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**REPORT
ON
GRAVITY, GEOCHEMICAL AND MAGNETOMETER SURVEYS**

**FOX 1-64 CLAIM GROUP
BLIND CREEK, YUKON TERRITORY**

**FRONTIER EXPLORATIONS LTD. (N.P.L.),
642 Clark Drive,
Vancouver 6, B.C.**

by

**Edward O. Chisholm, P.Eng.,
1349 W. 32nd Avenue,
Vancouver 9, B.C.**

JANUARY 3rd, 1968.

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A review of the results of the gravity, geochemical and magnetometer surveys on the Fox group has been completed. The following comments and recommendations are submitted:

SUMMARY

The results of the three surveys do not outline any targets of significance that would warrant investigation by diamond drilling at present. A re-check should be made by detailed geochemical and magnetometer survey when the snow has gone in the vicinity of the series of low order gravity anomalies obtained in the northeast corner of claim Fox 28 (94060). Further work should be dependent on the results of this re-check.

MAGNETOMETER SURVEY RESULTS

A magnetometer survey was carried out over the Fox 1-16 group in August, 1966, by Gemini Explorations Ltd. No significant variations were noted over the entire survey area greater than 200 gammas. These results are unusually flat and raise the question of the validity of some of the readings. This can be re-checked in the summer of 1968, when a physical examination is made of gravity anomalies on claim 94060. The area involved is covered by lines 76 to 92 N, from 00+1600 S. on the Bouger anomaly gravity survey plan by Roving Exploration Services Ltd., dated October, 1967. Approximately 1¹/₂ miles of survey should be completed at a minimum cost of \$200.00.

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GEOCHEMICAL SURVEY RESULTS

A geochemical survey was carried out over the Fox 1-16 claim group by Alrae Explorations Ltd. in August, 1966. A doubtful low order anomaly was indicated in swampy ground on claim Fox 14 (94648). Of seven determinations comprising the anomaly, five are of doubtful validity due to poor soil sampling conditions, such as water accumulation at the sample site, permafrost, or organic material in the sample. In addition to this, the dithizone method in use consisted of a very insensitive field method that at best could only detect a major accumulation of base metal ions. Such an accumulation is not indicated in the survey, and little significance is attached to it.

The only positive factor in the survey is the location of an anomaly down-slope from the minor gravity anomaly indicated in a gravity survey on the adjoining claim Fox 29. This in itself may not be significant, as the geochemical anomaly is a narrow in-line type, suggesting a vein occurrence. If valid, it may not be related to the gravity anomaly itself.

The soil samples on hand from this area should be analyzed by the atomic absorption spectrophotometer method in a commercial laboratory. The samples should be run for lead and zinc. This would test the validity of the rock dithizone anomaly at little additional cost. The samples to be tested are those from lines 80 to 104, from 0+00 N. to 10+00 N. on the geochemical grid of Alrae Explorations, dated October 25th, 1966. A total of 84 samples is involved at an estimated cost of \$1.25 per sample for a total expenditure of \$126.00.

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Geochemical Survey Results (continued)....

The area of the gravity anomaly in the northeast corner of claim Fox 28 (94060) should be soil sampled during the summer months for lead and zinc. The area involved is covered by lines 76 to 92 N., from 00 to 1600 S. Approximately 70 samples are involved at an analyses cost of \$100.00, plus collection costs. The collection of samples could be combined with a magnetometer re-check of the area when the snow is off the ground.

GRAVITY SURVEY RESULTS

A gravity survey was carried out over the central part of the Fox claim group, including claims Fox 17-24, 26, 28, 33, 35, 37, 39, 41, 42, 43 and 44. The claim block adjoins to the south of the claims covered by the geochemical and magnetic survey, so no additional data is available to assess the significance of the gravity results. The area is covered with poorly drained muskeg. A series of northeast trending Bouger anomalies were obtained on Fox 28 (94060) in the northeast corner of the claim block. An area 1,500 feet long by 400 feet wide is represented. The highest value obtained was 0.8 milligals. These values would be somewhat lower when the regional gravity gradient is subtracted to give the residual gravity anomaly, which serves as a basis of interpretation. The residual anomalies are in the process of calculation by Roving Geophysics, and it is understood from recent communications that an excess mass of 600,000 tons has been calculated for the area of the anomaly. This definitely warrants further

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Gravity Survey Results (continued)....

investigation on the ground when the snow has gone. Experience with other similar surveys in the Vangorda area indicates that residual anomalies greater than 0.4 milligals under overburden conditions of less than 50 feet can represent sulphide mineralization among such other things as: denser rock types, magnetite accumulations, or near surface rock outcrop. To aid in the interpretation of the gravity anomaly, a geochemical, magnetometer and E.M. 16 survey should be made on claim Fox 28 (94060). At the same time, an area should be carefully prospected for mineralized float raised to surface by solifluction. A competent exploration crew of two men could carry out this work when the snow is off the ground in approximately 1 week's time at a cost of around \$1,000.00. Further work on the claims should be deferred until this work is carried out.

RECOMMENDATIONS

1. Re-check the soil samples on hand from lines 80 to 104, from 0 to 10 N. for lead and zinc by the atomic absorption method.
2. Carry out over the existing grid prospecting, a magnetometer, E.M. 16 and geochemical soil survey on claim Fox 28 (94060) in order to assist in the interpretation of the gravity anomaly. This should be carried out in the summer months by a two-man crew at a total cost of around \$2,000.00, including sampling, transportation, etc.
3. If results of the above work are favourable, diamond drilling of the gravity anomaly should be considered.

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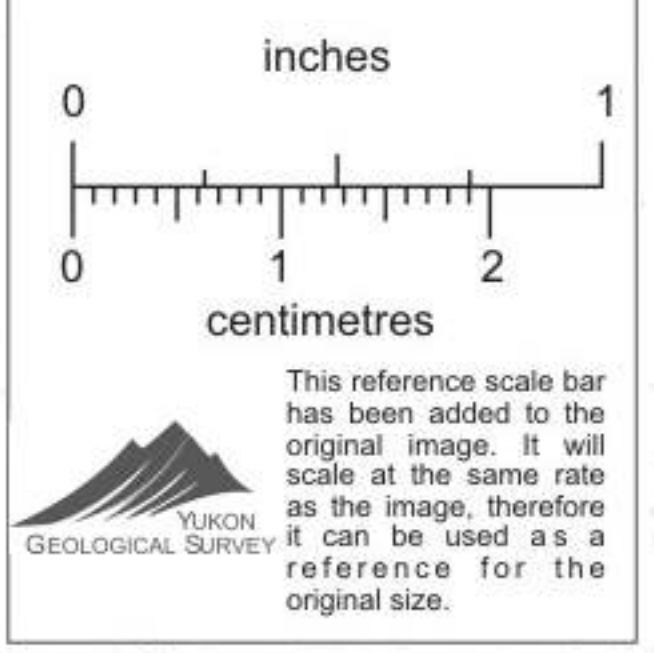
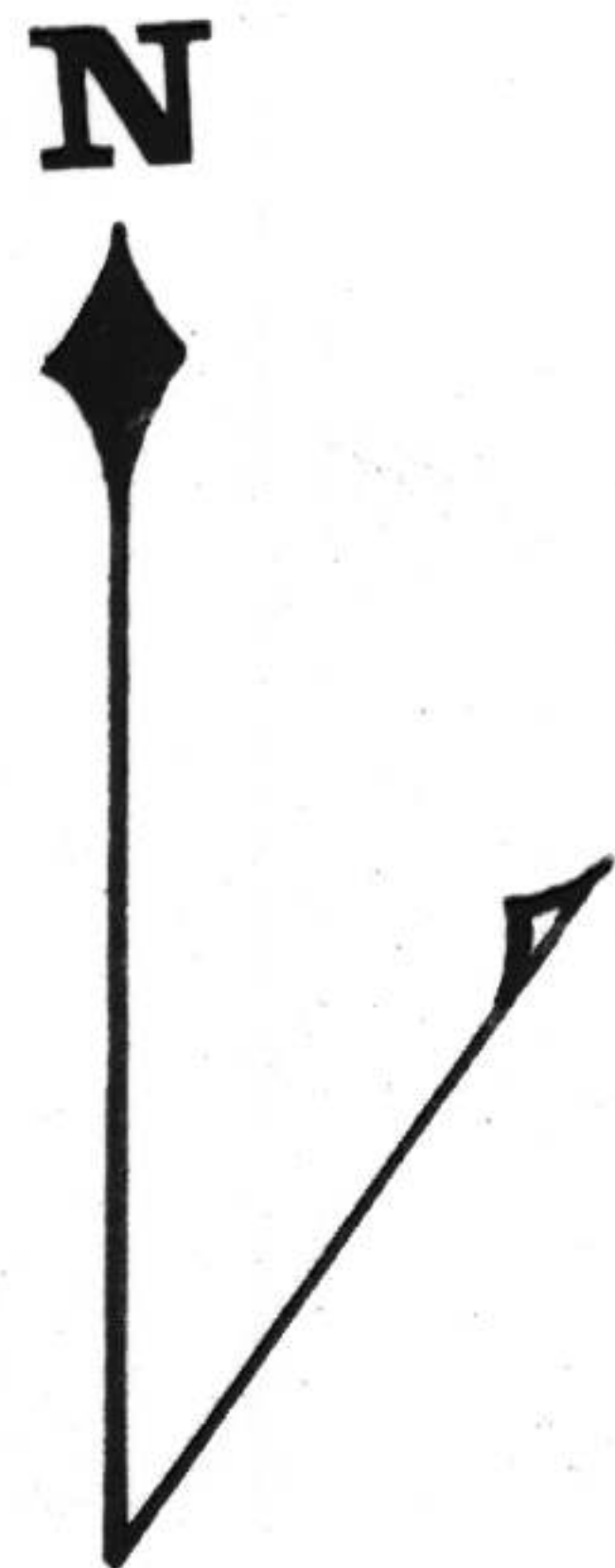
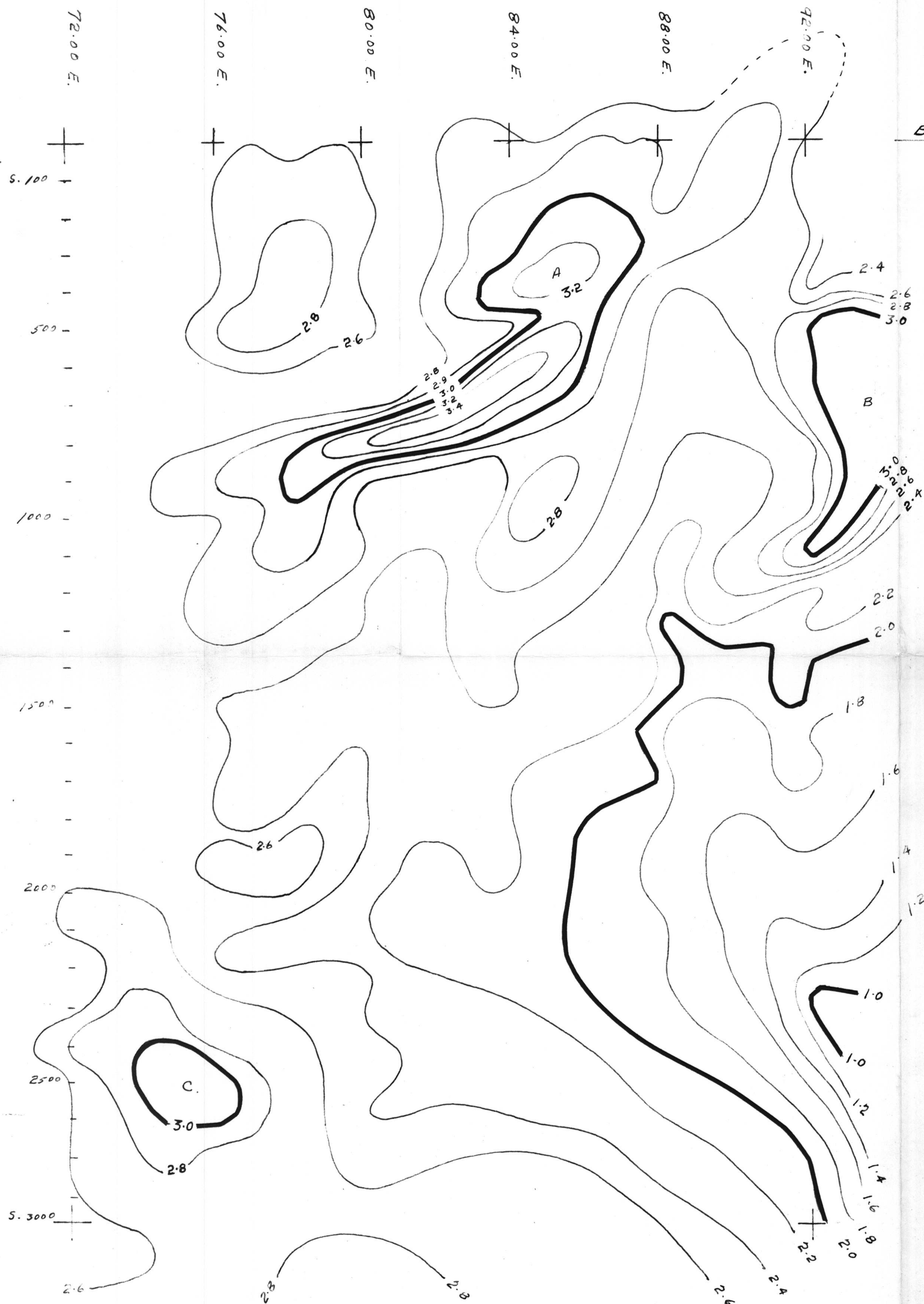
Recommendations (continued)....


4. Results on the western half of the claim group to date have not indicated anything of importance. It is recommended that the western half of the claim block should be dropped and the assessment obtained from the gravity survey be applied to the eastern 32 claims. If possible, 8 additional claims should be staked adjoining to the east of the top 4 claims of the group to protect the gravity anomaly. It is understood that Dynasty Explorations may have dropped ground here due to unfavourable drill results to the east. The claims to be re-staked adjoin to the east Fox 16, Fox 28, Fox 43 and Fox 44.

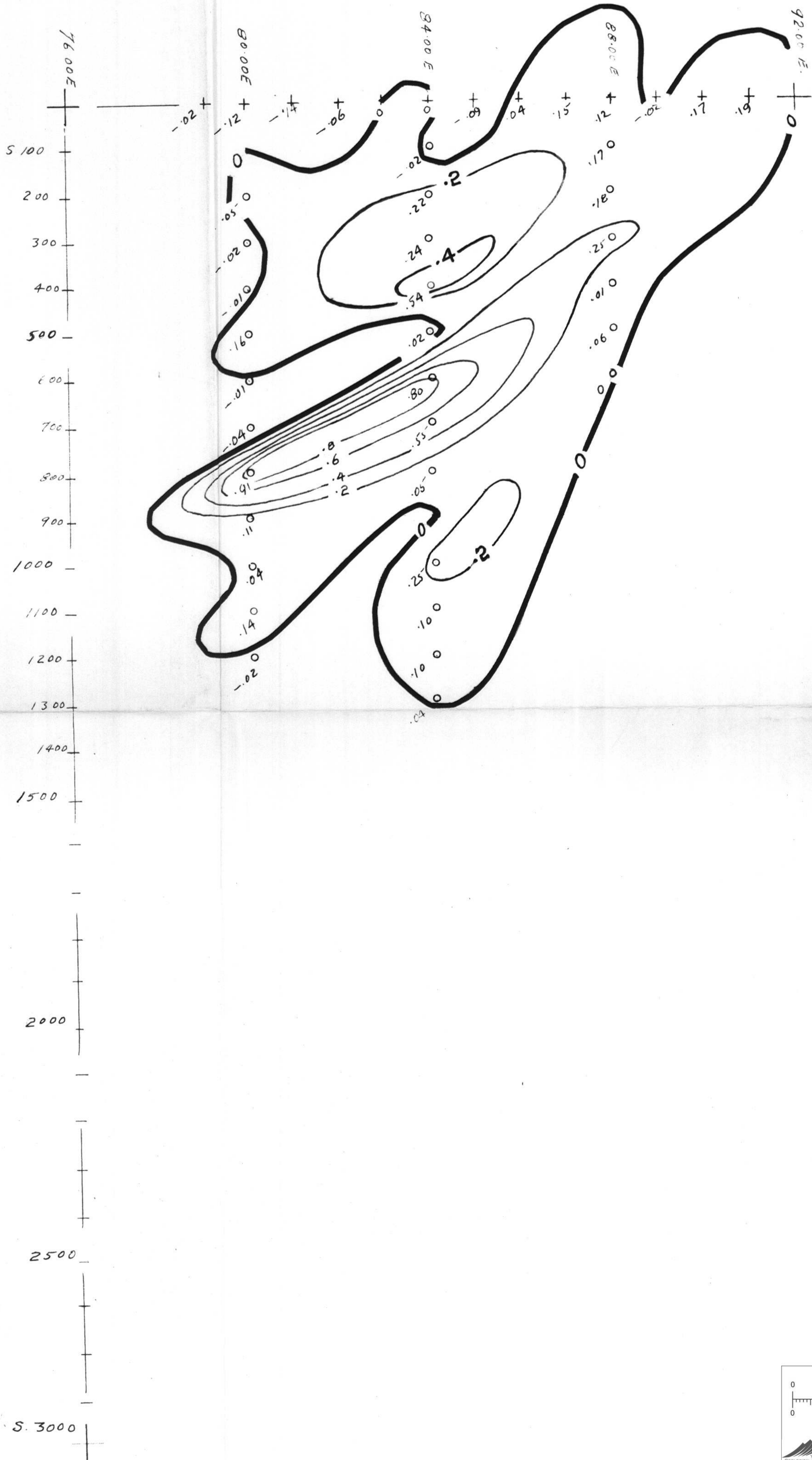
Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Edward O. Chisholm', with a long horizontal line extending to the right.

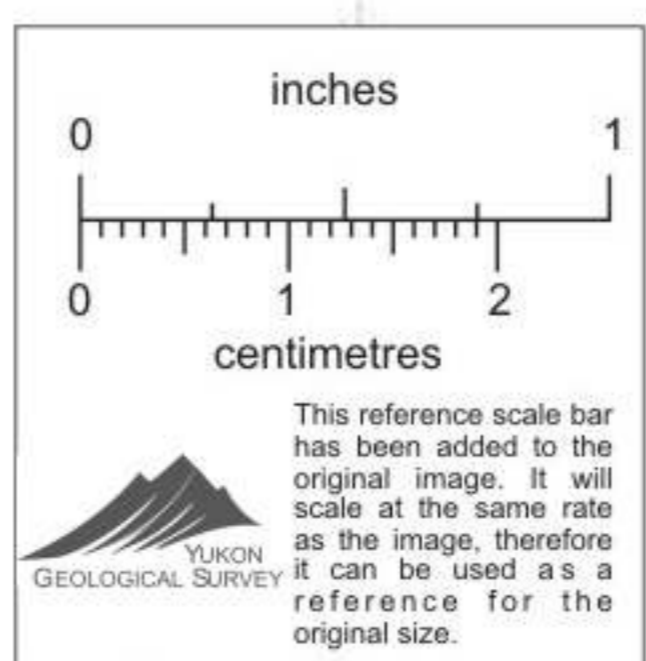
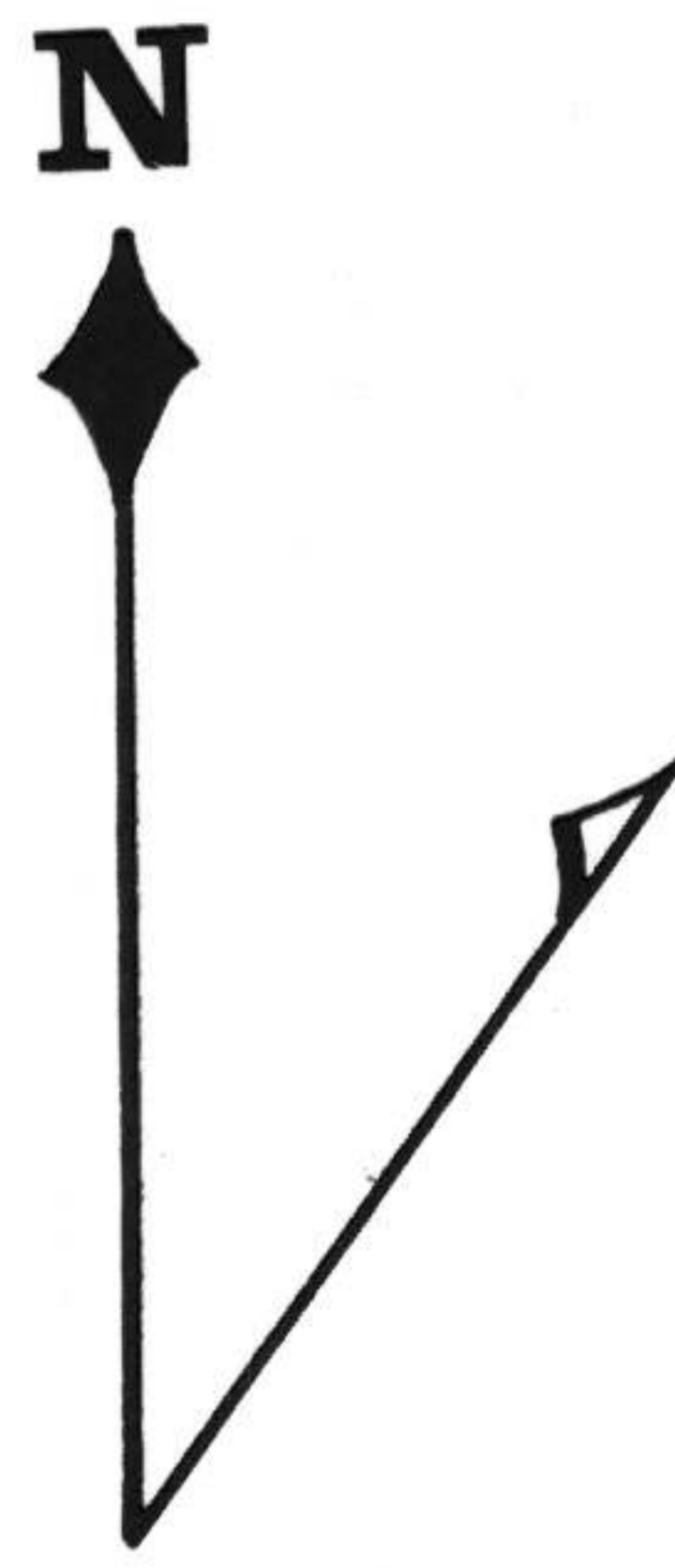
Edward O. Chisholm, P.Eng.



Survey:	GRAVIMETRIC		
Client:	FRONTIER EXPLORATIONS LTD.		
Prospect:	FOX CLAIMS	Area:	DYNASTY, YUKON
Contours:	BOUGUER	Instrument:	WORDEN MASTER
Contour Interval:	0.2 MGS.	Date:	DECEMBER, 1967
Map Scale:	1" to 200 ft.	Approved:	
Party Chief:	M. McCombe	 EXPLORATION SERVICES LTD.	
Bouguer interpretation by N. Rothenburg, P.Geol.			



BASE LINE



Survey:	GRAVIMETRIC		
Client:	FRONTIER EXPLORATIONS LTD.		
Prospect:	FOX CLAIMS	Area:	DYNASTY, YUKON
Contours:	RISIDUAL GRAVITY	Instrument:	WORDEN MASTER
Contour Interval:	0.2 MGS.	Date:	DECEMBER, 1967
Map Scale:	1" to 200 ft.	Approved:	<i>[Signature]</i>
Party Chief:	M. McCombe		
Residual interpretation by N. Rothenburg, P.Geol.			