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**GEOLOGICAL AND LITHOGEOCHEMICAL REPORT
ON THE FIRE 1 CLAIM**

**OMINECA MINING DIVISION, B.C.
NTS 93L/3W**

**BY
PERRY GRUNENBERG
JANUARY 1992**

CLAIM NAME	UNITS	TENURE NUMBER	ANNIVERSARY
FIRE 1	20	243181	25 FEBRUARY

LOCATION: 54°09' NORTH LATITUDE; 127°29' WEST LONGITUDE

OPERATOR: HLX RESOURCES LTD.

OWNER: HLX RESOURCES LTD.

CONSULTANT: PERRY GRUNENBERG, B.Sc., F.G.A.C.

APPROVAL NO: SMI 91-0200305-393 **GEOLOGICAL BRANCH
ASSESSMENT REPORT**

22,133

**GEOLOGICAL AND LITHOGEOCHEMICAL REPORT
ON THE FIRE 1 CLAIM
OMINECA MINING DIVISION, B.C.
NTS 93 L/3W**

SUMMARY

The FIRE 1 claim was staked over the "Fire Lookout" Au-Cu-Ag-Mo showing reported in B.C.G.S. Open File 1991-1. The claim is located on the north facing slopes of Nanika Mountain, immediately north of Morice Lake, 75 kilometres south-southwest of Smithers, B.C. in the Omineca Mining Division. An access road, to within one kilometre of the property, is currently being developed as logging progresses into the area. The property consists of one Modified Grid Claim totalling 20 units.

A work program completed in December 1991 included prospecting, geologic mapping and rock chip sampling. This work was done by a two-man crew using a helicopter from Houston, B.C. Work sites were restricted to windblown ridges where snow accumulation had not totally obscured outcrop exposures. Fifteen rock chip samples were gathered from such sites. Each sample location was flagged and recorded as a distance and compass bearing from the survey marker near the Forest Service fire lookout station on the property.

Geological mapping indicates that the claim block is predominantly underlain by siliceous pyroclastic facies of the Early Jurassic, Telkwa Formation. This Formation includes well-bedded, quartz feldspar pyroclastic ash flows, ignimbrite, breccias, air-fall tuffs, red tuffs, and basalt and rhyolite flows. The northeast section of the claim block is underlain by a basaltic flow facies of the Telkwa Formation, including massive maroon to green augite feldspar porphyry to aphanitic basalt flows, minor maroon tuffs, with minor flow top breccias which are locally amygdaloidal. Previous mapping shows the presence of a granitic stock on the eastern part of the claim.

Fifteen rock chip samples were collected from the ridge near the fire lookout station on the western margin of the claim. The most significant sample, in terms of gold values (532 ppb), was chipped from an outcrop containing carbonate veining and stockworks in propylitically altered andesites, which appear to be part of an alteration halo covering a large portion of the exposed ridge near the fire lookout station.

GEOLOGICAL AND LITHOGEOCHEMICAL REPORT
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OMINECA MINING DIVISION, B.C.
NTS 93 L/3W

TABLE OF CONTENTS

SUMMARY.....	i
TABLE OF CONTENTS.....	ii
FIGURES.....	ii
TABLES.....	ii
1.0 INTRODUCTION.....	1
1.1 LOCATION AND ACCESS.....	1
1.2 PHYSIOGRAPHY, VEGETATION, AND CLIMATE.....	1
1.3 CLAIM INFORMATION.....	1
1.4 HISTORY.....	4
1.5 WORK DONE FOR HLX RESOURCES LTD. IN 1991.....	5
2.0 GEOLOGY.....	6
2.1 REGIONAL GEOLOGY.....	6
2.2 PROPERTY GEOLOGY.....	8
3.0 LITHOGEOCHEMICAL SAMPLING.....	9
3.1 DISCUSSION OF RESULTS.....	11
COST STATEMENT.....	13
REFERENCES.....	14
STATEMENT OF QUALIFICATIONS.....	15
APPENDIX - MIN-EN LABS ASSAY CERTIFICATES.....	16
FIGURES	
FIGURE 1 - LOCATION MAP.....	2
FIGURE 2 - CLAIM MAP.....	3
FIGURE 3 - 1:50,000 GEOLOGY MAP.....	7
FIGURE 4 - ROCK SAMPLE LOCATION MAP.....	10
TABLES	
TABLE I - CLAIM STATUS.....	4
TABLE II - ROCK SAMPLE DESCRIPTIONS AND GEOCHEMISTRY.....	11

1.0 INTRODUCTION

The FIRE 1 claim was staked over the "Fire Lookout" Au-Cu-Ag-Mo showing reported by Pat Desjardins and Ron Arksey in Open File 1991-1, B.C. Geological Survey Branch (G.S.B.C.). See Minfile Occurrence Number 093L 309. The work covered in this report was designed to further investigate this showing.

1.1 LOCATION AND ACCESS

The claim is located on the north facing slopes of Nanika Mountain, immediately north of Morice Lake, 75 kilometres south-southwest of Smithers, B.C. (Figure 1). An access road to within one kilometre of the property is currently being developed as logging progresses in the area. Currently, the Morice Forest Service road provides year round access to within 10 kilometres of the claim. For the work outlined in this report, the claim was accessed via helicopter from Houston, B.C.

1.2 PHYSIOGRAPHY, VEGETATION, AND CLIMATE

The property is located within the Hazelton Mountains of the Bulkley Ranges, on the eastern margin of the Coast Range Mountains, and west of the Nechako Plateau. Elevations vary considerably from 775 metres at Morice Lake to approximately 2000 metres at mountain peaks. The terrain is characterized by steep ridges and large U-shaped valleys. The western portion of the property lies over alpine plateau, with a steep slope to the east into lower elevation wetlands.

Vegetation is altitude dependant with small spruce, pine, and alder in the valleys and sparse grassy patches at higher locations. The tree line is at approximately 1400 metres.

The area experiences typical northern interior climate, with relatively dry summers and moderate to high snowfalls in winter. Average July temperature is 20°C and average January temperature is -10°C.

1.3 CLAIM INFORMATION

The property is located within the Omineca Mining Division and consists of one Modified Grid Claim totalling 20 units (Figure 2). The claim is 100 percent owned by HLX Resources Ltd. of Vancouver, B.C. For more information, please see Table I.

HLX RESOURCES LTD.

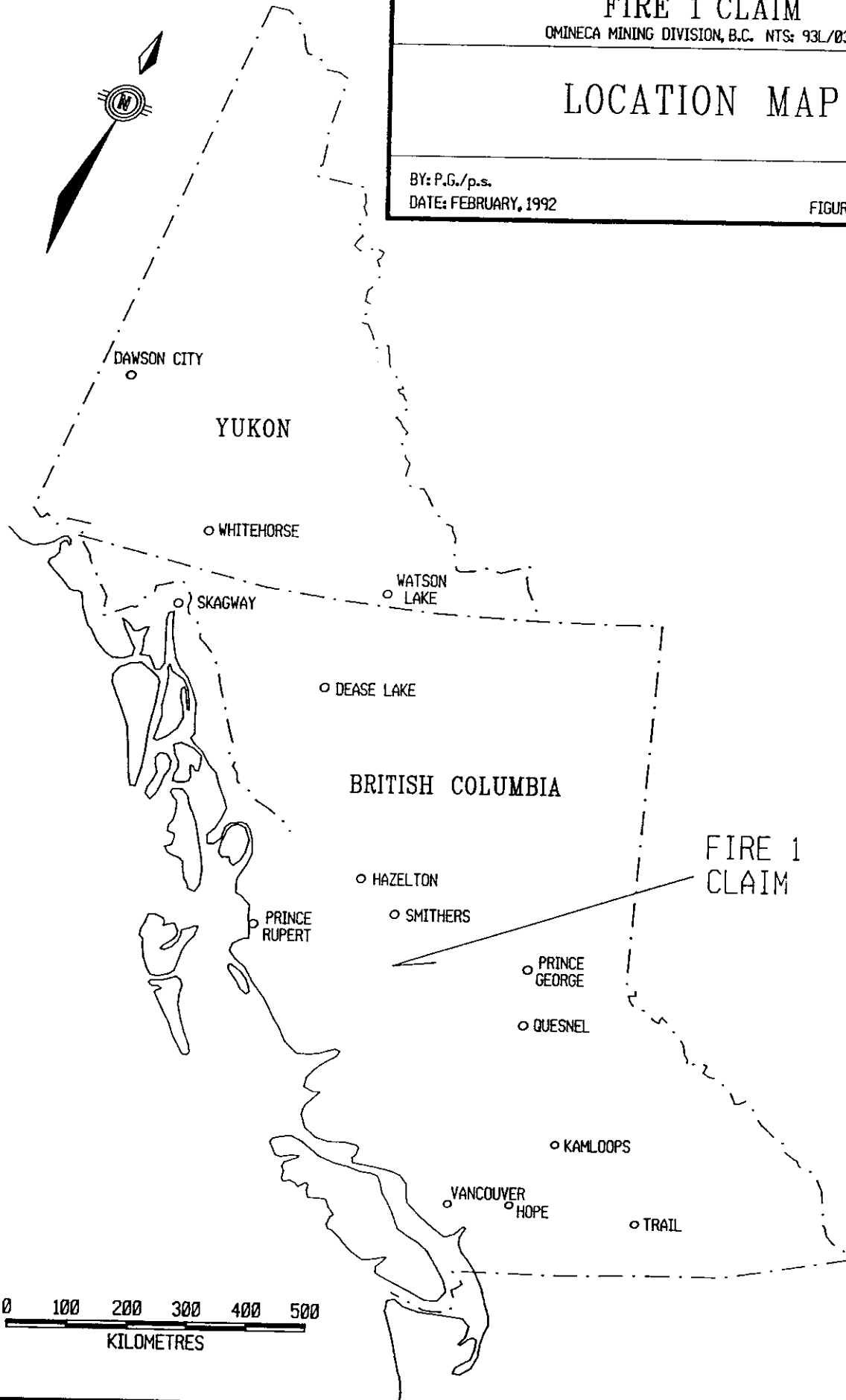
FIRE 1 CLAIM

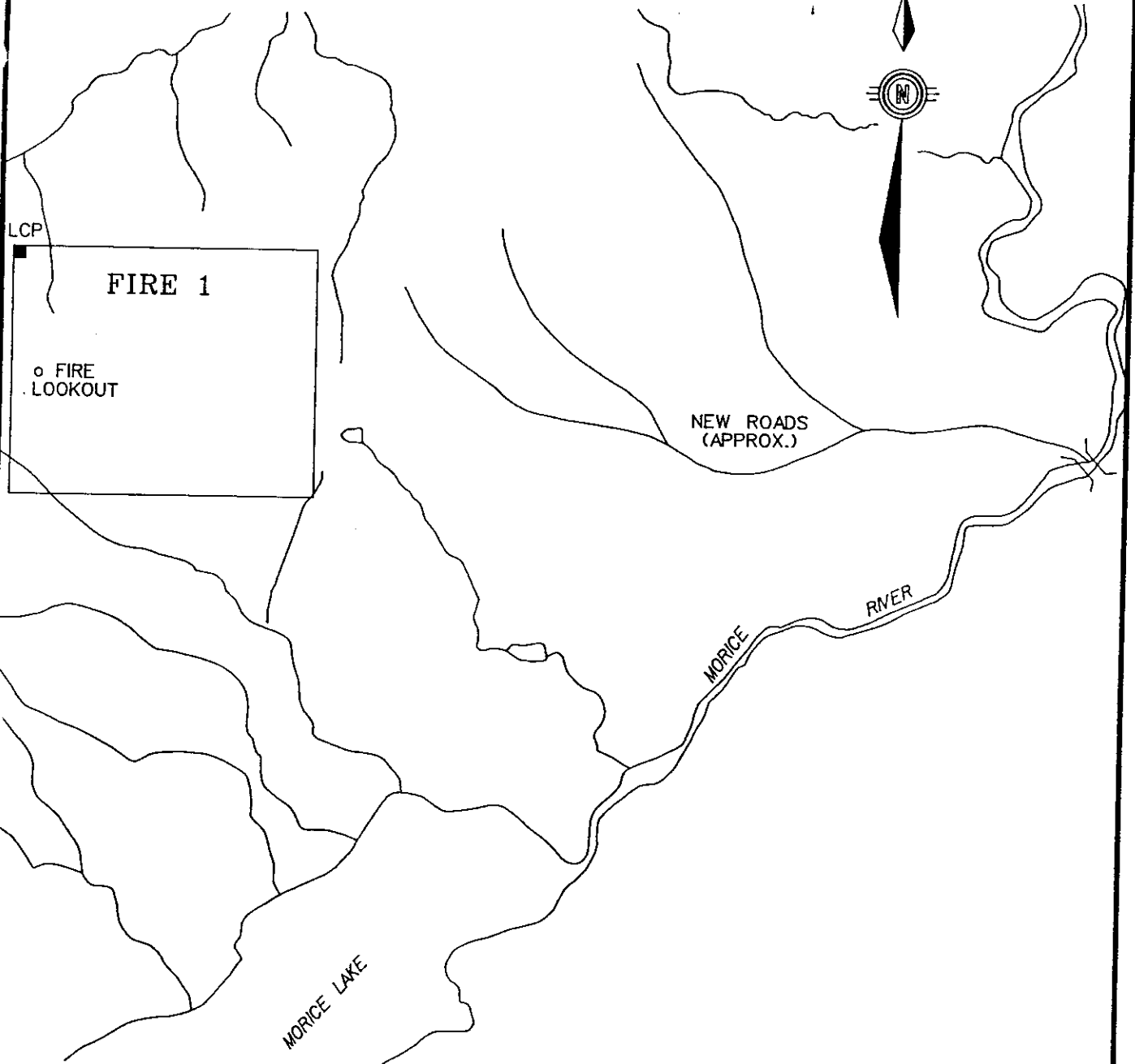
OMINECA MINING DIVISION, B.C. NTS: 93L/03W

LOCATION MAP

BY: P.G./p.s.
DATE: FEBRUARY, 1992

FIGURE: 1





SCALE 1:50,000

HLX RESOURCES LTD.
FIRE 1 CLAIM OMINECA MINING DIVISION, B.C. NTS: 93L/03W
CLAIM MAP
BY: P.G./p.s. DATE: FEBRUARY, 1992
FIGURE 2

TABLE I
CLAIM STATUS

CLAIM NAME	UNITS	TENURE NUMBER	ANNIVERSARY
FIRE 1	20	243181	FEBRUARY 25

1.4 HISTORY

Exploration of the Hazelton Mountains dates back to the late 1800's with the construction of the Telegraph Trail through the Bulkley Valley. Access as far as Hazelton was provided by steamship on the Stikine River from the west. In 1892, the first survey of the area was conducted by A.L. Pourier where he made note of the mineral potential of the area, with special note of coal outcroppings in the Telkwa Valley. In 1914 a rail line was developed through the Bulkley Valley, and with improved access came many more prospectors. By 1925, development work was proceeding on numerous properties in the area, with 18 being identified as potential mine sites.

The most successful of these ventures was the Duthie Mine on the backside of Hudson Bay Mountain, which produced silver from vein ore through the 1920's. Other properties of interest at the time were the Cronin Mine and the Silver King Mine. At various times ore shipments were made from these properties but they never attained the kind of production that would qualify them as actual mines.

In the late 1960's and early 1970's regional exploration for copper and molybdenum porphyries covered much of the area. These surveys resulted in the discovery of several deposits including the Glacier Gulch Mo-W deposit, the Huckleberry Cu-Mo deposit, the Berg Cu-Mo deposit, and the Big Onion Cu deposit. These deposits are currently at various stages of development.

More locally, 25 kilometres southwest of the FIRE 1 claim, the New Moon Pb-Zn-Ag-Au-Cu deposit was worked by Newmont Mines during the 1985 to 1987 field seasons. Programs involved mapping, prospecting, hand and backhoe trenching, geochemical sampling, and geophysical surveying. This work resulted in the discovery of 20 mineralized zones in fault controlled quartz-carbonate epithermal veins.

No previous work has been documented as taking place on the FIRE 1 claim.

1.5 WORK COMPLETED FOR HLX RESOURCES LTD. IN 1991

A program that included prospecting, geologic mapping and rock chip sampling was completed over the property on December 4, 1991. This work was done by a two person crew using a helicopter from Houston, B.C. to access the claim. Work sites were restricted to windblown ridges where snow accumulation had not totally obscured outcrop exposures. Fifteen rock chip samples were gathered from such sites. Each sample location was flagged and recorded as a distance and compass bearing from the survey marker near the fire lookout station on the property.

2.0 GEOLOGY

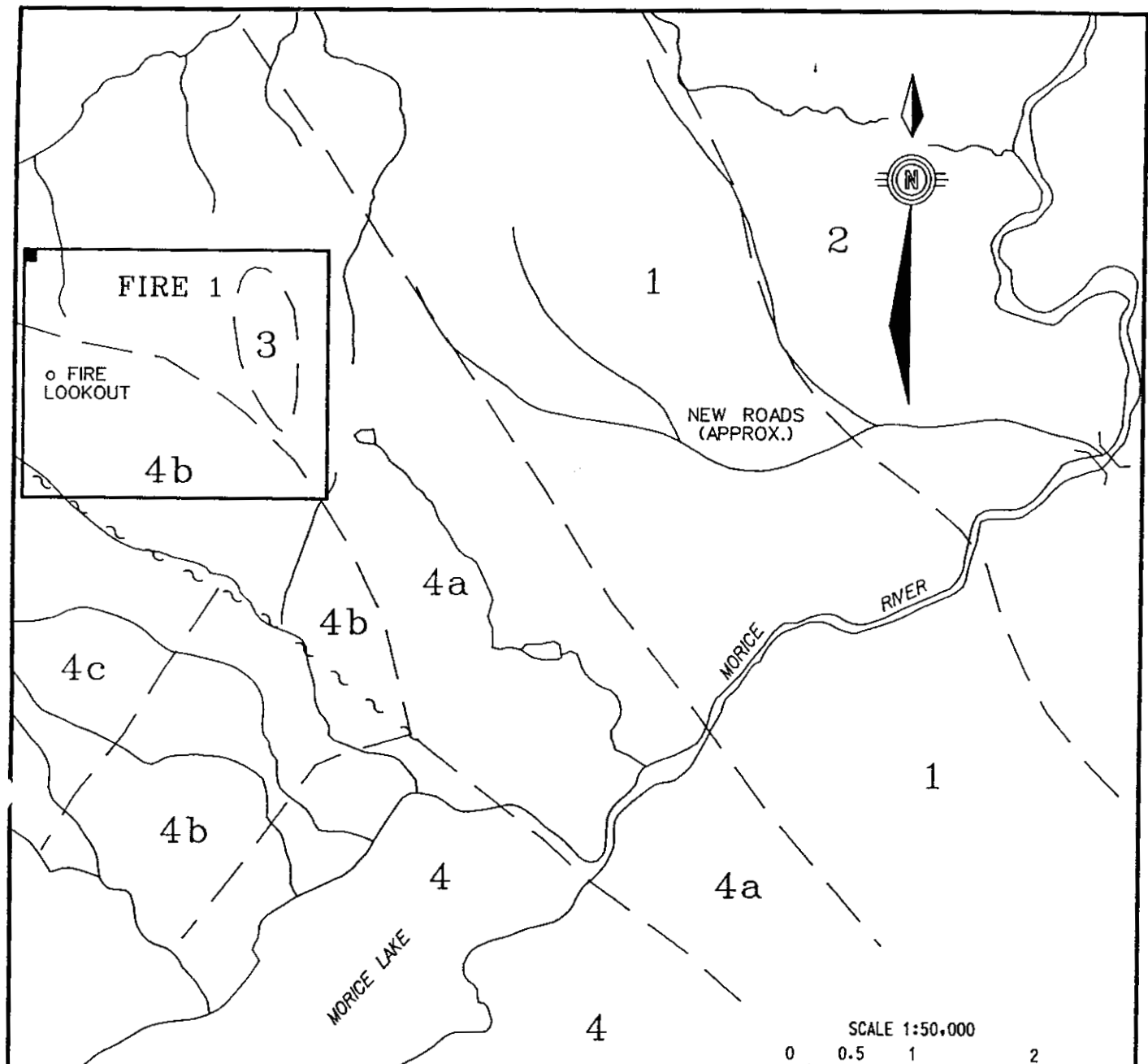
2.1 REGIONAL GEOLOGY

Regionally, the FIRE 1 claim lies at the western limits of the early to mid Jurassic Hazelton Group rocks, in close proximity to the coast plutonic complex. More locally, the Hazelton Group has been subdivided into the Telkwa and Nilkitkwa Formations. The Telkwa Formation underlies most of the property.

The name Telkwa Formation refers to the oldest of three formations which make up the Hazelton Group. This formation consists of a thick suite of calc-alkaline volcanic rocks that has been subdivided into five distinct facies, of which the Howson subaerial facies, composed of basalt to andesite pyroclastic flows and tuffs deposited in a terrestrial environment (Tipper and Richards, 1976), is locally prominent. The Telkwa Formation is underlain and probably coeval with Lower Jurassic Topley Intrusions and is overlain conformably by the Nilkitkwa Formation.

The Nilkitkwa Formation is composed of shale, siltstone, greywacke, limestone, rhyodacite, airfall tuffs and breccias, and basalts. The basal member is the Red Tuff member composed of reddish calc-alkaline volcanic rocks, some of which are found around Morice Lake.

Telkwa Formation rocks are intruded by the Topley Intrusions which form calc-alkaline stocks and batholiths that are Early Jurassic in age. They form a series of bodies coincident with the Skeena Arch, and, although they trend directly toward the Coast Plutonic Complex, they have not been recognized within it. These intrusions are thought to be contemporaneous with the Telkwa Formation.



ENDAKO GROUP

- 1 - EOCENE TO OLIGOCENE -
BUCK CREEK VOLCANICS: - BASALTS
- 2 - PALEOCENE TO OLIGOCENE -
THAUTIL RIVER SEDIMENTS:
CONGLOMERATE, SANDSTONE, SILTSTONE
- 3 - TERTIARY INTRUSIVES -
QUARTZ MONZONITE, GRANODIORITE
QUARTZ DIORITE
- LOWER JURASSIC -

HAZELTON GROUP

- 4 TELKWA FORMATION: UNDIVIDED
ANDESITE, DACITE, RHYOLITE, BASALT,
FLOWS & PYROCLASTIC
- 4a BASALTIC FLOW FACIES
- 4b SILICEOUS PYROCLASTIC FACIES
- 4c SHALLOW MARINE SEDIMENTARY
FACIES

NOTE: Geology compiled from Geology Survey Branch
B.C. Ministry of Energy, Mines, & Petroleum Resources
open file 1991-1, NTS 93L/03, Pat Desjardins & Ron Arksey
& Minfile map 093L Smithers Mineral occurrence map

HLX RESOURCES LTD.

FIRE 1 CLAIM

OMINECA MINING DIVISION, B.C. NTS: 93L/03W

GEOLOGY MAP

BY: P.G./p.s.
DATE: FEBRUARY, 1992

FIGURE: 3

2.2 PROPERTY GEOLOGY

Most recently, the area in the vicinity of the claim was mapped at a scale of 1:50,000 by Desjardins and Arksey of B.C.G.S. See Open File 1991-1, NTS 93/L03. This mapping indicates that the claim block is predominantly underlain by siliceous pyroclastic facies of the Telkwa Formation, including well-bedded quartz-feldspar-phyric ash flows, ignimbrite, breccias, air-fall tuffs, red tuffs, basalt and rhyolite flows. The northeast section of the claim block is underlain by basaltic flow facies of the Telkwa Formation, including massive maroon to green augite-feldspar-phyric to aphyric basalt flows, minor maroon tuffs, with minor flow top breccias which are locally amygdaloidal. Previous mapping of the area at a scale of 1:250,000 by B.C.G.S. (Minfile Map 93L) shows the presence of a granitic stock on the eastern part of the claim. This feature had been mapped as early Tertiary quartz monzonite, granodiorite or quartz diorite but is absent from the later 1:50,000 map.

During the latter B.C.G.S. (1:50,000) mapping survey, 20 rock samples were collected and geochemically analysed. The sample which returned the highest grades of base and precious metals was located near the center of the Fire 1 claim, in close proximity to the inferred contact between the siliceous and basaltic facies of the Telkwa Formation. This sample (#11 on the map sheet) contained 505 ppb gold, 46.3 ppm silver, 6768 ppm copper, 26 ppm molybdenum, and 350 ppm zinc. The sample was described as a pervasively carbonate altered Telkwa Formation pyroclastic with malachite staining.

Further investigation by HLX Resources Ltd. found minor amounts of malachite stained Andestic tuff at the location of the B.C.G.S. sample mentioned above (sample 91FP01, Figure 4). This sample comes from an area of pervasively propylitic altered andesites. In places the andesite is brecciated with a stockwork of carbonate stringers commonly invading fractures over zones of 30 cm width. The andesites appear to become less altered towards the western margin of the claim block.

3.0 LITHOGEOCHEMICAL SAMPLING

A total of 15 rock chip samples were collected from the ridge near the fire lookout on the western margin of the Fire 1 claim. Each sample location was flagged and recorded as a distance and bearing from the survey marker located near the lookout buildings.

The samples were then packaged and shipped to Min-En Labs in North Vancouver. At Min-En Labs the samples were tested for 31 elements by a standard I.C.P. A.E.S. method, and for gold by fire assay. Sample locations, are shown on Figure 4. Sample descriptions and assay results for copper and gold are given in table II. The complete set of Min-En assay results are in Appendix 1.

UNALTERED
ANDESITE

PROPYLLITIC ALTERED
ANDESITE



FIRE 1 - WEST CLAIM BOUNDARY

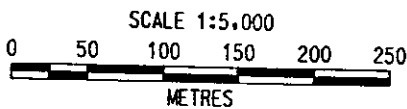
91FP05 X
X 91FP06
91FP04 X
91FP01 X
91FP03 X
91FP02 X
91FPLD1 X

91FLD2 X
91FLD6 X

91FLD3 X
91FLD4 X
91FLD7 X

91FLD5 X
91FLD8 X
91FP07 X

127° 30' W



NOTE: ELEVATION IN FEET
X - SAMPLE LOCATION
□ - FIRE LOOKOUT BUILDING

HLX RESOURCES LTD.

FIRE 1 CLAIM

OMINECA MINING DIVISION, B.C. NTS: 93L/03W

ROCK SAMPLE
LOCATIONS

BY: P.G./p.s.
DATE: FEBRUARY, 1992

FIGURE: 4

TABLE II
ROCK SAMPLE DESCRIPTIONS AND GEOCHEMISTRY

SAMPLE #	DESCRIPTION	Au ppb	Cu ppm
91FP01	Andesite with malachite stain Chalcopyrite 1 to 2 %	98	5577
91FP02	Narrow quartz-carbonate stringer vein (rhodochrosite), 3 cm. wide, in brecciated altered andesite	20	61
91FP03	Stockwork carbonate in brecciated andesite with epidote and carbon- ate alteration, 30 cm. width	532	30
91FP04	Abundant iron oxide in propylitic altered andesite	6	7
91FP05	Quartz-carbonate stringer vein with epidote and rhodochrosite in highly chloritized andesite	4	156
91FP06	Fine grained andesite with high iron staining (5% very fine grained pyrite)	3	9
91FP07	High pervasive propylitic alteration of andesite, abundant calcite on fractures	28	37
91FLD1	Andesite limonitic with vugs, epidote and carbonate alteration	12	47
91FLD2	Andesite, small stringers of calcite with rusty staining	10	11
91FLD3	Cherty green-brown breccia with andesitic matrix, iron oxide	2	4
91FLD4	Contact of andesite with cherty breccia, vuggy with calcite infills	1	9
91FLD5	Sugary textured andesite with 1% pyrite and chalcopyrite	1	8
91FLD6	Grey, quartz eye biotite rhyolite possibly float	1	10
91FLD7	Grey opaque quartz vein with epidote and limonite, 6 cm. width	2	29
91FLD8	Foliated felsic dyke, 2% quartz in an aphanitic grey matrix	1	4

3.1 DISCUSSION OF RESULTS

Sample number 91FP01 was selected from the same location as the malachite stained sample taken by B.C.G.S. (Open File 1991-1). The most significant sample in terms of gold values (sample 91FP03) was chipped from an outcrop located 50 metres to the west of 91FP01. These samples are from carbonate veining and stockworks in propylitically altered andesites, which appear to be part of an alteration halo

covering a large portion of the exposed ridge near the fire lookout. This area's style of alteration and mineralization is similar to that of the New Moon property to the south of the FIRE 1 claim.

The New Moon property's mineralized zones, hosted by Jurassic Hazelton Group volcanics, consist of fault controlled epithermal quartz-carbonate veins and breccia zones. It's vein mineralogy consists mainly of sphalerite and galena with minor amounts of pyrite, chalcopyrite, malachite and azurite. Gold and silver are associated but not directly correlated with the base metals. Typical alterations grade inward from chlorite-epidote to quartz-sericite-pyrite. The zones pinch and swell along strike and down dip.

Respectfully submitted,



Perry Grunenberg, B.Sc., F.G.A.C.

COST STATEMENT

Fire 1 Claim

Geological and Geochemical Surveys

SALARIES & WAGES: 2pers 2mdays @ \$240.75	\$ 481.50
HELICOPTER: Northern Mountain, 1hr	742.58
ASSAYS & ANALYSES:	
Min-En Labs, 15rocks for Au & 31el ICP @ \$14.18	212.66
SUPPLIES & SUNDRY:	159.71
CONSULTANT FEES: Archean Engineering Ltd.	347.75
REPORT PREPARATION:	<u>989.80</u>
TOTAL	<u>\$2,934.00</u>

REFERENCES

DANDY, L., 1990; Geology of the Smithers Region, a summary prepared for the Ministry of Energy, Mines and Petroleum Resources, unpublished paper

DESJARDINS P., and **ARKSEY R.**, 1991; Ministry of Energy, Mines and Petroleum, Geological Survey Branch, B.C. Open File 1991-1, Geology of the Lamprey Creek Area, 1:50,000 MAP

TIPPER H., and **RICHARDS T.**, 1976; Jurassic Stratigraphy and History of North Central British Columbia, G.S.C. Bulletin 270.

VISAGIE D., 1986; Geological, Geochemical, Trenching and Drilling Report on the New Moon Property, Assessment Report, Newmont Exploration of Canada Limited.

STATEMENT OF QUALIFICATIONS

PERRY GRUNENBERG, B.Sc., F.G.A.C.

ACADEMIC

1982	B.Sc. in Geology	The University of British Columbia
1987	Fellowship	Geological Association of Canada

PROFESSIONAL

1989 to PRESENT	P and L Geological Services, Smithers, B.C.	Contract Geologist working in Mining and Mining Exploration in and around the Smithers area.
1984 to 1989	Hughes-Lang Explorations Vancouver, B.C.	Project Geologist employed to work on geological, geophys- ical, and geochemical surveys with follow-up drilling, in areas throughout B.C. and Yukon.
1983	Strato Geological Engineering Ltd. Vancouver, B.C.	Project Geologist contracted to work in all aspects of Mining Exploration on properties in Nevada, Washington, and B.C.
1982	P and L Exploration Vancouver, B.C.	Contract Geologist involved in evaluating placer gold prospects near Quesnel and Princeton, B.C.

APPENDIX 1

MIN-EN LABS ASSAY CERTIFICATES

