Technology Applied to Exploration of the Greenvale Project
North Queensland

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There are two elements to this presentation:

- The technology (software) which is the principal reason for the presentation and
- The exploration project.

The software program is **BlockViewer** which is one of two software programs I have developed over the last 20 years or so.

The Greenvale Exploration Project is held by Superior Resources Limited and I thank Superior for permission to present information on the project. I am a non-executive Director of Superior Resources Limited.
The Software

- BlockViewer allows the on-screen **3D visualisation** of block modelled data such as geophysical survey data (eg. IP data), drill hole data and other data to improve the spatial understanding and interpretation of the data.
The rocks of interest are:

- Metamorphosed Ordovician intermediate to basic volcanics, intrusives and sediments which are probably equivalent to rocks in the Macquarie Arc in NSW and
- Hosts to a variety of mineralisation styles including VMS, Porphyry Copper and Lode Gold deposits.

In contrast, the Balcooma VMS deposit to the northwest is hosted by an acid volcanic sequence.
See the Superior Resources Limited ASX release on the Galah Dam Prospect dated 14 February 2017.
3D Modelling of an historical IP survey was completed by Peter Rowston of GRS using the UBS 3D software.

3D block models for chargeability and conductivity (resistivity).

The exploration permit covering Galah Dam has only recently been granted to Superior.

All drill hole data shown has been compiled from historical records.

The following slides have been taken directly from BlockViewer with additions and annotations in PowerPoint.
Galah Dam
Google Earth on DTM (SRTM)

View Centre: 10000E; 96750N; 450RL
Looking: –20° to 330° Grid

Folded Alteration Zone

Modelled Chargeability and Conductivity Targets

Historical Drilling
Galah Dam
Google Earth on DTM

View Centre: 10000E; 96750N; 450RL
Looking: –20° to 330° Grid

Folded Alteration Zone

Modelled Chargeability and Conductivity Targets

Historical Drilling
Galah Dam
3D Chargeability Block Model
3D Contours at 15, 20, 25, 30, 35 & 40 mV/V

View Centre: 10000E; 96750N; 450RL
Looking: −20º to 330º Grid
Galah Dam
3D Conductivity Block Model
3D Contours at 20, 30, 40 & 80mS/m

View Centre: 10000E; 96750N; 450RL
Looking: –20º to 330º Grid
Galah Dam
3D Chargeability Block Model
3D Conductivity Block Model

Contours on Section through View Centre
Thick Lines – Chargeability; Thin Lines Conductivity

View Centre: 10000E; 96750N; 450RL
Looking: -20º to 330º Grid

Chargeability
mV/V
15
20
30
35
40

Conductivity
mS/m
10
20
30
40
80
Galah Dam
Drill Hole Section 96050N
Zinc
Looking North (Grid)
Galah Dam
Section 97280N
Looking North (Grid)
Galah Dam
3D Chargeability Block Model
3D Conductivity Block Model
Contours on Section through View Centre
Thick Lines – Chargeability; Thin Lines Conductivity

View Centre: 9990E; 96900N; 340RL
Looking: 0° to 30° Grid

West Limb
Fold Axis
East Limb

~800m

Transverse Section

Chargeability mV/V
15 20 25 30 35 40

Conductivity mS/m
10 20 30 40 80
Diagrammatic Syncline

Speculation: Is the fold a Syncline with sulphide remobilisation up the fold axis?
Galah Dam

Drawn in Mapinfo

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EPM26165 “Cockie South” Galah Dam Prospect
Modelled Chargeability
Drill Hole Zinc
Google Earth
Old Galah Dam Prospect

- Better Drill Hole Intersections (1% Zn Cut-off)
  - 05GDRC002 159 - 171 12m @ 1.95% Zn, 0.41g/t Au & 0.12% Cu
  - GDDH01 222 - 230 8m @ 3.53% Zn, 0.26g/t Au & 0.17% Cu
  - GDP014 64 - 80 16m @ 4.44% Zn, 1.11g/t Au & 0.38% Cu &
  - GDP014 102 - 110 8m @ 2.61% Zn, 1.14g/t Au & 0.17% Cu

Galah Dam
Long Section Along Fold Axis
Looking Grid West

New Galah Dam Target Area

GDDH01

GDP014

05GDRC002

LEGEND

DRILL HOLE LEGEND
Zn (%)

- <0.2
- 0.2 to 0.5
- 0.5 to 1.0
- 1.0 to 3.0

LEGEND

Modelled Conductivity Contours (mS/m)

- 10
- 20
- 30
- 40
- 80

Modelled Chargeability Contours (mVv)

- 15
- 20
- 25
- 30
- 35
- 40
Galah Dam

Map drawn in Mapinfo

Legend:
- Modeled Conductivity Contours (mS/m):
  - 10
  - 20
  - 30
  - 40
  - 80

- Modeled Chargeability Contours (m/V):
  - 15
  - 20
  - 25
  - 30
  - 35
  - 40

Drill Hole Legend:
- Zn (%): <0.2, 0.2 to 0.5, 0.5 to 1.0, 1.0 to 3.0

Geophysical Anomalies

1. Galah Dam Prospect
2. Cross-Sections
3. Axial Plane Long-Section
4. Folded Major Alteration Zone
5. East Limb
6. West Limb
7. Major Anomalies
8. Contours of Modeled Chargeability (400RL) (Approximately 120m Depth) (5m/V intervals)
9. Zinc, gold, and copper intersections in historical drilling
10. VTEM Sliding Tau Image

EPM26165 “Cockie South” Galah Dam Prospect Modeled Chargeability Drill Hole Zinc
Galah Dam
Conceptual Pit

Pit to 300RL
Surface
Chargeability 20mV/V