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(ETA 457)

293001

NEWNHAM EXPLORATION & MINING SERVICES

RELINQUISHMENT REPORT

FOR PART OF EL 20/92

- MOINA AREA

EL20/92
29

See folio 51

Prepared for:

Goldstream Mining NL
Titan Resources NL
28-42 Ventor Avenue
West Perth, 6005

By:

L A Newnham, B.Sc., F.A.I.M.M.
PO Box 132
Riverside, Tas 7250

Ph: (03) 6394 3434
Fax: (03) 6394 3435

23 July, 1997

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CONTENTS

1. SUMMARY

EL 20/92 of 25 sq km near Moina is explored under a joint venture agreement between Goldstream Mining NL and Titan Resources NL.

The principal exploration targets were precious and base metal deposits formed by hydrothermal activity associated with a spine of the Dalcoath Granite thought to underlie the licence area at a shallow depth.

The 12.5 sq km area to be relinquished is essentially the eastern end of the licence, closest to the Dalcoath Granite outcrop.

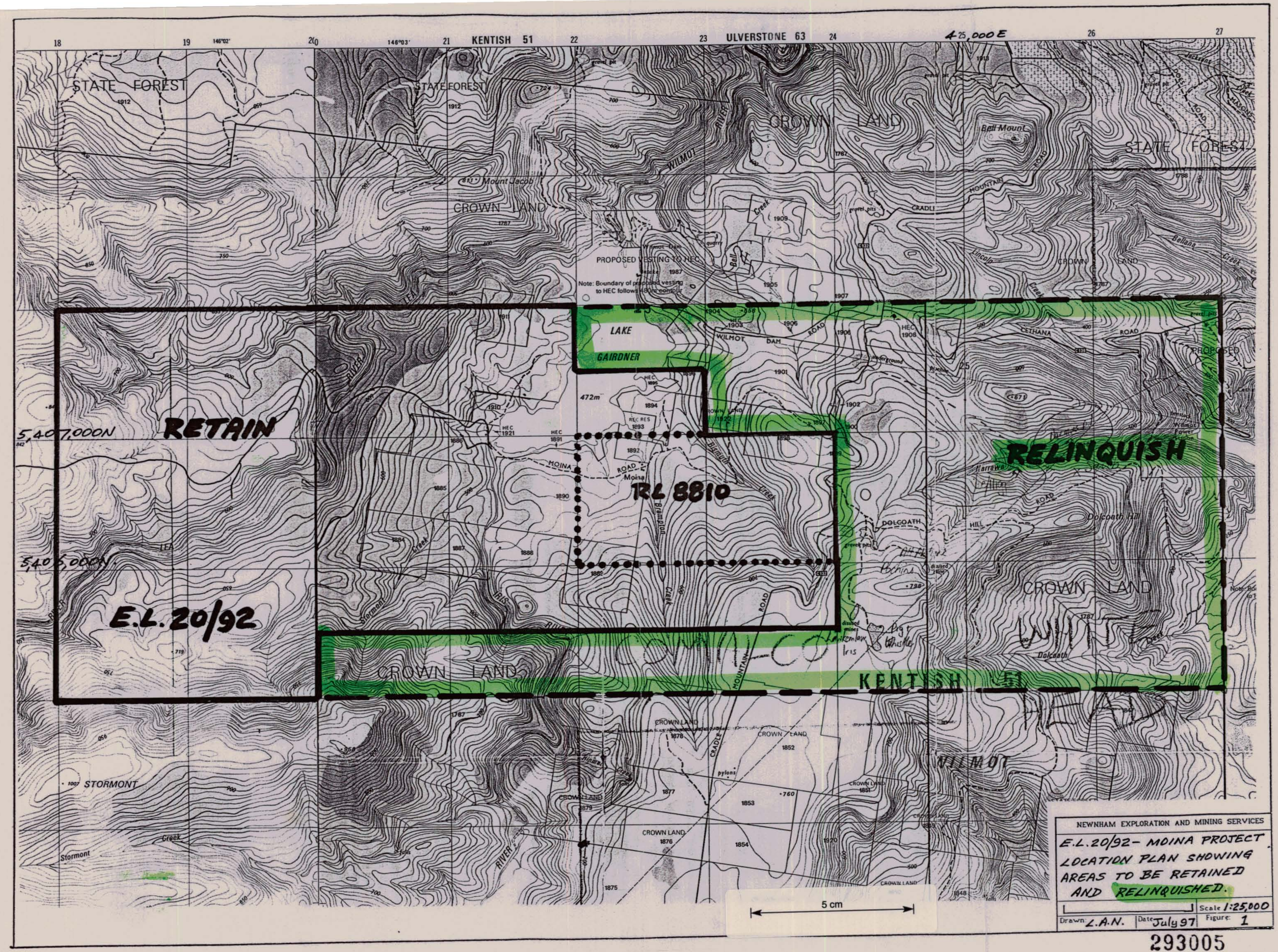
Work completed by the joint venture partners on this area included:

- high resolution aeromagnetic survey
- review of existing data

2. AREA TO BE RELINQUISHED

The 12.5 sq km area to be relinquished is shown on Fig 1, and is defined by the following co-ordinates:

> Commencing at the north-east corner defined by 427,000 E, 5,408,000 N, then due south to 5,405,000 N, then due west to 420,000 N, then due north to 5,405,500 N, then due east to 424,000 E, then due north to 5,407,000 N, then due west to 423,000 E, then due north to 5,407,500 N, then due west to 422,000 E, then due north to 5,408,000 N, then due east to the point of commencement.



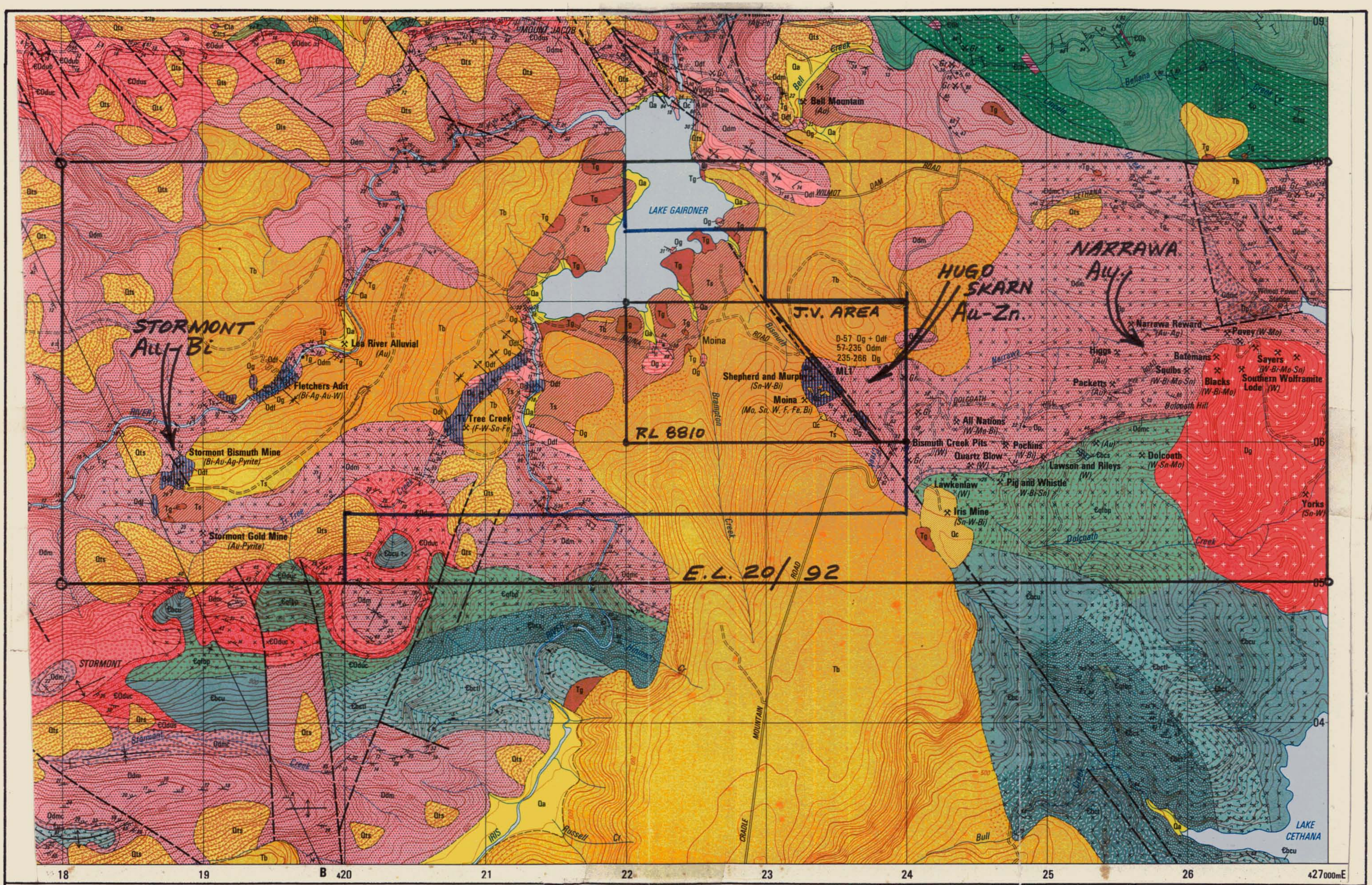
NEWNHAM EXPLORATION AND MINING SERVICES

E.L. 20/92 - MOINA PROJECT LOCATION PLAN SHOWING AREAS TO BE RETAINED AND RELINQUISHED.

Scale 1:25,000

Drawn: L.A.N. Date: July 97 Figure: 1

293005



Hugo Fault projected outcrop
Hugo Skarn Au-Zn mineralisation
Possible skarn extensions beneath Basalt.

Tb Tertiary Basalt
Tg, Ts Tertiary sediments and gravels
Og Gordon Limestone (Vertical stripes = skarn)
Odm Moina Sandstone
Odmc Roland Conglomerate
Єv Various Cambrian Volcs + Seds

Dg Dolcoath Granite
x x Contact alteration zone around Dg.

Map is a photocopied section of the State 1:25,000 Winterbrook-Moina Geol. Map. (MRVP Map 9.)

5 cm

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MOINA AREA

REGIONAL GEOLOGY

0 km. 0.5 km 1	Scale: 1:25,000
Drawn: LAN / Date: APR 97	Figure: 2

3. WORK COMPLETED

The joint venture partners directed their efforts on the relinquished area to reviewing existing data, and an aeromagnetic coverage.

Reviewing Existing Data:

The Moina area was recently quantified by government as one of the most prospective areas in Tasmania. It has attracted a large amount of exploratory effort over a 120 year period.

Numerous abandoned mine workings exist throughout the relinquished area, many of which were little more than prospecting ventures.

Two principal styles of mineralisation were identified, and reviewed, in the relinquished area:

(a) Sn-W-Mo-Bi Veining Adjacent to Dalcoath Granite:

A large number of small mines have been developed on quartz vein systems developed on the northern outcropping flank of the Dalcoath Granite and in the sedimentary and volcanic units due west of this section of the granite.

The systems are dominated by steeply dipping quartz veins carrying variable amounts of wolfram, cassiterite, molybdenite and bismuthinite, and are concentrated in the basal Denison Group sediments (Roland Conglomerate and Moina Sandstone) and the underlying Cambrian volcanic porphyries, extending for 2-3 km west of the granite outcrop.

The majority of veins are narrow and were very small producers. The most significant producer was the All Nations Mine, developed on several 0.2-1.0 m wide veins, and mined intermittently until recent times for coarse wolframite.

Genetically, the deposits are considered to have formed from fluorine-metal rich hydrothermal fluids eminating from the highly fractionated Dalcoath Granite ridge or cupola, and ascending through intensely fractured siliceous sediments and volcanics adjacent to that ridge.

(b) Au-Base Metal Deposits in Fractured Sediments (Narrawa):

The Higgs and Narrawa Reward Mines were developed on narrow auriferous veins close to the outcropping Dalcoath Granite in the eastern section of EL 20/92.

In the 1980s, the area was first explored by CRA and later by RGC.

CRA undertook various geophysical and geochemical surveys in the region and completed two drill holes targetted at base metal mineralisation in fractured sandstones. Results were disappointing with low levels of base metals being located in strongly pyritic sediments, which were in places Au anomalous.

The best results were:

DG 1 :	9 m 0.24 g/t Au
DG 2 :	6 m 0.28 g/t Au

RGC was primarily interested in gold and extensively sampled all the old workings and completed four cored drillholes.

High grade Au zones were defined in the shallow workings but only broad, low grade zones were intersected in drill holes. Best results were:

ND 1 :	20 m 0.48 g/t Au including 1 m 6.18 g/t Au
ND 2 :	11 m 0.15 g/t Au
ND 3 :	4 m 0.5 g/t Au 13 m 0.12 g/t Au

RGC commissioned Dr Greg Morrison to review the data on Narrawa and a direct extract from his report *An Overview of Gold Occurrences in Northern Tasmania* for Goldfields Exploration, November 1987, is presented below. More detailed data on the area is contained in various RGC reports on EL 26/85 held in the Mineral Resources Tasmania library.

"

HIGGS-NARRAWA REWARD

An evaluation of bulk tonnage potential based on a reconnaissance of surface and underground workings and graphic logging of two representative drill holes.

The Higgs and Narrawa Reward workings have produced approximately 28 kg of gold from quartz veins and disseminations in sheared sandstone, siltstone, calc-silicates and porphyry dykes. The old workings were limited in depth by a rapid fall off in grade that has been interpreted as the transition from surface enriched to primary mineralisation. Similarly in the recent exploration programme encouraging results from rock chip sampling have not been duplicated in drilling intersecting the shear zone approximately 100 m below the workings. There are two possible explanations for the grade drop off:

1. Surface enrichment due to oxidation as suggested by most previous workers.

2. Structure controlling small shoots with shallow plunge so that drill intersections below old workings intersect the structure but not the ore shoot.

   For the explanation based on surface enrichment there is strong support in the nature of the workings, the available assay data and the fact that similar features have been noted in many other goldfields of northern Tasmania. However there are some puzzling observations:

1. Fresh sulphides are exposed near surface or within a few centimetres of surface in many places suggesting oxidation is incomplete

2. In all the drill holes there is strong depletion of all elements analysed including gold down to approximately 30 m. The cutoff to anomalous grades is sharp and in ND 1 and DG 1 at least, below the level of even partial oxidation and distinctly below the level of complete oxidation (<10 m).

3. Good surface gold grades are restricted to discrete patches (eg. main Higgs workings, West Higgs) with only occasional good grades between.

These features suggest the simple process of surface oxidation and gold enrichment typical of the arid environment in Western Australia is not entirely applicable here.

A structural explanation is suggested by observations of ore shoot geometry and surface grade distribution. In the Higgs and Narrawa Reward workings the principal 'reef' is an irregular shear zone striking NW and dipping approximately 70° NE and hence cutting bedding which has a similar strike but shallower dip. The orientations of the walls of the workings and the distribution of ore shoots suggest the low angle intersection causes refraction of the shear zone where it intersects beds of varying competence at low angles. The geometry is consistent with the process of Reidel Shear that gives rise to a complex of small, shallow plunging ore shoots. This model is well documented for the Far Fanning deposit in North Queensland (Roy Kidd, BSc Hons thesis, JCUNQ, 1985) where moderately plunging ore zones have been shown to consist of numerous shallow plunging ore shoots with dimensions of a few metres by 10's of centimetres. Definition of ore reserves at Far Fanning was so difficult that eventually 5000 tonne bulk samples were taken to establish overall grade and leachability (Elliot and Houtgraaf,1986).

Plotting of all the assay data and features of the drill core on graphic logs for holes ND 1 and DG 1 has demonstrated a strong overall element zoning pattern and distinct controls on gold distribution. Although there is some duplication in DG 1 there is a strong single pass zoning pattern in ND 1 from shallow Pb-Zn-Ag through Cu-Bi-Au (As, W) to Mo-W-Bi and Sn Mo (As) at depth. This is similar to the zoning pattern for the whole Moina field relative to the Dalcoath granite and suggests that even dykes that are part of the system may telescope the whole zoning pattern. In DG 1 the dykes themselves are sheared, and mineralised with the whole element assemblage, suggesting deformation, intrusion and mineralisation are broadly contemporaneous. Overprinting relationships suggest the deeper zones are younger and that the gold mineralisation is most closely linked to the earliest stage of greisen alteration overprinting the Pb-Zn-Ag mineralisation. If the zoning pattern and time sequence are more generally applicable then there may be a distinct 'gold corridor' in space and time and on a variety of scales that may help focus exploration.

For Narrawa and Higgs the complexities of variable surface grades, ore shoot geometry and element zoning make definition of deep exploration targets difficult. The fundamental problem at this stage seems to be the depth extent of the good surface grades. This could be tested with a programme of detailed surface rock chip sampling and drill hole sampling to a few metres or tens of metres. Confidence in these results might justify a programme of shallow ore reserve definition.

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Pursuit of these styles of deposits is not considered an attractive exploration objective by the joint venture partners.

Aeromagnetic Survey:

A high resolution aeromagnetic survey was completed over the entire licence area in May, 1996.

Survey specifications are:

- aquisition by UTS Geophysics Pty Ltd
- aircraft AS350B helicopter
- magnetometer Scintrex CS-2 Cesium
- traverse lines grid N-S
- line spacing 50 m

  tie lines 500 m
- mean terrain clearance 60 m
- sample interval 3-4 m
- navigation GPS

The data was processed by Pitt Research Pty Ltd. In March, 1997 Pitt was contracted to undertake various imaging and modelling studies of the raw data and their report on this work is affixed as Appendix A.

293012

APPENDIX A

AEROMAGNETIC DATA

293013

To: Lindsay Newnham - Newnham Exploration and Mining Services
From: Grant Archer - Pitt Research
Date: 15 April, 1997
Subject: Modelling and Imaging of Moina Aeromagnetic Survey

Dear Lindsay,

As a result of your visit to Pitt Research on Friday 7 March, 1997 and the resulting request for additional magnetic modelling and image production applied to the Moina aeromagnetic survey (northern Tasmania), the following work has been carried out.

Magnetic Modelling

Objective of magnetic modelling

As outlined on March 7, the objective of magnetic modelling was to focus on a large NEE trending magnetic ridge located in the NW corner of the Moina survey.

Description of NW magnetic ridge

The NW magnetic ridge strikes approximately NEE and has a variable magnetic intensity ranging from a peak response (measured in a NS sense) of approximately 1700nT (measured peak to trough of anomaly) to a minimum of around 700nT (peak to trough). Strike length of the ridge is at least 4km and extends outside the bounds of the survey in both directions. The area covering the anomaly has been geologically mapped at the surface as Moina sandstone and basalt, with sandstone covering the sources of most intense magnetic anomalism. Two options for magnetic modelling were pursued in accordance with our discussions:

option 1

The magnetic source of the NW ridge is caused by skarn with geological constraints:

- flat dipping
- depth below surface 50 - 150m
- magnetic susceptibility 0.4 - 0.5 S.I. units (as determined by magnetite content)
- width 10 - 40m
- lateral dimensions 200-300m by 200-300m

option 2

The magnetic source of the NW ridge is caused by a flat dipping volcanic layer with geological constraints:

- flat to 20 degrees dip
- minimum depth below surface 300m
- magnetic susceptibility 0.01 S.I. units
- width > 500m

Results of modelling Option 1

The various images of the Moina aeromagnetic survey (see section "Image Production" later in this document), in particular the residual and the vertical derivative images, were used to assist in interpreting possible magnetic body positions and their lateral extents to be used in the model of the NW magnetic ridge.

Three north-south oriented traverses intersecting the NW magnetic ridge were chosen for the purpose of modelling and presentation for this document (although obviously other traverses were considered during the course of modelling). The three traverses were positioned over magnetic highs on the ridge, and (hence) intersected the positions of magnetic bodies as interpreted using residual imagery. Locations of traverses were 418650E, 419550E and 420650E. (see figure 1 for contour map of area covering traverses presented)

Effort was put into attempting to derive a model within the geological constraints proposed by option 1, however considerable difficulty was encountered trying to explain the broadness of the observed magnetic anomaly, as a result of using the shallow depths to magnetic sources as proposed by option 1 (ie 50-100m below surface) - broadness of anomaly can be interpreted as being associated with deeper sources. A more detailed discussion follows.

Modelling of traverse 420650E
(see figure 2a for traverse location)

Some "success" in modelling was obtained by putting the main magnetic body ("skarn") in section 420650E deeper in the section than as proposed by option 1. Figure 2a shows a plan view of magnetic (observed) contours with annotation of traverse 420650E. Figure 2b shows a plan view of the model derived for the traverse. Only bodies in the vicinity of the line have been included in the model. Magnetic susceptibilities are annotated in S.I. units and **body 2** represents "**skarn**" and is the main magnetic body in the section. Figure 2c is a sectional view of the model. A reasonable match between observed and modelled profile is observed. While width, lateral extent and dip of body 2 ("skarn") approximate the constraints of option 1, obviously depth and magnetic susceptibility **do not**. The magnetic susceptibility for body 2 has been increased (to perhaps unrealistic levels ?) from the value suggested by option 1 to compensate for reduction in anomaly amplitude due to placing the body at a greater depth (than proposed by option 1), in order to achieve a reasonable correlation between the observed and theoretical field. I have sent you quantitative information on the relationship between magnetite content and magnetic susceptibility. Nevertheless a reduction in susceptibility for body 2 could be achieved by increasing the body thickness while using a similar depth to magnetic source within limitations, and a reasonable match between profiles is maintained, and I would suggest this as a more likely model ? Figure 2d is the same as figure 2c only with the individual contribution of body 2 ("skarn") to the magnetic anomaly also plotted (black line), and is included to illustrate that body 2 is indeed the main magnetic source in the section.

I emphasise I have tried to constrain the model to the parameters of option 1. I also emphasise that a similar looking modelled profile could be derived by increasing the width of the main magnetic body (using a similar depth) and reducing its magnetic susceptibility, within limitations, if desired. Figures 2e and 2f are the result of simply doubling the thickness of body 2 with magnetic susceptibility decreased from 1.53 to 0.75 S.I. units, for example - a similar match in profiles is achieved using the alternative parameters. The possibility of the source of the NW magnetic ridge being Mount Read volcanics has been suggested by you, and I think is worthwhile considering at least based on the regional magnetics (see section "Regional Aeromagnetics" later in this document).

Modelling of traverse 419550E
(see figure 3a for traverse location)

Figure 3a is a plan view of magnetic (observed) contours with annotation of traverse 419550E. Figure 3b shows a plan view of the model generated for the traverse. Magnetic susceptibilities are annotated and **body 6** represents **"skarn"** and is the main magnetic body in the section. Figure 3c shows the sectional view of the traverse. A fair match between observed and modelled profile is observed. Body depth and magnetic susceptibility are larger than those suggested in the constraints of option 1. Similar to traverse 420650E the magnetic susceptibility of the "skarn" (body 6) could be lowered to "more realistic" levels (?) by increasing body thickness and keeping depth similar, within limitations, while still obtaining a similar reasonable profile correlation. I emphasise I have not done this so as to try to keep within some of the constraints of option 1 (c/f figures 2e and 2f). I suggest the alternative parameters as a more likely possibility ? Figure 3d is included to illustrate that body 6 is the main magnetic source in the section (contribution to the magnetic profile is plotted in black).

Modelling of traverse 418650E
(see figure 4a for traverse location)

Figures 4a, 4b and 4c represent a plan of contours of the observed field (showing traverse for modelling), a plan of the model constructed, and the sectional view of the profile, respectively. The result of observation of figure 4c reveals a poor match between observed and modelled profile due to the "inflated" negative lobe of the observed anomaly - though the "regional" wavelength is a reasonable match. The inflated negative lobe of the anomaly (relative to this magnetic latitude) could possibly be explained by magnetic remanence in the source, though I have tried to avoid including remanence in the model - to my knowledge no field measurements of remanence are available. As a very superficial attempt to illustrate one way of improving the match between profiles, I have introduced remanence in the model for this line and altered body dips to come up with the model shown in figures 5a and 5b, where a reasonable match is observed between modelled and observed profile (naturally magnetic susceptibilities have altered). I emphasise this is very superficial and do not seriously suggest this as a good solution, but show it as a demonstration of the type of thing that could be done using remanence. Additional knowledge of susceptibility and remanence measured in the field would be of great assistance here.

Results of modelling Option 2

This option was ruled out relatively quickly on the basis of some very simple modelling. I report modelling using an "enormous" magnetic block with dimensions of approximately 4km by 2km in lateral extent and more than 1km in width (much larger, hence more magnetic than the volume constraints of option 2) with a magnetic susceptibility of 0.01 S.I. (a constraint of option 2) used in a model and placed at the surface, did not generate enough field intensity to explain even the weakest part of the NW ridge (approximately 700nT peak-trough; the strongest part of the ridge is approximately 1700nT peak-trough).A magnetic susceptibility of 0.01 S.I. is simply not magnetic enough to explain the NW magnetic ridge. In addition a flat dipping layer as proposed by the option would more likely be noticed as a regional contribution to the magnetic field in the survey. The NW ridge (based on its signature) could better be described by a more steeply dipping body. Plots illustrating the above are available on request.

Regional Aeromagnetics

A preliminary view of the regional magnetics of the Devonport area, in the form of the 1:50000 scale contour map supplied by the Tasmanian mines department shows what looks like a distinctive magnetic texture associated with the Mount Read volcanics (ie to the north of the Moina survey). The NW magnetic ridge of the Moina aeromagnetic survey appears to have a similar general magnetic texture and strike to the Mount Read volcanics, expressed in the Mines Department contoured magnetic map, though this all needs to be verified with a more detailed observation of the data. If the apparent correlation between the magnetics and Mount read volcanics is indeed valid it might be possible to considerably extend at a depth, the boundaries of the mapped Mount Read volcanics.

Magnetic Model of Shepherd and Murphy anomaly Area

As you are already aware time was put into preliminary work carried out in preparation for possible modelling of the Shepherd and Murphy anomaly and adjacent areas. Although a preliminary result was derived for the Shepparton-Murphy anomaly, this work was not concluded due to a change of focus to the NW magnetic ridge of the Moina survey.

Image Production

Magnetic imagery

A number of filters and image enhancements were applied to the Moina aeromagnetic survey at Pitt Research during the period, to possibly assist with delineation of NW trending structures, as requested. This work was carried out by Mark Deuter, and hard copies of these results and comments have been sent to you. Images were also used as an aid to magnetic modelling. Results of reduction to the pole processing lend further evidence to the possibility of the NW magnetic ridge (results of modelling discussed above) being due to a deep magnetic source (see item "6" of "Notes of colour image products generated for Moina survey" by Mark Deuter), though this conclusion relies to some extent on a no remanence assumption for the anomaly.

Conclusion

On the basis of having very limited data pertaining to physical measurements on the rocks responsible for the NW magnetic ridge in the Moina aeromagnetic survey, magnetic modelling was carried to explore some of the structural possibilities proposed. It needs to be pointed out that if some of the unknowns in the modelling of the magnetic data (such as magnetic susceptibility and remanence) could be clarified (eg via drilling) a more reliable solution could be derived, nevertheless ideas were still able to be tested yielding useful results The modelling was carried out using aeromagnetics flown at an average altitude of 60m. For information, modelling of ground magnetic data, if it existed would give a more reliable solution eg by getting closer to the magnetic sources would allow better resolution of magnetic bodies used in the model.

The possibility of the NW magnetic ridge being caused by a magnetic sheet is suggested as not being likely based primarily on the given constraint on susceptibility, and the constraint of flat dip.

The possibility of discrete shallow (50-150m below surface) bodies being the source of magnetism of the NW magnetic ridge was explored, and the interpretation implies the probability of these magnetic sources actually being deeper in the section and thicker than was suggested by the constraints of option 1.

The idea of the NW ridge being due to Mount Read volcanics as suggested by you, I think is given support by preliminary observations made on the regional magnetics contours provided by the Tasmanian Mines department, but needs verifying. It would be useful if some magnetic susceptibility measurements on the Mount Read volcanics could be provided.

The possibility of magnetic remanence in the ridge has been suggested by inspection of profiles and could be pursued further if required. In the case of modelling using remanence it would be more optimal to have some data from known physical measurements of remanence, if it could be arranged.

293018

Grant Archer
Geophysicist

Notes on Colour Image Products generated for Moina survey

1. Residual after 8-pass Hanning filter (colour)

This product is essentially a high-pass filter (residual = total - low-pass) which shows the location of the major high-frequency (shallower) features of the area. It is used as a first-pass approximation of the location and extent of magnetic bodies in a particular area, and produces a similar image to the Laplacian filter below. The chromatic key indicates the relative amplitude of the residual anomalies. The residual image displays a number of flight-line dependent features caused by variable terrain clearance in difficult topography.

2. Second vertical derivative (upward continued 10m) - greyscale.

This image has been produced by a 2D FFT process. 2VD images are typically very noisy, and this has been minimised by arbitrarily upward continuing the 2VD gridded data by 10m. The image clearly displays a number of NW trending structures in the centre and eastern parts of the area. An ovalshaped anomaly of diameter approximately 300mx400m appears to the north of the major skarn feature, at approx 423000 mE, and 5407500 mN. It is located adjacent to a NW trending structure. A line of anomalies extending in a NE direction across the lower right of the image may be cultural in origin, perhaps a power line or fence.

3. First vertical derivative (colour).

The 1VD grid has been colour scaled, with relief shading and highlights to emphasise subtle trends in the NW direction. It is a useful image for comparison against the 2VD image.

4. Laplacian filter.

Another high-pass filter of similar character to image 1.

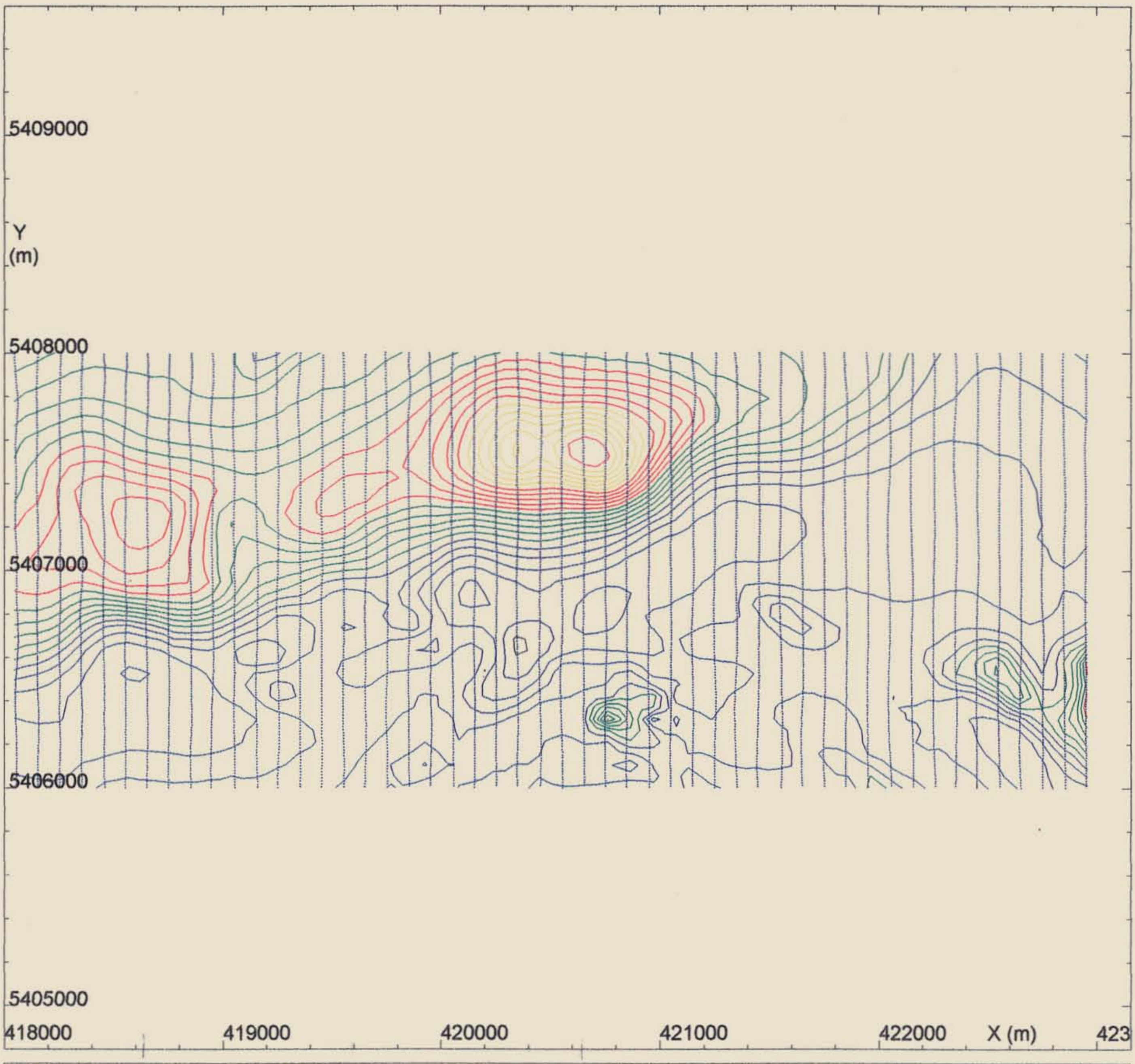
5. Sobel edge-enhancement of TMI (colour)

The Sobel filter is an edge-detecting filter, and has the property when applied to magnetic data that it identifies the edges of magnetic units. This image needs to be interpreted with caution ! The colour assignment no longer applies to the magnetic values, but to the gradients of the magnetic data. Therefore a ridge will be depicted as two red flanks (high gradient) either side of a blue ridge-top (low gradient). A large number of NW trending magnetic structures appear in this image, and the known skarn bodies have a consistent appearance. The oval-shaped anomaly identified in 2. is also well depicted on this image.

6. Reduced to Pole Magnetics (colour)

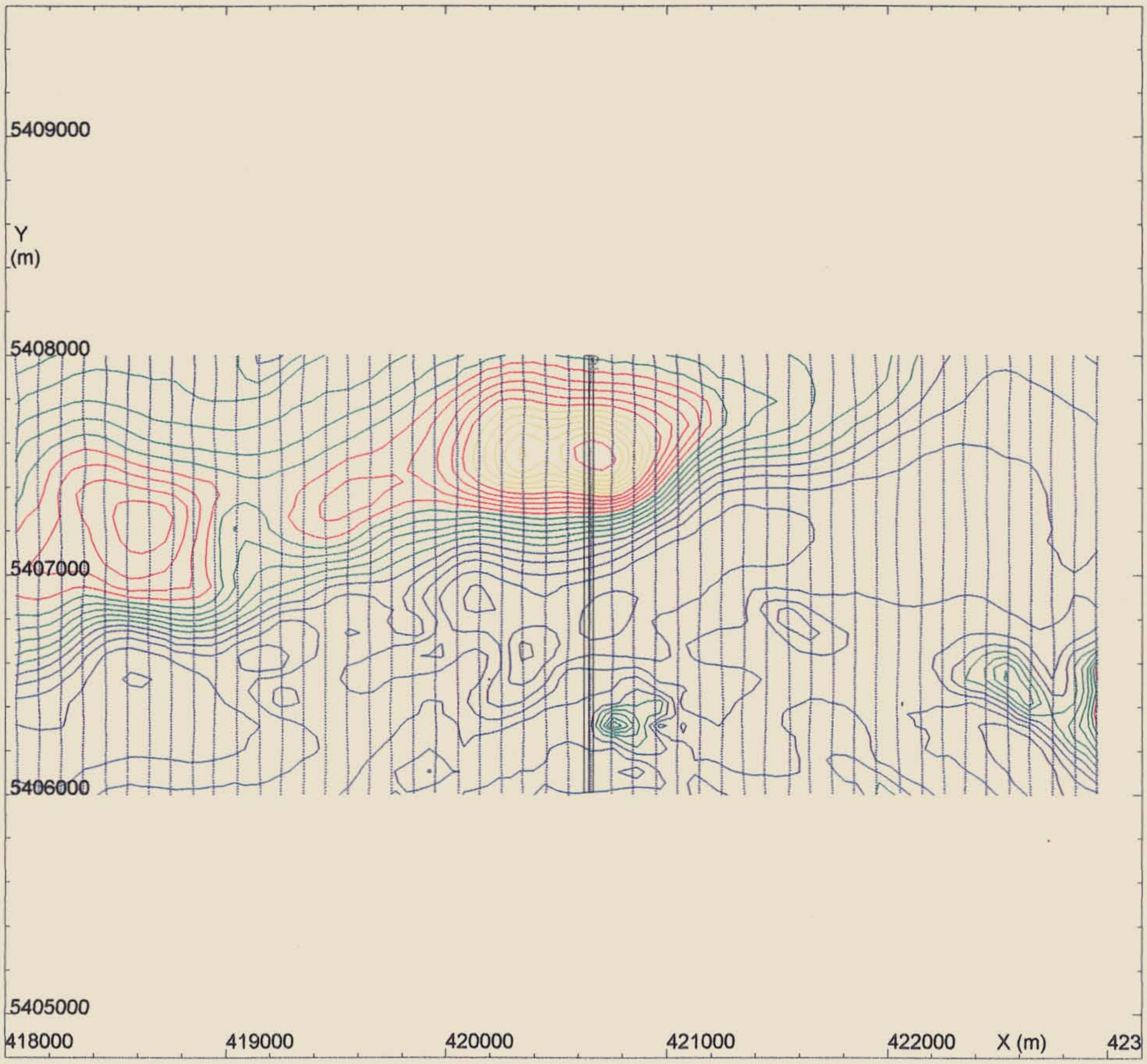
The reduction to pole of TMI was generated to see the effect of this process on the major anoamly in the NW of the area. Comparison against the TMI image will show that the anomaly has shifted considerably to the south, indicating a deep source. Most of the other features have retained a position close to the TMI position, reflecting shallow sources and steep angle of inclination at this latitude.

Contact: Mark Deuter Pitt Research. Ph: (08) 8362 9966 Fax: (08) 8362 9977.



Observations:	Data Area: Moina - Tasmania
Model:	
Contours of:	Observed field; Contour intervals: 80.0000, 400.0000 nT
POTENT v3.08	Plan drawn at 18:11 15/03/1997 for Pitt Research Ltd

Figure 1



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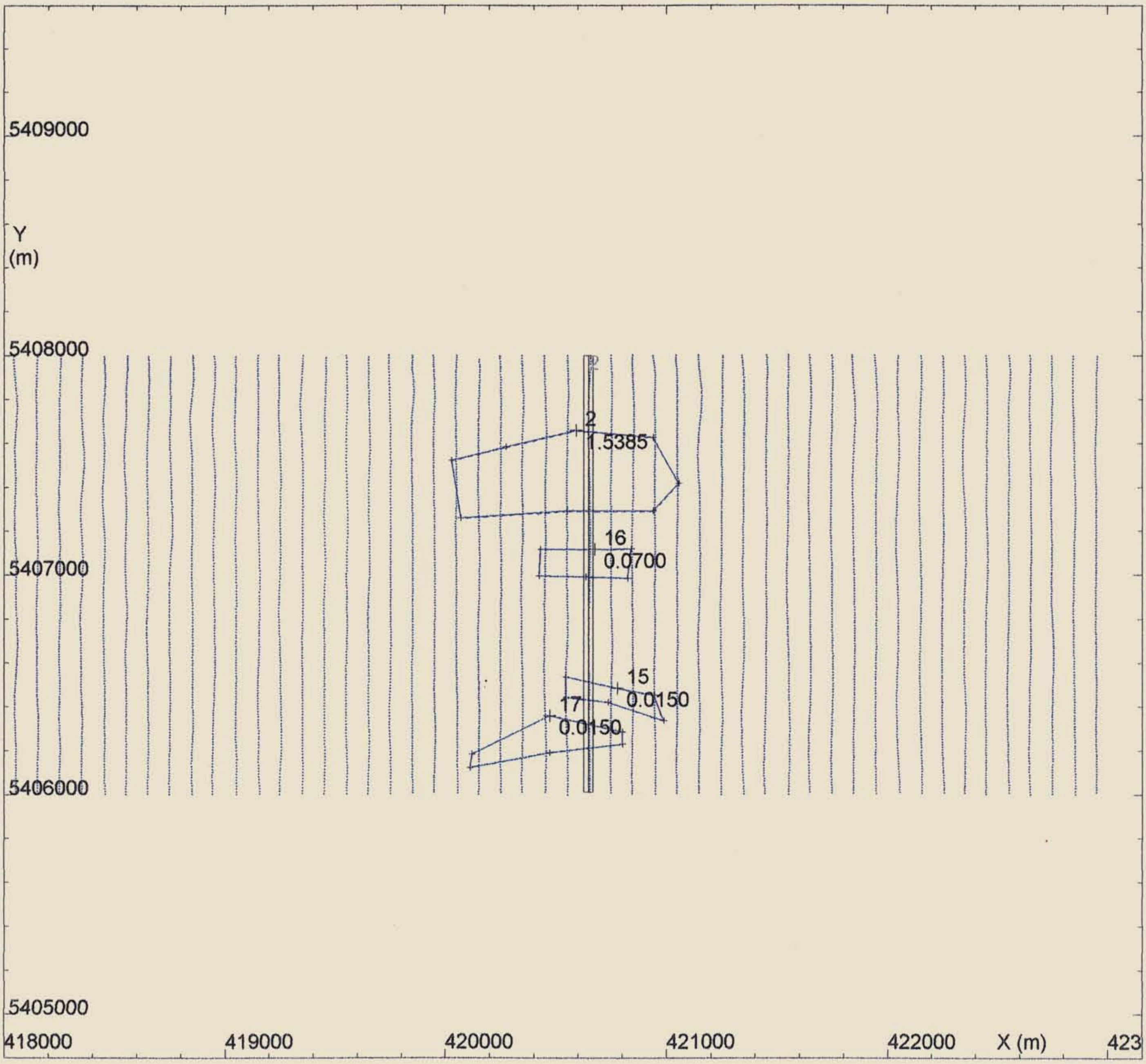
Model:	
Contours of:	Observed field; Contour intervals: 80.0000, 400.0000 nT
POTENT v3.08	Plan drawn at 18:48 15/03/1997 for Pitt Research Ltd

Figure 2a

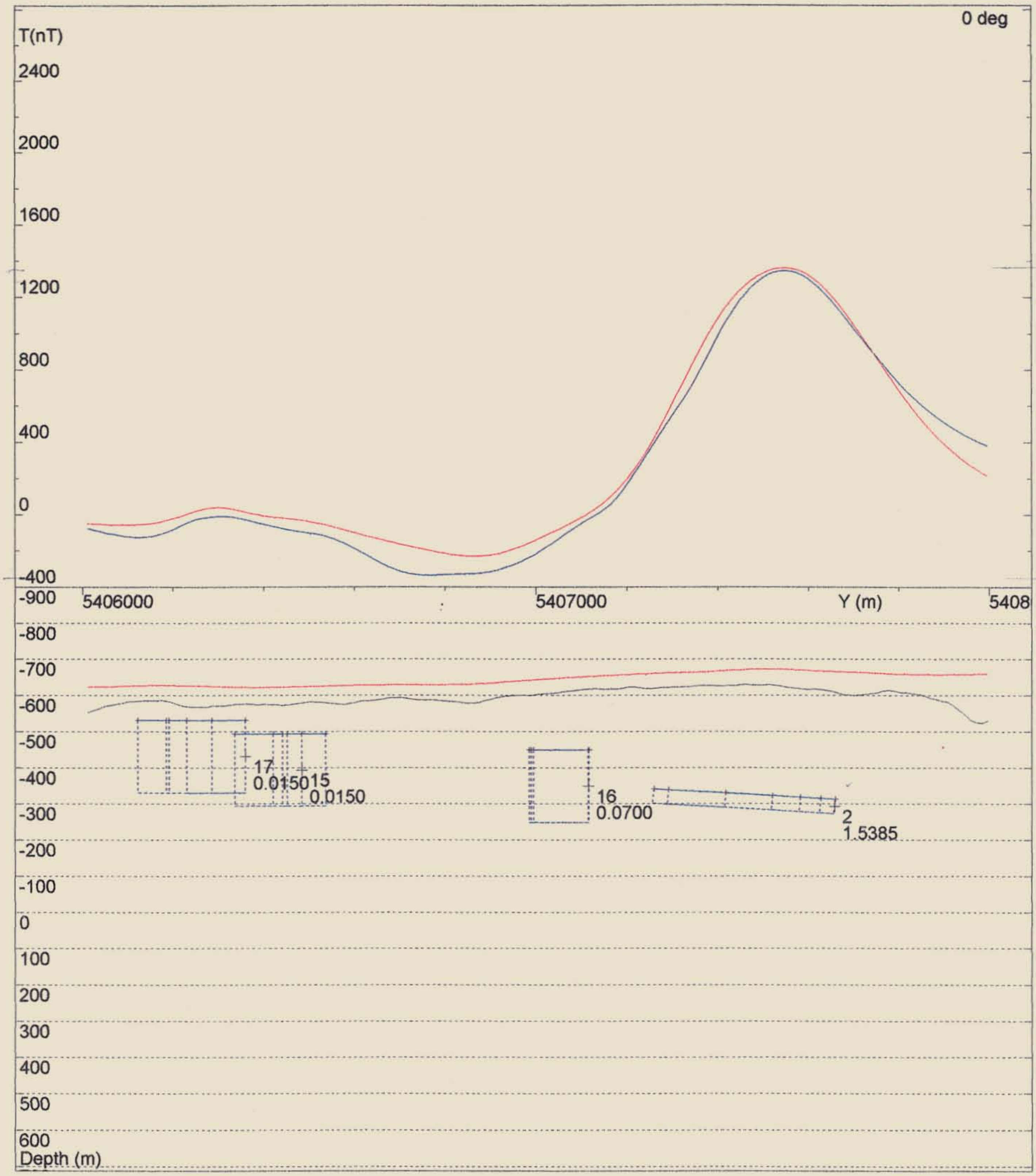
293022



Observations:	Data Area: Moina - Tasmania
Model:	Section 420650E (nb only bodies in vicinity of lines have been modelled)
POTENT v3.08	Plan drawn at 18:43 15/03/1997 for Pitt Research Ltd

Figure 2b

293023



Observations:	Data Area: Moina - Tasmania
Profile #2;	profile section 420650E
Model:	Section 420650E (nb only bodies in vicinity of lines have been modelled)
Calculation mode:	Total Magnetic Intensity

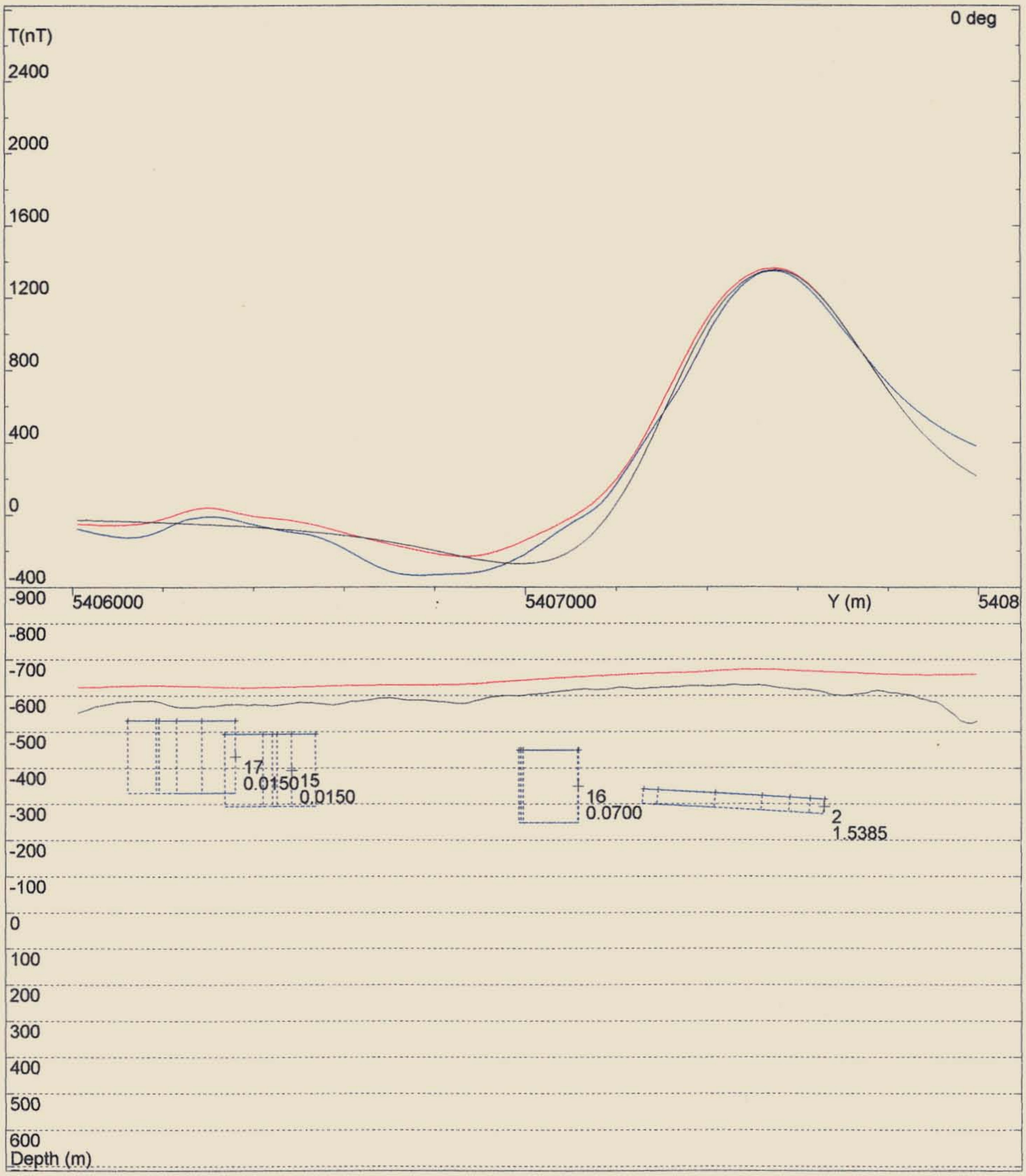
Observed: ———— Calculated: ————

Residual: ———— Individual body: ————

POTENT v3.08 Profile drawn at 18:43 15/03/1997 for Pitt Research Ltd

Figure 2c

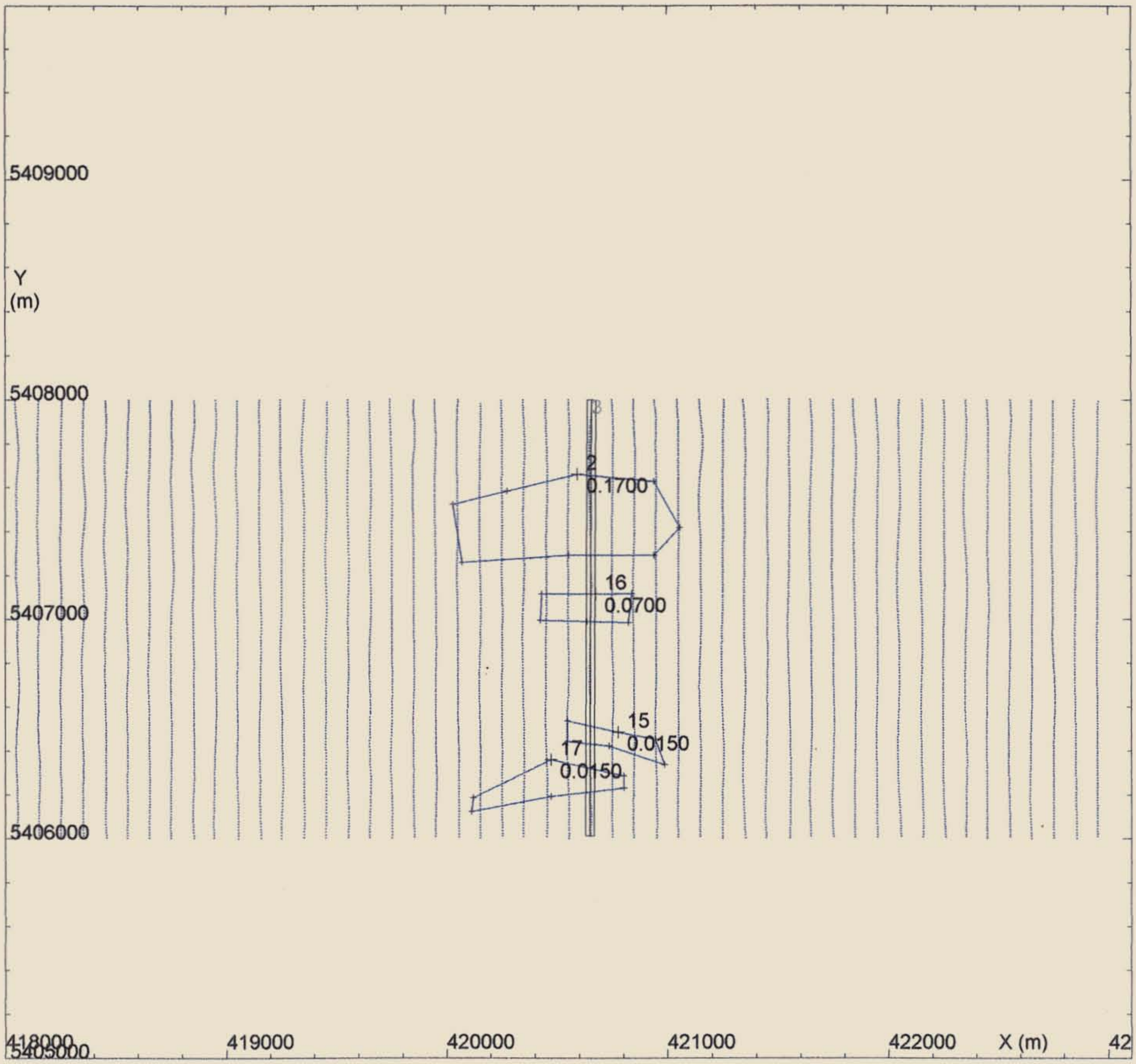
293024



Observations:	Data Area: Moina - Tasmania		
Profile #2;	profile section 420650E		
Model:	Section 420650E (nb only bodies in vicinity of lines have been modelled)		
Calculation mode:	Total Magnetic Intensity		
Observed:	————	Calculated:	————
Residual:	————	Individual body:	————
POTENT v3.08	Profile drawn at 18:44 15/03/1997 for Pitt Research Ltd		

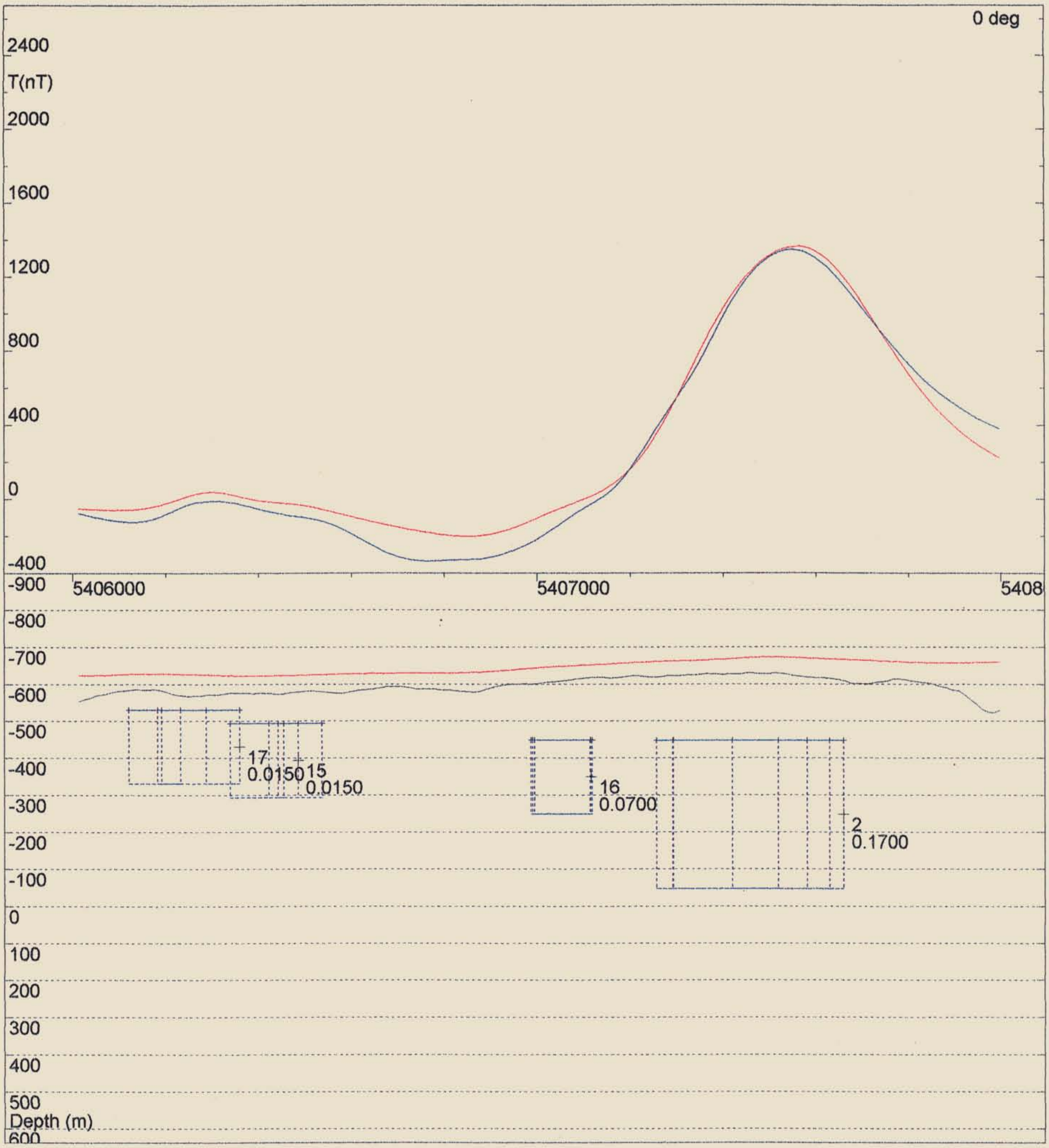
Figure 2d

293025



Observations:	Data Area: Moina - Tasmania
Model:	section 420650E - highly magnetic basalt
POTENT v3.08	Plan drawn at 01:25 17/03/1997 for Pitt Research Ltd

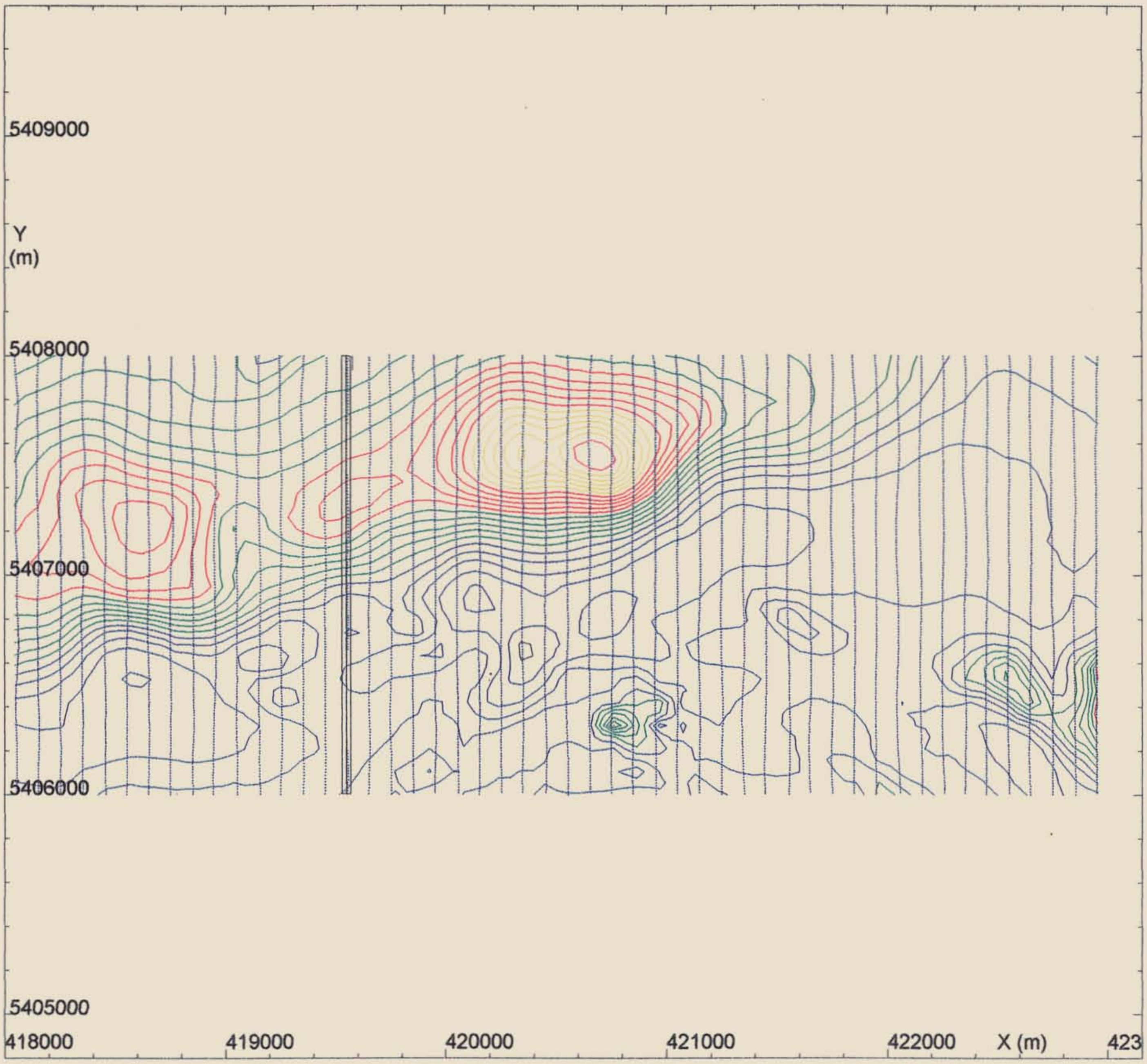
Figure 2e



Observations:	Data Area: Moina - Tasmania		
Profile #3;	profile section 420650E		
Model:	section 420650E - highly magnetic basalt		
Calculation mode:	Total Magnetic Intensity		
Observed:		Calculated:	
Residual:		Individual body:	
POTENT v3.08	Profile drawn at 01:20 17/03/1997 for Pitt Research Ltd		

Figure 2f

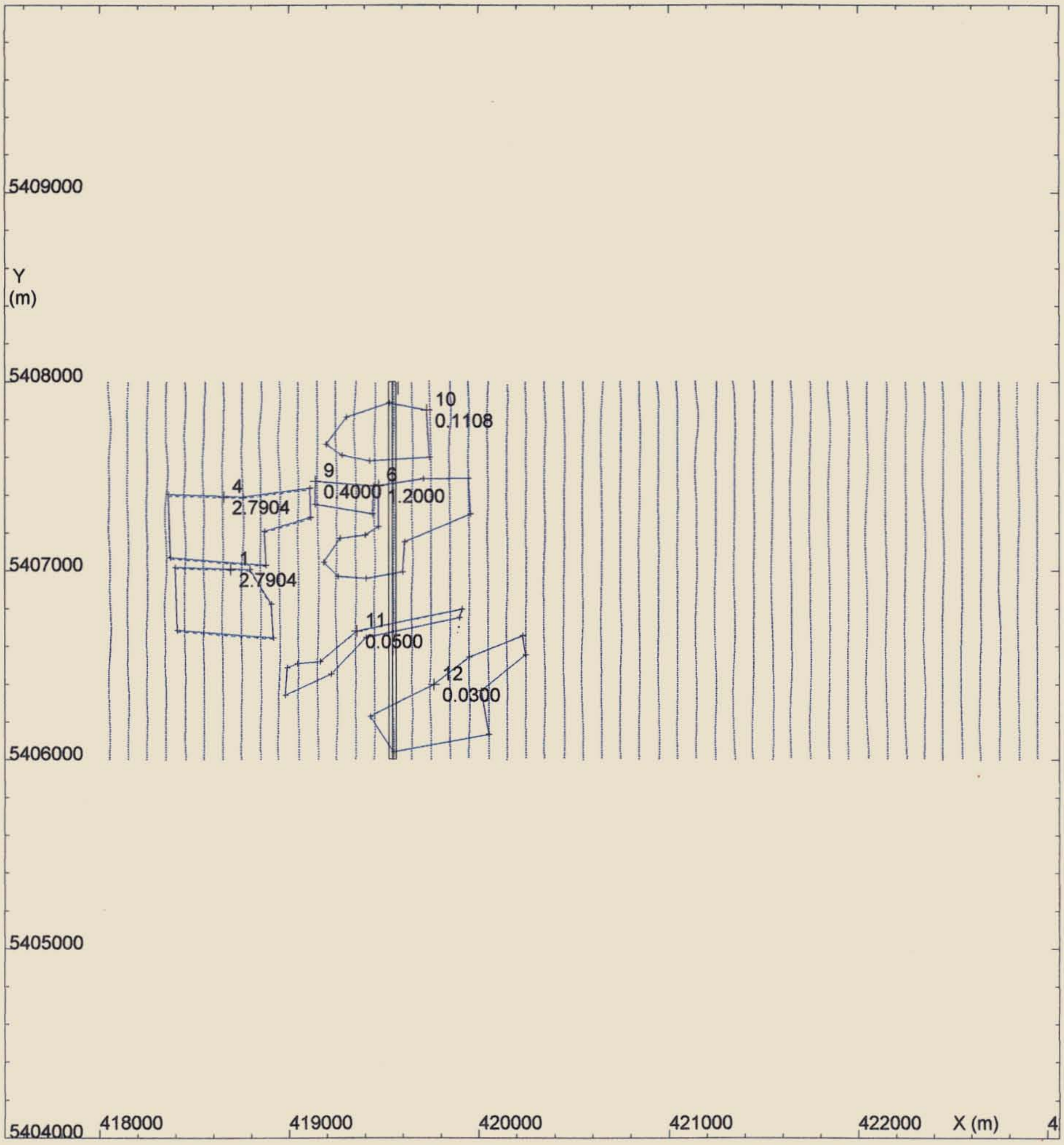
293027



Observations:	Data Area: Moina - Tasmania
Model:	
Contours of:	Observed field; Contour intervals: 80.0000, 400.0000 nT
POTENT v3.08	Plan drawn at 18:22 15/03/1997 for Pitt Research Ltd

Figure 3a

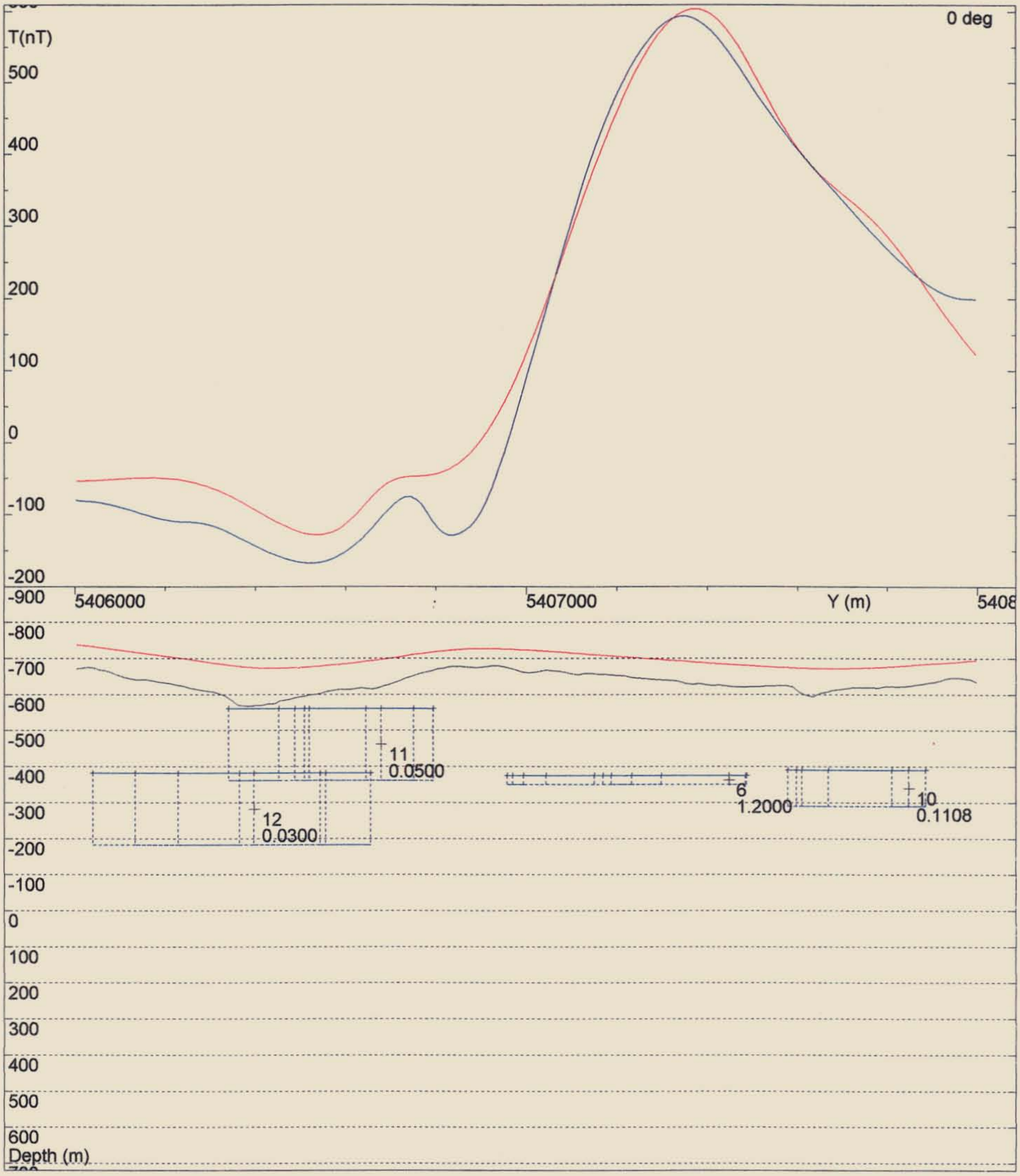
293028



Observations:	Data Area: Moina - Tasmania
Model:	Section 419550E (nb only bodies in vicinity of line have been modelled)
POTENT v3.08	Plan drawn at 00:46 16/03/1997 for Pitt Research Ltd

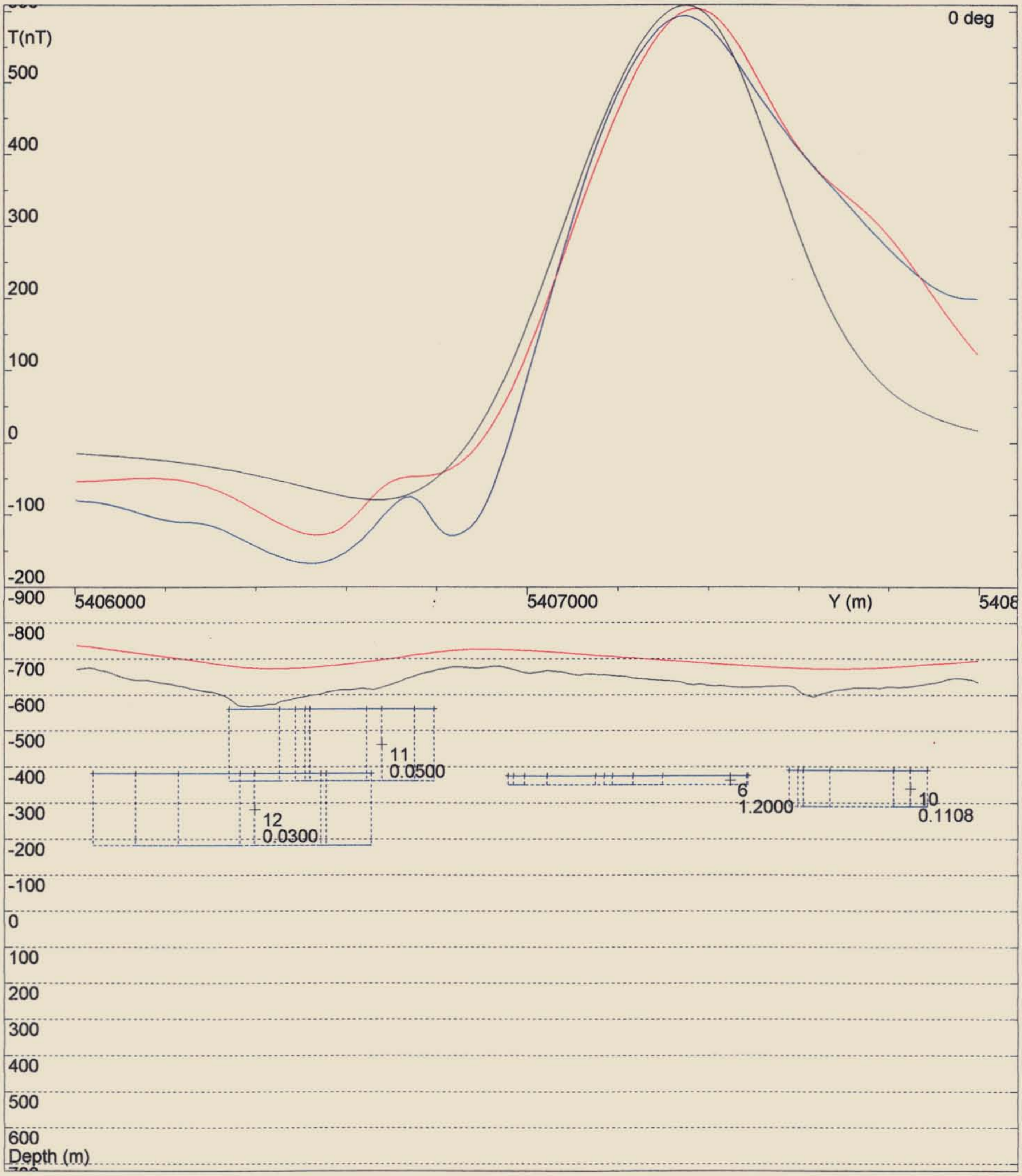
Figure 36

293029



Observations:	Data Area: Moina - Tasmania
Profile #1;	profile section 419550E
Model:	Section 419550E (nb only bodies in vicinity of line have been modelled)
Calculation mode:	Total Magnetic Intensity
Observed: ———	Calculated: ———
Residual: ———	Individual body: ———
POTENT v3.08	Profile drawn at 00:45 16/03/1997 for Pitt Research Ltd

Figure 3c

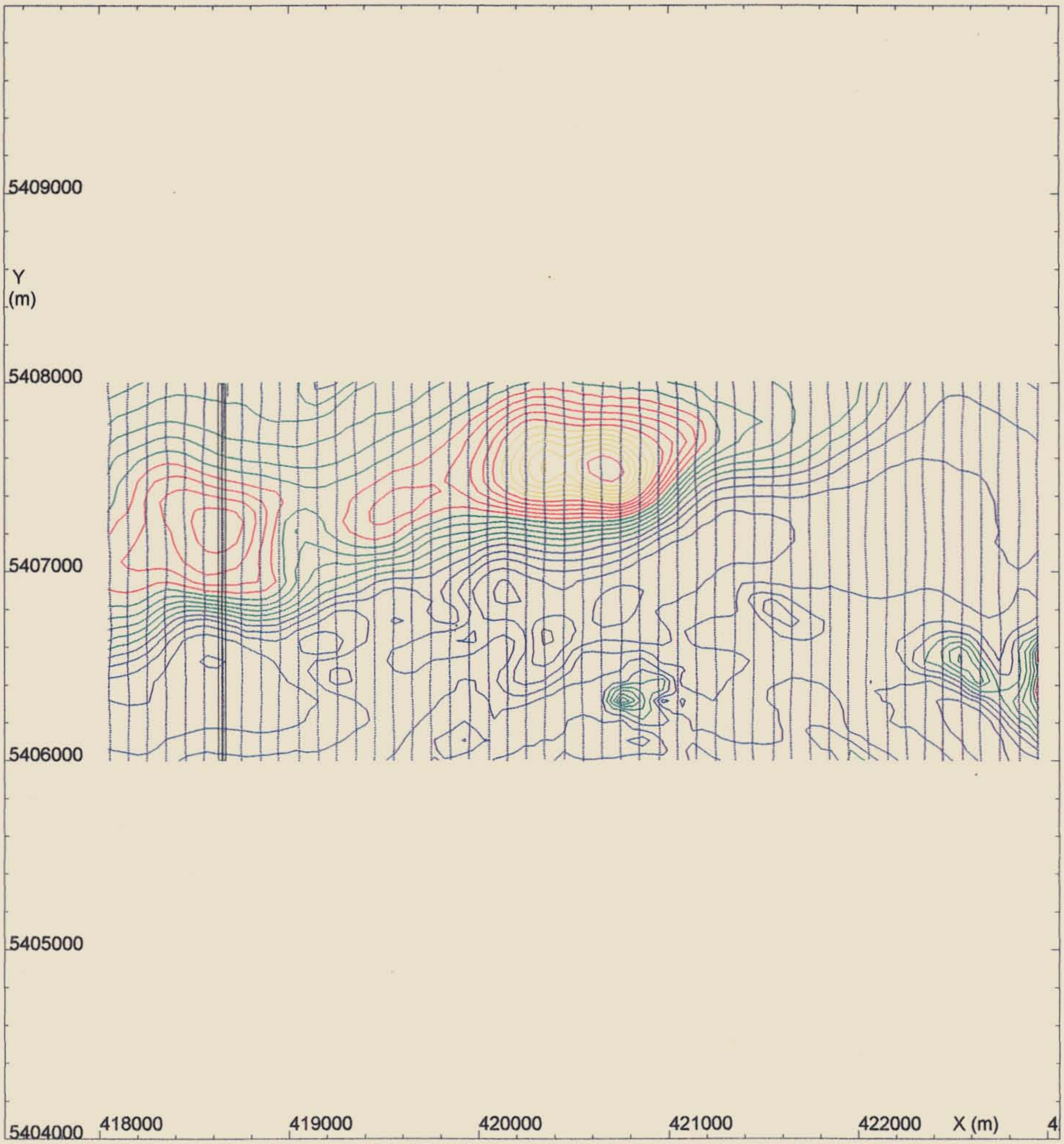


Observations:	Data Area: Moina - Tasmania
Profile #1;	profile section 419550E
Model:	Section 419550E (nb only bodies in vicinity of line have been modelled)
Calculation mode:	Total Magnetic Intensity

Observed: ———— Calculated: ————
Residual: ———— Individual body: ————

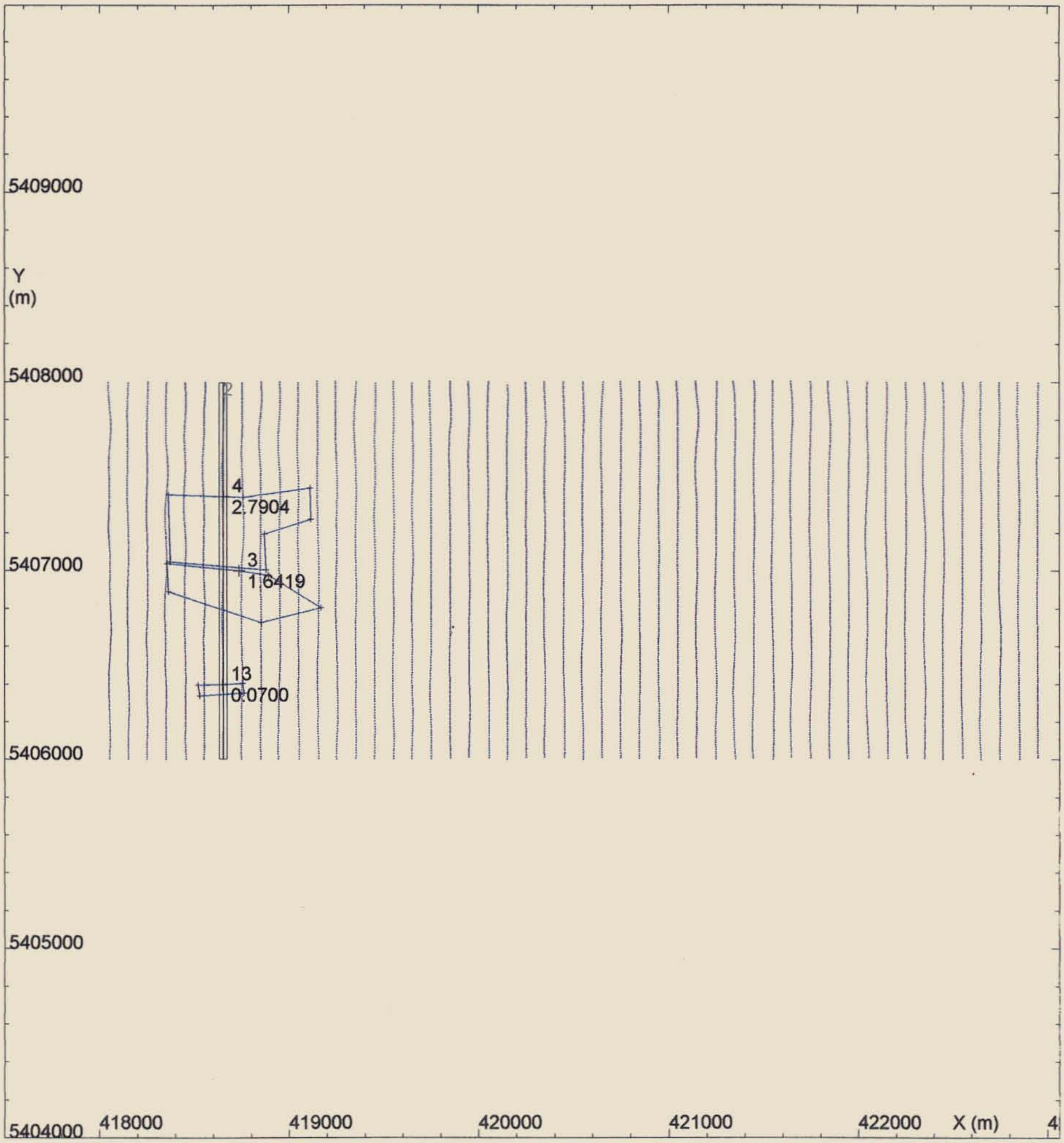
POTENT v3.08 Profile drawn at 00:53 16/03/1997 for Pitt Research Ltd

Figure 3d



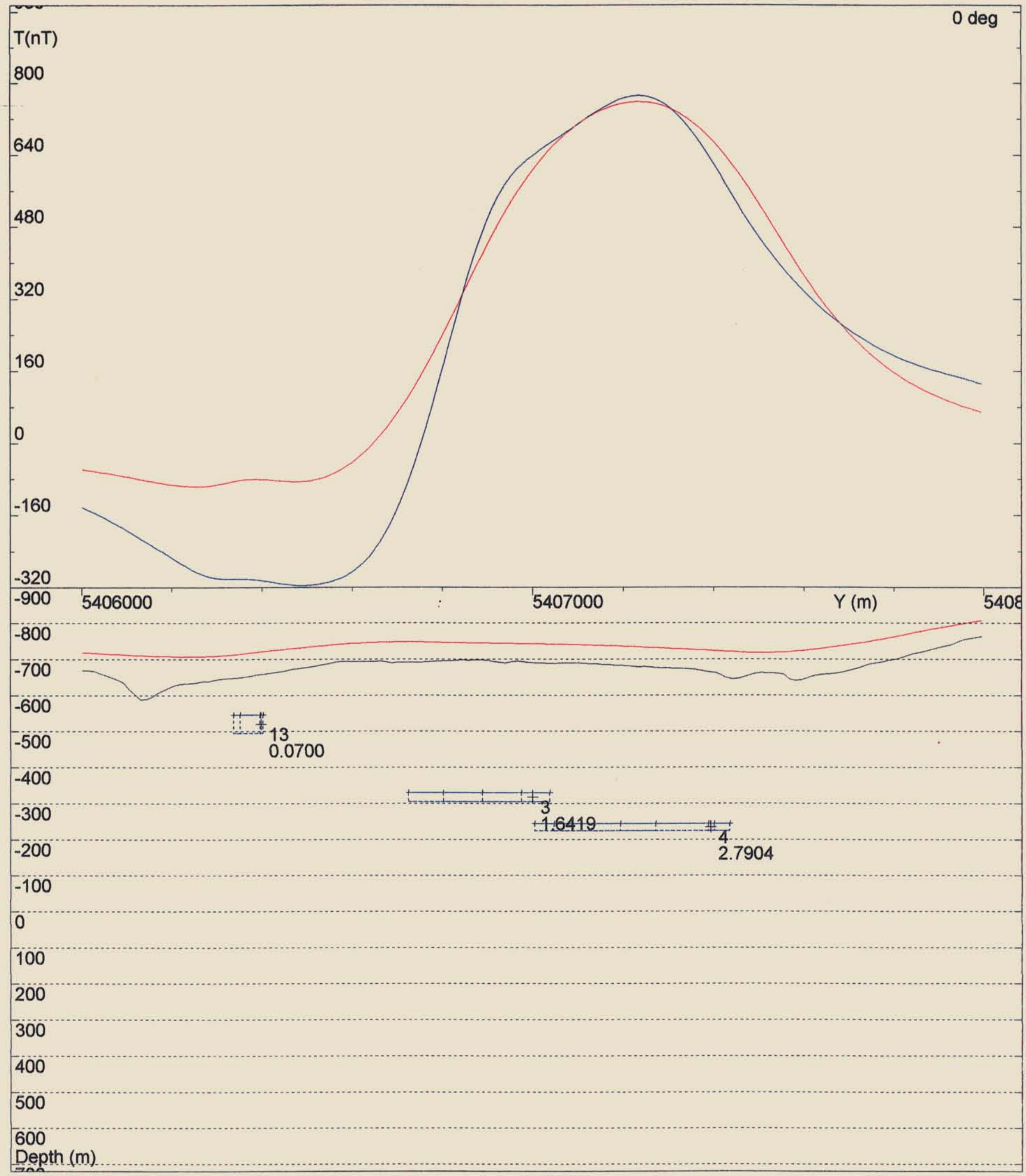
Observations:	Data Area: Moina - Tasmania
Model:	
Contours of:	Observed field; Contour intervals: 80.0000, 400.0000 nT
POTENT v3.08	Plan drawn at 21:55 15/03/1997 for Pitt Research Ltd

Figure 4a



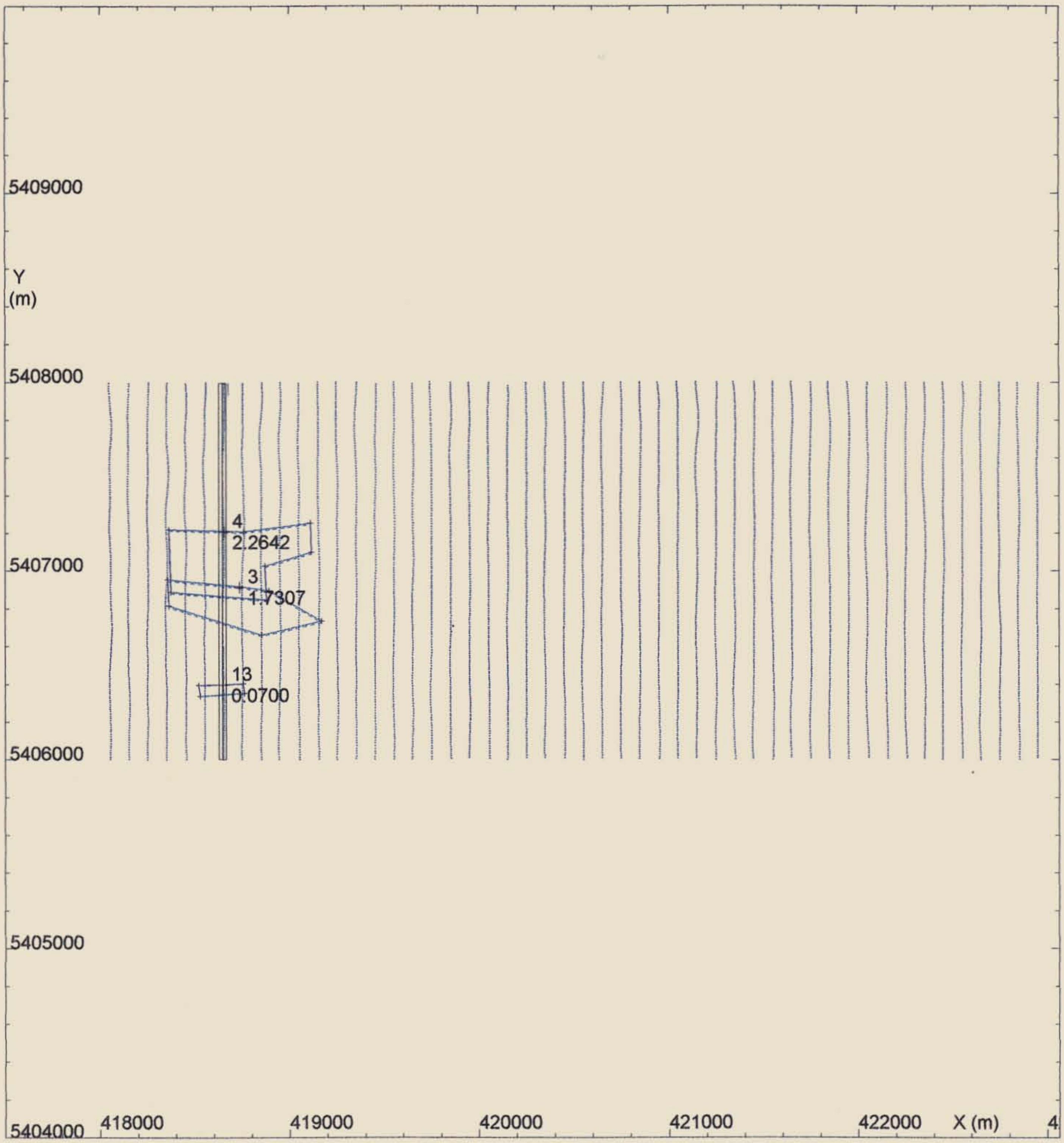
Observations:	Data Area: Moina - Tasmania
Model:	Section 418650E - no remanence (nb only bodies in vicinity of line have been modelled)
POTENT v3.08	Plan drawn at 00:34 16/03/1997 for Pitt Research Ltd

Figure 4b



Observations:	Data Area: Moina - Tasmania
Profile #2;	profile section 418650E
Model:	Section 418650E - no remanence (nb only bodies in vicinity of line have been modelled)
Calculation mode:	Total Magnetic Intensity
Observed:	Calculated:
Residual:	Individual body:
POTENT v3.08	Profile drawn at 00:34 16/03/1997 for Pitt Research Ltd

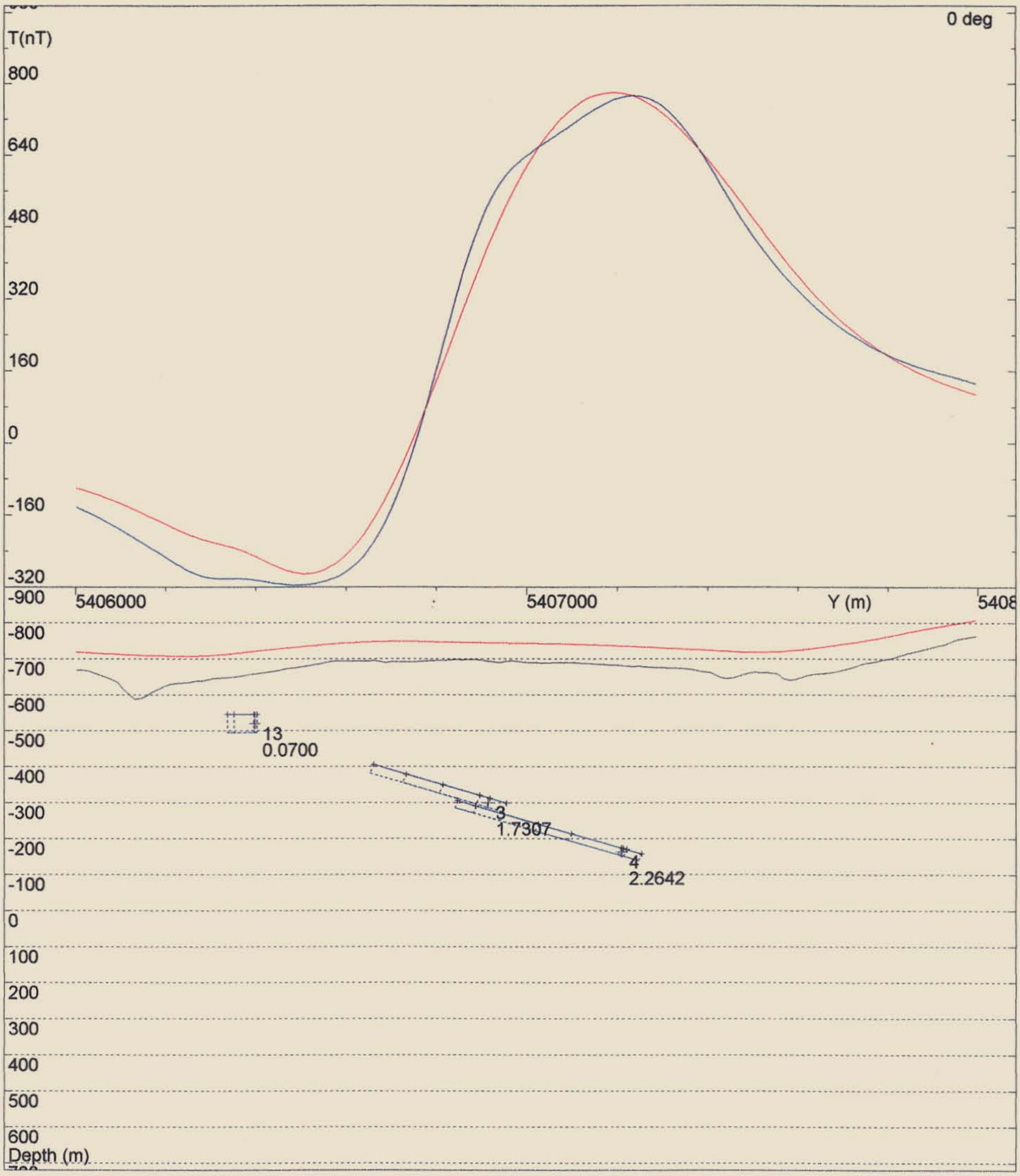
Figure 4c



Observations:	Data Area: Moina - Tasmania
Model:	Section 418650E (nb only bodies in vicinity of line have been modelled)
POTENT v3.08	Plan drawn at 21:40 15/03/1997 for Pitt Research Ltd

Figure 5a

293035

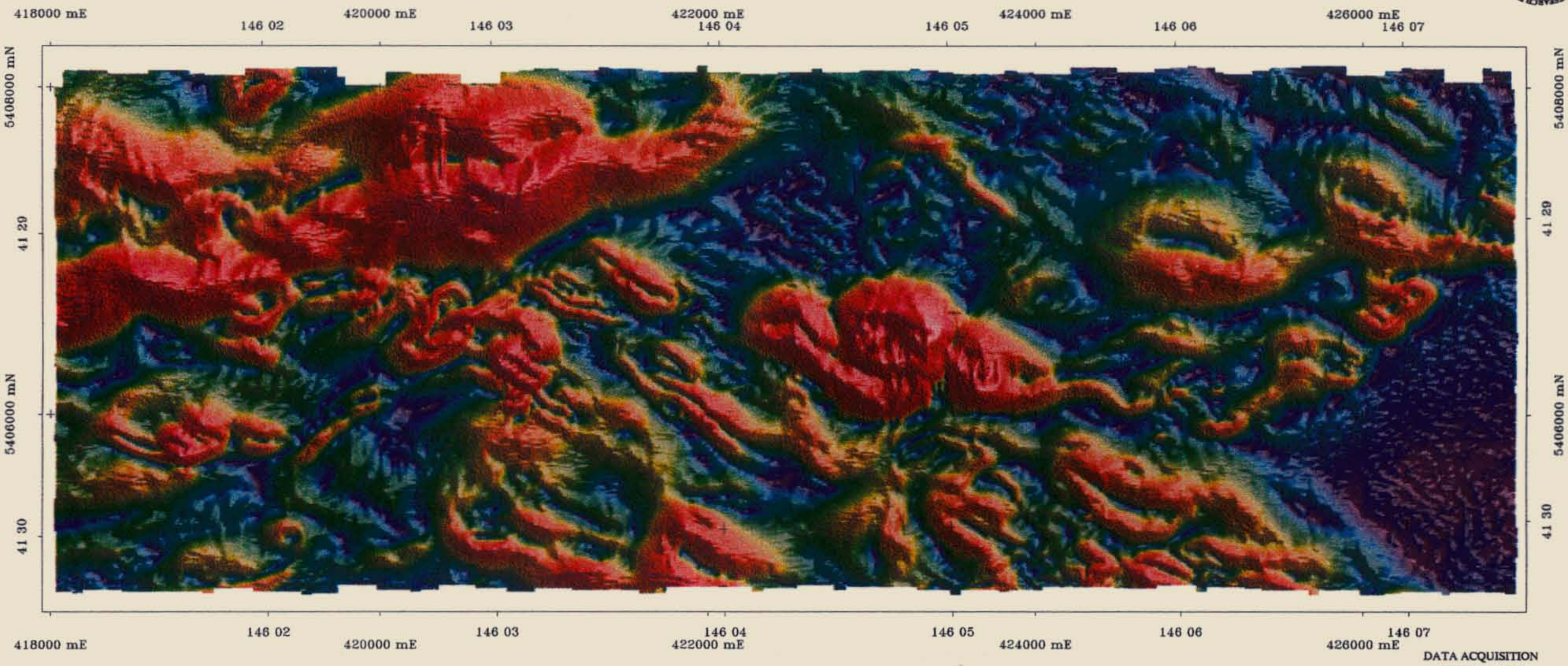


Observations:	Data Area: Moina - Tasmania		
Profile #1;	profile section 418650E		
Model:	Section 418650E (nb only bodies in vicinity of line have been modelled)		
Calculation mode:	Total Magnetic Intensity		
Observed:	————	Calculated:	————
Residual:	————	Individual body:	————
POTENT v3.08	Profile drawn at 21:35 15/03/1997 for Pitt Research Ltd		

Figure 5b

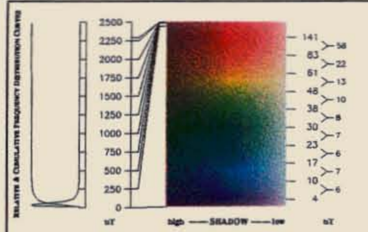
Moina

Titan Resources



5 cm

COLOUR SCALED SOBEL EDGE ENHANCEMENT OF TMI WITH RELIEF SHADING & HIGHLIGHTS FROM 45°



CHROMATIC KEY

500 0 500 1000 1500 2000 2500 metres

Universal Transverse Mercator Projection
Central Meridian: 147° East, AMG Zone 55
Grid Cell Size: 10 metres
Graticules 1 minute and 2000 metres

SURVEY SPECIFICATIONS

FLIGHT LINE DIRECTION	TRAVERSE LINES: along Grid NS TIE LINES: along Grid EW
FLIGHT LINE SPACING	TRAVERSE LINES: 50 metres TIE LINES: 500 metres
SURVEY HEIGHT	MEAN TERRAIN CLEARANCE: 60 metres
SAMPLE INTERVAL	0.1 secs (approx 3-4 metres along ground)
NAVIGATION	Differential GPS
SURVEY FLOWN	May 1996

DATA ACQUISITION

UTS Geophysics Pty Ltd
Valentine Rd, Perth Airport, Belmont, WA, 6104
Phone: 09 479 4232 Fax: 09 479 7361

AIRCRAFT	AS350B Helicopter
MAGNETOMETER	Scintrex CS-2 Cesium
RESOLUTION	0.001 nT
SENSITIVITY	0.001 nT
RECORDING INTERVAL	10 Hz
COMPENSATION	RMS AADC II Compensator
ACQUISITION MANAGEMENT	Neil Goodey, Nino Tufilli

DATA PROCESSING

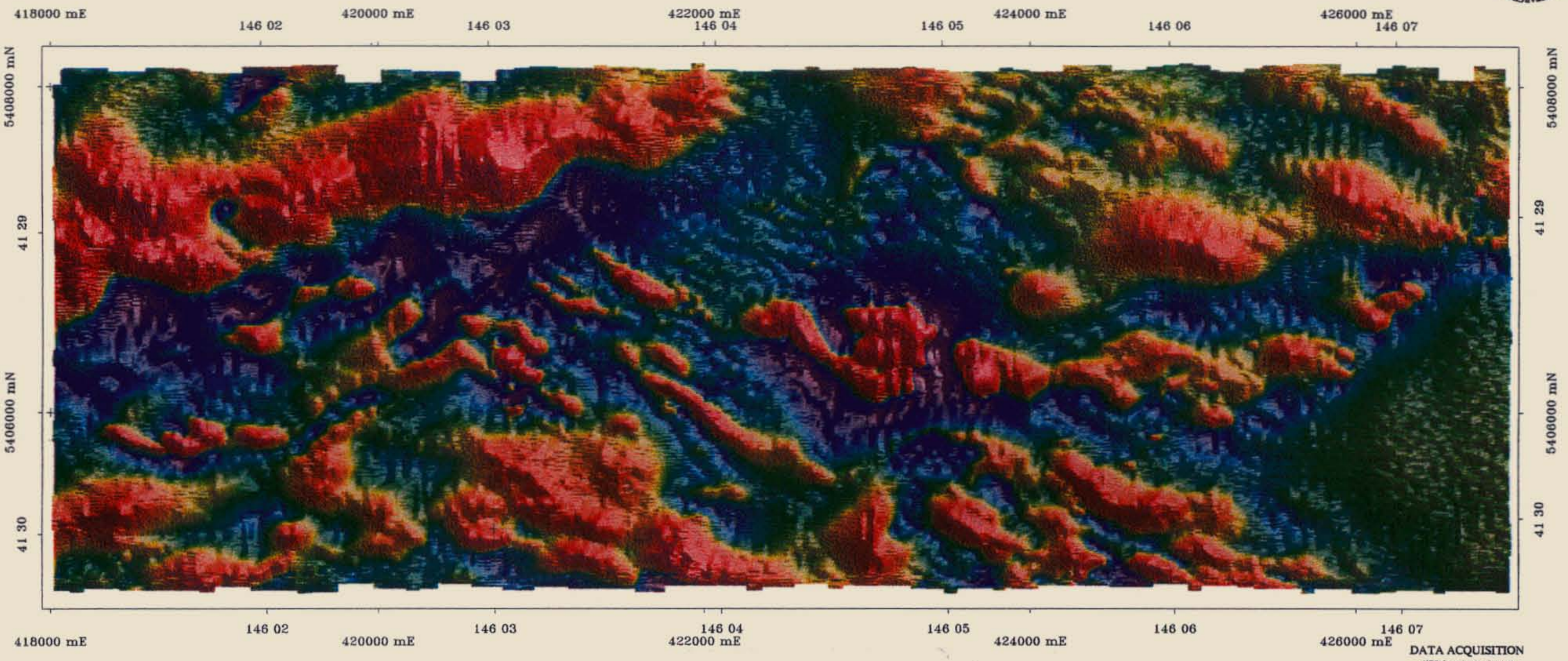
Pitt Research Pty Ltd
45 Hackney Road, Hackney, SA, 5069
Phone: 08 8362 9966 Fax: 08 8362 9977

MAGNETIC DATA PROCESSING	The magnetic data have been corrected for regional gradient by subtraction of IGRF model 1995 computed at survey date. Diurnal magnetic variations have been removed. System parallax has been removed. Microlevelling has been applied.
GRIDDING PARAMETERS	ALGORITHM: bicubic spline MESH SIZE: 6 × 6 metres
PROCESSING MANAGEMENT	Mark Deuter, Mark Wegner

203036

Moina

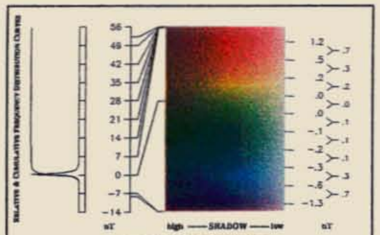
Titan Resources



5 cm

COLOUR SCALED FIRST VERTICAL DERIVATIVE WITH RELIEF SHADING & HIGHLIGHTS FROM 45°

500 0 500 1000 1500 2000 2500 metres



CHROMATIC KEY

Universal Transverse Mercator Projection
Central Meridian: 147° East, AMG Zone 55
Grid Cell Size: 10 metres
Graticules 1 minute and 2000 metres

SURVEY SPECIFICATIONS

FLIGHT LINE DIRECTION	TRAVERSE LINES: along Grid NS TIE LINES: along Grid EW
FLIGHT LINE SPACING	TRAVERSE LINES: 50 metres TIE LINES: 500 metres
SURVEY HEIGHT	MEAN TERRAIN CLEARANCE: 60 metres
SAMPLE INTERVAL	0.1 secs (approx 3-4 metres along ground)
NAVIGATION	Differential GPS
SURVEY FLOWN	May 1996

DATA ACQUISITION

UTS Geophysics Pty Ltd
Valentine Rd, Perth Airport, Belmont, WA, 6104
Phone: 09 479 4232 Fax: 09 479 7361

AIRCRAFT	AS350B Helicopter
MAGNETOMETER	Scintrex CS-2 Cesium
RESOLUTION	0.001 nT
SENSITIVITY	0.001 nT
RECORDING INTERVAL	10 Hz
COMPENSATION	RMS AADC II Compensator
ACQUISITION MANAGEMENT	Neil Goodey, Nino Tufilli

DATA PROCESSING

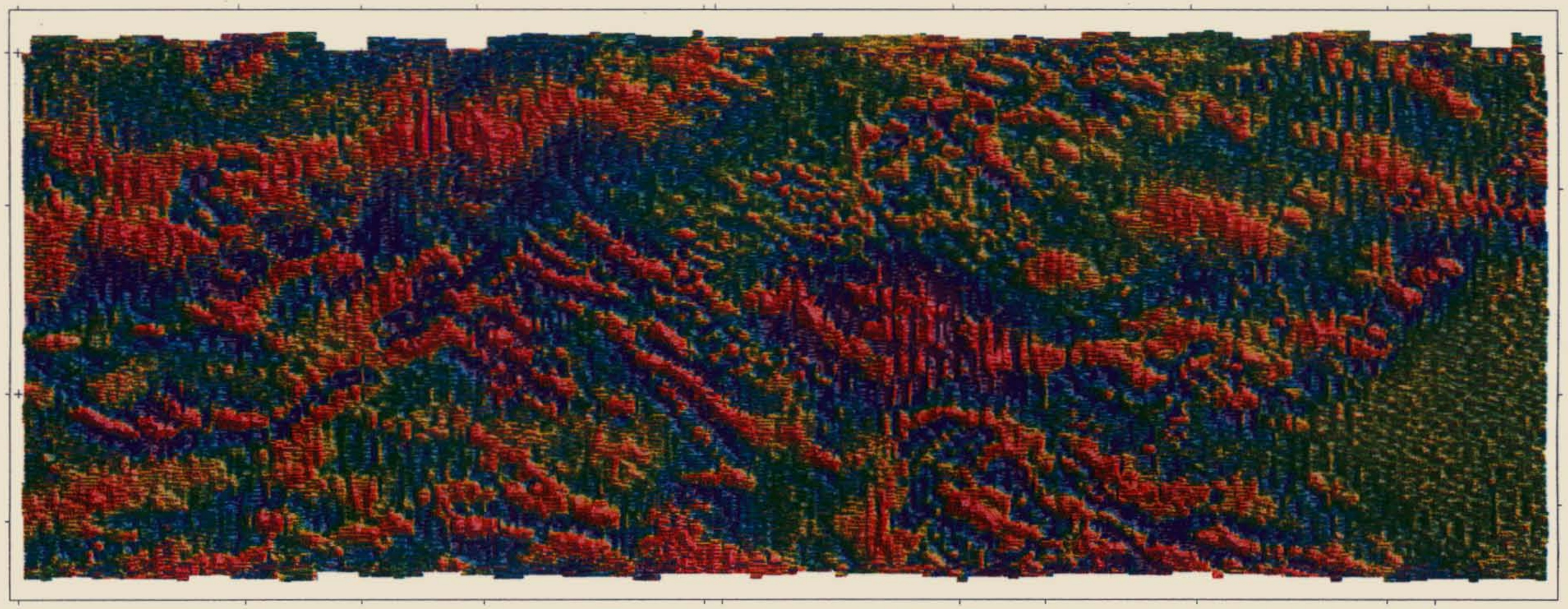
Pitt Research Pty Ltd
45 Hackney Road, Hackney, SA, 5069
Phone: 08 8362 9966 Fax: 08 8362 9977

MAGNETIC DATA PROCESSING	The magnetic data have been corrected for regional gradient by subtraction of IGRF model 1995 computed at survey date. Diurnal magnetic variations have been removed. System parallax has been removed. Microlevelling has been applied.
GRIDDING PARAMETERS	ALGORITHM: bicubic spline MESH SIZE: 6 × 6 metres
PROCESSING MANAGEMENT	Mark Deuter, Mark Wegner

223037

Moina

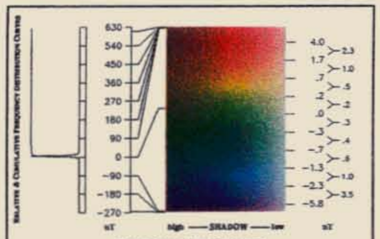
Titan Resources



5 cm

COLOUR SCALED LAPLACIAN FILTER of TMI
WITH RELIEF SHADING & HIGHLIGHTS FROM 45°

500 0 500 1000 1500 2000 2500 metres



CHROMATIC KEY

Universal Transverse Mercator Projection
Central Meridian: 147° East, AMG Zone 55
Grid Cell Size: 10 metres
Graticules 1 minute and 2000 metres

SURVEY SPECIFICATIONS

FLIGHT LINE DIRECTION	TRAVERSE LINES: along Grid NS TIE LINES: along Grid EW
FLIGHT LINE SPACING	TRAVERSE LINES: 50 metres TIE LINES: 500 metres
SURVEY HEIGHT	MEAN TERRAIN CLEARANCE: 60 metres
SAMPLE INTERVAL	0.1 secs (approx 3-4 metres along ground)
NAVIGATION	Differential GPS
SURVEY FLOWN	May 1996

DATA ACQUISITION

UTS Geophysics Pty Ltd
Valentine Rd, Perth Airport, Belmont, WA, 6104
Phone: 09 479 4232 Fax: 09 479 7361

AIRCRAFT	AS350B Helicopter
MAGNETOMETER	Scintrex CS-2 Cesium
RESOLUTION	0.001 nT
SENSITIVITY	0.001 nT
RECORDING INTERVAL	10 Hz
COMPENSATION	RMS AADC II Compensator
ACQUISITION MANAGEMENT	Neil Goodey, Nino Tufilli

DATA PROCESSING

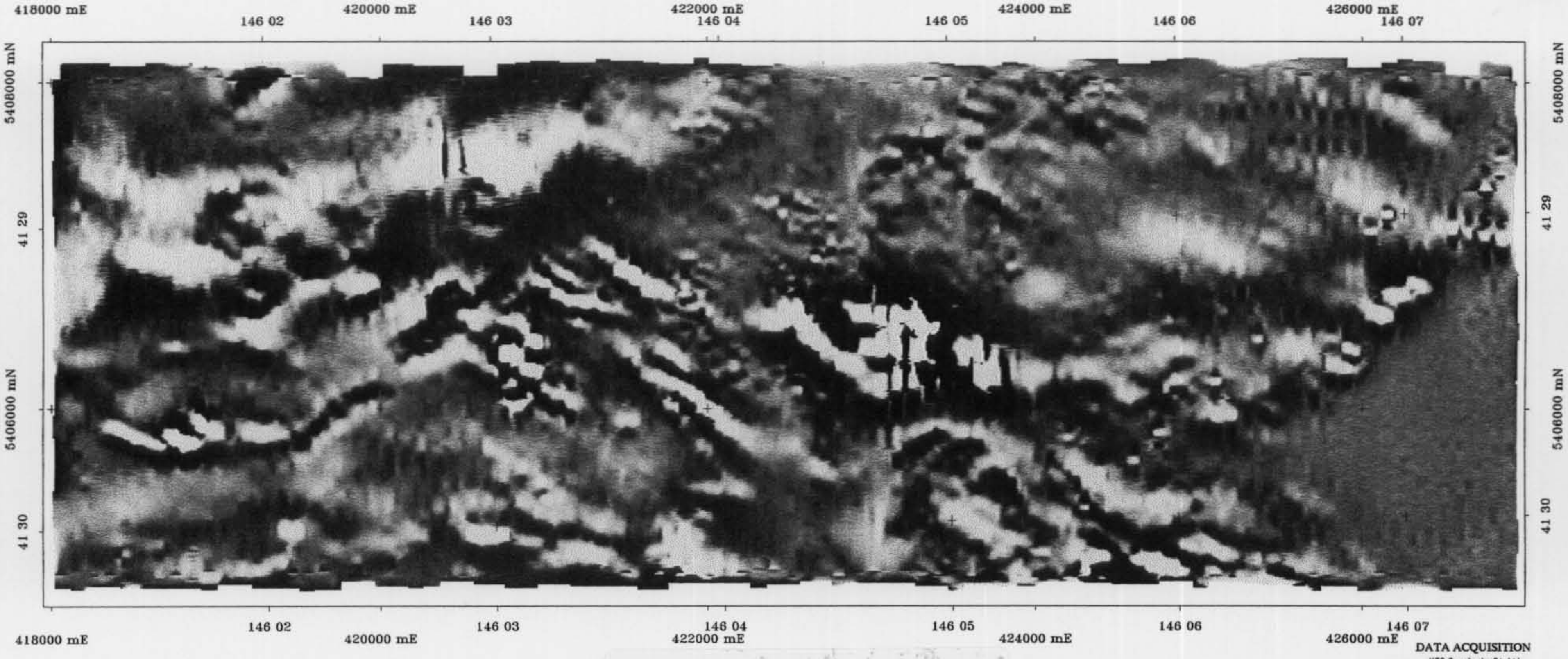
Pitt Research Pty Ltd
45 Hackney Road, Hackney, SA, 5069
Phone: 08 8362 9966 Fax: 08 8362 9977

MAGNETIC DATA PROCESSING	The magnetic data have been corrected for regional gradient by subtraction of IGRF model 1995 computed at survey date. Diurnal magnetic variations have been removed. System parallax has been removed. Microlevelling has been applied.
GRIDDING PARAMETERS	ALGORITHM: bicubic spline MESH SIZE: 6 × 6 metres
PROCESSING MANAGEMENT	Mark Deuter, Mark Wegner

233038

Moina

Titan Resources



5 cm

GREY SCALED SECOND VERTICAL DERIVATIVE
UPWARD CONTINUED by 10 metres

500 0 500 1000 1500 2000 2500 metres

Universal Transverse Mercator Projection
Central Meridian: 147° East, AMG Zone 55
Grid Cell Size: 10 metres
Graticules 1 minute and 2000 metres

MAP SHADING
(nonlinear scale)

-0.1 0 0.3

SECOND VERTICAL DERIVATIVE

DATA ACQUISITION

UTS Geophysics Pty Ltd
Valentine Rd, Perth Airport, Belmont, WA, 6104
Phone: 09 479 4232 Fax: 09 479 7361

AIRCRAFT	AS350B Helicopter
MAGNETOMETER	Scintrex CS-2 Cesium
RESOLUTION	0.001 nT
SENSITIVITY	0.001 nT
RECORDING INTERVAL	10 Hz
COMPENSATION	RMS AADC II Compensator
ACQUISITION MANAGEMENT	Neil Goodey, Nino Tufilli

SURVEY SPECIFICATIONS

FLIGHT LINE DIRECTION	TRAVERSE LINES: along Grid NS TIE LINES: along Grid EW
FLIGHT LINE SPACING	TRAVERSE LINES: 50 metres TIE LINES: 500 metres
SURVEY HEIGHT	MEAN TERRAIN CLEARANCE: 60 metres
SAMPLE INTERVAL	0.1 secs (approx 3-4 metres along ground)
NAVIGATION	Differential GPS
SURVEY FLOWN	May 1996

DATA PROCESSING

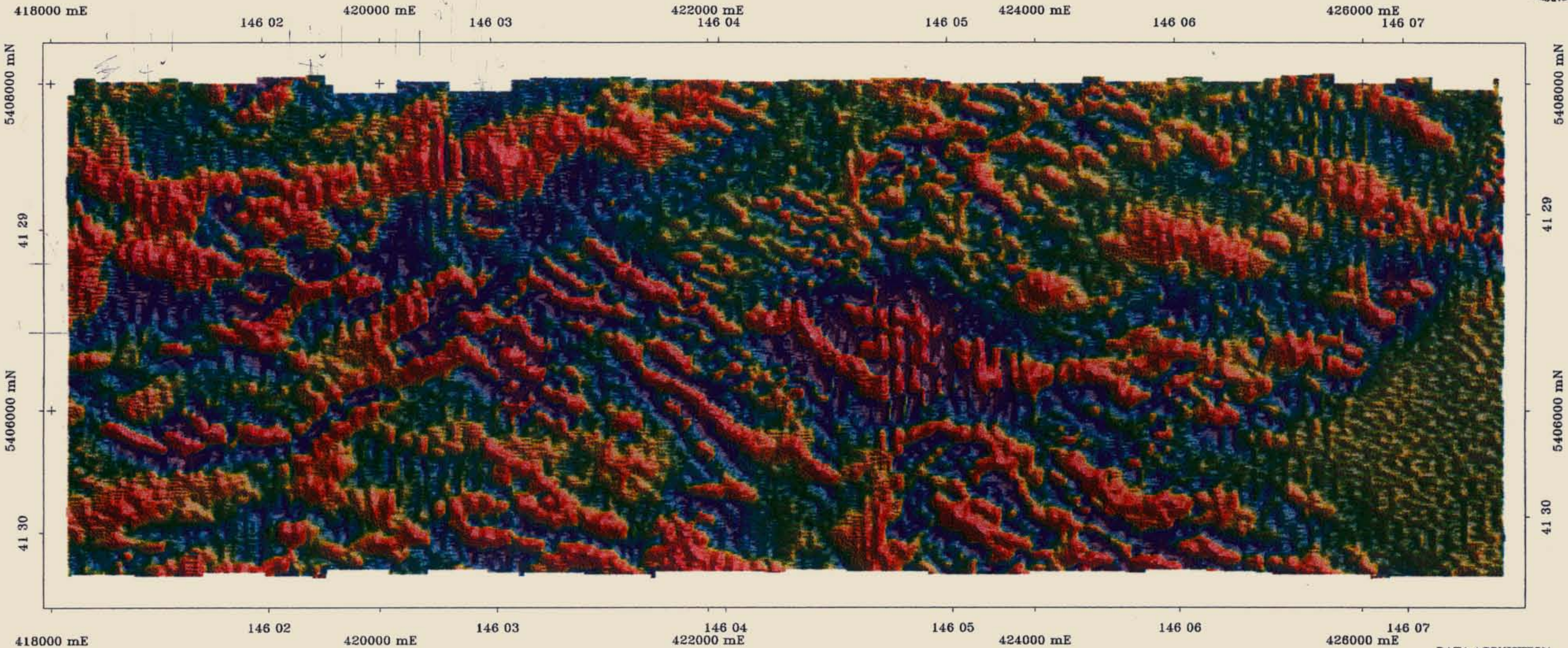
Pitt Research Pty Ltd
45 Hackney Road, Hackney, SA, 5069
Phone: 08 8362 9966 Fax: 08 8362 9977

MAGNETIC DATA PROCESSING	The magnetic data have been corrected for regional gradient by subtraction of IGRF model 1995 computed at survey date. Diurnal magnetic variations have been removed. System parallax has been removed. Microlevelling has been applied.
GRIDDING PARAMETERS	ALGORITHM: bicubic spline MESH SIZE: 6 × 6 metres
PROCESSING MANAGEMENT	Mark Deuter, Mark Wegner

293039

Moina

Titan Resources

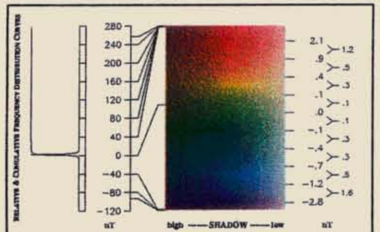


5 cm

COLOUR SCALED RESIDUAL AFTER 8-PASS HANNING FILTER
RELIEF SHADED & HIGHLIGHTED FROM 45°

500 0 500 1000 1500 2000 2500 metres

Universal Transverse Mercator Projection
Central Meridian: 147° East, AMG Zone 55
Grid Cell Size: 10 metres
Graticules 1 minute and 2000 metres



CHROMATIC KEY

SURVEY SPECIFICATIONS

FLIGHT LINE DIRECTION	TRAVERSE LINES: along Grid NS TIE LINES: along Grid EW
FLIGHT LINE SPACING	TRAVERSE LINES: 50 metres TIE LINES: 500 metres
SURVEY HEIGHT	MEAN TERRAIN CLEARANCE: 60 metres
SAMPLE INTERVAL	0.1 secs (approx 3-4 metres along ground)
NAVIGATION	Differential GPS
SURVEY FLOWN	May 1996

DATA ACQUISITION

UTS Geophysics Pty Ltd
Valentine Rd, Perth Airport, Belmont, WA, 6104
Phone: 09 479 4232 Fax: 09 479 7361

AIRCRAFT	AS350B Helicopter
MAGNETOMETER	Scintrex CS-2 Cesium
RESOLUTION	0.001 nT
SENSITIVITY	0.001 nT
RECORDING INTERVAL	10 Hz
COMPENSATION	RMS AADC II Compensator
ACQUISITION MANAGEMENT	Neil Goodey, Nino Tufilli

DATA PROCESSING

Pitt Research Pty Ltd
45 Hackney Road, Hackney, SA, 5069
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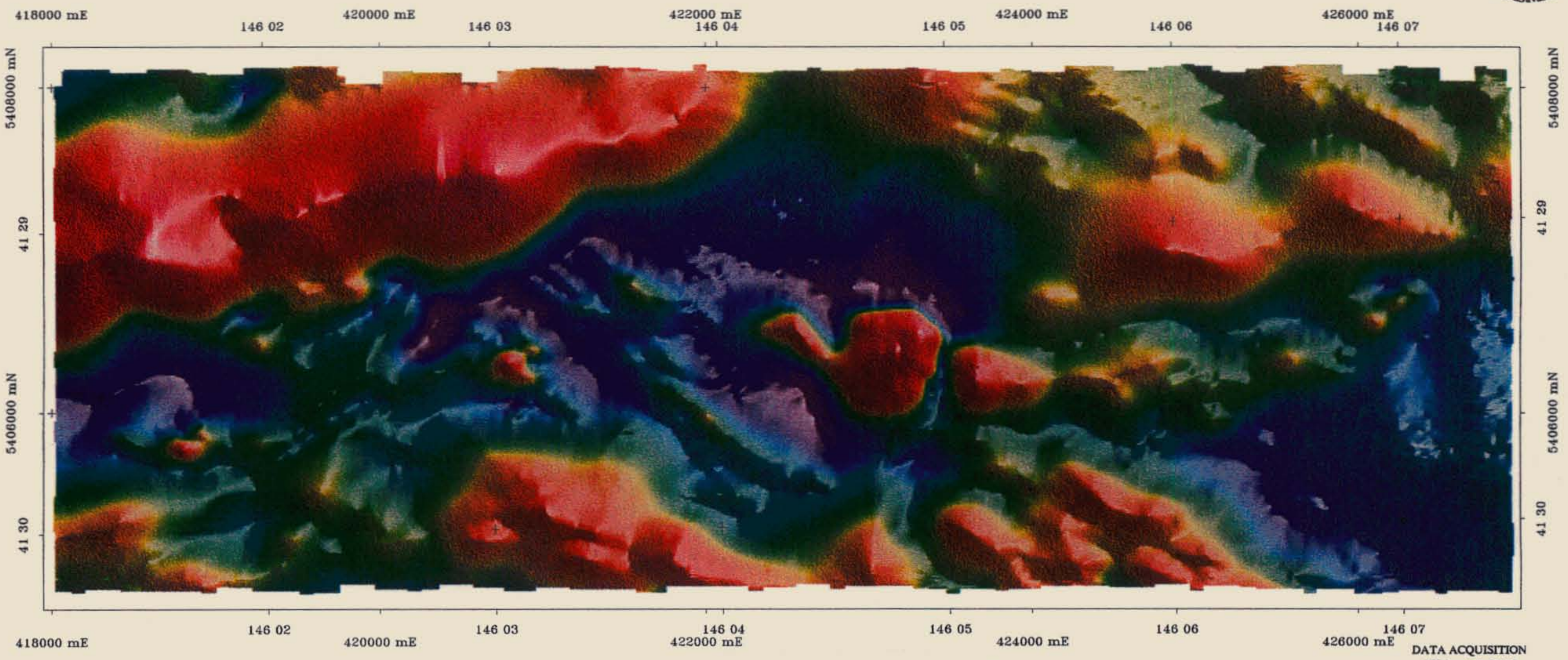
MAGNETIC DATA PROCESSING	The magnetic data have been corrected for regional gradient by subtraction of IGRF model 1995 computed at survey date. Diurnal magnetic variations have been removed. System parallax has been removed. Microlevelling has been applied.
GRIDDING PARAMETERS	ALGORITHM: bicubic spline MESH SIZE: 6 × 6 metres
PROCESSING MANAGEMENT	Mark Deuter, Mark Wegner

293040

Moina

Titan Resources

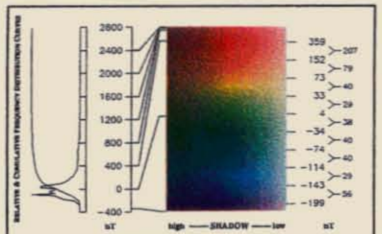


5 cm

COLOUR SCALED RTP of TMI
WITH RELIEF SHADING & HIGHLIGHTS FROM 45°

500 0 500 1000 1500 2000 2500 metres

Universal Transverse Mercator Projection
Central Meridian: 147° East, AMG Zone 55
Grid Cell Size: 10 metres
Graticules 1 minute and 2000 metres



CHROMATIC KEY

SURVEY SPECIFICATIONS

FLIGHT LINE DIRECTION	TRAVERSE LINES: along Grid NS TIE LINES: along Grid EW
FLIGHT LINE SPACING	TRAVERSE LINES: 50 metres TIE LINES: 500 metres
SURVEY HEIGHT	MEAN TERRAIN CLEARANCE: 60 metres
SAMPLE INTERVAL	0.1 secs (approx 3-4 metres along ground)
NAVIGATION	Differential GPS
SURVEY FLOWN	May 1996

DATA ACQUISITION

UTS Geophysics Pty Ltd
Valentine Rd, Perth Airport, Belmont, WA, 6104
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MAGNETOMETER	Scintrex CS-2 Cesium
RESOLUTION	0.001 nT
SENSITIVITY	0.001 nT
RECORDING INTERVAL	10 Hz
COMPENSATION	RMS AADC II Compensator
ACQUISITION MANAGEMENT	Neil Goodey, Nino Tufilli

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GRIDDING PARAMETERS	ALGORITHM: bicubic spline MESH SIZE: 6 × 6 metres
PROCESSING MANAGEMENT	Mark Deuter, Mark Wegner