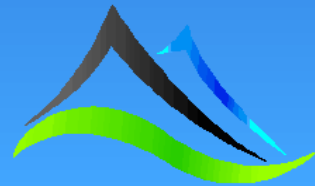


# Chasing Volkswagons at 2km with IP

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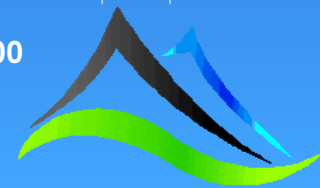
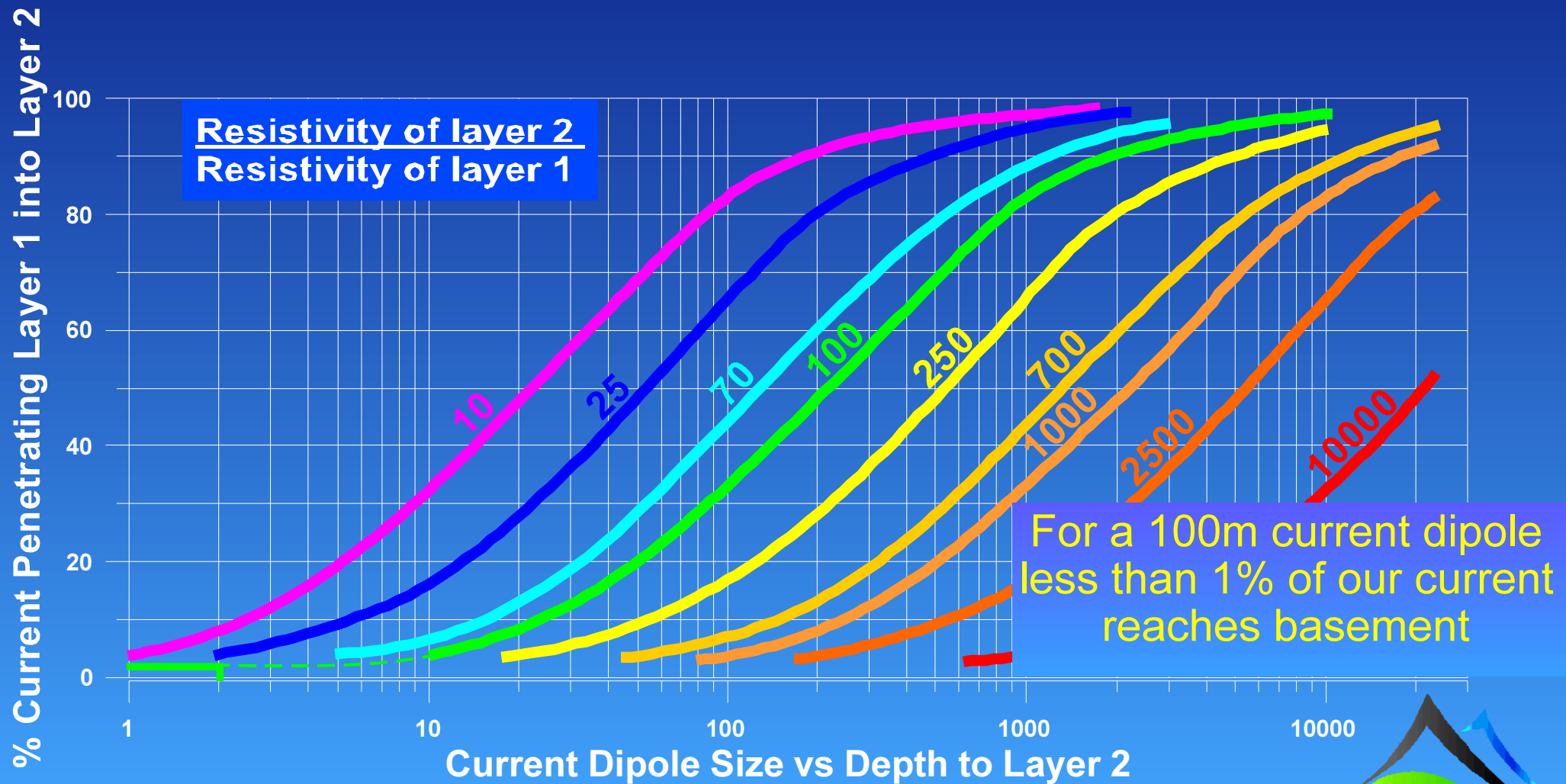
Kim Frankcombe  
ExploreGeo

*"It would be like burying a 1957 Volkswagen a mile or two deep and discerning whether it is a '57 or '58 model from the shape of the rear bumper," Robert Friedland 2009 when describing Ivanhoe's Zeus IP system*



# Signal at the target

50m of 10 Ohm m overburden over 1,000 Ohm m basement



# More power and high voltages!



2.5 kVA,  $V_{max}$  1 kV

20 MVA,  $V_{max}$  100 kV, 10,000A into a 5km dipole



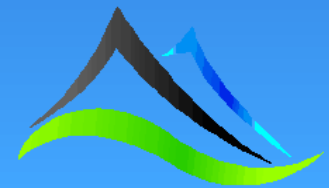
50 kVA,  $V_{max}$  4 kV



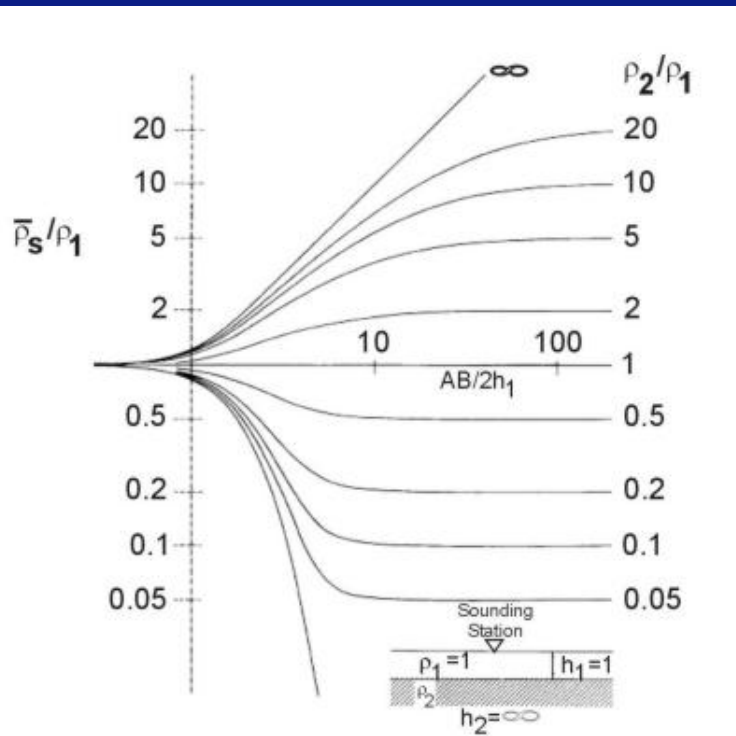
200 kVA,  $V_{max}$  10 kV

# State mining acts need attention

Ohm's Law is immutable

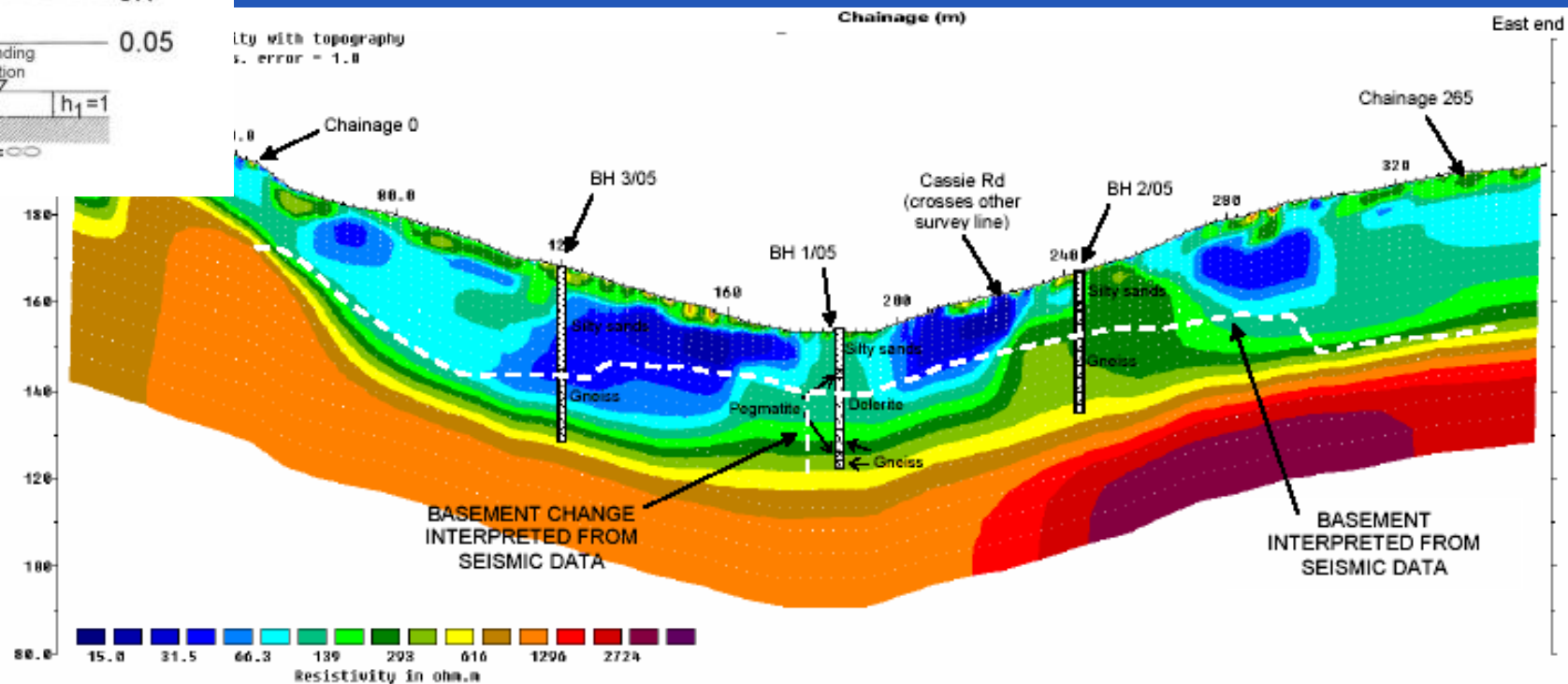


# More channels and variable geometry



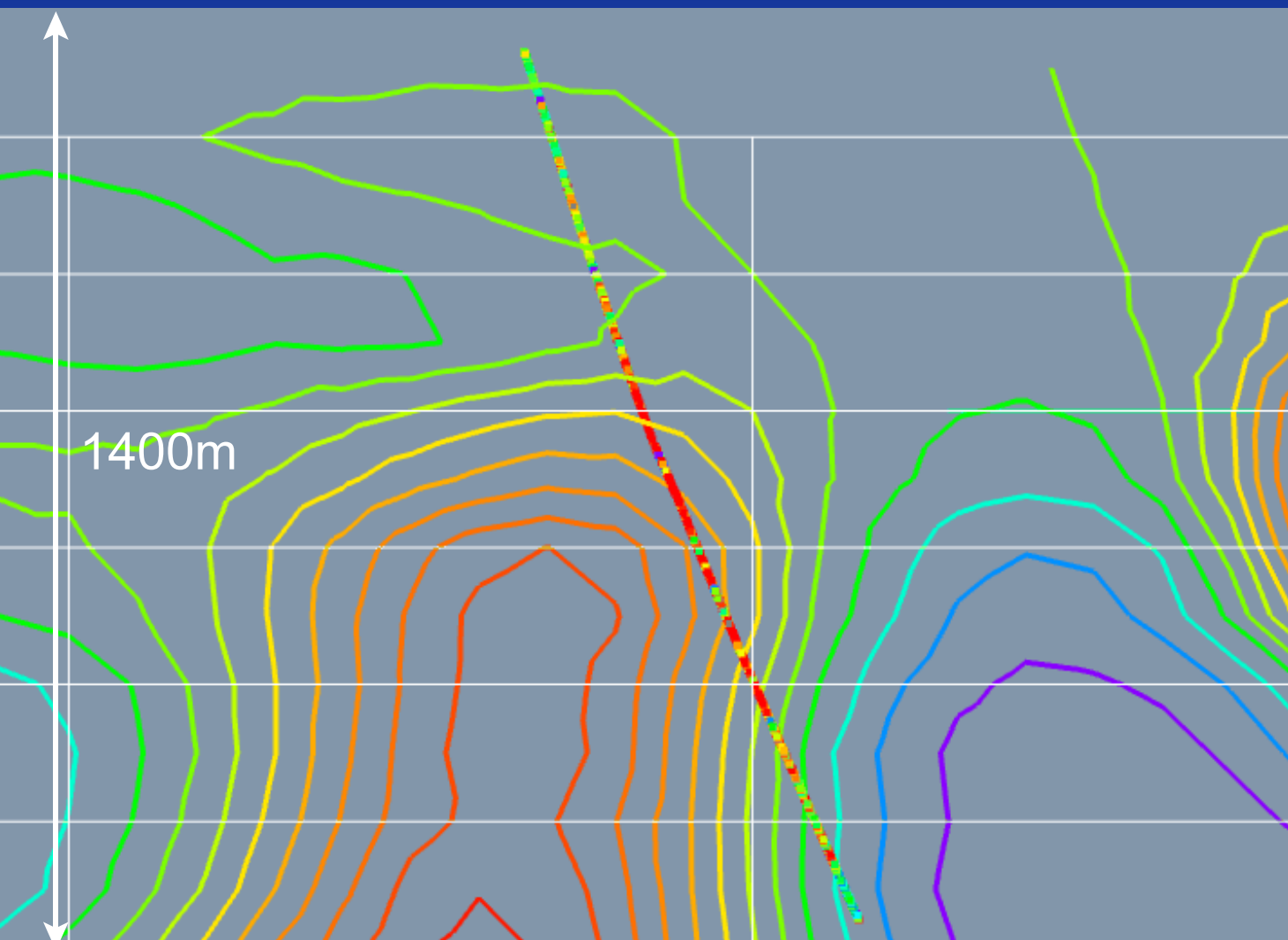
The near surface geophysicists have gone from simple 1D soundings to electrical tomography by using multi-resolution arrays with varying MN, AB and n.

From 10 readings to 10,000 over the same site  
The minerals exploration industry can do the same



# Case Study

Comparison between IP and Cu grades in the deepest drillhole



2 mV/V contours of chargeability

Cu to 3.3%

Resistivity 100 -1000 Ohm m in this location

Good correlation to at least 1km depth

