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YUKON TERRITORY, CANADA
"LAND OF THE MIDNIGHT SUN"

PROPERTY EXAMINATION AND EVALUATION REPORT

END 1-24 YUKON QUARTZ
MINERAL CLAIMS
Y91534 - Y91557
NTS SHEET 105-L-10
WHITEHORSE MINING DISTRICT
LATITUDE 62°40', LONGITUDE 134°06'
CENTRAL YUKON TERRITORY

for

ENVOY RESOURCES LTD.
BOW RIVER RESOURCES LTD.
#333-885 DUNSMUIR ST.
VANCOUVER, B. C.

by

R. G. HILKER, P. ENG.
CONSULTANT GEOLOGIST
WHITEHORSE, Y. T.
FEBRUARY 10th, 1975

EVALUATION REPORT
END 1-24 CLAIMS Y91534-Y91557
SHEET 105-L-10, YUKON TERRITORY
ENVOY RESOURCES LTD.
BOW RIVER RESOURCES LTD.

by

R. G. HILKER, P. ENG.

FEBRUARY 10th, 1975.

NMEAP
Received
May 28, 1975.

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INTRODUCTION

The End 1-24 group of claims are located approximately 32-miles northwest of the Anvil Range lead-zinc deposits in the central Yukon. The claims are located southeast of a bend in the Pelly River, referred to as "The Detour", and north of Detour Lake on NTS - sheet 105-L-10. The area is situated on the north side of the Tintina Trench in the Earn Hills and on the northwest edge of the Glenlyon Range, and the Tummel Basin. The major Tintina Fault structural feature in the area bisects the aforementioned physiographic features. The Pelly River "Detour" lies within the Tintina Valley and centres at the edges of the MacMillan, Stewart, and Lewes Plateaus and the Glenlyon Range.

The End Claims are within an area that was previously staked and worked by Glenlyon Mines Limited and General Enterprises Limited, Airborne and ground geophysics, geological mapping, and soil geochemical mining surveys were performed by the two aforementioned companies in 1966 and 1967. Conwest Exploration Limited conducted an airborne electromagnetic survey north of the Pelly River and staked 480 claims in the Earn River area during the early summer of 1966. In September of 1974, Conwest Exploration restaked the Earn River flats with 1,000 claims and are planning a major surface exploration programme in the summer of 1975.

The End 1-24 claims were staked over the lapsed J H claim group that was originally held by Glenlyon Mines Limited. The claims were staked on the 24th of October, 1974. The End Claims were staked for the purpose of covering a surface showing of chalcopyrite where limited diamond drilling was done by the exploration department of McIntyre Porcupine Mines Limited under an option agreement with Glenlyon Mines Limited.

Due to recent geological mapping in the Anvil Range by the Geological Survey of Canada, a different age of rock units are indicated in the Detour Lake Area. The volcanics, chart and limestone of unit 15, Anvil Range Group - Glenlyon Geology map 1967 and the Upper Pennsylvanian and Permian Anvil Range Group Unit 8 - Geology of Anvil

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Range zinc-lead District 1972 appear to be the same rock unit. The Unit 8 group of rocks occur adjacent to the Unit 3 phyllite and schists lead-zinc host rocks, in the Anvil Range area where the Faro, Vangorda, Swim and AEX orebodies are located. Therefore, the rock units that occur in the vicinity of the End claims probably belong to the Anvil Range Group - Unit 8 and are Upper Pennsylvanian and Permian in age, and are underlain by phyllite and schists that may be Hadrynian, Cambrian and Ordovician in age.

This report on the End claims was requested and authorized by Mr. Jim MacLeod of Vancouver, B.C. for Envoy Resources Limited and Bow River Resources Limited of #333-885 Dunsmuir Street, Vancouver, B.C.

R. G. Hilker, P. Eng. has visited the claim group and the Detour Lake area on several occasions, and specifically on May 19, 1972, June 15, 1973, and on October 24th, 1974, during the staking of the End 1-24 Claim Group.

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LOCATION AND ACCESS

The End claims are located on NTS sheet 105-L-10 in the Whitehorse Mining District at approximately 62°40' latitude and 134°06' longitude. The claims are located in the southeast of a bend in the Pelly River referred to as "The Detour". The Pelly River Detour lies 68-miles northeast of the village of Carmacks and 124-miles due north of the City of Whitehorse. The nearest road to the property is Klondike Highway north of Carmacks and the Campbell Highway south of the property on the north side of Big Salmon Lake.

In 1967, General Enterprises Limited built 70-miles of tractor road from Pelly Crossing on the Klondike Highway to Detour Lake. There has been 20-miles of access roads built in the general area of Detour Lake and the Pelly River Detour bend. The roads are presently suitable for a four wheel drive type of vehicle. A good quality gravel airstrip was constructed east of Detour Lake and is suitable for twin engine type of aircraft. The roads and airstrip in the Detour Lake area are in good condition and usable for exploration work in the area. The End claims are located about one mile southeast of a tractor road and three miles southeast of the Detour Lake airstrip and on the opposite side of the Pelly River.

Rotary blade aircraft are available from Carmacks and Whitehorse. Three fixed wing aircraft charter companies operate both single and twin engine aircraft from the Whitehorse airport. The present rates for aircraft in the Yukon are as follows:

$290/hr. - Bell Jet Ranger - 206B, fuel JP-4 at 22GPH
$180/hr. - Bell 47B-1 - fuel 100/130 at 18GPH
$1.20/mile - Piston Beaver fuel 80 or 100 at 16 to 18GPH
$200/hr. - Scottish Aviation Twin Pioneer
$0.95/mile - Twin Engine Beechcraft Baron fuel 100 at 24GPH
$0.80/mile - Beechcraft Travelair fuel 100 at 18GPH
$0.90/mile - Cessna 185 fuel 100 at 14GPH

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The fuel costs are extra for the rotary blade aircraft and will vary in price from various localities that flying is done from. Fuel costs are extra at localities outside of Whitehorse in the fixed wing aircraft.

In general, the End Claim Group has fairly good access by the airstrip and rotary blade aircraft landing pads on the claim group. However, it is noted that the claim group is located on the north side of the Pelly River from the airstrip (see location sketch No. 2 in pocket).

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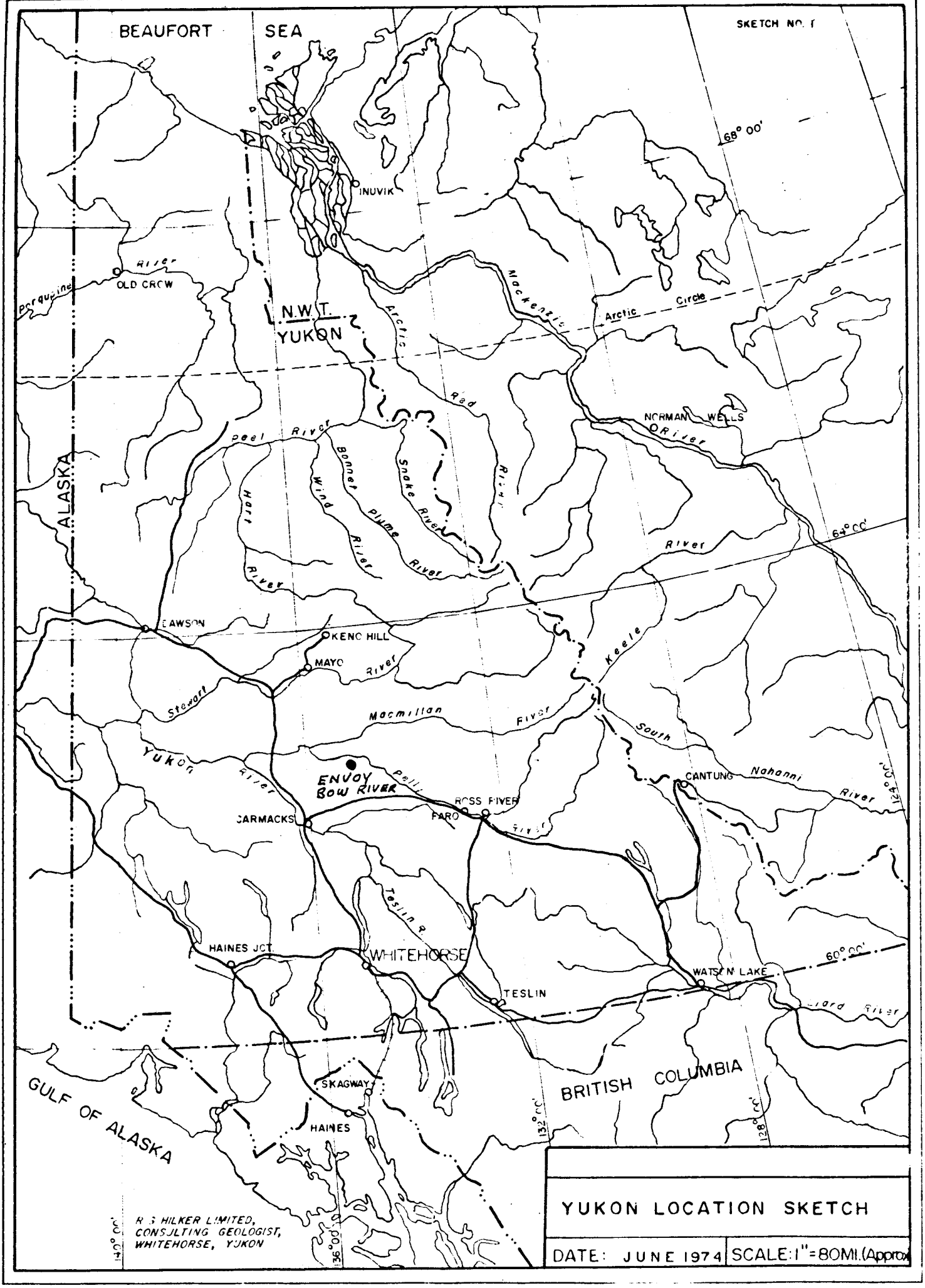
SKETCH NO. 1
BEAUFORT SEA
INUVIK
68° 00'
Mackenzie
Arctic Circle
OLD CROW
Porcupine River
N.W.T.
YUKON
ALASKA
Arctic
Red
NORMAN WELLS
Peel River
Bonner
Wind River
Snake River
Hart River
Plume River
River
64° 00'
DAWSON
KENO HILL
MAYO
River
Keele
Stewart
Macmillan River
South
Nahanni River
124° 00'
YUKON River
ENVOY
BOW RIVER
Pelly
CANTUNG
ROSS RIVER
FARO
CARMACKS
River
Teslin R.
HAINES JCT.
WHITEHORSE
60° 00'
WATSON LAKE
TESLIN
Liard River
BRITISH COLUMBIA
GULF OF ALASKA
SKAGWAY
HAINES
132° 00'
128° 00'
136° 00'
140° 00'
R. S. HILKER LIMITED,
CONSULTING GEOLOGIST,
WHITEHORSE, YUKON
YUKON LOCATION SKETCH
DATE: JUNE 1974
SCALE: 1" = 80MI. (Approx.)

CLAIMS

The End 1-24 Yukon quartz mineral claim group is located in the Whitehorse Mining District on NTS sheet 105-L-10. The claims are recorded at the Whitehorse Mining Recorders office in the City of Whitehorse, Yukon Territory. The claims are situated on the southeast side of the Pelly River Detour at approximately latitude 62°40' and longitude 134°06' in the Central Yukon region.

The following information pertains to the End claim group and was gathered from the records and certificates of work of the claims.

Name Claim	Grant Number	Anniversary Date
End 1-8	Y91534-Y91541 (incl.)	November 5, 1975
End 9-16	Y91542-Y91549	November 5, 1975
End 17-24	Y91550-Y91557	November 5, 1975

The registered owner of the claims are as follows:

- 50% Bow River Resources Ltd.
- 50% Envoy Resources Ltd.

The address of the owners is recorded on the claim transfers as No. 333-885 Dunsmuir Street, Vancouver, B.C.

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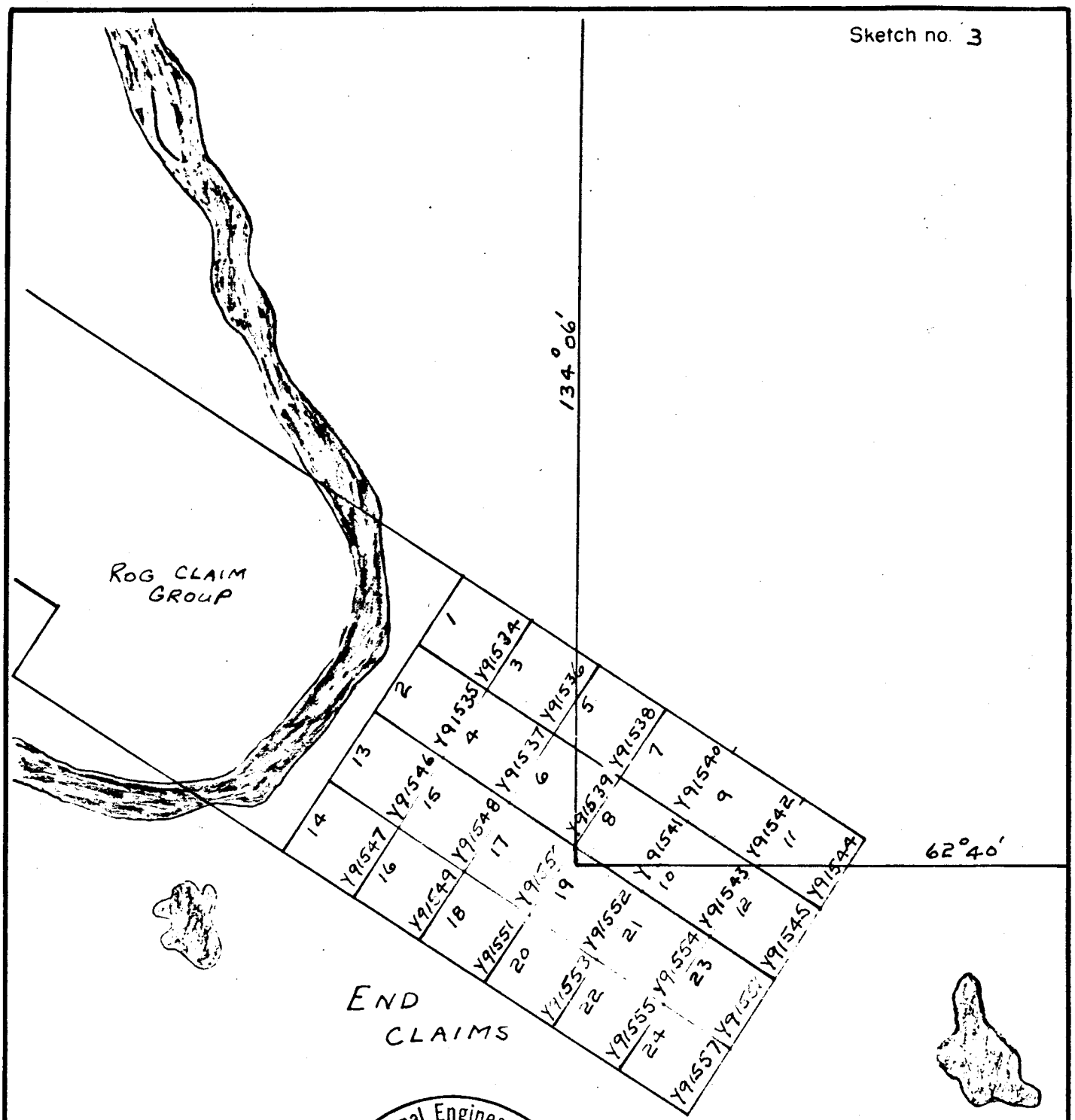
Sketch no. 3



Association of Professional Engineers of the Yukon Territory
R. G. HILKER
GEOLOGICAL ENGINEER

NTS SHEET - 105 L-10

END 1-24 CLAIM GROUP

ENVOY RESOURCES LTD
BOW RIVER RESOURCES LTD.

DATE: FEB/1975 | SCALE 1" = 1/2 MILE

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

REGIONAL GEOLOGY

During recent geological mapping in the Anvil Range area by D. J. Tempelman-Kluit-1972 of the Geological Survey of Canada, a different age has been given to the Anvil Range Group than what was previously mapped by R. B. Campbell, 1949-1954 and J. O. Wheeler 1956 on Geology Map 1221-A Glenlyon. The phyllite and schist host rocks, that contain the lead-zinc ore deposits in the Anvil district, are thought to be Proterozoic and Paleozoic strata that is in the Hadrynian (?), Cambrian (?) and Ordovician (?) period. The difference in the age classification is due to the additional geological information available since 1966 to the present with the increased mining activity that has occurred since the mapping in 1949-1956 by Campbell and Wheeler. Thousands of feet of diamond drilling and the subsequent core recovery and the Anvil Mines open pit mining operation has made available to Tempelman-Kluit abundant rock specimens for examination and study.

Tempelman-Kluit on Geology Map 1261-A has assigned an age of Upper Pennsylvanian and Permian to the Anvil Range Grou - Unit 8. Campbell previously mapped the Anvil Range Group - Unit 15 as Mississippian or Later in age. A similar unit to Campbell's unit 15 has been mapped by J. A. Roddick, 1958, 1960 and L. H. Green, 1960 on the Tay River Geology Map 13 - 1961 of which adjoins the Glenlyon sheet. On the Tay River sheet the Mississippian (?) and/or later (?) aged rocks are identified as Unit 9. In addition, Tempelman-Kluit has differentiated between the Group and Units that were previously combined in Campbells Unit 15. The changes in the recent geology maps issued by the Geological Survey of Canada can be considered to be updating and detailed geology due to additional information from areas of orebodies. Therefore, the writer will follow the age and detail of units assigned by Tempelman-Kluit to the Anvil Range Group and Anvil area mineralized host rocks for the purpose of preparing this report.

The following general geology of the Anvil Range is quoted from G.S.C. Bulletin 208 and the geology is by D. J. Tempelman-Kluit:

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"The core of Anvil Range is underlain by granodiorite and porphyritic quartz monzonite that form the Anvil Batholith, intruded in Mesozoic time. A sequence of Proterozoic and the Paleozoic strata, similar to that found extensively elsewhere in Selwyn Basin, flanks the Anvil Batholith. This sequence includes two regional unconformities, one beneath Devono-Mississippian strata and another below Pennsylvanian-Permian succession. The older Paleozoic rocks, dominated by thick Cambrian (?) and Devono-Mississippian sequences are mainly metamorphic and sedimentary, whereas the Pennsylvanian-Permian rocks are largely volcanic. Paleozoic beds have an aggregate thickness of about 15,000 feet. Small intrusions of Paleozoic or Mesozoic 'alpine' periodotite are associated with Permian volcanic rocks. A thick, post-Permian conglomerate lies along an important fault parallel to the Tintina Trench. Acid and Basic Tertiary volcanic rocks occur locally."

The general area of the Pelly River Detour bend and terrain east has been geologically mapped and thought to contain the Anvil Range Group of andesite, chert, and limestone rocks of Pennsylvanian and Permian age. A Jurassic and Cretaceous age sequence of conglomerate, shale and sandstone lies to the south and east of Detour Lakes. The aforementioned group of rocks occurs parallel to the Tintina Fault. From diamond drilling conducted in 1968, the core suggests that the volcanics overlay phyllite and schist rock types that are thought to be Hadrynian, Cambrian and Ordovician in age.

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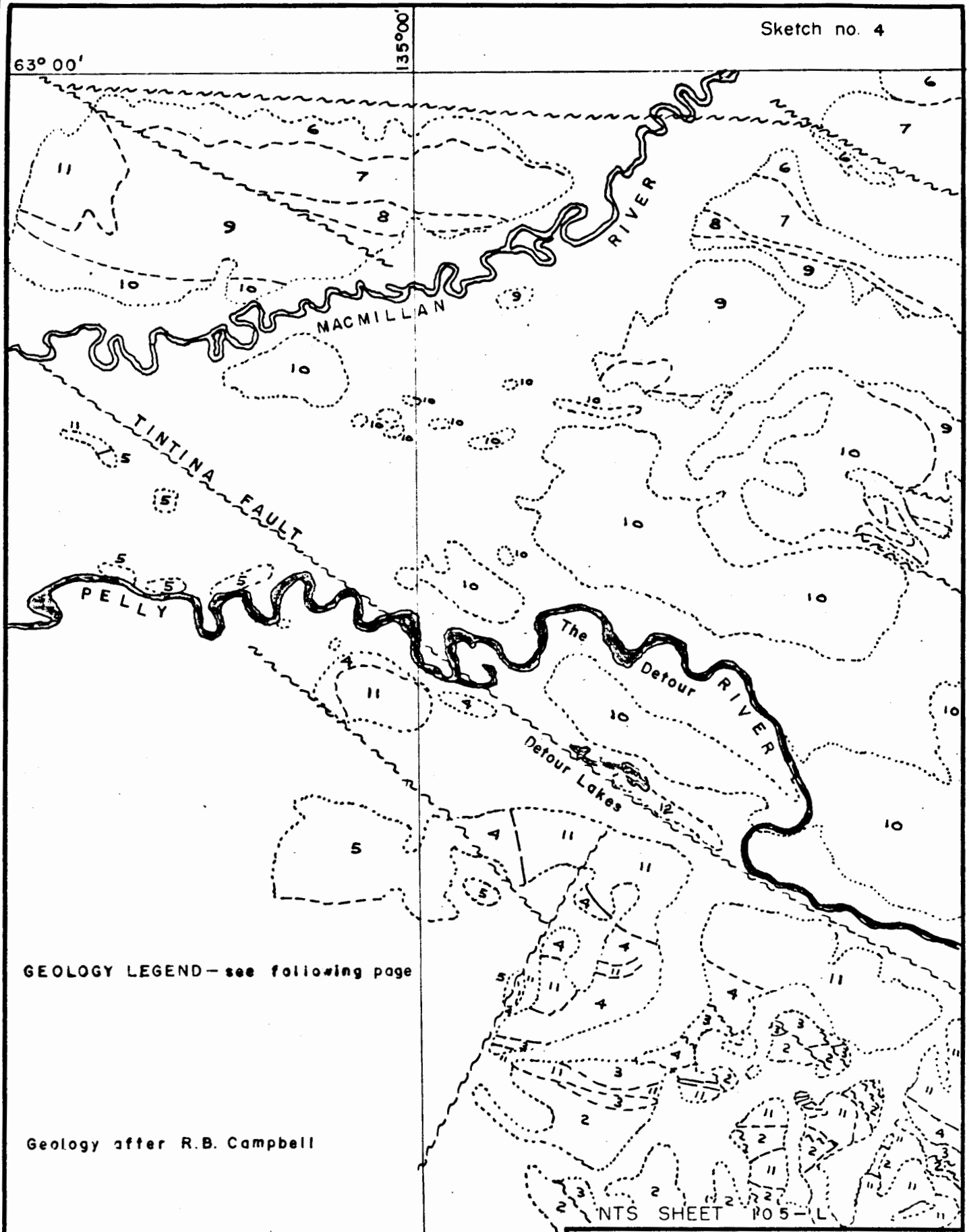
Sketch no. 4



GEOLOGY LEGEND — see following page

Geology after R.B. Campbell

NTS SHEET 105-L

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

ENVOY RESOURCES LTD.
BOW RIVER RESOURCES LTD.
REGIONAL GEOLOGY

DATE: JAN. / '75 | SCALE: 1" = 4 mi

GEOLOGY LEGEND - GLENLYON SHEET

(See Regional Geology - Sketch #4)

MESOZOIC

Jurassic/Cretaceous

12 - conglomerate, shale, sandstone

11 - granite rocks

PALAEOZOIC

Pennsylvanian and Permian

Anvil Range Group

10 - chert, basalt, limestone

Mississippian

9 - chert, quartzite, argillite

8 - limestone, argillite, chert

7 - conglomerate

6 - chert, argillite, quartzite, limestone, conglomerate

Silurian/Devonian

5 - quartzite, argillite, dolomite, limestone

Cambrian/Ordovician

4 - slate, phyllite, hornfels, argillite, limestone

Hadrynian/Cambrian/Ordovician

3 - limestone, phyllite, skarn, schist

2 - phyllite, schist, amphibolite

1 - gritty quartzite

Geology after R. B. Campbell - Memoir 352, and D. J. Tempelman-Kluit - Bulletin 208.

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TABLE OF FORMATIONS

CENOZOIC

Tertiary

12 - sandstone, shale, and conglomerate

MESOZOIC

Cretaceous

11 - monzonite and granodiorite

Triassic

10 - conglomerate with fragments of schist (unit-1), basalt (unit-8), serpentinite (unit-9), sandstone, slate, and limestone

Triassic and (?) Upper Permian

9 - serpentinite and peridotite

PALEOZOIC

Pennsylvanian and Permian

Anvil Range Group

8 - chert, basalt and limestone

Devonian and Mississippian

7 - slate, chert, greywacke, chert-pebble conglomerate, and limestone

Middle Devonian

6 - limestone and dolomite

Devonian and Silurian

5 - quartzite

Ordovician and Silurian

4 - slate and chert

Hadrynian, Cambrian and (?) Ordovician

3 - phyllite, schist, amphibolite (Anvil Range lead-zinc deposits host rocks)

Hadrynian (?) and (?) Cambrian

2 - skarn, schist, amphibolite, marble

Hadrynian

1 - gritty quartzite

Geology after D. J. Tempelman-Kluit - G.S.C. Bulletin 208.

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REFERENCE TO GEOLOGY AND GEOPHYSICS

1. Geological Survey of Canada Bulletin 208 - Geology and Origin of the Faro, Vangorda, and Swim Concordant Zinc-Lead Deposits, Central Yukon Territory by D. J. Tempelman-Kluit 1972.

2. Geophysics Paper - Airborne Magnetics Glenlyon, Y. T. Sheet 105-L, Scale 1 inch = 4 miles.

   Geophysics Paper 7839-G - Airborne Magnetics Tay River, Y. T. Sheet 105-K, Scale 1 inch = 4 miles.

3. Dr. Aarho E. Aho - The Northern Miner October 17, 1974.

4. Geological Survey of Canada - Memoir 247, Physiography of The Canadian Cordillera with Special References to the Area North of the Fifty-Fifth Parallel - by H. S. Bostock 1948.

5. Geological Survey of Canada - Geology Sheets:
   - Glenlyon, Y. T. - Sheet 105-L
   - Tay River, Y. T. - Sheet 105-K

6. Western Miner - Exploration Methods in Yukon with special references to the Anvil District - A. E. Aho, April 1966.

7. Sixth Commonwealth Mining and Metallurgy Congress - Geophysical Exploration of a Lead-Zinc Deposit in Yukon Territory - F. D. Chisholm - 1957.

8. Geology of Glenlyon Map area, Yukon Territory (105-L) - Geological Survey of Canada Memoir 352 by R. B. Campbell, 1967.

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PREVIOUS EXPLORATION DETOUR LAKE AREA

Two companies have conducted mining exploration surveys in the general area of Detour Lakes and the Pelly River Detour during 1966 and 1967. The majority of mining claims staked and worked in the area were held by Glenlyon Mines Limited and General Enterprises Limited. The exploratory work performed was as follows: Airborne Electromagnetic and Magnetic Survey - April 1966; Ground Electromagnetic and Magnetics - 1966 and 1967; Geological mapping - summer 1966; Geochemical Soil Sampling - summer 1966; Electromagnetic Ronka E. M. 16 - July 1968; 70 mile winter tractor road constructed during winter of 1967 from Pelly Crossing on the Klondike Highway to Detour Lakes, 20 miles of access road in the general vicinity of Detour Lake to claim groups that were being worked, fixed wing aircraft airstrip constructed approximately 3,000 feet in length - summer 1967; diamond drilling August, September and October 1968.

The following is a list of the data pertaining to surface exploration surveys conducted in the Detour Lake area; the data is from reports filed at the Whitehorse Mining Recorders office and available to the public after the claims involved in the survey and documented in the technical reports have lapsed, and a six months time period has passed since the claims reverted to the Crown.

Glenlyon Mines Limited Data

1. Airborne Geophysical Survey and Geological and Geochemical Follow-up, April 1 - November 30, 1966; NTS sheet 105-L-10 by P. H. Sevensma (Tee 1-56, Klik 1-40 and Bun 1-52 claim groups).
2. Progress and Geochemcial Report, May 10 - 1967, NTS sheet 105-L-10, by P. H. Sevensma (Klik, Hub - Pine, J. H. and Rose-Kay claim groups).
3. Geophysical Report - Anne Group NTS sheet 105-L-10, July 21 to 28, 1967 - by P. H. Sevensma.

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McIntyre - Porcupine Mines, Ltd. (Glenlyon Option) Data

1. Geochemical Soil Survey and Ground Geophysical Survey Anne Claim Group NTS sheet 105-L-10, July 31, 1968 - by P. H. Sevensma.

2. Diamond Drill Log - Exploration Department of McIntyre Porcupine Mines, Limited.
   a) Mab # 9 Claim - DDH, M-#1, length hole 496 ft., drilled September 12, 1968 completed September 17, 1968;
   b) Mab # 4 Claim - DDH, M-#2, length hole 533 ft., drilled September 19, 1968, completed September 25, 1968;
   c) Pine Claim Group - DDH, P-#1, length hole 301 ft., drilled August 13, 1968, completed August 17, 1968 (Location Pine Grid 0+00 and "P" baseline intersection).
   d) Hub Claim Group - DDH, H-#1, length Hole 684 ft., drilled August 26, 1968, completed September 7, 1968. (Location Hub Grid PL 4+00E and 270 N).
   e) J. H. Claim Group - DDH, J H-#1, length of hole 550 ft., drilled August 1, 1968, completed August 10, 1968.

General Enterprises Limited Data

1. Magnetic Survey of Bata Claims - NTS sheet 105-L-10, October to November 1966, by R. A. Granger and A. F. Reeve, P. Eng.

2. Geophysical Exploration of the Bata and Bob Group of Mineral Claims - NTS sheet 105-L-10, December 1966 - April 1967 by R. A. Granger and A. F. Reeve, P. Eng. (Sharp SE-300 electromagnetic survey and Fluxgate MF-1 magnetics survey).

The only previous documented surface exploration on the End Claims, that is recorded at the Whitehorse Mining Recorders office, was conducted on the old J H Claim group. A diamond drill hole geology log was filed for assessment work purposes on the J A Claims and the exact drilling location is unknown. The drilling was done by McIntyre Porcupine Mines Limited under the Glenlyon Mines Limited option agreement. The End Claims were staked over the area that was previously drilled and covered by the J H Claim group.

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Several small copper surface showings were located on the End 8 and 19 mineral claims during the staking of the claim block. The J H-1 diamond drill hole collar was not located in the field, but it is possible that the hole was drilled near the surface showings. The copper surface showings probably occurred on the original J H 23 and 6 claims.

ECONOMIC GEOLOGY - Anvil Range District

Three massive types of lead-zinc deposits with 80-million tons of proven ore reserves are located in the Anvil Range area. The Faro, Vangorda and Swim Lake deposits are contained in the phyllites and schists of the Late Proterozoic or in the period of Ordovician (?), Cambrian (?), and/or Hadrynian. A brief description follows on the type of occurrence and sulphide minerals present in the deposits, for the purpose of exploration in the region.

Swim Lake Massive Zinc-Lead Deposit

The Swim Lake deposit is an irregular, digitate, tabular zone of sulphide minerals in a quartzite gangue surrounded by a partial mantle of creamy white phyllitic rocks. The sulphide zone contains about 50 per cent sulphide minerals in a gangue of granular grey quartz with minor muscovite. The Swim Lake zone is a discontinuous, roughly tabular, elongated mass about 1,500 feet long and nearly 500 feet wide that trends northwest and dips northeast at 25-degrees. The average thickness of the orebody is nearly 70-feet and maximum thickness is 280-feet. Published figures (Northern Miner, March 9, 1967) indicate the presence of 5-million tons of mineralized host rock containing about 9.5 per cent combined zinc and lead with 1.5 ounces of silver per ton and minor copper and gold. Zinc is the predominant base metal. Metallic minerals that occur in order of abundance are: pyrite, sphalerite, galena, pyrrhotite, marcasite, chalcopyrite, with minor arsenopyrite, magnetite and tetrahedrite. The magnetic response over the Swim Lake orebody was fairly good and gravimetric results over the deposit delineated the sulphide body accurately.

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Vangorda Creek Massive Zinc-Lead Deposit

The Vangorda deposit is an irregular tabular mass of sulphide minerals with a granular quartz gangue, that is partly surrounded by a narrow zone of pale-coloured phyllite and, in turn, enclosed by phyllitic rocks. The sulphide-rich body at Vangorda Creek contains about 50 per cent metallic minerals in a gangue of granular grey quartz with minor muscovite. The Vangorda mineralized zone is tabular and flat lying; the long axis trends northwest and is about 2,500-feet long. Its width is about 500-feet, and the average thickness is about 70-feet. Published tonnage and grade figures for the Vangorda body (Chisholm 1957) are 9.4 million tons with 3.1 per cent lead 4.96 per cent zinc, 0.27 per cent copper, and 1.76 ounces per ton silver; 12.6 million tons of nearly barren sulphides are reported in addition to the base metal zone. About 50 per cent of the zone is sulphides with pyrite being the most dominant metallic mineral. Metallic minerals present in order of abundance are as follows: sphalerite, galena, pyrrhotite, chalcopyrite, and minor constituents are magnetite and marcasite. The average specific gravity of the Vangorda sulphide ore is about 4.4 and the host rocks are 2.8.

It is noted by E. O. Chisholm (1957) that there was no correlation between magnetics, aeromagnetics, and self potential anomalies in the vicinity of the Vangorda deposit. He established that a general relationship does exist between soil geochemical anomalies in the area of the Vangorda sulphide deposit.

Faro Massive Zinc-Lead Deposit

The Faro orebody is a gently dipping tabular lens of sulphide minerals in a granular quartz gangue enclosed by an irregular zone of pale-coloured schists within a quarta-mica schist. Sulphide minerals make up about 50 per cent of the Faro ore zone of which pyrite constitutes about one quarter of the volume of the deposit. In order of abundance, the metallic minerals present are: sphalerite, galena, pyrrhotite, chalcopyrite, and marcasite; minor metallic sulphides are magnetite, arsenopyrite, bournonite and tetrahedrite. The Faro

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orebody is a regular and continuous, southwest-dipping tabular lens with the long northwest trending axis 4,800-feet long. The deposit is 1,200-feet wide with an average thickness of 120-feet. The depth of the mineralized zone beneath the surface ranges between 600-feet at its centre and 200-feet near the northwest and southeast ends. The main sulphide body interfingers with and terminates against granitic rocks on the northwest end. A second zone of sulphide mineralization, the Faro #2, is smaller and less extensive than the main orebody, and lies 1,500-feet southeast of the southeast end of the Faro #1 zone. Published figures indicate the presence of 63.5 million tons of ore with 3.405 per cent lead, 5.721 per cent zinc, and 1.196 ounces of silver per ton; in parts the deposit contains 0.15 per cent copper.

Dr. A. E. Aho (1966) reports that soil geochemical surveys and gravimetric surveys are the best tools for defining and delineating of massive sulphide zones in the Faro Deposits area.

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CLAIM GEOLOGY

The geology south of the Pelly River Detour bend and Detour Lakes was mapped by R. B. Campbell and shown on the Glenlyon Map Sheet 105-L, 1967. A northwest trending hill has a bearing direction across the south side of the Pelly River Detour. The Detour hills have been shaped by the northwest glaciation that passed through the area from the last cordilleran ice - sheet. The hills rises from 1,892-feet from the water elevation of Detour Lake to approximately 3,500+ feet to the highest point. Several glacial features occur on the Detour hill and flanks to the north and south. The End claims are located on the northwest end of Detour hill. The long axis strikes 60° northwest and is bound to the south by the Tintina Fault and to the north by the bend in the Pelly River. From previous work in the area, cross lineaments of N15°W are suggested to exist across the N60°W bearing hills.

The Detour hill and terrain east was mapped by R. B. Campbell and contains rocks of the Anvil Range Group that are thought to be Upper Pennsylvanian and Permian in age. The Anvil Range Group consists of: greenish grey, pale green and brick red argillaceous and tuffaceous chert; massive green basalt, commonly amygdaloidal, includes common pyroclastics and less common pillowed varieties, metamorphosed equivalent near granitic bodies; light grey, massive resistant recrystallized limestone (D. J. Tempelman-Kluit - group description). The Anvil Range Group has been described by R. B. Campbell as: andesitic and basaltic flows, breccia, tuff; diorite, slate, phyllite; minor limestone, chert, carbonaceous shale; local quartz-mica, schist and lime-silicate rock.

The End claims appear to contain the Anvil Range Group of andesite, chert, and limestone of Upper Pennsylvanian and Permian age and possible phyllite, schist, limestone and quartzite that is Hadrynian, Cambrian and (?) Ordovician in age.

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From examination of outcrops and diamond drill geology logs, believed to be from the J H Claims drill hole on the End claims, the predominant rock types are phyllite, schist and volcanics. The diamond drill geology log of hole J H-#1 indicates the following subsurface rock types to be present on the End claims: chloritic schist, sericitic schist, breccia, phyllite, siltstone, graphitic sediments, sandy sediments and pyrite with minor chalcopyrite. (See McIntyre Porcupine Mines Limited diamond drill log of J H-#1 in pocket). The aforementioned rock types are thought to be similar to the phyllites,schists, limestone and sandstone group of rocks in the Anvil Range and which are described to be Hadrynian, Cambrian and (?) Ordovician in age. Rock outcrops examined to the northwest of the End claim group were more resistant, harder and resisted the glaciation ice-sheets that passed through the area. The Detour hill rocks are thought to belong to the Anvil Range group of andesite, chert, and limestone and to be Upper Pennsylvanian and Permian in age.

Therefore, it is believed by the writer that similar rock types occur south of the Pelly River Detour as the rock types in the Anvil Range mining district.

The diamond drill log of Porcupine McIntyre on drill hole J H-#1 reports assays of tr gold, silver from 0.06 to a high of 0.8 oz./T; Copper: 0.02, 0.22, 0.12, 0.11, 0.01, 0.09, 0.07, 1.41, 0.17, 0.04 and 0.02. Disseminated iron sulphides are reported in hole J H-#1 drill hole. The drill hole was drilled for a length of 550-feet between August 1, 1968 and August 10th, 1968.

Several small sulphide surface showings were noted to occur on the boundary between the End #8 and End #19 claims. The chalcopyrite with malachite showings were in a fractured andesite rock type and associated with milky white quartz veins. The showings are scattered through an area approximately 300-feet long by 50-feet wide, with the long axis trending in a southeast direction.

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The following are three assays of random surface samples collected from the End claims and assayed by the Whitehorse Assay Office Ltd.:

Sample No.	Description	% Copper	% Zinc
#3452	Andesite/quartz, malachite and minor chalcopyrite.	0.83	0.01
#3453	Andesite/quartz, malachite on surface.	0.63	tr
#3454	Andesite/quartz, abundant visible chalcopyrite and minor malachite stain.	0.83	0.01

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CONCLUSIONS AND RECOMMENDATIONS

The End claims are located about 32-miles northwest of the Anvil Range mining district where massive lead-zinc ore deposits occur. The claims are located on the southwest end of the Pelly River Detour hill and on the north side of the Tintina Fault. A cross lineament is thought to cut across the End claim group in the area of the copper showing.Cross structural features, faults and lineaments are thought to be related to lead-zinc mineralization in the Anvil Range mining district. The End 1-24 claims cover terrain that appears to contain phyllites, schists, limestone and sandstone that is considered to be Hadrynian, Cambrian and (?) Ordovician in age. Surface rock types on the claim group appear to belong to the Anvil Range Group of andesite, chert and limestone that is Upper Pennsylvanian and Cambrian in age.

It is noted by the writer that a problem of correlation in age, formation, group and rock units exists between the Anvil Range area and the Glenlyon map sheet. The correlation of rock units also exists in the general area and on the End claim group. Minor sulphide mineralization occurs on the End claims as reported in the McIntyre Porcupine drill logs and is observed in surface outcrops of chalcopyrite mineralization in volcanic rock types.

It is recommended that a detailed surface exploration programme be conducted on the End claim group to fully evaluate the ground. A surface geophysical, geochemical and geological programme is warranted to check for sulphide conductors and zones that may be due to lead-zinc mineralization. Sphalerite is not an electrical conductor, and it is expected that if sulphide zones do exist on the claim group, that abundant pyrite exists in a tabular mineralized zone to be detectable by electromagnetic instrumentation.

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EXPENDITURES

To further probe the terrain that is enclosed within the End 1-24 quartz mineral claims, for possible economic lead-zinc mineralized zones, the following expenditures would be warranted for 24 line-miles of grid system with 400-feet spaced crosslines:

Stage 1

Horizontal Electromagnetics Survey		$4,000.00
Magnetics Survey		2,000.00
Geochemical Soil Sampling		2,400.00
Geochemical Determinations - 1300 samples @ $2.00		2,600.00
Geological Mapping		3,000.00
Linegrid - 30 linemiles		3,000.00
Aircraft Transportation		8,000.00
Fixed Wing - 10 hrs. @ $200./hr.	$2,000.00	
Rotary Blade - 20 hrs. @ $300./hr.	6,000.00	
Camp Construction		2,000.00
Camp Costs - food, propane, expediting, cook, etc.		5,000.00
Radio Communications		800.00
Field Equipment		1,000.00
Report on Field Work		1,800.00
Date Processing	$500.00	
Drafting Plans	500.00	
Typing and Duplicating	300.00	
Report Preparation	500.00	
Geological Salaries		2,000.00
TOTAL STAGE I		$37,600.00

Stage II

If zones or conductors are delineated, in the Stage I surface exploration programme, that suggests possible sulphide zones, a diamond drill programme would be required to further investigate the property.

R. G. Hilker

R. G. Hilker, P. Eng.

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CERTIFICATION

I, ROBERT G. HILKER, of #6 Chalet Crescent, Hillcrest, in the City of Whitehorse, in the Yukon Territory, DO HEREBY CERTIFY:

1. THAT I am a Consulting Geologist, with an office located at #8 Northern Metalic Building and Postal Address P.O. Box 4008, in the City of Whitehorse, in the Yukon Territory.

2. THAT I am a graduate of the Michigan Technological University located at Houghton, Michigan, U.S.A., where I obtained a Bachelor of Science Degree in Geological Engineering (Exploration Option) in 1962.

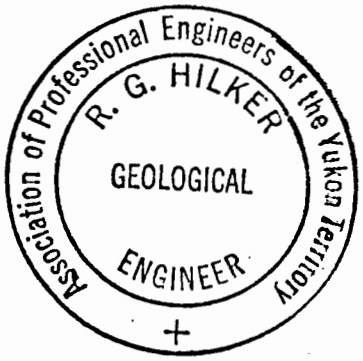
3. THAT I am a registered member in good standing of; The Association of Professional Engineers of the Yukon Territory, a Fellow of the Geological Association of Canada, and registered with The Association of Professional Engineers of British Columbia, with a non-residence license.

4. THAT I have practised my profession as an engineer and geologist for the past twelve years.

5. THAT I have personally examined the End 1-24 claims; observed the number one and two posts of the End 1-24 quartz mineral claims; examined the diamond drill core believed to have been from DDH, M-#1 and DDH, Mab #2 that is located at the old Porcupine McIntyre campsite; and noted rock types in outcrops within the claim boundaries that are located on NTS sheet 105-L-10, Pelly River Detour and Detour Lakes Area of the Yukon Territory, on May 19, 1972, June 15, 1973, June 15, 1974, and October 24, 1974.

6. THAT I have no direct or indirect interests in any of the mineral claims, or in any of the securities held by Envoy Resources Ltd., and Bow River Resources Ltd., nor do I expect to receive any.

DATED this 10th day of February, A.D. 1975, in the City of Whitehorse, Yukon Territory.



R. G. Hilker, P. Eng.

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A P P E N D I X

CERTIFICATE

WHITEHORSE ASSAY OFFICE LTD.
BOX 4518 WHITEHORSE Y. T.
PHONE 667 2694 Y1A 2R8

DATE. FEBRUARY 7, 1975.

FILE NO. 0359-3

SAMPLE RECEIVED FROM R. G. HILKER LTD.

SAMPLE NO.	GOLD Oz. Per Ton	SILVER Oz. Per Ton	COPPER	ZINC				
3452			.83	.01				
3453			.63	TR				
3454			.83	.01				

ASSAYER. [signature]

SKETCH No. 2

RIVER
THE DETOUR

PELLY

ROB 1-15

DDH - M-1

Campsite

DDH - MAB-2
Cu - Zn

THE

EARN

RIVER

PELLY

DETOUR

RIVER

DETOUR
LAKES

ALPHA 1-40

ROG 1-43

PINE
Cu-Zn

DETOUR LAKE
AIRSTRIP

END 1-24
ENVOY RESOURCES
Cu

TINTINA FAULT

62° 40'

134° 50'

LEGEND

- TRACTOR & VEHICLE ROAD
- DIAMOND DRILL HOLE
- Cu — SHOWING
- PINE GEOCHEMICAL Cu-Zn ANOMALY
- LINAMENT

Association of Professional Engineers of the Yukon Territory
R. G. HILKER
GEOLOGICAL
ENGINEER

N.T.S. SHEET 105-L

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

PELLY RIVER DETOUR
LOCATION & ACCESS PLAN

Date: Jan. / 1975

Scale: 1:50,000 or 1.25 in. = 1 mile

EXPLORATION DEPARTMENT

McIntyre Porcupine Mines, Limited

DIAMOND DRILL LOG

Property Clenlyon Group — Yukon
Location JH Group

Hole No. JH-1 Sheet No. 1
Length of Hole 522'
Date Started August 1, 1968 Completed August 10, 1
Core Logged by Terry Fersereau
Date August 10, 1968
Elevation Datum

Surveys

At	Dip	Bearing
0'	-45°	

Co-ordinates of Collar

North
East

From	To	Description of Core	SLUDGE ASSAYS Footage				Sample No.	CORE ASSAYS Footage	Width	Au Ozs.	Ag Ozs.	Cu.	
0	2	Overburden											
2	29	Quartz with areas of chloritic schist (to 10 - 20%). Some dolomite					7438	8-13	5	tr	0.7	0.22	
		in fractures. Very minor Cp. Poss H_2O course					7439	13-18	5	tr	0.6	0.02	
		6 - 8 - lost core - ground					7426	18-24	6	0.01	0.06	0.12	
		16'6" - 17'6" - lost core - ground											
		12'2" - 13'0" - lost core - ground											
		25'7" - 27' - lost core - ground											
		27'5" - 29' - lost core - ground											
		18'4" - 24' - quartz with Cp and malachite in fractures & disseminations											
		Less than 1% sulfide.											
29	211.5	Quartz augen sericitic schist - light grey-green sericitic											
		matrix with quartz augen porphyroblasts					7430	35-38'6"		tr	0.2	0.11	
		to 1/8" as well as some chloritic augen. 10% quartz veinlets,											
		with occasional Cp. Foliation (core axis angle 25 - 30°)											
		A few porphroblasts of Fe sulfide. Porphyroblasts all told											
		occupy 15% of rock. CO_3 on foliation planes.											
		38'6" - 42'3" qtz. vein.											
		48' - 52'10" - quartz vein. Occasional Cp. Malachite in qtz. C.angle	35°				7431	48-52'10"		tr	0.4	0.01	

EXPLORATION DEPARTMENT

McIntyre Porcupine Mines, Limited

DIAMOND DRILL LOG

Property

Location

Surveys

At	Dip	Bearing

Hole No. JH-1 Sheet No. 2

Length of Hole

Date Started Completed

Core Logged by

Date

Elevation Datum -

Co-ordinates of Collar

North

East

From	To	Description of Core	SLUDGE ASSAYS Footage				Sample No.	CORE ASSAYS Footage	Width	Au Ozs.	Ag Ozs.	Cu	
		65 - 70 - as previous schist but with 10% chlorite augen (to 1/8")											
		CO_3 on foliation planes. Core angle 10 - 15° - foliation											
		70 - 108 - less than 10% quartz veining											
		100 - foliation core angle 30°											
		102 - 107 - lost core - ground											
		108 - 118 - quartz augen chloritic schist - merely less sericitic											
		than previous											
		140 - 178 - quartz chlorite augen sericitic schist											
		128 - 129 - 60% quartz											
		137 - possible fault											
		178 - 191 - quartz "graphitic" schist zone. Brecciated					7432	185'6"-191		tr	0.5	0.09	
		appearance, possible fault zone. Core angle 5 - 20°											
		210 - 211.5 - buff colored altered sediment											
		210 - quartz vein ½ wide with Cp. core angle 5°											

EXPLORATION DEPARTMENT

McIntyre Porcupine Mines, Limited

DIAMOND DRILL LOG

Property

Location

Surveys

At	Dip	Bearing

Hole No. JII-1 Sheet No. 3

Length of Hole

Date Started Completed

Core Logged by

Date

Elevation Datum -

Co-ordinates of Collar

North

East

From	To	Description of Core	SLUDGE ASSAYS Footage				Sample No.	CORE ASSAYS Footage	Width	Au Ozs.	Ag Ozs.	Cu
211.5	304.6"	"Breccia"? zone. Buff coloured rock with 10 - 15% quartz augen										
		and some chlorite augen. Consists of irregularly shaped fragments										
		in a fine grained grey-buff matrix. Jagged fragments? to 4" seen.										
		Strong preferred orientation at 20° to core axis. Occasional										
		Fe sulfides. In places fragment boundaries are indistinguishable										
		240 - "graphitic" area										
		275 - Fe sulphide in qtz vein										
		276 - Preferred orientation 20 - 25° to core axis					7433	300-304		tr	0.7	0.07
		302 - 303.5 - quartz - "graphite" area					7440	329-333'3" 4'3'		tr	0.1	-
		300 - 304 - some Cp in quartz veins and occasionally as shears										
		and in quartz augen. Foliation core angle 0 - 10°										
304'6"	315	Quartz augen sericite schist.										
		304.8" - 306 - quartz eye meta sed rock. 20 - 30% quartz "eyes"										
		(generally less than 1/8") in a fine grained middle grey green matrix										
		Occasional Cp associated with largest quartz areas.										
		306 - 312 - Core angle 25°. Less than 10% quartz veins with occ. Cp.										

EXPLORATION DEPARTMENT

McIntyre Porcupine Mines, Limited

DIAMOND DRILL LOG

Property

Location

Surveys

At	Dip	Bearing

Hole No. JH-1 Sheet No. 4

Length of Hole

Date Started Completed

Core Logged by

Date

Elevation Datum

Co-ordinates of Collar

North

East

From	To	Description of Core	SLUDGE ASSAYS Footage				Sample No.	CORE ASSAYS Footage	Width	Au Ozs.	Ag Ozs.	Cu
		312 - 315 - non schistose										
5	344	315 - 319 - quartz vein with 1 - 2% Cu in fracture. Typical core					7434	315-319		0.01	0.7	1.41
		angle 20°. Some core is ½ Cp and ½ quartz					7435	319-324		tr	0.4	0.17
		319 - 324 - quartz with occasional Cp					7436	324-329		tr	0.4	0.04
		324 - 329 - quartz with occasional Cp										
		324 - note sericitic mica and mariposite in quartz in quartz										
		324 - 337'6" - largely quartz with occasional Cp and mariposite										
		337'6" - 344 - 50% qtz., 50% quartz chl. augen schist. Core										
		angle 22°										
4	373	as breccia 211.5 - 304.6										
		356 - 357'9" - qtz. vein										
		363'3" - 364'5" - qtz vein with minor Cp. Shearing core angle 30°										
		364.5" - 370 - as breccia 211.5 - 304.6 but with 20 - 20% quartz.										
		Seems to be going down qtz.										
		370 - 373 - quartz vein, minor Cp										
3	392	Middle grey-green bedded phyllitic sed. rock. Bedding 20° to core										
		axis. 20% quartz intr at outset. weakly foliated, argillaceous										
		to sandy composition.										

EXPLORATION DEPARTMENT

McIntyre Porcupine Mines, Limited

DIAMOND DRILL LOG

Property Glenlyon, Yukon Territory

Location JII Group

Surveys

At	Dip	Bearing

Hole No. JII-1 Sheet No. 5

Length of Hole

Date Started Completed

Core Logged by

Date

Elevation Datum -

Co-ordinates of Collar

North

East

From	To	Description of Core	SLUDGE ASSAYS Footage				Sample No.	CORE ASSAYS Footage	Width	Au Ozs.	Ag Ozs.	Cu	
		390 - 95 - minor Cp in quartz veinlets											
		379 - some chlorite porphyroblasts											
		379 - 81 - some Fe sulfides in quartz											
		390 - 91 - Cp in narrow quartz veins in sediment with core angle 20°											
392	416	Siltstone - banded grey green to carbonaceous black siltstone with											
		occasional grey-green sandstone. Bedding core angles 15 - 25°											
		401 - 405 - relatively argillaceous and carbonaceous rock											
		406 - 406'3" - quartz vein											
		407 - 408 - quartz vein with some Fe sulfide											
		412 - foliation evident											
		414 - 416 - 2 - 3% Fe sulfide											
416	423	Breccia? as 211.5 - 304.6. Preferred orientation 15° to core axis											
423	438	As 392 - 416											
438	460	Quartz - carbonaceous sediment "graphitic" area											
		443 - 447 - notice Cp and Fe sulfide. In some areas Cp concentration					7437	443-448		tr	0.8	0.02	
		is to 34%.											
460	480	Grey green sandy sediments											

EXPLORATION DEPARTMENT

McIntyre Porcupine Mines, Limited

DIAMOND DRILL LOG

Property Glenlyon

Location JH-1 - JH Group

Surveys

At	Dip	Bearing

Hole No. JH-1 Sheet No. 6

Length of Hole

Date Started Completed

Core Logged by

Date

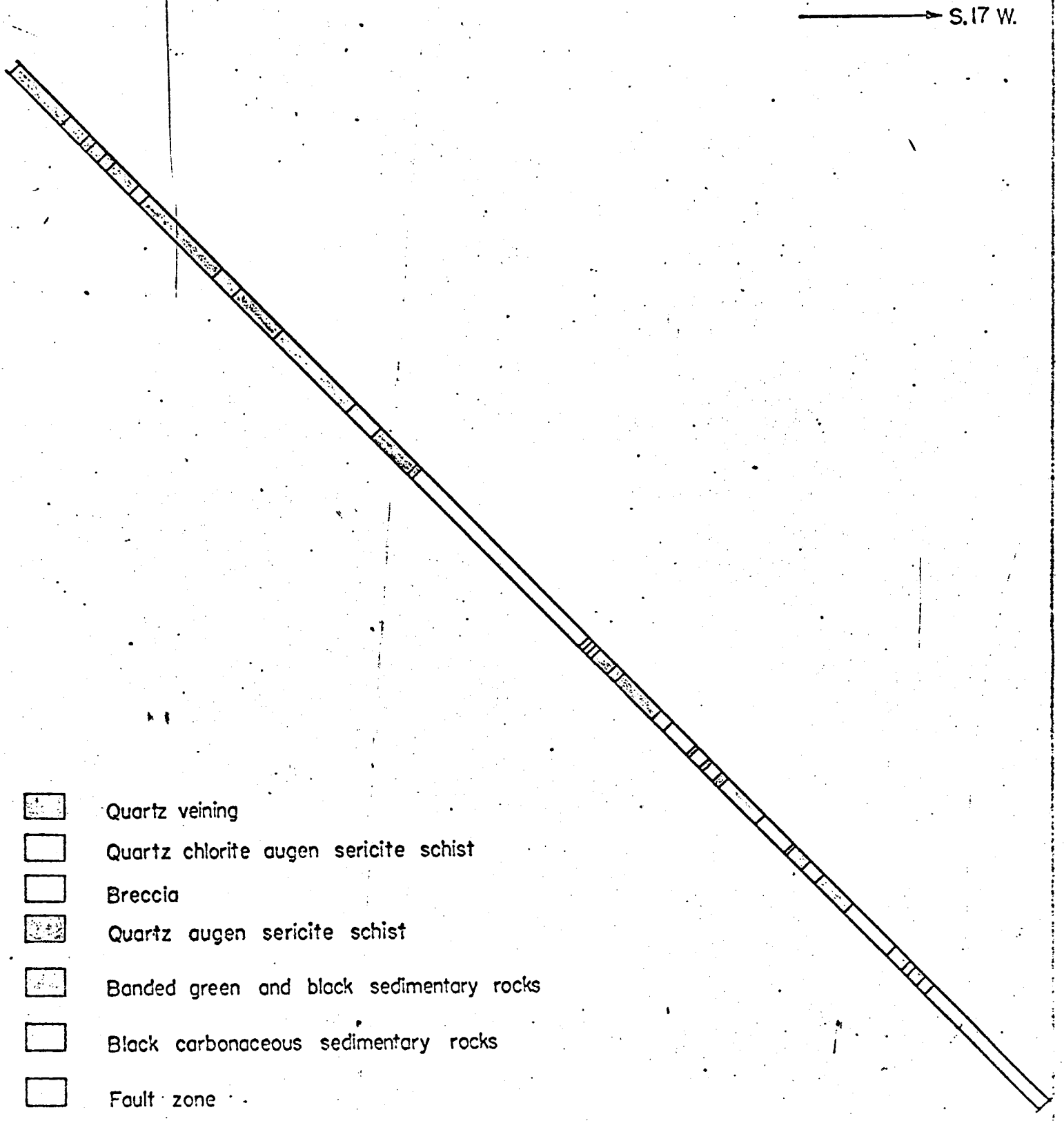
Elevation Datum -

Co-ordinates of Collar

North

East

From	To	Description of Core	SLUDGE ASSAYS Footage				Sample No.	CORE ASSAYS Footage	Width	Au Ozs.	Ag Ozs.		
		468 - 471 - quartz - carbonaceous material ("graphitic") area -											
		some ground core											
		476 - 480 - quartz - carbonaceous material area - some ground core											
480	541	Carbonaceous sedimentary rocks - banded predominantly dark black.											
		Core angle of bedding 20 - 60°. Occasional graphitic slip areas.											
	550	536 - 20% Fe sulfide in a ¼ quartz vein.											



- Quartz veining
- Quartz chlorite augen sericite schist
- Breccia
- Quartz augen sericite schist
- Banded green and black sedimentary rocks
- Black carbonaceous sedimentary rocks
- Fault zone

McINTYRE PORCUPINE MINES LIMITED

GLENLYON OPTION
J.H. GROUP SECTION D.D.H. 1

DATE DRAWN: 2.10.68	SCALE: 1" = 50'
DRAWN BY:	N.T.S.