GEOLOGICAL AND GEOCHEMICAL

ASSESSMENT

OF THE

HAT AMD FLARE

MINERAL CLAIMS

SKEENA MINING DIVISION

NTS

103I 15 W

LAT. 54° 48'

LONG. 1299 59'

OWNERS: DON YOUNG AND PETER OGRYZLO

OPERATORS: DON YOUNG AND PETER OGRYZLO

WORK COMPLETED: AUG/SEPT 1983

REPORT SUBMITTED: JUNE 1984

TABLE OF CONTENTS

1

Location	1
Access	3
History	4
Summary	5
Geological Descriptions -Gener	ral 6
Mineralization	7
Detailed Technical Data	
Vein Geochemistry	9
Method	9
Interpretation of Results	11
Summary and Conclusions	14
Itemized Cost Statement	15
Author's Qualifications	16
Statement of Qualifications	17
MAPS	
Location	2
4700 Vein Chip Samples	in pocket
HAT and FLARE- soil and vein	-
sampling	in pocket

Introduction

INTRODUCTION:

i.Location:

Topography, location and access have been described in detail in previous assessment reports and will be summarized here.

The property is composed of the Hat 1 and 2 and Flare 1 and 2 mineral claims. These claims are located 45 km. N 37 W of the Terrace municapal airport, NTS 103 I. Record numbers are 3334 to 3337.

The claims straddle the ridge forming the divide between the Kitsumkalum River and Mayo Creek in the Kitimat Ranges of the Coast Mountain Range of British Columbia.

A number of Au/Ag bearing veins have been discovered and explored on a northerly trending arete ridge. The showings are generally on north slopes and are usually above treeline although elevations are below 1500 m. ASL. The most significant vein described in this report is exposed at 1430 m. elevation. This vein is from 30 to 100 cm. wide and is visible for a length of 30 m. Grades range up to 0.606 OPT Au and 242.1 OPT Ag. The vein is enveloped by a mineralized quartz—carbonate stockwork containing up to 0.88 OPT Ag. Larger stockwork zones up to 50 m. across contain up to 0.8 OPT Ag.

ii.ACCESS:

Access is by helicopter from Terrace municipal airport.

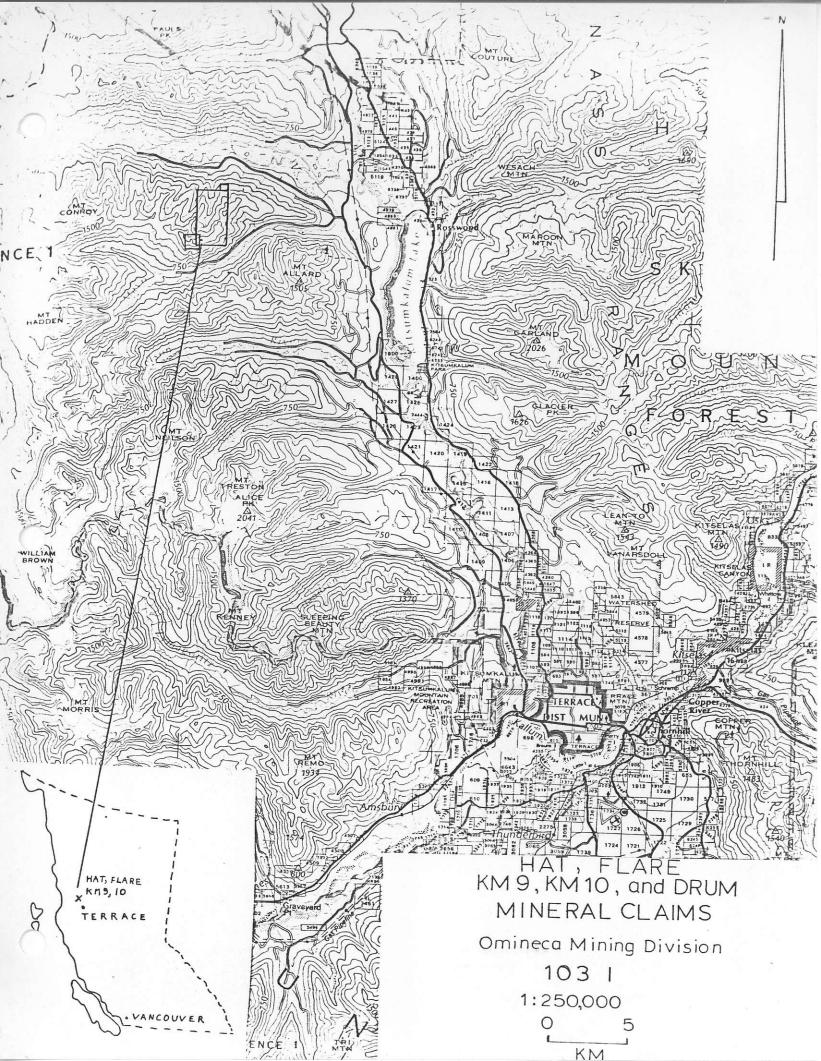
Round trip air time is approximately one hour by Bell 206

helicopter.

Beaver road which joins the Nass logging road 38 km. north of Terrace. The showings may be reached in 6 to 7 hours depending on weather and route chosen.

The Mayo and Beaver logging roads provide good all weather access to the area surrounding the property. Branch logging roads now terminate around the 700 m. elevation within 4 km. of the property. Future road access from the end of these roads would not present any undue difficulty, and would require a climb of 500 to 600 m. over a distance of 4 km.

Terrace is a modern industrial community with a population of around 8000. It is well serviced with daily flights from Vancouver. The property is 50 km. from the CN transcontinental railway, and 110 km. from the port of Kitimat, which is open all year. There is a 138 KVA power line 15 km. from the property.



iv. HISTORY:

The veins discussed in this report were discovered by following up stream sediment and quartz float dispersion trains. The area was chosen as a result of the B.C. Ministry of Mines and Petroleum Resources geochemical survey of NTS sheet 103 I released in 1979. No previous reference to these veins has yet been found, and it is possible that the largest vein found to date has only recently been exposed by retreating snow and ice.

Significant placer production has taken place in the Terrace area, notably on Lorne and Douglas creeks, and precious metals have been produced from lode deposits on Kitselas Mountain and Knauss Mountain.

In the immediate vicinity of the HAT and FLARE claims, reference may be made to the MAYOU and ORO showings. The ORO showing in particular has been actively explored from 1945 to the present and is in the most advanced stage of development. This showing is on the CHRIS claims adjoining HAT and FLARE to the east. Duffel and Souther, in the GSC memoir on the Terrace area, also examined the MARTIN group some 5 km. to the east. All these showings are polymetallic vein occurences, usually well mineralized with arsenopyrite, and

have significant precious metal values.

iv.SUMMARY OF WORK

Three men spent some thirty man days on the property during the 1983 field season. The assessment work was mostly done between July 30 and August 9, 1983.

The object of the program was to chip sample and map the most highly mineralized veins discovered during the previous year, to sample the mineralized stockwork zones, and to extend the area of mapping and prospecting.

GEOLOGICAL DESCRIPTIONS

i GENERAL:

The property straddles the southern margin of the Lower Jurassic — Upper Cretaceous Bowser Basin near the southern contact of that unit with the Coast Range Plutonic Complex. The basin is predominantly filled with siltstone and shale, with minor sandstone, conglomerate and coal. The coast range Complex is represented by apophyses and outliers of dioritic composition. A medium grained light grey granodiorite forms the peak of Mt. Allard south and east of the property, and apparently crosses Mayo creek and forms the spine of the ridge dividing Mayo creek and the Kitsumkalum river

Intruding this apophysis is a younger composite multiphase stock of predominantly diorite composition. A number of precious metal bearing quartz veins are clustered in and around this stock on the HAT and FLARE claims. The stock is primarily a fine to medium grained diorite with horneblende diorite and occasional coarse gabbro. Rhyolite dykes cut the stock as well. Surrounding the stock is a contact aureole extending for several hundred meters characterised by limonite staining in the sediments.

ii MINERALIZATION:

Most of the work detailed in this report was done on the 4700 vein. The vein is well exposed for some thirty meters, and is from 30 to 100 cm. wide. The attitude is N 60 W / 70 NE. The vein is entirely within the diorite host rock, and appears to pinch off to the North and South. It reappears some 100 meters to the North but is largely obscured by talus. After scraping off the rubble, a chip sample was obtained which yielded 0.019 OPT Au and 0.41 OPT Ag over 1 meter. To the south the vein is represented by a shear zone, but another vein appears 100 meters higher and 200 meters to the Southeast along this trend. This vein was only recently discovered and is almost completely obscured by overburden and vegatation. It was not sampled, but deserves further attention.

The 4700 vein is a polymetallic epithermal deposit. Gold is primarily associated with arsenopyrite and silver is primarily associated with galena. Other gangue minerals are quartz and ankerite, which together make up 80 % of the vein with the remaining 20 % being sulphides and xenoliths of wallrock. The other sulphides are chalcopyrite and sphalerite, and occional bornite. Quartz is milky white to grey and is usually stained with iron oxides and a greenish arsenic stain. The vein is sometimes banded with alternating bands of quartz and arsenopyrite or bands of included

wallrocks. The other sulphides appear to occur as more irregular masses or lenses.

Wallrocks are of a medium grained diorite which has been pervasively altered by carbonates and pyrite for several meters on either side of the vein. The alteration zone has a distinctive reddish tinge due to the presence of ankerite. which is the dominant carbonate, and represents up to 10% of the host rock. Pyrite makes up from 1% to 5% of the rock. This mineralization is significant as these altered wallrocks appear to carry precious metals. Silver seems to occur more often than gold, and is almost always present. The footwall appears to carry higher values than the hangingwall. The zone is silicified with quartz occuring both as pervasive disseminations and as small veinlets. Occasionally the vein boundaries become indistinct where the vein horsetails into a number of smaller veinlets, and the entire zone is well mineralized. The vein splits at the southern end with a branch leaving the main trend in a westerly direction.

A much larger quartz-ankerite zone several tens of meters in extent lies below and to the north of the 4700 vein. Mineralogy is similar to the mineralized alteration envelope around the vein, but is not quite as intense. Silver values remain significant, and may be as high as in the footwall zone of the vein. It is not clear if this zone exists independently. It is possible that it is also an envelope around a blind vein that does not outcrop, or that

is buried under talus or snow. Similar zones exist elsewhere on the property, and all deserve attention, both for the precious metal content and for the possibility of discovering more veins.

The veins on the HAT 2 claim at the 4500' to 4800' (1370 to 1460 meter) elevation were re-examined as well. The gold and silver content was confirmed, but the relation between the veins and the alteration zone is still obscure and will require more work.

DETAILED TECHNICAL DATA - VEIN GEOCHEMISTRY

i METHOD:

The primary target of the program was to sample the vein at the 4700 foot elevation on the HAT 1 claim, which is called the 4700 vein in this report.

The vein outcrops on the east wall of a north facing cirque. It is accessible on foot without undue difficulty. The attitude is N 60 W / 70 NE. Widths range from 30 cm. to 100 cm. over an exposed length of 30 m. A mineralized envelope of quartz and ankerite extends for up to 10 meters either side of the vein and gives the wall rocks a singularly rusty appearance.

Thirteen sets of chip samples were taken across the vein. Where the vein was clearly defined, samples were taken

of the hangingwall, vein, and footwall rocks. Samples were taken every two to three meters. Mineralization clearly extends for some distance into the wallrock. Where the vein bifurcated, splayed, or horsetailed, or where boundaries were otherwise indistinct, the sample was taken across the full mineralized width. A total of 18 chip samples were taken.

A total of 81 samples were taken, of which 8 were stream sediment samples and the remainder were rock or chip samples. These samples were crushed and weighed, digested with 3:1:3 HCl:HNO3:H20 and analysed by induction coupled plasma geochemical analysis for 30 elements. Au and Ag were analyzed by fire assay where necessary. Some rock samples, after digestion were analysed by atomic absorption spectrophtometry with Au and Ag analysed 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. The author wishes to thank Noranda Exploration, Homestake and Lac Minerals for providing analyses.

INTERPRETATION OF RESULTS

Precious metal values are summarized as follows:

ROCK TYPE	WIDTH (cm.)	Au (OPT)	Ag (OPT)
Hangingwall	60	tr	tr-0.15
Vein	30-75	tr-0.311	0.16-18.74
Foot wall	60	tr	0.28-0.88
Zone	130-200	tr-0.088	0.15-10.05
Immediately b	elow the 4700	vein is a	large mineralized
boulder appar	ently derived	from the v	ein. Chip samples from
this boulder	are presented	as follows	5

WIDTH (cm.)	Au (OPT)	Ag (OPT)
30	0.43	242.1
100	0.606	1.70

Below the 4700 wein and some 50 meters NW a large silicified ankeritic stockwork zone outcrops. Several chip samples were taken across this zone. Gold values were negligible, but silver values were as high as 0.85 OPT over a sample width of 10 meters. Silver was present in significant amounts in each chip sample. A grab sample of ankeritic rock found in the talus contained 1.47 OPT Ag. These ankeritic zones present a much larger exploration target than the vein deposits. They

are much more common on the property and present a potential for developing a large tonnage deposit. They are easily prospected, as they have a characteristic reddish iron carbonate stain. Several zones exist on the property and have recieved little or no prospecting. All should be systematically sampled.

In addition to the chip sampling program, prospecting for more veins continued. Three veins were discovered, and grab samples from these are listed as follows:

WIDTH(cm.)	Au (OPT)	Ag (OPT)
100	2.05	1.66
100	0.177	0.50
10	0.28	0.41

Silver appears to be associated primarily with galena. Pb/Ag ratios range between 2/1 and 10/1 after eliminating anomalously high or low ratios. Gold is apparently associated with arsenopyrite, which is ubiquitous in the mineralized vein material. Cu and Zn are are commonly associated with both Au and Ag, while Ca is apparently depleted in the veins. Hg is occasionally present, but is not common. Pb/Ag ratios appear to be in a similar range in the quartz-ankerite zones, at least for the few samples taken. Ca however, appears to be enriched, as evidenced by the abundant iron carbonates.

SUMMARY AND CONCLUSIONS

The precious metal veins on the HAT and FLARE claims should continue to be explored. Mineable widths exist in the 4700 vein, and it should be sampled at depth to determine if tonnage and grade are sufficient to support a mining operation. The property is close to an established population center, and access and power are close by.

The other veins on the property should be pursued as well to determine if mineable widths are present there as well. Exploration of the ankeritic alteration zones should continue to see if there are tonnages and grade available to support larger scale mining operations.

ITEMIZED COST STATEMENT

TOTAL

i.	Allocation for wages P.Ogryzlo	
	fieldwork 2/8/83 to 9/8/83 90 hr.@\$15.00 19/8/83	\$1350.00
	Preparation of reports, drafting 40 hr. @ \$15.00	\$600.00
	D.Young fieldwork 30/7/83 to 8/8/83 160 hr. @\$12.0	\$1920.00
	Travel 2 days Topley Landing-Terra 16 hr. @\$12.00	\$192.00
	Robert Messer Ph.D. fieldwork 3/8/83 to 9/8/83 70 hr. @ \$15.00	\$1050.00
ii.	Camp expenses 30 man days @ \$25.00	\$ 750.00
iii	.Board 30 man days @ \$15.00 Special living allowance 30 man days @ \$ 2.50	\$ 450.00 \$ 75.00
iv.	Travel mileage 960 miles @ \$0.30 x20% 2 pickups 9 days @ \$15.00	\$ 57.00 \$ 270.00
٧.	Secretarial, photocopy, office	\$ 150.00

\$6864.00

AUTHOR'S QUALIFICATIONS

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

I was 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.
1977-1984	Prospector and cons	ulting geologist

STATEMENT OF QUALIFICATIONS

I, Donald M. Young, certify that the following summarizes my education and experience:

Dat e	
1965	Induced polarization survey- McPhar Geophysics
1977	Prospecting course, Granisle, B.C.
	Louis Tsan instructor
1977	Prospecting and claimstaking, partnered by
	Peter Ogryzlo
1978	Prospected under Prospector's
	Assistance Act
1979	Completed B.C. Ministry of Mines advanced
prospection	ng
	course, Castlegar, B.C.
1979-1982	Prospected under Prospector's

1979-1982 Prospected under Prospector's
Assistance Act

