

MAGNETOMETER SURVEY
FOR
NEW FAR NORTH EXPLORATION LIMITED
CONSOLIDATED BELLEKENO MINES LTD.
R. W. FALKINS
ON
FAIR CLAIM GROUP
VANGORDA CREEK AREA
YUKON TERRITORY



This report has been examined by
the Geological Survey and has
been approved as to content and work by:
D. J. Frilley
Resident Geologist
Approved as to cost in the amount
of \$ 6143.00
R. F. Deedman
Resident Mining Engineer
Accepted as representation work
under Section 53(4) Yukon Quartz
Mining Act.
[Signature]
COMMISSIONER OF YUKON

Toronto, Ontario
April 10, 1967

Ross D. Lawrence, P. Eng.
Watts, Griffis and McQuat Limited

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INTRODUCTION

At the request of J. R. Needham and Associates Ltd., a magnetometer survey was carried out on the Fair claim group for New Far North Exploration Ltd., Consolidated Bellekeno Mines Ltd., and R. W. Falkins. The survey was done during the period March 15 to 24 and 27 to 31, 1967 by J. S. Koski of Watts, Griffis and McOuat Limited under the supervision of the author.

PROPERTY, LOCATION AND ACCESS

The property covered by this survey includes 54 contiguous claims as follows:

<u>Mineral Claims</u>	<u>Grant Numbers</u>
Fair 1 to 16 inclusive	95999-96014
Fair 31 to 46 inclusive	96031-96046
Fair 61 and 62	96063-96064
Fair 75 and 76	96071-96072
Fair 81 to 96 inclusive	96079-96094
Fair 119 and 120	96117-96118

They are located ten miles west of the Faro Ore Zone of the Anvil Mining Company and fifty miles northwest of Ross River (located where the Canol Road crosses the Pelly River).

Access to the property can be gained through Whitehorse in two ways: (1) by truck from Whitehorse to the airstrip on the Anvil group and thence by helicopter to the property, and (2) by single-engined aircraft from Whitehorse to Ross River and thence by helicopter to the claim group.

GENERAL GEOLOGY

The rocks along the eastern side of the Pelly River near Vangorda Creek are all younger than Precambrian, and include a wide variety of rock types ranging from Devonian to Tertiary in age.

The Anvil Range is composed of a core of Cretaceous quartz monzonite and granodiorite. These are clearly intrusive rocks and relatively fresh and unaltered.

This core is flanked by a series of older sediments and volcanics which have all been metamorphosed to some extent, often quite severely. These rocks are considered to be Mississippian and are divided into three units as follows:

1. A lower sedimentary group of quartz-sericite schists and phyllites, graphitic slates and schists, banded quartzose granulites, chlorite schists, and local skarn zones.
2. A predominantly basic volcanic group of flows and tuffs with minor interflow sediments which are all highly sheared and altered.
3. An upper group of micaceous quartzites and schists.

The first schist group is the favourable horizon for replacement and ore deposition in the Vangorda Creek area. These rocks are generally flatly-dipping to the northeast or southwest and strike west to northwest. Locally they dip steeply.

The area covered by this magnetometer survey is indicated on Map 13-1961 as being underlain in the central portion by quartz-sericite schist bounded by basic volcanics to the east and west. The contact with the Anvil batholith is indicated to lie just to the west and north of the property.

GRID CONTROL

A grid was established on the property with a base line oriented at approximately 124° astronomic (magnetic east) and cross lines cut at 400-foot intervals. The grid was not surveyed and has been shown on the map as though the lines are all straight and parallel. It is thought that the lines are well cut and that this is a reasonable presentation.

MAGNETOMETER SURVEY

The magnetometer survey was carried out using two Sharpe MF-1 fluxgate magnetometers with a sensitivity of 20 gammas per scale division. One magnetometer was kept at the base station and read periodically during the day (by the cook). The base station was initially established at an arbitrary value of 500 gammas. This value is in line with the regional magnetic background. This information was used to establish a curve for diurnal magnetic variation which was used to correct the field readings.

Readings were taken at 100-foot intervals with intermediate readings taken when indicated to check anomalous magnetics.

A total of 60 miles of line were surveyed and approximately 3,200 readings taken.

DISCUSSION OF RESULTS

The magnetic background of the property generally ranges between 525 and 650 gammas.

Fair Anomaly

This anomaly probably represents the anomaly obtained during an airborne magnetometer survey carried out by Canadian Aero Service Limited as described in their report of July 11, 1966.

The anomaly as outlined during the ground survey strikes approximately north-south and passes through the base line at line 4W. The anomalous zone is somewhat erratic along strike with maximum magnetic relief of 1,000 gammas above background and a width of 400 to 1,200 feet.

Map 13-1961, published by the Geological Survey of Canada, at a scale of one inch to four miles, indicates that the central part of the property is underlain by the same favourable schist horizon in which the Vangorda Creek ore deposits occur.

Experience in other areas of the Vangorda Creek belt suggests that this favourable schist horizon may be restricted on the Fair group to a narrow belt as indicated by the anomalous magnetics. The remainder of the claim group may be underlain by less highly metamorphosed volcanic rocks of equivalent origin.

CONCLUSIONS

1. The magnetic survey carried out on the Fair group has indicated the existence of a linear magnetic zone.
2. Experience in the area indicates that it is probably a reflection of the favourable schist horizon.

RECOMMENDATIONS

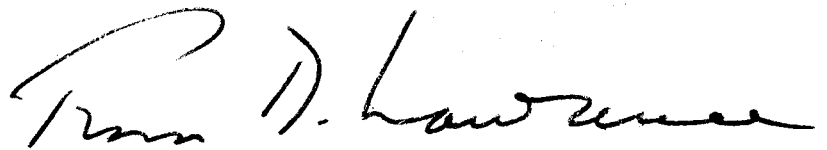
1. The property should be geologically mapped in detail once weather conditions are favourable. At the same time a geochemical soil survey should be done. The objective of this work is to outline zones exhibiting favourable structural or mineralized conditions.

2. A gravity survey should be carried out following the above. It may be restricted to areas of definite interest as indicated by the preceding work. This work should be carefully done in detail by fully qualified personnel. The objective of the gravity survey is to outline anomalous areas within the favourable schist zone which would form drilling targets.

3. The claims should be carefully checked to ensure that no fractions exist between claims.

Respectfully submitted,

WATTS, GRIFFIS AND McOUAT LIMITED



April 10, 1967
Toronto, Ontario.

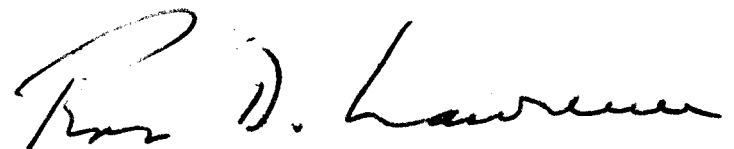
Ross D. Lawrence, P.Eng., B.A.Sc., M.Comm.

CERTIFICATE

I, Ross D. Lawrence hereby certify:

1. That I am a geological engineer and reside at 21 Munro Blvd., Willowdale, Ontario.
2. That I graduated from the University of Toronto with the degree of Bachelor of Applied Science in 1956 and the degree of Master of Commerce in 1959.
3. That I am a registered Professional Engineer in the Province of Ontario.
4. That I have been continuously engaged in my profession for over ten years.
5. That this report is based on a magnetometer survey carried out by J. S. Koski, B.Sc., P.Eng., which I supervised, upon a general knowledge of the Vangorda Creek area gained through work on other properties in the area and on a study of all available maps and reports on the area.
6. That I have no interest, nor do I expect to receive any interest, directly or indirectly in the property surveyed or in the securities of the companies holding it.

April 10, 1967
Toronto, Ontario



Ross D. Lawrence, P.Eng., B.A.Sc., M. Comm.

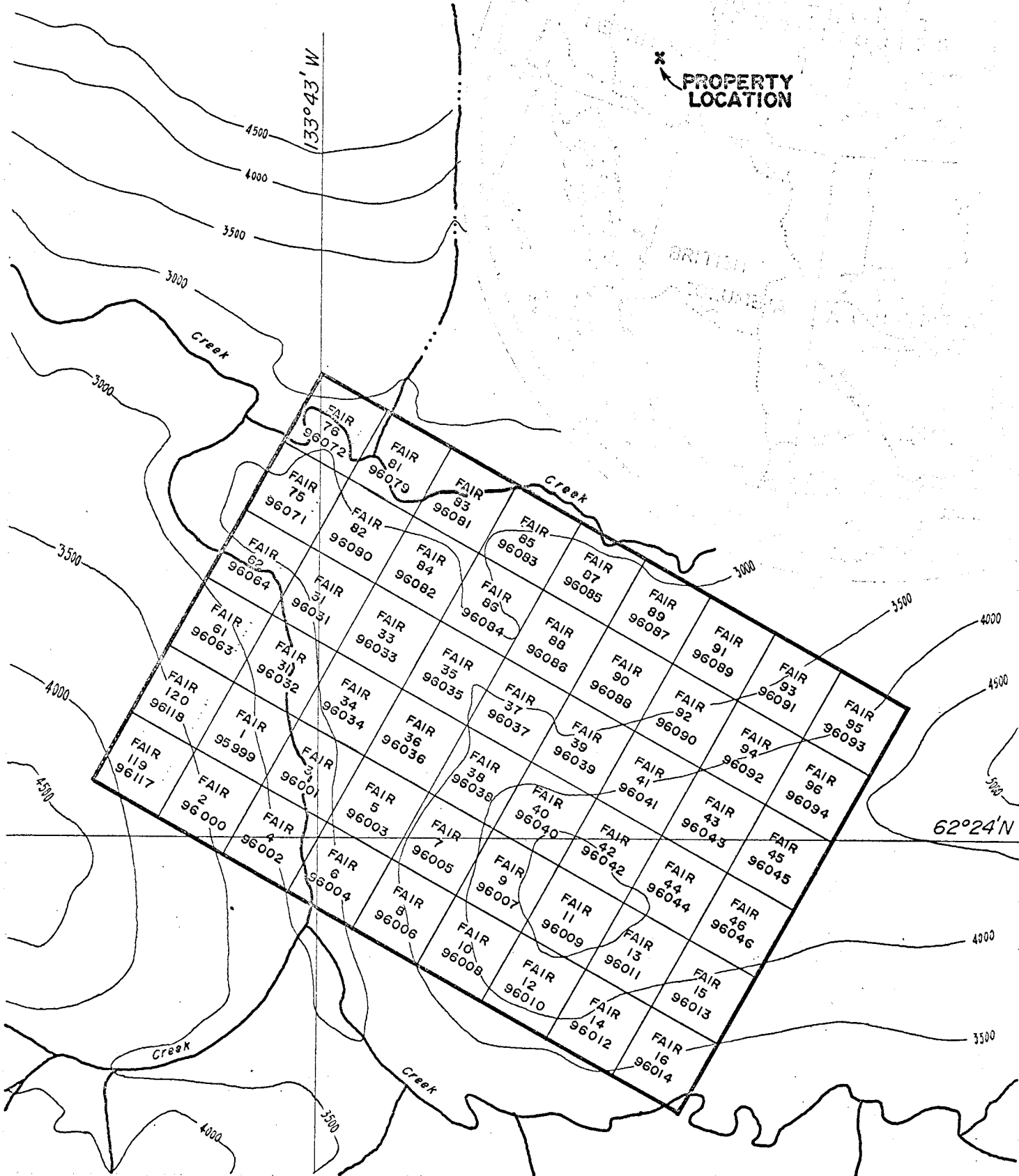
NEW FAR NORTH ET AL

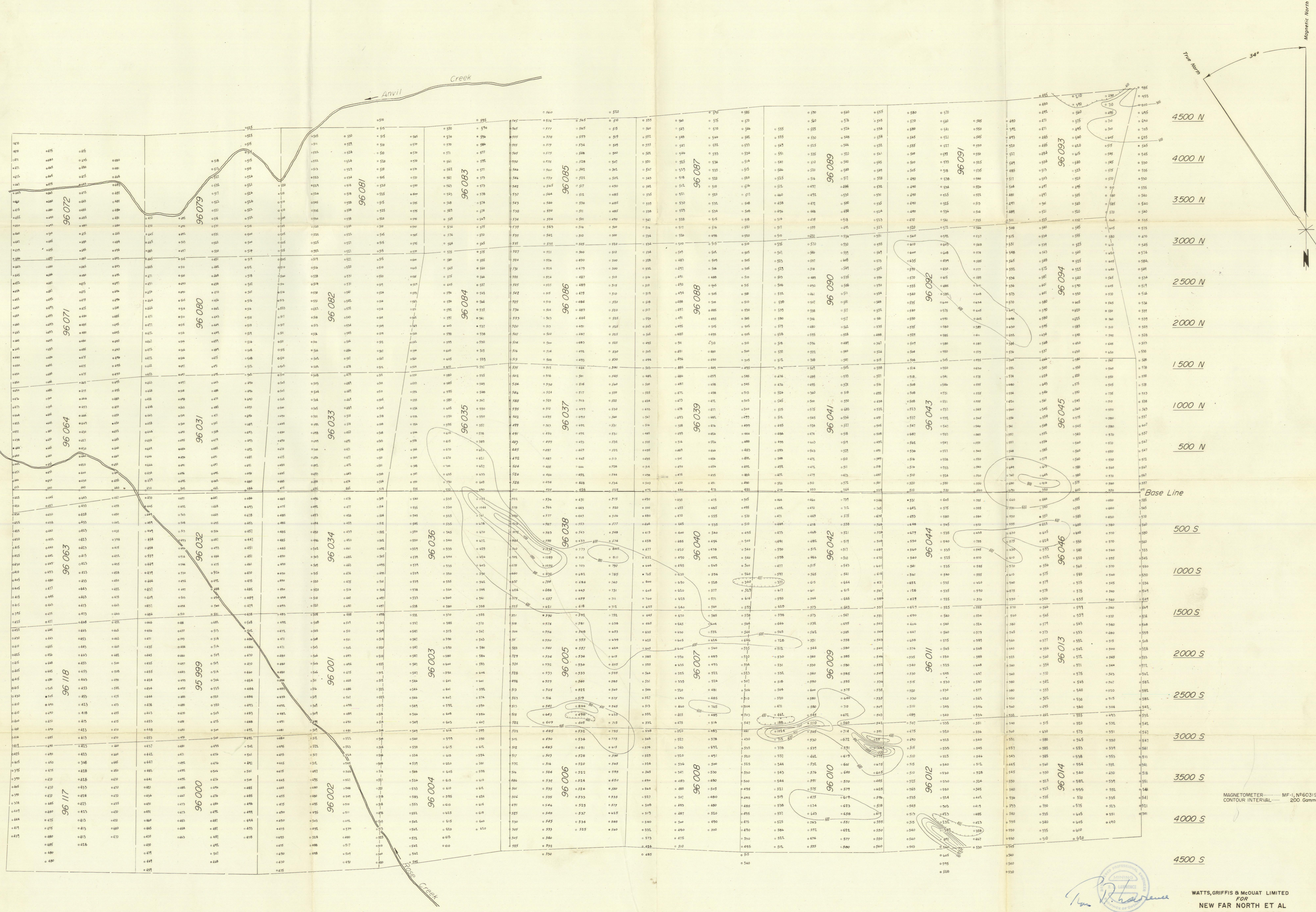
FAIR GROUP
Vangorda Creek Area
YUKON TERRITORY

Scale: 1" = 1/2 Mile

April 1967

Ron D. Lawrence





Line 50 W
Line 56 W
Line 52 W
Line 48 W
Line 44 W
Line 40 W
Line 36 W
Line 32 W
Line 28 W
Line 24 W
Line 20 W
Line 16 W
Line 12 W
Line 8 W
Line 4 W
Line 0+00
Line 4 E
Line 8 E
Line 12 E
Line 16 E
Line 20 E
Line 24 E
Line 28 E
Line 32 E
Line 36 E
Line 40 E
Line 44 E
Line 48 E
Line 52 E
Line 56 E
Line 60 E
Line 64 E
Line 68 E
Line 72 E
Line 76 E

4500 N
4000 N
3500 N
3000 N
2500 N
2000 N
1500 N
1000 N
500 N
Base Line
500 S
1000 S
1500 S
2000 S
2500 S
3000 S
3500 S
4000 S
4500 S

MAGNETOMETER: MF-1, N°603197
CONTOUR INTERVAL: 200 Gauss

WATTS, GRIFFIS & McQUAT LIMITED
FOR
NEW FAR NORTH ET AL
FAIR CLAIMS
Vangorda Creek Area
YUKON TERRITORY
MAGNETOMETER SURVEY
SCALE: 1" = 400 Feet
April 1967

Magnetic North

34°

True North

Tom R. Lawrence