GEOLOGICAL REPORT

on the

LUCKY STRIKE CLAIM GROUP

KAMLOOPS MINING DIVISION

82M/5E

Lat. 51°29' Long. 119°37'

for

J.A. FENNELL

OWNER AND OPERATOR

by

JAY D. MURPHY, P. ENG.

CONSULTING GEOLOGICAL ENGINEER

1978-7-5

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

ADDENDA

INTRODUCTION

The Lucky Strike claim group of four units is located immediately east of the height of land separating the valley of Fennell Creek on the west from the Adams Lake valley on the east side. The claims lie about 13 km west northwest of the north end of Adams Lake and 14 km southeast of Vavenby. Topography is rugged and relief strong. A vertical distance of over 700 metres separates Fennell Creek valley from the flanking ridges less than a kilometer distance. Vee shaped valleys contain fast flowing mountain streams with frequent falls and rapids. The claims area is drained by a main tributary of Otter (Gollen) Creek.

Mineralization occurs on a steep, easterly facing slope at an elevation of 1300 metres. Local relief in the subject area exceeds 150 m. Overburden is light and outcrops scarce. The area has been logged within the past five years.

Access from Barriere, a distance of 66 km, is by logging road east along the Barriere River valley (50 km) then north along Fennell Creek and Otter Creek (16 km) to within 100 m of the closest showing. The first 10 km from Barriere has been recently hard surfaced. The balance is an active gravel logging road along the Barriere River Valley and a disused track up Fennell Creek. Access in the claims area is by a series of switchback roads that expose most of the mineralization but are now badly sloughed and blocked by mud slides.

Sulphides occur in moderately dipping Carboniferous sediments within a kilometre of the Cretaceous Baldy Batholith. Mineralization includes pyrite, pyrrhotite, chalcopyrite and minor sphalerite. Work to date indicates that copper is the only element present in economically significant amounts.

The best information available indicates that the first work done on the subject area was in 1967-68 when Dynasty Mines optioned the original 40 claim group from J.A. (Sandy) Fennell and subsequently staked considerable adjacent ground. Following regional geological mapping and geochemical sampling a drill programme was recommended, but the option was dropped before any drilling was done. The present Lucky Strike group was staked for the current owner in 1975. Two X-Ray drill holes and some rockwork has been done since that time. The writer first examined the property in June, 1976. The two drill holes were logged in May of that year.

Purpose of the current programme covered by this report was to accurately establish the spatial relationship between the various mineralized zones to permit the owner to better plan subsequent drilling or trenching he may wish to do for exploration and assessment purposes. Topography precludes

...../2

effective pace-compass work so the stadia method was chosen for speed, and because the accuracy is compatible with the job requirements. A Wild T1A instrument was used in conjunction with a metric rod. Results were field plotted on a scale of 1:1000 and the map produced used for follow up geological mapping. Approximately 2.8 hectares was covered in this manner as illustrated by Plate No. 1.

For contouring purposes an arbitrary elevation of 2500 M was assigned to control station 'A'. No attempt was made to tie this in with true elevation above sea level. Elevations shown on Plate No. 1 are relative only. Map orientation with respect to true north was obtained by taking a Brunton compass shot from station 'A' to station 'B' using a declination setting of 23°E.

Surface showings were chip sampled and the results tabulated on Plate No. 1.

SUMMARY AND CONCLUSIONS

Strong sulphide mineralization containing copper of sub economic grade occurs in moderately dipping sedimentary rocks close to the north contact of the Baldy Batholith. Mineralization is stratiform and occurs at various horizons within the sedimentary sequence. Intensity varies from disseminated to massive over thickeness of two to five metres. Mineralization is thought to have emanated from the adjacent grantic instrusive, possibly channeled by steep faults cutting the host sediments. Work to date has been insufficient to place a vertical or lateral limit on the disbribution of mineralization. Neither has sufficient work been done to prove the continuity of any mineralized zone. Until this can be done any attempts to evaluate the economic potential of the property must be classed as speculation.

The deposit presents difficulties from the mining aspect. The fact that the mineral bands are separated by tens of metres of barren materials may preclude open pit mining, and the copper content is too low to support selective mining by underground methods. Furthermore, assuming that better grade zones are present, the dips are too steep for trackless equipment to operate directly on the foot wall and too flat for broken muck to flow by gravity alone. Development and stoping costs would therefore be relatively high. This is not to say that mineralization may not be present of sufficient grade to offset the mining costs, or that some bands may not have dips more amenable to selective mining, but only that from the limited information available some negative aspects do appear.

...../3

The presence of potentially important mineralization has already been proven. What is required above all is to establish the continuity of one or more of the mineralized bands with the objective of developing ore grade sections within these bands. There is any amount of rockwork that could be done to open up known mineralization, but this would not help to determine lateral continuity. There seems little point proving that the known showings contain good copper values unless it is proven beforehand that the mineralization has some length to it. Two methods are suggested to provide this information; diamond drilling or geophysics. The method chosen will depend on the money available, although the writer feels that diamond drilling would provide the optimum return per exploration dollar at this stage.

RECOMMENDATIONS

(A) Starting 50 m north of drill hole No. 2 drill a minimum of two AQ size holes at 50 m spacing. Holes to have a bearing of S-50-W, a dip of 50° and a length of approximately 60m. Holes should collar at a high enough elevation to insure cutting the sulphide band exposed near drill hole No. 1. Subsequent work would depend on drill results.

(B)1 - Run a test line over known mineralization with a Ronka 16VLF unit. Provided a suitable response is obtained, cover the entire mineralized area and projected strike in a systematic manner.

2 - Assuming anomalous results are obtained, select and drill the target most likely to prove significant extension of mineralization.

Recommendations A and B are intended as alternatives, the one selected depending on available financing. Recommendation 'A' involves 120 m of AQ drilling at an estimated $35/m or $4200. Recommendation 'B', a one man EM survey would cost an estimated $1000. minimum. Follow up drilling, if required, would involve an expenditure similar to that of recommendation 'A'.

GEOLOGY AND STRUCTURE

Three main sedimentary rock types occur in the claims area and are termed limestone, fedspar gneiss and limy phyllite.

...../4

Limestone varies from blue grey to buff in colour. The blue grey variety is medium grained, crystalline and massive. The buff variety is fine grained, massive in part but with some beds up to a metre thick exhibiting excellent flaggy bedding. Contacts are not well exposed but both overlying and underlying units appear conformable. At the extreme north end of the mapped area a lens of well bedded limestone pinching from 4 m to 0.5 m is enclosed by feldspar gneiss. In the vicinity of TP-6 a massive limestone band about 1.0 m thick is enclosed by limy phyllite. Limestone, as interpreted in the cross sections, Plate No. 1, consists of two distinct units separated by a steep fault. The southern unit is approximately 15 to 20 metres thick, the unit on the north side is 37 to 40 metres thick. Limestones have a fairly restricted distribution in the area mapped but regionally this is a prominent rock type forming steep cliffs a hundred metres or more in height. Exposures near the valley floor suggest similar thicknesses of limestone may underlie the units observed in the claim group.

Feldspar gneiss is a tough, competent rock usually light grey or nearly white in colour. Weak to moderately well developed gneissic banding appears to parallel and enhance the bedding. The rock is medium grained and normally consists of an estimated 75 - 80% light grey plagioclase, 15% fine grey quartz and 5% chlorite. Where sheared and mineralized, sericite is developed to 5% or more. A well mineralized graphitic sample from near drill hole No. 1 consisted of an estimated 40% graphite, 40% pyrite, 20% actinolite and 1% chalcopyrite. The rock as a whole contains minor disseminated pyrite sufficient to give rusty weathered surfaces. Within the mapped area feldspar gneiss is seen to a thickness exceeding 100 m and has the greatest areal distribution of the three principal units.

Limy phyllite is a soft, fine grained rock, medium grey to greenish grey in colour. A well developed flaggy bedding is a prominent feature in outcrop and causes the scree to form flat slabs 3 to 5 cm thick. Chlorite is developed along these selvages and may also constitute a significant proportion of the rock itself. Grey carbonate is present to an estimated 20 - 30% producing vigorous effervescence with dilute hydrochloric acid. Laminations between bedding planes have a silvery appearance in reflected light, probably due to the development of fine sericite along these planar surfaces. Fine, disseminated pyrite is usually present but not in sufficient quantity to cause rusty weathering. Mapping indicates this unit has a thickness of several metres at least but no accurate estimates are possible. Areal distribution is confined to two small areas as illustrated by Plate No. 1.

All units normally strike northeast and dip northwest at moderate angles. At the extreme north end of the mapping strikes swing nearly east west with shallow dips to the north.

...../5

In the area between stations 'A' and 'C' different rock types are found on opposite sides of the dry gully defined by contours. Similarly, along the road immediately below, limestone outcrops on the south side of the gully and feldspar gneiss on the north side of the same elevation. It was concluded the gully represents the trace of a fault along which there has been definite vertical displacement and possible horizontal offset. The sense of the movement is not known as the fault was not seen in outcrop. The fault altitude is shown as vertical in Section A - A, Plate No. 1 but this is an assumption only and other interpretations are possible. This section is interpreted to indicate that the limestone beds on either side of the postulated fault represent two different units. This being the case, vertical movement on the fault could not be less than 50 m. No estimate was made of horizontal offset.

Rocks show little evidence of deformation or metamorphism. No folding was noted. Limestone units have recrystallized, probably due to thermal effects from the Baldy Batholith, but uncombined carbonate in the phyllite unit indicates heating must have been slight. Foliations as mapped are considered an enhancement of bedding by weak directed pressure, and the two features are normally parallel. Local divergences do occur, mainly near contacts between limestone and adjacent rocks, and are attributed to interformational movement.

MINERALIZATION

Sulphide mineralization, in approximate decreasing order of abundance and distribution, includes pyrite, pyrrhotite, chalcopyrite and sphalerite. Significant magnetite was noted in core from drill hole No. 2.

Feldspar gneiss and limestone are both hosts to sulphides. Surface showings are confined to the former unit but the strong mineralized section in drill hole No. 2 is in limestone. This section is over 5 m in core length, containing over 60% sulphides, including massive sections of pyrrhotite with pyrite and chalcopyrite.

Minor mineralization is also associated with quartz veining. Typically, narrow quartz veins up to 15 cm occur along the lower limestone contacts parallel to the bedding. Irregular stringers may branch out crosscutting the bedding as at the showing in limestone near TP-13. No contact is exposed here but a shallow dipping quartz vein was noted in addition to near vertical stringers with associated pyrite and chalcopyrite.

...../6

Mineralization as a whole appears to be stratiform but is not considered syngenetic, with the possible exception of weekly disseminated pyrite. Some of the better mineralization occurs near what is interpreted as a fault zone, indicating that such structures may have played an important role in channeling mineralized solutions from the Baldy Batholith to the calcareous and arenaceous host rocks that provide favourable environments for emplacement and deposition.

ECONOMIC CONSIDERATIONS

The importance of this property is enhanced by certain similarities with the extensively explored Harper Creek property about 12 km west. Both are underlain by similar rock types, both lie within one or two kilometres of the north contact of the Baldy Batholith and both contain the same sulphide minerals.

The Lucky Strike property has the advantage of being readily accessible by road both from Barriere on the Yellowhead Highway and Chase on the Trans Canada Highway. Steep slopes make foot travel arduous but this is compensated to some extent by the absence of trees and a system of old logging roads traversing the claims. Steep topography could be an advantage in underground development.

The claims contain an abundance of useable timber and potable water sufficient to handle diamond drilling and underground exploration phases of property development. Vavenby on the CNR is the closest rail point, a straight line distance of 14km. Barriere is the nearest source of electrical power. Environmental problems would be minimal as the area is uninhabited and none of the surrounding land has agricultural potential. No logging is being done in the immediate area. The Rexspar uranium operation, if it proceeds as planned, might provide a future nucleus of skilled, indigenous mine labour.

STATEMENT OF COSTS

The following expenses covering fieldwork and reporting costs were incurred on the Lucky Strike property between the periods 1878-6-18 and 1978-7-6. Work was performed by J. D. Murphy, P. Eng. and P.N. Murphy, Assistant.

...../7

Labour			
78-6-18	1 day 1 man checking access road, orientation, etc. (1/2 x $150.)	$ 75.00	
78-6-21	1 day 2 men, travel set up camp start stadia survey (1/2 x $184.)	92.00	
78-6-22-23	2 days, 2 men, stadia survey (2 x $184.)	368.00	
78-6-24	1 day 1 man geological mapping	150.00	
	1 day 1 man surface sampling	34.00	
78-6-25	1/2 day 1 man geological mapping	75.00	
	1/2 day 1 man sampling, break camp	17.00	
	Total Labour	$ 811.00	811.00
Field Expenses			
	2 men, 4 days at $20/day		80.00
Transportation			
Personal vehicle Kamloops - Barriere and return			
	96 x 2 = $192.00 x $.20	38.40	
Rental vehicle (4 x 4) 182 miles x $.25		45.50	
Gasoline, rental vehicle		13.50	
	Total Transportation	$ 97.40	97.40
Equipment Rental			
1 Wild T1A Theodolite for 1 week min.			
	78-6-20 to 27	$ 50.00	
1 Multofor rod for 1 month min.		5.00	
Handling charges on above (15%)		8.25	
Shipping charge		11.45	
	Total Equipment Rental	$ 74.70	74.70
Assay Costs			
11 rock samples for 11 copper, 2 gold, 3 nickel, 3 zinc		$ 94.00	
Handling charges on above (15%)		14.10	
	Total Assay Costs	$ 108.10	108.10
Report Preparation			
Drafting, reporting, typing, printing, photocopying, etc. 78-6-26 to 78-7-6,			200.00
	Total Costs		$1,291.20

CERTIFICATE

I, Jay D. Murphy, hereby certify:

1. That I am a Consulting Geological Engineer, resident at 1335 Todd Road, Kamloops, B.C.

2. That I am a graduate from the University of Manitoba (1954) with a B. Sc. in Geological Engineering.

3. That I have practiced my profession continuously since graduation.

4. That I am a member of the Association of Professional Engineers of British Columbia and Ontario.

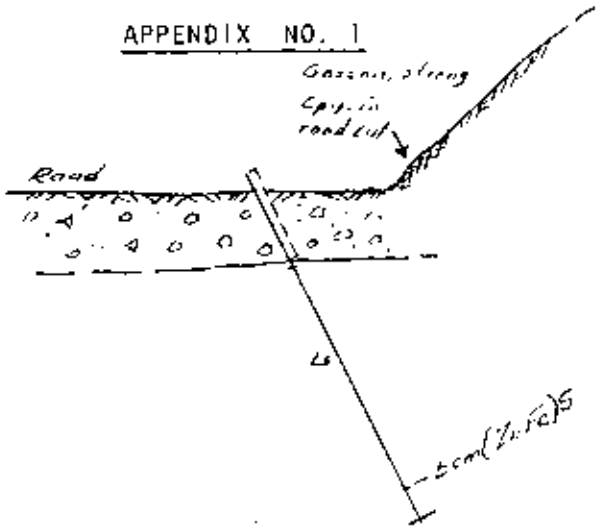
5. That the information contained in this report is based on a personal examination of the subject property.

6. That I have no financial interest in the subject property.

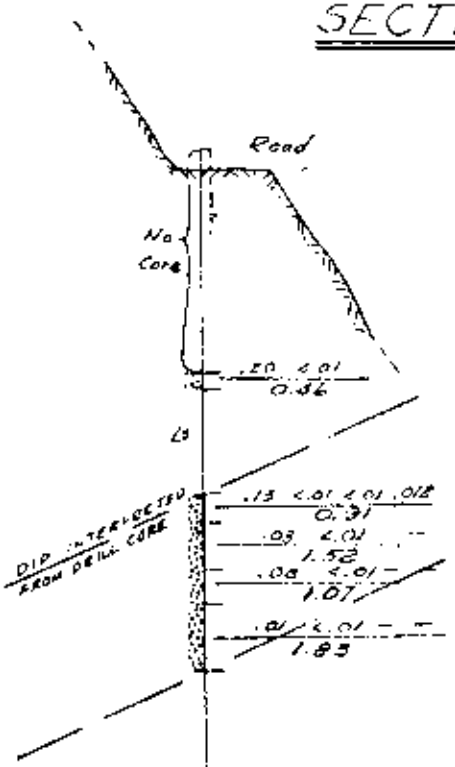
Jay D. Murphy, P. Eng.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
JAY D. MURPHY

APPENDIX NO. 1



SECTION ON DDH "1



ASSAY KEY

Cu(%) Ni(%) Mo.% Au(oz/Ton)
Width (m)

LEGEND

Ls — Limestone

Sulphides - banded to massive

SECTION LOOKING NORTH ON DDH "2

0.10(Zn.)
0.46

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
JAY O. MURPHY

LUCKY STRIKE PROPERTY

BARRIERE, B.C.

J.D. Murphy 1:240 1976-6-23

0 5 10 METRES

Kamloops Research & Assay Laboratory Ltd.

2095 WEST TRANS CANADA HIGHWAY—KAMLOOPS, B.C. V1S 1A7
TELEPHONE 372-2784 · TELEX 048-8320

B.C. LICENSED ASSAYERS
GEOCHEMICAL ANALYSTS

CERTIFICATE OF ASSAY

TO Mr. J. Murphy,
1335 Todd Road,
Kamloops, B. C.

Certificate No. K-1680
Date July 1, 1978.

I hereby certify that the following are the results of assays made by us upon the herein described chip samples

Kral No.	Marked	GOLD Ounces Per Ton	SILVER Ounces Per Ton	Cu Percent	Zn Percent	Ni Percent				
							Percent	Percent	Percent	Percent
1	036	-	-	.37	-	-				
2	037	-	-	.14	-	-				
3	038	-	-	.01	-	L.01				
4	039	-	-	.09	-	L.01				
5	040	-	-	.21	-	.015				
6	041	Tr	.03	L.01	-	-				
7	042	-	-	.07	.005	-				
8	043	Tr	Tr	.17	.009	-				
9	044	-	-	.09	.006	-				
10	045	-	-	.05	-	-				
11	046	-	-	.56	-	-				

Tr denotes "trace"
L denotes "less than"

APPENDIX No. 2

- 10 -

NOTE:
Rejects retained three weeks
Pulps retained three months
unless otherwise arranged.

Registered Assayer, Province of British Columbia

SAMPLE NO.	LENGTH (metres)	ASSAY			
		COPPER (%)	ZINC (%)	NICKEL (%)	GOLD (oz/ton)
36	0.50	0.37	—	—	—
37	1.00	0.14	—	—	—
38	1.30	0.01	—	<0.01	—
39	1.00	0.09	—	<0.01	—
40	0.50	0.21	—	0.015	—
41	1.00	<0.01	—	—	TR
42	0.60	0.07	0.005	—	—
43	1.30	0.17	0.009	—	TR
44	1.00	0.09	0.006	—	—
45	2.00	0.05	—	—	—
46	1.00	0.56	—	—	—
FROM DH # 2					
18	0.46	0.20	—	<0.01	—
19	0.91	0.13	—	<0.01	0.012
20	1.52	0.03	—	<0.01	—
21	1.07	0.08	—	<0.01	—
22	1.83	0.01	—	<0.01	—
23	0.46	—	0.10	—	—

LEGEND

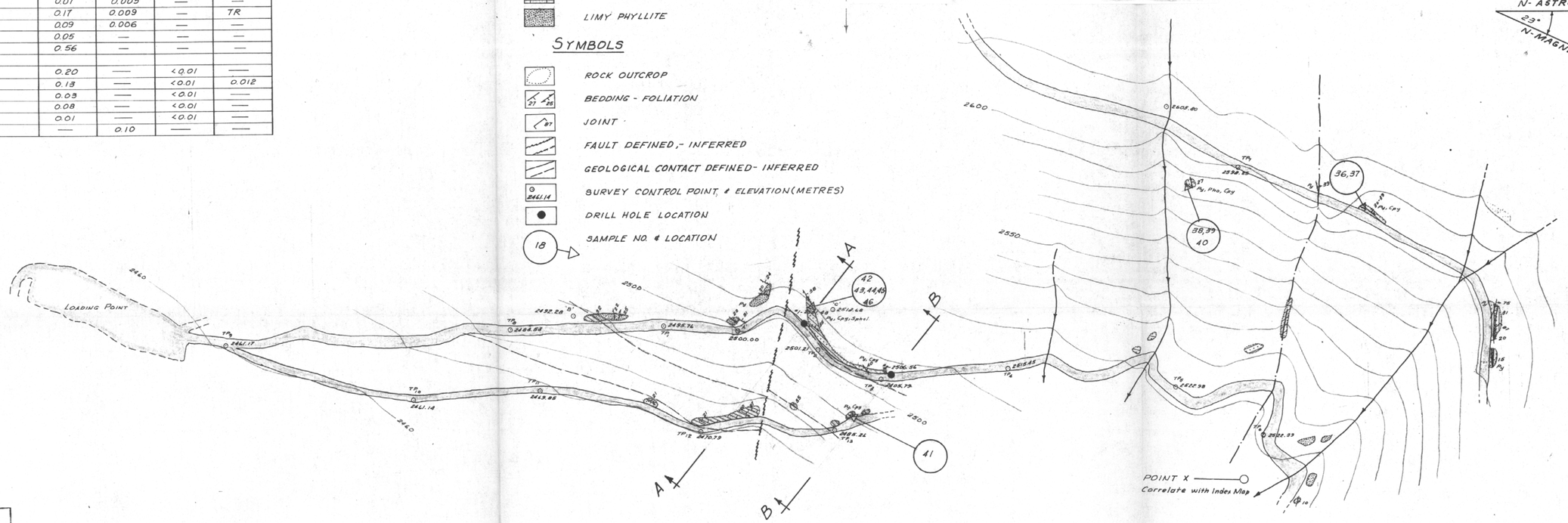
- SULPHIDE MINERALIZATION
- FELDSPAR GNEISS
- LIMESTONE
- LIMY PHYLLITE

SYMBOLS

- ROCK OUTCROP
- BEDDING - FOLIATION
- JOINT
- FAULT DEFINED, - INFERRED
- GEOLOGICAL CONTACT DEFINED - INFERRED
- 2441.14 SURVEY CONTROL POINT & ELEVATION (METRES)
- DRILL HOLE LOCATION
- 18 SAMPLE NO. & LOCATION

Approximate position of centre point of four unit group as located by J. A. Fennell using roads, topography and previous 2 post staking for tie in. Distance to outside boundary is 500 metres in each cardinal direction.

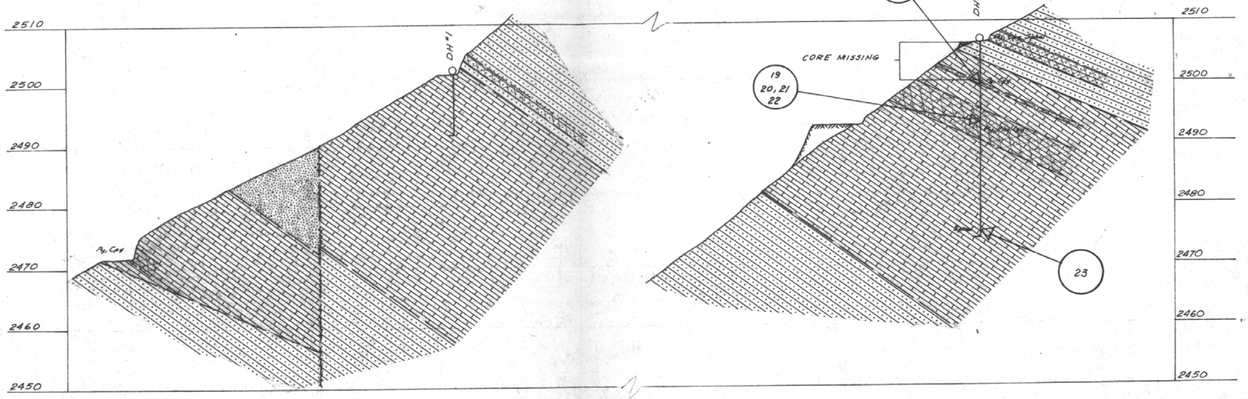
N - ASTRONOMIC
23°
N - MAGNETIC



SURFACE PLAN

SCALE: 1:1000

0 5 10 20 30 40 50
METRES

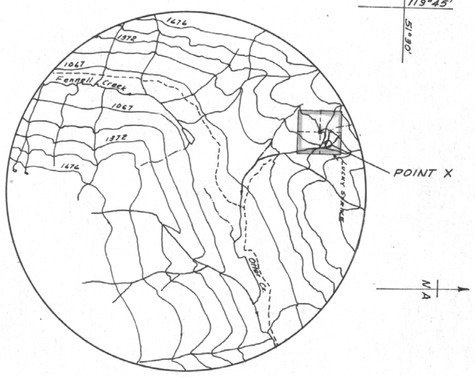


SECTION A-A

SECTION B-B

SCALE: 1:500

0 10 20 30
METRES



INDEX MAP

1:50000

1000 0 1000 2000 3000 4000
METRES

PROFESSIONAL ENGINEER
JAY D. MURPHY
BRITISH COLUMBIA

DRAUGHTSMAN JDM	PLATE No. 1
SCALE: NOTED	LUCKY STRIKE PROPERTY
DATE: 1978.7.2	BARRIERE, B.C.
	SURFACE GEOLOGY AND SECTIONS
	NTS 82M/SE

MINISTER OF MINES BRANCH

67912