

DN GROUP

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93-N-14

II DN GROUP

INTRODUCTION

In early June of this year, Norranco staked 14 mineral claims to cover a mineral occurrence located some 4 miles north of copper properties long held by Kennecot Copper Corporation.

The DN claims constitute a raw and untried prospect situated in a favorable geological trend known to be a copper province. The following report sets out known information relevant to the area and presents a development proposal for the property.

LOCATION AND ACCESS

The claim group is on a rounded unnamed mountain approximately 12 miles southwest of Usilika Lake. Average elevation of the claim is about 5,000 feet with the highest portion being some 6,000 feet above M. S. L.

The Usilika Lake road passes within an estimated 12 miles of the claim group. The take-off point for the pack trail leaving the road is approximately 2 miles south of Osilinka Crossing, in turn some 140 miles from the Pacific Great Eastern rail point at Ft. St. James.

The road is a gravel access road, serving the communities of Manson Creek, Germanson Landing and Hogem. It is not kept open in winter.

Alternative access is by helicopter from bases at Smithers or Ft. St. James. Each is some 1½ hours flying time from the claim group.

#### FACILITIES AND CLIMATE

Pacific Great Eastern is currently extending the railroad to the Takla Lake region. This will put rail facilities an approximate 40 miles from the claim area and will undoubtedly contribute to rapid development of the region.

No other facilities exist, the area presently being classed as remote.

Climate is that of the northern interior, temperatures ranging between 90° above and 60° below zero. Though precipitation varies widely in the region as a whole, the claims are located near the eastern border zone with precipitation in the order of 25 inches per year. Once established, work is feasible past the June through September summer season.

#### PROPERTY

At present, holdings consist of 14 mineral claims acquired by location and will approximate 700 acres.

Nearest valid claims are held by Kennecot, some 4 miles south and by Amax with holdings approximately the same distance to the northwest.

The DN mineral claims were located on June 7, 1968, with a Record

Date of June 17, 1968. Record Numbers are 59,788 through 59,801 and the details are on file with the Mining Recorder at Smithers, British Columbia. Configuration of the claim group is depicted in Figure 1.

### HISTORY

The Kennecot property at the head of Duckling Creek has been known since "gold rush" times. However, work has been limited to geological and geophysical surveys, backed by diamond drilling for determination of grade and size of the ore bearing structures, undertaken during ownership by Kennecot. ✓

Similar work has been completed on the Hogan Mines prospect, located on Kwanika Creek, about 30 miles south of the DN Group.

The Norranco prospect is a new discovery and no record of other previous work is known to exist.

### REGIONAL ACTIVITY

Kennecot Copper has worked northward from its properties near the DN claims and this season is active in regional exploration some 60 miles northwest at Thutade Lake. Consolidated Mining and Smelting had prospected the region in the late 20's and early 30's, and has in the order of 100 men in reconnaissance work over the same area this season.

Both Amax and Phelps Dodge are active to the west in the Babine-Takla

Lake trend, north of the Granisle Mine on Babine Lake. Noranda is similarly located.

Many other mining exploration ventures are under way, a few with prospects having mine making potential.

**GEOLOGY**  
(Regional)

The general trend has been mapped by the Geological Survey of Canada, results from work on the area of interest being presented in G.S.C. Memoirs 252, 251 and 274 for the Ft. St. James, McConnel Creek and Aiken Lake Map areas, respectively.

Regionally, the area of interest is centrally located near the eastern border of the Omineca-Cassiar Batholith which forms the backbone of a mountain trend some 400 miles long lying to the west of the Rocky Mountain Trench. These plutonic rock masses are believed to have been emplaced during the Upper Triassic-Lower Cretaceous period and were accompanied by intense metamorphism and deformation.

**GEOLOGY**  
(Local)

The DN claims are located on the eastern flank of the Hogem Batholith, a member portion of the larger plutonic mass. It is a composite magmatic mass with an exposed area of some 1,200 square miles. The intrusive is bounded on the west by the Pinchi Fault Zone, some 200

miles long, and on the east by the Wolverine Fault Zone.

The claim group is largely covered with overburden, but in a cirque on DN No. 2 MC, the mineralization is exposed in a variety of granitic rock types and dykes occurring in a sheared and fractured zone some 500 feet or more in width. It is believed that the property is largely underlain by the granitic rocks, with smaller areas of altered and granitized sedimentary and volcanic rocks.

The mineralized area contains a fracture system healed with quartz veinlets and mineralization was noted on other micro-fractures. See Figure 2.

#### MINERALIZATION

Known mineralization is confined to the fracture system on DN No. 2.

The copper minerals chalcopyrite and bornite, accompanied by pyrite, occur in disseminated form in the host rock and as coatings on fracture planes.

Magnetite is widespread in outcrops observed, occurring in granular form. Biotite is common, but in areas of pronounced alteration muscovite, sericite and an increase in quartz content both as phenocrysts and as veinlets is evident.

Well mineralized float was noted at several locations over the claim group. It is not known if this originated in the present property limits.

Character samples taken from locations 1 and 2, Figure 2, returned an assay of 0.9 per cent copper when combined for evaluation. Ten soil samples taken at 100 foot intervals along the lip of the cirque returned very high values over an 800 foot section above the known mineralized zone. Additional sampling was not possible because of the season and the time available when staking the claims.

### CONCLUSIONS

The DN claim group is well located in an area known to contain significant concentrations of copper minerals. Some of these deposits are presently under investigation and development by major mining interests.

The present holdings warrant detailed investigation, as does the area surrounding the mineral claims and additional claims can be staked should results of the work so indicate.

Because of location, the most useful exploration season is limited to the period June through September. For this reason, planning should include maximum utilization of men and equipment in the favorable season.

*probably too late for '69*

### RECOMMENDATIONS AND ESTIMATED COSTS

Economics in time and costs can be effected by utilizing road transportation to the Osilinka Crossing area, then shuttling men, supplies and equipment to the property by helicopter from this location.

Anticipated costs to set up camp for a 5 man crew and to undertake geo-chemical, geophysical and geological surveys and mapping, together with reporting of results and demobilization costs are as follows:

<u>A. Initial Phase</u>	<u>Estimated Cost</u>
1. Purchase of camp materials.	\$ 3,000.00
2. Purchase of supplies (5 men for 2 months).	2,500.00
3. Assemble men and supplies at Osilinka Crossing base. Move out, end of season.	2,700.00
4. Ferry men and supplies to property by helicopter.	1,600.00
5. Wages (5 men plus cook).	8,500.00
6. Geochemical supplies and determinations.	1,800.00
7. Geophysical survey (Magnetometer and EM).	1,400.00
8. Geological and engineering.	7,200.00
9. Reporting, supervision.	2,000.00
10. Helicopter support, estimate one split trip per week at \$300 per trip.	2,400.00
11. Office, overhead, contingencies.	4,900.00
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Total estimated cost, initial phase	<u><u>\$38,000.00</u></u>
<u>B. Regional, Surrounding DN Group, Initial Phase</u>	
1. Geochemical supplies and determinations.	\$ 1,400.00
2. Localized geophysical studies.	2,000.00
3. Localized geological mapping, tie in to regional trends and DN Group.	4,500.00



	<u>Estimated Cost</u>
4. Wages and costs, 2 men, 2 months.	\$ 3,000.00
5. Supplies (based at DN Group).	600.00
6. Helicopter support, estimate one split trip per week at \$300 per trip.	2,400.00
7. Reporting, supervision.	1,500.00
8. Office, overhead, contingencies.	4,100.00
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Total estimated costs, regional phase	<u><u>\$19,500.00</u></u>

C. Second Phase

It is anticipated that drilling will be required for preliminary evaluation of mineralized areas known and to be located. Since the amount of this work is not predictable at present, a nominal amount of footage with estimated costs on a semi-contract basis is set out for costing purposes.

	<u>Estimated Cost</u>
1. Estimate 2,500 feet of coring at \$12 per foot.	\$37,500.00
2. Supervision and reporting.	4,500.00
3. Mobilization and demobilization.	5,000.00
4. Assays, mapping, logging.	4,000.00
5. Camp costs.	4,000.00

	<u>Estimated Cost</u>
6. Office, overhead and contingencies.	\$ 7,500.00
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Total estimated cost, second phase	<u>\$61,500.00</u>

It is estimated that the work set out above can be completed during a full work season. Further work would be planned for the ensuing season and would be based on a thorough study of results obtained.

## II DN GROUP - DRAWINGS

- Figure 1                      Claim Location Detail
- Figure 2                      Sample Location Sketch                      ?
- Figure 3                      Photo-Geological Interpretation