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P.O. Box 566
WHITEHORSE, YUKON TERRITORY
"LAND OF THE MIDNIGHT SUN"

CHARTA MINES LTD. (N.P.L.)

GEOLOGICAL REPORT

ON THE

CPA 1-12 (Y41569-Y41580)

MINERAL CLAIMS

JULY 12, 1970

LOCATED ON WHITE CREEK

LATITUDE 61° 27' N

LONGITUDE 132° 26' W

SHEET 105-F-8

WATSON LAKE MINING DIVISION

YUKON TERRITORY

BY

R.G. HILKER, P.ENG.

G.G. CARLSON, GEOLOGIST

- NOVEMBER 12, 1970 -

RECEIVED
23 NOV 1970
MINING
RECORDERS OFFICE
WHITEHORSE, Y.T.

RECEIVED
NOV [illegible] 1970
MINING RECORDER
LAND AGENT
WATSON LAKE Y.T.
I.A. & N.D.

RECEIVED
NOV 25 1970
MINING
INSPECTION OFFICE
WHITEHORSE, Y.T.

This report has been examined by the Geological Evaluation Unit and [illegible] recommended to the Commiss[illegible] to be considered as representative [illegible] amount of

$1214.80

D.B. Craig

[illegible]

[illegible]

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

[illegible]

Commissioner of Yukon Territory

TABLE OF CONTENTS

INTRODUCTION:

The CPA 1-12 claim group was staked on September 26, 1969, by R.G. Hilker and Z. Levoie. The claims are in a geologically favorable area, with several known lead, silver and gold occurrences. A zone of three strong gossans is covered by the twelve claims.

During the staking, several samples were collected and some have been subsequently assayed. A second visit to the property was made by R.G. Hilker on July 12, 1970. During this examination, more rock samples were collected, as well as some random soil samples, and the gossan zones were located relative to the position of the claims.

Both trips to the property were by Trans North Turbo Air Bell 206 Jet Ranger. The staking flight originated from Whitehorse, while the second visit to the property was conducted from Swift Lake, approximately 60 miles southwest of the property.

This report is submitted to the Watson Lake Mining Recorder's Office for the purpose of assessment work on the CPA 1-12 claim group. It is requested that information contained within this report remain CONFIDENTIAL.

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LOCATION AND ACCESS

Physiographically, the CPA claim group is located on the southwest edge of the St. Cyr Range, within the northwesterly trending Pelly Mountains. This mountain range is bounded on the northeast side by the prominent and narrow Tintina Valley, on the west by the Lewes Plateau, and on the south by the Nisutlin Plateau. The claims are situated near a major divide, with the Nisutlin River draining to the south, the Big Salmon River to the west, and the Pelly River to the north.

Elevation in the vicinity of the claims range from over 6,500 feet to less than 3,500 feet. The claims themselves cover elevations from 4,500 to 6,500 feet, with relatively steep slopes. This is above timberline and vegetation is almost non-existent except on the valley floor of White Creek where low-growing willows and buckbrush are abundant.

The CPA 1-12 claim group is located on Claim Sheet 105-F-8, in the Watson Lake Mining Division, Yukon Territory. The centre of the claim group is located approximately one mile north of White Creek, three miles east of its confluence with McConnell River, at 60° 27' north latitude and 132° 26' west longitude.

At present, access to the property is by helicopter only. Whitehorse, which lies approximately 100 air miles south-west of the property, is the nearest permanent helicopter base.

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The Canol Road, which runs between Johnson's Crossing at Mile 836 on the Alaska Highway, and Ross River, follows the Rose River Valley which parallels the McConnell River, 21 miles due west of the claim group.

A tractor road leaves the Canol Road at approximately Mile 71, and follows the Groundhog Creek valley, continues over a low pass into the Seagull Creek valley to a silver-lead-zinc showing on the property of Canol Mines. This road was constructed during the summer of 1969 and has been in use during the summer of 1970. A continuation of this road from the point where it reaches the McConnell River, would provide the most suitable access to the CPA claim group. The present route to the turnoff point is approximately 21 miles, while only 5.5 to 6.0 miles of new road construction would be required to reach the claim group.

The existing routes in the area, plus the new road requirements, have been located on the Proposed Road Access Sketch (see Sketch #2).

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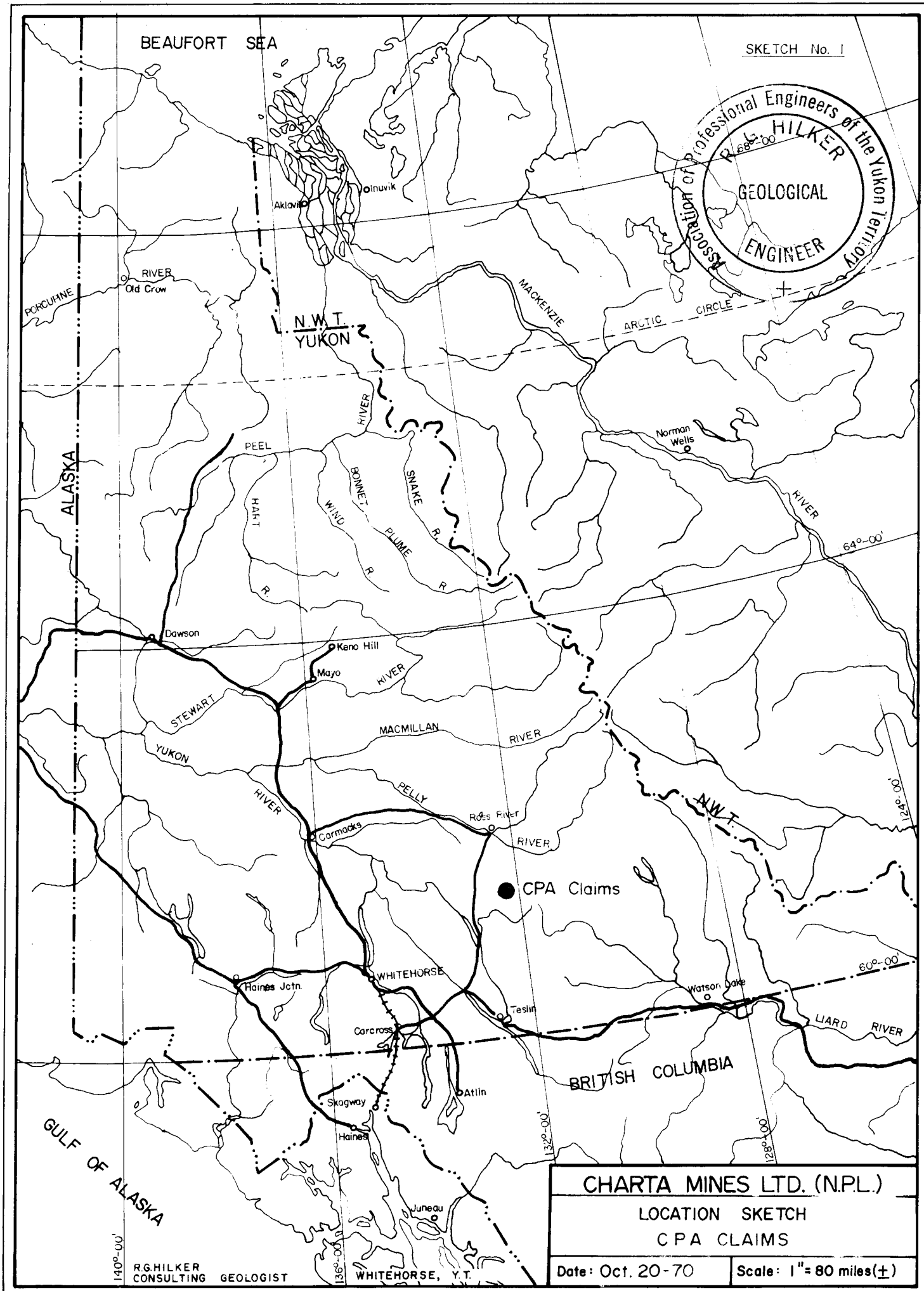
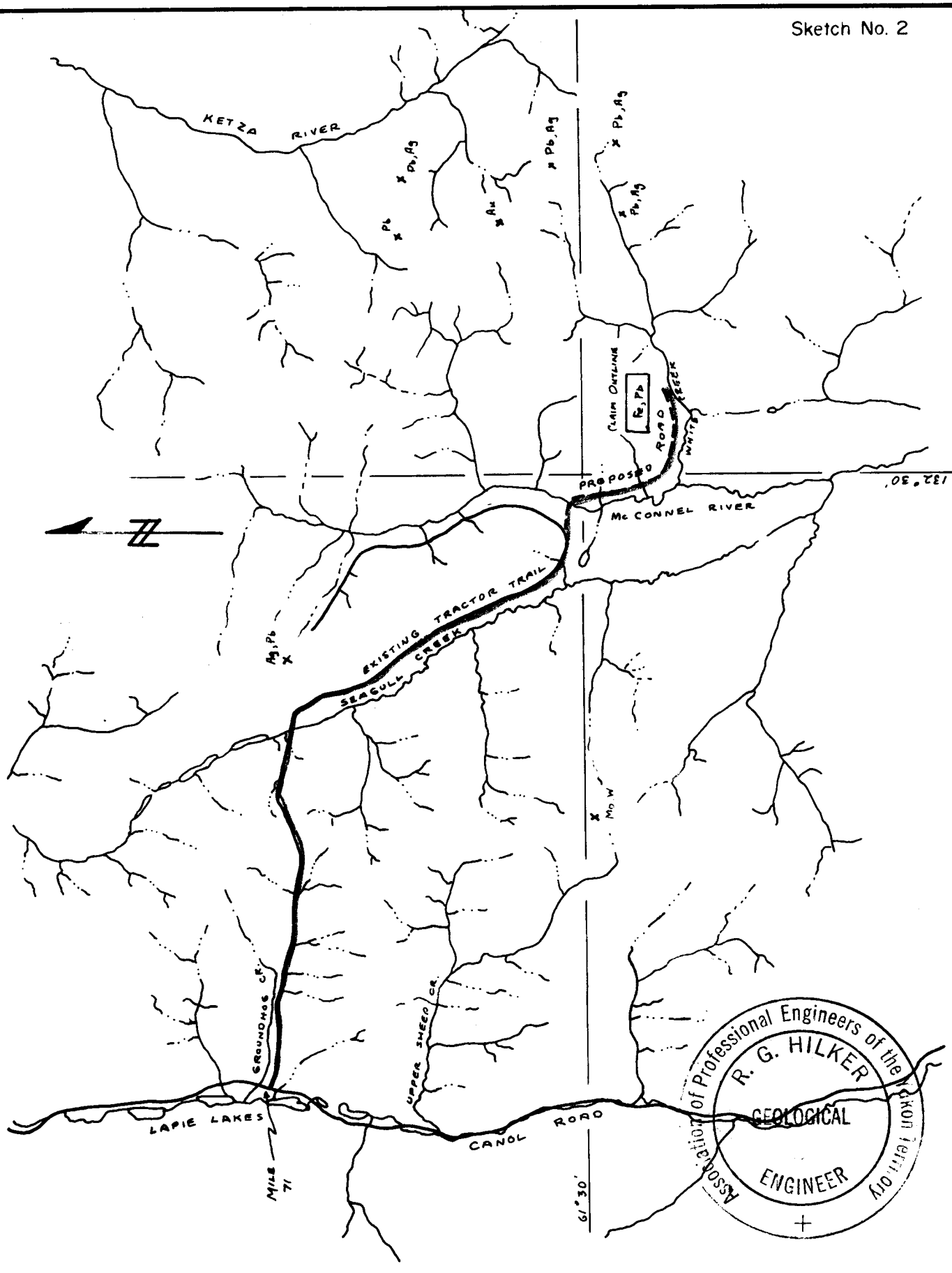

BEAUFORT SEA
SKETCH No. 1
Association of Professional Engineers of the Yukon Territory
R.G. HILKER
GEOLOGICAL
ENGINEER
Inuvik
Aklavik
RIVER
Old Crow
PORCUPINE
N.W.T.
YUKON
MACKENZIE
ARCTIC CIRCLE
RIVER
PEEL
HART R.
WIND R.
BONNET PLUME R.
SNAKE R.
Norman Wells
RIVER
ALASKA
64°-00'
Dawson
Keno Hill
Mayo
RIVER
STEWART
MACMILLAN RIVER
YUKON RIVER
PELLY
Ross River
RIVER
Carmacks
N.W.T.
CPA Claims
124°-00'
WHITEHORSE
Haines Jctn.
60°-00'
Watson Lake
Teslin
LIARD RIVER
Carcross
BRITISH COLUMBIA
Atlin
Skagway
Haines
GULF OF ALASKA
132°-00'
128°-00'
Juneau
140°-00'
136°-00'
WHITEHORSE, Y.T.
R.G.HILKER
CONSULTING GEOLOGIST
CHARTA MINES LTD. (N.P.L.)
LOCATION SKETCH
CPA CLAIMS
Date: Oct. 20-70
Scale: 1"= 80 miles(±)

Sketch No. 2



R.G. HILKER LTD
CONSULTING GEOLOGIST
WHITEHORSE Y.T.

CHARTA MINES LTD (N.P.L.)	
CPA CLAIMS ACCESS	
Date: Oct. 20-70	Scale: 1" = 4mi. approx.

CLAIMS

The following information was searched from the records at the Mining Recorder's Office, Whitehorse, Y.T., on November 5th, 1970 by E.G. Carlson:

Claim Name	Grant Nos.	Anniversary Date	Recorded Owner
CPA 1-12 (incl)	Y41569-Y41580	October 20/70	R.G. Hilker

Present ownership of the claims is as follows:

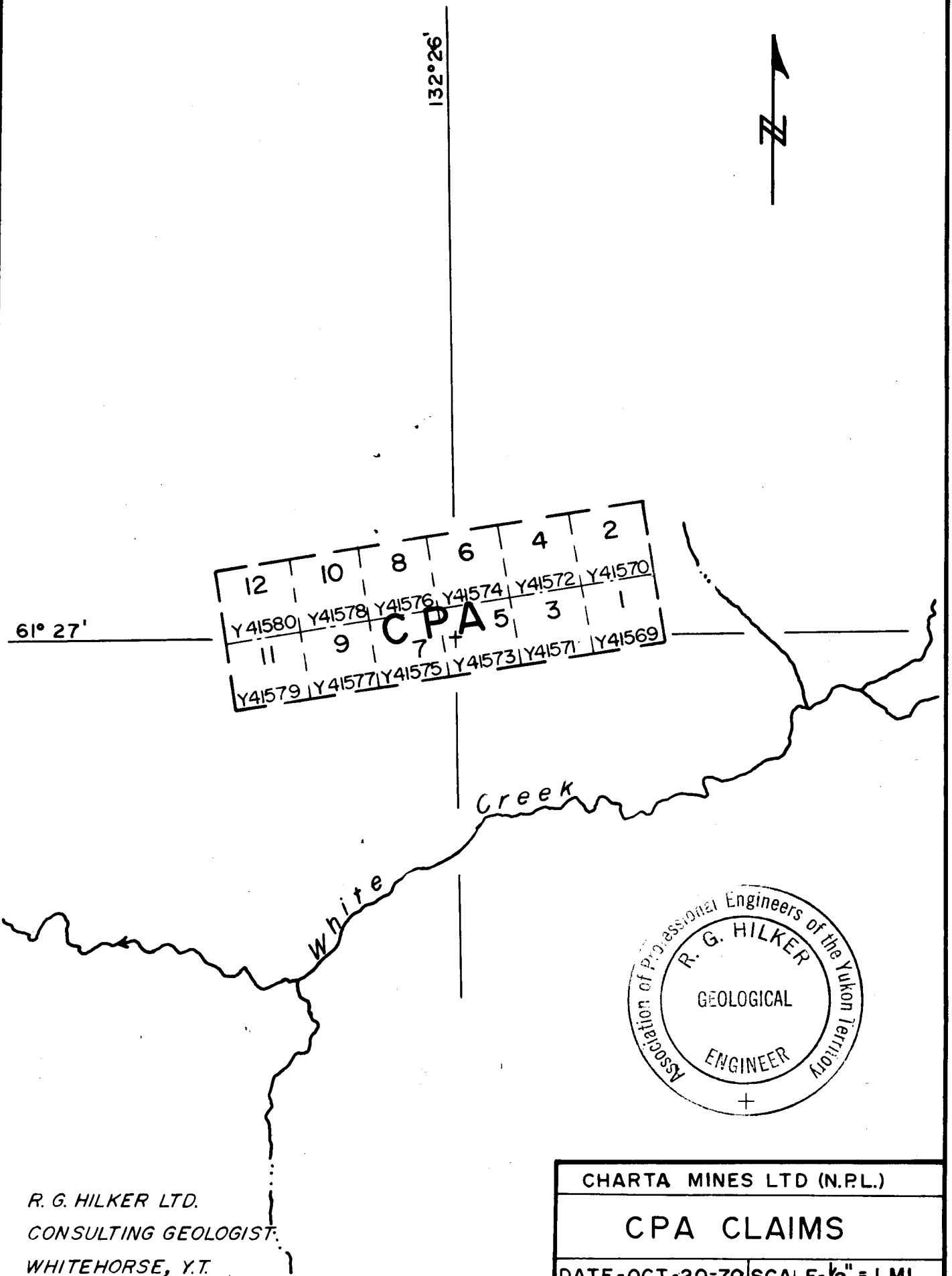
Alan Kulan 33%

Z. Lavoie 33%

R.G. Hilker 34%

.../5

SKETCH No. 3



R. G. HILKER LTD.
CONSULTING GEOLOGIST
WHITEHORSE, Y.T.

CHARTA MINES LTD (N.P.L.)

CPA CLAIMS

DATE-OCT-20-70 | SCALE-½" = 1 MI.

G E O L O G Y

GENERAL GEOLOGY

The geology of the Quiet Lake Map Sheet, N.T.S. Sheet 105-F, has been mapped by J.D. Wheeler, L.H. Green and J.A. Roddick, of the Geological Survey of Canada, during the late 1950's. The information collected during this survey has been presented in preliminary form only, in G.S.C. Map 7-1960. The following general outline has been taken from this map and the accompanying descriptive note.

The CPA claim group lies in the east central part of the map sheet in a zone of relatively unmetamorphosed northwest trending sediments and volcanics. The oldest of these units mapped (Unit 1) has been dated as Lower Cambrian and consists of approximately 1000 feet of quartzites, overlain by phyllites and slate and finally limestone. These rocks outcrop both south and east of the claim group.

Overlying this sequence is a thick and extensive unit of Middle and Upper Cambrian phyllite (Unit 2) with minor intrusive and extrusive greenstone.

Unit 3, consisting of a narrow band of mainly black slate, has not been mapped in the vicinity of the claim group. Unit 4 is a relatively thick member of grey and buff weathered bedded dolomite with minor chert and sandstone and containing fossils of Silurian age. A discontinuous band of this unit occurs east and north of the claim group.

.../6

Disconformably overlying Units 2, 3 and 4 are Units 5 and 6, probably of Mississippian age. Clastic sedimentary rocks and bedded chert (Unit 5), occur as a thick band northeast of the claim group area, while a variety of volcanic rocks (Unit 6), ranging through greenstone, breccias, tuffs and flows, with minor slate, chert and graywacke, occur throughout the area of the claim group and over large areas mainly to the north. Unit 7 consists of heterogeneous and shattered hornblende syenite which occurs as plugs associated with Unit 6. One such plug occurs just north of the claim group.

Unit 8, consisting mainly of narrow beds of clastic limestone, has not been mapped in the immediate vicinity of the claim group.

Mesozoic plutonic rocks (Unit 9), possibly a part of the Coastal intrusives, consist mainly of medium- to coarse-grained biotite granodiorite and quartz monzonite. These rocks occur in a large batholithic structure to the west of the claim group. Minor plus occur within the unmetamorphosed sediments to the east. Sediments within the area of the intrusive, form a metamorphic assemblage of unknown age.

The structure of the area is quite complex. The CPA claim group is located in a northwest trending zone of highly folded and faulted sediments. Major faults, such as the Seagull, Tintina and the Porcupine, parallel the major trend, while minor faults parallel and bisect the trend. The sediments are in some

.../7

areas relatively flat, while elsewhere they are steeply folded and often overturned.

As a result of this extreme structural activity, the stratigraphic relations within this belt are rather difficult to interpret. On a major scale, regional folding has been disrupted by normal, reverse and thrust faulting. On a lesser scale, folding appears to be more intense, and associated faulting has produced numerous isolated blocks and klippes.

A detailed report on the geology of the area, when it is produced, will help to unfold the depositional and the structural history of this Palaeozoic sedimentary belt.

.../8

TABLE OF FORMATIONS

MESOZOIC

Jurassic and/or Cretaceous

9 Medium to coarse-grained biotite granodiorite and quartz monzonite, part porphyritic; minor diorite, granite and gneiss.

PALAEOZOIC

Mississippian (?)

8 Dark grey limestone; minor argillite and dolomite.

Mississippian (?) or Earlier

7 Heterogeneous, shattered hornblende syenite.

6 Green volcanic rocks; greenstone; breccias, tuffs and flows; minor meta-diorite, chert, slate, greywacke and limestone.

5 Siliceous slate and shale, chert, greywacke, minor chert pebble conglomerate.

Silurian and Devonian

4 Thick-bedded dolomite with local lenses of chert, minor quartzite.

Ordovician and Silurian

3 Black slate; platy black limestone; siltstone, minor volcanic breccia.

Cambrian

2 Lustrous phyllite, part limy and dolomitic; minor greenstone, limestone, chert, greywacke and phyllitic quartzite; minor greenstone breccia and tuff.

1 Massive quartzite; phyllite; limestone.

After: Wheeler, Green, Roddick - G.S.C. Prelim. Map 7-1960.

.../9

ECONOMIC GEOLOGY

The CPA 1-12 claim group is located in a northwest trending belt of Palaeozoic sediments and volcanics which have been highly faulted and folded. Several known silver-lead occurrences, with associated gold, copper and zinc, are scattered throughout this belt. These showings exhibit no particularly significant spatial relationships, except perhaps that they occur in clusters. Neither does the mineralization show an affinity for any one rock type. Limestone, phyllite, volcanic tuffs and breccias and the minor leucocratic intrusives (Unit 9) provide the various host rocks.

The mineralization in this area has several modes of occurrence, and the following description of types of mineralization and successful exploration techniques which have been applied, are taken from work by P.H. Savensma, P.Eng., and R.G. Hilker, P.Eng., both of whom have carried out recent exploration work, including diamond drilling, on the OXO claim group at the head of the Ketza River, about 9 miles northeast of the CPA claims.

1. Massive sulfides -- Massive pyrite-pyrrhotite in quartz-rich veins with minor chalcopyrite, arsenopyrite and galena. Zones of massive galena and massive chalcopyrite may also occur within the quartz veins. The width of these veins is up to 12 feet, with averages between 3 and 5 feet.

.../10

2. Quartz veins with minor sulfides -- The quartz is coarse and milky, with sulfides generally less than 10 percent of the total rock composition. The sulfides are primarily pyrite and phyrrhotite. Calcite and siderite stringers may also be present.

3. Galena -- Skarn type mineralization with fine to coarse cubic crystals, occasionally massive, and occurring within limestone. Massive pyrrhotite and pyrite may also be present in these zones.

The most promising mineralization is the massive galena in quartz veins, as described above, with a silver-lead ratio which is in the range of 0.65 to 1.0. This ratio is quite favorable for an economic grade of mineralization.

Detailed exploration techniques which have been successfully used to delineate mineralized zones in this area include geological mapping, trenching, and magnetometer, electro-magnetic and soil sampling surveys. In overburden covered areas, copper and lead geochemical anomalies have provided downslope substantiation of geophysical anomalies, providing good diamon drill targets.

Geological mapping is expected to be one of the most effective tools. As previously mentioned, the mineralization does not show stratigraphic control, at least on a large scale, but structure is expected to be extremely important in the emplacement of vein-type mineralization. A careful study of structural geology within a zone of mineralization in this area would be essential to its interpretation and evaluation. .../11

After: Wheeler, Green & Roddick; G.S.C.

Sketch No. 4

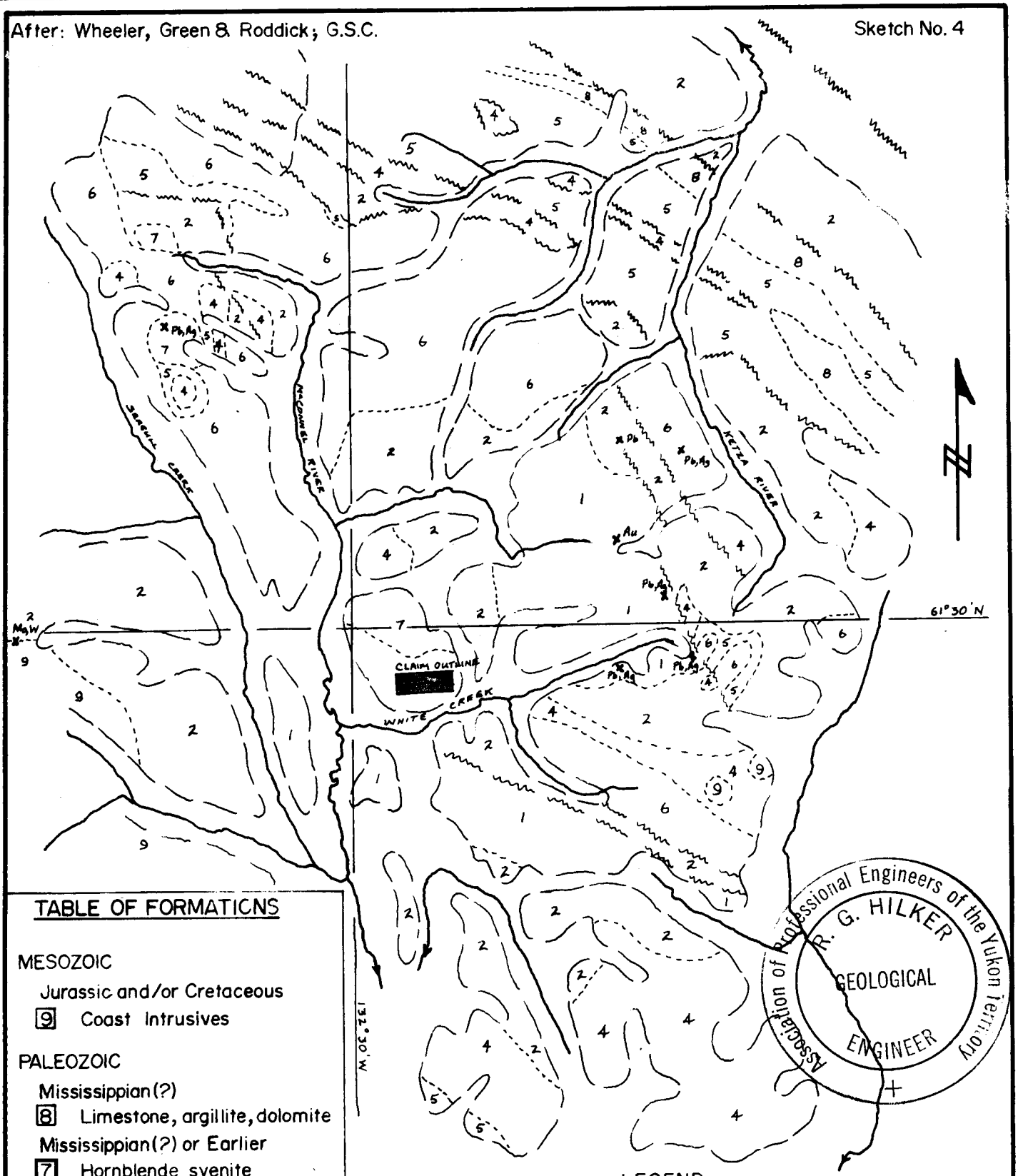


TABLE OF FORMATIONS

MESOZOIC

Jurassic and/or Cretaceous

9 Coast Intrusives

PALEOZOIC

Mississippian(?)

8 Limestone, argillite, dolomite

Mississippian(?) or Earlier

7 Hornblende syenite

6 Volcanics, minor limestone

5 Siliceous slate, shale; chert

Silurian and Devonian

4 Dolomite, minor quartzite

Ordovician and Silurian

3 Slate, limestone

Cambrian

2 Phyllite

1 Quartzite, limestone

LEGEND

Geological contact

Fault

Outcrop zone boundary

Association of Professional Engineers of the Yukon Territory
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GEOLOGICAL
ENGINEER

R.G.Hilker Ltd.
Consulting Geologist
Whitehorse, Y.T.

CHARTA MINES LTD. (N.P.L.)

General Geology
CPA Claims

Date: Oct. 20 - 70 | Scale: 1" = 4mi.

REFERENCE TO PUBLISHED GEOLOGY

The Quiet Lake Map Sheet (Sheet 105F) was geologically mapped during the late 1950's by J.D. Wheeler, L.H. Green and J.A. Roddick of the Geological Survey of Canada. A final report has not yet been published, and the only information available is the preliminary geology map, Map 7-1960, with a short accompanying descriptive note. No previous or subsequent geology of the area has been published.

.../12

CLAIM GEOLOGY

According to the G.S.C. mapping, the CPA 1-12 claim group is located over buff, rusty and pale green felsic breccias and tuffs with minor chert and brown crinoidal limestone (Unit 6) of Mississippian age or earlier.

The property is above treeline, on a fairly steep slope, and rock exposure is restricted mainly to frost-heaved boulders and screes. During the visits to the property, rusty tuff was the predominant rock type encountered. Boulders of massive milky-white quartz were also observed.

Three large, deep red colored gossan zones are located within the area of the claims (see Sketch #5). The gossan is derived from iron staining on the tuff. Also present is a manganese oxide coating on some of the felsitic rocks.

Two soil samples were collected and gave the following assay results:

	Fe (%)	Mn (ppm)	Pb (ppm)	Cu (ppm)	Ni (ppm)
3029	15.0	220	52	15	13
3030	12.5	200	50	14	10

A quartz-vein sample (#3872) and soil samples (#101-104) assayed as follows:

	Ag oz/T	Au oz/T	Pb (%)	Pb (ppm)
3872	Tr.	0.08	0.02	--
101				6
102				196
103				12
104				134

.../13

The iron and lead represent anomalously high values, while copper, manganese and nickel are low background values. An acid, oxidizing environment, which is potentially present in a gossan area such as this, may cause significant surface leaching of metal ions with the exception of iron, which has been precipitated as a secondary oxide, and some lead, which has a normally low mobility and may be co-precipitated with the hydrous iron oxides.

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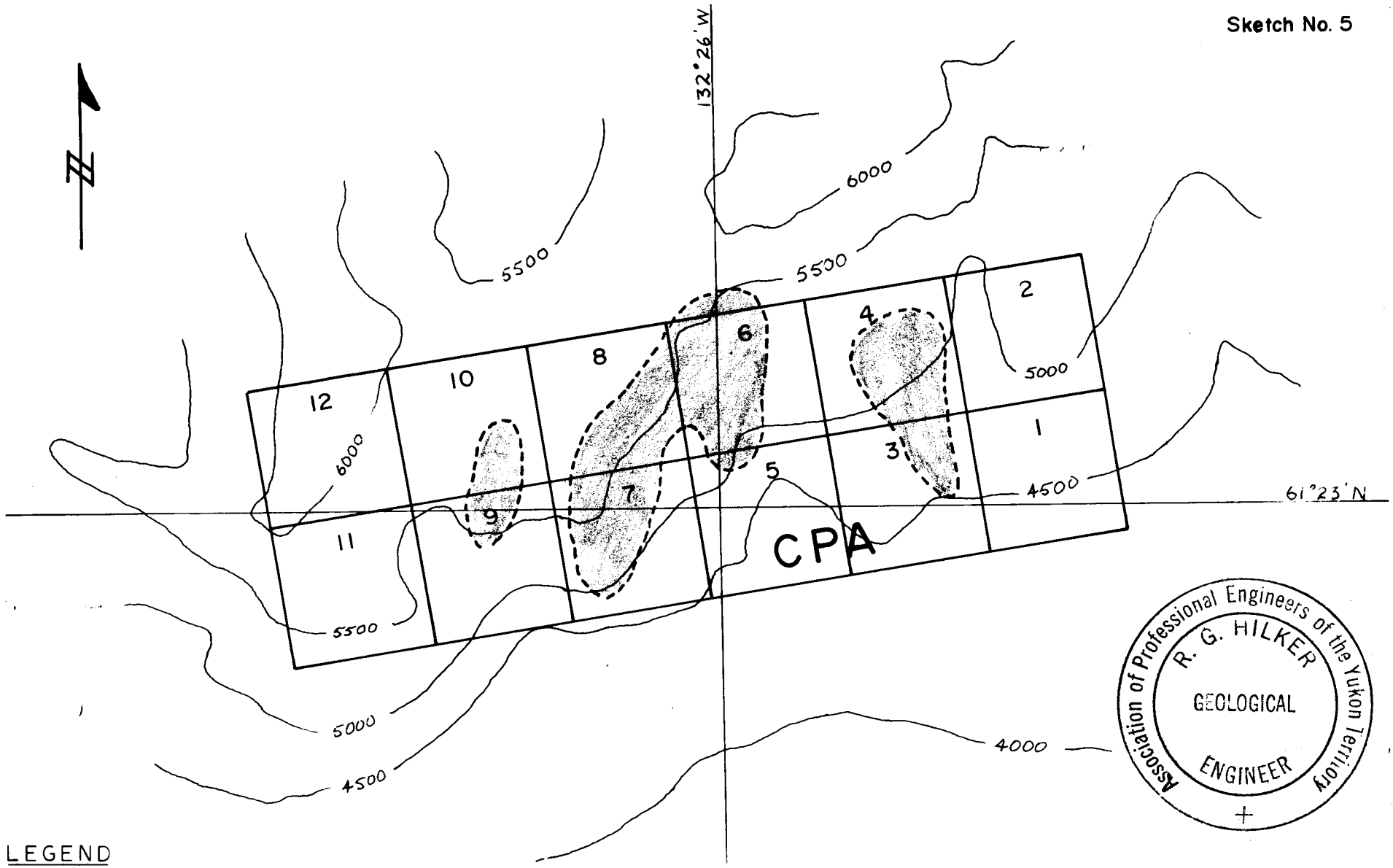
Sketch No. 5



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GEOLOGICAL
ENGINEER

LEGEND

Gossan zone

500' contour

R. G. HILKER LTD.
CONSULTING GEOLOGIST
WHITEHORSE, Y. T.

CHARTA MINES LTD. (N.P.L.)

Gossan Location Sketch

Date: Oct. 20 - 70 | Scale: 1" = 1500'

CONCLUSIONS

The CPA 1-12 claim group is located in a belt of Palaeozoic sedimentary and volcanic rocks which have proven to be favorable for silver, lead, zinc, copper and gold mineralization which is associated with quartz veining or skarn zones.

Three major gossan zones, located within the claim boundaries, indicate anomalous iron concentrations within the rocks. Iron is a major constituent of most sulfide zones located throughout this area. Anomalously high iron, supported by moderately high lead values, were obtained from soil samples taken from within the claim group.

Successful exploration techniques applied in this area include geological mapping, trenching, geophysical surveys and geochemical surveys. The geophysical methods include magnetometer, horizontal loop EM, Crone EM and Ronka EM-16. Since the three various electromagnetic surveys have shown close correlation with one another, it is suggested that the EM-16, being the simplest and least expensive survey to carry out, would provide sufficient EM coverage. It is felt that detailed geological mapping, accompanied by magnetometer, EM-16 and soil sampling surveys, be carried out on a 400-foot spaced linegrid with 100-foot stations. Soil samples should be analyzed for lead and copper.

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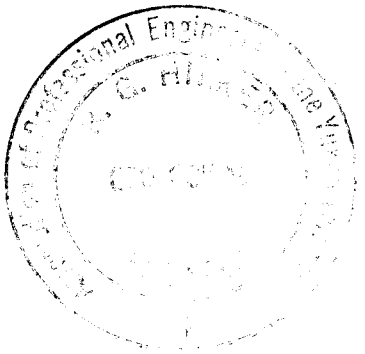
RECOMMENDATIONS

The following expenditures are recommended on the CPA 1-12 claim group in the White Creek area, Yukon Territory, to provide a primary evaluation of the potential of the claim group:

Linegrid - 12 linemiles @ $85/mile	$ 1,020.00
Geological Mapping - 12 linemiles @ $100/mile	1,200.00
Geochemical Survey:	
Soil Sampling - 12 linemiles @ $75/mile	900.00
Geochemical Determinations - 640 samples for Cu & Pb @ $1.60/sample	1,024.00
Magnetics Survey - 12 linemiles @ $75/mile...	900.00
Electromagnetic Survey (E.M.-16) - 12 linemiles @ $100/mile...	1,200.00
Transportation - Helicopter (Jet Ranger) for a total of 10 hrs @ $250/hr	2,500.00
Truck Transportation	700.00
Camp Costs	1,500.00
Radio Rental	200.00
Geological Report & Drafting of Data	1,000.00
Contingencies	1,200.00
TOTAL	$13,344.00

The initial camp is to be established by two linecutters on the CPA claim group. Upon completion of the linegrid the two linecutters would move out of the camp when the four-man exploration crew were mobilized to the claim group.



R.G. Hilker, P.Eng.
Consulting Geologist

A P P E N D I X

BARRINGER RESEARCH

Geochemical Laboratory Report

BARRINGER RESEARCH LIMITED
304 CARLINGVIEW DRIVE
REXDALE, ONTARIO, CANADA
PHONE: 416-677-2491
CABLE: BARESEARCH

DATE July 29, 1970

R. G. Milken
P.O. Box 566
Whitehorse, Y. T.

Attn: R. G. Milken

REPORT NUMBER 191

L K Davis

SAMPLE NUMBER	Total Fe %	Total Mn ppm
CPA 3029	15.0	220
CPA 3030	12.5	200

BARRINGER RESEARCH

Geochemical Laboratory Report

BARRINGER RESEARCH LIMITED
304 CARLINGVIEW DRIVE
REXDALE, ONTARIO, CANADA
PHONE: 416-677-2491
CABLE: BARESEARCH

DATE Aug. 24, 1970.

R. G. Milker Ltd.,
Box 566,
Whitehorse, Y.T.

Project No.; 119.33
Attn: R. G. Milker
REPORT NUMBER 139 - A

L.K. Davis

SAMPLE NUMBER	Ni ppm
CPA 3029	10
CPA 3030	10

DATE [illegible] 1963

FILE NO. [illegible]

ASSAY CERTIFICATE

WHITEHORSE ASSAY OFFICE

P.O. BOX 346. WHITEHORSE. YUKON

RECEIVED FROM D.G. Elliot Yukon

SAMPLE NO.	GOLD Oz. PER TON	SILVER Oz. PER TON	Lead.					
[illegible]	Tr	.02	.02					
			P.P.M. Lead					
[illegible]			6					
[illegible]			[illegible]					
[illegible]			18					
[illegible]			153					