061056

GEOLOGICAL REPORT

on the

BAF, VUH, ANG, HAM, LIN, DUO, STOL,
ANN, GOZ, WALT, ANG, LUV MINERAL CLAIMS

Located at
64°25'N; 132°30'W
on
N.T.S.Map Sheets 106-C-7, 106-C-8
near the confluence of Duo and Goz Creeks
Mayo Mining District, Yukon

Field work conducted during the period
August 20, 1973 to September 10, 1973

By

C. M. Hamilton, P.Eng.

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
$ 86,775.00

Resident Geologist or ~~Resident Mining Engineer~~

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

~~Commissioner of Yukon Territory~~
ADMINISTRATOR OF THE YUKON TERRITORY

For

Barrier Reef Resources Ltd. (N.P.L.)
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INTRODUCTION

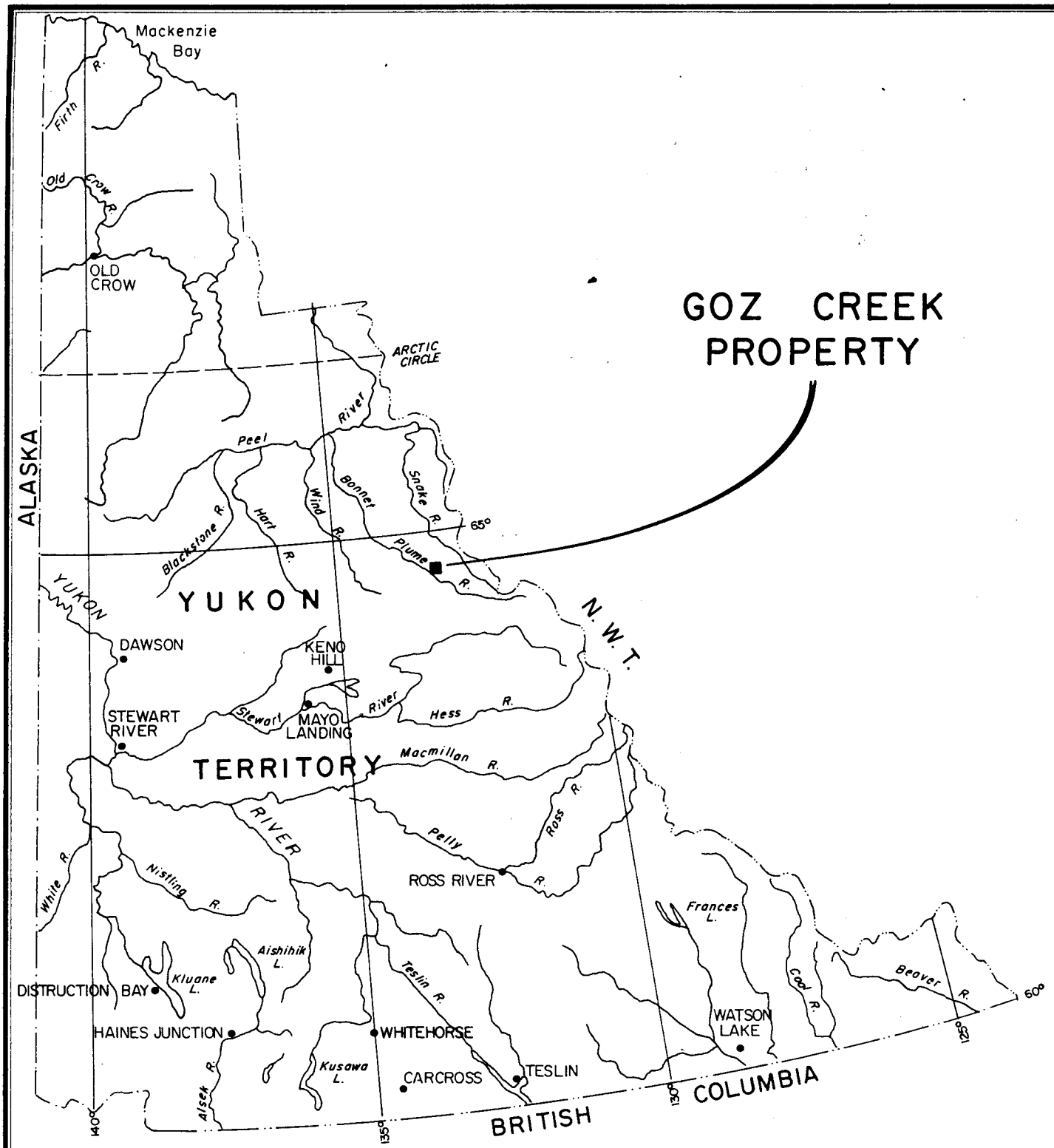
This report describes the results of geological investigations of 192 mineral claims located near Goz Creek in the Mayo Mining District, Yukon Territory. The project was carried out during August and September, 1973, by Cordilleran Engineering Limited at the request of Barrier Reef Resources Ltd. (N.P.L.).

The overall aim of the project was to determine the extent and nature of widespread zinc and lead mineralization which was discovered and staked during June and July, 1973. The work consisted of helicopter supported geological mapping, stratigraphic measurements, surface rock sampling, and prospecting. Additional work is strongly recommended and the present data should suffice as a preliminary step toward a more comprehensive mapping programme which will be required to insure the proper location of drilling targets.

LOCATION AND ACCESS

The claims are located near the headwaters of the Bonnet Plume River (N.T.S. 106-C) at the junction of Goz and Duo Creeks (64°25'N, 130°30'W). The area is accessible by helicopter from Mayo, Yukon Territory (125 miles) or by float plane to Goz Lake and thence by helicopter (8 miles) to the property.

Ross River, Y.T., is located 180 miles due south of the property and Whitehorse is 280 miles to the southwest. (See Location Map, Figure 1).



LOCATION MAP
GOZ CREEK PROPERTY

SCALE 0 20 40 60 80 100 MILES

BY

CORDILLERAN ENGINEERING LTD.
1418 - 355 BURRARD STREET
VANCOUVER 1, B.C.
NOV. 1973

FIGURE 1

EXPLORATION WORK

Stratigraphic sections were examined, sampled, and roughly measured at three localities and the results were compiled to provide a generalized stratigraphic column. A prominent "marker bed" was identified and allowed subdivision of the rocks into mapable units. A geological map of the property was subsequently made using the 1 inch = 1/2 mile topographic claim maps (106-C-7,8). Detailed mapping of some of the most promising lead-zinc showings was accomplished using Brunton compass and tape traverse methods. This mapping was done on a scale of 1 inch = 100 feet and covered an area of 4,000' by 1,500'.

A total of 61 surface rock samples were collected from 15 separate localities and submitted for assay. These samples represent 21 continuous rock chip sample sections across mineralized outcrops.

LOGISTICS

A base camp at Rackla Lake, located 23 miles southwest of the claim group, was occupied from June 20 until September 15, 1973. A Bell G3B1 helicopter was chartered from Rotoflite, Ltd. through Trans North Turbo Air, Ltd., Whitehorse, and used for transportation in the field. Trans North also provided float plane support, maintained radio communications, and expedited supplies from Mayo, Yukon Territory.

Unusually adverse weather conditions during late August and early September inferferred with the operations. However, Rackla Lake did not freeze over until October 1.

Winter snowfall in the area is generally light and the south-facing slopes, where most of the lead-zinc showings occur, should be free of snow by early June.

GEOLOGY

INTRODUCTION

The claims are situated within the Canadian Cordillera near the headwaters of the Bonnet Plume River. The area of interest includes approximately 14 square miles of rugged alpine terrain which is underlain by a thick sequence of folded and faulted Lower Cambrian (?) or possibly Upper Precambrian(?) sedimentary rocks. (See Figure 2).

The region is physiographically characterized by mature topographic development and typical trellis drainage patterns. Evidence of extensive alpine glaciation during the Pleistocene is reflected in the deeply disected mountain ranges, extensive fluvial glacial deposits, and remnant cirque glaciers.

Elevations range from about 3,700 feet (near the junction of Goz and Duo Creeks) to about 6,300 feet

GEOLOGY - Introduction (cont'd)

(mountain peaks) with local relief averaging about 2,000 feet. A considerable portion of the area is above timberline (4,000 feet) and has good exposure. However, part of the area in the valley of Goz Creek is covered by conifer forests with few outcrops.

The Nadaleen River map-area (NTS 106-C) has been studied and mapped by S. L. Blusson; however, only a preliminary geological sketch is presently available (G.S.C. Paper 70-1). An earlier geological reconnaissance map of the Northern Selwyn Mountains was also made by J. O. Wheeler (G.S.C. Paper 53-7) in 1953. These references provided a rough stratigraphic and structural basis for the present field work.

GEOLOGY - Introduction (cont'd)

FIGURE 2: Goz Creek Property, looking northeast.

GEOLOGY (cont'd)

STRATIGRAPHY

Five recognizible stratigraphic units ranging in age from Late Precambrian (?) to Lower Cambrian (?) were mapped and are illustrated on the following page (see Figure 3). These units are described in ascending stratigraphic order as follows:

LATE PRECAMBRIAN (?)

Unit G

The rocks comprising Unit G are mostly light brown and medium to dark gray, thin-bedded to laminated phyllitic shale. These beds are non-resistant and generally form negative topographic features such as the valley of Goz Creek. This unit is probably equivalent to rocks which have been informally designated the "Grit Unit" (S.L.Blusson, personal communication).

The lithologic contrast between the shales and the overlying resistant carbonates allows accurate mapping of the contact boundaries. This contact is also readily discernible on the air photographs.

GEOLOGY - Stratigraphy (cont'd)

Unit C

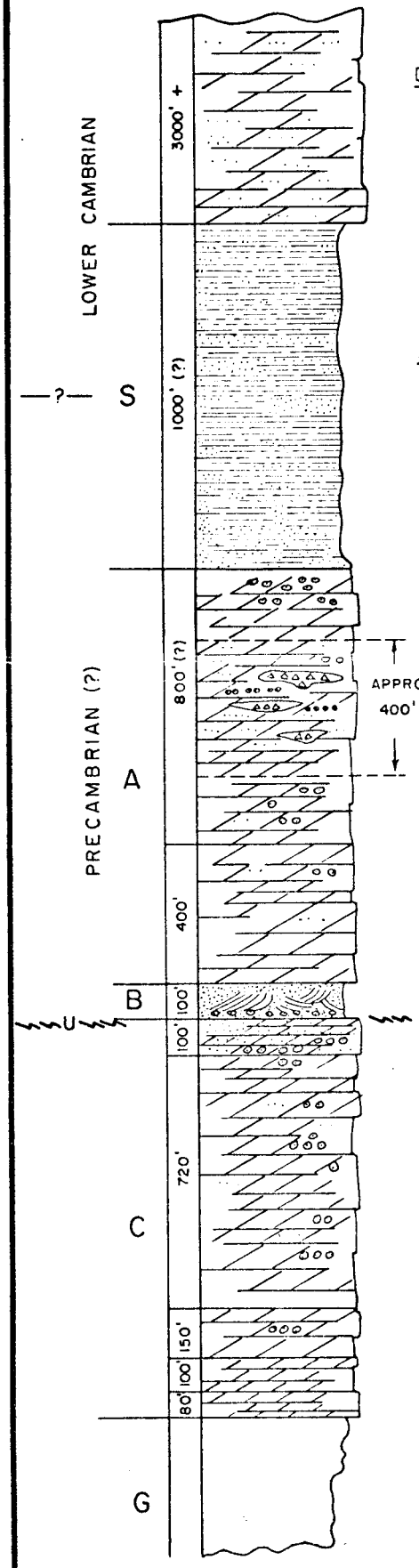
Unit C conformably overlies Unit G and consists of resistant medium to light gray, thin to thick bedded, fine to microcrystalline calcareous dolostone. This unit contains locally porous vuggy pisolitic beds and minor quartz sand, particularly toward the top of the section. The lower 180 feet of the unit is distinguished by thin bedding and is somewhat darker gray in color than the upper part of the unit. The total thickness of Unit C was determined to be approximately 1,150 feet.

Unit B

A prominent sandstone "marker bed" 100 feet in thickness is recognized disconformably overlying Unit C. This bed is characterized as light gray to brownish gray weathering, very thin-bedded to thinly laminated porous dolomitic quartz sandstone with some dark gray non-calcareous shale. It contains fine to very coarse grained quartz sand and has conspicuous tangential sets of cross bedding and some graded bedding. A thin basal conglomerate is also present and contains cobbles up to 2" in diameter. This unit is resistant in the vicinity of the claim group but becomes non-resistant toward the north.

STRATIGRAPHIC SECTION

GOZ CREEK, YUKON TERRITORY



DOLOSTONE: (SEKWI FORMATION), orange and gray weathering, thin bedded, coarse crystalline, vuggy dolostone and minor quartzite.

SHALE: dark gray and brown, very thin bedded to laminated silty shale and sandstone. Non resistant.

DOLOSTONE: medium to light gray and mottled gray, thick-bedded to massive, fine to microcrystalline, calcareous dolostone with some porous vuggy beds, minor chert, solution-collapse breccias, lenses of dolomitic quartz sandstone. Some pisolites.

MINERALIZATION: Sphalerite and galena occur as:

1.) matrix in silicified breccia beds up to 50 feet thick
2.) vug filling, in porous vuggy dolostone
3) veinlets in fractured dolostone
4.) disseminated in light gray coarse crystalline dolostone
5.) banded matrix in lenticular cross-bedded quartz sandstone

DOLOSTONE: medium to light gray and pinkish gray, thick-bedded, fine to microcrystalline locally vuggy dolostone. Some pisolites.

SANDSTONE: light gray to brownish gray, very thin bedded to thinly laminated pourous dolomitic quartz sandstone and dark gray non-calcareous shale. Fine to very coarse grained quartz sand. Abundant tangential crossbedding. Some graded bedding. Conglomeratic at base with cobbles up to 2" dia. Weathers gray to reddish brown. Resistant and non-resistant beds.

DOLOSTONE: very light gray, thick bedded, pourous, sandy dolostone. Pisolitic at base with pisolites 1-5 mm. Some graded bedding.

DOLOSTONE: light gray, thin to thick bedded, fine microcrystalline, calcareous dolostone. Locally pourous, vuggy pisolitic beds, minor quartz sand. Minor white, secondary dolomite.

DOLOSTONE: medium to light gray, thin to thick bedded, calcareous dolostone, locally pisolitic.

DOLOSTONE: medium gray thick bedded microcrystalline calcareous dolostone. Light gray weathering.

DOLOSTONE: medium to dark gray, thin to thick bedded, fine to microcrystalline calcareous dolostone, light gray weathering, banded, resistant.

SHALE: "GRIT UNIT", light brown, medium to dark gray, thin bedded to laminated phyllitic shale. Some calcareous beds, non-resistant.

SCALE: 1" = 500'

FIG. 3

GEOLOGY - Stratigraphy (cont'd)

Unit A

This unit is comprised of medium to light gray and mottled gray, thick bedded to massive, fine to microcrystalline calcareous dolostone. Porous vuggy beds with local breccias and minor lenses of quartz sandstone are contained within this unit and are extensively mineralized. Pisolites are found in many parts of the section and the overall lithology is very similar to Unit C. Stratigraphic position, rather than lithology, is of primary importance in distinguishing between Units A and C. Unit A is approximately 1,200 feet in thickness; however, most of the upper portion of the section has been removed by erosion in the vicinity of Goz Creek.

Unit S

Unit S conformably (?) overlies Unit A and is composed of gray and brown, very thin-bedded to laminated silty shale and sandstone. No sections of this unit were measured; however, it is believed to be approximately 1,000 feet thick (S.L.Blusson, personal communication).

GEOLOGY - Stratigraphy (cont'd)

LOWER CAMBRIAN

Sekwi Formation

The Sekwi Formation has been completely removed by erosion in the area of the claim group, but is present to the northwest, and consists of orange and gray weathering, thin bedded, coarse crystalline, vuggy dolostone. This unit is at least 3,000 feet thick and hosts several lead-zinc occurrences in the Godlin Lakes area, Y.T. Trilobites have been collected from this unit by G.S.C. personnel at localities northwest of the Goz property.

GEOLOGY (cont'd)

STRUCTURAL GEOLOGY

Regional deformation has resulted in a structural style that is characterized by predominantly west-northwest trending fold axes and faults. The most prominent structures are believed to be of Late Mesozoic (Laramide) age and are the result of compressional forces oriented in a northeast-southwest direction. On a regional scale, the sedimentary rocks occurring in the vicinity of Goz Creek appear to be part of a much larger structural block which has been thrust toward the northeast onto younger Ordovician-Devonian units.

The carbonate rocks, which host the mineralization, are sandwiched between overlying and underlying shales. These carbonates rest conformably on the shales to the north of the claim group, but are in fault contact near the south boundary. This fault, which is tentatively named the "South Fault", marks the southern extent of the carbonate rocks and the mineralization. The exact attitude of the fault was not determined, but it is believed to be a relatively high-angle reverse fault.

GEOLOGY - Structural Geology (cont'd)

The carbonate rocks to the north and west of Goz Creek occur primarily within a broad, gently folded assymetrical anticline-syncline. The anticlinal fold (hereafter referred to as the "Goz Creek Anticline") axis trends roughly west-northwest with dip values averaging 1 to 5 degrees on the north flank and 14 to 30 degrees on the south flank. All of the presently known lead-zinc showings occur on the south side of the anticline.

A prominent near-vertical reverse fault, subsequently referred to as the "North Fault", cuts the Goz Creek Anticline and is persistent for a distance of 8 to 10 miles along a northwest trend. This fault has an estimated displacement of 700 feet and seems to be the northern limit of the mineralization. On the north (up-thrown) side of the fault most of the favourable host unit (Unit A) has been eroded away and only remnants can be seen on the tops of the higher peaks.

Numerous secondary fractures and joints occur in the carbonate rocks and often obscure the original bedding, making it difficult to obtain accurate attitudes.

MINERALIZATION

Extensive showings of zinc and lead sulfide occur in sedimentary rocks of Lower Cambrian (?) or Upper Precambrian (?) age located 8 miles southwest of Goz Lake. The mineralization occurs as crudely stratiform bodies within porous dolomitized carbonates along a 5 1/2 mile-long northwest trending outcrop between the North and South faults. (See Regional Geology, Plate I).

The overall host unit is comprised of medium to light gray, medium to coarse crystalline, massive vuggy dolostone beds occurring within Unit A. These beds contain some silicified breccia, pisolites, chert, minor quartz sandstone and are generally more porous than the typical dolostones of Unit A. The mineralization occurs over a stratigraphic interval of approximately 400 feet within Unit A and there are several mineralized horizons.

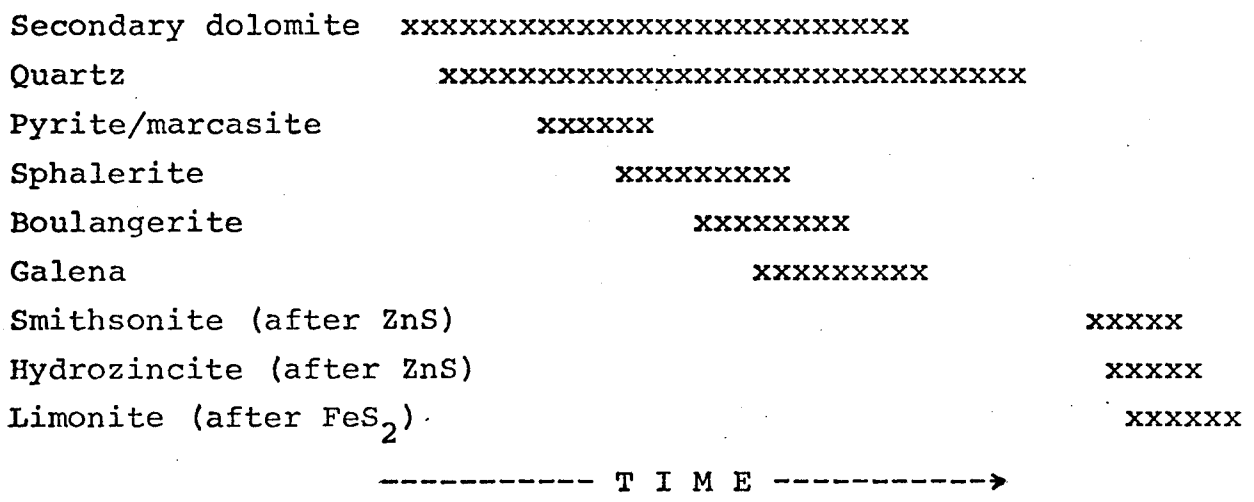
MINERALIZATION (cont'd)

The mineralization is most commonly greenish-yellow and red crystalline sphalerite (ZnS) with minor amounts of galena (PbS). Extensive secondary smithsonite ($ZnCO_3$) is found in many heavily weathered outcrops and is somewhat difficult to recognize due to its dull gray to brown color. White secondary hydrozincite ($2ZnCO_3 \cdot 3Zn(OH)_2$) is common in areas around the showings. Minor boulangerite ($Pb_5Sb_4S_{11}$) has been identified at several localities where it occurs as metallic gray vesicular masses with sphalerite. Other minerals include pyrite (FeS_2) and/or marcasite (FeS_2), which occurs in trace amounts with the mineralization, but is more abundant in peripheral areas some distance from the showings. Secondary limonite ($FeO(OH) \cdot nH_2O$) is widespread and imparts a prominent light rusty gossanous color to the carbonates. In addition, very minor traces of pyrobitumen (petroleum residue) and found in vugs and cavities in the porous dolostone.

Mineralized textures observed indicate a fairly consistent paragenetic sequence, and is illustrated as follows:

MINERALIZATION (cont'd)

Mineral Paragenesis



Five distinct modes of occurrence are recognized. Sphalerite, accompanied by minor galena and boulangerite, occur as:

(1) matrix in silicified breccia beds
(2) vug filling in porous vuggy dolostone
(3) veinlets in fractured dolostone
(4) disseminations in light gray coarse crystalline dolostone
(5) banded matrix in lenticular cross-bedded quartz sandstone.

The zinc occurrences are visualized as crudely stratiform bodies of relatively high-grade disseminated sphalerite and breccia or sandstone with sphalerite matrix, surrounded by extensive areas of lower grade sphalerite

MINERALIZATION (cont'd)

vug and fracture filling with some disseminated sphalerite. However, there is some evidence of structural control and localization of mineralization where faults and fractures intersect the favourable host beds.

Secondary smithsonite and hydrozincite occur with the sphalerite in varying amounts depending on the degree of weathering. Quartz is often associated with the various zinc minerals. Both pre- and post-ore quartz is evident in the silicified breccias; however, sphalerite occurs without quartz in numerous localities.

EVALUATION OF ZINC-LEAD OCCURRENCES

The most extensive zinc-lead showings on the claim group occur along a 1 1/2 mile-long outcrop area which was partially mapped on a scale of 1 inch = 100 feet using Brunton compass and tape survey methods. (See Geological Plan, Plate II). The principal surface showings were sampled using 10 to 15 foot continuous chip sections weighing 10 to 15 pounds each. These samples were subsequently assayed for total zinc, non-sulfide zinc, lead, silver, and cadmium. The results were averaged and are illustrated on the Assay Plan (Plate III). Detailed assay results are contained in the appendix. Sampled areas have been designated A, B, C etc. for easy reference.

Breccia beds outcropping in the vicinity of A, B and H contain massive sphalerite and, where altered by weathering, secondary smithsonite matrix. These showings

EVALUATION OF ZINC-LEAD OCCURRENCES

form a continuous mineralized outcrop trend having a strike length of approximately 1,600 feet and an estimated true thickness of 30 to 40 feet. (See Figure 4). The average grade of fresh unoxidized mineralization is 21.0% sulfide zinc with 0.1 to 0.3% lead. The breccia is characterized by subangular silicified dolostone fragments in a matrix of coarse crystalline sphalerite with some post-ore quartz. The breccia fragments average 1" to 12" across and often contain some disseminated sphalerite.

Heavily mineralized lenticular quartz sandstone beds up to 10 feet thick occur in close proximity to the breccia. "Grab samples"indicate that these beds contain 20 to 25% sulfide zinc.

A second linear trend is defined by showings J, M, and N where disseminated sphalerite and minor breccia form a crudely stratiform body partially exposed along 1,100 feet of strike length. Assays indicate that this particular body will average 20 to 30% sulfide zinc with an estimated true thickness of 30 to 50 feet.

Other showings, such as E, L, I, K, and C show lesser individual continuity, but seem to be part of

EVALUATION OF ZINC-LEAD OCCURRENCES (cont'd)

FIGURE 4: Well exposed outcrop of mineralized breccia at "A", looking southeast.

EVALUATION OF ZINC-LEAD OCCURRENCES (cont'd)

a broad pattern of mineralization within the host unit and, taken together, represent a continuously mineralized northwest trending outcrop for at least 4,400 feet along strike. (See Figure 5 and Regional Geology, Plate I).

Persistence of the mineralization down-dip is suggested by Showing "O" (not shown on Geological Plan) where a canyon cuts the host unit. At this locality a poorly exposed outcrop having an estimated true thickness of 15 feet contained 37.6% sulfide zinc. Other showings (F), also not covered by detailed mapping, lie up-dip from the main showings and averaged 5.7% sulfide zinc over a measured true thickness of 30 feet.

In addition to lead and zinc, cadmium and silver, occur as minor constituents in the mineralized areas. Cadmium occurs primarily with sphalerite and assays range from 0 to 0.14% Cd and averages 0.06% Cd. Silver is associated with the galena and assays range from 0 to 4.7 oz/ton with an overall average of about 0.10 to 0.2% oz/ton. Antimony occurs in boulangerite which occassionally accompanies sphalerite and galena.

EVALUATION OF ZINC-LEAD OCCURRENCES (cont'd)

Numerous additional showings are known to exist along the 5 1/2 mile-long outcrop of the host unit but were not sampled. Large areas of the property remain unprospected and unmapped in detail. Much of the area in the valley of Goz Creek is forested and has untested potential.

The heavily weathered nature of the carbonate outcrops and the presence of secondary smithsonite make it somewhat difficult to visually estimate the zinc content of some mineralized areas. This problem must be considered for future mapping and prospecting. A zinc oxide indicator solution proved useful, during the field work, but the method is not quantitative. Careful surface sampling and assays at close intervals will be required in order to recognize and evaluate these weathered or oxidized areas.

EVALUATION OF ZINC-LEAD OCCURRENCES (cont'd)

FIGURE 5: Outcrop of mineralized host unit located on northwest side of Goz Creek.

GEOCHEMISTRY

A regional programme of geological and geochemical reconnaissance in the Bonnet Plume-Nadaleen River area resulted in the discovery of the zinc showings at Goz Creek. Mineralization was found during the course of systematic stream sediment sampling covering various carbonate units. Analytical results which were obtained from the vicinity of the claim group are included in this report (see Plates V, VI and VII).

Most of the samples from the area around Goz Creek are anomalous with the highest values (7700 ppm Zn) occurring near major known zinc showings on the property. However, on a regional basis, the entire carbonate block north and west of Goz Creek is considered anomalous, ie., above 300 ppm zinc.

NOTES ON GENESIS

An epigenetic origin for the mineralization at Goz Creek is suggested by field observations and there are many similarities between these occurrences and well-known deposits in the mid-continent region of the U.S. Porosity of the host unit was undoubtedly an important factor in the mineralization process and provided a paleoaquifer channelway or "plumbing system" which served to localize the ore-bearing fluids. The presence of pisolitic and sandy beds could account for the initial porosity and suggests that the carbonate deposition occurred under relatively high-energy, shallow water conditions. Similar conditions exist today on the west side of Andros Island (Bahamas) where recent pisolite-sand deposition is observed on a broad submarine shelf.

Refluction dolomitization, marginal to a restricted shallow-water marine environment, such as in the vicinity of a supratidal shoal or reef is visualized as a probable mechanism for development of further porosity and subsequent

NOTES ON GENESIS (cont'd)

solution-collapse breccia. This environment was recurrent through time as evidenced by the presence of similar shelf carbonates throughout the Middle and Lower Paleozoic section. The Lower Cambrian paleogeographic setting and facies relationships (Goz Creek - see Figure 6) are remarkably similar to those occurring in the Middle Devonian at Pine Point, N.W.T., and Robb Lake, B.C., where similar zinc deposits have been found.

The zinc and lead was probably transported as a soluble chloride complex in Na-Ca-Cl brines (possibly connate solutions derived from basin shales) moving through the porous and permeable zones within the host unit. However, solid evidence to support any of the various ideas regarding the genesis of the mineralization, as well as the host rocks, must await more detailed textural studies.

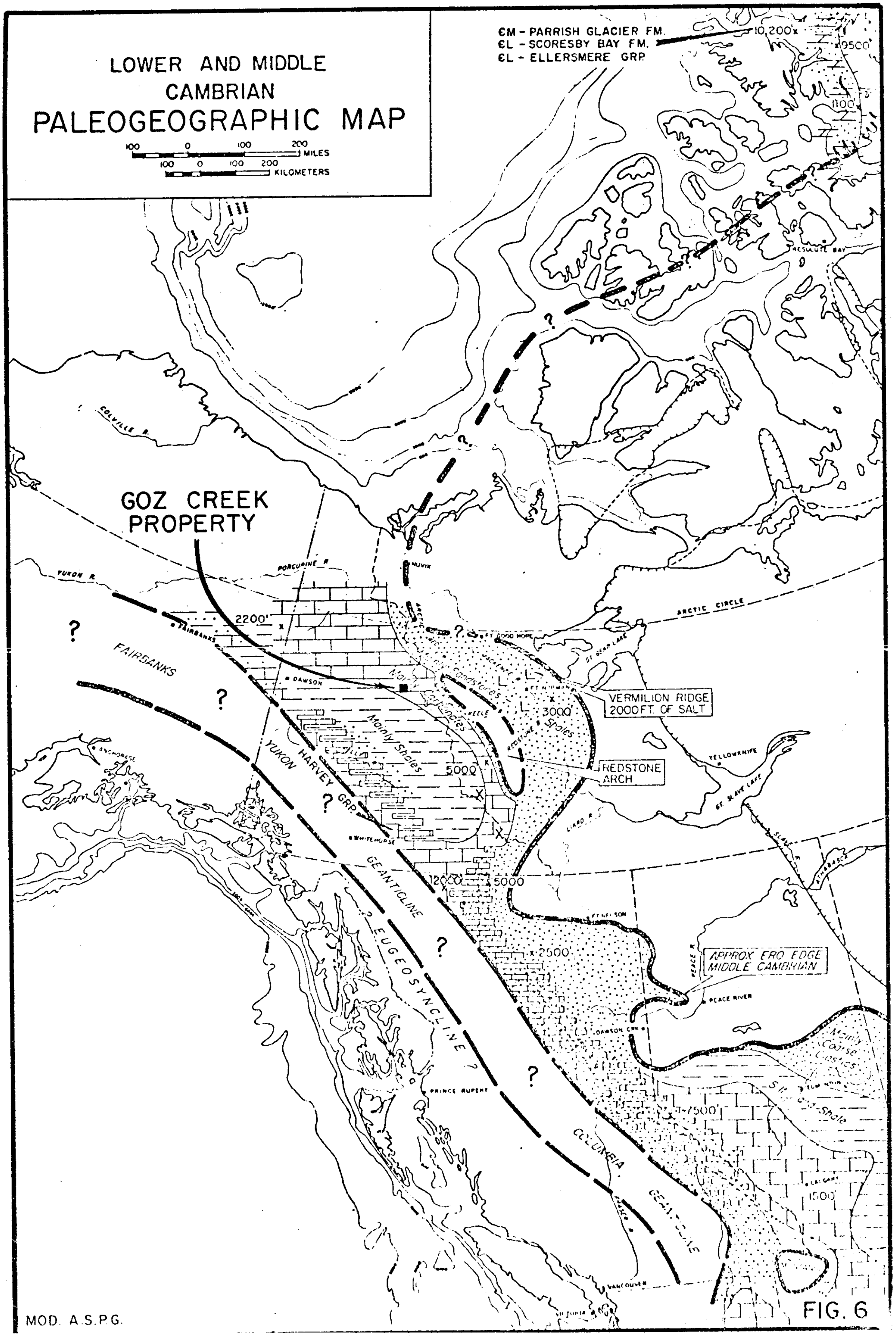

LOWER AND MIDDLE
CAMBRIAN
PALEOGEOGRAPHIC MAP
100 0 100 200 MILES
100 0 100 200 KILOMETERS
€M - PARRISH GLACIER FM.
€L - SCORESBY BAY FM.
€L - ELLERSMERE GRP.
10,200'
9500'
1100'
RESOLUTE BAY
COLVILLE R.
GOZ CREEK
PROPERTY
YUKON R.
PORCUPINE R.
INUVIK
ARCTIC CIRCLE
2200'
FAIRBANKS
FT. GOOD HOPE
GT. BEAR LAKE
DAWSON
Mainly Sandstones
Mainly Carbonates
Mainly Shales
Shales
3000
VERMILION RIDGE
2000 FT. OF SALT
REDSTONE
REDSTONE
ARCH
YELLOWKNIFE
GT. SLAVE LAKE
5000
ANCHORAGE
YUKON
HARVEY GRP.
WHITEHORSE
LIARD R.
GEANTICLINE
12000
5000
FT. NELSON
EUGEOSYNCLINE ?
2500
APPROX ERO EDGE
MIDDLE CAMBRIAN
PEACE R.
PEACE RIVER
DAWSON CRK
Mainly Coarse Clastics
PRINCE RUPERT
7500'
Silt and Shale
COLUMBIA
GEANTICLINE
CALGARY
1500'
VANCOUVER
MOD. A.S.P.G.

FIG. 6

SUMMARY AND CONCLUSIONS

A block of 192 claims located near Goz Creek, 125 miles northeast of Mayo, Y.T., was examined using geological mapping, stratigraphic measurements, surface rock sampling, and prospecting. The property includes 14 square miles of alpine terrain underlain by a thick sequence of Lower Cambrian or Upper Precambrian (?) sedimentary rocks.

Widespread zinc-lead sulfide mineralization occurs in carbonate host rocks exposed along a 5 1/2 mile-long outcrop on the south flank of a broad anticline. These occurrences are visualized as crudely stratiform bodies of relatively high grade mineralization, surrounded by extensive zones of lower grade material. The best mineralized area averages 30 to 40 feet (true thickness) of 21.0% sulfide zinc contained in heavily weathered outcrops and exposed for 1,600 feet along strike. Numerous other discreet

SUMMARY AND CONCLUSIONS (cont'd)

mineralized bodies occur within the host unit, which is approximately 400 feet thick.

Regional and stratigraphic mapping and preliminary sampling have demonstrated that the area has considerable potential; however, presently available data is insufficient for estimating the overall grade and tonnage. The gently dipping host unit and relatively shallow overburden provide an ideal situation for possible open-pit mining and further evaluation of the claim group is highly recommended.

RECOMMENDATIONS

The objectives of exploration work in 1974 are as follows:

1. Determine lateral persistence, approximate thickness, stratigraphic and structural control and depth of oxidation of the mineralized zone or zones.

2. Select the best possible area to begin outlining tonnage.

3. Establish more efficient access to the property.

Extensive bedrock exposures in the area of interest suggests that objectives (1) and (2) would be best achieved by thorough prospecting and detailed geological mapping followed by limited diamond drilling in selected areas.

RECOMMENDATIONS (cont'd)

Objective (3) would be achieved by constructing a 5,000' airstrip on the property at a site that has already been selected. This would permit more economical use of aircraft for logistic support than is presently possible.

Respectfully submitted

CORDILLERAN ENGINEERING LIMITED

C. M. Hamilton, Geologist, P.Eng.

CMH/z

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ASSAYS AND GEOCHEMICAL RESULTS

SAMPLE NUMBER	SHOWING	SECTION NUMBER	FOOTAGE	DESCRIPTION
3526	A	1	17 to 27'	Rock chip sample-breccia with ZnS matrix.
3527	A	1	27 to 37'	Rock chip sample-breccia with ZnS matrix.
3528	A	1	37 to 47'	Rock chip sample-breccia with ZnS matrix.
3529	A	1	47 to 57'	Rock chip sample-breccia with ZnS matrix.
3530	A	1	57 to 67'	Rock chip sample-breccia with ZnS matrix.
3531	A	1	67 to 77'	Rock chip smaple-breccia with ZnS matrix.
3532	A	1	83 to 98'	Rock chip sample-breccia with $ZnCO_3$ matrix
3533	A	1	-30 to -40'	Rock chip sample-dolostone with $ZnCO_3$.
3534	A	1	-20 to -10'	Rock chip sample-dolostone with $ZnCO_3$.
3535	A	2	-10 to 0'	Rock chip sample-breccia with $ZnCO_3$ matrix
3536	A	2	0 to 10'	Rock chip sample-breccia with ZnS matrix.
3537	A	2	10 to 20'	Rock chip sample-breccia with ZnS matrix.
3538	A	2	20 to 30'	Rock chip sample-breccia with ZnS matrix.
3539	A	2	30 to 40'	Rock chip sample-breccia with ZnS matrix.
3540	A	2	40 to 50'	Rock chip sample-breccia with ZnS matrix.
3541	A	2	50 to 60'	Rock chip sample-breccia with ZnS matrix.
3542	A			Rock chip sample-breccia with $ZnCO_3$ matrix
3543	B			Rock chip sample across 60' rubble outcrop
3544	B			Rock sample-boulangerite + sphalerite.
3554	D			Rock sample-hi grade PbS with boulangerite
3555	C	1	-10 to 0'	Rock chip sample.
3556	C	1	0 to 10'	Rock chip sample.
3557	C	1	10 to 20'	Rock chip sample.
3558	C	1	20 to 30'	Rock chip sample.
3559	C	1	30 to 40'	Rock chip sample.
3560	C	1	40 to 48'	Rock chip sample.
3561	F	1	0 to 10'	Rock chip sample-true thickness.
3562	F	1	10 to 20'	Rock chip sample-true thickness.
3563	F	1	20 to 30'	Rock chip sample-true thickness.
3564	G	1	0 to 10'	Rock chip sample-true thickness.

ASSAYS AND GEOCHEMICAL RESULTS (cont'd)

SAMPLE NUMBER	SHOWING	SECTION NUMBER	FOOTAGE	DESCRIPTION
3572	C			Rock sample-vuggy dolostone with ZnS.
3573	A			Rock sample-quartz sandstone with banded ZnS matrix.
3574	H	1	0 to 10'	Rock chip sample-true thickness.
3575	I	1	0 to 10'	Rock chip sample-true thickness.
3576	K	1	0 to 10'	Rick chip sample-true thickness.
3577	E	1	0 to 10'	Rock chip sample-true thickness.
3578	E	1	0 to 10'	Rock chip sample-true thickness.
3579	J	1	0 to 30'	Rock chip sample-true thickness.
3580	J	2	0 to 10'	Rock chip sample-true thickness.
3581	N	1	0 to 10'	Rock chip sample-outcrop 3'x10'.
3582	N	2	0 to 35'	Rock chip sample.
3583	N	3	0 to 15'	Rock chip sample.
3584	M	1	0 to 10'	Rock chip sample-true thickness.
3585	L	1	0 to 10'	Rock chip sample-dolostone with disseminated ZnS.
3586	D	1	0 to 65'	Rock sample-heavily weathered dolostone with $ZnCO_3$.
3587	L	2	0 to 30'	Rock chip sample.
3588	A	1	83 to 98'	Rock chip sample-breccia with $ZnCO_3$ matrix
3589	A	1	98 to 113'	Rock chip sample-breccia with $ZnCO_3$ matrix
3590	A	1	113 to 128'	Rock chip sample-breccia with $ZnCO_3$ matrix
3591	A	1	128 to 143'	Rock chip sample-breccia with $ZnCO_3$ matrix
3592	A	1	143 to 158'	Rock chip sample-barren(?) dolostone.
3593	A	3	0 to 10'	Rock chip sample-breccia with $ZnCO_3$ matrix
3594	A	3	10 to 40'	Rock chip sample-breccia with $ZnCO_3$ matrix
3595	A	3	40 to 70'	Rock chip sample-breccia with $ZnCO_3$ matrix
3596	A	4	0 to 15'	Rock chip sample-breccia with $ZnCO_3$ matrix
3597	O	1	0 to 15'	Rock chip sample-estimated true thickness.
3600	A			Rock sample-breccia with $ZnCO_3$ matrix.
3601	H	1 Ext	0 to 15'	Rock chip sample-massive $ZnCO_3$.
3602	H	1 Ext	15 to 30'	Rock chip sample-massive $ZnCO_3$.
3603	H	1 Ext	52 to 72'	Rock chip sample-massive $ZnCO_3$.
3604	H	1 Ext	72 to 92'	Rock chip sample-massive $ZnCO_3$.

ASSAYS AND GEOCHEMICAL RESULTS (cont'd)

SAMPLE NUMBER	SHOWING	SECTION NUMBER	FOOTAGE	DESCRIPTION
3605	A	2	-10 to -20'	Rock chip sample-breccia with $ZnCO_3$ matrix
3606	A	2	-20 to -30'	Rock chip sample-breccia with $ZnCO_3$ matrix
3607	A	2	-30 to -40'	Rock chip sample-breccia with $ZnCO_3$ matrix
3608	A			Rock sample-barren dolostone.
3609	A			Rock sample-barren dolostone.
3610	L			Rock sample-barren dolostone.

BONDAR-CLEGG & COMPANY LTD.
764 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110 TELEX: 053-3548

Certificate of Analysis

TO Cordilleran Engineering Limited
1418 - 355 Burrard Street
Vancouver 1, B.C.

REPORT NO. A 43-50
DATE August 28, 1973

I hereby certify that the following are the results of analyses made by us upon the herein described Ore samples

MARKED	Pb %	Zn %	Cd %
3526	0.38	33.40	0.11
3527	0.24	34.00	0.10
3528	0.24	31.50	0.09
3529	0.16	30.00	0.09
3530	0.28	24.00	0.08
3531	0.18	31.40	0.09
3532	0.07	38.20	0.11
3533	L0.02	0.52	L0.01
3534	L0.02	9.00	0.05
3535	0.30	5.75	0.02
3536	0.04	27.80	0.08
3537	0.16	15.80	0.04
3538	0.10	19.20	0.06
3539	0.77	19.40	0.06
3540	0.11	37.60	0.10

NOTE:
Rejects retained two weeks
Pulps retained three months
unless otherwise arranged.

BONDAR-CLEGG & COMPANY LTD.
R. K. Rogers

R. K. Rogers

APPENDIX "B"
iv

BONDAR-CLEGG & COMPANY LTD.
764 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110 TELEX: 053-3548

Certificate of Analysis

TO Cordilleran Engineering Limited

REPORT NO. A 43-50

DATE August 28, 1973

I hereby certify that the following are the results of analyses made by us upon the herein described Ore samples

MARKED	Pb %	Zn %	Cd %
3541	0.14	32.40	0.09
3542	0.02	41.80	0.09
3543	0.38	18.00	0.08
3544	10.00	14.40	0.08
3545	3.50	5.40	0.05
3546	18.00	3.50	0.04
3547	0.03	7.20	0.07

Ag results to follow

L means Less Than

NOTE:
Rejects retained two weeks
Pulps retained three months
unless otherwise arranged.

BONDAR-CLEGG & COMPANY LTD.
R. K. Rogers

APPENDIX "B"

BONDAR-CLEGG & COMPANY LTD.
764 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110 TELEX: 053-3548

Certificate of Analysis

TO Cordilleran Engineering Limited
1418 - 355 Burrard Street
Vancouver 1, B.C.

REPORT NO. A 43-50
DATE September 4, 1973

I hereby certify that the following are the results of analyses made by us upon the herein described Ore samples

RR. 416.

MARKED	Ag ounces per ton
3526	0.02
3527	Trace
3528	Trace
3529	Trace
3530	0.04
3531	Trace
3532	Trace
3533	Trace
3534	Trace
3535	0.12
3536	0.02
3537	Trace
3538	Trace
3539	Trace
3540	0.02

NOTE:
Rejects retained two weeks
Pulps retained three months
unless otherwise arranged.

BONDAR-CLEGG & COMPANY LTD.
R. K. Rogers

APPENDIX B, VI

BONDAR-CLEGG & COMPANY LTD.
764 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110 TELEX: 053-3548

Certificate of Analysis

TO Same as Page #1

REPORT NO. A 43-50

DATE September 4, 1973

I hereby certify that the following are the results of analyses made by us upon the herein described ore samples

MARKED	Ag ounces per ton
3541	Trace
3542	Trace
3543	Trace
3544	Trace
3545	3.2
3546	22.0
3547	Trace

NOTE:
Rejects retained two weeks
Pulps retained three months
unless otherwise arranged.

BONDAR-CLEGG & COMPANY LTD.
R. K. Rogers

To: Co leran Engineering Ltd.

REPORT No A4 649

PAGE No. 1

DATE: September 27/73

BONDAR-CLEGG & COMPANY LTD.

CERTIFICATE OF ASSAY

1418 - 355 Burrard Street
Vancouver 1, B. C.

Samples submitted: Sept. 18, 1973
Results completed: Sept. 27, 1973

I hereby certify that the following are the results of assays made by us upon the herein described pulp BR-42 samples.

MARKED	GOLD		SILVER	Zn*							TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
3526				0.52							
3527				0.59							
3528				0.75							
3529				0.71							
3530				0.55							
3531				0.74							
3532				31.00							
3533				0.44							
3534				8.95							
3535				4.90							
3536				1.15							
3537				0.60							
3538				1.85							
3539				0.78							
3540				0.60							
3541				0.74							

*non-sulphide

Registered Assayer, Province of British Columbia

To: Coleran Engineering Ltd.

REPORT No A - 630

PAGE No. 1

DATE: October 1, 1973

BONDAR-CLEGG & COMPANY LTD.

CERTIFICATE OF ASSAY

1418 - 355 Burrard Street
Vancouver 1, B. C.

Samples submitted: Sept. 17, 1973
Results completed: Oct. 1, 1973

Project: Yukon

I hereby certify that the following are the results of assays made by us upon the herein described ore AR-YK. samples.

MARKED	GOLD		SILVER	Pb	Zn	Cd					TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
3548			0.96	1.35	8.10	0.02					
3549			0.59	0.50	29.75	0.06					
3550			2.3	2.55	30.70	0.06					
3551			56.5	49.25	3.25	0.01					
3552			17.5	19.50	41.75	0.09					
3553			16.6	32.95	21.40	0.15					
3554			2.4	60.90	0.30	L0.01					
3555			0.17	0.50	0.25	L0.01					
3556			0.89	0.40	22.90	0.07					
3557			0.87	3.10	18.20	0.06					
3558			0.81	5.60	16.70	0.06					
3559			0.70	3.10	18.75	0.06					
3560			0.18	0.20	3.80	0.01					
3561			0.06	0.55	3.05	0.01					
3562			0.30	0.35	8.30	0.02					
3563			0.78	3.10	11.15	0.03					
3564			4.7	30.85	5.35	0.01					
3565			0.16	0.45	0.25	L0.01					
3566			0.32	13.80	2.20	0.01					
3567			0.04	0.25	0.30	L0.01					
3568			0.30	21.34	15.70	0.07					
3569			0.05	0.25	0.25	L0.01					
3570			0.14	0.10	0.15	L0.01					
3571			0.08	0.05	0.10	L0.01					
3572			0.04	0.05	4.40	0.01					

APPENDIX "B" 1x

DO NOT REMO
ORIGINAL

Registered Assayer, Province of British Columbia

To: Coleran Engineering Ltd.

REPORT No A2 630

PAGE No. 2

BONDAR-CLEGG & COMPANY LTD.

DATE: October 1, 1973

CERTIFICATE OF ASSAY

I hereby certify that the following are the results of assays made by us upon the herein described ore samples.

MARKED	GOLD		SILVER	Pb	Zn	Cd					TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
3573			1.8	0.05	24.20	0.06					
3574			0.71	0.05	16.95	0.04					
3575			3.5	2.70	19.45	0.05					
3576			1.8	0.05	26.60	0.06					
3577			0.71	L0.05	22.40	0.06					
3578			0.79	L0.05	30.65	0.08					
3579			0.21	1.00	15.45	0.04					
3580			0.48	0.70	31.05	0.10					
3581			0.49	0.05	34.55	0.09					
3582			0.40	0.30	30.25	0.08					
3583			1.2	0.05	51.60	0.14					
3584			0.81	1.00	37.20	0.10					
3585			3.2	0.25	19.65	0.05					
3586			0.02	0.40	13.40	0.02					
3587			0.02	0.10	38.55	0.10					
3588			0.02	0.10	43.60	0.12					
3589			0.14	0.10	39.65	0.10					
3590			0.02	L0.05	23.15	0.03					
3591			0.02	L0.05	9.95	0.01					
3592			0.02	L0.05	0.55	L0.01					
3593			0.02	L0.05	6.50	0.07					
3594			0.02	L0.05	30.05	0.12					
3595			0.02	0.05	41.20	0.12					
3596			0.04	L0.05	28.00	0.06					
3597			4.4	L0.05	39.05	0.11					

Registered Assayer, Province of British Columbia

APPENDIX "B"

To: Coleran Engineering Ltd.

REPORT No A - 630

PAGE No. 3

DATE: October 1, 1973

BONDAR-CLEGG & COMPANY LTD.

CERTIFICATE OF ASSAY

I hereby certify that the following are the results of assays made by us upon the herein described ore samples.

MARKED	GOLD		SILVER	Pb	Zn	Cd					TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
3598			trace	0.20	2.15	0.01					
3599			trace	0.15	3.05	0.01					
3600			trace	L0.05	44.00	0.07					
3601			trace	L0.05	16.15	0.04					
3602			trace	L0.05	14.05	0.05					
3603			trace	L0.05	11.05	0.03					
3604			trace	L0.05	12.70	0.03					
3605			trace	L0.05	9.95	0.04					
3606			0.02	0.05	15.05	0.08					
3607			0.14	0.15	24.45	0.11					
3608			trace	L0.05	0.30	L0.01					
3609			trace	L0.05	0.20	L0.01					
3610			trace	0.40	2.00	L0.01					
3611			3.5	3.90	0.40	L0.01					
3612			3.6	3.40	0.20	L0.01					
3613			0.94	1.00	0.05	L0.01					

L denotes 'less than'

Registered Assayer, Province of British Columbia

APPENDIX "B" xi

BONDAR-CLEGG & COMPANY LTD.

geochemists ● assayers ● analytical chemists

1500 PEMBERTON AVENUE, NORTH VANCOUVER, B.C.
PHONE: 988-5315 TELEX: 04-54554

CERTIFICATE OF ASSAY

TO Cordilleran Engineering Ltd.
1418 - 355 Burrard Street
Vancouver 1, B. C.

Report No: A23 - 705
Date: October 17, 1973

BR-41C

I hereby certify that the following are the results of assays made by us upon the herein described pulp samples.

MARKED	Zn* Percent	MARKED	Zn* Percent	MARKED	Zn* Percent
3542	39.20	3564	4.50	3586	11.70
3543	0.55	3565	0.20	3587	34.50
3544	0.35	3566	1.90	3588	42.40
3545	3.50	3567	0.20	3589	28.90
3546	0.10	3568	0.15	3590	19.50
3547	0.10	3569	0.10	3591	8.50
3548	0.25	3570	0.10	3592	0.50
3549	0.25	3571	0.05	3593	5.40
3550	1.35	3572	0.35	3594	29.00
3551	0.15	3573	0.30	3595	39.20
3552	2.20	3574	4.70	3596	24.30
3553	18.0	3575	4.50	3597	1.40
3554	0.20	3576	0.70	3598	0.20
3555	0.10	3577	1.25	3599	0.20
3556	1.90	3578	1.75	3600	32.4
3557	1.50	3579	1.85	3601	14.20
3558	1.50	3580	0.45	3602	12.70
3559	1.50	3581	0.70	3603	10.00
3560	1.15	3582	1.10	3604	11.10
3561	1.30	3583	1.80	3605	8.90
3562	1.45	3584	0.80	3606	13.00
3563	2.55	3585	2.50	3607	22.10

NOTE:
Rejects retained two weeks
Pulps retained three months
unless otherwise arranged.

ORIGINAL

Registered Assayer, Province of British Columbia

APPENDIX "B" xii

BONDAR-CLEGG & COMPANY LTD.

geochemists ● assayers ● analytical chemists

1500 PEMBERTON AVENUE, NORTH VANCOUVER, B.C.
PHONE: 988-5315 TELEX: 04-54554

CERTIFICATE OF ASSAY

TO Cordilleran Engineering Ltd.

Report No: A23 - 705

PAGE 2

I hereby certify that the following are the results of assays made by us upon the herein described pulp samples.

MARKED	Zn* Percent	MARKED	Percent	MARKED	Percent	
3608	0.30					
3609	0.15					
3610	1.95					
3611	0.30					
3612	0.15					
3613	L0.05					

L denotes 'less than'
* non sulphide

NOTE:
Rejects retained two weeks
Pulps retained three months
unless otherwise arranged.

Registered Assayer, Province of British Columbia

APPENDIX "B" xiii

CLAIM RECORDS

"Title to all claims held by
Barrier Reef Resources Ltd. (N.P.L.)"

GOZ CREEK AREA

Yukon Territory, (NTS 106-C)

CLAIM NAME		GRANT NO.	EXPIRY DATE
GOZ	1	Y 69432	July 23, 1974.
	2	Y 69433	July 23, 1974.
	3	Y 69434	July 23, 1974.
	4	Y 69435	July 23, 1974.
	5	Y 69436	July 23, 1974.
	6	Y 69437	July 23, 1974.
	7	Y 69438	July 23, 1974.
	8	Y 69439	July 23, 1974.
LUV	1	Y 69440	July 23, 1974.
	2	Y 69441	July 23, 1974.
	3	Y 69442	July 23, 1974.
	4	Y 69443	July 23, 1974.
	5	Y 69444	July 23, 1974.
	6	Y 69445	July 23, 1974.
	7	Y 69446	July 23, 1974.
	8	Y 69447	July 23, 1974.
DUO	1	Y 69448	July 23, 1974.
	2	Y 69449	July 23, 1974.
	3	Y 69450	July 23, 1974.
	4	Y 69451	July 23, 1974.
	5	Y 69452	July 23, 1974.
	6	Y 69453	July 23, 1974.
	7	Y 69454	July 23, 1974.
	8	Y 69455	July 23, 1974.
STOL	1	Y 69456	July 23, 1974.
	2	Y 69457	July 23, 1974.
	3	Y 69458	July 23, 1974.
	4	Y 69459	July 23, 1974.
	5	Y 69460	July 23, 1974.
	6	Y 69461	July 23, 1974.
	7	Y 69462	July 23, 1974.
	8	Y 69463	July 23, 1974

CLAIM RECORDS
GOZ CREEK AREA (cont'd)

CLAIM NAME		GRANT NO.	EXPIRY DATE
VUH	1	Y 69464	July 23, 1974.
	2	Y 69465	July 23, 1974.
	3	Y 69466	July 23, 1974.
	4	Y 69467	July 23, 1974.
	5	Y 69468	July 23, 1974.
	6	Y 69469	July 23, 1974.
	7	Y 69470	July 23, 1974.
	8	Y 69471	July 23, 1974.
WALT	1	Y 69476	August 6, 1974.
	2	Y 69477	August 6, 1974.
	3	Y 69478	August 6, 1974.
	4	Y 69479	August 6, 1974.
	5	Y 69480	August 6, 1974.
	6	Y 69481	August 6, 1974.
	7	Y 69482	August 6, 1974.
	8	Y 69483	August 6, 1974.
LIN	1	Y 69484	August 6, 1974.
	2	Y 69485	August 6, 1974.
	3	Y 69486	August 6, 1974.
	4	Y 69487	August 6, 1974.
	5	Y 69488	August 6, 1974.
	6	Y 69489	August 6, 1974.
	7	Y 69490	August 6, 1974.
	8	Y 69491	August 6, 1974.
ANN	1	Y 69500	August 6, 1974.
	2	Y 69501	August 6, 1974.
	3	Y 69502	August 6, 1974.
	4	Y 69503	August 6, 1974.
	5	Y 69504	August 6, 1974.
	6	Y 69505	August 6, 1974.
	7	Y 69506	August 6, 1974.
	8	Y 69507	August 6, 1974.
BON	1	Y 69508	August 6, 1974.
	2	Y 69509	August 6, 1974.
	3	Y 69510	August 6, 1974.
	4	Y 69511	August 6, 1974.
	5	Y 69512	August 6, 1974.
	6	Y 69513	August 6, 1974.
	7	Y 69514	August 6, 1974.
	8	Y 69515	August 6, 1974.

CLAIM RECORDS
GOZ CREEK AREA (cont'd)

CLAIM NAME		GRANT NO.	EXPIRY DATE
HAM	1 Fr.	Y 69524	August 6, 1974.
	2	Y 69525	August 6, 1974.
	3	Y 69526	August 6, 1974.
	4	Y 69527	August 6, 1974.
	5	Y 69528	August 6, 1974.
	6	Y 69529	August 6, 1974.
	7	Y 69530	August 6, 1974.
	8	Y 69531	August 6, 1974.
	9	Y 69532	August 6, 1974.
	10	Y 69533	August 6, 1974.
	11	Y 69534	August 6, 1974.
	12	Y 69535	August 6, 1974.
	13 Fr.	Y 69536	August 6, 1974.
	14	Y 69537	August 6, 1974.
	15	Y 69538	August 6, 1974.
	16	Y 69539	August 6, 1974.
BAF	1	Y 69540	August 6, 1974.
	2	Y 69541	August 6, 1974.
	3	Y 69542	August 6, 1974.
	4	Y 69543	August 6, 1974.
	5	Y 69544	August 6, 1974.
	6	Y 69545	August 6, 1974.
	7	Y 69546	August 6, 1974.
	8	Y 69547	August 6, 1974.
	9	Y 69548	August 6, 1974.
	10	Y 69549	August 6, 1974.
	11	Y 69550	August 6, 1974.
	12	Y 69551	August 6, 1974.
	13	Y 69552	August 6, 1974.
	14	Y 69553	August 6, 1974.
	15	Y 69554	August 6, 1974.
	16	Y 69555	August 6, 1974.
	17	Y 69556	August 6, 1974.
	18	Y 69557	August 6, 1974.
	19	Y 69558	August 6, 1974.
	20	Y 69559	August 6, 1974.
	21	Y 69560	August 6, 1974.
	22	Y 69561	August 6, 1974.
	23	Y 69562	August 6, 1974.
	24	Y 69563	August 6, 1974.
	25	Y 69564	August 6, 1974.
	26	Y 69565	August 6, 1974.
	27	Y 69566	August 6, 1974.
	28	Y 69567	August 6, 1974.
	29	Y 69568	August 6, 1974.
	30	Y 69569	August 6, 1974.
	31	Y 69570	August 6, 1974.
	32	Y 69571	August 6, 1974.

CLAIM RECORDS
GOZ CREEK AREA (cont'd)

CLAIM NAME		GRANT NO.	EXPIRY DATE
BAF	33	Y 69572	August 13, 1974.
	34	Y 69573	August 13, 1974.
	35	Y 69574	August 13, 1974.
	36	Y 69575	August 13, 1974.
	37	Y 69576	August 13, 1974.
	38	Y 69577	August 13, 1974.
	39	Y 69578	August 13, 1974.
	40 Fr.	Y 69579	August 13, 1974.
	41	Y 69580	August 13, 1974.
	42	Y 69581	August 13, 1974.
	43	Y 69582	August 13, 1974.
	44	Y 69583	August 13, 1974.
	45	Y 69584	August 13, 1974.
	46	Y 69585	August 13, 1974.
	47	Y 69586	August 13, 1974.
	48	Y 69587	August 13, 1974.
	49	Y 69588	August 13, 1974.
	50	Y 69589	August 13, 1974.
	51	Y 69590	August 13, 1974.
	52	Y 69591	August 13, 1974.
	53	Y 69592	August 13, 1974.
	54	Y 69593	August 13, 1974.
	55	Y 69594	August 13, 1974.
	56	Y 69595	August 13, 1974.
	57	Y 69596	August 13, 1974.
	58	Y 69597	August 13, 1974.
	59	Y 69598	August 13, 1974.
	60	Y 69599	August 13, 1974.
	61	Y 69600	August 13, 1974.
	62	Y 69601	August 13, 1974.
	63	Y 69602	August 13, 1974.
	64 Fr.	Y 69603	August 13, 1974.
	65 Fr.	Y 69604	August 13, 1974.
	66	Y 69605	August 13, 1974.
	67	Y 69606	August 13, 1974.
	68	Y 69607	August 13, 1974.
	69	Y 69608	August 13, 1974.
	70	Y 69609	August 13, 1974.
	71	Y 69610	August 13, 1974.
	72	Y 69611	August 13, 1974.
	73	Y 69612	August 13, 1974.
	74	Y 69613	August 13, 1974.
	75	Y 69614	August 13, 1974.
	76	Y 69615	August 13, 1974.

CLAIM RECORDS
GOZ CREEK AREA (cont'd)

CLAIM NAME		GRANT NO.	EXPIRY DATE
BAF	77	Y 69616	August 13, 1974.
	78	Y 69617	August 13, 1974.
	79	Y 69618	August 13, 1974.
	80	Y 69619	August 13, 1974.
	81	Y 69620	August 13, 1974.
	82	Y 69621	August 13, 1974.
	83	Y 69622	August 13, 1974.
	84	Y 69623	August 13, 1974.
	85	Y 69624	August 13, 1974.
	86	Y 69625	August 13, 1974.
	87	Y 69626	August 13, 1974.
	88	Y 69627	August 13, 1974.
	89	Y 69628	August 13, 1974.
	90	Y 69629	August 13, 1974.
	91	Y 69630	August 13, 1974.
	92	Y 69631	August 13, 1974.
	93	Y 69632	August 13, 1974.
	94	Y 69633	August 13, 1974.
	95	Y 69634	August 13, 1974.
	96	Y 69635	August 13, 1974.
ANG	1	Y 69636	August 13, 1974.
	2	Y 69637	August 13, 1974.
	3	Y 69638	August 13, 1974.
	4	Y 69639	August 13, 1974.
	5	Y 69640	August 13, 1974.
	6	Y 69641	August 13, 1974.
	7	Y 69642	August 13, 1974.
	8	Y 69643	August 13, 1974.

CORDILLERAN ENGINEERING LIMITED

MINERAL EXPLORATION
MANAGEMENT AND
ENGINEERING CONSULTANTS

1418-355 BURRARD STREET
VANCOUVER 1, B.C.
TELEPHONE (604) 681-8381

WRITER'S CERTIFICATE

I, C. Michael Hamilton of Vancouver, B.C. hereby certify that:

1. I am a geologist employed by Cordilleran Engineering Limited, at 1418 - 355 Burrard Street, Vancouver, B.C.

2. I received a Professional Degree (M.Sc. equivalent) in Geological Engineering from Colorado School of Mines, Golden, Colorado, in 1969 and completed an additional year of graduate studies (1970).

3. I am a certified member of the Association of Professional Engineers of the Province of British Columbia.

4. I am the author of this report which is based on field examinations of the Goz Creek prospect from August 20 to September 10, 1973.

CORDILLERAN ENGINEERING LIMITED

PROFESSIONAL ENGINEER OF C. Michael Hamilton BRITISH COLUMBIA ENGINEER

C. Michael Hamilton

C. Michael Hamilton, P.Eng.
Geologist

May, 1974
Vancouver, B.C.

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SUPERVISOR'S CERTIFICATE

I, John W. Stollery of North Vancouver, B.C. hereby certify that:

1. I am a geological engineer residing at 4421 Patterdale Drive and employed by Cordilleran Engineering Limited of 1418 - 355 Burrard Street, Vancouver 1, B.C.

2. I am a graduate of the Provincial Institute of Mining, Haileybury, Ontario (1958) and received a Bachelor of Science degree from Michigan Technological University, Houghton, Michigan, (1961).

3. I am a certified member of the Association of Professional Engineers of Ontario and British Columbia.

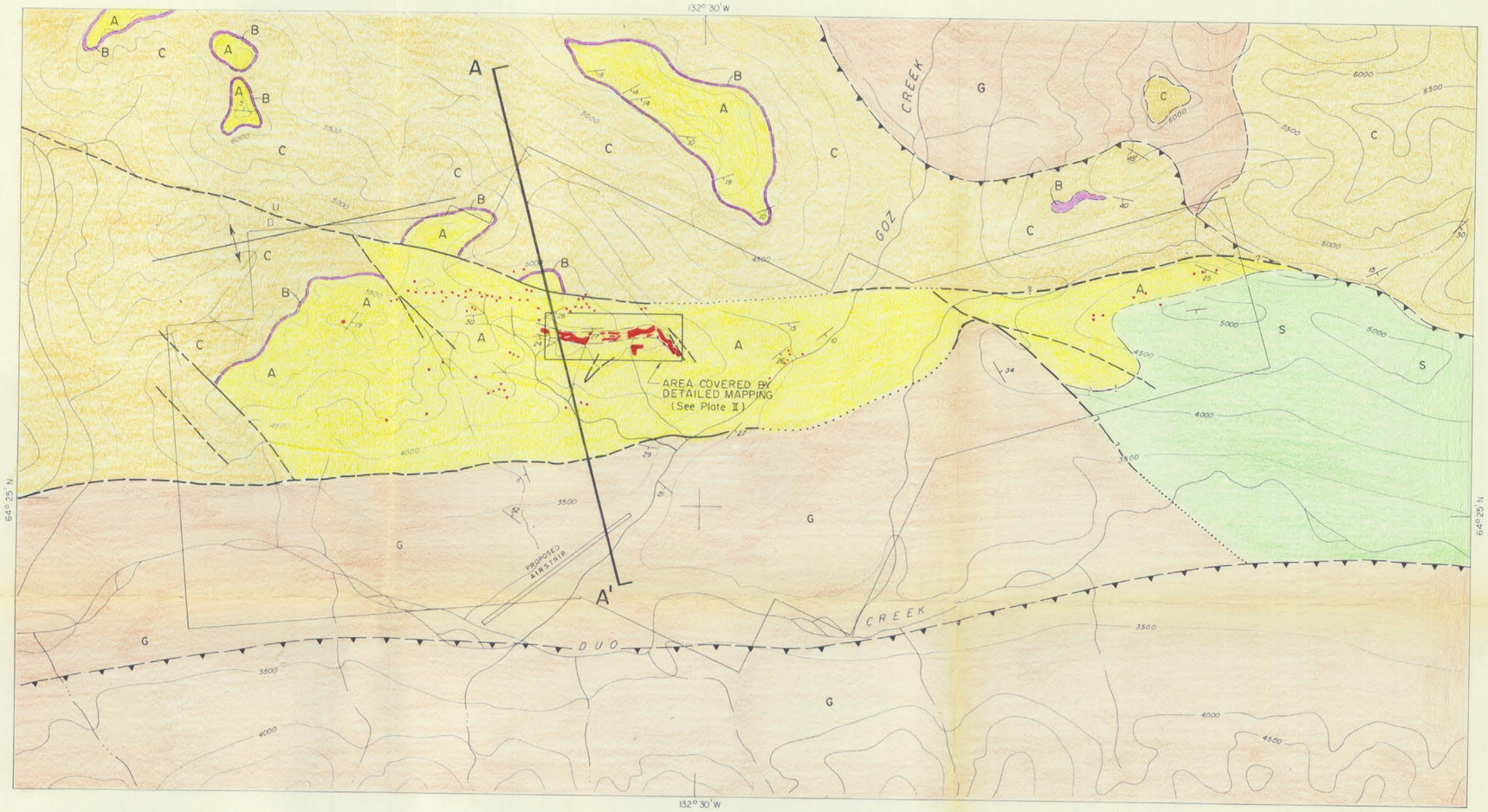
4. I supervised the writing of this report which is based on a geological and geochemical survey during August and September, 1973.

CORDILLERAN ENGINEERING LIMITED

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
J. W. STOLLERY

J. W. Stollery, P.Eng.
Geological Engineer

December, 1973
Vancouver, B.C.



LEGEND

- S — SHALE – dark gray and brown, very thin bedded to laminated silty shale and sandstone.
- A — DOLOSTONE – medium to light gray and mottled gray, thick bedded to massive, fine to microcrystalline vuggy dolostone with minor solution breccia, chert. Locally arenaceous and pisolitic. Host unit for Pb-Zn mineralization.
- B — SANDSTONE – light gray to brownish gray, very thin bedded to thinly laminated pourous dolomitic quartz sandstone and dark gray non-calcareous shale. Abundant tangential crossbedding. Conglomeritic at base. Weathers gray to reddish brown "Marker bed".
- C — DOLOSTONE – medium to light gray, thin to thick bedded, fine to microcrystalline dolostone. Locally arenaceous, pisolitic.
- G — SHALE – light brown, medium to dark gray, thin bedded to laminated phyllitic shale. Non-resistant.

GEOLOGICAL CONTACT – definite, inferred, covered

FAULT – definite, inferred, covered

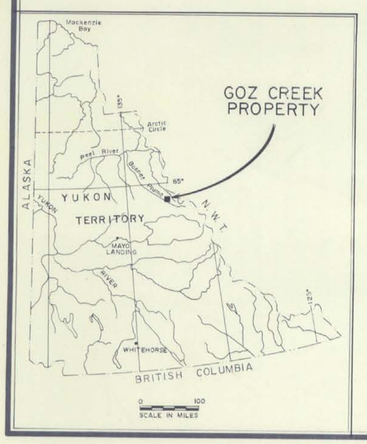
THRUST FAULT

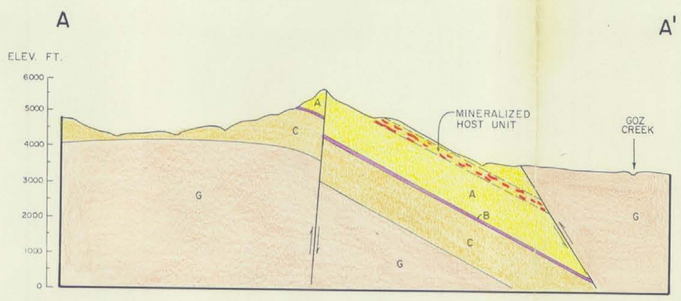
STRIKE AND DIP

ANTICLINE

EXTENSIVE SHOWINGS – Zinc and/or Lead mineralization

MINOR SHOWINGS – Zinc and/or Lead mineralization





X – SECTION
LOOKING N 75°E.
NO VERTICAL EXAGERATION

NOTES:

TOPOGRAPHIC BASE MAP BY DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES MAP No. 106 C-7,8
MAGNETIC DECLINATION: 34° 30' E (1973)

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. Michael Hamilton

C. Michael Hamilton

BARRIER REEF RESOURCES LTD. (NPL)

REGIONAL GEOLOGY

GOZ CREEK PROPERTY

NADALEEN RIVER AREA (N.T.S. 106 C)

MAYO MINING DISTRICT, YUKON TERRITORY

CONTOUR INTERVAL = 500'

1500 0 1500 3000 4500 6000 7500 9000 10 500
SCALE IN FEET

BY

CORDILLERAN ENGINEERING LTD
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VANCOUVER 1, B.C.

OCT 1973

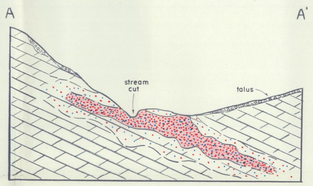
061056

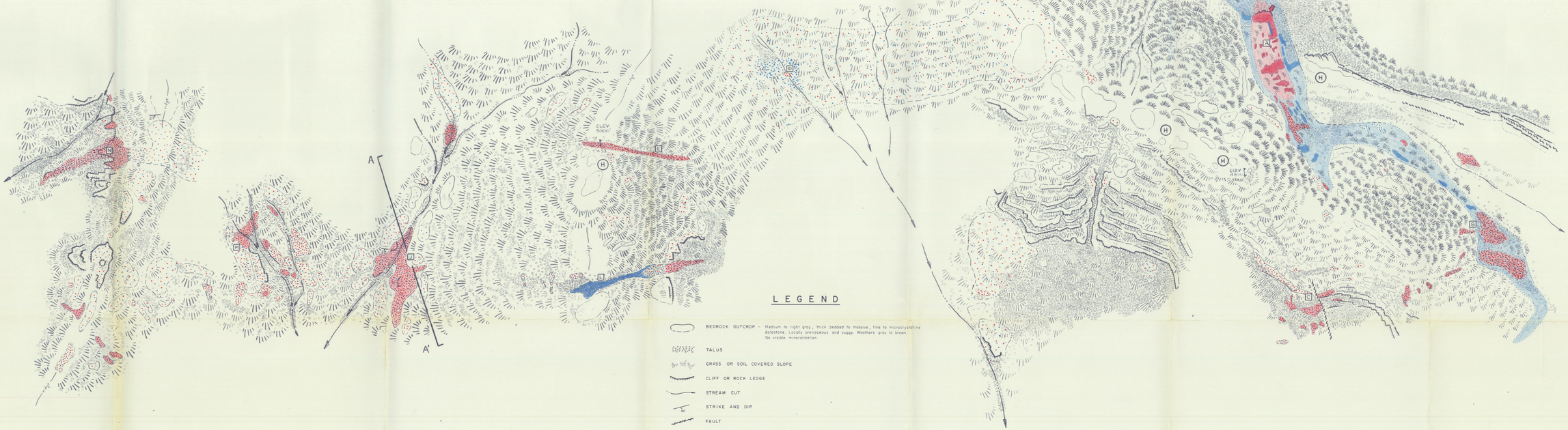
PLATE I.

X-SECTION

LOOKING N 72° E

1" = 100'





LEGEND

- BEDROCK OUTCROP – Medium to light gray, thick bedded to massive, fine to microcrystalline dolostone. Locally arenaceous and vuggy. Weathers gray to brown. No visible mineralization.
- TALUS
- GRASS OR SOIL COVERED SLOPE
- CLIFF OR ROCK LEDGE
- STREAM CUT
- STRIKE AND DIP
- FAULT
- GEOLOGICAL CONTACT – Definite, inferred, covered
- STRONGLY MINERALIZED OUTCROP – Breccia with massive ZnS matrix. (Assay 6 to 30% Comb. Pb-Zn)
- STRONGLY MINERALIZED OUTCROP – Includes disseminated ZnS, ZnS vug filling, and ZnS fracture filling. (Assay 6 to 30% Comb. Pb-Zn)
- MODERATELY MINERALIZED OUTCROP – Includes disseminated ZnS, ZnS vug filling, and ZnS fracture filling. (Assay 1 to 6% Comb. Pb-Zn)
- LIGHTLY MINERALIZED OUTCROP – Includes disseminated ZnS, ZnS vug filling, and ZnS fracture filling. (Assay <1% Comb. Pb-Zn)
- SUBOUTCROP OF ZnS MINERALIZED BRECCIA – Inferred
- STRONGLY MINERALIZED OUTCROP – Breccia with massive $ZnCO_3$ matrix (Assay 6 to 30% Comb. Pb-Zn)
- MODERATELY MINERALIZED OUTCROP – $ZnCO_3$ (Assay 1-6% Comb. Pb-Zn)
- SUBOUTCROP OF $ZnCO_3$ MINERALIZED BRECCIA – Inferred
- MINERALIZED OUTCROP – ZnS & $ZnCO_3$
- STRONGLY MINERALIZED OUTCROP – Quartz sandstone with ZnS matrix (Assay 6 to 30% Comb. Pb-Zn)
- (A) Pb/Zn SHOWING DESIGNATION – Assayed Outcrops
- (H) HELICOPTER LANDING SITES

NOTES

MAP BASED ON BRUNTON COMPASS AND TAPE TRAVERSE.
ACCURATE ELEVATION CONTROL NOT ESTABLISHED.
MAGNETIC DECLINATION – 34° 30' E. (1973)

C. Murray Newton

BARRIER REEF RESOURCES LTD. (NPL)

GEOLOGICAL PLAN

GOZ CREEK PROPERTY

NADALEEN RIVER AREA (N.T.S. 106 C)

MAYO MINING DISTRICT, YUKON TERRITORY

100 0 100 200 300

SCALE IN FEET

BY

CORDILLERAN ENGINEERING LTD.
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VANCOUVER 1, B.C.
OCT. 1973

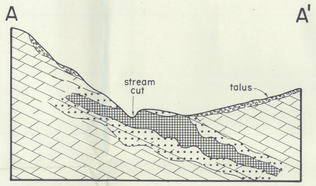
06/1056

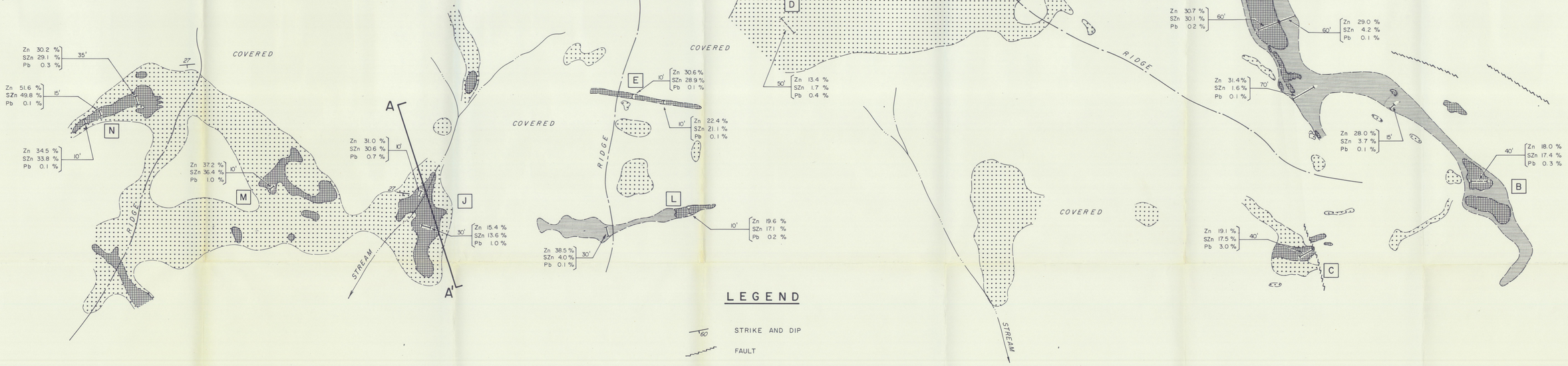
PLATE II

X-SECTION

LOOKING N 72°E

0 50' 100'





LEGEND

- STRIKE AND DIP (60)
- FAULT
- OUTCROP AND SUBOUTCROP — ZINC AND/OR LEAD SULFIDE MINERALIZATION ASSAY AVERAGE : 6 to 30 % COMBINED Pb-Zn.
- OUTCROP AND SUBOUTCROP — ZINC AND/OR LEAD SULFIDE MINERALIZATION ASSAY AVERAGE : 0.5 to 6 % COMBINED Pb-Zn.
- ZINC CARBONATE MINERALIZATION ASSAY AVERAGE : 6 to 30 % COMBINED Pb-Zn.
- Zn 21.1 % SZn 20.0 % Pb 0.1 % — 30' — SAMPLE LOCATION WITH SAMPLE LENGTHS AND ASSAYS FOR TOTAL ZINC, SULFIDE ZINC, AND LEAD.
- [A] LEAD-ZINC SHOWING DESIGNATION

NOTES

MAP BASED ON BRUNTON COMPASS AND TAPE TRAVERSE.
MAGNETIC DECLINATION 34° 30' E (1973)

BARRIER REEF RESOURCES LTD. (NPL)

ASSAY PLAN

GOZ CREEK PROPERTY

NADALEEN RIVER AREA (N.T.S. 106 C)

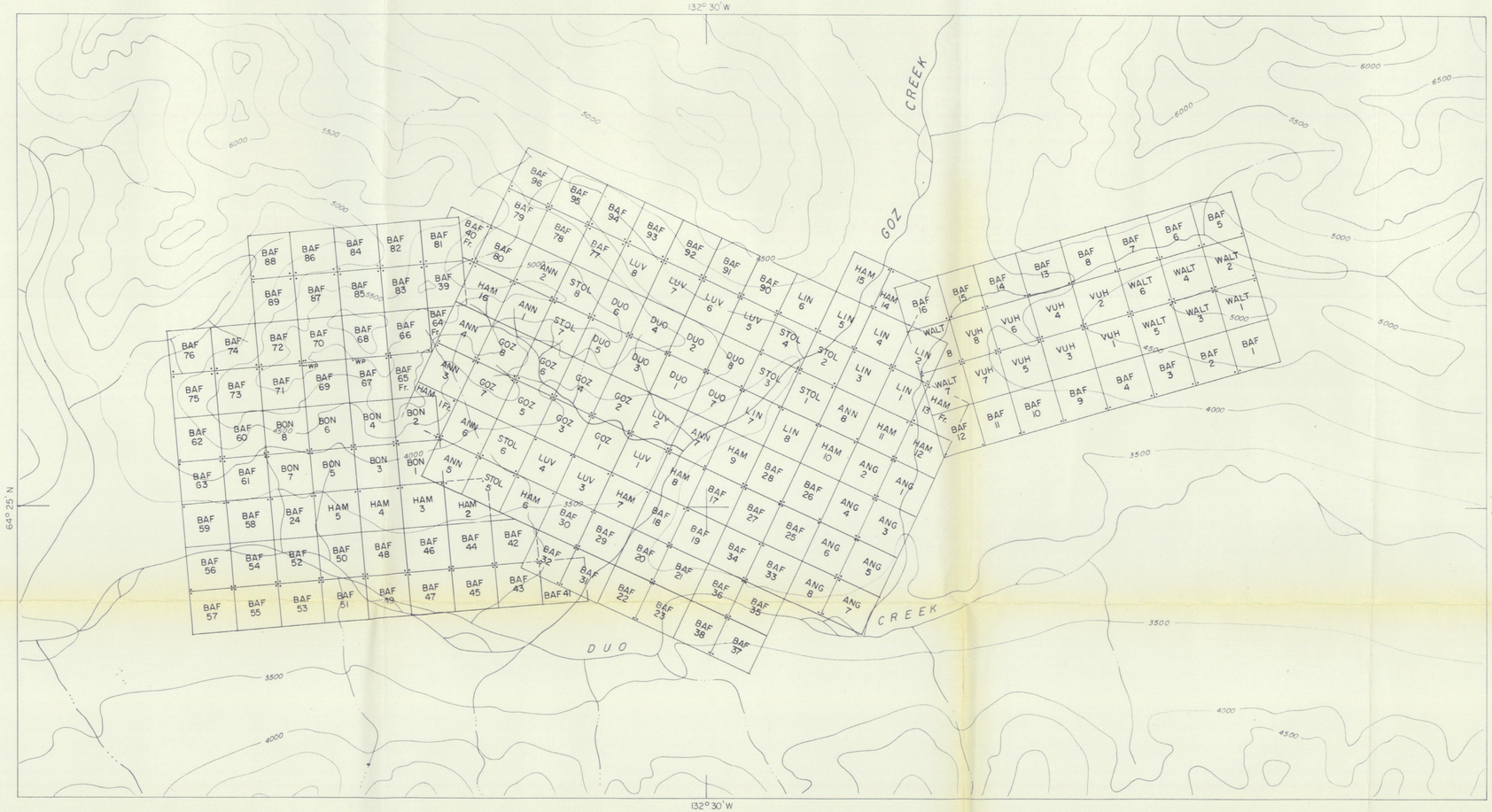
MAYO MINING DISTRICT, YUKON TERRITORY

100 0 100 200 300
SCALE IN FEET

BY
CORDILLERAN ENGINEERING LTD.
1418 - 355 BURRARD STREET
VANCOUVER 1, B.C.
OCT 1973

061056

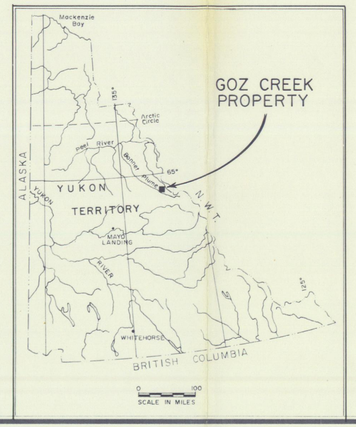
PLATE III



NOTES

TOPOGRAPHIC BASE MAP BY DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES MAP "106 C-7, 106 C-8.

MAGNETIC DECLINATION: 34° 30' E (1973)



BARRIER REEF RESOURCES LTD. (NPL)

CLAIM MAP

GOZ CREEK PROPERTY

NADALEEN RIVER AREA (N.T.S. 106 C)

MAYO MINING DISTRICT, YUKON TERRITORY

CONTOUR INTERVAL = 500'

1500 0 1500 3000 4500 6000 7500 9000 10 500

SCALE IN FEET

BY

CORDILLERAN ENGINEERING LTD

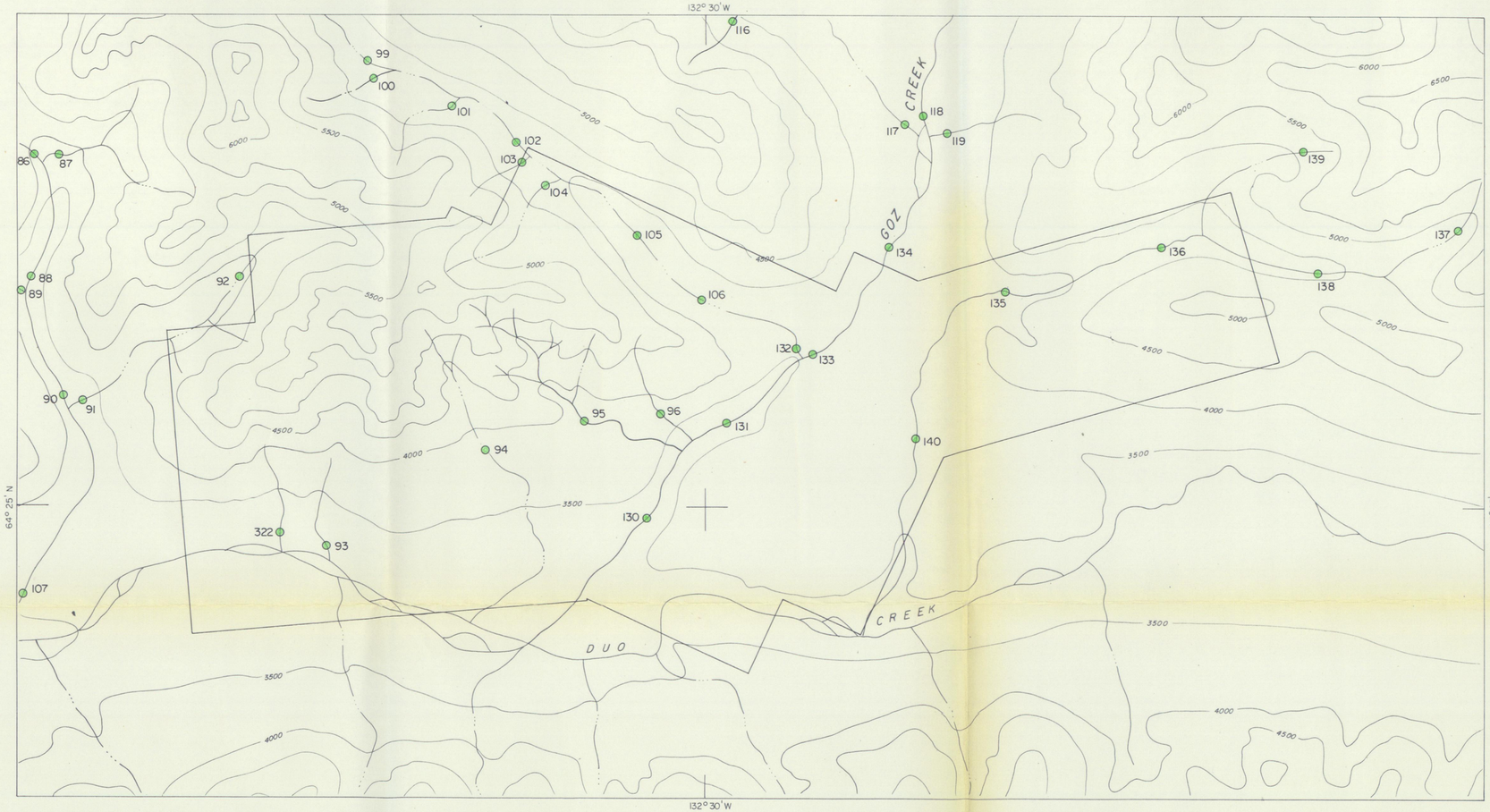
1418 - 355 BURRARD STREET

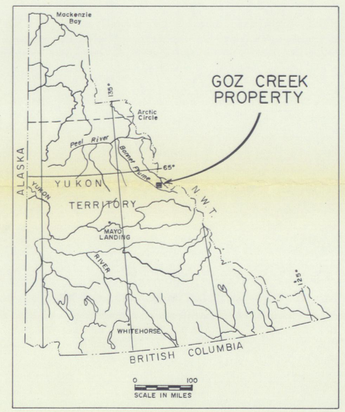
VANCOUVER 1, B.C.

OCT. 1973

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — C. Michael Hamilton

PLATE IV





NOTES

TOPOGRAPHIC BASE MAP BY DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES MAP 106 C-7, 106 C-8.

MAGNETIC DECLINATION: 34° 30' E (1973)

EXPLANATION

95 ● STREAM SEDIMENT SAMPLE LOCATION AND NUMBER

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

C Michael Hamilton

BARRIER REEF RESOURCES LTD. (NPL)

STREAM SEDIMENT SAMPLE LOCATION MAP

GOZ CREEK PROPERTY

NADALEEN RIVER AREA (N.T.S. 106 C)

MAYO MINING DISTRICT, YUKON TERRITORY

CONTOUR INTERVAL = 500'

1500 0 1500 3000 4500 6000 7500 9000 10 500

SCALE IN FEET

BY

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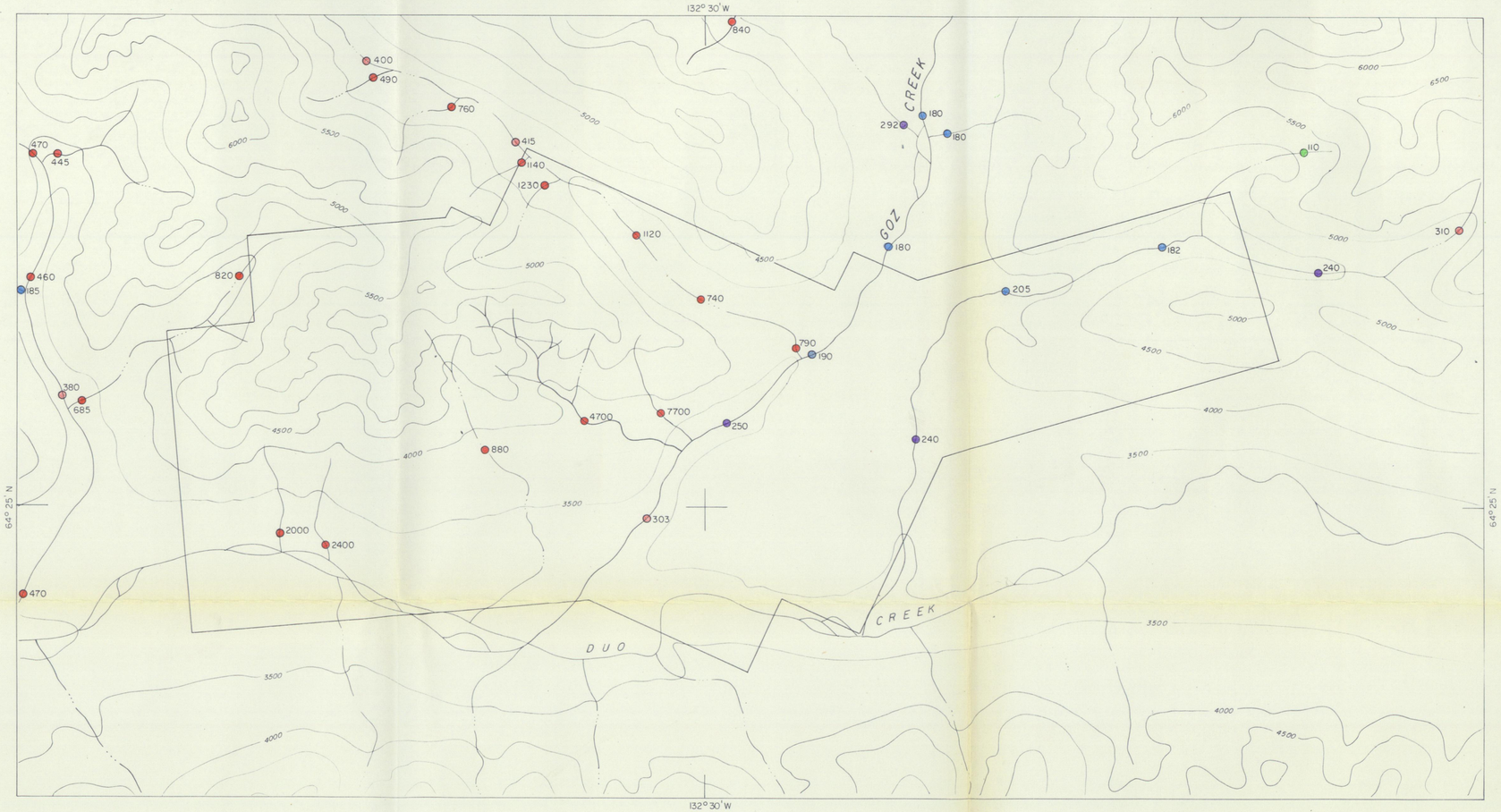
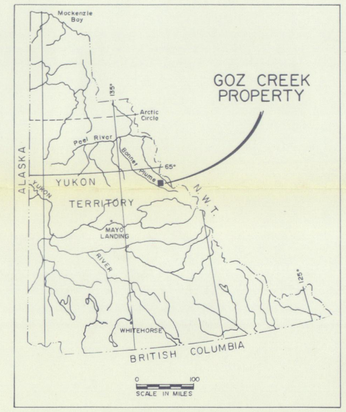
OCT. 1973

PLATE V





NOTES

TOPOGRAPHIC BASE MAP BY DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES MAP *106 C-7, 106 C-8.

MAGNETIC DECLINATION: 34° 30' E (1973)

EXPLANATION

○ STREAM SEDIMENT SAMPLE LOCATION

	ZINC CONTENT
BACKGROUND	0 TO 112 ppm
ABOVE BACKGROUND	113 TO 236 ppm
POSSIBLE ANOMALY	237 TO 299 ppm
PROBABLE ANOMALY	300 TO 422 ppm
STRONG ANOMALY	423 + ppm

BARRIER REEF RESOURCES LTD. (NPL)

ZINC CONTENT OF STREAM SEDIMENTS

GOZ CREEK PROPERTY

NADALEEN RIVER AREA (N.T.S. 106 C)

MAYO MINING DISTRICT, YUKON TERRITORY

CONTOUR INTERVAL = 500'

1500 0 1500 3000 4500 6000 7500 9000 10 500

SCALE IN FEET

BY

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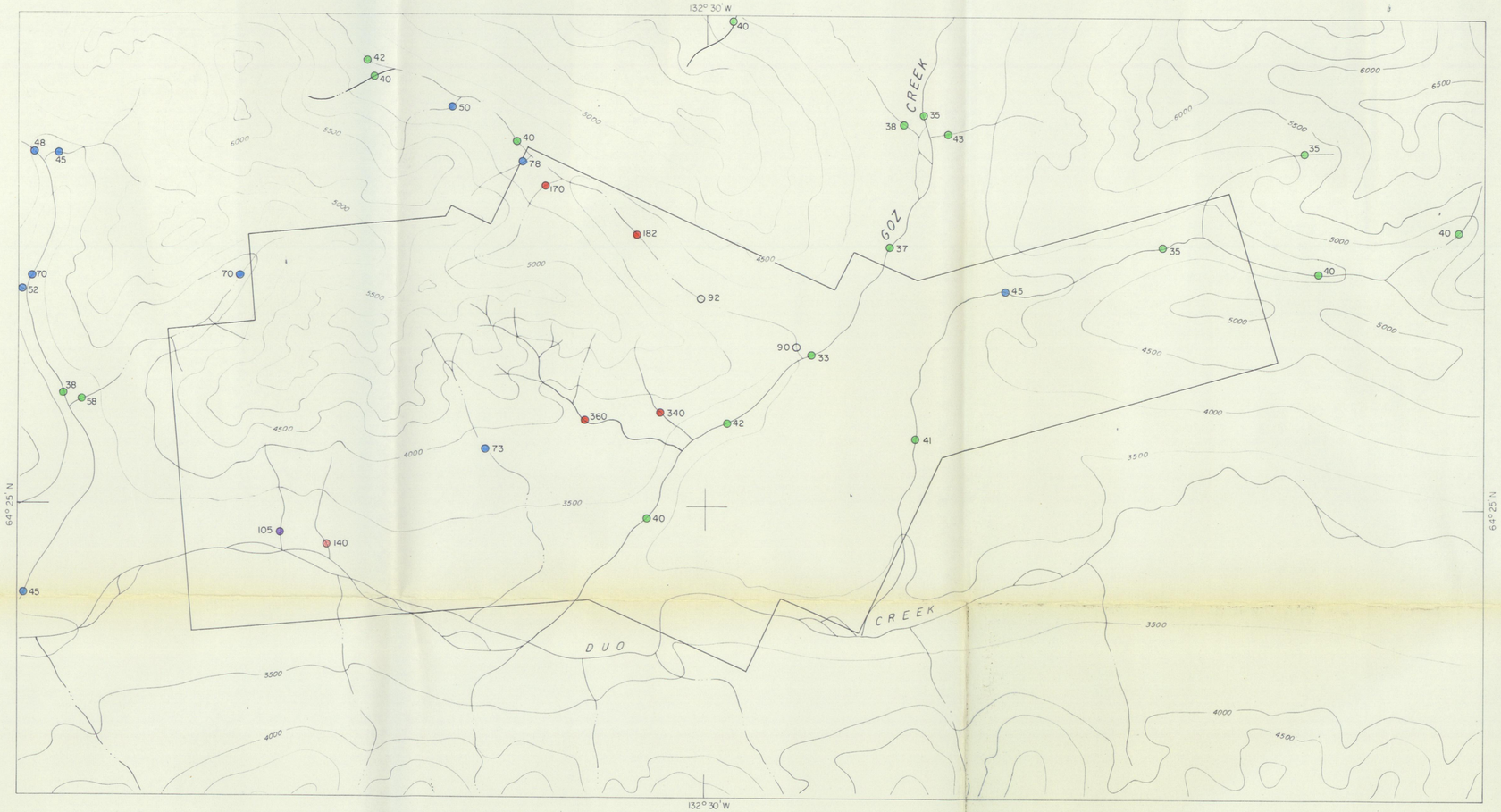
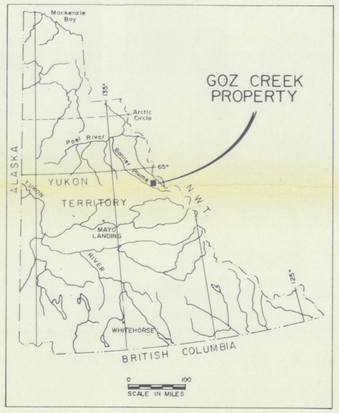
OCT. 1973

PLATE VI





NOTES

TOPOGRAPHIC BASE MAP BY DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES MAP 106 C-7, 106 C-8.

MAGNETIC DECLINATION: 34° 30' E (1973)

EXPLANATION

○ STREAM SEDIMENT SAMPLE LOCATION

	LEAD CONTENT
BACKGROUND	0 TO 44 ppm
ABOVE BACKGROUND	45 TO 94 ppm
POSSIBLE ANOMALY	95 TO 119 ppm
PROBABLE ANOMALY	120 TO 169 ppm
STRONG ANOMALY	170 + ppm

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — C. Hamilton

BARRIER REEF RESOURCES LTD. (NPL)

LEAD CONTENT OF STREAM SEDIMENTS

GOZ CREEK PROPERTY

NADALEEN RIVER AREA (N.T.S. 106 C)

MAYO MINING DISTRICT, YUKON TERRITORY

CONTOUR INTERVAL = 500'

1500 0 1500 3000 4500 6000 7500 9000 10 500

SCALE IN FEET

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PLATE VII