PNX Metals

Mt Ellison Review, Burnside Project

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Northern Territory, GDA94 MGA Zone 52

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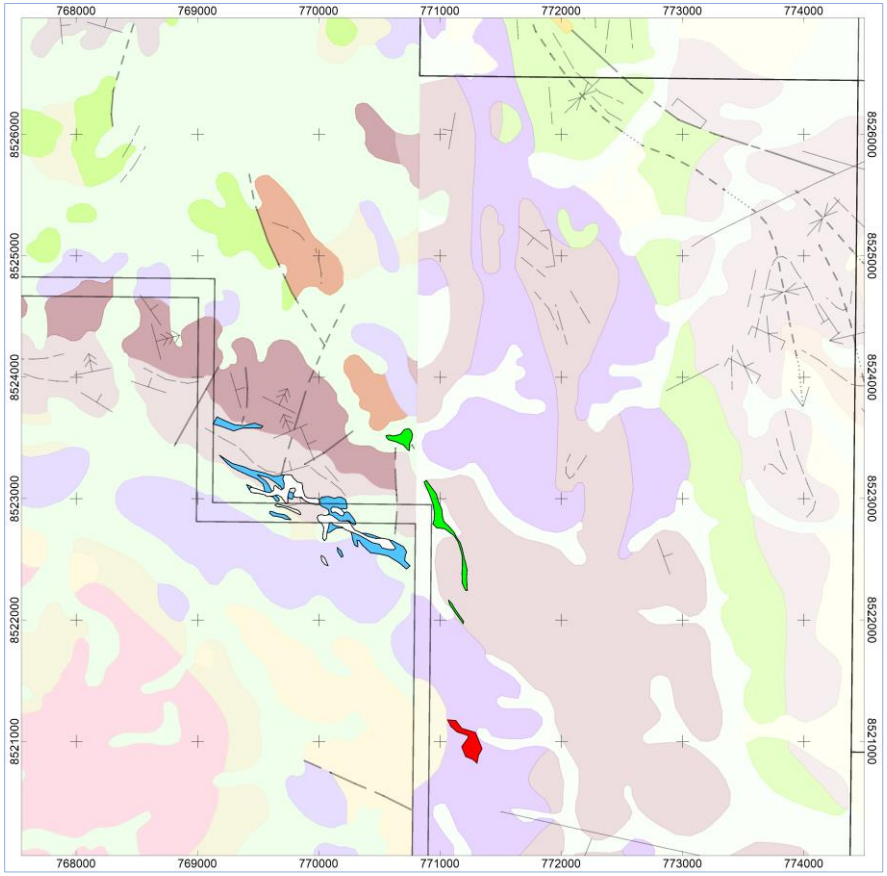
Mt Ellison – Background

Historic Cu mine located in PNX's Burnside Project.

Defined by Cu soil anomaly that extends over ~1.5km.



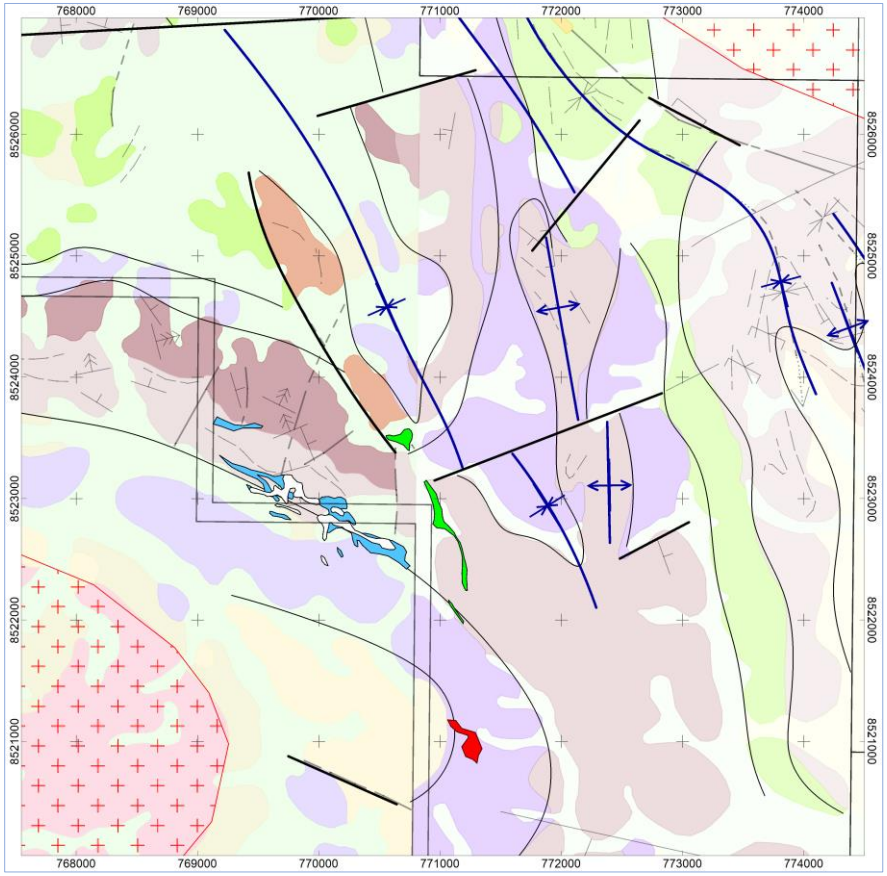
Mt Ellison Cu anomaly (green) over 100k geology. Also shown is Deloraine Pb (white) and Zn (blue) anomalies and Ban Ban Au anomaly (red).

Mt Ellison – Geology

Mt Ellison is hosted by black shales of the Proterozoic Koolpin Formation in the Pine Creek Geosyncline.

Structurally complicated area between the Burnside Granite 2.5km to the SW and the Margaret Granite 5km to the NE.

Mt Ellison appears to occur at the termination of a NNW trending fault. Possibly a reflection of change in geological/sulfide competency??



Mt Ellison Cu anomaly (green) over 100k geology and interpreted faults (thick black) and folds (blue). Also shown is Deloraine Pb (white) and Zn (blue) anomalies and Ban Ban Au anomaly (red).

Mt Ellison – Historic Work

Blade (1979) reported:

- Highly ferruginous rocks with “abnormally high specific gravity” were collected from a pseudo gossan in the vicinity of the old workings.
- Assay results showed high concentrations of base metals.

Table 1. Mount Ellison, Rock sample assay values

Rock sample No, Assay results	No. 1. GS 1753	No. 2. GS1754	No. 3. GS 1755
Cu in %	19.0	22.5	40.0
Pb in ppm	155	135	80
Zn in ppm	340	270	300
Ag in ppm	70	60.0	170.0
Bi in ppm	65	60	95
Au in ppm	0.05	0.05	0.05

- Polished sections of the rock samples showed that the pyrite and massive chalcocite are remobilised and recrystallised and “probably formed in a zone of secondary enrichment, after chalcopyrite”.

Mt Ellison – 2011 VTEM

VTEM shows that the area is electrically complex.

Mt Ellison has a VTEM response on some of the lines, particularly near the old workings. Note that any massive secondary chalcocite will be conductive (see next page).

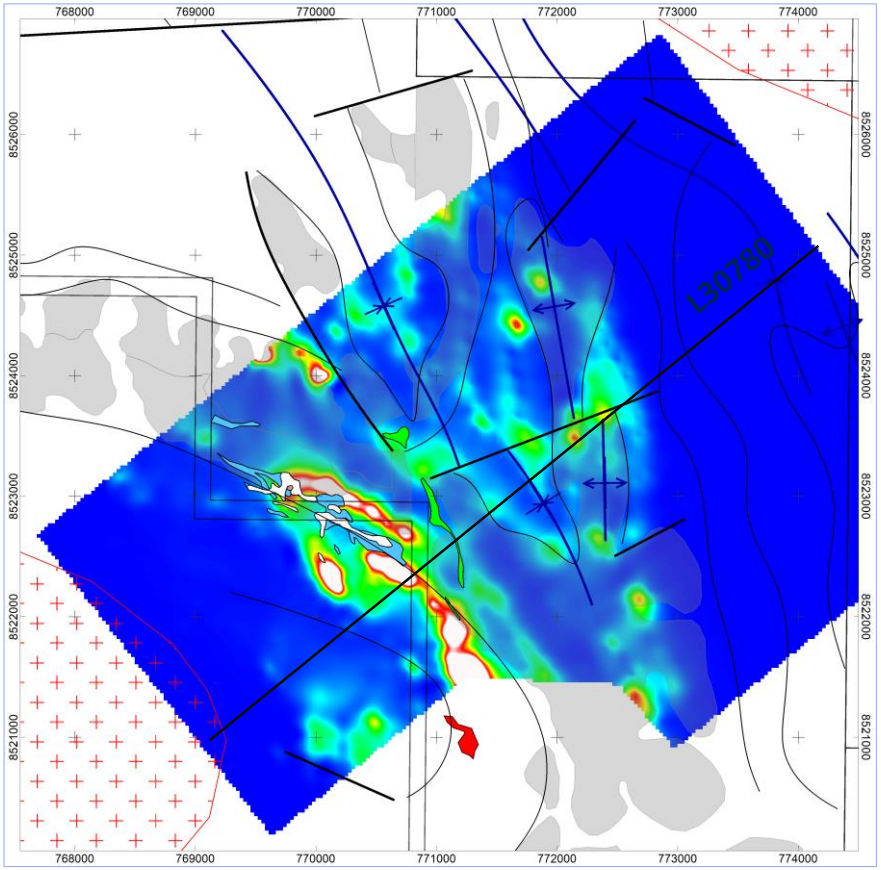
The Koolpin Formation is highly conductive.

The Gerowie Tuff, Mount Bonnie Formation and Burnside Granite have relatively low conductivity.

The Zamu Dolerite has moderate to high conductivity.

The Wildman Sandstone has moderate to low conductivity.

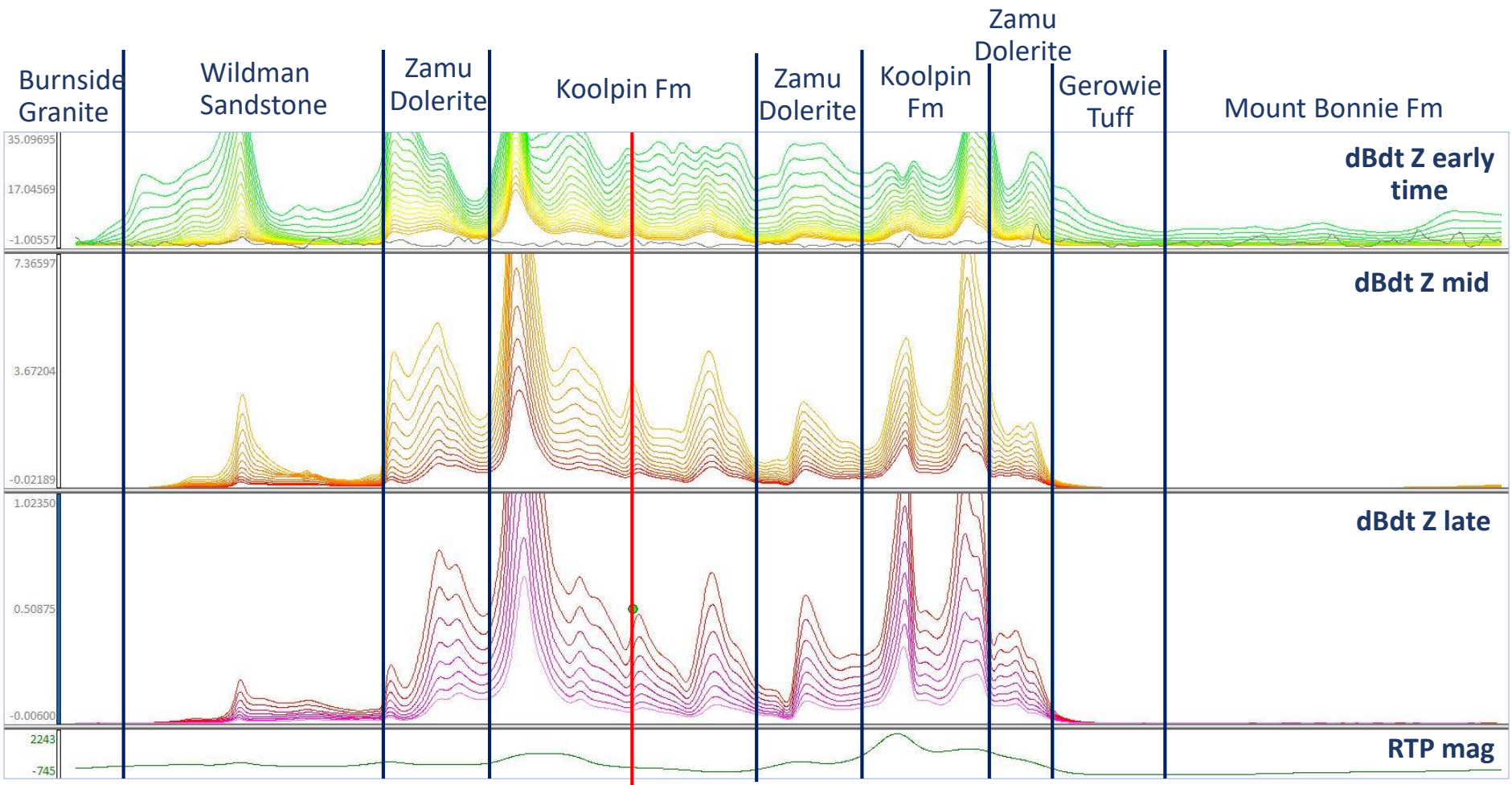
The VTEM data should be used to refine the geological interpretation.



Mt Ellison Cu anomaly (green) over VTEM time channel 45, Koolpin Formation (grey) and 100k geology interpretation. Also shown is Deloraine Pb (white) and Zn (blue) anomalies and Ban Ban Au anomaly (red).

Mt Ellison – 2011 VTEM

The VTEM response over Mt Ellison is swamped by the lithological response of the Koolpin Formation.



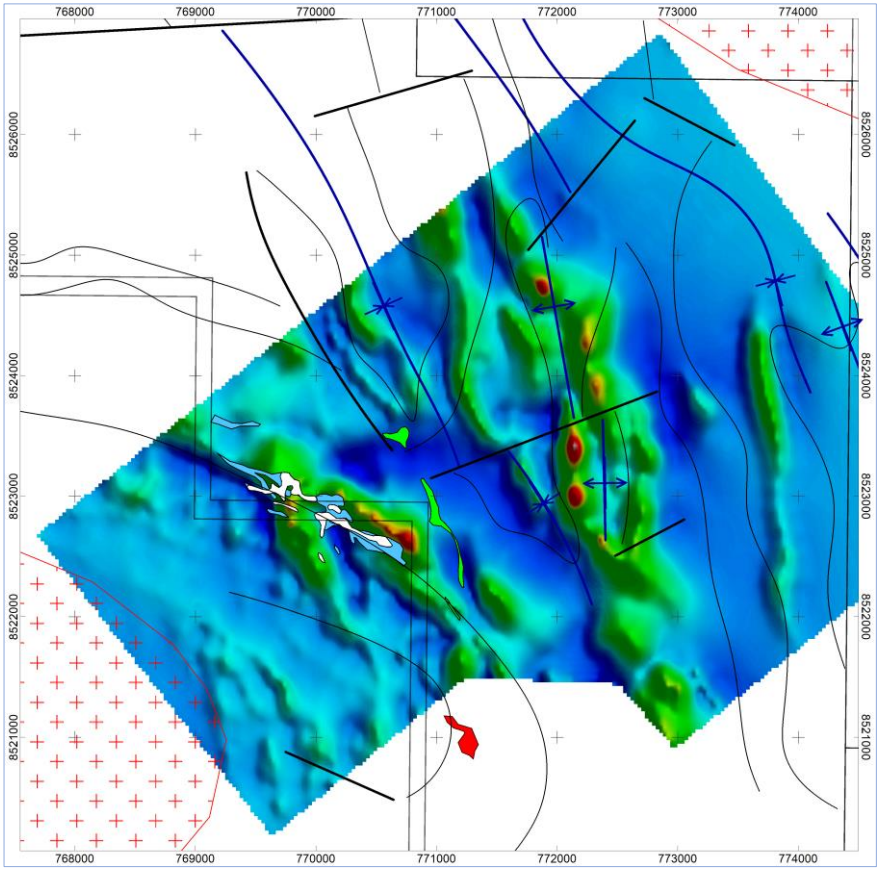
VTEM Line 30780 Z component and magnetic profiles with Mt Ellison location (red), divided by 100k lithology (blue). Line location shown on previous page.

Mt Ellison – Magnetics

The magnetics from 2011 VTEM survey show that the area is magnetically active.

While the Koolpin Formation has magnetic high signature, Mt Ellison occurs in a magnetically low area.

The magnetics should be used to refine the geological interpretation.



Mt Ellison Cu anomaly (green) over RTP magnetics (0.5VD) and 100k geology interpretation. Also shown is Deloraine Pb (white) and Zn (blue) anomalies and Ban Ban Au anomaly (red).

Mt Ellison – Geophysical Considerations

Although Mt Ellison has a VTEM response along some of its strike length, it is not sufficient for reliable modelling and drill targeting.

The conductivity of the Koolpin Formation will make targeting Mt Ellison with EM difficult but not impossible; long read times would need to be utilised. EM surveys at Mt Bonnie were affected by the presence of the Koolpin Formation 800m away but the Mt Bonnie mineralisation was still able to be reliably modelled.

Mt Ellison mineralisation is likely to be more chargeable than the Koolpin Formation and so amenable to IP/resistivity.

CSAMT is also a possibility. For example, Dugald River Pb-Zn-Ag deposit is hosted by black shales and successfully mapped by CSAMT (see slides 11-15).

Detailed gravity may be an option but for a target width of 10m at shallow depths, station spacing would need to be in the order of 5-10m.

Mt Ellison – Conclusions

Mt Ellison sits in an electrically complex area and has a subtle EM response along some of its strike length.

Other base metal deposits hosted by black shales have been mapped using electrical techniques (IP/Res, EM, CSAMT).

Reported high SGs are from samples of secondary enrichment pseudo gossan containing pyrite and chalcocite. The density of primary mineralisation is unknown.

Mt Ellison has no magnetic response.

The Mt Ellison area is structurally complex, EM and magnetics in conjunction are able to map lithologies in the Mt Ellison area.

Mt Ellison – Recommendations

A detailed review of the VTEM over the Mt Ellison area should be undertaken to determine the extent of the VTEM response. Part of this process would be to refine the existing geological mapping and interpretation using magnetic and conductivity information.

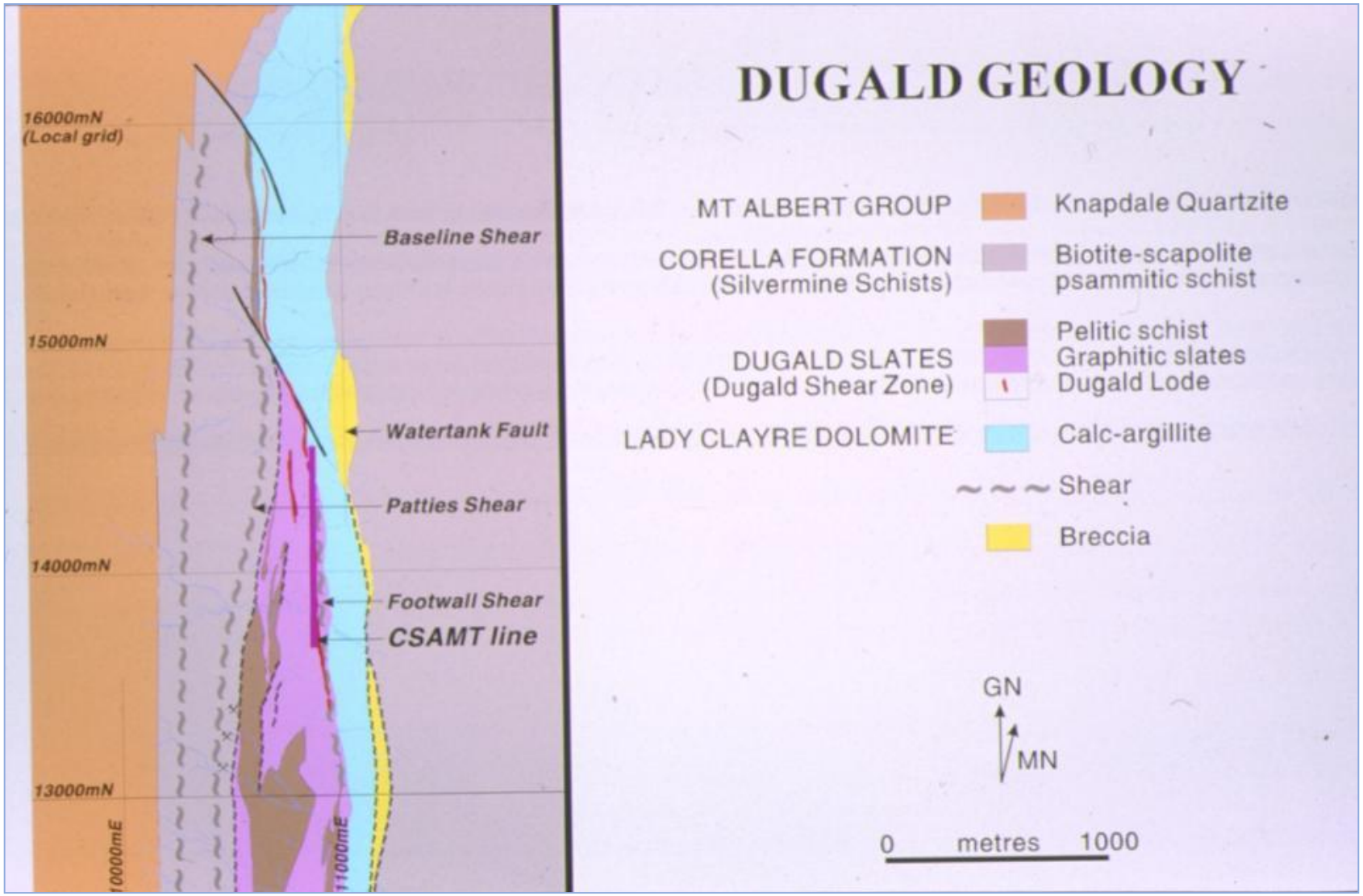
It is believed that the most effective method for drill targeting would be a two step IP/Resistivity approach:

1) gradient array IP over the length of the Cu anomaly to define areas of higher conductivity and/or chargeability, followed by
2) detailed lines of IP over areas of interest to define drill targets.

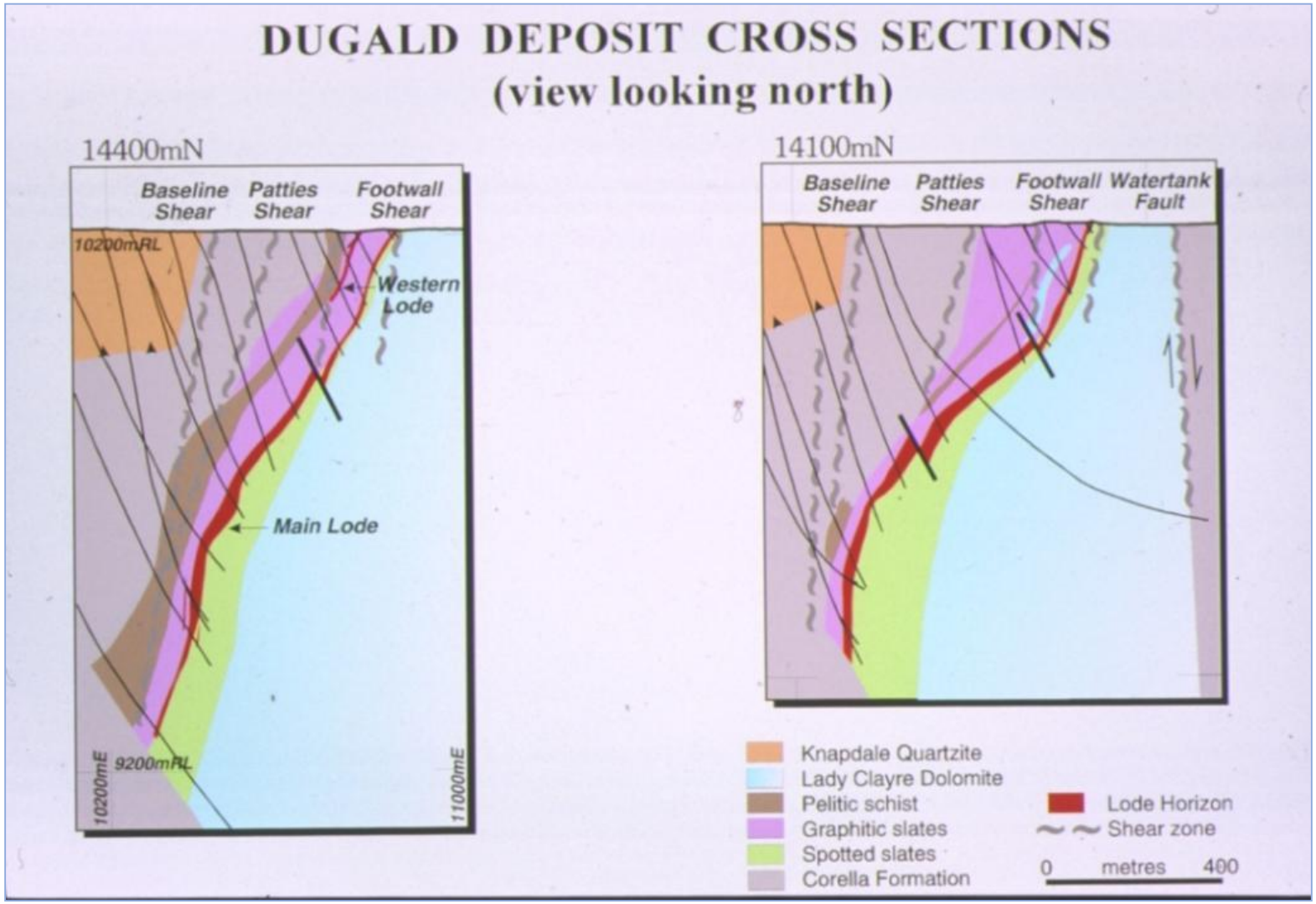
EM could trialled as a second option if IP is unsuccessful, beginning where there is the highest VTEM response.

CSAMT could be used as a last option (due to high cost).

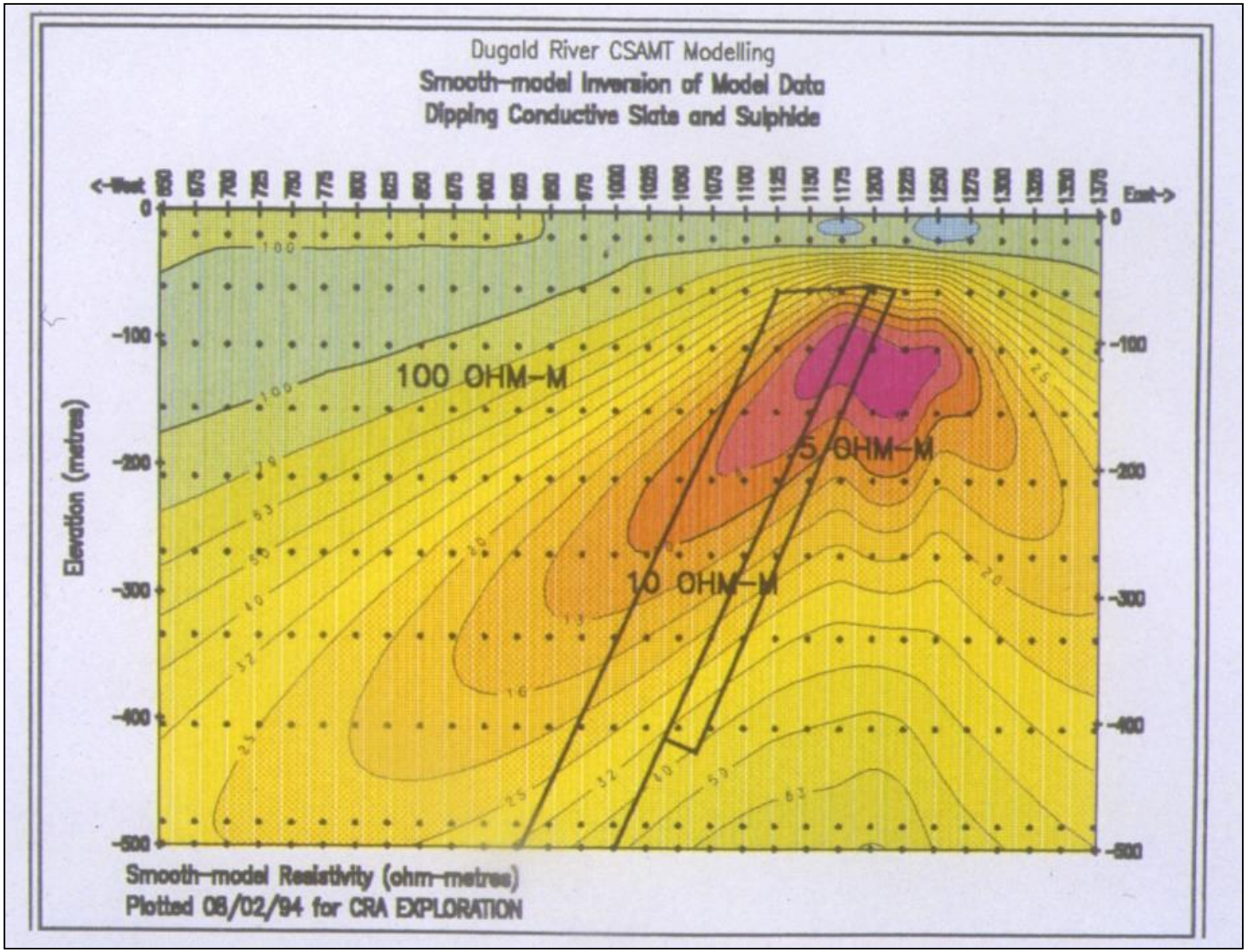
Dugald River - Geology



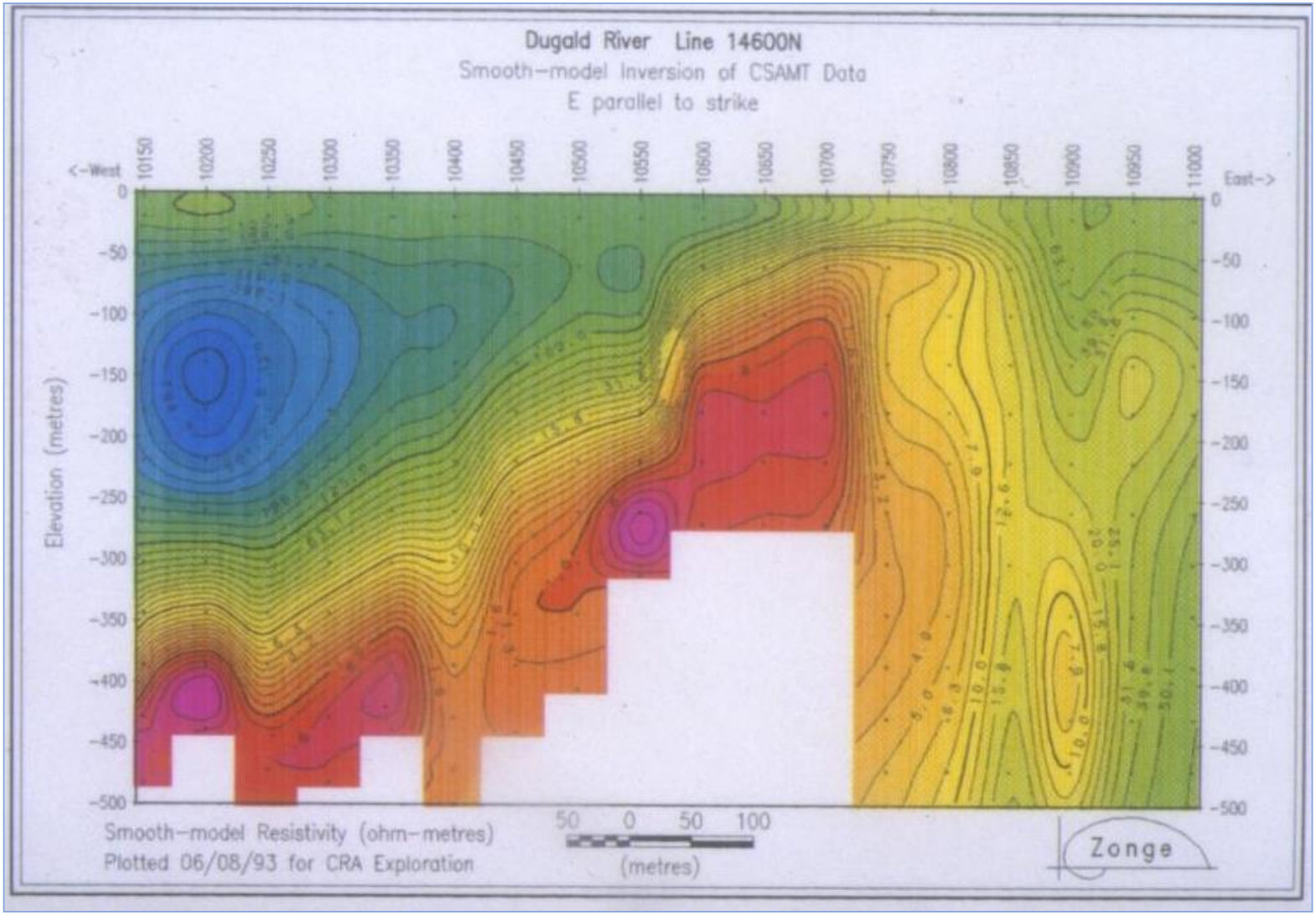
Dugald River - Geology



Dugald River - CSAMT



Dugald River - CSAMT



Dugald River - EM

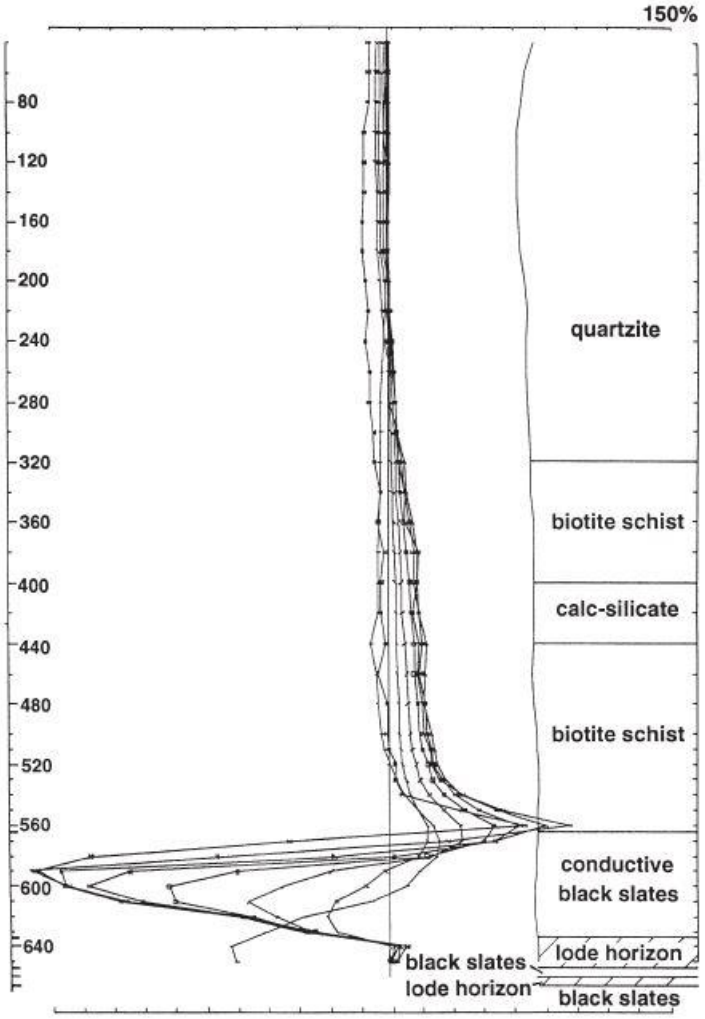


Figure 5 Dugald River DHEM. The results show that although the overlying shales are conductive, the mineralisation is more so (after Macnae & Mutton 1996).

Downhole EM survey (Bishop and Emerson 1999, 318)