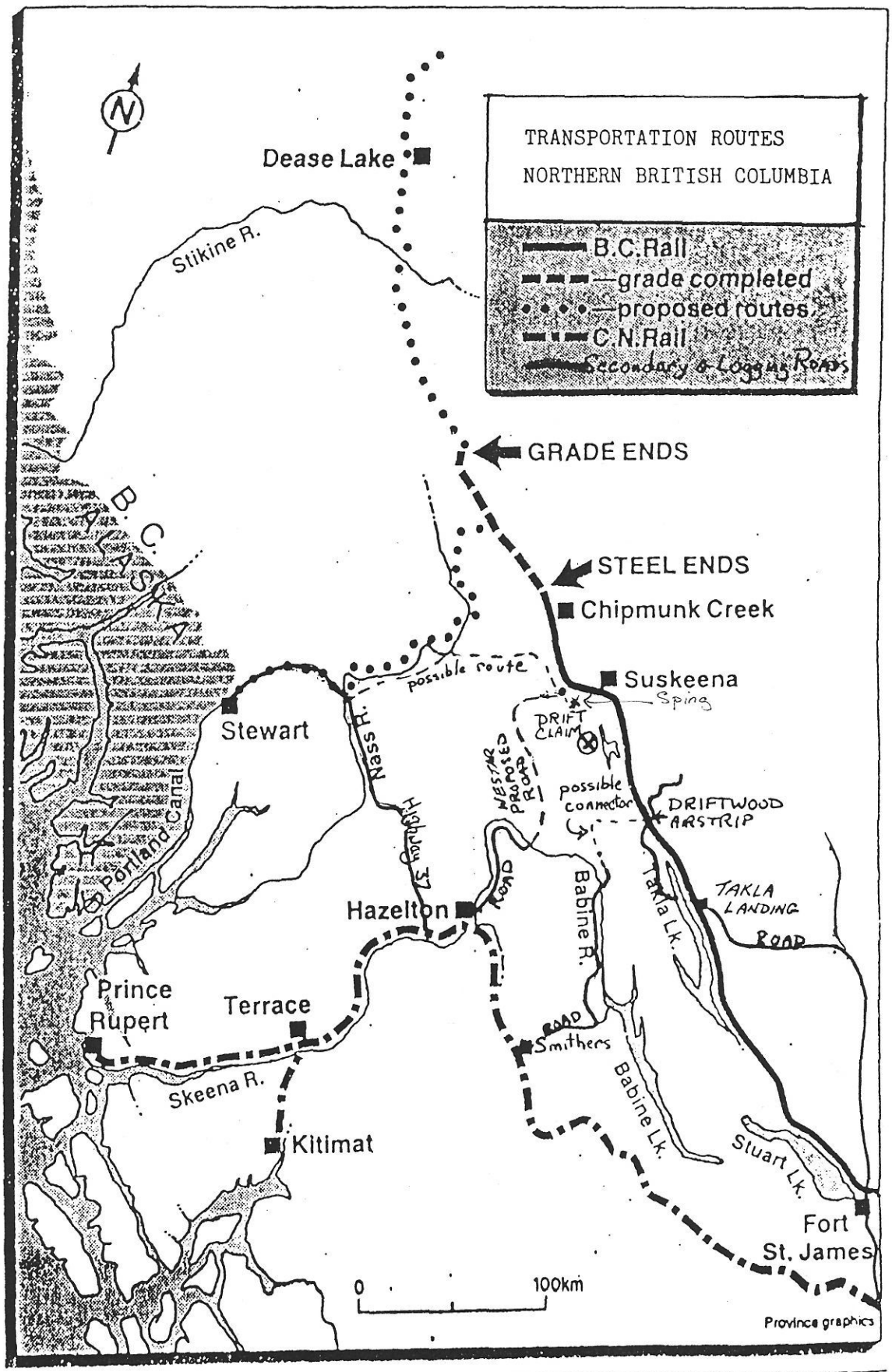
SPING

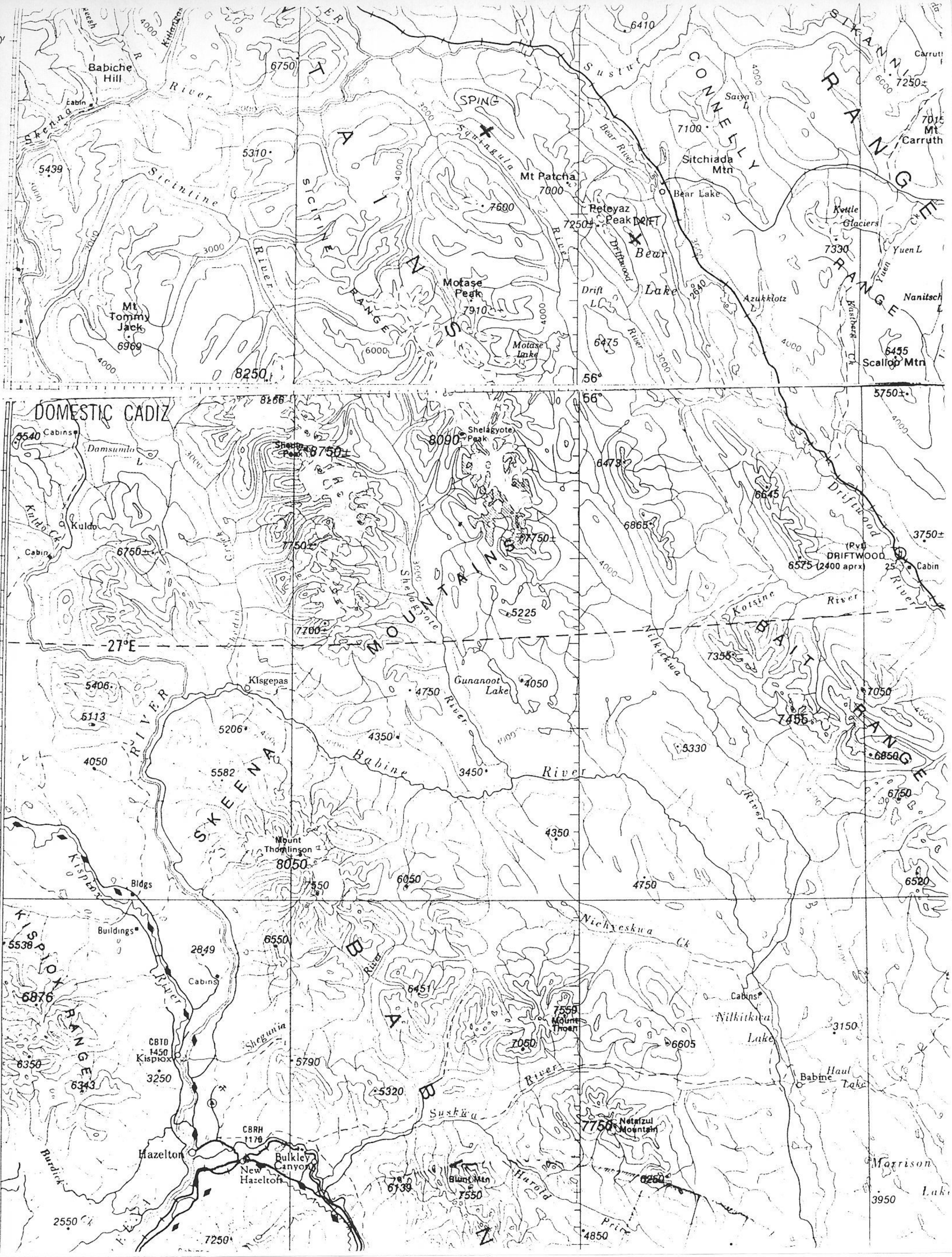
SUMMARY

The Sping property, owned 100% by Windflower Mining Ltd., is located 117 km. (72 miles) north of Hazelton, B.C. The property is underlain by Jurassic Hazelton Group rocks consisting of volcanics and volcanoclastic sediments and covers a sediment hosted (carbonate) copper, silver deposit with minor but significant values in gold. Reserves are estimated, from previous diamond drill testing, at 5.5 million tons grading .5% copper, 1/3 oz. silver and 1/3 to 1/2 gram gold per ton. The deposit is located on a small knoll on a hillside and because of this factor and other advantages such as negligible overburden and a carbonate host rock, the deposit should be amenable to very low cost open pit mining.

The nature of the mineralization has many similarities to the German-Silesian "Kupferschiefer" sediment hosted copper silver ores and as such "Sping" property and its immediate surrounding basinal sediments provide excellent potential for additional economic mineralization. At present a number of additional geological targets are known on the property which deserve further investigation and possibly drill testing. These targets include a laminated siltstone sequence which from previous drilling has been shown to host chalcopyrite mineralization and a known limestone sequence which has largely been untested because of overburden cover. A geochemically high copper anomaly is another of these untested targets.

It is highly recommended that an exploration program using the "Kupferschiefer" model be implemented for the "Sping" and immediate area. This should include detailed geological mapping of the area and an in depth study of the stratigraphy of the area with drill testing of units favorable to copper, silver mineralization.


TRANSPORTATION ROUTES
NORTHERN BRITISH COLUMBIA
B.C. Rail
grade completed
proposed routes
C.N. Rail
Secondary & Logging Roads
N
Dease Lake
Stikine R.
GRADE ENDS
STEEL ENDS
Chipmunk Creek
Suskeena
Spring
possible route
DRIFT CLAIM
NEW PROPOSED ROAD
possible connector
DRIFTWOOD AIRSTRIP
Stewart
B.C.
ALASKA
Portland Canal
Nass R.
Highway 37
Hazelton
Babine R.
Takla Lk.
TAKLA LANDING ROAD
Prince Rupert
Terrace
Smithers
Skeena R.
Babine Lk.
Kitimat
Stuart Lk.
Fort St. James
0
100km
Province graphics



Babiche Hill
Skeena
River
Cabin
6750
5439
5310
Sicintine
River
3000
Mt Tommy Jack
6969
4000
8250
SPING
Squingula
SICINTINE RANGE
Mt Patcha
7000
7500
Peteyaz Peak
7250±
DRIFT
Bear Lake
Motase Peak
7910
Motase Lake
6000
Drift L
Driftwood
River
6475
6410
Sustut
CONNELLY
Bear River
7100
Sitchiada Mtn
Bear Lake
Saiya L
2840
Azukklotz L
SIKANNI RANGE
Carruth
7250±
7015
Mt Carruth
Kettle Glaciers
7330
Yuen L
Nanitsch L
6455
Scallop Mtn
56°
DOMESTIC CADIZ
5540
Cabins
Damsumlo L
Kuldo Ck
Kuldo
Cabin
6750±
8266
6750±
7750±
7700±
8090
Shelagyote Peak
7750±
5225
SKEENA
MOUNTAINS
Shelagyote
6473
6865
6645
6575
Driftwood
(Pvt)
DRIFTWOOD
(2400 aprx)
Cabin
3750±
5750±
Kotsine
River
BAIT RANGE
7355
7050
7455
6850
6750
27°E
Kisgepas
5406
5113
4050
5206
5582
4750
4350
Gunanoot Lake
4050
Babine
River
3450
5330
Nilkitkwa
4350
Mount Thomlinson
8050
7550
6050
4750
6520
Kispiox
Bldgs
Buildings
5538
KISPIOX RANGE
6876
2849
Cabins
6550
River
BABINE
6451
7559
Mount Thoen
7050
6605
Nichyeskwa Ck
Cabins
Nilkitkwa Lake
3150
CBTO
1450
Kispiox
6350
6343
3250
5790
5320
Suskwa
River
7750
Netalzul Mountain
Babine
Haul Lake
CBRH
1170
Hazelton
New Hazelton
Bulkley Canyon
Burdick Ck
6139
Blunt Mtn
7550
Harold Price
6260
Morrison Lake
3950
2550
7250
4850

SPING PROPERTY

Property, Location and Access

The Sping property consists of the following six unit mineral claim, located in the Omineca Mining Division of British Columbia.

SPING 1 Record No. 7375 NTS 94-D-3/E

At the present time access to the property is by helicopter from Smithers or Hazelton, B.C. However, logging roads presently reach as far as 40 km. north of Hazelton and roads now in the proposal stage may reach within 6 km. of the Sping in the near future. (Westar Timber, personal communication) Furthermore, B.C. Rail's railway route to Dease Lake has recently been refurbished and is now in use as far as Lovell Cove on Takla Lake, and is scheduled to reach within 15 km. of the Sping property by 1991.

History

The mineral deposit on the Sping property was first discovered by Canadian Superior Exploration Ltd. (C.S.E.) in 1972. Subsequent exploration by C.S.E. included geological, geochemical and geophysical surveys as well as 2,972 feet of drill testing. This work resulted in the partial delineation of a 5.0 million ton copper-silver deposit grading .5% copper and one third of an ounce of silver per ton. Additional drilling (3 drill holes, 1156 ft.) was again carried out in 1976 by City Services Mineral Corp. Windflower Mining Ltd. acquired the property from C.S.E. in 1983 and has maintained it since, carrying out limited field work and some metallurgical studies.

Geology and Mineralization

The Sping property is underlain by Lower to Middle Jurassic sediments and volcanics belonging to the Hazelton group of rocks. The property covers a portion of a volcanic belt, probably an island arc assemblage, which strikes southeast and lies adjacent to the younger Bowser basin to the west.

Of economic interest is a dolomitic limestone unit with thicknesses as great as 238 feet. This limestone unit was found to carry significant amounts of copper, silver, and gold mineralization. Diamond drilling in 1973 delineated some 5 million tons grading .5% copper, and .3 oz. silver per ton. More recent work indicates the "ore" carries low but significant values in gold as well. (1/3 to 1/2 gr. per ton). The mineralized limestone is part of a larger sequence of intravolcanic sediments deposited in a small basin to the south west of the more predominantly volcanic terrain. A dioritic intrusive located approximately 2 km. from the mineralized deposit is believed to be a volcanic centre, probably the source for much of the volcanic sequence and volcanically derived sediments found in the local area. Drill testing has indicated the mineralized limestone unit to be underlain predominantly by tuffs, sandstones and siltstones,however, two drill holes did intersect felsic volcanics beneath the limestone unit.

A summary of the mineralization encountered in the 1973 drilling is as follows:

Drill Hole	Interval	Length	%Cu	oz. Ag/ton
73-2	10'-140'	130'	.56	.32
73-3	6'-142'	136'	.54	.61
73-5	5'-170'	165'	.47	.16
73-6	3'-150'	147'	.47	.28
73-7	3'-160'	157'	.30	.14
73-9	11'-50'	39'	.59	.39

Subsequently, in 1989 and 1990, limited metallurgical testing was carried out on some of the mineralized core from the Sping property. This work indicated that a good grade copper concentrate bearing significant values in silver and gold could be produced through the use of standard flotation techniques. Assays of concentrates produced in these various tests are as follows:

Testing Lab.	Cu%	Ag.	Au
P. Elkins (UBC)	15.8	112.7 grams (3.29 oz.)	11.109 grams (.324 oz)
P. Elkins (UBC)	8.85	58.2 grams (1.69 oz.)	4.90 grams (.143 oz.)
Bacon & Donaldson	24.04	1043 grams (30.4 oz.)	7.99 grams (.233 oz.)

Origin of the Mineralization

With respect to the origin of the mineralization as observed on the Sping property, it is thought that the porous nature of the underlying sediments has played a significant role in the mineralization of the dolomitic limestone. It is quite possible that convecting formational brines fuelled by heat sources of nearby volcanic activity travelled through the porous sandstones and volcanic tuffs, leached out copper and precious metals from these volcanically derived sediments and redeposited them in a more reducing type of environment within the dolomitic limestone and probably in other strata such as the laminated siltstones as well. The copper and silver mineralization could have been carried as chloride complexes within the formational brines.

This theory has been used Jowett and others in explaining the very extensive mineralization occurring in the Kupferschiefer and Zechstein carbonates in Germany and Poland, and because this theory fits the characteristics of the Sping mineralization so well, its significance with respect to further exploration can not be ignored. In order to add weight to this idea the following is a list of geological and mineralogical observations which show an uncanny similarity to the Kupferschiefer/Zechstein deposits.

1.) The nature of the mineralization; fine grained chalcopyrite, bornite and chalcocite disseminated within a dolomitic limestone sedimentary unit. The mineralization is uncommonly consistent throughout the carbonate unit in both grade and manner of occurrence.

2.) Extensive occurrence of hematite both below the mineralized strata and laterally. This could be equated to the "Rote Faule" underlying the Kupferschiefer deposits.

3.) The presence of volcanics rich in copper and associated epiclastic sediments within and in proximity to the sedimentary basin, which could well provide the source for the copper silver mineralization.

4.) The presence of volcanic centres in proximity to the basin which could well be the heat engine required to drive a convective system of copper bearing formational fluids through the porous underlying sediments and up into the now mineralized limestone or into other strata such as the laminated siltstone unit.

5.) Closely associated major regional faulting.

Recommendations

Using the Kupferschiefer model and the available technical information for the Sping an intensive exploration program should be carried out on the Sping property and immediate area. Some targets become obvious immediately, such as the remainder of the limestone designated as "unmineralized" by previous operators, the limestone occurring on the Squingula River, and the laminated siltstone unit outcropping 3600' west of the mineralized limestone and its associated geochemical anomaly. Because of the known higher gold content of the Sping mineralization even low grade copper occurrences should be investigated thoroughly with respect to their economic viability.

G. Ryznar, PEng.
Jan. 1991

Stratigraphic Comparison

Lower and Middle Jurassic Hazelton Group	Eskay Creek Area	Sping Area
Eskay Creek Facies Salmon River Formation	limestone, limy or cherty siltstone & shale; Eskay Creek deposit in this unit.	Cherty limestone, siltstone siliceous siltstone; Sping deposit in this unit Drill hole 3 thickness, 150'
Mt. Dilworth	Felsic tuff, Tuff breccias, dust tuff Dacite to rhyolite comp.	Felsic flows, Cherty tuffs Minor andesitic flows Drill hole 3 thickness, 117'
Betty Creek formation	Volcanic conglomerates, and breccias Reworked crystal tuffs	Tuffs and fragmental Tuffs Thickness in Hole 3, 300' plus

Other features of geological significance within the Sping area are as follows:

1.) The upper sedimentary limestone unit (Eskay Ck. Equivalent) hosts disseminated chalcopyrite, chalcocite & bornite mineralization.
2.) The siltstone unit below the limestone also carries chalcocite, chalcopyrite & pyrite mineralization in vugs. This would also be considered Eskay Creek equivalent.
3.) In the felsic unit, the felsic cherty tuffs are pyritic in part and exhibit quartz veinlets & fine grained biotite stringer alteration which may be an indication of proximity to a major mineralizing event. This is in the Mt Dilworth equivalent.
4.) Tuffs below the felsic unit commonly exhibit andesitic fragments similar to the Betty Creek.

In consideration of the above comparison of stratigraphy between the Eskay Creek and Sping areas and the recent indications of significant gold values within the Sping deposit, a strong recommendation is made for intensive base and precious metal exploration in the Sping area with emphasis on the Mt. Dilworth and Eskay Creek equivalents.

G. Ryznar, PEng.
Nov. 1, 1991

THE "SPING" STRATIGRAPHY - ANOTHER ESKAY CREEK EQUIVALENT?

The "Sping" property, owned 100% by Windflower Mining Ltd., is located 117 km. (72 miles) north of Hazelton, British Columbia, near the confluence of the Sustut and Skeena rivers. The claims are underlain by Early to Middle Jurassic volcanics and sediments belonging to the Hazelton Group .

A dolomitic limestone unit, centrally located on the property carries disseminated chalcopyrite with asssociated gold and silver mineralization. Results of a 1973 drill program showed drill indicated reserves of over 5,000,000 tons grading .5% copper and .35 oz. silver per ton with additional potential to the south and northeast. More recent metallurgical testing indicated gold values in copper concentrates ranging from 5 to 14 grams per ton of concentrate. Another limestone bed located 1 km. to the south of the deposit has not been tested for additional mineralization although I.P. surveys indicate anomalous results in this area.

Because metallurgical studies have shown that the copper concentrates from the "Sping" deposit carry significant quantities of gold, (8 to 14 gr.) the origin of the metallogenic event responsible for this deposit has been reconsidered and its syngenetic genesis questioned.

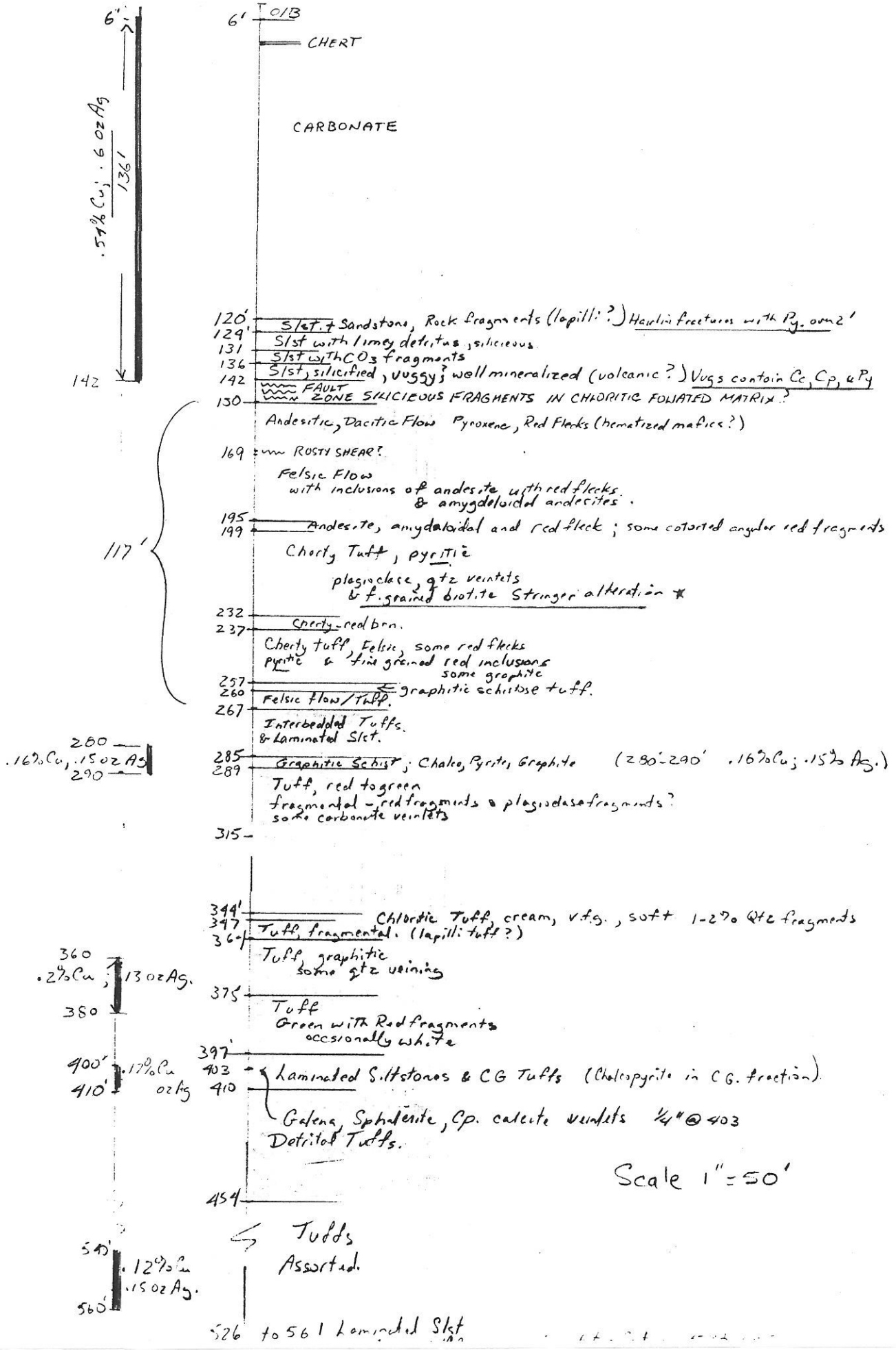
The deposit's physical location on the eastern periphery of the Bowser Basin and the age of the hosting volcanic and sedimentary strata suggest some comparisons could be made to the geological environment of the rich precious metal deposits of the Eskay Creek area of north eastern B.C.

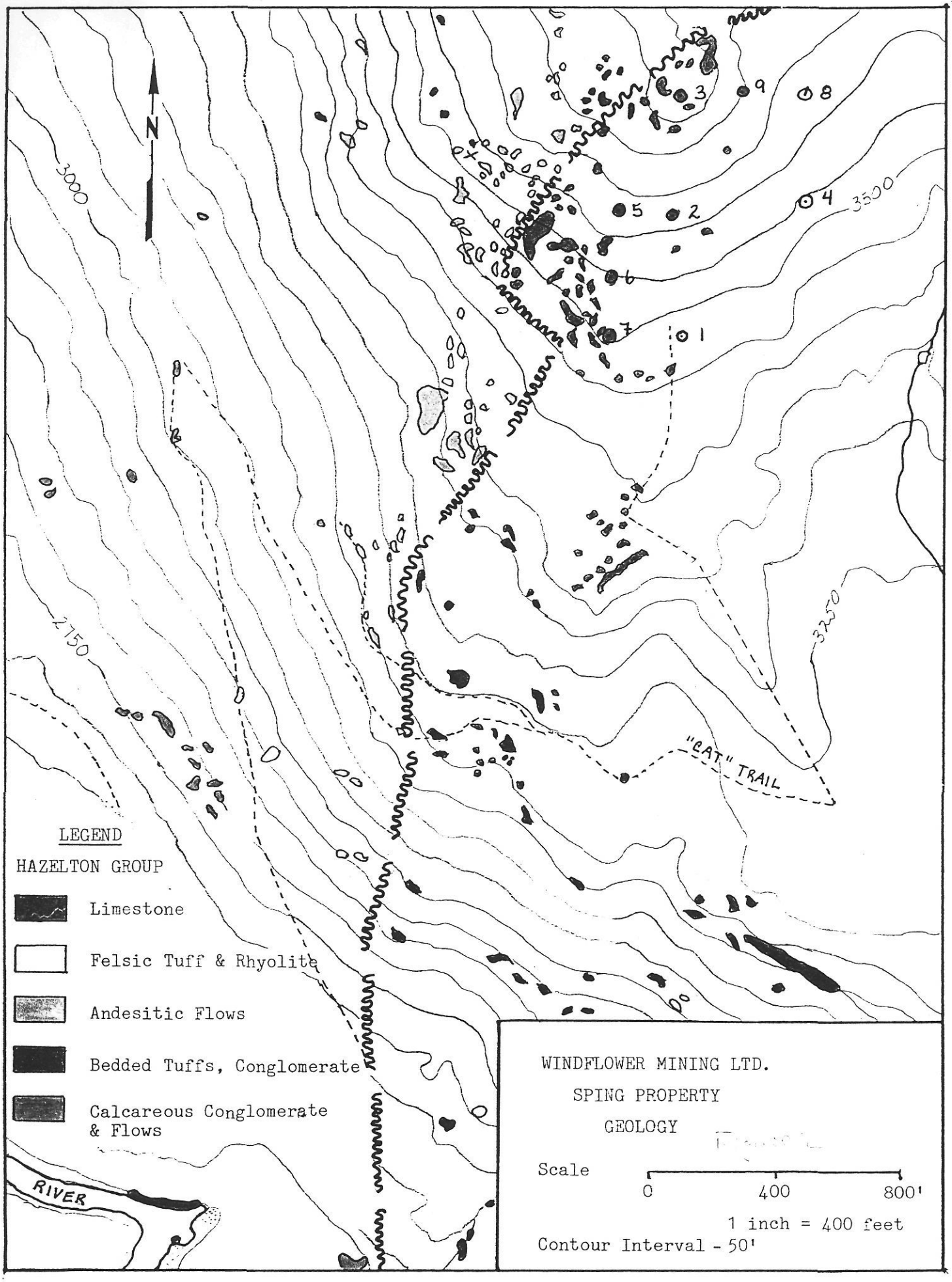
Recent studies have shown that most of the mineralization of the Eskay Creek deposit appears to be stratabound within silicieous to limy sediments belonging to the Eskay Creek facies of the Salmon River Formation, all part of the Hazelton Group. This facies is underlain by extrusive volcanic rocks of the Mt. Dillworth formation and an epiclastic unit of variable composition, the Betty Creek formation. Volcanic conglomerates and breccias of the Betty Creek formation commonly exhibit matrix supported green and purple andesitic fragments. The finer grained rocks of the Betty Creek appear to be reworked crystal and lithic tuffs.

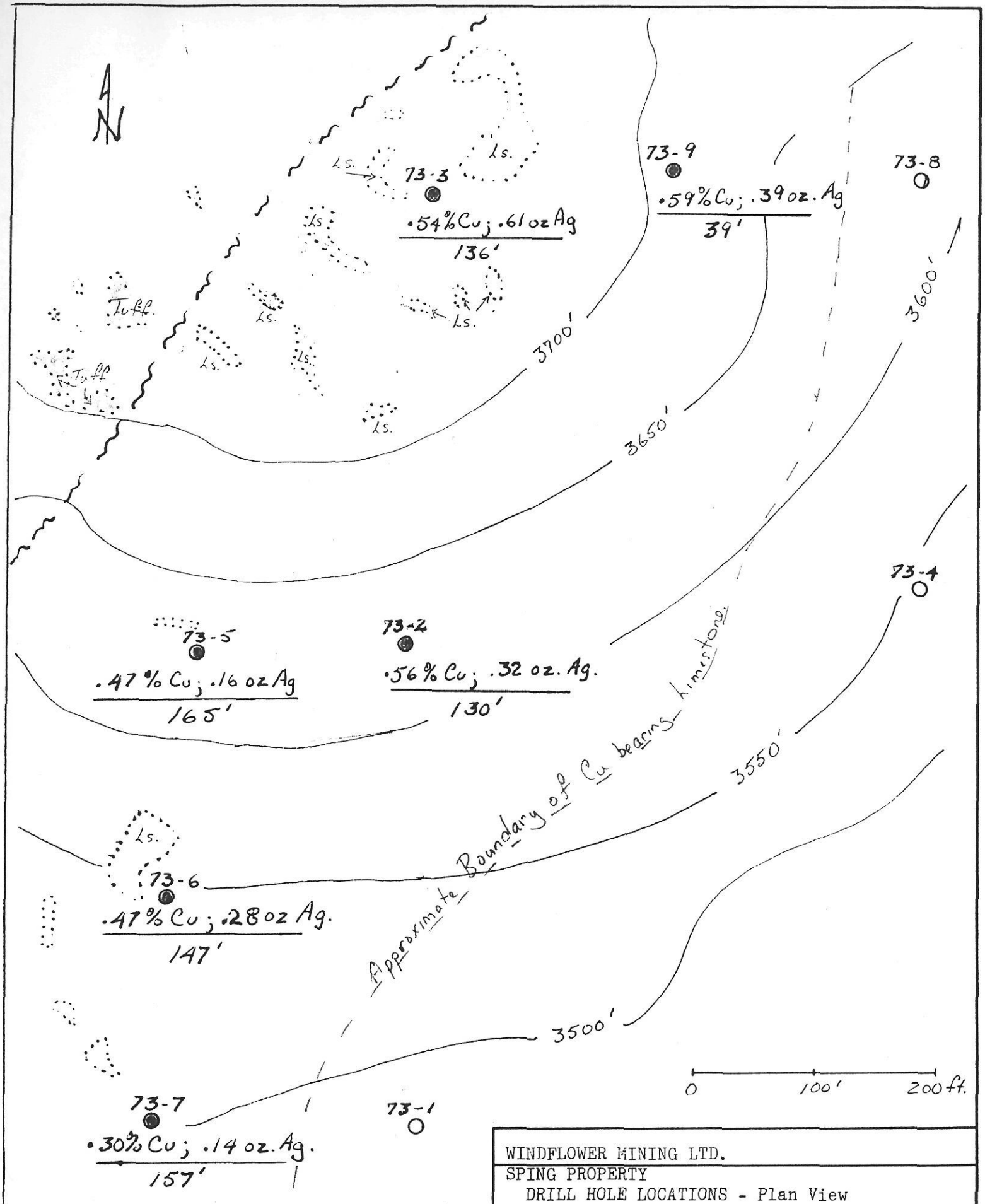
It has been recognized by Anderson et al(G.S.C.) that the Early to Middle Jurassic rocks of the Hazelton Group encircling the Bowser Basin is "the metallotect for important base and precious metal mineral deposits", hence the term, "Golden Horseshoe". In this respect, the Eskay Creek deposits lie on the western periphery of the Bowser Basin while the Sping deposit lies on the eastern periphery within similar stratigraphy as shown below:

WINDFLOWER MINING LTD. - SPING PROPERTY

DRILL HOLE 73-3




N
3000
2750
3500
3250
"CAT" TRAIL
RIVER
LEGEND
HAZELTON GROUP
Limestone
Felsic Tuff & Rhyolite
Andesitic Flows
Bedded Tuffs, Conglomerate
Calcareous Conglomerate & Flows
WINDFLOWER MINING LTD.
SPING PROPERTY
GEOLOGY
Scale
0
400
800'
1 inch = 400 feet
Contour Interval - 50'



Ls. = limestone.

WINDFLOWER MINING LTD.		
SPING PROPERTY DRILL HOLE LOCATIONS - Plan View		
SCALE 1" = 100'	LOCATION 94-D-3/E	DATE Dec/90
SURVEY BY	DRAWN BY	NO. 90-1.

SPING PROPERTY - WINDFLOWER MINING

DDH #2 (-90°)

Mineralized section (10'- 140') 130' of .56% Cu, .32 oz. Ag per ton

includes:

Assay Intervals	% Cu	Oz. Ag
50'- 60'	0.60	0.23
60'- 70'	0.62	0.61
70'- 80'	0.98	0.55
80'- 90'	0.86	0.94
90'- 100'	1.12	0.91

Shorter Sections - Averages

60'- 100' (40') .9% Cu, .75 oz. Ag per ton

70'- 100' (30') .99% Cu, .80 oz. Ag per ton

DDH #3 (-90°)

Mineralized section (6'- 142') 136'of .54% Cu, .61 oz Ag per ton

includes:

Assay Intervals	% Cu	Oz. Ag
20'- 30'	0.70	1.02
30'- 40'	0.46	0.58
40'- 50'	0.66	1.05
50'- 60'	1.44	2.34
60'- 70'	0.66	0.97

Shorter Section - Average

20'- 70' (50') .78% Cu, 1.18 oz. Ag per ton

DDH #5 (-90°)

Mineralized section (5'- 170') 165'of .47% Cu,.16 oz. Ag per ton

No higher grade sections.

DDH #6 (-90°)

Mineralized section (3'- 150') 147'of .47% Cu, .28 oz. Ag per ton

includes:

Assay Intervals	% Cu	Oz. Ag
50'- 60'	0.42	0.53
60'- 70'	0.86	0.79
70'- 80'	0.96	0.47
80'- 90'	0.58	0.35
90'- 100'	0.66	0.24

DDH #6 (continued)

Shorter section - Average
50'- 100'(50') .70% Cu, .48 oz. Ag per ton

DDH # 7 (-90°)

Mineralized section (3'- 160') 157' of .30% Cu, .14 oz. Ag per ton

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DDH #9 (-90°)

Mineralized section (11'- 50') 39' of .59% Cu, .39 oz. Ag per ton
includes from 11' to 40' (29') of .63% Cu, .48 oz. Ag per ton

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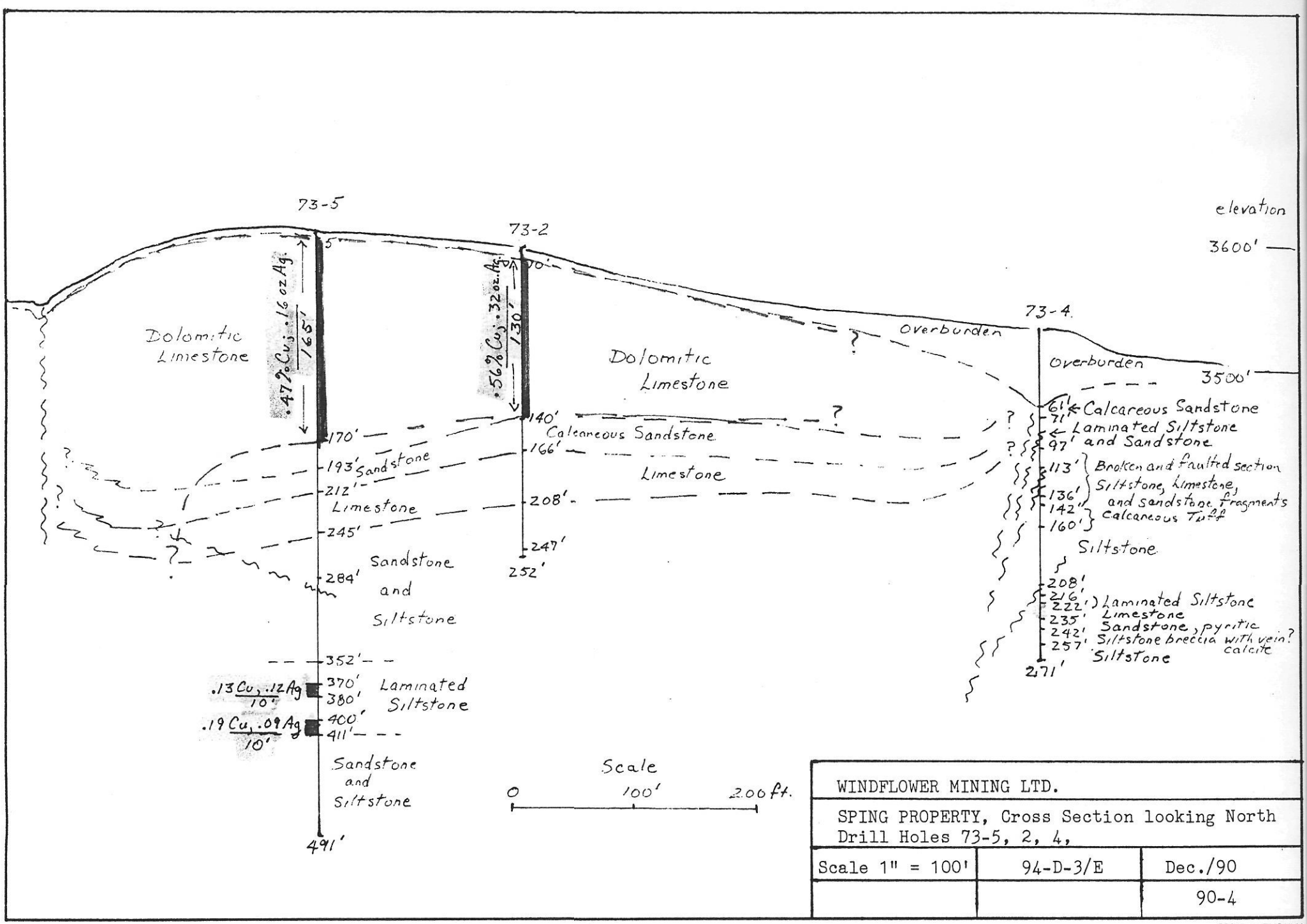
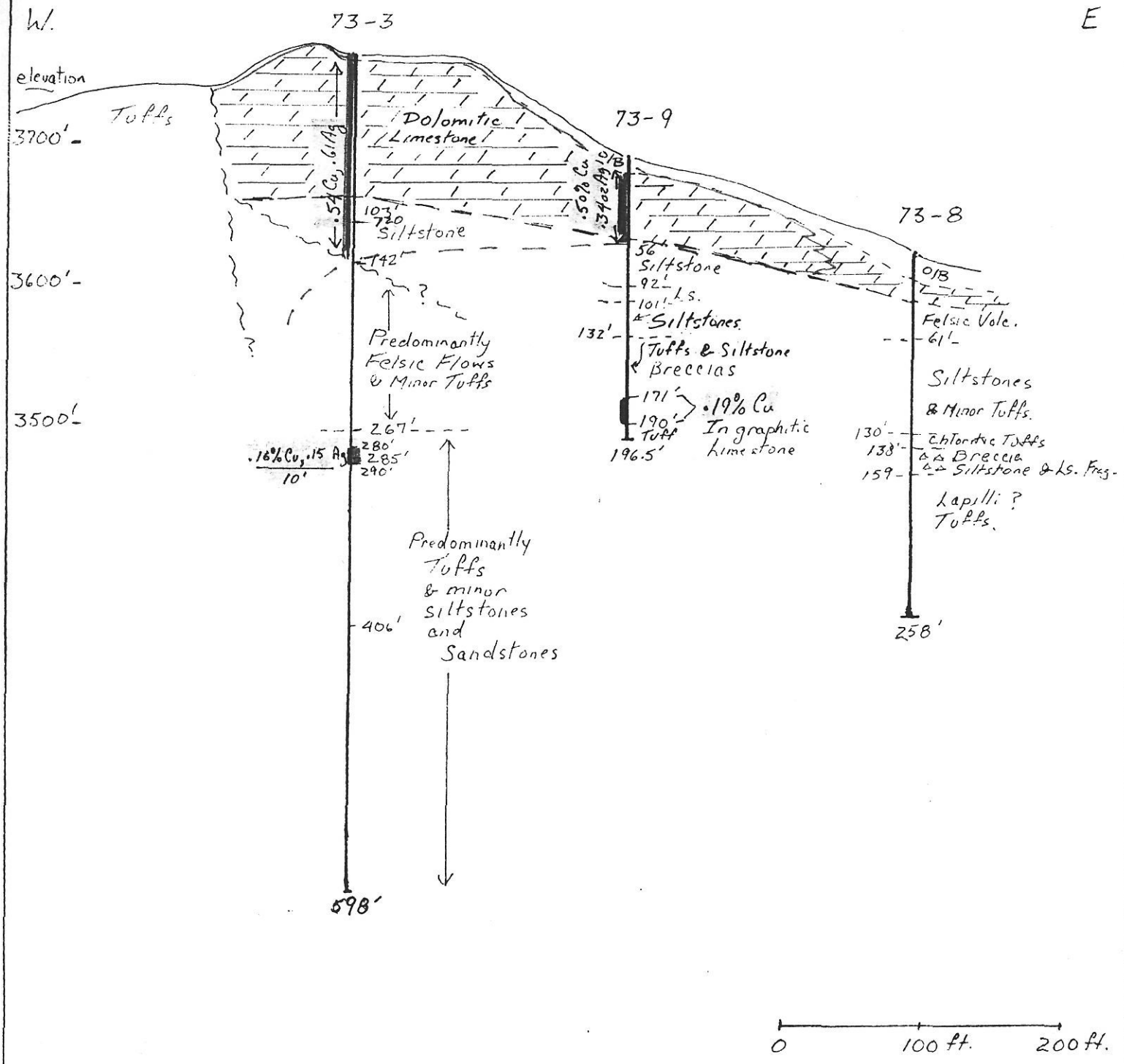
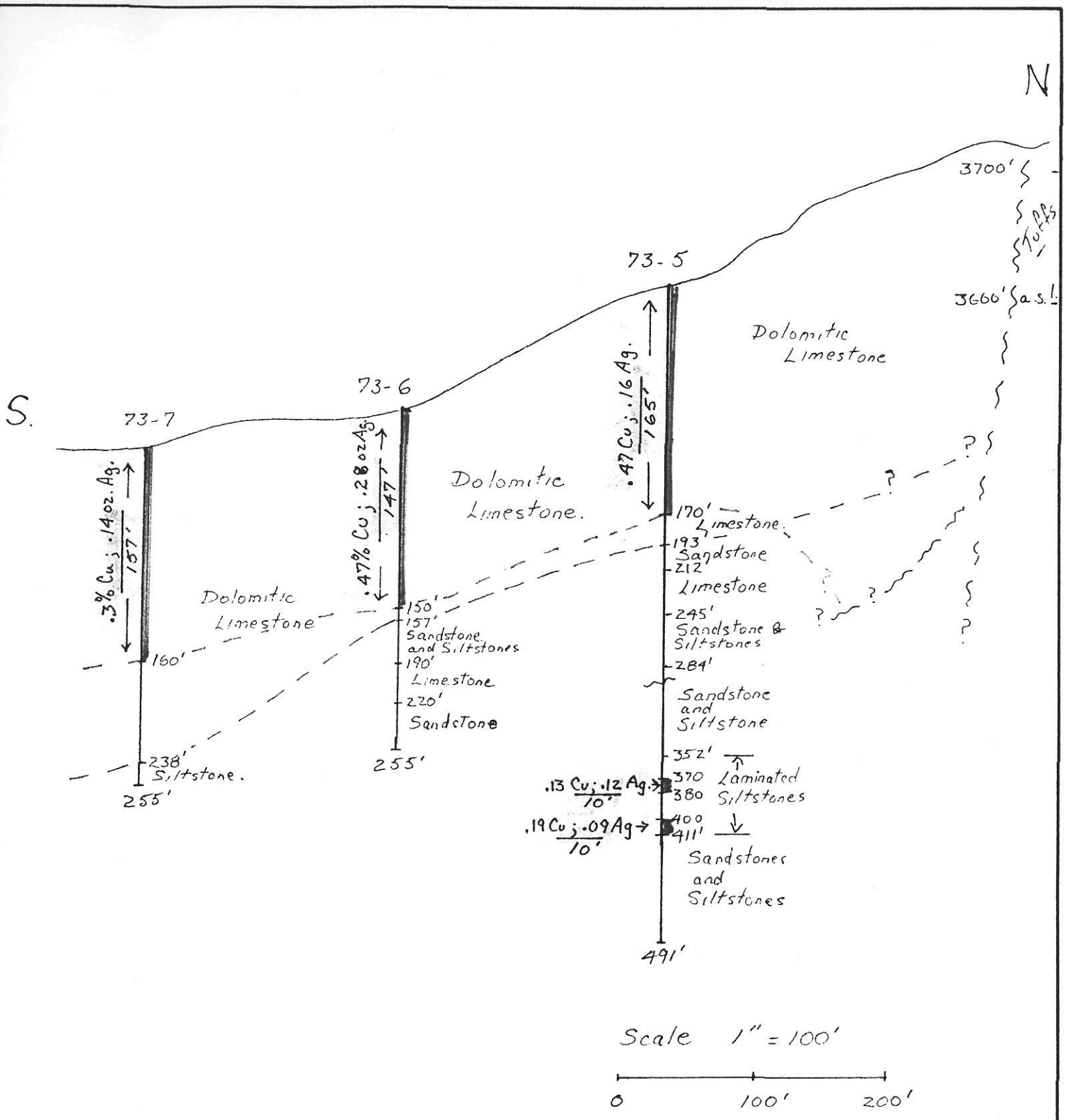


WINDFLOWER MINING LTD.		
SPING PROPERTY, Cross Section looking North Drill Holes 73-5, 2, 4,		
Scale 1" = 100'	94-D-3/E	Dec./90
		90-4



WINDFLOWER MINING LTD		
SPING PROPERTY, British Columbia Cross Section - Drill Holes 73-3, 9, 8;		
SCALE 1"=100'	LOCATION 94-D-3/E	DATE DEC/90
SURVEY BY	DRAWN BY G.R.	NO. 90-2.



WINDFLOWER MINING LTD.		
SPING PROPERTY, Cross Section looking West Drill Holes 73-5,6,7.		
SCALE 1"=100'	LOCATION 94-D-3/E	DATE DEC/90
SURVEY BY	DRAWN BY G.R.	NO. 90-3.

Energy, Mines and Resources Canada
Geological Survey of Canada Sector

Énergie, Mines et Ressources Canada
Secteur de la Commission géologique du Canada

601 Booth Street
Ottawa, Ontario
K1A 0E8

12 February 1992

G. Ryznar
Windflower Mining Ltd.
4405 Glencanyon Drive
North Vancouver, B.C. V7N 4B4

Dear Gerald:

Thank you very much for the information on the Sping property. I am very interested in the property and would like to visit it when the opportunity arises.

I have enclosed a copy of a general paper on sediment-hosted stratiform copper deposits, grade and tonnage information for various types of stratabound copper deposits, and a series of notes and abstracts on "volcanic redbed copper" (native copper - copper sulphide) deposits. From these you can see that I have been interested in this deposit type, including in central British Columbia, for some time. I have a couple of papers on volcanic redbed copper deposits in preparation and will send you copies when they are in shape for release.

Based on your data on the Sping, I am uncertain about classification (e.g. fault complications, precise stratigraphic relationships, colour of the rock units, nature of unit overlying the limestone) but if I had to guess I would put it in the volcanic redbed category. Many such deposits and occurrences are hosted in sedimentary interbeds within volcanic sequences and several districts contain deposits that are transitional between sediment-hosted stratiform and volcanic redbed copper deposits. You can see from the grade and tonnage plot that some of these deposits are of considerable size and grade and are quite respectable exploration targets.

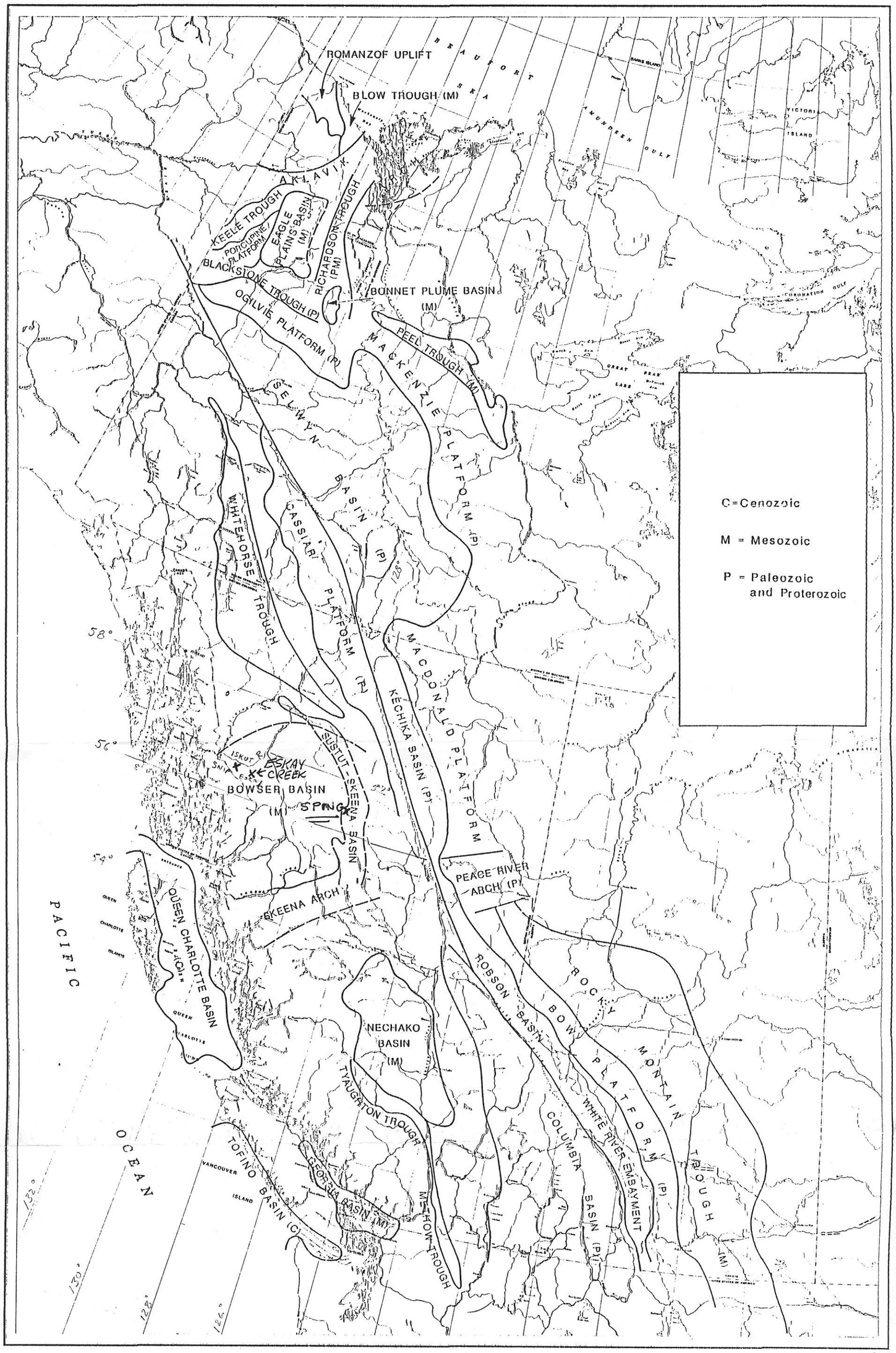
If I can be of further help please let me know.

Yours truly,

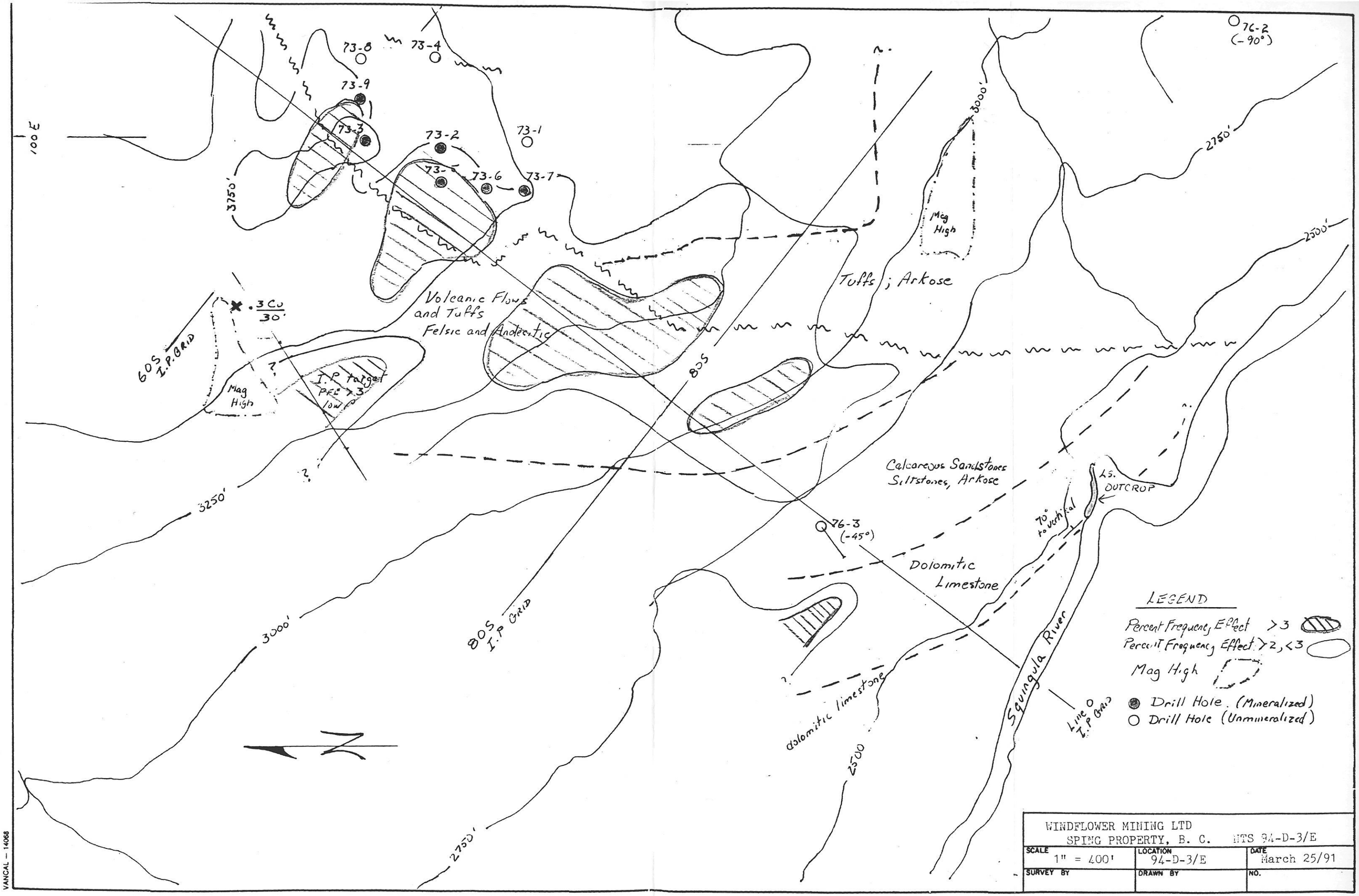
Rod Kirkham

R.V. Kirkham

Encl.


ROMANZOF UPLIFT
BLOW TROUGH (M)
BEAUFORT SEA
AKLAVIK
KEELE TROUGH
PORCUPINE PLATFORM
EAGLE PLAINS BASIN (M)
RICHARDSON TROUGH (PM)
BLACKSTONE TROUGH (P)
BONNET PLUME BASIN (M)
OGILVIE PLATFORM (P)
PEEL TROUGH (M)
MACKENZIE PLATFORM (P)
SELWYN BASIN (P)
WHITEHORSE TROUGH
CASSIAR PLATFORM (P)
MACDONALD PLATFORM
KECHIKA BASIN (P)
SUSITUT-SKEENA BASIN
BOWSER BASIN (M)
ESKAY CREEK
SPRING
PEACE RIVER ARCH (P)
SKEENA ARCH
QUEEN CHARLOTTE BASIN (C)
NECHAKO BASIN (M)
ROBSON BASIN
ROCKY MOUNTAIN TROUGH (M)
WHITE RIVER EMBAYMENT (P)
COLUMBIA BASIN (P)
TYAUGHTON TROUGH
METHOW TROUGH
GEORGIA BASIN (M)
TOFINO BASIN (C)
PACIFIC OCEAN
VANCOUVER ISLAND
QUEEN CHARLOTTE ISLANDS
C=Cenozoic
M = Mesozoic
P = Paleozoic and Proterozoic
58°
56°
54°
132°
130°
128°
126°

GSC



WINDFLOWER MINING LTD
SPING PROPERTY, B. C. NTS 94-D-3/E

SCALE	LOCATION	DATE
1" = 400'	94-D-3/E	March 25/91
SURVEY BY	DRAWN BY	NO.

VANCAL — 14068