

SUMMARY REPORT
FOR
NEW FAR NORTH EXPLORATIONS LIMITED
CONSOLIDATED BELLEKENO MINES LIMITED
ON THE
JOE AND FAIR CLAIMS

CLAIM SHEET 105 K/5

Whitehorse Mining District
Yukon Territory

22,700

This report has been examined by
the Geological Evaluation Unit.
Approved as to technical worth by:

D. J. Sullivan
RESIDENT GEOLOGIST

Approved as to cost in the amount
of: \$ *22,700.00*

R. F. Redden
DEPUTY MINISTER

Accepted as reconnaissance work
under Section 33(4) Yukon Quartz
Mining Act.

[Signature]
COMMISSIONER OF YUKON

Toronto, Ontario.
December 8th, 1967.

Ross D. Lawrence, B.A.Sc., P. Eng., M. Comm.
Watts, Griffis and McQuat Limited.

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Claim Location Map

Scale: 1" = 1/2 mile

SUMMARY

New Far North Explorations Limited and Consolidated Bellekeno Mines Limited hold a property consisting of 107 claims in the Vangorda Creek area of the Yukon Territory. Exploration has been carried out in several stages over various portions of the claims, and is described in this report.

Although no showings of economic interest have been discovered on the property, it is underlain by a considerable thickness of favourable sericite schists. There is also evidence of northeast-trending shears. As the sulphide deposits in the general area appear to be controlled by northeast faults and to be localized in siliceous sericite schists near the Anvil batholith, the property is considered to be favourably located.

Geochemical and gravity surveys have indicated a coincident anomaly, which warrants further investigation by diamond drilling.

INTRODUCTION

The purpose of this report is to summarize the results of all exploration carried out to-date on the Joe and Fair claims, including geochemical interpretation by Barringer Research Limited and a review of geophysics by Seigel Associates Limited.

The programme was directed by Watts, Griffis and McOuat Limited and supervised by the writer.

PROPERTY

The property consists of claims as follows:

Joe	1 - 8	Y-12351 - Y-12358
	9 - 34	Y-20399 - Y-20424
	36	Y-20426
	38	Y-20428
	40 - 42	Y-20430 - Y-20432
	47	Y-20437
	49 - 54	Y-20439 - Y-20444
	56	Y-20446
	57 - 58	Y-21274 & Y-21275
	61 - 64	Y-21276 - Y-21279
Fair	1 - 16	Y-95999 - Y-96014
	31 - 46	Y-96031 - Y-96046
	61 - 62	Y-96063 - Y-96064
	75 - 76	Y-96071 - Y-96072
	81 - 96	Y-96079 - Y-96094
	119 - 120	Y-96117 - Y-96118

The two groups consist of contiguous, unpatented claims located in the Whitehorse Mining District of the Yukon Territory, in the so-called Vangorda Creek Area.

LOCATION AND ACCESS

The Vangorda Creek area is considered to be an area about 60 miles long by 25 miles wide along the northeast side of the Tintina trench, (Pelly River) about 125 air miles northeast of Whitehorse and centred about 30 air miles northwest of Ross River.

The Company's claims are located about three miles north of Rose Mountain or 45 miles northwest of Ross River on Claim Sheet 105 K/5 with coordinates approximately 133°40' W and 62°24' N.

Access to the area has improved considerably in the past two years. From Whitehorse, the Alaska Highway is followed southeast 80 miles to Johnson's Crossing at which point the Canol Road runs northeast for 140 miles to Ross River.

The Canol Road, which extends on to Norman Wells on the MacKenzie River in the Northwest Territories, but has been abandoned beyond Ross River, was constructed during the Second World War. The Canol Road from Johnson's Crossing to Ross River is a second class gravel and sand, single-lane road with many hills and turns. About four hours are required to drive the 140 miles.

Prior to the winter of 1965 - 1966, the road was closed during the winter months, but is now being maintained and kept open year-round by the Territorial Department of Highways.

A second route to Ross River is from Watson Lake, a distance of about 190 miles by road. This route has been much improved and will also be kept open during the winter. A new highway is being constructed from Ross River, northwest along the west bank of the Pelly River for about 30 miles. It then turns west and eventually joins with the Whitehorse-Dawson Highway near Carmacks, 125 miles north of Whitehorse.

Anvil Mining Corporation has improved the access road from Blind Creek to their "Faro" property, a distance of about 20 miles. Unfortunately, however, until a permanent structure is installed to cross the Pelly River, the use of an ice bridge in winter is necessary. This eliminates road access during fall freeze-up and spring break-up.

The only method of direct access to the Company's property is by helicopter, which can be chartered at Ross River. Fixed-wing aircraft can be chartered in Whitehorse, landing either on floats, skis or wheels at Ross River or on the Swim Lakes. There is also an airstrip on the "Faro" claim group sufficient to handle DC-3 aircraft on wheels or skis.

Permanent radio communication is available between Ross River and Whitehorse facilitating transportation arrangements and lodging and a various assortment of supplies are available at Ross River.

GENERAL GEOLOGY

The general geology of the Vangorda Creek area consists of a series of late Paleozoic sediments and volcanics generally weakly to strongly metamorphosed and converted to schists which surround and overlap the intrusive granitic batholith of Cretaceous Age forming the core of the Anvil Range. The schists strike west to northwest and dip gently to steeply away from the granitic core.

A major lineament known as the Tintina Fault strikes northwest and marks the Pelly River valley in this area. Subsidiary to this are a number of well pronounced northeast-striking faults cutting across the batholith and surrounding schists and possibly intersecting a second fault zone parallel to the Tintina in the vicinity of Tay River to the northeast.

Rock types within the schist belt include quartz-sericite chlorite and graphite schists, phyllite, argillite, quartzite and limestone. Occasionally, especially as the Anvil batholith is approached, higher grade metamorphism is reflected in garnet and staurolite schists. Intermediate volcanics occur in minor amounts interbedded with the schist as well as a major unit stratigraphically overlying the schists.

The lead-zinc-silver orebodies found in the area to-date are replacement-type masses, stratigraphically controlled in part, favouring siliceous schists, but also closely associated with the northeast-striking fault zones and granitic batholith and offshoot dykes.

They occur along the southwest side of the Anvil Range and all are quite flatly dipping. Large barren pyrite and pyrrhotite masses are associated with some of the orebodies as well as occurring in other areas with little or no accompanying economic sulphides, especially in the area of Swim Lakes.

DETAILS OF EXPLORATION AND DISCUSSION OF RESULTS

GRID CONTROL

Six separate grids were laid out to cover a total of 86 claims. The base lines were oriented at an azimuth of 119° true, and are shown on the accompanying 1,000-scale geological map.

Cross lines were spaced at 400-foot intervals along the base lines, but no tie lines were cut, and the cross lines are assumed to be parallel. All lines were picketed every 100 feet, and these stations were used as control for the various surveys.

It should be noted that base lines 3, 4 and 5 were laid out independently of the other grids and that no tie-in survey was completed. While the various 400-scale maps suggest certain gaps, in fact, no gaps exist on the ground and complete coverage was obtained.

GEOLOGY

Field mapping was carried out during the summer months on the easternmost 36 claims of the Fair group and on Joe claims 1 to 8. These maps, on a scale of 1" = 400 feet, are included in the map pocket at the back of this report.

It was planned to continue detailed mapping of the Joe claims during the last stage of exploration in October. However, because of an early snowfall this was not possible, and was limited to mapping of cliff face exposures. Outcrop areas, thus located, are shown on the 1,000-scale geological map.

The property is underlain by a number of rock types as summarized in the following table.

TABLE OF FORMATIONS

<u>Age</u>	<u>Map Unit</u>	<u>Rock Type</u>
Cretaceous	7	Granite
Mississippian	6	Peridotite
	5	Gabbro Diorite
	4	Chlorite Schist
	3	Andesite
	2	Limestone
	1	Sericite Schist

Map unit 7, granite, represents a west-trending offshoot of the Anvil batholith, and was seen in outcrop in the southwest part of the Fair group.

Units 5 and 6 are basic to ultrabasic rocks which may, in fact, be coarse-grained phases of volcanic rocks. These rocks have been variably altered making a precise identification difficult.

Map units 1 to 4 are essentially volcanic rocks with minor interbedded sediments. Although distinctly different in appearance, they may, in fact, be derived from similar rocks which have undergone different degrees of metamorphism. Very few graphitic exposures were noted.

The various bedded or sheared rocks have a general northwest trend and lie along the southwestern flank of the Anvil granite batholith.

Northeast-trending shear zones have been mapped in the northeastern section of the Fair group and on the Joe group.

No mineralized occurrences of economic interest were noted on the claim groups. Several samples were taken of weakly disseminated sulphides occurring in small shear zones, but assays were restricted to little better than trace amounts.

GRAVITY

A gravity survey was carried out in October, as follows:

- (a) Joe claims: Lines 80 E to 100 E on base line No. 2, from 0 to 25 N.
- (b) Joe claims: Lines 4 E and 8 E on base line No. 5, from 10 S to 10 N.
- (c) Fair claims: Lines 60 E, 72 E and 76 E on base line No. 1, from 0 to 40 N, 0 to 70 N and 40 N to 70 N, respectively.

A World-Wide quartz element gravity meter was employed on the survey, and stations were established at 100-foot intervals.

The results of this work have been examined and interpreted by Seigel Associates Limited. The following description is extracted from their report.

One continuous gravity high, having a magnitude of about 0.5 milligals above background, occurs from line 80 E (13 N to 16 N) to line 88 E (12 N to 15 N) on base line No. 2.

This anomaly, from theoretical considerations, could be due to a rock mass with a density of 0.1 more than the mean density of the immediate area. However, because of its affiliation with a zone of relatively high geochemical values in copper, the anomaly becomes significant.

MAGNETICS

All of the Fair claims and Joe claims 1 to 8 were covered by two separate magnetometer surveys during the spring and summer of 1967.

The remaining Joe claims were surveyed in October, and these results were reviewed by Seigel Associates Limited, while interpretation on the earlier work was done by Watts, Griffis and McQuat Limited.

A Sharpe MF-1 fluxgate magnetometer was employed throughout, but while the magnetic background is in the order of 600 gammas on the original work, it varies from 1,200 to 1,600 gammas on the latter survey. This discrepancy results from two different latitude settings on the magnetometers, not from variations of magnetic intensity.

On the Fair group, a long narrow anomaly strikes approximately north-south and crosses the base line at 4 + 00 W.

On the Joe group two anomalous areas were noted. On claims 3, 5 and 7 a narrow zone strikes north to northwest. Another, with magnetic relief of up to 5,000 gammas, trends northwest across Joe 1 and 12.

Another zone of moderate magnetic relief was indicated on Joe claim 9.

The magnetic relief is generally low, and the few areas of higher intensity, described above, may be due to basic and ultrabasic rock types, rather than magnetic sulphides.

ELECTROMAGNETICS

An E. M. survey was performed over a portion of the Joe claims in order to test the gravity anomaly for conductivity.

A Sharpe SE-200 was employed on a frequency of 1,000 c.p.s. No zones of conductivity were indicated.

GEOCHEMISTRY

Soil samples were collected from the upper soil zone (A₃/B and/or B/C) on the eastern 36 claims of the Fair group and on Joe claims 1 to 32.

All samples were analysed for copper, while with a few exceptions, all were tested for zinc. In addition, all samples from the Fair group and Joe claims 1 to 8 were tested for nickel. A limited number of samples were selected for lead determinations.

The results of these analyses, by hot acid extraction methods, are shown on the accompanying maps.

Anomalous nickel values appear to be caused solely by underlying ultrabasic horizons. On Joe claims 1 to 4, 11 and 12 anomalous values in copper and zinc were obtained. Inasmuch as this zone is coincident with a gravity anomaly, and appears to be geologically favourable, it represents the area of primary interest.

A zone of secondary interest is found on Joe claims 9, 26 and 28, where above background copper values were encountered. This area should receive further attention depending upon the results of future work on Joe 1 to 4.

Several other areas have above background copper and zinc values, which are somewhat erratic and are clearly of lower priority.

CONCLUSIONS

Geological mapping completed to-date has confirmed that the property is underlain by geological conditions favourable for the deposition of economic mineral deposits. The northeastern portion of the Fair group and essentially all of the Joe group are underlain by a considerable thickness of sericite schist, while the contact with the Anvil batholith is probably located just north of the property boundary.

Northeast-trending shear zones have been mapped in the northeastern section of the Fair group and on the Joe group. These conditions are typical of the economic deposits in the general area.

Geochemical testing of soil samples taken from these favourable areas have outlined one prime anomalous zone of interest.

Coincident with this zone, a gravity anomaly was located which extends for over 2,000 feet and has a mean magnitude of 0.5 milligals over background.

Magnetic surveys have primarily indicated the general structure of the area and areas underlain by basic or ultrabasic rocks.

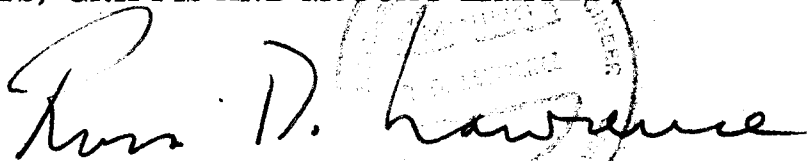
RECOMMENDATIONS

It is recommended that the anomalous area be tested by diamond drilling. Three holes are suggested to adequately explore the zone, each of approximately 600 feet in length. The first hole should be collared on line 88 E at 12 + 00 N at 60°. The programme should be supervised by a geologist, on site, who can spot subsequent holes on the basis of information gained in the first hole.

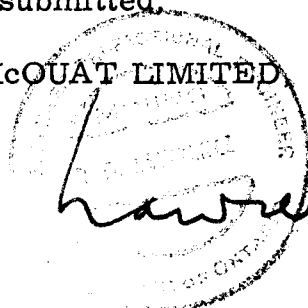
This programme is estimated to cost \$ 60,000.00.

Respectfully submitted,

WATTS, GRIFFIS AND McQUAT LIMITED



Ross D. Lawrence



Toronto, Ontario.
December 8th, 1967.

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

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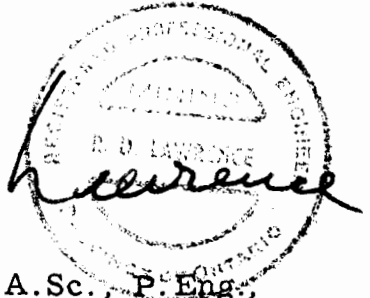
J. L. Walker
December 8th, 1967.

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CERTIFICATE

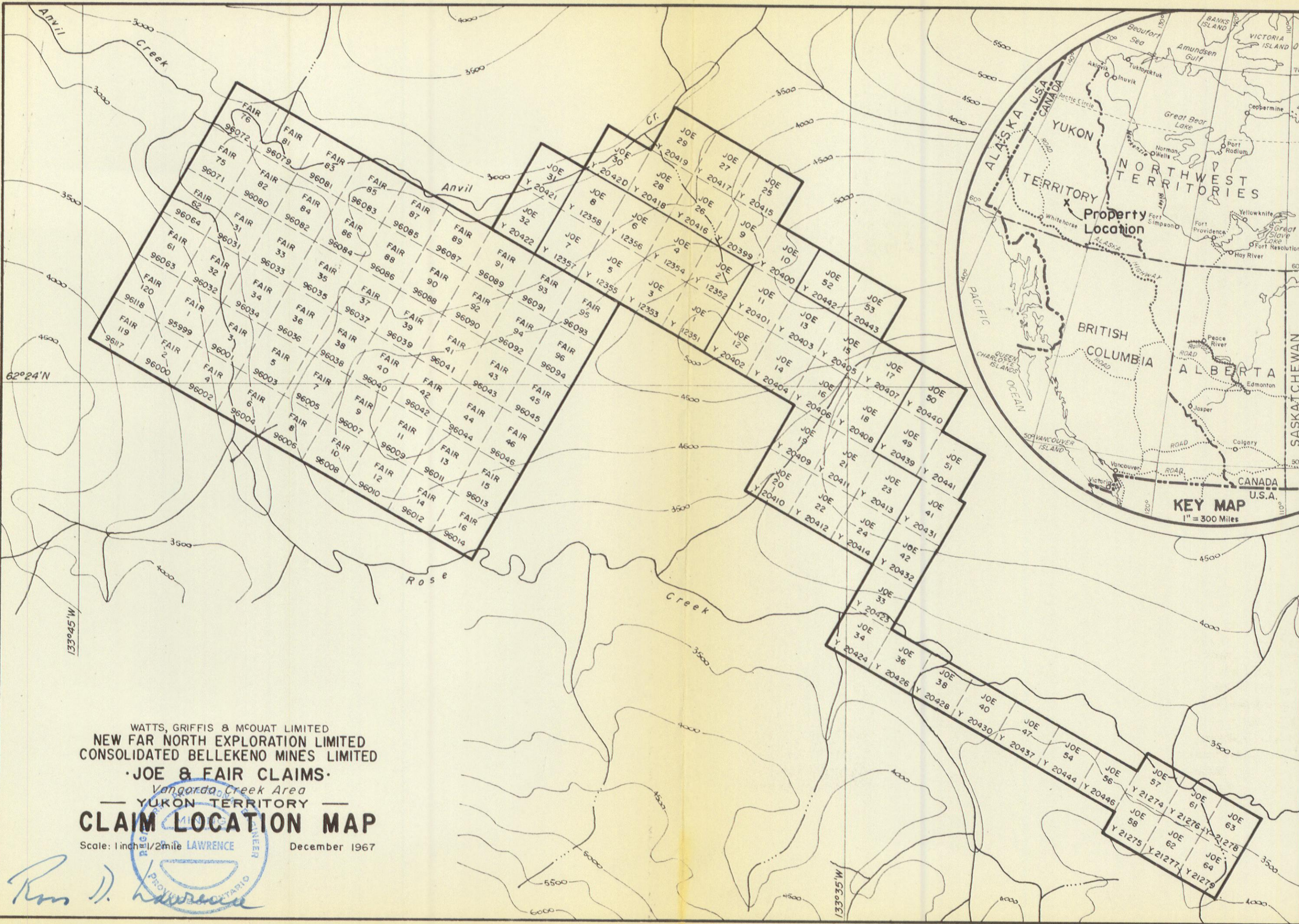
I, Ross D. Lawrence, hereby certify:

1. That I am a geological engineer and reside at 21 Munro Blvd., Willowdale, Ontario.
2. That I am a registered Professional Engineer in the Province of Ontario.
3. That I graduated from the University of Toronto in 1956 with the degree of Bachelor of Applied Science and in 1959 with the degree of Master of Commerce.
4. That I have been continuously engaged in my profession for over 11 years.
5. That the foregoing report is compiled from various investigations carried out during 1967 as listed in the bibliography. The majority of the field work was carried out by, or directed by personnel of Watts, Griffis and McOuat Limited under my direct supervision.
6. That I have no personal interest, nor do I expect to receive any interest, either directly or indirectly in the properties described or in the securities of New Far North Explorations Limited or Consolidated Bellekeno Mines Limited.

Toronto, Ontario.
December 8th, 1967.

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



WATTS, GRIFFIS & McQUAT LIMITED
 NEW FAR NORTH EXPLORATION LIMITED
 CONSOLIDATED BELLEKENO MINES LIMITED

• JOE & FAIR CLAIMS •

Vangorda Creek Area

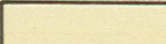

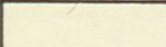


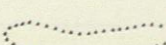

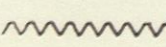
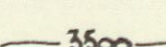
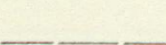
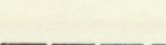
YUKON TERRITORY

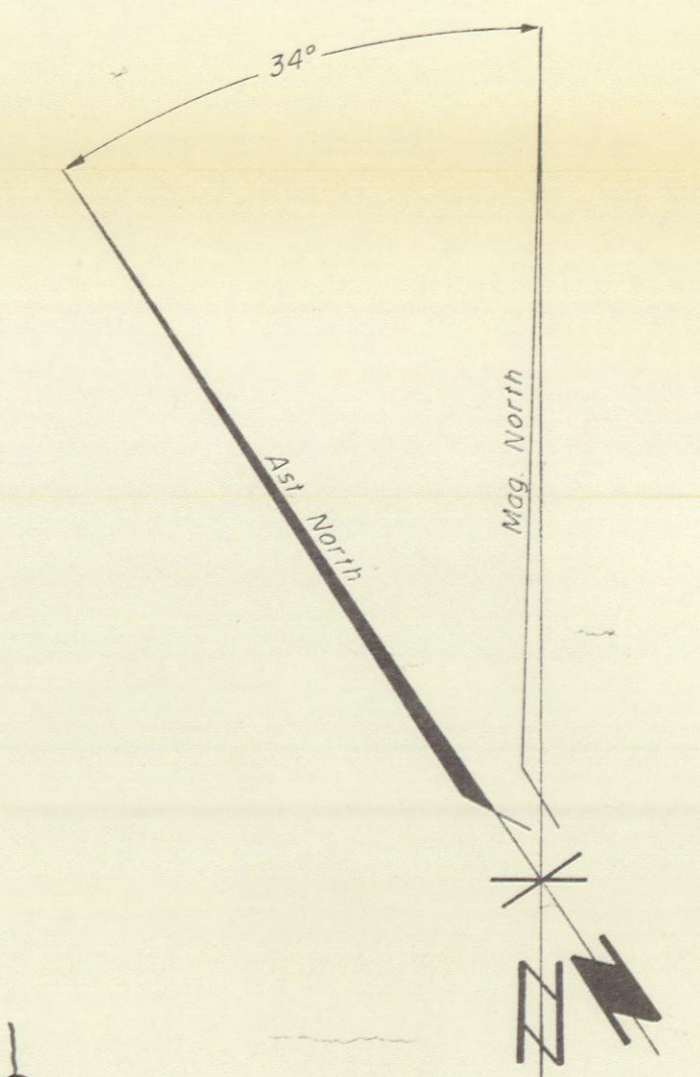
CLAIM LOCATION MAP

Scale: 1 inch = 1/2 mile
 December 1967

Ross D. Lawrence
 LAWRENCE
 CIVIL ENGINEER
 REG. NO. 1100
 YUKON TERRITORY

LEGEND

-  Granite
-  Basic and Ultrabasic Intrusives
-  Volcanics
-  Sericite Schist
-  Geological contact
-  Outcrop area
-  Strike and dip of Schistosity
-  Assumed fault
-  Topographic contour
-  Claim boundary
-  Outline of area covered by 400 scale geology maps



WATTS, GRIFFIS & MCQUAT LIMITED
 NEW FAR NORTH EXPLORATION LIMITED
 AND
 CONSOLIDATED BELLEKENO MINES LIMITED
JOE & FAIR CLAIMS
 Vangorda Creek Area
 — YUKON TERRITORY —
GEOLOGICAL MAP
Scale: 1 inch = 1000 feet (approx.)
 TORONTO, ONTARIO December 1967