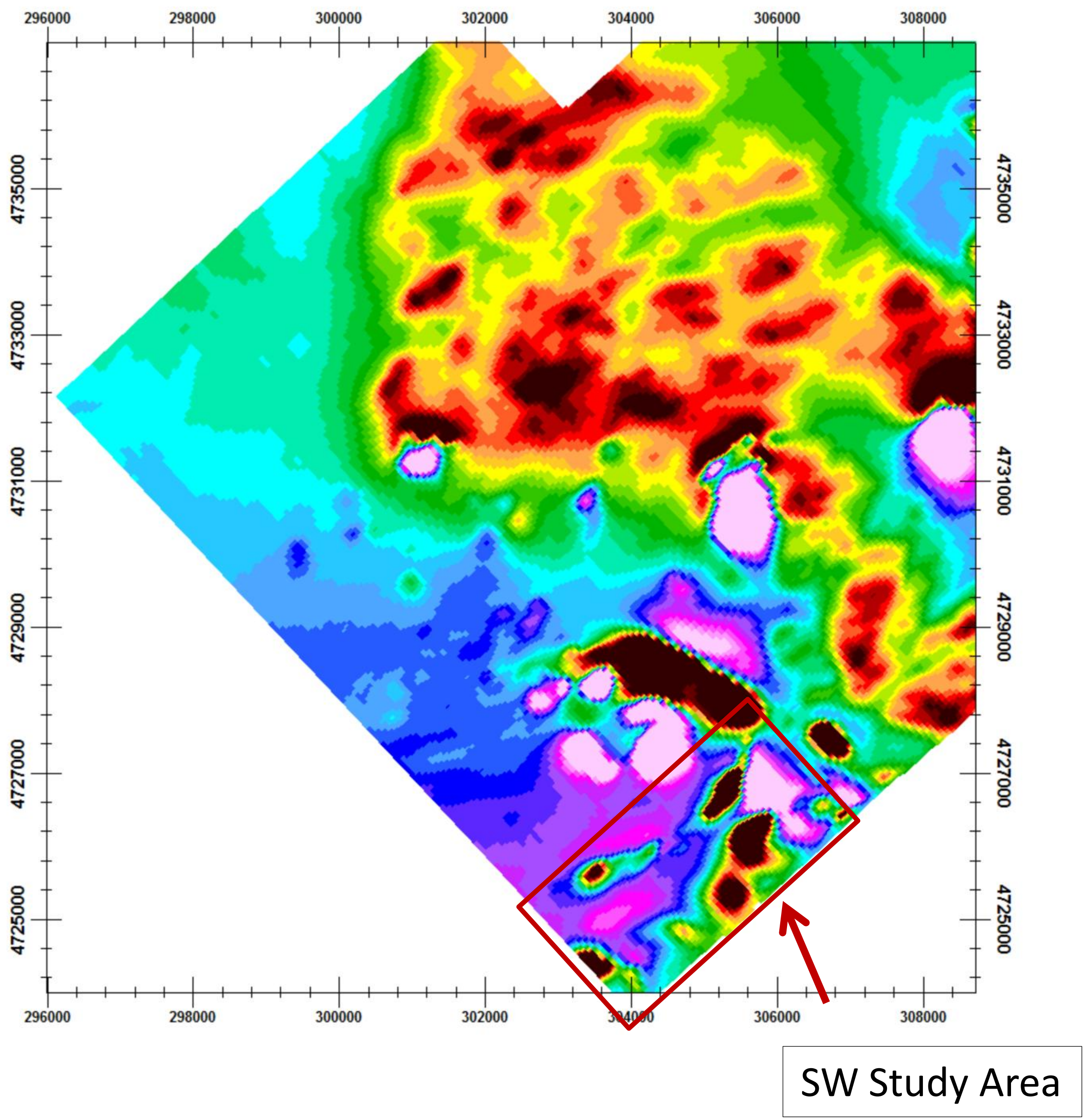
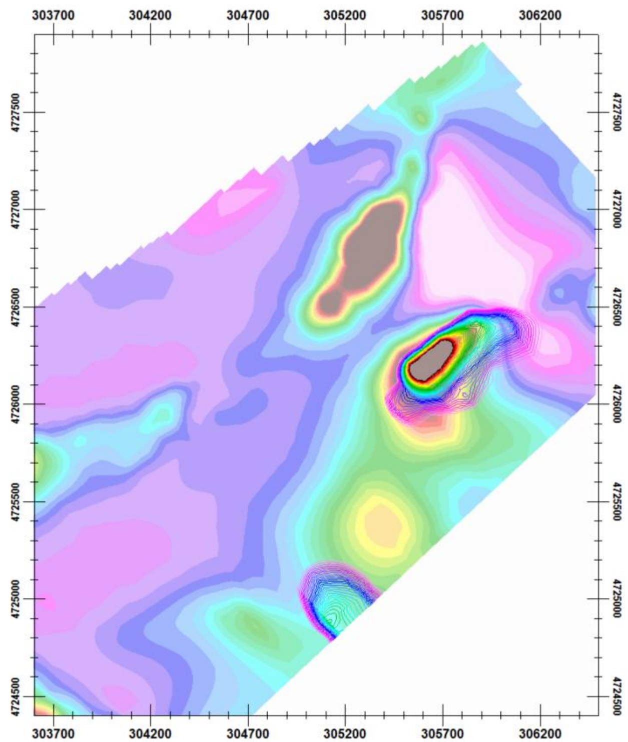
Rattlesnake Hills Magnetics – Western Portion

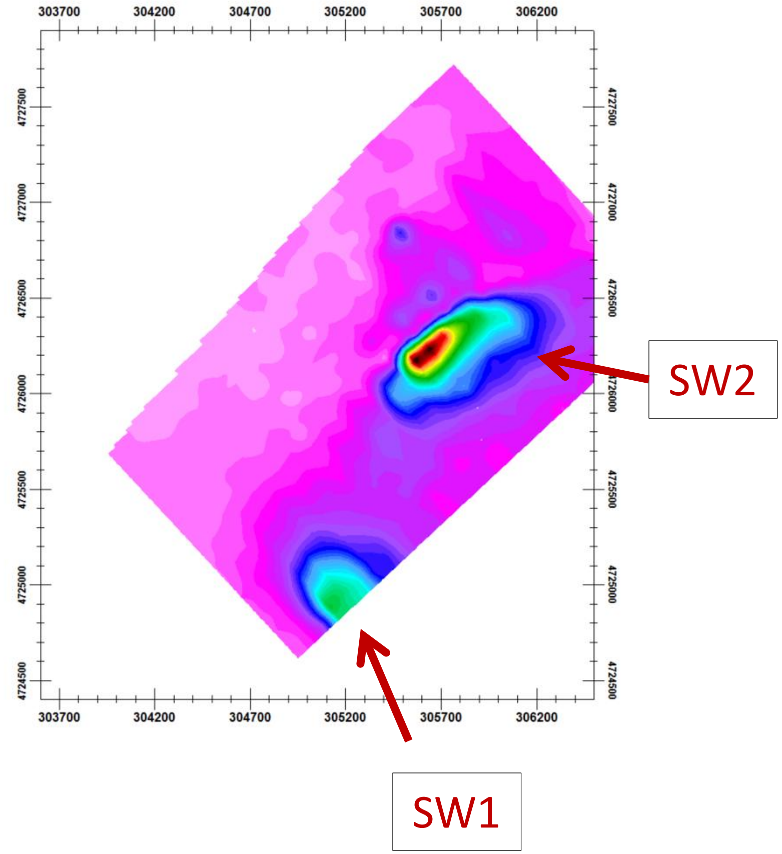


Rattlesnake Hills EM – West South Eastern Corner

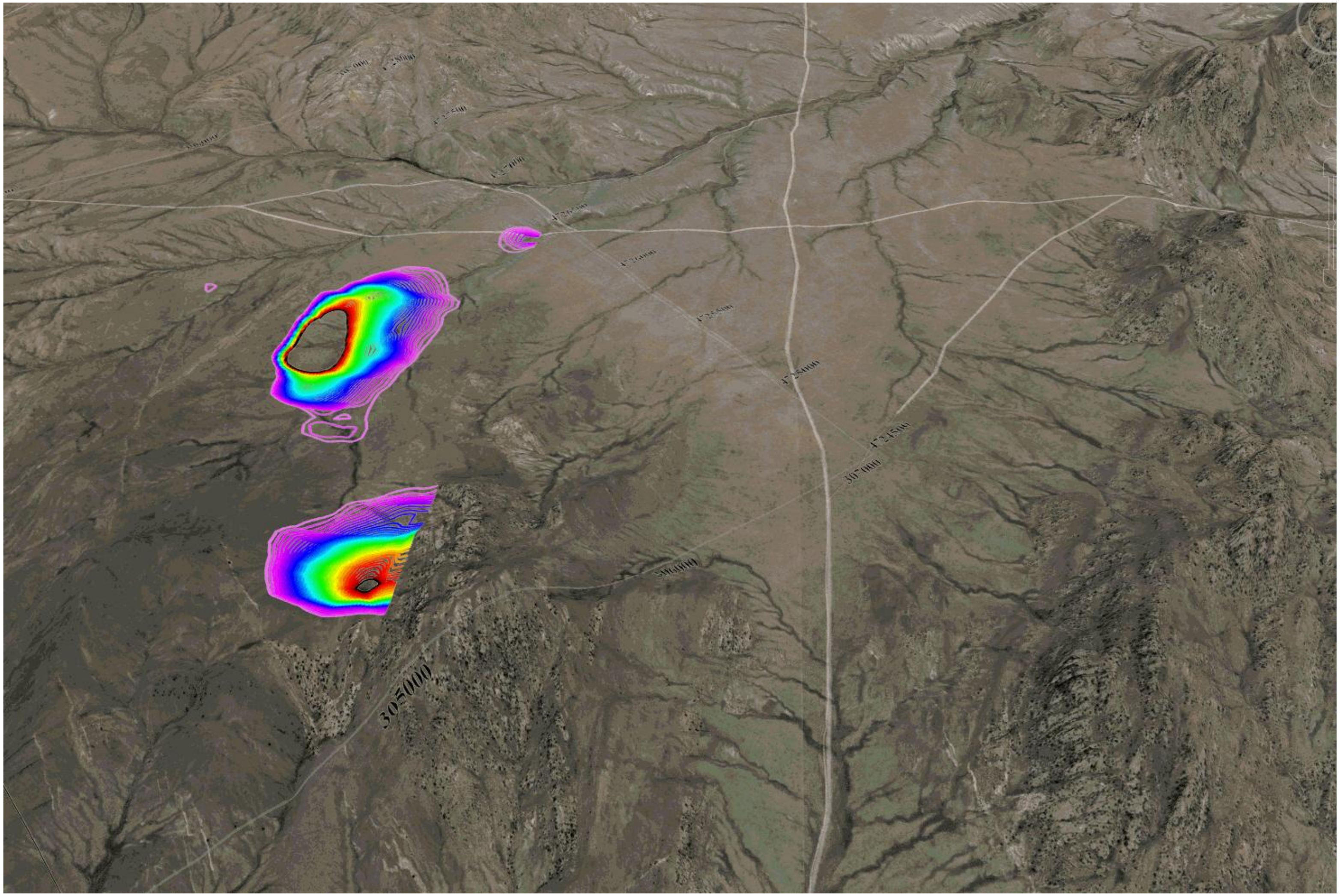
Channel 33



With magnetic underlay



Rattlesnake Hills Magnetics – West South Eastern Corner



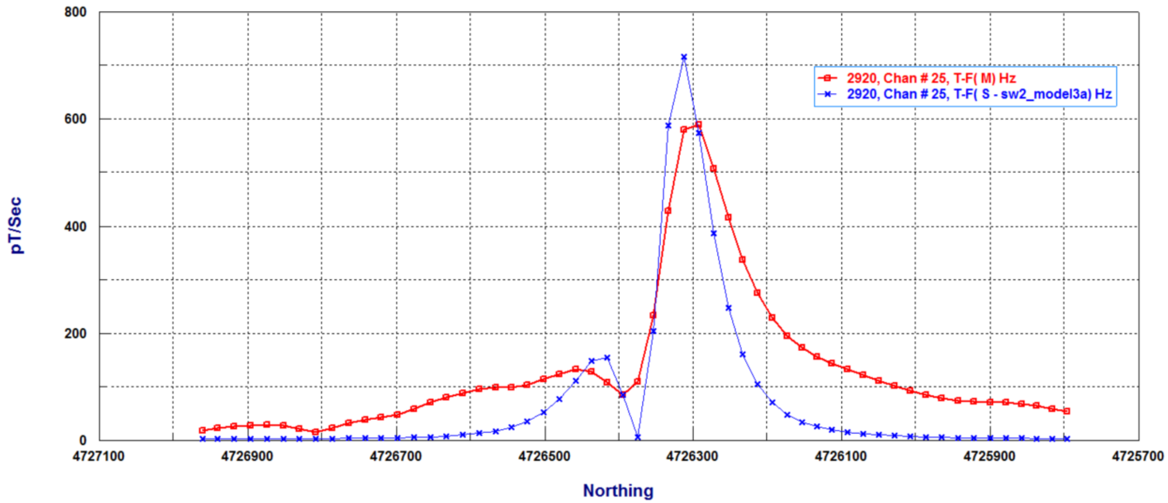
Rattlesnake Hills Magnetics – West South Eastern Corner

SW1

The response is from a relatively flat lying surface with peak response slightly outside the survey area. This does not mean the object is necessarily a thin flat lying structure but merely that this is the surface the VTEM detects. There is indicates of another structure below the main response with an even higher conductance.

SW2

SW2 is coincident with a magnetic response. This is only a preliminary model but verifies that the conductor is relatively vertical with a dip to the SE. Also the modeling indicates a plunge to the North. Depth to top is very shallow.



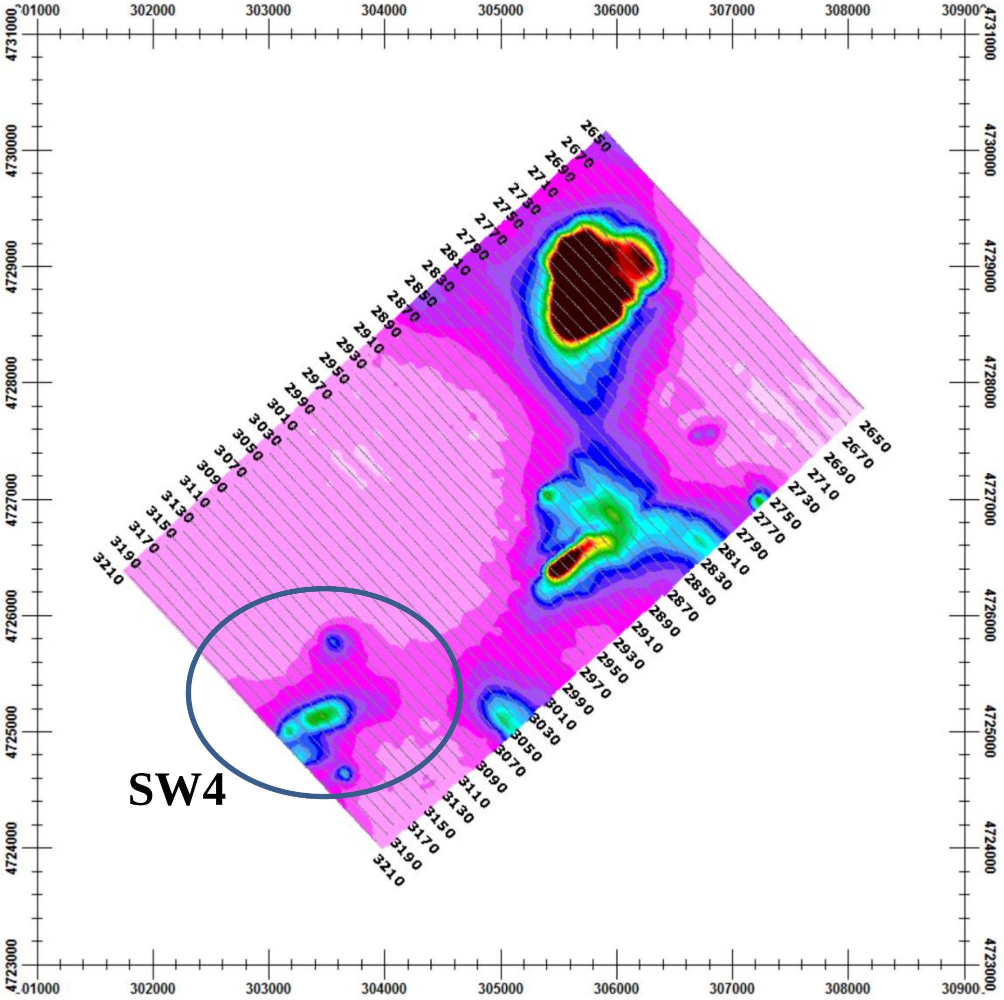
SW2

Strike Angle: 47 degrees NE
Strike Length: 800m
Dip angle: 65 degrees to SE
Dig Extent: 600m
Conductance: 50S

Rattlesnake Hills Magnetics – West South Eastern Corner

SW4

SW4 is on the very southern lines of the VTEM survey slightly west of the SE corner of the survey.

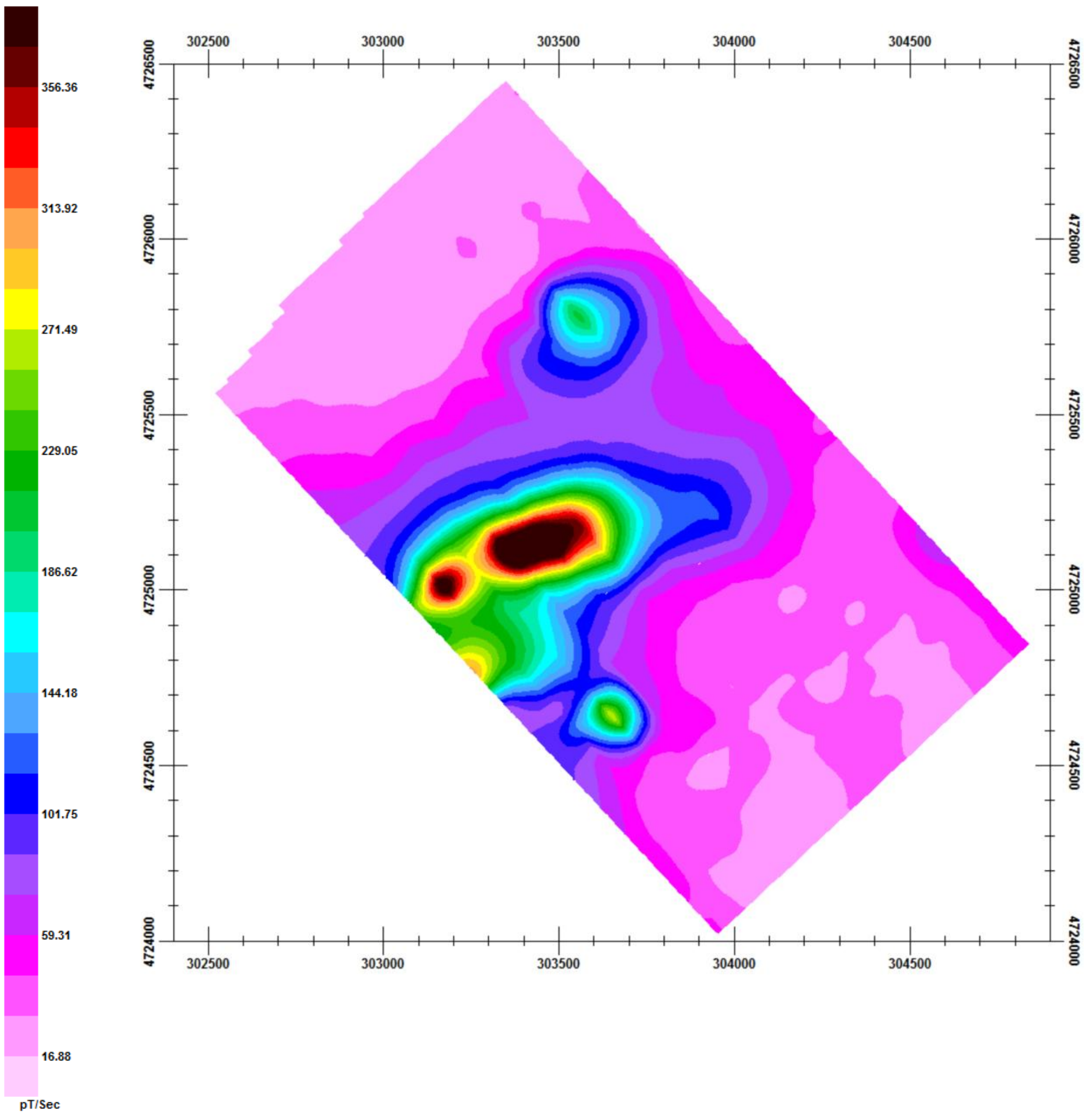


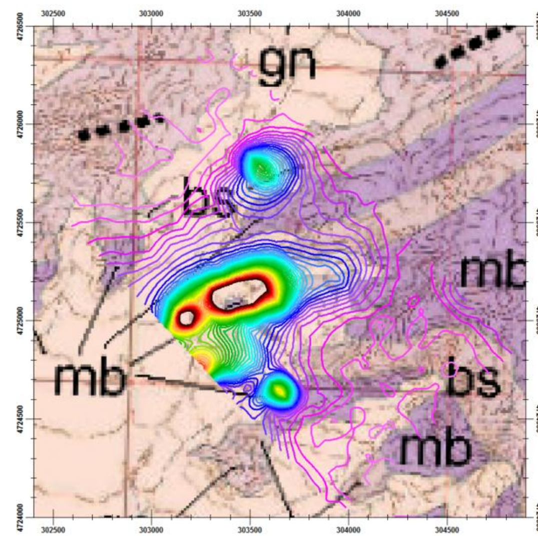
Channel 24
0.58msec

Rattlesnake Hills Magnetics – West South Eastern Corner

SW4

SW4 is on the very southern lines of the VTEM survey slightly west of the SE corner of the survey. There is one major anomaly with four additional satellite anomalies. Channel 23 is shown.

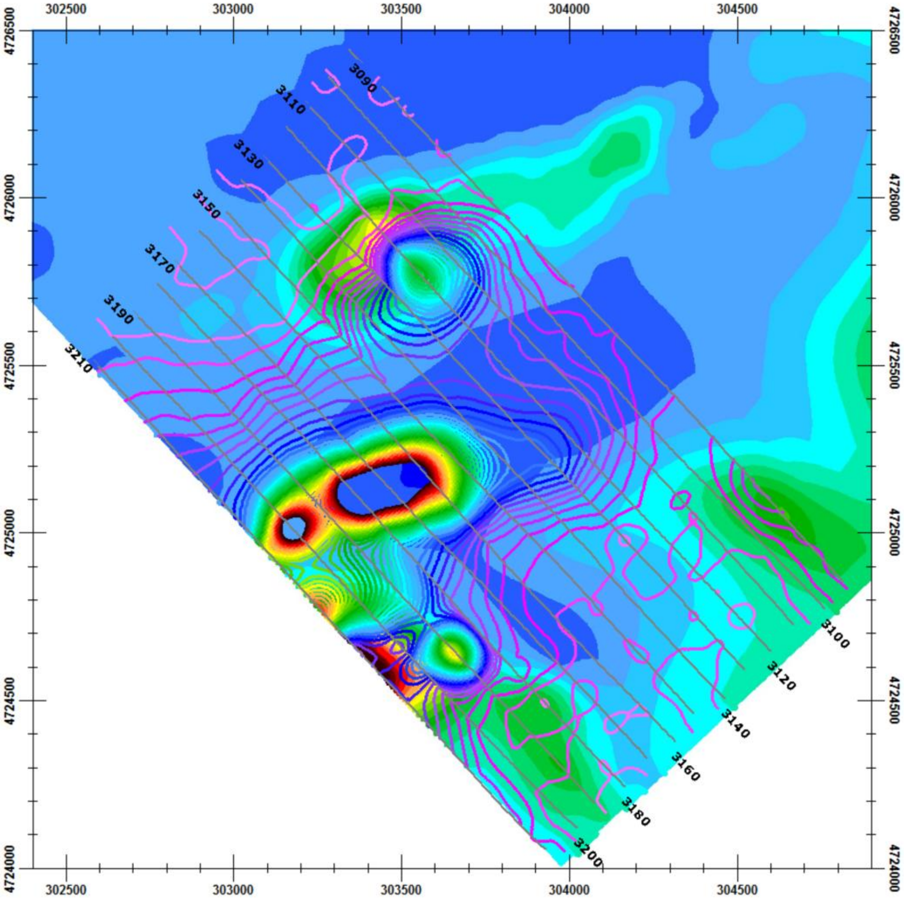


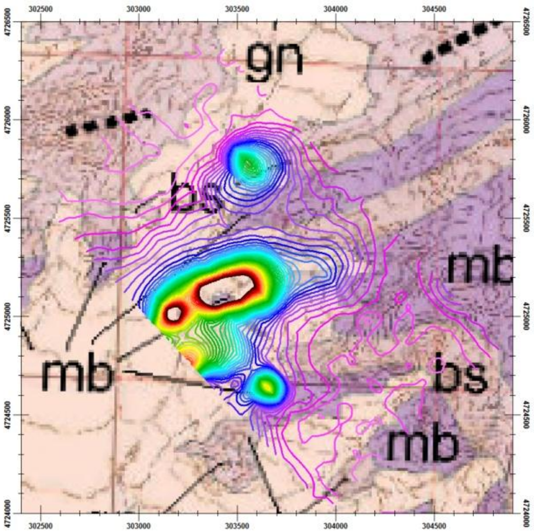


Rattlesnake Hills Magnetics – West South Eastern Corner

SW4

SW4 is on the very southern lines of the VTEM survey slightly west of the SE corner of the survey. There is one major anomaly with four additional satellite anomalies. Channel 23 is shown with aeromagnetic RTP underlay.

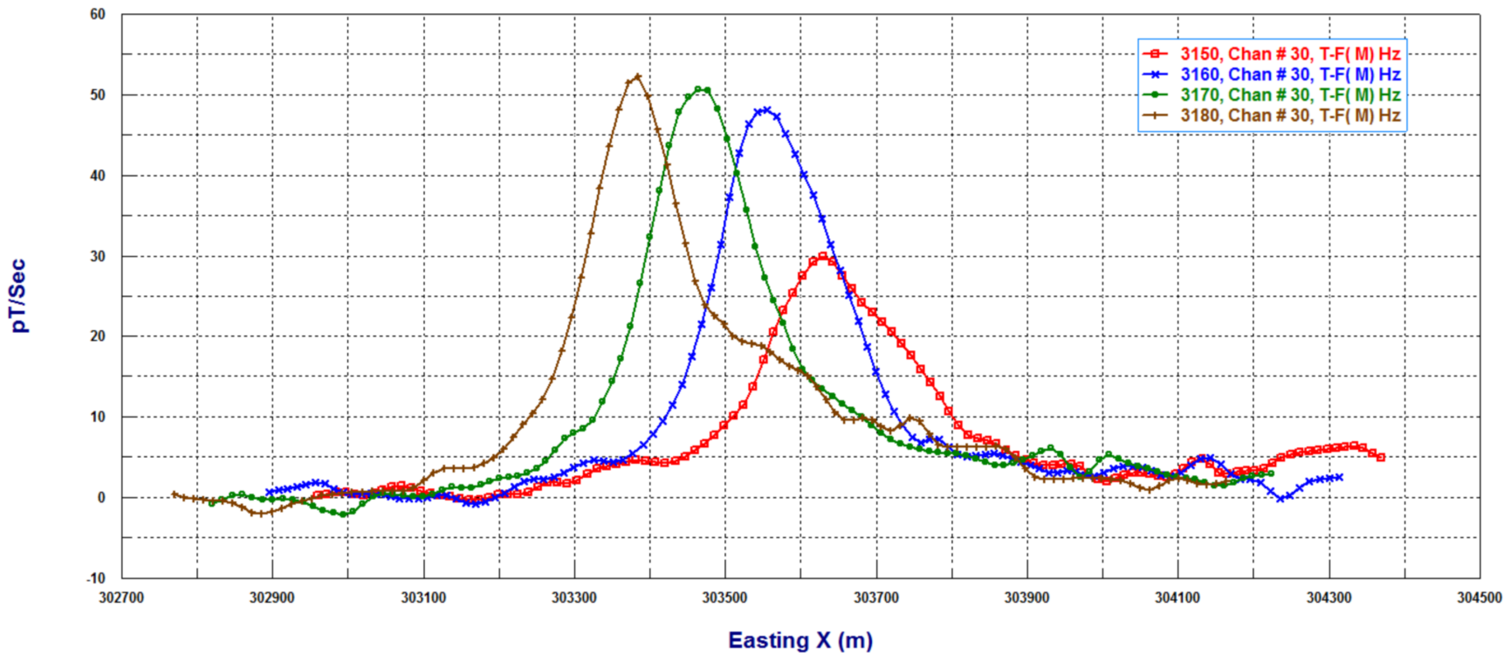


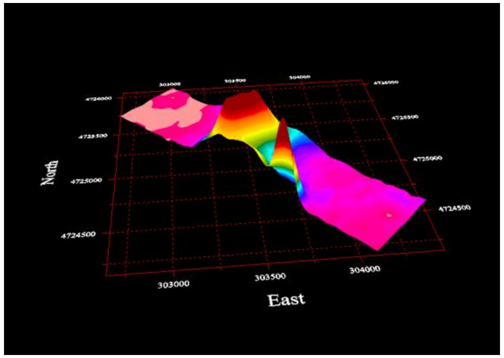


Rattlesnake Hills Magnetics – West South Eastern Corner

SW4

Channel 30 along the principal lines across the main anomaly. The structure is relatively flat lying with a slight dip to the

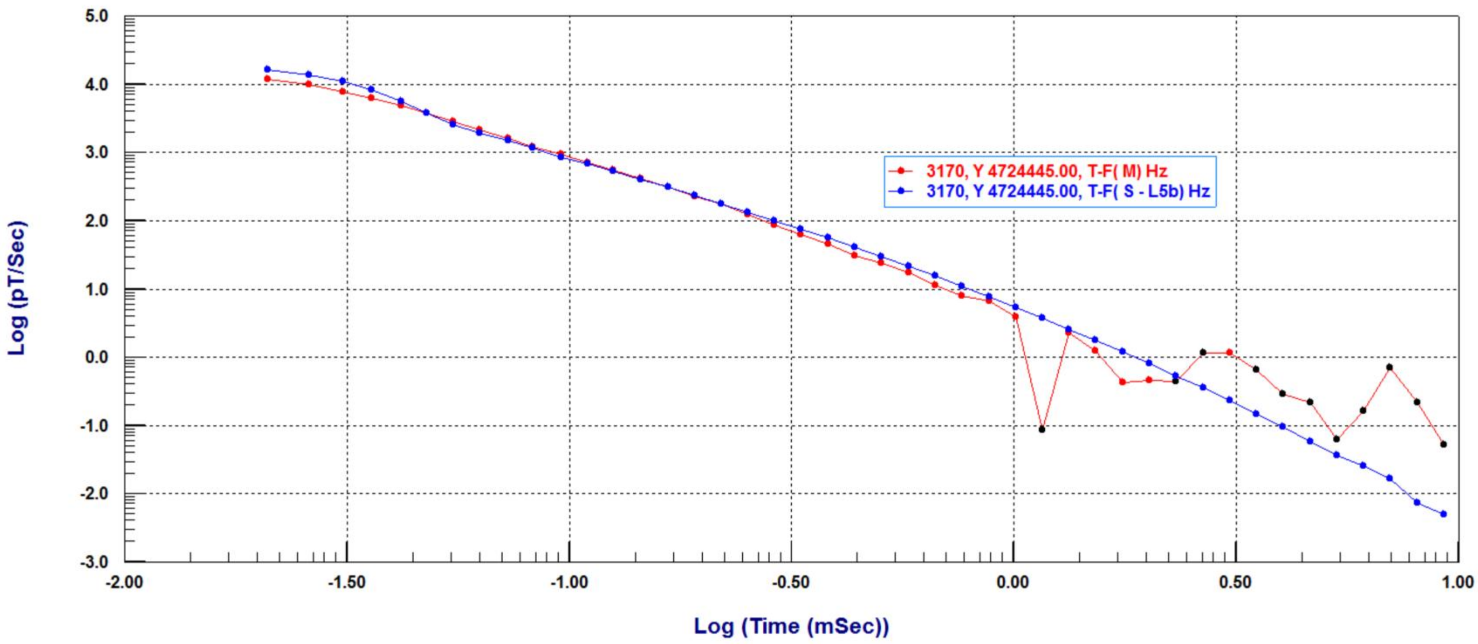




Rattlesnake Hills Magnetics – West South Eastern Corner

SW4

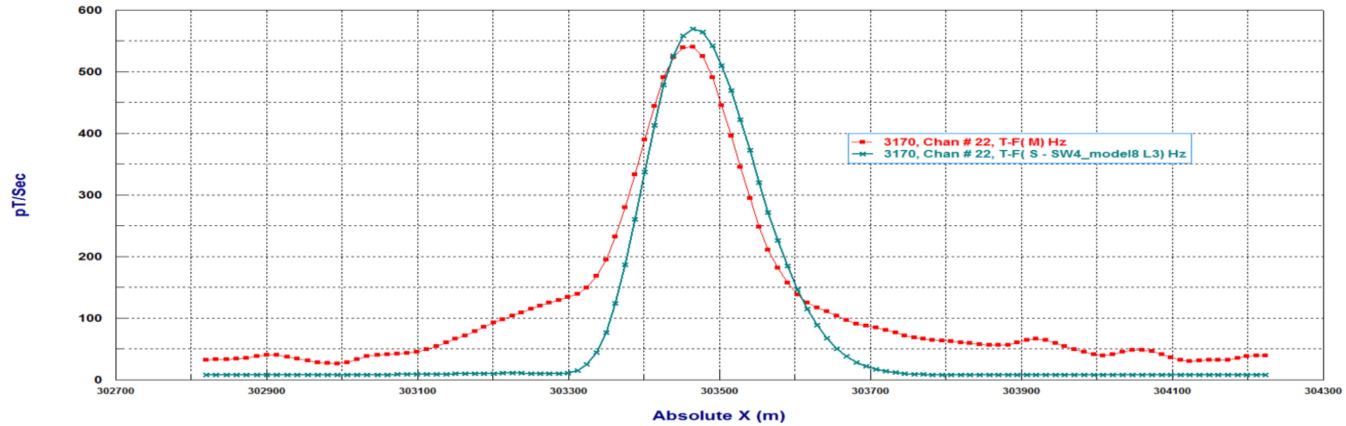
The southeast area of the VTEM response generally shows this type of background response away from conductors and resistors. The early time is difficult as the exact nature of the T/O and the bandwidth of the receiver and transmitter are not known. But, the type of curvature in early time is reproduced with a 25KHz bandwidth which seems reasonable. The immediate cover appears resistive but there is a thin layer of conductive material below. Beneath the shallow, is of order 700 Ωm generally to a depth of 300m below that is of order 4000 Ωm. But, the data seems to have a noise bottom at about 10 pT/sec which is quite high for a VTEM survey. Generally, the models for the SW targets put them in the 700 Ωm material still too high for much in the way of current channelling effects thus the modeling is done with a combination of layering plus an inductive plate.

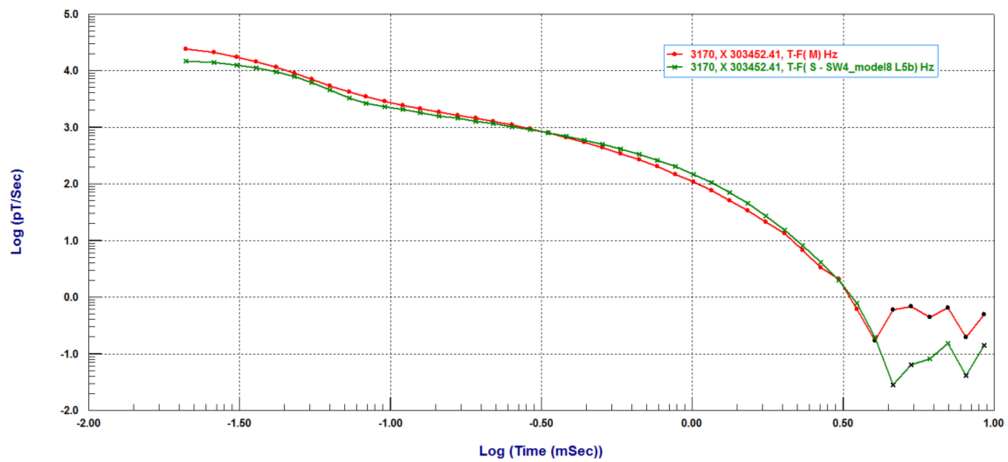


Rattlesnake Hills Magnetics – West South Eastern Corner

SW4

Channel 30 along the principal lines across the main anomaly. The structure is relatively flat lying with a slight dip to the southeast. The axis of the anomaly is not a straight line and thus fitting exactly the right location cannot be done with a thin sheet model. Also, the response anomaly has rather rounded sides. I interpret this a somewhat concave structure which would explain the slow fall off on the sides. The decay at the peak is shown below against the model with the background as in the previous figure. The conductance of the thin sheet model should not be considered as the main substance of the anomaly.





SW4 Model:

Strike: 500m
Depth Extent: 380m
Strike: 60° east of north
Dip Angle: 15° SE
Conductance: 9 Siemens

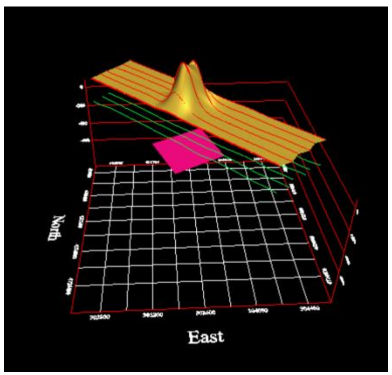
Rattlesnake Hills Magnetics – West South Eastern Corner

SW4

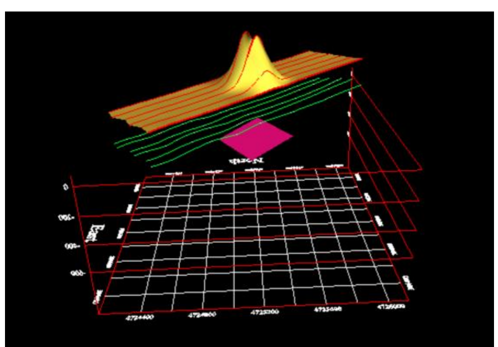
With a flat lying object particularly if has volume as indicated by the curvature of the response and the edges, the total conductance from a VTEM survey cannot be determined. The small size of the system only will respond to the top surface and if significantly conductive will not penetrate far into the structure decaying with penetration depth.

The associated conductive material in the smaller satellite anomalies does appear to be continuous at depth as shown for Channel 33 shown below.

view from South



view from North



SW4 Model:

Strike: 500m
Depth Extent: 380m
Strike: 60° east of north
Dip Angle: 15° SE
Conductance: 9 Siemens