

006659

# PROPERTY FILE

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REVIEW OF WORK DONE  
ON THE  
MACKTUSH PROPERTY  
TO JULY 10, 1991

Alberni Mining Division  
British Columbia

Latitude 49°08' North  
Longitude 124°52' West

For  
SYMC RESOURCES LTD.

By  
John Wilson, F.G.A.C.  
August 16, 1991

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Consulting Geologist

## Introduction

The Macktush mining property, south of Port Alberni, B.C., is owned by SYMC Resources Ltd. It consists of ten Modified Grid mineral claims in the Alberni Mining Division.

This report, prepared at the request of SYMC Resources Ltd., describes work done up to July 10, 1991 such as drilling, trenching, sampling, surveying, metallurgical testing and construction. It includes sections from past reports on geology, diamond drilling, recommended future work and possible tailings impoundments. Government-related documents are enclosed concerning mineral title, bonding and a prospectus for the B. C. Mine Development Steering Committee.

## Location and Access

The centre of the property is immediately west of Alberni Inlet, ten kilometres south of Port Alberni, B. C.

There is no permanent human habitation in the area, it being devoted to the logging industry. A small B. C. Forest Service campsite is located on the Inlet nearby.

All of the claims are accessible by extensive logging roads used by MacMillan Bloedel Limited. Several overgrown, abandoned logging roads are in the eastern part of the property. Figure 1 illustrates road access.

A large MacMillan Bloedel Limited log loading dock facility lies on the Inlet one kilometre south of the claims.

## Mineral Claims

The property consists of 159 units represented by ten Modified Grid mineral claims in the Alberni Mining Division. Claims outlines are shown on Figure 1. Appendix I contains the record forms and claim map available at the Alberni Gold Commissioner on August 16, 1991. The registered owner is SYMC Resources Ltd.

No claim posts or claim lines were examined by the writer.

Current claims details are:

<u>Claim Name</u>	<u>Record Number</u>	<u>No. of Units</u>	<u>Expiry Date</u>
COPPER 50	2474	10	Feb. 13, 1992
COPPER 100	1909	12	Oct. 31, 1993
COPPER 101	1910	9	Oct. 31, 1992
COPPER 102	1911	16	Oct. 31, 1992
COPPER 103	1912	12	Oct. 31, 1992
COPPER 104	1913	20	Oct. 31, 1992
COPPER 105	1914	20	Oct. 31, 1992
COPPER 300		20	June 19, 1992
COPPER 400		20	June 19, 1992
COPPER 500		20	June 26, 1992

## Topography, Climate, Vegetation

Elevations range from sea level at Alberni Inlet to 960 metres above sea level in the southwestern part of the claims block. The slopes are moderate to steep with ridgetops sometimes being fairly gentle. Several swamps and small lakes occur at drainage divides in the COPPER 50 claim. The property is steeply incised by several prominent creeks draining easterly to Alberni Inlet.

The climate is mild year round with rainfall common in fall, winter and spring. Winter snowfall is usually light and soon melts at lower elevations.

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### Geology

The property is underlain by late Triassic Karmutsen Formation intermediate to basic volcanics and Middle Jurassic Island Intrusion granodiorites and other dioritic rocks. The most significant mineralization recognized is gold bearing quartz veins, most of which strike northeasterly and dip steeply to the southeast. Other mineral occurrences are a Cu-Fe skarn, a molybdenum porphyry and a copper porphyry.

### Geological Studies and Consultant's Recommendations

A July, 1991 report by N. C. Carter, Ph.D., P.Eng. describes the geology and mineralization of both the regional setting and the mineral claims (Carter, 1991). The report includes the history and results of surface sampling, diamond drilling and metallurgical testing on the property.

A recommended exploration program is also described, along with cost estimates, that includes diamond drilling, trenching, geophysics and geological mapping. The suggested program specifies drill hole locations, spacing, angles and depths. Details of a recommended picket line grid and mapping operation are also given.

### Surface Sampling

Surface samples have been analyzed for gold and a variety of other elements, usually including silver and copper. Locations of samples are shown on Figures 1, 2 and 3. Table I provides a summary of information from each sample site. Occurrences that have not been sampled are also plotted on maps and listed in Table I. Analytical data sheets are in Appendix II.

TABLE I

<u>Figure No.</u>	<u>Sample Site No.</u>	<u>Assay Tag No.</u>	<u>Width (metres)</u>	<u>Gold<sup>1</sup> (oz/ton)</u>	<u>Silver<sup>1</sup> (oz/ton)</u>	<u>Copper<sup>1</sup> (%)</u>
1	A	D33301	grab	0.055	0.22	0.54
	Description of Geology: Rusty shear zone at creek edge.					
	Description of Excavation: No excavation.					
1	B	D33302	grab	0.365	1.89	1.70
	Description of Geology: 3+ metre wide lens of pyritic, sheared intermediate to basic volcanic or dyke trending 090° within granitic outcrop.					
	Description of Excavation: An enlarged drainage ditch on the south side of road trending 090°. 37 metres long, up to 9 metres wide and 1 to 1.5 metres below road bed.					
1	C	D33304	grab	0.001	0.14	1.95
	Description of Geology: Disseminated and veinlet chalcopryrite / pyrite in K-feldspar altered granitic rocks. Mineralized shear at 030°/045° east.					
	Description of Excavation: An arcuate trench commencing uphill at 275° from the end of a spur road and then curving southerly to finish with a trend of 160°. Total length is 42 metres. The width is approximately 4 metres and the depth is 0.5 to 1 metre except in the southern third where it reaches 1.5 metres.					

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1	D	8	grab	2 ppm	<10 ppm	0.43 %
		9	grab	2 ppm	<10 ppm	150 ppm
		101	grab	11 ppm	<10 ppm	0.44 %
		102	grab	9 ppm	70 ppm	0.54 %
		103	grab	1 ppm	<10 ppm	117 ppm
		104	grab	6 ppm	32 ppm	0.62 %
		105	grab	<1 ppm	<10 ppm	100 ppm

Description of Geology: 7 metre wide outcrop cut by northeasterly striking shears containing quartz-calcite veining and disseminated pyrite. Shears dip southerly.  
 Description of Excavation: Drainage ditch on north side of road.

1 E none  
 Description of Geology: Molybdenite in quartz veinlets and fractures in granodiorite  
 Description of Excavation: Roadcut.

2 F none  
 Description of Geology: Iron - copper skarn evidence as broken rubble. No outcrop seen due to logging activity, road building.  
 Description of Excavation: None seen.

2 G none  
 Description of Geology: Granitic rock with several pyritic quartz veins to 20 centimetres across three metres at 065°/050°E.  
 Description of Excavation: An 8 X 12 metre area stripped of up to 1.2 metres of overburden.

2 H E 19511 grab 0.192 1.56 0.57  
 Description of Geology: Dioritic intrusive and intermediate volcanic or dyke. Pyritic quartz veining.  
 Description of Excavation: 3 X 13 metre excavation along uphill side of skid road trending 114°. Depth is up to 1.8 metres.

2 I 20774<sup>2</sup> 1.0 696 ppb 0.3 ppm 37 ppm  
 Description of Geology: Dioritic intrusive with pyritic quartz veining at 050°/090°.  
 Description of Excavation: 4 X 12 metre trench trending 140°. Up to 90 centimetres deep.

2 J none  
 Description of Geology: Pyritic quartz veins to several centimetres at 050°/060°E.  
 Description of Excavation: 4.5 X 7 metre excavation trending 065°. Up to 90 centimetres deep.

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2	K	E 19851	grab	0.034	0.01	0.03
		E 19852	grab	0.185	0.87	0.27
		E 19853	grab	0.072	0.27	0.62

Description of Geology: Dioritic intrusive cut by a zone, a few metres wide, containing pyritic quartz veins up to several centimetres wide. Veining strikes  $075^\circ$  and is steeply dipping.

Description of Excavation: A 33metre long cat track, with some pits, trends southwesterly from the road to a  $150^\circ$  trending cut in the overburden that is 16 metres long, up to 3 metres wide and up to 2.5 metres deep.

2	L	E 19510	grab	0.166	1.23	0.42
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Description of Geology: Shear zone to 7 metres wide with pyritic quartz veins to 30 centimetres within alternating slices of granitics and volcanics.  
Description of Excavation: 18 X 32 metre excavation. Up to 3 metres deep.

2	M	126	grab	0.465	3.09	1.26
		207752	chips	817 ppb	1.40 ppm	26 ppm
		E 19509	grab	0.074	0.76	1.12

Description of Geology: Shear zone to 7 metres wide with pyritic quartz veins to 30 centimetres within alternating slices of granitics and volcanics.

Description of Excavation: 18 X 100 metre excavation. Up to 3 metres deep.

2	N	E 60302	grab	0.166	0.72	0.45
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Description of Geology: Pyritic quartz vein in dioritic intrusive.<sup>5</sup>  
Description of Excavation: Pit filled in; in ditch beside road.

2	O	none				
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Description of Geology: Steeply southerly dipping pyritic quartz veining strikes  $060^\circ$   
Description of Excavation: 1.5 X 9 metre excavation trending  $120^\circ$ . Up to 3 metre high outcrop face is exposed on the uphill side of the site.

2	P	100	grab	0.364	1.08	1.85
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Description of Geology: Pyritic quartz vein.<sup>5</sup>  
Description of Excavation: Pit not seen. Covered by roadbed.

2	Q <sup>3</sup>	W-1	1.0	5 ppb	1.9 ppm	28 ppm
		W-2	2.0	15 ppb	1.1 ppm	9 ppm
		W-3	2.0	20 ppb	1.3 ppm	6 ppm
		W-4	2.0	5 ppb	0.9 ppm	8 ppm
		W-5	2.0	5 ppb	0.8 ppm	10 ppm
		W-6	2.0	5 ppb	0.7 ppm	5 ppm
		W-7	2.0	5 ppb	0.8 ppm	7 ppm
		W-8	1.0	5 ppb	0.8 ppm	24 ppm
		W-9	1.0	5 ppb	0.9 ppm	53 ppm
		W-10	1.0	5 ppb	0.9 ppm	41 ppm

Description of Geology: Dioritic intrusive cut by a 6 metre wide shear containing several quartz veins to 20 centimetres. The shears strike 035° and dip 060° to 080° easterly. Weakly pyritic.

Description of Excavation: 3 X 16 metre enlarged ditch / stripped embankment above road. Up to 2 metres deep.

2	R	none				
		Description of Geology: Over 6 metre wide shear zone striking 040° in granitic rocks dips steeply easterly. Zone contains multiple narrow quartz veins with finely disseminated pyrite.				
Description of Excavation: 5.4 X 6.4 metre excavation at roadside ditch. Up to 1.2 metres stripped.						

2	S	130	grab	0.318	0.31	0.42
		20773 <sup>2</sup>	1.1	0.073	0.2 ppm	88 ppm
Description of Geology: Pyritic quartz vein at approximately 025°/080°E.						
Description of Excavation: 1.8 X 3.5 metre trench trending 040° beside creek; up to 1 metre deep.						

2	T	E 18960	grab	0.130		
		Description of Geology: Dioritic intrusive with steeply dipping pyritic quartz veins several centimetres wide that strike 050°.				
Description of Excavation: 0.5 X 6 metre stripped area / trench trending 153°. Up to 75 centimetres deep.						

3	U	101	0.91	0.303	0.12	0.01
		102	0.46	0.173	0.71	0.05
Description of Geology: 0.91 metre wide zone of multiple quartz veining striking 060° and dipping steeply easterly. Quartz diorite footwall and andesitic hangingwall. Pyritic.						
Description of Excavation: 2 X 6 metre trench blasted to a depth of up to 1.5 metres.						

3	V	50	2.13	0.303	0.01	0.01
	Description of Geology: Pyritic quartz vein. <sup>5</sup>					
	Description of Excavation: 3 X 3 metre shallow pit. <sup>5</sup>					
3	W	104	3.66	0.416	2.21	0.78
	Description of Geology: Pyritic quartz vein. <sup>5</sup>					
	Description of Excavation: 10 metre long adit not seen since closed by rubble. <sup>5</sup>					
3	X	1003	0.76	0.218	1.43	1.34
	Description of Geology: Pyritic quartz vein. <sup>5</sup>					
	Description of Excavation: 1 X 2 metre shallow pit. <sup>5</sup>					
3	Y	none				
	Description of Geology: Steeply south dipping 1 metre wide quartz vein striking 065° with disseminated pyrite and chalcopyrite.					
	Description of Excavation: 4 X 11 metre excavation trending 100°					
3	Z	1	4.88	0.952	0.34	0.60
		20772 <sup>2</sup>	1.20	0.659	8.1 ppm	1286ppm
		(note 4)	1.00	14910 ppb	3 ppm	0.16 %
		(note 4)	grab	7100 ppb	34 ppm	0.62 %
	Description of Geology: Multiple quartz veining greater than 1 metre in width with pyrite, chalcopyrite. Striking northeasterly and dipping steeply to the southeast.					
	Description of Excavation: Old, shallow adit.					

NOTES:

Dimensions of excavations are approximate. Geological descriptions are based on examinations by the writer unless otherwise noted.

Sampling is by principals of SYMC Resources Ltd. unless otherwise noted.

- (1): Units are oz/ton ( Au, Ag ) and % ( Cu ) unless otherwise indicated.
- (2): Sampling by N. C. Carter, Ph.D., P.Eng. (Carter, 1991)
- (3): Sampling by J. Wilson, F.G.A.C. (Wilson, 1991)
- (4): Sampling by B. C. Ministry of Energy, Mines and Petroleum Resources (Carter, 1991).
- (5): Measurements / descriptions from SYMC Resources Ltd.

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## Diamond Drilling

From 1987 to 1988 a total of ten holes were diamond drilled on the property.

Core from three holes (DDH 87-01, 87-03 and 87-08) was examined and split in 1987 under the supervision of Frank C. Loring, P.Eng. In 1990 the writer relogged the same core in more detail. Hole DDH 88-5 was logged and sampled in 1990 by N. C. Carter, Ph.D., P.Eng. A survey of collar locations of the four holes was undertaken in 1990 by the writer, assisted by Sims Associates, B.C.L.S. of Qualicum Beach and Mr. H. McMaster, president of SYMC Resources Ltd. All the above mentioned work is included in the report by Carter (1991) which is the sole source of information for Table II, below.

The four holes described above were drilled to depths of 132.6, 41.1, 105.8 and 53.2 metres respectively. Their purpose was to test the Fred Vein.

Core from the remaining six holes was not logged or sampled because they were tipped over while being stored on the property prior to examination. Map locations of the collars of these six holes was provided by Mr. H. McMaster.

Locations of drill holes are shown on Figures 2 and 3. Analytical data sheets are enclosed as Appendix III. Table II summarizes gold, silver and copper results from drill core sampling.

TABLE II

<u>Fig. No.</u>	<u>Hole No.</u>	<u>Sample Tag No.</u>	<u>Interval (metres)</u>	<u>Length (m)</u>	<u>Gold (oz/t)</u>	<u>Silver (oz/t)</u>	<u>Copper (%)</u>
3	87-01	P 0512	109.58-110.72	1.14	0.174	0.06	0.03
3	87-03	E 60357	33.50-34.29	0.79	0.112	0.48	0.80
		E 60358	36.58-40.39	3.81	1.290	5.04	0.95
3	87-08	E 60354	71.63-72.88	1.25	0.290	0.05	0.03
3	88-05	20776	46.33-47.22	0.89	76	1.5	217
		20777	47.22-48.00	0.78	155	2.2	276
		20778	48.00-48.80	0.80	281	3.7	106
		20779	48.80-49.50	0.70	62	1.3	27
		20780	49.50-50.40	0.90	12	1.2	19
		20781	52.02-52.21	0.19	81	1.7	35

## Metallurgical Testing

In 1988 Coastech Research Inc. studied samples taken from the Fred Vein and found that good recoveries of gold, silver and copper were achievable by "initial gravity concentration to recover free milling coarse gold followed by froth flotation to produce a sulphide concentrate containing copper and precious metals." (Carter, 1991)

Appendix IV contains excerpts from the Coastech report by Broughton (1988).

## Physical Work / Construction

The extent of trenching and stripping at eighteen sites is described in Table I.

The upper adit (site W), located at an old, undocumented working, was lengthened some 10 metres, sampled and then blasted shut for safety reasons (H. McMaster, personal communication).

The skid road (Figure 3), measuring approximately 200 metres long was built for the drill program.

A water reservoir (Figure 2), measuring 7.5 X 18 metres and 6 metres deep was excavated.

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An area (Figure 1) was leveled to provide future space for physical plant needs. A small building was installed nearby at a core storage site.

Racks at the Port Alberni premises of SYMC Resources Ltd. contain core from the holes that have been logged and sampled.

Surveys were conducted by Sims Associates, BCLS of Qualicum Beach on Oct. 17, 1988 and Jan. 24, 1990 that located some claim posts of COPPER 102 claim, drill hole collars, trenches, adit portals and roads.

#### Other Studies and Documentation

An examination of possible tailings impoundment sites and design was undertaken (Palmer and Skermer, 1988); excerpts are included in Appendix V.

A prospectus for the B. C. Mine Development Steering Committee was prepared in 1988; excerpts are included in Appendix VI.

Documents regarding bonding required by the Ministry of Energy, Mines and Petroleum Resources are in Appendix VII.

A letter from Mitsui and Co. (Canada) Ltd., which followed discussions with principals of SYMC Resources Ltd. and property visits, is in Appendix VIII.

#### References

Broughton, Linda M. (1988): SYMC Resources Ltd. - Metallurgical Testwork Report #2, Coastech Research Inc.

Carter, N. C. (1991): Geological Report on the Macktush Property - private report for SYMC Resources Ltd.

Palmer, Ronald W. and Skermer, Nigel A. (1988): Macktush Creek Property - Proposed Pilot Tailings Impoundment - private report for SYMC Resources Ltd.

SYMC Resources Ltd. (1988): A Prospectus for SYMC Resources Ltd. - Macktush Creek Property—Port Alberni, B. C. - prepared for the B. C. Mine Development Steering Committee


Wilson, John (1990): Map compilation of sampling and diamond drilling on the Macktush property drill area, consisting of 1:500 scale map, sections and tables. Private compilation for SYMC Resources Ltd.

Wilson, John (1991): Report on Chip Sampling of April, 1991 on the Macktush Property - private report for SYMC Resources Ltd.

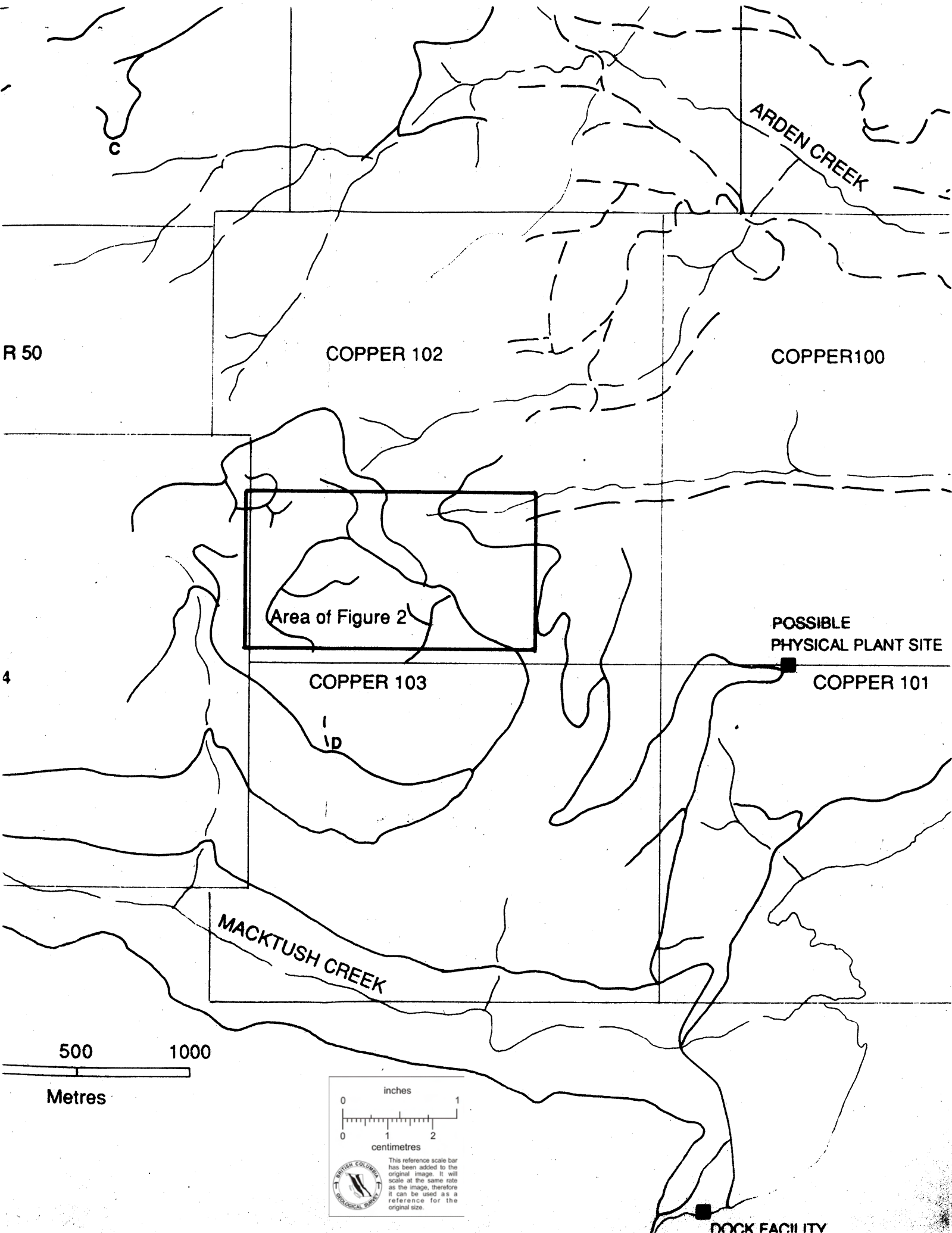
#### Statement of Qualifications

I, John Wilson, of Merville, British Columbia hereby certify that:

1. I am a graduate of the University of British Columbia with a BSc. (honours geology), 1972.
2. I am a Fellow of the Geological Association of Canada.
3. I have worked as a professional mineral exploration geologist in B. C. and eastern North America every year since 1972.



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ARDEN CREEK

R 50

COPPER 102

COPPER100

Area of Figure 2

POSSIBLE  
PHYSICAL PLANT SITE

4

COPPER 103

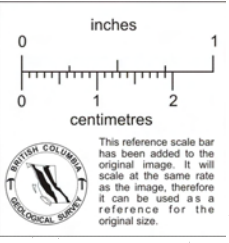
COPPER 101

1  
10

MACKTUSH CREEK

500 1000

Metres



DOCK FACILITY

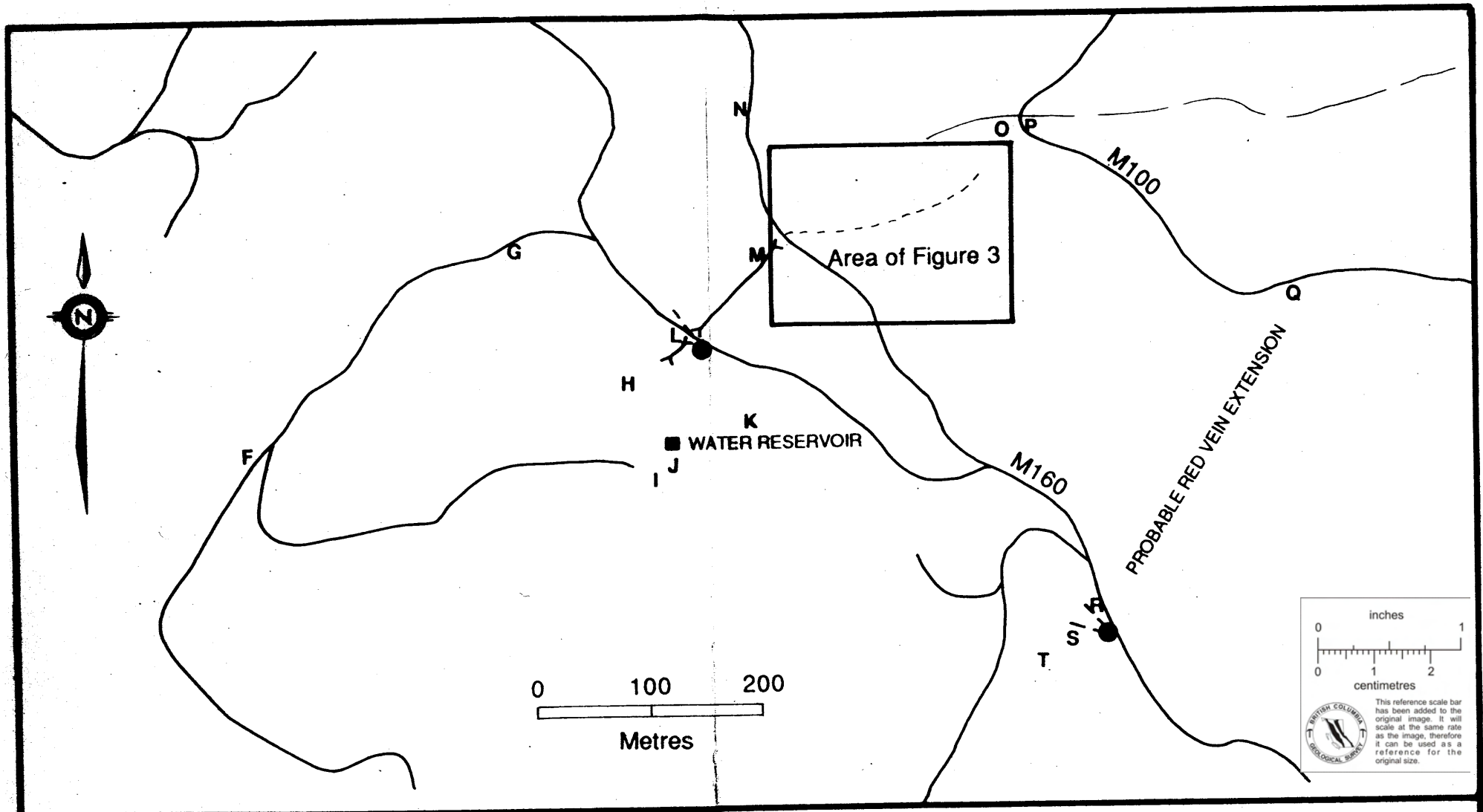


Figure 2: **Trenching, Sampling and Drilling Locations**  
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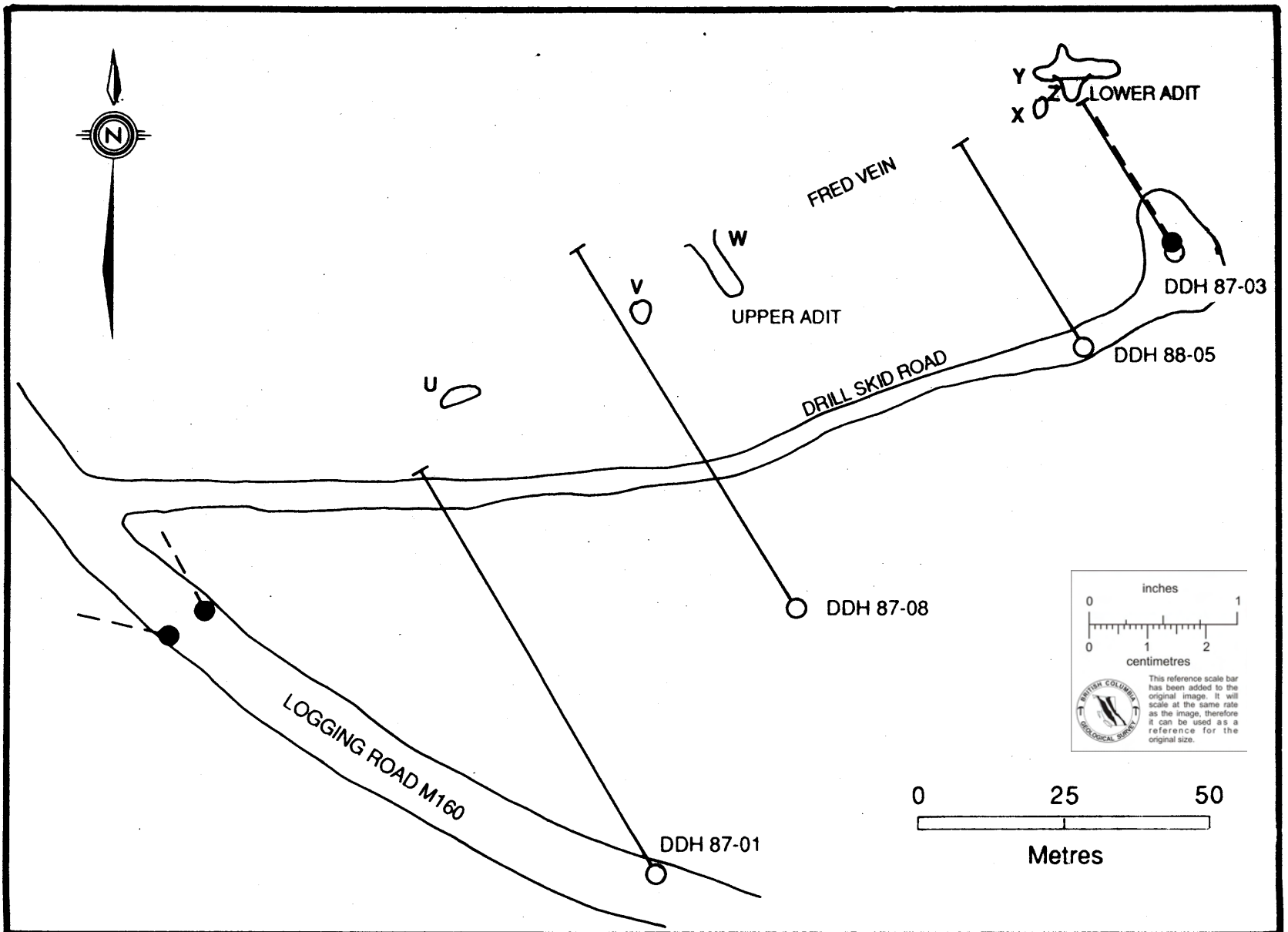


Figure 3:

## Trenching, Sampling and Drilling Locations

SCALE 1:1000