Geology Assessment Report
Maggie Property

NTS 92G/10W, 11E
Vancouver Mining Division
Latitude: 49° 38'N Longitude: 123° 01' W

Owner/Operator: Minnova Inc.
by: G.S. Wells
December 1990

Claim: War Eagle

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1. Introduction

Minnova Inc. acquired the Maggie claims from International Maggie Mines Ltd. in 1987 to evaluate the volcanogenic massive sulphide potential of the property. This report describes the results of a geological mapping program on the War Eagle claim which was done during the period of September 17, 1990 to September 20, 1990.

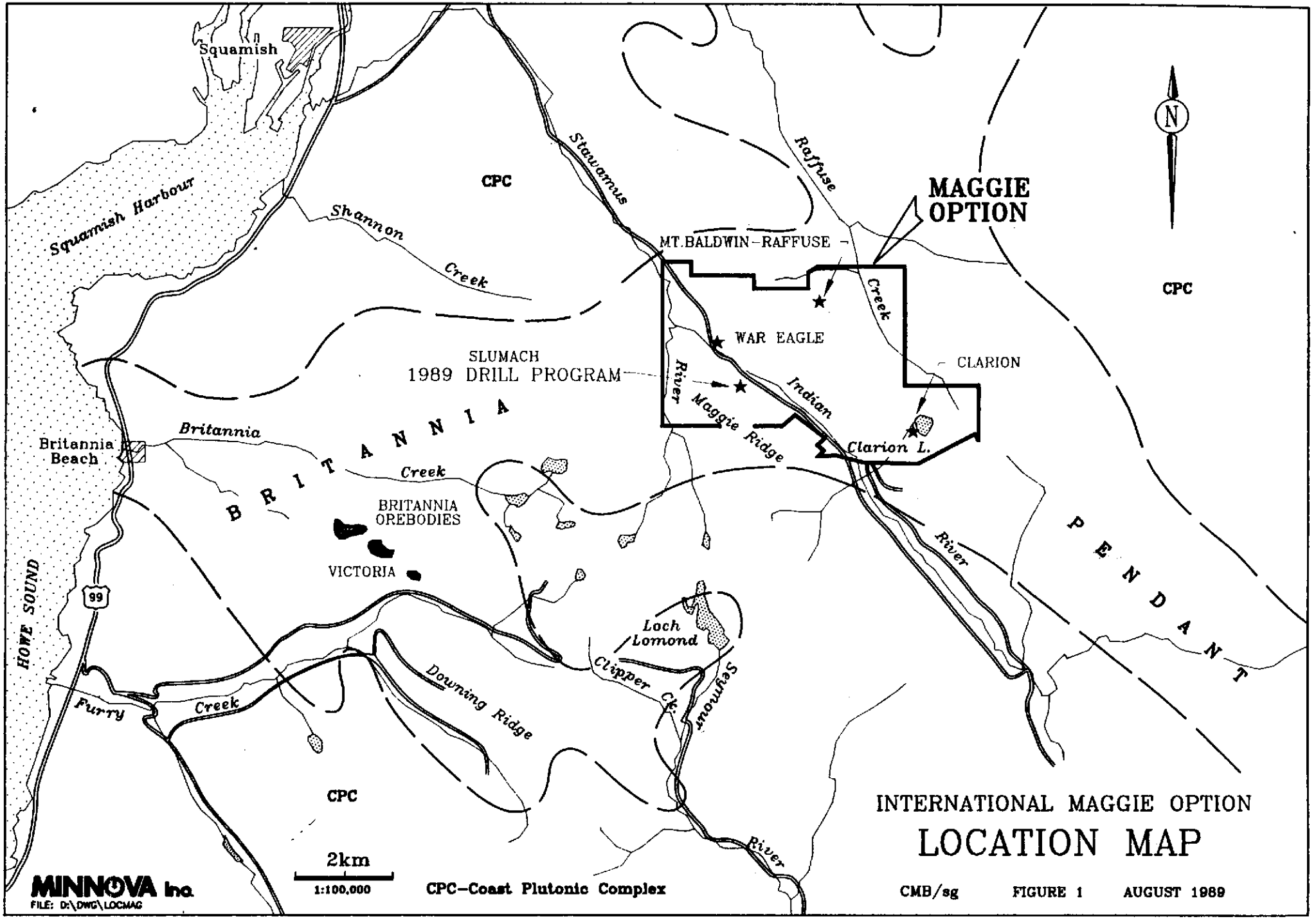
a. Location, Access and Physiography

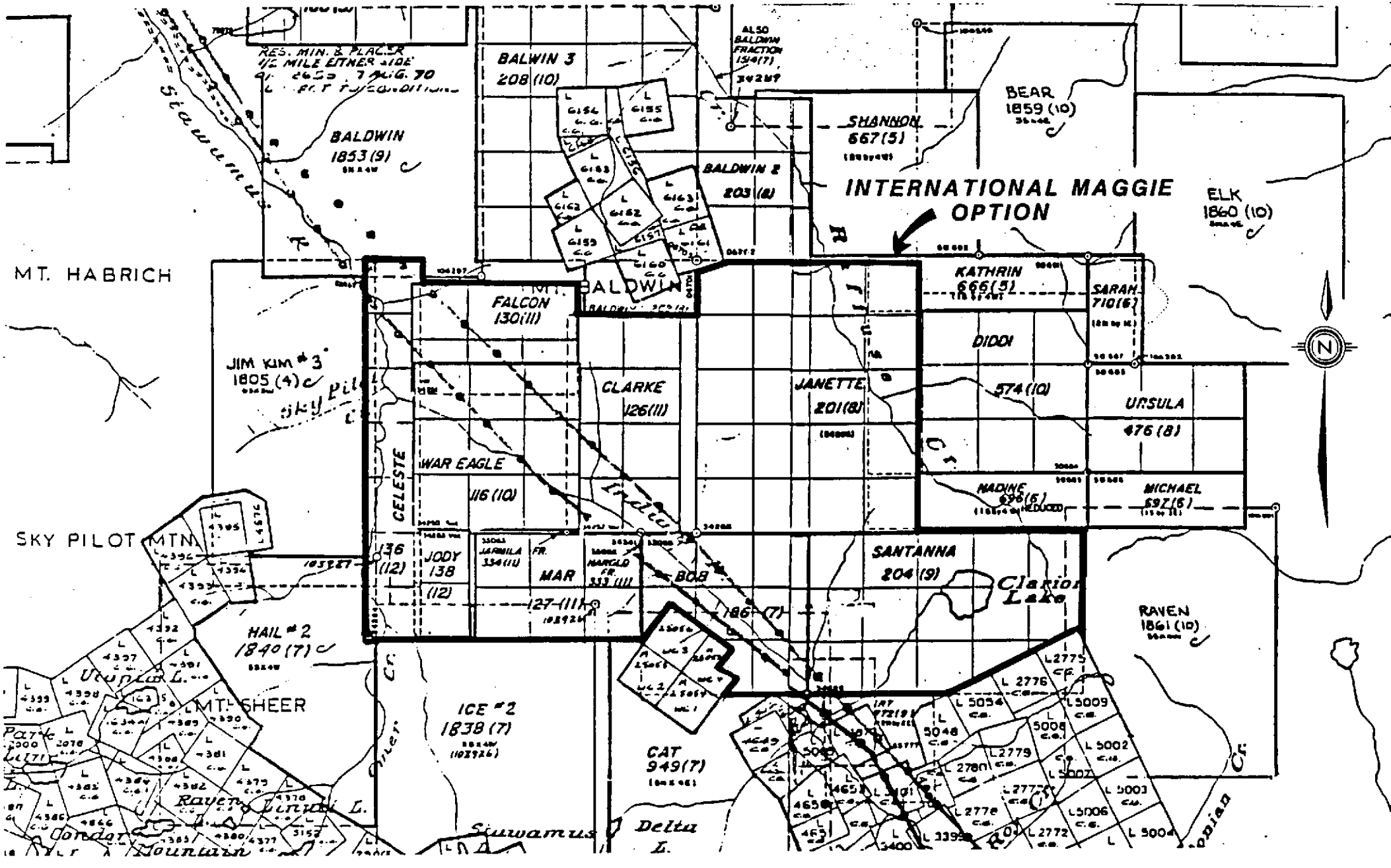
The Maggie property is located about 10 kilometres southeast of Squamish, B.C. in the rugged Coast Range mountains just north of Vancouver (Figure 1). The property straddles the Indian River Valley and is accessed by a rough logging and powerline access road which runs south along the valley floor. Most of the property has been logged to an elevation of 1000 meters except for the Slumach area where steep bluffs remain forested with original growth Douglas fir and hemlock.

b. Mineral Rights

Geological mapping was carried out on the War Eagle claim which is part of the 78-2 supp. group (Figure 2). The status of these claims is as follows:

Claims	Record No.	Units	Month of Record
Jarmilla Fr.	334	1	November
Harold Fr.	333	1	November
Mar	127	6	November
Bob	186	9	July
Celeste	136	7	December
Jody	138	2	December
Falcon	130	6	November
Santanna	204	15	September
Janette	201	20	August
Clarke	126	8	November
War Eagle	116	9	October


Squamish
Squamish Harbour
Shannon Creek
CPC
Stawamus
Raffuse
MAGGIE OPTION
MT. BALDWIN–RAFFUSE
N
CPC
Creek
WAR EAGLE
SLUMACH
1989 DRILL PROGRAM
River
Maggie
Indian
Ridge
CLARION
Clarion L.
Britannia Beach
Britannia
Creek
BRITANNIA
BRITANNIA OREBODIES
VICTORIA
HOWE SOUND
99
Loch Lomond
Clipper Ck.
Seymour
River
PENDANT
Furry
Creek
Downing Ridge
CPC
River
2km
1:100,000
CPC–Coast Plutonic Complex
MINNOVA Inc.
FILE: D:\DWG\LOCMAG
INTERNATIONAL MAGGIE OPTION
LOCATION MAP
CMB/sg
FIGURE 1
AUGUST 1989



NTS 92G/10W,11E

INTERNATIONAL MAGGIE OPTION

CLAIM MAP

FIGURE 2

MINNOVA

0 1 2km

1: 50,000

c. History

The Maggie property has been explored sporadically by a number of companies for many years. The property has long been recognized as having good potential for hosting economic mineralization similar to the nearby Britannia deposits. Systematic drill testing of targets began in 1978-9 when Placer Development Limited drilled 10 holes totalling 1310 metres in the area of the War Eagle adit, a 35 meter underground development by Maggie Mines (now International Maggie Mines Ltd.). Placer terminated their option in 1980 and over the next two years Maggie Mines drilled an additional 37 holes (4500 meters) again, concentrating of the War Eagle area. A number of well mineralized zones were encountered but no ore grade material was defined (Archibald, 1982). In 1983 Maggie Mines discovered the Slumach Vein (1 km southeast of War Eagle) a narrow, gold-rich quartz-sulphide vein. The vein was discovered after following up highly anomalous soil samples collected by Placer. After drilling several short holes Maggie then drove a 55 meter cross-cut in only to discover a dyke in place of the vein. A raise and a further 18 meters of drifting on the structure was done. Unfortunately mineable widths were not present.

Minnova Inc. entered into an agreement with Maggie Mines in 1987 and has been evaluating the property's volcanogenic massive sulphide potential using geology, lithogeochemistry, geophysics and diamond drilling.

2. Regional Geology

The Maggie property is underlain by a late Jurassic to early Cretaceous sequence of volcanic and sedimentary rocks ranging from basalt to rhyolites assigned to the Gambier group (Roddick, 1979). These units have been intruded by Coast Plutonic Complex rocks of a variety of lithologies. The Coast event has been dated at about 100 Ma (Heah, 1982). The volcanic package in the Indian

River valley has been interpreted as an earlier volcanic cycle than that which hosts the Britannia orebodies 10 kilometres to the west. This interpretation is an agreement with mapping by James (1925) who assigned the volcanic and sedimentary rocks in the Indian-Stawamus River area to the Lower Goat Formation and is based on the following evidence:

1. The volcanic and sedimentary assemblage in the Indian River valley forms a west facing panel dipping beneath Sky Pilot mountain.

2. The interfingered basalt flows and argillites which constitute Sky Pilot and Goat Ridge dip gently south and can be traced, without interruption, into the footwall of the Britannia Mines sequence.

3. Geology of the War Eagle Claim

Geological traverses were carried out along the accessible roads and creeks that occur on the War Eagle claim. The claim is underlain by granites of the Coast Plutonic complex and a volcanic-sedimentary sequence which is part of the middle Gambier Group (Figure 3). The Gambier Group rocks have a general northwest-southeast strike. The sediments and crystal tuff units exhibit well-defined bedding which generally dips at variable angles to the southwest except in the War Eagle showing area where bedding dips to the north. A steeply dipping foliation is associated with an early folding event.

The following is a brief description of the map units exposed on the War Eagle claim:

Unit 6.5 Granite

The northeastern part of the claim is underlain by a medium to coarse grained, white weathering granite of the Coast Plutonic complex.

Unit 6.3 Rhyolite (QFP) Intrusive

A medium grained, massive, greenish grey, rhyolite intrusion is exposed in a creek bed immediately southwest of the Coast Range granite. This unit contain 5-10% phenocrysts of plagioclase and quartz (1-2 mm size). The rhyolite is locally weakly sericitic and biotitic.

Unit 5.1 Mafic Dykes

Medium to coarse grained, dark green, massive mafic dykes are associated with the mafic volcanics exposed on the claim. Locally well defined chilled margins can be seen in the outcrops but generally these units are hard to distinguish from massive mafic flows.

Unit 4.2 Argillite, Tuff, Wacke

Well bedded argillites, fine grained tuffs and wacke are found in the volcanic sequence exposed on the War Eagle claim. The argillites are very fine grained and dark grey to black in colour. Thin (<5 cm) lapilli and crystal tuff interbeds are common. This unit is commonly pyritic with up to 10% pyrite occurring as very fine beds.

Unit 3 Felsic Volcanics

Felsic volcanics appear to be concentrated in the southeastern corner of the War Eagle claim (Figure 3). Unit 3.1 is a massive, medium grained aphyric flow which locally exhibits well developed flow banding. This unit is interpreted as the extrusive equivalent of the rhyolite QFP intrusion exposed along strike to the northwest. Felsic crystal tuffs (unit 3.7) and ashes (unit 3.6) are exposed to the southwest of the rhyolite flow. These units interfinger with intermediate crystal tuffs and ashes (units 2.6 and 2.7). In unit 3.7, small (<1 mm) feldspar crystals and rare quartz crystals are set in a fine grained siliceous ash matrix. Unit 3.6 consists primarily of siliceous, fine grained ash with minor interbeds of argillite and chert. Biotite hornfels alteration due to the proximity of the Coast Range granites locally occurs in these ashy units and results in a purplish hue to the rock. The felsic volcanics exposed on the claim are generally unaltered and only weakly pyritic (<1%).

Unit 2 Intermediate Volcanics

Intermediate crystal tuffs (unit 2.7) and ashes (unit 2.6) are exposed in the central and western parts of the War Eagle claim. The crystal tuffs which are commonly feldspar-rich (20-25%) are light green in colour due to finely disseminated chlorite. Feldspar-phyric lapilli and chert fragments (<5%) are locally present in this unit. The fine-grained ashes (unit 2.6) are generally well bedded.

Unit 1 Mafic Volcanics

Massive, fine to medium grained, dark green mafic volcanics are exposed to the northwest and southeast of the central rhyolite QFP intrusion/flow complex (Figure 3). The crystal tuff (unit 1.7) contains 15-20% feldspar crystals set in a fine grained, chloritic ash matrix. The feldspar crystals are pervasively, weakly epidotized. The massive flow (unit 1.1) is also commonly feldspar porphyritic (20-25%) and chloritic. Dark bluish green cordierite clots (up to 1 cm diameter) are found in the mafic volcanics exposed in the Indian River valley at the eastern edge of the War Eagle claim.

The units described above appear to form a homoclinal sequence which dips 45° to 60° to the southwest. Northerly dips and tops to the ashes and argillites exposed in the War Eagle showing area may be related to folding and/or faulting but outcrop exposure is not sufficient to satisfactorily resolve the structural problem in this area.

a. Mineralization

Previous work on the War Eagle claim focused on evaluating the War Eagle showing. Mineralization exposed here consists of thin, subeconomic veinlets and disseminations of pyrite, sphalerite and chalcopyrite hosted in intermediate tuffs. Elsewhere on the claim economic mineralization is sparse. The argillite units contain up to 10% pyrite which occurs as fine beds and disseminations. Other volcanic units exposed on the claim commonly have traces of disseminated pyrite but no economic sulphides.

4. Conclusions

The War Eagle claim is underlain by Coast Range granites and volcanic and sedimentary units of the middle Gambier Group. The volcanics trend in a northwesterly direction and occur as a homoclinal sequence that dips generally to the southwest at 45° to 60°. A rhyolite intrusion/flow complex occurs in the east-central part of the claim. It is flanked by mafic flows and crystal tuffs and overlain by interbedded felsic tuffs, intermediate tuffs and argillites. Base metal mineralization is exposed at the War Eagle showing but intensive work by previous operators has failed to define any economic zones. Elsewhere on the property mineralization is sparse. However, based on the geological mapping, it is recommended that further exploration for base metal mineralization be concentrated in the vicinity of the rhyolite intrusion/flow complex.

Gary Webb

5. Statement of Costs

War Eagle Claim filed for $2340.00

G.S. Wells	3 days x $350/day	$1050.00
J.D. Kapusta	3 days x $300/day	$ 900.00
Truck	3 days x $ 50/day	$ 150.00
Food/housing	6 man days x $40/day	$ 240.00
		$2340.00

6. References

Archibald, G. F., 1982: Summary Report on Work Performed on the Janette, Mar and War Eagle Claims for Maggie Mines Ltd.

Heah, T., 1982: Stratigraphy, Geochemistry and Geochronology of the Lower Cretaceous Gambier Group, Sky Pilot area, BSc. thesis, UBC.

James, H. T., 1925: Britannia Beach Map Area, B.C., Geological Survey of Canada, Memoir 158.

Roddick, J. A., Woodsworth, G. J., 1979: Geology of Vancouver West Half and mainland part of Alberni; Geological Survey of Canada, Open File 611.

7. Statement of Qualifications

I, Gary S. Wells, herby certify that:

1. I hold an Honours Bachelor of Science degree in combined geology and chemistry (1975) from Carleton University, Ottawa, Ontario and a Ph.D degree in geology (1980) from Queen's University, Kingston, Ontario.

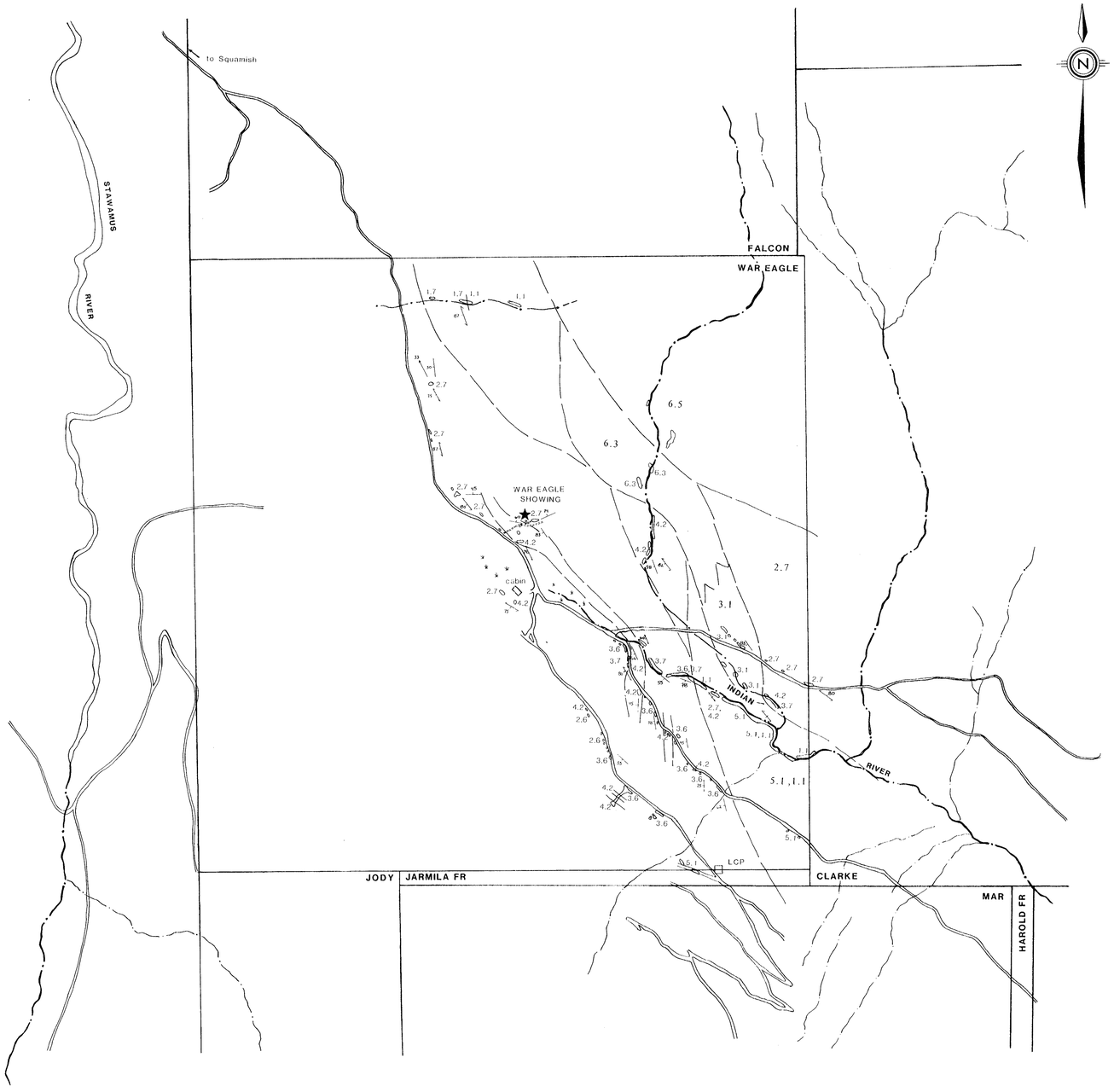
2. I am an associate member of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy.

3. I have practised my profession in exploration continuously since graduation in 1980.

Gary Wells

Gary S. Wells

Date: Dec. 17 /90



GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,779

LEGEND

Rock Types:

6.5 Granite
6.3 Rhyolite Intrusive
5.1 Mafic Dikes
4.2 Argillite, Tuff, Wacke
3 Felsic Volcanics
- 3.1 Massive Flow
- 3.6 Ash
- 3.7 Crystal Tuff

2 Intermediate Volcanics
- 2.6 Ash/Tuff
- 2.7 Crystal Tuff

1 Mafic Volcanics
- 1.1 Massive Flow
- 1.7 Crystal Tuff

SYMBOLS:

- Bedding
- Foliation
- Lineation
- Geological Contact

MINNOVA Inc.

GEOLOGY OF THE WAR EAGLE CLAIM

0 500m
SCALE: 1:5000

Gary Wallis

N.T.S. 92G/10W,11E		MAP:
DRAWN BY: GSW		3
DATE: October 1990		