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GEOLOGICAL & GEOCHEMICAL ASSESSMENT REPORT

on the

**SILVER BOW CLAIM GROUP
Skeena Mining Division
Alice Arm Area, B.C.**

**Claims: ALEX (6348), ANDRA (6349), "45" (5961),
MOLLIE DARLING (5961), VIOLET (5962),
SUNSET #1 (5964), SUNSET #3 (5963),
SILVER BOW (6097), BASIN (6098), CRACKER
JACK (6099), BROWNIE FR. (6099), STORM
KING (6099).**

Latitude: 55⁰ 24' North
Longitude: 129⁰ 29' West
NTS: 103P / 5 & 6

**SUB-RECORDER
RECEIVED**
NOV 28 1990
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VANCOUVER, B.C.

on behalf of

**PACIFIC NORTHERN VENTURES LTD.
#1730 - 999 Granville Street
Vancouver, B.C., V6C 2W2.**

by

D.F. Symonds, B.Sc., F.G.A.C.

**BURTON CONSULTING INC.
901 - 626 West Pender Street
Vancouver, B.C., V6B 1V9.**

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

NOVEMBER 16 1990

20,570

BURTON CONSULTING INC.

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- I - Laboratory Assay Sheets
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1.0 INTRODUCTION

This report, written on behalf of Pacific Northern Ventures Ltd., of Vancouver, B.C. describes field work carried out on the **Silver Bow Property**. This work was carried out between August 27th and September 11th, 1990. The property is located approximately 8 kilometres south of Alice Arm, B.C.

Two zones mineralized zones were shown to be along the same structure and a new area of gold/silver mineralization was discovered.

Recommendations are made for further work on the property.

2.0 SUMMARY & CONCLUSIONS

The **Silver Bow Property**, owned by Pacific Northern Ventures Ltd., of Vancouver, B.C. is located approximately 8 kilometres south of Alice Arm, B.C. Access to the property is by helicopter from Stewart, B.C. or Terrace, B.C. The provincial road system extends to the B.C. Moly open pit, 5 kilometres northeast of the property. The property consists of two modified-grid claims (36 units) and ten reverted crown grants in the Skeena Mining Division.

Work on the property has been carried out since the early 1900's, exploring the known showings (Theda Bara, Bebe Daniels, Silver Bow, Verona, Bowyer). These old showings are largely narrow shear zones, sporadically mineralized with gold, silver, lead, zinc and copper.

Recent work has resulted in the discovery of mineralized (gold, silver) quartz veins on the property at the head of Lime Creek. These veins occur in Hazelton Assemblage rusty argillites which lie in "fingers" intruded by Coast Plutonic Complex granodiorites. Samples of vein material run up to 6490 p.p.b. Au and >100 p.p.m. Ag.

There are several important mineral producers and past-producers in the area, including B.C. Moly, Premier, Granduc, Big Missouri, Scottie, Prosperity, Porter-Idaho and the Torbrit and Dolly Varden Mines, 22 kilometres to the north.

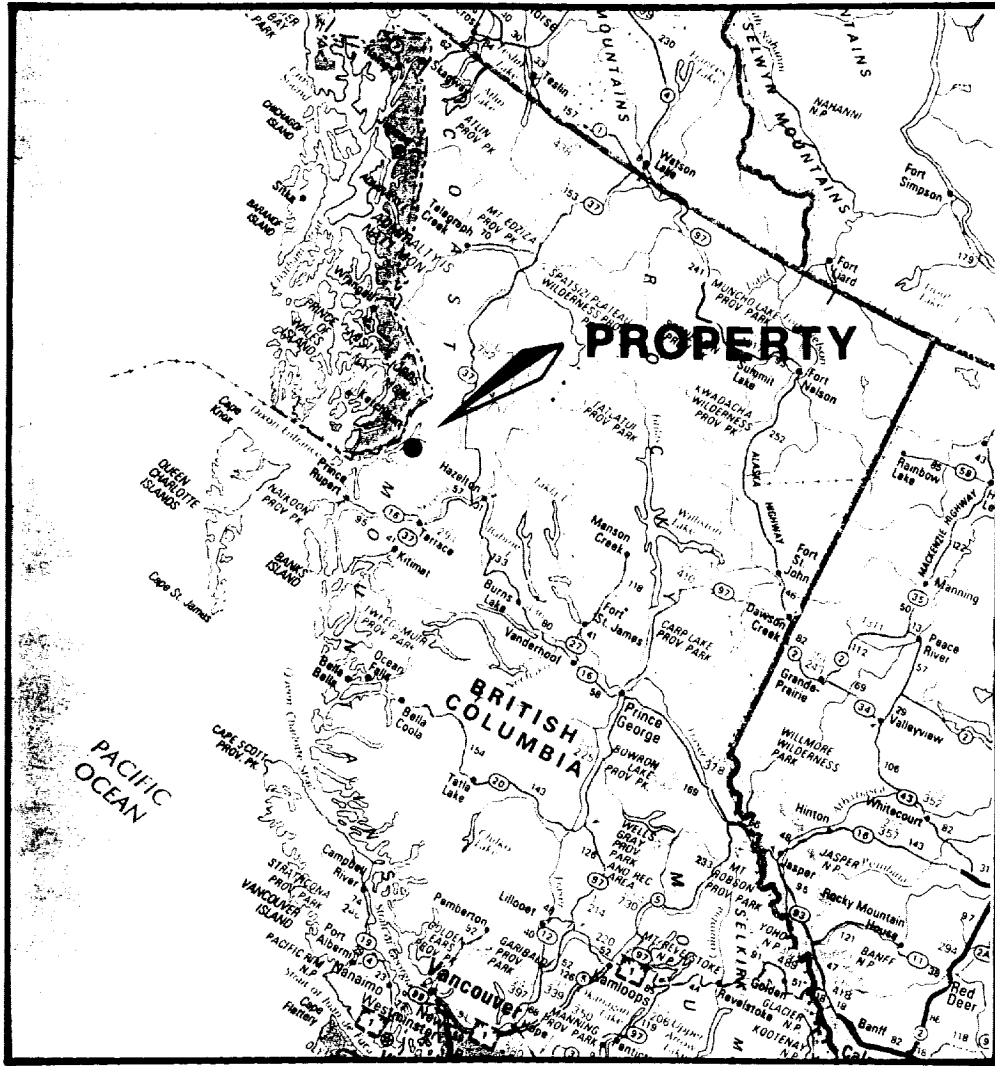
Further work is recommended on the property, concentrating on the area at the head of Lime Creek. This work should include prospecting, geological mapping, geophysical and geophysical test surveys and blasting/hand trenching.

3.0 LOCATION & ACCESS

The Silver Bow Claim Group is located approximately 68 kilometres south-southeast of Stewart, B.C., or alternatively, 8 kilometres south of Alice Arm. Location information is shown on Figures 3-1 and 4-1.

Elevations on the property range from 550 metres to 1350 metres. The topography is moderately steep at higher elevations. Vegetation consists of widely-spaced trees with low bush and numerous open meadows. Much of the property area is covered by a layer of glacial till. The property includes the headwaters of Roundy and Lime Creeks, which have cut deeps canyons at lower elevations, making access difficult or impossible.

Access to the property is by helicopter from Stewart, B.C. or from Terrace, B.C., or alternatively by road to Kitsault and then by helicopter to the property, a distance of about 6 kilometres.



**PACIFIC NORTHERN
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Silver Bow Claims

Location Map

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NOVEMBER 16, 1990

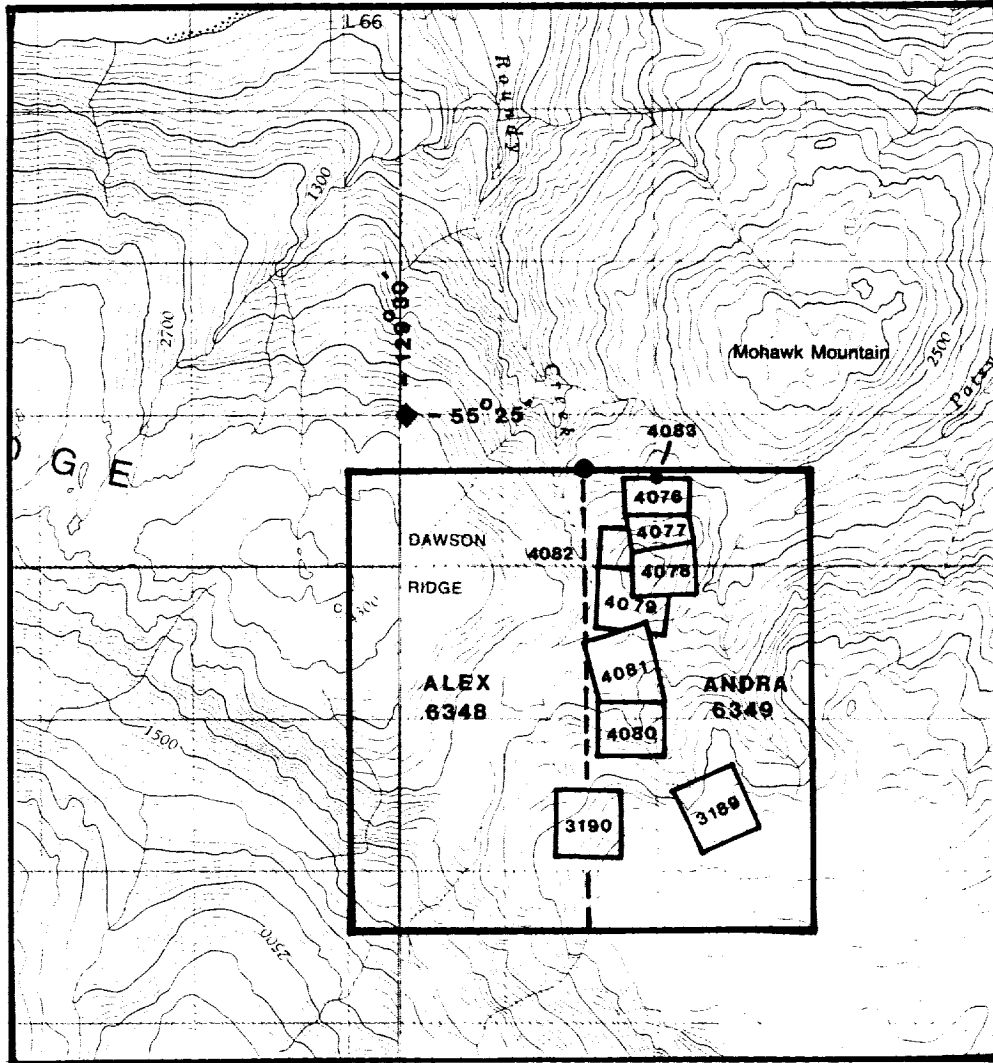
FIG. 3-1

4.0 CLAIM INFORMATION

The **Silver Bow Claim Group** consists of two modified-grid system claims and ten reverted crown-granted mineral claims located in the Skeena Mining Division. Claim information is summarized as follows:

<u>CLAIM NAME</u>	<u>RECORD #</u>	<u>LOT #</u>	<u>**EXPIRY DATE</u>	<u>AREA</u>
<u>Metric Claims</u>				
ALEX (18 units)	6348	-	09SEP1991	18 units
ANDRA (18 units)	6349	-	09SEP1991	18 units
<u>Reverted Crown Grants</u>				
"45"	5961	L4078	26MAR92	15.53 ha
MOLLIE DARLING	5961	L4082	"	5.05 ha
VIOLET	5962	L4079	"	13.34 ha
SUNSET #1	5964	L4080	"	17.44 ha
SUNSET #3	5963	L4081	"	20.88 ha
SILVER BOW	6097	L3189	"	20.72 ha
BASIN	6098	L3190	"	20.90 ha
CRACKER JACK	6099	L4076	"	11.96 ha
BROWNIE FR.	6099	L4077	"	0.39 ha
STORM KING	6099	L4077	"	9.82 ha

** Expiry Dates Pending Acceptance of Assessment Report



NTS 103 P - 5, 6

**PACIFIC NORTHERN
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Silver Bow Claims

Claim Map

SKEENA M.D.

Burton Consulting Inc.

NOVEMBER 16, 1990

FIG. 4-1

5.0 PROPERTY HISTORY

The Alice Arm area has been prospected since the early 1900's, resulting in the discovery of numerous silver/lead/zinc, molybdenum, copper and gold/silver deposits. The present-day Silver Bow Claim Group consists of a number of old silver properties, surface and underground workings referred to in early reports of the B.C. Ministry of Mines and Petroleum Resources. These old workings include the Silver Bow, Sunset, Verona, Basin, Mohawk, Theda Bara and Bebe Daniels.

Exploration work on the Silver Bow Claim Group is reported in the 1916 Minister of Mines Annual Report, which states that work was done on the Silver Bow workings, Basin Claim, Sunset Group and Mohawk Group. High grade silver assay values were reported on several of the properties. A selected sample from the Sunset Group reportedly returned a value of \$84/ton silver, which would correspond to an assay value of greater than 100 oz./ton silver based on a silver price of \$0.62/oz. A sample taken from the Mohawk Group was reported to yield 300 oz./ton silver. The 1922 Minister of Mines Annual Report states that samples taken from the Verona showing returned values of up to 65 oz./ton silver and 0.19 oz./ton gold.

The 1926 Minister of Mines Annual Report states that the Theda Bara and Bebe Daniels claims were explored by two adits, the upper adit being 51 feet in length and the lower adit 20 feet in length. Both adits were driven on the same vein, which occupies a shear zone in the argillites. It was noted (1927) that "a pile of massive sulphides including pyrite, pyrrhotite, sphalerite and galena can be found on the dump".

In 1966, the Marshall Creek Copper Co. Ltd. erected a camp near the old Keystone workings and cleaned out the adits. During a 3 1/2 month program, all of the showings were mapped in detail, with some trenching and stripping being carried out. The 1966 Minister of Mines Annual Report states that a chip sample taken from the Verona showing assayed 0.32 oz./ton gold and 2.4 oz./ton silver. A chip sample over a 2 foot width of the Basin showing reportedly assayed 0.18 oz./ton gold and 18.1 oz./ton silver.

In 1988, Shangri-La Minerals Ltd. carried out an exploration program on behalf of Pacific Northern Ventures Ltd.¹ This program included resampling the old workings, geochemical soil surveys, a VLF electromagnetic survey and limited prospecting.

6.0 GEOLOGY

6.10 REGIONAL GEOLOGY

The regional geology of the Unuk River/Salmon River/Anyox map area has been compiled and revised most recently by Grove et al in B.C. Ministry of Mines and Petroleum Resources Bulletin 63 (1986). The pertinent portion of the regional geology is shown on Figure 6-1.

The Alice Arm area is west of the Bowser Basin and the eastern boundary of the Coast Plutonic Complex. Granitic stocks of the Alice Arm intrusions occur along this contact as a separate later phase of the Coast Plutonic Complex. These stocks are in the order of 800 metres in diameter or smaller.

The Coast Plutonic Complex is a batholith that extends the length of the British Columbia coastline. This batholith is composed of many successive related intrusive events. The Complex has uplifted older rock units, forming numerous (often mineralized) roof pendants.

Associated with the Complex are dykes and sills that intrude the surrounding rocks. Grove (1971) noted that this area is part of the eastern or interior belt of mineralization which parallels the eastern boundary of the Coast Plutonic Complex.

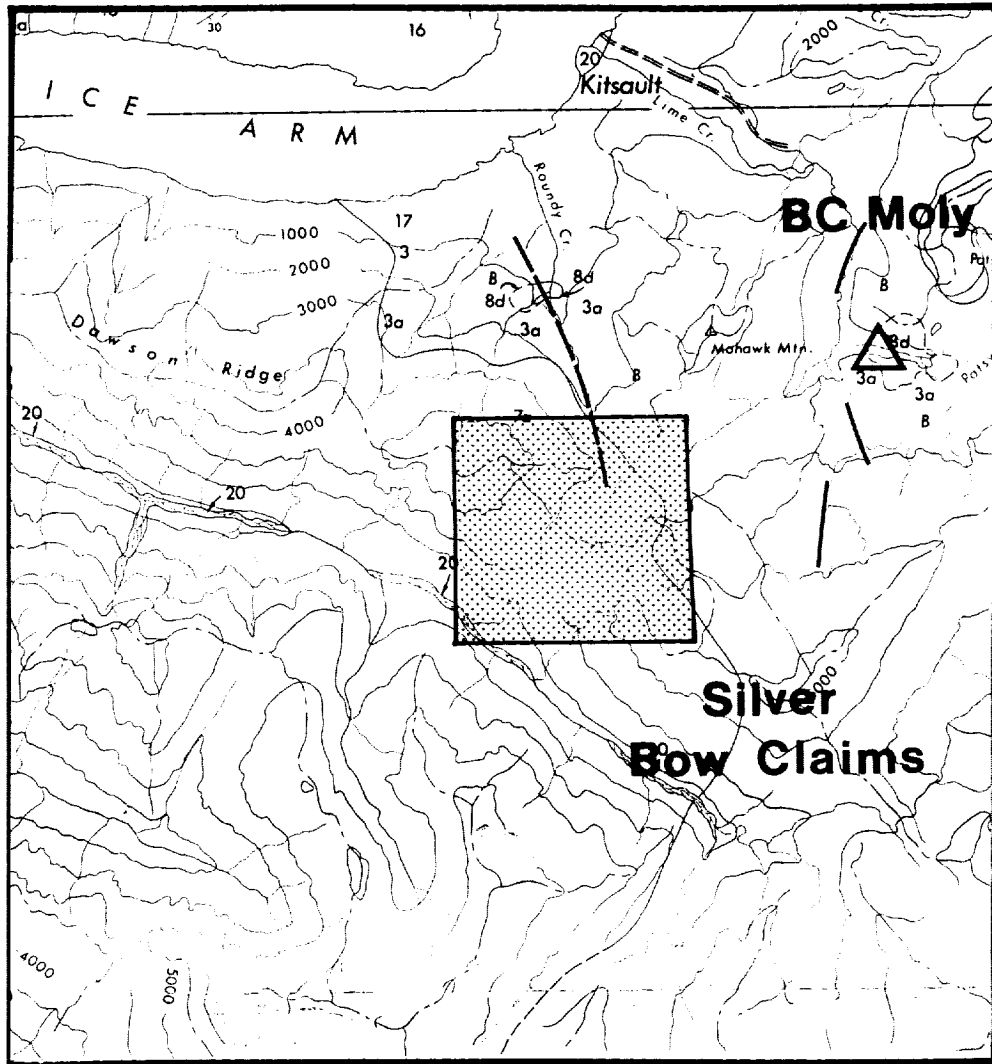
The Hazelton Assemblage is part of the Stewart complex which hosts the eastern belt. This complex consists of a deformed belt of plutons, gneiss, schists, cataclasites, sediments and volcanics. The complex lies on the western edge of the Bowser Basin. In the Alice Arm area, the complex consists of Jurassic sediments and volcanics with some quartz monzonite stocks.

Mineral deposits have formed primarily within the Hazelton Assemblage of the Stewart complex. Major producers in the area include the Premier, Big Missouri, Granduc, Scottie, Prosperity, Porter-Idaho, B.C. Molybdenum Mine, Torbrit Silver and the Dolly Varden Mine.

The B.C. Molybdenum Mine is in close proximity to the Silver Bow Claim Group. This mine produced 10,400 tonnes of molybdenum from 1967 to 1972, when weak markets forced suspension of mining operations. Milling operations continued until 1982. Reserves are estimated at 36 million tonnes of slightly less than 0.20% molybdenum sulphide, as stated by Woodcock (1977).

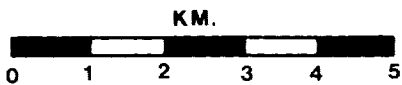
The other major deposits, of which the Premier Mine is the largest, are located approximately 80 kilometres northerly along the eastern belt of mineralization. The Premier mine has produced approximately 1.3 million ounces of silver and significant gold. Westmin restarted mining operations on the Premier over a year ago.

The property is underlain by Hazelton sediments and some volcanic rocks. The Hazelton rocks are cut by Alice Arm intrusives to the north and west. Gold/silver/lead/zinc veins occupy north-south trending shears in the Hazelton rocks.



NTS 103 P - 5,6

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Silver Bow Claims
<i>Regional Geology</i> AFTER BCMEMPR - 1986

NOVEMBER 16, 1990

FIG.6-1

LEGEND

(To Accompany Figure 6-1)

- 20** - Quaternary sediments.
- 17** - Upper Jurassic Hazelton Group sediments;
siltstone, greywacke, sandstone,
conglomerate & other minor sediments.
- 16** - Middle Jurassic Salmon River Formation
sediments; siltstone, greywacke, sandstone
& other minor sediments.
- 8d** - Eocene plutonic stocks; augite diorite.
- 7a** - Eocene Coast Plutonic Complex;
granodiorite.
- B** - Biotite-predominant form of Unit 7a.
- 3a** - Tertiary metamorphic rocks; phyllite.
- 3** - Tertiary metamorphic rocks; hornfels.

6.20 LOCAL GEOLOGY

6.210 Work Done

Geological mapping traverses were carried out on stream drainages, where most of the outcrop on the property occurs. In addition, geological traverses were carried out along some of the steep hillsides and in the large bowl at the south end of the property. Information gathered from these traverses was combined with previous geological information gathered in 1988 and is shown of Figure 6-2.

6.220 Rock Types & Alteration

The property is underlain primarily by sediments and metasediments of the Upper Jurassic Nass Formation of the Hazelton Assemblage and by granodiorite of the Coast Plutonic Complex. A few diorite dykes associated with shear zones are also present on the property. Much of the property is covered by a thick layer of glacial till.

The Nass Formation consists of sedimentary rocks that have been subjected to minor metamorphism. Sediment types, as categorized by Grove (1971) include siltstone, greywacke, sandstone, calcarenite, argillite, conglomerate and minor sandstone. The Nass Formation occurs as a roof pendant within the Coast Plutonic Complex. Isolated outcrops of sediments occur as "fingers" on top of the granodiorite.

The rock units observed on the property are sandstone and argillaceous greywacke of the Hazelton Group and granitic rocks of the Coast Plutonic Complex.

Property geology as mapped during the 1988 and 1990 field seasons is shown on Figure 6-2.

6.230 Structure

The Silver Bow adits and the Verona workings are located along a northerly-trending shear zone, which is cross-cut by other east northeasterly-trending shear zones.

The Theda Bara and Bebe Daniels adits are located on a northerly-trending shear zone.

The area at the head of Lime Creek to the east of the earlier discovered zones, where new quartz veins and zones have been discovered, has been subject to intense shearing. At least three separate shear attitudes were observed in the canyon walls in this locale.

6.240 Mineralization

Mineralization on the property consists of visible galena and sphalerite, with gold and silver values detected in assays. This mineralization is generally related to massive sulphide zones (pyrite, pyrrhotite), which occur along shear zones in the sediments. These shear zones may be quartz-filled in places. A total of thirty-one rock samples were taken for assay purposes. These samples were assayed for gold and a Trace 7 analytical package was run for Ag, As, Cu, Mo, Pb, Sb and Zn. Several of the samples were anomalous in Au, Ag, As, Pb, Sb and Zn. The sample results are shown on Figure 6-2.

The most significant result of the 1990 sampling program was the new discovery of mineralized quartz veins and zones in the headwaters of the Lime Creek drainage. These mineralized samples are indicated on Figure 6-2 as Sample #467878 and Sample #467879. Sample #467878 ran 4290 p.p.b. Au and greater than 100 p.p.m. Ag, while Sample #467879 ran 6490 p.p.b. Au and 84.0 p.p.m. Ag.

7.0 GEOCHEMISTRY

7.10 STREAM SEDIMENT SURVEY

A total of seventeen stream sediment samples were taken from the Roundy Creek and Lime Creek drainages on the property. The samples were collected using a small suction dredge. Approximately 0.5 cubic metres of material was vacuumed from the creekbed and passed through a small sluice box. The material from the sluice box was transferred to a large plastic bag and sent to the laboratory.

At the laboratory, the +10 mesh fraction of each sample was rejected and each sample was split into +80 mesh and -80 mesh fractions for separate analysis, using fire assay with an atomic absorption finish for the gold analysis. Sample results are shown on Figure 6-2. The results from the -80 mesh fraction range from detection limit to 255 p.p.b. Au, while the +80 mesh results range from detection limit to 30 p.p.b.

Sample results indicate a fairly uniform concentration of fine gold in the samples tested. This concentration is relatively low, and could be explained by the poor characteristics of the sampling sites readily accessible to the sampler. The low gold values in the coarse fractions of the samples analysed indicates that none of the sites which were sampled are natural "placer traps".

7.20 SOIL GEOCHEMICAL SURVEYS

7.210 Area Between Verona Workings & Silver Bow Adits

A total of thirty-three geochemical soil samples were taken in an area surrounding the Verona workings. The sampling was an attempt to trace the mineralized structure southerly back towards the Silver Bow adit area as well as further to the north. These samples were taken from the "C" horizon, at an average depth of 80 cm. The "B" horizon is not well-developed in this area. The samples were assayed for gold and a Trace 7 analytical package was run for Ag, As, Cu, Mo, Pb, Sb and Zn.

Sample locations with anomalous values are shown on Figure 7-1. One gold value was above detection limit (10 p.p.b. at 75N/50E). Two arsenic values were anomalous (110 p.p.m. at 75N/50E & 106 p.p.m. at 75S/0E). Two zinc values were anomalous (400 p.p.m. at 75N/0E & 380 p.p.m. at 75S/0E). One lead value was anomalous (70 p.p.m. at 300N/25W).

PACIFIC NORTHERN VENTURES LTD.
 GEOCHEMICAL SURVEY - VERONA
 WORKINGS AREA

16 Nov. 1990

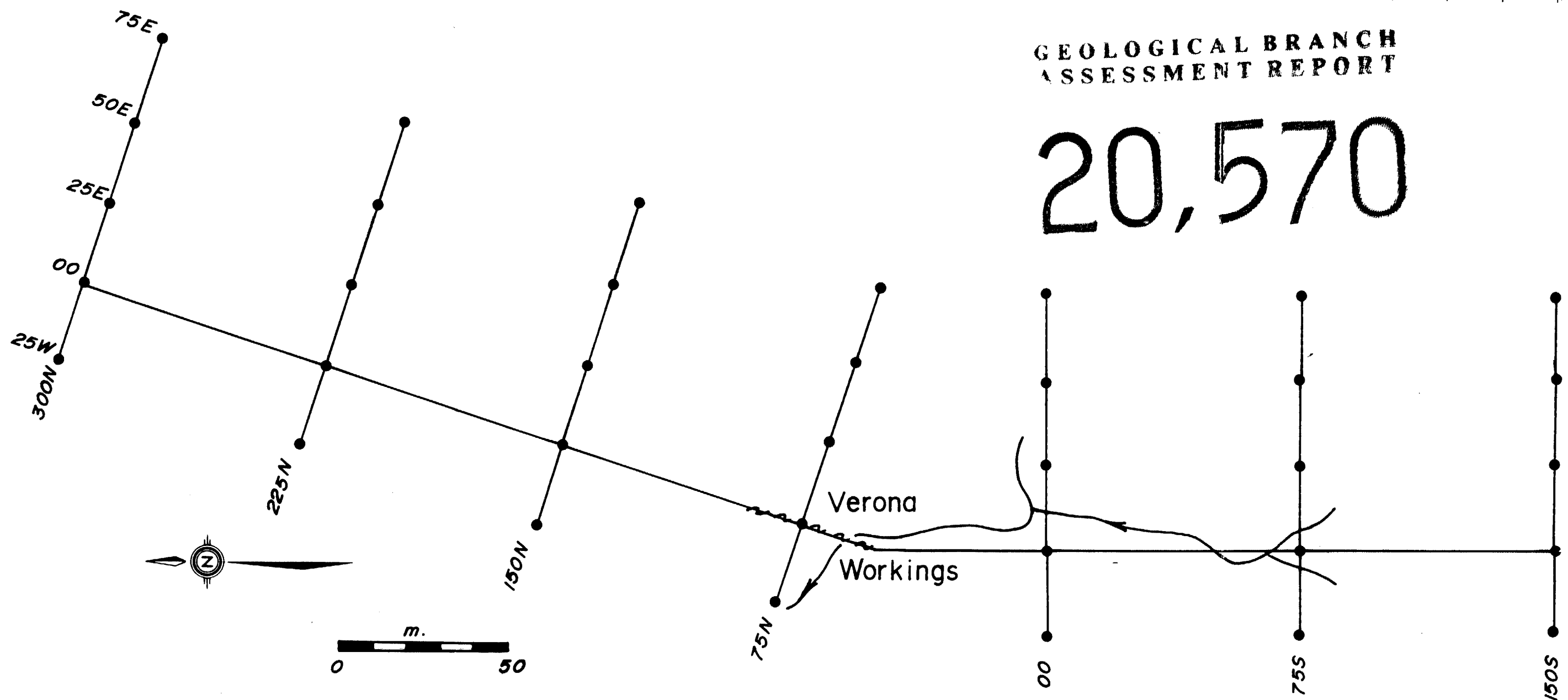
Fig. 7-1

SEE FIG. 6-1 FOR LOCATION
 OF WORKINGS

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Ag ppm Aqua R	As ppm	Cu ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm
0M-0E	217 238	< 5	< 0.2	52	20	6	26	0.4	190
0M-25E	217 238	< 5	< 0.2	18	36	< 1	10	1.2	100
20+00 0+50E	217 238	< 5	< 0.2	24	13	< 1	20	0.4	88
20+00 0+75E	217 238	< 5	< 0.2	17	21	1	9	0.4	75
0M-25W	217 238	< 5	< 0.2	26	36	9	7	0.8	105
75M-00E	217 238	< 5	< 0.2	28	64	1	16	< 0.2	400
75M-25E	217 238	< 5	< 0.2	32	17	2	26	0.2	112
75M-50E	217 238	< 10	< 0.4	110	31	3	12	0.2	225
75M-75E	217 238	< 5	< 0.2	18	26	2	10	0.2	115
75M-0E	217 238	< 5	< 0.2	106	15	1	12	0.2	380
75M-25E	217 238	< 5	< 0.2	12	3	< 1	6	< 0.2	102
75M-50E	217 238	< 5	< 0.2	30	22	< 1	16	0.6	85
75M-75E	217 238	< 5	< 0.2	36	18	< 1	20	0.2	92
75M-25W	217 238	< 5	< 0.2	12	40	< 1	10	0.4	116
75M-0E	217 238	< 5	< 0.2	44	20	2	14	0.4	170
150M-00E	217 238	< 5	0.7	6	18	< 1	14	not/ass	92
150M-25E	217 238	< 5	< 0.2	12	26	< 1	10	0.2	135
150M-50E	217 238	< 5	< 0.2	17	20	< 1	10	< 0.2	85
150M-75E	217 238	< 5	< 0.2	23	22	< 1	13	< 0.2	68
150M-00E	217 238	< 5	< 0.2	46	13	10	14	0.2	140
150M-25E	217 238	< 5	< 0.2	15	32	< 1	10	1.0	105
150M-50E	217 238	< 5	< 0.2	15	28	1	8	0.4	90
150M-75E	217 238	< 5	< 0.2	10	33	< 1	6	0.4	105
150M-25W	217 238	< 5	< 0.2	19	20	< 1	10	0.6	55
150M-0E	217 238	< 5	< 0.2	40	12	< 1	14	< 0.2	225
225M-00E	217 238	< 5	< 0.2	5	9	< 1	6	< 0.2	44
225M-25E	217 238	< 5	< 0.2	14	16	< 1	6	0.4	82
225M-25W	217 238	< 5	< 0.2	11	34	< 1	8	0.6	86
225M-50W	217 238	< 5	< 0.2	10	28	< 1	10	0.6	64
300M-00E	217 238	< 5	< 0.2	18	14	2	10	0.4	78
300M-25E	217 238	< 5	< 0.2	12	28	1	8	< 0.2	112
300M-25W	217 238	< 5	0.2	30	22	3	70	0.4	155
300M-50W	217 238	< 5	0.2	172	32	4	22	0.8	96

GEOLOGICAL BRANCH
 ASSESSMENT REPORT

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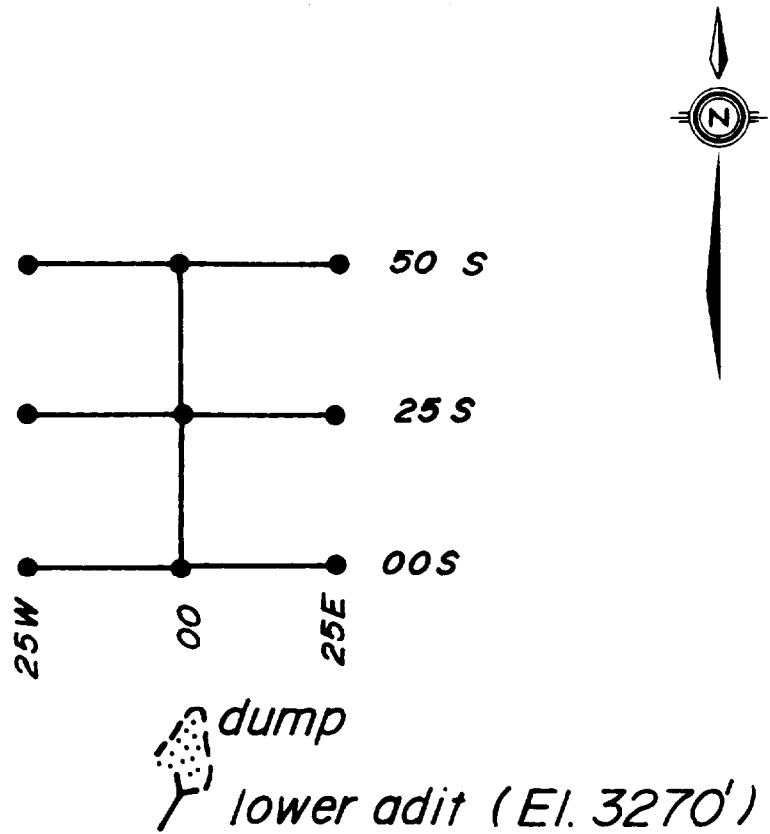
7.220 Theda Bara & Bebe Daniels Adit Areas

A total of nine geochemical soil samples were taken below (to the north of) the Theda Bara and Bebe Daniels adits to test the usefulness of geochemistry in tracing the mineralized shear zone at this location. The samples were assayed for gold and a Trace 7 analytical package was run for Ag, As, Cu, Mo, Pb, Sb and Zn.

Sample locations are shown on Figure 7-2. There were no anomalous metal values observed in the data.

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Ag ppm Aqua R	As ppm	Cu ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm
TB 08-0E	217 238	< 5	0.4	18	18	< 2	8	< 0.2	98
TB 08-25E	217 238	< 5	0.4	17	15	< 1	4	< 0.2	83
TB 08-25W	217 238	< 5	0.4	86	28	< 4	28	< 0.2	165
TB 258-0E	217 238	< 5	< 0.2	17	23	< 1	14	< 0.6	140
TB 258-25E	217 238	< 5	< 0.2	10	18	< 1	6	< 0.2	64
TB 258-25W	217 238	< 5	< 0.2	18	18	1	8	1.0	110
TB 508-0E	217 238	< 5	0.2	14	14	1	8	0.6	80
TB 508-25E	217 238	< 5	0.2	16	10	2	8	3.0	102
TB 508-25W	217 238	< 5	0.6	20	14	9	20	1.2	80

SEE FIG. 6-1 FOR LOCATION OF WORKINGS



GEOCHEMICAL SURVEY
 THEDA BARA & BEBE
 DANIELS ADITS

16 Nov. 1990 Fig. 7-2

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8.0 RECOMMENDATIONS

Further work is recommended in the area of mineralized quartz veins discovered at the head of Lime Creek during the 1990 field work program. The newly-discovered area has a different style of mineralization that represents a breccia zone with a larger tonnage potential type of structure. This is different from the previous known narrow vein structures. This work should include further prospecting and geological mapping, as well as geochemical and geophysical (magnetic and VLF electromagnetic) test surveys. These test surveys would indicate whether or not any further geochemical or geophysical work would be useful. Field crews should be prepared to carry out blasting and hand trenching to further delineate any mineralized zones encountered.

9.0 COST STATEMENT**Personnel: Alex Burton**

- July 31	to property	(1 day)	\$425.00
- Aug. 1	"	(1/2 day)	\$212.50
- Aug. 13	re equipment	(2 hrs.)	\$140.00
- Aug. 16	re equipment	(2 hrs.)	\$140.00
- Nov. 15	review report	(1 day)	\$425.00

Fred Loutitt

- Aug. 27 to Sep. 10	(15 days)	\$4,542.50
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Doug Symonds

- Aug. 8	letter	(1 hr.)	\$60.00
- Aug. 20 to Aug. 22			
Aug. 27 to Sept. 11	(19 days)	\$6,770.00	
- Sep. 25 to Sep. 28	(5/6 day)	\$291.67	
- Nov. 12 to Nov. 22	(4 days)	\$1,225.00	

Dennis Wager

- Aug. 20 to Aug. 22		
Aug. 27 to Sept. 11	(19 days)	\$3,800.00

Total Personnel: \$18,031.67

Accommodation:

- July 31	hotel	\$37.44
- Aug. 20	motel	48.13
- Aug. 22	motel	104.33
- Aug. 23	motel	52.16
- Aug. 26	motel	52.16

Total Accommodation: \$294.22

Food & Meals:

- July 31	meal	\$15.00
- July 31	meal	14.91
- July 31	meal	19.00
- July 31	meal	42.00
- Aug. 20	meal	4.76
- Aug. 20	meal	19.84
- Aug. 20	meal	5.75
- Aug. 20	meal	17.25

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- Aug. 21	meal	17.94
- Aug. 21	meal	6.90
- Aug. 21	meal	12.71
- Aug. 22	meal	32.26
- Aug. 22	meal	41.80
- Aug. 22	groceries	930.51
- Aug. 23	meal	59.00
- Aug. 23	meal	4.60
- Aug. 23	meal	28.75
- Aug. 26	meal	61.47
- Aug. 27	groceries & supplies	129.28
- Aug. 27	meal	22.08
- Sep. 10	meal	115.00
- Sep. 11	lunch	12.10

Total Food & Meals: \$1,612.91

Supplies:

- Aug. 13	hardware	\$30.43
- Aug. 16	lumber	36.55
- Aug. 16	campstove	126.17
- Aug. 22	lumber	95.88
- Aug. 22	maps	19.50
- Aug. 22	supplies	64.39
- Aug. 23	explosives	281.01
- Aug. 23	hardware	26.76
- Aug. 27	mattresses	131.62
- Aug. 31	tent rental	36.80
- Aug. 31	dredge rental	258.75

Total Supplies: \$1,107.86

Transportation:

- July 31	helicopter	\$1,582.00
- July 31	airfare	245.10
- Aug. 20	bus fare	23.92
- Aug. 20	gas	24.00
- Aug. 20	gas	30.91
- Aug. 20	gas	27.75
- Aug. 21	gas	25.30
- Aug. 21	gas	25.99
- Aug. 27	gas	114.64
- Aug. 27	gas	34.50
- Sep. 10	truck rental	230.00
- Sep. 10	equipment rental	230.00
- Sep. 10	helicopter	2,994.89
- Sep. 10	gas	62.56
- Sep. 24	equipment rental	65.84

Total Transportation: \$5,717.70

BURTON CONSULTING INC.

Analytical Costs:

- Oct. 10	Chemex Labs.	\$1,110.90
- Oct. 10	Chemex Labs.	873.43
- Oct. 10	Chemex Labs.	239.49
- Oct. 10	Chemex Labs.	268.81

Total Analytical Costs: \$2,492.63

Communications:

- July 25	long distance	\$3.28
- July 27	"	1.93
- July 27	"	0.69
- July 27	"	3.19
- Aug. 14	"	0.69
- Aug. 17	"	0.69
- Aug. 21	"	1.63
- Aug. 21	"	3.65
- Aug. 21	"	5.14
- Aug. 22	"	2.29
- Aug. 22	"	5.78
- Aug. 22	"	1.93
- Aug. 26	"	5.68
- Aug. 27	"	1.97
- Aug. 27	"	2.31
- Aug. 28	"	3.12
- Aug. 28	"	2.31
- Aug. 29	"	1.97
- Aug. 29	"	8.71
- Aug. 30	"	1.97
- Aug. 30	"	4.34
- Sep. 10	"	2.04
- Sep. 10	"	8.94
- Sep. 11	"	2.70
- Sep. 11	"	2.04
- Sep. 11	"	3.61
- Sep. 11	"	1.61
- Sep. 11	FAX	14.95
- Sep. 11	long distance	6.06

Total Communications: \$105.22

Miscellaneous:

- Aug. 17	bank charges	\$28.75
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Total Miscellaneous: \$28.75

Drafting & Report Preparation:

- Nov. 22	DFS Enterprises	\$650.00
Total Drafting & Report Preparation:		<u>\$ 650.00</u>

<u>TOTAL EXPENSES</u>	<u>\$30,040.96</u>
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10.0 CERTIFICATE

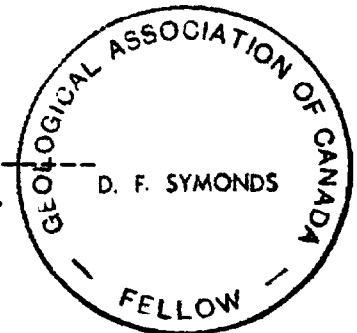
I, Douglas Frederick Symonds, of #313 - 1750 West 13th Avenue, Vancouver, B.C. do hereby state:

- 1) I am a geologist and a graduate of the University of B.C. (B.Sc. - 1972).
- 2) I am a Fellow of the Geological Association of Canada. (Registration #F5496).
- 3) I have practised my profession since graduating in 1972.
- 4) I have based this report on field work carried out under my direct supervision, during the period of August 27th to September 10th, 1990.
- 5) I have no interest, either direct or indirect, in the Silver Bow Property or in Pacific Northern Ventures Ltd., nor do I expect to receive any such interest.

Signed at Vancouver, B.C. this 16th day of November, 1990.



D.F. Symonds, B.Sc., F.G.A.C.
Geologist



APPENDIX I
(Laboratory Assay Sheets)



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: BURTON CONSULTING INC.

901 - 626 W. PENDER ST.
VANCOUVER, BC
V6B 1V9

Project : PNV 89-1
Comments :

Page Number : 1
Total Pages : 1
Invoice Date : 10-OCT-90
Invoice No. : I-9023941
P.O. Number :

CERTIFICATE OF ANALYSIS A9023941

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Ag ppm Aqua R	As ppm	Cu ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm		
467861	208 294	565	2.0	>10000	134	6	84	5.8	80		
467862	208 294	75	0.9	260	52	2	40	0.8	50		
467863	208 294	1140	6.4	>10000	52	2	2500	20.0	375		
467864	208 294	180	34.0	960	166	2	>10000	28.0	7000		
467865	208 294	130	1.5	500	120	1	1000	3.0	1850		
467866	208 294	55	0.7	2030	36	< 1	360	2.6	230		
467867	208 294	< 5	0.3	146	48	< 1	38	4.4	57		
467868	208 294	< 5	< 0.2	22	14	< 1	18	0.8	14		
467869	208 294	< 5	< 0.2	14	14	< 1	12	0.6	63		
467870	208 294	< 5	< 0.2	6	14	< 1	10	0.4	30		
467871	208 294	< 5	< 0.2	15	10	< 1	10	0.6	83		
467872	208 294	< 5	1.4	20	11	< 1	330	0.6	70		
467873	208 294	< 5	< 0.2	12	15	< 1	20	0.6	35		
467874	208 294	< 5	0.4	17	8	< 1	28	0.4	30		
467875	208 294	< 5	2.1	276	52	4	350	0.8	1200		
467876	208 294	< 5	< 0.2	10	5	< 1	12	0.2	71		
467877	208 294	35	3.1	36	12	4	66	9.8	112		
467878	208 294	4290	>100.0	3150	30	< 1	1500	15.6	3650		
467879	208 294	6490	84.0	1100	28	< 1	350	14.4	355		
467880	208 294	200	3.0	74	11	< 1	34	1.6	47		
467881	208 294	65	5.8	350	30	1	42	2.8	105		
467882	208 294	5	1.6	40	64	5	78	1.2	152		
467883	208 294	15	1.8	68	10	< 1	8	6.0	47		
467884	208 294	< 5	1.4	70	12	< 1	10	7.8	63		
467885	208 294	< 5	1.2	12	4	< 1	36	1.8	80		
467886	208 294	75	6.6	22	78	< 1	4	30.0	19		
467887	208 294	15	1.2	152	6	< 1	6	2.0	12		
467888	208 294	< 5	1.1	34	20	< 1	290	15.2	210		
467889	208 294	< 5	1.0	56	22	< 1	38	12.0	102		
467890	208 294	15	0.6	17	5	< 1	10	4.0	25		
467891	208 294	65	1.1	174	15	< 1	14	4.8	48		

CERTIFICATION:

Hart Bickler



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
 212 Brooksbank Ave., North Vancouver
 British Columbia, Canada V7J 2C1
 PHONE: 604-984-0221

To: BURTON CONSULTING INC.

901 - 626 W. PENDER ST.
 VANCOUVER, BC
 V6B 1V9

Project : PNV89-1
 Comments:

Page Number : 1
 Total Pages : 2
 Invoice Date: 10-OCT-90
 Invoice No. : I-9023964
 P.O. Number :

CERTIFICATE OF ANALYSIS A9023964

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Ag ppm Aqua R	As ppm	Cu ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm		
TB 0S-0E	217 238	< 5	0.4	18	18	2	8	0.2	98		
TB 0S-25E	217 238	< 5	0.4	17	15	< 1	4	< 0.2	83		
TB 0S-25W	217 238	< 5	0.4	56	25	4	28	< 0.2	165		
TB 25S-0E	217 238	< 5	< 0.2	17	23	< 1	14	0.6	140		
TB 25S-25E	217 238	< 5	< 0.2	10	10	< 1	6	< 0.2	64		
TB 25S-25W	217 238	< 5	< 0.2	18	18	1	8	1.0	110		
TB 50S-0E	217 238	< 5	0.2	14	14	1	8	0.6	80		
TB 50S-25E	217 238	< 5	0.2	16	10	2	8	3.0	102		
TB 50S-25W	217 238	< 5	0.6	20	14	9	20	1.2	80		
ON-0E	217 238	< 5	< 0.2	52	20	6	26	0.4	190		
ON-25E	217 238	< 5	< 0.2	18	36	1	10	1.2	100		
L0+00 0+50E	217 238	< 5	< 0.2	24	13	< 1	20	0.4	88		
L0+00 0+75E	217 238	< 5	< 0.2	17	21	1	9	0.4	75		
ON-25W	217 238	< 5	< 0.2	26	36	3	7	0.8	105		
75N-00E	217 238	< 5	< 0.2	28	64	1	16	< 0.2	400		
75N-25E	217 238	< 5	< 0.2	32	17	2	26	0.2	112		
75N-50E	217 238	10	0.4	110	31	3	12	0.2	225		
75N-75E	217 238	< 5	< 0.2	18	26	2	10	0.2	115		
75S-0E	217 238	< 5	< 0.2	106	15	1	12	0.2	380		
75S-25E	217 238	< 5	< 0.2	12	3	< 1	6	< 0.2	102		
75S-50E	217 238	< 5	< 0.2	30	22	1	16	0.6	85		
75S-75E	217 238	< 5	< 0.2	36	18	< 1	20	0.2	92		
75N-25W	217 238	< 5	< 0.2	12	40	< 1	10	0.4	116		
75S-25W	217 238	< 5	< 0.2	44	20	2	14	0.4	170		
150N-00E	217 238	< 5	0.7	6	18	< 1	14	not/ss	92		
150N-25E	217 238	< 5	< 0.2	12	26	< 1	10	0.2	135		
150N-50E	217 238	< 5	< 0.2	17	20	< 1	10	0.2	85		
150N-75E	217 238	< 5	< 0.2	23	22	< 1	13	< 0.2	68		
150S-00E	217 238	< 5	< 0.2	46	13	10	14	0.2	140		
150S-25E	217 238	< 5	< 0.2	15	32	< 1	10	1.0	105		
150S-50E	217 238	< 5	< 0.2	15	28	1	8	0.4	90		
150S-75E	217 238	< 5	< 0.2	10	33	1	6	0.4	105		
150N-25W	217 238	< 5	< 0.2	19	20	< 1	10	0.6	55		
150S-25W	217 238	< 5	< 0.2	40	12	1	14	< 0.2	225		
225N-00E	217 238	< 5	< 0.2	5	9	< 1	6	< 0.2	44		
225N-25E	217 238	< 5	< 0.2	14	16	< 1	6	0.4	82		
225N-25W	217 238	< 5	< 0.2	11	34	< 1	8	0.6	86		
225N-50W	217 238	< 5	< 0.2	10	28	< 1	10	0.6	64		
300N-00E	217 238	< 5	< 0.2	18	14	2	10	0.4	78		
300N-25E	217 238	< 5	< 0.2	12	28	1	8	< 0.2	112		

CERTIFICATION: *Hart Buchler*



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: BURTON CONSULTING INC.

901 - 626 W. PENDER ST.
VANCOUVER, BC
V6B 1V9

Project : PNV89-1
Comments:

Page Number : 2
Total Pages : 2
Invoice Date: 10-OCT-9
Invoice No. : I-9023964
P.O. Number :

CERTIFICATE OF ANALYSIS A9023964

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm Aqua R	As ppm	Cu ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm		
300N-25W	217	238	< 5	0.2	30	22	3	70	0.4	155		
300N-50W	217	238	< 5	0.2	172	32	4	22	0.8	96		

CERTIFICATION: Janet Buchler



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: BURTON CONSULTING INC.

901 - 626 W. PENDER ST.
VANCOUVER, BC
V6B 1V9

Project : PNV 89-1
Comments:

Page Number : 1
Total Pages : 1
Invoice Date : 10-OCT-90
Invoice No. : I-9023940
P.O. Number :

CERTIFICATE OF ANALYSIS

A9023940

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	fusion wt. gm									
467951 -80	201 205	50	30.00									
467952 -80	201 205	70	10.00									
467953 -80	201 205	120	10.00									
467954 -80	201 205	15	10.00									
467955 -80	201 205	115	10.00									
467956 -80	201 205	< 5	10.00									
467957 -80	201 205	85	10.00									
467958 -80	201 205	75	30.00									
467959 -80	201 205	255	10.00									
467960 -80	201 205	35	30.00									
467961 -80	201 205	< 5	30.00									
467962 -80	201 205	10	30.00									
467963 -80	201 205	35	10.00									
467964 -80	201 205	70	10.00									
467965 -80	201 205	105	30.00									
467966 -80	201 205	70	10.00									
467967 -80	201 205	65	10.00									

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: BURTON CONSULTING INC.

901 - 626 W. PENDER ST.
VANCOUVER, BC
V6B 1V9

Project : PNV 89-1
Comments:

Page Number : 1
Total Pages : 1
Invoice Date : 10-OCT-90
Invoice No. : I-9023939
P.O. Number :

CERTIFICATE OF ANALYSIS

A9023939

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	fusion wt. gm								
467951 +80	217 240	10	30.00								
467952 +80	217 240	30	30.00								
467953 +80	217 240	10	30.00								
467954 +80	217 240	10	30.00								
467955 +80	217 240	< 5	30.00								
467956 +80	217 240	< 5	30.00								
467957 +80	217 240	< 5	30.00								
467958 +80	217 240	30	30.00								
467959 +80	217 240	< 5	30.00								
467960 +80	217 240	< 5	30.00								
467961 +80	217 240	< 5	30.00								
467962 +80	217 240	< 5	30.00								
467963 +80	217 240	< 5	30.00								
467964 +80	217 240	< 5	30.00								
467965 +80	217 240	25	30.00								
467966 +80	217 240	< 5	30.00								
467967 +80	217 240	< 5	30.00								

CERTIFICATION:

APPENDIX II
(References)

REFERENCES

- 1) Di Spirito, F., P.Eng. et al; "Geological, Geophysical & Geochemical Surveys on the Silver Bow Claim Group; Private Report for Pacific Northern Ventures Ltd.; November 18, 1988.

LEGEND

ROCK DESCRIPTIONS / ASSAYS

▲ ROCK SAMPLE DESCRIPTIONS

**Note that only last 3 digits of Sample # shown on map.

- | SAMPLE # | DESCRIPTION |
|----------|---|
| 467881 | - grab sample of 35 cm. quartz vein with sulphides trending 030/10W. |
| 467882 | - grab sample of 40 cm. quartz vein with sulphides trending 014/10E. |
| 467883 | - grab sample of 20 cm. quartz vein with sulphides trending 054/45NW. |
| 467884 | - grab sample from rusty zone 30 cm. to 1 metre in width, trending 010°. |
| 467885 | - grab sample from 30 cm. quartz vein with sulphides trending 160°. |
| 467886 | - chip sample of 40 cm. zone of mixed quartz vein & argillaceous sediments. |
| 467887 | - chip sample from 110 cm. of mixed quartz vein & argillaceous breccia. |
| 467888 | - 200 cm. chip sample of 4 metre wide quartz vein "swarta". |
| 467889 | - 1 metre chip sample from west side of 3 metre wide quartz-breccia zone. |
| 467890 | - chip sample of 3 metre quartz-breccia zone. |
| 467891 | - 1 metre chip sample from east side of 3 metre wide quartz-breccia zone. |
| 467892 | - grab sample from 80 cm. mixed zone of quartz & sediments, trending 172/28SE. |
| 467893 | - chip sample of 3 metre quartz-breccia zone. |
| 467894 | - 200 cm. chip sample of remainder of zone described in Sample # 467888. |
| 467895 | - grab sample of narrow disseminated sulphide zone related to Sample # 467897. |
| 467896 | - grab sample of scattered veins up to 20 cm. wide. |
| 467897 | - grab sample of narrow massive sulphide zone. |
| 467898 | - grab sample from 30 cm. quartz vein with pyrite & galena, trending 018/10E. |
| 467899 | - chip sample from 140 cm. quartz breccia zone with sulphides, trending 205/80E. |
| 467900 | - 1 metre chip sample from centre of 3 metre wide quartz-breccia zone. |
| 467901 | - chip sample from 140 cm. of sulphide rich argillaceous sediments with 15 cm. quartz vein. |
| 467902 | - grab sample of narrow, sulphide-rich quartz zone. |
| 467903 | - grab sample from 15 metre by 6 metre exposed & faulted quartz zone in sediments. |
| 467904 | - grab sample from 60 cm. to 2 metre wide quartz vein/breccia zone. |
| 467905 | - additional grab sample from quartz mass described in Sample # 467893. |
| 467906 | - grab sample from 15 cm. zone trending 015/58W. |
| 467907 | - grab sample from 60 cm. quartz vein trending 210° with sulphides & some argillaceous breccia. |
| 467908 | - grab sample from bottom of 4 metre wide quartz mass (breccia & multiple quartz veins) in sediments, with some pyrite. |
| 467909 | - grab sample from top of 4 metre wide quartz mass described in Sample # 467908. |
| 467910 | - grab sample of boulder material. |
| 467911 | - grab sample of boulder material. |

▲ ROCK SAMPLE ASSAYS

SAMPLE DESCRIPTION	PPSP CODE	Fe ppm	Al ppm	Ag ppm	As ppm	Cu ppm	Co ppm	Zn ppm	Pb ppm	Mn ppm
467881	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
467882	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
467883	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
467884	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
467885	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
467886	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
467887	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
467888	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
467889	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
467890	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
467891	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2

● STREAM SEDIMENT ASSAYS

SAMPLE DESCRIPTION	PPSP CODE	Fe ppm	Al ppm	Ag ppm	As ppm	Cu ppm	Co ppm	Zn ppm	Pb ppm	Mn ppm
871	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
872	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
873	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
874	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
875	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
876	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
877	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
878	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
879	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
880	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2
881	210 214	102	2.1	<0.05	2.2	2.2	2.2	2.2	2.2	2.2

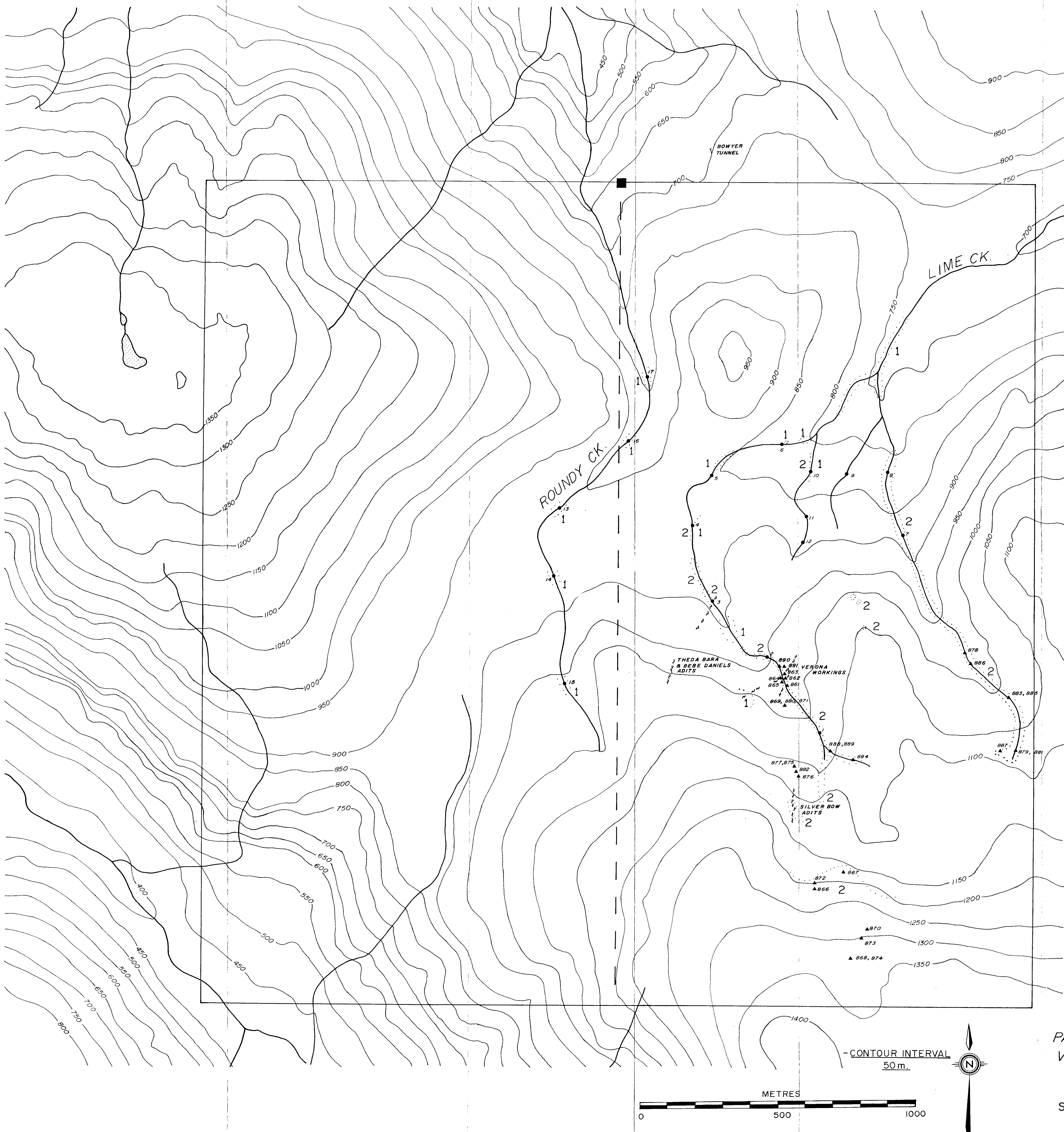
879 ▲ ROCK SAMPLE (Last 3 digits of assay no.)

● STREAM SEDIMENT SAMPLE
(Relates to last 2 digits of assay no.)

--- LIMIT OF OUTCROP

--- FAULT OR SHEAR ZONE

- 1 COAST PLUTONIC COMPLEX
- granodiorite
- 2 HAZELTON SEDIMENTS
- argillaceous greywacke, sandstone



--- CONTOUR INTERVAL
50m.

