Engineering
Performance

RCV Survey for 3D Environmental Site Assessment

DMT Geosciences

Task:

Identify and map impacted areas at decommissioned facilities to assist in efficient and cost-effective site remediation.

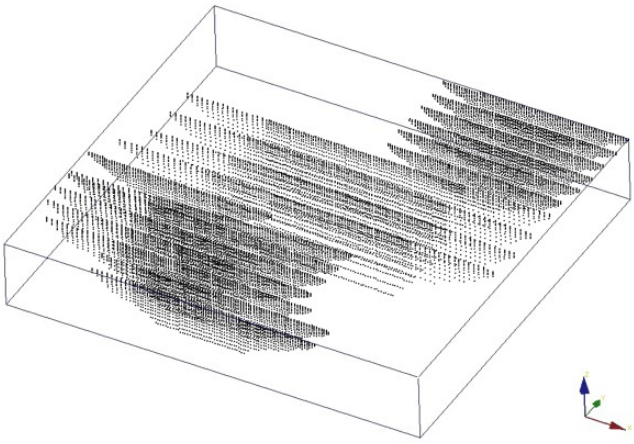
Method:

The Rapid Conductivity Volume (RCV) method uses multiple electrical resistivity lines to obtain a pseudo-3D gridded image of an impacted zone, and creates a 3D volume of conductivity.
These results are often preceded by an EM31 survey for reconnaissance mapping of impacted zones.

Benefits of RCV

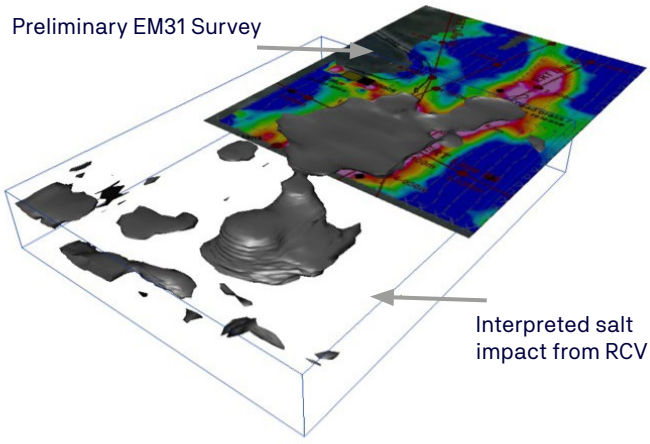
- Obtains horizontal and vertical delineation of impacted zones, which helps target future drill locations, or investigate areas with challenging terrain
- Can result in reduced excavation efforts by more accurate determination of impacted volumes
- Investigate depths > 20m
- Can be directly correlated with existing borehole information

Rapid acquisition of multiple 2D lines



A series of 2D lines are acquired to create a pseudo-3D subsurface volume

Pseudo-3D conductivity volume of subsurface



An isosurface is a contour of conductivity. This example shows a 3D conductivity contour at 125 mS/m, which was correlated to significant chloride impact through geochemical sampling of boreholes

Note how the mapped impact area extends to depth, where it was originally missed by EM31

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