

093L/03  
Hagas

821250

REPORT OF 1980 EXPLORATION RESULTS

Hagas 1,3,4,5,6,16,76 to 80,81 and 84 Fr. and Hem Mineral Claims

54° 09' N., 127° 01' E.

N.T.S. 93L/3E

OMINECA MINING DIVISION

Report by: M. Vulimiri

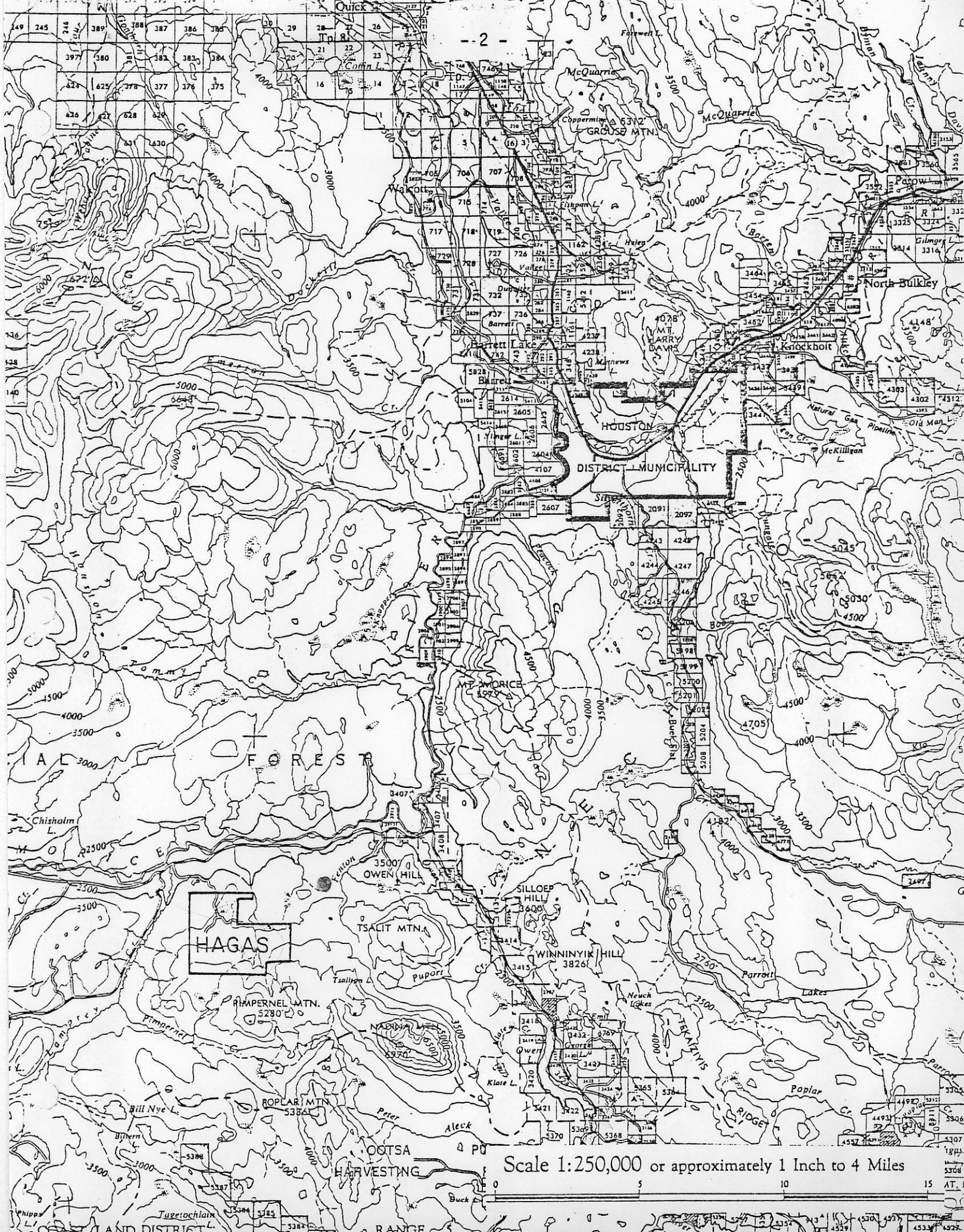
January, 1985.

## INTRODUCTION

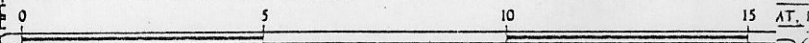
The Hagas property is located within the Omineca Mining Division in the central interior of British Columbia, approximately 20 miles southwest of the town of Houston. The geodetic coordinates are  $54^{\circ}09'N$  and  $127^{\circ}01'E$ .

The property is accessible from Houston via the Morice River road to Km 41.6 and then via a good logging road for 3 kms. The Hagas property is encountered just beyond Frypan Lake.

The central area of the Hagas property was initially staked during the early 1970's. The claims have been the subject of a number of exploration programs, as has the Code-Fen property immediately to the east. The soils, particularly on the central area of the claims, are anomalous in metal values and the geologic setting is similar in some respects to the Nadina and Sam Goosly properties to the east.



Scale 1:250,000 or approximately 1 Inch to 4 Miles



The property consists of the following 102 claim units or fractions:

<u>Claim Name</u>	<u>Record Number</u>
Hagas 1,3,4 and 5	108688, 108690, 108691 and 108692
Hagas 6	108693
Hagas 16	108703
Hagas 76	507
Hagas 77-78	564 and 565
Hagas 79-80	1161 and 1162
Hagas 81 FR.	1163
Hagas 84 FR.	1164
Hem (12 units)	86

#### HISTORICAL SUMMARY OF THE HAGAS CLAIM AREA

The discoveries of the massive sulphide orebodies of Sam Goosly (Equity Silver Mine) and Nadina Mine prompted an intense exploration search around the Houston Belt area for similar type deposits. Exploration was particularly intensified around Gabbroic stocks considered to be the centres of volcanism cutting lower or middle Hazelton Group rocks. ✓

*veins?*

In 1971, Dr. B.N. Church with the B.C. Department of Mines mapped the area and described a small .5 km wide basic intrusive south of Morice River which is presently covered by the Hagas Claims. This stock which intrudes Hazelton Volcanics is considered significant, indicating possible regional structural weakness. The stock was identified as being chemically identical with the Goosly basic intrusive, recognition of which confirmed interest in the area and it was staked by prospectors.

In 1970, Anaconda carried out reconnaissance geochemical surveys and Zinc, Arsenic and Mercury anomalies were located bordering a swamp in the north-eastern part of the Hagas Claims. Anaconda, however, didn't pursue the target.

CODE

In 1972, Perry Knox Kaufman and Associates optioned the ground from the prospectors. During their option period they reconfirmed the earlier geochemical anomalies of Arsenic and Zinc, but Mercury was not confirmed because of analytical difficulties. They also completed a Turam

175 samples

2.4 line miles

over the swamp area and located a 1000 meter north-  
westerly trending conductor. In 1973, two short  
90 meter angle drill holes were drilled from two  
locations on the eastside of the swamp to test the  
anomaly. However, drilling failed to intersect any  
zone of conductance and finally, later interpretation  
of the geophysics demonstrated that the drill holes  
had been spotted in the wrong direction. Relogging  
of this core indicated that hole 73-1 did intersect  
a highly altered zone in fine grained tuffs containing  
1-2% sulphides in fractures.

-605<sup>1</sup>

see log  
very restricted

apparently at end of hole

In 1977, Aquataine Company Ltd., carried out a  
Max-Min II geophysical survey on three lines over the  
same area. Prior to the ground geophysics they had  
the area flown by Scintrex Ltd. of Toronto. The  
following year they decided to test the anomaly from  
the west side of the swamp and DDH-77-1 intersected  
massive sulphides in stringers (from 60-100% of core)  
from 22 m to 35 m. DDH-77-2 was also drilled on a single  
airborne anomaly on the far east side of the property.  
The sulphides did not contain economic values and  
Aquataine subsequently dropped its option.

surface  
mapping  
1:25,000  
2 holes  
308.8 m  
Assessment  
Report  
# 6233

183.5 km  
of airborne  
EM  
EM survey  
9.85 km

In 1979, a private syndicate Catri Ind., acquired the ground and carried out further exploration including establishing a grid on the west side of the property, geochemical surveys and airborne E.M. surveys by Aerodat Ltd. The syndicate never tested any of the anomalies. Airborne anomalies were found on trend southwest of the earlier anomalies established by the Turam survey. A parallel anomaly on the northern flank of the Gabroic stock was also located. *2nd survey*

#### GEOLOGY

Rock exposures are scarce in the central, northern and eastern part of the property, but become reasonably abundant at higher elevations to the south and west. Dense glacial till with up to 15% rounded boulders covers most of the property. Logging road construction provides some of the best exposures on the property.

The youngest rocks on the property are the Tertiary, Buck Creek volcanics which are exposed at higher elevations to the south and east. They consist of fresh, dark green, aphanitic brown weathering andesitic flows which are felt to post date mineralization hosted by the underlying Hazelton volcanics.

The underlying Hazelton Group occupy the central and northern parts of the property, predominantly in recessively weathered creek valleys and low spots between small hills. They consist of a diverse suite of rock types which can be divided into two successive assemblages. At the base, a series of green, mottled andesite, breccia and pyroclastics which exhibit pervasive epidolization and associated minor chlorite, calcite and quartz are found in the central claim area (unit 1 on map). Within this unit and possibly overlying it is a dark green, fragmental volcanic rock interlayered with red-brown argillite containing green, flattened, volcanic, vesicular fragments similar to the underlying beds (unit 2 on map). Units 1 and 2 generally have easterly strikes and dip steeply to the west. Overlying the preceding succession, bedded maroon and brown andesitic flows, lapilli tuffs and calcite pyroclastics occupy the northern part of the property (unit 3 on map). The nature of this succession (unit 3) suggests an aerial to sub-aerial mode of emplacement. This unit outcrops in near flat lying horizons.



Within the northern central portion of the claim group a gabbroic stock pierces the Hazelton volcanics. It consists of coarse grained gabbro with well developed plagioclase laths and poikilitic angite. Small dykes of fine grained diorite, likely contemporaneous to the stock, cut Hazelton rocks and have a north-westerly strike. Chemistry of the stock identifies it as being very similar to the Goosly stock at Equity Mines.

#### MINERALIZATION

Sulphide mineralization has been confirmed in floats over the southwestern part of grid, minor stringer associated with quartz gauge in outcrops, and drill hole 77-1 on the northeastern swamp area. The mineralization in floats has been identified as chalcopyrite and sphalerite occurring as disseminations and stringers in andesite flow rocks, tetrahedrite stringers as breccia veinlets within fine grained tuff, and massive pyrite and stringers within lapilli tuffs in drill hole 77-1. The float mineralization in the

*where?*

southwestern part of the property lies on trend with geophysical conductors and hole 77-1 to the northeast.

Both the conductors, float occurrences and hole 77-1 lie along a northeasterly strike of Hazelton exposure. The structural fabric of the area also has a parallel northeasterly trend.

#### GEOCHEMISTRY

Geochemical testing has been extensively utilized on the property. Results indicate that the heavy glacial till essentially masks most conventional soil sampling techniques. However, zinc, arsenic and mercury do indicate some trend and may prove useful. Heavy mineral sampling appears more useful and copper, silver in addition to zinc, arsenic and mercury may prove useful. Sampling of drill cores and rocks for trace elements mercury, arsenic in addition to copper, zinc, silver has proved encouraging when related to results from the Goosly deposit. The hole 77-1 high sulphide section with high arsenic and silver values is strikingly similar to the Goosly mineralization.

## GEOPHYSICS

The numerous geophysical surveys, both airborne and ground, have generally confirmed a long 5 km northeasterly striking conductive zone paralleling the structural fabric within Hazelton volcanics. Only one diamond drill hole 77-1 on the northeasterly end of the property has successfully intersected this conductive zone.

## SUMMARY OF EXPLORATION POTENTIAL

The work conducted to date has been piece-meal, but collectively this data has outlined a target which has similarities to the Goosly orebody.

- (1.) The geology indicates a large 5 km long 500 m wide structural fracture zone with a **gabroic stock** located in the center flank of a window of **Hazelton volcanic rocks**.
- (2.) Coincident and paralleling the geological trend is a confirmed **geophysical conductive zone** found by both airborne and ground techniques.

- (3.) Interesting geochemical trends were established for Zn, As & Hg in soils.
- (4.) Heavy mineral testing of drill core and floats reveal a sulphide environment similar to the Goosly chemistry.
- (5.) Tetrahedrite in fracture veinlets within lapilli tuff floats confirms the possibility of finding the same material in place.
- (6.) Drill hole 77-1 contained 13 meters of massive pyrite and stringer sulphides with high trace values in copper, zinc, silver and gold.

How HIGH?

RECOMMENDATIONS

- (1.) Follow up and extension of the geochemical work.
- (2.) Follow up of the airborne anomalies to the southwest and relocations of conductors with a Turam Electromagnetic survey.
- (3.) At least 6000 feet of diamond drilling with a minimum depth of 1000 feet for some of the holes.



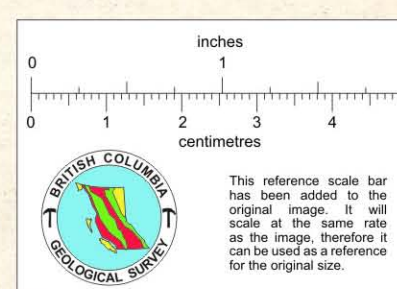


**LEGEND**

- 15 Site sample location & №
- Airborne geophysical conductor
- 1980 control grid outline
- Turam anomaly
- Swamp
- Lake
- Creek
- Road
- Claim post
- Dip & strike
- Outcrop
- Contact
- Interpreted contact

- BUCK CREEK VOLCANICS**
- 5 Fresh, fine grained brownish weathering green andesite
- 4 Gabbro stock
- HAZELTON GROUP**
- 3 Mainly coarse pyroclastic rocks
- 2 Primarily altered andesite & dacitic flows
- 1 Mainly maroon pyroclastics & andesites
- Zn anomalies
- Magnetometer contour in gammas

Contours at 100 metres intervals



PETROSTONE RESOURCES LTD.  
**HAGAS CLAIM GROUP  
GEOCHEMISTRY AND  
GEOPHYSIC**  
NADINA MTN. AREA, OMINECA M.D., B.C.  
SCALE 1:5000  
DATE JAN 1988  
BY: MV & J.B. FIGURE 14