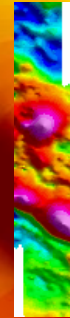
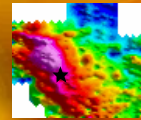
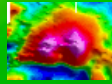


# Wonarah Ground Magnetics July 2010

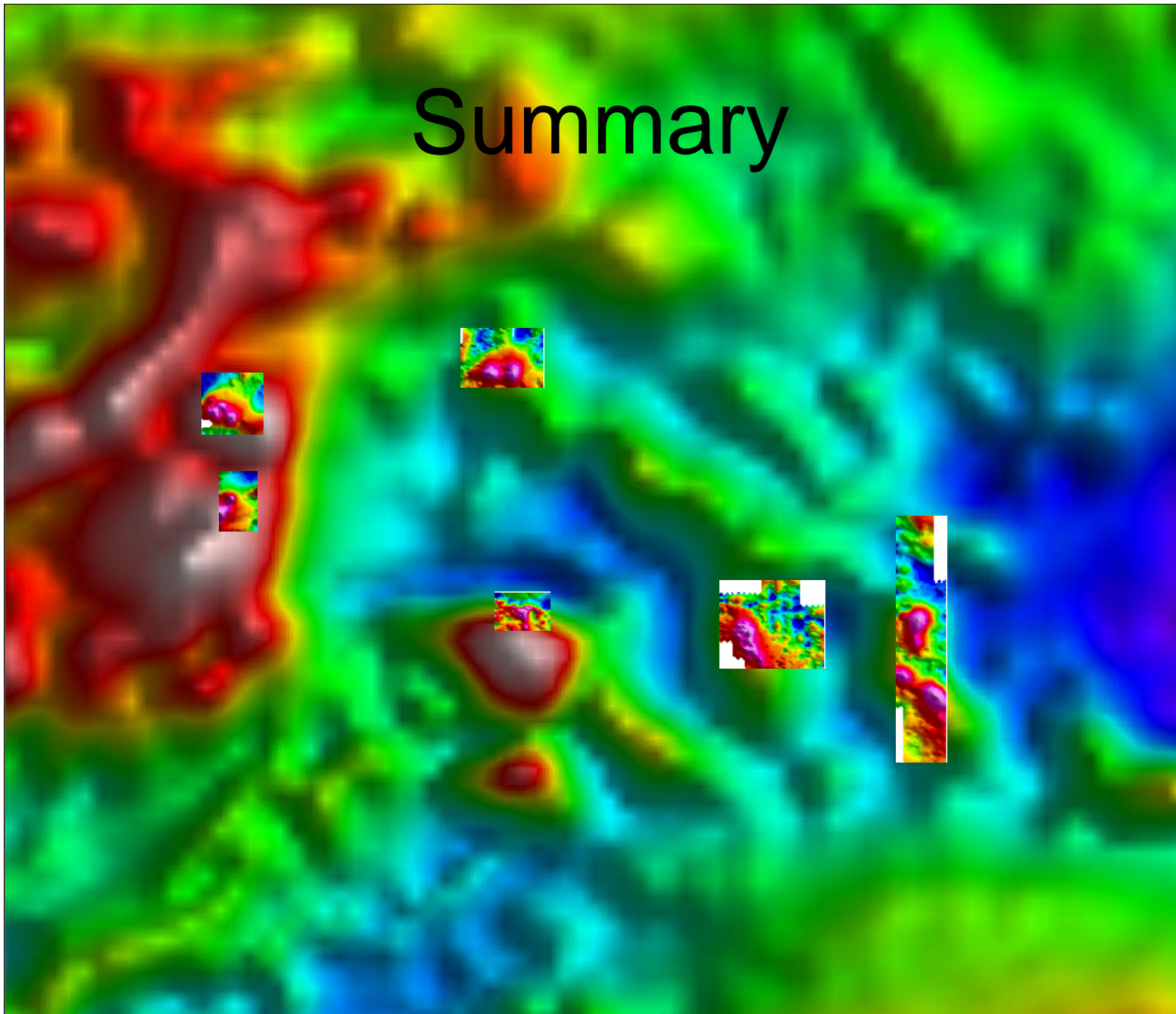


## Preliminary Magnetic Modelling

By Kate Godber for Russell Fulton, MineMakers Ltd

Ground TMI images superimposed on the regional gravity field

# Summary



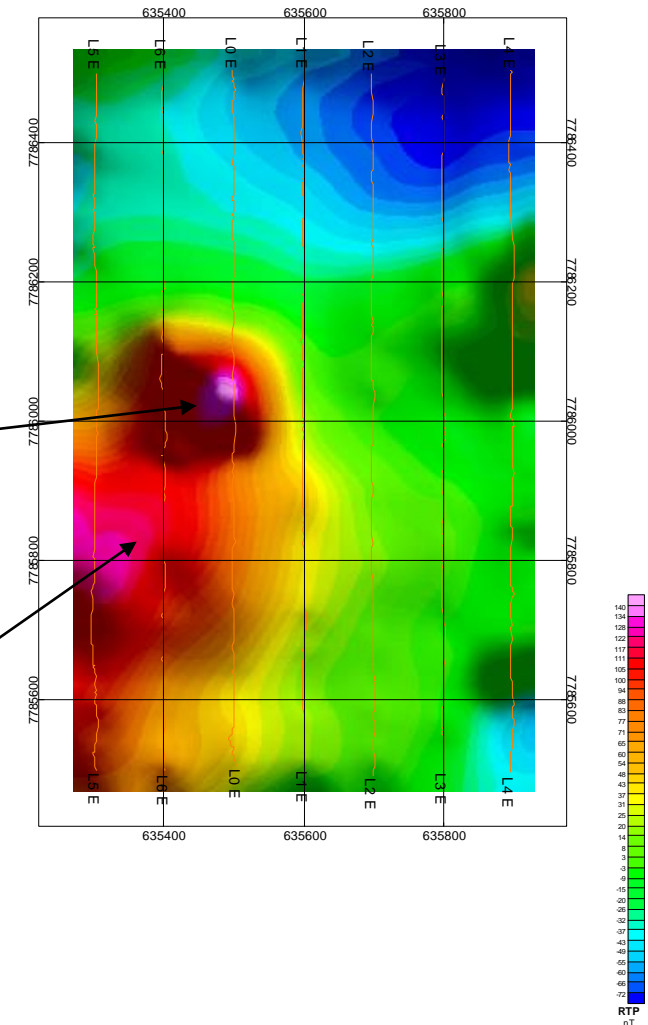
Ground RTP images superimposed on the regional reduced to pole aeromagnetics

# Summary

- 6 regional magnetic anomalies were mapped with ground magnetics on 100m spaced lines
- The magnetic maps generally show various narrow magnetic peaks superimposed on regional basement responses
- Rough, unconstrained 2D models on this data indicate magnetic sources between 10m and 500m deep.
- The ground magnetic data is a significant improvement on the regional aeromagnetics, showing fine scale structure and several very near surface magnetic sources
- Without drilling or known rock susceptibility constraints, the magnetics modelling should be only considered a rudimentary guide of 'depth to source', and not a true geological section
- As drilling and rock susceptibility measurements become available, incorporating them into the modelling will allow much more accurate geophysical models

# PPR012

- Small magnetic peak superimposed on large basement magnetic source
- ~175nT amplitude
- Modelling indicates a confined source with minimum depth ~80m
- Southerly dip or plunge?
- Low priority due to relatively large depth to top
- Modelling indicates the basement structure > 100m deep, offset south from the small magnetic source. May interconnected



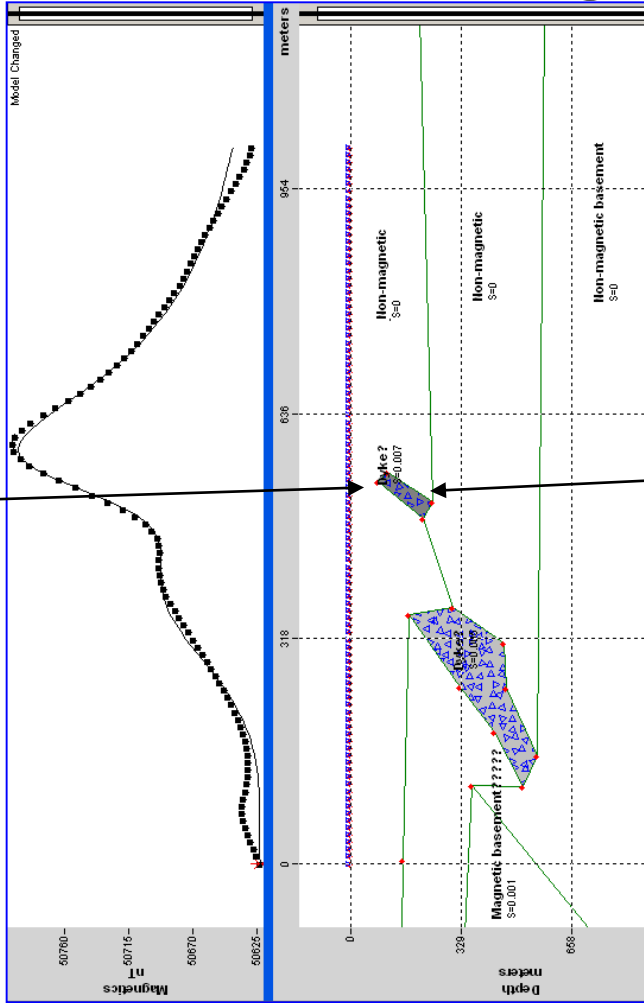
MineMakers Ltd

PPR012 Reduce to pole magnetic map

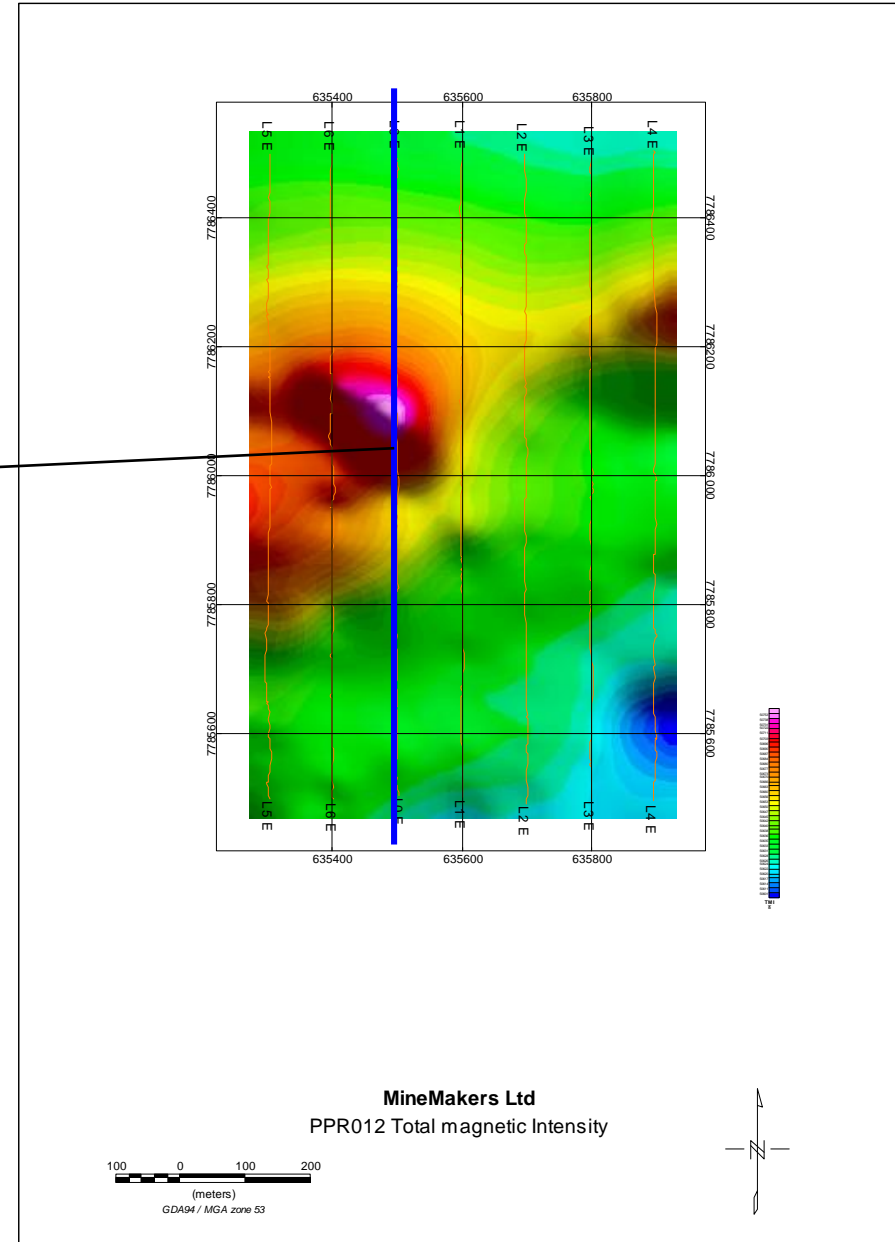
100 0 100 200



# PPR012 Modelling



Depth to peak anomaly: >80m  
 Position:  
 635484mE,  
 7786041mN

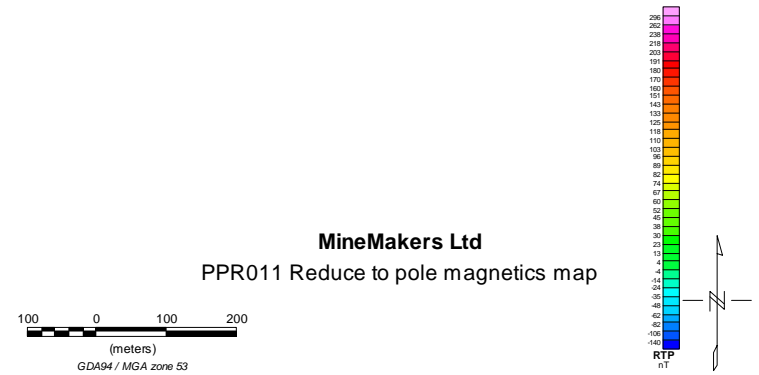
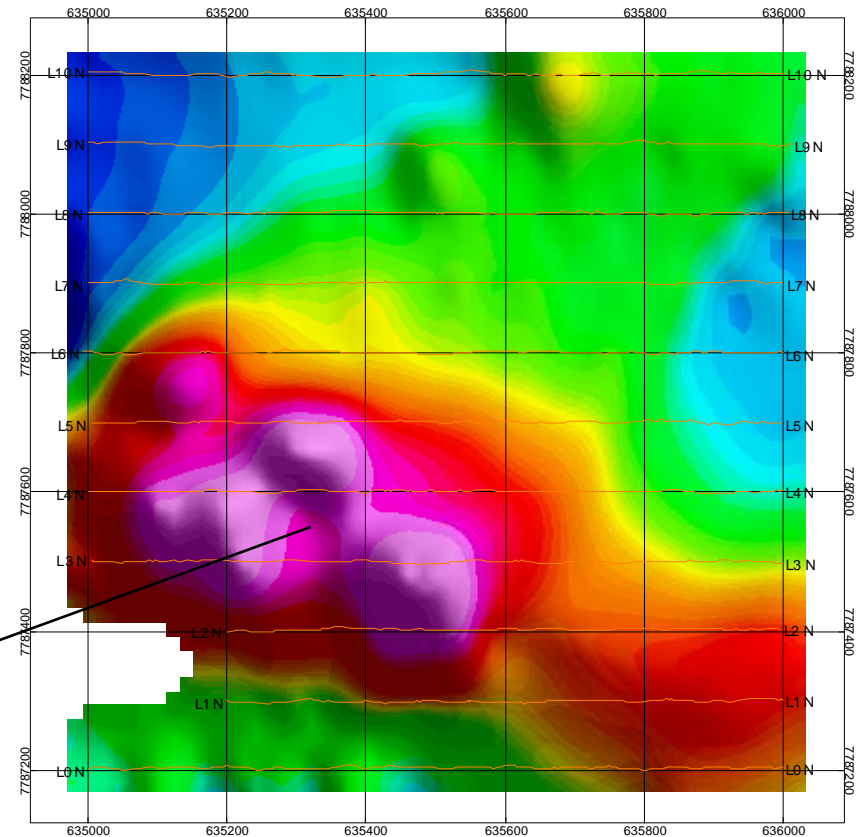


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 PPR012 Total magnetic Intensity

\*Expand as required

# PPR011

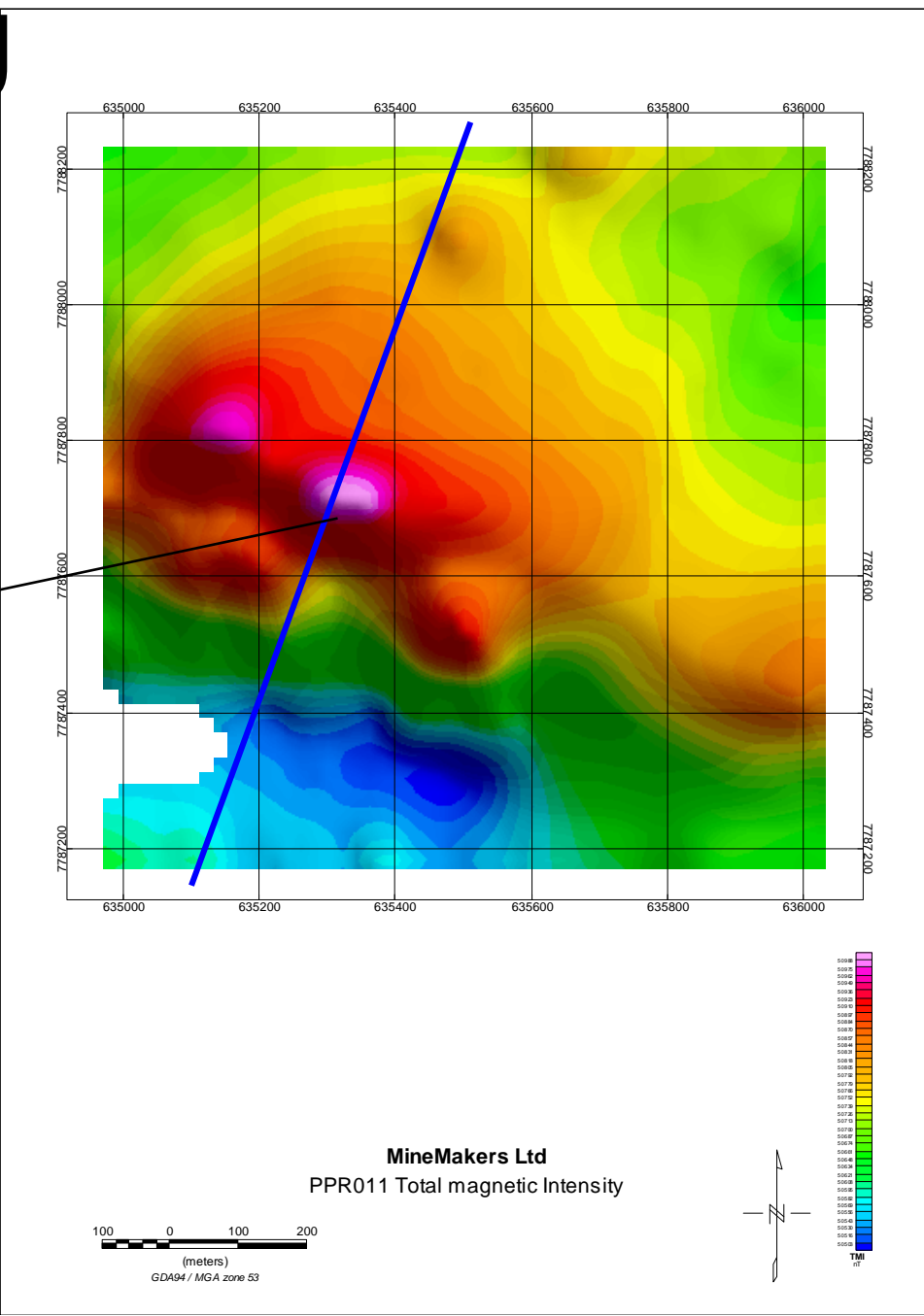
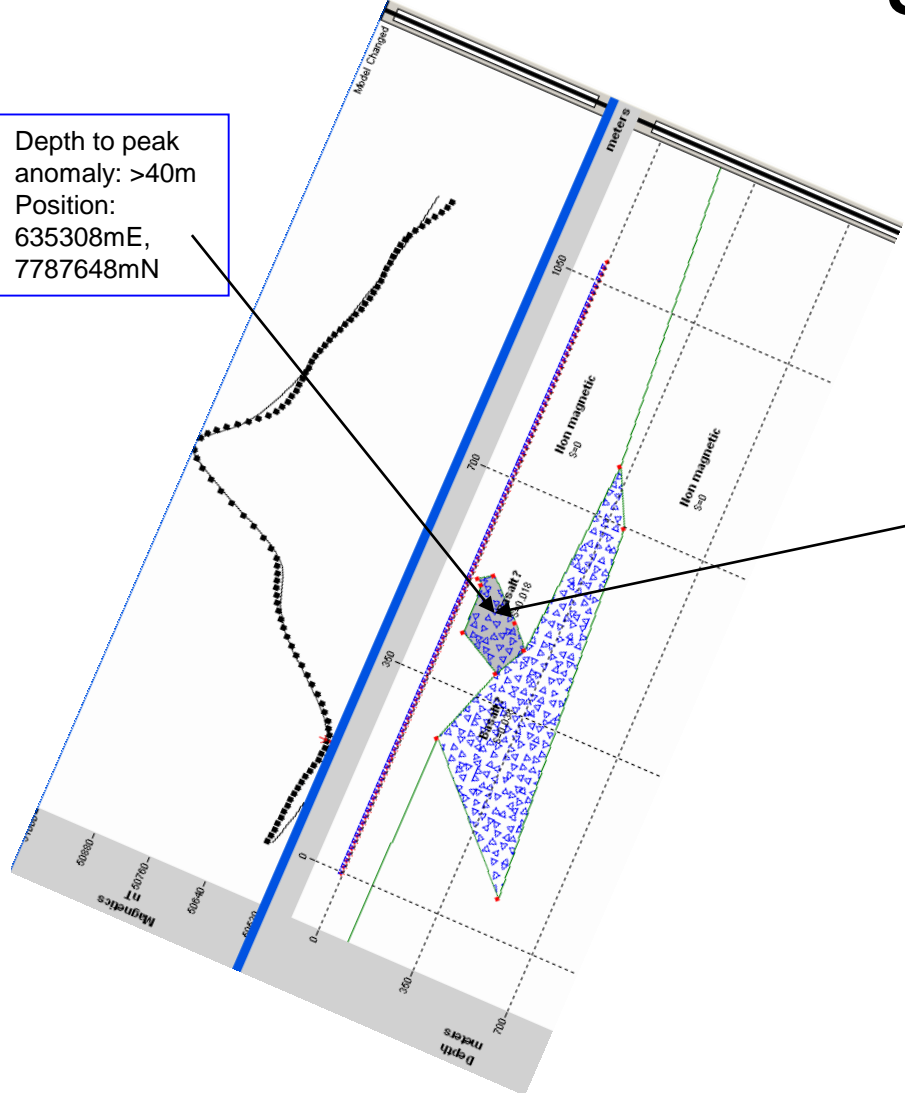
- Strongest magnetic anomaly in the Wonarah area
- ~470nT peak to trough
- Consists of broad magnetic peaks superimposed on broader basement structures
- Shallowest magnetic source is >40m deep
- Moderate priority due to apparently shallower depths and strength of the basement high



MineMakers Ltd  
PPR011 Reduce to pole magnetics map

# PPR011 Modelling

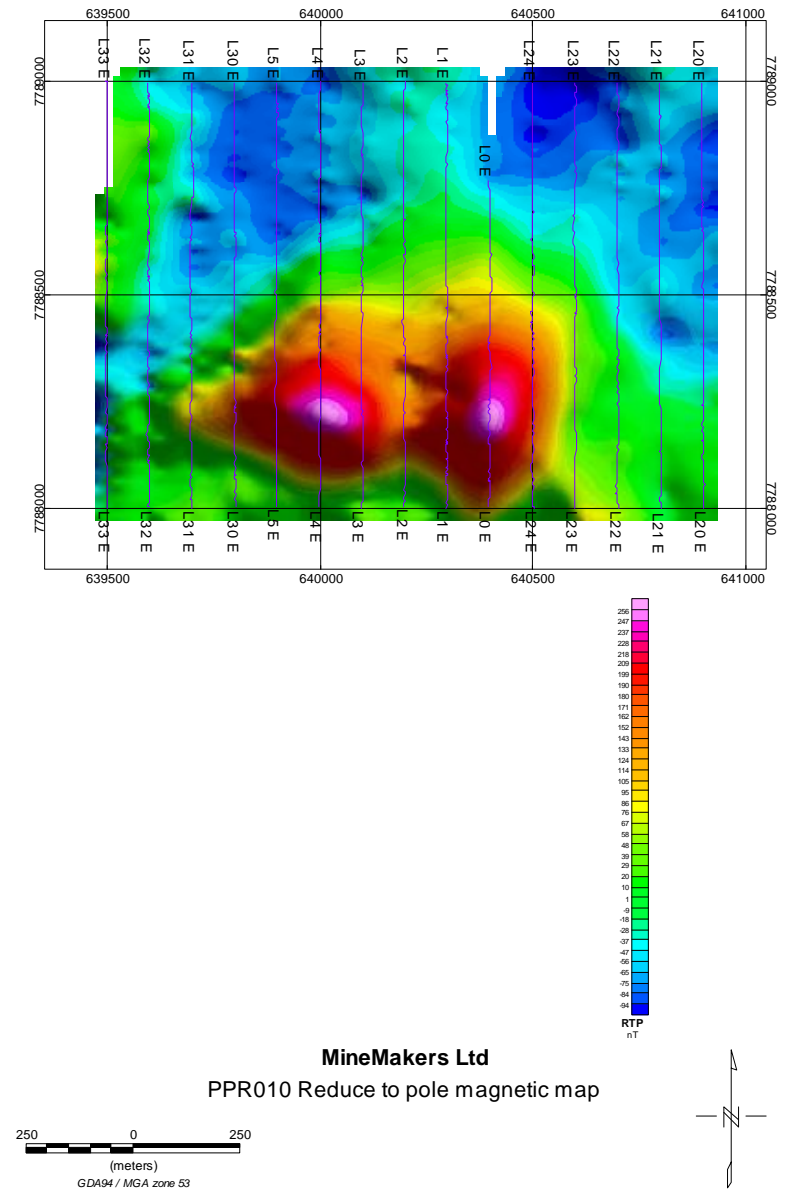
Depth to peak anomaly: >40m  
Position:  
635308mE,  
7787648mN



\*Expand as required

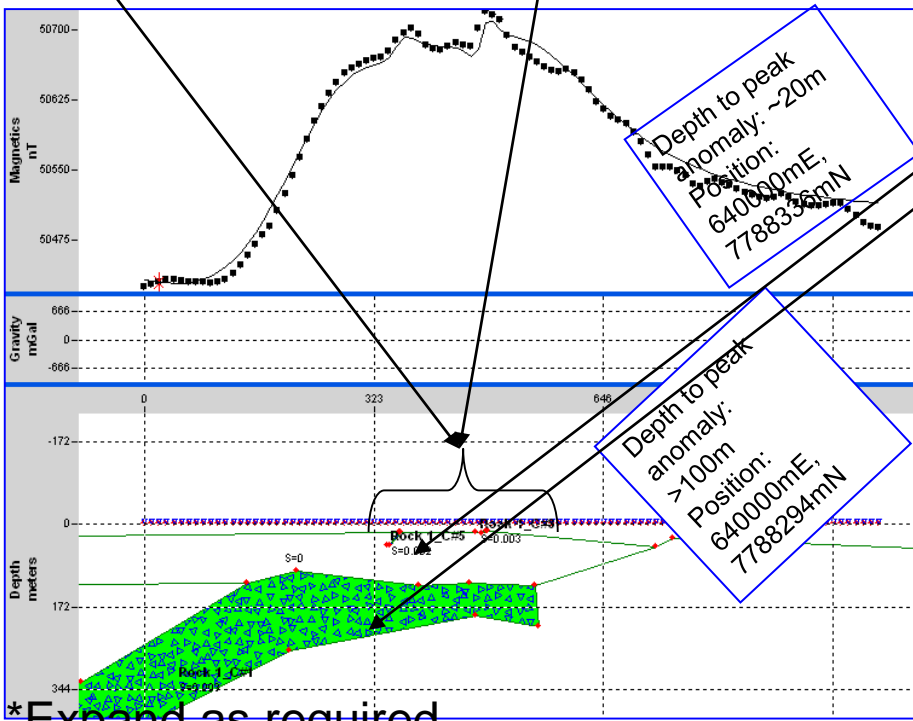
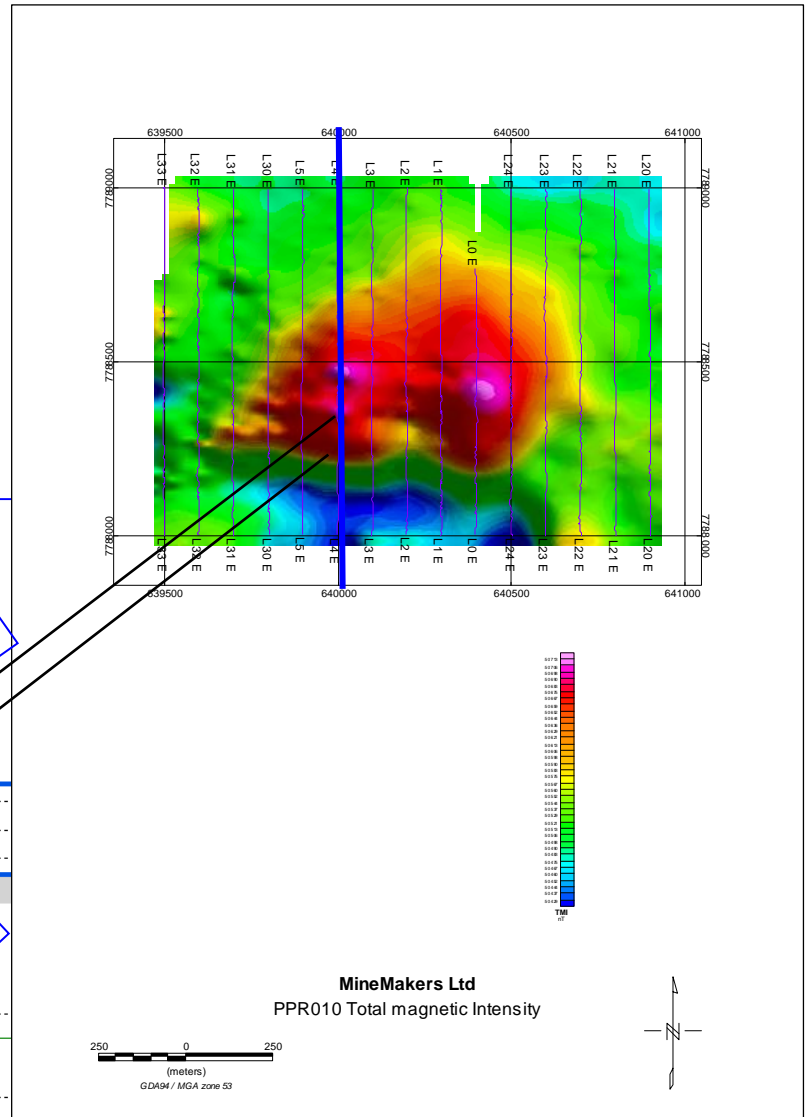
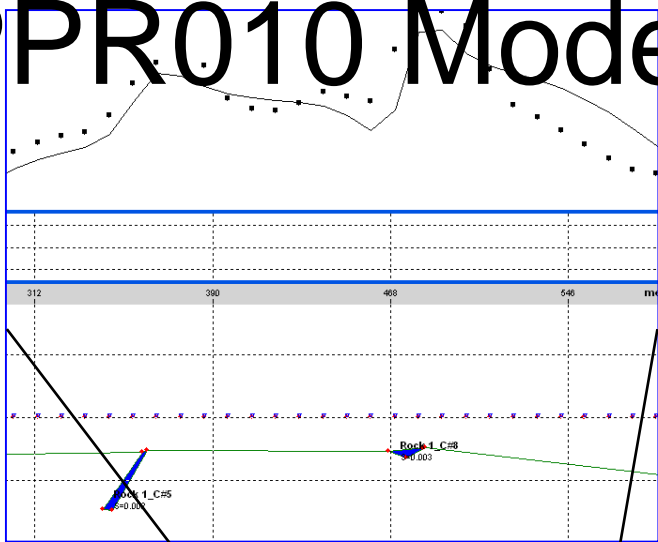
# PPR010

- Weak magnetic anomaly on the end of a sinuous reg. magnetic lineament
- Weathered channel basalt?
- Very small, shallow magnetic peaks superimposed on the broad channel response
- Average depth >100m, minimum depth to peaks....20m
- Low priority due to the very small size of the magnetic peaks





# PPR010 Modelling



Depth to peak anomaly: ~20m  
Position:  
640000mE,  
7788335mN

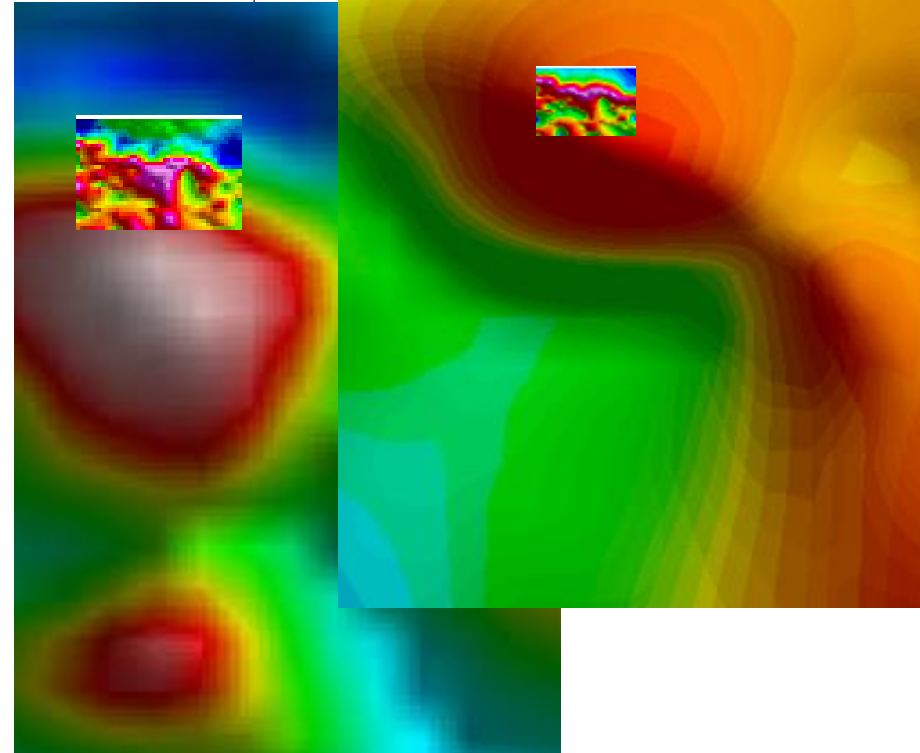
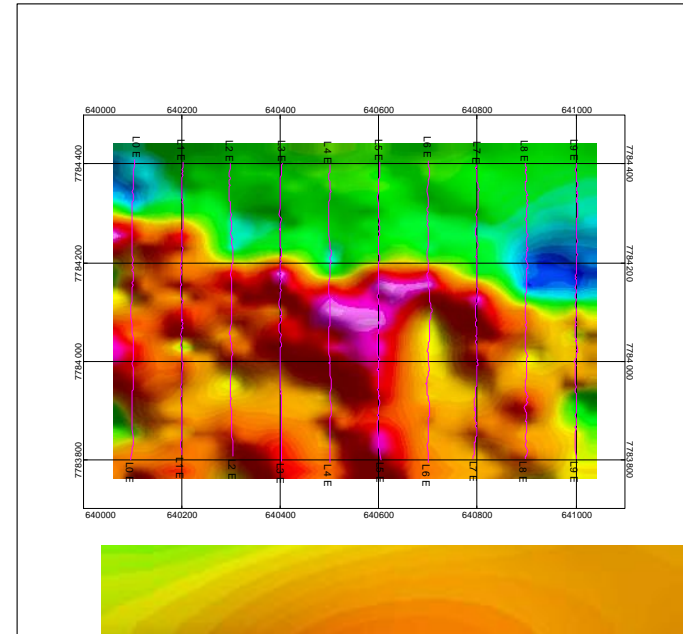
Depth to peak anomaly: >100m  
Position:  
640000mE,  
7788294mN

\* Expand as required

MineMakers Ltd  
PPR010 Total magnetic Intensity

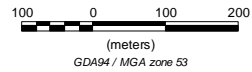
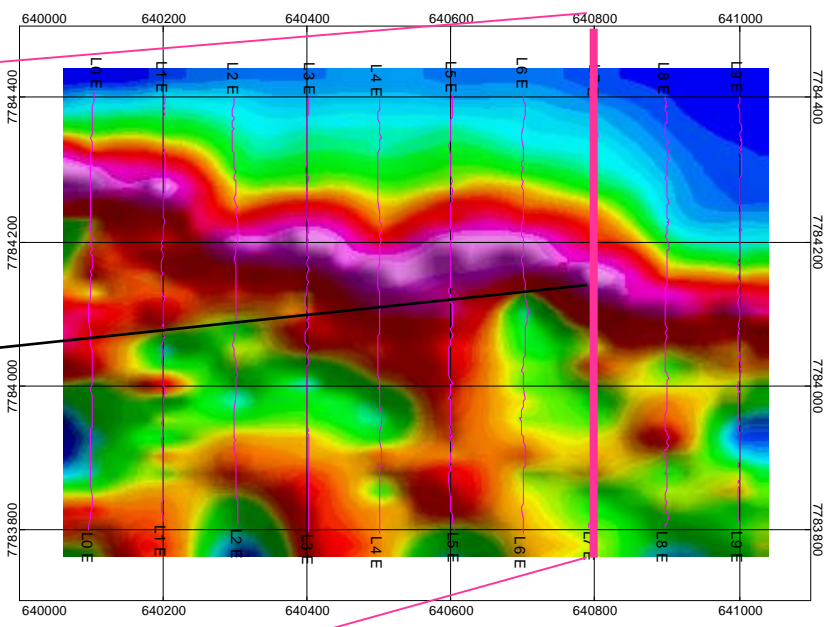
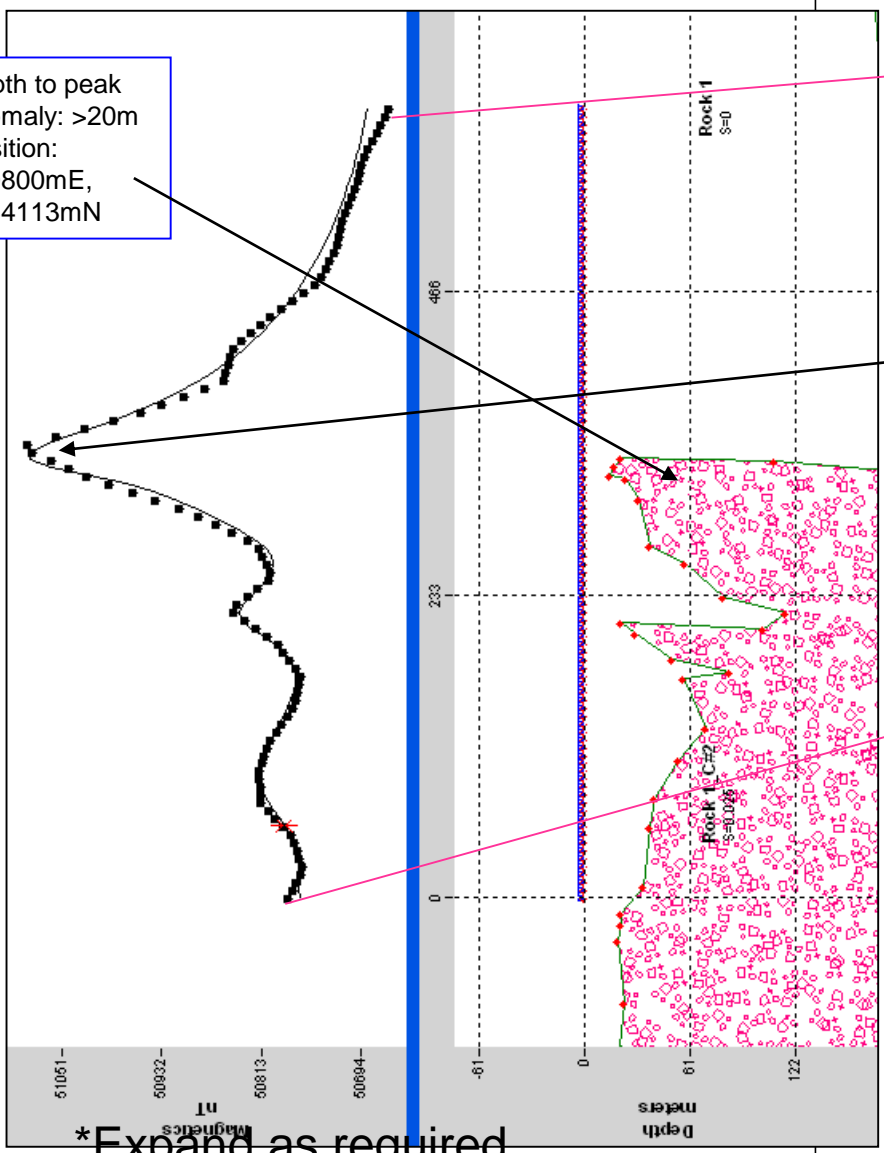
# PPR09

- Strong magnetic response on northern edge of regional magnetic high
- Directly superimposed on local gravity high
- ~300nT trough to peak
- Strong E-W structure to the north
- Minimum depth >11m
- **Very high priority due to shallow depth and dual mag+grav high**

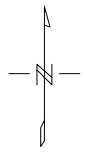
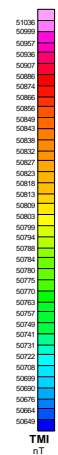


# PPR009 Modelling

Depth to peak anomaly: >20m  
 Position: 640800mE, 7784113mN



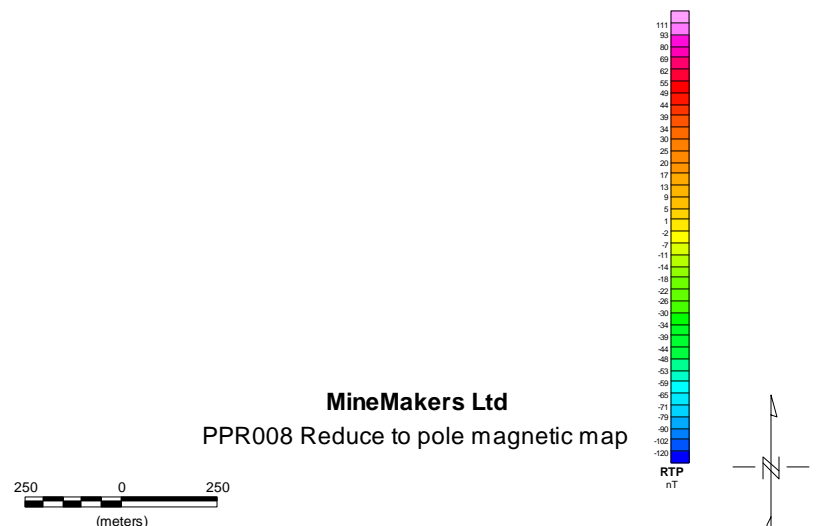
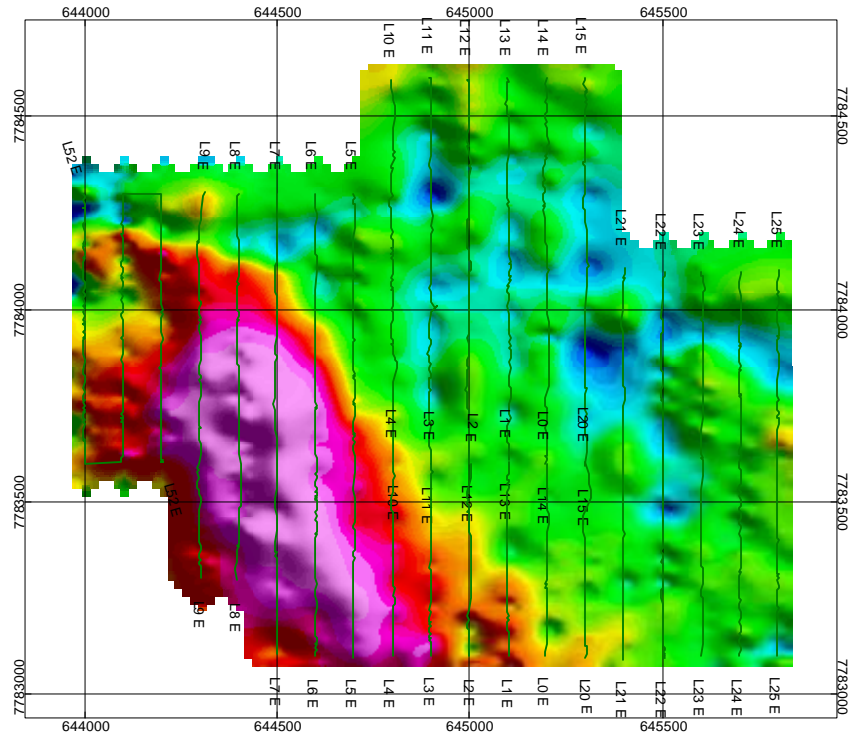
MineMakers Ltd  
 PPR009 Total magnetic Intensity



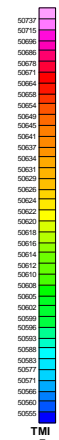
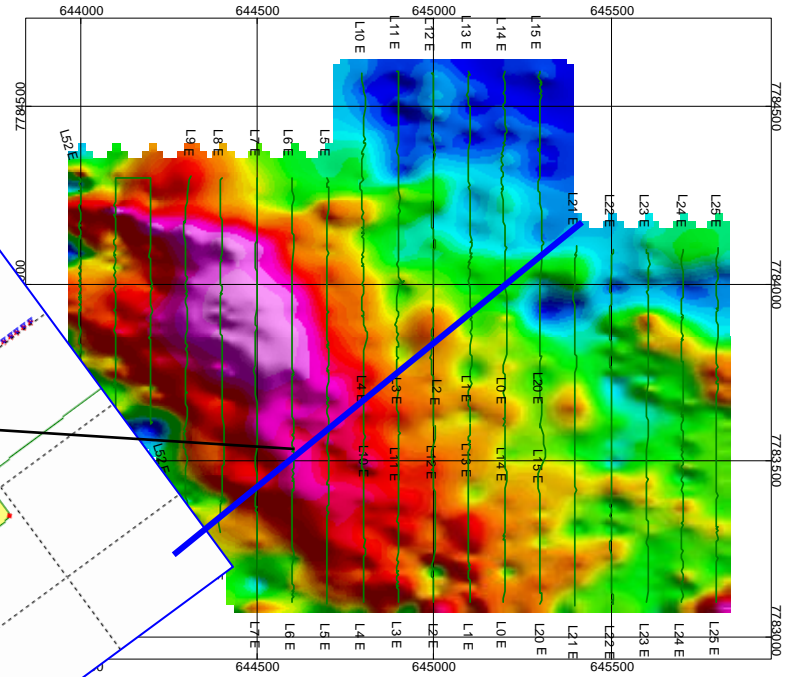
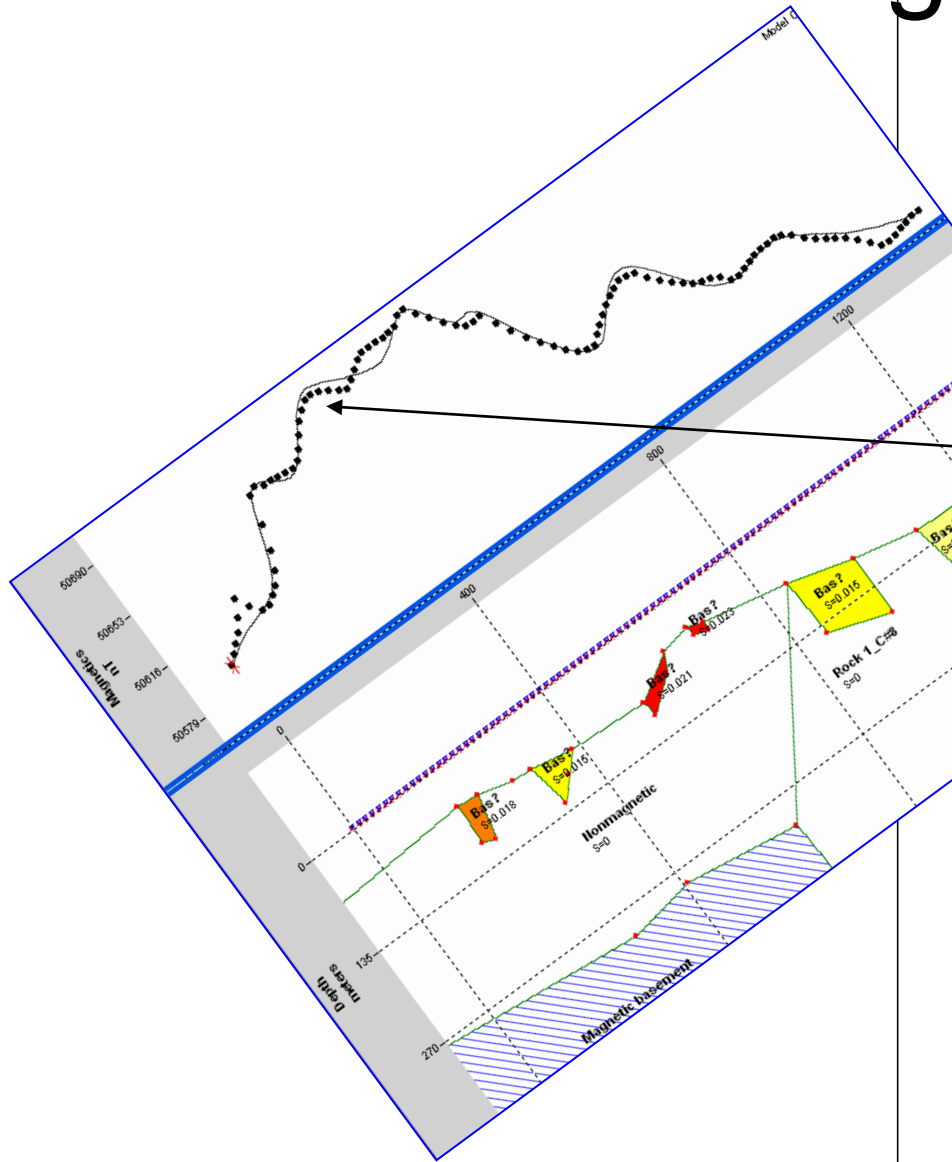
\* Expand as required

# PPR08

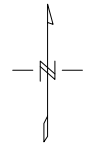
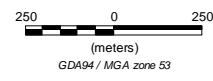
- Broad, ~100nT low amplitude regional mag high
- Subtle magnetic features superimposed on mag high and also on surrounds
- Basement magnetic source is >250m deep
- Shallow magnetic sources are probably unrelated to the deeper magnetic source
- Minimum depth to the shallower magnetic sources is >50m
- V. poor model to data
- V. low priority due to poor model data fit



# PPR008 Modelling



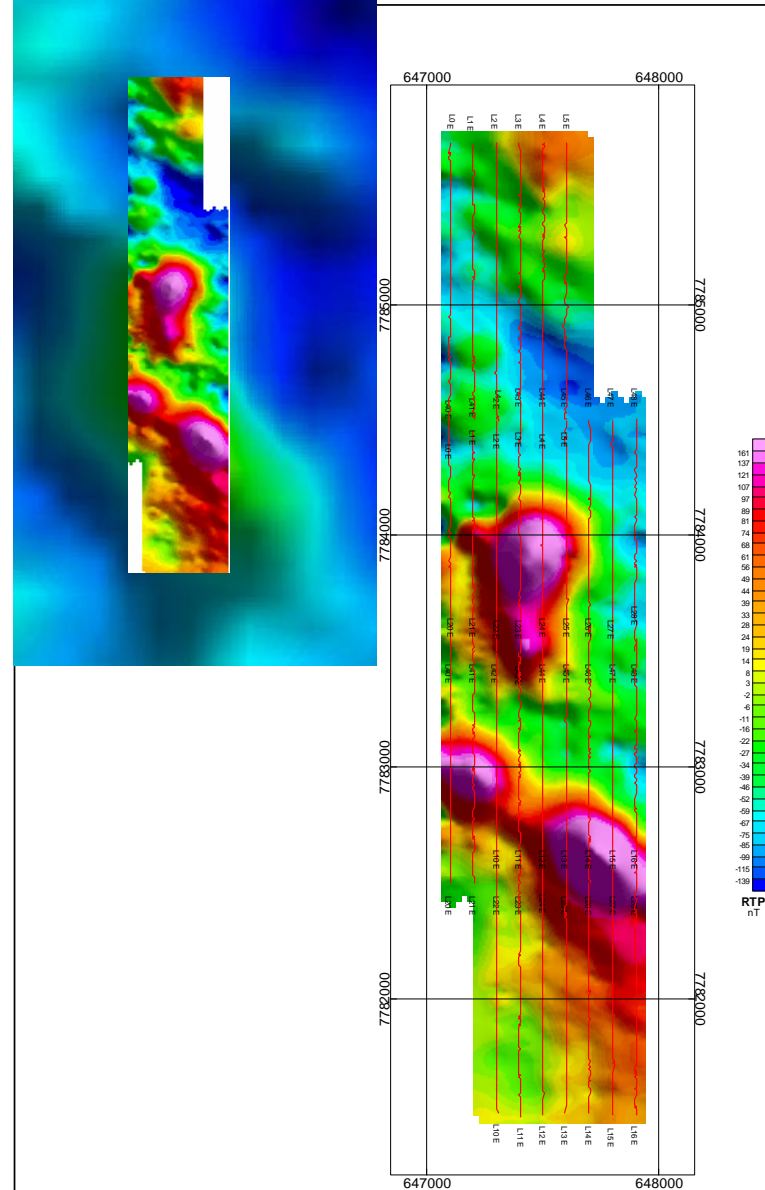
MineMakers Ltd  
PPR008 Total magnetic Intensity



\*Expand as required

# PPR007

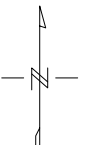
- Two narrow 150nT peaks superimposed on a broad magnetic basement structure
- Modelling indicates that peaks may be caused by changes in upper surface topography of a layer-like magnetic source
- Modelling indicates shallow magnetic peaks have depth to top >50m
- Good opportunity to test magnetic basement at relatively shallow depths



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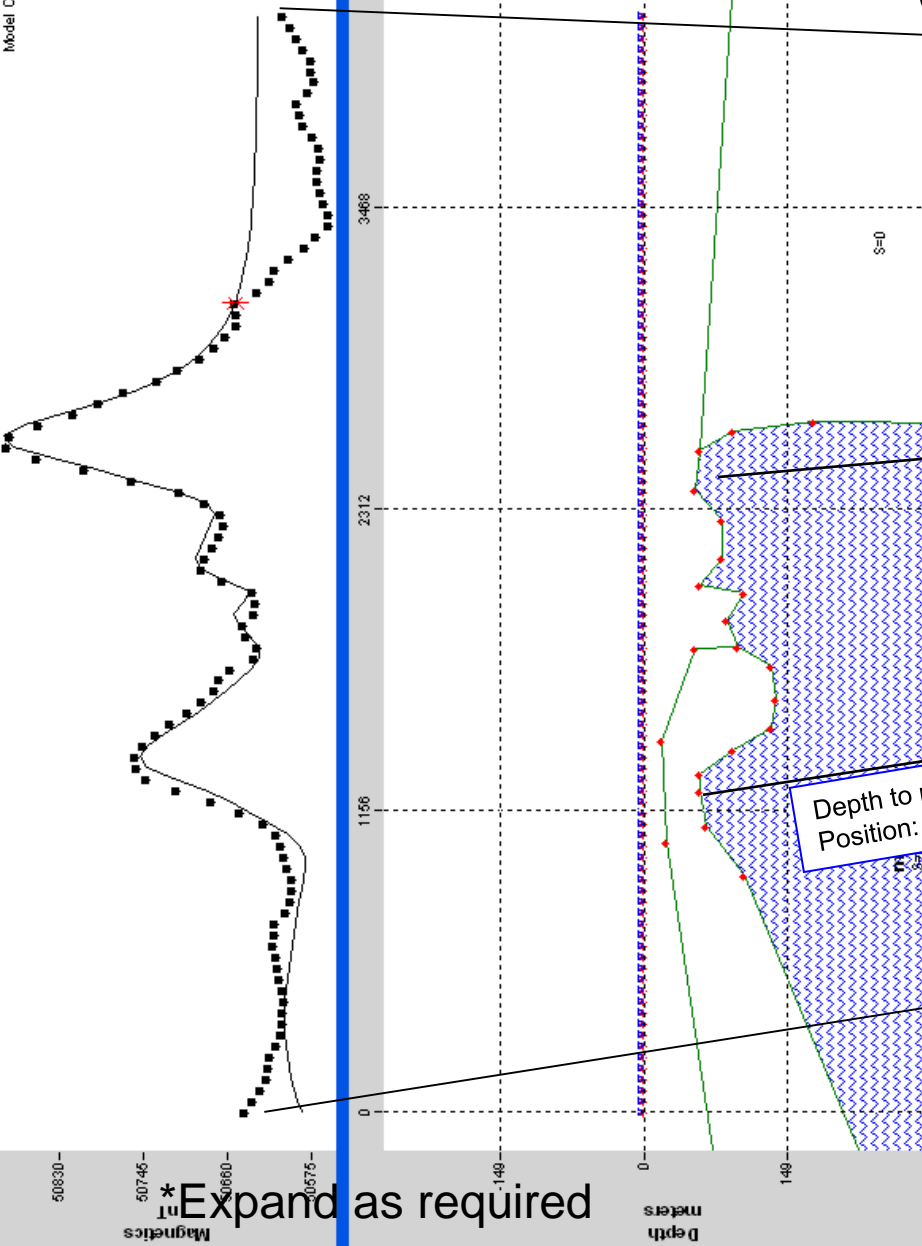
PPR007 Reduce to pole magnetic map

250 0 250 500 750  
(meters)

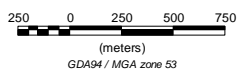
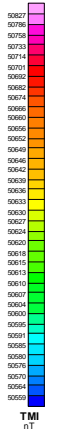
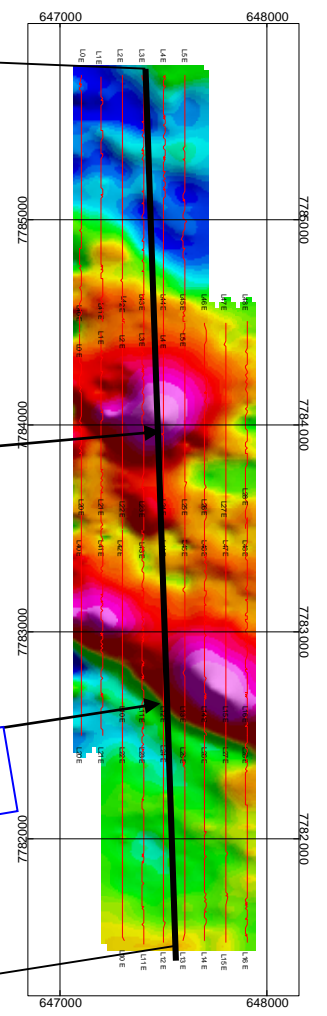


# PPR007 Modelling

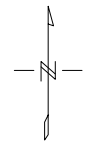
Model Changed



Depth to peak anomaly: >50m  
Position: 647532mE, 7782673mN



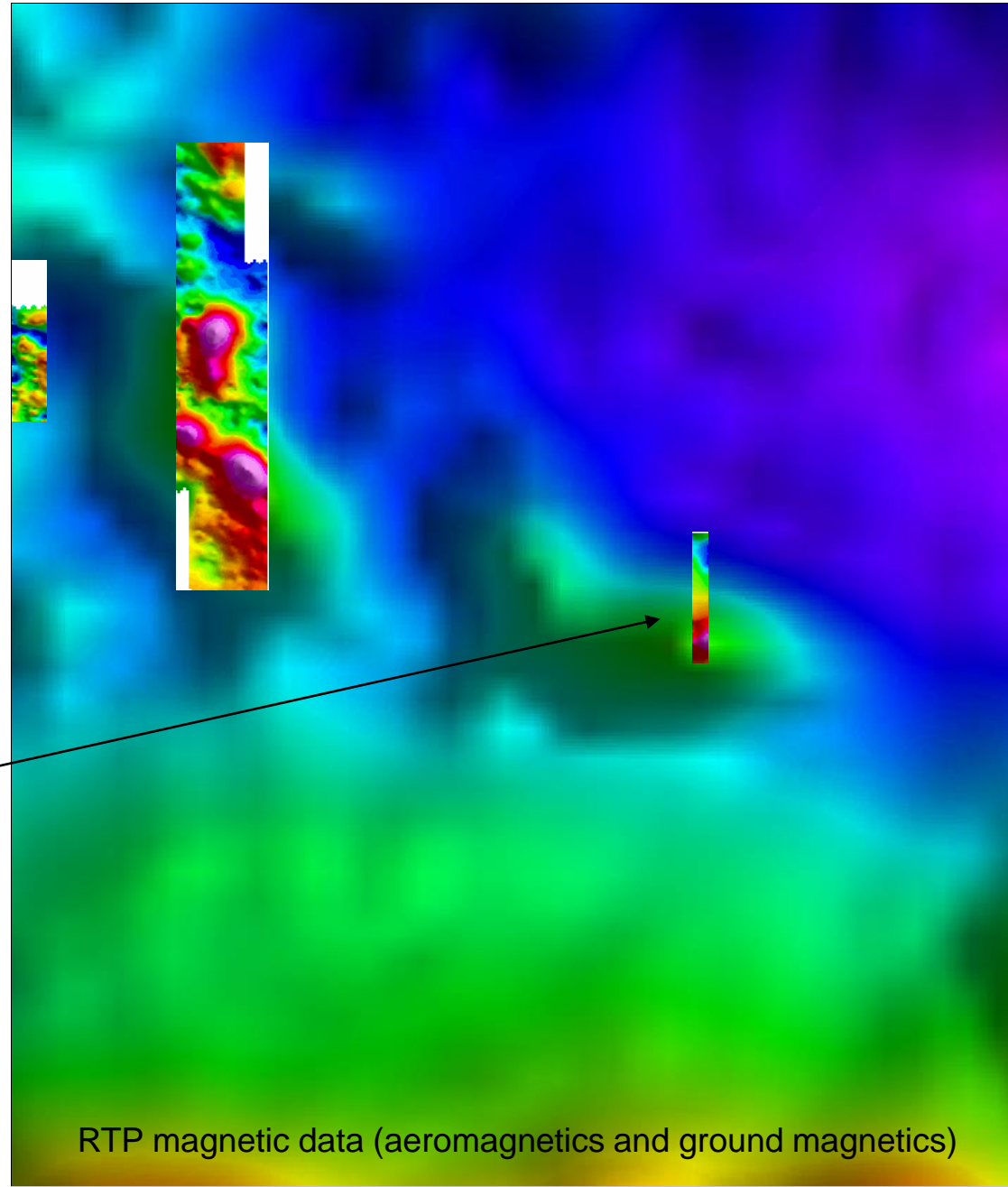
MineMakers Ltd  
PPR007 Total magnetic Intensity



\*Expand as required

# PPR006

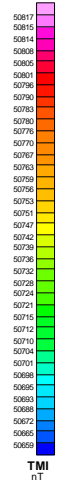
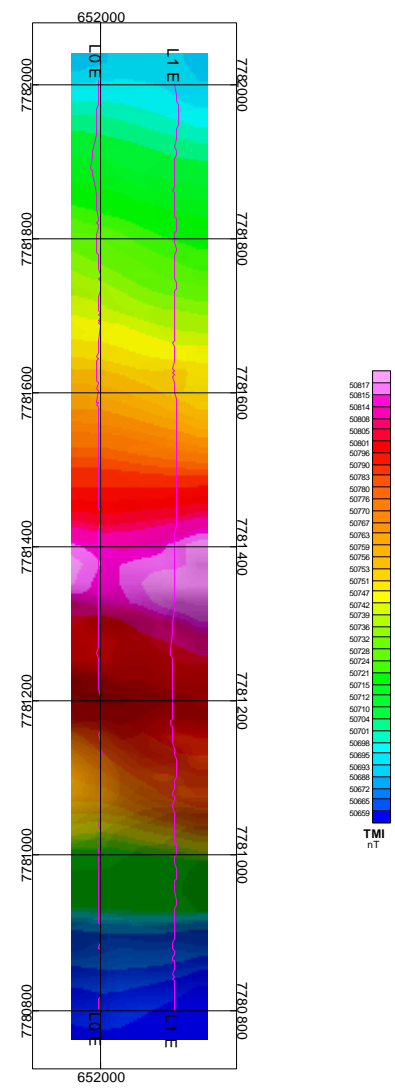
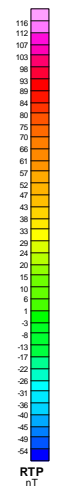
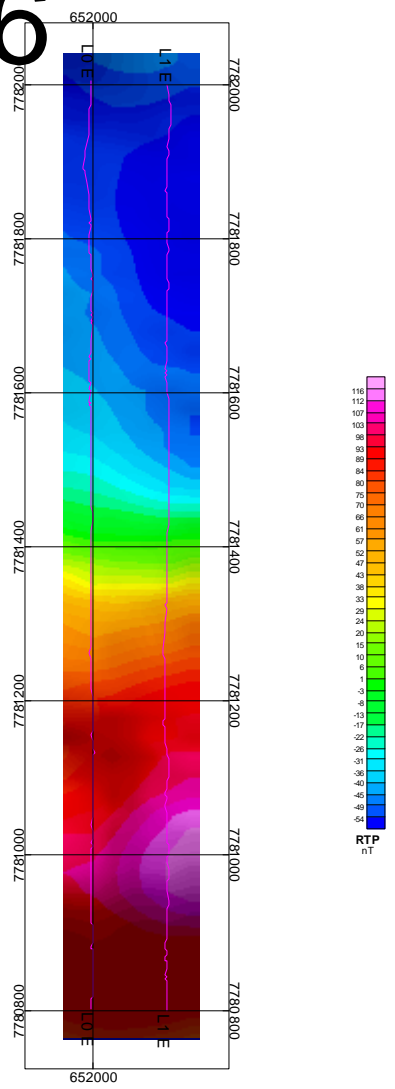
- Width and amplitude of anomaly indicate it is very deep
- Reduce to pole filter moves the TMI anomaly over 600m south
- This means that the source is very deep
- Deep source means that the reduction to pole has a greater effect than shallower sources
- No drilling recommended due to depth of source



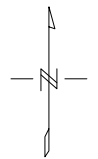
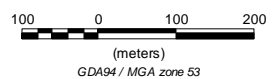
RTP magnetic data (aeromagnetics and ground magnetics)



# PPR006



MineMakers Ltd  
PPR006 Reduced to pole magnetic map



MineMakers Ltd  
PPR006 Total magnetic Intensity

