

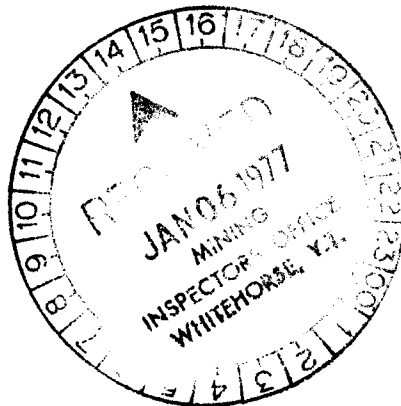
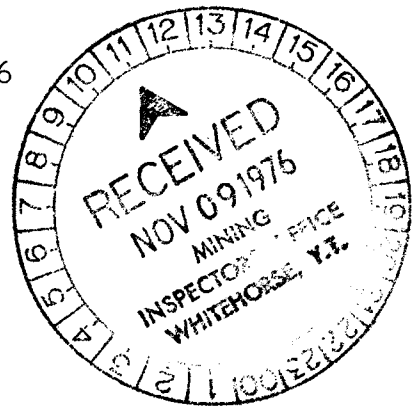


GEOLOGICAL REPORT

"M CLAIM GROUP"

115F/16 YUKON TERRITORY

PICKHANDLE PROJECT - 1976



SUE W. CAMPBELL,
GEOLOGIST

WESTERN MINES LIMITED
SEPTEMBER 1976

070



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 \$ ~~800⁰⁰~~ 6500⁰⁰

W.D. Sinclair
 Resident Geologist or
 Resident Mining Engineer

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

B.R. Baxter
 B.R. BAXTER
 Supervising Mining Recorder

[Signature]
 Commissioner of Yukon Territory

\$ 800 \$ 6500

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SUMMARY AND RECOMMENDATIONS

The M Group claims were optioned from P. Verslucce by Brascan Resources Limited in May, 1975. The property is located 200 miles (320 Km) west-northwest of Whitehorse, Yukon Territory and is accessible by helicopter. Limited geological work was conducted in 1975.

The 1976 exploration program consisted of detailed geologic mapping and prospecting of the claim group and surrounding area and a magnetometer survey over a portion of the claims.

Geological work determined volcanic stratigraphy and areal extent of copper-iron showings. The mineralization is typical copper-iron sulphide content of intermediate composition volcanic rocks.

The magnetometer survey delineated continuation of the folded serentinized peridotite under areas of overburden.

The property option was dropped July 31, 1976.

INTRODUCTION

Detailed geologic mapping of the M Group Claims and surrounding area and a magnetometer survey over half of the property were conducted during the summer, 1976. Geologic mapping at 1:6000 continued from mid-June to end of July: The exploration program was supervised by L. W. Saleken, Geologist.

Results of the geological and geophysical work are presented in the following report.

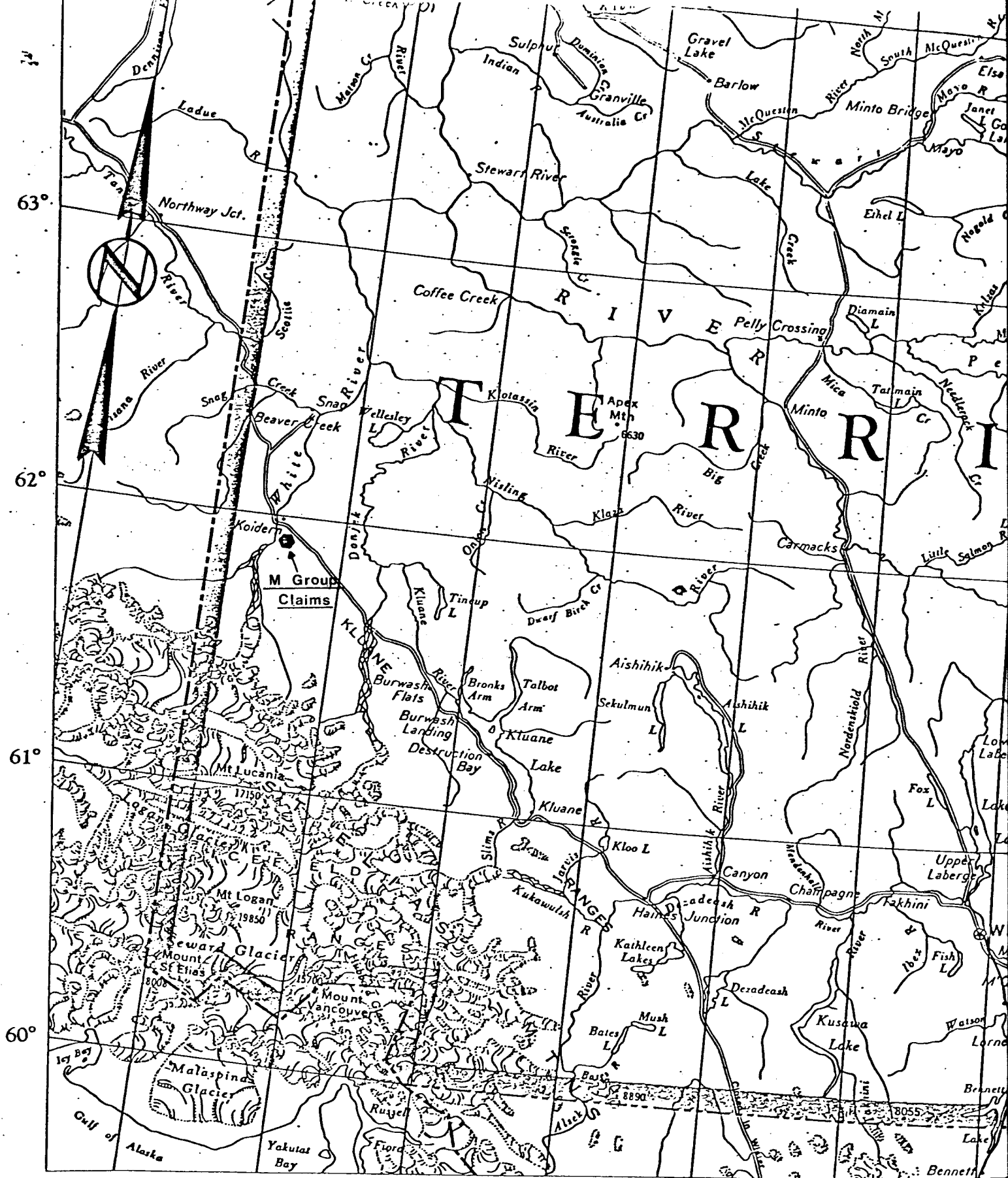
LOCATION, ACCESS AND LOGISTICS

The M Group Claims are located within the Whitehorse Mining District approximately 200 miles (320 Km) west-northwest of Whitehorse, Yukon Territory. The 61 claims sit between elevations 2,250 feet and 4,500 feet on the northeast slope of the Kluane Ranges between Edith Creek and Koidern River (NTS 115 F 16).

Most convenient access to the property is by helicopter from any suitable location on the Alaska Highway, which passes within three miles (4.8 Km) of the lower elevation claim boundary. White River Lodge (Mile Past 1169) has a helicopter landing site with ample room for storage of JP.4 or AV-GAS fuel. The southeast end of the claims group (Creek #2) may be reached by a five mile (8 Km) long winter tractor road, which leaves the Alaska Highway at MP 1154. Airboat navigation of Koidern River and numerous small lakes to the northwest end of the property at Creek #9 is possible during times of high water levels. Pickhandle Lake, situated three miles (4.8 Km) north of the claims, is easily negotiated by float planes.

The 1976 field camp was located ten air miles (16 Km) southeast of White River Lodge, owned and operated by Tom and Norma Bradley. Accommodation, meals, propane, gasoline, and deisel fuel are available at the lodge. The Bradleys monitor base and mobile CB radios on Channel 19 from 8:00 A. M. to 10:00 P. M. daily. Tom Bradley runs an airboat which he will rent on an hourly basis. The White Pass freight truck travels the Whitehorse to Beaver Creek (MP 1202) section of the Alaska Highway twice weekly.

HF radio communication can be established TMTA basis at Carmacks, Haines Junction and Whitehorse on 4461 hz and to CNT Whitehorse on 4950 hz. Field mining exploration camps and expeditors operate on 4441 hz.



141° 140° 139° 138° 137° 136° 135°

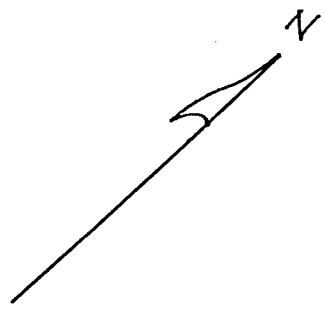


SCALE

PROPERTY AND CLAIM STATUS

<u>Claim #</u>	<u>Record #</u>	<u>Recording Date</u>	<u>(Work) Expiry Date</u>
M 54-59	Y98924-29	June 26, 1975	June 26, 1977
M 52+53	Y90912+13	Sept. 17, 1974	Sept. 19, 1980
M 6	Y77307	Oct. 4, 1973	Oct. 4, 1980
M 1-5	Y77302-06	Oct. 4, 1973	Oct. 4, 1980
M 7+8	Y77308+09	Oct. 4, 1973	Oct. 4, 1980
M 9+10	Y77324+25	Oct. 3, 1973	Oct. 4, 1980
M 11-13	Y77354-56	Oct. 4, 1973	Oct. 4, 1980
M 14	Y77357	Oct. 4, 1973	Oct. 4, 1980
M 19+20	Y77358+59	Oct. 4, 1973	Oct. 4, 1980
M 21-51	Y77549-79	Oct. 19, 1973	Oct. 19, 1980
M 60-61	YA3104-5	July 24, 1975	July 24, 1977

			51
		Y 77579	
36	35	49	50
Y 77564	M GROUP Y 77563	Y 77577	Y 77578
38	37	47	48
		Y 77575	Y 77576
Y 77566	Y 77565	22	21
40	39	Y 77556	Y 77549
Y 77568	Y 77569	24	23
42	41	Y 77552	Y 77551
Y 77570	Y 77569	26	25
44	43	Y 77554	Y 77553
Y 77572	Y 77571	28	27
46	45	Y 77556	Y 77555
Y 77574	Y 77573	30	29
19	20	Y 77558	Y 77557
Y 77558	Y 77559	32	31
13	14	Y 77560	Y 77559
Y 77356	Y 77357	34	33
11	12	Y 77362	Y 77361
Y 77354	Y 77355	2	1
9	10	Y 77303	Y 77302
Y 77324	Y 77325	4	3
7	8	Y 77305	Y 77304
Y 77308	Y 77309	6	5
M 61	M 60	Y 77307	Y 77306
YA 2105	YA 3104	52	53
		Y 90912	Y 90913
		M 54	M 55
		Y 98924	Y 98925
		M 56	M 57
		Y 98926	Y 98927
		M 58	M 59
		Y 98928	Y 98929



alaska highway 2.25 miles

M GROUP CLAIMS
 115 F 16
 scale 1" = 1/2 MILE

PHYSIOGRAPHY AND CLIMATE

The M Group claims are situated at or below tree-line between elevations 4,500 feet asl. and 2,250 feet asl., on the southeast slope of the Kluane Ranges. The steep slope is broken by two level benches and deeply dissected by numerous creeks. The Shakwak Trench, a wide, flat-bottomed valley lies at the base of the Kluanes below the claim group. Tree cover is moderately thick along the creeks, but sparse on the mass covered slopes. Permafrost is approximately one to two feet (1-2) below surface.

Summers in the Kluane Ranges are short, but the sun is above the horizon for a maximum of about 20 hours. Mean temperatures for June and July are about 55° F to 60° F, but cloudy, windy days may drop the temperature to 35° F, while clear, calm days may raise the temperature to 90° to 95° F. Temperatures of 105° F were recorded at Bruwash Landing on Kluane Lake near the end of June, 1976. Rainfall is occasionally light and continuous for up to a week or heavy and short-lived over the course of a day. Moderate to strong winds are typical in the Kluanes, sometimes gusting to 40 and 45 mph. Snow storms are possible during the summer months.

HISTORY AND PREVIOUS WORK

Prospecting in the area during the early 1950's was conducted by Prospector's Airways, Canalask Nickel Mines, and Frobisher Mines and a rough field map of the geology and showings was produced. Their field work was concerned with investigating results of an airborne mag survey carried out by Dr. Hans Lunberg. The work resulted in staking and subsequent development of the Canalask Nickel Mines in 1954.

Mr. P. Versluce staked the GG and JJ claims in 1968 and later restaked them as the M Claims when they lapsed in 1973. A twelve mile (19.2 Km) grid was cut between Creeks 2 and 5 in 1968 by Roger Voisine and his crew and a small cat trail was constructed along the base of the mountain northwest to Creek 3.

In 1973, a field crew from John S. Vincent Limited acting for Nickel Syndicate (Aquitaine, Home Oil, Getty Mining Pacific) began a program of mapping, prospecting and geochemical sampling, but were halted by poor weather.

K. A. McLean, previously with Brascan Resources, examined some of the showings with P. Versluce in September 1974. Brascan Resources Limited optioned the M Claims in May, 1975 and a ten day bulldozer stripping program was conducted in early June. K. A. MacLean and H. Versluce spent ten days prospecting and mapping in July and F. B. Whiting and B. K. McKnight visited the property in August and September, respectively.

PROJECT EXPENDITURE FOR 1976

PERSONNEL

Sue W. Campbell Geologist	Geology Dept., U.B.C. Vancouver, B. C.	May 15-Aug. 15	\$1,500/month	92
Kim Baldry Assistant Geologist	Geology Dept., U.B.C. Vancouver, B. C.	June 1-Aug. 3	\$700/month	64
Grant Crooker Geologist	Keremeos, B. C.	July 10-31	\$50/day	22
Brian Laing Assistant Geologist	Nanaimo, B. C.	July 17-31	\$32/day	15
L. W. Saleken Geologist	6976 Laburnum Street Vancouver, B. C.	July 10-20	\$100/day	11

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PERSONNEL COSTS

Sue W. Campbell	3.0 Months @ \$1,500 per month	\$4,500.00
Kim Baldry	2.0 Months @ \$700.00 per month	1,400.00
G. Crooker	21 days @ \$50.00 per day	1,050.00
B. Laing	15 days @ \$32.00 per day	480.00
L. W. Saleken	10.0 days @ \$100.00 per day	1,000.00
	Sub Total	8,430.00
	Fringe Benefits @ 20%	1,686.00
	Total	\$10,116.00

HELICOPTER

Total Hughes 500 c hours from June 14 to July 24 - 17.2 @ \$280.00 per hour	\$4,816.00 ✓
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EQUIPMENT RENTAL

Radio SBX-11 for June and July	\$ 324.84
Magnetometer for July	100.00
Camp Rental 2 months @ 750 per month	1,500.00

TRAVEL EXPENSE AND TRANSPORTATION

Freight	394.12
Room and Board	200 months @ 9.00 ✓ 1,800.00 ✓
Camp Food and Materials	1,003.34 ✓
Camp Fuel	200.00

MAP AND REPORT COSTS

Map Preparation	312.31 ✓
Field Office Supplies	190.37 ✓

Total Project Expenditure \$20,756.98

EXPLORATION PROCEDURE FOR 1976

The 1976 field program was aimed at detailed geologic mapping and prospecting of the M Claims and surrounding area. Objectives of the 1:6000 scale mapping were;

- (1) to delineate the stratigraphic sequence and geologic environment of a group of volcanic and sedimentary rocks;
- (2) to determine areas and extent of copper mineralization; and
- (3) to establish a relationship, if any, between volcanic stratigraphy and environment and copper occurrences.

A magnetometer survey was conducted across the area of best mineralization in order to delineate the geology in overburden areas.

GEOLOGY

REGIONAL GEOLOGIC SETTING

The Kluane Ranges extend 120 miles (192 Km.) from Slims River northwest to White River and are flanked on the southwest by the St. Elias Mountains and on the northeast by the Shakwak Trench.

The oldest rocks in the Kluane Ranges are Lower Permian medium green, andesitic volcanic flows, thinly bedded to massive tuff, volcanic breccia and agglomerate, and locally interbedded argillite and limestone. This unit reaches an estimate thickness of 4,000 feet (1.2 Km) and is overlain conformably by 3,000 feet (0.9 Km) of Lower Permian sedimentary rocks. The contact is gradational grey to black argillite, chert, and siltstone form the lower portion of this unit with an upward change to argillaceous limestone, buff-colored, massive limestone, and discontinuous beds of reddish-brown conglomerate and massive sandstone. Upper Triassic amygdaloidal basalts with thin discontinuous limestone interbeds overlie the Permian strata disconformably. These volcanic rocks are dark green with black amygdules to reddish-purple with creamy-white vesicle fillings. Individual flows measure 50 feet (152 m) across. Total thickness of this unit is approximately 3,000 feet (0.9 Km).

Serpentinized mafic and ultramafic rocks occur within the upper part of the Permian volcanic-sedimentary contact and are dominantly concordant to sedimentary layers.

Rocks younger than the Triassic flows outcrop in the southeastern half of the Kluane Ranges. They include Upper Triassic limestone, shaly limestone, gypsum, and limy to silty shale and a Lower Cretaceous and Upper Jurassic sedimentary sequence consisting of greywacke, argillite, minor conglomerate, and limestone.

Large granitic bodies have intruded the Permian to Cretaceous sequence. Two main stages of intrusive activity produced Cretaceous (and Jurassic ?) granodiorite, quartz diorite, and diorite and Cretaceous (and Tertiary ?) alaskite, granite, granodiorite and porphyritic rhyolite.

The entire volcanic-sedimentary section has been folded and faulted. Subparallel inclined folds have axial planes striking 100° and dipping 70° S.W. These folds experience a number of culminations and depressions along the length of the Kluane Ranges. Faulting has been intense with near-vertical dip-slip faults parallel to fold axial traces and younger strike-slip faults perpendicular to the Shakwak Trench. Metamorphism has reached lower Greenschist facies

PROPERTY GEOLOGY

Geologic mapping of the M Group claims was completed on a scale of 1:6000 inches. The property is underlain by a sequence of Permian volcanic, volcanoclastic, and sedimentary rocks. Seven mappable units of Permian age were delineated. The volcanic units progress upwards from flows to coarse-grained and lapilli tuffs, and finally to agglomerates and breccias. A discontinuous felsic volcanic rock (map unit 8) is Permian or younger. The Permian sequence has been intruded by peridotite (map unit 9) of possible Triassic age.

The oldest rock type (map unit 1) exposed on the property is an intimately interbedded sequence of grey-brown cherty argillite, grey limy argillite, black shale, and fine-grained medium green andesite tuff. This unit is well foliated with numerous minor folds and shears. Its apparent thickness at the northwest end of the property is exaggerated by faults running subparallel to bedding.

White to light grey fine-grained, crystalline limestone and cherty limestone (map unit 2) overlie the tuffite. This unit flanks both sides of the tuffite due to anticlinal folding.

Map unit 3 is a major volcanic unit of the property. The rock is light to medium green andesitic flow. Pillowed andesite and vesicular to amygdaloidal flow rock are recognizable in some outcrops. The pillows are six inches to one foot (15 to 30.5 cm) by one to two feet (30.5 to 61 cm) in the plane of exposure. The amygdules are chlorite, epidote, calcite, or chlorite + epidote + calcite. Quartz-calcite + epidote veins, less than or equal to six inches (15 cm) and running parallel to foliation, are numerous in the andesitic flow rock. Thin, one cm wide, epidote stringers and veins occur in subparallel groups. The andesitic flow has developed into chlorite schist in certain areas of intense folding and shearing. Sweated out pyritic bands (5 mm wide) parallel to foliation are common in the volcanic flow and their folded nature is representative of the larger folding pattern.

Map units four and five are younger than the andesitic flow unit and are interbedded near the base of the volcanic tuff (map unit 6). Unit four consists of thinly bedded black shaly argillite, grey to black chert, and grey-brown cherty argillite. Unit five consists of buff-colored limestone with interbedded thin cherty layers (0.5 to 1 cm. wide) and lenses of chert varying in size from 7 to 15 cm. across.

Medium to dark green volcanoclastic rocks (map unit 6) include andesitic and minor dacitic coarse-grained tuff (≥ 3 mm. fragments), lapilli tuff (≥ 4 mm. fragments), and minor hornblende crystal tuff. A gradation to larger fragment size in the tuffs going up-section appears locally. The tuffs are massive, poorly foliated to thinly bedded (≥ 10 cm.), well foliated. Quartz and quartz-calcite + epidote veins and stringers intrude the volcanic tuffs.

An aphanitic to fine-grained, well-foliated felsic volcanic rock (map unit 8) is contained within a folded section of andesitic tuff. This unit may overlies the tuff as a discontinuous rhyolitic flow or may represent a felsic intrusion into the intermediate volcanoclastics. Map unit eight is restricted to two outcrops at 4,000 feet a.s.l. in Creek 1.

The Permian volcanic-sedimentary sequence exposed on the property ends with a thick sequence of medium to dark green dacitic to andesitic agglomerate and breccia with interbedded chert and shaly argillite (map unit 7).

A serpentized peridotite sill (map unit 9) intrudes the Permian section and is repeated by anticlinal folding. This dark green to black ultramafic body averages 100 feet (3 metres) wide and intrudes the upper portion of the tuffaceous unit. The well sheared and fractured serpentized peridotite is believed to be of Triassic age.

STRUCTURAL SETTING OF M CLAIMS

The M Group Claims are positioned on the northeast limb and at a culmination of a regional syncline. This major fold trends northwest, is isoclinal, and is inclined to the southwest.

A number of Permian and Permo-Triassic rock units within the M Group boundary appear to be repeated. Structural data suggest that numerous smaller scale isoclinal folds and subparallel faults cause this repetition. Major plane of primary layering strikes 135° to 155° and dips 50° to 75° southwest: Major plane of rock foliation strikes 115° to 135° and dips 50° to 70° southwest. Lineations on the plane of foliation include minor fold axes, elongated chlorite clots, quartz rods, and crenulations. Plunges are 15° to 35° to either the southeast or northwest. Selected southwest-northeast cross sections (in map pocket) show a suggested series of four syncline-anticline pairs. These folds are isoclinal and inclined steeply to the southwest. Shears and faults have also caused repetition, and in some cases, omission of individual map units. Major plane of shearing strikes 125° to 135° and dips 70° to 80° southwest or vertical. Predominant direction of movement on these shears is indicated by slickensides plunging approximately 30° to the southeast. There are three faults (two defined and one interpreted) trending northwest across the property, subparallel to the strike of both primary layering and/or foliation. These faults appear to have steep dips to either the northeast or southwest, such that the fault plane is warped with respect to vertical. Probable movement on these faults is a combination of dip-slip (high angle normal to reverse)

and strike slip. The Permo-Triassic sequence has four main fracture directions;

- (1) most prominent - strike, 045° to 065° , and dip, 70° to 80° northwest or 90° ;
- (2) strike, 015° to 025° , and dip, 60° to 65° southeast;
- (3) strike, 110° to 120° , and dip, 60° to 70° southwest; and
- (4) least prominent - strike, 155° to 165° , and dip 65° northeast.

REGIONAL METAMORPHISM AND ALTERATION

Regional metamorphism of the volcanic-sedimentary sequence to low-grade greenschist facies is characterized by;

- (1) schistosity;
- (2) pervasive chlorite and epidote;
- (3) sweated out, narrow veins of quartz-calcite, epidote, and pyrite all parallel to the schistosity; and
- (4) subsequent shearing parallel to schistosity.

Hydrothermal alteration, superimposed on the Permo-Triassic section, is late syn-tectonic to post-tectonic. Alteration effects to the Permian volcanic and sedimentary rocks include;

- (1) veins and stringers of one or more of quartz calcite, and epidote, which occur along fracture and shear planes at high angles to the foliation;

- (2) quartz veins and stringers with associated copper and iron sulphides ⁺ malachite ⁺ azurite, which follow fractures and shears;
- (3) malachite ⁺ azurite coatings on fracture and shear planes; and
- (4) stringers and veins up to one cm. wide of chalcopyrite ⁺ pyrite, at an angle to the foliation.

Alteration effects to the Permo-Triassic peridotite sills include;

- (1) moderate to extensive serpentization and magnetite veining; and
- (2) talc-calcite veining.

Hydrothermal fluids causing supentization of the peridotite are believed to be the same as those causing quartz-calcite ⁺ epidote veining in the volcanic and sedimentary rock units.

MINERALIZATION

Sulphide minerals occurring on the property, in order of abundance, are pyrite, chalcopyrite, and pyrrhotite. Copper and copper-iron sulphide occurrences include;

- (1) mineralized zones, one to three feet
(15 to 30.5 cm) wide, veins, one to two inches
(2.5 to 5.1 cm) wide, and seams (\geq 1cm) parallel
to foliation, but at an angle to bedding, or along
fractures and shears at high angles to both foliation
and bedding;
- (2) small lenses (0.5 by 1 cm) and disseminations, interconnected
by tiny veinlets when viewed microscopically; and
- (3) within quartz-calcite \pm epidote veins, quartz veins,
and calcite \pm epidote veins.

Any of these veins may occur individually or in subparallel groups.

Copper-vein sulphide showings in the Permian sequence are scattered throughout the M Group property, but are most abundant between Creeks two and five and elevations 3,250 feet and 3,750 feet a.s.l. This prominent mineralized horizon contains a folded lower andesites flow and upper coarse-grained andesitic tuff. The horizon may be traced discontinuously for 7,000 feet (2 Km) along strike and for 1,200 feet (364 m) along apparant thickness. The northwest end of the horizon is fault-bound; the southeast is covered in overburden.

The Camp Showings (a group of showings in both andesitic flow and tuff) and the Main Showing (in andesitic tuff) are the two prominent showings within the mineralized horizon. The Camp Showings include;

- (1) one to three foot (15 to 30.5 cm) wide mineralized zones containing chalcopyrite (2 to 5%), pyrite (2 to 10%) ⁺ malachite ⁺ azurite in both volcanic flow and tuff. These zones sit along shears either parallel to or at an angle to foliation. The average trend of the zones is 070° to 075° with a 65° dip to the southeast;
- (2) chalcopyrite (≥ 1%) and pyrite (1 to 2%) in quartz-calcite ⁺ epidote veins parallel to foliation in the andesitic flow;
- (3) chalcopyrite ⁺ pyrite and pyrite lenses (1 cm x 0.5 cm) elongate parallel to foliation in the volcanic flow; and
- (4) disseminated chalcopyrite (≥ 1%) and pyrite (1 to 2%) in the coarse-grained andesitic tuff. The Main Showing, located in a trench between Creeks two and three and midway between the Upper and Lower Bench Stripping, is chalcopyrite in coarse-grained andesitic tuff, extensively riddled with pervasive and vein epidote and numerous quartz-calcite veins.

Chalcopyrite occurs;

- (1) by itself in 2.5 to 4 cm. wide veins (070/20 S.E.);
- (2) as disseminations and central stringers, 0.5 to 1 cm wide, in quartz veins (2.5 to 5 cm. wide) striking 070° and dipping 20° southeast; and
- (3) as dissemination (up to 30%) in large quartz ⁺ calcite veins, which have had their thickness grossly exaggerated by ptygmatic folding.

Tuffite - an interbedded mixture of cherty and shaly argillite, chert, and andesitic tuff crops out at 2,750 feet a.s.l. in Creek three. This rock type contains chalcopyrite (≈ 1 to 1.5%), pyrite (1 to 5%), and malachite in quartz veins running parallel to foliation (081/64 SE). The chalcopyrite occurs as disseminations and as small pods or lenses 1 cm. by 2 cm. or smaller in the quartz veins.

Chalcopyrite (1 to 2%) with malachite and minor azurite occurs along a shear surface (141/71 NE) in cherty argillite exposed at 3,900 feet a.s.l. in Creek two. The cherty argillite is interbedded to the southwest with pyritic shaly argillite.

A mineralized outcrop of limestone and chert in contact with coarse-grained andesitic tuff sits on the mountain slope at 4,100 feet a.s.l. southwest of Creek three. Chalcopyrite (1 to 2%), malachite, and azurite occur in quartz calcite veins along northeast-southwest trending fractures. A 2.5 to 10 cm. wide zone along a fracture (144/43° SW) contains disseminated chalcopyrite (1 to 2%) and pyrite (1 to 2%) and small patches (2 cm by 2 cm) of chalcopyrite and pyrite with quartz-calcite stringers.

A unique showing of chalcopyrite, pyrite, and magnetite in brecciated, coarse-grained andesitic tuff occurs in Creek four at 4,200 feet a.s.l. The brecciated tuff has been infilled with calcite ⁺ quartz veins and stringers, containing disseminated chalcopyrite (≥ 1%), pyrite (2 to 3%), and magnetite (1 to 5%).

Sulphide mineralization on the M Group claims is believed to be typical sulphide content of intermediate composition volcanic rocks, which has been poorly concentrated by folding and hydrothermal activity during metamorphism.

GEOPHYSICS

MAGNETIC SURVEY

The magnetic survey was conducted over the occur of best mineralization. The purpose of the survey was to delineate the geology in overburden areas. A Scientrex MF-2 fluxgate magnetometer was used and the survey was carried-out by G. Crooker, Geologist. A total of thirteen line miles were run at one hundred foot centres along lines cut four hundred feet apart.

The results of the survey are plotted on Figure five.

CONCLUSIONS AND RECOMMENDATIONS

This year's exploration program of the M Group Claims established the stratigraphy of the Permian volcanic-volcaniclastic sequences and extent and origin of its contained copper-iron sulphide minerals. The showings represent typical sulphide mineral content of volcanic rocks, poorly concentrated by folding and hydrothermal activity. The mineralization is hydrothermal-metamorphic rather than volcanogenic massive sulphide in origin.

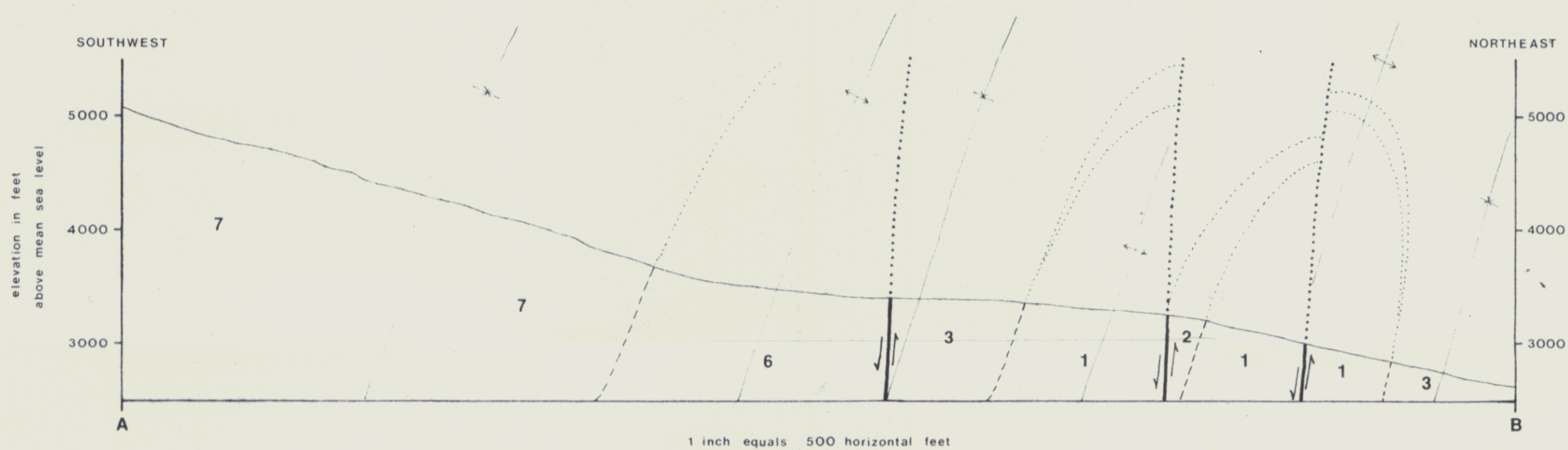
The property option was dropped by Brascan Resources at the end of July, 1976.

Respectively Submitted

Sue W. Campbell

Sue W. Campbell
Geologist

CROSS SECTION A-B



LEGEND

- | | | | | | |
|---------------|--|--|---|----------|--|
| PERMO-TRIASIC | 9 | Serpentinized peridotite | 8 | Rhyolite | |
| | 7 | Dacitic to andesitic agglomerate and breccia with interbedded black chert and shaly argillite | | | |
| | | 7 undifferentiated
7a dacitic agglomerate
7b andesitic agglomerate
7c chert and shaly argillite | | | |
| PERMIAN | 6 | Andesitic and minor dacitic coarse-grained tuff, lapilli tuff, and hornblende crystal tuff | | | |
| | | 6a coarse-grained (>3mm)
6b lapilli tuff (>4mm)
6c hornblende crystal tuff | | | |
| | 5 | Limestone with interbedded lenses of chert | | | |
| | 4 | Argillite and minor chert | | | |
| | | 4a shaly argillite
4b chert and cherty argillite | | | |
| | 3 | Andesitic volcanic flow | | | |
| | | 3 undifferentiated
3a pillowed andesite
3b amygdaloidal andesite
3c chlorite schist | | | |
| | 2 | Limestone, cherty limestone | | | |
| 1 | Tuffite - interbedded cherty argillite, limy argillite, shale, and fine-grained andesitic tuff | | | | |

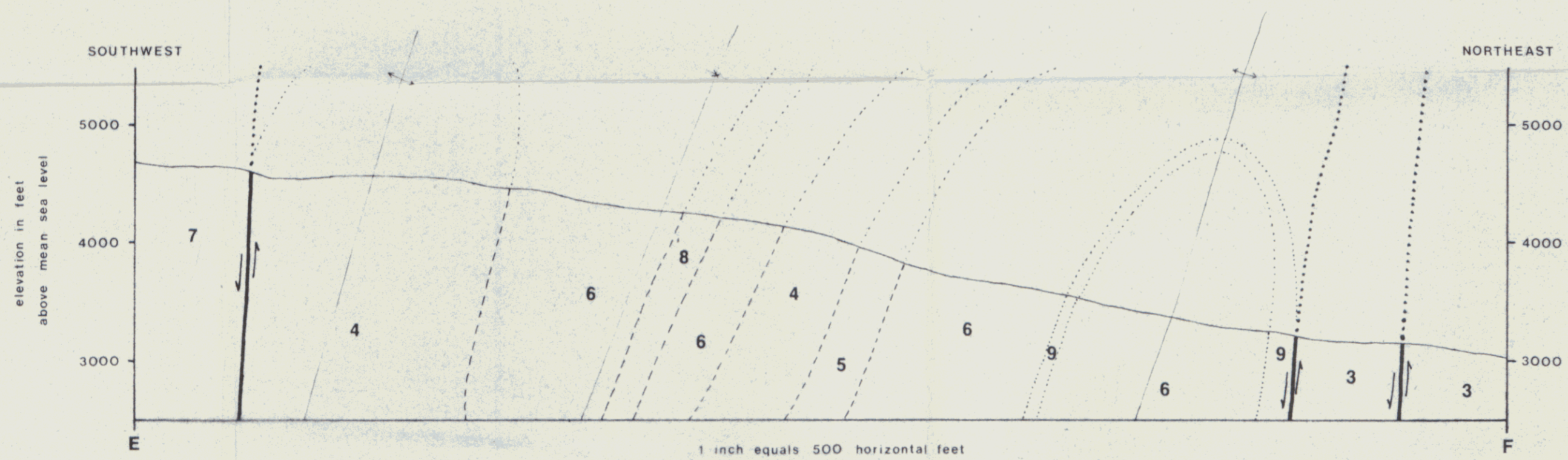
SYMBOLS

- Geological contact ————
- Fault ————
- Fold axial plane ————

CROSS SECTION C-D



CROSS SECTION E-F



Harcan Resources Limited

M Group - Pickhandle Lake

GEOLOGIC CROSS SECTIONS

115 - F 16

YUKON TERRITORY

Drawn By: S.W. CAMPBELL
 Drafted By: S.W.C.
 Date: SEPT. '76 Revised: _____

Scale: VERTICAL = 2(HORIZONTAL)
 Contour Interval: _____
 Drawing No. 4



Brascan Resources Limited

**M CLAIMS
MAGNETOMETER**

**115 F 16
YUKON TERRITORY**

Drawn By: GFC	Scale: 1" = 500'
Drafted By: GFC	Contour Interval: _____
Date: _____	Revised: _____
	Drawing No. 5