

PROSPECTING REPORT  
ON  
WINDY 2, 3 AND 4  
MINERAL CLAIMS

CASSIAR AREA,  
LIARD MINING DIVISION,  
NORTHERN BRITISH COLUMBIA

MAP 104P-5W

59°20'  
129°51'

by

W. KUHN  
INDEPENDENT PROSPECTOR AND OWNER

SEPTEMBER 28, 1979

MINERAL RESOURCES BRANCH ASSESSMENT REPORT <b>7520</b> NO. _____
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SAMPLE MAP . . . . .	in pocket
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WINDY GROUP

<u>Claim Name</u>	<u>Record Number</u>	<u>Number of Units</u>	<u>Date Recorded</u>
Windy 2	597	12	Aug. 1, 1978
Windy 3	598	9	Aug. 1, 1978
Windy 4	599	12	Aug. 1, 1978

The Windy Group (2, 3 & 4) are owned by W. Kuhn and are presently under option to Shell Oil Company of Canada Ltd. subject to agreement dated September 21, 1979.

INTRODUCTION

This Prospecting Report is based on work done on the Windy Group between July 1978 and August 1, 1979, by the owner. The main effort was between June 26, 1979 and August 1, 1979 in the form of general prospecting, some instrument work with a Scintrex MF2 magnetometer and Scintrex Gamma-ray Spectrometer. The area is free of snow between late June into October. The elevation ranges between 4600 feet in the north end of Windy 2 to 6300 feet on Windy 3 and 4 thus most of the area is above timberline with a minor amount of stunted balsam and backbrush in the valleys.

LOCATION

The Windy Group is staked next to the Cassiar asbestos mine to the southeast and joined on the north by the "M 1-4 mineral claims" presently owned by Union Carbide. Access is by rough dirt road to the property from Cassiar, B. C. approximately 3 km. by road to the nearest showings. The property is approximately 144 km. (or 91 miles) by road from Watson Lake, Yukon and 432 km. (326 miles) from Tidewater at Stewart, B. C.

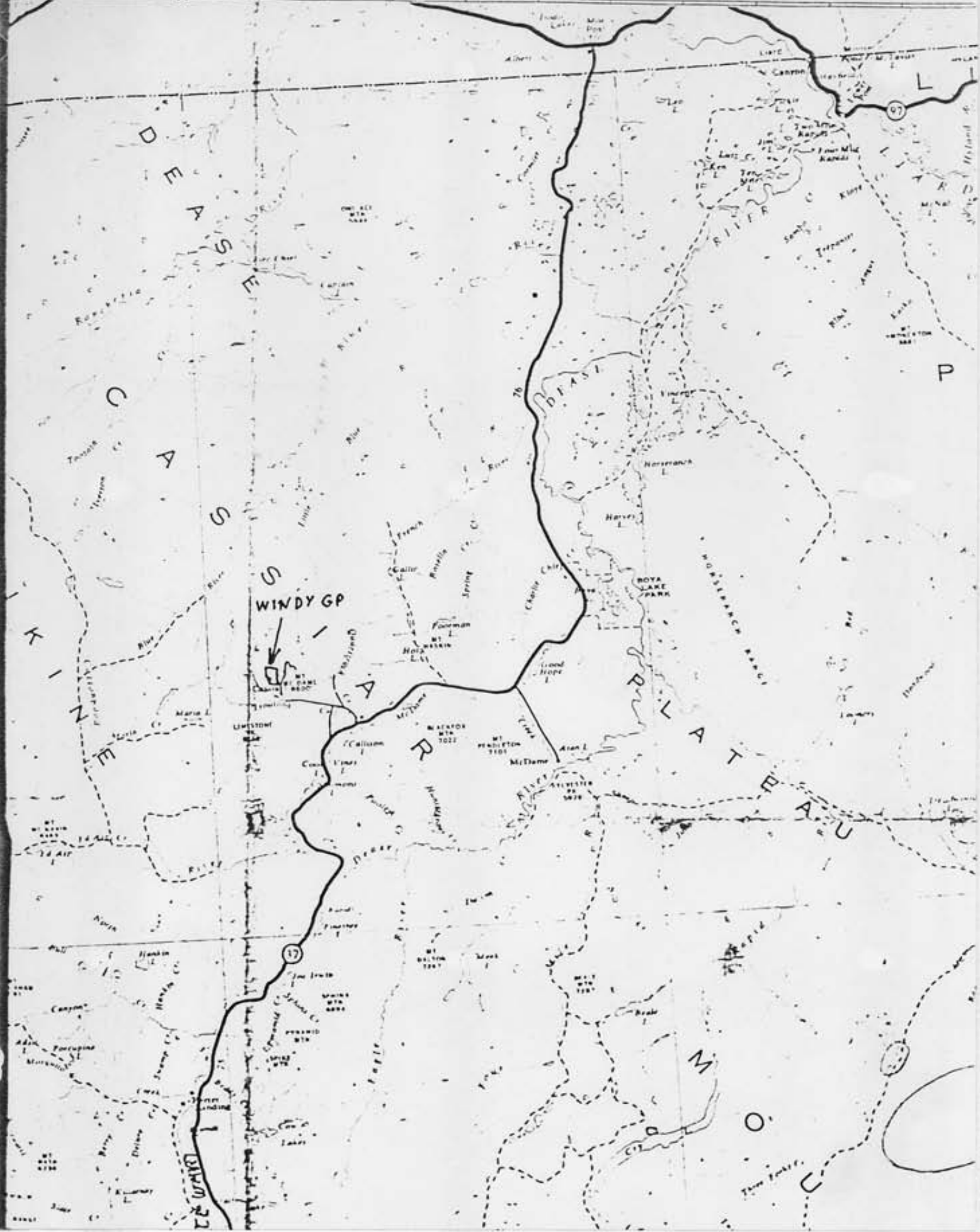
# REGIONAL LOCATION MAP

(4)

← TO WHITEHORSE  
120°

124°

X WATSON LAKE Y1



WINDY GP

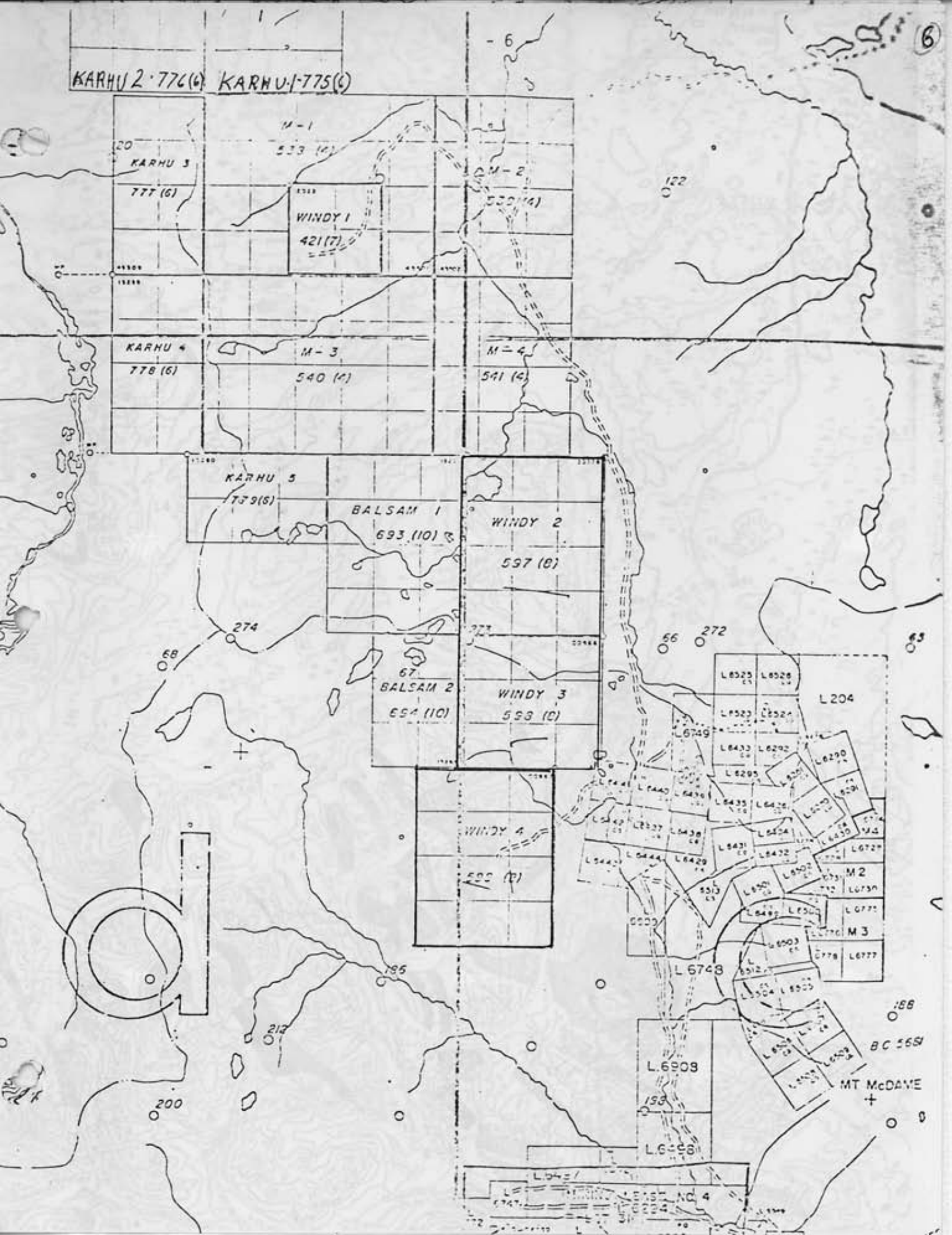
ROYAL LAKE PARK

12

97



KARHU 2-776(6) KARHU-1-775(6)



KARHU 3  
777 (6)

M-1  
533 (4)

WINDY 1  
421 (7)

M-2  
532 (4)

KARHU 4  
778 (6)

M-3  
540 (4)

M-4  
541 (4)

KARHU 5  
779 (6)

BALSAM 1  
693 (10)

WINDY 2  
597 (8)

274

BALSAM 2  
694 (10)

WINDY 3  
598 (8)

WINDY 4  
599 (8)

L 6923 L 6926  
L 6924 L 6927  
L 6928 L 6929  
L 6930 L 6931  
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L 7000

L 6903

L 6904

BC 565

MT McDAVE

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L 6902

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L 6999

L 7000



BC5682

167



## HISTORY

The area covered by the Windy Claims has been staked and restaked many times in the past by various exploration ventures and private individuals. The south end of Windy #4 contains the old 'Contact' showing (see B. C. Min. Inventory 104/P/5/W #4 and Minister of Mines Annual Report 1969 p.40).

It is the discovery of extensive and continuous tungsten bearings skarns that led to the present staking and as such is a new and original discovery.

Anomalous scheelite values in reconnaissance stream panning were discovered in the adjacent areas to the north over ten years ago by the present owner. At that time the bulk of the area was staked and some of it was later drilled for molybdenite but apparently scheelite values were not recognised or were discounted.

In July 1977 the "M" group was staked by the present owner for Union Carbide of Canada. In July of 1978 the Windy 2 to 4 were staked by the present owner and offered to Union Carbide on the same agreement but were declined.

Intensive prospecting and night lamping revealed considerable scheelite float late in October 1978. Follow up prospecting in June 1979 confirmed the source of float mineralization and careful prospecting revealed tungsten mineralization over a wide area, much of it concealed or partially concealed by oxidation of sulfide content (pyrrhotite) and by overburden. A Scintrex MF2 magnetometer was used to extend known zones and aided in discovering more showings in place and in float along strike.

## GEOLOGY

A general regional geological map (1110 A McDame) has been available of the area for many years. It was the unique geology of the claims area as interpreted on this map which drew the prospector's attention to the area some years ago and initiated a stream-panning reconnaissance program for tungsten in 1969 which led to the present discovery. A more recent and detailed geology of the claims area and adjacent area has very recently been done by Andre Panteleyev, British Columbia Department of Mines.

In the large map in the pocket of this report the prospector-owner of the claims has attempted to outline contacts of rock types along with other pertinent information

East Skarn Zone: See main map.

A strong and continuous-massive-sulfide-skarn zone was traced from the southeast corner of Windy 3 to the main east mineral showing at the south end of Windy 2, thence intermittently along the west slope of a high ridge (in float and magnetic response or chain of magnetic anomalies) where it parallels a fault zone and ends against the north intrusive. The south end of said zone being more a massive sulfide gradually turning into more of skarn as it follows down the contact northerly and becomes offset from the main east showing by the quartz feldspar porphyry plug (see map). Part way along this zone on its upper (west) contact is a fine grained biotite carrying intrusive dike 5 to 10 ft. wide and on the lower (east) contact of this part of the zone massive limestone.

Further down below this are outcrops and pods of massive sulfides and tungsten skarns then quartzites and the intrusive (Q.F.P.) plug itself. The main massive sulfide zone carries copper, zinc, tungsten, silver values and is 6 feet to 40 feet in width.

The main east zone at boundary of Windy 2 and 3 is a series of 2 or perhaps 3 tungsten (scheelite) skarn zones developed between massive limestone beds. It would appear the mineralization here is developed between or has altered by intrusive action from the high temperature intrusive (Q.F.P.) plug to the south or the subterreanean extension thereof. The alteration and mineralization occurring at the weaker sections of the limestone bedding.

At the opposite or west side of the lower Atan (3), or at the limestone contact of the Good Hope (1) formations as the case may be, occurs the west showing at the west boundary of Windy #3 M.C. Here areas of spectacular garnet specimens parallel tungsten bearing garnet-diopside-pyrrhotite skarns for a northwesterly-southeasterly strike length of approximately 700 feet by about 30 feet wide, the north end butting into and perhaps altered and mineralized by the north intrusive.

What is here referred to as the north intrusive is designated on Map 1110-A McDame as a separate stock but on close detailed examination it appears to be at least physically contiguous with the Cassiar Batholith. However, it is now recognised that the same high temperature usually porphyritic intrusive extends itself along the main east contact of the main Cassiar Batholith and at the same time is separate from the batholith proper.

Four intrusive bodies, separate at least on surface were noted: the north intrusive, the small plug just south of the main east showing, the intrusive dike contacting the massive sulfide zone, and the south intrusive, touching the old "contact mineral showing".

Rocks overlying or enveloped by these intrusives are skarns, carbonates, phyllites, quartzites, shales and cherts, some quartz veining and mafic dikes were noted mainly in the lower Atan Formation.

Highly developed skarns and some scheelite bearing quartz veins were noted at the old 'contact' showing. No nightlamping has yet been done here but a high 74,000 ppm-W anomaly occurred here in soil sampling. Old reports do mention here presence of scheelite along with: ruby silver, galena, sphalerite, bismuth, molybdenite, copper, manganese and Ad. Inf. There is also said to be on good authority a high-grade silver vein here since covered by talus!

SUMMARY & CONCLUSIONS

The Windy tungsten property is a new discovery of unknown grade and dimensions with as yet comparatively very little exploration work done. The best mineralization sampled to date, on the property is still close to surface, of a leached, disjointed oxidized condition and still partially obscured by overburden.

The location is accessible by vehicle less than 2 miles from an existing townsite within practical haulage transportation range of existing seaport of Stewart, B. C. or Skagway, Alaska via Whitehorse and Whitepass.

Its discovery as a tungsten property seems to follow the classic pattern of discovery of scheelite deposits in the past in that it was not recognised as such when it was explored for other minerals. The property can be explored efficiently and economically with relative ease. Most of the property can be made accessible by vehicle.

The nature of the mineralization lends itself easily to detection of pyrrhotite in the scheelite skarns by magnetometer survey. A close watch should be made for tin in the form of micro crystalline cassiterite found on adjacent properties (Storie Moly).

A 100 ppm uranium soil anomaly was recorded on northwest boundary of Windy 2 by the Government Geochemical Program after claims were staked. Both the intrusive and metamorphic rocks have a high radioactive background both for K-feldspar and U-Th wave lengths. Panning and stream silt geochemical readings can be confusing because of recent and

intense glacial action much of the mineralization being in north-facing glacial cirques overlooking eskers and moraines in the lower valleys. Geophysics coupled with night lamping and/or daytime prospecting for pyrrhotite skarns and testing of samples with lamp. A large tractor (D8) with rippers is needed to expose main east showing. (See Mag Grid 1 on Main Map). Surface prospecting-trenching geophysics followed by geological mapping and more trenching and geophysics and sampling followed lastly by drilling would be appropriate. The mineralization found to date has been quite inconspicuous on the surface. It is suggested that the nature of the topography related to the geology could host large tonnage at depth. The mineralized skarns are dipping  $50^{\circ}$  -  $60^{\circ}$  to vertical and correct and detailed understanding of the geological structure is imperative to the successful and effective later stages of drilling and blocking out ore reserves. The continuation of mineralized skarns on the presumed horizontal contacts at the top of the underlying intrusives, at base of the overlying sediments must always be kept in mind. It is possible if not probable, that two or more of the several intrusive bodies on the property may join at depth beneath the sediments thus greatly enlarging contact area and multiplying tonnage potential and grades, especially at bottom terminus of steeply dipping sedimentary bedding or at trough of syncline as the case may be.

William Kuhn

STATEMENT OF QUALIFICATIONS

I, William Kuhn, have made my livelihood as a prospector almost exclusively for the last 15 years, in various parts of British Columbia, Yukon, and Northwest Territories. Including reconnaissance prospecting, regional silt sampling, aero magnetic, air radiometric reconnaissance from helicopter in Northern B. C. and Yukon. The last 10 years I have prospected mainly alone as an independent contractor for mining companies including El Paso Mining & Milling, MacKenzie Syndicate 1975 (Mecla, Giant Yellowknife and Western Mines), Union Carbide of Canada Ltd., Rio Tinto Canadian Explorations and at present am working completely independent. At the present time I have two major properties under option which I discovered staked and optioned including the subject of this report, and another which I was co-staker.

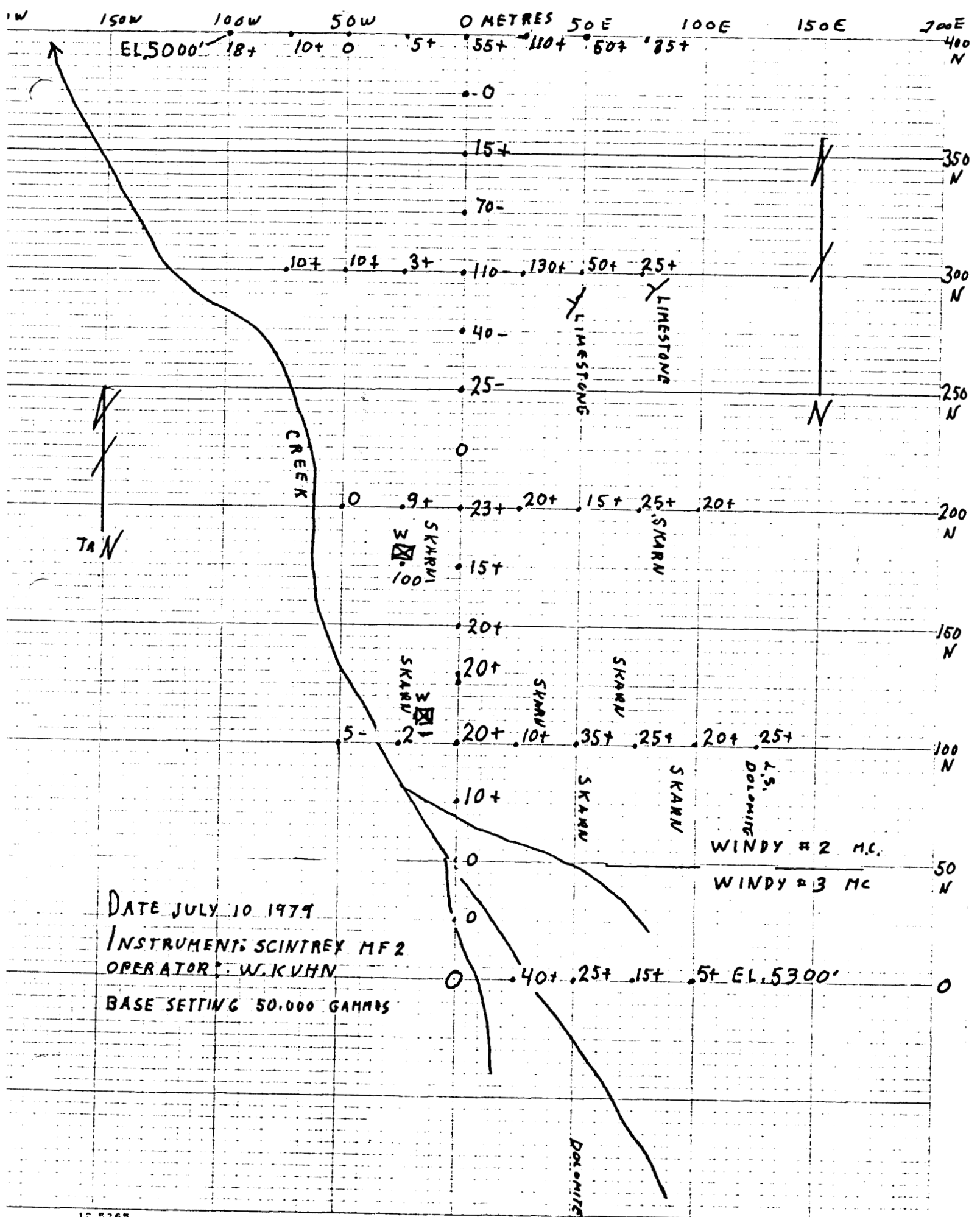
I have no academic qualifications beyond grade school.

Completed  
September 28, 1979

*William Kuhn*  
WILLIAM KUHN



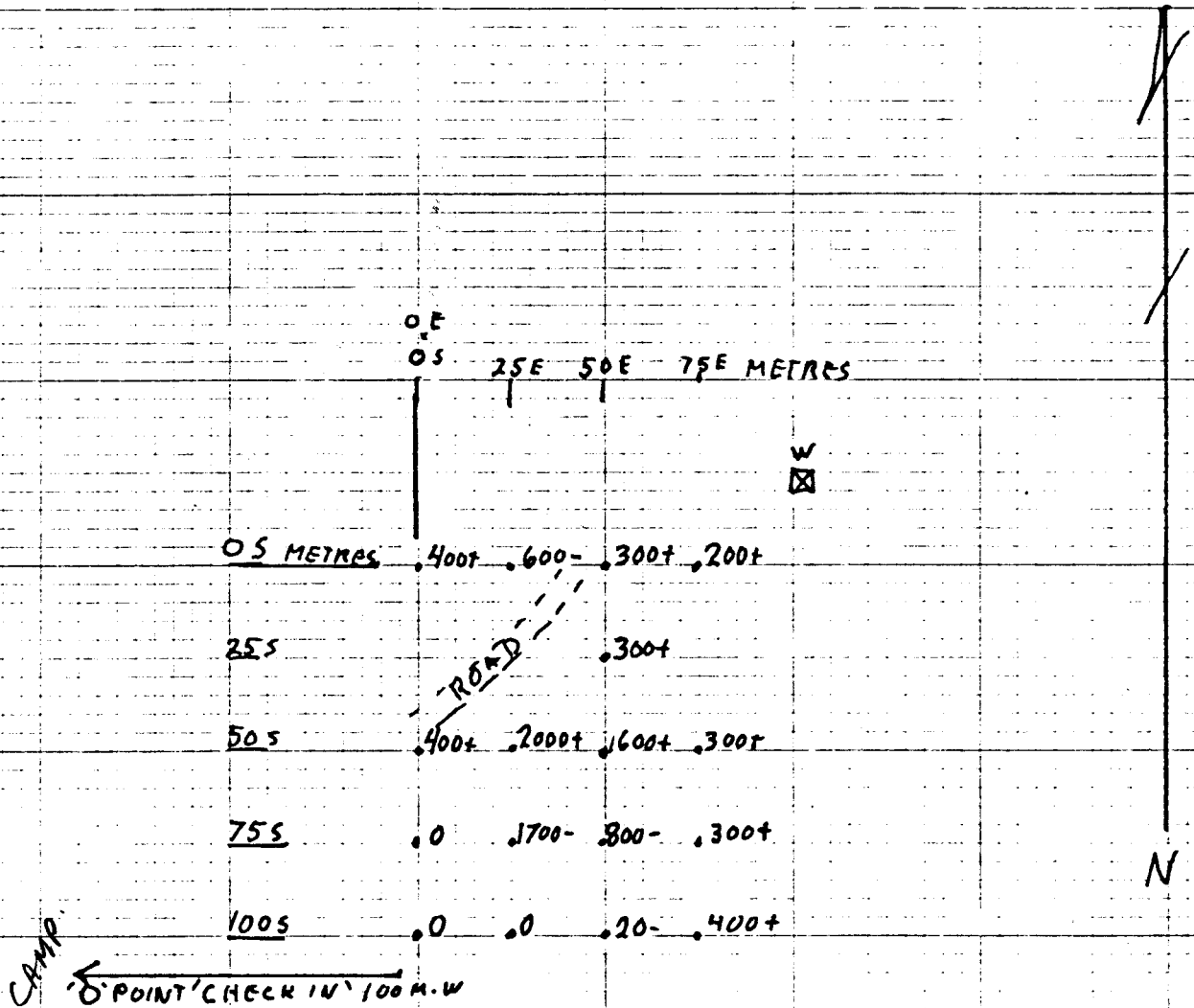
DETAIL OF MAG. GRID #1 - WINDY 2 MC



DATE JULY 10 1979  
 INSTRUMENT: SCINTREX MF2  
 OPERATOR: W. K. V. H. N.  
 BASE SETTING 50,000 GAMMAS

WINDY #2 MC  
 WINDY #3 MC

# DETAIL OF MAG. GRID # 2 WINDY # 2 MC



INSTRUMENT: SCINTREX MF2  
 OPERATOR: W. KUHN  
 BASE SETTING 30,000 GAMMAS

Subsequent to the work described in this report, a road has been built to the main east showing, numerous cat trenches made turning up additional mineralization. The property has been optioned to Shell Oil Co. of Canada Ltd. as of September 24, 1979.

*W Kuhn*

W. KUHN

STATEMENT OF COSTS

WAGES

20 days @ \$100.00	\$2,000.00
Camp supplies & Equipment 15 days @ \$20/day	300.00
Instrument rental - 5 days @ \$29/day	145.00
Assays	300.00
Travel Time - 1 way - 3 days @ \$100/ea.	300.00
Report - 3 days @ \$100/day	300.00
Truck Rental - 20 days @ \$25/day	500.00
Gas & Oil - 20 days @ \$5/day	100.00
Radio Rental - 20 days @ \$5/day	100.00
Room & Board - 3 days @ \$50/day	150.00
1500 miles (one way from Vancouver) @ .20¢/mi.	<u>300.00</u>
	\$4,495.00
AMOUNT CLAIMED	<u><u>\$4,195.00</u></u>

*W Kuhn*

W. KUHN

DAYS SPENT ON THE PROPERTY TO AUGUST 1, 1979

1978

October 4  
5  
6  
7  
8

1979

June 14  
15  
24  
25  
26  
27  
28  
29  
30

July 1  
2  
7  
8  
9  
10  
31

Feb. 7 1979

Reflected Light Ore Microscopy of Samples

WO and R

(TUMBUKA TUBA)

WO Paragenesis- Chalcopyrite/Covellite/Sphalerite

A small amount of subidiomorphic very fine grained chalcopyrite is associated with rimming idiomorphic sphalerite. Minor covellite replaces the chalcopyrite. Magnetite and other Fe-Ti oxides are the most abundant opaques. Less than .5% of the rock is sulphide in order of abundance: chalcopyrite>sphalerite>covellite.

WINDY GROUP

R Paragenesis- Pyrite/Sphalerite/Chalcopyrite

A minor amount of very fine grained idiomorphic pyrite is replaced by finer grained subidiomorphic sphalerite. A trace of chalcopyrite occurs associated with the pyrite. Again Fe-Ti oxides and their weathering products are the most abundant opaques. Less than 1% of the rock is sulphide in order of abundance: pyrite>sphalerite>chalcopyrite.

WR Howard, BSc



# Vancouver Petrographics Ltd. <sup>64</sup>

JAMES VINNELL, Manager  
JOHN G. PAYNE, Ph. D. Consultant

P.O. BOX 39  
8887 NASH STREET  
FORT LANGLEY, B.C.  
V0X 1J0

PHONE (604) 533-1155

R, cont.

Opagues most commonly occur as wormy growths along cleavages in clinopyroxene, partly altered to Fe-oxides. One instance of enclosure in scheelite was noted; however scheelite does not tend to associate strongly with the sulfides.

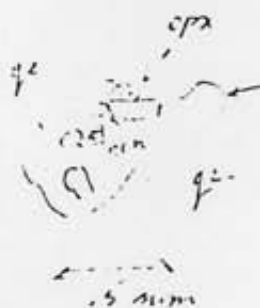
A few euhedral to subhedral sphene grains .2 mm long occur in clusters within epidote.

A few large crystals of scapolite ( $\epsilon \approx .008$ , relief between quartz and pyroxene, poor cleavage, uniaxial negative) concentrate at one end of the slide surrounded by quartz.

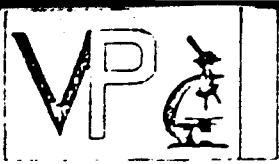
Paragenesis: Scheelite seems to have formed later than clinopyroxene, which would have provided Ca. The other calcium-bearing minerals, calcite, epidote and garnet surround scheelite rather than the reverse, so it is doubtful that the scheelite formed at their expense.

The silicate assemblage is divariant and subject as well to  $f_{CO_2}$  and  $f_{O_2}$  so no meaningful P-T assignment can be made.

## Scheelite - pyroxene textures



Tend to be elongate in direction of layering.



JAMES VINNFLL, Manager  
HEN G. PAYNE, Ph.D. Geologist

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## R Layered skarn

### Mode

Epidote	32
Diopside-hedenbergite	20
Quartz	15
Calcite	15
Scheelite	10
Garnet	7
Opagues	tr
Sphene	tr
Scapolite	1

Most epidote is in interlocking masses of seive-like to skeletal crystals including small grains of quartz, clinopyroxene, and fine epidote. Epidote was seen to form skeletal growths inside garnet, a habit similar to that of calcite. This may be a partial replacement of the host garnet. Rarely, epidote crystals are euhedral, showing oscillatory zoning.

Clinopyroxene,  $\angle$  to  $z = 45^\circ$ , very pale green in thin section, is a Mg-Fe solid solution. It commonly shows lamellar twinning. These twins are bent in several instances. Clinopyroxene crystals are granular to subhedral.

Quartz forms large interstitial grains with undulatory extinction and incipient subgrain formation. It concentrates at one end of the slide.

Calcite forms the interstitial material where quartz is lacking. Both it and quartz occur between more mafic bands of clinopyroxene, garnet, epidote and scheelite. Twins are bend and show strain shadows around more competent grains such as clinopyroxene. Some calcite appears secondary: it forms skeletal intergrowths inside garnets, and calcite veinlets cut the section.

Scheelite forms large rounded anhedral grains and grain aggregates, all with undulatory extinction. Some have anomalous blues and oranges under crossed nicols. In general it appears to be in equilibrium with other phases. Some notable exceptions occur:

- 1) It tends to associate with clinopyroxene, and in some cases appears to be replacing it. ( See sketches ).
- 2) In one instance it is surrounded by epidote; in another, garnet.

Garnets are seive-textured to skeletal, with other phases tending to concentrate in their cores. In particular, weblike skeletal calcite and epidote are considered to be secondary.





# CHEMEX LABS LTD.

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 NORTH VANCOUVER, B.C.  
 CANADA V7J 2C1  
 TELEPHONE: [REDACTED] 984-0221  
 AREA CODE: 604  
 TELEX: 043-52597

- ANALYTICAL CHEMISTS
- GEOCHEMISTS
- REGISTERED ASSAYERS

## CERTIFICATE OF ASSAY

TO: W. Kuhn  
 Box 44812  
 Vancouver, B.C.  
 V7X 1A6

ATTN:

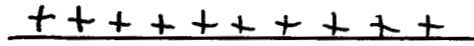
CERTIFICATE NO. 65619  
 INVOICE NO. 31401  
 RECEIVED July 17/79  
 ANALYSED July 27/79

SAMPLE NO. :	% Cu	% Zn	% W03	% Sn	oz/ton Ag	oz/ton Au
WB 1			0.09			
2				0.01	0.26	<0.003
3			0.05			
4	0.30			0.01	0.12	<0.003
6			0.08			
7			1.80	<0.01	0.06	<0.003
8			0.20	0.01	0.14	<0.003
9	0.35		0.06	0.01	0.14	<0.003
11			0.22			
12		0.25	0.31	<0.01	0.06	<0.003
13			6.40	0.05	0.16	<0.003
WB 14			1.78	0.01	0.08	<0.003
Verb #1					0.28	<0.003

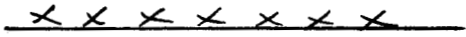
*B. Swaites*  
 REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA



MAP LEGEND



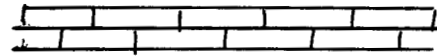
Intrusive



Hornfels



Phyllite-Quartzite-Shale



Carbonate: Limestone-dolomite



Mineral in place



Mineral float



Sample location



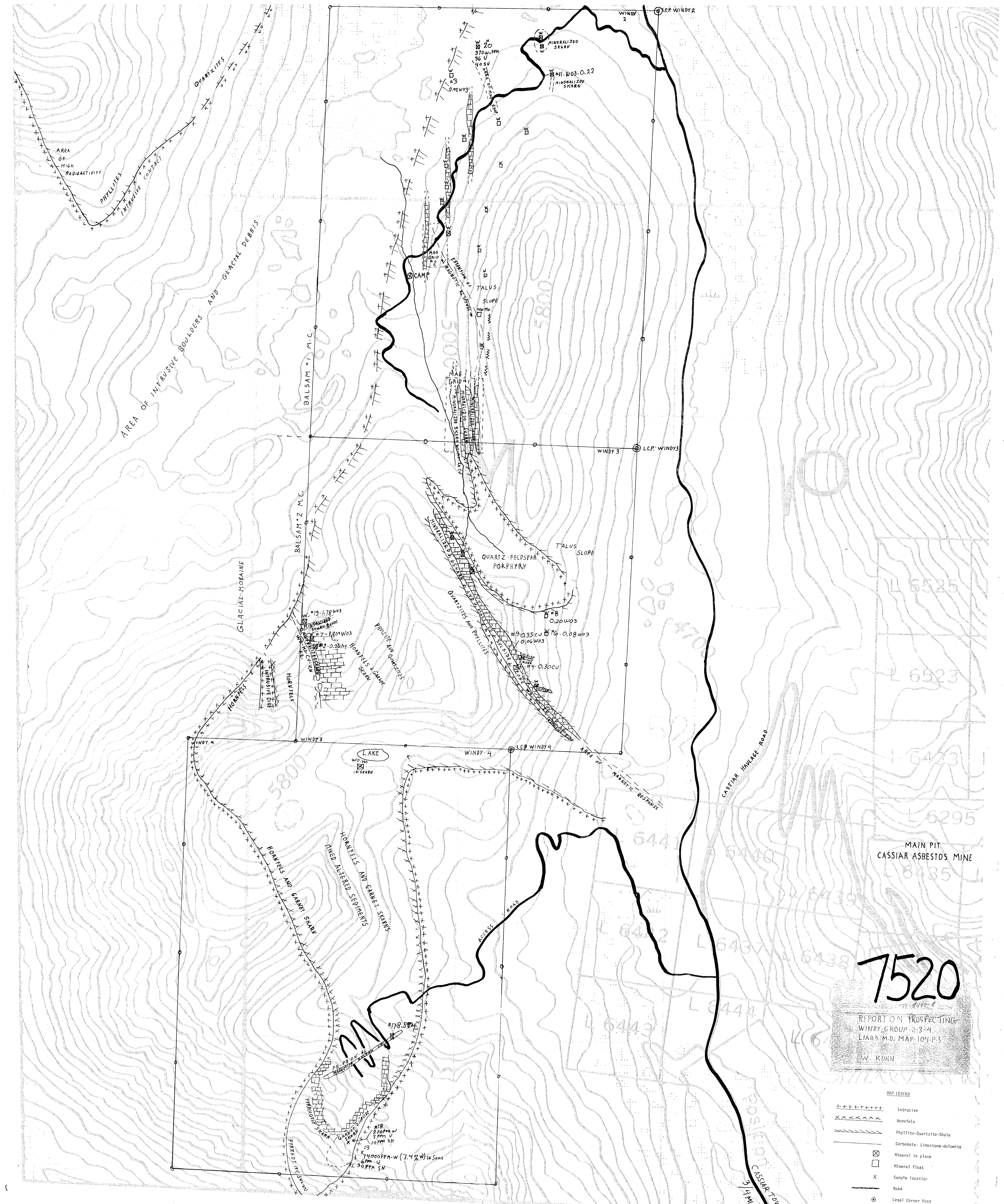
Road



Legal Corner Post



Corner or Identification Post



MAIN PIT  
CASSIAR ASBESTOS MINE

7520

REPORT ON PROSPECTING  
WINDY GROUP 2-3-4  
LIARD M.D. MAP 104-P-5  
W. KOHN

- MAP LEGEND
- +++++ Intrusive
  - xxxxxxx Hornfels
  - ||||| Phyllite-Quartzite-Shale
  - Carbonate: Limestone-dolomite
  - ☒ Mineral in place
  - ☐ Mineral float
  - x Sample locator
  - Road
  - Legal Corner Post
  - Corner or Identification Post