Department of Mines and Petroleum Resources ASSESSMENT REPORT

NO. 3387 MAP

Decation & Geology Man 2) Ceomagnetic Sorvey

Nitro Development Inc.

Geomagnetic - Geochemical Survey

CLEO Claim Group

1210 17'

52° 20'

Cariboo Mining District

93 A /3 W

British Columbia

G. L. Kirwan, P. Eng.

Vancouver, B.C.

September 27th, 1971.

Nitro Development Inc., 10th floor, 366 Bay Street,* Toronto 110, Ontario.

Gentlemen:

Report herein covers results of preliminary exploration essentially aimed at locating and assessing to some degree concentration of copper material on your property located in the Cariboo Mining District, British Columbia.

Work programs completed to date consist of line grid at 400 ft. separation, geomagnetic survey with recordings east 100 ft., and a geochemical soil sampling program with determination for copper content expressed in parts per million.

PROPERTY, LOCATION, ACCESS:

The Nitro holdings consists of 24 contiguous mineral claims, some 1,200 acres in all, referred to as CLEO 1-24 with respective Record Numbers 57715-57738 inclusive.

The property is located at the western head of Murphy Lake, some 24 miles north northeast of the townsite of Lac La Hache serviced by Highway 97 and Pacific Great Eastern Railroad. Coordinates of the property are 121° 17' Longitude, 52° 2' Latitude.

Access is best attained by charter aircraft from Lac La Hache to Murphy Lake.

An alternate route may be open in dry periods by logging roads via Spoat Lake from Lac La Hache.

GEOLOGY:

Geological coverage is meagre on the Nitro holdings however G.S.C. reference Map 3-1961, Quesnel Lake, shows the south half of the property to be underlain by Jurassic - Cretaceous granodiorite, monzonite, and hornblende - biotite complex. The north portion is drift covered by Pleistocene and recent glacio-alluvial till and gravel, but is probably underlain by identical rock sequences as the remaining portion of the property.

Surface prospecting has uncovered a copper occurrences in the region of claims 57724-57735 in granodiorite material.

MAGNETOMETER SURVEY

Control and Survey Method: A Sharpe MF-1 Fluxgate magnetometer was employed to measure the vertical componant of the earth's magnetic field in gammas. Control was established through grid at 400 ft. spacings directed east and west to property limits from north - south base control line. Stations were established each 100 ft. along crosslines.

GEOCHEMICAL SURVEY

<u>Field Control</u> - Control was established employing existing grid used for geomagnetic survey.

Field Procedure: Employing normal soil auger equipment, samples of soil were taken each 100 ft. from the "B" horizon located directly below the topmost or human horizon.

No impervious clay horizon were noted in area covered. Sample depth ranged from 3 to 10 inches below surface, averaging 5 inches.

Laboratory Procedure: All samples were dried then passed through a -80 mesh nylon screen to eliminate possible humus contamination. Half gram portions were then subject to hot aqua regia and hot Hcl acid extraction for copper. Determination was by atomic absorption in Parts Per Million (PPM) in the Vancouver laboratories of Bondar-Clegg & Co. Ltd.

Results of Survey: Some 1,404 samples of soil were taken and determined for copper in the 26.6 mile survey.

General base level of copper in soils throughout surveyed area is numerically 15, thus numerically 45 is considered as anomalous threshold.

Three zones representing areas of significant geochemical increment indicating concentration of copper were detected and are labelled "A", "B", and "C" respectively in order of intensity and size.

Anomaly "A", located in central western portion of property, is associated with an area of geomagnetic high, although direct superimposition was not achieved. It is possible, due to linearily, that the magnetic high may represent a disjointed or faulted dyke probably of diabase composition. Copper concentration would then be related geologically to the dyke. The anomaly, 2,200 ft. long in direction 100° azimuth, an average 400 ft. in width, has intensity of 154 based on 17 recordings or over ten times background. Soil depth is unknown.

Adjacent on the northeast to anomaly "A" is anomaly "B" and is a singularly long and narrow zone with dimensions 2,200 ft. by 100 ft. Intensity averages 424 from five anomalous copper determinations, or about six times background. No geomagnetic distortion is related to this zone.

It is possibly significant in thinking in terms of a large low grade copper deposit that numerous isolated geochemically anomalous recordings occur in vicinity of anomalies "A" and "B", although these may be caused by spurious effects in normal soil making procedures.

Anomaly "C" located in the south central portion of area surveyed, is 600 ft. in length, an average 200 ft. in width, and has intensity of eight times background. This zone represents an area of known copper concentration dissiminated in granodiorite.

CONCLUSIONS AND RECOMMENDATIONS

Programs consisting of magnetic coverage and geochemical soil sampling with copper determinations were recently completed over the Nitro Development Inc. holdings located in the Cariboo Mining District, south central British Columbia.

Geomagnetic results indicate on essentially magnetically flat area having little relief indicating uncontorted, undistorted, fault free, homogenious rock structure, probably granodiorite or similar acidic rock, all of which promotes large low-grade deposits similar to the Gibralter Mines situation some 45 miles northwest

which firm plan early production on a 40,000 tons per day basis. A disjointed area of magnetic highs occur in the northwest portion of the property and may represent a dyke situation.

The salient geochemical features are anomalies "A", "B" and "C", each indicative of concentrations of copper material. Anomaly "A", 2,200 ft. long, 400 ft. wide, with intensity of ten times background, is likely related to a dyke situation. Anomaly "B", 2,200 ft. long, 100 ft. wide, is located adjacent to zone "A" and the two tend to converge southeastward. Isolated anomalous recordings occur in abundance in general area of zones "A" and "B", and may be indicative of a large low grade copper deposit in this vicinity, or may be results of soil making processes. Anomaly "C", located in area of known copper dissiminations in granodiorite on the property is 600 ft. long averages 200 ft. wide and has intensity of eight times background.

Diamond drilling is recommended to further assess anomaly "A". Hole No. 1 should be collared in vicinity of 64N, 16+75W, 225° azimuth, -45° dip, and be 200 ft. in depth. Hole No. 2 should be collared at location 72N, 21+75W, 225° azimuth, -45° dip and be 200 ft. in depth.

Estimated cost of 400 ft. of $A_{\rm X}$ core drilling including mobilization, demobilization, moving costs,

engineering, assays, would be \$8,500.00.

Further work is contingent upon results of recommended program.

Respectfully submitted,

G. L. KIRWAN FR. Eng.,

Vancouver, British Columbia September 27th, 1971.

the same of the sa	<u>Names</u>	Addresses	. <u>Dates Worked</u>
	M. Davies	2779 Masefield Road North Vancouver, B.C.	14 Aug - 19 Aug. inc. 25 Aug - 30 Aug.
	R. Godfrey	337 East 23rd Street North Vancouver, B.C.	14 Aug - 19 Aug. inc.
The second secon	K. Van Koughnett	R. R. #1, Site 2 Cranbrook, B.C.	25 Aug - 30 Aug.
	J. M. Ashton, P. Eng.	#204 - 2930 Spruce St. Vancouver, B.C.	14,15 Aug30 Aug.
	Davies 12 days @ \$27.50 /day = \$ 330.00		
	Godfrey 6 days @ 22.00 /day = 132.00		
	Van Koughnett 6 days @ 22.00 /day = 132.00		
	Ashton 3 days @ 1	.50.00 /day =	450.00
	Food & Meals 27 man days @ \$4.00 /day = 108.00		
	Camp costs = 38.00		
Expenditures, Flagging, Engineering Supplies = 18.75			
	Soil Assays		755.00
		Total: \$ 2	1
Declared before me at the City in the			
	of Vanarue	, in the	TAKE TO THE MENT OF THE PARTY O
	Province of British Columbia, this 30 G.L. Ki fwan, P. Enga.		
-	day of November 1971, A.D		

A Commissioner for taking Affidavits within Br A Notary Public in and for the Province of Britis

Sub-Mining Recorder

CERTIFICATE

I, GERALD L. KIRWAN of the cities of Toronto and Vancouver, certify as follows:

- 1. THAT I am a Geologist with offices at Ste. 205 160 Bay Street, Toronto and Ste. 214 475 Howe Street, Vancouver, B.C.
- 2. THAT I have been graduated from Carleton University, B. Sc., 1957, and that I have practised my profession continuously.
- 3. THAT I am registered with the Association of Professional Engineers of the Province of Ontario as a Professional Engineer, I am a Fellow of the Geological Association of Canada and a Member of the Canadian Institute of Mining and Metallurgy.
- 4. THAT I have no interest direct or indirect in the property of Nitro Development Inc., nor do I beneficially own directly or indirectly any security of the Company or affiliates thereof.
- THAT the accompanying report has been prepared by myself and is based upon study of pertinent government reports and maps, upon a general knowledge of the subject area, upon a visit to the property March 16, 1970, and upon supervision of work programs covered herein.
- 6. THIS report herein may be used in the prospectus of the Company and amendments thereto.

DATED at the City of Vancouver, in the Province of British Columbia, this 27th day of September, 1971.

G. L. Kirwan, B. Sc., P. Eng.



