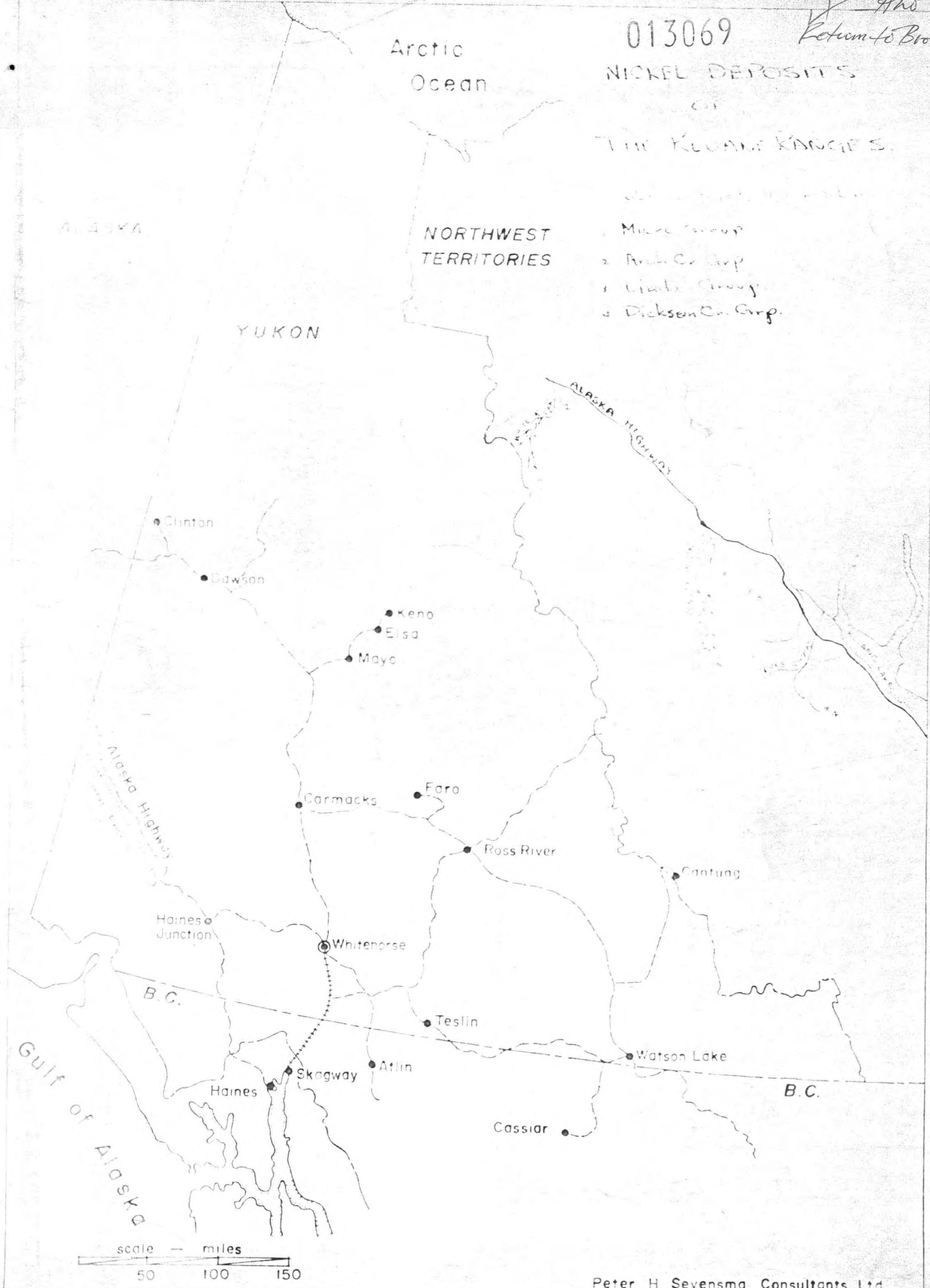


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NICKEL DEPOSITS OF THE KLUANE KINGDOM

- 1. Minto Group
- 2. Ashcroft Group
- 3. Liard Group
- 4. Dickson Co. Group



INTRODUCTION

The Kluane Ranges, extending from the south end of Kluane Lake to the Alaska border, front on the Shakwak Trench. This Trench has served as a travel route between centers of interest in the Yukon and Alaska from the time of the early gold rushes to the present. Construction of the Alaska highway stimulated exploration activities following World War Two.

The presence of placer gold in many of the transverse valleys which dissect the Kluane Ranges attracted early attention. Following the War production has been recorded from Burwash, Bullion, Arch, Sheep and Wade Creeks.

Native copper was in use by Indians in the area prior to 1900. A source was located on the White River in 1905, and other copper occurrences were located and staked on Tatamagouche and Quill Creeks about 1914.

During the period 1952 - 1958 a number of copper - nickel deposits were located and explored by various exploration companies.

Renewed activity during the period 1967 to date, primarily by Newmont Mining Co. Ltd., Discovery Mines Ltd. and Hudson Bay Mining and Smelting Co. has resulted in an announcement that the Wellgreen property on Quill Creek will be placed in production at a rate of 600 tons per day. Other prospects in this area may now be expected to receive careful investigation.

PROPERTY & OWNERSHIP

This evaluation was prepared at the request of a group of Whitehorse, Yukon businessmen, and prospectors with a wide background of mine exploration and development experience.

Specific attention is directed to properties held by this group based on the writer's personal knowledge of the area and a study of all available reports.

The properties held by members of this group may be summarized as follows:-

1. Micro Group, White River Area.
2. Tippy - Jiffy - Legacy - Sue Claims, Arch Creek Area.
3. Linda Group - Quill Creek Area.
4. D.C. Group - Dickson Creek Area.

D.C. Group, Dickson Creek Area.

The D.C. group comprises 22 claims located above timberline on Dickson Creek, a tributary of the Duke River. A tractor road originates at the Alaska Highway and passes within six miles of the property. Access by tracked equipment poses no problem.

The claims cover a NW trending peridotite body of up to 200 ft. width which intrudes a sequence of sedimentary and volcanic rocks. The geologic setting sequence bears a close similarity to the better known nickel - copper occurrences on the White River and on Quill Creek.

Geophysical work carried out in 1968 has traced the geologically favourable structure for an additional 4,000 ft.

No major trenching or diamond drilling has been carried out on the property and all samples have of necessity been taken from surface exposures. Six such mineralized outcrops have shown encouraging values with copper and nickel reporting to 0.38% and 0.39% respectively. Sulphides carrying up to 5% Ni are reported by the Geological Survey as having been found near the mouth of Dickson Creek.

It is recommended that additional exploration work be done on the known showings and on the several concealed magnetic anomalies delineated by the 1968 survey.

Arch Creek Area

The Arch Creek claim group is the collective title assigned to 72 contiguous claims known individually as the Tippy - Jiffy - Legacy and Sue groups.

The group is located twelve miles from the Alaska Highway (Mile 1111) in the Kluane Range.

A twelve mile truck road gives access to the property and at the present time 10 miles is being upgraded for heavy duty servicing of the mine and townsite of the Hudson-Yukon Mining Co.

The claims cover a folded sedimentary-volcanic complex intruded by peridotite and later porphyry dykes. The whole is comparable to that of Hudson-Yukon property located $2\frac{1}{2}$ miles to the southeast and in fact represents a continuation of that company's structure and lithology.

Work carried out in 1967 consisted of geological mapping, ground magnetometer and E.M. surveys over a 11,000 ft. strike length.

Two major magnetic anomalies were defined. One 800 ft. in length

and open to the northwest is covered by overburden but a second anomaly of 2,600 ft. length is clearly related to a peridotite intrusive which outcrops in the surveyed area.

Numerous copper - nickel occurrences are known and all are closely related to the above peridotite intrusive. Large blocks of massive sulphide float have also been reported. Assays to 3.8% nickel and 2.5% copper have been returned from in-place mineralization and one of the larger pieces of float assays 6.4% combined nickel - copper. In view of the high grade mineralization uncovered to date, the known presence of ultra basic intrusives with which sulphide nickel mineralization is invariably associated and the clear similarity of lithology and structure with that of the Hudson-Yukon property a substantial programme of exploration is clearly warranted.

Micro Group

In excess of 60 contiguous claims are held to cover mine workings, mineral showings, and geologically favourable areas on and adjacent to the former Canalask Nickel Property. The main showing on this group is located on the east bank of the White River some $2\frac{1}{2}$ miles south of the Alaska Highway at mile 1169.

The original showing was staked by Prospectors Airways in 1952 and subsequently optioned to Canalask Nickel Mines Ltd. who carried out an extensive program of surface drilling, underground development and underground drilling. By 1958 an orebody estimated to contain 550,000 tons with an average grade of 1.68% Ni had been delineated. An advantageous smelter contract could not be obtained and work was terminated.

In March of 1964 the property was acquired by Mr. P. Versluce of Whitehorse who conducted a program of prospecting and bulldozer trenching and succeeded in locating a number of additional sulphide outcrops and in tracing a zone of copper mineralization on the west side of the river.

The property was optioned to Discovery Mines Ltd. who carried out a further program of surface and underground drilling. This work resulted in a revision of the Ore Reserve tonnage as follows:-

Total Probable and Possible Ore: 430,153 tons @ 1.35% Ni.

It was noted however that several erratic mineral intersections were encountered. The ore zone would appear to terminate against a fault which was not crossed. No work was done on the west bank of the river.

A substantial potential for the discovery of additional ore shoots is believed to exist and this potential should be tested by a wider search than that conducted to date.

Linda Group

This group is located southeast of the Wellgreen property and comprises a total of 29 mineral claims. The geological setting is similar to that found on the Wellgreen property.

Geochemical surveys carried out by Newmont Mining Company in 1967 reveal a pattern of anomalous nickel values on Linda Creek and some of the south flowing tributaries.

Prospecting by the owners has succeeded in locating a number of copper - nickel occurrences. Selected samples from the trenches

have returned values to 3.45% Ni and, in a nearby location, 4.3% Cu. In another area where massive sulphides were located in place a selected sample returned a value of .43% Cu and 4.65% Ni.

This property was examined by the writer and an assistant in September of 1966 at which time further prospecting was recommended. Results of the later work will require evaluation but would appear to indicate a strong possibility that one or more small to moderate sized nickel - copper ore shoots could be present.

LINDA GROUP.

January 16th, 1970

NI - CU

Notes on Quill Creek Copper Mines Ltd. Property - P. Versluce

Property - the property consists of the following claims:

Linda 1 - 8

Jay 1, 3, 5, 7, 9, 11 & 24

Go 31, 33 35, 37, 39 - 46 inclusive

Total of 27 claims

See Claim Sheet 115-G-6 and accompanying sketch.

1. Geochemical Survey carried out on claims in 1967 by Newmont Mining Corporation. (Stream Sediment Survey) map available.
2. Airborne magnetic survey done by Newmont. Distinct anomalies are present in areas of known Cu-Ni mineralization and a number of possible deeply buried intrusives are indicated.
3. Location and Access:
The property is readily accessible by an all weather road, connecting with the Alaska Highway at Mile 1111, thence, 9 miles following Quill Creek to the Wellgren Ni property of Hudsons Bay Mining and Smelting Co.
4. The ultra basic rocks, associated with the Wellgren Ni deposit can be traced southeasterly into the Linda and Go claim groups.

Prospecting and Bulldozer Trenching in the fall of 1969 by the owners revealed several mineral outcrops that warrant serious investigation.

Description of Linda Claims:

- Showing #1. Located approximately 150' upstream where Linda Location Line crosses Linda Creek, on Linda #8. This is a shear zone in contact with peridotite. Approximately 20' wide, 8' well mineralized Grab Sample No. 2710 Cu. 42, Ni. 3.45. Grab Sample No. 2717 Cu. 4.3, Ni. 1.35. Since taking these samples, I obtained new samples after drilling and blasting, followed by Bulldozer excavator. These have not been assayed yet, but they show very good zinc mineralization on hanging wall and massive Ni sulfides on foot-wall. Estimated to run 5% Ni.
- Showing #2. This is an old Hudsons Bay #3 showing located approximately 1200' upstream from No. 1 showing. Massive sulphides are exposed on S W side of Linda Creek for a length of -

approximately 60' by 4' wide at bottom of Creek.
Across Creek outcrop observed by overburden. A large
limestone mass occurs further up hill (approximately
400' higher elevation than Creek). Grab sample #2709,-
Cu .43, Ni 4.65.

Showing #3. Peridotite exposed approximately 1000' upstream from
No. 1 showing. Disseminated mineralization over 60'
wide. Grab samples from hand trenching in August 1969,
#2707 - 24" wide, Ni. .27, Cu. .24, #2708 - 60" wide,
Ni. .42, Cu. .26. Cu and Ni mineralization found in
place across Creek in October 1969. Owners put in
large open cut to obtain better sampling conditions.
New samples not arrived as yet. (January 1970).

Float found in #4 at head of small willow draw above
tent camp. Sample # 2712 - Ni. .41, Cu. .14. (This
locality is completely mass covered.)

Well mineralized float found on skyline Linda 7 or 8
(South Boundary). Not assayed yet.

On Go # 33 & 35 a high elevation mineralized peridotite
Cu and Ni in place. Early snow prevented a proper
sampling job.

January 16th, 1970

P. Verslucce
P.O. Box 164
WHITEHORSE, Y.T.

DATE September 19, 1969

ASSAY CERTIFICATE

FILE NO 5725-13

WHITEHORSE ASSAY OFFICE

P.O. BOX 348, WHITEHORSE, YUKON

RECEIVED FROM _____

P. Versluis

SAMPLE NO.	PLATINUM SILVER		Copper	Nickel				
	oz PER TON	oz PER TON						
2707 <i>Linda mc</i>			.24	.27				
2708 <i>"</i>			.23	.42				
2709 <i>"</i>			.43	4.65				
2710			.42	5.45				
2711			-	.23				
2712 <i>Linda</i>			.14	.41				
2714			.14	.03				
2715 <i>Arch G</i>			.63	.27				
2716 <i>" " " float</i>			2.5	3.90				
2717 <i>Linda</i>			4.3	1.55				
No Mark			.35	.23				
Mark 09			.09	.03				
Mark 111			.08	.10				

ASSAYER *Geo. Spaiden*