Historic IP Modelling

Cookies Corner, Pine Creek

GDA94, MGA Z52

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Survey Information

IP survey undertaken in 1988.

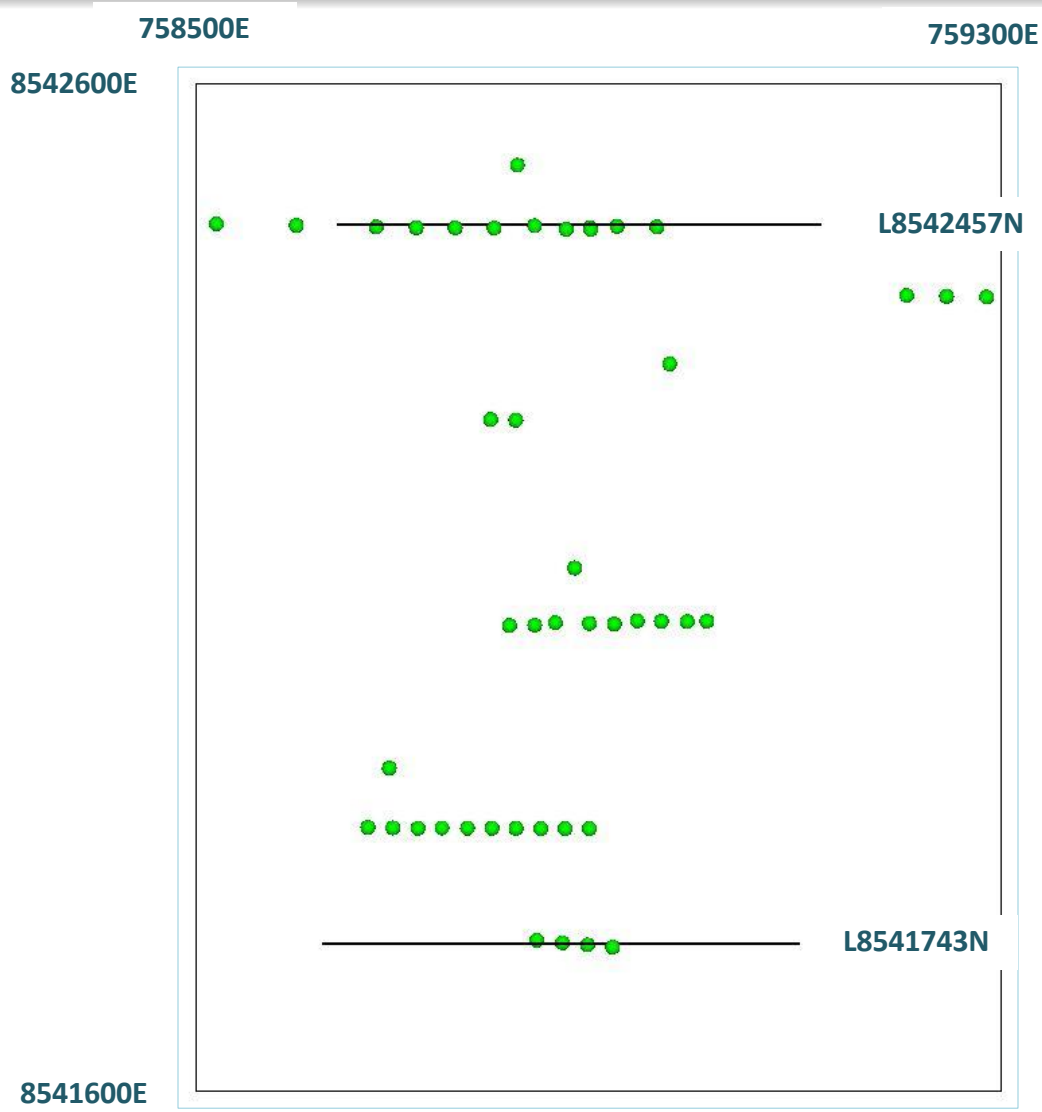
Blocks of gradient IP were followed up with two lines of dipole-dipole IP (DDIP).

No digital data available, only scanned plans (gradient) and pseudo-sections (DDIP).

DDIP specifications:

- Survey type: frequency domain
- Units: ohm.m and mrad
- Dipole length: 50m
- N level: 1 to 6
- Frequency: 0.25Hz
- Transmitter: GGT20
- Receiver: GDP12
- Current: unknown, estimated from transmitter
- Survey geometry: unknown

Survey Information



Location of DDIP lines and collars.

Processing

Pseudo-section data (apparent resistivity and chargeability) was manually entered using local grid coordinates, with the assumption that all data was C>P.

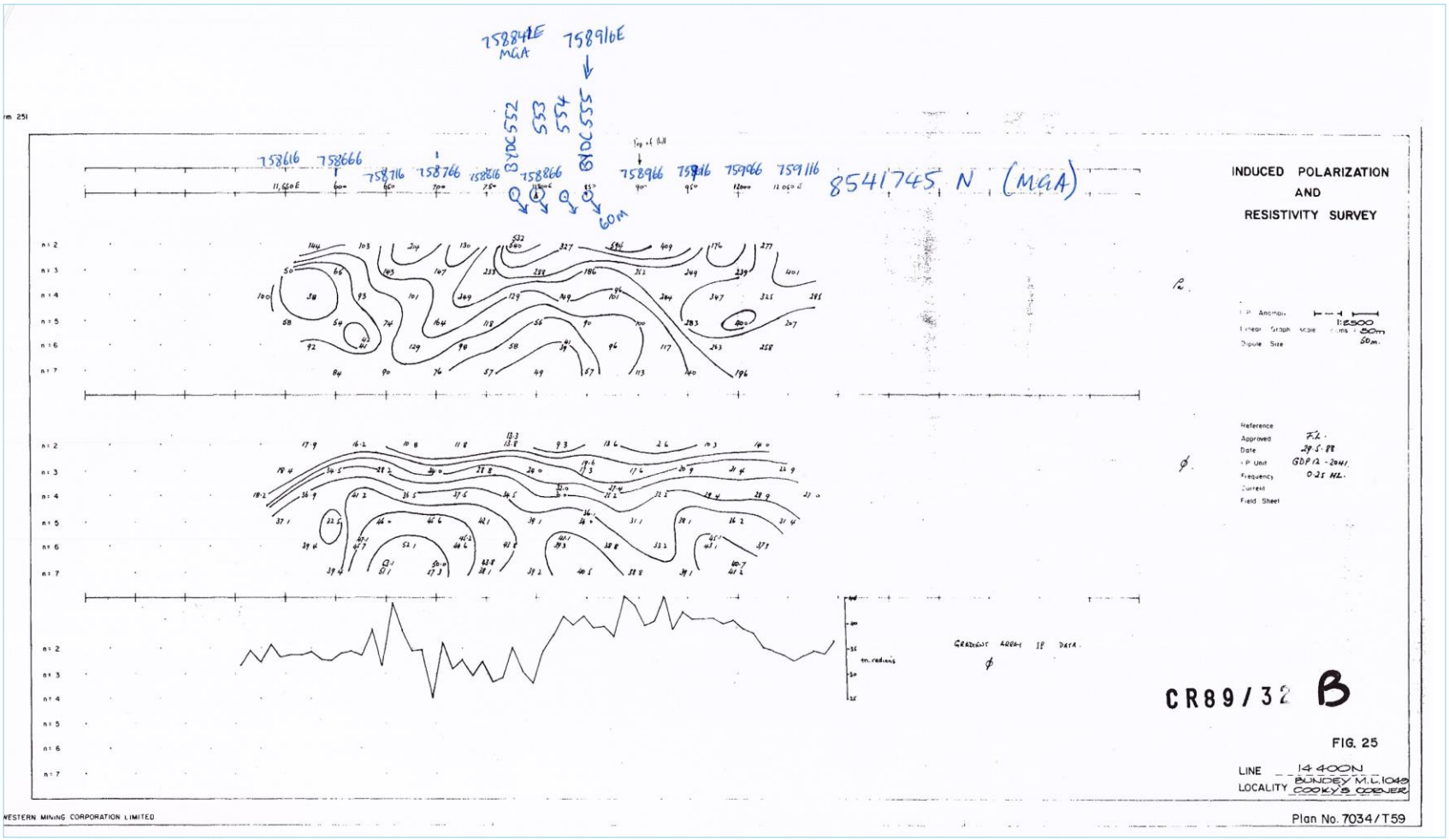
Voltage was back calculated from apparent resistivity with an assumed current of 7 Amps. Note that this is a best estimate based on knowledge of the transmitter and survey setup, errors in this estimate will create an offset in the resistivity of final models.

Coordinates were updated to GDA94 MGA Zone 52 using DGPS coordinates of collar on section.

Data was imported into Scientific Computing Application's TQIPdb software for pseudo-section visualisation and addition of elevation information. Data was then exported in a format for inversion with UBC's DCIP2D inversion software. Following inversion sensitivity testing was undertaken.

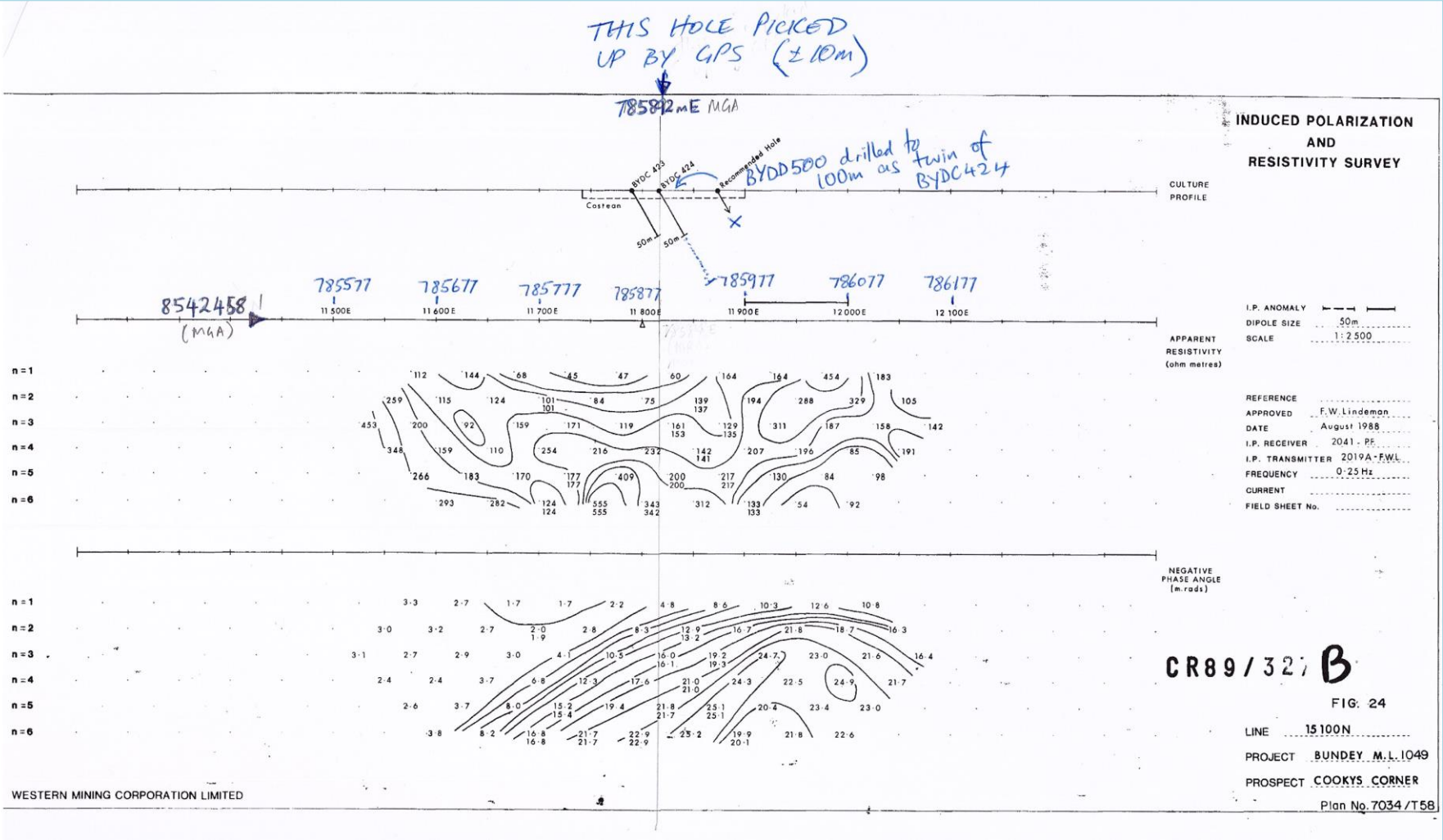
Gridded models were imported into Geosoft's Oasis Montaj software for display. Chargeability results were converted from mrad to mV/V so as to be comparable with recent IP data.

Pseudo-Sections



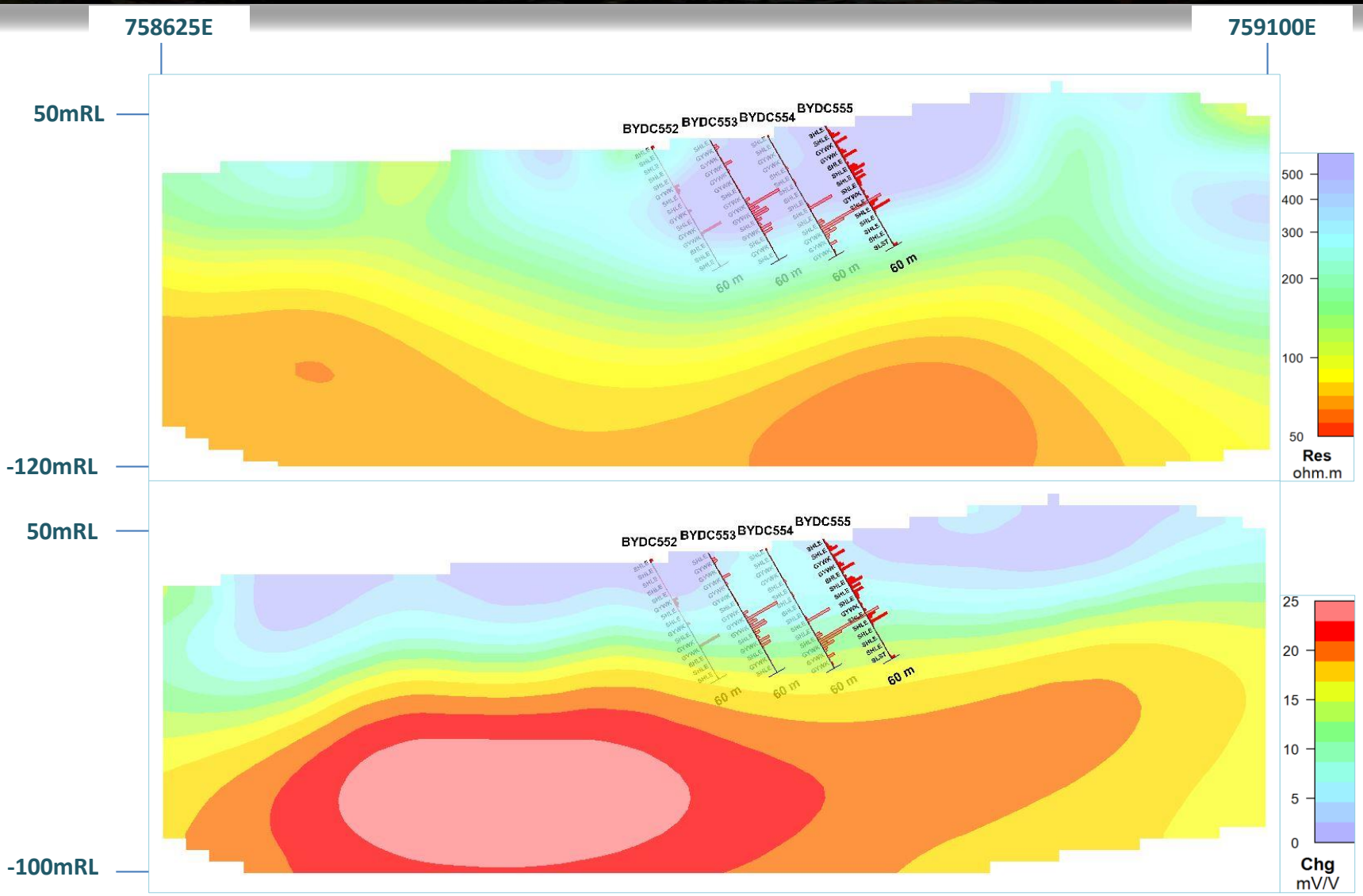
L8541743N pseudo-section.

Pseudo-Sections



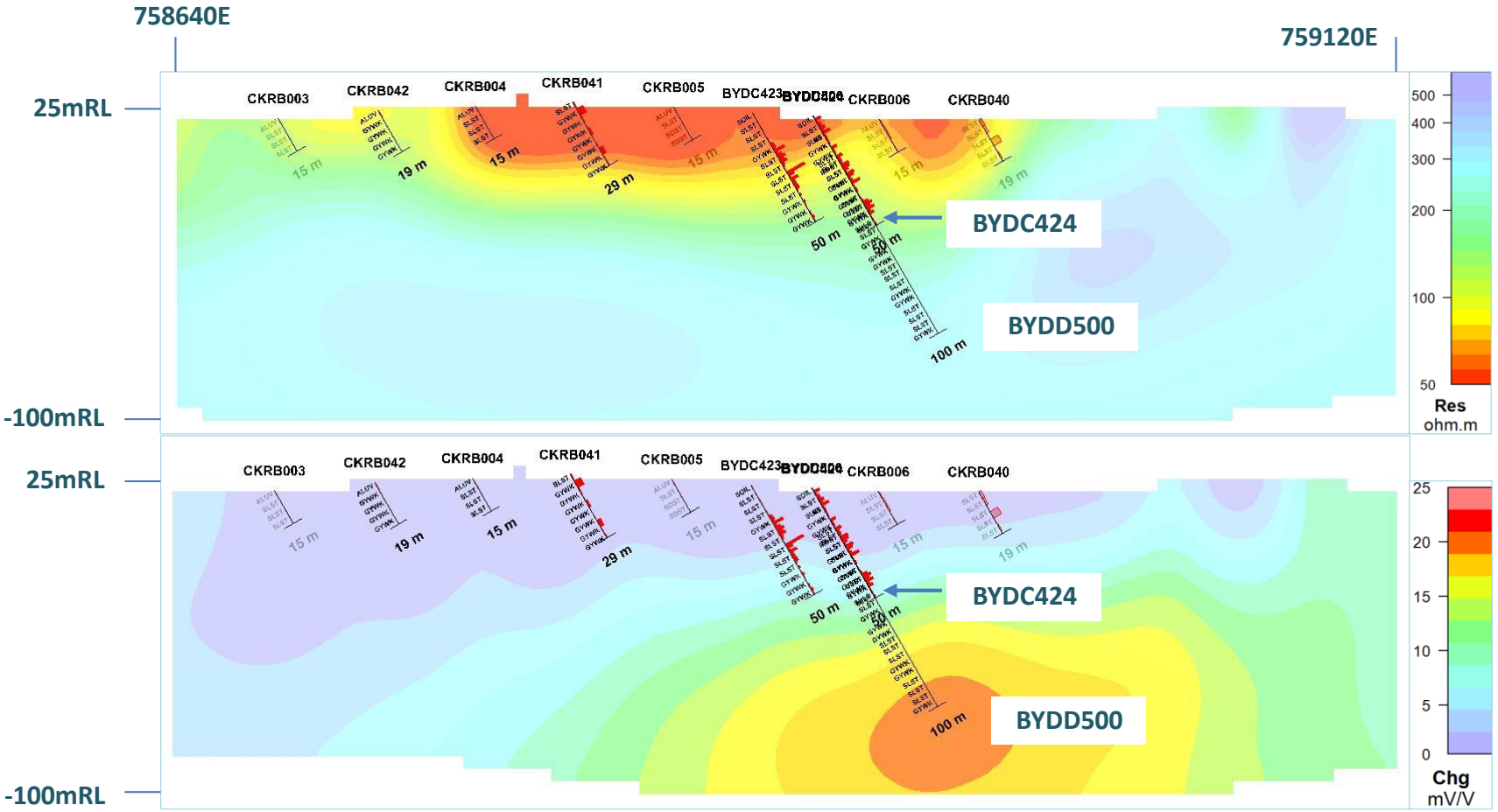
L8542457N pseudo-section.

Results – L8541743N (L14400N)



L8541743N resistivity (top) and chargeability (bottom) models with drillholes and Au (ppm) in red.

Results – L8542457N (L15100N)



L8542457N resistivity (top) and chargeability (bottom) models with drillholes and Au (ppm) in red.

Conclusions

Historic DDIP pseudo-section data has been successfully modelled.

L8541743N has a large chargeability anomaly in a region of high conductivity that has not been tested by drilling. To the east on L8541743N, drillhole BYDC554 has Au intersection of 1.93g/t Au from 43-51m, including 3.32g/t Au from 46-50m.

L8542457N has a chargeability anomaly in a region of low conductivity that has been intersected by drillhole BYDD500, for which there is no assay data. BYDC424 ended short of the chargeability anomaly but has intersections including 0.97g/t Au from 30-3m and 0.63g/t Au from 39-45m. Note that drillholes were only routinely assayed for Au and As.

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