AAS with Au being fire assayed with a lower detection limit of 10ppb.

Worldwide, 70% of Au deposits, regardless of genetic origin have a sympathetic relationship with arsenic, hence its special role as an indicator mineral. The initial batch of soil samples utilised a method with a lower detection limit of 50ppm as any values below this are often in the background range for most lithotypes. Unfortunately all samples returned below limit of detection, which necessitated the reassaying of the pulps with a finer lower detection value. However this still failed to detect any significant arsenic anomalism over the prospect. Of note are the two highest arsenic values obtained which are located on the terminus of a chargeability anomaly detected by the geophysics survey (See section 3.3)

This low tenor of arsenic is repeated by the base metal response where there are uniformly low order values in Cu, Pb, Zn and Ag. In an absolute sense the base metal values obtained are disappointing in comparison to other prospects and other genetic models. However in a relative sense, there is a marked, significant and spatial relationship between the highest base metal values and magnetic character of the underlying rocks. The highest Cu, Pb and Zn values recorded occur as a well-defined cluster within and immediately adjacent to, the 'Bullseye' magnetic anomaly. Cu is the sole anomalous base metal element associated with the 'Linear' magnetic feature. It occurs along the North –West perimeter of this feature along the intrusive-sediment contact.

Rose, Hawkes and Webb (1979) state that the average crustal abundance for Mo in granites is 1.3 to 2ppm; in shales 2 to 2.6ppm and in soils 2.5 to 4ppm. The results obtained indicate a substantial deviation from the norm for the lithotypes mapped at Langdon's Hill. 7% of all soil samples returned Mo values in the range of 10 to 139ppm. On the periphery of the western edge of the 'Linear' magnetic feature, Mo anomalism was recorded over a continuous distance of 125m with values in the range of 23 – 39ppm (BL 5000E / 6200-6300N and Line 6300N / 5025E). Cu also mimics the distribution of Mo along the intrusive – sediment contact. The highest value obtained, 139ppm is isolated with no supporting proximal values in either molybdenum, base metals or precious metals.

The Au values obtained are of low tenor with the vast majority of samples (527 of 601) assaying below 20ppb. Two values were recorded above 150ppb, the highest being 510 ppb. Both these values are point source and isolated with no proximal support from other elements or from geophysics. On face value, the Au results are erratically distributed and contouring of values was not possible. However, when the distribution of Au is overlain with the magnetics, a clear spatial relationship exists. Five gold values, greater than 50ppb, are located on the immediate perimeter of the 'Linear' magnetic anomaly in a peripheral zone of low magnetics. This may indicate areas of magnetite destruction due to alteration. Chargeability Trend B, noted below in Section 3.3 is also flanked by these anomalous Au values. No anomalous Au values were obtained from the 'Bullseye' magnetic feature.

### 3.2.2. Geochemistry – Rock

34 float rock samples were obtained as part of the grid mapping process. The base metal response was low in keeping with the district metallogenesis. Furthermore, Taheri and Bottrill state that "the Au mineralisation in the Cygnet Area is relatively low in silica and sulphide minerals indicating a sulphur and silica deficient system". .

Type1 and Type 2 syenite porphyry were the dominate intrusive types sampled. Typically the samples exhibited a high density of limonite filled, leach voids (with pseudomorphs after pyrite) and occasionally fresh, fine grained, disseminated and euhedral pyrite. Strong silica alteration was a feature. The best Au value obtained, Sample CY 10010 – 370ppb Au was of a Type 1 intrusive.

Fossiliferous siltstones and grey mudstones were the sedimentary lithotypes sampled. Pyritisation and silicification was the dominant alteration observed (CY 10004 – 130ppb) along with examples of stratiform replacement textures (CY 10006 – 150ppb Au). These two samples are spatially related to the 'Linear' magnetic anomaly. The highest value obtained (CY 10010-370ppb Au), is significant as it is located adjacent to the major chargeability anomaly delineated by the geophysics survey. Moreover this anomalous Au value is also located in a magnetic low zone. The balance of rock samples were generally on or below the limit of detection. None the less, favourable textures were observed in the specimens collected. There were examples of chalcedonic/amorphous silica, (CY 10008) from a mullock sample in the trench located on the western end of the magnetic linear feature; suggestions of skarn development (CY 10014,23,30) and a possible intrusive breccia (CY 10034 Mo - 38ppm).

Of note was sample CY 10019 which returned a high Pb value of 953ppm. This sample was located in the T1 syenite body at the centre of the 'Bullseye' magnetic target.

The zone of continuous elevated Mo in soil, noted above in Section 3.2.1 also returned a float rock value of 32ppm Mo (CY 10027)

### 3.3. Geophysics

The reader is referred to the Appendix 1 authored by Hungerford Geophysics and titled "Interpretation of Induced Polarisation Surveys – Langdon's Hill Prospect. Cygnet. S.E. Tasmania"

In short the survey identified thru gradient and dipole-dipole arrays, two significant chargeability trends, which warrant drill testing.

Trend A, striking in a N.W. direction presents as a linear feature in excess of 400m long. A coincident resistivity high and magnetic low indicates possible disseminated sulphides and alteration. Arsenic anomalism flanks both sides of this trend and at its NW terminus. Whilst the values are weak in an absolute sense in a relative sense they are the highest figures noted from the data set. The highest Zn value obtained also occurs at this point.

Trend B also striking in a NW direction is a gradient and dipole chargeability and a dipole resistivity anomaly that parallels the 'Linear' magnetic feature referred to in the introduction.

Four additional chargeability trends were defined but were considered to be of a lower priority.

Of lesser interest was Trend C, which is a very intense, point source IP anomaly. Anthropogenic/cultural reasons are cited to be the reason for the response. As noted in the report, a very high Au in soil value of 510ppb is located 200m to the north east. In addition, 75m to the south west sampling of a pyrite vein by Pacific Nevada returned a Au value of 943ppb within sediments exhibiting selective replacement and a value of 89ppb.

## 4. DISCUSSION OF RESULTS

In 1999 Pacific Nevada undertook an airborne magnetic survey over an extensive portion of the Cygnet district. Hungerford (1999) noted in his interpretation of the magnetics that historical workings and gold occurrences were distributed along ENE structures. This is in accordance with the orientation of mineralisation shown on the MRT state metallogenic map at Kings Hill, Mt Mary and Black Jack Ridge.

The Langdon's Hill prospect is not in accord with this district observation having a pronounced NW orientation as indicated by the 'Linear ' magnetic anomaly and the IP chargeability trends noted in the recent survey.

Taheri and Bottrill (1999) figure 1 indicates regional lineaments that define possible structural controls to the emplacement of the Cretaceous alkaline intrusives and thus the Au mineralisation. The predominate trend noted – The Weld River-Huon River lineament is 70kms in length, striking in a NW direction and hosts Au prospects in the middle reaches of the Weld valley.

The district lineament analysis by Hungerford clearly shows a major trend adjacent and parallel to the Weld – Huon structure. The Hungerford analysis also indicates lineament intersection foci throughout the district. Langdon's Hill is one of the few instances where there is a coincident lineament intercept with a discrete magnetic high. (See Hungerford Figure 2)

On the basis of such structural control, the genetic model proposed for Langdon's Hill is a Au-Cu-Mo deposit either within a major NW trending fault zone, at the intersection of lineaments or in altered sediments adjacent to those structures.

Turner (1999) noted during the re-logging of core at Mt Mary, a marked correlation between metal values and intervals where the core was intensely fractured, limonitic or decomposed to clay, suggesting a supergene influence on Au emplacement. Further support is gained from Twelvetrees (1902) who stated that visible gold was observed in a 'reddish coloured' contact rock and Blake (1936) also noted Au detected in ferruginous, brecciated rock along the porphyry-sediment contact. A structural model is now favoured over a strict porphyry Cu model akin to the Circum-Pacific deposits of south western USA and Andean South America.

Sillitoe (1979) highlights the association of haematite and magnetite alteration with Au rich porphyry deposits. The prime aim of the geological mapping was to correlate any spatial relationship between intrusive type, Au distribution and the 'Linear' and 'Bullseye' magnetic features. This was not successful with results obtained generally of low tenor with poor definition. Any relationship between Au distribution and magnetic signature is inconclusive.

Weak Au anomalism is associated with a small cluster of values extending around the NW terminus of the 'Linear' magnetic feature in association with elevated copper and highly anomalous Mo. This is encouraging given that Mo shows an almost universal association with porphyry copper deposits. Weak anomalism is also found flanking either side of IP Trend B located in magnetic low zones. The conundrum here is that these magnetic low features may represent either favourable alteration due to the destruction of magnetite or a non magnetic syenite phase.

The geophysical programme has proved to be the superior tool for delineating drill targets at Langdon's Hill. The initial anomalous pan concentrate and rock chip values obtained by Cyprus in the mid 1980's were confined to the eastern flank of the hill. (255, 80 & 55 ppb Au in rock; 0.77ppm Au in pan con). The author's initial interpretation was that these values were associated with the 'Linear' magnetic anomaly. The definition of a coincident chargeability anomaly - Trend B - lends further evidence to this proposition.

However the major discovery appears to be Trend A which represents a blind anomaly with virtually no geochemical response. Hungerford (2004) figure 10

"Interpreted Geophysical Section' indicates that the pyrite and associated alteration occurs on the contact between the syenite and the overlying sediments in a roof pendant relationship. A burial thickness of 80m is inferred. This explains the lack of a leakage halo in the soil geochemistry from the western part of the grid. The sole supporting evidence being the 1987 Cyprus pan concentrate value of 0.13ppm Au, weak arsenic anomalism flanking Trend A at its NW terminus and the 370ppb Au rock sample at the southern end of Trend A.

## 5. CONCLUSIONS

Set out below is a summary of the 3 drill targets defined (In descending order of priority)

### 1. Trend A

- Gradient array -Chargeability high/Resistivity high
- NW orientation is adjacent and parallel to the regional Weld-Huon lineament
- Magnetic low zone
- Proximal Au value of 190ppb
- 370ppb Au at southern end of trend
- As anomalism on flank and NW terminus
- Cyprus era pan concentrate anomaly

### 2. Trend B / 'linear' magnetic anomaly

- Coincident (CY 10004 – 130ppb) Chargeability high/Resistivity high/ Magnetic high which mimics the shape of the topographic axis of Langdon's Hill
- Adjacent and parallel to the regional Weld – Huon lineament
- Au values provide no conclusive definition though flanking values lend support as they are located in magnetic low zones on either side of the IP/Res/ Mag trend.
- On the NW terminus of this trend is a 125m train of anomalous Mo values in soil and rock with coincident elevated Cu and Au.

### 3. 'Bullseye' Magnetic feature

- Intense, local, circular feature located at the SW terminus of the prominent, spatially extensive and unexplained Port Cygnet magnetic anomaly.
- Evidence of skirting pyritisation / skarnification extending beyond the anomaly at a topographic level that equates with the modelled top of the magnetic body that is 40 m below the surface.
- Strong ( in a relative sense) spatially restricted Cu and Zn values
- No Au response only base metals which may indicate a sulphide-magnetite rich intrusive phase or base metal / precious metal vertical zonation.
- No Chargeability/ No Resistivity response

The author concurs with the drilling recommendation made by Hungerford Consulting. Trend A – 250 metre hole collared at 5800N / 4525E, inclined at 60 degrees and orientated at 285 degrees magnetic.

If the initial hole is successful, consideration should be given to directional drilling from the same drill pad or steepening of the inclination for an additional hole rather than a new set up.

It is the author's opinion that sufficient tectonic / structural, geochemical and geophysical evidence exists that would warrant drill investigation of the 'Linear' magnetic anomaly / Trend B. A 100m deep vertical hole centred upon 6200N / 5000E is suggested.

A drilling budget of $100,000 is proposed.

In conclusion, based on the combined geological, geochemical and geophysical programme, potential exists to prove up a low grade/ bulk tonnage deposit or a smaller, high grade, structurally controlled deposit.

## 5. ENVIRONMENT

As per the MRT 'Code of Practice', all soil holes were filled in immediately after sampling to reduce the risk of injury to cattle. For the IP geophysics survey, four current electrode pits were excavated by backhoe, to a depth of approximately 1 metre and dimensions of 1200mm width by 2000mm length. Four individual landowners affected were consulted prior to the establishment of these pits. All pits were rehabilitated as per page 74 of 'The Code of Practice'. At present the grid remains established with survey pegs in place for the foreseeable future. It is the authors belief that there are no outstanding issues with regard to the environmental performance of the company.

## 6. EXPENDITURE

The following table indicates expenditure over the tenure period.

| Date | MRT Requirement | M.Meadows Expenditure |
|---|---|---|
| Oct 2001- Oct 2002 | $16,125.50 | $8,041.10 |
| Oct 2002 - Oct 2003 | $16,125.50 | $38,826.38 |
| Oct 2003 – Oct 2004 | $47,000.00 | $55,015.20 |
| **TOTAL** | $79,250.00 | $101,882.68 |

The expenditure for the current reporting period was $55,015.20.
The expenditure breakdown is as follows:

| | |
|---|---|
| Salaries & Wages | $16,725.07 |
| Geophysical Consultant | $3900.00 |
| Geophysical Survey | $21,173.18 |
| Field Supplies | $10.68 |
| Travel & Accommodation | $5,067.37 |

## 7. REFERENCES


Blake,F. Summary of reports on Mt Mary Mine, Cygnet. 1936. UR 1891/79 MRT library.

Hungerford,N. Geophysical Interpretation-Cygnet-EL29/97. 1999. 00_4412A MRT library

Hungerford,N. Langdon Hill Magnetics. December 2002. Report to Maiden Meadows Pastoral Pty Ltd.

Hungerford,N. Interpretation of Induced Polarisation Surveys.Langdons Hill Prospect. Cygnet.S.E.Tasmania. March 2004. Report to Maiden Meadows Pastoral Pty Ltd.

Reid,R. Annual Report-EL29/97.1999.Pacific Nevada Mining Pty Ltd. 99_4260.MRT Library.

Rose,A et al. Geochemistry in Mineral Exploration. Academic Press. 2nd Edition 1979.

Sillitoe,R.H. Some thoughts on gold rich porphyry copper deposits. *Mineralium Deposita.*14:161-174

Taheri,J and Bottrill,R. Porphyry and sedimentary-hosted gold deposits near Cygnet. New styles of gold mineralisation in Tasmania. Tasmanian GeololgicalSurvey. Record 1999/01. MRT.

Twelvetrees,W.Report on gold at Port Cygnet and Wheatleys Bay, Huon River. 1902. OS/238. MRT library.

Vanzino,L. Summary of previous exploration and recommendations for further work. June 2002. Coast and Mountain Exploration. 'In House' Technical report to Maiden Meadows Pastoral Pty Ltd.

PN, 140790, 140ppb Au 3340ppm Pb, 23ppm Ag, 642ppm Mo

505500 mE

506000 mE

506500 mE

507000 mE

5218500 mN

5218000 mN

5217500 mN

5217000 mN

Lymington Road

Cyprus, 152250, 255ppb Au

Cyprus, 152252, 55ppb Au

0.77ppm Au in panned concentrate (Jones, 1987)

Cyprus, 152239, 80ppb Au

ddens Road

Quoll Lane

0.13ppm Au in panned concentrate (Jones, 1987)

PN, 7641516, 74ppb Au

PN, 7640838, 943ppb Au

PN, 7640831, 89ppb Au

Forsters Rivulet Road

## LEGEND

Panned Concentrate Samples (Value, Reference)

Rock Chip Samples (Company, Sample Number, Value, Element)

Maiden Meadows Pastoral

Figure 1: Langdons Hill, EL34/2001 Geochemical Compilation

Compiled by: L Vanzino & R Reid

Scale: 1:8000, Projection: AMG Zone 55 (AGD 66), Date:21/3/4

0 50 100 200

metres

506500 mE
506000 mE
506500 mE
507000 mE
Lymington Road
5218500 mN
5218000 mN
5217500 mN
5217000 mN
Quoll Lane
Forsters Rivulet Road

Zone of high intensity magnetics
-axis parallels topography
-magnetic syenite or silicification

Lineament Trend

Discrete magnetic high

Lineament Trend

Main syenite intrusion outline
(Residual bouger gravity low)

## References


Gravity Interpretation from MRT data.
Hungerford, N., Figure C5, 00_412A

Lineament Trend from Air-Magnetics
Interpretation from Figure 2, Plate 1,
Plate 2. Reid, R., 99_4260

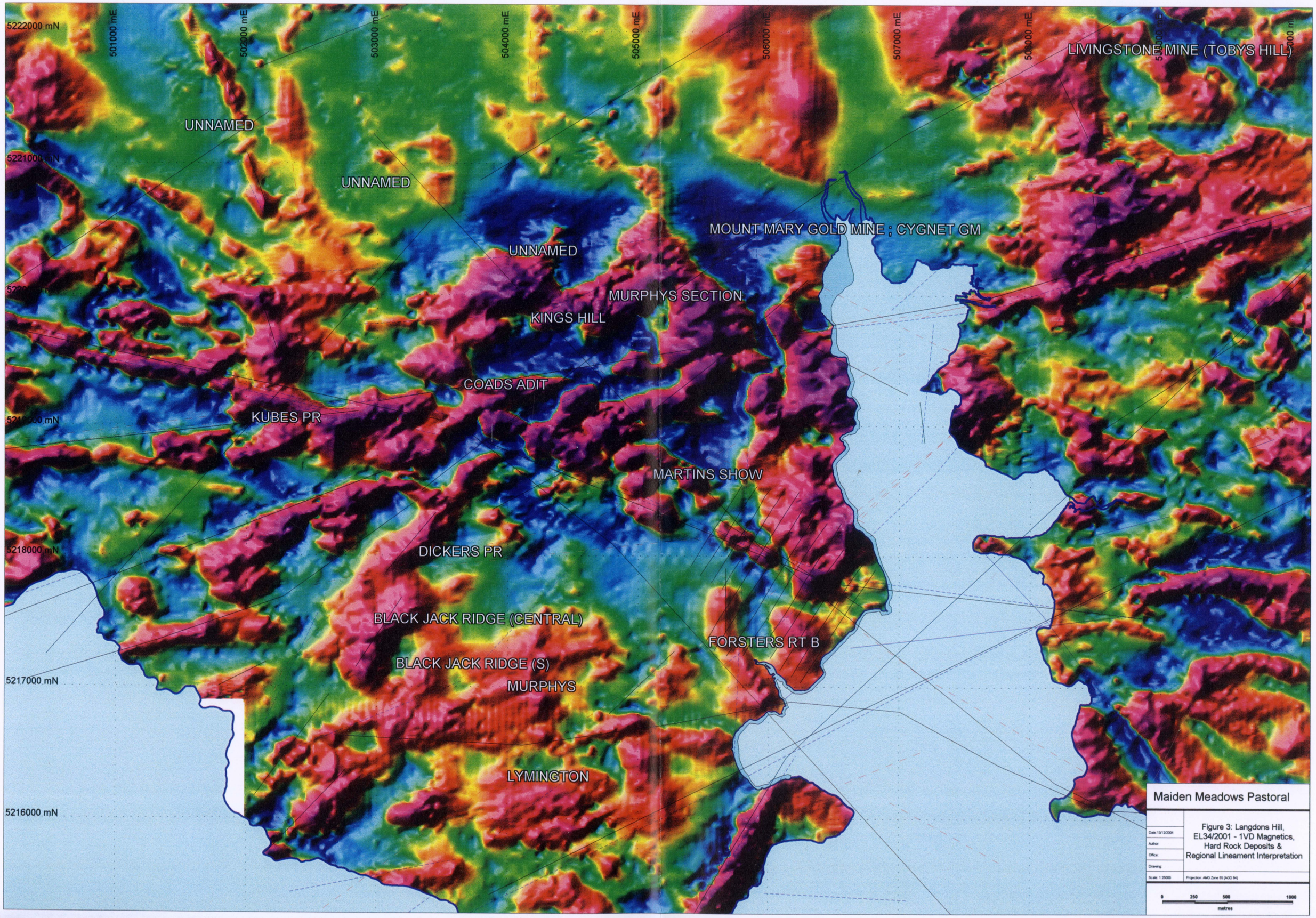

Maiden Meadows Pastoral

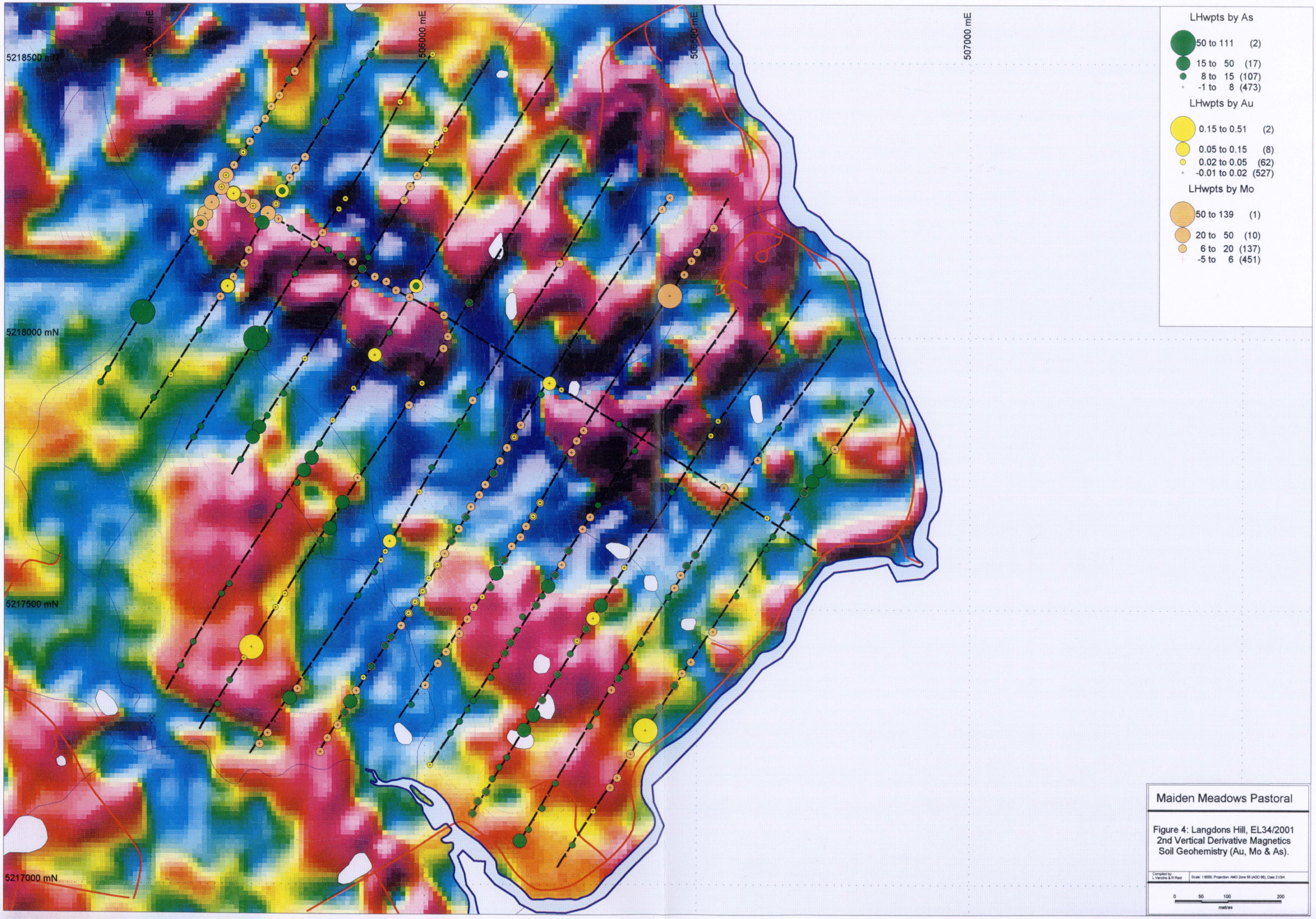
Figure 2: Langdons Hill, EL34/2001
Geophysical Compilation

Compiled by:
L Vanzino & R Reid

Scale: 1:6000, Projection: AMG Zone 55 (AGD 66), Date:21/3/4

0 50 100 200
metres


5222000 mN
501000 mE
502000 mE
503000 mE
504000 mE
505000 mE
506000 mE
507000 mE
508000 mE
509000 mE
510000 mE
LIVINGSTONE MINE (TOBYS HILL)
UNNAMED
5221000 mN
UNNAMED
MOUNT MARY GOLD MINE ; CYGNET GM
UNNAMED
MURPHYS SECTION
KINGS HILL
COADS ADIT
KUBES PR
MARTINS SHOW
5218000 mN
DICKERS PR
BLACK JACK RIDGE (CENTRAL)
FORSTERS RT B
BLACK JACK RIDGE (S)
5217000 mN
MURPHYS
LYMINGTON
5216000 mN
Maiden Meadows Pastoral
Figure 3: Langdons Hill, EL34/2001 - 1VD Magnetics, Hard Rock Deposits & Regional Lineament Interpretation
Date: 13/12/2004
Author:
Office:
Drawing:
Scale: 1:25000
Projection: AMG Zone 55 (AGD 84)
0
250
500
1000
metres


5218500 mN
5218000 mN
5217500 mN
5217000 mN
505500 mE
506000 mE
506500 mE
507000 mE
LHwpts by As
50 to 111 (2)
15 to 50 (17)
8 to 15 (107)
-1 to 8 (473)
LHwpts by Au
0.15 to 0.51 (2)
0.05 to 0.15 (8)
0.02 to 0.05 (62)
-0.01 to 0.02 (527)
LHwpts by Mo
50 to 139 (1)
20 to 50 (10)
6 to 20 (137)
-5 to 6 (451)
Maiden Meadows Pastoral
Figure 4: Langdons Hill, EL34/2001
2nd Vertical Derivative Magnetics
Soil Geohemistry (Au, Mo & As).
Compiled by L Vanzino & R Reid
Scale: 1:6000, Projection: AMG Zone 55 (AGD 66), Date: 21/3/4
0 50 100 200
metres

5218500 mN

5218000 mN

5217500 mN

5217000 mN

505500 mE

506000 mE

506500 mE

507000 mE

LHwpts by Zn

125 to 264 (7)
75 to 125 (25)
50 to 75 (49)
-2 to 50 (515)

LHwpts by Pb

100 to 259 (3)
50 to 100 (11)
25 to 50 (32)
-3 to 25 (553)

LHwpts by Cu

150 to 304 (4)
75 to 150 (23)
40 to 75 (55)
0 to 40 (517)

Maiden Meadows Pastoral

Figure 5: Langdons Hill, EL34/2001
2nd Vertical Derivative Magnetics
Soil Geohemistry (Cu, Pb & Zn).

Compiled by: L Vanzino & R Reid | Scale: 1:8000, Projection: AMG Zone 55 (AGD 66), Date: 21/3/4

0 50 100 200
metres

## Legend

- Pyrite
- Skarn
- Anomalous Rock Chip

506500 mE
506000 mE
506500 mE
507000 mE
5218500 mN
5218000 mN
5217500 mN
5217000 mN

Lymington Road
Lineament Trend
32ppm Mo
130ppb Au
953ppm Pb
150ppb Au
370ppb Au
Quoll Lane
Forsters Rivulet Road

Maiden Meadows Pastoral

Figure 6: Langdons Hill, EL34/2001
2003/4 Anomalous Rock Values,
Alteration and Relationship
to Geophysical Interpretation

Compiled by L Vanzino & R Reid | Scale: 1:8000, Projection: AMG Zone 55 (AGD 66), Date:21/9/4

0 50 100 200
metres