

87-268-16064



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**ASSESSMENT REPORT
ON RECONNAISSANCE GEOLOGICAL MAPPING,
ROCK SAMPLING AND SILT SAMPLING** 2/78
of the
TR GROUP (TR 1 and 2 CLAIMS)
and the
EVEREST TR GROUP (TR 3, 4, and 5 CLAIMS)
Atlin Mining Division, British Columbia
NTS 104N/6W, 104N/11W
59°30'N Lat., 133°22'W Long.

owner(s):

HOLLYCROFT RESOURCE CORPORATION
and
GOLDENROD RESOURCES & TECHNOLOGY INC.
May 7, 1987
T. Neale, B.Sc. & T.G. Hawkins, P.Geol.

Operator: Goldenrod Resources and Technology Inc.

FILMED

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

16,064

C. DRILLING (Details in report submitted as per section 8 of regulations.) (The itemized cost statement must be part of the report.)	COST
D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL (Details in report submitted as per section 5, 6, or 7 of regulations.) (The itemized cost statement must be part of the report.) (State type of work in space below.) Geological, geochemical	\$2,000.00
TOTAL OF C AND D	2,000.00

Where the above statement requires a technical report as per section C of the Mineral Act Regulations, the author of the report shall complete both copies of the ASSESSMENT REPORT TITLE PAGE AND SUMMARY form and include the completed forms in the assessment reports.

Who was the operator (provided the financing)?
 Name Goldenrod Resources & Technology Inc.
 Address 1002 - 475 Howe St.
Vancouver, B.C. V6C 2B3

<i>Portable Assessment Credits (PAC) Withdrawal Request</i>		AMOUNT
Amount to be withdrawn from owner(s) or operator(s) account(s):		
Name of Owner/Operator		
(May be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.)	1.	
	2.	
	3.	
TOTAL WITHDRAWAL		
TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL		

I wish to apply \$ 2,000.00 of this work to the claims listed below.
 (State number of years to be applied to each claim, its month of record, and identify each claim by name and record number.)
TR 4 2166(2) 20 Units 1 year @ \$100/unit

Value of work to be credited to portable assessment credit (PAC) account(s). (May only be credited from the approved value of C and (or) D) not applied to claims.)		AMOUNT
Name of owner/operator	1.	
	2.	
	3.	

I, the undersigned Free Miner, hereby acknowledge and understand that it is an offence to knowingly make a false statement or provide false information under the *Mineral Act*. I further acknowledge and understand that if the statements made, or information given, in this Statement of Exploration and Development are found to be false and the exploration and development has not been performed, as alleged in this Statement of Exploration and Development, then the work reported on this statement will be cancelled and the subject mineral claim(s) may, as a result, forfeit to and vest back to the Province.



MINERAL ACT

STATEMENT OF EXPLORATION AND DEVELOPMENT

I, J.S. Getsinger (Name) Agent for Hollycroft Resource Corp. (Name)
301 - 409 Granville St. (Address) 1002 - 475 Howe St. (Address)
Vancouver, B.C. Vancouver, B.C.
V6C 1T2 (Postal Code) 687-7938 (Telephone Number) V6C 2B3 (Postal Code) 682-8567 (Telephone Number)
Valid subsisting F.M.C. No. 296277 Valid subsisting F.M.C. No. _____

STATE THAT

1. I have done, or caused to be done, work on the Hollycroft TR Group
(TR 1, 2 claims) Claim(s)
Record No(s) 2163(2), 2164(2)
Situate at NTS 104N/6 and 11 in the Atlin Mining Division,
59° 30' N Lat, 133° 17' W Long. 2,000 dollars. Work was done from the 6th day
to the value of at least of August 19 86, to the 10th day of August 19 86

2. The following work was done in the 12 months in which such work is required to be done:

[COMPLETE APPROPRIATE SECTION(S) A, B, C, D, FOLLOWING]

A. PHYSICAL

(Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails.)

(Give details as required by section 13 of regulations.)

		COST
TOTAL PHYSICAL		

I wish to apply \$ _____ of physical work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record number.)

B. PROSPECTING

(Details in report submitted as per section 9 of regulations.)
(The itemized cost statement must be part of the report.)

COST

I wish to apply \$ _____ of this prospecting work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record number.)

C. DRILLING (Details in report submitted as per section 8 of regulations.) (The itemized cost statement must be part of the report.)	COST	
D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL (Details in report submitted as per section 5, 6, or 7 of regulations.) (The itemized cost statement must be part of the report.) (State type of work in space below.)		
	Geological, geochemical	\$2,000.00
	TOTAL OF C AND D	\$2,000.00

Where the above statement requires a technical report as per section C of the Mineral Act Regulations, the author of the report shall complete both copies of the ASSESSMENT REPORT TITLE PAGE AND SUMMARY form and include the completed forms in the assessment reports.

Who was the operator (provided the financing)? Name Goldenrod Resources & Technology Inc.
 Address 1002 - 475 Howe St.
Vancouver, B.C. V6C 2B3

Portable Assessment Credits (PAC) Withdrawal Request		AMOUNT
Amount to be withdrawn from owner(s) or operator(s) account(s):		
Name of Owner/Operator		
[May be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.]	1.	
	2.	
	3.	
TOTAL WITHDRAWAL		
TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL		

I wish to apply \$ 2,000.00 of this work to the claims listed below.
 (State number of years to be applied to each claim, its month of record, and identify each claim by name and record number.)
TR 2 2164(2) 20 Units 1 year @ \$100/unit

Value of work to be credited to portable assessment credit (PAC) account(s). [May only be credited from the approved value of C and (or) D not applied to claims.]		
Name		AMOUNT
Name of owner/operator	1.	
	2.	
	3.	

I, the undersigned Free Miner, hereby acknowledge and understand that it is an offence to knowingly make a false statement or provide false information under the *Mineral Act*. I further acknowledge and understand that if the statements made, or information given, in this Statement of Exploration and Development are found to be false and the exploration and development has not been performed, as alleged in this Statement of Exploration and Development, then the work reported on this statement will be cancelled and the subject mineral claim(s) may, as a result, forfeit to and vest back to the Province.



(i)

SUMMARY

Reconnaissance geological mapping, rock sampling, and silt sampling for assessment purposes have been completed on the TR claims. Work was done on the TR Group (TR 1 and 2 claims) for Hollycroft Resource Corporation and on the Everest TR Group (TR 3 to 5 claims) for Goldenrod Resources and Technology Inc.

The TR claims are located on Spruce Creek in the historical gold mining area of Atlin, B.C., and are underlain by Carboniferous to Permian metasedimentary and metavolcanic rocks of the Cache Creek Group, in particular the Kedahda Formation, a known host to numerous gold-bearing deposits in the area.

A limited rock sampling program from on and near the TR claims of rocks similar to known auriferous rocks in the Atlin area, yielded results of up to 80 ppb Au (sample 061); 1.0 ppm Ag and 64 ppm Pb (sample 058); 100 ppm Cu (sample 064); 142 ppm Zn, 6 ppm Bi, 7.0 ppm Cd, 40 ppm Ga, and 5010 ppm P (sample 063); 22 ppm Mo (sample 068); and 2410 ppm Ba (sample 060).

An auriferous rock sample from a neighbouring property, similar to rocks on the TR claims, yielded 960 ppb Au and 176 ppm Zn (sample 069).

Whole rock analyses confirm the siliceous composition of the rocks collected, and suggest a correlation between potassic alteration and/or a combination of potassic and carbonate alteration with gold values.

Petrographic analysis of one sample indicates association of pyrite growth with quartz veins and biotite, and shows postdeformational metamorphic recrystallization.



(ii)

High Cr and Ni from silt sampling indicate possible subsurface ultramafic rocks. Carbonate-altered ultramafic rocks host known gold deposits in the Atlin area.

A Phase I exploration program, consisting of geological mapping and sampling, soil sampling, magnetometer and VLF-EM surveys, and possible trenching, with follow-up analyses, whole rock analyses, and petrographic studies, is recommended at an estimated cost of \$25,000.

Contingent on encouraging results from Phase I, further phases of exploration, consisting of geophysical surveys (including IP) and diamond drilling, may be recommended.



TABLE OF CONTENTS

	Page
SUMMARY	(i)
1.0 INTRODUCTION	2
2.0 PROPERTY LOCATION, ACCESS, TITLE	3
3.0 HISTORY	5
4.0 REGIONAL GEOLOGY	7
4.1 Cache Creek Group	9
4.1.1 Nakina Formation	9
4.1.2 Kedahda Formation	10
4.1.3 Horsefeed Formation	10
4.1.4 French Range Formation	11
4.1.5 Teslin Formation	11
4.2 Structure and Metamorphism	12
4.3 Economic Setting	13
5.0 1986 ASSESSMENT WORK	15
5.1 Property Geology, Mineralization, and Lithogeochemistry	15
5.2 Petrography	19
5.3 Whole Rock Analyses	20
5.4 Silt Sampling	21
6.0 PROPOSED WORK PROGRAM	22
7.0 CONCLUSIONS	23
8.0 RECOMMENDATIONS	25
CERTIFICATES - T. Neale, B.Sc.	27
- T.G. Hawkins, P.Geol.	28
REFERENCES	29

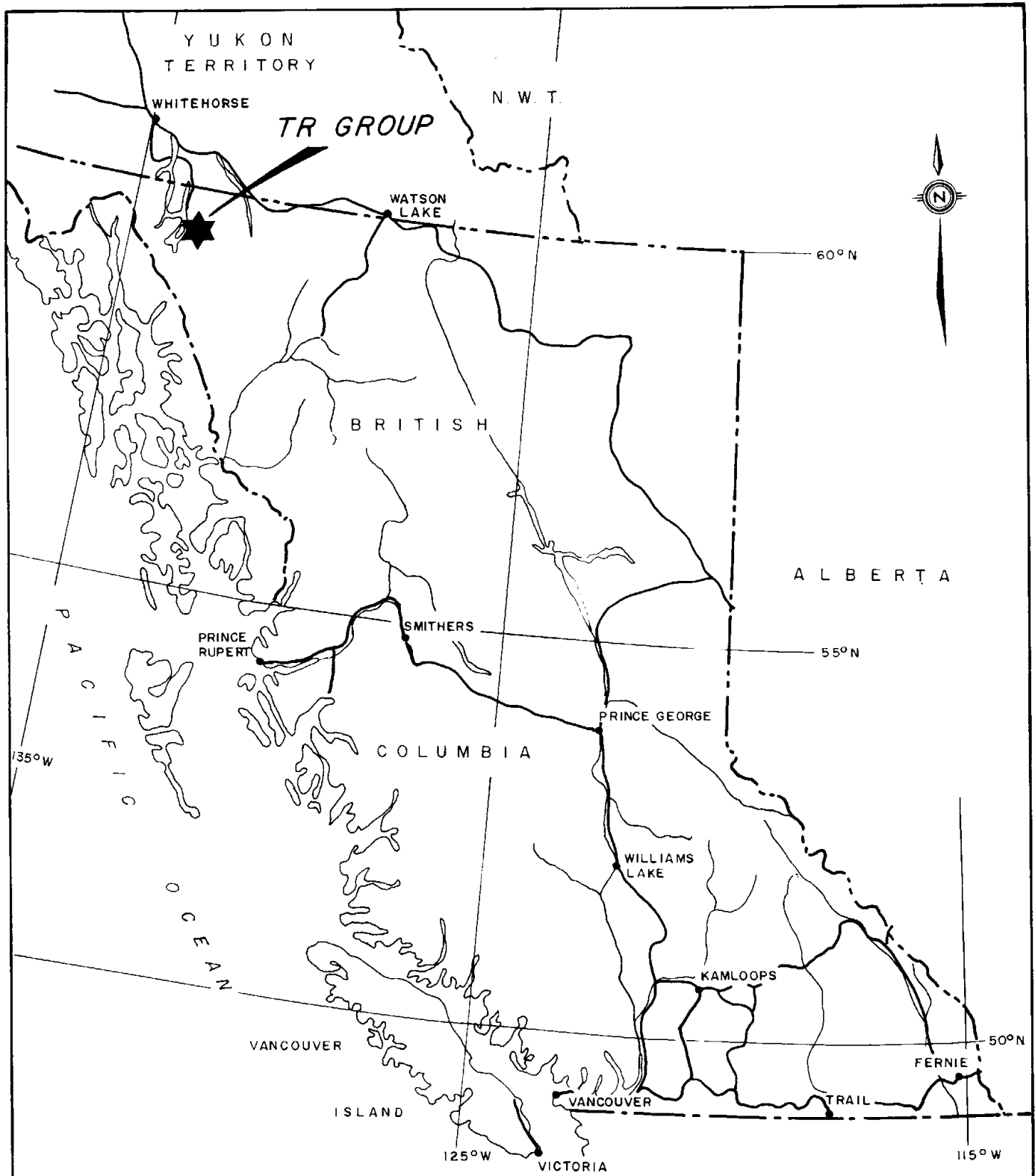


Appendices

- I List of Personnel and Statement of Expenditures
- II Rock Sample Descriptions and Lithogeochemical Results
- III Thin Section Description
- IV Certificates of Analysis
- V Conversion Factors for Metric Units

List of Illustrations

Figure 1	General Location Map	1
Figure 2	Claim Map	4
Figure 3	Regional Geology Map	8
Figure 4	Property Plan, Geology and Sampling	In Pocket

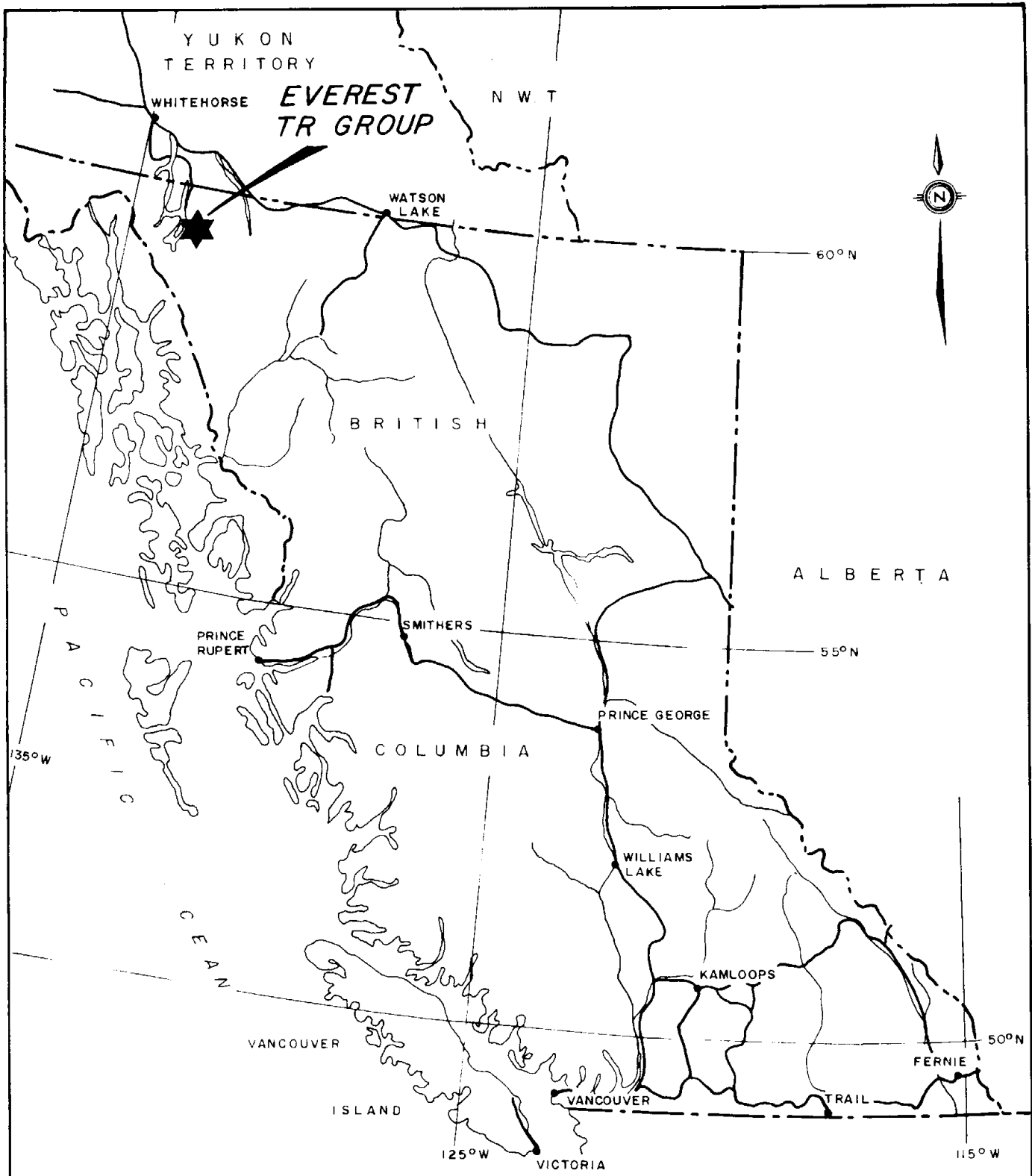


HOLLYCROFT RESOURCE CORPORATION

GENERAL LOCATION MAP
 TR GROUP
 ATLIN MINING DIVISION

Project No: V 242	By: T. N.
Scale: 1 : 8 000 000	Drawn: J. S.
Drawing No: 1	Date: MAY 1987

 MPH Consulting Limited



GOLDENROD RESOURCES AND
TECHNOLOGY INC.

GENERAL LOCATION MAP
EVEREST TR GROUP
ATLIN MINING DIVISION

Project No	V 242	By	T. N.
Scale	1 : 8 000 000	Drawn	J. S.
Drawing No	1	Date	MAY 1987



MPH Consulting Limited



1.0 INTRODUCTION

This report summarizes geological assessment work carried out by MPH Consulting Limited at the request of Mr. L. Nowek of Hollycroft Resource Corporation and Goldenrod Resources & Technology Inc. on the TR Group (TR 1 and 2 claims) and the Everest TR Group (TR 3, 4, and 5 claims) from August 6 to 10, 1986. The program was carried out by T.G. Hawkins, P.Geol.

Work done to fulfill assessment requirements included geological mapping at a scale of 1:20,000, prospecting, rock sampling, and silt sampling. Twelve (12) rock samples and three silt samples were collected. All samples were analyzed for gold by atomic absorption spectroscopy and for 30 elements by ICP. Six (6) samples were selected for whole rock analyses.

Included in the report is a summary of known geological and mining exploration in the area, a description of regional and property geology, and a brief discussion of the economic setting of the claims. A recommended work program designed to explore further the economic potential of the claims is provided.



2.0 LOCATION, ACCESS, TITLE

The claims reported on here comprise two groups, the TR Group and the Everest TR Group, located in the Spruce Creek valley about 20 km southeast of Atlin, on NTS map sheets 104N/6 and 104N/11, centred at approximately 59°30'N latitude, 133°22'W longitude, in the Atlin Mining Division of British Columbia (Figure 1).

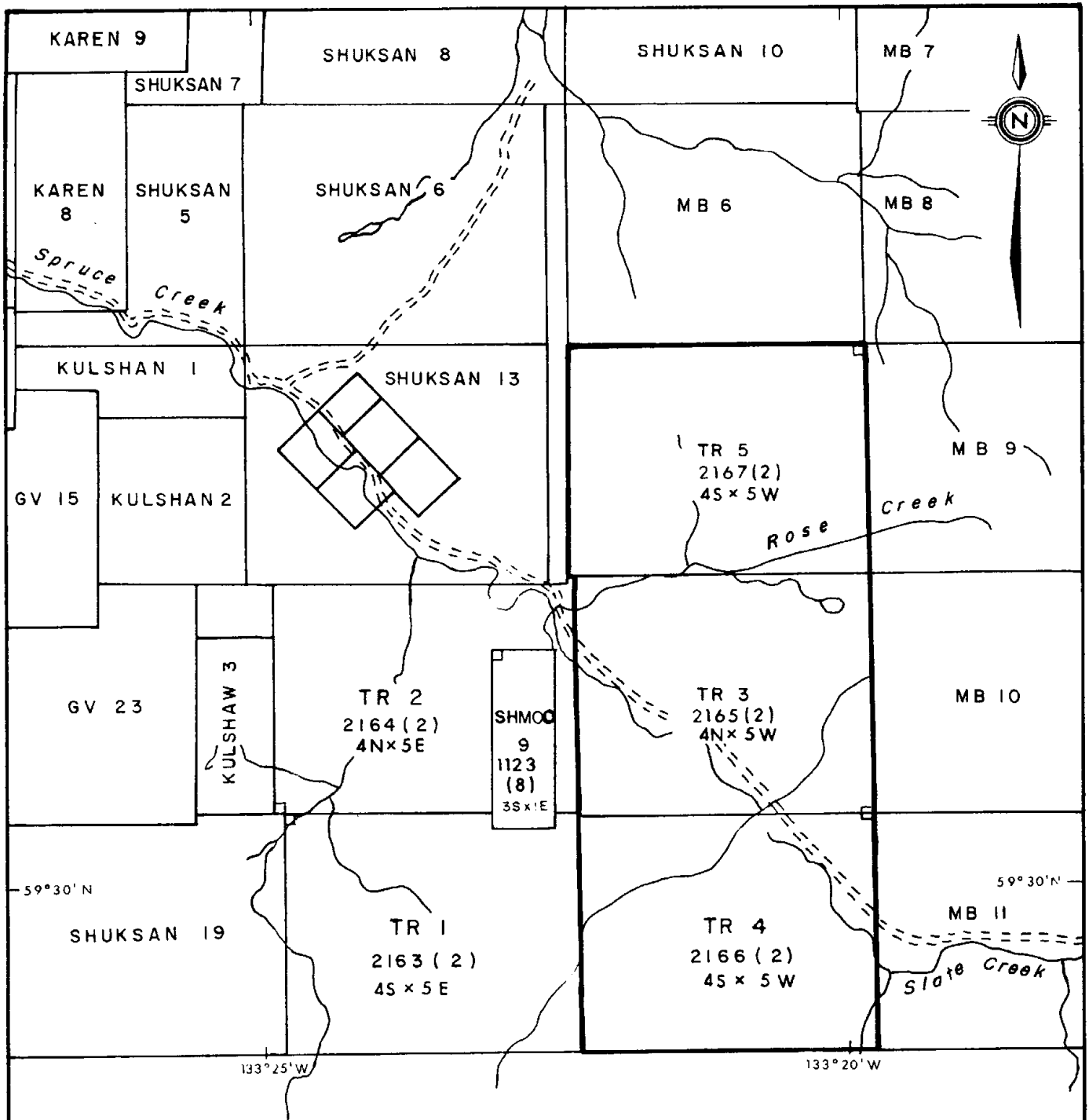
Access to the property is via road from Atlin. The Spruce Creek Road crosses the northeastern corner of the TR 2 and TR 4 claims, and a four-wheel drive track provides access to the TR 1 claim.

Claim information is summarized below:

Claim	Record No.	Units	Owner	Anniversary Date	Year Registered
TR Group (Notice to Group 1183, January 30, 1985)					
TR 1	2163(2)	20	Anthony Rich	Feb. 8, 1989	1984
TR 2	2164(2)	20	Hollycroft Resource Corporation	Feb. 8, 1988	1984
Everest TR Group (Notice to Group 1184, January 30, 1985)					
TR 3	2165(2)	20	Anthony Rich	Feb. 8, 1987	1984
TR 4	2166(2)	20	Goldenrod Resources & Technology Inc.	Feb. 8, 1988	1984
TR 5	2167(2)	20	Leon Nowek (50%) & David Flanagan (50%)	Feb. 8, 1989	1984

The assessment work done for this report applies to the TR 2 claim and the TR 4 claim.

The TR 2 claim overlaps the previously staked Shmoo 9 claim of Raft River Resources Co. Ltd. (Figure 2).



NTS 104N/6W
104N/11W



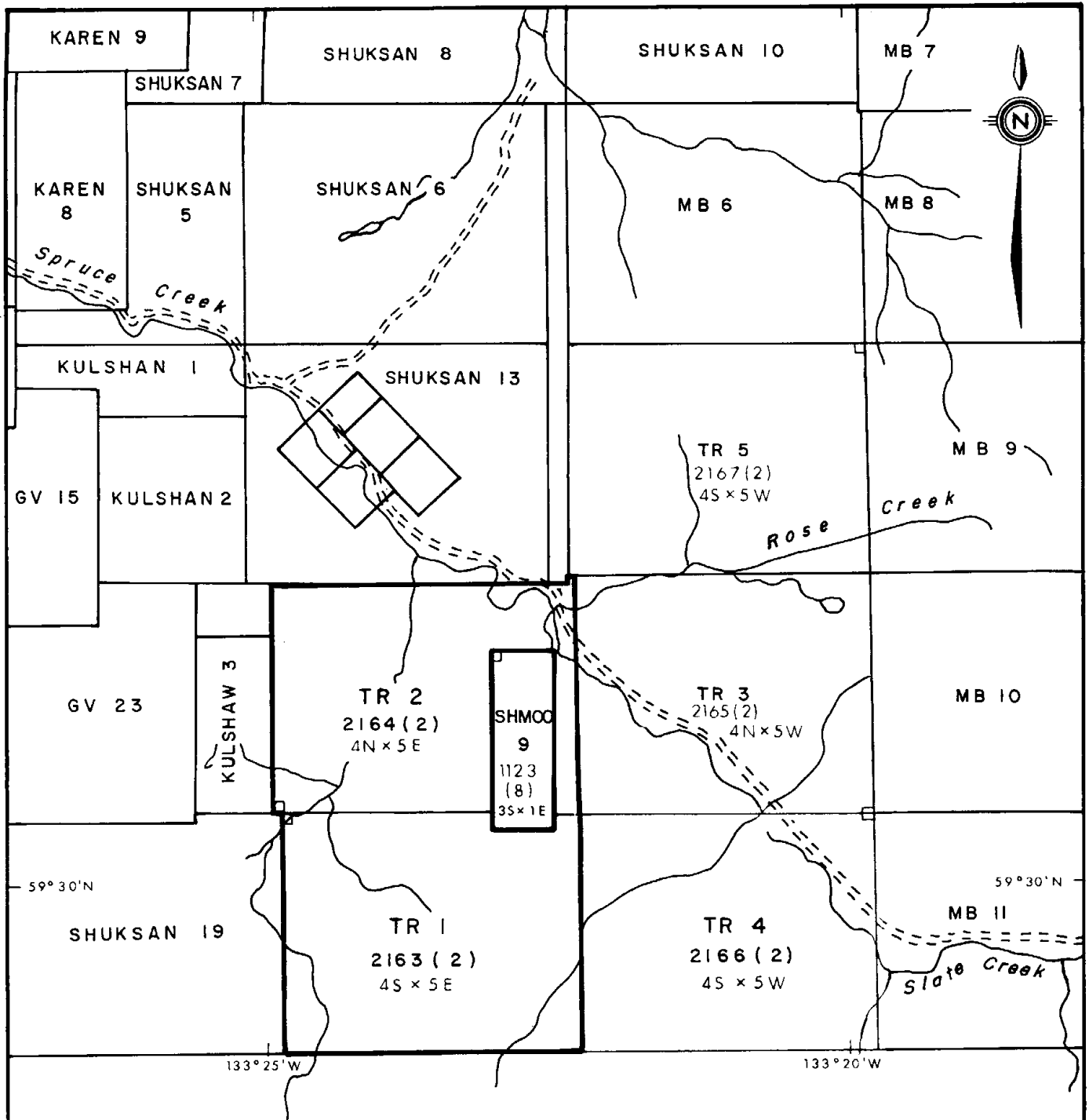
GOLDENROD RESOURCES AND
TECHNOLOGY INC.

CLAIM MAP
EVEREST TR GROUP
ATLIN MINING DIVISION

Project No:	V 242	By:	T. N.
Scale:	1: 50 000	Drawn:	J. S.
Drawing No:	2	Date:	MAY 1987



MPH Consulting Limited



NTS 104N/6W
104N/11W



HOLLYCROFT RESOURCE CORPORATION

**CLAIM MAP
TR GROUP**

ATLIN MINING DIVISION

Project No:	V 242	By:	T. N.
Scale:	1: 50 000	Drawn:	J. S.
Drawing No:	2	Date:	MAY 1987.



MPH Consulting Limited



3.0 HISTORY

The Atlin area has been known as a placer gold camp since 1897. Placer mining has been carried out continually since then. About 31 million grams (1 million ounces) of gold have been recovered from the Atlin area creeks although little production is recorded from lode deposits.

In the early 1900's, some exploration for the source of the placer gold was carried out locating most of the presently known quartz veins by 1905. Quartz veins with minor sulphides and gold at the Imperial and Lakeview occurrences, and minor gold in quartz-carbonate altered serpentinite at the Yellow Jacket and Anaconda properties, represent the two modes of occurrence of lode gold.

In the 1940's and early 1950's, the Surprise Lake Batholith was explored for tungsten by several companies. Numerous small showings were located. Black Diamond Tungsten Ltd. carried out stripping, trenching, pitting, and diamond drilling and drove a 122 m (400 foot) adit on a showing at the head of Boulder Creek.

More recently, exploration for Au, W, Sn, and Ag in skarns at the Surprise Lake Batholith-Cache Creek Group contact has been carried out by various companies including Cream Silver Mines Ltd. In the 1970's, the Surprise Lake Batholith was prospected for uranium and porphyry molybdenum, both of which were located in relatively minor amounts.

Recent (1986) work on the Yellow Jacket property by Homestake Mineral Development Company has returned encouraging results



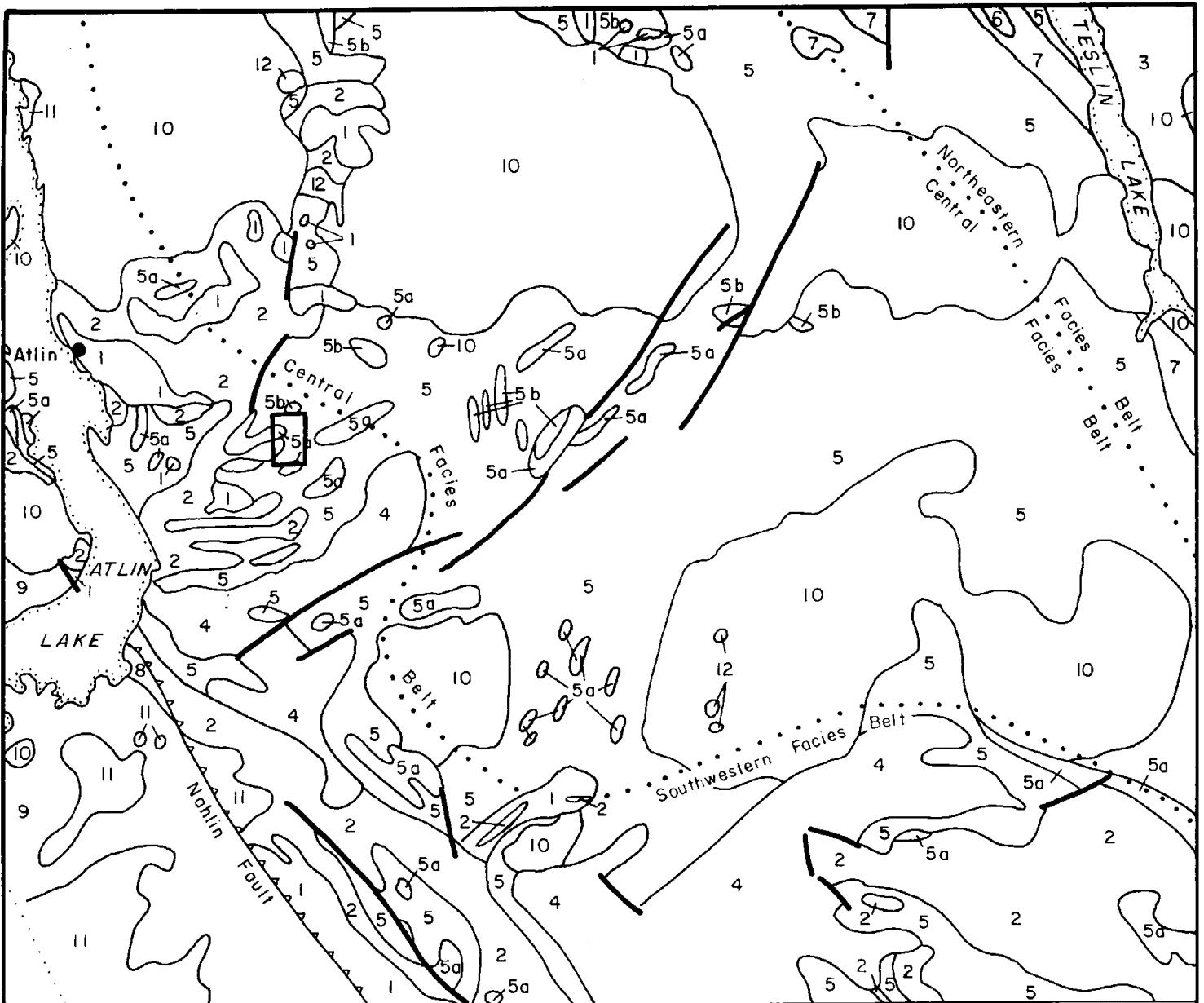
6.

including diamond drill intersections of 17.8 g/t (0.52 oz/ton) Au over 3 m (10 feet) and 10.6 g/t (0.31 oz/ton) Au over 3.4 m (11 feet). Similar results are reported from Claymore Resources Ltd.'s GV property.

4.0 REGIONAL GEOLOGY

The Atlin area is underlain by Upper Paleozoic Cache Creek Group rocks of the Atlin Terrane, which is made up of three northwest-trending facies belts. The northeast facies belt contains chert and pelite of the Kedahda Formation, overlain by French Range Formation carbonates. The central facies belt contains mainly Kedahda Formation chert and pelite with minor volcanic sandstone and local limestone. The southwestern facies belt, which underlies the Atlin gold camp area, consists of Nakina Formation mafic volcanics and associated alpine type ultramafic bodies grading upwards into Kedahda Formation chert and pelite which contains very large lenses of Horsefeed Formation carbonate. The Cache Creek rocks are intruded by Jurassic Coast Intrusions, granitic bodies, and Cretaceous alaskite and quartz monzonite. They are locally overlain by Tertiary and Pleistocene andesitic and basaltic volcanics.

The Atlin Terrane is separated from Lower Jurassic Laberge Group sediments and Upper Triassic and older metamorphic rocks to the southwest by thrust or reverse faults. On the northeast, the Atlin Terrane is bounded by near vertical faults and is in contact with metamorphosed Upper Paleozoic rocks and Mesozoic granitic rocks of the Omineca Crystalline Belt and with a narrow strip of Lower Mesozoic volcanic and sedimentary rocks. Small to large bodies of variably altered peridotite and serpentinite commonly are associated with the boundary faults.



G E O L O G Y

UPPER CRETACEOUS, QUATERNARY

12 Basalt, pyroclastic rock

UPPER CRETACEOUS AND/OR LOWER TERTIARY

11 Sandstone, pyroclastics, felsic to intermediate volcanics

MESOZOIC OR EARLY TERTIARY

10 Granitic rocks

Property boundary

LOWER AND MIDDLE JURASSIC

9 Laberge Gp. - sandstone, siltstone, pelite, conglomerate

UPPER TRIASSIC AND ? LOWER JURASSIC

8 Mafic to intermediate volcanics, volcanic sandstone, minor carbonate

PERMIAN

Cache Creek Group

7 Teslin Fm. - limestone, dolomitic limestone

6 French Range Fm. - mafic flows, pyroclastics

PERMO-CARBONIFEROUS

5 Kedahda Fm. - bedded chert, cherty pelite, pelite; some volcanic sandstone; local carbonate (5a) and mafic volcanic pods (5b)

4 Horsefeed Fm. - limestone, dolomitic limestone; local interbedded mafic flows (4a)

CARBONIFEROUS

3 Undifferentiated metamorphic rock

2 Nakina Fm. - mafic flows; minor diabase and pyroclastics

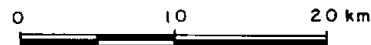
PERMO-CARBONIFEROUS

1 Variably serpentinized peridotite and dunite; local intrusions of gabbro and pyroxene diorite (1a)

S Y M B O L S

- Geological contact
- Fault
- ▲▲▲ High angle reverse fault

Reference: Monger, 1975.



AR 16561



HOLLYCROFT RESOURCE CORPORATION

REGIONAL GEOLOGY MAP

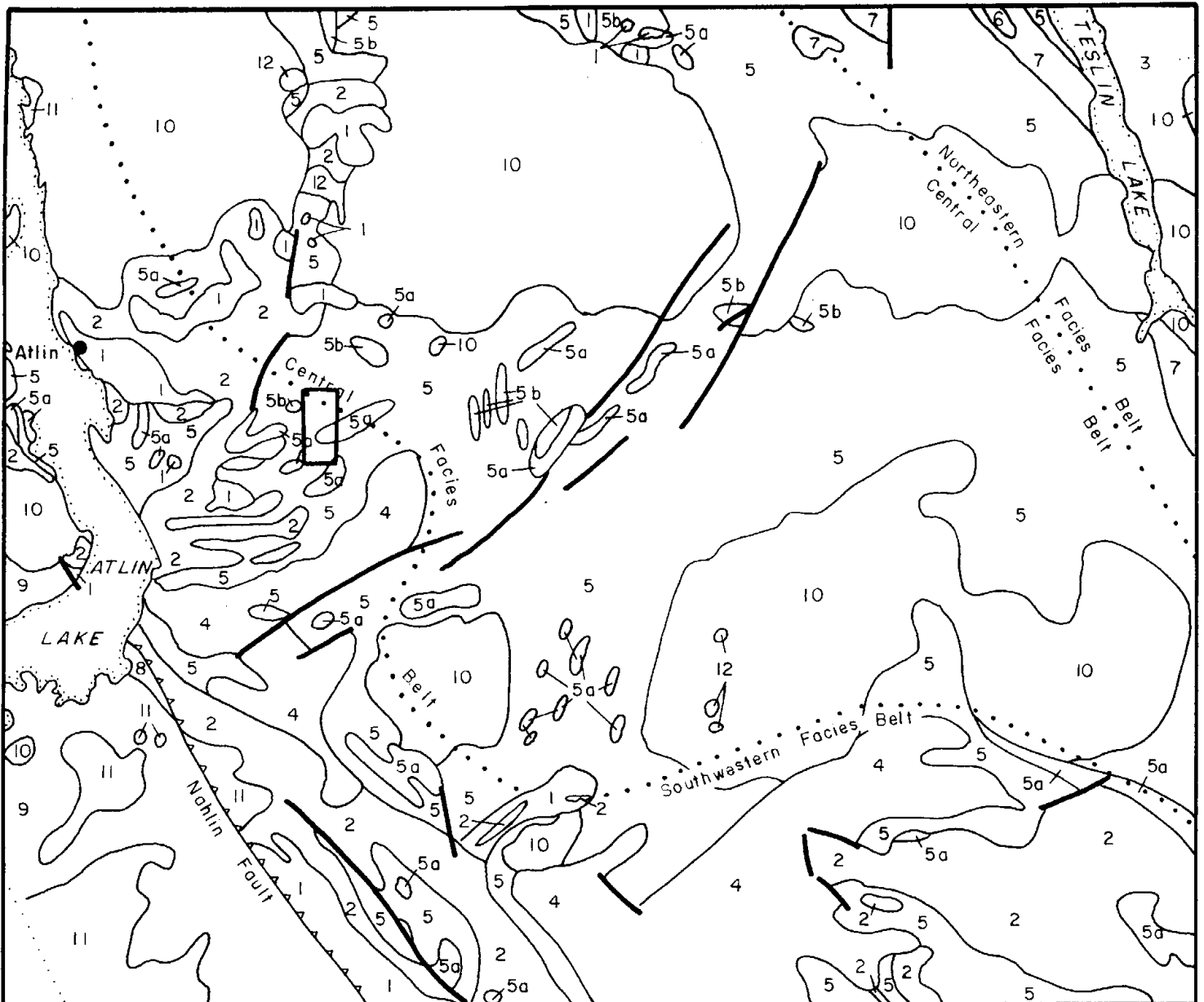
TR GROUP

ATLIN MINING DIVISION

Project No. V 242	By: T. N.
Scale: 1 : 500 000	Drawn: J. S.
Drawing No. 3	Date: MAY 1987.



MPH Consulting Limited



G E O L O G Y

UPPER CRETACEOUS, QUATERNARY

12 Basalt; pyroclastic rock

UPPER CRETACEOUS AND/OR LOWER TERTIARY

11 Sandstone, pyroclastics, felsic to intermediate volcanics

MESOZOIC OR EARLY TERTIARY

10 Granitic rocks

LOWER AND MIDDLE JURASSIC

9 Laberge Gp. - sandstone, siltstone, pelite, conglomerate

UPPER TRIASSIC AND ? LOWER JURASSIC

8 Mafic to intermediate volcanics, volcanic sandstone, minor carbonate

PERMIAN

Cache Creek Group

7 Testin Fm. - limestone, dolomitic limestone

6 French Range Fm. - mafic flows, pyroclastics

PERMO-CARBONIFEROUS

5 Kedahda Fm. - bedded chert, cherty pelite, pelite; some volcanic sandstone, local carbonate (5a) and mafic volcanic pods (5b)

4 Horsefeed Fm. - limestone, dolomitic limestone; local interbedded mafic flows (4a)

CARBONIFEROUS

3 Undifferentiated metamorphic rock

2 Nakina Fm. - mafic flows; minor diabase and pyroclastics

PERMO-CARBONIFEROUS

1 Variably serpentinized peridotite and dunite; local intrusions of gabbro and pyroxene diorite (1a)

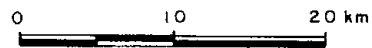
S Y M B O L S

— Geological contact

— Fault

▲▲▲ High angle reverse fault

Reference: Monger, 1975.



GOLDENROD RESOURCES AND TECHNOLOGY INC.

**REGIONAL GEOLOGY MAP
EVEREST TR GROUP**

ATLIN MINING DIVISION

Project No. V 242	By: T. N.
Scale: 1 : 500 000	Drawn: J. S.
Drawing No. 3	Date: MAY 1987.



MPH Consulting Limited

4.1 Cache Creek Group

4.1.1 Nakina Formation

The Nakina Formation is exposed only in the southwestern facies belt of the Atlin Terrane. Monger (1975) described the Nakina Formation in the Mt. Sentinel area as containing three minor rock types: basalt, diabase, and lithic tuff. The basalt is generally very fine grained to aphanitic and greenish-grey in colour. Locally pillows, pillow breccias, and aquagene tuffs are present. Diabase is greenish-grey in colour, tan weathering, uniform in texture, and consists of feldspar laths to 4 cm in a clinopyroxene-chlorite-clinozoisite groundmass, and may be gradational into basalt. Diabase sills or flows are up to 300 m thick. Some diabase sills appear to be partly gravity-differentiated, enabling type determination. Tuffs are typically yellow-green to grey-green in colour and contain lapilli-sized clasts of altered volcanic glass and basalt as well as feldspar crystals. The tuffs commonly contain calcite patches in the groundmass. The Nakina Formation volcanics contain fault-controlled(?) pods to small bodies of red to tan weathering serpentized peridotite which locally contain lenses or discontinuous dykes of Nakina Formation(?) diabase. Nakina Formation rocks are metamorphosed to the prehnite-pumpellyite facies. Diabase intrudes chert of the overlying Kedahda Formation whereas tuffs and basalt of the Upper Nakina Formation are intercalated with Kedahda Formation rocks. The Nakina Formation ranges from Lower Mississippian to Middle Pennsylvanian in age.

4.1.2 Kedahda Formation

The Kedahda Formation is the most widely exposed formation in the Atlin Terrane, occurring in all three facies belts. The Kedahda Formation in the Sentinel Mountain area is described by Monger (1975) as comprising thinly-bedded chert grading to argillite, interbedded greywacke, and pods of limestone. It is up to 1200 m thick and contains the Horsefeed Formation within it. The chert is grey in colour, varying to buff to red near volcanics and white where recrystallized by diabase, and form beds 2 to 8 cm thick separated by pelitic layers. Locally, 'ghosts' of radiolaria to 3 mm are common in the chert. Chert grades into dark grey argillite and locally into volcanic greenish greywacke composed mainly of fine-grained volcanic fragments with local occurrences of chert, limestone, and/or volcanic pebble conglomerates, or of lenses of chert, forms massive beds in the cherty rocks. Pods of limestone varying from thinly-bedded to massive also occur in the chert rocks. Limestones are medium grey to black in colour, locally dolomitic, and contain fossils including crinoids, brachiopods, fusilinids, and bryozoan fragments. The age of the formation is Early Mississippian to Late Permian.

4.1.3 Horsefeed Formation

The Horsefeed Formation is exposed only in the southwestern facies belt. The Horsefeed Formation in the Sentinel Mountain area, as described by Monger (1975), consists of pale grey, massive, partly recrystallized limestone. The lower part of the formation consists of calcarenitic limestone containing crinoids



and foraminifera, whereas the upper part varies from micritic to calcarenitic limestone with some fusulinids and crinoid columnals to aphanitic, hard, splintery limestone and dolomitic limestone with few fossils. The Horsefeed Formation is of Late Pennsylvanian to Late Permian age and is approximately 1000 m thick. It occurs within the Kedahda Formation, near the top.

4.1.4 French Range Formation

The French Range Formation is exposed only in the northeastern facies belt. In the Hall Lake area, Monger (1975) describes the formation as consisting of very fine-grained chert-like pyroclastics of agglomerate and lesser amounts of massive, fine-grained metabasalt. The French Range Formation is Lower Permian in age, up to 300 m thick, and is in gradational, probably interfingering, contact with the Kedahda and Teslin Formations.

4.1.5 Teslin Formation

The Teslin Formation is also only present in the northeastern facies belt. In the Hall Lake area, Monger (1975) describes it as comprising a basal tuffaceous calcarenite to calcarenitic limestone, a calcarenitic limestone with characteristic laminations of sparry calcite, and an upper fetid, hard, splintering, aphanitic limestone or dolomitic limestone, all with abundant fossils. The rocks are of Permian age, are up to 300 m thick, and may be overlain by cherts of the Kedahda Formation.

4.2 Structure and Metamorphism

The metamorphic grade of the Atlin Terrane is generally the prehnite-pumpellyite facies, with local variations up to blueschist or greenschist facies, or in some places hornfels. Style of deformation depends largely on rock type. Massive volcanic rocks, sandstone, and pyroclastics act competently, with faulting as the main style of deformation. Massive carbonate units are relatively competent, and are deformed by very large scale folding with complementary faults, or by faulting. Recrystallization and flowage, especially in non-dolomitic layers, occur locally. Pelite and chert are generally incompetent and are irregularly folded, crumpled, and faulted. A poorly-developed fracture cleavage may be present in pelitic layers.

Due to the wide differences in competency, disharmonic folding and faulting along contacts are common.

In most of the Atlin Terrane, only one period of regional deformation can be inferred. This deformation occurred in late Middle Jurassic time as the Atlin Terrane was underthrust from the southwest by Middle Jurassic and older rocks. In the Dease Lake area of the Atlin Terrane, however, clear evidence for an earlier phase of regional deformation, possibly of Permo-Triassic age, exists.

4.3 Economic Setting

The main economic type of deposit in the Atlin area is placer gold. The first placer claims were staked in 1898 and mining has



been carried out continuously ever since. Pine and Spruce Creeks have been the main producers, with Brick, Bowden, Ruby, Wright, Otter, and McKee Creeks also contributing. Placer tungsten (wolframite) was also located in Boulder Creek.

Low grade porphyry molybdenum mineralization occurs in the Surprise Lake Batholith and the Boulder Creek area; numerous minor uranium showings also occur throughout the batholith.

Numerous barren or weakly auriferous quartz veins in altered serpentinite and metabasalt are probably the source of the placer gold. Some of the quartz veins contain high-grade gold near surface, but values decrease rapidly with depth.

Asbestos, Cu, Ni, and jade occur in, or are associated with, ultramafic bodies east of Dease Lake; however, these ultramafics are slightly different from the Atlin Terrane alpine-type ultramafic bodies. Thin veins of cross-fibre chrysotile asbestos are common in the Atlin ultramafics, and veins up to 1.2 m wide of high-grade magnesite are also known.

Of particular interest are the low concentrations of Au in quartz-carbonate altered peridotite and serpentinite in the Atlin area. Previously considered uneconomic, these deposits have become more attractive with the increase in the price of gold. Standard Gold Mines Ltd. is exploring an occurrence of this type on their Shuksan property. Assays of up to 329 g/t Au are reported from the gold-bearing quartz veins. The average assay for 23 samples was 42.0 g/t Au (uncut).



Claymore Resources Ltd.'s GV property was initially explored for gold-bearing altered ultramafic bodies, but the best results were obtained from the contact of a body of "rhyolite" with argillite. Diamond drilling results of up to 9.39 g/t Au, 8.9 g/t Ag over 3 m were obtained from quartz veined argillite near the contact, while a grab sample result of 11.2 g/t Au was obtained from rhyolite. Results from drill holes on the ultramafics were erratic and low, the best being 3 m of 4.46 g/t Au.

Both the GV and Shuksan properties lie within the area that J.M. Black, a B.C. Department of Mines geologist, suggested contained the source (or sources) of the placer gold in McKee, Spruce, Otter, and Wright Creeks. Black identified the potential source area after about four months of field work in 1948 and 1950 (Aitken, 1985).

On the Yellow Jacket property, diamond drilling by Homestake Mineral Development Company has intersected gold-bearing zones including 3 m of 17.8 g/t Au including 2 m of 24.7 g/t Au; and 3.4 m of 10.6 g/t Au including 1.8 m of 18.9 g/t Au.



5.0 1986 ASSESSMENT WORK

Assessment work including reconnaissance geological mapping, rock sampling, and silt sampling was carried out on the TR claims from August 6 to 10, 1986 by T.G. Hawkins, P.Geol. of MPH Consulting Limited. Follow-up lithogeochemical analyses for gold by AA and 30 other elements by ICP on 12 rock samples and 3 silt samples, whole rock analyses (of 6 rock samples) and one petrographic analysis were carried out after completion of the fieldwork.

5.1 Property Geology, Mineralization and Lithogeochemistry

The TR claims are underlain mainly by Carboniferous to Permian metasedimentary and minor volcanic rocks of the Cache Creek Group, most significantly the Kedahda Formation (Figure 4). The property is located along the transition from a carbonate-dominated facies in the southwest to a chert and pelite-dominated facies in the northeast, a major regional facies change, mostly within the Kedahda Formation (Figure 3).

The following description of property geology is based primarily on traverse summaries from August 1986 fieldwork.

Much of the project area is underlain by glacial deposits such as terminal moraines from valley glaciers, and bedrock is not well exposed. As Spruce Creek is a well-known placer gold area, further investigation of these unconsolidated deposits may be warranted.



Many of the outcrops on the TR claims belong to a local carbonate unit within the Kedahda Formation.

Near the common corner post of the TR 1 and TR 4 claims, the best outcrop is on a 1550 m knob where samples 058, 059, 060 and 061 were collected. There a package of mixed volcanic and sedimentary rocks vary from metamorphosed greywacke and/or hornfels to felsic cherty tuff and sericite schist. The unit commonly contains pyrite, abundant locally. Quartz veins (up to 3 cm), such as sample 058, are moderately common near the top of the hill. Boulders (greater than 0.03 m) in rubble show evidence of increasing quartz veins and stringers, particularly toward the felsic and sericite schist unit.

Samples 058 to 061 were collected from a cherty tuff unit, with limonitic staining after weathered pyrite, and sheared white quartz veins. Pyrite occurs as disseminated cubes (up to 1 mm) and as fine-grained, fracture-controlled mineralization.

Lithogeochemical results obtained from this area include 1.0 ppm Ag and 64 ppm Pb (sample 058); 4 ppm Mo (sample 059); 10 ppb Au and 2410 ppm Ba (sample 060); and 80 ppb Au (sample 061).

The geological unit from which samples 058 to 061 were taken is a rusty-weathering, sulphide-bearing siliceous schist, presumably part of the Kedahda Formation, but not usually included in descriptions of typical Kedahda Formation. It is suggested that it is perhaps a metamorphosed felsic volcanic or tuff.

An outcrop of carbonate in the same area is composed of thinly bedded to massive black limestone (bedding strikes northwest and



dips moderately to steeply southwest). Ankeritic alteration occurs along shear zones, and minor stringer carbonate is also present.

In the southwestern area of the TR 1 and TR 4 claims, outcrops are scarcer, but rubble indicates chert and pelite of the Kedahda Formation, such as sample 062. Outcrop in a stream gully near the western boundary of the TR 1 claim is of massive to variably bedded, siliceous pelite and chlorite schist. Jointing and cleavage appears to be persistent in this area; bedding is approximately east-west striking with a southerly dip. Weathered surfaces on boulders of stretched conglomerate(?) show large clasts of siliceous cherty rocks, fully stretched and boudinaged, in a matrix of sheared chloritic schist. Some fragments are a few metres long and up to 1 m wide.

Sample 063 is from carbonate-altered(?) limestone, or recrystallized, thinly bedded, fine-grained material to more coarsely crystalline carbonate. Iron carbonate stringers and solution fractures are 3-5 cm thick. Results of 6 ppm Bi, 7.0 ppm Cd, 40 ppm Ga, 5010 ppm P, 20 ppm Pb, and 142 ppm Zn have been obtained.

The area of limestone outcrop is more extensive than previously estimated. Bedding appears to be east-west with flat to moderate dips both north and south. Shear zones and joints persistently trend 20° across the limestone unit, and are the structural control for solution fractures and alteration.

A few outcrops have been exposed on the TR 4 claim by former placer mining efforts. Samples of Kedahda Formation metasedimentary rocks include sample 064 black pelite to argillaceous



chert with 1-2% pyrite and 100 ppm Cu; and sample 065 pelitic and granular layered and cross-bedded metasediment with more or less weathered pyrite.

Buff-weathering, massive to schistose felsic rock with mostly-weathered pyrite (samples 066 and 067) along the road is very similar to the unit on the knob south of the claim block (sample locality 058 to 061). These two samples, the first (066) of more massive siliceous material with fine, dark-coloured quartz veins up to 1 cm, and the second (067) of a felsic, siliceous, sericitic schist with finely disseminated and remnant coarse cubic pyrite, yielded high barium values of 2010 and 1790 ppm, respectively.

Farther to the southeast (near the claim boundary between TR 3 and TR 4 claims), sample 068 was collected of foliated calcareous and carbonaceous (graphitic) pelite with quartz carbonate stringers and yielded 22 ppm Mo. This unit is overlain by micaceous quartzite and carbonate of the Kedahda Formation.

The final rock sample (069) was collected on the neighbouring GV property because it resembled rocks exposed near the southern part of the TR claim block (sample locality 058 to 061). It yielded the highest gold value, 960 ppb, as well as the highest zinc, 176 ppm. Similarity between this rock and rocks believed to be underlying the TR claims suggests that further exploration and sampling of similar rocks on the property may be warranted.

Evidence for rocks of both lode gold types common to the Atlin placer area occurs on the TR claims - both weathered, mineralized quartz veins and quartz-carbonate altered rocks - although definite outcrop is rare.

5.2 Petrography

One sample from near the TR claim area was selected for petrographic analysis because of its similarity to known auriferous rocks. Sample 061 was observed in thin section to be a metamorphosed, pyritic quartz-rich pelitic sedimentary rock, or possibly a recrystallized, silicified felsic volcanic rock, although the former interpretation is preferred.

The rock consists mainly of recrystallized quartz in a fine-grained, polygonal granoblastic texture, with about 20% brownish biotite altering to chlorite, and 5-7% pyrite (including weathered pyrite and iron oxide minerals). The pyrite occurs with biotite and larger-grained quartz, some of which was introduced as quartz vein material. Pyrite growth postdates quartz veinlets but predates the final recrystallization of quartz. The presence of biotite indicates a higher metamorphic grade than the regional chlorite grade reported, and may indicate higher-temperature hornfelsing due to proximity to an unknown intrusive contact. Alteration of biotite to chlorite indicates later retrogression or alteration.

Contemporaneous pyrite, biotite, and coarse quartz may indicate mineralization during contact metamorphism and/or metasomatism accompanied by quartz veining from intrusion of plutonic rocks, presumably during the Jurassic.

5.3 Whole Rock Analyses

Whole rock analyses were performed on six samples; results give percentages of nine major oxides and volatiles (loss on ignition) (Appendix IV).

The samples are fairly high in silica (from 58.5 to 95.0%). As most of them are siliceous metasedimentary rocks, evaluation in terms of a volcanic rock type model is inappropriate. However, a comparison of the analyses in terms of gold values is interesting.

Sample 061 (see also thin section description) yielded 80 ppb Au. It contains 77.0% SiO_2 , 8.3% Al_2O_3 , 1.5% MgO , 4.2% Fe_2O_3 , 0.1% CaO , 3.5% K_2O , 0.4% Na_2O , 0.3% TiO_2 , and 0.1% MnO , as well as 3.6% L.O.I. for a total of 99.0.

The other auriferous sample (069, from a neighbouring property), yielded 960 ppb Au and 176 ppm Zn. Its whole rock analysis is: 58.5% SiO_2 , 13.2% Al_2O_3 , 3.1% MgO , 6.5% Fe_2O_3 , 5.5% CaO , 3.4% K_2O , 0.3% Na_2O , 1.0% TiO_2 , and 0.2% MnO , with 9.6% L.O.I. for a total of 101.3%.

The most notable chemical similarity between these two rocks, besides common gold values, is that both are high in potassium, with 3.5 and 3.4% K_2O , double the next highest value. This could be due to potassic alteration accompanying gold mineralization.

They are also similar in iron content (4.2 and 6.5%).

However, the differences may be significant in regard to the likelihood of gold mineralization. The rock with the higher gold



value (960 ppb Au in sample 069 vs. 80 ppb Au in sample 061) is lower in silica by 20%, higher in alumina by 5%, higher in magnesia, much higher in calcium, higher in titanium, and also in L.O.I. The extremely high CaO content of 5.5% compared to 0.4% for the next highest in the sample suite may be the key factor, implying that carbonate alteration as well as potassic alteration is significant.

More whole rock analyses are required for a definite conclusion, but it appears that gold values are associated with a combination of potassic and carbonate alteration in generally siliceous rocks.

5.4 Silt Sampling

Three silt samples were collected in the area of the TR claims, draining mainly Kedahda Formation metasedimentary rocks. One (GH-SS1) shows a slightly elevated silver value of 0.4 ppm, and significant nickel (142 ppm). All silt samples are higher in chromium and nickel than rock samples analyzed, and somewhat higher in magnesium. Values of 224, 156, and 149 ppm Cr were obtained from GH-SS1, GH-SS2, and GH-SS3. The silt sample geochemistry may reflect eroded serpentinitized ultramafic rocks which are possibly present but not exposed on the property, as they would be less resistant than siliceous metasedimentary rocks or carbonate units. If this is so, it makes the TR claim area more promising in terms of gold exploration, because of the association of gold with carbonate-altered serpentinites.

6.0 PROPOSED WORK PROGRAM

Reconnaissance geological assessment work on and near the TR claims has shown lack of bedrock outcrop on the property, but outcrop on adjacent properties of rocks similar to known auriferous rocks in the area.

The TR claims are in a very favourable environment for gold mineralization, located on Spruce Creek, a major placer gold producer in the Atlin area.

Further geological exploration is warranted due to the location of the claims in a gold producing area.

Soil sampling along widely-spaced lines, with sample stations at 25 m intervals, would be useful in order to outline possible anomalies in areas lacking outcrop. Magnetometer surveys could be used to search for possibly ultramafic bodies, and VLF-EM surveys to delineate fault zones and other mineralized structures.

Further geological mapping, rock sampling, and trenching where location of bedrock is possible are also proposed.

Whole rock analyses and petrographic studies would aid in identification of rock types, mineralization, and alteration.

A Phase I exploration program consisting of geological mapping and sampling, soil sampling, magnetometer and VLF-EM surveys, and possible trenching, is proposed. At an estimated cost of \$25,000, the field program is expected to take approximately 2 weeks to complete, with analyses and report writing to follow.

Contingent on favourable results, further geophysical surveys (including IP) and diamond drilling may be recommended.



7.0 CONCLUSIONS

1. Reconnaissance geological mapping, rock sampling, and silt sampling for assessment purposes have been completed on the TR claims (TR Group and Everest TR Group).
2. The TR claims are located on Spruce Creek in the historical gold mining area of Atlin, B.C., a favourable environment for gold exploration.
3. The TR claims are underlain by Carboniferous to Permian metasedimentary and metavolcanic rocks of the Cache Creek Group, and in particular the Kedahda Formation. These rocks are host to numerous gold-bearing quartz vein deposits in the area.
4. Outcrops near the TR claims, and striking toward them, are of metamorphosed, mixed volcanic and sedimentary rocks with pyritic quartz veins, very similar to known auriferous rocks in the Atlin area.
5. A limited rock sampling program on and near the TR claims yielded results of up to 80 ppb Au (sample 061); 1.0 ppm Ag and 64 ppm Pb (sample 058); 100 ppm Cu (sample 064); 142 ppm Zn, 6 ppm Bi, 7.0 ppm Cd, 40 ppm Ga, and 5010 ppm P (sample 063); 22 ppm Mo (sample 068), and 2410 ppm Ba (sample 060).
6. An auriferous rock sample from the neighbouring GV property was also analyzed due to its similarity with rocks on the TR claims, and yielded 960 ppb Au and 176 ppm Zn (sample 069).



7. Whole rock analyses confirm the siliceous composition of the rocks collected, and suggest a correlation between potassic alteration and/or a combination of potassic and carbonate alteration with gold values.
8. Petrographic analysis of one sample indicates association of pyrite growth with quartz veins and biotite, and shows postdeformational metamorphic recrystallization.
9. Silt sampling results are high in both Cr and Ni, indicating possible subsurface ultramafic rocks. Carbonate-altered ultramafic rocks host known gold deposits in the Atlin area.
10. A Phase I exploration program, consisting of geological mapping and sampling, soil sampling, magnetometer and VLF-EM surveys, and possible trenching, with follow-up analyses, whole rock analyses, and petrographic studies, is recommended at an estimated cost of \$25,000.

8.0 RECOMMENDATIONS

1. Reconnaissance geological assessment work has been completed on the TR claims near Atlin, B.C. Further geological exploration is warranted due to the location of the property within a past- and presently-producing gold mining area.
2. Further geological mapping and rock sampling, with possible trenching in areas where bedrock may be uncovered, is recommended.
3. Soil sampling is recommended at 25 m station intervals on three widely-spaced lines in order to cover large areas of limited outcrop, and in order to test the feasibility of blanket soil geochemistry.
4. Similarly spaced magnetometer and VLF-EM test surveys are recommended to delineate subsurface ultramafic bodies and mineralized structures. Such surveys have been successful elsewhere in the Atlin area for locating gold-bearing deposits.
5. Whole rock analyses and petrographic studies are recommended for identification of rock-types, mineralization, and alteration.
6. A Phase I geological exploration program consisting of the work outlined above is recommended at an estimated cost of \$25,000.



26.

7. Contingent on encouraging results from Phase I, further phases of exploration, consisting of geophysical surveys (including IP) and diamond drilling may be recommended.

Respectfully submitted,

MPH Consulting Limited

A handwritten signature in cursive script, appearing to read 'T. Neale'.

T. Neale, B.Sc.

A handwritten signature in cursive script, appearing to read 'T.G. Hawkins'.

T.G. Hawkins, P.Geol.

May 7, 1987

**CERTIFICATE**

I, T. Neale, do hereby certify:

1. That I am a graduate in geology of the University of British Columbia (B.Sc. 1978).
2. That I have practised as a geologist in mineral exploration for eight years.
3. That the opinions, conclusions, and recommendations contained herein are based on field work carried out by MPH Consulting Ltd. personnel in August, 1986 and library research work.
4. That I own no direct, indirect, or contingent interest in the area, the subject property, or shares or securities of Hollycroft Resource Corporation or Goldenrod Resources & Technologies Inc. or associated companies.

T. Neale, B.Sc.

Vancouver, B.C.

May 7, 1987



CERTIFICATE

I, T.E. Gregory Hawkins, do hereby certify:

1. That I am a Consulting Geologist with business offices at 2406 - 555 West Hastings Street, Vancouver, B.C. V6B 4N5.
2. That I am a graduate in geology of The University of Alberta, Edmonton (B.Sc. 1973), and of McGill University, Montreal, (M.Sc. 1979).
3. That I have practised within the geological profession for the past sixteen years.
4. That I am a Fellow of the Geological Association of Canada and a Professional Geologist registered in the Province of Alberta.
5. That the opinions, conclusions and recommendations contained herein are based on field work carried out by me on the property in August 1986.
6. That I own no direct, indirect, or contingent interest in the area, the subject property, or shares or securities of Hollycroft Resource Corporation or Goldenrod Resources & Technologies Inc. or associated companies.


T.E. Gregory Hawkins, P.Geol.

May 7, 1987

REFERENCES

- Aitken, J.D. 1955: Atlin, British Columbia, GSC Paper 54-9.
- Aitken, J.D. 1959: Atlin Map-Area, British Columbia, GSC
Memoir 307.
- Monger, J.W.H. 1975: Upper Paleozoic Rocks of the Atlin
Terrane, Northwestern British Columbia and
South-Central Yukon, GSC Paper 74-47.

Appendix I

LIST OF PERSONNEL

and

STATEMENT OF EXPENDITURES



**List of Personnel and
Statement of Expenditures
Goldenrod Resources & Technology Inc. and
Hollycroft Resource Corporation**

Field Costs

Personnel:

T.G. Hawkins, P.Geol.
4 days @ \$475 \$1,900.00

Equipment Rental:

4WD Truck 566.16
Helicopter 425.66

Expenditures:

Meals and Accommodation 439.74
Transportation 746.00
Analyses-
12 rocks (Au, ICP @ \$11.95 143.40
3 silts (Au, ICP @ 11.95 35.85
6 whole rock @ 20.00 120.00
Rocks cut 24.00
Expenses (Maps) 25.68
Thin section interpretation 50.00

1,584.67

Field Costs Subtotal 4,476.49

Report Costs

Drafting 4.5 hrs @ 20.00 90.00
Typing 250.00
Copying 100.00
Maps 15.00
T.G. Hawkins, P.Geol. 1 days @ \$475 475.00
J.S. Getsinger, Ph.D. 4 days @ 350 1,400.00
B.Y. Thomae, B.Sc. 5 days @ 250 1,250.00
T. Neale, B.Sc. 2 days @ 350 700.00

Report Cost Subtotal 4,280.00

Administration @ 15% on \$3,031.49 454.73

Total \$9,211.22

Costs have been applied as follows:

50% (\$4605.61) to Everest TR Group - Goldenrod Resources & Tech.
50% (\$4605.61) to TR Group - Hollycroft Resource Corporation



Appendix II

ROCK SAMPLE DESCRIPTIONS

and

LITHOGEOCHEMICAL RESULTS

TR GROUP (TR 1 and 2 CLAIMS)
and
EVEREST TR GROUP (TR 3, 4, and 5 CLAIMS)

ROCK SAMPLE DESCRIPTIONS

Sample Number	Description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Other ppm
058	Grab sample of rubble crop to the south of TR2 claim, with 3 cm white quartz vein with minor limonite and vugs after pyrite(?) hosted in Kedahda Formation silicified pelite. The host rock is black, massive, fine-grained material with minor limonite blebs after pyrite(?).	5	<u>1.0</u>	27	<u>64</u>	50	
059	A larger block of white crystalline quartz vein material from 30 cm boulder hosted by more felsic unit. None of the host is included in the material. Minor amounts of sericite and carbonate are emplaced along joint planes. Limonite is present along these surfaces and may or may not be related to pyrite. Also very minor amount of black chlorite(?) or biotite.	5	0.2	8	10	14	
060	Host rock to 061, found in rubble crop in same location from boulders of similar dimensions. Material is fine, sugary quartz, massive with similar jointing and attendant limonite staining. Ubiquitous disseminated rusty cubes of weathered pyrite (less than 1 mm) are evident throughout the rock and are likely the cause of the limonite. No unit fitting this particular description appears to be included in the Kedahda Formation section.	10	0.2	24	8	18	<u>2410</u> Ba



Sample Number	Description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Other ppm
061	Grab sample from large blocky rubble crop area, along strike(?), 150 m from 060, therefore possibly the same type of unit. The rock is a rusty weathering, light greyish siliceous schist with abundant disseminated and fracture controlled pyrite, up to 3% and 1 mm in size. This unit is 30 m+ in thickness and of local importance due to sulphide content and due to the fact that it does not appear to be included in previous descriptions of geology.	<u>80</u>	0.2	40	6	56	
062	Traverse to the west and south of TR 2, approximately along claim boundary. Sample 062 is of cherty, argillaceous pelite, very finely banded to massive, forming 10 m-wide float terrain in rubble slope and within what appears to be a package of Kedahda Formation pelites and cherts.	5	0.2	52	8	114	
063	Of carbonate altered limestone, or recrystallization of thinly-bedded, fine-grained material to more coarse crystalline, with iron carbonate and like these solution fractures are 3-5 cm in thickness. The area of limestone outcrop is far more extensive than originally estimated. Bedding appears to be east-west, with gentle to moderate dip both north and south. The overprinting of the 20°-trending shear and joint direction persists through the limestone unit and is the direction on which these alteration and solution fractures are emplaced.	5	0.2	19	20	142	5010 P
064	TR 4 claim. Taken in road outcrop as exposed by placer mining. Wavy, banded, folded and sheared Kedahda Formation composed of black chert to cherty pelite and argillaceous chert with 1-2% pyrite, creating a very rusty weathering outcrop.	5	0.2	<u>100</u>	6	32	



Sample Number	Description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Other ppm
065	Also outcrop of rusty weathering Kedahda Formation as exposed by placer mining. However, this material is more pelitic and granular, wavy banded and cross-bedded sediment with minor pyrite and limonite after pyrite. Approximately 0.75 km further down the road, a sub-outcrop of buff weathering, more felsic material, both schistose and massive, with pyrite and remnant pyrite plugs with limonite; very similar to unit seen on the big hill south of the claims.	5	0.2	19	10	110	
066	Massive siliceous material with fine black quartz up to 1 cm in thickness.	5	0.2	78	10	32	
067	A second sample taken of a felsic, siliceous, sericite(?) schist with finely disseminated pyrite and coarse cubic pyrite remnants.	5	0.2	76	6	30	
068	Grab sample of highly foliated calcareous and graphitic pelite with minor fracturing and quartz carbonate stringers. Limonite is again present; believed to be after pyrite. This unit directly underlies a micaceous quartzite which is again directly overlain by the limestone unit of the Kedahda Formation. Dips are gentle, in the order of 10° . It would appear that the terrain underlain by the carbonate unit (that strikes east-west approximately and dips to the south) continues across the northern portion of the TR 4 claim from the west side.	5	0.2	51	12	176	





Appendix III

THIN SECTION DESCRIPTION



PETROGRAPHIC REPORT

by J.S. Getsinger, PhD

J. S. Getsinger

For Hollycroft Resource Corp. **Date** August 25, 1986
Project V242 - ATLIN **Collector** Greg Hawkins
Sample V242-061 **Date Collected** August 1986

Location: Near Atlin, British Columbia, TR claims

Rock Type: Pyritic metasiltstone or silicified felsic volcanic

Lithochemistry: 80 ppb Au, 260 ppm Ba; 77% SiO₂, 8.3% Al₂O₃, 1.5% MgO, 4.2% Fe₂O₃, 0.1% CaO, 3.5% K₂O, 0.4% Na₂O, 0.3% TiO₂, 0.1% MnO, and 3.6% L.O.I.

Hand Specimen: Hard, brown-rusty weathering, pale purplish-grey, fine-grained (<0.1 mm) rock with up to 5% pyrite cubes (<1 mm) disseminated and on fractures. Cut surface shows cloudy, mottled look. Pyrite cubes crosscut vague layer boundaries.

THIN SECTION (Polished No):

% (Approx.) MINERALS

60-70%	Quartz - very fine grained, in groundmass, and in thin veinlets, mosaic, recrystallized after pyrite growth
20%	Biotite - brownish mica, medium birefringence, altering to chlorite; dark mineral in core of zone; in layers with coarser quartz, pyrite
10%	Chlorite - green micaceous mineral, low birefringence, mainly after biotite
Trace	Zircon(?) - pleochroic haloes in biotite
5- 7%	Pyrite - pyrite cubes crosscut quartz veinlets; mosaic quartz surrounds pyrite. Some are weathered to reddish hematite(?) ± other iron oxide minerals; possibly some rutile(?)

Rock Textures/Structures: Irregular compositional layers are somewhat differentiated: biotite occurs with larger-grained quartz and pyrite. Random orientation of mica and euhedral pyrite suggest crystallization outlasting deformation.

Protolith: Quartz-rich pelitic sediment, fine-grained, or possibly felsic volcanic(?).

Alteration/Mineralization: Could be silicified (quartz-flooded); pyrite growth postdates quartz veinlets but predates final recrystallization of quartz. Chlorite is a reaction product of biotite.

Conditions of Formation: Fine-grained siliceous rock has been metamorphosed to hornfels or amphibolite facies, then partially retrograded to chlorite zone.



Appendix IV

CERTIFICATES OF ANALYSIS

ROSSBACHER LABORATORY LTD.

2225 S. SPRINGER AVENUE
BURNABY, B.C. V5B 3N1
TEL : (604) 299 - 6910

CERTIFICATE OF ANALYSIS

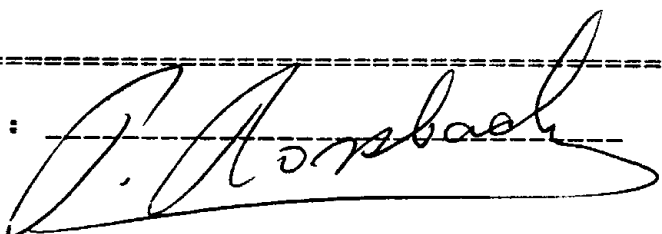
TO : MPH CONSULTING LTD.
301-409 GRANVILLE STREET
VANCOUVER B.C.

CERTIFICATE#: 86360
INVOICE#: 6631
DATE ENTERED: 86-08-21
FILE NAME: MPH86360
PAGE # : 1

PROJECT: V 243 2
TYPE OF ANALYSIS: GEOCHEMICAL

RE FIX	SAMPLE NAME	PPB Au
T	058	5
T	059	5
T	060	10
T	061	80
T	062	5
T	063	5
T	064	5
T	065	5
T	066	5
T	067	5
T	068	5
T	069	960
T	GH 551	5
T	GH 552	5
T	GH 553	5

CERTIFIED BY :



RECEIVED 100 2 2 1986



Chemex Labs Ltd.

-Analytical Chemists -Geochemists -Registered Assayers

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J2C1

Phone: (604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : RESEARCHER LABORATORY LIMITED

2225 SOUTH SPRINGER AVENUE
BURNABY, B.C.
V5B 3H1

CERT. # : A8616934-001-A
INVOICE # : I8616934
DATE : 3-SEP-86
P.O. # : NONE
~~4243~~ V242

Semi quantitative multi element ICP analysis

Nitric-Aqua-Regia digestion of 0.5 gm of material followed by ICP analysis. Since this digestion is incomplete for many minerals, values reported for Al, Sb, Ba, Be, Ca, Ga, Ge, La, Mg, K, Na, Sr, Ti, Tl, W and V can only be considered as semi-quantitative.

COMMENTS :

Sample Description	Al	Ag	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Ti	Tl	U	V	W	Zn		
	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm		
058	0.17	1.0	<10	70	<0.5	4	0.03	<0.5	5	94	27	1.12	<10	0.03	<10	0.08	110	<1	<0.01	16	80	64	<10	2	<0.01	<10	<10	2	<10	50	--	--
059	0.05	0.2	<10	30	<0.5	<2	0.02	<0.5	<1	116	8	0.27	<10	<0.01	<10	0.02	66	4	<0.01	3	30	10	<10	3	<0.01	<10	<10	2	<10	14	--	--
060	0.07	0.2	<10	2410	<0.5	<2	<0.01	<0.5	1	74	24	0.49	<10	0.11	<10	0.16	170	<1	<0.01	3	20	8	<10	8	<0.01	<10	<10	5	<10	18	--	--
061	0.22	0.2	10	250	<0.5	<2	<0.01	<0.5	6	70	40	3.21	<10	0.66	<10	0.65	83	<1	0.01	20	170	6	<10	11	0.05	<10	<10	25	<10	56	--	--
062	0.32	0.2	10	70	<0.5	<2	0.14	<0.5	9	70	52	4.73	<10	0.12	<10	2.02	618	<1	0.02	16	830	8	<10	11	0.02	<10	<10	45	<10	114	--	--
063	0.04	0.2	20	40	<0.5	6	35.58	7.0	3	40	19	0.37	40	<0.01	<10	0.27	251	2	<0.01	12	5010	20	10	<1	<0.01	<10	<10	9	<10	142	--	--
064	0.72	0.2	10	200	<0.5	<2	0.16	<0.5	4	65	100	1.21	<10	0.42	10	0.49	254	<1	0.01	12	60	6	<10	3	0.04	<10	<10	14	<10	32	--	--
065	0.30	0.2	<10	150	<0.5	<2	0.26	<0.5	8	32	19	2.71	<10	0.14	10	0.03	421	3	<0.01	36	250	10	<10	7	<0.01	<10	<10	7	<10	110	--	--
066	0.44	0.2	<10	2010	<0.5	<2	0.01	<0.5	4	103	78	0.98	<10	0.21	<10	0.30	268	<1	0.01	16	90	10	<10	11	0.02	<10	<10	7	<10	32	--	--
067	0.92	0.2	10	1790	<0.5	<2	0.01	<0.5	2	77	76	1.61	<10	0.48	10	0.71	507	1	0.01	6	100	6	<10	12	0.06	<10	<10	18	<10	30	--	--
068	0.21	0.2	<10	160	<0.5	<2	0.07	<0.5	5	71	28	2.06	<10	0.12	<10	0.02	102	22	<0.01	19	580	10	<10	9	<0.01	<10	<10	3	<10	22	--	--
069	0.21	0.6	40	120	<0.5	<2	3.69	<0.5	15	55	51	3.99	10	0.14	<10	1.34	1406	2	<0.01	20	1090	12	<10	91	<0.01	<10	<10	7	<10	176	--	--
GH 551	1.22	0.4	20	110	<0.5	<2	0.29	<0.5	22	224	32	2.91	<10	0.05	<10	1.90	1046	1	0.01	142	420	12	<10	9	0.09	<10	<10	47	<10	78	--	--
GH 552	1.39	0.2	10	90	<0.5	<2	0.31	<0.5	15	156	42	2.81	<10	0.10	<10	1.27	543	1	0.01	90	520	12	<10	12	0.05	<10	<10	38	<10	86	--	--
GH 553	1.07	0.2	10	100	<0.5	<2	0.21	<0.5	14	149	37	2.50	<10	0.08	<10	1.07	1048	2	0.01	69	340	12	<10	10	0.08	<10	<10	28	<10	66	--	--

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Hunt Bickler

ROSSBACHER LABORATORY LTD.

2225 S. SPRINGER AVENUE
BURNABY, B.C. V5B 3N1
TEL : (604) 299 - 6910

CERTIFICATE OF ANALYSIS

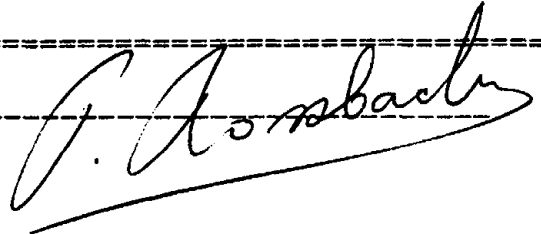
TO : MPH CONSULTING LTD.
301-409 GRANVILLE STREET
VANCOUVER B.C.
PROJECT: V 243 242
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 86360.A
INVOICE#: 6669
DATE ENTERED: 86-08-27
FILE NAME: MPH86360.A
PAGE # : 1 A

PRE FIX	SAMPLE NAME	% SiO2	% Al2O3	% MgO	% Fe2O3	% CaO	% K2O	% Na2O	% TiO2	% MnO
A	060	95.0	2.6	0.5	0.6	0.2	0.7	0.3	0.1	0.1
A	061	77.0	8.3	1.5	4.2	0.1	3.5	0.4	0.3	0.1
A	062	65.5	13.6	3.9	6.4	0.4	1.7	2.7	0.5	0.1
A	066	92.5	4.0	0.8	1.4	0.2	1.0	0.7	0.1	0.1
A	067	85.0	6.5	1.6	2.1	0.2	1.7	0.9	0.2	0.1
A	069	58.5	13.2	3.1	6.5	5.5	3.4	0.3	1.0	0.2

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2225 S. SPRINGER AVENUE
BURNABY, B.C. V5B 3N1
TEL : (604) 299 - 5910

CERTIFICATE OF ANALYSIS

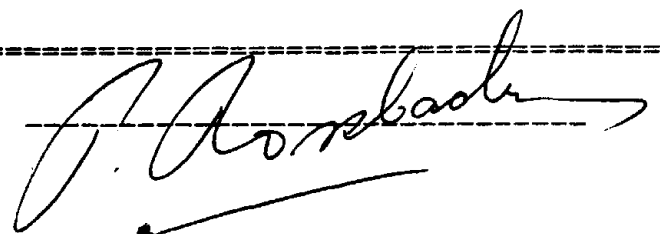
TO : MPH CONSULTING LTD.
301-409 GRANVILLE STREET
VANCOUVER B.C.
PROJECT: V 243 242
TYPE OF ANALYSIS: GEOCHEMICAL

CERTIFICATE#: 86360.A
INVOICE#: 6669
DATE ENTERED: 86-08-27
FILE NAME: MPH86360.A
PAGE # : 1 B

PRE FIX	SAMPLE NAME	% LOI	% TOTAL
A	060	0.7	100.8
A	061	3.6	99.0
A	062	4.0	98.8
A	066	0.9	101.7
A	067	2.0	100.3
A	069	9.6	101.3

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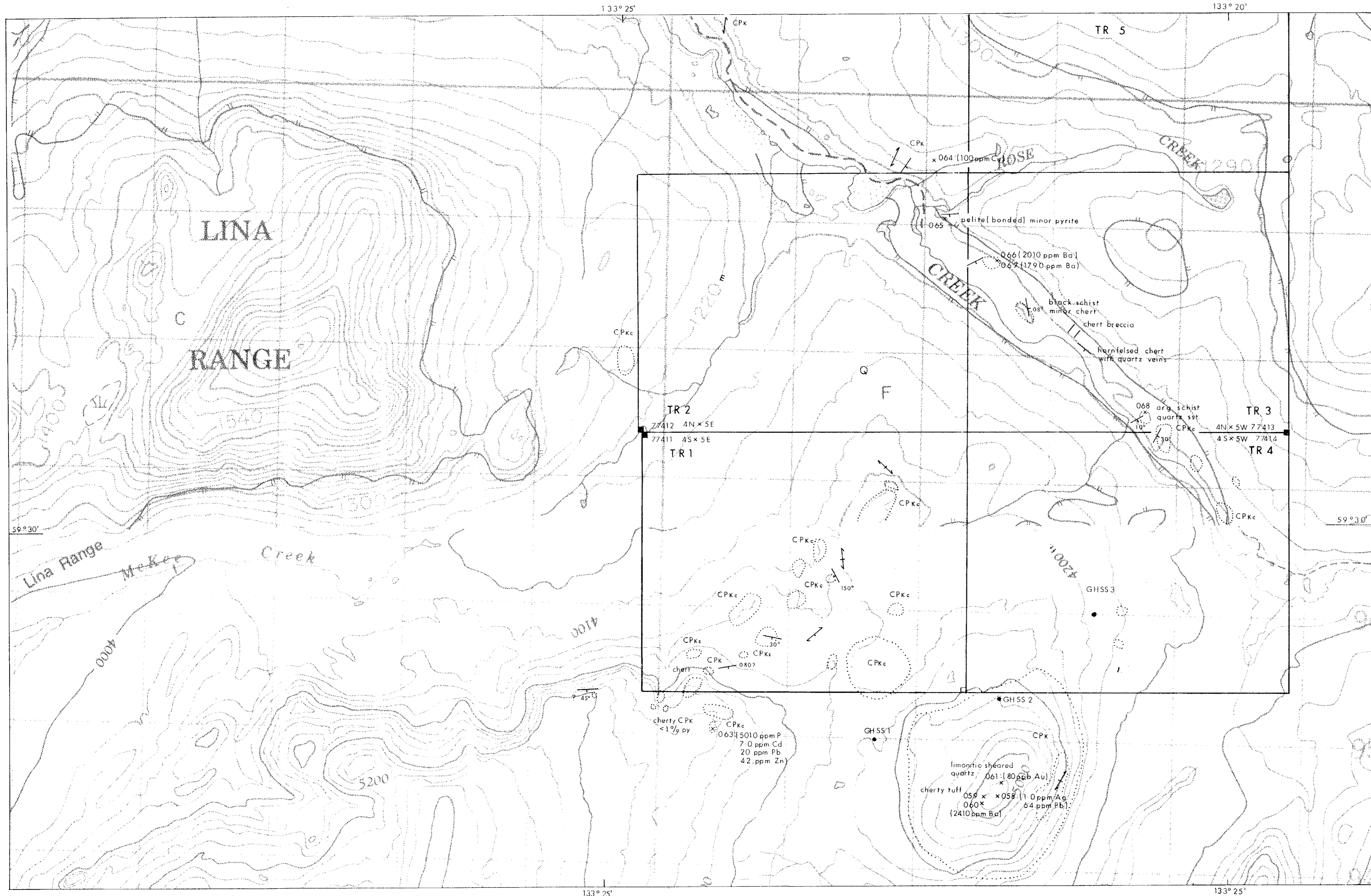
Appendix V

CONVERSION FACTORS FOR METRIC UNITS



Conversion Factors for Metric Units

1 inch	= 25.4 millimetres	(mm)
	or 2.54 centimetres	(cm)
1 cm	= 0.394 inch	
1 foot	= 0.3048 metre	(m)
1 m	= 3.281 feet	
1 mile	= 1.609 kilometres	(km)
1 km	= 0.621 mile	
1 acre	= 0.4047 hectares	(ha)
1 ha	= 2.471 acres	
1 ha	= 100 m x 100 m = 10,000 m ²	
1 km ²	= 100 ha	
1 troy ounce	= 31.103 grams	(g)
1 g	= 0.032 troy oz	
1 pound (lb)	= 0.454 kilogram	(kg)
1 kg	= 2.20 lb	
1 ton (2000 lb)	= 0.907 tonne	(t)
1 tonne	= 1.102 ton = 2205 lb	
1 troy ounce/ton	= 34.286 g/t	
1 g/tonne	= 0.0292 troy oz/ton	
1 g/t	= 1 part per million	(ppm)
1 ppm	= 1000 parts per billion	(ppb)
10,000 g/t	= 1%	

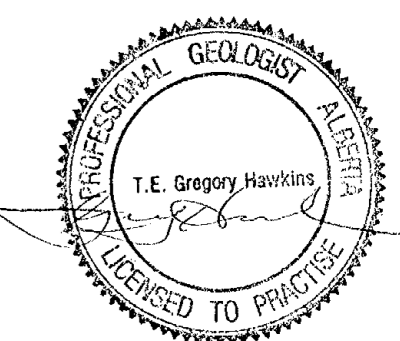


LEGEND

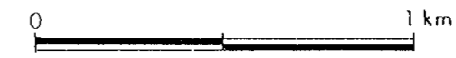
- (after Monger 1975)
- QUATERNARY**
- Q unconsolidated, mainly glacial deposits, undifferentiated
- CARBONIFEROUS TO PERMIAN**
- CPK Kedahda Formation: mainly bedded chert, cherty pelite and pelite, some volcanic sandstone.
 - CPKs sediments undifferentiated
 - CPKc carbonate
 - CPKvb basic volcanic pods
- GHSS 1 • Silt sample location
- 064 x Rock sample location

GEOLOGICAL BRANCH ASSESSMENT REPORT

16,064



To accompany Report by
T.E. Gregory Hawkins, P. Geol.,
G.D.
MAY 7 1987



GOLDENROD RESOURCES AND TECHNOLOGY INC. HOLLYCROFT RESOURCE CORPORATION			
GEOLOGY, ROCK AND SILT SAMPLE LOCATIONS EVEREST TR GROUP AND TR GROUP ATLIN MINING DIVISION			
Project No. V 242	By T.G.H., B.T.	Scale: 1 : 20 000	Drawn: J.S.
Drawing No. 4	Date: MAY 1987		
MPH Consulting Limited			