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

CLAIM SHEET 105 K/5

Whitehorse Mining District
Yukon Territory

June 13th - August 11th, 1967

Toronto, Ontario.
September 7th, 1967.

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

TABLE OF CONTENTS

MAPS

SUMMARY

New Far North Explorations Limited and Consolidated Bellekeno Mines Limited hold a property consisting of 62 claims in the Vangorda Creek area of the Yukon. Geological mapping, recently completed on 44 of the claims, is described in this report.

Government geological mapping (G.S.C. Map 13 - 1961) in the area at a scale of 1 inch to 4 miles indicated that the property was underlain by rocks similar to those which are the host for mineral deposits in the Vangorda Creek area. The detailed geological mapping has confirmed this.

Although no showings of economic mineralization have been discovered on the property, a considerable thickness of favourable sericite schists crosses the northeast section of the Fair group. There is also evidence of northeast-trending shearing in this section. As the sulphide deposits located to-date 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.

Soil samples, which were collected at the same time as mapping was being done, are currently being tested for base metal content. Any areas of higher than background amounts of metals, especially if underlain by sericite schists, should receive further attention.

INTRODUCTION

The purpose of this report is to describe the results of a programme of geological mapping carried out under the writer's direction. The field work was done during the period of June 13th to August 11th, 1967 by Mr. Jack Koski, B.Sc.

The mapping was carried out on 44 claims known as Joe 1 to 8, inclusive and Fair 5 to 16, 35 to 46 and 85 to 96, all inclusive.

PROPERTY

The property consists of 62 claims, as follows:

Joe	1 - 8	Y-12351 - Y-12358
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 survey was confined to the eastern 36 claims of the Fair group and the 8 Joe claims.

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

LOCATION & 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 co-ordinates 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 dikes.

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.

GRID CONTROL

Lines were cut on the property previously in connection with a magnetometer survey. A base line was run through the centre of the Fair group at 124° true. Cross lines were established at 400-foot intervals.

A secondary base line (Base line No. 2) was cut east from 49 + 00 N on Line 76 E. Cross lines at 400-foot intervals were cut from this line to cover the eastern part of the Joe group.

LOCAL GEOLOGY

Field mapping was carried out at a scale of 1" = 200 feet and reduced to 1" = 400 feet for presentation with this report. All lines were traversed and, in addition, pace and compass traverses were carried out between lines in areas where outcrop could be expected. Aerial photographs were also used to assist in the mapping.

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

TABLE OF FORMATIONS

Age	Map Unit	Rock Type
Cretaceous	7	Granite
Mississipian	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.

ECONOMIC GEOLOGY

Lead-zinc mineral deposits in the area occur in the sericite schist horizon close to the contact with the Cretaceous granite. A considerable thickness of these rocks occurs on the property and the granite occurs in the southwest corner of the property and to the north of the property. Thus, the area is underlain by favourable geological conditions.

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.

Techniques successfully used for locating mineralization of economic interest in this area include geochemical sampling and a variety of geophysical surveys. A combination of magnetic, electromagnetic and gravity surveys are often required to definitively outline anomalous areas.

A magnetometer survey previously completed outlined several areas of high magnetic relief. The geological mapping indicates that the magnetic highs are underlain by masses of gabbro or diorite, although in some cases no outcrops were located in anomalous areas.

Soil samples were collected over a large part of the property at the same time as the mapping was being carried out. These are currently being analyzed and the results interpreted by another consulting firm.

These results should be carefully studied and if any anomalous areas are indicated, the carrying out of EM and/or gravity surveys should be considered.

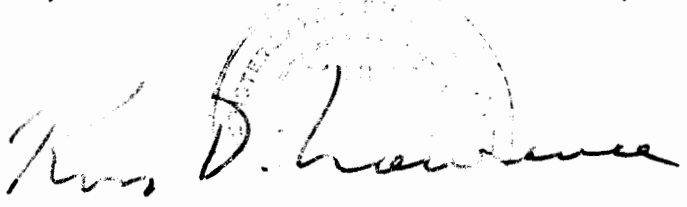
CONCLUSIONS & RECOMMENDATIONS

Geological mapping of 44 claims of the Joe and Fair claim groups 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 is underlain by a considerable thickness of sericite schist while the Anvil granite batholith is located nearby.

All available information on the property, which now includes a magnetometer survey, a geological map and geochemical testing of soil samples, should be assembled and carefully studied. Any areas of anomalous geochemical analyses, particularly where underlain by sericite schist, could be of economic interest. Serious consideration should be given to conducting electromagnetic surveys and/or gravity surveys in such areas.

Respectfully submitted,

WATTS, GRIFFIS AND McOUAT LIMITED,



Toronto, Ontario.
September 7th, 1967.

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

CERTIFICATE

I, Ross D. Lawrence, hereby certify:

1. That I am a geological engineer and reside at 21 Munro Blvd., Willowdale, Ontario.

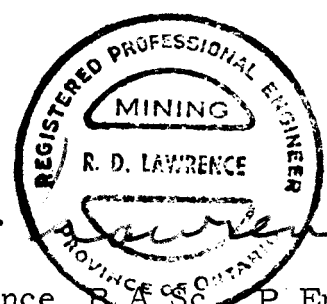
2. That I am a registered Professional Engineer in the Province of Ontario.

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 based upon field work carried out by Mr. Jack Koski, B.Sc., which work was carried out 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.
September 7th, 1967.

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

NEW FAR NORTH ET AL

· JOE GROUP ·

Vangorda Creek Area

YUKON TERRITORY

Scale : 1"=1/2 Mile

Sept. 1967

133°37'W

62°24'N

PROPERTY LOCATION

KEY MAP

1" = 200 Miles

YUKON TERRITORY

NORTHWEST TERRITORIES

ALASKA

BRITISH COLUMBIA

ALBERTA

SASKATCHEWAN

PACIFIC OCEAN

CANADA

U.S.A.

Whitehorse

Fort Providence

Yellowknife

Great Slave Lake

Fort Resolution

Hay River

Peace River

Edmonton

Calgary

Vancouver

Victoria

Vancouver Island

Queen Charlotte Islands

ALCAN HIGHWAY

JOE 8 Y 12358	JOE 6 Y 12356	JOE 4 Y 12354	JOE 2 Y 12352	
JOE 7 Y 12357	JOE 5 Y 12355	JOE 3 Y 12353	JOE 1 Y 12351	

4500

4000

3500

3000

3000

3500

4000

5000

5000

4500

4000

3500

FAIR

GROUP

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
Line 80 E
Line 84 E
Line 88 E
Line 92 E
Line 96 E
Line 100 E

34°
True North
Magnetic North

3500 N
3000 N
2500 N
2000 N
1500 N
1000 N
500 N
8000 N
7500 N
7000 N
6500 N
6000 N
5500 N
5000 N
4500 N
4000 N

Y 12358
Y 12356
Y 12354
Y 12352
Y 12357
Y 12355
Y12353
Y 12351

BUSH

No 2 BASE LINE

L E G E N D

6.	Peridotite, moderately serpentinized, altered to Actinolite Schist in places
5.	Gabbro, Diorite
4.	Chlorite Schist
3.	Andesite, occasionally tuffaceous
2.	Limestone
1.	Sericite Schist, carbonated, quartzose in places

Outcrop
Talus
Contact
45 Dip and strike of bedding
60 Dip and strike of jointing
20 Dip and strike of shearing
Swamp

REGISTERED PROFESSIONAL ENGINEER
MINING
D. LAWRENCE
PROVINCE OF ONTARIO

WATTS, GRIFFIS & McOUAT LIMITED
FOR
NEW FAR NORTH ET AL

JOE CLAIMS
—Vangorda Creek Area—
YUKON TERRITORY
GEOLOGICAL MAP

SCALE 1"=400 Feet

SEPTEMBER 1967

Anvil Creek
Rose Creek
True North
Magnetic North
34°
96 072
96 079
96 081
96 083
96 085
96 087
96 089
96 091
96 093
96 071
96 080
96 082
96 084
96 086
96 088
96 090
96 092
96 094
96 064
96 031
96 033
96 035
96 037
96 039
96 041
96 043
96 045
96 063
96 032
96 034
96 036
96 038
96 040
96 042
96 044
96 046
96 118
95 999
96 001
96 003
96 005
96 007
96 009
96 011
96 013
96 117
96 000
96 002
96 004
96 006
96 008
96 010
96 012
96 014
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
Line 60 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
LEGEND
7. Granite
6. Peridotite, moderately serpentinized, altered to Actinolite Schist in places
5. Gabbro, Diorite
4. Chlorite Schist
3. Andesite, occasionally tuffaceous
2. Limestone
1. Sericite Schist, carbonated, quartzose in places
Outcrop
Talus
Contact
Dip and strike of bedding
Dip and strike of jointing
Dip and strike of shearing
Swamp
WATTS, GRIFFIS & McOUAT LIMITED
FOR
NEW FAR NORTH ET AL
FAIR CLAIMS
—Vangorda Creek Area—
YUKON TERRITORY
GEOLOGICAL MAP
SCALE: 1" = 400 Feet
SEPTEMBER 1967

Anvil Creek

Rose Creek

96 072 96 079 96 081 96 083 96 085 96 087 96 089 96 091 96 093

96 071 96 080 96 082 96 084 96 086 96 088 96 090 96 092 96 094

96 064 96 031 96 033 96 035 96 037 96 039 96 041 96 043 96 045

96 063 96 032 96 034 96 036 96 038 96 040 96 042 96 044 96 046

96 118 95 999 96 001 96 003 96 005 96 007 96 009 96 011 96 013

96 117 96 000 96 002 96 004 96 006 96 008 96 010 96 012 96 014

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

Line 60 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

True North
34°
Magnetic North

LEGEND
0-50
50-100
100+

Ni- IN PARTS PER MILLION
NOTE: Geochemical analyses and interpretation by Barringer Research Limited.

WATTS, GRIFFIS & McOUAT LIMITED
FOR
NEW FAR NORTH ET AL
FAIR CLAIMS
— Vangorda Creek Area —
YUKON TERRITORY
GEOCHEMICAL SURVEY
Nickel Determinations

SCALE: 1"= 400 Feet AUGUST 1967

WATTS, GRIFFIS & McOUAT LIMITED

FOR

NEW FAR NORTH ET AL

FAIR CLAIMS

— Vangorda Creek Area —

YUKON TERRITORY

GEOCHEMICAL SURVEY

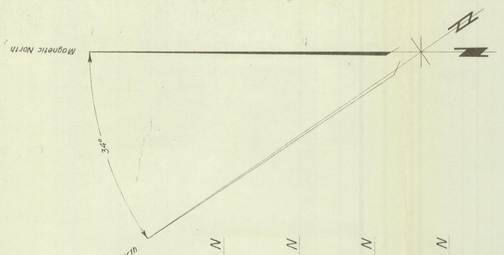
Lead Determinations

SCALE 1"=400 Feet

SEPTEMBER 1957

Pb IN PARTS PER MILLION

NOTE Geochemical analyses and interpretation by Barringer Research Limited



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

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

96 014 | 96 013 | 96 012 | 96 011 | 96 010 | 96 009 | 96 008 | 96 007 | 96 006 | 96 005 | 96 004 | 96 003 | 96 002 | 96 001 | 96 000 | 95 999 | 96 046 | 96 045 | 96 044 | 96 043 | 96 042 | 96 041 | 96 040 | 96 039 | 96 038 | 96 037 | 96 036 | 96 035 | 96 034 | 96 033 | 96 032 | 96 031 | 96 093 | 96 094 | 96 092 | 96 090 | 96 089 | 96 088 | 96 087 | 96 091 | 96 083 | 96 084 | 96 082 | 96 080 | 96 085 | 96 086 | 96 081 | 96 079 | 96 072 | 96 071 | 96 064 | 96 063 | 96 118 | 96 117

Anvil Creek

Rose Creek

Anvil Creek

Rose Creek

96 072 | 96 079 | 96 081 | 96 083 | 96 085 | 96 087 | 96 089 | 96 091 | 96 093

96 071 | 96 080 | 96 082 | 96 084 | 96 086 | 96 088 | 96 090 | 96 092 | 96 094

96 064 | 96 031 | 96 033 | 96 035 | 96 037 | 96 039 | 96 041 | 96 043 | 96 045

96 063 | 96 032 | 96 034 | 96 036 | 96 038 | 96 040 | 96 042 | 96 044 | 96 046

96 118 | 95 999 | 96 001 | 96 003 | 96 005 | 96 007 | 96 009 | 96 011 | 96 013

96 117 | 96 000 | 96 002 | 96 004 | 96 006 | 96 008 | 96 010 | 96 012 | 96 014

Line 60 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

True North
34°
Magnetic North

(75) Anomalous Zinc Value

Zn IN PARTS PER MILLION

NOTE: Geochemical analyses and interpretation by Barringer Research Limited

WATTS, GRIFFIS & McOUAT LIMITED
FOR
NEW FAR NORTH ET AL
FAIR CLAIMS
—Vangorda Creek Area—
YUKON TERRITORY

GEOCHEMICAL SURVEY
Zinc Determinations

SCALE 1"= 400 Feet

SEPTEMBER 1967

True North
Magnetic North
34°
Anvil
Creek
Rose
Creek
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
96 072
96 079
96 081
96 083
96 085
96 087
96 089
96 091
96 093
96 071
96 080
96 082
96 084
96 086
96 088
96 090
96 092
96 094
96 064
96 031
96 033
96 035
96 037
96 039
96 041
96 043
96 045
96 063
96 032
96 034
96 036
96 038
96 040
96 042
96 044
96 046
96 118
95 999
96 001
96 003
96 005
96 007
96 009
96 011
96 013
96 117
96 000
96 002
96 004
96 006
96 008
96 010
96 012
96 014
Line 60 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
LEGEND
0-36
37-50
+50
Cu IN PARTS PER MILLION
NOTE: Geochemical analyses and interpretation by Barringer Research Limited
WATTS, GRIFFIS & McOUAT LIMITED
FOR
NEW FAR NORTH ET AL
FAIR CLAIMS
—Vangorda Creek Area—
YUKON TERRITORY
GEOCHEMICAL SURVEY
Copper Determinations
SCALE: 1" = 400 Feet
AUGUST : 1967