

NOTES ON POSSIBILITIES OF 'OVER CORRECTION'  
SEA CLAIM GROUP

The NW corner of the Bouguer gravity map of the Sea prospect was examined on the basis that a Bouguer density was employed that would lead to 'over corrected' values. Comparison of the Bouguer gravity profiles and the topographic profiles over four survey lines in this area, show that in many cases topographic lows appear to give rise to gravity 'highs' and vice versa.

Recent drilling results have shown depths of overburden to be in excess of what was previously expected. Overburden depths as obtained from holes drilled by the rotary method, are plotted in conjunction with the rotary hole number on the Sea Bouguer map ( eg. SRH 5,0/B 365) These values of depth to bedrock through unconsolidated glacial till may prove to be useful if further investigations are carried out concerning the effect of overburden on gravity results.

The plots of elevations and gravity are enclosed, the regional gravity as estimated for the production of the residual map is also shown but must be corrected upon re-examination. The vertical scale of the topographic relief has been drastically exaggerated ( 20' : 1 " ) The horizontal scale is 400' to 1 ".

Line 72<sup>6</sup>W was observed to be a good example of 'over correction' For example the hill on the south side of the profile ( A ) is estimated to be approximately 30 feet in relief. If a density of 2.0 is assumed for unconsolidated glacial till, the elevation correction will be .07 mg/foot. Therefore for 30 feet ~~feet~~ of overburden the overall correction will amount to 2.1 milligals. If the hill is assumed to be composed of a material of density 2.8 (2.77 used by United for Sea prospect), the correction for 30 feet of this material will be 1.8 mg/foot. By comparing these two materials the difference in corrective value is calculated to be .3 milligals. From field evidence it appears that the hill in question is definitely composed of glacial till. It is evident in this case that the Bouguer value has then been influenced by the accumulation of overburden here and should be corrected to a plane by the addition of a factor of 0.3 mg.

Again on Line 72W, the valley ( B ) , may approximately considered to be 30 feet in maximum relief to depth.

2.

Line 76 also reflects the valley (B) by a gravity 'high'. Correction for the valley by using a density of 2.8 would result in a higher Bouguer value of 0.3 milligals if in reality it should have been corrected using a density of 2.0 for overburden. The valley has a depth of 30 feet so the anomaly should be reduced by 0.3 milligals. This would still give an anomaly of 0.2 milligals after the correction. The sulphides obtained in SRH 3, if estimated to have a density contrast of .3 (due to their disseminated nature) and comprising a semi-infinite slab of 40 feet thickness, would give an anomaly of .15 mg.

Bob, as Joe Webster is taking a lot of our gravity data back to Calgary with him, I have included some of the items I mentioned in my last letter. The work is very rough and should be considered only as some 'ideas' on the subject.

62° 11' 30"

62° 11' 30"

SWIM LAKE

FINGER LAKE

It would take over 1000' of overburden to produce this if only country rock/gal densities are involved. I conclude that some of steep flank caused by ore body.



Gordon:  
I can't see much basis for removing regional in this. The interpretation suggested is pretty hairy.  
RMB

Poorly contoured

DYNASTY EXPLORATIONS LIMITED  
SEA GROUP PROJECT  
YUKON TERRITORY

BOUGUER

UNITED GEOPHYSICAL CO. OF AMERICA  
PARTY 588

Contour Interval 0.1 MG.  
Scale 1 inch = 400 ft.

Interpretation by A. RICH  
Approved by R.B. GALESKI

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