

82-#821-10821
9

GEOLOGICAL
AND
GEOCHEMICAL ASSESSMENT
of the HAT and FLARE
MINERAL CLAIMS

Skeena Mining Division

NTS 103 I 15 W +14E

Lat. 54° 48'

Long. 129° 59'

Owners: Don Young and Peter Ogryzlo

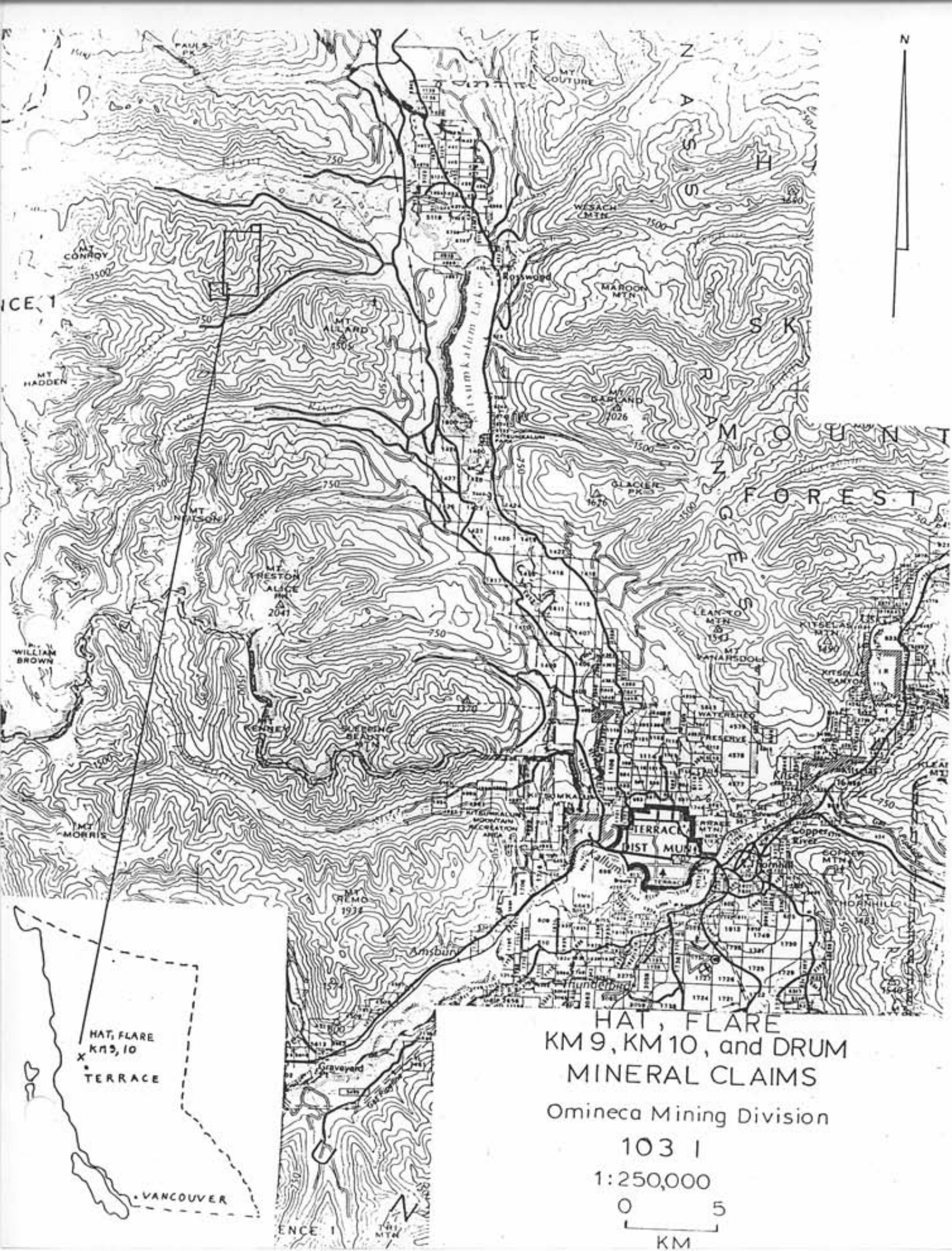
Operators: Don Young and Peter Ogryzlo

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

10,821

TABLE OF CONTENTS

	Page No.
Introduction	1
Location	1
Access	4
History	5
Summary of Work	6
Detailed data - Geochemical	7
Detailed data - Geological	9
Intrusive rocks	10
Sedimentary rocks	10
Structure	12
Mineralization	13
Discussion	15
Recommendations	16
Statement of Qualifications	17
Itemized cost statement	19
Maps	
Locations Map	3
Geochemical Analyses	in pocket
Geological sketch	in pocket



HAT, FLARE
KM 9, KM 10, and DRUM
MINERAL CLAIMS

Omineca Mining Division

103 I

1:250,000



KM

INTRODUCTION:

i. LOCATION:

The property is composed of the Hat 1 and 2 and Flare 1 and 2 two post claims. These claims are located 45 Km. N 37°W of the Terrace municipal airport NTS 103 1. Record numbers are 3334 to 3337.

The property straddles a hog's back ridge which forms the divide between Mayo Creek and the Kitsumkalum River in the Kitimat Ranges of the Coast Mountains Range of British Columbia.

Topography in the area is generally mountainous with moderate to steep forested ridges and truncated spurs where the ridges abut the major glacial valleys. A notable flat area is the valley of the Kitsumkalum River in which the river meanders through quaternary alluvium filling the valley floor. The tributary streams are deeply incised where they enter the larger U-shaped valleys and rise with numerous waterfalls to a series of cirques.

Local topography on the property is a gentle rounded ridge which trends east-west and forms the divide between Mayo Creek and the Kitsumkalum Rivers.

This ridge is usually bordered to the north and south by a series of steep cirques separated by aretes. The cirques are usually filled with fresh talus, and in one case with small lakes. Elevations range from 1500 feet to 5000 feet ASL. Vegetation is characteristic of a coastal rain forest. Ridges are covered with cedar, hemlock and balsam fir. Slide and talus areas are covered with thickets of alder and salmonberry. Alpine areas range from

bare rock to heather and sparse dwarf balsam fir. Tree line is around 4200 feet.

The most significant showings are on a northerly pointing arete or spur. There is little vegetation on the claims.

Climate is characterised by a cool wet season from spring until fall, with some snow remaining on most slopes until mid-June. There is little permanent snow on the property, other than some 3 to 5 ha. of ice on Hat 1.

ii. ACCESS:

Access is by helicopter from Terrace Municipal airport. Round trip aircraft time is approximately one hour by Bell 206 helicopter.

Ground access is by Highway 16 west to the Nass Road, then northward to Km.38 on the Nass road, then westward on the Beaver road to Km.10 or on the Mayo Road to Km. 7. These latter roads are private logging roads with gates controlled by B.C.Timber. Access is then by foot from 1000 foot elevation to 5000 foot elevation.

A good pack trail may be found leading to old workings on Mayo Creek ridge, by going up through slash to 2500 foot elevation from around Km.5 of the Mayo Road.

iii. HISTORY:

Precious metal showings have been known for many years on the Mayo Creek ridge. Duffell and Souther refer to the Martin Group in which gold was found in narrow veins with arsenopyrite.

Since the 1950's, sporadic exploration has occurred on the ORO showing, in which gold occurs in quartz with arsenopyrite and stibnite. The vein is up to 1.5 m wide and has been traced for some 300 m. These showings adjoin the KM 9 claim to the west and are partially surrounded by this claim..

The Mineral Inventory file shows the Mayo claims north of Flare 1 dating from 1928. No trace of these veins and no workings other than an old claim post were found.

Most of the veins covered in this report appear to have been recently exposed by receding snow and ice, and it is unlikely that any previous reference to them is possible.

A reconnaissance geochemical survey sponsored by the B.C. Dept. of Mines and Petroleum Resources and released in 1979 revealed that the Mayo Creek ridge was anomalous in arsenic and silver, and the Km 9 and 10 claims discussed in this report were acquired.

Reconnaissance prospecting and following float and stream sediment dispersion trains led to the discovery and acquisition of the Hat and Flare claims.

iv. SUMMARY OF WORK:

The property was explored during the 1982 field season. Two men spent approximately 12 days on the property. Work was occasionally hampered by weather.

The goal of the project was to map and sample veins on the property. Geological mapping was included in the sampling program, and float prospecting was used to search for other veins. Geochemical rock analyses were performed to clarify trace element associations with the precious metals.

DETAILED TECHNICAL DATA - GEOCHEMICAL

i. METHOD

Veins discovered in the 1982 prospecting season were chip sampled where access permitted. In more difficult situations these veins were grab sampled, and where access was impossible, float which appeared to be derived from the veins was sampled.

The claims have been recently glaciated with till and talus filling the cirques. Quartz bearing float is abundant in the till and was sampled. Whenever possible the float was traced up-ice back to the source. This led to the discovery of several new veins which were sampled as described.

Sixteen float samples, nineteen grab samples, and eleven chip samples were taken, as well as one stream sediment. In addition, some twenty float samples were collected for inspection by ultraviolet light, as scheelite was occasionally observed.

These samples were crushed and weighed, digested with 3:1:3 HCl: HNO₃:H₂O, diluted and analysed by induction coupled plasma geochemical analysis for thirty elements. Au and Ag, when over instrumental detection limits were checked by fire assay.

Au and Ag when reported in ppm were converted to troy ounces per ton by multiplying by a conversion factor of 1/34.28.

Analyses were provided courtesy of Anaconda and Asarco.

Tungsten results by ICP were occasionally hampered by interference when Zn was greater than 10,000 ppm. For this reason W was not plotted, unfortunately, as distinct quartz-tungsten veins were prospected. Au and Ag were plotted, as well as As, Pb and Cu.

DETAILED TECHNICAL DATA - GEOLOGICAL

i. GENERAL:

Geological mapping was carried out coincidental with the geochemical survey. Control was provided by 1:50,000 topography, compass, Thommen altimeter and air photographs.

Regional geology is described by Duffell and Souther (1964). The property lies on the southern margin of the upper Jurassic - lower Cretaceous Bowser Basin near the southern contact with the Coast Range plutonic complex. This contact extends east-west some 40 km from Dorreen on the Skeena River to Kitsumkalum Lake, although lateral displacement along the Kalum Valley is possible. The sediments directly north of this contact contain an east-west belt of numerous precious metal showings. Lorne Creek and Douglas Creek were notable placer producers, with lode production from Mt. Knauss and numerous precious metal veins on Maroon Mountain and the Mayo Creek ridge.

In the vicinity of the property, precious metal showings appear to be clustered along the northern margin of an apophysis of the Coast Range complex. This apophysis is primarily a medium grained, light grey granodiorite which forms the peak of Mount Allard immediately south of Mayo Creek.

Intruding this apophysis is an apparently younger composite multiphase stock of primarily diorite composition. This stock is the host of numerous precious metal bearing quartz veins.

iii DESCRIPTIONS

1. Sedimentary rocks

Sedimentary rocks underlie most of the property and form a monotonous sequence of banded siltstone and shale as well as a massive dark argillite. Some conglomerate was noted, as well as minor sandstone and tuffaceous rocks. These rocks are attributed to the upper Jurassic- lower Cretaceous Bowser Group by Duffell and Souther. Bedding appears to be consistently striking northeast and dipping southeast.

2. Intrusive rocks

A large pluton of medium-grained quartz-plagioclase- biotite quartz diorite (2a) outcrops near the western boundary of Hat and Flare. This appears to be an apophysis of the Coast Range Plutonic complex which dominates the terrain 5 km to the west. It appears to be barren of mineralization.

Smaller intrusions of a quartz- poor hornblende diorite (2b) outcrop along the crest of the Mayo Creek ridge. These appear, spatially, to be associated to some of the mineralized veins.

3. Multiphase intrusions

Intruding all the above is a composite stock. Lithology was too varied to map at the chosen scale, particularly given the difficult access. The stock is primarily a fine- to medium-grained diorite with hornblende diorite and occasional coarse leucocratic gabbro. Rhyolite (aplite) dykes cut the stock as well.

These rocks host a number of quartz - precious metal veins. Contacts with the biotite quartz diorite to the west and with the Jurassic siltstones are clear, but contact relations with the hornblende diorite to the east remain uncertain.

The stock is surrounded by a contact aureole which is characterized by limonite stained sediments for several hundred meters.

iii. STRUCTURE

Bedding appears to be the most obvious structure on the property. Bedding provides the structural control for the northeasterly trend of the ridge. Dips are to the southeast.

A major north-south fault crosses the property coincident with the boundary between the KM9 and KM10 claims. The fault zone has been deeply eroded and forms the major drainage from the property. Shear and gouge zones are mineralized with carbonate veins and veinlets, and rarely with large quartz veins.

The composite stock is cut by a number of faults, which frequently control quartz veins. The dominant direction is north - south vertical shears, although steep dipping northwesterly shears are present. A number of subhorizontal shears are also present.

iv. MINERALIZATION

Gold and silver appear to be associated with quartz polymetallic sulphide veins. The best values appear associated with arsenopyrite and galena. Chalcopyrite and sphalerite are also common, but the correlation with Au-Ag is less clear.

The best exposed vein is at 4700 elevation on the Hat 1 claim. Au values range from 0.2 to 1.2 OPT, and Ag ranges from 2 to over 200 OPT. a width of 30 to 50 cm. Exposed length is some 30 meters, Sulphides are abundant, with arsenopyrite, galena and sphalerite present. Gangue minerals are quartz, dolomite and ankerite.

An envelope of reddish ankerite - limonite staining with quartz-stringers extends up to 10 meters either side of the vein. These envelopes are common on the veins that cut the multiphase stock and should be examined more closely. This vein appears to have been recently exposed by receding snow and ice. A number of related veins have been found 100 to 200 meters south of this vein. Au grades range from 0.2 to 0.8 OPT, but width and length are uncertain.

Another group of quartz veins may be seen between 4500 and 5000 feet on the Hat 2 claim. Au grades range from 0.2 to 0.8 OPT over 15 to 50 cm. These veins are accompanied by As and Pb sulphides, as well as ankerite-limonite envelopes with quartz stringers. Ag ranges from 0.8 to over 40 OPT.

Quartz scheelite veins have been observed but their relation to precious metal values is not clear.

A number of quartz-arsenopyrite and quartz-pyrite veins have been noted cutting the siltstone, accompanied by carbonate (calcite) or fluorite, with widths up to 1.5 meters. Precious metal values are low, however, and the ankerite envelopes are notably absent. Two such veins may be seen around 3700 elevations on KM10 claim in a stream draining a small lake. Quartz-calcite or calcite veins and veinlets appear to be low in precious metals.

DISCUSSION OF RESULTS

Precious metal values occur in quartz polymetallic sulphide veins. As, Pb, Zn, Cu and Hg are commonly associated with these veins and may be used as pathfinders. The veins are exposed in and near a multiphase stock, and are accompanied by envelopes of ankerite-limonite staining. W is sometimes present and should be pursued.

RECOMMENDATIONS AND CONCLUSIONS

1. Veins presently known should be more extensively sampled to determine if mineable widths and lengths are present.

2. The stringer zone enveloping the veins must be sampled for precious metals as well.

3. Ratios between base and precious metals should be studied and statistical correlations determined.

4. The alteration envelopes suggest that whole rock major element geochemistry would be useful in prospecting the stock and contact aureole.

5. The sediments mantling the stock should be carefully prospected south of the Hat claims.

AUTHOR'S QUALIFICATIONS

I, Peter Lawrence Ogryzlo, certify that I received The Bachelor of Science degree from McGill University in 1969.

I have been continuously employed in mineral exploration and mining geology from 1969 to 1977. I have been an independent prospector from 1977 to 1982.

Period	Employer	Position
1969 -1972	Patino Mines Ltd.	Junior Exploration Geologist
1972-1977	Noranda Mines Ltd.	Mine Geologist Noranda Mines Ltd., Bell Copper Div.
1977- 1982	Prospector and consulting geologist	

STATEMENT OF QUALIFICATIONS

I, Don Young, certify that the following summarizes my education and experience.

Date:

- 1965 Induced Polatization Survey-
McPhar Geophysics
- 1977 Prospecting Course, Granisle, B.C.
Louis T'san instructor
- 1977 Prospecting and claimstaking,
partnered by Peter Ogryzlo
- 1978 Prospected under Prospector's
Assistance Act
- 1979 Completed B.C. Department of Mines
Advanced Prospecting Course, Castlegar, B.C.
- 1979-1982 Prospected under Prospector's
Assistance Act.

ITEMIZED COST STATEMENT

i. Allocation for wages		
P. Ogryzlo		
fieldwork		
5/8/82 to 16/8/82	110 hr. @ \$12.00	\$1320.00
Travel 2 days Topley Landing-Terrace		
return 16 hr @ \$12.00		\$ 192.00
Preparation fo reports, drafting		
40 hr. @ \$12.00		\$ 480.00
D. Young		
fieldwork		
5/8/82 to 16/8/82	110 hr @ \$1 .00	\$1100.00
Travel		
2 days Topley landing - Terrace		\$ 160.00
return 16 hr @ \$1 .00		
ii. Camp expenses		
24 man days @ \$25.00		\$ 600.00
iii. board		
28 man days @ \$12.00/day		\$ 336.00
special living allowance		
28 man days @ \$2.50		\$ 70.00
iv. Travel		
mileage 960 moles @ \$0.30x20%		\$ 57.00
2 pickups 14 days @ \$15.00		\$ 420.00
helicopter		\$ 267.00
v. Assaying		
36 ICP @ \$9.00		\$ 324.00
12 ICP @ \$10.00		\$ 120.00
42 fire assay @ \$7.00		\$ 294.00

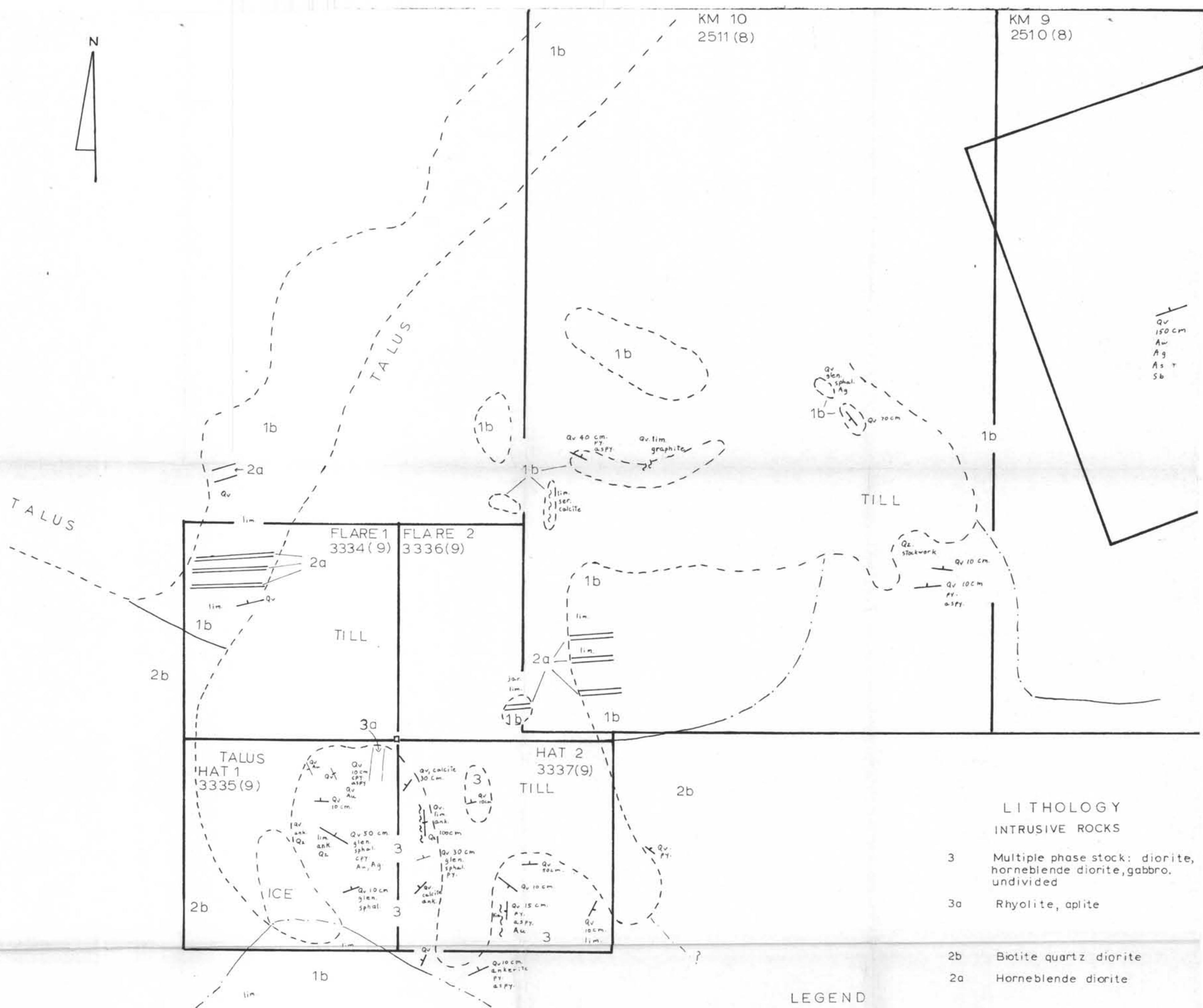
vi. Secretarial, photocopy, office	\$150.00
TOTAL	\$5890.00



KM 10
2511 (8)

KM 9
2510 (8)

Qv
150 cm
Aw
Ag
As
Sb



LITHOLOGY
INTRUSIVE ROCKS

- 3 Multiple phase stock: diorite, hornblende diorite, gabbro, undivided
- 3a Rhyolite, aplite
- 2b Biotite quartz diorite
- 2a Hornblende diorite

LEGEND

- Qv 40cm Quartz vein, width
- Fault
- Qz Quartz veinlets
- Outcrop
- Contact

SEDIMENTARY ROCKS

- 1b Siltstone, shale, minor conglomerate, sandstone, grit.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,821

HAT and FLARE
MINERAL CLAIMS
Skeena Mining Division
Mayo Creek 103115
GEOLOGICAL SKETCH

KM 10
2511 (8)

KM 9
2510 (8)



3500

4000

4500

5000

4500

4000

3000

3500

4000

4500

4500

4000

LAKE

LAKE

FLARE 1 3334(9)

FLARE 2
3336(9)

HAT 2
3337(9)

HAT 1
3335(9)

(1670, 8103, 710) x
 (35800, 470, 52) x
 (710, 430, 1330) x
 (6876, 48843, 8954) x
 (35797, 47, 7) x
 (7450, 1480, 308) x
 (1120, 71000, 71000) x
 (4250, 4250, 700) x
 (1382, 5048, 43537) x
 (383, 21551, 3352) x
 (3704, 38204, 2937) x
 (70, 21, 65) x
 (180, 1980, 310) o
 (20, 48, 22) o
 (20, 48, 22) o
 (35207, 23, 7) x
 (110, 000, 550, 417) x
 (30, 43, 40) x
 (10000, 71000, 4780) o
 (850, 50, 70) o
 (210, 52, 133) o
 (6000, 37, 48) o
 (150, 51, 82) o
 (50, 24, 27) o
 (350, 35, 25) o
 (340, 07, 18) o
 (170, 142, 31) o
 (17000, 167, 21) o
 (1700, 7400, 1350) o
 (2534, 135, 149) o
 (3320, 3200, 84) o
 (710000, 710000, 1170) o
 (230, 16, 30) o
 (1740, 1040, 47) o
 (20, 26, 70) o
 (27920, 0046, 174) o
 (<10, 13, 24) o

(2709, 20, 4) x
(210000, 210, 42) x
(440, 730, 7070) x
(237, 34, 38) o

(30, 75, 30) x

x (600, 5640, 560)

x (50, 2320, 37)

x (110, 259, 27)

x (110, 245, 71)

x (230, 40, 115)

x (300, 710000, 212)

LEGEND

- x Vein float (As, Pb, Cu, ppm.)
- o Vein grab "
- Δ Vein chip "
- Stream sed. "

Elevation in feet A.S.L.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

10,821

**HAT and FLARE
MINERAL CLAIMS**
Skeena Mining Division
Mayo Creek 1031 15

As, Pb, Cu, VEIN GEOCHEMISTRY

PI O

1:5000

11-15-82

KM 10
2511 (8)

KM 9
2510 (8)



3500

4000

4500

5000

LAKE

LAKE

(0.009, 0.15)
(0.014, 0.01)
(0.006, 1.11)
(0.002, 0.05)

x (0.001, 0.12)

3500

x (0.021, 3.79)

x (0.000, 0.14)

x (0.002, 0.18)

4000

x (0.001, 0.09)

x (0.000, 0.11)

x (0.003, 6.52)

FLARE 1 3334 (9)

FLARE 2
3336 (9)

HAT 1
3335 (9)

HAT 2
3337 (9)

(0.023, 2.14)
(0.376, 1.12)

(0.001, 1.75)

(0.014, 1.75) x
o (0.000, -)

(0.024, 0.08) x
(0.083, 2.92) Δ

(1.224, 273.14) Δ

Δ (0.123, 25.49)
o (0.465, 1.82)
x (0.143, 1.85)
x (0.198, 2.33)
Δ (0.000, 0.17)

(0.004, 4.47) o

(0.020, 13.76)

Δ (0.043, 0.06)

Δ (0.004, -)

o (0.000, 0.03)

o (0.000, -)

o (0.003, 0.06)

o (0.001, -)

o (0.000, 0.03)

o (0.045, 0.09)

Δ (0.001, -)

o (0.003, 0.29)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

o (0.000, -)

4500

4500

4000

LEGEND

- x Veinfloat (Au,Ag Q.R.T.)
- o Vein grab "
- Δ Vein chip "
- Stream sed "

GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,821

HAT and FLARE
MINERAL CLAIMS
Skeena Mining Division
Mayo Creek 103I-15
Au Ag VEIN GEOCHEMISTRY

PLO

1: 5000

11-15-82