84-1269-13602
10/85

GEOLOGICAL REPORT ON
EAGLE GORGE, 1, 2 and 3 CLAIMS

Nanaimo Mining Division
NTS 92F/14W
Latitude 49°52'N Longitude 125°19'W

Report Prepared For

IRON RIVER RESOURCES LTD.
1910 Galerno Road
Campbell River B.C.

by

K.E. NORTHCOTE AND ASSOCIATES LTD.
AGASSIZ B.C.

November 26, 1984

K.E. Northcote Ph.D.,P.Eng.

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FIGURES

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SUMMARY OF WORK EAGLE GORGE 1984

SAMPLES COLLECTED AND DISPOSITION

A total of 4 samples were collected for assay; 10 for petrographic and/or mineralographic study and 8 heavy media samples were collected for scanning electron microscope analysis.

SITE EG-1 Figures 2 and 5

Sample 84-8001	Cu Ag Au Assay		See page 13
8306-1	" " "	" and ICP	" " "

SITE EG-3 Figures 2 and 5

Sample 8211-1	" " "	"	" " "

SITE EG-3 Figures 2 and 5

Sample 84-EG-3-1	" " "	"	See page 14

SITE EG-6 Figure 5

Samples EG-1 to 8	Panned concentrate SEM analyses	See page 15

SITE EG-1 Figure 5

Sample 84-8001-1	Macroscopic description	Appendix C, p 1.
84-8001-2	"	" " " "

SITE EG-6 Figure 5

Sample 84-8003	"	"	" " " "

SITE EG-3 Figure 2 and 5

Sample 84-EG-3-1A (TS)	Macrosopic, Microscopic Transmitted light	Appendix C p2
84-EG-3-1A)PTS)	Reflected light	" " "
84-8008-1 to 5	Macroscopic, Microscopic transmitted light	App.C p3-5

GEOLOGICAL REPORT ON
EAGLE GORGE, 1, 2, and 3 CLAIMS
Nanaimo Mining Division

SUMMARY FOR G.E.M. 1984

by K.E. Northcote

CLAIMS EAGLE GORGE #1, #2 and #3 claims consisting of a total of 21 units (EAGLE GORGE #1 and #2 form 1 group with EAGLE GORGE #3 presently as a separate group.)

LOCATION The Eagle Gorge property is located approximately 20 kilometres south-southwest of Campbell River, Latitude 49°52'N, Longitude 125°19'W, NTS 92F/14W. The claims are situated just below the junction of Piggott Creek with Oyster River.

ACCESS Logging roads which pass through the claims on both sides of Oyster River provide excellent access from Campbell River, a road distance of about 30 kilometres.

Mineral exploration and development can be carried out throughout most of the year with snowfall occurring in December and January.

GEOLOGY OF CLAIMS AREA

The EAGLE GORGE claims are underlain by block faulted Karmutsen Formation underlying EAGLE GORGE #3, #2 and the southeast half of EAGLE GORGE #1. The northwest half of this claim is underlain by Nanaimo Group which also underlies the north edge of EAGLE GORGE #3. Nanaimo Group unconformably overlies and is also in fault contact with Karmutsen Formation in the claims area.

Summary continued (EAGLE GORGE Claims)

There are six known copper-silver bearing quartz-vein-breccia showings on the Eagle Gorge property. EG-1 and 2 on Wowo creek and EG-3 on Oyster River were examined. Samples from EG-1 and 3 were assayed and a petrographic and mineralographic study was made of material from EG-3.

EG-1

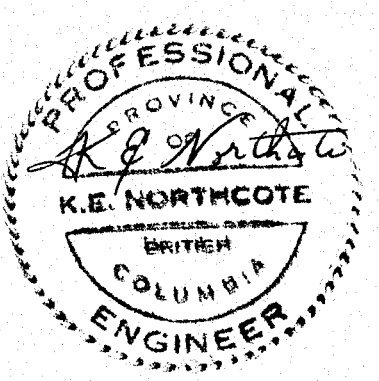
84-8001 (0.2m) 5450 ppm Cu, 1.6 ppm Ag, 5 ppb Au.
8306-1 2.03% Cu, 0.49 oz Ag/ton, 0.001 oz Au/ton.

EG-3

84-EG-3-1 (chip samples mineralized) 7.78% Cu, 0.57 oz Ag.ton, 0.004 oz Au/ton.

The most significant showing examined by Northcote is EG-3 which occurs in a silicified, brecciated, mineralized volcanic glass which may be material related to Tertiary plutonism - volcanism injected between much older Upper Triassic Karmutsen flows. Volcanic glass of Upper Triassic age would be expected to show a greater degree of devitrification.

See Assessment Report # _____



COSTS CHARGEABLE TO ASSESSMENT (1984)

EAGLE GORGE #3 CLAIM

FIELD	$ 900.00
K. Northcote 3 days @ $300./day	
D. Berkshire 2 days @ 100./day	200.00
PETROGRAPHIC STUDY	500.00
Thin sections and polished sections, photomicrographs	
Scanning electron microscope study	114.00
TRAVEL	
Kilometerage	250.00
Ferry	36.00
REPORT PREPARATION	
Writing 3 days @ 250/day	750.00
Typing, draughting, photocopying	175.00
ROOM AND BOARD	
Meals, motel 3 days	165.00
TELEPHONE AND MISCELLANEOUS	25.00
TOTAL	$3 115.00

REPORT ON THE GEOLOGY
OF EAGLE GORGE GROUP OF CLAIMS
NTS 92F/14W, Nanaimo Mining Division B.C.

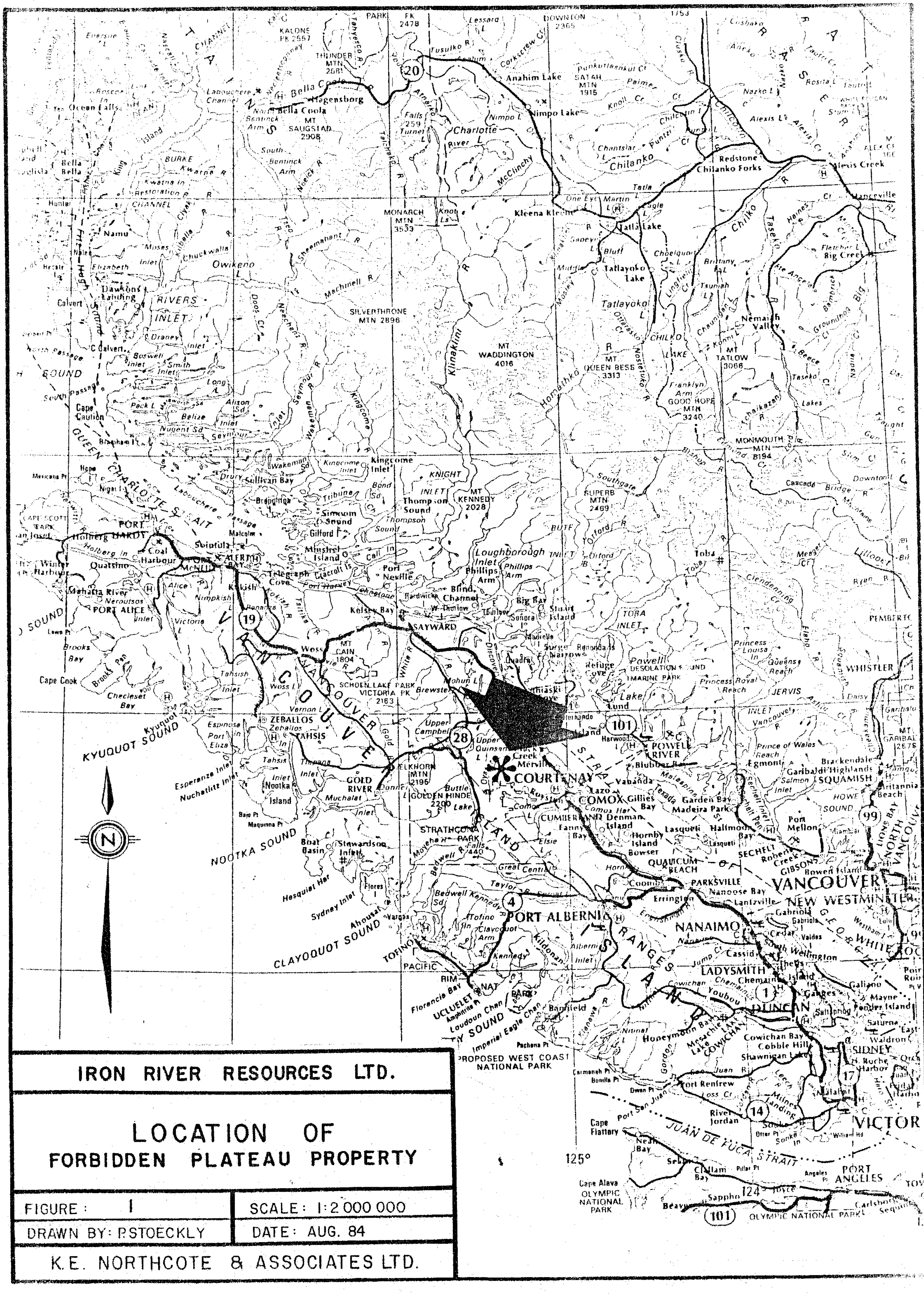
INTRODUCTION

K.E. Northcote and Associates Ltd. was contracted by Iron River Resources Ltd. to examine the Eagle Gorge Property, to sample and assay known mineral occurrences, sample placer material in order to comment on possible source and to outline a program covering EAGLE GORGE, ELNORA, RINA and JOE ANNE claims comprising Iron River Resources Forbidden Plateau Mining Property. This work was done in the period May 1 to October 24, 1984.

LOCATION AND ACCESS

The Eagle Gorge Property is located approximately 20 kilometres south-southwest of Campbell River and 30 kilometres northwest of Courtenay on Vancouver Island, Latitude 49°52'N, Longitude 125°19'W, NTS 92F/14W. See Figures 1 and 2. The claims are situated just below the junction of Piggott Creek with Oyster River. Elevations range from 225 metres in streambeds to about 450 metres on adjacent ridges. Logging roads which pass through the claims provide excellent access from Campbell River, a road distance of about 30 kilometres. The Oyster River traverses the claim group in a northeasterly trending gorge which may attain depths of up to 100 metres.

Mineral exploration and development can be carried out throughout almost the entire year with snowfall occurring in late December and during January.



IRON RIVER RESOURCES LTD.

LOCATION OF FORBIDDEN PLATEAU PROPERTY

FIGURE : 1	SCALE : 1:2 000 000
DRAWN BY: P.STOECKLY	DATE: AUG. 84

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MINERAL CLAIMS

The Eagle Gorge groups of claims are comprised of EAGLE GORGE #1, #2 and #3. The claim groups are shown on Figure 2 and contain a total of 21 units. The legal corner posts and location posts of these claims were not examined to determine that they were set in accordance with the Mineral Act. It is noted however that those posts that were observed during the course of mapping and sampling appeared to be legally set and the location lines are well marked. Legality and maintainence of the claims by filing assessment work is the responsibility of Iron River Resources Ltd.

TABLE I

EAGLE GORGE CLAIMS

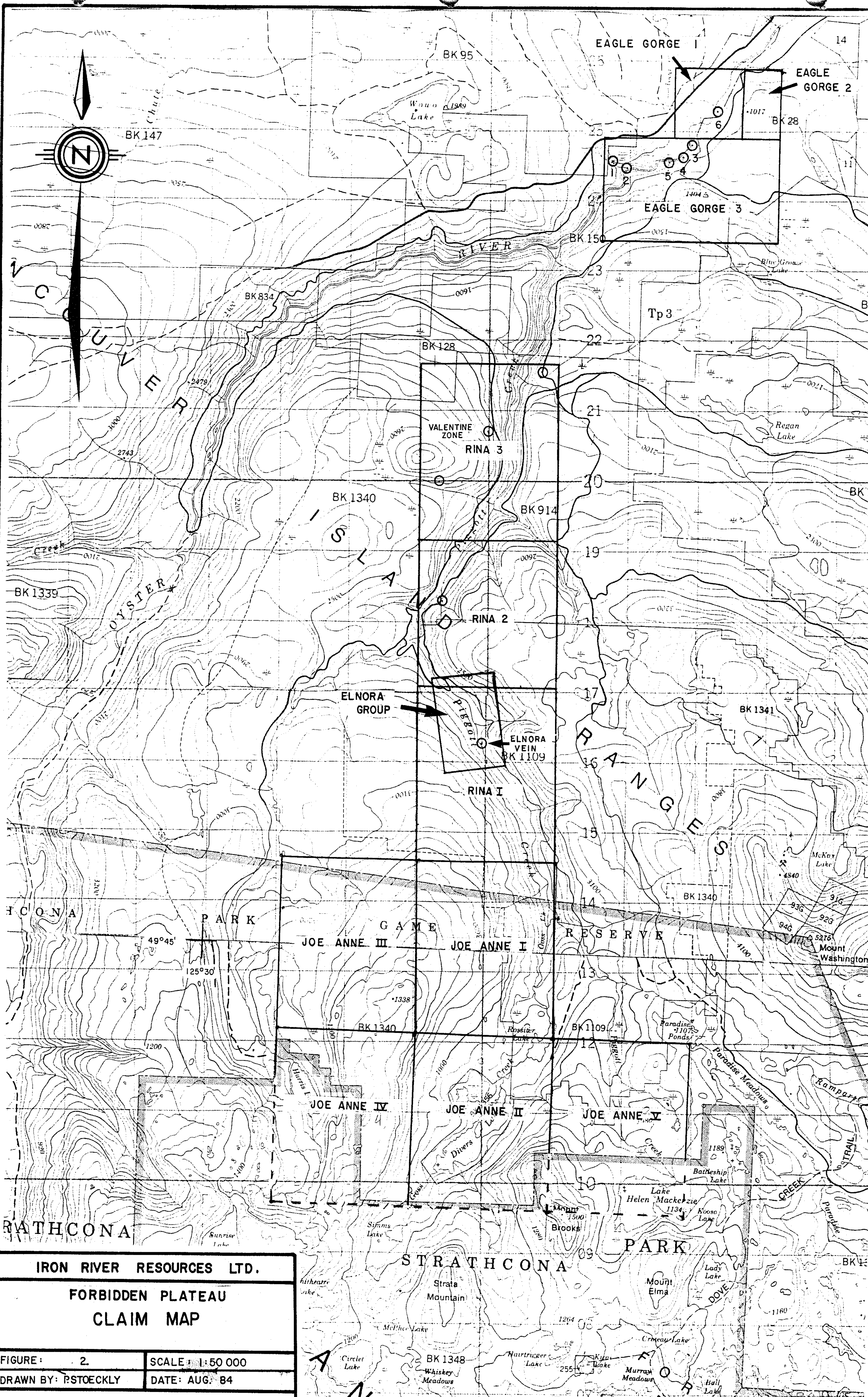
CLAIM	UNITS	RECORD NO.	ANNIVERSARY DATE
EAGLE GORGE #1	4	1229 (7)	July 20, 1986
EAGLE GORGE #2	2	1251 (8)	August 31, 1986
EAGLE GORGE #3	15	1271 (10)	October 25, 1984
Total	21 units		

EAGLE GORGE #1 and #2 were grouped in July, 1983 with EAGLE GORGE #3 presently not a part of this group.

HISTORY OF EXPLORATION

Although the Oyster-Piggott area has had intermittent prospecting since the lowland area to the east was settled in the 1800's there are no lode occurrences listed in MEMPR's Minfile for the area of the EAGLE GORGE #1, 2 and 3 claims.

Coarse gold was recovered from a placer operation in the Oyster-Piggott drainage in the 1920's to 1940's. Some iron pipes and other hydraulic sluicing equipment remains in evidence of this old operation. MEMPR



IRON RIVER RESOURCES LTD.

FORBIDDEN PLATEAU
CLAIM MAP

FIGURE: 2. | SCALE: 1:50 000
DRAWN BY: P. STOECKLY | DATE: AUG. 84

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Bulletin No.28 gives production figures only for the period 1936 to 1945 totalling 125 ounces with fineness ranging from 880 to 890. Although Oyster River and Piggott Creek are not Designated Placer Areas, a prexisting placer lease is located immediately to the east of the EAGLE GORGE claims at Strawberry Flats.

Gold mineralization was found in place on Mt. Washington in May 1940 by J.M. McKay who had systematically panned creeks up from Oyster River to find coarse gold in a creek draining into McKay Lake.

1984 PROGRAM

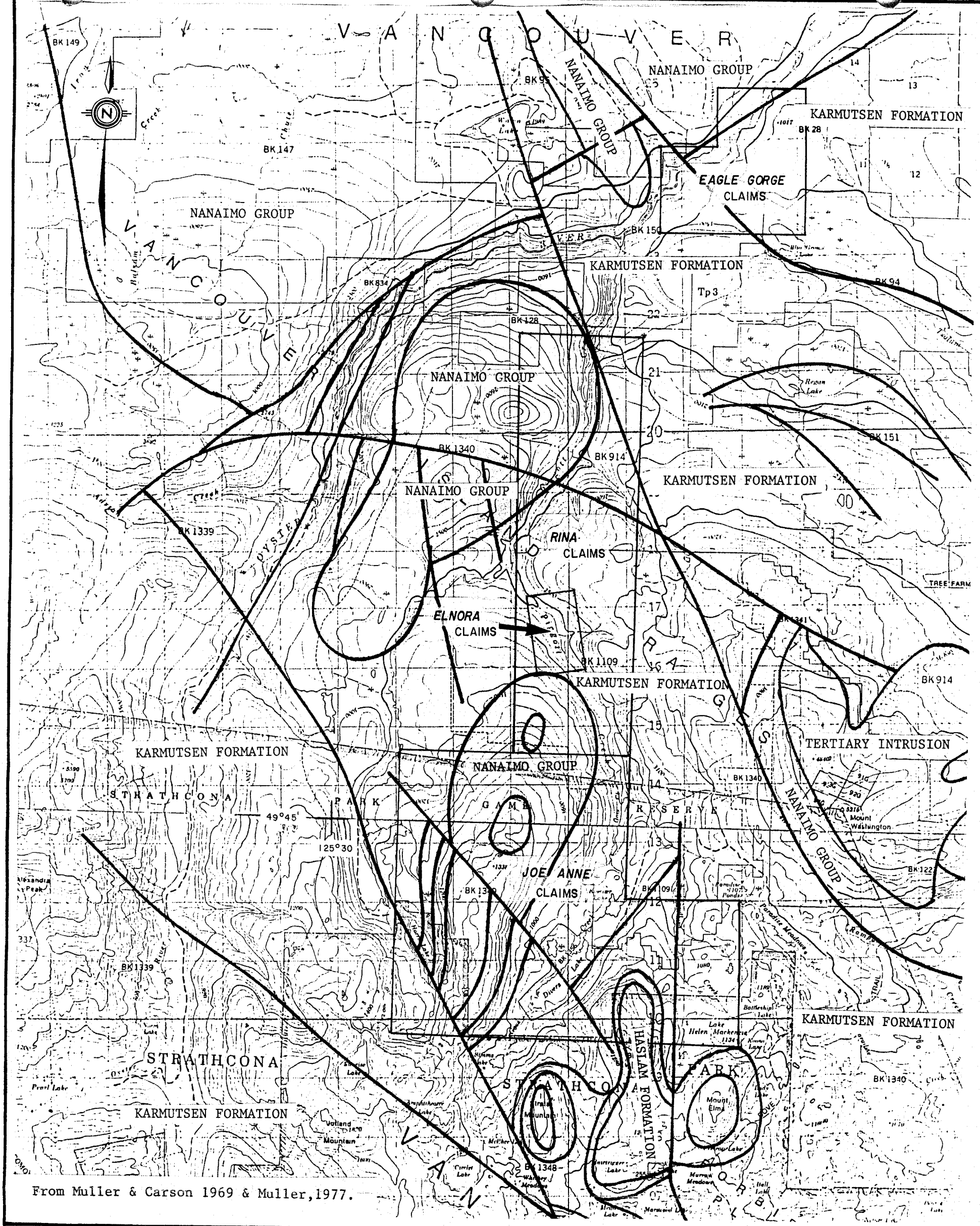
The claims area was extensively prospected by D.P. Berkshire during the 1984 field season. This work was beneficial to the over all program by improving trail access and facilitating examination of specific mineralized occurrences.

Three days were spent by K.E. Northcote in company with D.P. Berkshire examining and sampling showings and collecting heavy media samples for SEM analyses. This work was done May 14 to 16, 1984. Subsequently petrographic work was done on the Eagle Gorge #1 and #3 showings and scanning electron microscope work was done on heavy media material panned from Oyster River.

This work forms part of the initial stage of an overall program for Eagle Gorge, Rina, Elnora and Joe Anne claims groups on Iron River Resources Forbidden Plateau property the bulk of which is to be carried out during 1985.

GENERAL GEOLOGY

The northern part of the Forbidden Plateau area is underlain mainly by Karmutsen Formation of Upper Triassic age. See Figure 3. These rocks are submarine basaltic flows, pillow lavas, pillow breccias with minor intercalated bedded tuffs, argillites and some interlava limestones near the top of the formation. These rocks are commonly uniform, massive, bedded units of generally dark grey-green color. They have undergone low grade (zeolite/pumpellyite) regional metamorphism. The base of the Karmutsen Formation is not exposed in the northern part of the Forbidden Plateau area.



From Muller & Carson 1969 & Muller, 1977.

IRON RIVER RESOURCES LTD.	
GEOLOGY OF FORBIDDEN PLATEAU AREA	
FIGURE: 3	SCALE:
DRAWN BY: P.STOECKLY	DATE: OCT. 84
K.E. NORTHCOTE & ASSOCIATES LTD.	

- TERTIARY INTRUSION
- NANAIMO GROUP
- HASLAM FORMATION
- BONANZA FORMATION
- QUATSINO FORMATION
- KARMUTSEN FORMATION

Precretaceous levels of erosion have generally extended down into the Karmutsen but locally Precretaceous structure has preserved a few wedges of conformably overlying Quatsino and Bonanza Formations. See Figure 3.

Quatsino limestone consists of a thick bedded sequence of massive limestone generally composed of detrital shell material, here recrystallized but showing relict shell fragments and scattered siliceous nodules. The thickness of the Quatsino Formation in this area is not known.

Bonanza Formation is composed largely of subaerial volcanic rocks mainly of a pyroclastic nature consisting of tuff breccia, flow breccia with lesser flows. The thickness of the Bonanza erosional remnant is not known. There are numerous Precretaceous Intrusions in the general area. See Muller, 1977, OF 463. These occur as major, Jurassic, Island Intrusions, none of which are identified in the northern part of the Forbidden Plateau area. Figure 3. On a smaller scale, dykes of basaltic rocks cut through Karmutsen volcanics providing feeders for flows higher in the succession. Similarly, feeders for Bonanza volcanics may be expected to cut older formations but these are probably represented by Island Intrusions which have followed upwards and cannibalized Bonanza volcanic centres.

Precretaceous structural uplift and faulting accompanied by some flexuring and subsequent erosion resulted in an erosion surface penetrating down into the Karmutsen Formation with a few fault protected remnants of Quatsino and Bonanza rocks within it.

These older rocks are unconformably overlain by a thick succession of Nanaimo Group sedimentary rocks consisting of basal conglomerates sandstones siltstones, mudstones and coal.

The Nanaimo Group and older rocks were subsequently intruded by Tertiary

Intrusions as dykes, sills, plugs and locally diatreme breccias. These intrusions affected the older rocks by metamorphosing them to hornfels or by pervasive silicification and sericitic alteration along brecciated zones which may follow or cut across bedding.

MINERAL POTENTIAL OF THE NORTHERN PART OF FORBIDDEN PLATEAU AREA

The geologic environment discussed in the preceeding General Geology section may be host to a wide variety of types of mineral deposits.

Deposits associated with Precretaceous bedded and intrusive rocks include the following:

(1) Contact metasomatic (pyrometasomatic) skarn deposits. related to emplacement of Jurassic Island Intrusions into Upper Triassic Quatsino limestone, Karmutsen intraformational limestones and calcic volcanic units of the Karmutsen. These deposits constituted the important copper, iron and copper-iron deposits mined on Vancouver Island until the late 1960's to early 1970's. Significant production was achieved from such properties as Benson Lake, Merry Widow, Kennedy Lake, Nimpkish Lake, Argonaut Iron and others. Lead, zinc and to a lesser extent molybdenum (Phillips Arm), tungsten (Chilko Lake) are associated with skarns but have not yet become significant producers.

Contact metasomatic deposits may occur at or very near to contacts between calcareous rocks and Island Intrusions or within sheared or brecciated structures leading from contact zones.

(2) Copper-molybdenum porphyry related deposits occur in subvolcanic environments within Bonanza/Island Intrusion porphyritic rocks. The best known example of this type of deposit on Vancouver Island is Island Copper which went into production November 1971, with published

initial reserves of 257,000,000 tonnes of 0.52% Cu and 0.017% molybdenum.

(3) Shear-vein systems containing copper, lesser lead-zinc and in some areas gold and/or silver values. These occurrences are thought to be genetically related to Island Intrusions and may be found in any of the formations predating or contemporaneous with Island Intrusion magmatic activity. To date none of these has been a significant producer.

(4) Karmutsen flow top and interflow tuff/argillite copper, (vanadium) mineralization. Copper occurrences associated with basic Karmutsen volcanics are widespread on Vancouver Island. Copper mineralization occurs in flow tops as disseminations, in amygdules and in quartz and calcite veins and in locally rich mineralized interlava tuffs and argillites. The metal and mineralizing solutions emplacing these deposits are thought to be derived from within the volcanic sequence and have no direct relationship to plutonic, intrusive or hydrothermal processes. Vanadium occurs as volborthite associated with secondary copper minerals in carbonaceous interlava sediments in Karmutsen amygdaloidal basalts near Menzies Bay. Some copper production was achieved from the Karmutsen Formation on Quadra Island in the early 1900's. Leaching of copper from these materials has been attempted in later years.

Deposits associated with Cretaceous and later bedded and intrusive rocks include:

(5) Tertiary porphyry, diatreme breccia related copper, gold-silver deposits. The most significant of these include Catface north of Tofino, Mount Washington and Gem Lake properties in Forbidden Plateau area. Catface has not yet achieved production but is reported to

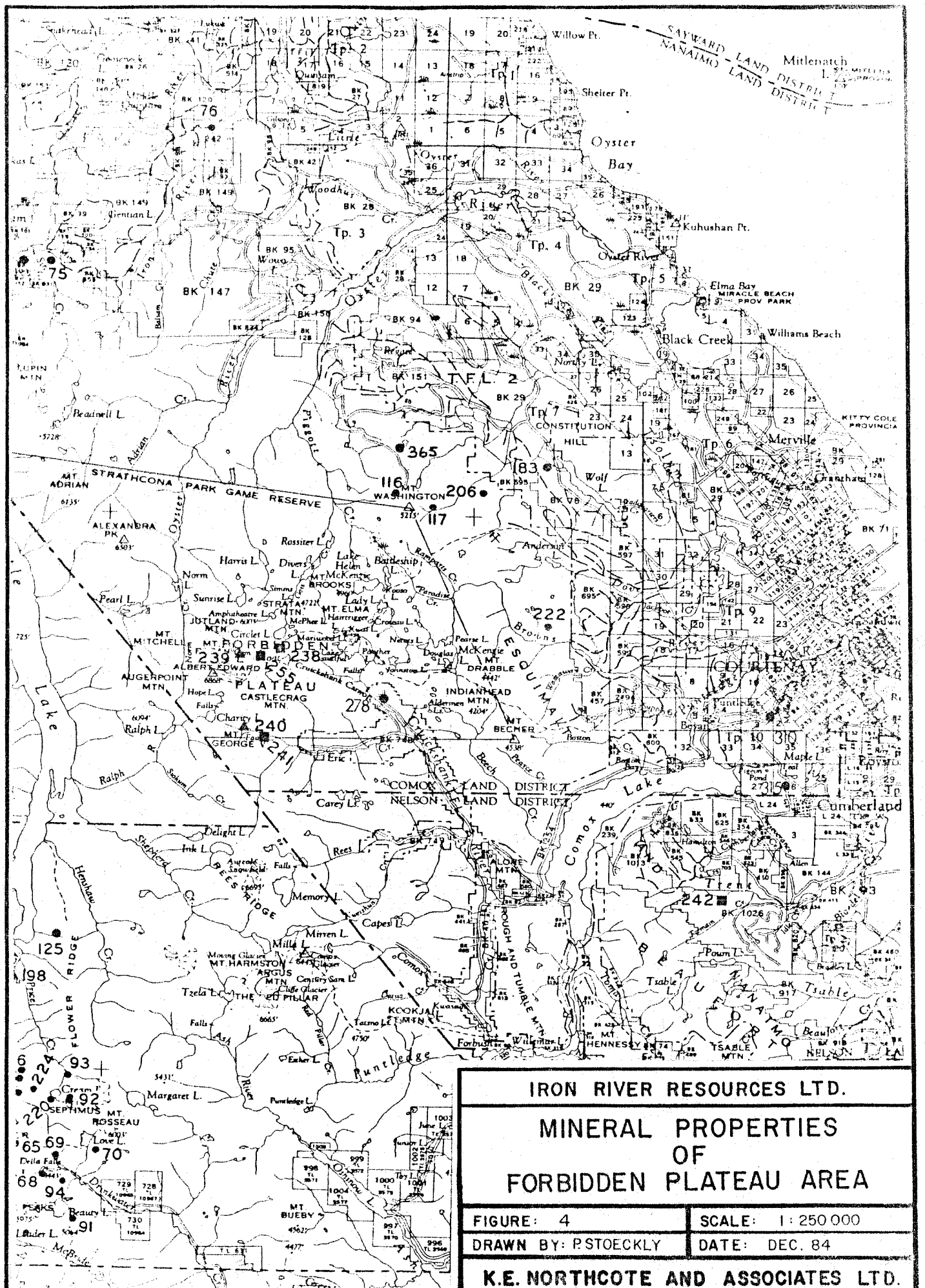
have geological reserves the order of 100 to 180 million tonnes of approximately 0.45% copper with unannounced molybdenum content. Mount Washington, immediately east of Iron River Resources Forbidden Plateau property, during the period 1961 to 1967 milled 396,000 tons of ore which produced 7,822,463 lbs of copper, 4,204 oz of gold and 232,620 oz of silver. The Gem Lake property, to the south of the Forbidden Plateau property in Strathcona park is an important copper prospect in a similar Tertiary pluton (diatreme) related geological environment.

(6) Gold/silver bearing quartz-carbonate vein, breccia-shear systems are spatially and probably genetically related to Tertiary plutons and intrusive breccias (diatremes). These systems occur in plutons, metavolcanics and metasediments and transect or commonly follow bedding in less metamorphosed bedded rocks as silicified, carbonatized, mineralized, brecciated shear zones. Mineralization is varied consisting of a wide range of iron, copper, lead, zinc and silver arsenic, bismuth, antimony minerals which may carry good values. Examples of this type of deposit include Domineer-West-Lakeview zone under exploration by Better Resources Ltd. and the Faith zone at Faith Lake under review by Falconbridge.

TABLE II

MINFILE PROPERTIES FORBIDDEN PLATEAU AREA

MINFILE	PROPERTY	COMMODITY	DESCRIPTION
92F-075	Iron Hill Argonaut Cobalt	Fe producer	Skarn
92F-076	Iron River	Fe reserves	Skarn



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MINERAL PROPERTIES OF FORBIDDEN PLATEAU AREA

FIGURE: 4	SCALE: 1 : 250 000
DRAWN BY: P.STOECKLY	DATE: DEC. 84

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TABLE II (Continued)

MINFILE	PROPERTY	COMMODITY	DESCRIPTION
92F-116	Mt.Washington Copper Domineer 22	Cu Mo Ag Au producer	Porphyry (diatreme) related quartz vein systems
92F-117	Mt.Washington Copper Domineer Murex Creek	Au Ag Cu Mo prospect	Porphyry (diatreme) related quartz vein systems
92F-183	Good Hope	As prospect	Shear and calcite vein in andesite
92F-206	Murex Gem	Cu Au Ag Mo prospect	Quartz vein shears; disseminations.
92F-238	Three Musketeers (confusion with 92F-255)	Cu prospect	Shear zone
92F-239	Gem Lake MFG	Cu prospect	Porphyry and other intrusive related mineralization
92F-240	Faith	Au prospect	Vein
92F-241	Faith Copper Rim	Cu prospect	Intrusive related mineralized breccia.
92F-255	Brown	Au(Ag Zn As Cu) prospect	Veins
92F-288	Moore Cobalt	Cu Fe Co Au	Flow top and fractures in basic volcanics
92F-365	MWC	Cu Ag Au	Tertiary intrusive (diatreme) related "porphyry" mineralization

GEOLOGY OF THE EAGLE GORGE CLAIMS

Figure 3 from Muller and Carson 1969 and Muller 1977, shows the EAGLE GORGE #3 claim underlain by block faulted Karmutsen Formation with Nanaimo Group sediments in the northwest half of EAGLE GORGE #1 with Karmutsen rocks underlying the southeast half of this claim and all of EAGLE GORGE #2. The Karmutsen Group rocks are composed of very gently dipping thick amygdaloidal basaltic flows with interbedded pillow lavas, pillow breccias with very minor intercalated tuffaceous interbeds. The Nanaimo Group rocks consist of fairly flat lying conglomerates and sandstones with interbedded siltstone and shale which unconformably overlie Karmutsen rocks and forms fault blocks in fault contact with older Karmutsen rocks.

MINERAL POTENTIAL OF EAGLE GORGE CLAIMS

Mineral lode potential of the EAGLE GORGE claims appears to be in two types of deposits. Firstly, mineralization occurring in Karmutsen basic volcanic flow tops and tuffaceous or argillaceous interbeds. Secondly, quartz-carbonate vein-shear systems containing base metals and gold and/or silver values. Although the probability of the first type of mineralization has been kept in mind most attention to date has been paid to quartz-carbonate vein breccia shear systems. Six such vein systems have been identified in the EAGLE GORGE claim group, with five of these on EAGLE GORGE #3.

RESULTS OF 1984 PROGRAM

EAGLE GORGE #1 and #2 showings are located on EAGLE GORGE #3 claim on Wowo Creek at approximate elevation 335 m (1100 ft) with #2 showing approximately 200 metres downstream from #1. See Figure 2. These showings occur in Karmutsen flows and breccias just below the unconformity with overlying Nanaimo Group conglomerates. Showings #3 to #6 inclusive are on Oyster River on EAGLE GORGE #3 with Vein #6 on EAGLE GORGE #1 claim.

Site EG-1

EAGLE GORGE #1 showing is a narrow quartz-(carbonate) vein-breccia with strongest mineralization across 0.15 to 0.20 m. The vein-breccia system trends 130° to 140°/75°W. The vein-breccia pinches and swells and this or parallel systems could extend for about 250 metres. The vein-breccia is in a fine polymictic, multicolored, breccia with purplish to pink colored fragments in a dark chloritic matrix. This breccia has been impregnated by quartz showing some open space filling and contains chlorite and sericite pods. Spotty mineralization is visible as chalcocite accompanied by malachite staining, cuprite and native copper in hairline fractures.

A chip sample from Site No. 1 vein-breccia across 0.20 metres gave the following values:

Sample 84-8001: 5450 ppm Cu, 1.6 ppm Ag and 5 ppb Au.

A sample assayed earlier by L.V. Berkshire gave the following values:

Sample 8306-1: 2.03% Cu, 0.49 oz Ag/ton, and 0.001 oz Au/ton. An ICP geochemical analysis for 30 elements was also run confirming values for Cu and Ag and no significant values for other elements.

Site EG-2

A second altered vein system is located approximately 200 metres downstream from Site No. 1. This is a strong iron-stained quartz-carbonate (with possible feldspar) zone containing disseminated pyrite. The zone follows bedding and pinches and swells 0.4 to possibly greater than 1.0 m in the creek under a waterfall. High water precluded thorough examination and sampling. Panned concentrate below this zone produced garnet, diopside (?), epidote, very minor magnetite and fleck of very fine gold in tails in pan.

For completion; a sample collected from site EG-3 on EAGLE GORGE #3 claim by L.V. Berkshire in November, 1982, gave the following results

Sample 8211-1; 9.45% Cu, 0.54 oz Ag/ton, and 0.001 oz Au/ton.

Site EG-3

A third zone which crops out on the east side of Oyster River EG-3 was examined and sampled. See Figure 2. This zone appears as a bleached horizon approximately 2.5 metres in width conforming to bedding in Karmutsen Formation. An approximate attitude is 020/40SE. The zone appears to be bleached and has a porcelain-like appearance, has been crackled and filled with quartz and chalcocite with lesser chalcopyrite. These veins are irregular in attitude and range from hairline to 1 or 2 cm of massive chalcocite.

Examination of seven thin sections by petrographic microscope show the zone is composed of a breccia of altered, partly devitrified, porphyritic, microlitic volcanic glass. The breccia matrix has been veined and impregnated by quartz with lesser sericite. Polished thin section under reflected light shows sieve-like aggregates of chalcocite grains forming irregular elongate masses several millimetres in length in quartz gangue. The chalcocite contains myrmekitic intergrowths of bornite and chalcopyrite. Aggregates of covellite grains form small masses generally isolated in quartz gangue.

An assay of a random chip sample of mineralized material from this zone gave the following results.

Sample 84-EG-3-1 0.57 oz Ag/ton, 0.004 oz Au.ton and 7.78% Cu.

HEAVY MEDIA SAMPLES

Heavy media samples panned from Oyster River within EAGLE GORGE claim group contain native gold, native silver, native copper, magnetite, (grains and nodules) garnet and a variety of mafic minerals and epidote. In addition melted material (solder) and amalgam from former placer operations were also recovered.

SCANNING ELECTRON MICROSCOPE ANALYSES

Eight fragments of metallic heavy media concentrate were sent for scanning electron microscope analyses. Of these two were known to be gold, one solder, and others suspected of being native silver. The results of these analyses are summarized below with the laboratory report forming Appendix D.

TABLE III

SEM ANALYSES

SAMPLE NO.	ELEMENTS DETECTED	REMARKS
EG-1	Au (1-2% Ag & Zn, Tr Fe	High purity native gold
EG-2	Ag (1-2% Hg)	Coating Fe, Al, Si
EG-3	Ag (3-5% Hg)	
EG-4	Pb,Zn mixture	Solder
EG-5	Ag (1-2% Hg)	As for EG-2
EG-6	Ag (1-2% Hg)	As for EG-2, 5
EG-7	Au (-1% Hg, -1% Zn, -1% Fe, -1% Ag)	Tarnished surface coating is a mixture of Au & Hg.
EG-8	Au (1-2% Zn)	Differs from EG-1

The SEM analyses confirmed gold, silver and solder in the heavy media concentrate. In addition measurable variations in trace element content of the major metals suggests that non destructive SEM methods might be utilized to determine whether or not the metals are derived from a common or multiple source.

CONCLUSIONS

Vein-breccia-shear mineralization related to Tertiary plutonism-volcanism in the northern Forbidden Plateau area is the major possibility for deposits of economic significance in the Eagle Gorge group. Flow top and interlava sediment mineralization related to basic volcanics is a poor but untested possibility.

The most significant showing examined by Northcote is EG-3. This showing occurs in a silicified, brecciated mineralized volcanic glass which may be material related to Tertiary plutonism/volcanism injected between much older Upper Triassic Karmutsen flows. Volcanic glass of Upper Triassic age would be expected to show a greater degree of devitrification.

The gold recovered in heavy media samples is generally well flattened although some grains are less so and a few have quartz particles attached to them. This, coupled with differences in trace elements content suggests multiple sources for gold. Similarly the flattened aspect of some native silver grains as compared to the crystal habit still visible in others suggests multiple sources for silver as well. Grains of native copper found in heavy media samples are probably derived from secondary native copper occurring in nearby vein-shear systems. Magnetite nodules are probably derived from skarns developed within calcic Karmutsen volcanics and interlava limestones. The problem remains, however, of locating the source area

or areas for coarse native gold and silver in the Oyster-Piggott system.

Source areas for gold in Oyster River includes the Mt. Washington area which is presently under exploration for gold by Better Resources Ltd. An additional possible source area is the headwaters of Piggott Creek where Tertiary plutons and diatremes have invaded Lower Cretaceous Nanaimo Group sediments thus creating a Mt. Washington type of environment. This very favourable environment has been partly alienated from mining exploration by extension of Strathcona Park boundaries.

RECOMMENDATIONS

(1) Group EAGLE #1, #2 and #3 to form one group of claims
(2) A regional heavy media stream sediment sampling program is recommeded in order to determine source areas for the significant native gold and native silver found in heavy media concentrates from the Oyster-Piggott systems. This work would be conducted both within and upstream from the Eagle Gorge group of claims.
(3) Channel sampling of 3 or more zones across Eagle Gorge #3 showing is required. Hand trenching by Copco drilling and blasting may be required to crack through smooth water-warn surfaces of outcrops.

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CERTIFICATE

I, Kenneth E. Northcote of 2346 Ashton Road, R.R.#1, Agassiz, B.C. do hereby certify that:

1] I have been practising as a professional geologist for a period of approximately 25 years for petroleum exploration companies, mining exploration and consulting companies, federal and provincial agencies.

2] I obtained a Ph.D. in geology from U.B.C. in 1968 and qualified for registration with the Association of Professional Engineers of B.C. in 1967.

3] This report is the result of examination of EAGLE GORGE #3 claim May 14 to 16, 1984 and subsequent assays and petrographic and mineralographic studies done in the laboratory in support of fieldwork.

4] I have no interest either directly nor indirectly in holdings or assets of Iron River Resources Ltd., nor do I expect to receive any.

5] I consent to the use of this report in, or in connection with, a prospectus relating to the raising of funds.

Dated at Agassiz, B.C. this 17th day of December. 1984

APPENDIX A

EAGLE GORGE CLAIM DATA

MINERAL ACT - PROVINCE OF BRITISH COLUMBIA

Record of Mineral Claim

FORM G

MAP NO. 92F/14W RECORD NO. 1229

MINING RECEIPT NO. 104932 E RECORDED AT Nanaimo B.C. THIS 20th DAY OF July 19 82

DO NOT WRITE IN SHADED AREAS

Deputy Gold Commissioner

Nanaimo MINING DIVISION

Affidavit for Mineral Claim

I, LAURENCE V. BERKSHIRE (NAME) AGENT FOR (NAME)

Box 104, HERIOT BAY, B.C. V0P 1H0 (ADDRESS) (ADDRESS)

VALID SUBSISTING F.M.C. NO. 205113 VALID SUBSISTING F.M.C. NO.

MAKE OATH AND SAY:- I COMMENCED LOCATING THE EAGLE GORGE #1 MINERAL CLAIM

ON THE 16 DAY OF JULY 19 82 AT 1200 AM (TIME INDICATE A.M. OR P.M.) AND COMPLETED THE LOCATION

ON THE 19 DAY OF JULY 19 82 AT 1800 PM (TIME INDICATE A.M. OR P.M.) CONSISTING OF

2 (NUMBER) UNIT LENGTHS SOUTH (DIRECTION) AND 2 (NUMBER) UNIT LENGTHS WEST (DIRECTION) AND I HAVE IMPRESSED ALL THE REQUIRED INFORMATION

ON METAL TAGS NO. 33091 WHICH HAS BEEN SECURELY FASTENED TO THE POSTS AS REQUIRED UNDER THE REGULATIONS.

IDENTIFICATION POST(S) NOT PLACED WERE

CHECK "√" APPLICABLE SQUARE

[√] THE LEGAL CORNER POST

† [ ] THE WITNESS POST FOR THE LEGAL CORNER POST

} IS SITUATED:

10 FT NORTH OF ROAD UP SOUTH SIDE OF THE OYSTER RIVER THE LCP IS DUE WEST APPROX 500 METERS FROM THE WEST BOUNDARY OF M.S.I 105A (M92F/14W)

(PRECISELY DESCRIBE POSITION OF POST RELATIVE TO KNOWN TOPOGRAPHICAL OR SURVEYED FEATURES THAT RELATE TO FEATURES ON A MAP)

† BEARING AND DISTANCE TO TRUE POSITION OF LEGAL CORNER POST FROM THE WITNESS POST ° .

BEARING AND DISTANCE FROM IDENTIFICATION POST TO WITNESS POST ° .

I HAVE COMPLIED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE STAKING OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN, ACCEPTABLE TO THE MINING RECORDER, OF THE LOCATION.

SWORN AND SUBSCRIBED TO AT

THIS DAY OF 19 BEFORE ME

Laurence V Berkshire
SIGNATURE

* THIS AFFIDAVIT MAY BE TAKEN BY A PERSON EMPOWERED TO TAKE AFFIDAVITS BY THE EVIDENCE ACT OF BRITISH COLUMBIA.

GOLD COMMISSIONER
20.00
JUL 20 1982
M.R. 104932E
NANAIMO, B.C.
MR OR SMR STAMP

NO. OF UNITS 4 WORK REQUIREMENT $ PER YEAR

WORK NUMBERS	C/L IN $	MINING RECEIPT AND DATE RECORDED	TYPE OF WORK	YEAR OF EXPIRY	CREDIT: WORK UNIT(S)	CREDIT: RENTAL IN $ S	TRANSFERS (B/S'S, ASSIGNMENTS, CONVEYANCES)
29970/981	-	105166 E Jul. 20/83	P/ PR	1986			Feb. 10, 1984, all interest sold to Iron River Resources Ltd., Vol. 19, Fol. 102.

ORIGINAL

MINERAL ACT - PROVINCE OF BRITISH COLUMBIA

Record of Mineral Claim

FORM G

MAP NO. 92F/14W RECORD NO. 1251

MINING RECEIPT NO. 104973 E RECORDED AT Nanaimo B.C. THIS 31st DAY OF August 19 82

DO NOT WRITE IN SHADED AREAS

Deputy Gold Commissioner

Nanaimo MINING DIVISION

Affidavit for Mineral Claim

I, LAURENCE V BERKSHIRE NAME AGENT FOR _____ NAME

Box 104, HERIOT BAY, B.C. V0P 1H0 ADDRESS _____ ADDRESS

VALID SUBSISTING F.M.C. NO. 205113 VALID SUBSISTING F.M.C. NO. _____

MAKE OATH AND SAY:- I COMMENCED LOCATING THE EAGLE GORGE #2 MINERAL CLAIM

ON THE 11TH DAY OF AUGUST 19 82 AT 1000 (TIME INDICATE A.M. OR P.M.) AND COMPLETED THE LOCATION

ON THE 23RD DAY OF AUGUST 19 82 AT 1600 (TIME INDICATE A.M. OR P.M.) CONSISTING OF

2 (NUMBER) UNIT LENGTHS SOUTH (DIRECTION) AND 1 (NUMBER) UNIT LENGTHS EAST (DIRECTION) AND I HAVE IMPRESSED ALL THE REQUIRED INFORMATION

ON METAL TAGS NO. 33092 WHICH HAS BEEN SECURELY FASTENED TO THE POSTS AS REQUIRED UNDER THE REGULATIONS.

IDENTIFICATION POST(S) NOT PLACED WERE _____

CHECK "√" APPLICABLE SQUARE

† [√] THE LEGAL CORNER POST

† [ ] THE WITNESS POST FOR THE LEGAL CORNER POST

} IS SITUATED: _____

PRECISELY DESCRIBE POSITION OF POST RELATIVE TO KNOWN TOPOGRAPHICAL OR SURVEYED FEATURES THAT RELATE TO FEATURES ON A MAP.

3 METERS NORTH OF LOGGING ROAD UP SOUTH SIDE OF THE OYSTER RIVER (COMMON A.C.P WITH EAGLE GORGE #1 CLAIM) AND 500 METERS WEST OF MINERAL RESERVE M.S.I. 105A

† BEARING AND DISTANCE TO TRUE POSITION OF LEGAL CORNER POST FROM THE WITNESS POST _____ °

BEARING AND DISTANCE FROM IDENTIFICATION POST TO WITNESS POST _____ °

I HAVE COMPLIED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE STAKING OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN, ACCEPTABLE TO THE MINING RECORDER, OF THE LOCATION.

SWORN AND SUBSCRIBED TO AT COURTENAY

THIS 31 DAY AUGUST 19 82 BEFORE ME

* _____

* THIS AFFIDAVIT MAY BE TAKEN BY A PERSON EMPOWERED TO TAKE AFFIDAVITS BY THE EVIDENCE ACT OF BRITISH COLUMBIA

Laurence V. Berkshire SIGNATURE

Sub-Recorder
RECEIVED
104973E
AUG 31 1982
968877 G.M.B.C.
M.R. # $100.00
COURTENAY, B.C.
MR OR SMR STAMP

NO. OF UNITS 2 WORK REQUIREMENT $ _____ PER YEAR

WORK NUMBERS	C/L IN $	MINING RECEIPT AND DATE RECORDED	TYPE OF WORK	YEAR OF EXPIRY	CREDIT: WORK UNIT(S)	CREDIT: RENTAL IN $'S	TRANSFERS (B.S.'S, ASSIGNMENTS, CONVEYANCES)
20982/987	-	105166 E Jul. 20/83	P/PR	1986			Feb. 14, 1984, all interest sold to Iron River Resources Ltd., Vol. 19, Fol. 102.

ORIGINAL

MINERAL ACT - PROVINCE OF BRITISH COLUMBIA

Record of Mineral Claim

FORM G

MAP NO. 92F/14W RECORD NO. 1271

MINING RECEIPT NO 104969 E RECORDED AT Nanaimo B.C. THIS 25th DAY OF October 19 82

DO NOT WRITE IN SHADED AREAS

Gold Commissioner

Nanaimo
MINING DIVISION

Affidavit for Mineral Claim

I, LAURENCE V. BERKSHIRE (NAME) AGENT FOR _____ (NAME)

BOX 104, HERIOT BAY, B.C. (ADDRESS) _____ (ADDRESS)

VALID SUBSISTING F.M.C. NO. 205113 VALID SUBSISTING F.M.C. NO. _____

MAKE OATH AND SAY:- I COMMENCED LOCATING THE EAGLE GORGE #3 MINERAL CLAIM

ON THE 28TH DAY OF SEPTEMBER, 1982 AT 1000 (TIME - INDICATE A.M. OR P.M.) AND COMPLETED THE LOCATION

ON THE 20TH DAY OF OCTOBER, 1982 AT 1300 (TIME - INDICATE A.M. OR P.M.) CONSISTING OF

3 (NUMBER) UNIT LENGTHS SOUTH (DIRECTION) AND 5 (NUMBER) UNIT LENGTHS EAST (DIRECTION) AND I HAVE IMPRESSED ALL THE REQUIRED INFORMATION

ON METAL TAGS NO. 38593 WHICH HAS BEEN SECURELY FASTENED TO THE POSTS AS REQUIRED UNDER THE REGULATIONS.

IDENTIFICATION POST(S) NOT PLACED WERE _____

CHECK ("✓") APPLICABLE SQUARE

[✓] THE LEGAL CORNER POST

† [ ] THE WITNESS POST FOR THE LEGAL CORNER POST

IS SITUATED: CAF (i) UNIT WEST OF MILE 19 POST ON THE MACMILLAN - BLOEDEL ROAD ON THE NORTH SIDE OF THE CYSTLE ROCK. THE LCP IS 2 UNITS SOUTH AND 4 UNITS WEST OF THE LCP'S FOR CLAIMS EAGLE GORGE #1 & #2 MAP # 92F/14W

(PRECISELY DESCRIBE POSITION OF POST RELATIVE TO KNOWN TOPOGRAPHICAL OR SURVEYED FEATURES THAT RELATE TO FEATURES ON A MAP)

† BEARING AND DISTANCE TO TRUE POSITION OF LEGAL CORNER POST FROM THE WITNESS POST _____ ° _____

BEARING AND DISTANCE FROM IDENTIFICATION POST TO WITNESS POST _____ ° _____

I HAVE COMPLIED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE STAKING OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN, ACCEPTABLE TO THE MINING RECORDER, OF THE LOCATION.

SWORN AND SUBSCRIBED TO AT _____

THIS _____ DAY OF _____ 19 ____ BEFORE ME

* _____

* THIS AFFIDAVIT MAY BE TAKEN BY A PERSON EMPOWERED TO TAKE AFFIDAVITS BY THE EVIDENCE ACT OF BRITISH COLUMBIA.

Laurence V. Berkshire
SIGNATURE

M.R. 104969E
NANAIMO, B.C.
MR OR SMR STAMP

GOLD COMMISSIONER
$75.00
OCT 25 1982

NO. OF UNITS 15 WORK REQUIREMENT $ _____ PER YEAR

WORK NUMBERS	C/L IN $	MINING RECEIPT AND DATE RECORDED	TYPE OF WORK	YEAR OF EXPIRY	CREDIT: WORK UNIT(S)	CREDIT: RENTAL IN $'S	TRANSFERS (B.S.'S, ASSIGNMENTS, CONVEYANCES)
338 31324/	-	105242/166051 Oct. 18/83	P/G	1984			Feb. 14, 1984, all interest sold to Iron River Resources Ltd., Vol. 19, Fol. 102.

ORIGINAL

WORK SHEE

APPLICATION OF WORK ON MINERAL CLAIMS AND 2 POST CLAIMS

Mining Division ... Nepigon.....

Notice to Group No... 1462..... Date Work Recorded ..July 20, 1983....

Date Notice to Group Recorded ..July 20, 1983... Mining Receipt No. ....105169.R.....

Work type code:
- P Physical
- D Drilling
- S Legal Survey (single claim)
- G Geological Survey
- PR Prospecting
- PS Legal Survey (Perimeter)

Standing of claim as a result of this recording

(1) Work No.(s)	(2) Type of Work	(3) C/L in $	(4) Name(s) of Claim(s)	(5) No. of Units	(6) Record No.(s)	(7) Month of Record	(8) Penalty Fee(s) $	Approved work being applied as per statement (includes work to be credited) (9) Value in $	(10) No. Yrs./ Claim	(11) Fee Paid	Credits immediately PRIOR to this recording: (12) WORK in $	(13) RENT in $	(14) Year of Expiry	Claim now has credits of: (15) WORK in $	(16) RENT in $
29870 - 29871	P/ PR	-	Eagle Gorge #1	1	1229	7	-	1200.	1	60.	-	-	1988	-	-
29932 - 29937	P/ PR	-	Eagle Gorge #2	2	1231	3	-	600.	3	30.	-	-	1988	-	-

APPENDIX B

ASSAYS

MIN-EN Laboratories Ltd.

705 WEST 15th STREET,
NORTH VANCOUVER, B.C., CANADA V7M 1T2
TELEPHONE (604) 980-5814

ANALYTICAL REPORT

Project ..... Date of report Oct.26/84.

File No. 84-2,84-4B,4-C,4D Date samples received Oct.22/84.

Samples submitted by: .....

Company: K.E. Northcote

Report on: 3 rocks assay prep Geochem samples

..... Assay samples

Copies sent to:

1. K.E. Northcote, Agassiz, B.C.
2. .....
3. .....

Samples: Sieved to mesh ..... Ground to mesh -100

Prepared samples stored ☒ discarded ☐

rejects stored ☒ discarded ☐

Methods of analysis: Geochem Ag-,Cu-nitric,perchloric digestion.A.A., Au-aqua regia.A.A., Assays Ag-acid digestion-chemical analysis. Au-fire.

Remarks: .....

MIN-EN Laboratories Ltd.
Specialists in Mineral Environments
705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524 TELEX: 04-352828

CERTIFICATE OF ASSAY

COMPANY: K.E. NORTHCOTE
PROJECT: 84-48
ATTENTION: K.E. NORTHCOTE

FILE: 4-1315B
DATE: OCTOBER 25/84
TYPE; ROCK ASSAY

We hereby certify that the following are assay results for samples submitted.

SAMPLE NUMBER	AG G/TONNE	AG .OZ/TON	AU G/TONNE	AU OZ/TON	CU %
84-EG-3-1	19.5	0.57	.13	0.004	7.775

Certified by [signature]

MIN-EN LABORATORIES LTD.

MIN-EN Laboratories Ltd.
Specialists in Mineral Environments
705 WEST 15th STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524 TELEX: 04-352828

GEOCHEMICAL ANALYSIS CERTIFICATE

COMPANY: K.E. NORTHCOTE
PROJECT: 84-4B
ATTENTION: K.E. NORTHCOTE

FILE: 4-1315B
DATE: OCT. 26/84
TYPE: ROCK GEOCHEM

We hereby certify that the following are the results of the geochemical analysis made on 2 samples submitted.

SAMPLE NUMBER	CU PPM	AG PPM	AU PPB
84-8007-3-1	11300	4.5	10
84-8001	5450	1.6	5

Certified by Ken Arnold

ACME ANALYTICAL LABORATORIES LTD.
Assaying & Trace Analysis
852 E. Hastings St., Vancouver, B.C. V6A 1R6
Telephone:253 - 3158

To: L.V. Berkshire
Bpx 104
Herlot Bay, B.C.
V0P 1H0

File No. 83-0726
Type of Samples Rock
Disposition

ASSAY CERTIFICATE

No.	Sample	Cu%	Ag oz/ton	Au oz/ton					No.
1	8306 -1	2.03	.49	.001					1
2									2
3									3
4									4
5									5
6									6
7									7
8									8
9									9
10									10
11									11
12									12
13									13
14									14
15									15
16									16
17									17
18									18
19									19
20									20

DATE SAMPLES RECEIVED June 7, 1983
DATE REPORTS MAILED June 9, 1983
ASSAYER

DEAN TOYE, B.Sc.
CHIEF CHEMIST
CERTIFIED B.C. ASSAYER

ACME ANALYTICAL LABORATORIES LTD.
Assaying & Trace Analysis
852 E. Hastings St., Vancouver, B.C. V6A 1R6
Telephone:253 - 3158

To: L.V. Berkshire
Box 104,
Heriot Bay, B.C.
V0P 1H0

Page 5
Fig 6.

File No. 82-1463
Type of Samples Rocks
Disposition

ASSAY CERTIFICATE

No.	Sample	Cu%	Ag oz/ton	Au oz/ton					No.
1	8211-1	9.45	.54	.001					1
2									2
3									3
4									4
5									5
6									6
7									7
8									8
9									9
10									10
11									11
12									12
13									13
14									14
15									15
16									16
17									17
18									18
19									19
20									20

DATE SAMPLES RECEIVED Nov. 3, 1982
DATE REPORTS MAILED Nov. 8, 1982
ASSAYER

DEAN TOYE, B.Sc.
CHIEF CHEMIST
CERTIFIED B.C. ASSAYER

APPENDIX C

PETROGRAPHIC REPORT

PETROGRAPHIC DESCRIPTIONS

EAGLE GORGE CLAIMS

No 1 Showing

84-8001-1 Karmutsen Breccia

Macroscopic

Footwall, breccia, light flesh colored to purplish fragments in a dark chloritic matrix. Abundantly shattered, filled with calcite chloritic slip surfaces. Chalcocite with associated malachite staining, cuprite, native copper (traces).

84-8001-2 Silicified Karmutsen Breccia

Macroscopic

Breccia, polymictic, multicolored, green, pinks, purple, cream, impregnated by silica, lesser chlorite and sericite pods. Some open space quartz crystals. Minor chalcocite, with associated malachite and traces native copper in hairline fractures.

84-8003

Macroscopic.

Sericite and hematitic clay, granular texture, occurs as poorly consolidated but cohesive layer between flat lying Karmutsen flows. Crops out at stream level on Oyster River. Alteration zone?

84 EG-3-1 (A) (TS) Volcanic breccia, devitrified, volcanic glass, altered

Macroscopic

Altered bleached volcanic cut by quartz, chalcocite veins, disseminated chalcopyrite, pyrite. Malachite and iron staining. Stained slab; no evidence of K-spar

Microscopic

Groundmass

Feldspathic devitrified glass; laths/acicular, indistinct outline Matrix between laths clouded by dusting of very fine opaque granules. Disseminated coarser opaques. Mottled by iron staining. Cut by hematite and lesser jarosite-filled irregular fractures traces malachite- Cut by major quartz veins. Contains pseudomorphs of the feldspar phenocrysts, aggregates of granular clay? feldspar, (quartz), traces sericite.
Traces carbonate as aggregates of fine granules.

Veins

Quartz (-.01 to 0.5mm) subhedral/anhedral crystals, some growing inwards from vein walls.
Opaques-large irregular masses several mm probably aggregates of grains within siliceous matrix and veins. Locally forming sieve texture and discontinuous net in quartz matrix.

Texture

Breccia, composed of fragments of bleached, devitrified volcanic glass showing ghost-like outline of microlites in a very fine to coarse siliceous groundmass. Devitrified glass shows outline of altered plagioclase (?) phenocrysts now also with a fine granular texture.

84 EG-3-1 (A)(PTS) Volcanic breccia, devitrified volcanic glass, silicified matrix.

Macroscopic

Altered bleached mottled cream-pink (volcanic), cut by quartz, chalcocite veins to + 1.0cm. Fractures stained by jarosite, lesser malachite. Chalocite vein is drusy with encrustation of quartz on chalcocite.

EG-3-1 (A) Cont.

Microscopic

Groundmass

Feldspathic; laths/acicular with indistinct outline Matrix between laths clouded by dusting of very fine opaque granules. Scattered coarser opaque grains. Contains angular fragments of aggregates of granular quartz with feldspar (?) and traces of sericite. Mottled by iron staining. Cut by hematite and jarosite-filled fractures, minor malachite.

Reflected Light metallic minerals

Pyrite

Isolated irregular filigree grains (-.01 to 0.8 mm) locally appears to be replaced by chalcocite/covellite and hematite.

Chalcocite

(-.01 to several mm) occurs as irregular masses aggregates of grains silver white with rapid blue tarnish

Covellite

(-.01 to .05 mm) clusters of grains

Bornite

(-.01 to .03 mm) irregular myrmekite intergrowths in chalcocite

Chalcopyrite

(-.01 to .03 mm) irregular myrmekite intergrowths with bornite in chalcocite

Hematite

Irregular discontinuous masses and stringers in gangue associated with filigree pyrite.

Texture

An irregular sieve like texture in gangue of irregular chalcocite masses containing myrmekitic irregular intergrowths of bornite in swarms. Clusters of covellite grains rimmed and cleavage fillings of dark grey gangue (?) Chalcopyrite as myrmekitic intergrowths with bornite and chalcocite

84-8008-1 Altered Karmutsen basalt flow/breccia

Macroscopic

Karmutsen basalt, chloritic, brecciated, cut by dark green-grey, very fine grained dense, hard material (volcanic glass?)
Stained slab, no evidence of K-spar

84-8008-1 Cont.

Microscopic

Groundmass

Feldspar; laths/acicular, felted mass
Augite; fine acicular felted in plagioclase
Biotite; shredded irregular possibly brucite
Quartz; anhedral interstitial

Veining

Irregular quartz, carbonate

Breccia Infilling

Volcanic glass (?) green to buff, massive, uniaxial, high +relief brecciated. Veined by bright green pleochroic fibrous mineral, anomalous bluish birefringence (chlorite?) Alteration to serpentine and chlorite
Carbonate, aggregates of small grains and small interstitial masses and diffuse veinlets.
Chlorite bladed radiating and felted masses intermixed with feldspathic (?) materials
Quartz interstitial to green and buff colored volcanic glass.

84-8008-2 Alteration

Macroscopic

Laminated altered material, iron stained outer rind. Probably a mixture of clay minerals, sericite, carbonate and siica. Small discontinuous hairline fractures filled with

Microscopic

Groundmass

(a) White chalky appearance but hard, relic microlitic texture very fine granular, dense with slightly coarser siliceous (?) material. Probably devirified volcanic glass
(b) Carbonate masses, aggregates of grains and as veins and diffuse discontinuous hairline veinlets.
(c) Iron staining in fractures and diffuse stains
(d) Opaque; dusting throughout matrix of very fine (-0.01 mm) very irregular granules scattered coarser irregular grains to +1.5 mm
As irregular discontinuous veinlets within brecciated or sheared zones with carbonate

Texture

Intensely altered devitrified groundmass, relic microlitic texture, sheared; veined and impregnated by carbonate with opaque minerals forming irregular dusting and clots.

84-8008-3 Altered breccia; volcanic glass

Macroscopic

Breccia, light green/cream fragments in a dark green grey/black matrix. Some hairline veining by carbonate

Stained slab shows trace of potassium rich material in small diffuse segregations or spots.

Microscopic

Breccia Fragments and Groundmass

Volc.glass- dark brown groundmass, partly devitrified, very fine granular submicroscopic alters readily to chlorite/serpentine. Contains plagioclase laths some of which are sericitic and lesser pyroxene phenocrysts

Chlorite-fine felted and coarser, bladed, radiating masses intermixed with carbonate. Also occurs as irregular veinlets.

Carbonate- irregular masses of aggregates of grains.

Veins and veinlets

Carbonate, irregular veinlets forming networks cutting through breccia fragments and matrix

84-8008-4 "Porcelainite" devitrified volcanic glass

Macroscopic

Massive but brecciated and veined porcelain-like material, veined by carbonate and siliceous veins and veinlets
Stained slab; no evidence of K-spar

Microscopic

Groundmass and Fragments

Devitrified glass, brown to black granular, showing ghostlike microlite outlines. Aggregates of carbonate granules, alteration

Veins and veinlets

Carbonate
Siliceous veinlets and hairline fracture fillings very fine granular appearance, low birefrigence. These stand in relief on etched slab surface therefore probably silica.

84-8008-5 Silicified, brecciated devitrified volcanic glass breccia

Macroscopic

Bleached, siliceous porcellaineous brecciated rock showing open space quartz filling between fragments and as veins. Traces of block opaque mineral within quartz veins.
Stained slab; no evidence of K-spar

Microscopic

Fragments

Devitrified glass, fine granular texture; plain light shows ghost-like outlines of microlites
Cut by diffuse irregular masses and disrupted veinlets of carbonate which are cut by late silicification and quartz veining.

Matrix

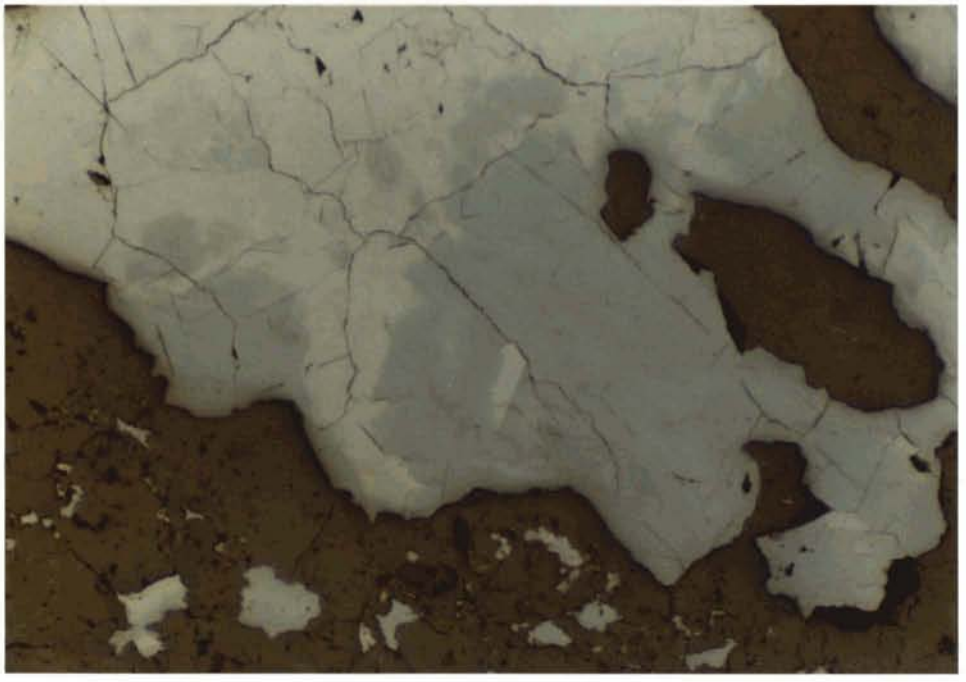
Granular silica surrounding fragments the order of 0.01 mm, irregular grains rapidly grading inwards into coarser quartz crystals forming veins.

Veins

Quartz to 1.0mm anhedral/subhedral with some carbonate as coarse grains to 1.0mm
Late iron staining in fractures; some of which cuts silicification and some cut by silicification

Opaques

Aggregates of grains within quartz forming irregular masses in the core of the veins interstitial to quartz crystals.

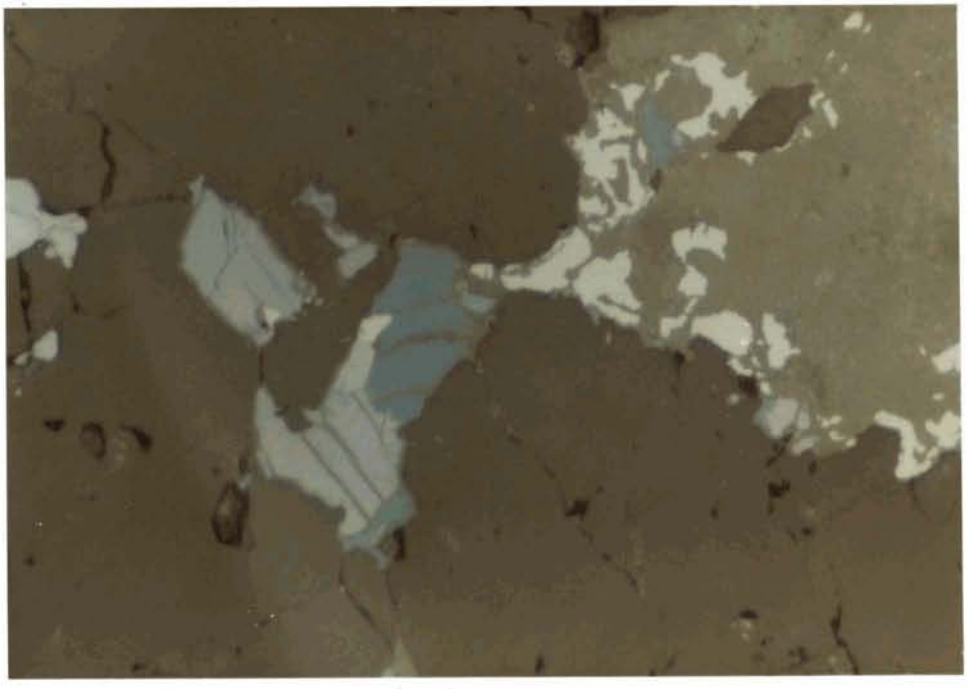


84 IR 2-0

84 EG-3-1 (PTS)

Scale 0.1mm
X10 Objective

Chalcocite; cream and blue-grey, with vermicular intergrowths of bornite; cream-pink, covellite tarnish on chalcocite.

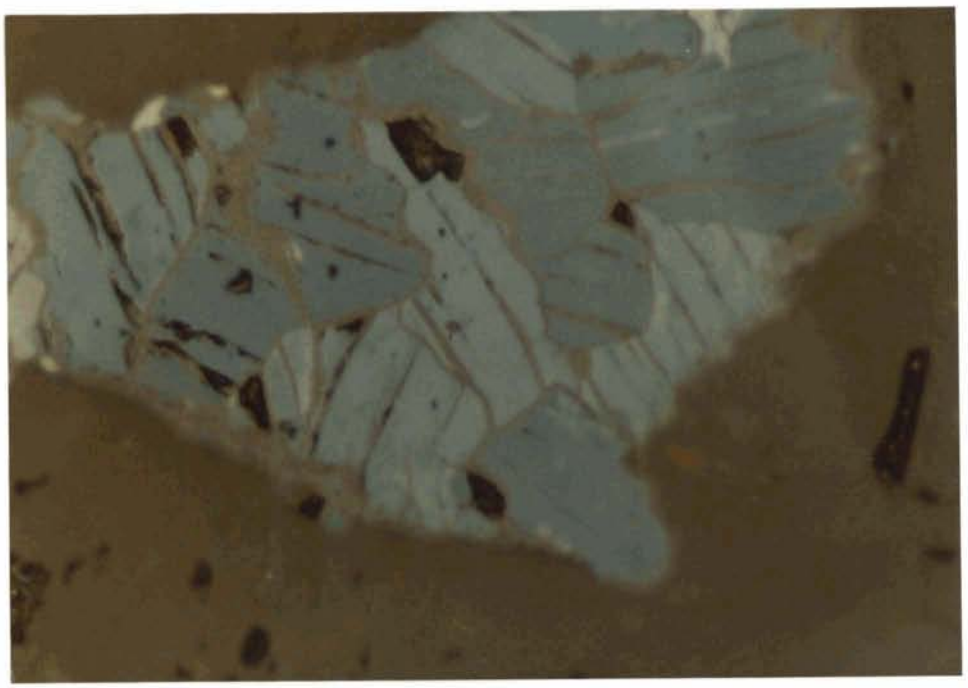


84 IR 2-1

84 EG-3-1 (PTS)

Scale 0.1mm
X40 Objective

Chalcocite and covellite

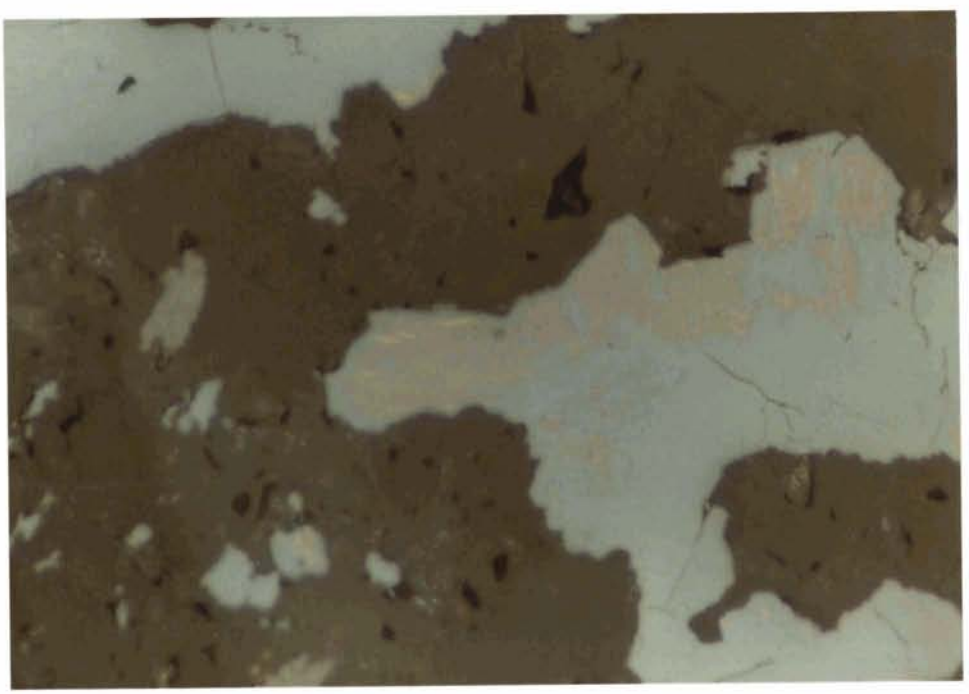


84 IR 2-3

84 EG-3-1 (PTS)

Scale 0.1mm
X40 Objective

Covellite

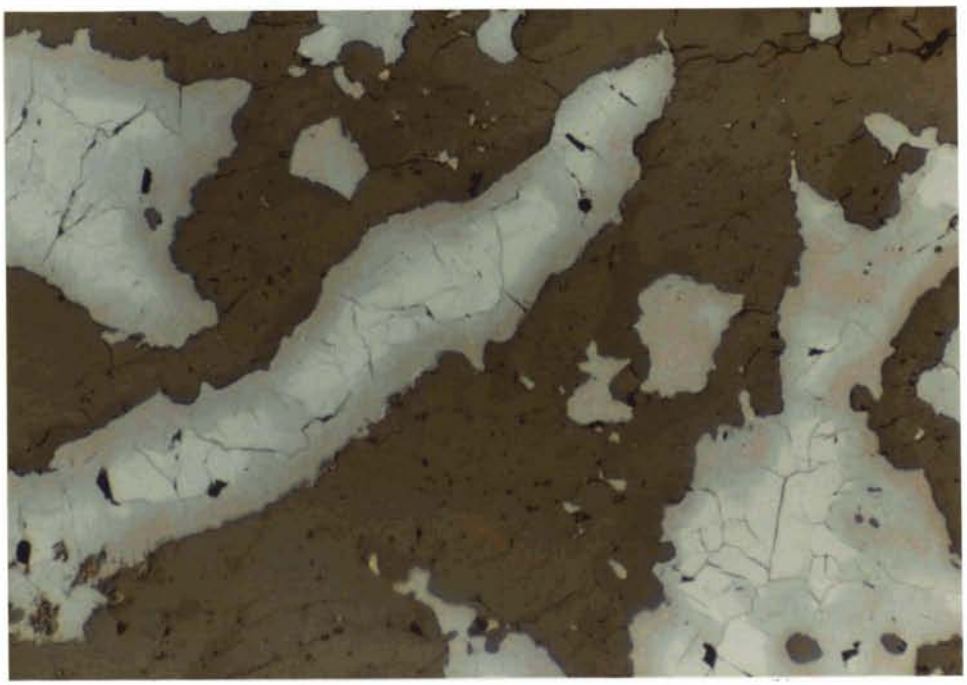


84 EG-3-1 (PTS)

84 IR 2-4

Scale 0.1mm
X40 Objective

Chalcocite, bornite and chalcopyrite intergrowth; covellite tarnish



84 EG-3-1 (PTS)

84-IR 2-5

Scale 0.1 mm
X10 Objective

Chalcocite, bornite intergrowths with covellite tarnish on chalcocite.

APPENDIX D

SCANNING ELECTRON MICROSCOPE ANALYSES
HEAVY MEDIA

Cominco Ltd./Exploration Research Laboratory/1486 East Pender Street
Vancouver, B.C./Canada V5L 1V8/Tel. (604) 254-0881/Telex 04-507730

Exploration
Research Laboratory

K.E. Northcote & Associates Ltd.
2346 Ashton Road
R.R.1, Agassiz, B.C.
V0M 1A0

30 November 1984

Dear Ken:

Following are my SEM analysis findings of your samples EG-1 to EG-8.

EG-1 is essentially high purity native gold with 1-2% of Ag and Zn and trace (<1%) Fe.

EG-2 is essentially native silver with 1-2% Hg. This was determined on a freshly scored part of the grain. The impurities or coatings contain Fe, Al and Si.

EG-3 is again native silver with 3-5% Hg. This was determined on a freshly scored part of the grain.

EG-4 is a mixture of Pb and Zn. It is a solder.

EG-5 is essentially the same as EG-2.

EG-6 is essentially the same as EG-2 and EG-5.

EG-7 is a platy, foil-like material. On a freshly scored surface it is seen to consist of gold with <1% Hg, <1% Zn, <1% Fe and <1% Ag. The tarnished surface coating is a mixture of gold with considerable mercury.

EG-8 is native gold with 1-2% Zn.

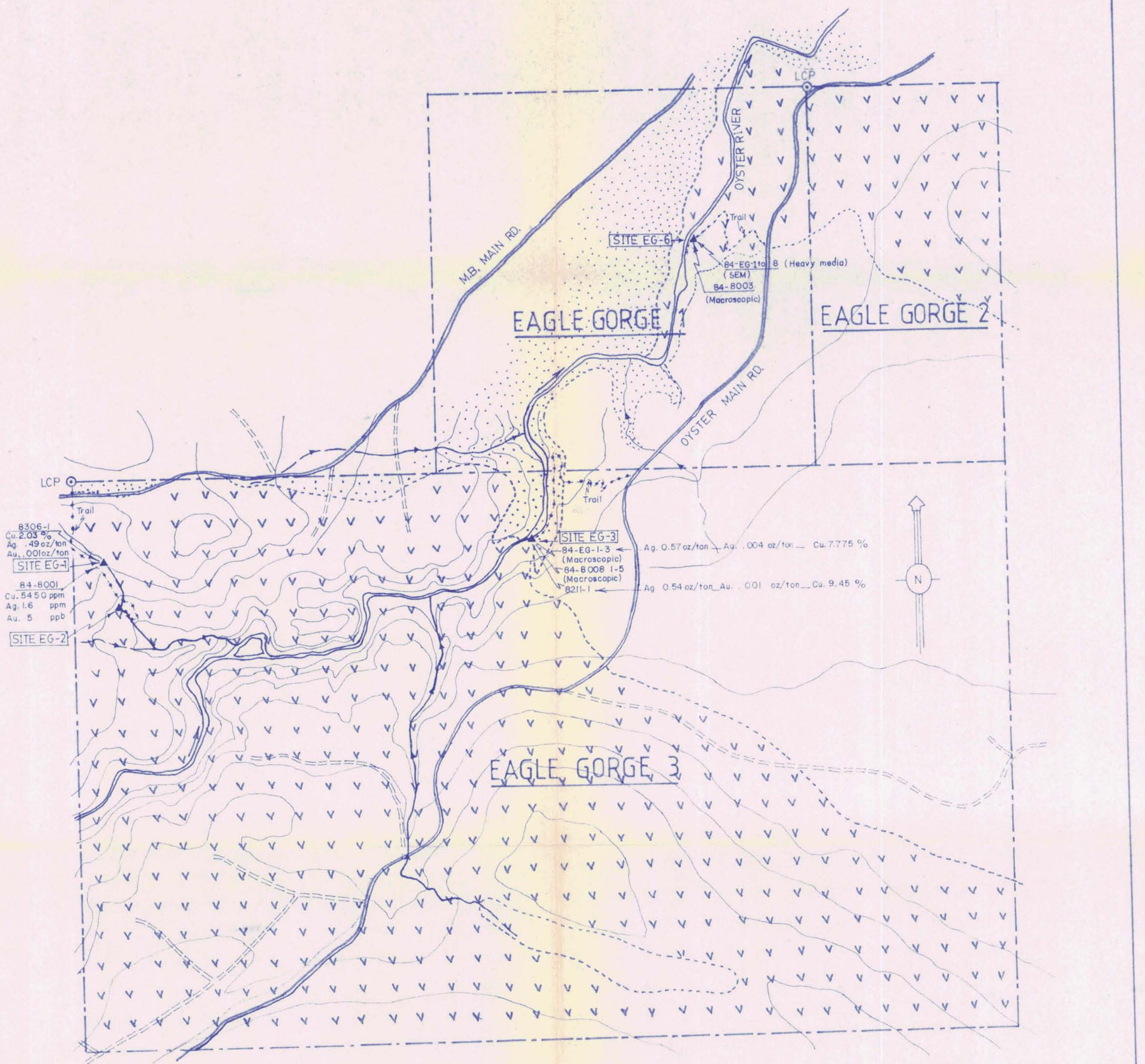
Although I am not able to quantify the trace elements in the native gold from Samples EG-1 and EG-8 very accurately the signature of the two is distinctly different. This is encouraging for further studies.

I am returning your samples as requested.

Yours truly,

J.A. McLeod, M.A. Sc., P. Eng.

JAM/clm
Encl.



IRON RIVER RESOURCES LTD.

GEOLOGICAL & SAMPLE MAP
pace and compass

FIGURE: 5 | SCALE 1/10,000

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