



## **GROUND GEOPHYSICAL SURVEY DEFINES NEW TARGETS AT ATHENA'S ASHBURTON PROJECT**

### **HIGHLIGHTS**

- **Gradient Array Induced Polarisation survey defines new zones within the outcropping mineralisation at Kooline.**
- **Dipole-Dipole Induced Polarisation follow-up survey results in exciting, discrete drilling targets.**

### **Details**

Athena Resources Limited (Athena or the Company) is pleased to announce the results of the ground geophysical survey completed at Kooline within the Ashburton Project. Athena employed a geophysical survey contractor to undertake Gradient Array Induced Polarisation (IP) surveys on an initial four grids targeting the previously defined and announced Lead, Copper, and Gold zones (Figure 1). An additional Gradient Array grid was included on the Copper zone to delineate an exciting anomaly highlighted in the initial field results, along with two Dipole-Dipole IP lines over selected results from the survey. The Gradient Array grid has provided a surface plan of the resistivity and chargeability of the underlying geology and the Dipole-Dipole lines give an indication of the depth and direction. The Dipole-Dipole survey has enhanced interpretation of the Gradient Array data and enabled the planned drill holes to be optimally positioned.

The most significant result from the IP survey is the coincidence of historical workings aligning along the edge of the Gradient Array chargeability responses. It is a possibility that the historic mining and prospecting has occurred along the margins of the main zones of mineralisation. The coincident chargeability and resistivity anomalism suggests that the response is due to quartz-hosted sulphides, similar to which is observed in the historic workings. This encouraging response also enables Athena to re-interpret and integrate the previously acquired airborne and ground electromagnetic datasets.

The chargeability response for each of the grids is shown in the attached plans, along with historic workings, anomalous resistivity trends, and target zones. The 800m x 400m Grid 1 was positioned over an area where Athena has previously reported rock chip results of 3.78% Copper; 42.5% Lead; 375g/t Silver. Figure 2 shows a 450m long anomalous zone which is significantly higher in amplitude than that of the mineralisation associated with historic workings. Importantly there are small prospecting pits on the edge of the response with the main part under shallow cover which possibly masked it from historical prospecting. Athena will now target this zone as part of the proposed drilling program. Figure 3 shows the results of original Grid 2 and extension Grid 5. The mineralisation associated with the historic workings is evident as a low amplitude anomaly aligning along the northwest trend. Grid 2 was extended to the northeast to define the anomalous zones shown as drilling targets T4, T5, and T6 on Figure 3.

These chargeable zones align with the major northwest structure defined by the quartz ridge in line with T7. Athena is encouraged by the response in an area previously untested by historic surface prospecting and recent geochemical sampling. A Dipole-Dipole line was positioned over the best Gradient Array anomalism (Line 9400E in Figure 4) to map the vertical extents. The results of the chargeability and resistivity 2D inverted section have provided Athena with exciting new drilling targets. The resistivity high centred on 2625N correlates with the outcropping quartz associated with the northwest structure; however both the resistivity and chargeability anomalies around 2725N are untested and will be targeted in the upcoming drilling program. Grid 3 (Figure 5) was positioned within the main historical lead mining area at Kooline. The historical workings aligning along the edge of the 450m long anomalous chargeability response provided Athena with enough confidence to position a Dipole-Dipole line to test the vertical extents and orientation. Figure 6 shows an exciting chargeability anomaly located to the south of the existing workings which will be drill tested as a priority in the next field season. Figure 7 shows the results of the Gradient Array Grid 4 over the previously defined Gold zone. There are correlating resistivity and chargeability anomalism within the 25ppb gold contour. The previously announced gold auger geochemical sampling results are shown with respect to the chargeability response.

The five Gradient Array grids cover less than 15% of the area of known outcropping mineralisation and historic workings and have provided Athena with additional drillhole targets not previously defined by surface exploration. The Company is excited about applying these IP methods to test the remaining area which has not been explored with modern exploration techniques.

## Background

Athena Resources Limited listed on the ASX in November 2006. The Company is a junior explorer with a focus on nickel, basemetals and gold. The company is targeting "green-field" Archaean and Proterozoic terranes in Western Australia that display features often associated with large world class mineral deposits. Athena is exploring for magmatic nickel-copper sulphide and platinum group mineralisation at Byro and Ravensthorpe and gold-copper-silver-lead mineralisation at Ashburton. The Company has over 7,000km<sup>2</sup> under granted tenure and in exploration licence applications.

Donald Thomson  
*Technical Director*

18 November 2008

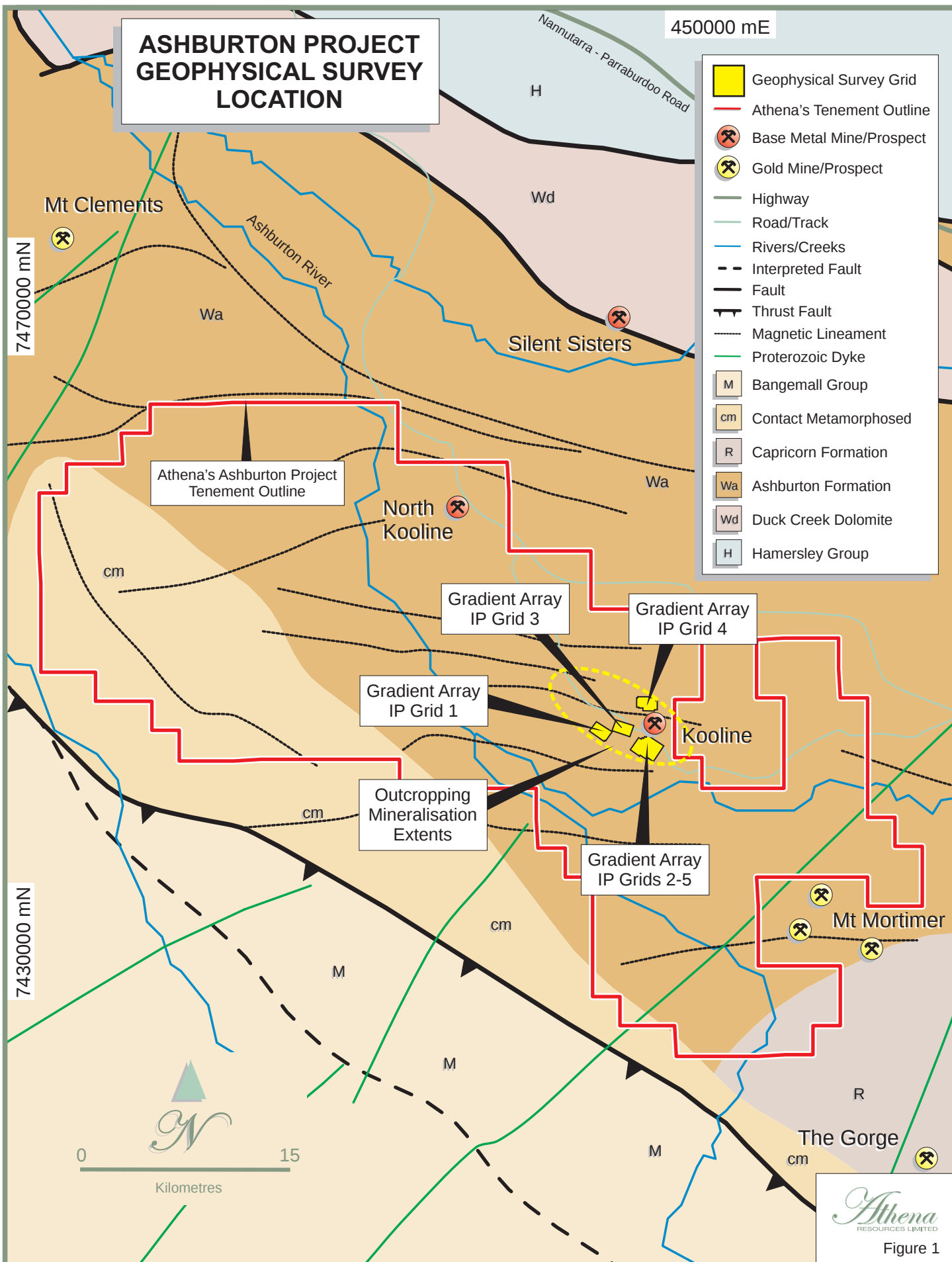
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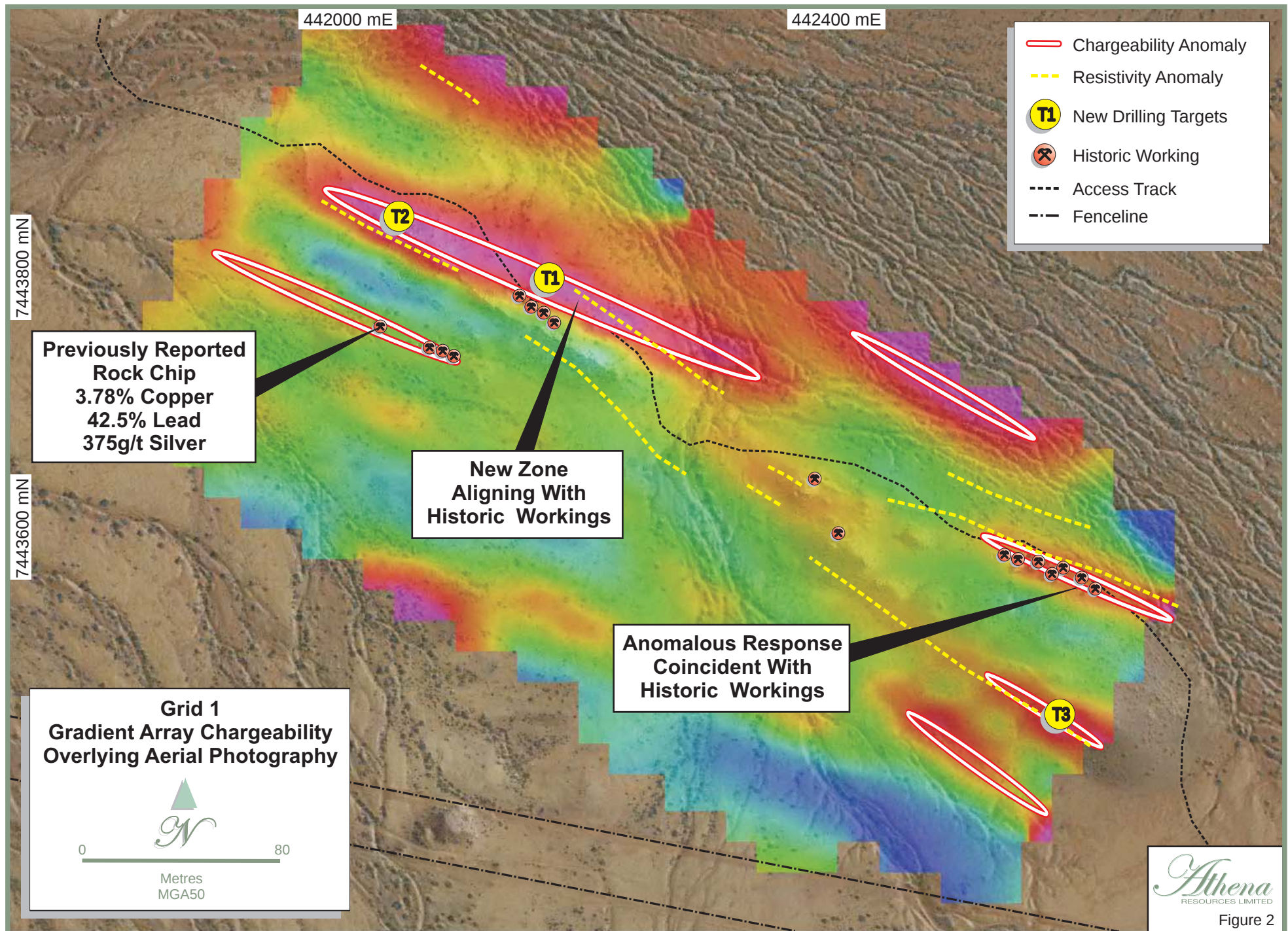
The technical information relating to Athena's exploration projects was compiled by Mr Donald Thomson, an employee of Indigo Exploration Services Pty Ltd. Mr Thomson is a Member of the Australasian Institute of Mining and Metallurgy, and has sufficient relevant experience in the styles of mineralisation and deposit styles under consideration to qualify as a Competent Person as defined in "The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2004 edition)". Mr Thomson consents to this inclusion of the information in this report in the context and format in which it appears.

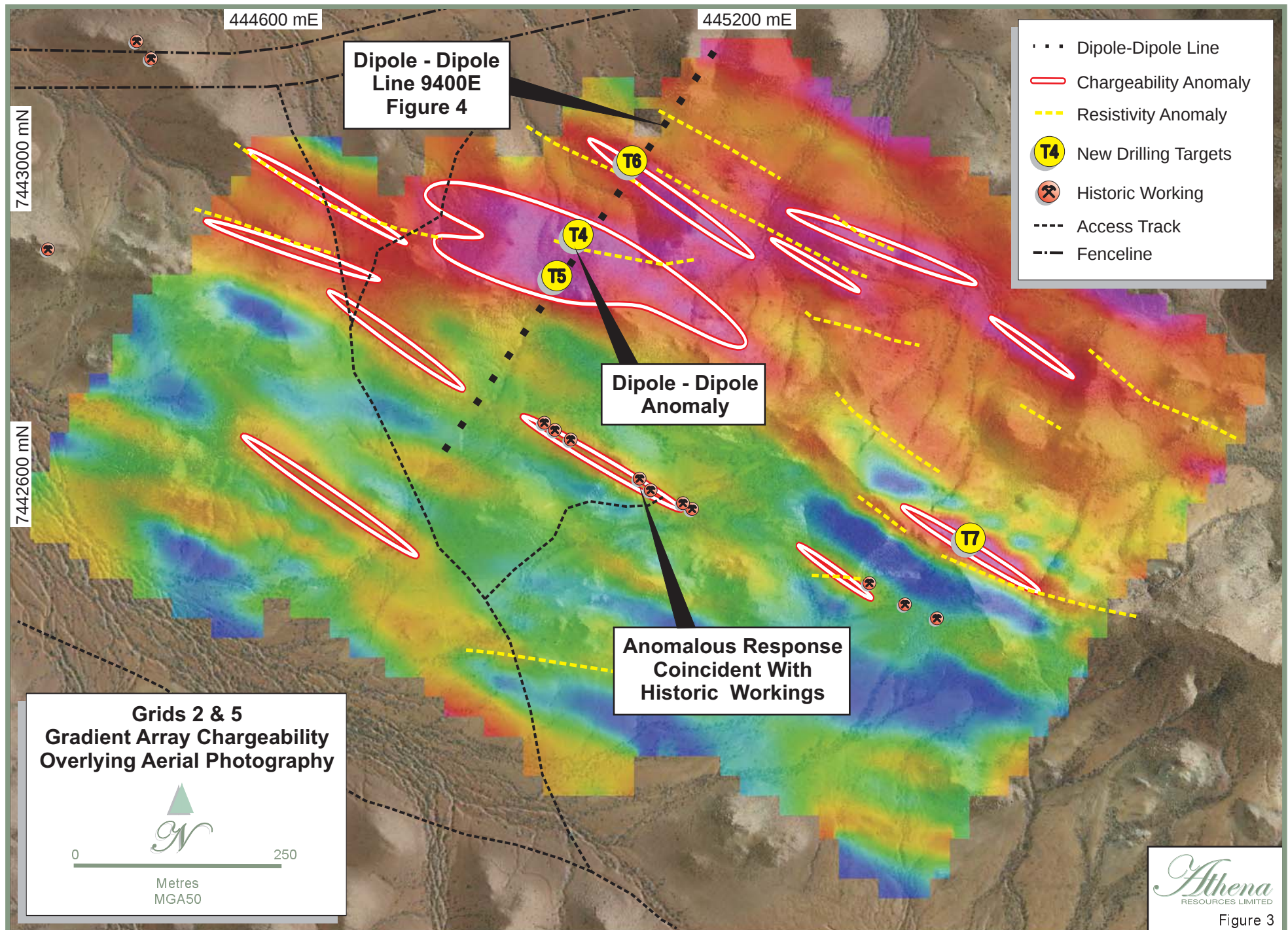
# ASHBURTON PROJECT GEOPHYSICAL SURVEY LOCATION



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Figure 1





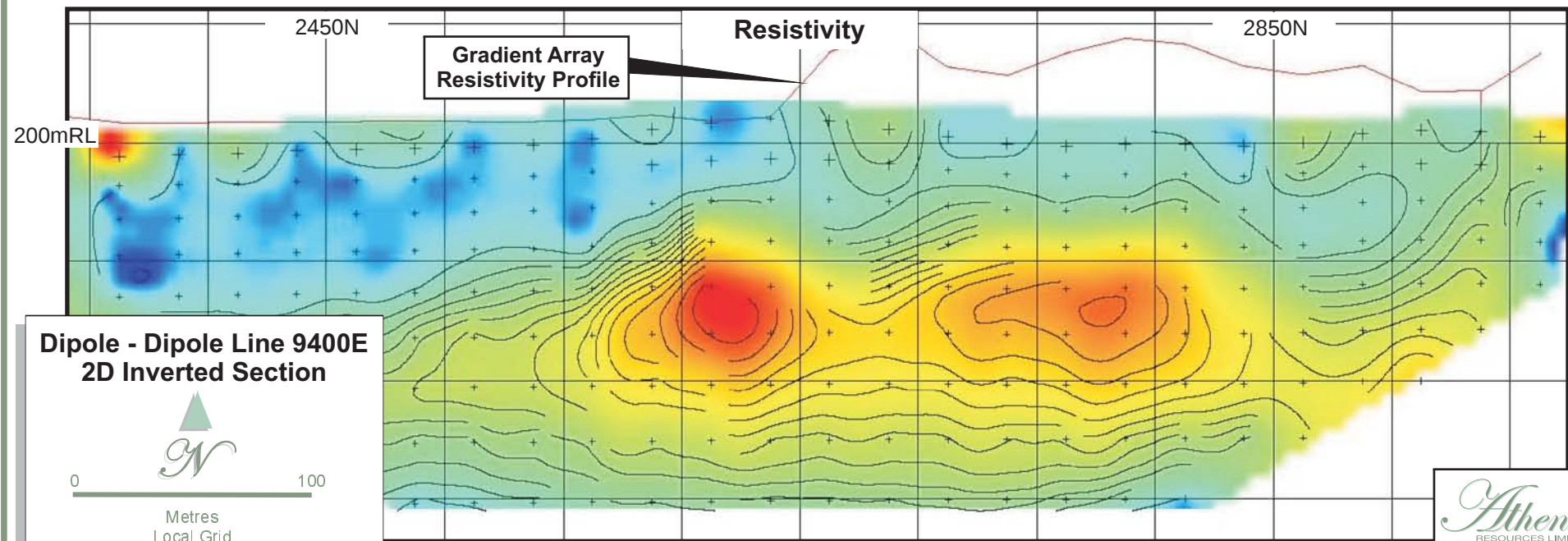
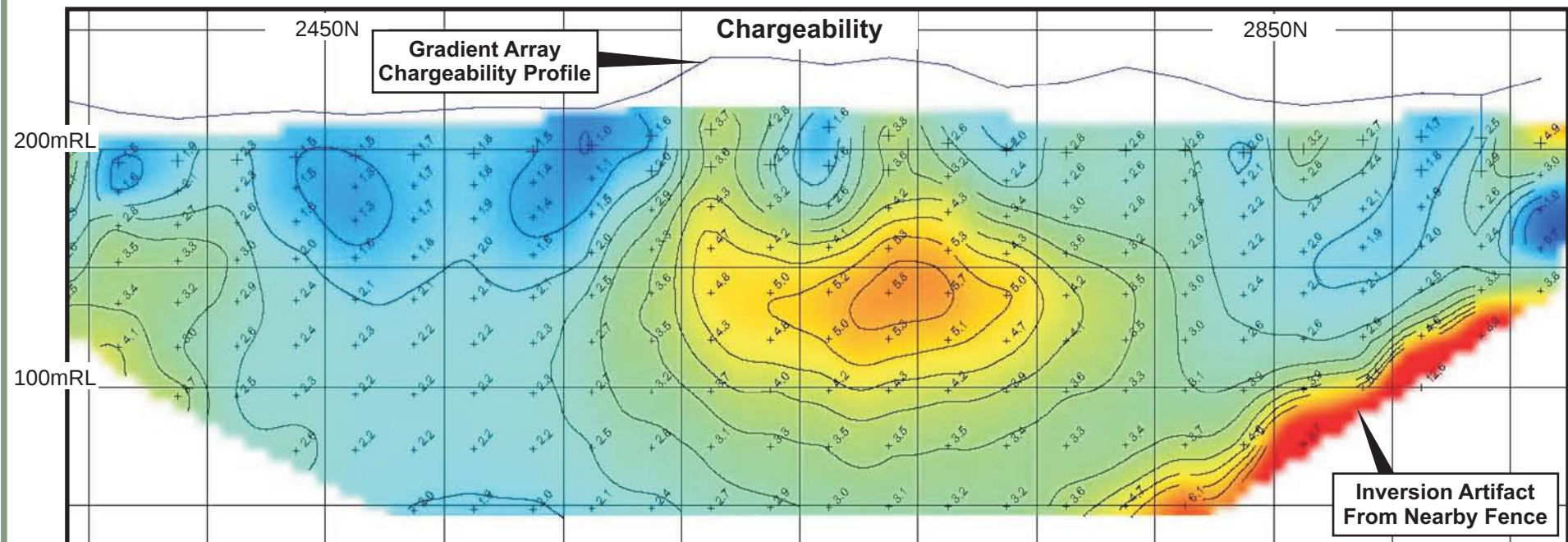
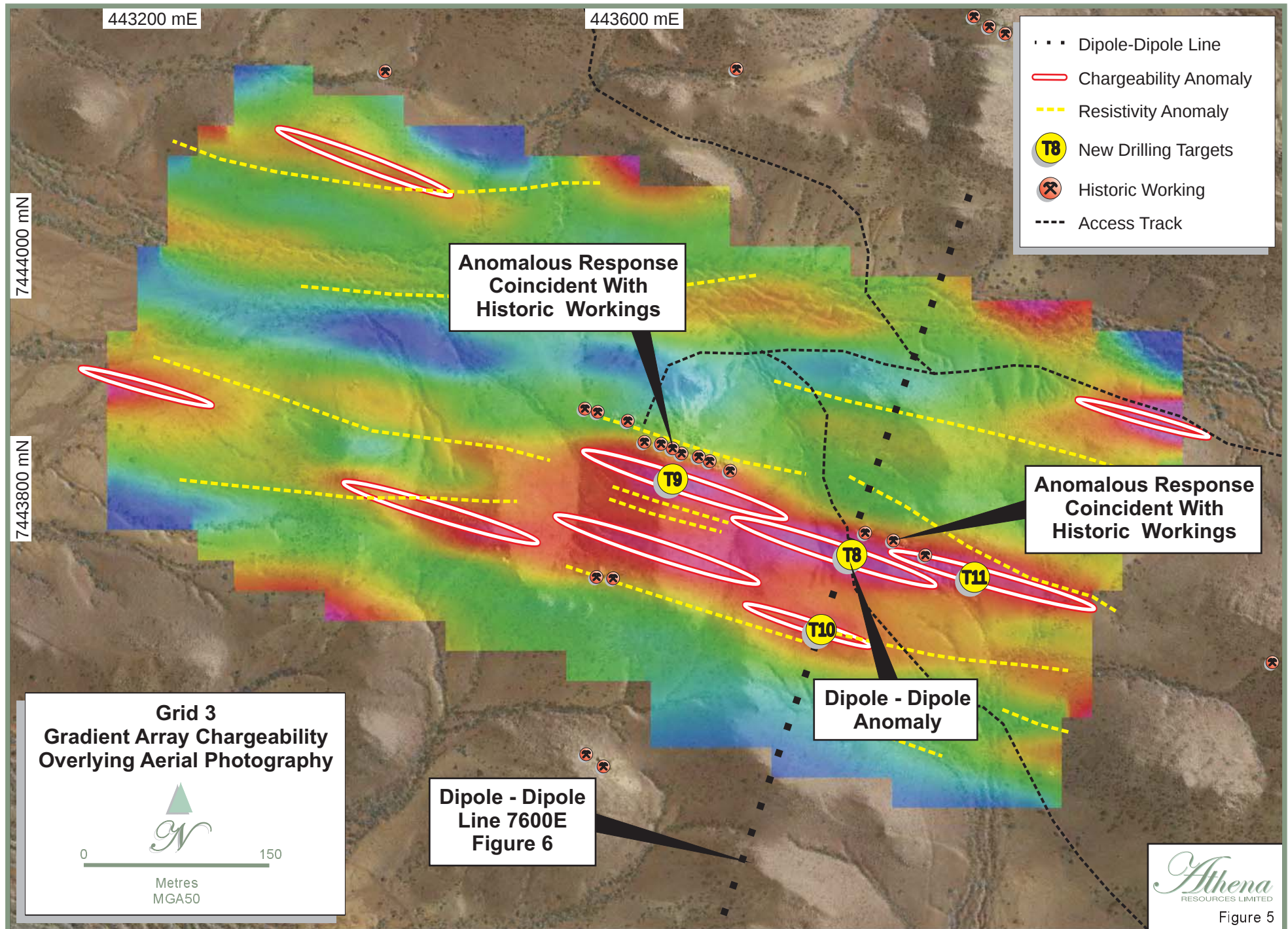
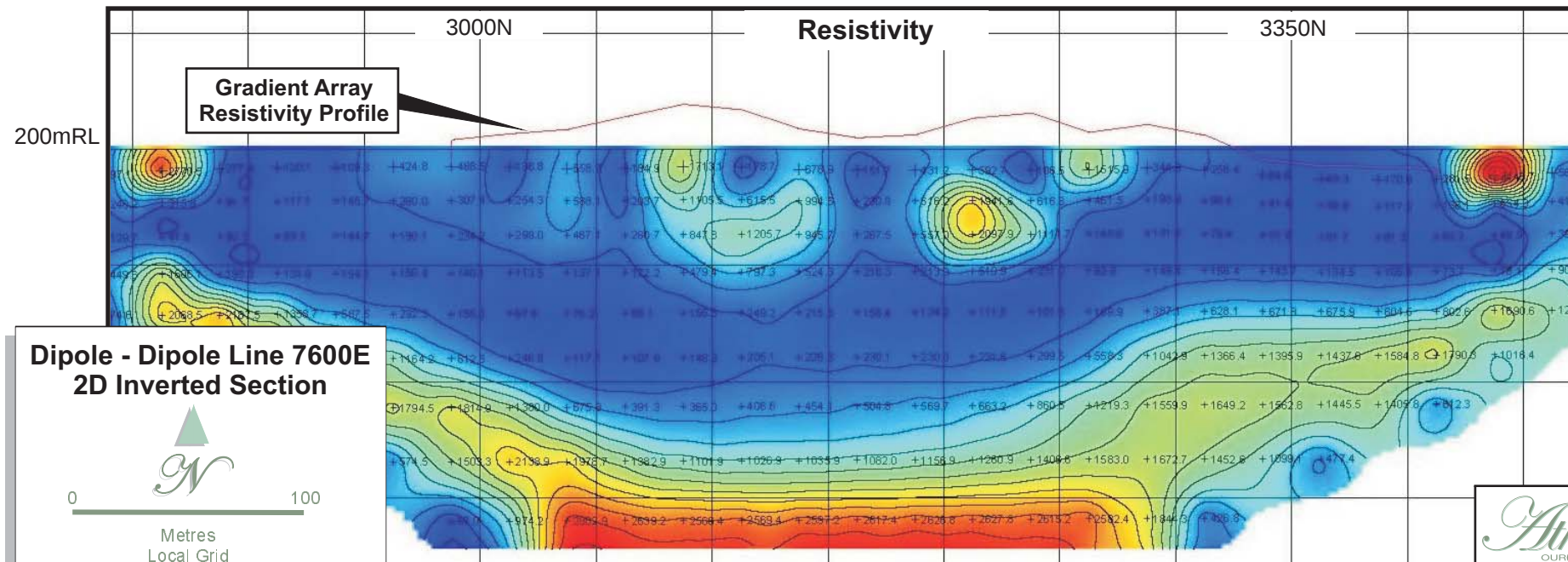
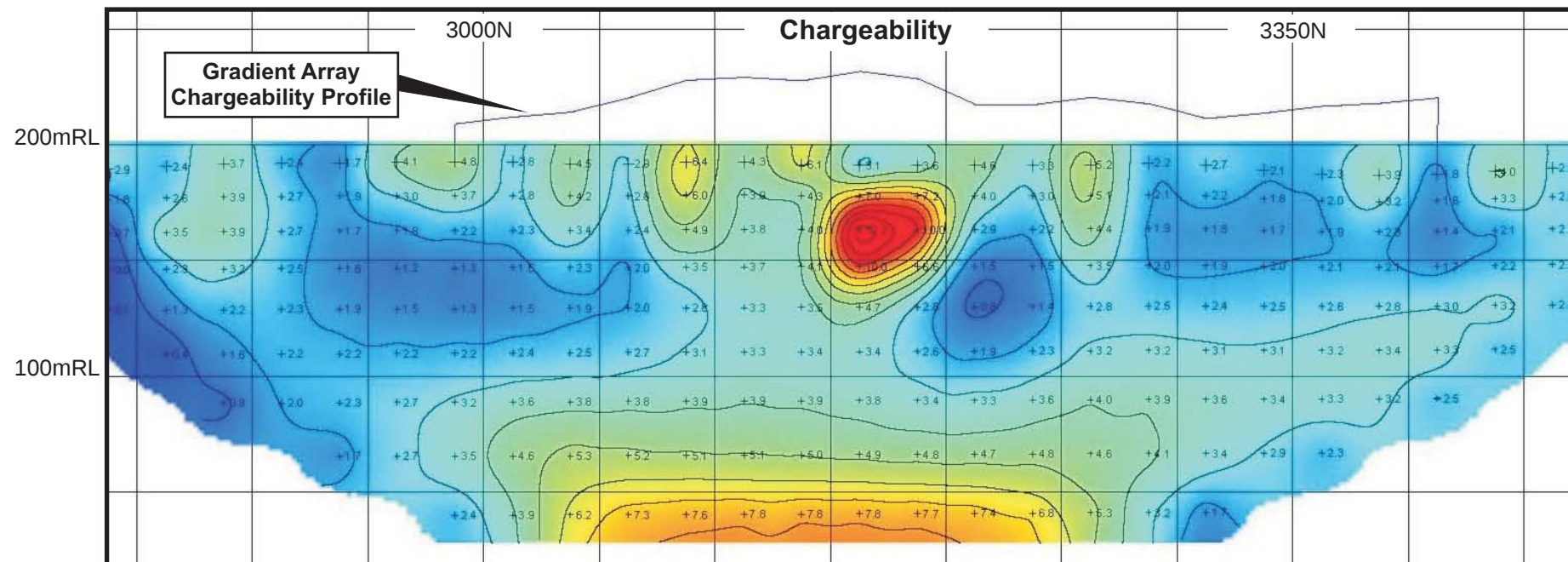


Figure 4





**Dipole - Dipole Line 7600E  
2D Inverted Section**



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Figure 6

