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BILL, FARO, GAL, JOE, LO GROUPS

GRAVITY INTERPRETATION

Yukon Territory

for

ANVIL MINING CORP.

by

ROBERT B. GALESKI, P. Geoph.

December, 1966.

BILL, FARO, GAL, JOE, LO GROUPS

GRAVITY INTERPRETATION

Field work was completed on the claims in the above groups by United Geophysical Company of America, approximately 1000 stations having been surveyed and metered. United prepared elevation and Bouguer maps of the field data. These are included with this report. Stations from the Faro, Lo, Bill project were reworked into this one.

The writer computed a sampling of inner circle terrain correction values in portions of the area with greatest topographic relief. Maximum correction found was of the order of 0.5 mgals, with rate of change between adjacent stations less than 0.1 mgals. Although the application of terrain corrections would remove 1/3 to 1/2 the amplitude of the two strongly negative features in the south part of the area, it would have little effect on the over all interpretation, and the added cost of computing these values is not warranted.

Bouguer gravity profiles were plotted. Regionals were drawn through these profiles, and residuals were extracted and plotted in profile form. After smoothing, the residual and regional values were contoured. They are included in this report. Interpretation that follows is based primarily on these two maps and on the profiles. A template residual map is also included.

ELEVATION MAP:

Elevations vary from a low of 3546' a.s.l. in the northwest part of the area to highs of 3899' a.s.l. in the southwest part and 3954' a.s.l. in the east part. A northwesterly trending valley extends from the south. It is joined by a southwesterly trending valley in the northerly part of the area. Except in the southern part of the area, gravity values appear to be free of topographic disturbance.

BOUGUER MAP

Two features of interest appear on the Bouguer map.

1. A strong northeasterly gradient in the northeast part of the area, indicating a deep-seated mass deficiency here.
2. A positive closure in the northwestern part. Analysis of this is given in the discussion of the residual map.

REGIONAL MAP

The regional map was constructed from the profiles. Regional values strike roughly NW-SE and decrease toward the northeast. They indicate deep seated (2000' +) mass deficiency in the northeast. A reversal in the regional occurs along the southwest margin of the area worked, indicating mass surplus at depth here.

PROFILE-RESIDUAL MAP

Compared to those in the area of deep-seated mass deficiency immediately to the north, residual values here are relatively

uniform. Through the bulk of the area, the "lows" and "highs" have relief of only 0.2 to 0.3 mgals - within the range of overburden variation effects. Two strong negative anomalies in the south are obviously related to low surface elevations. However, four positive anomalies of probable and possible economic significance exist. These (labelled A,B,C,D) are discussed below.

-"A"- This is the strongest positive feature in the area. It exists along the westerly end of line 20N. It is not completely defined, as it can be seen on only one line, and values are still high at the end of the line. The actual apex may not have been crossed in the survey. Gravity relief is at least 0.8 mgals and gradient on the flanks is at least as great as 0.2 mgals/100'. Assuming it is caused by an ore body of 3.6 g/cc density and country rock is 2.7, depth to top is 140' and mass is 11½ million tons (including a possible extension into the small high to the east). Should further work show a higher apex north or south of line 20N, a shallower depth may be computed. Extension to the southwest would add greater potential tonnage. The "A" anomaly is represented by a closure on the Bouguer map. The template residual indicates the same relief as the profile residual.

-"B"- Occuring in the northeast corner of the project, at the margin of the area worked and on a steep regional, the "B" anomaly is ill-defined and probably of only marginal interest. The profile residual map indicates 0.6 mgals relief, and the

template residual only 0.4. There is poor reconciliation between the two maps as to apex. However, the feature is worthy of further investigation.

-"C"- With a maximum positive relief of only 0.5 mgals, this anomaly is strictly marginal. Apex is on line 325. Flank gradients are of the order of 0.1 mgals/100'. This is possibly an overburden effect. If it does represent a heavy mass of interest, depth to top would be about 200', and tonnage would be small.

-"D"- The "D" anomaly is part of the "E" anomaly described in the report on the area to the north.

TEMPLATE - RESIDUAL MAP

A second residual map was constructed using a four point average on an 800' diameter ring for regional control. It agrees with the profile residual map in a general way, showing the low relief of the bulk of the area, confirming the "A" anomaly quite closely, the "C" anomaly roughly and the "B" anomaly rather poorly.

Recommendations:

1. Extend line 20N westerly to determine the full areal extent of the "A" anomaly.

2. Run a gravity line from 34W on line 24N to 34W on line 16N to find the apex of the "A" anomaly and to determine flank gradients.

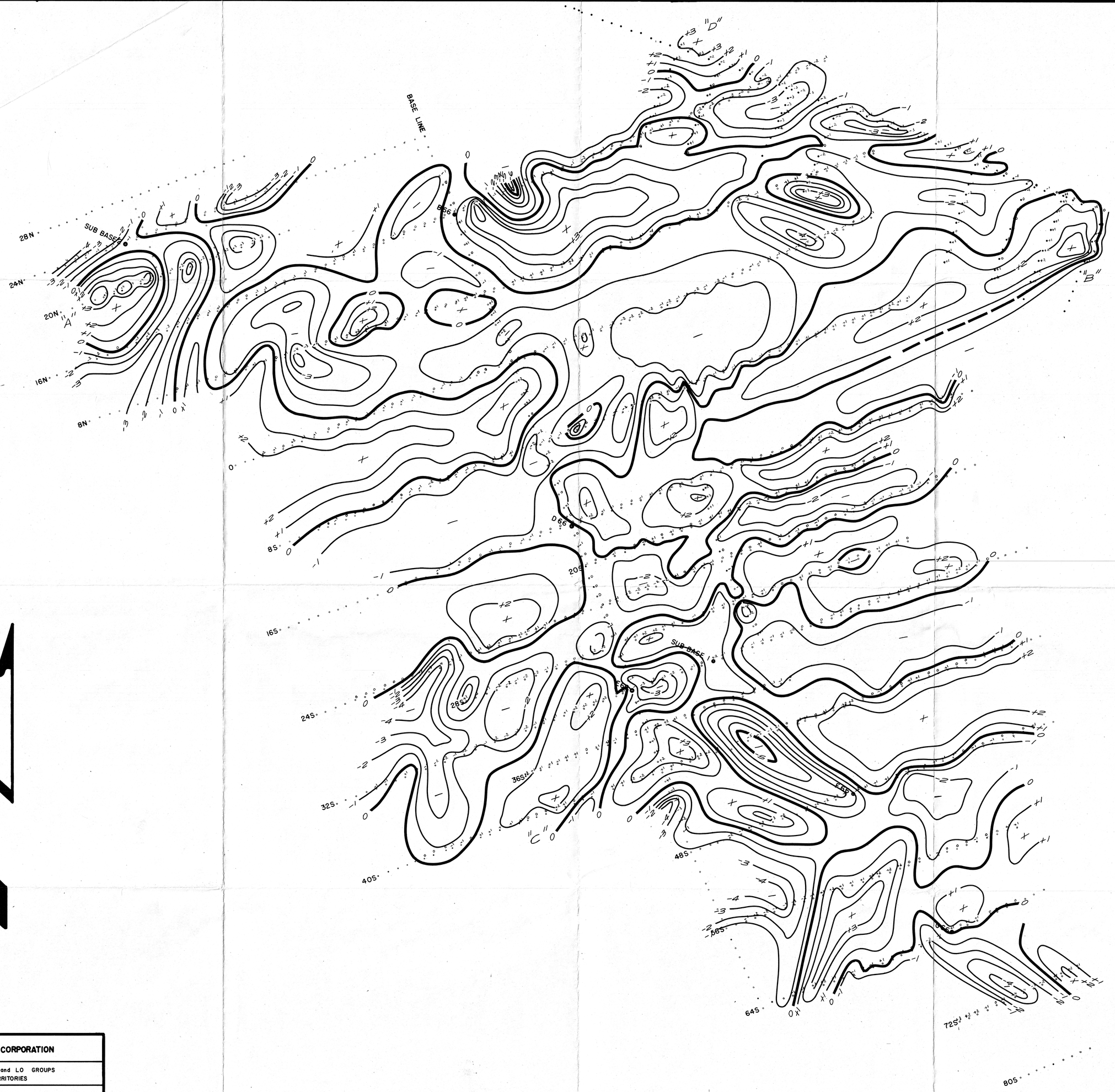
3. Upon completion of 1 and 2 above, select a location and

drill the "A" anomaly.

4. Run a gravity line parallel to the south base line of the "Faro, Lo, Bill" prospect and 400' south of it, extending 800' east and west of the apex of the "B" anomaly as shown on the profile residual map.

5. Consider further gravity or drilling on the "B" anomaly upon completion of 4, above.

R. B. Galeski, P. Geoph.



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YUKON TERRITORIES

TEMPLATE RESIDUAL MAP

105 K 6

UNITED GEOPHYSICAL COMPANY OF AMERICA
PARTY 598

CONTOUR INTERVAL — 0.1 MGALS. SCALE — 1" = 400'

DATE — DECEMBER 1966 INTERPRETATION BY — R.B. GALESKI

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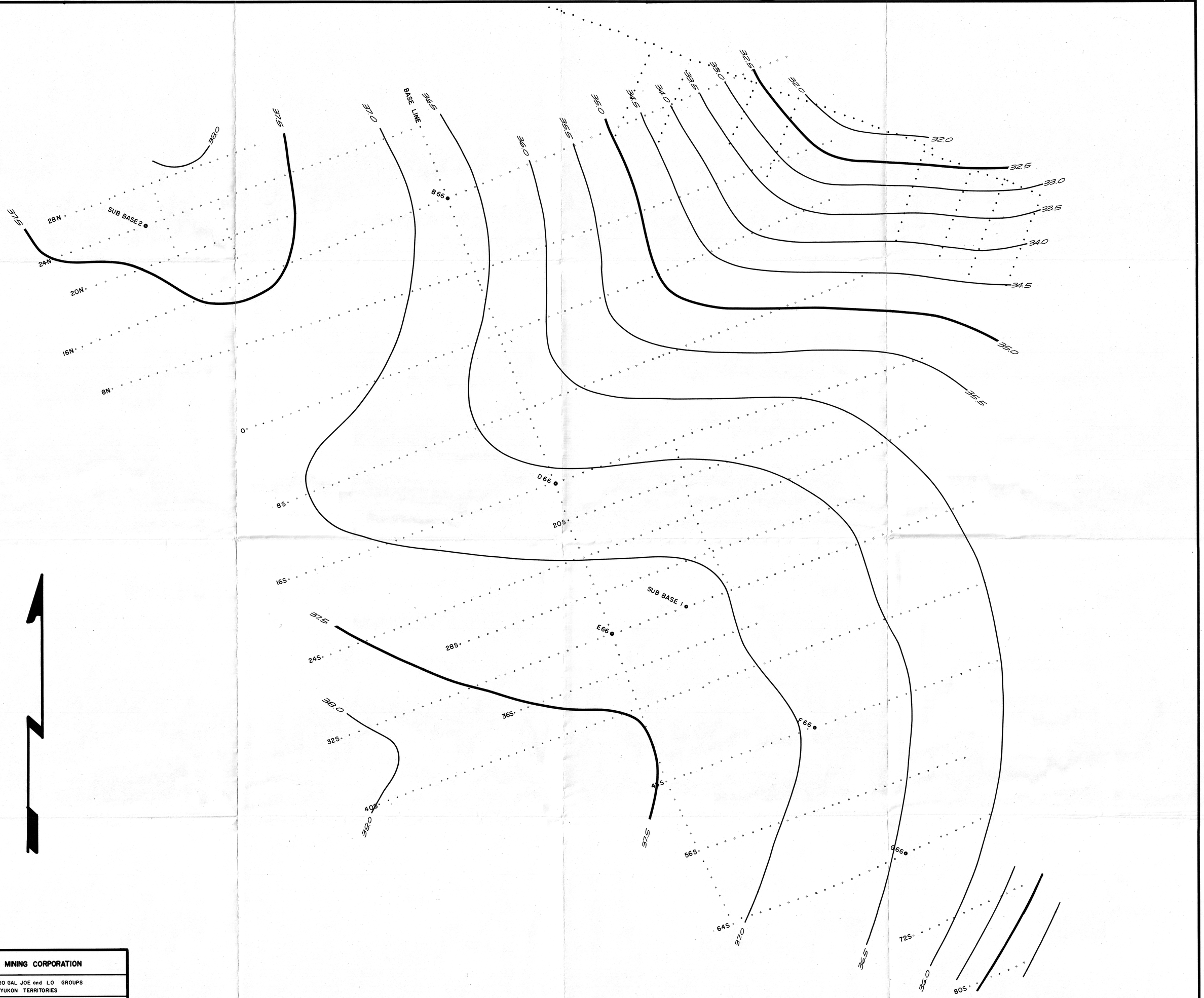
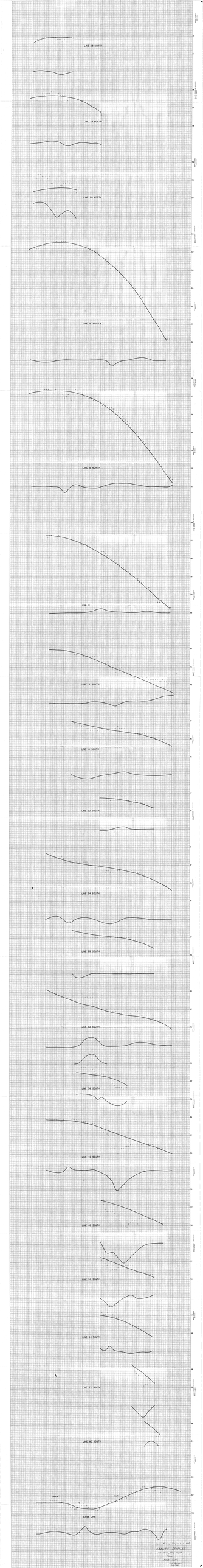
BILL FARO GAL JOE and LO GROUPS YUKON TERRITORIES	
TOPOGRAPHY	
UNITED GEOPHYSICAL COMPANY OF AMERICA PARTY 598	
CONTOUR INTERVAL — 25'	SCALE — 1" = 400'
DATE — OCTOBER 1966	INTERPRETATION BY — P. A. COLTON



ANVIL MINING CORPORATION
BILL FARO GAL JOE and LO GROUPS YUKON TERRITORIES
REGIONAL GRAVITY
UNITED GEOPHYSICAL COMPANY OF AMERICA PARTY 598
CONTOUR INTERVAL — 0.5 MGAL. SCALE — 1" = 400' — DECEMBER 1966 INTERPRETATION BY — R.B.GALESKI


LINE 28 NORTH
LINE 24 NORTH
LINE 20 NORTH
LINE 16 NORTH
LINE 12 NORTH
LINE 8
LINE 4 SOUTH
LINE 8 SOUTH
LINE 12 SOUTH
LINE 16 SOUTH
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LINE 24 SOUTH
LINE 28 SOUTH
LINE 32 SOUTH
LINE 36 SOUTH
LINE 40 SOUTH
LINE 44 SOUTH
LINE 48 SOUTH
LINE 52 SOUTH
LINE 56 SOUTH
LINE 60 SOUTH
BASE LINE

BASE LINE
"A"
"B"
"C"
"D"
28N
24N
20N
16N
8N
0
0
0