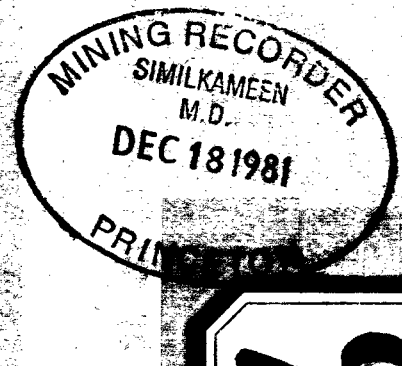
BRENDA MINES LTD.
EXPLORATION GROUP 81-165

REPORT on D.D.H. - SS-28-81 9936
SIWASH SILVER MINERAL PROPERTY

Latitude 49° 49', Longitude 120° 20'
Similkameen Mining Division
N.T.S. 92H/16

Paul C. Bankes
November, 1981



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I INTRODUCTION

a) History of Property

The Siwash Creek area has been prospected since the early 1900's. Several adits have been driven into rock faces along creek banks and numerous hand trenches, following mineralized leads, have been excavated throughout the valley. Evidence of old placer workings is also apparent along the banks of Siwash Creek.

During the 1960's, mineral exploration was carried out in the area by several companies including Quality Exploration Corporation Ltd., Cyprus Exploration Corporation Ltd. and Diana Explorations Ltd. More recent work on the property was executed by E. Mullin of Princeton, B.C. and D.E. Agur of Summerland, B.C. The holdings of these persons were optioned to Brenda Mines Ltd. in April 1979 for further exploratory work.

b) Topography and Vegetation

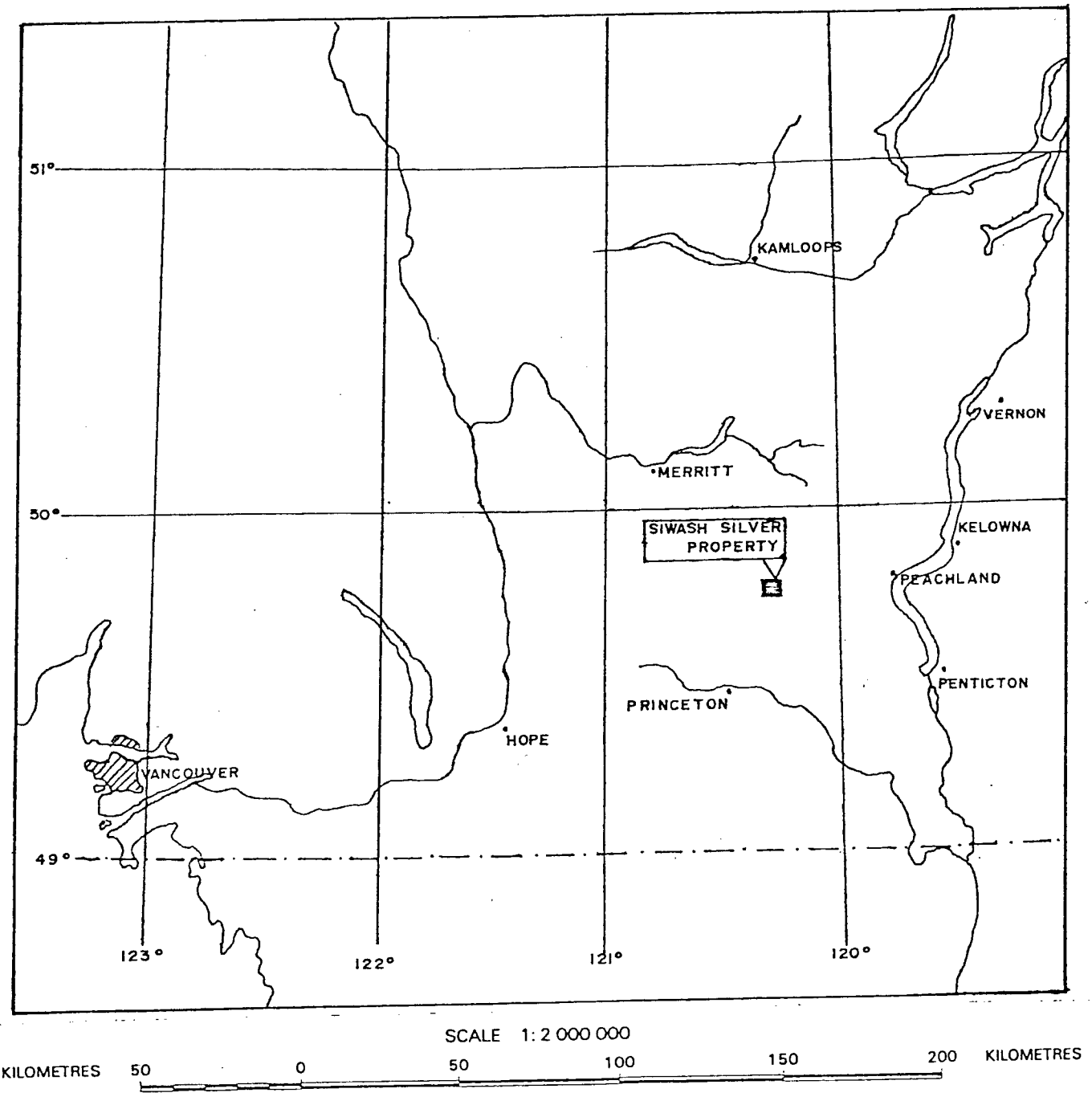
The property occupies the deep, narrow, terraced Siwash Creek valley and its surrounding plateau lands. Major tributaries include Tepee, Galena and Gavin Creeks flowing into the main valley from the east and Saskat Creek entering from the west. All of these creeks occupy the base of very steep, narrow valleys. Vegetation consists generally of well spaced stands of jackpine, fir and spruce with a lush, grassy undergrowth. Some of the more immature forests consist of tight growths of scrawny jackpine. Tag alders flourish in swampy areas within the plateau and along steep valley sides.

II PROPERTY DESCRIPTION

a) Location and Access

The Siwash Silver Property is located 38 air kilometres northeast of Princeton, B.C. The claims are situated along Siwash Creek, west of Tepee Lakes and east of Missezula Lake. There are presently two access roads to the property. One is via an 8 kilometre forestry access road which branches off of the Summerland-Princeton road, north of Osprey Lake. The other branches off of the Trout Creek logging road, 60 kilometres west of Peachland, B.C.

Figure 1 - Location Map

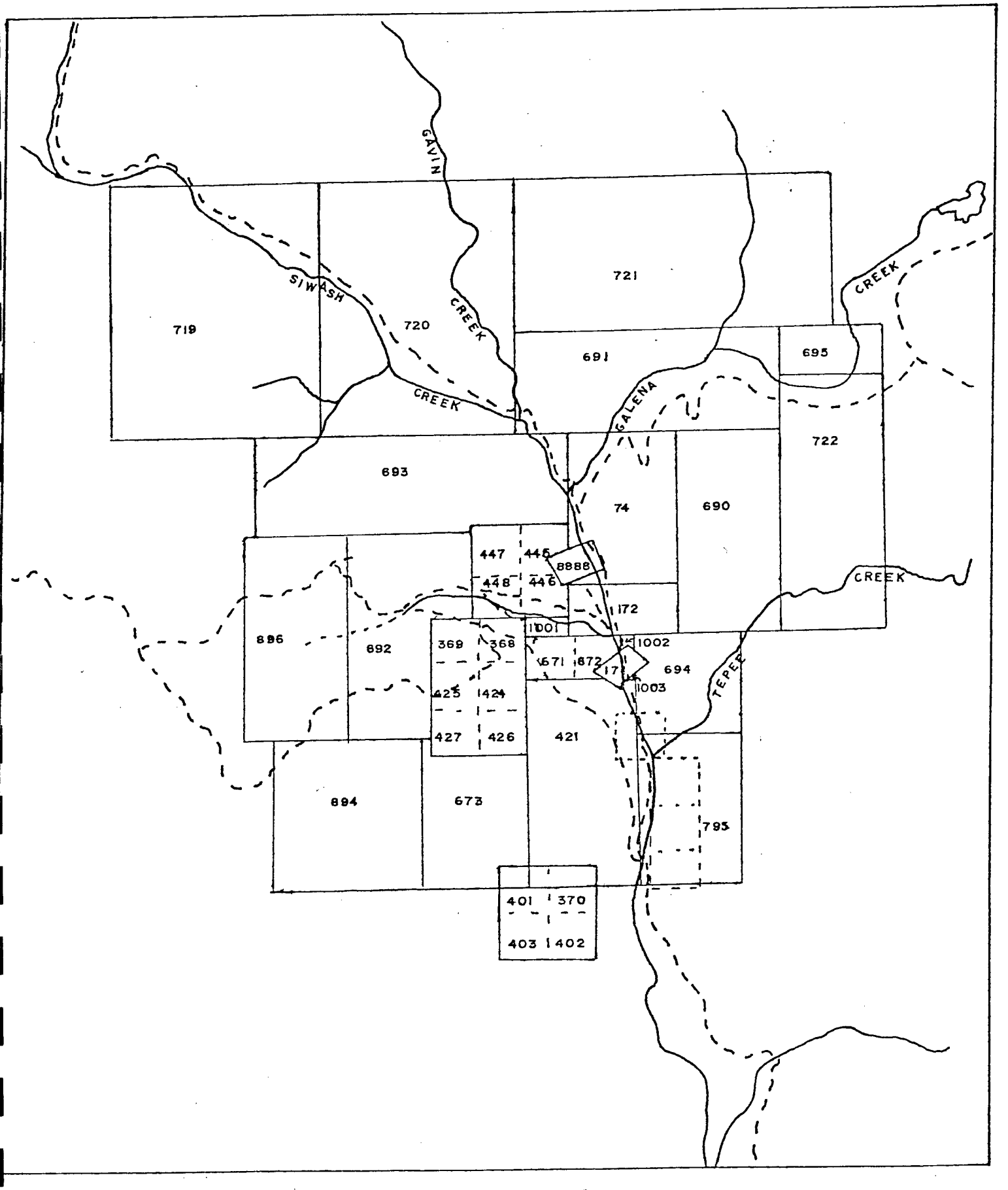


b) Claim Inventory

Claim Name	Record No.	Units	Record Date	Assessment Date
ED	74	6	June 29/76	June 29/87
ED # 2	172	2	Nov. 23/76	Nov. 23/88
Saskat 1	368	1	June 29/78	June 29/87
Saskat 2	369	1	June 29/78	June 29/87
June 1	370	1	June 29/78	June 29/86
Skye 1	401	1	Aug. 15/78	Aug. 15/86
Skye 2	402	1	Aug. 15/78	Aug. 15/86
Skye 3	403	1	Aug. 15/78	Aug. 15/86
June 2	421	8	Sept. 1/78	Sept. 1/86
Pat 1	424	1	Sept. 14/78	Sept. 14/87
Pat 2	425	1	Sept. 14/78	Sept. 14/87
Pat 3	426	1	Sept. 14/78	Sept. 14/87
Pat 4	427	1	Sept. 14/78	Sept. 14/87
V.M. 1	445	1	Oct. 5/78	Oct. 5/88
V.M. 2	446	1	Oct. 5/78	Oct. 5/88
V.M. 3	447	1	Oct. 5/78	Oct. 5/88
V.M. 4	448	1	Oct. 5/78	Oct. 5/88
Jean 1	671	1	July 26/79	July 26/87
Jean 2	672	1	July 26/79	July 26/87
Hawk	673	6	July 26/79	July 26/86
Nanci P-1	690	8	Aug. 13/79	Aug. 13/87
Nanci P-2	691	10	Aug. 13/79	Aug. 13/85
Skylab	692	12	Aug. 13/79	Aug. 13/88
B & B	693	12	Aug. 13/79	Aug. 13/87
Herdel	694	4	Aug. 13/79	Aug. 13/86
Teepee	695	2	Aug. 13/79	Aug. 13/86
ARP	719	20	Sept. 13/79	Sept. 13/83
Fergito-Allendo 1	720	20	Sept. 13/79	Sept. 13/85
Fergito-Allendo 2	721	18	Sept. 13/79	Sept. 13/85
Timbo-Tavish	722	10	Sept. 13/79	Sept. 13/84
Charlie	795	6	Oct. 25/79	Oct. 25/85
Bisbee	894	9	Dec. 12/79	Dec. 12/83
Bingham	896	8	Dec. 12/79	Dec. 12/83
Peterson	8888			Feb. 6/87
Fissure Maiden	171	(Crown Grant)		Nov. 8/86
SS 1 (fraction)	1001	frac.	Apr. 30/80	Apr. 30/87
SS 2 (fraction)	1002	frac.	Apr. 30/80	Apr. 30/87
SS 3 (fraction)	1003	frac.	Apr. 30/80	Apr. 30/87

All claims are located in the Similkameen Mining Division.

Figure 2 - Claim Map



Scale 1:50,000 Échelle

Miles 1 0 1 2 3 Milles

Metres 1000 0 1000 2000 3000 4000 Mètres

Yards 1000 0 1000 2000 3000 4000 Verges

III REGIONAL SETTING

The Siwash Silver mineral property is underlain by granite, quartz-eye porphyry and quartz-feldspar porphyry related to the Otter Intrusions of Upper Cretaceous-Early Tertiary age. These units comprise the "Siwash Creek Body" referred to by Rice (1960). This body has intruded granodiorites of the Coast Intrusions, which are Jurassic in age. Older Nicola volcanics of Triassic age occur in the extreme northwest of the mineral property.

Surface mineralization occurring throughout the mineral property is hosted in:

1. Thin veinlets and brecciated areas within zones of intense chloritization and silicification.
2. Fractures crosscutting zones of intense alteration.
3. Quartz veins.

In order of abundance, the following mineralization occurs within the various host environments described; pyrite, specular hematite with minor amounts of sphalerite, galena, chalcopyrite, tetrahedrite, bornite and gold. Mineralization is not homogeneous throughout the area, but varies from one location to the next with respect to the kind of mineralization incurred and the concentrations thereof.

IV DIAMOND DRILLING

a) Introduction

Maitland Explorations Ltd. was contracted to drill 1,050 metres (3,447 feet) of BQ core between July 4th and July 28th, 1981. Hole SS-28-81 was drilled into a large Pb, Zn soil anomaly on the central portion of the VM #4 mineral claim.

b) Hole Description - D.D.H. SS-28-81

Location: S-7+00N, 8+00E — Elevation: 5,100 feet

Azimuth: 0° — Angle -60°

Depth: 74.68 metres — Overburden: 4.8 metres

Lithologies	Alteration	Mineralization
Quartz-Feldspar Porphyry (12 m)	Weak prophyllitic	Minor pyrite
Quartz-Eye Porphyry (5 m)	Phyllic	Minor sphalerite, galena, calcopyrite & pyrite
Quartz-Feldspar Porphyry (7 m)	Weak prophyllitic	Minor pyrite
Quartz-Eye Porphyry (3 m)	Phyllic	Minor pyrite
Diatreme (2½ m)	Phyllic	Minor pyrite
Quartz-Eye Porphyry (7 m)	Moderate Phyllic	Minor pyrite & sphalerite
Quartz-Feldspar Porphyry (3 m)	Weak prophyllitic	Minor sphalerite & pyrite, minor specular hematite
Diatreme (1 m)	Phyllic	Minor pyrite
Quartz-Feldspar Porphyry (14 m)		Minor pyrite
Diatreme (9½ m)	Phyllic	Moderate pyrite
Quartz-Feldspar (4½ m)		Minor pyrite

c) Treatment of Results

All diamond drill core was logged at 1 metre intervals noting: rock type, alteration, structures, mineralization and core recovery. Intervals having visible mineralization were split and assayed for the following elements: Cu, Mo, Pb, Zn and Ag, at the Brenda Mines assaying facilities. All remaining core has been stored at the Brenda Mines exploration office.

V CONCLUSIONS

Diamond drill hole SS-28-81 intersected only very minor Pb, Zn, hosted in the quartz-eye porphyry and the quartz-feldspar porphyry units, largely as minor veining. The alteration and presence of the disseminated pyrite and specular hematite suggests that this hole is peripheral to our objective. The hole does not substantiate the presence of the high Pb and Zn soil anomalies found in the area.

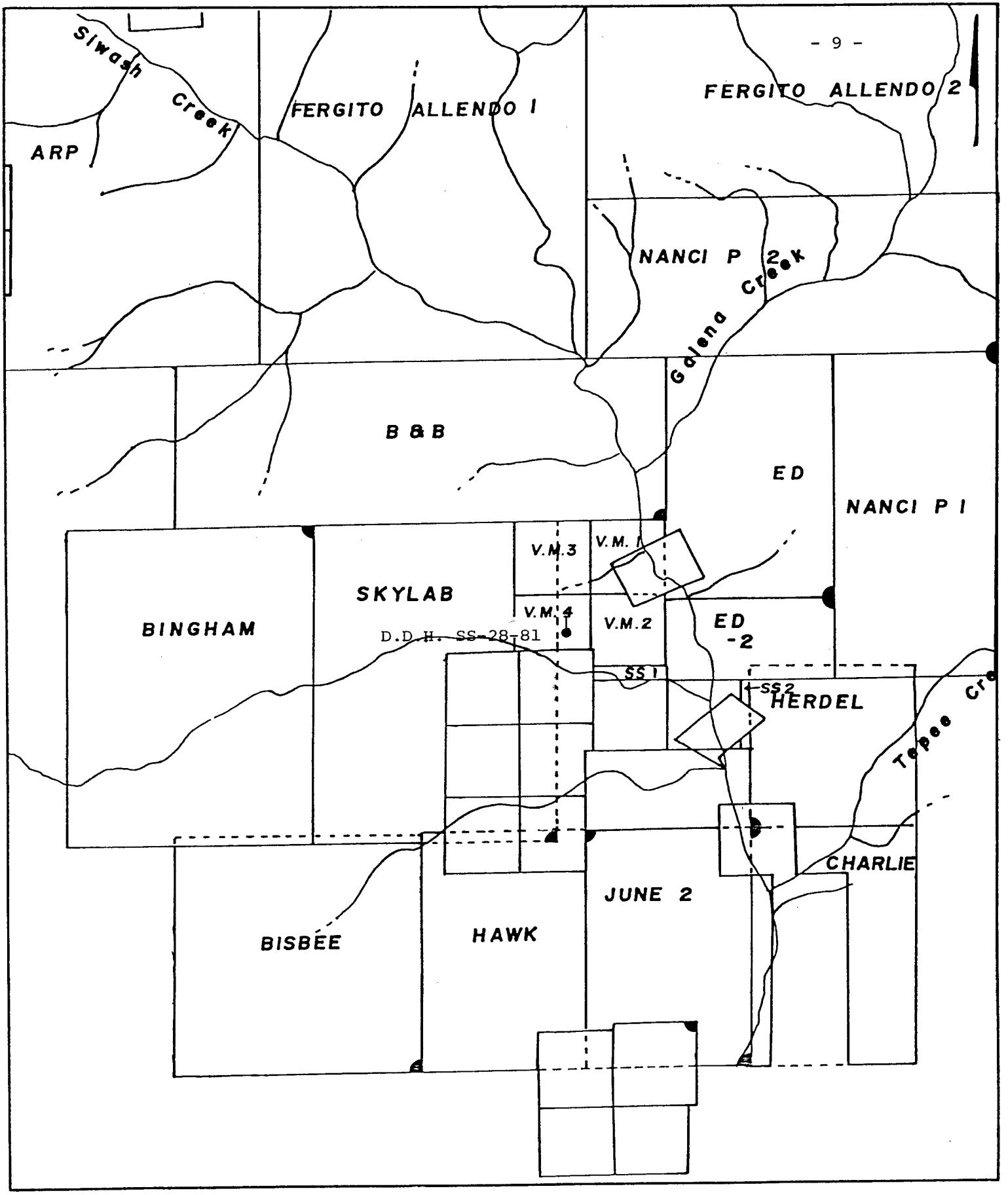


Figure 3 - D.D.H. Location Map

Scale: 1: 31,680

APPENDIX I

PREPARATION for ROCK SAMPLES and DRILL CORES

Each core is given a sample number 1, 2, 3 etc.

Preparation:

a) Jaw crush into sample tray.

b) Mix 2x and split sample in half using large riffle. Transfer each half to a drying tray and label A & B.

c) Dry sample for at least 1 hour.

d) Cool and riffle mix 3x, then split down to pot grinding size.

e) Pot grind sample A for 2½ minutes and transfer to a number sample packet.

f) Clean all apparatus thoroughly after each sample.

g) Retain sample B as a coarse reject sample (pot grind every 10th B sample and run as normal).

Note: Rock samples are prepared in a similar manner depending upon size.

ANALYSIS by A.A. for Cu, Pb, Zn, Ag, and Mo.

1. Weigh 2.00 GM on the top pan balance into a 150 ML beaker (check that beaker No. is the same as written on work sheet).

2. Add 15 MLS Nitric Acid, cover with watchglass and heat on low heat until brown Nitrous fumes are gone.

3. Remove beakers from hot plate, cool for 5 minutes.

4. Add 10 ML Hydrochloric Acid. Place on hot plate. When all brown Nitrous fumes gone, remove watchglasses and take just to dryness on a low plate.

5. Remove from plate, cool, add 20 MLS distilled water, 5 MLS Conc. Hydrochloric Acid and boil salts into solution.

6. Cool in water bath, when cold transfer to 100 MLS Volumetric flask, add 1 MLS Superfloc solution and dilute to 100 MLS with distilled water.

7. Mix thoroughly and then transfer to original beaker.

8. When all samples ready, transfer to A.A. room for reading.

9. If Mo is required, 10.00 MLS of this solution is transfered to a test tube and 1.00 MLS of ALC_3 solution added.

APPENDIX II

LIST of ABBREVIATIONS

alt	-	alteration
andes	-	andesite
arg	-	argillic
assoc	-	associated
bio	-	biotite
born	-	bornite
bx	-	breccia
cc	-	calcite
chlor	-	chlorite, chloritic
cm	-	centimetre
cpy	-	chalcopyrite
Cu	-	copper
diss/ dissem	-	disseminated
fracs	-	fractures
frags	-	fragments
gal	-	galena
G.D.	-	granodiorite
g/mt	-	grams per metric tonne
hb	-	hornblende
hem	-	hematite
kaol	-	kaolinite
k-spar	-	potassium feldspar
lim	-	limonite
m	-	metre
mag	-	magnetite
mlzn	-	mineralization
mn	-	manganese
mod	-	moderate
Mo	-	molybdenite
ntwk	-	network
O.B.	-	overburden
oz.	-	ounces
Pb	-	lead
phenos	-	phenocrysts
phyll	-	phyllic
porphy	-	porphyry
prop	-	propylitic
py	-	pyrite
Qtz	-	quartz
recov	-	recovery
rk	-	rock
sev	-	several
sil	-	siliceous, silicified
spec	-	specular hematite
sph	-	sphalerite
unalt	-	unaltered
vn	-	vein
vnlt	-	veinlet
w	-	with
xen	-	xenolith

APPENDIX III

Property Siwash Silver D.D.H. No. SS-28-81 Dip -60°

D.D.H. Grid Location _____ Elevation 5,100 feet Azimuth 0°

Core Size BQ Total Depth 74.68 m (245')

METRES	ROCK TYPE (core description)	ALTERATION & STRUCTURE (associated minerals)	MINERALIZATION	MLZN	RECOV.	
0 - 1	OVERBURDEN					
1 - 2						
2 - 3						
3 - 4.8						
4.8 - 5		Small gouge zone.	Large py bleb.			
5 - 6	QTZ-K-SPAR PORPHYRY Phenos are irregular in shape & occurrence.	Strong prophyllitic alt. Fractured core. Several small gouge & slip zones. Chlorite veining.	Dissem py.			
6 - 7		Presence of feldspar as veining, but as potassic flooding. Chlor veining.	Dissem py. Siderite blebs.			
7 - 8			Dissem py. Siderite blebs. 10 cm mineralized zone w/ py & Zn.			
8 - 9	DIATREME	Strong prop alt. Clasts rounded up to 9 cm. Chlor veining.	Dissem py. Siderite blebs. 3 cm py, mn, Zn clast.			
9 - 10	QTZ-K-SPAR PORPHYRY	Strong prop alt. 10 cm broken zone. Several small gouge zones. Broken feldspars.	Dissem py. Siderite blebs. Hematite.			
10 - 11		45 cm gouge zone from 10.65 to 11.1. Broken k-spars.	Dissem py & siderite & limonite.			
11 - 12		Strong prop alt. Slip zone along 30°. Broken k-spars.	Dissem minor py & limonite. Several siderite blebs.			
12 - 13		Broken k-spars. Frac along 30° & 60°. Narrow gouge zone.	Limonite, siderite increases as replacement for k-spars and as blebs.			
13 - 14		K-spars broken & irregular.	Siderite decreases as phenos decrease. Mod py (blebs & dissem).			

METRES	ROCK TYPE (core description)	ALTERATION & STRUCTURE (associated minerals)	MINERALIZATION	MLZN	RECOV.	
14 - 15	QTZ-K-SPAR PORPHYRY	Some qtz-eye clasts @ 14.8 that appear to be entirely contained within k-spar unit.	Mod py.			
15 - 16			Mod py.			
16 - 17	QTZ-EYE PROPHYRY	Phyllic alt. Some clasts @ 16.3; qtz-eye up to 2 cm in size. Probably contact related; this unit does not appear to be a diatreme.	Mod to strong py.			
17 - 18		5 mm slip @ 17.2, 25° to core. 10 cm broken core @ 17.5.	5 cm py vein @ 17.6, 90° to core.			
18 - 19		Chlorite increases.	Mod py; blebs of sphal.			
19 - 20			Mod cpy; blebs of sphal.			
20 - 21		Mod phyll alt.	Blebs of py & sphal. 5 mm siderite vnlt @ 20.5, 70° to core.			
21 - 22	QTZ-K-SPAR PORPHYRY K-spar phenos altered to siderite.	Brecciated texture near contact; frags subrounded.	Minor py.			
22 - 23	FELDSPAR PORPHYRY. Siderite increases away from contact. Phenos irreg in shape near contact, becoming more euhedral away from contact.		Minor py.			
23 - 24			Very minor py.			
24 - 25						
25 - 26		7 cm gouge zone @ 25.7, 50° to core.				
26 - 27			Minor py.			
27 - 28			Minor py.			
28 - 29	QTZ-K-SPAR PORPHYRY		Py increases.			
29 - 30	DIATREME - very fine grained qtz-eye matrix, clasts are large (up to 3 cm), infrequent & composed of QTZ-K-SPAR PORPHYRY.		Minor py; siderite replacement of k-spars in clasts.			

METRES	ROCK TYPE (core description)	ALTERATION & STRUCTURE (associated minerals)	MINERALIZATION	MLZN	RECOV.	
30 - 31	QTZ-EYE PORPHYRY	Mild phyll alt. 10 cm broken & gouge zone @ 30.0; well broken @ 30.9.	Mod py (blebs).			
31 - 32.5			1 cm py vein @ 31.8 m, 75° to core.			
32.5 - 33	DIATREME - Qtz-eye matrix & clasts. Clasts range in size from 1 - 5 cm, k-spars in clasts replaced by siderite.	3.5 cm fault zone @ 32.4 on contact between qtz-eye & diatreme.	Minor py in matrix.			
33 - 34						
34 - 35						
35 - 36	QTZ-EYE PORPHYRY	Mild phyll alt.	Mod py (blebs, vnlts & dissem) and blebs of sphal.			
36 - 37			Mod py. Sphal increases up to 36.5 then dies out.			
37 - 38			Siderite blebs @ 37.3. Mod py.			
38 - 39		Moderately broken.	Minor py.			
39 - 40		Well broken @ 39.6 to 39.7.	Minor py. 5 mm sphal vnlt @39.3, 90° to core.			
40 - 41	QTZ-EYE PORPHYRY	Mild phyll alt.	Strong py from 40.1 to 40.4.			
41 - 42			Mod py,; qtz-eye frags @ 41, may be offshoot of larger diatreme. Very minor sphal.			
42 - 43	QTZ-K-SPAR PORPHYRY Some phenos replaced by siderite, >50% of phenos irregularily shaped.		Minor py & sphal.			
43 - 44			Minor py & mod sphal (blebs & vnlts).			
44 - 45		5 cm broken @ 45.0.	Minor py.			

D.D.H. No. SS-28-81

METRES	ROCK TYPE (core description)	ALTERATION & STRUCTURE (associated minerals)	MINERALIZATION	MLZN	RECOV.	
45 - 45.8	DIATREME from 45.2 to 45.8; qtz-eye frags up to 2 cm.		Minor py.			
45.8 - 46	QTZ-K-SPAR PORPHYRY (very sheared) - original fabric of rock destroyed; k-spar hard to identify & are partially replaced by siderite.		Minor py.			
46 - 47						
47 - 48	Same as above - sheared to 48.2.		Minor py.			
48 - 49	Same - k-spar very irreg.		Minor py.			
49 - 50	Same - k-spars more euhedral, strong siderite.		Minor py.			
50 - 51	Same - chlorite increases.		Minor py.			
51 - 52		1 cm shear @ 41, 40° to core.	Very minor py.			
52 - 53			Very minor py.			
53 - 54			Minor py.			
54 - 55			Minor py.			
55 - 56			Minor py.			
56 - 57		Broken & gouged from 56.6 to 57.0.	Very minor py.			
57 - 58		Broken & gouged from 57.1 to 58.0.	Minor py.			
58 - 59		Recovery 10%.				
59 - 60		Gouge @ 59.4.				
60 - 61	DIATREME; matrix is qtz-eye.	Clasts consist of pro-altered qtz-eye & range in size from 1 - 8 cm. Some clasts sub angular.	Mod py.			
61 - 62			Mod py, minor sphal.			
62 - 63			Locally strong py.			
63 - 64						
64 - 65						
65 - 66						
66 - 67						
67 - 68						
68 - 69						
69 - 70						

METRES	ROCK TYPE (core description)	ALTERATION & STRUCTURE (associated minerals)	MINERALIZATION	MLZN	RECOV.	
70 - 71	QTZ-K-SPAR PORPHYRY Exact contact masked by faulting.	Broken & gouge from 70.0 to 71.0.	Minor py.			
71 - 72			Minor py.			
72 - 73	FELDSPARS begin to be replaced by chlorite & siderite.		Minor py.			
73 - 74						
74 - 74.68						
74.68	END of HOLE					

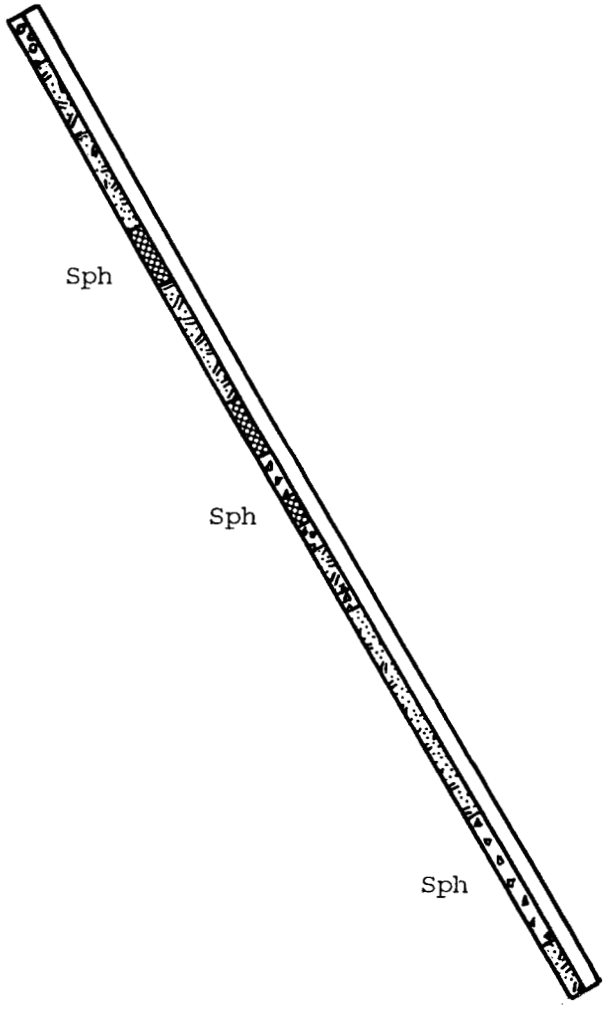
APPENDIX IV

Drill Section SS-28-81

Azimuth: 0^{o}

Angle: -60^{o}

Depth: 74.68 metres



LEGEND

- Overburden
- Quartz-Feldspar Porphyry
- Diatreme
- Quartz-Eye Porphyry

Sph Cu - Mineralization

Scale: 1:500

APPENDIX V

Statement of Costs

Diamond Drilling		
	July 27, 1981; 1 day; drilled from 115 feet to 245 feet; 130 feet @ $26.03/foot (39.6 metres @ $85.45/metre)	$3,383.90
Geologist		
	July 27, 1981; 1 day @ $86.00/day	86.00
Student		
	July 27, 1981; 1 day @ $53.00/day	53.00
	Total	$3,522.90

APPENDIX VI

STATEMENT of QUALIFICATIONS

I, Paul Bankes, of the town of Peachland, Province of British Columbia, do hereby certify that:

1) I am a geologist residing in Peachland with Post Office Box 9 as my address.

2) I am a graduate of the University of Western Ontario, with a BSc in geology (1978).

3) I have been employed as an exploration geologist by Brenda Mines Ltd. since April 1978.

P.C. Bankes, BSc
Exploration Geologist
Brenda Mines Ltd.

Apr 23 / 81
Date

STATEMENT of QUALIFICATIONS

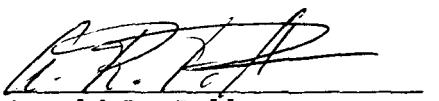
I, Arnold R. Pollmer of Peachland, Province of British Columbia, do certify that:

1) I have been employed as a geologist by Noranda Mines Limited from December 1973 to June 1977; I am presently employed as the chief geologist by Brenda Mines Ltd.

2) I am a graduate of the University of Wisconsin with a Bachelor of Science Degree in Geology (1972).

3) I am a member of the Canadian Institute of Mining and Metallurgy.

4) I am a fellow of the Geological Association of Canada.



Arnold R. Pollmer
Chief Geologist
Brenda Mines Ltd.