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A SUMMARY REPORT  
on the  
CANALASK NICKEL-PLATINUM PROPERTY  
Yukon Territory

for  
ALL NORTH RESOURCES LTD.

by  
John S. Vincent, P.Eng.,  
Consulting Geologist

Vancouver, B.C.

January 10, 1987.

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*John S. Vincent, P. Eng.*

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## SUMMARY & CONCLUSIONS

All-North Resources Ltd. has acquired an interest in the Canalask Nickel-Platinum Property under the terms of a working option and will be carrying out an exploration and evaluation program over the 1987 season. All-North is the operator of the Kluane Joint Venture, in which Chevron Minerals Ltd. is an equal partner. The area of interest is located in the Western Yukon Territory 200 miles northwest of Whitehorse.

The Kluane District has an attractive association of ultramafic rocks and nickel-copper sulphides over a strike length of 100 miles, and previous work has demonstrated that there is also an important content of the platinum group elements (PGE). Production from the Wellgreen Mine 50 miles to the south included substantial credits in these metals.

The Canalask Nickel-Platinum Property has a calculated mineral inventory of 550,000 tons with a grade of 1.68% nickel and 0.04% copper. Metallurgical evaluation has demonstrated a possible 90% recovery and a concentrate grade of 19.7% nickel which also contains .030 ounces of platinum and 0.019 ounces of palladium per ton. This concentration of nickeliferous sulphide is located 400 feet north of the footwall contact of a large ultramafic complex which also has a significant association of sulphide mineralization within a gabbroic phase along this contact.

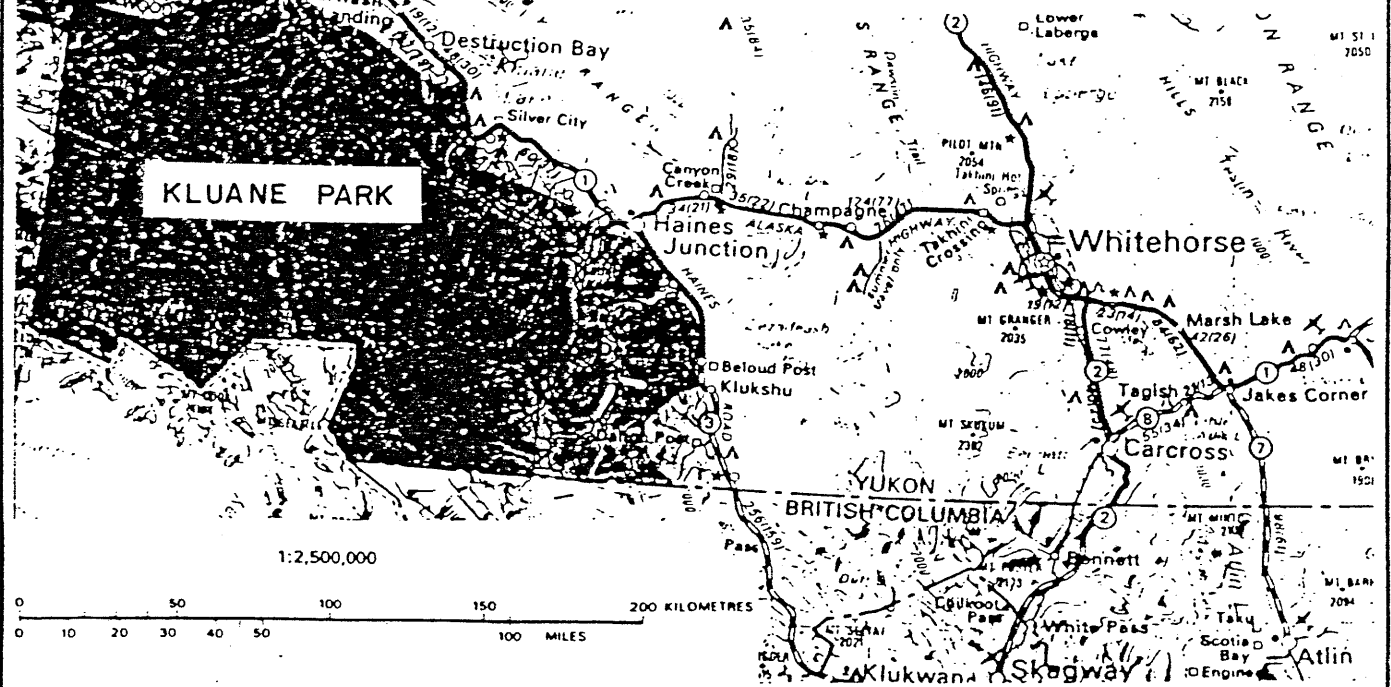
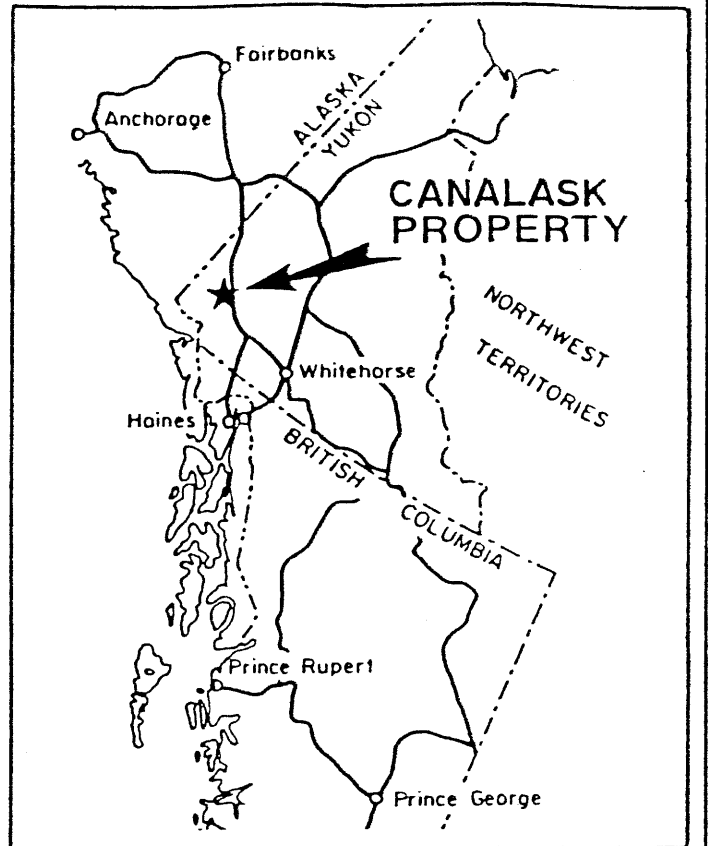
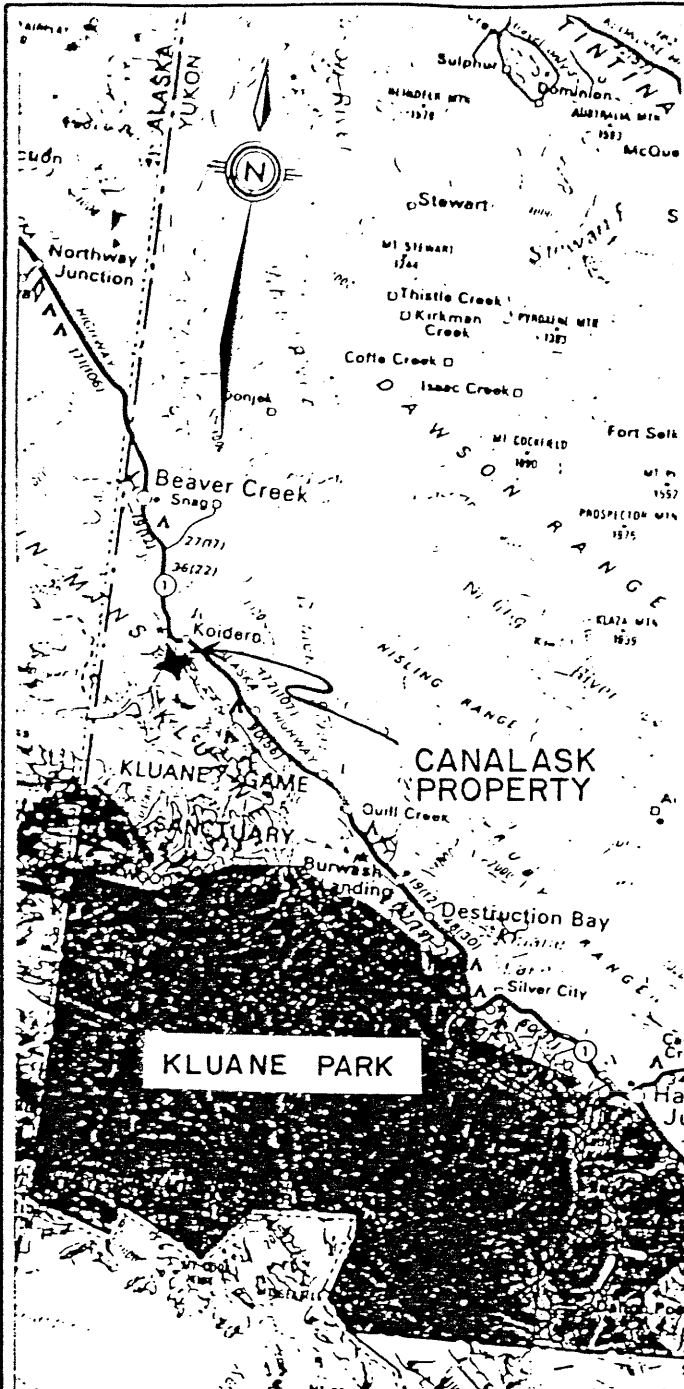
An exploration program on the Canalask property in 1972-73 discovered disseminated and interstitial nickeliferous sulphides in a gabbroic phase of the ultramafic complex along the footwall contact, and a re-examination of old drill core identified

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similar material at depth in the deposit to the north. This host carries important amounts of the PGE at the Wellgreen, and further work is warranted to explore this potential at the Canalask.

A 2-Phase drilling program is recommended to accomplish this, with an initial phase estimated to cost \$112,000 and a follow-up phase costing \$288,000.

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ALL NORTH RESOURCES LTD.  
 CANALASK PROPERTY  
 LOCATION MAP

Nov. 28, 1986

Plate: 1

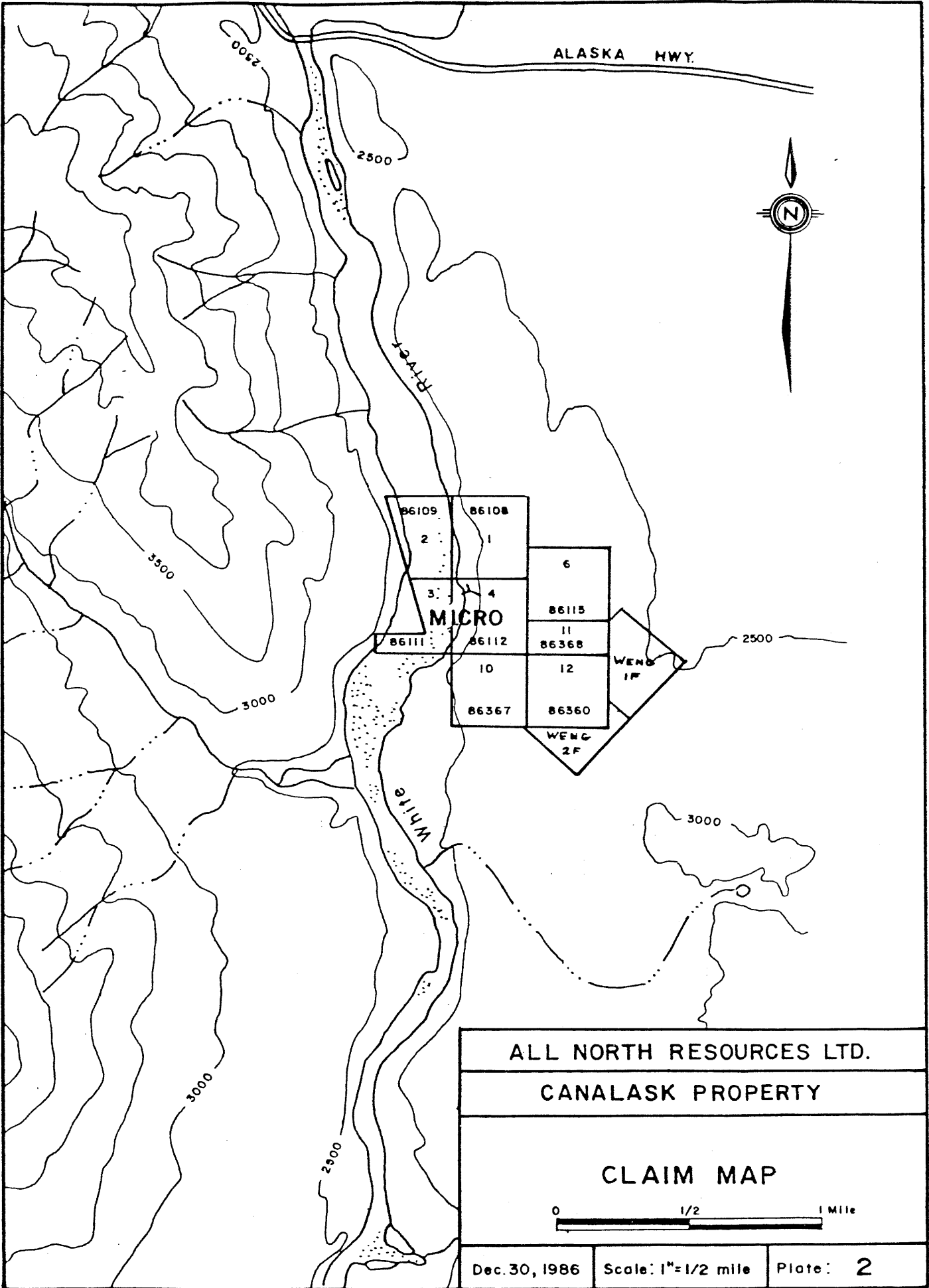
### INTRODUCTION

At the request of R.J. Cathro, P.Eng., a Director of All North Resources Ltd., the writer has prepared a summary report on the Canalask Nickel-Platinum Property in the western Yukon Territory. The nickel-copper potential has been the object of primary interest in the past, and although a platinum-palladium content in the sulphides was known, it is only recently that the overall potential of the platinum group metals in the ultramafic rocks of the Kluane District has been recognized. The Wellgreen Mine previously operated by Hudson Bay Mining and Smelting 50 miles to the southeast has a very significant PGE content, and the occurrence of nickel-copper sulphides in a similar geological environment at the Canalask strongly suggests a similar potential.

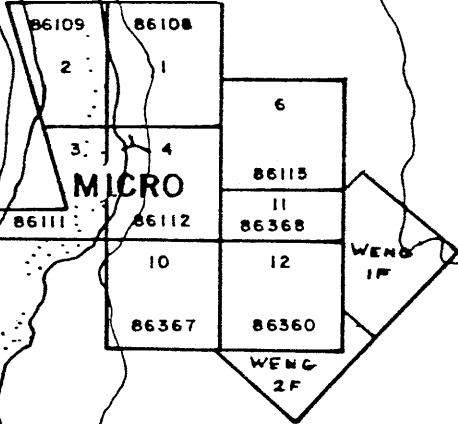
The Kluane Joint Venture conducted a preliminary evaluation of the Wellgreen during 1986, and plans a comprehensive program for 1987. Concurrent with this work the Canalask property will also be explored and evaluated. All-North Resources Ltd is 50/50 partner with Chevron Minerals Ltd. in the Kluane Joint Venture and is currently acting as the Operator.

This report is based on a review of files compiled by the property owners over the years, and on the writer's experience on the property over the 1972 and 1973 field seasons. The report takes the form of a review of past work, a description of the geology and mineralization, a review of the exploration results compiled by the writer in 1973, and a recommended work program to evaluate the platinum group element potential.

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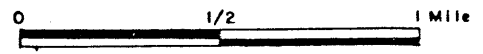
ALASKA HWY.



ALL NORTH RESOURCES LTD.

CANALASK PROPERTY

CLAIM MAP



Dec. 30, 1986

Scale: 1"=1/2 mile

Plate: 2

### PROPERTY, LOCATION & ACCESS

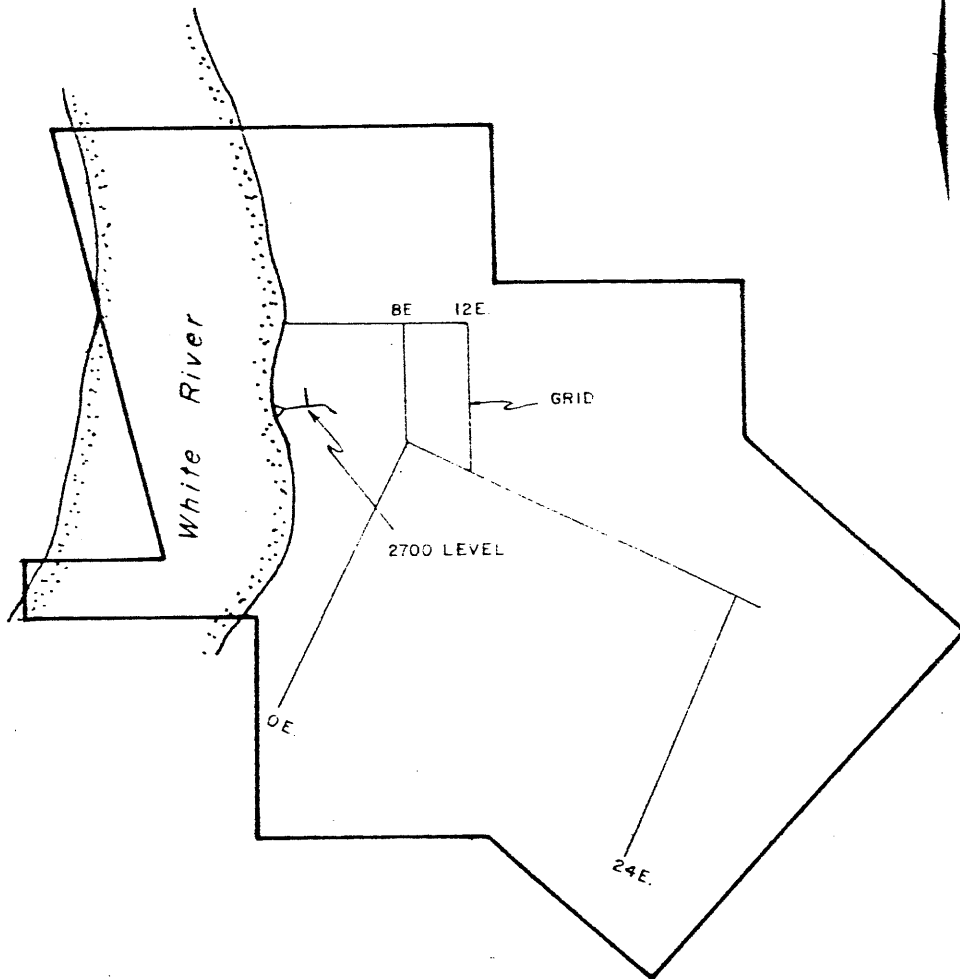
The Canalask Nickel-Platinum Property is located in the western Yukon Territory 200 miles northwest of Whitehorse on the eastern bank of the White River. The small hamlet of Koidern at Mile 1170 on the Alaska Highway is the closest settlement. A 2.5 mile all-weather gravel road connects the campsite and portal area with the highway at Mile 1168.

The topography is comprised of low rolling hills separated by swampy depressions with a maximum relief of 600 feet. Slopes are forested with spruce and occasional birch and alder.

The claim package consists of 8 lode claims itemized as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry Date</u>
Micro 1	86108	Oct. 10, 1987
2	109	"
3	111	"
4	112	"
6	115	"
10	367	"
11	368	"
12	360	"

The claims are recorded in the name of Charles Gibbons and are held by the Kluane Joint Venture under the terms of an option agreement. The Kluane Joint Venture recorded the Weng 1 and 2 fractional claims on December 19, 1986, as part of the option. The writer has not searched title and current status of the claims.



ALL NORTH RESOURCES LTD.

CANALASK PROPERTY

PROPERTY OUTLINE

0 1/4 1/2 mile

Dec. 31, 1986

Scale: 1" = 1/4 mile

Plate: 3

## HISTORY & PREVIOUS WORK

Nickel mineralization was discovered on the east bank of the White River by Prospectors Airways in 1952. They drilled 5,322 feet in 14 core holes in 1953, and the property was optioned by Canalask Nickel Mines of Toronto. Over the period 1954 to April 1958 a further 8,784 feet of surface drilling supported a reserve calculation of 550,000 tons with a grade of 1.68% nickel and 0.04% copper. Approximately 1000 feet of adit and cross-cuts were driven on the 2700 level, a 300 foot winze was sunk, and 375 feet of drift on the 2400 level was completed. About 775 feet of underground drilling was completed on each level. Work was suspended and the property lay dormant. The claims lapsed and were restaked by Peter Versluce of Whitehorse in March of 1964. They were subsequently acquired by Mr. Gibbons from the Versluce estate.

Discovery Mines of Toronto acquired the property in 1967 and carried out an evaluation program over the 1968 season which consisted of both surface and underground work. A total of 1,217 feet of underground diamond drilling and 3,276 feet of surface drilling was completed.

The Canalask Property was optioned by the Nickel Syndicate in 1972; a joint venture group formed by the writer to explore for nickel in the Cordillera of B.C. and the Y.T. Over the period 1972-1973 an exploration program was carried out in the Kluane District under the direct supervision of the writer. Studies of the Canalask and Wellgreen sulphide deposits were two important phases of this project.

## GEOLOGY

### Regional Setting:

The Kluane Map area is bisected diagonally by the Shakwak Lineament which trends northwesterly at approximately 135°. North of the Shakwak Trench the geology is mainly intrusive in origin and is completely different from the younger extrusive and sedimentary rocks to the south. It is evident that strike-slip displacement along a major crustal break underlying the trench has been significant at various times in the past.

The regional structural fabric south of the trench is dominated by several components: the 135° trend of the Kluane Ranges and Shakwak lineament, a 115°-120° direction of bedding and thrust faults, and a northerly-trending lineation expressed by drainage patterns as established by the White and Donjek Rivers. In the vicinity of the White River there is a flexure in the stratigraphic trend from the through-going to 135° to about 120°. This may reflect drag along the White River fault zone and indicate right-hand displacement. It is also possible that the flexure is a pre-fault feature subsequently cut and displaced by the break.

The stratigraphy is comprised of greenstones and sediments generally Lower Mesozoic in age which have been intruded during the Permian and Triassic by alpine ultramafic complexes of peridotite, gabbro, and dunite. In GSC Memoir 340 Dr. Muller groups the sedimentary and volcanic rock types, and distinguishes three main volcanic packages: the Dezadeash being the oldest, the Cache Creek, and the Mush Lake as the youngest.

On a regional scale the peridotites and associated ultramafic rocks appear to be sill-like in character, generally parallelling

the stratigraphy. The bodies range in thickness to 1500 feet and have a considerable strike-length exposure relative to their width. In the White River area the peridotite cross-cuts the general strike of the hosting sediments and volcanics.

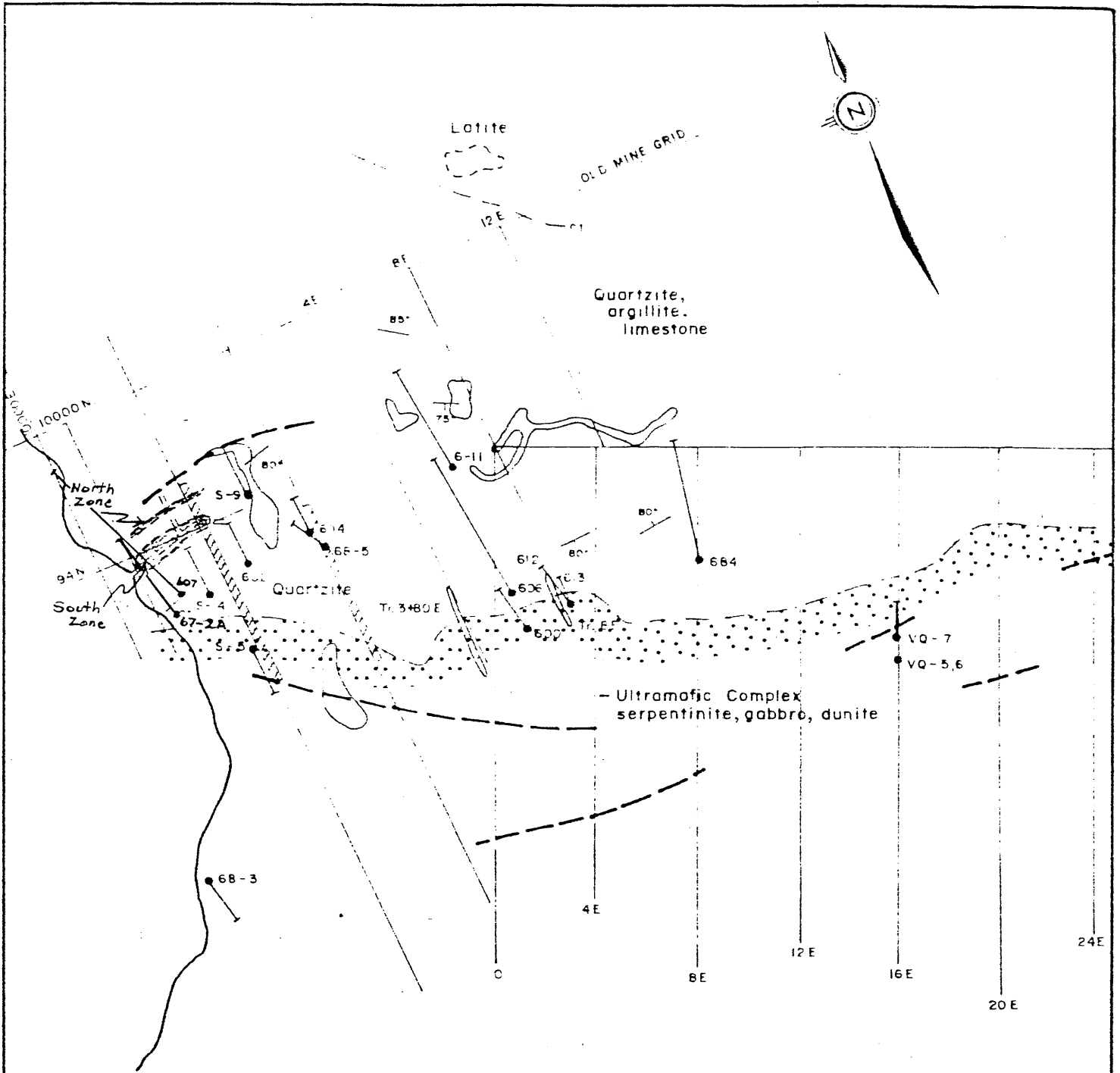
Nickel-copper occurrences are spread along a strike length of 100 miles through the Kluane District south of the Shakwak Trench. The Dickson Creek prospect in the southeast, the Wellgreen mine in the center, and the Canalask Property in the northwest of the Kluane map sheet are the discoveries of economic interest found to date. These deposits are found in a similar geologic setting in association with the ultramafics and strongly fractured quartzites or cherts. The nickeliferous sulphides occur in close association with the serpentinitized peridotites and gabbros as massive accumulations, interstitial segregations and fracture fillings, and finely disseminated material.

Canalask Property:

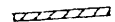

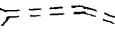




The ultramafic body is the dominant rock unit on the property. Previous workers accepted the conclusions in F.A. Campbell's 1956 thesis study that the body was a sill injected parallel to initially flat-lying volcanics. Work carried out by the Nickel Syndicate had the benefit of further work after that time, and these results led to the interpretation that the mass is a steeply-dipping dike, probably formed as a result of multiple intrusions which post-date the sulphide-bearing structural features in the sedimentary-volcanic sequence adjacent to the north. The ultramafic mass is complex in structure and composition, and consists of phases of aphanitic serpentinite, dunite, and gabbro. Field evidence indicates that the gabbroic phase intruded the peridotite, but probably after the main period of folding. It does not appear that the gabbro

was comagmatic with the main phase of the larger ultramafic. Exposure in trenches and the attitudes as indicated by the magnetics indicate that the mass dips south at steep to moderate angles and crosscuts structural features adjacent to the north at  $30^{\circ}$ - $40^{\circ}$ .

The footwall of the intrusion is in contact to the north with a sequence of very fine grained rocks which appear to be mainly sedimentary in origin. Quartzite and chert with occasional bands of limestone and argillite predominate, although it is suspected that fine-grained tuffaceous material may be interbedded on occasion but difficult to recognize. These rocks are very fine grained to aphanitic, light greenish grey, and thinly bedded where banding is visible. North of the mineralized zones andesite and andesite agglomerate outcrop along the east bank of the river. Although the regional strike is to the northwest, a local open flexure immediately east of the river has impressed an easterly strike on the rocks for a distance of approximately 2500 feet. The dip is steep at  $80^{\circ}$ - $85^{\circ}$  to the south. This flexure has created a zone of fracturing 400 feet north of the peridotite contact which hosts nickel and copper sulphides which contain appreciable PGE in two parallel zones. The North and South zones appear to plunge approximately  $70^{\circ}$  to the west. It seems apparent that the ultramafic dike post-dates and crosscuts the fold at  $30^{\circ}$ - $40^{\circ}$ , and it is suggested that the nickeliferous sulphide mineralization has been emplaced in conjunction with a later intrusive phase represented by the gabbroic suite of rocks. Iron sulphides in blebs and fine disseminations are a common constituent of the sediments and volcanics, and occur in laminated bands not unlike some varieties of Precambrian sulphide iron formations. Nickel is absent and this fact seems to have confused previous workers in their effort to outline the



NOTE:


-  I.P. chargeability > 25 ms.
-  E.M. conductors.
-  Trace of 2700 Level.
-  Cat trenches
-  Footwall ultramafic contact.
-  Diamond drill hole  
604, 68-5 - Canalask & Discovery  
VQ-5 - Nickel Syndicate
-  Bedding attitude.

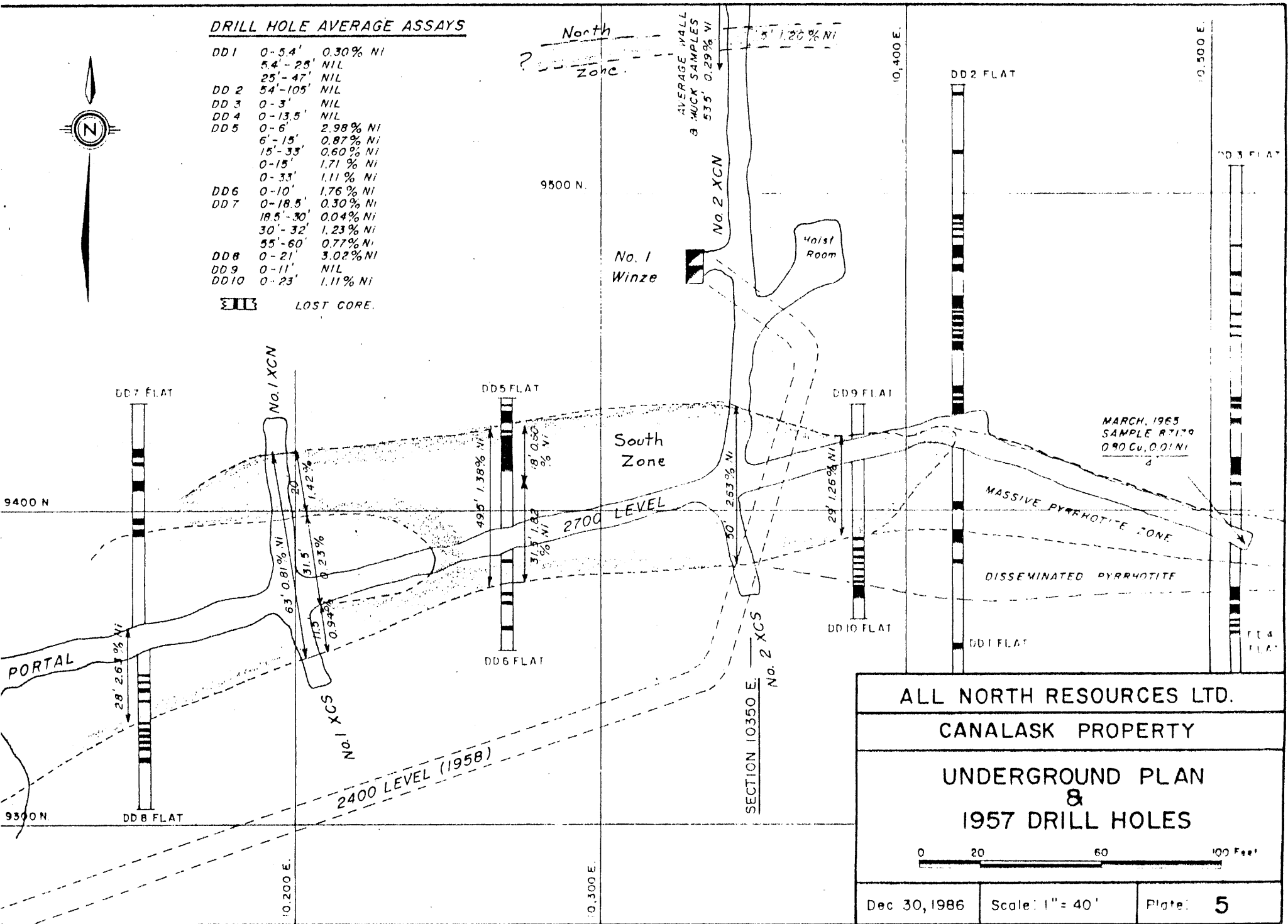
ALL NORTH RESOURCES LTD.  
CANALASK PROPERTY  
COMPILATION SKETCH

0      300      600      1200 Feet

**DRILL HOLE AVERAGE ASSAYS**

DD1	0-5.4'	0.30% Ni
	5.4'-23'	NIL
	25'-47'	NIL
DD2	54'-105'	NIL
DD3	0-3'	NIL
DD4	0-13.5'	NIL
DD5	0-6'	2.98% Ni
	6'-15'	0.87% Ni
	15'-33'	0.60% Ni
	0-15'	1.71% Ni
	0-33'	1.11% Ni
DD6	0-10'	1.76% Ni
DD7	0-18.5'	0.30% Ni
	18.5'-30'	0.04% Ni
	30'-32'	1.23% Ni
	55'-60'	0.77% Ni
DD8	0-21'	3.02% Ni
DD9	0-11'	NIL
DD10	0-23'	1.11% Ni

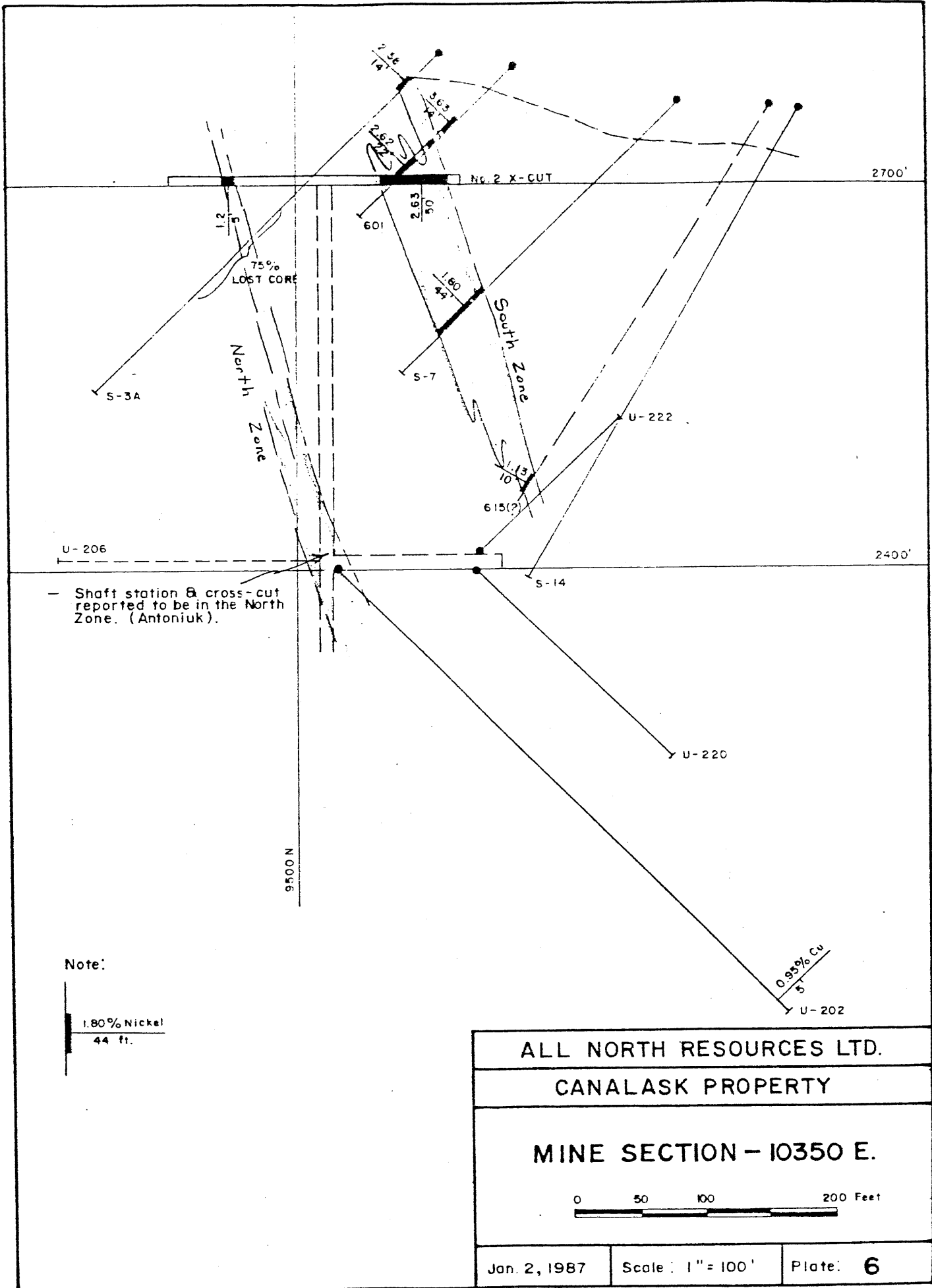
 LOST CORE.



**ALL NORTH RESOURCES LTD.**  
**CANALASK PROPERTY**  
**UNDERGROUND PLAN**  
**&**  
**1957 DRILL HOLES**

0      20      60      100 Feet

Dec 30, 1986	Scale: 1" = 40'	Plate: 5
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nickeliferous zones. Diamond drill logs and maps do not distinguish the various types of sulphide, and the numerous occurrences of barren material has no doubt influenced previous workers in their decision to terminate exploration efforts.

Mineralization consists of pyrrhotite, chalcopyrite, and pentlandite in varying proportions. The zones outlined in Figure 5 lie 400 feet north of the peridotite body within the sediments. The best evaluation of this mineralization was found on the 2700 level when the workings were accessible. Four types of sulphide mineralization are apparent:

1. Massive pyrrhotite.
2. Finely disseminated pyrrhotite, chalcopyrite, and pyrite.
3. Fine fracture fillings of pyrrhotite, chalcopyrite and pyrite.
4. Sulphides in an interstitial or network texture in a gabbroic host.

The occurrence and significance of these various types is summarized in order of apparent importance.

1. Network Texture:

The presence of this type of material is extremely significant because it demonstrates the occurrence of nickeliferous sulphides within the mafic and ultramafic rocks. Trenching in 1972 exposed this type of material along the contact zone in trench 3+80 E, Figure 4, and drill hole 67-2A drilled by Discovery Mines on mine section 10080 E returned an intersection of similar material in the lower North Zone about the 2300 elevation. A polished section of a core specimen at a footage of 538 in this hole showed a mineral composition of:

Pyrrhotite	50%	)	
Pentlandite	25%	)	of sulphides present
Pyrite	25%	)	

The hand specimen is described as "heavily disseminated ultra-basic rock". Logs for the adjacent underground holes 24-2 and 3 drilled from the 2400 level on section 10145 E are not available. It seems reasonable to suggest that a "tongue" of the mineralized peridotite, or a related phase, as seen in trench 3+80 E 400 feet to the south may be present at depth in the North Zone area. This type of mineralization was encountered 1600 feet to the east of trench 3+80 E in drill hole VQ-7. There is geological room here to define a sizeable tonnage of material with an estimated grade of 0.75%-0.80% nickel, which could contain appreciable amounts of copper, cobalt, platinum, and palladium. Further drilling is justified to evaluate this potential.

#### 2. Fracture Fillings:

Based on previous examination of sulphide intersections in the old drill core, it is apparent that fracture filling material constitutes the dominant source of nickel in the mineralized zones of initial interest north of the contact. T. Antoniuk (Discovery Mines) was essentially correct in his conclusion that: "Ore is localized in a shatter zone within the east-west striking segment of a major flexure."

The fractures are commonly very fine and some of the better nickel values, 3%-4%, are contained in 12-15% sulphide mineralization.

#### 3. Disseminated:

The truly disseminated sulphides found in a re-examination of the old core in 1973 occur in finely laminated bands in tuffaceous and cherty rocks, and this material is regarded as sulphide iron formation. The volume density varies from finely disseminated through larger blebs to massive pods and stringers. The predominant sulphide is pyrrhotite, minor amounts of chalcopyrite are noted, and pentlandite is absent. This material is widespread and intimately mixed with the fine networks of

nickeliferous sulphides in the fracture zones. It appears that earlier workers did not distinguish between the two types, and as a result did not fully appreciate why significant intersections of sulphide are barren.

On surface these sulphide zones produce lively gossans, and it appears that several of these were trenched and correlated with the main nickeliferous zone.

#### 4. Massive Pyrrhotite:

The massive pyrrhotite in the North and South Zones is generally low in nickel values, although there are exceptions. Bore hole 607 has an intersection of massive sulphide grading almost 5% nickel, while sampling on the 2700 level returned only traces. It is conceivable that pyrrhotite may be represented by more than one age of which only the later is nickeliferous. The larger pod-like zones may be concentrations within the volcanic sequence similar in origin to the sulphide iron formations in the Precambrian Shield of Ontario. In the Thompson Nickel Belt of Manitoba the writer has mapped similar associations in quartzite and amphibole gneisses adjacent to the ore zones. The significance of these zones may be in the indication of volcanic centres of activity, and the fact that the associated volcanic and sedimentary rocks have a readily available sulphur budget which would be most hospitable to the intrusion of nickel-bearing ultramafic rocks.

The copper content of nickeliferous intersections is generally low; i.e. < 0.5%. Several higher and significant intersections were encountered in the footwall side of the North Zone which suggest the possibility of a copper zone. This mineralization is described as finely disseminated chalcopyrite in the "albitized tuff".

Earlier reports by Antoniuk and Sevensma focused on the strong albitization of the host rocks in the mine area and concluded that it is associated with hydrothermal activity concurrent with the mineralization. Further work is required to demonstrate this association.

Two types of sulphide mineralization were encountered by the Nickel Syndicate along the footwall contact interval of the ultramafic complex 400 feet south of the South Zone: one nickeliferous and the other containing only trace amounts of nickel. The latter occurs as coatings on fracture and shear surfaces within a shear zone adjacent to the contact, and appears to account for the EM anomalies tested. The nickel-bearing sulphide occurs as disseminated and interstitial material in a gabbroic footwall phase in the interval 0+00 to 16+00 E. On line 3+80 E, Figure 4, a trench exposed a 10 foot section of gabbroic rock containing the previously described network texture sulphide phase which assayed 0.3% nickel. Analyses of a 127 foot section of adjacent peridotite returned up to 260 ppb platinum and 435 ppb palladium. *Note HQ-7 intersected weakly mineralized gabbro with encouraging platinum and palladium values on line 16+00 E, which are described in detail later in this report.* This lies within the general area of structural significance and adjacent to zones of known mineralization to the north. The material does not give rise to a typical EM response and it must be concluded that this exploration method has not been effective in evaluating the potential of this area.

#### MINERAL INVENTORY

##### Ore Reserve:

The reserve calculations carried out in the past focused on the nickeliferous sulphides delineated in the Main and North Zones 400 feet north of the footwall ultramafic contact. The drilling

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and underground work supported a calculation of 550,000 tons with a grade of 1.68% nickel and 0.04% copper. No determinations for the PGE were carried out.

Concurrent with the work done by Canalask Nickel Mines on the North and South Zones, preliminary metallurgical studies were carried out by Quebec Metallurgical Industries on 2 bulk sample lots taken from underground drift intersections. The size of the samples is not known.

The analysis of the samples is reported as follows:

	<u>Lot No. 1</u>	<u>Lot No. 2</u>
Nickel	2.30%	1.20%
Copper	.03	.03
Cobalt	ND	ND
Arsenic	ND	ND
Sulphur	3.60	3.30
Iron	7.60	9.60

Simple flotation tests after grinding to -100 mesh produced a recovery of approximately 90% of the nickel with a concentrate grade of 18 to 20%. The small amount of copper is almost completely recovered. The concentrate had the following analysis:

Nickel	19.7%
Cobalt	.28
Copper	.34
Platinum	.030 oz per ton
Palladium	.019
Gold	.020
Silver	.496

The composition of these sulphides shows the combination of nickel-copper and the PGE in the mineralizing system. However, the gabbroic-hosted material was not encountered underground and has not been tested.

The sulphides which occur along the contact zone 400 feet south of the underground workings may well have a significantly

enhanced PGE content, as is the case in the Wellgreen deposit. Values are typically very erratic in distribution both within a deposit and at the scale of a sample. Thus, sampling requires a well designed program with particular attention directed to sample size and technique of collection.

#### GEOPHYSICS

Geophysical work has consisted of limited induced polarization surveys over the Main and North Zones by Discovery Mines in 1967, and magnetometer and electromagnetic surveying over the entire property held by the Nickel Syndicate. The two IP profiles and the EM conductors are located on Figure 4. The northern footwall contact of the ultramafic complex as traced by its magnetic signature was also located, Figure 4. The IP profiles correlate the signature with the known mineralization as delineated by the drilling and underground work. Chargeabilities to 50 ms were recorded against a background of 10 ms. In particular this may be an effective way to explore for the discontinuous disseminated and network types of mineralization.

The electromagnetic and magnetic surveys were carried out over lines spaced at 400 foot intervals layed out transverse to the strike of the ultramafic contact. The program was designed to explore for massive sulphide bodies with a geological model in mind similar to that used by the writer in the Manitoba Nickel Belt where the systematic diamond drill evaluation of magnetic conductors was rewarded with discovery.

The EM work was carried out by a geophysical contractor using horizontal loop EM 17 instrumentation. A frequency of 1600 Mz and a coil spacing of 300 feet was used which allowed effective evaluation to a depth of approximately 150 feet.

The magnetometer work effectively mapped the ultramafic body along a strike length of 2 1/2 miles and widths up to 1500 feet. Thus, the body extends well southeast of the present claim boundary. The magnetics infer that the mass dips steeply south, thus defining the north contact as the footwall. An important feature which emerged from the study was that the variety of pyrrhotite in the sulphide mix is weakly magnetic to non-magnetic in places. As a result the targeted sulphide mineralization was determined to have a minimal magnetic signature, - if any. An orientation survey over the 'mine area' did not define the anticipated response.

The compositional variation within the ultramafic may be evident from magnetic studies, and further work should be done with more sensitive instrumentation than the Fluxgate mag used in 1972.

The EM work defined the conductors located on Fig. 4, and several holes were spotted to evaluate them. Massive sulphides were not found, and it was concluded at the time that the potential for this type of mineralization was limited. However, it was also apparent that the less than massive types would not provide magnetic conductive targets. The disseminated and network-type sulphides encountered in the trench at 3+80 did not respond to either method. However, the IP signature to the west records chargeabilities in the order of 25 to 30 ms which could well reflect this type of material.

#### DRILLING

As mentioned, the earlier drilling was focused on the known mineralization 400 feet to the north of the contact. The most recent drilling by the Nickel Syndicate was located to evaluate EM conductors coincident with magnetic anomalies in the expectation that massive sulphides would be discovered. The

VQ-7 analask  
Nickel Syndicate

-60° N, T13 GRID, 16E section, 7+535  
EQWL

Footage	Description	Sample	Length	Ni	Cu
0.0	Collar				
26.0	NW casing boulders, gravel, sand				
1 98.0	Start of core, boulders				
105.0	(RW casing) 7' below ledge				
106.0	Peridotite, massive, mg, med gy blk, weathered and sly rusty, occ slip fracture surface coated with sulphide, clc-med brn po, minor dissem po, 5-10%, LC 102-104	9989	7.4	0.34	0.07
121.0	Perid, sly serpd, gen massive, num chunks with prom heavy coat of sf sulp, and prom dissem sulp, mainly po, poss some py in fine frags, 25-30% sulp LC 109.0-110.0, 118.8 - 119.6	9990	15.0	0.35	0.09
131.0	Perid, as @ 121.0, sly more serpd & less sulp, occ sf asb occ H gy alt frags to 0.2' 20% sulp	9991	10.0	0.25	0.02
141.0	Perid, med gy - dkgy blk, f-mg, mainly massive to 138 Some dissem po & num sulp coated frags with prom siltsides, 20%-25% sulp	9992	10.0	0.25	0.02
151.0	Perid, dkgy-blk, f-mg, sly more shrd appearance prom sf sulp, siltsides, occ sf asb, LC 144-147, 25%	9993	10.0	0.27	0.04
162.0	Perid, med gy, gen more shrd & foliated 30° along core than above, prom sf sulp, almost massive in hly shrd areas over 5', occ asb rare 0.1'-0.2' peggy stringers	9994	11.0	0.34	0.06
171.0	Perid, med-dk gy blk, hly serpd, num sml strcs asb, prom sf and dissem sulp, 40% sulp	9995	9.0	0.34	0.06
175.0	LC				
178.6	Perid, dkgy-blk, f-mg, chunky, lighter weight sulphide coatings & more prom dissem sulps, 25%-30%	9996	3.6	0.54	0.12
183.0	Perid, change of type, blotchy grey on dry surface. streaky blotchy granular wide network of serpd zones on wet surf, some sf and minor dissem & sml patches suld, contact is vague, foln 30°-45°, 5-10% meta-peridotite-gabbro, soft, yet harder than perid to this depth, mg-med qgrn, fine dissem sulp, 5%	9997	4.4	0.28	0.02
198.0		9998	15.0	0.22	0.01

VQ-7 Canastak  
Nickle Syndicate

Footage	Description	Sample	Length	Ni	Cu
198.0					
211.0	Metapend-gabbro, med q, ma, fol @ 45°, occ widely spaced serpd strks, lightly dissem po, occ sf astabes, blacky but massive, 5%	9999	13.0	0.22	0.01
221.0	Gabbro, med q, num widely spaced blk serpd strks @ random angles, occ fract fillings sulp as @ 2120, 45° randomly scattered sulp, 5-10%	1000	10.0	0.24	0.03
234.0	Metaperid-gabbro, sly denser than above, med q with 0.01' dk serpd strks, occ fine dissem sulp, 5%	1001	13.0	0.22	0.06
249.0	Gabbro, as @ 234, 2 0.01' lt fels veins @ 242, 243, 45° thin dk serpd strks, occ more hly serpd bnd @ 244-246 with more prom fine dissem sulp, 10%	1002	5.0	0.25	0.05
262.0	Gabbro, med q, ma, blk serpd strks are narrower area at random angles, occ light coating sf sulp med-lt yell brn around. 261, fine dissem sulp (po) pres related to dk serpd zones in this section, 5-10%	1003	13.0	0.24	0.03
272.0	Perid, poss a more serpd var of 262.0 dk qy blk fq, gen more foliated, occ fracts along core with brassy yellow coating, some fracts along core	1004	10.0	0.85	0.09
280.0	Perid, as above, sly less serpd, chunky, fewer sulp 10-15%	1005	8.0	0.23	0.05
290.0	Gabbro, massive, num strcs serpd, spts fine po, 8%	1006	10.0	0.24	0.04
306.0	Gabbro, massive, prom fields, occ serpd strcs, 5%	1007	15.0	0.18	0.02
318.6	Gabbro, med q, ma, occ, smt spk dissem sulp LT 5% occ brn mica, Chlor str's to 0.01' LC 314 315 317.6-318.6	1008	13.6	0.17	0.02
323.0	Str zone, gouge, mainly chlorite, minor serpd	1009	4.4	0.14	0.02
330.0	Gabbro, ma, med q, occ serpd strcs, occ prom chlor str's, 30°-50°, occ smt spk & patch (0.01') lt brn po, 5%-10% Sulp	1010	7.0	0.26	0.13
334.6	Gabbro, ma-fq, med q, occ chlor str to 0.01' @ random angles & prom dissem po in smt patches and strcs randomly scattered throughout core, 25-30%	1011	4.6	0.66	0.28

}  
0.013 opt Fe  
0.040 opt Pd

VQ-5, Canclask  
NICKEL SYNDICATE

Page 2 of 2

Range	Description	Sample	Length	Ni	Ni	Cu
334.6	Gabbro, mainly a 6" band of lt brn heavily disseminated					
335.0	Cumulate Sulphide, 75%, Po, Py?, minor CP					
340.0	Gabbro, med gy mg, generally disseminated o. of patches med brn po, occ fract, 30% & random, gen massive, prom CP in last 0.2', 30%	1012	0.4	1.32	0.32	}
342.8	Gabbro, m-fa, blacky & brassy, contact zone	1013	5.0	0.80	0.20	
361.0	Tuffite - quartzite, fine grained, aphanitic, pinkish gray unit with occ prom fragmented bands, broken & blocky, LC 343.6-346.6, 347.0-348.0, 351.5-354 355-358.	1014	2.8	0.15	0.00	
361.0	Foot of hole					

Date started July 11 1973

Date completed July 21 1973

Drilled by E CARON Diamond Drilling Ltd

Logged by K.A. MACLEAN, JOHN S VINCENT Ltd

results led to the conclusion that the responses were due to sulphides smeared out along slip planes and fractures.

Drill hole VQ-7, Fig. 4, tested the #2 conductive zone and encountered mineralized gabbro from <sup>vri</sup> ~~250~~-340 feet. <sup>The best mineralization</sup> ~~with the 10~~  
~~foot interval 330 to 340 averaging 1.0% nickel. The sulphide was~~  
described as disseminated and network-type material. Above this intersection the rock is a lightly mineralized serpentinite which carries 0.15-0.35% nickel and trace amounts of copper. <sup>The remainder of the drill core was</sup> Holes 4 and 5 shown on Fig 4 were lost in heavy overburden. <sup>not covered for 166</sup> These results are encouraging in that the presence of the sulphide-bearing gabbroic phase has been identified 1600 feet east of the trench exposure of similar material. Further drilling through this section and along strike to the west is required <sup>and all of the red core that can be located should be re-assayed for PGE.</sup>

#### GEOCHEMISTRY

Limited soil sampling was carried out by the Nickel Syndicate over the known areas of mineralization to determine its effectiveness. An analysis of 63 samples established a mean of 43 ppm nickel and 51 ppm copper with anomalous levels set at 59 and 98 respectively. However, overburden cover is highly variable, and the surprising depths and clay/boulder compositions encountered in trying to set drill casing precluded further soil surveys. Further orientation soil sampling and analyses for platinum and palladium should be carried out.

#### RECOMMENDATIONS

It is recommended that exploration be continued to evaluate the potential for continuity of the sulphide mineralization within the mine area, and to delineate the gabbroic-hosted disseminated and network texture material encountered in the 1973 drilling

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occurred within the <sup>10 foot</sup> interval <sup>from</sup> 330 to 340 feet, which  
~~analyzed~~ analyzed 0.76% Ni, 0.24% Cu, 0.013 oz/ton Pt and 0.04  
oz/ton Pd. It was



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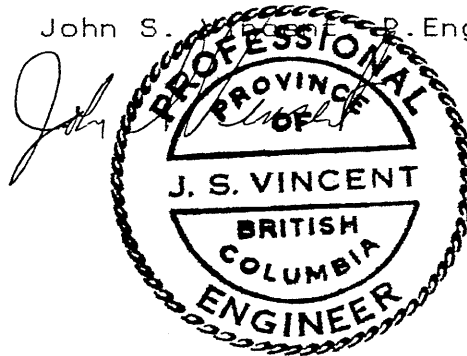
CERTIFICATE

I, John S. Vincent, P. Eng., of Vancouver, British Columbia, do hereby certify that:

1. I am a Consulting Geologist with offices located at 530-800 West Pender St., Vancouver, B.C.
2. I am a graduate of Queen's University, Kingston, Ont., B.Sc. 1959, and a graduate of McGill Univ. in Montreal, M.Sc. 1962. Both degrees being in Mining Geology.
3. I have practiced my profession continuously for 27 years. I am a member in good standing of the Professional Engineers of British Columbia, and a Fellow of the Geological Association of Canada.
4. The data upon which this report has been prepared is based on the writer's direct field experience in the area over the period 1970-1973.
5. I have no interest direct or indirect in the securities or properties of All-North Resources Ltd.

Vancouver, B.C.,  
January 10, 1987.

John S. Vincent, P. Eng.



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