

GEOLOGICAL AND GEOCHEMICAL REPORT

RIFT, RIFT 2, OMEGA, MICA 5-18, and MICA 19 FR
Mineral Claims

Revelstoke Mining Division

82M/15E

51°54'N/ 118°32'W

October 19, 1981

G. Gibson

E & B EXPLORATIONS, INC.

81-4854-9638

9638

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on the

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MINERAL CLAIMS

REVELSTOKE MINING DIVISION

82M/15E

51°54'N

118°32'W

for

E & B EXPLORATIONS, INC.
1440-800 W. Pender Street
Vancouver, B.C.

..... - OWNER

J.M. LEASK
507 - 14 th Avenue
South Cranbrook, B.C.

..... - OPERATOR

by

GORDON GIBSON
Consulting Geologist

SEPTEMBER 30, 1981

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INTRODUCTION

Location, Access, and Physiography

The RIFT, RIFT 2, OMEGA, MICA 5-18, and MICA 19 FR. mineral claims, collectively called the RIFT property, are located in the northern Selkirk mountains of southeastern British Columbia approximately 98 km north of Revelstoke and 12 km south of Mica Creek. The property forms an elongate block of 261 units lying immediately east of and parallel to the Columbia river. The approximate geographic center of the property has coordinates $51^{\circ}54'N$ / $118^{\circ}32'W$, NTS. 82 M/15E. Figure 1 is an index map, scale 1:250,000 showing the location of the claims.

Access to the lower reaches of the property is provided by route 23 - a permanent hard surface highway connecting the communities of Revelstoke and Mica Creek. Portions of route 23 within the property boundary are currently being relocated to higher elevations in order to accomodate the Columbia reservoir, the maximum flood level of which will fall at 573 m upon completion of the Revelstoke dam.

Air access to higher reaches of the RIFT property is facilitated by permanent helicopter bases at Revelstoke and Golden.

Rugged alpine topography with serrate ridges, glaciers, neve' and deep u-shaped valleys typifies the northern Selkirk and Monashee mountains. On the RIFT property, elevations vary from 565 m A.S.L. at the Columbia river to 2105 m A.S.L. on the summits of neighbouring peaks. In general the claims occupy west-facing slopes of the Columbia river cross-cut by the deeply incised valleys of Birch creek and Bigmouth creek - see Figure 1. Above a tree line at

approximately 1675 m vegetation is rare and bedrock exposures are large and numerous. By contrast, areas below tree line are floored by thick deposits of glacial till and alluvium and support dense stands of cedar, hemlock, balsam, and spruce with prolific slide alder and devil's club. Bedrock exposures at lower elevations are limited to stream canyons and to road cuts (especially along newly blasted sections of route 23 and skid trails in the B.C. Hydro transmission right of way).

Climate is that of the Interior Rain Belt with temperatures ranging between -15°C and $+30^{\circ}\text{C}$. Annual precipitation averages 1.15 m, more than half of which falls as up to 6 m of snow. Snowpack at any one time rarely exceeds 1.5 m.

Claims and Ownership

All claims are within the Revelstoke Mining Division and are owned by:

E & B Explorations, Inc.
1440 - 800 West Pender Street
Vancouver, B.C. V6C 2V6

Operator on the claims is:

J.M. Leask
507 - 14th Avenue
South Cranbrook, B.C.

<u>Claim Name</u>	<u>Size</u>	<u>Record No.</u>	<u>Record Date</u>
RIFT	20 U	1024	August 20, 1980
RIFT 2	6	1041	September 12, 1980
OMEGA	20	1042	September 12, 1980
MICA 5	15	1068	October 24, 1980
MICA 6	20	1069	October 24, 1980
MICA 7	4	1070	October 24, 1980
MICA 8	20	1071	October 24, 1980
MICA 9	20	1072	October 24, 1980
MICA 10	6	1073	October 24, 1980
MICA 11	20	1074	October 24, 1980
MICA 12	18	1075	October 24, 1980
MICA 13	20	1076	October 24, 1980
MICA 14	15	1077	October 24, 1980
MICA 15	20	1078	October 24, 1980
MICA 16	4	1079	October 24, 1980
MICA 17	16	1080	October 24, 1980
MICA 18	16	1081	October 24, 1980
MICA 19 FR	<u>1</u>	1082	October 24, 1980

Total 261 units

Claim locations are shown on Drawings 1, 2, and 3 of this report - scale 1:10,000.

History

During the 1980 field season, a joint-venture reconnaissance prospecting and geochemical exploration program, operated by J.M. Leask, and funded by E & B Explorations, Inc. was undertaken in the northern Selkirk and Rocky mountains near Mica Creek. This work led to discovery in August 1980 of a Zn, Pb, Cu massive sulfide showing now known as the RIFT occurrence - see Geology. Subsequently, the RIFT, RIFT 2, and OMEGA claims and later the MICA 5-18 and MICA 19 FR. were staked to protect the showing and surrounding areas. Assessment work on the property during the remainder of the 1980 field season was limited to cursory prospecting and widely spaced silt and soil sampling.

In May 1981, the writer was engaged by Leask and E & B to do geological mapping and prospecting over the claim block and to supervise the establishment of a control grid for geochemical and geophysical surveys. Results of the geological and geochemical surveys are presented herein.

Assessment Work - 1981

Geological mapping and prospecting was carried out during the period May 15 to July 31, 1981. B.C. Government air photographs (1:37,000 and 1:20,000) and enlargements of standard NTS 1:50,000 topographic maps (1:25,000 and 1:10,000) were used for field control. Geological data are compiled on Drawing 4 of this report - scale 1:25,000. Total area surveyed is approximately 15,000 hectares.

A control grid totalling 33.20 line km. was established by compass and beltchain methods. The grid is centered on the RIFT Zn-Pb-Cu occurrence and covers portions of RIFT, MICA 12, and MICA 19 FR. claims. A total of 738 soil samples were collected from the grid and analysed for Zn, Pb, Cu, and Ag. Results of the geochemical survey are presented on Drawings 5, 6, 7, and 8 - scale 1:5,000.

GEOLOGY

Regional Setting

Portions of four major tectonic elements of the Columbian Orogen underlie the Mica Creek area. From east to west, these are:

1. Rocky Mountain Fold and Thrust Belt
2. Selkirk Allochthon
3. Shushwap Metamorphic Complex
4. Monashee Complex

The RIFT property is located along the western margin of the Selkirk Allochthon where it contacts the eastern edge of the Shushwap Metamorphic Complex - see Figure 2 (after Read and Brown, 1981).

Property Geology

Introduction

In the area of the RIFT property the Selkirk Allochthon embraces regionally metamorphosed Hadrynian (Windermere) through Cambrian and younger (?) sedimentary and volcanic rocks cut by Cretaceous (?) granitic intrusions. Three phases of approximately coaxial superimposed deformation combine to produce a strong northwest trend to fold structures. North of Birch creek the stratigraphic units that outline these fold patterns can be traced with difficulty across the Columbia river into the Monashee mountains of the Shushwap Metamorphic Complex. South of Birch creek strata of the Selkirk Allochthon are separated from the Shushwap Complex by the gently east-dipping Columbia River Fault Zone.

Lithology

The northern half of the property is underlain by varied sedimentary and volcanic strata of the Hadrynian Horsethief Creek group in faulted contact with quartzite of the Lower Cambrian and older (?) Hamill group.

The southern half of the property is underlain by sedimentary units of uncertain stratigraphic position cut by sills and dikes of porphyritic quartz monzonite - see Drawing 4.

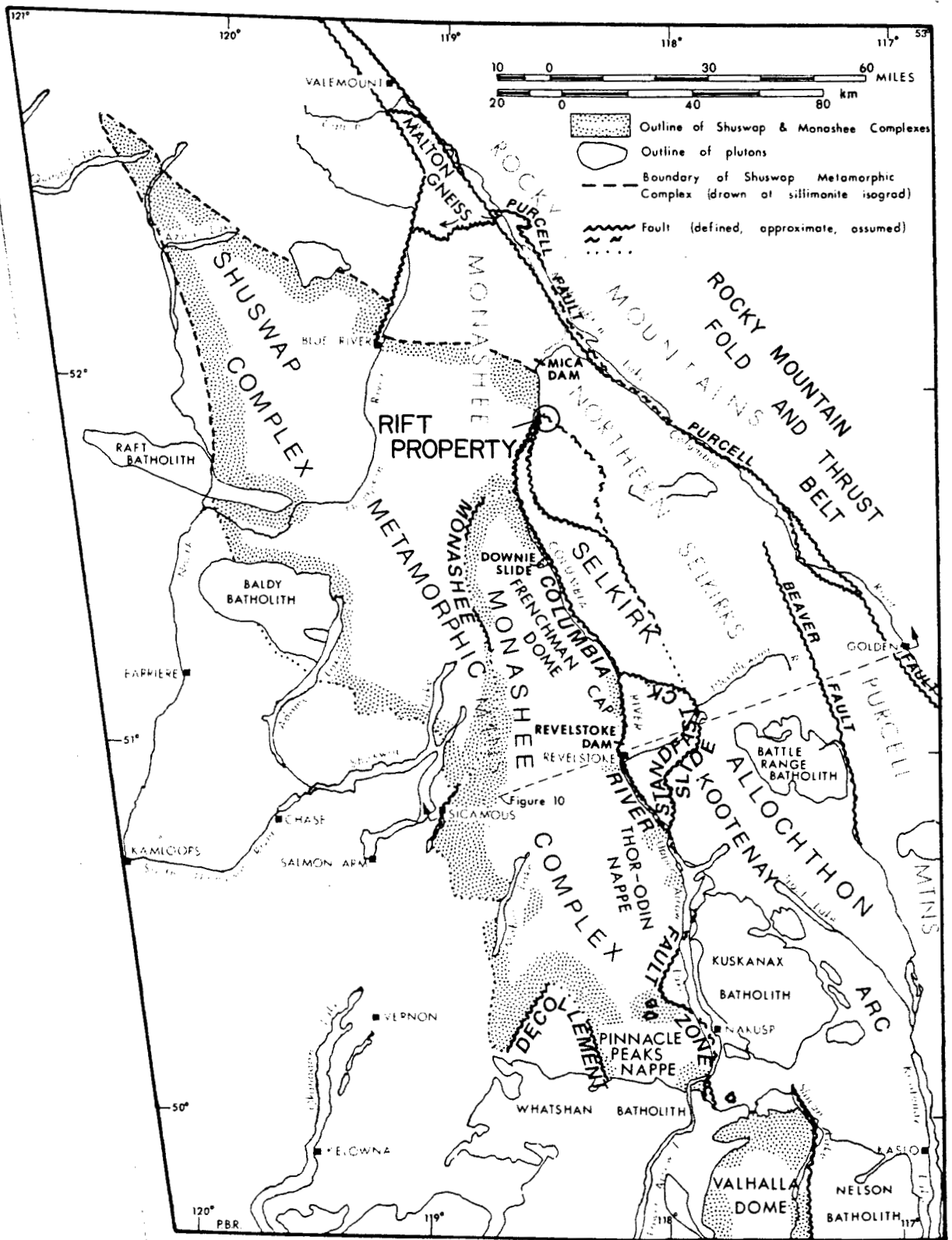


Figure 2. Regional tectonic map showing location of the RIFT property. Adapted from Read and Brown (1981).

Gordon Gibson

Horsethief Creek Group

For mapping purposes a three-fold subdivision of the Horsethief Creek group into a lower Semipelite Amphibolite Division, middle Carbonate Division and upper Clastic Division was employed. As such the resulting map units are consistent with those of Poulton and Simony (1980). Within each of the major subdivisions structural complications and lack of continuous exposures would not permit assignment of individual rock units to a precise stratigraphic position. Instead, the units are keyed to appropriate parts of the legend by rock type only and hence represent lithologic units and not rock-stratigraphic units.

The lowermost subdivision of the Horsethief Creek group exposed in the map area is the Semipelite Amphibolite Division. It is characterized by approximately equal amounts of platy granular quartz-biotite-muscovite-feldspar semipelite and hornblende-plagioclase-garnet (\pm biotite) amphibolite. Individual amphibolite bands range from less than 1 cm to over 200 m in thickness. Thinly layered varieties commonly alternate with psammite and fine grained actinolite (or diopside) - garnet calcsilicate. These are thought to have formed by metasomatism of impure argillaceous dolostones. Thick amphibolite sheets are coarse grained equigranular and likely represent metamorphosed mafic volcanic horizons. Subordinate quartz-muscovite-biotite pelite, quartzite and narrow calcitic marble interlayers make up the remainder of the Semipelite-Amphibolite Division. Most outcrops of the Division feature brick-red to dark-grey weathering colours and coarse blocky to flaggy talus. The total thickness of the unit as mapped is approximately 1200m but the base was not observed.

The Carbonate Division of the Horsethief Creek group consists of medium to coarse grained crystalline calcitic marble, quartz-diopside calcsilicate, quartzite and rusty calcareous pelite. Strata are interbedded on a scale of 1m to 10m but individual marble bands may locally achieve thicknesses of 60 m or more. Marble bands, on average, make up about 30% of the estimated 300m total thickness of the Carbonate Division. Weathering characteristics vary according to the relative abundance of the component rock types. In general, resistant spines of pale grey-weathering marble separate recessive areas of rusty-weathering pelite and calcsilicate.

The uppermost unit of the Horsethief Creek group is the Upper Clastic Division. It features a thick and extremely varied assemblage of aluminous muscovite-biotite (\pm garnet) pelite/semipelite, psammite, quartzite, and amphibolite with subordinate calcsilicate and marble. Typical exposures are characterized by thin to medium-bedded pelite and semipelite alternating, on a scale of 5m to 20m with medium-bedded psammite and quartzite. Garnetiferous amphibolite makes up an estimated 15% of the section and ranges from thin-bedded varieties with intercalated calcareous psammite and calcsilicate to large coarse grained ortho-amphibolite sheets up to 150m thick. Marble bands are rare and do not exceed 2m in thickness. Weathering colours in shades of tan or buff typify most exposures of the Upper Clastic Division. Where amphibolite constitutes a major part of the section however, dark grey to brick red colours predominate. The total thickness of the Division is estimated to be 1500m. This probably represents a minimum because the uppermost portion may have been eliminated by sliding along the basal contact of the overlying Hamill group - see Structure.

Hamill Group

White micaceous quartzite of the Hamill group is exposed in a fault-bounded slice, 75m thick, on the ridge east of the headwaters of Birch creek - see Drawing 4. The slice is bounded on the north and south by calcsilicate of the Upper Clastic and Carbonate Divisions respectively.

Unassigned Lithologies

The southern half of the map area is underlain by a thick sedimentary sequence dominated by large calcitic marble units up to 250m thick - see Drawing 4. These and several narrower marble bands fall within a succession of psammite, quartz-muscovite-biotite pelite, calcareous pelite and calcsilicate. Weathering characteristics for the sequence as a whole resemble those of the Carbonate Division; resistant pale grey marble units form prominent towers and bluffs between recessive areas of tan and grey-weathering pelites and psammites. Intense deformation precludes an overall thickness determination for the sequence.

Strata of this southern outcrop belt were placed within the Carbonate and Upper Clastic Divisions of the Horsethief Creek group by Brown et al (1977). The present mapping however has forced a reinterpretation of earlier work. Major carbonate units, exposed on ridges north of Bigmouth creek, upon approaching the Columbia river gradually deflect from the regional northwest trend to take on northeast strikes with gentle to moderate southeast dips - see Drawing 4. In so doing the units coincide with a north trending strip of marble exposed at low elevations along the east bank of the Columbia river north of Nicholls creek. The latter was mapped by Wheeler (1965) and others as the

lower Cambrian Badshot formation. If a correlation of unassigned marble units with the Badshot formation is possible then associated pelitic strata in the southern part of the map area must belong to either the upper part of the Hamill group or lower part of the Lardeau group of lower Cambrian and younger age. Final assignment of these units to a definite stratigraphic position must await the results of further detailed mapping.

In the area of the RIFT Zn-Pb-Cu occurrence, a distinctive part of the unassigned section, 400m thick, is bracketed by major marble units - see Drawing 4. Between the marble units, host lithologies for the RIFT conformable massive sulfide layer are thin to medium-bedded dark calcareous pelites, calcsilicates and quartzites. These are intruded by porphyritic (K-spar) biotite-garnet quartz monzonite. Quartz monzonite intrusions take the form of dikes, sills and myriads of narrow (<10 cm) anastomosing layer-parallel tongues. Ninety meters structurally above the massive sulfide layer is a podlike body of serpentinite, 20 m thick, containing large (to 5cm) cleaved metacrysts of magnesite. Several narrow (<1.5m) lenses of talc-actinolite-biotite schist occupy the interval between the serpentinite body and massive sulfide layer. For a description of the sulfide occurrence itself see Mineralization.

Structure

Structures of the map area are dominated by tight to isoclinal northwest trending phase 2 and phase 3 folds. Axial surfaces of these folds dip moderately to steeply southwest. South of the Hamill quartzite, second and third phase folds developed in an inverted stratigraphic sequence (Read and Brown, 1979) implying the existence of at least one large asymmetrical first phase structure. Structures of

this type are now well documented in the northern Selkirk and Monashee mountains. In the Monashees northwest of Mica Creek Ghent et al (1981) mapped recumbant west - closing phase 1 nappes with amplitudes in excess of 40 km. To the south, in the French creek, Argonaut mountain area, Brown and Tippett (1978) recognized an early east-facing structure- the Goldstream nappe, with an underlimb at least 10 km long.

At the outcrop scale, first and second phase fabrics are difficult to separate. The prevailing minor structure is a penetrative mineral foliation axial planar to both phase 1 and phase 2 (designated S_2 on Drawing 4). Throughout the map area S_2 and primary layering are parallel or near parallel, indicating isoclinal deformation. Several major second phase isoclinal folds cross the ridge north of Bigmouth creek and are responsible, in part, for repetition of thick (unassigned) marble units. Further north, lack of persistent marker units in the Upper Clastic and Carbonate Divisions precludes the easy recognition of major fold patterns.

A well developed crenulation cleavage, designated S_3 on Drawing 4, is axial planar to third phase folds. Muscovite and biotite, aligned along and defining S_2 are bent and transposed by S_3 . The metamorphic index minerals sillimanite, kyanite and staurolite commonly grow across S_2 but are kinked by S_3 indicating that the peak of metamorphism occurred between the second and third phases of deformation. On the larger scale, open to isoclinal third phase folds tend to buckle and distort the limbs of second phase structures.

Major faults cross the map area in a northwesterly direction and dip at moderate angles toward the southwest, approximately parallel to the regional structural grain - see Drawing 4. Such faults probably developed as structural

slides along major lithologic contacts. One important fault of this type places Hamill quartzite against the Carbonate Division of the Horsethief Creek group thereby effecting a stratigraphic omission of at least 1500 m. Actual displacement on this fault however is almost certainly much greater than 1500m due to a large component of layer-parallel slip. A second fault slide separates unassigned units of the southern part of the map area from amphibolites of the Upper Clastic Division. Should unassigned marble units eventually prove to be the Badshot formation (see Lithology) then a very large net displacement along this fault would be required to place Lower Cambrian stratigraphy on the south against Hadrynian stratigraphy on the north.

Mylonite and cataclastic rocks exposed on the west bank of the Columbia river opposite Bigmouth creek indicate that the regionally important Columbia River Fault Zone extends at least as far north as the southern part of the RIFT claim area.

Metamorphism and Plutonic Activity

Barrovian-type regional metamorphism has profoundly affected all lithologies in the mapped area. In the northern Selkirk mountains isograds trend northwesterly and outline metamorphic highs and lows. Most of the northern part of the RIFT property area is underlain by a metamorphic high culminating in the sillimanite zone. On the southern part of the property regional metamorphic grades drop off rapidly through the staurolite to the garnet zones - see Drawing 4. An intervening kyanite zone, if present, is too narrow to be recognized or may be eliminated by post-metamorphic faulting. West of the Columbia River rocks of the Shushwap Metamorphic Complex are uniformly metamorphosed to sillimanite grade.

Abundant semi-concordant anatectic pegmatite bodies containing quartz, microcline, muscovite, biotite and black tourmalene are found in the sillimanite zone. The largest of these approach 1.5 square kilometers in area and are shown as separate rock units on Drawing 4.

The Bigmouth pluton is a quartz monzonite stock of probable Cretaceous age outcropping immediately south of the mapped area - see Drawing 4. Porphyry, with large rimmed orthoclase phenocrysts embedded in a matrix of quartz, orthoclase, plagioclase and biotite is a characteristic rock type throughout much of the pluton. Compositionally and texturally this rock closely resembles intrusive units cutting the footwall and hanging wall of the RIFT occurrence (see Lithology), suggesting a possible comagmatic relationship.

Mineralization

Mineralization on the property is limited to the RIFT Zn-Pb-Cu occurrence located at 745m ASL in a minor west-flowing tributary of the Columbia river 4.5 km north of Bigmouth creek - see Drawing 4. Strata that enclose the showing have already been described under Lithology.

The RIFT occurrence is a stratabound massive sulfide layer comprised of intimately intergrown pyrite, pyrrhotite, sphalerite and galena with subordinate chalcopyrite. Fine to coarse grained recrystallized sulfides are compositionally banded, on a scale of 1 to 5 cm, into sphalerite-rich and sphalerite-poor lamellae. The massive sulfide layer (> 60% sulfides) varies in thickness from 0 to 1.4 m and is structurally underlain by a zone 0.3 to 1.6 m thick, of disseminated sulfides in a fine grained dark siliceous gangue. The structural hangingwall of the sulfide layer is sharply

defined against a barren marble bed, less than 0.5 m thick, in turn overlain by calcsilicate. The showing is well exposed in a steep-sided draw over a strike length of approximately 27 m at an average attitude of 115°/50° SW. To the east, the sulfide band is covered by overburden. To the west, it is thinned and offset against several steeply-dipping shear zones.

Assay sampling on the showing yielded the following averaged results:

Massive sulfide	Zn 29.47%	Pb 6.93%	Cu 0.03%	over 0.8 m
F.W. diss. sulfide	Zn 2.39%	Pb 0.39%	Cu 0.02%	over 0.9 m

GRID PREPARATION

A grid, totalling 33.20 line km, was established in the area of the RIFT occurrence to provide control for geochemical and geophysical surveys. Surveys were intended to test for possible buried extensions of the massive sulfide layer.

Personell of Renegade Mineral Exploration Services Ltd. of P.O. Box 3192, Kamloops, B.C., V2C 6B8 were engaged to prepare the grid and carry out the various surveys.

A total of 39 north-south lines were spaced at 50 m and 100 m intervals along a 2.8 km east-west baseline - see Drawings 5-8. Lines were run by compass and beltchain methods and were flagged (fluorescent orange) and blazed with stations marked at 25 m intervals. Each 50 m station was labelled with a weather-resistant teflon tag.

GEOCHEMISTRY

Field Methods

Soil samples were collected from the grid lines at 25 m and 50 m intervals - see Drawings 5-8. Soil was extracted with a mattock from the B horizon at a minimum depth of 10 cm and placed into Kraft 9 cm x 16 cm paper sample bags. Soil samples were not taken where the ground surface had been disturbed by construction activity or landslides or where soil development was poor, as in steeply sloping areas.

All samples were shipped to Vangeochem Lab Ltd., 1521 Pemberton Ave., North Vancouver, B.C. V7P 2S3 for Zn, Pb, Cu and Ag analysis.

Analytical Procedure

Samples were dried in a ventilated oven and then sifted in a stainless steel sieve to separate the - 80 mesh fractions. Subsequently the fines were weighed out into 0.50 gram samples using a top-loading balance. These were heated in a sand bath with nitric and perchloric acids (15% to 85% by volume of the concentrated acids respectively). Digested samples were then diluted to a fixed volume with demineralized water.

Zinc, lead, copper and silver analyses were determined by using a Techtron Model AA-5 atomic absorption spectrophotometer. Digested samples were aspirated directly into an air and acetylene mixture flame. The results, in parts per million, were calculated by comparison to a set of standards used to calibrate the atomic absorption unit.

Results and Interpretation

Background, threshold and anomalous populations were determined for each of zinc, lead, copper and silver:

	<u>Background</u>	<u>Threshold</u>	<u>Anomalous</u>
Zn	<180 ppm	180-450 ppm	>450 ppm
Pb	< 29 ppm	29-60 ppm	> 60 ppm
Cu	< 32 ppm	32-75 ppm	> 75 ppm
Ag	<0.2 ppm	0.2-0.8 ppm	>0.8 ppm

Zinc and lead anomalous zones show a strong spatial association over the grid area - see Drawings 5 and 6. A prominent coincident Zn and Pb anomaly is centered between grid coordinates L99+00E/100+50N and L100+00 E/100+00 N. This location directly overlies the exposed part of the RIFT massive sulfide layer. A second area of high zinc and lead geochemistry is elongate in an east-west to northeast-southwest direction between coordinates L100+00E/101+25N and L104+00E/102+75N. This area contains discrete anomalous Zn and Pb values at stations L100+50E/101+25N, L102+00E/100+75N and L103+00E/100+75N. The anomalous zone falls at elevations of 745 to 885 m in a region of moderate (26°) west and northwest-facing slopes with dense forest cover and good soil development. It probably records geochemical dispersion from an underlying layer of massive sulfide that may be the eastward continuation of the RIFT occurrence or (more likely) a zone structurally below the RIFT mineralization. Additional coincident Zn and Pb anomalies occur in the southwestern and northeastern parts of the grid at stations L95+00E/92+00N and L112+00E/103+00N respectively.

Copper shows only one anomalous value over the RIFT occurrence at station L100+00E/100+00N - see Drawing 7. Three

3. Soil geochemical results indicate that the massive sulfide layer (or a zone structurally below it) may extend below overburden well to the east of the exposed part of the showing. This should be confirmed by additional work, including diamond drilling, in 1982.

Respectfully submitted

Gordon Gibson

Gordon Gibson
Consulting Geologist

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- Wheeler, J.O., 1965. Big Bend map area, British Columbia; GEOL. SURV. CAN. Paper 64-32, 37p.

STATEMENT OF COSTS

1.	WAGES (May 15 - July 31, 1981)				
	Consulting geologist	75 days @ \$125	9375		
	Geological assistant	75 days @ \$ 70	5250		
	Expeditor	75 days @ \$ 35	<u>2625</u>		17,250
2.	FOOD AND ACCOMODATION (May 15 - July 31, 1981)				
	Trailer Rental	2.5 mo @ \$1800	4500		
	Food	150 man days @ \$15	<u>2250</u>		6,750
3.	TRANSPORTATION				
	Truck rental				
	1979 GM 4x4 3/4T	2.5 mo @ \$800	2000		
	Fuel and maintenance	\$500	500		
	Helicopter				
	Bell 206B	30 hrs. @ \$415	12450		
	Fuel and oil		<u>1155</u>		16,105
4.	GRID PREPARATION AND SOIL SAMPLING (Sub Contract)				
	Line cutting/sampling				
	48 man days @ \$170		8160		
	Travel				
	6 man days @ \$80		480		
	Truck rental				
	33 days @ \$25		825		
	+1318 km @ \$0.18		237		
	Food and accomodation				
	48 man days @ \$15		720		
	Miscellaneous supplies		<u>159</u>		10,581

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STATEMENT OF COSTS (Continued)

5.	GEOCHEMICAL ANALYSES		
	738 soil samples @ \$4.60	<u>3394</u>	3394
6.	MAPS		
	1:25,000 topo, photomylar and prints		
	1:10,000 recontoured topo and prints	<u>950</u>	950
7.	FREIGHT CHARGES	<u>50</u>	50
8.	REPORT PREPARATION	<u>400</u>	400
	TOTAL		<u><u>\$55,480</u></u>

STATEMENT OF QUALIFICATIONS

I, Gordon Gibson, do hereby certify that:

1. I am a geologist with residence at 201-2020 West 2nd Avenue, Vancouver, British Columbia, V6J 1J4.
2. I am a graduate of the University of British Columbia with a Bachelor of Science degree in geology (1975).
3. I have practiced in the field of mineral exploration since 1975.
4. I am a member of the Canadian Institute of Mining and Metallurgy.
5. I was employed as an independent consultant by J.M. Leask of 507-14th Avenue, South Cranbrook, B.C., to manage the exploration program outlined in the accompanying report. I have no other financial or legal interest in the mineral claims therein described.

Respectfully submitted,

Gordon Gibson

Gordon Gibson
Geologist

October 1, 1981

TO WHOM IT MAY CONCERN

I am the President of Renegade Mineral EXplorations, and this year during the months of July, and August I worked with Gordon Gibson at Mica Creek.

I am an experienced woodsman with a total of four years in mineral explorations. In addition to practical experience I attended the Fifth Annual Mineral Exploration course for prospectors.

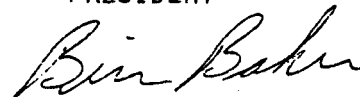
I am fully qualified in the following areas:

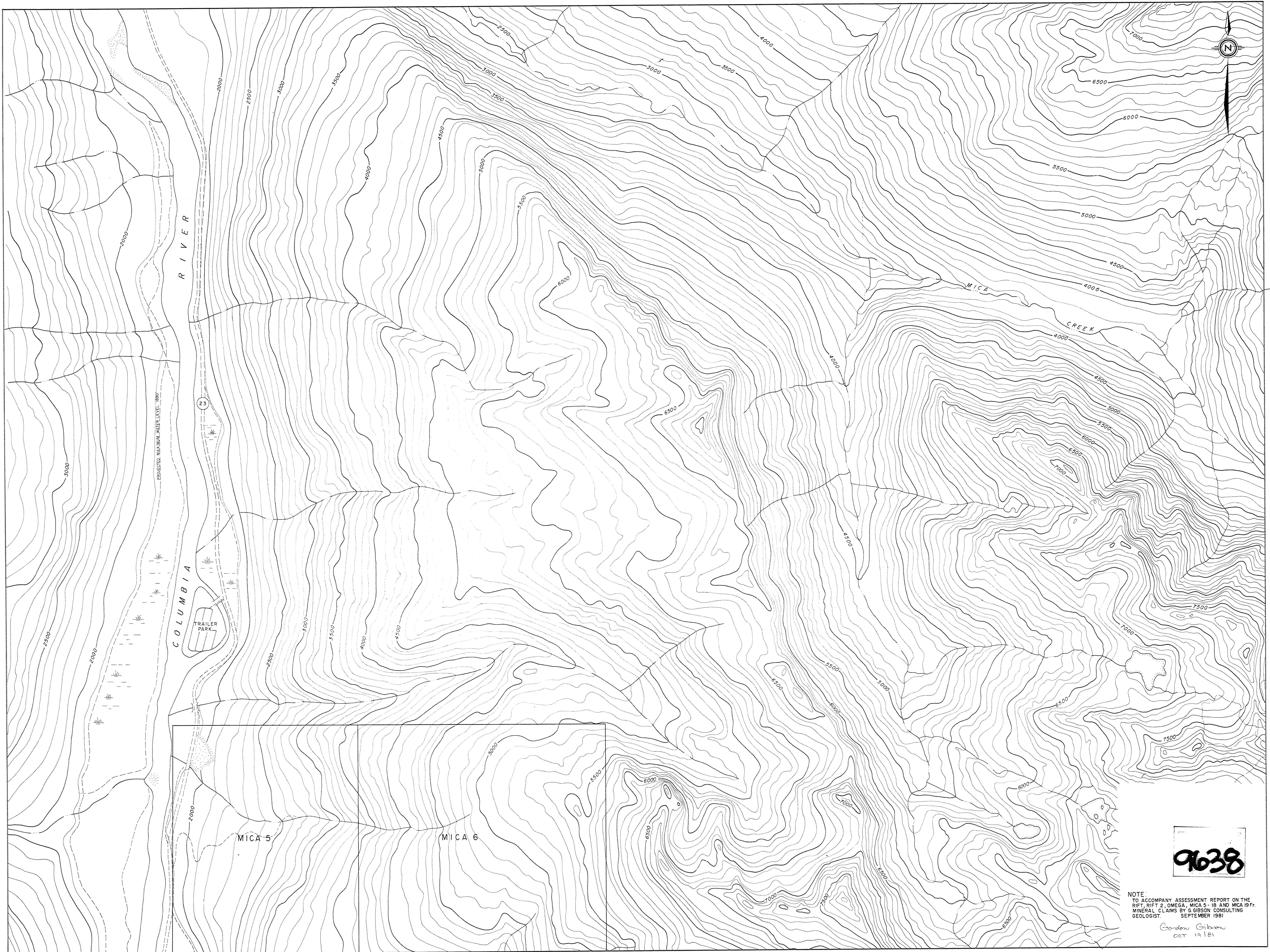
1. STAKING MINERAL CLAIMS
2. GEOCHEMICAL SURVEYS
3. GEOPHYSICAL SURVEYS
4. CONTROLLED GRIDS
5. TRAVERSING FOR CONTROLLED POINTS
6. LINE CUTTING
7. CONTROLLED TRANSITING

Renegade Mineral Explorations Services Limited
P.O. Box 3192
Kamloops, B.C.
V2C 6B8

Brian Baker

PRESIDENT





9638

NOTE:
TO ACCOMPANY ASSESSMENT REPORT ON THE
RIFT, RIFT 2, OMEGA, MICA 5-18 AND MICA 19 FT.
MINERAL CLAIMS BY GIBSON CONSULTING
GEOLOGIST. SEPTEMBER 1981

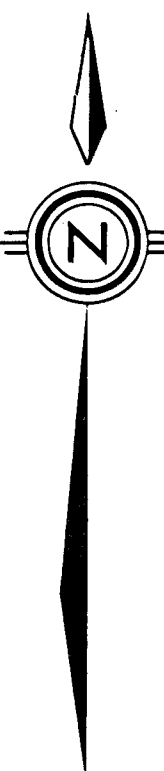
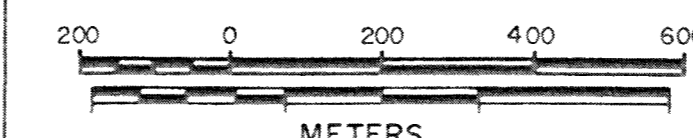
Gordon Gibson
OCT 19 1981

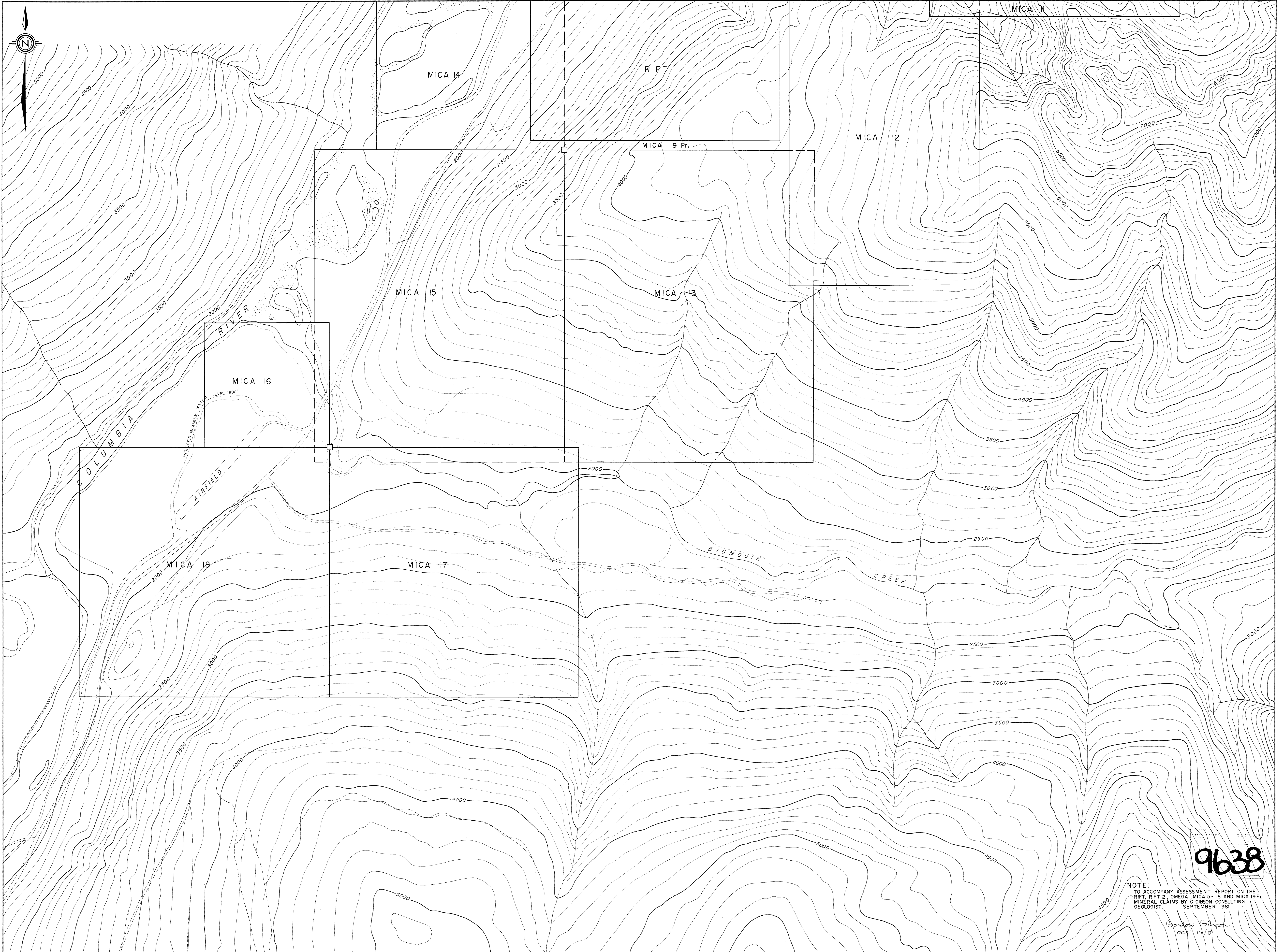
	<p>MAP SCALE</p> <p>200 0 200 400 600 METERS</p>	<table border="1"> <tr> <th>No</th> <th>Date</th> <th>MADE BY</th> <th>DESCRIPTION</th> </tr> <tr> <td>1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> </tr> </table>	No	Date	MADE BY	DESCRIPTION	1				2				3				<p>E & B Explorations Inc.</p>	WOOD RIVER PROJECT	
			No	Date	MADE BY	DESCRIPTION															
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<p>NTS_83 D</p>	<table border="1"> <tr> <th>DATE</th> <th>DRAWN BY</th> <th>CHECKED</th> <th>APPROVED</th> <th>OFFICE</th> <th>DEPARTMENT</th> <th>MAP INDEX NUMBER</th> <th>SCALE</th> <th>DRAWING NUMBER</th> </tr> <tr> <td>APRIL 1981</td> <td>JVV</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1:10,000</td> <td></td> </tr> </table>	DATE	DRAWN BY	CHECKED	APPROVED	OFFICE	DEPARTMENT	MAP INDEX NUMBER	SCALE	DRAWING NUMBER	APRIL 1981	JVV						1:10,000		CLAIM MAP	
DATE	DRAWN BY	CHECKED	APPROVED	OFFICE	DEPARTMENT	MAP INDEX NUMBER	SCALE	DRAWING NUMBER													
APRIL 1981	JVV						1:10,000														



9638

NOTE:
 TO ACCOMPANY ASSESSMENT REPORT ON THE
 RIFT, RIFT 2, OMEGA, MICA 5-18 AND MICA 19 FF.
 MINERAL CLAIMS BY GIBSON CONSULTING
 GEOLOGIST SEPTEMBER 1981
 GIBSON CONSULTING
 OCT 19 1981

	<p>MAP SCALE</p>  <p>0 200 400 600 METERS</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>REV.</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> <tr> <td>1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> </tr> </table>	REV.	DATE	BY	DESCRIPTION	1				2				3				4				5				<p>E & B Explorations Inc.</p>	<p>WOOD RIVER PROJECT CLAIM MAP</p>
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<p>DATE: APRIL 1981 DRAWN BY: J.V.V. CHECKED: APPROVED:</p>		<p>OFFICE: DEPARTMENT:</p>		<p>MAP INDEX NUMBER: SCALE: 1:10,000 DRAWING NUMBER: 2</p>																								



9638

NOTE:
TO ACCOMPANY ASSESSMENT REPORT ON THE
RIFT, RIFT 2, OMEGA, MICA 5-18 AND MICA 19Fr.
MINERAL CLAIMS BY GIBSON CONSULTING
GEOLOGIST SEPTEMBER 1981

Gordon Gibson
Oct 19/81

	MAP SCALE		No.		DATE		OFFICE		DEPARTMENT		MAP INDEX NUMBER		SCALE		DRAWING NUMBER	
	200 0 200 400 600		1		APRIL 1981		E & B Explorations Inc.						1:10,000		3	
	METERS		2		DRAWN BY		E & B Explorations Inc.									
			3		CHECKED		E & B Explorations Inc.									
			4		APPROVED		E & B Explorations Inc.									

LEGEND

MESOZOIC AND/OR TERTIARY

GRANITIC ROCKS

- QM QUARTZ MONZONITE
- P PEGMATITE

LOWER CAMBRIAN AND (?) OLDER

HAMILL GROUP

- 4 QUARTZITE

HADRYNIAN (WINDERMERE)

HORSETHIEF CREEK GROUP

- 3 UPPER CLASTIC DIVISION

- a) PELITE
- b) PSAMMITE, SEMIPELITE, QUARTZITE
- c) AMPHIBOLITE
- d) CALCILICATE
- e) MARBLE

- 2 CARBONATE DIVISION

- a) MARBLE
- b) CALCILICATE
- c) PELITE
- d) SEMIPELITE, PSAMMITE
- e) AMPHIBOLITE

- 1 SEMIPELITE - AMPHIBOLITE DIVISION

- a) SEMIPELITE, PELITE
- b) AMPHIBOLITE
- c) PSAMMITE, QUARTZITE

HADRYNIAN AND/OR LOWER CAMBRIAN AND (?) YOUNGER

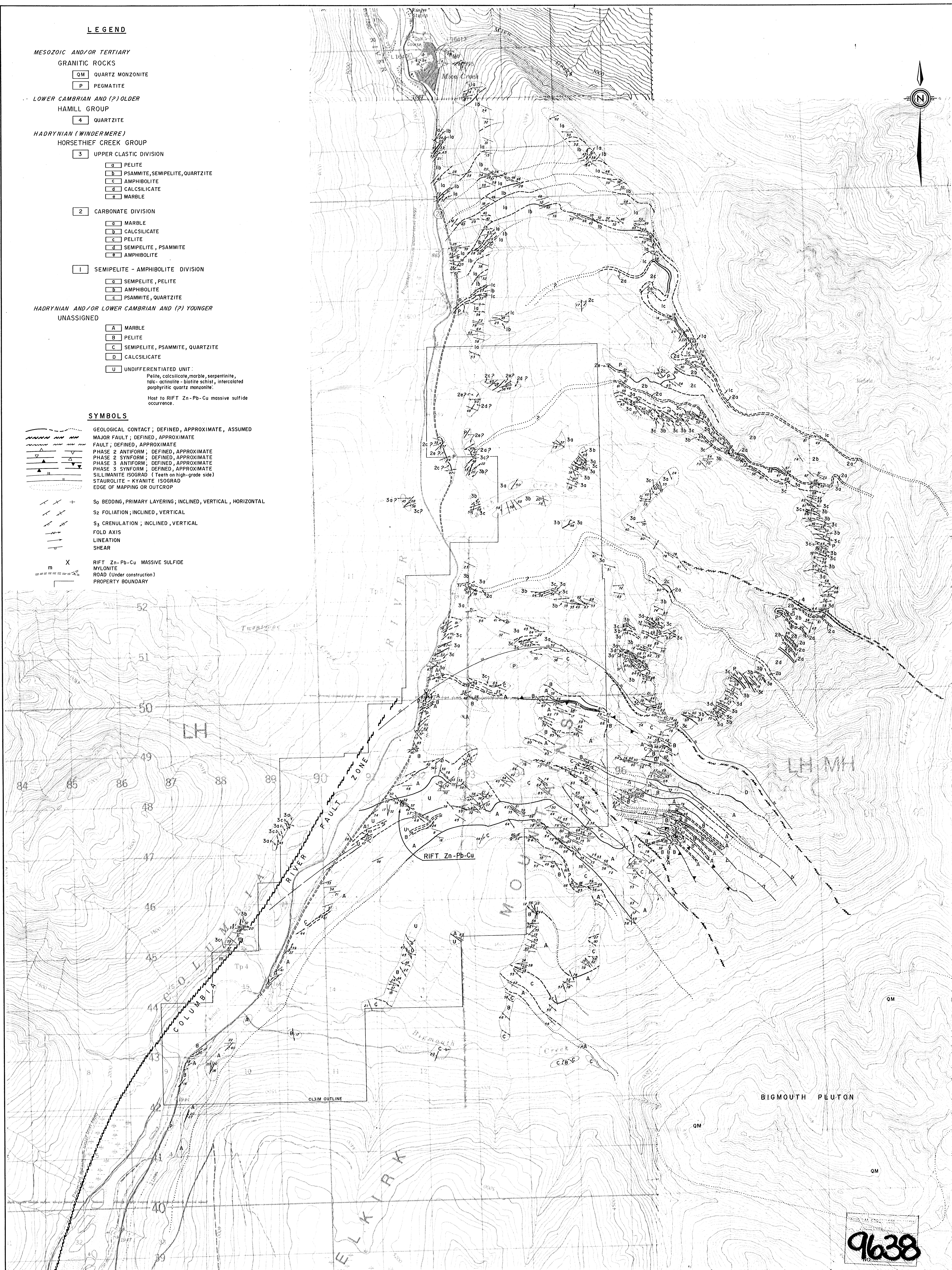
UNASSIGNED

- A) MARBLE
- B) PELITE
- C) SEMIPELITE, PSAMMITE, QUARTZITE
- D) CALCILICATE

- U UNDIFFERENTIATED UNIT
Pelite, calcilicite, marble, serpentinite,
talc-actinolite-biotite schist, intercalated
porphyritic quartz monzonite.
Host to RIFT Zn-Pb-Cu massive sulfide
occurrence.

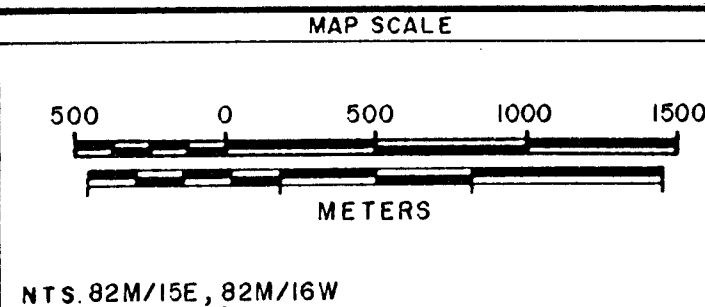
SYMBOLS

- GEOLOGICAL CONTACT; DEFINED, APPROXIMATE, ASSUMED
- MAJOR FAULT; DEFINED, APPROXIMATE
- FAULT; DEFINED, APPROXIMATE
- PHASE 2 ANTIFORM; DEFINED, APPROXIMATE
- PHASE 2 SYNFORM; DEFINED, APPROXIMATE
- PHASE 3 ANTIFORM; DEFINED, APPROXIMATE
- PHASE 3 SYNFORM; DEFINED, APPROXIMATE
- SILLIMANITE ISOGRAD (Teeth on high-grade side)
- STAUROLITE - KYANITE ISOGRAD
- EDGE OF MAPPING OR OUTCROP
- S₀ BEDDING, PRIMARY LAYERING; INCLINED, VERTICAL, HORIZONTAL
- S₂ FOLIATION; INCLINED, VERTICAL
- S₃ CRENULATION; INCLINED, VERTICAL
- FOLD AXIS
- LINEATION
- SHEAR
- X RIFT Zn-Pb-Cu MASSIVE SULFIDE
- MYLONITE
- ROAD (Under construction)
- PROPERTY BOUNDARY



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NOTE:
TO ACCOMPANY ASSESSMENT REPORT ON THE RIFT,
RIFT 2, OREGON, MICA 9-18 AND MICA 9-19 MINERAL CLAIMS
BY G. GIBSON CONSULTING GEOLOGIST.
SEPTEMBER 1981
Gordon Gibson
SEP 19 1981



No	Date	MADE BY	DESCRIPTION
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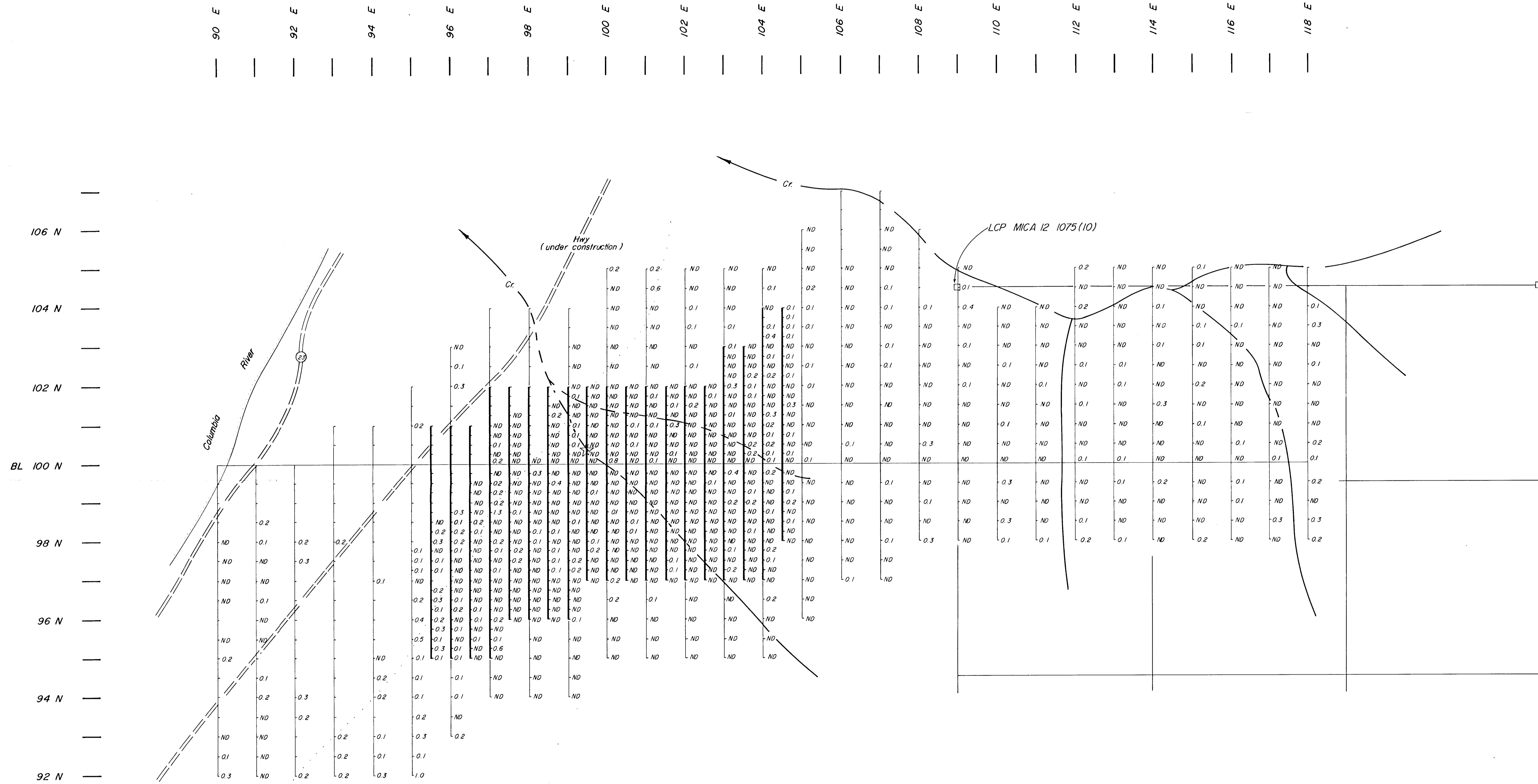
DATE	DRAWN BY	CHECKED	APPROVED
OCT. 1981	G. G.		

E & B Explorations Inc.

OFFICE	DEPARTMENT	MAP INDEX NUMBER	SCALE	DRAWING NUMBER
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WOODRIVER PROJECT

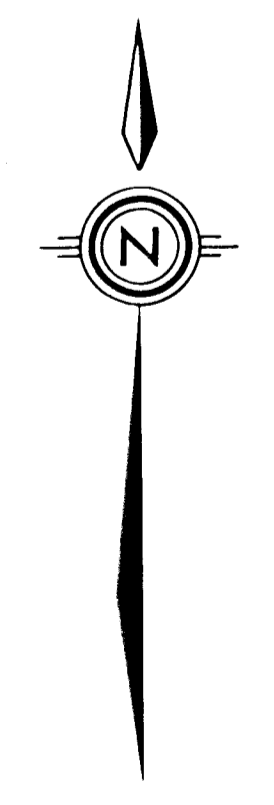
GEOLOGY



LEGEND

- Soil sample - silver value in ppm
N.D. - not detected
- ☆ RIFT Zn-Pb-Cu massive sulfide occurrence

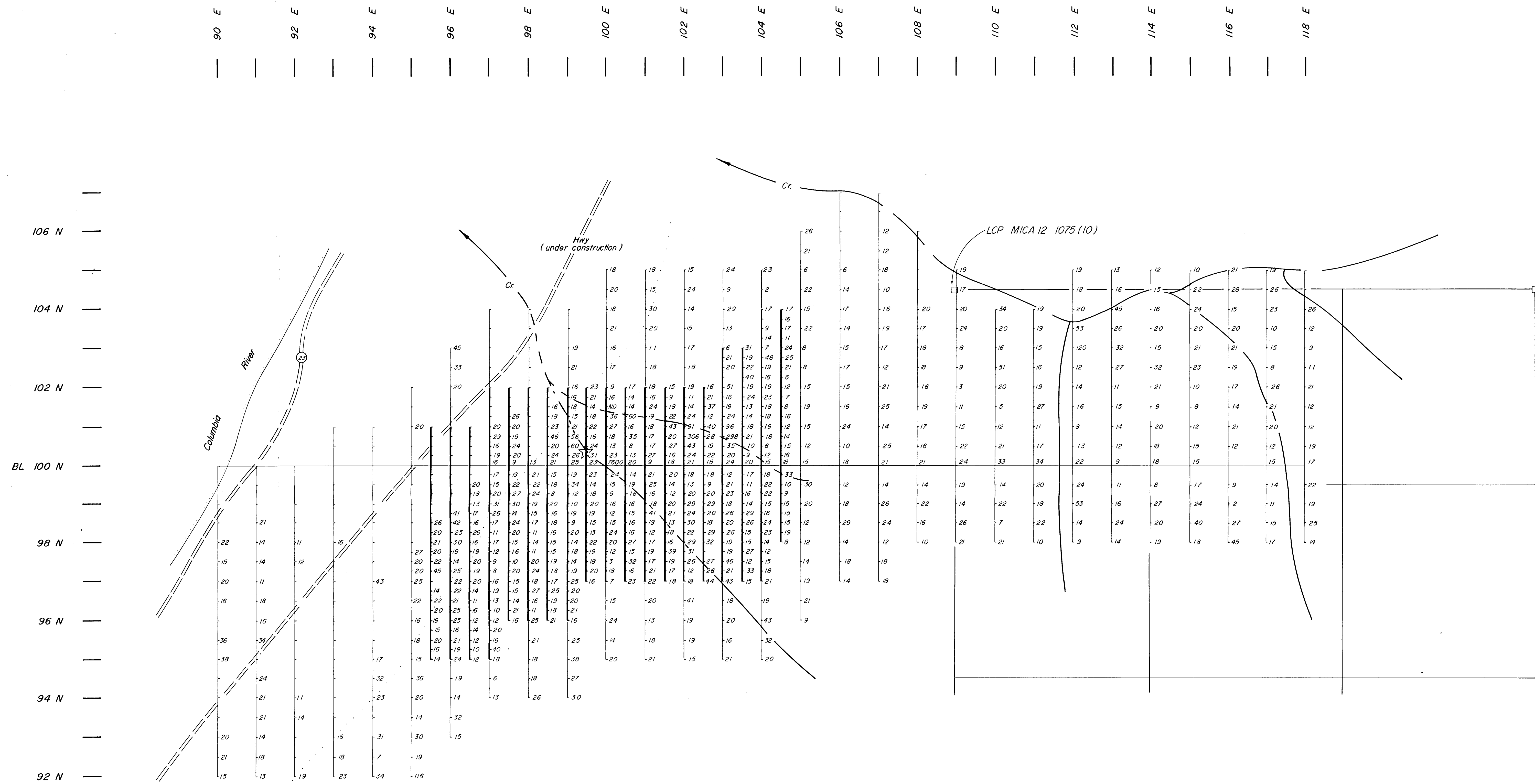
9638



To accompany assessment report on the RIFT, RIFT 2, OMEGA, MICA 5-18 and MICA 19 FR mineral claims by G Gibson-consulting geologist. September 1981

Gordon Gibson
OCT 1981

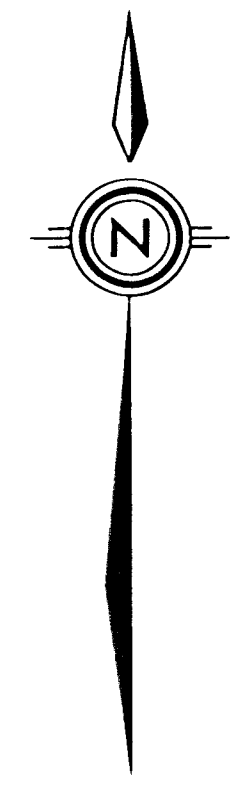
MAP SCALE NTS 82 M/15 E	NO. DATE MADE BY DESCRIPTION 1 10/10/81 GG		WOODRIVER PROJECT SOIL GEOCHEMISTRY Ag IN P.P.M.	
	DATE DRAWN BY CHECKED APPROVED Sept 1981 GG		OFFICE DEPARTMENT Vancouver	MAP INDEX NUMBER SCALE DRAWING NUMBER 1-5,000 8



LEGEND

- 110 Soil sample - lead value in ppm
N.D. - not detected
- ☆ RIFT Zn-Pb-Cu massive sulfide occurrence

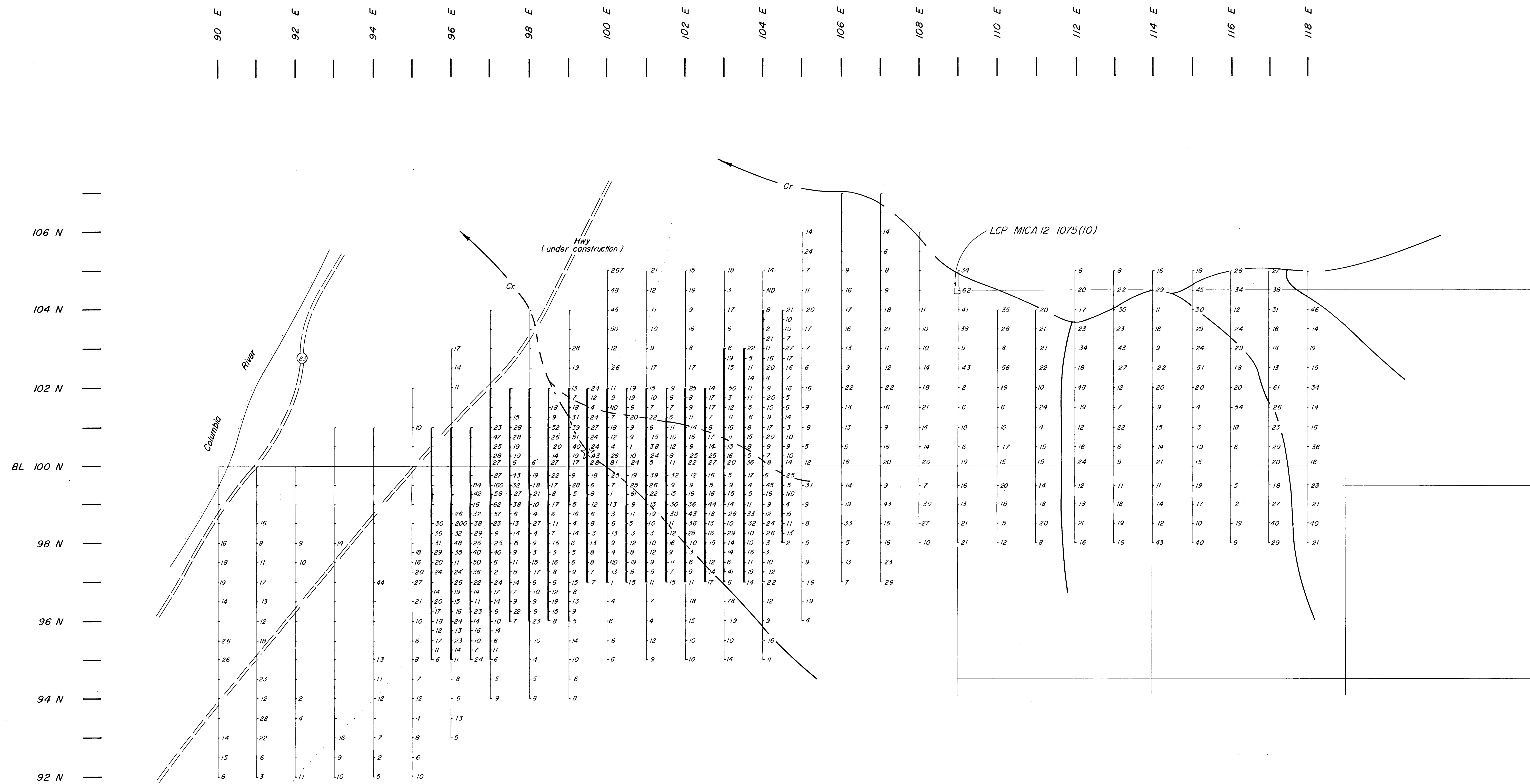
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To accompany assessment report on the RIFT, RIFT 2, OMEGA, MICA 5-18 and MICA 19 FR mineral claims by G. Gibson - consulting geologist. September 1981

Gordon Gibson
CCT 1981

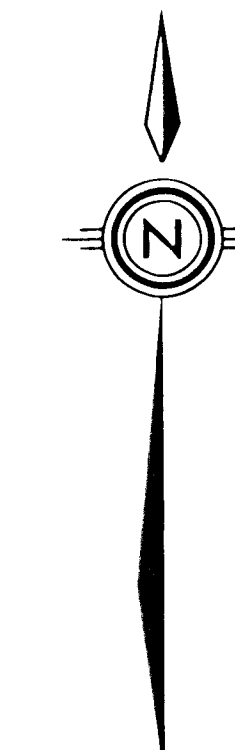
MAP SCALE NTS: 82 M / 15 E	No. 1 DATE: Sept 1981	Dwn. GG DRAWN BY: GG	MADE BY: GG CHECKED: GG APPROVED: GG	DESCRIPTION:		WOODRIVER PROJECT SOIL GEOCHEMISTRY Pb IN P.P.M.	
	OFFICE: Vancouver	DEPARTMENT:	MAP INDEX NUMBER:	SCALE: 1:5,000		DRAWING NUMBER: 6	



LEGEND

- 110 Soil sample copper value in ppm
N.D. - not detected
- ☆ RIFT Zn-Pb-Cu massive sulfide occurrence

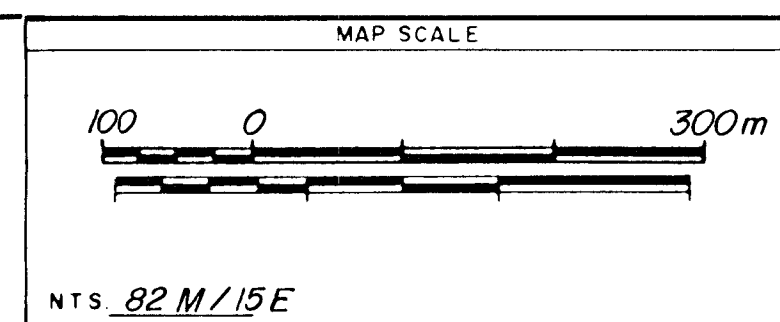
9638



To accompany assessment report on the RIFT, RIFT 2, OMEGA, MICA 5-18 and MICA 19 FR mineral claims by G Gibson - consulting geologist. September 1981

Gordon Gibson
Oct 19 1981

VANCOUVER

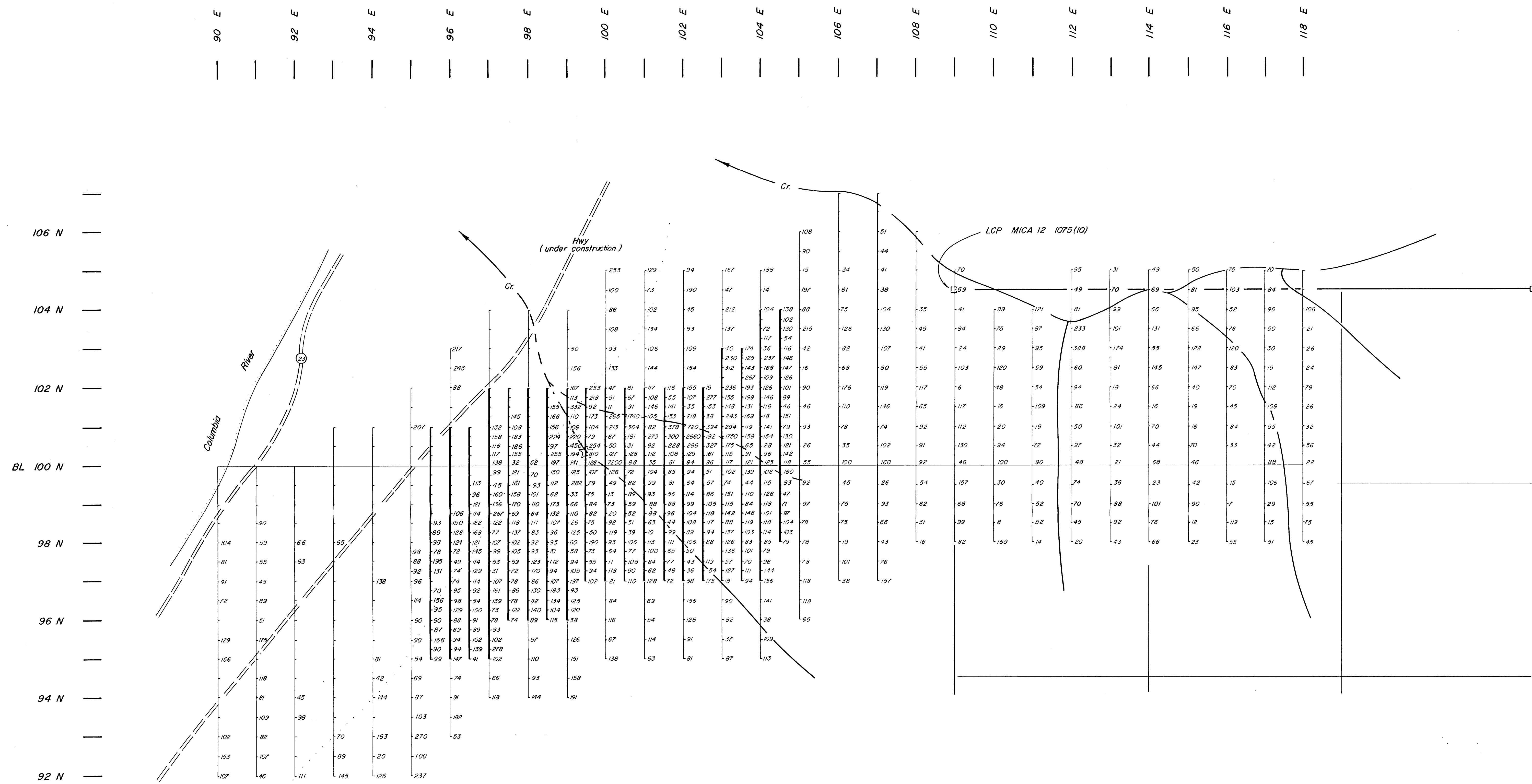


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E & B Explorations Inc.

OFFICE: Vancouver DEPARTMENT: _____

WOODRIVER PROJECT	
SOIL GEOCHEMISTRY	
Cu IN PPM	
MAP INDEX NUMBER	DRAWING NUMBER
1:5,000	7



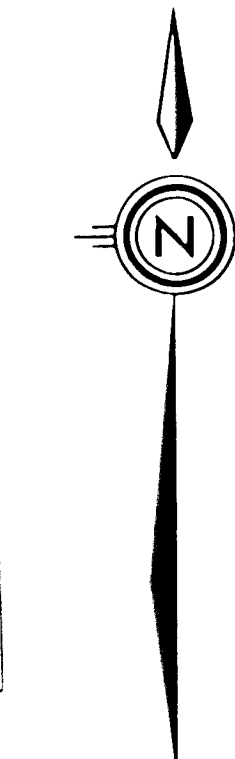
LEGEND

- | 110 Soil sample - zinc value in ppm
N.D. - not detected
- ☆ RIFT Zn-Pb-Cu massive sulfide occurrence

9638

To accompany assessment report on the
RIFT, RIFT 2, OMEGA, MICA 5-18 and
MICA 19 FR mineral claims by G. Gibson -
consulting geologist. September 1981

Conden Gibson
OCT 19/81



MAP SCALE NTS 82 M/15 E	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>1</td><td> </td><td> </td><td> </td></tr> <tr><td>2</td><td> </td><td> </td><td> </td></tr> <tr><td>3</td><td> </td><td> </td><td> </td></tr> <tr><td>4</td><td> </td><td> </td><td> </td></tr> <tr><td>5</td><td> </td><td> </td><td> </td></tr> </table>	1				2				3				4				5				MADE BY DATE Sept 1981	DESCRIPTION DRAWN BY GG	CHECKED APPROVED	OFFICE Vancouver	DEPARTMENT	WOODRIVER PROJECT SOIL GEOCHEMISTRY Zn IN PPM.	MAP INDEX NUMBER SCALE 1:5,000	DRAWING NUMBER 5
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E & B Explorations Inc.																													