

R. G. HILKER
LIMITED
CONSULTING GEOLOGIST . . . PROFESSIONAL ENGINEER

P.O. Box 566
WHITEHORSE, YUKON TERRITORY
"LAND OF THE MIDNIGHT SUN"



Wind 1 - 6 Claims
Mitchie Lake
Yukon Territory
Chromite Prospect
Sheet 105-D-9

For
Assessment Work
Dept. of Indian Affairs & Northern
Development
Whitehorse, Y.T. - Mining Recorder

This report has been examined by
the Geological Evaluation Unit.
Approved as to technical worth by:

D. B. Cray
RESIDENT GEOLOGIST

Approved as to cost in the a. mou. l.
of: \$ 600⁰⁰

D. F. Redman
RESIDENT MINING ENGINEER

Accepted as representation work
under Section 53(4) Yukon Quartz
Mining Act.

[Signature]
COMMISSIONER OF YUKON

By
R. G. Hilker, P. Eng.
Consulting Geologist
Whitehorse, Y.T.
October 6, 1969

TABLE OF CONTENTS

	Page
Introduction	1
Location & Access	1
Claims	2
Claim Sheet Sketch	
Regional Geology	3
Economic Geology	4
Conclusions	7
Recommendations	8
Expenditures	9

APPENDIX

Assay Certificates

INTRODUCTION

A property examination and evaluation was conducted on the Wind 1 - 6 Claims on August 18th, 1969. Access to the property was by Trans North helicopter on the 5,000 foot level of the claim group. The author was accompanied by Mr. John Wilkes during the property examination. The Wind Claims contain showings of chromite that are enclosed in an ultramafic intrusive host rock. The claim group is located on the top of a rounded mountain in Michie Lake area.

LOCATION AND ACCESS

The Wind 1 - 6 Claims are located approximately 12 miles northeast of the north end of Marsh Lake. The claim group is located at latitude $60^{\circ} 37'$ and longitude $134^{\circ} 9'$. The claims are located to the east of M'Clintock Creek and south of Michie Creek. A winter cat road leads from the Alaska Highway in the vicinity of M'Clintock Creek to the base of the mountain where the claims are located. The Wind 1 - 6 claims are located on Sheet 105D-9, Michie Creek and are in the Whitehorse Mining District of the Yukon Territory.

Presently, access to the claims is by helicopter from Whitehorse or by winter cat road from the north end of Marsh Lake. The tractor road appears to be in reasonable shape and very little repair work would be required to make this an usable access route.

CLAIMS

The following claim dates was searched at the Whitehorse Mining Recorders Office on October 1, 1969. The Whitehorse Mining Records indicated the following information:

<u>Claim</u>	<u>Grant Number</u>	<u>Located By</u>	<u>Anniversary Date</u>
Wind 1	Y26153	Robert G. Hilker	Sept. 23, 1969
Wind 2	Y26154	Robert G. Hilker	Sept. 23, 1969
Wind 3	Y26155	Robert G. Hilker	Sept. 23, 1969
Wind 4	Y26156	Robert G. Hilker	Sept. 23, 1969
Wind 5	Y26157	Robert G. Hilker	Sept. 23, 1969
Wind 6	Y26158	Robert G. Hilker	Sept. 23, 1969

The claims are located on Sheet 105D-9 - Whitehorse Mining District.

MICHIE LAKE

WIND 2 Y26154	WIND 1 Y26153
WIND 4 Y26154	WIND 3 Y26153
WIND 6 Y26158	WIND 5 Y26157

60° - 37.6'

134° - 8.7'

LOCATION SKETCH

WIND * 1-6 CLAIMS
SHEET 105-D-9

SCALE: 1" = 1/2 mile.

REGIONAL GEOLOGY

The geology in the area of Michie Lake has been mapped by the Geological Survey of Canada and is contained on Map 1093A - Geology of the Whitehorse Area, Yukon Territory. This map is enclosed in Memoir 312 - Whitehorse Map Area, Yukon Territory 1050 by J. O. Wheeler, 1961. The Wind Claims are located on the more northern of two peridotite bodies that are located to the southwest of Michie Creek. The peridotite intrusive contacts with the Upper Triassic Lewes River Group. Other rocks in the area include the Lower Jurassic and Later Laberge Group and Cretaceous Coast Intrusions. The Triassic Lewes River Group consists of greywacke, limestone and metamorphosed rocks that in parts are skarns. The peridotite intrusion is Cretaceous in age and also grades to dunite, serpentinite and pyroxenite. The Cretaceous Coast Intrusions consists mainly of granodiorite and granite.

The peridotite intrusions located on two rounded mountains that have reached a maximum elevation of approximately 5300 feet and contact with the sedimentary and metamorphic rocks of the Lewes River Group. The rocks in this area strikes predominantly north and south. The Lewes River sedimentary and metamorphic rocks, to the south of the Wind Claims, contain an anticline and syncline structure that has an axis east and west.

ECONOMIC GEOLOGY

The Wind 1 - 6 Claims were staked entirely on the peridotite intrusive. Local rock types observed varied from a fine grained peridotite to serpentinite. One area of rock exposure suggested a pyroxenite rock type that contained coarse Phenocrysts of augite. The serpentinite was the most predominant rock type that was observed on the claim group. In parts there has been some asbestos and ^{picrite} picrite develop within the ultramafic intrusive. The peridotite contains veins, approximately two inches wide, of picrite that has not had enough heat and pressure to fully develop an asbestoes fiber. The picrite veins in the peridotite stand out as chatter marks along the smooth and glaciated surface of the peridotite. Glaciation has rounded and groved the peridotite and serpentinite on the claim group.

A single exposure of chromite is located southwest of the number one post on Wind #4 Claim. The chromite showing is lenticular in shape approximately 12 feet long and is of an undetermined thickness. The chromite strikes 355° and dips 50° east. It can be described as a lens or pod of chromite and iron in peridotite. A few stringers approximately 1 inch thick strike off of the main chromite lens at a 252° strike direction.

Assay Results:

Sample	Cr ₂ O ₃	Fe	Cr:Fe Ratio
#3740 - massive chromite and iron.	39.4	5.7	6.92:1

Metallurgical grade chromite, at present, on the market exceeds 45% Cr₂O₃ and the Cr:Fe ratio is 2.65 or better. In the best grades of chromite the Cr:Fe ratio is about 3.

The chromite showing is relatively small but is very massive. The metal is black and metallic in appearance with some iron visible in the form of magnetite. There appears to be no apparent reason why the lens of chromite has occurred in the peridotite. There is no structural feature that is controlling mineralization. It would appear to be a pod or lens that is outcropping at surface. The remainder of the upper part of the peridotite could contain more of these lenses or pods and therefore be of some economic value. It would be a benefit to geological map, in detail, the surrounding area near the chromite occurrence. If more chromite is discovered, in surface showings, they could be explored by drilling and blasting or by diamond drilling. It may be beneficial to attempt to conduct a geochemical survey on the peridotite body to see if a chrome high could be detected. The amount of magnetite that is associated with the chromite and within the peridotite could be outlined by a close line spaced magnetometer survey.

The magnetics may indicate possible sources of additional chromite occurrences. The massive chromite that occurs in the one showing has been observed on the Wind #4 Claim. It is of significant interest to warrant additional work.

The only commercially important ore mineral of chromium (Cr) is chromite ($\text{FeO} \cdot \text{Cr}_2\text{O}_3$) which has a theoretical chromic oxide (Cr_2O_3) content of 68%. Chromite ores are basically a combination of oxides of chromium and iron with impurities of ilumina and magnesia varying in quantity. Chromite ores seldom contain more than 50% Cr_2O_3 .

CONCLUSIONS

The #3740 assay of the chromite indicated a high chrome-iron ratio and a high chrome content. The single occurrence of the chromite, lens or pod, may be indicative of larger or additional chromite occurrences on the peridotite mountain and the Wind 1 - 6 Claims. The peridotite requires a very carefull and extensive surface investigation to discover other occurrences of chromite.

Chromite occurs in peridotite and serpentine derived rock types and forms as veins or imbedded masses. Large ore bodies of chromite are formed by magnetic differentiation.

RECOMMENDATIONS

The following surface exploration program is warranted to fully evaluate the chromite occurrences on the Wind 1 - 6 Claims:

Linegrid - 25 linemiles @ \$50/mile	\$1,250
Geological Mapping	2,500
Magnetics	2,500
Petrographic & Polish Section Study	1,000
Soil Sampling	2,500
Transportation	1,500
Camp Costs	<u>1,000</u>
 TOTAL	 <u><u>\$12,250</u></u>

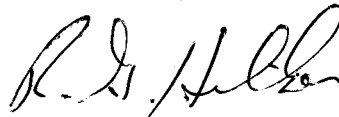
EXPENDITURES

Wind 1 - 6 Claims - Michie Lake Sheet 105D-9

Assessment Work Application:

1. Trans North Turbo Air Ltd. - August 18, 1969.....	\$141.60
2. One Professional Day on Property - August 18, 1969 (R. G. Hilker Limited)	150.00
3. Report Preparation, drafting, assaying	<u>325.00</u>
	<u>\$616.60</u>

I, R. G. HILKER, P. Eng., hereby certify that the above expenditures on the Wind 1 - 6 Claims, Michie Lake Sheet 105D-9, have been spent on the property within the claim year of the Wind 1 - 6 Claims.



R. G. Hilker, P. Eng.

October 6th, 1969

NO. 3620-1

WHITEHORSE ASSAY OFFICE

P.O. BOX 346, WHITEHORSE, YUKON

WIND CLAIMS

RECEIVED FROM R.G. Hilker Limited

SAMPLE NO.	GOLD OZ. PER TON	SILVER OZ. PER TON	Chromium Cr ₂ O ₃	Iron Fe				
			39.4	5.7				

ASSAYER Geo. Spading