



GEOLOGICAL REPORT ON  
THE MIKE 1 - 35 CLAIM GROUP  
BONNET PLUME RIVER AREA, YUKON TERRITORY  
SHEET 106-C-10

LAT. 64°30'N LONG. 132°30'W

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of \$ Not recommended

*D.B. Craig*  
Resident Geologist or  
Resident Mining Engineer  
*Refused under*  
~~Considered as representation work under~~  
Section 53 (4) Yukon Quartz Mining Act.

*Ed*  
Commissioner of Yukon Territory  
EDWARD O. CHISHOLM, P. ENG.

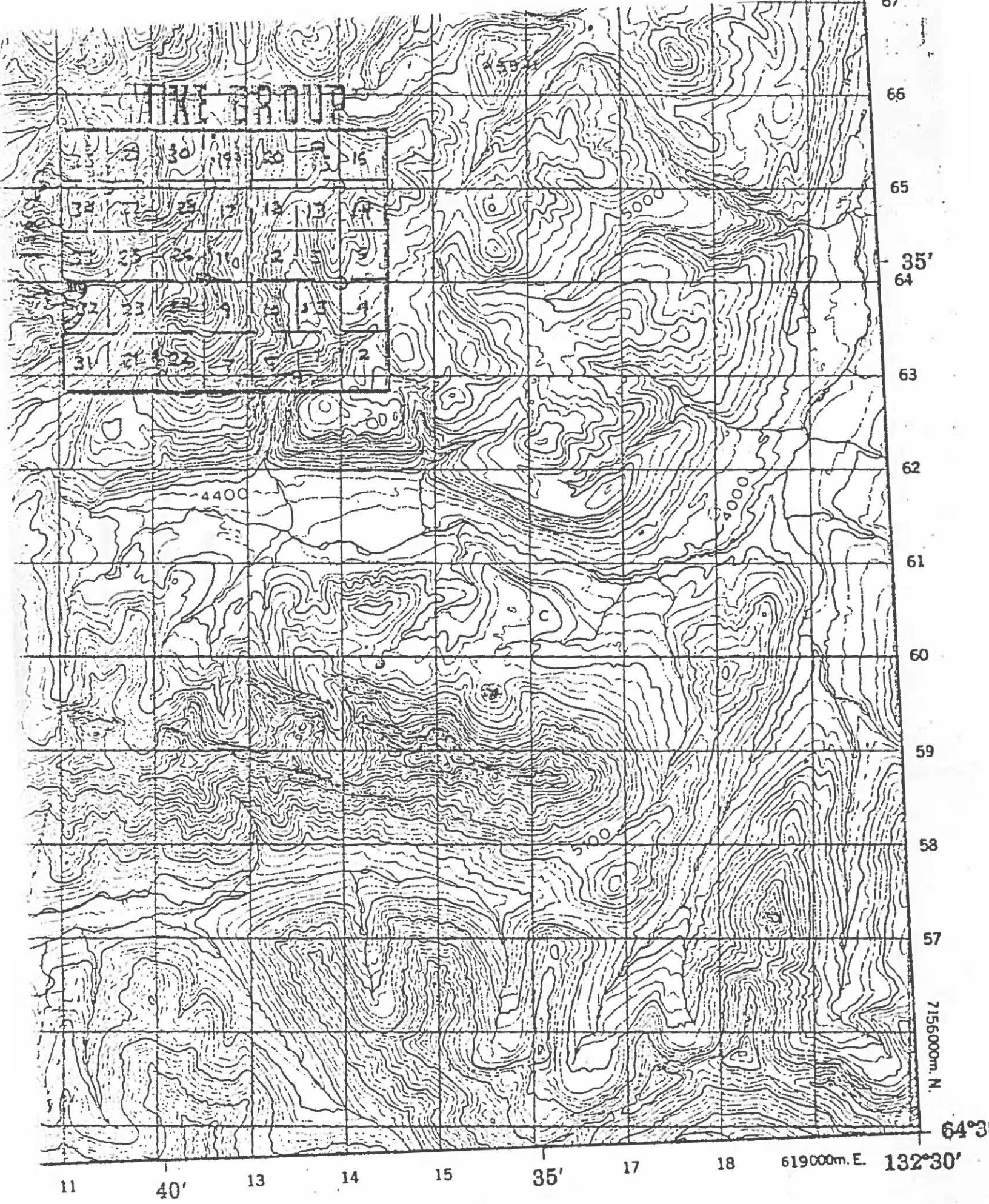


Vancouver, B.C.

July 20, 1974







Ces cartes sont en vente au Bureau des Cartes du Canada,  
 Ministère de l'Énergie, des Mines et des Ressources, Ottawa,  
 ou chez le vendeur le plus près.

ÉTABLI PAR LA DIRECTION DES LEVÉS ET DE LA  
 CARTOGRAPHIE MINISTÈRE DE L'ÉNERGIE, DES

# BONNET PLUME PROPERTIES

YUKON TERRITORY

SCALE

64° 45' N

MILES 4

2

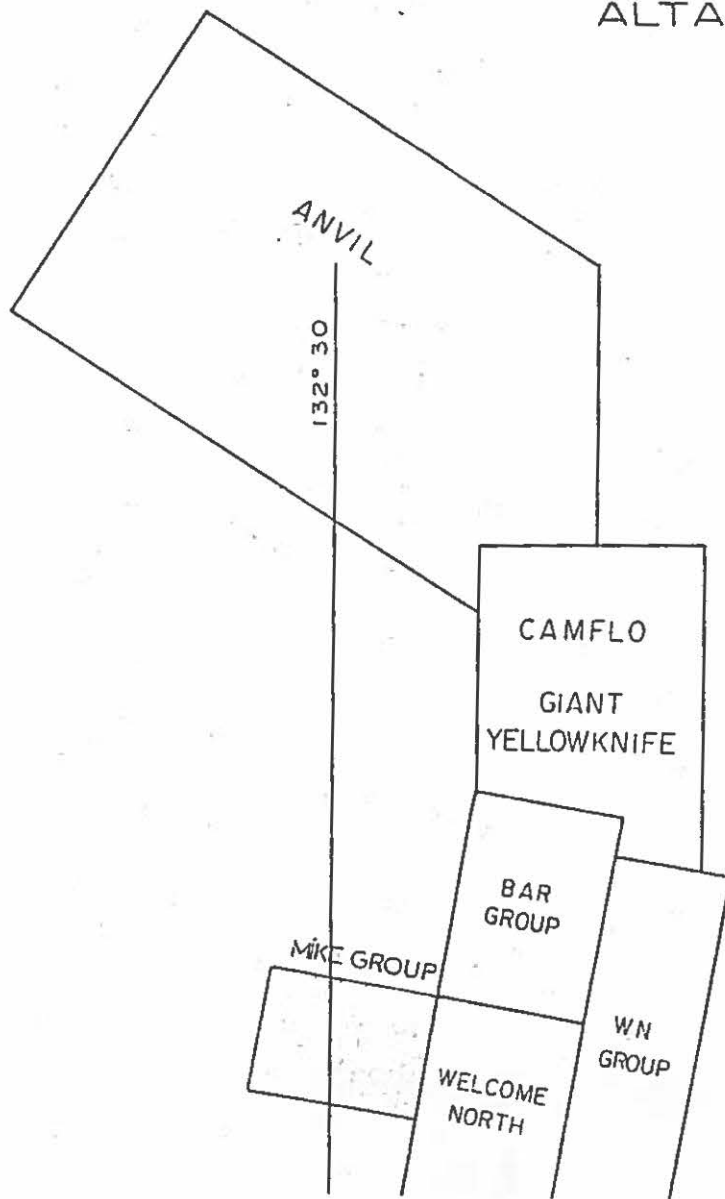
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4

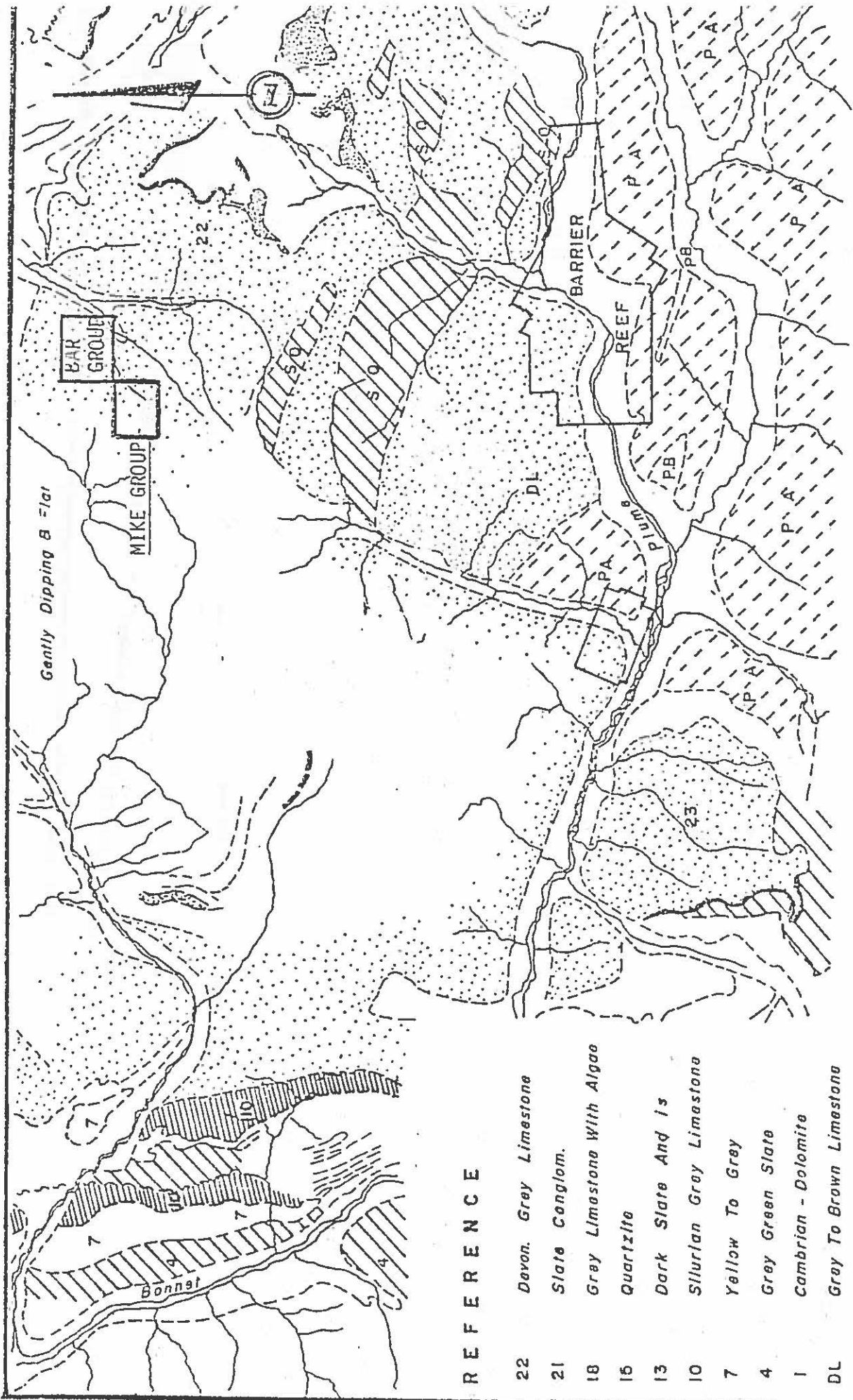
8 MILES



ALTAIR DRAFTING



SUN  
GRP.



Gently Dipping to East

MIKE GROUP  
BAR GROUP

BARRIER REEF

# WHITE CLIFFS

## REFERENCE

- 22 Devon. Gray Limestone
- 21 Slate Conglom.
- 18 Gray Limestone With Algae
- 15 Quartzite
- 13 Dark Slate And ls
- 10 Silurian Gray Limestone
- 7 Yellow To Grey
- 4 Grey Green Slate
- 1 Cambrian - Dolomite
- DL Grey To Brown Limestone
- SC Brown Slate & Quartzite
- PA Grey Green Slate
- PB Grey Limestone

Scale: 1 inch = 4 miles

Geology From G.S.C. Map 53-7

AXTEN DRAFTING LIMITED

35	29	30	19	20	15	16
34	27	28	17	18	13	14
33	25	26	11	12	5	6
32	23	24	9	10	3	4
31	21	22	7	8	1	2

*MIKE CLAIMS 1-35*

**MIKE CLAIMS GROUP**

GOZ LAKE AREA, YUKON TERRITORY

NTS 106 C/10

***CLAIM MAP***

1" = 3000 FEET

SUMMARY

The 35 claim Mike group is located ten miles north of a new major zinc discovery in the Bonnet Plume area of the Yukon Territory, made in the summer of 1973 by Barrier Reef Resources of Vancouver.

It is classified as a partially explored prospect underlain by Mid-Devonian dolostone containing recently discovered stratabound zinc-lead deposits. It is recommended that a staged exploration programme be carried out with a total expenditure of \$60,000.00.

INTRODUCTION

This report is based on information gathered by the writer from available government and private reports on the area and personal examination of the property. It was prepared at the request of Lion Mines Ltd. (NPL) and Inland Copper Co. Ltd., of Vancouver, B.C., joint owners of the claims. The claims were examined June 28 - 30, 1974. Their location on the attached plan is approximately correct.

PROPERTY

The Mike Property comprises a rectangular block of 35 unpatented mining claims two miles long by one mile wide. They were staked in July, 1974 and recorded at Mayo, Yukon Territory. Due dates are July, 1975. Several posts were examined and found to be staked in accordance with the Yukon Quartz Mining Act.

<u>Name of Claims</u>	<u>Grant Numbers</u>	<u>Due Date</u>
Mike 1 - 35	Pending	July, 1975

### LOCATION AND ACCESS

The claims are located approximately 135 miles NE of Mayo, Y.T. near the Snake River. Approximate coordinates are as follows:

LAT.  $64^{\circ}35'$  North; LONG.  $132^{\circ}30'$  W, NTS Sheet 106-C-10

Access to the property is by helicopter. Fixed-wing aircraft can land on Goz Lake or Goz Creek approximately eight miles southeast of the property.

Barrier Reef Resources is constructing a winter airstrip in the Creek Valley, about ten miles south of the property. An all-weather strip suitable for DC-3 aircraft is being planned which will greatly improve operating cost in the area. A winter tote road is also planned to the area from Mayo.

The Mayo-Elsa, all-weather highway ends at Keno City, 80 miles south-west of the property. A winter caterpillar road, extends from the end of the Mayo Highway a distance of 40 miles to Kathleen Lake, about 50 miles west of the property.

### TOPOGRAPHY

The claim group is located ten miles north of the Goz Creek at elevations from 3,000 to 5,000 feet. The topography is a moderately sloping upland plateau incised by two canyons.

The water supply in the nearby creeks is suitable for all purposes.

## HISTORY

The geology of the area was first mapped by Dr. J. O. Wheeler of the Geological Survey of Canada in 1952 (Preliminary Map 53 - 7), at a scale of four miles to the inch and covers the claims group. A more detailed map has recently been completed by S.L. Blusson for release this winter. As early as 1950 lead-zinc occurrences were discovered in dolomite-breccia, similar in many respects to the present finds, by the K.J. Springer interests. In recent years these were further explored by Gordon Dickson, prospector and founder of Rackla River Mines. Further exploration to the east along the belt of Palaeozoic sedimentary rocks, led to the discovery of the Hudson Bay Mining and Smelting stratiform, lead-zinc deposit known as the TOM Property located at McMillan Pass on the Canol Road 160 miles to the south east. Other large stratiform lead-zinc deposits were found by Prospector Airways Co. Ltd. under my direction at Vangorda Creek in the 1950's; and later by Kerr Addison in the 1960's at Swim Lake nearby. The most significant of these was discovered by A, Kulan. It became the ANVIL MINE of Cyprus Mining Corp. and Dynasty Exploration Ltd. and is currently in production at a rate of 7,500 tons per day from a 60 million ton ore body of 10 percent combined Pb-Zn. The Vangorda Swim and Anvil deposits are stratiform lenses in Middle-Upper Cambrian phyllite host rocks. Also discovered during this period was the FORTIN LAKE deposit of Dynasty. It is a 3 mile long zone of zinc mineralization in Silurian dolomitic argillites. Preliminary drilling was done under my direction and later my Mitsui Mining and Smelting Corporation. During the period 1965 to 1972 low metal prices discouraged exploration in this remote area. Then a major find aroused new interest in the belt when CANEX PLACER LTD. discovered a 25 mile long belt of lead-zinc mineralization in tightly folded graphitic argillites Ordovician age. A large staking rush developed in the area and intensive drilling was carried out in 1973, with indications of a possible producer.

Also in 1972 important base metal discoveries were made by Welcome North Mines Ltd. in the Godlin Lakes area in the Northwest Territories, 100 miles to the north of Summit Lake. Numerous major companies conducted work in 1973, such as Cominco, Bethlehem Copper, Conwest and Dynasty. Dr. Clyde L. Smith, a prominent Yukon geologist, who was associated with the development of several of the Yukon deposits reports that the recognition of the GODLIN deposits as excellent examples of the world renowned, MISSISSIPPI VALLEY type deposits, has spurred activity over a 300 mile length, within a belt of open-folded and faulted Lower Palaeozoic carbonate rocks known as the MACKENZIE fold-belt. This laterly resulted in the significant finds in the Bonnet Plume region by Barrier Reef Mines Ltd.

It is believed that the Yukon and adjacent Northwest Territories is entering a period of new and highly active base metal exploration.

The significant find of Barrier Reef, near the confluence of GOZ and DUO Creeks, lies ten miles to the south of the Bar property. The news of this discovery precipitated a staking rush that resulted in the location of over 2,000 contiguous claims in a belt 35 miles long and up to five miles wide. Another significant find has been made by CYPRESS RESOURCES LTD. ten miles to the west of Barrier Reef. Some twelve separate occurrences of zinc-lead mineralization have been reported in the area to date at widely separated areas within the Bonnet Plume staking belt. Six additional occurrences of sphalerite mineralization in flat lying mid-Devonian dolostone and limestone have recently been found on the Mike claims.

## GENERAL GEOLOGY

The area of the recent staking along the Bonnet Plume River is underlain by closely folded rocks of probable Cambrian or earlier age. Recent mapping places them as Proterozoic in age. The most widespread and believed to be the oldest formation, is composed of reddish-brown weathering dolomite and sandy dolomite, with minor amounts of grey limestone, dark grey slate, and quartzite. The sandy, cherty or argillaceous facies stand out in relief over the dolomite facies, to produce a very rough surface. The rock is composed mostly of fine-grained, dolomite. The dolomite does not react to hydrochloric acid. Some bands contain considerable proportions of dark clay, minerals and local chert nodules. There are numerous quartz veinlets 2 to 3 inches wide.

Most rocks show irregular banding. They have a rough, sandy texture. Concretions are common.

A distinctive feature is the presence of concentric, banded, circular forms 4 to 6 inches across and up to 14 inches. Some are columnar. These are believed to be algal structures, and they appear in great numbers suggesting colonies that form bioherms.

These structures are believed to be important from the standpoint of mineral deposition and sphalerite often replaces them locally.

Within the dolomitic formation are a few beds of grey limestone, bluish grey, platy, pyritic slates, and quartzites. A banded pale-green, chloritic, limestone overlies the algal bearing dolomites in places and elsewhere a grey weathering pale grey limestone occurs. Also dark grey and black slates, associated with varying amounts of grey and white quartzite, overlie the dolomite conformably at many localities.

The thickness of this sequence of dolomites, grey limestone and slates is not known. Smith (15) states the principal lead-zinc deposits of the larger sedimentary belt known as the Selwyn Basin and Mackenzie Fold Belt fall within two distinct classes: stratiform types of marine-volcanic association (ANVIL, TOM, HOWARD PASS, FORTIN); and MISSISSIPPI VALLEY TYPE (BARRIER REEF, GODLIN, NAHANNI).

Preliminary mapping of the Barrier Reef Property Bonnet Plume area, has outlined a breccia zone of high grade Zn-Pb averaging about 20% combined metal having a strike length of greater than 1,800 feet and a width of 30-40 feet. More detailed sampling, and diamond drilling is required to assign tonnage and grade to the deposit. Extensive outcrops, containing zinc sulphides in bedded carbonate rocks, have been found elsewhere on the claims by preliminary prospecting. These outcrops represent a mineralized "belt" about 5½ miles in length according to company reports.

#### MINERALIZATION

Mineralization on the Barrier Reef and other properties in the area generally is comprised of light buff-colored, to reddish-brown, sphalerite in porous dolostone, with aggregates and irregular patches of galena and minor quantities of possibly Jamesonite mineralization, are reported in higher grade zones.

Most of the high-grade mineralization is associated with breccia zones, but some occurs parallel to bedding planes with very little associated quartz.

GENERAL DISCUSSION OF GEOLOGY ON MIKE CLAIMS:

The Mike Group claims are underlain by a flat-lying pile of Middle Devonian limestone and dolomite sediments. Their age has been definitely determined by the identification of the presence of mid-Devonian Brachiopod fossils in dark grey limestone beds overlying a bioherm algal deposit in which the sphalerite replacement occurs. The limestone unit is exposed over a vertical height of at least 200 feet in bluffs along the south border of the claims. The unit is quite regular on the claims but shows thrust faulting and attitude change to the north of the claims group.

The unit is overlain by black to brown shale, locally well shattered. It forms rounded hummocks up to 500 feet or so in height. It may be Upper Devonian in age. The sequence of Devonian limestone and dolomites, overlain by black shales, resembles the Upper Devonian shale/mid-Devonian limestone/unit of the Pine Point area, well known for the prolific lead-zinc deposits within the Presqu'ile sediments.

The presence of algal reef fragments replaced by massive sphalerite in colliform structures, also characteristic of the Pine Point deposits, supports this view.

The claim group is located on a gently sloping upland, plateau for the most part, on which rounded hills of upper black shale provide the principal topographic relief.

The plateau is incised at the edges by creek canyons that lead into the main north-south tributary of the Snake River

that borders the property on the east. The mineralized showings found to date, are on the gently sloping limestone shelf within a few feet of surface. Since there are large areas of flat-lying limestone bare of overburden, the prospecting is easier than normal and frequent patches of sphalerite mineralization occur across the claims group on surface. These provide a unique situation for exploration and future development.

The mineralization so far encountered occurs in two principal modes:

- 1) Massive light-brown resinous sphalerite often in colliform masses up to two inches in thickness, replacing fragments of algal from a bioherm reef.
- 2) Veinlets and intergrowths of resinous sphalerite and white, coarse grained calcite in brecciated zones. Sphalerite often makes up to 50 percent of the zone. Galena is sparingly present but no pyrite.

In the discovery zone on claim Mike 5 both types of occurrence are present. These modes of occurrence resemble the main deposit at the Barrier Reef property ten miles to the south although they occur there in dolostones of Proterozoic age stratigraphically much lower than the Mike group.

In many respects the occurrence of the Barrier Reef and Mike Group stratigraphic deposits resemble those of such well known lead-zinc fields as the Tristate deposits in the Mississippi Valley, Pine Point, and elsewhere; and warrant careful detailed exploration.

A possible explanation for the formation of this type

of occurrence in carbonate basins has been recently proposed by A. R. Renfro in an article in ECONOMIC GEOLOGY, Vol. 59, 1974, pp. 33-45. As an aid to identification of similar conditions, it is quoted as follows:

" GENESIS OF EVAPORITE-ASSOCIATED STRATIFORM METALLIFEROUS  
DEPOSITS - A SABKHA PROCESS

A. R. Renfro

Abstract

Stratiform metalliferous deposits underlain by continental red beds or other oxidized strata and overlain by evaporites account for approximately thirty percent of the world's copper production. The origin of such deposits, including those in the Kupferschiefer of Germany and the Roan of Zambia and Rhodesia, long has been a controversy that defies explanation by traditional means. Recently discovered sedimentary and geochemical processes of coastal sabkhas provide the foundation for a hypothesis that successfully explains the genesis of these deposits.

Coastal sabkhas are evaporite flats that form along the subaerial landward margins of regressive seas. Because of their unique position, coastal sabkhas are nourished by subsurface flow of landward migrating, low Eh-high pH sea water and by seaward-migrating, high Eh-low pH terrestrial water. Commonly they are bordered on the seaward by intertidal mudflats and lagoons that are carpeted by leather-like mats of sediment-binding, blue-green algae. Fetid ooze consisting of interbedded decaying algae and detrital sediment occurs immediately beneath the living algal mat. On the landward side, the coastal sabkhas give way to, and initially rest on, sterile, oxygenated desert sediments.

Coastal sabkhas and their related evaporite facies prograde seaward across adjacent algal-mat facies. Upon burial the algal-mat facies become saturated with hydrogen sulfide generated by anaerobic bacteria. Concurrently, the trailing, landward edges of coastal sabkhas are buried by prograding terrigenous clastics of the desert. As sabkhas migrate basinward, terrestrial-formation water

" eventually must pass upward through the buried, strongly reducing algal mat in order to reach the surface of evaporation.

Terrestrial-formation water initially has low pH and high Eh and thus can mobilize and transport trace amounts of such elements as copper, silver, lead, and zinc. As terrestrial-formation water passes through the hydrogen sulfide-charged algal mat, its load of solute metals is reduced and precipitated interstitially as sulfides. Resulting metal deposits generally are conformable to the geometry of hydrogen sulfide-bearing host strata. Such deposits contain suites of metals that are zoned from landward to seaward according to their relative solubilities in the presence of hydrogen sulfide. These deposits are underlain by oxidized continental strata and are overlain by dolomite, gypsum, anhydrite, and/or halite. Grade and size of the deposits are dependent upon:

(1) quantity of available reductant, (2) duration of the sabkha process, and (3) quantity and chemistry of the metal-bearing, terrestrial water. "

Identification of the reef structures themselves in the sedimentary sequences is a requisite for further exploration and once it has been identified, careful prospecting within it for sphalerite replacements should follow. This is greatly facilitated by equipping prospectors with the new dithizone sprays that immediately identify zinc-oxide coatings on the rocks. Since pyrite is absent, gossans in the dolostones are rare, and the sphalerite is difficult to identify by eye. It has remained undetected in this area until the modern geochemical methods were used. Placing the field geochemical sprays in the hands of the prospecting personnel themselves; and guiding them to the correct geological environment will continue to turn up many new deposits of zinc in the vast carbonate basin sequence of the Bonnet Plume River and surrounding areas.

The flatness of the limestone beds on the Mike group do not indicate as a whole any apparent structural disturbances of

the beds. However, the large thrust fault on the north side of the group may have caused pressure on the block and subjected it to compressive stresses that opened up later tensional fracturing which provided channel ways for ore solutions. The overlying black shales may be the source beds from which percolating surface water brought the zinc ions into the reef areas where they were precipitated by sulphides generated from algal decomposition. In which case the contact between the shales and the underlying limestone would be good areas to search in detail.

Although the massive sphalerite itself is a poor conductor, there is locally enough galena present to warrant the use of the induced polarization geophysical method in the search for ore deposits. Frequency tests were carried out on a well mineralized specimen of sphalerite containing less than 1% galena and no pyrite. A rating of 100 units was obtained. This compares with 300 units on a similar test of good conductive rock from another area. The I.P. method could thus be of value in searching for ore deposits.

#### DESCRIPTION OF SHOWINGS ON THE MIKE GROUP:

Showings of sphalerite in dolomite-limestone breccia were seen at six widely separated locations on the claims group. No work has been done on the occurrences and all are prospectors' discoveries in exposed outcrops of flat-lying limestone of mid-Devonian age. They are similar in nature and occur at approximately the same stratigraphic level in the limestone-dolomite pile somewhere near the eroded off contact of the overlying black shales.

Showings:

1) SW Corner Claim Mike No. 16

A bluff 50 feet in height shows reefoid grey limestone containing coarse sphalerite replacement in dolomite-limestone breccia zone. A representative grab sample of talus material covering an area of 50 feet or so in diameter assayed 24.9% zinc. The mineralized limestone bed appears to be at least 10 feet in thickness. Its lateral extent is not known due to overburden cover.

2) NW corner of Claim Mike No. 4 (approximately 1,500 feet south of Showing No. 1) A flat-lying area of reefoid limestone containing very coarse sphalerite in calcite-breccia. A representative grab sample assayed 42.3% zinc. The mineralized exposure is approximately 50 feet in diameter and flat-lying. Its lateral and vertical extent are not known.

3) Near SE corner of Claim Mike 26. (approximately 4,500 feet west of Showing No. 2) A flat-lying dark reefoid limestone bed is exposed in a creek, near the contact of overlying black shales. A patch of mineralized limestone-breccia containing algal material with replacements of sphalerite in limestone is exposed in an area 50 to 75 feet in extent. Time did not permit a detailed examination. A picked high grade sample from the outcrop assayed 33.80% zinc and 12.55% lead.

Part of the area was snow covered at the time of examination.

The shale-limestone contact area here is several thousand feet in extent and warrants detailed examination.

The lateral and vertical extent of the mineralized zone is not known.

- 4) NE corner of Claim Mike 34 (approximately 3,000 feet NE of Showing No. 3) Considerable sphalerite float in brecciated limestone indicates nearby mineralization in place similar to Showing No. 1. No samples were taken.
- 5) Claim Mike 15 (1,000 feet NE of Showing No. 1) A flat-lying limestone breccia outcrop shows considerable secondary zinc. No samples taken.

The preliminary examination of the Mike Group shows that separate mineralized outcrops containing sphalerite replacement in brecciated reefoid beds of grey dolomite-limestone occur over a wide area several miles in extent. The individual extent of the mineralized zones are not known. All are recent discoveries that require detailed examination to evaluate their importance.

#### CONCLUSIONS & RECOMMENDATIONS:

Visual evidence shows that the limestone pile contains a series of sphalerite bearing strata that appear as flat-lying exposures at various locations over a considerable horizontal distance measured in thousands of feet. Careful topographic and geological mapping is needed to evaluate their continuity, extent and significances. From the extensive lateral and vertical spread of individual high grade showings however it is apparent that a significant strataform zinc discovery in favorable Middle Devonian limestone-dolomite sediments has been discovered. The most important zinc bearing bed is a hackly surfaced grey dolomitic limestone that is flat-lying or dips gently east. This horizon contains collapse breccia zones and bioherm reef structures that have replacements of heavy calcite containing light brown sphalerite with minor galena. Local concentrations of economic grade material averaging 15 to 20% zinc are present.

The mineralized beds vary from 12 to 25 feet in thickness and lengths up to 500 feet have been indicated. Continuity between various showings has not yet been established. The possibility of finding a substantial strata-band lead-zinc deposit on the property is considered excellent and a detailed exploration program including topographic, geological, geochemical and geophysical survey followed by trenching and diamond drilling is recommended immediately. The cost is estimated at \$60,000.00. The program could be completed this season in two months.

ESTIMATED COST:

An initial exploration programme is warranted on the claims, totalling \$60,000 as follows:

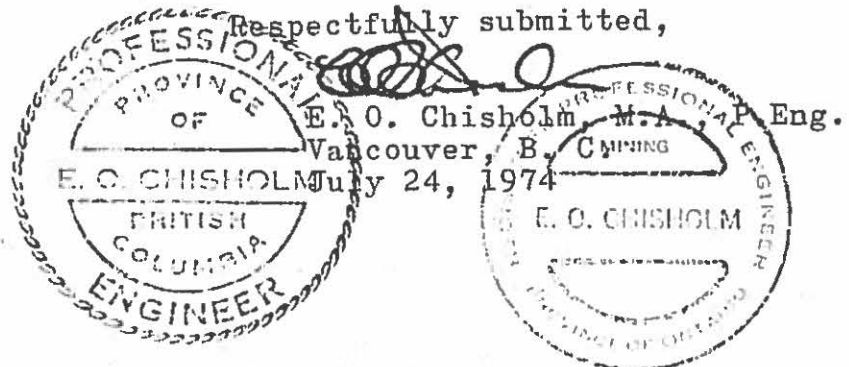
Phase I:

Line cutting - 30 miles	\$ 4,000.00
Geological Survey	2,500.00
Geochemical Survey	4,000.00
Induced Polarization Survey	4,500.00
Prospecting and Trenching	2,000.00
Helicopter - 20 hours @ \$200	4,000.00
Fixed Wing	2,000.00
Camp and Supplies	2,000.00
Assay	2,000.00
Supervision and Consulting	5,000.00
Contingencies	6,000.00
Total Phase I	\$38,000.00

Phase II:

Winkie Diamond Drilling	
4,000 feet @ \$5.50/foot	22,000.00
Total Phases I & II	\$60,000.00

Respectfully submitted,

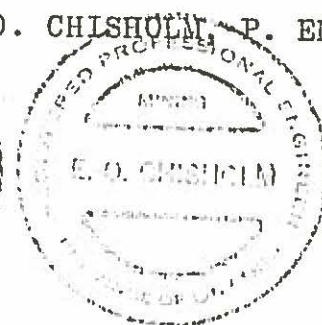
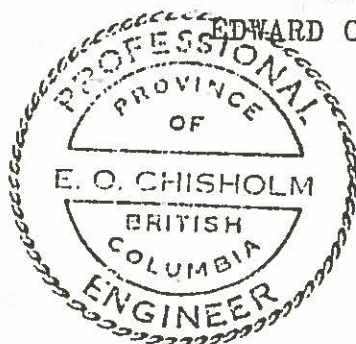


CERTIFICATE

I, Edward O. Chisholm, of the City of Vancouver in the Province of British Columbia, hereby certify that:

- 1) I am a geologist with offices at 821-602 West Hastings Street, Vancouver, B. C.
- 2) I am a graduate of the University of Toronto, Ontario, Master of Arts, 1945.
- 3) I am a member of the Professional Engineers of Ontario and British Columbia.
- 4) Permission is granted for submission of the report to the Vancouver Stock Exchange.
- 5) This report is based on my personal visit to the area and published geological literature.

DATED at Vancouver, British Columbia this 20th day of July, 1974.



A handwritten signature in black ink, appearing to read "E. O. Chisholm".

EDWARD O. CHISHOLM, P. ENG.

STATEMENT OF COSTS

For 144 Mineral Claims as follows:

Mike 1 - 43  
 Rio 1 - 30  
 T.C. 1 - 36  
 Algal 1 - 35

1) Wages 30 Man Days

(John Toporowski/Mike Brodribb/  
 Kevin Milledge)  
 Supervision 3 man days

\$ 900.00  
300.00 \$ 1,200.00

2) Supervision 3 Man Days

300.00

3) Camp Costs

330.00

4) Field Equipment Expense

231.00

5) Recording Fees

1,400.00

6) Staker's Fees

450.00

7) Claim Post Cost

315.00

8) Helicopter Flying

July 27 - August 7:

275605

218.90 *No*

275606

278.60 *No*

275609

278.60 *No*

276610

457.75 *No.*

275613

378.10 *STAKING*

275616

199.00 *STAKING*

275614

159.20 1,970.15

*No receipt*

- Flying	\$ 870.00	
- Fuel	394.20	\$ 1,264.20

9) Fixed Wing Flying:

Yukon Air		
2583	457.00	
108 Mile Airways		
# 870	1,118.40	
867	643.20	
859	<u>1,082.40</u>	<i>Staking</i> 3,301.00

10) Pro Rata General Expenses

144/700 (\$8,438.00)	<u>2,000.00</u>
----------------------	-----------------

TOTAL ON ACCOUNT

12,761.35

# EWING TRANSPORT

Mayo, Y. T. ..... 19..

To  
 Harmon Management  
 821 - 602 West Hastings  
 VANCOUVER, B. C.

Jul 11	B/L No. 11 12 pcs 2" x 4" x 16" slts	126 Pcs @ 213.16 U.S. Tax @ 11.84%	27.21 1.52	
20	B/L No. 17 300 pcs 2" x 2" x 4"	@ 90¢	270.00	
22	B/L No. 18 100 pcs 4" x 4" x 4"	@ 1.75	175.00	
23	B/L No. 20 80 pcs 4" x 4" x 4"	@ 1.75	140.00	613.80
<i>Terms: 30 Days . . . Nominal interest charged thereafter</i>				



OUR NUMBER	275616
DATE	AUG 7-74
CUSTOMER'S ORDER	
SALESMAN	R.G. STURGES
TERMS	
F.O.B.	

SOLD TO HARNAN MANAGEMENT LTD  
Box 4509 WHITEHORSE YUKON

SHIPPED TO \_\_\_\_\_  
 ADDRESS \_\_\_\_\_ VIA C-GHFA.

INVOICE

	PING GROUP (MOVE IN J.T. & M.B.)	1	7		
	TOM DICK HARRY GROUP		5		
	GYR (JOHN HOBAN)	1	1		
	BAT GROUP		8		
	MIKE PROJET (CHRISTOLM) (STARKING)	1	0		
	GOZ LAKE - CONINCO TO BAROP	1	6		
	1.6 ?				
		6	7	236	6

Red-form 7M31

1212515-R143  
 7-11-73





# 108 MILE AIRWAYS LTD.

R.R. 1, 100 MILE HOUSE, B.C.

*Charter Air Service*

DOUG McARTHUR  
LIZ  
(604) 395-2121

TICKET No 867

DATE JULY 26 PILOT ARMAROSE AIRCRAFT CL-212

CHARTERED BY AND/OR FOR: HARMAN

CUSTOMER'S CHARTER RECORD

FROM	NO. OF PASS.	WAITING TIME	FLYING TIME	REVENUE MILES	MILEAGE @ \$1.20
GOZ		600		120	643.20
MAHO		1600		120	
GOZ		-		70	CRUISE \$5 PER HOUR
MOUNTAIN		-		70	WAITING \$5 PER HOUR
GOZ	3	1000		70	LANDINGS \$2 PER
MOUNTAIN	-	-		70	EXPENSES
GOZ	4	800		70	EXTRA BAGGAGE
TO					
TO					
TO					
TO					
CASH	CHARGE	CHEQUE	TOTALS	531	TOTAL CHARGE \$643.20

Passengers acceptance of Charter and Conditions of Carriage as shown on the reverse side of Passenger's Copy of this Charter Ticket.

1. GRAC + STAYES TO GIZ
2. CAMP MOVE
3. 9 KM TO MAHO
4. ARMAROSE

PILOT'S LOG OF TRIP

FROM	ACTUAL FLIGHT TIMES			AIRCRAFT MILES
	UP	DOWN	A/C TIME	
TO				
TO				
TO				
TO				
TO				
TO				
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TO				
TO				
TO				
TO				
TO				
TOTALS A/C				
REMARKS:				
PILOT'S W/T MILES				
PILOT'S TOTAL MILES				

FLIGHT TICKET

CERTIFIED CORRECT: PILOT'S SIGNATURE

*Armarose*



# YUKON AIR LTD.

BOX 2244  
WHITEHORSE, YUKON  
PHONE: 668-2355

No. B 2583

FLIGHT REPORT No.:

CHARTER No.:

DATE: July 27 1974 A/C: Cessna 185 WTD

NAME: HARMAN MANGT LTD.

ADDRESS: Box 4509 WHITE HORSE

	Miles	RATE	TOTAL		FREIGHT OR PASSENGER
	Hours				
FROM: <u>FARO JOHNSON LK</u>					
TO: <u>FOZ LK.</u>	<u>170</u>	<u>80</u>	<u>136</u>	<u>00</u>	<u>4 SLAWERS.</u>
TO: <u>JOHNSON LK.</u>	<u>170</u>	<u>85</u>	<u>144</u>	<u>00</u>	
TO: <u>ROSS RIVER</u>	<u>35</u>	<u>80</u>	<u>28</u>	<u>00</u>	<u>1 LINK CUTTER</u>
TO: <u>FOZ LK.</u>	<u>185</u>	<u>80</u>	<u>148</u>	<u>00</u>	
WAITING TIME					
OTHER CHARGES			<u>456</u>	<u>00</u>	PILOT <u>[Signature]</u>
DISCOUNT					CHARTERER
	TOTAL		<u>456</u>	<u>00</u>	REMARKS:
			<u>456.00</u>		

# OLYMPIC HELICOPTERS LTD.

P.O. BOX 622  
MONTREAL 379, P.Q.

PHONE 514-334 2332

## FLIGHT REPORT

HELICOPTER: **BELL 47B-3** CF-**YUC**  
PILOT: **DRZYMALA**  
BASE: **PALMER LAKE**

DATE	TIME OFF	TIME DOWN	HOURS	CUSTOMER
<b>28 July 74</b>				ADDRESS
	<b>Post transport and positioning.</b>			CHARGE TO <b>HARMAN MANAGEMENT</b> ADDRESS <b>Box 4509,</b> <b>WHITEHORSE, Yukon</b>
	<b>H.M.C. Contract job.</b>			
			<b>6.0</b>	AUTHORIZED
				FLIGHT FROM TO
				FROM TO
				FROM TO
TOTAL HOURS FLOWN			<b>6.0</b>	GAS & OIL SUPPLIED COMP. <input type="checkbox"/>
STANDBY-TIME				CUST. <input checked="" type="checkbox"/>

SPECIAL INSTRUCTIONS & REMARKS

*Harman fuel*

OLYMPIC<sup>4</sup> HELICOPTERS LTD.

INVOICE

Nº 1106

P.O. BOX 622  
MONTREAL 379, P.Q.

Harman Management Ltd.  
Box 4509  
WHITEHORSE, Y. T.

DATE: August 9, 1974

Please mail cheque to:  
Yukon Business Services Ltd.  
205-205A Main St.  
WHITEHORSE, Y. T.

Rate: \$145.00 per hour

Flight report July 28/74

6.0 hours

\$870.00

(Report attached)

Terms: Net Cash on receipt of invoice.

Indian and Northern Affairs    Affaires indiennes et du Nord  
GENERAL RECEIPT    RÉCÉPISSÉ GÉNÉRAL

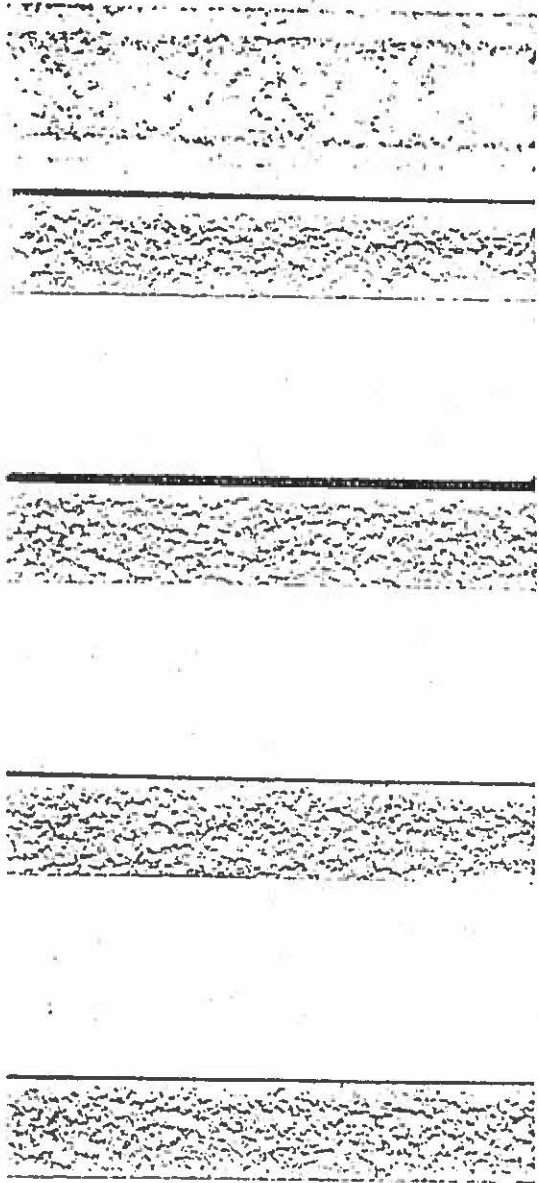
B 300685

Date: 9 Aug 74    Nature and No. of Remittance - Forme et n° de la remise: CHEQUE

Received the sum of - Montant de la somme de: THREE HUNDRED    Direction: 00 / 100 DOLLARS \$300.00

From - Du: HARKMAN MANAGEMENT  
Box 4509  
WHITEHORSE, VT.

Paid - Pour: 30-Dtz. REC. FEES  
RIO # 1-30 - 106-C-1C  
Guz Lake Area  
Authorized Signature - Fonctionnaire autorisé: *Jm-Ward*





Indian and Northern Affairs Affaires indiennes et du Nord

B 300685

GENERAL RECEIPT RÉCÉPISSÉ GÉNÉRAL

Branch Direction

Nature and No. of Remittance - Forme et n° de la remise

Invoice No. - Facture n°

Location - Endroit

MAYO, V.T.

Date: 9 AUG 74

Received the Sum of - Reçu la somme de

CHEQUE THREE HUNDRED

00, 100 DOLLARS \$ 300.00

From - De

( HARMAN MANAGEMENT )  
BOX 4509  
WHITEHORSE, V.T.

For - Pour 30-072 REC. FEES  
RIO # 1-30 - 106-C-10  
GOZ LAKE AREA

J.M. Wood

Authorized Signature - Fonctionnaire autorisé

LAND 10-38 (3-72) 7930-21-023-406R

AFFIDAVIT

Supporting Summary of Costs

I, E.O. Chisholm, Consulting Geologist, 821-602 West Hastings St.  
Vancouver British Columbia, do hereby state that to the best of my  
knowledge the statement of costs presented in this report is correct.

Dated at Vancouver, 28th day of August 1975.

Sworn before me at Vancouver,  
British Columbia 28th day of August, 1975

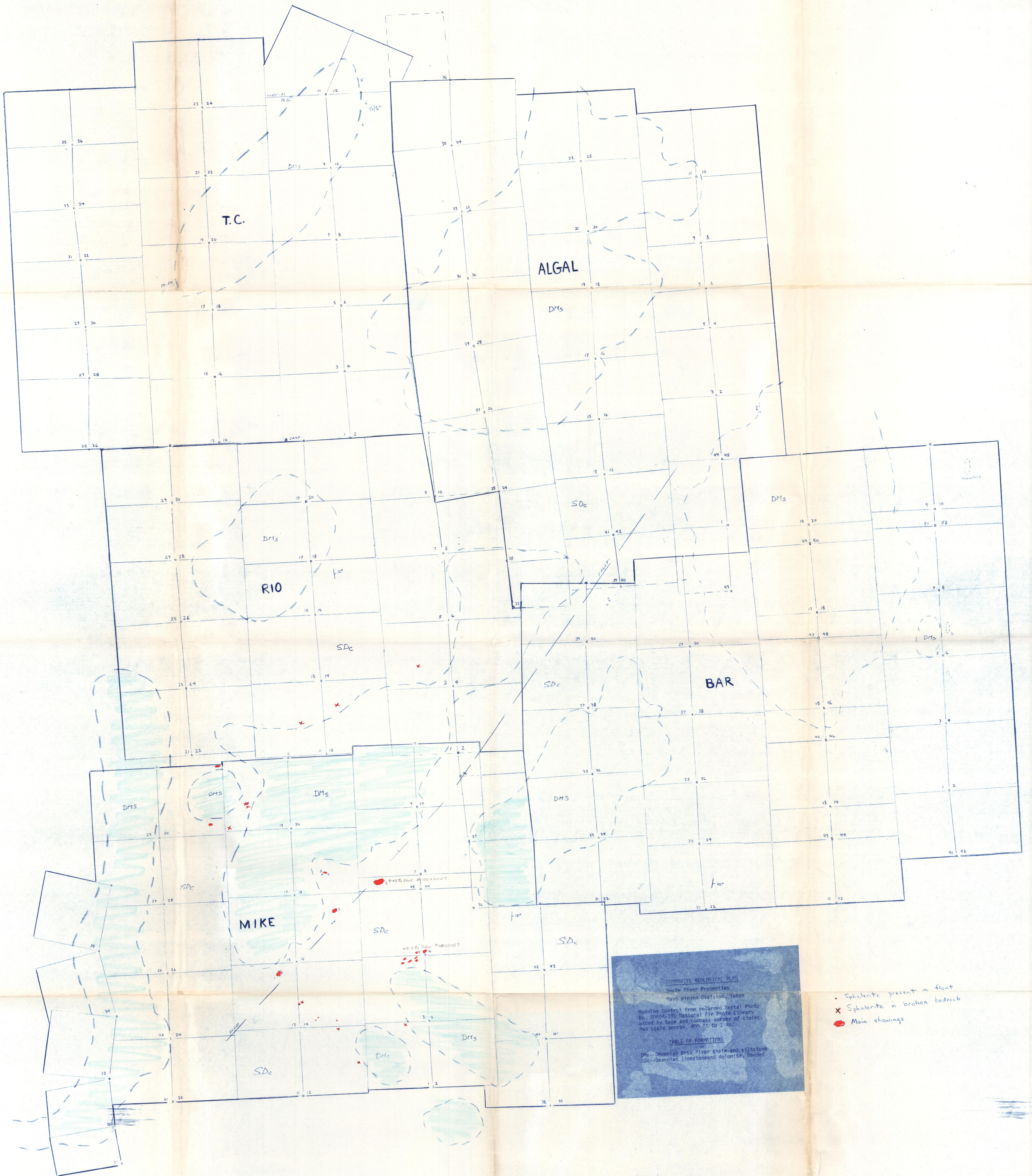


*[Signature]*

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*[Signature]*

E.O. Chisholm



**COMPOSITE GEOMORPHIC PLAN**  
 Snake River Properties  
 Tavo Mining Division, Idaho  
 Horizontal Control from enlarged Aerial Photo  
 No. 2494-191 National Air Photo Library  
 aided by tape and compass survey of cloues.  
 Map scale approx. 800 ft to 1 in.

**TABLE OF FORMATIONS**  
 DMS - Devonian Beza River shale and siltstone  
 SDe - Devonian limestone and dolomite, bedded

