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Dear Sir or Madam,

Please find following the results of three-dimensional (3D) inversion of transient audio-magnetotelluric (TAMT) data we collected in 2004 on four parallel lines over Body 140/141.

Seventy-one stations were collected on a grid trending 322 degrees (Figure's 1 and 2). The 3D code assumes a right handed co-ordinate system of positive x to the North, positive y to the East and positive z downwards as per the geomagnetic convention. Therefore, the grid was rotated by 38 degrees and referenced to UTM (513654, 5900876) (Figure 3).

Shown in Figure's 4 through 9 are the results of 3D inversion on the four lines covering Body 140/141 with Figure 7 courtesy of Shore Gold Inc. The major features of the models are ;

- The upper 100 m (overburden) is split into two resistive layers, although most resistive in the upper 20 m. A relatively thin conductive layer from approximately 20 to 40 m depth separates the shallow resistive layer from a comparatively less resistive layer from 50 to 100 m depth. Known from drilling, the resistive layer in the upper 20 m corresponds to glacial sand, the conductive layer from 20 to 40 m depth corresponds to glacial clay and the moderately resistive layer from 50 to 100 m depth represents glacial till.
- Conductive marine shales of approximately 5 Ωm resistivity are seen at 100 m depth, extending to as deep as 200 m.
- Resistive intrusions of approximately $30 \ \Omega m$ resistivity cuts through the conductive shales, most notably at station 300 on Line's 2 and 3 (Figure's 5, 6 and 7). Since drill hole 141-13 is located very close to station 300 on line 2 we would therefore appear to be mapping the Body 141 vent in some capacity.
- Other possible vents occur at station 1500 on line 3, relatively close to drill hole 145-06, and at stations -500 and -800 on line 3 (Body 140 and Body 133 respectively ?) although these latter anomalies are quite subtle as compared to the 141-13 anomaly. Evidence of a resistive depression is also seen at station 600 on line 2.
- Line three (Figure 6) is the only line long enough to be able to render a meaningful image of the deep structure associated with Body 140/141. An undulating resistive body is seen with fairly sharp edges at station locations -800 and + 1200, although the southern edge located at -800 is quite a bit sharper.

Sincerely,

David Goldak, M.Sc., P.Eng.



Figure 1: Area Map



Figure 2: Local Area Map

FALC B140/141 rotated 38 degree rotation angle Grid centre at L207



Figure 3: 3D Inversion Grid



Figure 4: 3D Inversion Results - Line 1

Line 1 TAMT 3D Inversion (x 2 vertical exaggeration)

Depth (m)







Figure 6: 3D Inversion Results - Line 3

Line 3 TAMT 3D Inversion (x 4 vertical exaggeration)



Figure 7: 3D Inversion Results - Line 3 with lithology



Figure 8: 3D Inversion Results - Line 4



Depth (m)



512200 512400 512600 512800 513000 513200 513400 513600 513800 514000 514200 514400 514600 514800 515000 515200

Figure 9: 3D Inversion Results - 200 m Plan View