

87-140-15972

GEOLOGICAL ~~AND GEOCHEMICAL~~  
REPORT  
on the  
CATFISH CLAIMS

Atlin Mining Division  
British Columbia

NTS: 104M/15W  
Latitude: 59°53<sup>4</sup>N Longitude: 134°<sup>50'</sup>51<sup>+</sup>W

FILMED

Owned and Operated by:  
H. Copland, Whitehorse, YT.

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

15,972

H. Copland  
January 10, 1987

## SUMMARY

The Catfish group consists of 11 road accessible contiguous claims located in Paddy Pass, between Tutshi and Bennett Lakes in north-western British Columbia. Mapping and prospecting were conducted over the property in 1986. Significant gold (0.68 oz/t), silver (4.74 oz/t), and zinc (47766ppm) values were obtained from rocks on the property. The property lies on the contact between Cretaceous granite, Pre-Permian gneiss, Triassic dacite/andesite and younger rhyolite dykes. Sulphide bearing quartz veins up to 1.5 metres in width cut all the units except for granite. A volcanogenic style of mineralization is also suspected to occur on the property. Further detail prospecting and mapping are necessary to locate the source of anomalous float and determine the extent of major mineralized veins.

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GEOLOGICAL AND GEOCHEMICAL REPORT ON THE CATFISH CLAIMS  
Atlin Mining Division, British Columbia

INTRODUCTION

The Catfish Group consists of 11 contiguous claims located on the north side of Paddy Pass between Bennett and Tutshi Lakes in north-western British Columbia. The property is underlain by rocks of the pre-Permian Yukon Group, Triassic Lewes River Group and the Cretaceous Coast Intrusive Complex. Geological mapping, prospecting, and sampling were carried out over various periods between June and October 1986.

LOCATION AND ACCESS

The property lies at the northeastern end of Paddy Pass, approximately 2.5 kilometres west of Tutshi Lake (see figs. 1&2). A 3 kilometre long four-wheel drive road extends into the centre of the claims from the Carcross-Skagway highway. The White Pass and Yukon railway passes 7 kilometres west of the claim group.

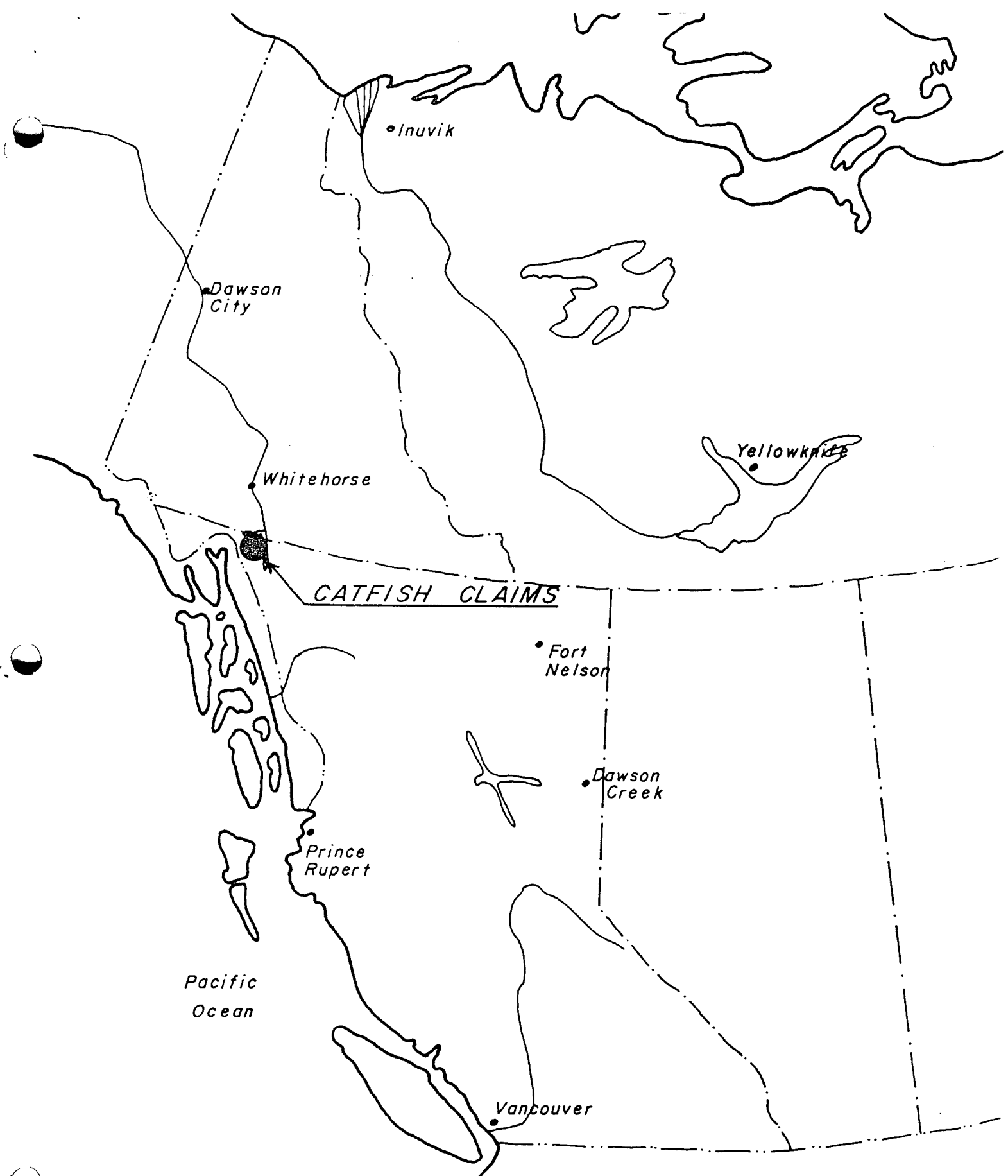
PROPERTY DEFINITION

The group consists of 11 claim units staked in June and October 1986 (see fig. 3). Details of the claims are listed below:

<u>Claim</u>	<u>Units</u>	<u>Tag No.</u>	<u>Record No.</u>	<u>Anniversary</u>
Catfish	2Nx2W	91170	2640	June 21, 1988
Catfish 2	1Sx2W	28833	2755	"
Catfish 3	3Nx1E	28830	2756	"
Catfish 4	1Nx2E	28831	2757	"

TOPOGRAPHY AND VEGETATION

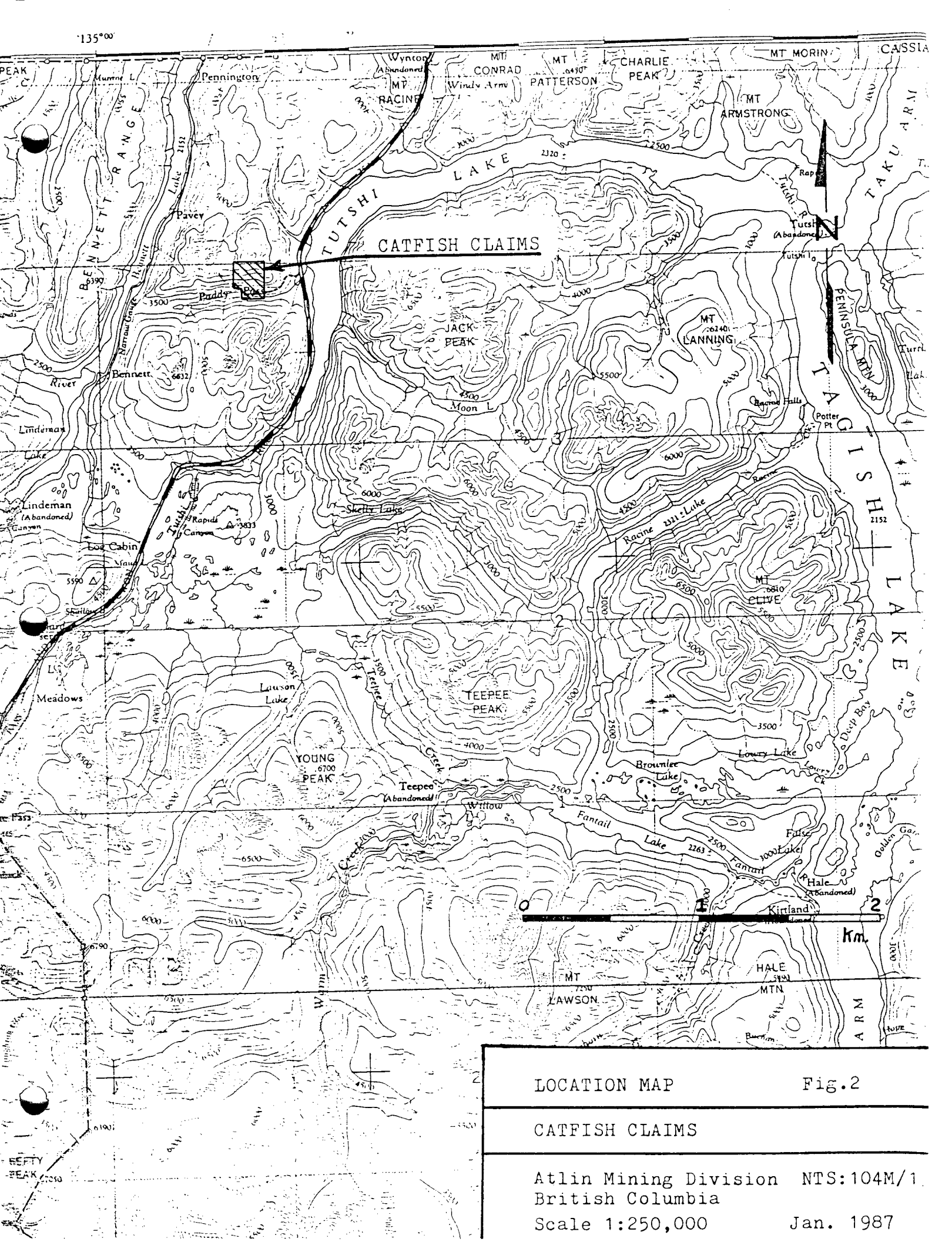
The claims lie within the Tagish Highlands on the eastern edge of the Coast Mountain Range. Peaks in the area average 1800 metres in elevation. Small icefields are typical in north facing cirques



**CATFISH CLAIMS**

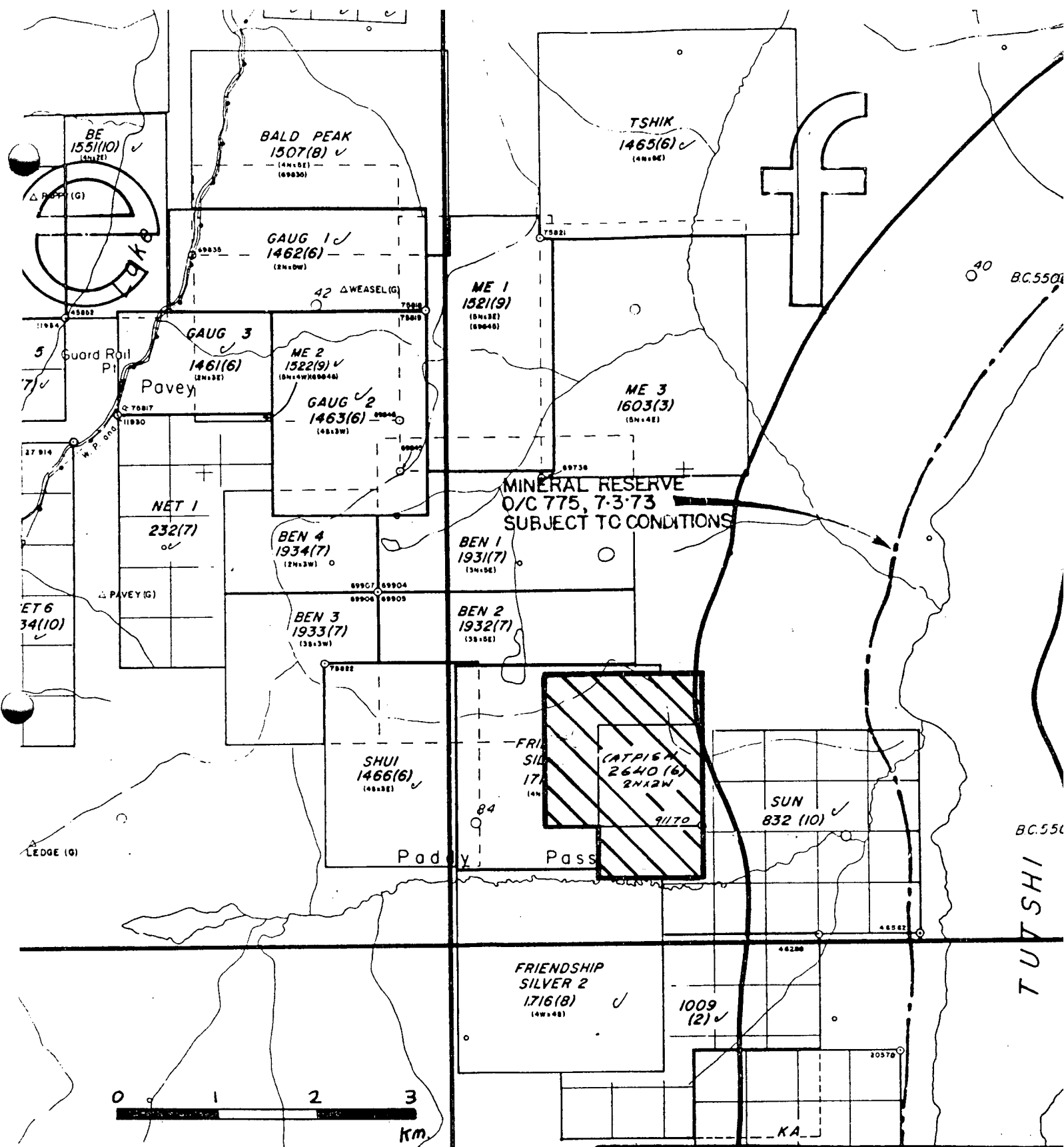
**LOCATION MAP Fig. 1**





LOCATION MAP Fig.2  
 CATFISH CLAIMS

Atlin Mining Division NTS:104M/1  
 British Columbia  
 Scale 1:250,000 Jan. 1987



CLAIM MAP

Fig. 3

CATFISH CLAIMS

MINERAL RES  
O/C 775, 7-3-73  
SUBJECT TO

Atlin Mining Division  
British Columbia NTS: 104M/15  
Scale 1:50,000 Jan. 1987

in the Coast Mountains. Paddy Pass forms a broad U-shaped valley approximately 900 metres in elevation linking the Bennett and Tutshi Lake valleys.

The claims lie on a south facing slope varying between 880 and 1920 metres in elevation. The south facing nature and relatively low elevation mean the claims are free of snow quite early in the season. Treeline occurs at an elevation of 1100 metres. Below this scattered stands of spruce and pine stand within thick groves of alder and poplar. Typical subalpine shrubs and grasses give way to talus and outcrop in the higher elevations. Numerous creeks flow southward from the property into the main creek in Paddy Pass which flows easterly into Tutshi Lake. A large volume of water flows through this creek year-round and one creek running through the centre of the property provides water even in the driest weather.

#### HISTORY

No recorded instances of work have been located for the ground now covered by the Catfish claims. The area has been staked as the Linda and more recently the Friendship Silver claims. The Linda is listed as a molybdenite occurrence in the mineral inventory file. A short partially caved adit and a road into the claims indicate that physical work has been done in the past. Numerous claims bounding the Catfish claims have recently expired except for the Ben 1-4 claims (Texaco) to the north.



## GEOLOGY

Regional

The claims lie on the boundary between the Intermontane Belt (Whitehorse Trough) and the Coast Plutonic Complex. The oldest rocks in the trough are remnants of the basement Yukon Group schists and gneisses which crop out along the western boundary of the trough and as pendants within the Coast Mountains. The Nahlin fault separates the oceanic rocks of the Atlin terrane to the east from those of the Whitehorse trough. The Atlin terrane is comprised of Upper Paleozoic to Lower Triassic limestone, chert, andesite, and basalt of the Cache Creek Group in British Columbia and the Taku Group in the Yukon.

The Whitehorse trough is a northwest trending Mesozoic synclinorium. The basal unit is an Upper Triassic package of volcanic rocks and related sediments known as the Lewes River Group (Stuhini Group equivalent in part). Bultman (1979) has further subdivided this with geographical names for distinct units within the group. Discontinuous bands and isolated pods of limestone overlying the volcanic rocks have been assigned to the Sinwa Formation.

Folded sedimentary rocks of the Lower and Middle Jurassic Laberge Group disconformably overlie the Lewes River Group. The Laberge Group consists of deep marine greywackes, shale, siltstones, and conglomerate of the Inklin Formation flanked by the shallow marine Takwahoni Formation sandstones and conglomerates. The Upper Jurassic or Lower Cretaceous Tantalus Formation conglomerate and sandstone crops out to the northwest and is more widespread in the Yukon.

The Coast Mountain Intrusive rocks range from diorite to granite in this area. They are separated from the Whitehorse trough by the northwest trending Llewellyn fault system. Morrison (1979) has defined four different plutonic suites in the Whitehorse area ranging from Upper Triassic to Eocene in age. The majority of the intrusives in the immediate area of the claims are probably mid to Upper Cretaceous.

The Upper Cretaceous Hutshi Group, thought to be an equivalent to

the Mount Nansen Group to the north, unconformably overlies older strata in the trough. This unit consists primarily of rhyolite and andesite flows and breccias. The Eocene Skukum Group and Sloko Formation crop out to the northwest and southeast of the claim group. These consist mainly of intermediate to acidic pyroclastic rocks and flows.

Property (see fig. 4)

The Catfish claims straddle the contact between granite of the Coast Plutonic Complex and Yukon Group metamorphic rocks. These metamorphic rocks form a band at least 200 metres thick as exposed on surface. They consist of a quartz-feldspar-chlorite gneiss and a chlorite-sericite schist. A well defined fault marks the gneiss/granite contact. Overlying the metamorphic rocks are extremely gossanous dacite-andesites of the Lewes River group. These occur at the higher elevations on the property and have not been fully mapped. The contact between these rocks and the gneiss has not as yet been fully delineated. Rhyolite dykes ranging in width from a few centimetres to one metre cut all younger units, except the granite. These may be related to the intrusion or could belong to either the Hutshi or Sloko Group volcanic rocks.

A detail description of the units observed follows:

Quartz-feldspar-chlorite gneiss (1a): this rock is light grey to brown with green chloritic streaks and a slightly iron stained weathered surface. Chlorite ranges from 5-20%. The rock is strongly foliated and small scale folding varies from tight to open. It appears compositionally to be igneous in origin.

Chlorite-sericite schist (1b): the schist is dark green to brownish, weathering a tan colour. The schist is fine grained and a mild sericitic sheen is visible on some fracture surfaces. A strong south-east foliation and a similiar style of folding to the gneiss is present.

Dacite/andesite (2): this unit is dark green to brown weathering a lighter shade, with some bright red/orange gossanous zones common.

It is fine grained and generally massive, although anhedral phenocrysts of feldspar 1-4 mm. in size comprise 1-2% of the rock locally. Although not observed over much of the property examined, abundant float suggests it is quite widespread in the higher elevations.

Granite (3): The granite is light grey to white, weathering to a pink tint. It is medium grained, equigranular with 25% quartz, 60% feldspar, and averaging 15% mafics, primarily biotite. Away from the contact the granite is distinctly jointed and fairly fresh in appearance. Closer and right at the contact the granite is strongly fractured with moderate argillic alteration.

Diorite (4): Easterly trending diorite dykes were observed cutting the gneiss and schist. The main dyke varied in width from 2-5 metres and was well exposed over 100 metres. The rock is fine grained with an approximate composition of 40% chlorite altered hornblende/pyroxene, and 60% feldspar. It is thought to be associated with the granite intrusion.

Rhyolite (5): The rhyolite occurs in dykes from 0.5-1.5 metres in width. They are light grey to white, tan weathering, and aphanitic. Their distinct colour allows them to stand out from great distances. The rhyolite usually contains trace pyrite and some are cut by numerous sulphide bearing quartz veins (see following sections).

### Structural

Structural features on the property follow the regional northwest trends. Foliation averages between  $140^{\circ}$  -  $160^{\circ}$  with a near vertical dip. Small scale folding of the metamorphic rocks also follows this pattern. Christie (1957) has mapped a northwest trending anticline and syncline in the vicinity of the property. No bedding attitudes were obtained on the claims to confirm this.

Several shear zones on the property usually orientated between  $040^{\circ}$  and  $070^{\circ}$  were observed. Dips varied from moderate to steep, to the southeast. The granite/gneiss fault contact is orientated  $160^{\circ}$ /vert. where well exposed in a creek bed.

Economic

Numerous barren and mineralized quartz veins occur throughout the property. They range in thickness from less than 1 centimetre to 1.5 metres, and tend to group in two orientations: east-southeast and northeast. The first set are generally barren in appearance and geochemistry. They have been observed cutting both the granite and metamorphic rocks and are less than 50 centimetres in width.

The major mineralized veins belong to the second set. The main vein which has a 15 metre long adit driven into its lower end, averages 1 metre in width and can be easily traced on surface for 200 metres before becoming covered in overburden at both ends. The vein is characterized by coarse grained, comb-structured, vuggy, milky to white quartz. A moderate to intense limonite and jarosite stain pervades the weathered surfaces. Blebs and streaks of pyrite, stibnite, arsenopyrite, and galena comprise from 0-15% of the vein along its length. Values up to 0.68 oz/ton gold and 4.29 oz/ton silver have been obtained from samples of the vein. A parallel vein 1.5 metres wide occurs just west of the main vein. Anomalous values have been obtained from the one sample taken across the vein. Snow cover hampered tracing of this vein for any length.

Numerous pieces of float found on the property indicate various other styles of mineralization occur. These have yet to be traced. Vuggy coarse grained quartz float with bleby, euhedral galena to 2% and malachite staining contained up to 4.74 oz/ton silver. Quartz veins with fine grained stibnite and galena are frequently observed in float, and in situ, running through rhyolite dykes. One float sample from a small vein contained 3890 ppb gold and 100.4 ppm silver.

A silicified piece of volcanic rock, found in the creek bed contains lenses and blobs of pyrite, pyrrhotite, sphalerite, and galena comprising up to 20% of the rock. Zinc values in this piece of float approached 5% (47766 ppm). Coarse flakes of molybdenite were observed on fracture surfaces of the granite intrusive in one location.

## GEOCHEMISTRY

Procedure

A total of 19 rock samples were collected from the property. All samples were shipped to Acme Laboratories of Vancouver, BC for preparation and analysis. Rocks were pulverised to -100 mesh and analysed geochemically for Cu, Pb, Zn, Ag, Sb, & Au. Several vein samples were ~~fire~~ assayed for gold and silver.

Results

A complete tabulation of results is included in the appendix, and sample locations are plotted on figure 5. A brief description of the samples collected and their values are tabulated on the following pages.

SAMPLE NUMBER	DESCRIPTION	GEOCHEMISTRY(ppm, Au ppb)						ASSAYS	
		Cu	Pb	Zn	Ag	Sb	Au	Ag (oz/ton)	Au
FSR-1	chip over 2 m., gossanous, silicified shear zone in schist	--	28	101	1.5	10	36	--	--
FSR-2	chip over 3 m., 1 m. wide quartz vein and adjacent wall rock; galena, pyrite, arsenopyrite 5%	--	--	--	23.1	--	790	--	--
FSR-3	chip over 1 m. of vein; limonitic with streaks and blebs of py, sph, galena	--	--	--	65.3	--	480	1.96	0.02
FSR-4	float grab; coarse vuggy quartz with blebs galena and sphalerite to 3%, malachite stain	--	--	--	146.9	--	84	4.74	.003
CFR-1	chip over 1 m.; end of adit, clay altered silicified shear zone, intense Fe-Mn stain	--	--	--	--	--	--	0.44	.001
CFR-2	chip over 1 m.; back of adit, clay altered, moderate silicification, highly fractured	--	--	--	--	--	--	0.88	.013
CFR-3	chip over 1.5 m.; fractured, silicified wall rock adjacent to vein, intense clay alteration	--	--	--	--	--	--	0.33	.031
CFR-4	chip over 1.5 m. of upper vein; vuggy coarse qtz 2-10% pyrite, sphalerite, galena, stibnite	--	--	--	--	--	--	0.33	.069
CFR-5	outcrop grab; same location as CFR-4	--	--	--	--	--	--	4.29	.680
CFR-6	chip over 0.5 m.; massive glassy quartz vein, vuggy, weak limonite stain, no visible sulphides	--	818	52	2.9	116	145	--	--
CFR-7	float grab; coarse grained vuggy quartz with euhedral blebs galena to 2%	--	4692	95	86.1	16	65	--	--
CFR-8	float grab; quartz veins in rhyolite, blebs of galena and stibnite to 5%	--	2069	7	100.4	406	3890	--	--
CFR-9	float grab; 30 cm. wide quartz, coarse grained streaks and blebs of galena, stibnite to 2%	--	1926	145	63.1	467	1240	--	--

(Con't)

SAMPLE NUMBER	DESCRIPTION	GEOCHEMISTRY(ppm, Au ppb)						ASSAYS	
		Cu	Pb	Zn	Ag	Sb	Au	Ag	Au (oz/ton)
CFR-10	float grab; quartz-carbonate alteration, coarse brecciated calcite and quartz	31	5	13	0.1	19	14	--	--
CFR-11	float grab; gossanous silicified volcanic, 20% galena, sphalerite, pyrite, pyrrhotite	717	588	47766	11.1	128	165	--	--
CFR-12	float grab; silicified dacite with 2-3% pervasive pyrite	11	31	398	0.2	2	8	--	--
CFR-13	outcrop grab; clay-chlorite alteration in dacite, minor pyrophyllite	142	27	34	2.9	2	7	--	--
CFR-14	outcrop grab; quartz veinlets in rhyolite, coarse veinlets 1-2 cm wide over 3 metres	52	12	13	0.6	3	3	--	--
CFR-15	chip over 2 m.; white limonitic quartz vein 1.5 m. wide, trace pyrite	119	319	182	6.8	48	24	--	--

## DISCUSSION AND CONCLUSIONS

Various styles of mineralization have been observed on the Catfish property, similiar to those reported on the Ben prospect to the northwest (Schroeter 1985, p. 187). Polymetallic quartz veins in gneiss, dacite, and rhyolite dykes contain significant values of gold, silver, lead and zinc. Higher grade zinc values from one sample may represent a volcanogenic style of mineralization.

The sources of several of the significant anomalous samples have not been followed up. Further work should concentrate on detail prospecting and mapping of the upper elevations of the property in order to find the source of these samples. In addition systematic soil sampling should be conducted along strike of the two major vein systems to determine if they continue under the thin overburden in these areas.



Hugh Copland  
Geologist



## ASSESSMENT COST STATEMENT

## 1. LABOUR:

## i) Field Work

Geologist (H. Copland) 5 days @ \$100/day	\$500
June 21, 22; July 19,20; October 21	

ii) Report Preparation and drafting 2½ days	<u>\$250</u>
---	--------------

	<u>\$750</u>
--	--------------

## 2. ANALYTICAL COSTS:

## i) Rock Samples Geochemistry

Preparation: \$3.00 x 14 samples	\$42
----------------------------------	------

Analysis: (Ag, Au) \$6.00 x 3	18
-------------------------------	----

(Pb,Zn,Ag,Sb,Au) \$8.00 x 5	40
-----------------------------	----

(Cu,Pb,Zn,Ag,Sb,Au) \$8.00 x 6	48
--------------------------------	----

## ii) Rock Samples Assay

Preparation: \$3.00 x 5 samples	15
---------------------------------	----

Analysis: (Ag,Au) \$9.75 x 7	68.25
------------------------------	-------

	<u>\$231.25</u>
--	-----------------

## 3. TRANSPORTATION

## i) Gas and Oil

	\$ 60
--	-------

## ii) Sample Shipment

	111
--	-----

	<u>\$176</u>
--	--------------

## 4. FOOD AND ACCOMODATION

## i) Food

	<u>\$20</u>
--	-------------

## 5. SUPPLIES

## i) Field: flagging, rock bags, etc.

	\$20
--	------

ii) Office: report preparation, photocopies, etc.	\$15
---	------

	<u>\$35</u>
--	-------------

<u>TOTAL:</u>	<u>\$ 1212.25</u>
---------------	-------------------

## SELECTED BIBLIOGRAPHY

Bultman, B.B.

1979: Geology and Tectonic History of the Whitehorse Trough west of Atlin, B.C.; unpublished PHD thesis, Yale University, 284 p.

Christie, R.L.

1957: Bennett Map Sheet Geology (104M); GSC Map 19-1957.

Morrison, G.W., et al.

1979: Interpretation of isotopic ages for Plutonic rocks in the Whitehorse map area, Yukon; Can. J. Earth Sci., V.16, p. 1988-1997.

Schroeter, T.G.

1985: Bennett Project (104M); BCMEMPR Geological Fieldwork, Paper 1986-1, p. 184-189.

Wheeler, J.O.

1961: Whitehorse Map Sheet (105D); GSC Mem. 312.

## CERTIFICATE

I, Hugh Copland, do hereby certify that:

1. I am a geologist residing at Site 20, Box 109, RR1, Whitehorse, YT.
2. I am a graduate of the University of B.C. with a B.Sc. (Honours) in Geological Sciences (1982); and of McMaster University with a B.Eng. (1976).
3. I have practised my profession over the past seven years, mainly in the Western Cordillera.
4. This report is based on field work conducted by me during the summer of 1986.
5. I am a member of The Yukon Professional Geoscientists Society.



Hugh Copland

Whitehorse January 16, 1987

APPENDIX

ANALYTICAL LABORATORIES LTD.  
51 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: JULY 5 1986

DATE REPORT MAILED: *July 9/86*

### GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
- SAMPLE TYPE: SILTS & ROCKS AU\* ANALYSIS BY AA FROM 10 GRAM SAMPLE.

ASSAYER: *D. Toye* DEAN TOYE. CERTIFIED B.C. ASSAYER.

HUGH COPLAND FILE # 86-1321

PAGE 1

SAMPLE#	Pb PPM	Zn PPM	Ag PPM	Au* PPB
<del>TLT 1</del>	<del>59</del>	<del>123</del>	<del>.5</del>	<del>58</del>
<del>TLT 2</del>	<del>16</del>	<del>149</del>	<del>.2</del>	<del>5</del>
<del>TLT 3</del>	<del>12</del>	<del>75</del>	<del>.1</del>	<del>5</del>
<del>TLT 4</del>	<del>13</del>	<del>134</del>	<del>.3</del>	<del>145</del>
<del>TLT 5</del>	<del>23</del>	<del>76</del>	<del>.5</del>	<del>7</del>
FSR-2	-	-	23.1	790
FSR-3	-	-	65.3 ✓	480
FSR-4	-	-	146.9 ✓	84
<del>TLR 2</del>			<del>.8</del>	<del>7</del>
<del>TLR 3</del>			<del>1.2</del>	<del>29</del>
<del>TLR 6</del>			<del>6.0</del>	<del>77</del>
<del>TLR 7</del>			<del>.1</del>	<del>7</del>
<del>TLR 8</del>			<del>.5</del>	<del>590</del>
<del>TLR 9</del>			<del>.1</del>	<del>71</del>
STD C/AU-0.5	36	137	7.2	510

✓ Assay required for correct result →

ACE ANALYTICAL LABORATORIES LTD.  
100 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE 253-3158      TELEX 04-53124

DATE RECEIVED: AUG 7 1986

DATE REPORT MAILED: *Aug. 13/86*

### ASSAY CERTIFICATE

SAMPLE TYPE: ROCK CHIPS    AU: 10 GRAM REGULAR ASSAY

ASSAYER: *D. Toy* DEAN TOYE. CERTIFIED B.C. ASSAYER.

HUGH COPLAND

FILE # 86-1913A

PAGE 1

SAMPLE#	Ag OZ/T	Au OZ/T
CFR-1	.44	.001
CFR-2	.88	.013
CFR-3	.33	.031
CFR-4	.33	.069
CFR-5	4.29	.680

ANALYTICAL LABORATORIES LTD.  
252 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE 253-3158      TELEX 04-53124

DATE RECEIVED: AUG 7 1986

DATE REPORT MAILED: *Aug 11/86*

**ASSAY CERTIFICATE**

SAMPLE TYPE: PULP    AU\* 10 GRAM REGULAR ASSAY

ASSAYER: *D. Toye* ..... DEAN TOYE. CERTIFIED B.C. ASSAYER.

HUGH COPLAND      FILE # 86-1321R

PAGE 1

SAMPLE#	Ag OZ/T	Au OZ/T
FSR-3	1.96	.020
FSR-4	4.74	.003

ANALYTICAL LABORATORIES LTD.  
E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: AUG 7 1986

DATE REPORT MAILED: *Aug 13/86...*

### GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
- SAMPLE TYPE: ROCKS & PAN CONC. AU\* ANALYSIS BY AA FROM 10 GRAM SAMPLE.

ASSAYER: *D. Toy* DEAN TOYE. CERTIFIED B.C. ASSAYER.

HUGH COPLAND FILE # 86-1913

PAGE 1

SAMPLE#	Pb PPM	Zn PPM	Ag PPM	Sb PPM	Au* PPB
CFR-6	818	52	2.9	116	145
CFR-7	4692	95	86.1 ✓	16	65
CFR-8	2069	7	100.4 ✓	406	3890
CFR-9	1926	145	63.1 ✓	467	1240
FSR-1	28	101	1.5	10	36

Assay required for correct result



ANALYTICAL LABORATORIES LTD.  
81 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: OCT 30 1986

DATE REPORT MAILED: *Nov. 6/86...*

### GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
- SAMPLE TYPE: ROCK CHIPS AU\* ANALYSIS BY AA FROM 10 GRAM SAMPLE.

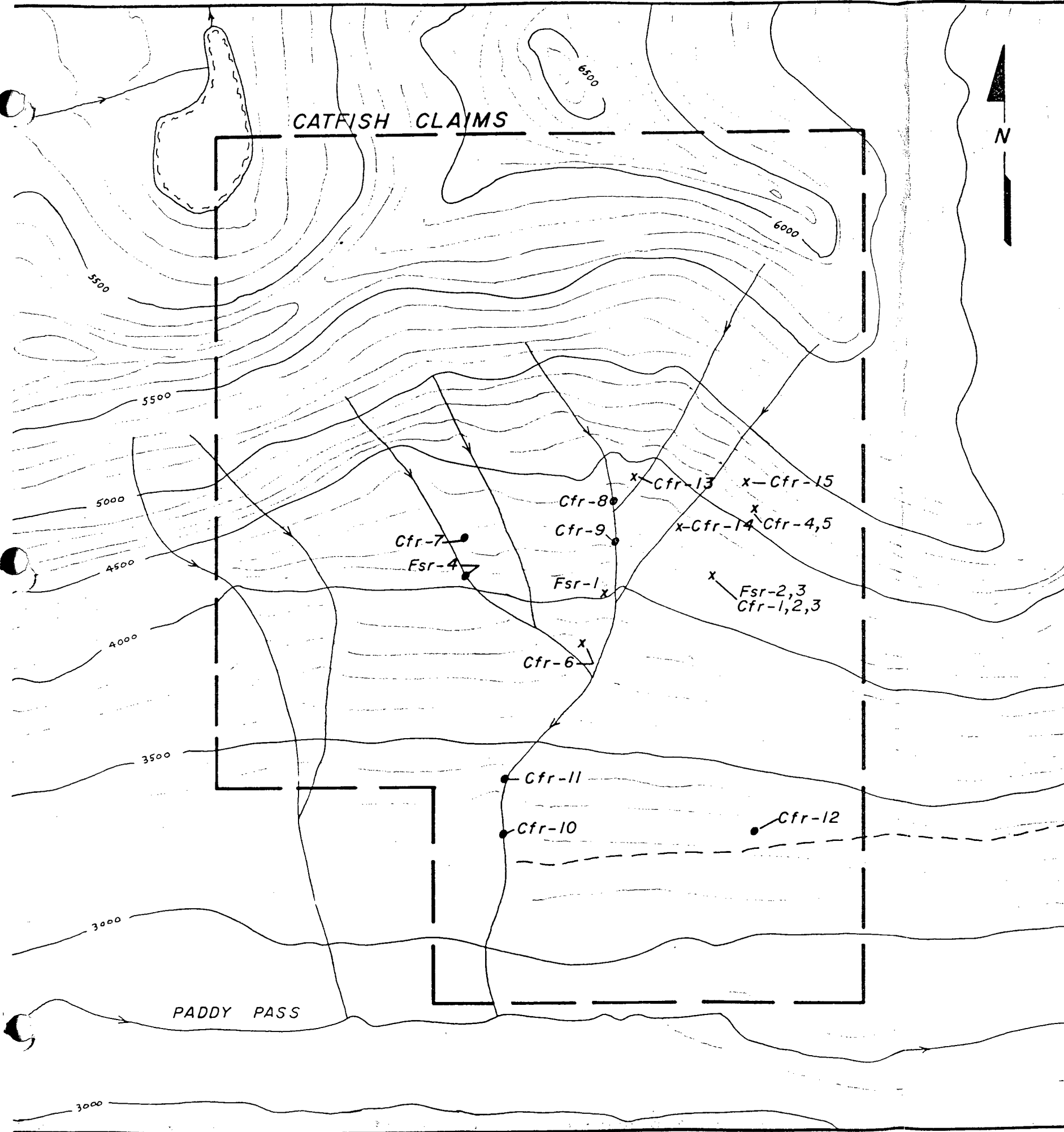
ASSAYER: *D. Toye* DEAN TOYE. CERTIFIED B.C. ASSAYER.

HUGH COPLAND FILE # 86-3472

PAGE 1

SAMPLE#	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Sb PPM	Au* PPB
CFR-10	31	5	13	.1	19	14
CFR-11	717	588	47766 <sup>✓</sup>	11.1	128	165
CFR-12	11	31	398	.2	2	8
CFR-13	142	27	34	2.9	2	7
CFR-14	52	12	13	.6	3	3
CFR-15	119	319	182	6.8	48	24
STD C/AU-R	58	42	129	7.0	15	500

✓ Assay required for correct result



**LEGEND**

x, o - Cfr-1 : Rock sample locations: outcrop, float

**RESULTS**

**GEOCHEMISTRY (ppm, Au in ppb)**

SAMPLE	Cu	Pb	Zn	Ag	Sb	Au
FSR-1	--	28	101	1.5	10	36
FSR-2	--	--	--	23.1	--	790
FSR-3	--	--	--	65.3	--	480
FSR-4	--	--	--	146.9	--	84
CFR-6	--	818	52	2.9	116	145
CFR-7	--	4692	95	86.1	16	65
CFR-8	--	2069	7	100.4	406	3890
CFR-9	--	1926	145	63.1	467	1240
CFR-10	31	5	13	0.1	19	1
CFR-11	717	588	47766	11.1	128	165
CFR-12	11	31	398	0.2	2	2
CFR-13	142	27	34	2.9	2	2
CFR-14	52	12	13	0.6	3	3
CFR-15	119	319	182	6.8	48	48

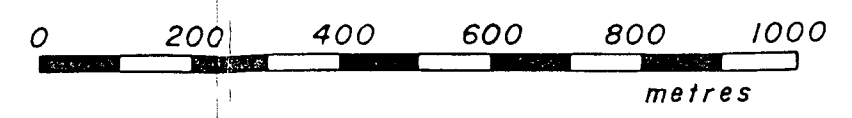
  

**ASSAYS (oz/ton)**

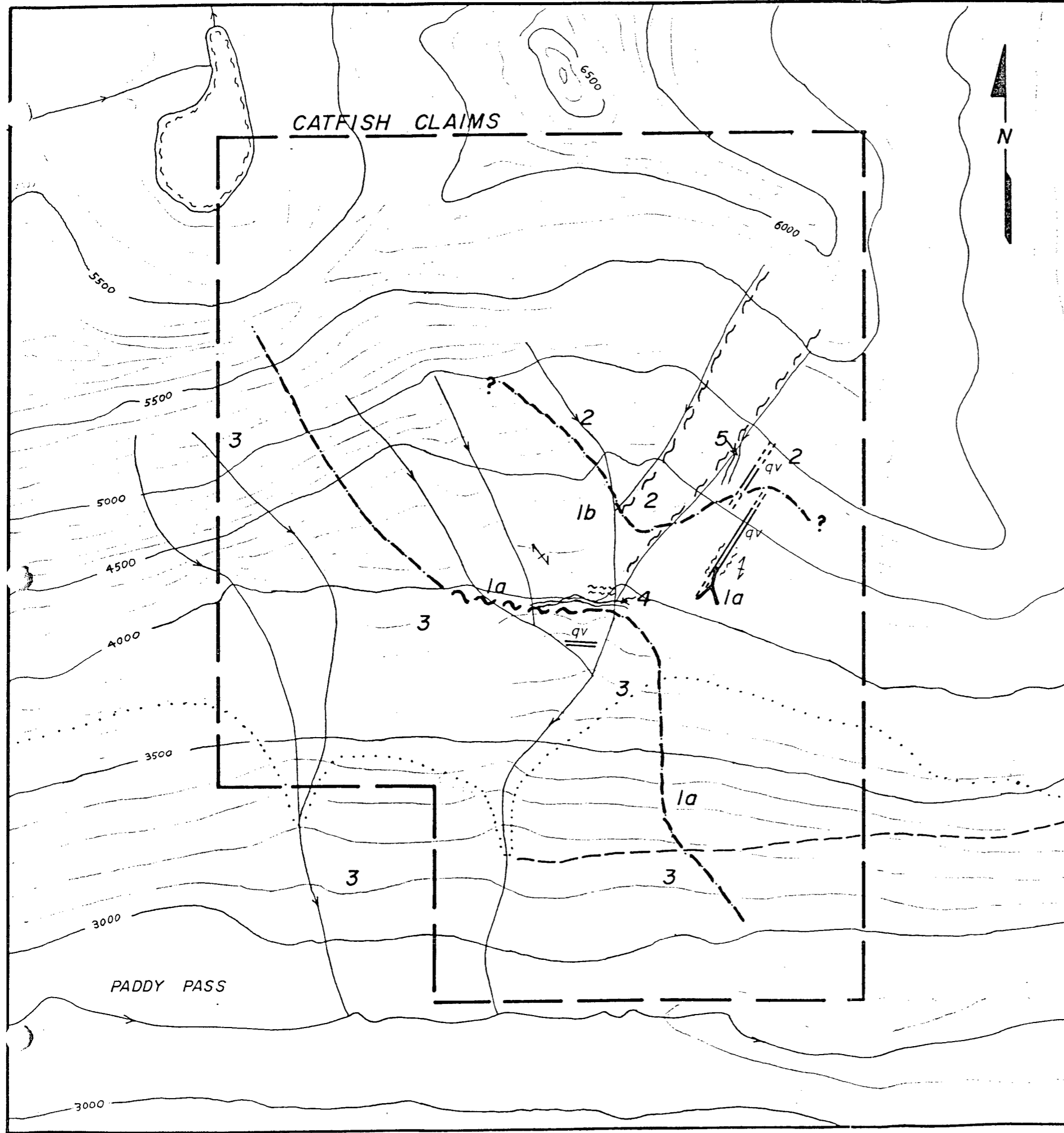
SAMPLE	Ag	Au
FSR-3	1.96	0.02
FSR-4	4.74	0.003
CFR-1	0.44	0.001
CFR-2	0.88	0.013
CFR-3	0.33	0.031
CFR-4	0.33	0.069
CFR-5	4.29	0.680

GEOLOGICAL BRANCH ASSESSMENT REPORT

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CATFISH CLAIMS		
SAMPLE LOCATIONS & RESULTS Fig. 5		
1:10,000	NTS: 104M/15	H. Copland January 1987



**LEGEND**

- 5 Rhyolite, dykes
- 4 Diorite, dykes
- 3 COAST MOUNTAIN INTRUSIONS (Upper Cretaceous) Granite
- 2 LEWES RIVER GROUP (Upper Triassic) Dacite, andesite
- 1 YUKON GROUP (Pre-Permian) la: gneiss, lb: schist

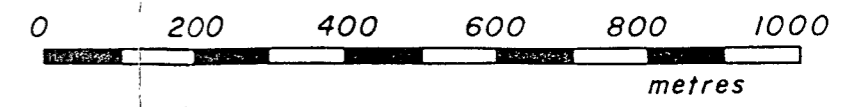
**SYMBOLS**

- Contact, assumed
- Fault, assumed
- Quartz vein
- Foliation
- Adit
- Limit of outcrop
- Claim outline
- Lake
- Creek
- Road

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

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contours in feet



CATFISH CLAIMS		
GEOLOGY		Fig. 4
1:10,000	NTS: 104M/15	H. Copland January 1987