

46-1038 - 15793

1221

REPORT ON THE
VERNA PROPERTY
SLOCAN MINING DIVISION
N.T.S. 82F/15W

Lat. 49° 47.3' Long. 116° 55.2'

FOR

FILMED

Owner(s): CASCADIA MINES & RESOURCES LTD.
John A. Hale

Operator: Cascadia Mines and Resources Ltd.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

SUB-RECORDER
RECEIVED

MAR 25 1987

15,793

M.R. # _____ \$ _____
VANCOUVER, B.C.

March 23rd, 1987

W.G. TIMMINS, P. Eng.

TABLE OF CONTENTS

	<u>PAGE</u>
PROPERTY	1
LOCATION AND ACCESS	2
PROPERTY LOCATION MAP	3
PROPERTY MAP	4
SETTING	5
HISTORY	5
GEOLOGY	7
1986 PROGRAM	8
RESULTS	9
CONCLUSIONS	10
BIBLIOGRAPHY	11
COST SUMMARY	12
APPENDIX I - CERTIFICATES OF ANALYSIS	14-17
GEOCHEMICAL SURVEY MAP - LEAD P.P.M.	18
GEOCHEMICAL SURVEY MAP - ZINC P.P.M.	19

PROPERTY

The property consists of 19 claims, units and fractions in the Slocan Mining Division as described below:

<u>Claim No.</u>	<u>Record No.</u>	<u>Units</u>
R.F.H.		4
Verna	28	6
Dorothy 1	287	1
Dorothy 2	288	1
Dorothy 3	289	2
D.D. Fraction	280	1
Alma & Eva	560	2
Alva	559	1
Dixie Lu	562	1

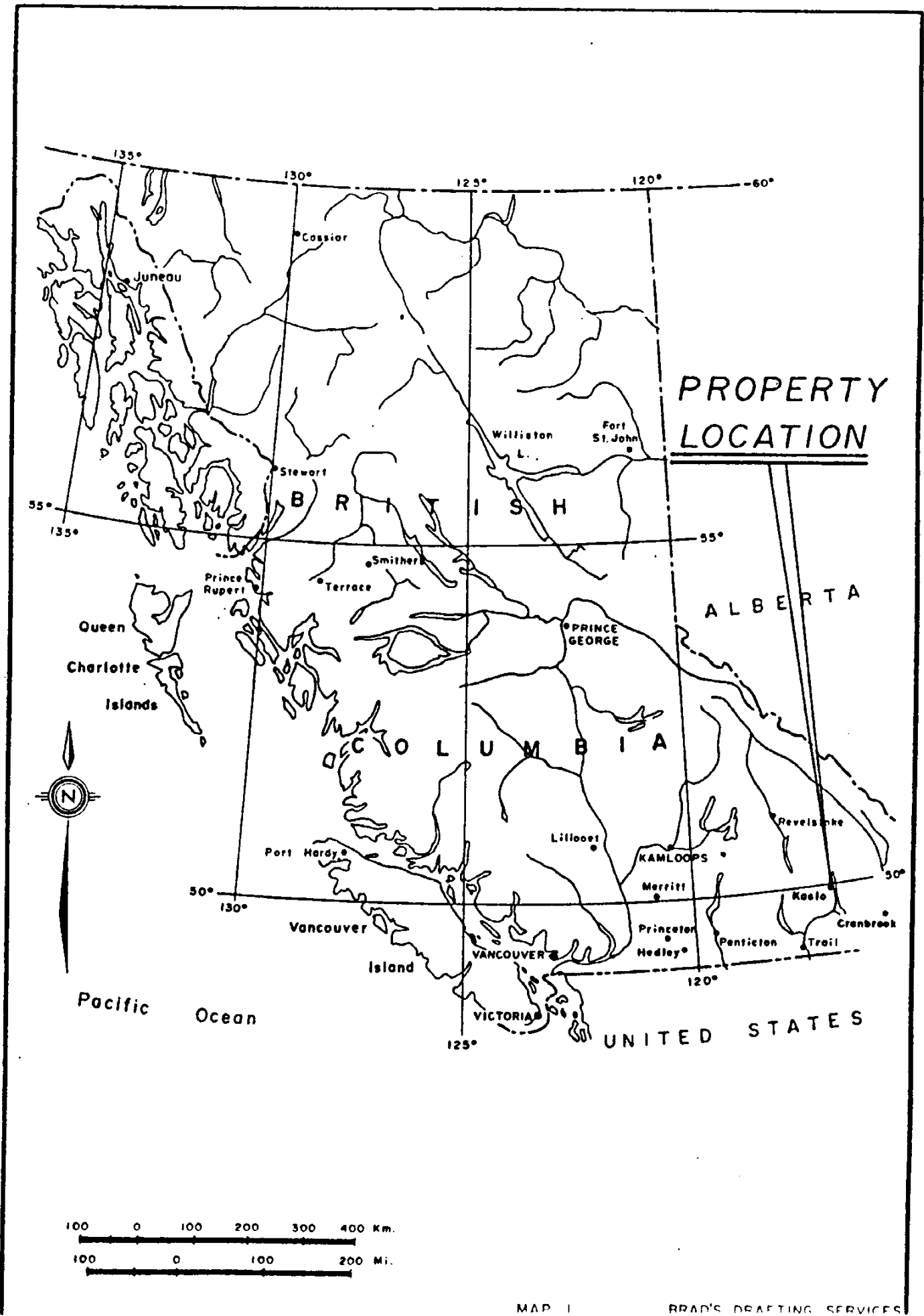
LOCATION AND ACCESS

Cascadia's Ainsworth property is located immediately north of the settlement of Ainsworth Hot Springs, on the west shore of Kootenay Lake in the south eastern portion of the province of British Columbia. It is 450 air kilometers (280 miles) east of Vancouver, and 240 air kilometers (150 miles) south-west of Calgary, and centered at latitude 49 47' north and longitude 116 55' west.

There are daily flights from Vancouver to Castlegar located some 70 air kilometers (25 miles) south-west of the claims. Normal access is by car or pick-up truck north-east from Castlegar to the City of Nelson on highway 3A-6; then north via highway 3A through Balfour and Proctor and finally north along the west shore of Kootenay Lake on highway 31 to Ainsworth Hot Springs. The total road distance is 90 kilometers from Castlegar and all highways are paved and well maintained.

Ainsworth is a small town with a restaurant, gas station-general store, and somewhat limited accommodations.

The mineral claims are situated a few kilometers north of the town of Ainsworth on Woodbury and Lendrum Creeks. A gravel road along Woodbury Creek provides fair access to the east part of the Verna Claim, however, there is limited access (trail only) to the south west portion of the property.



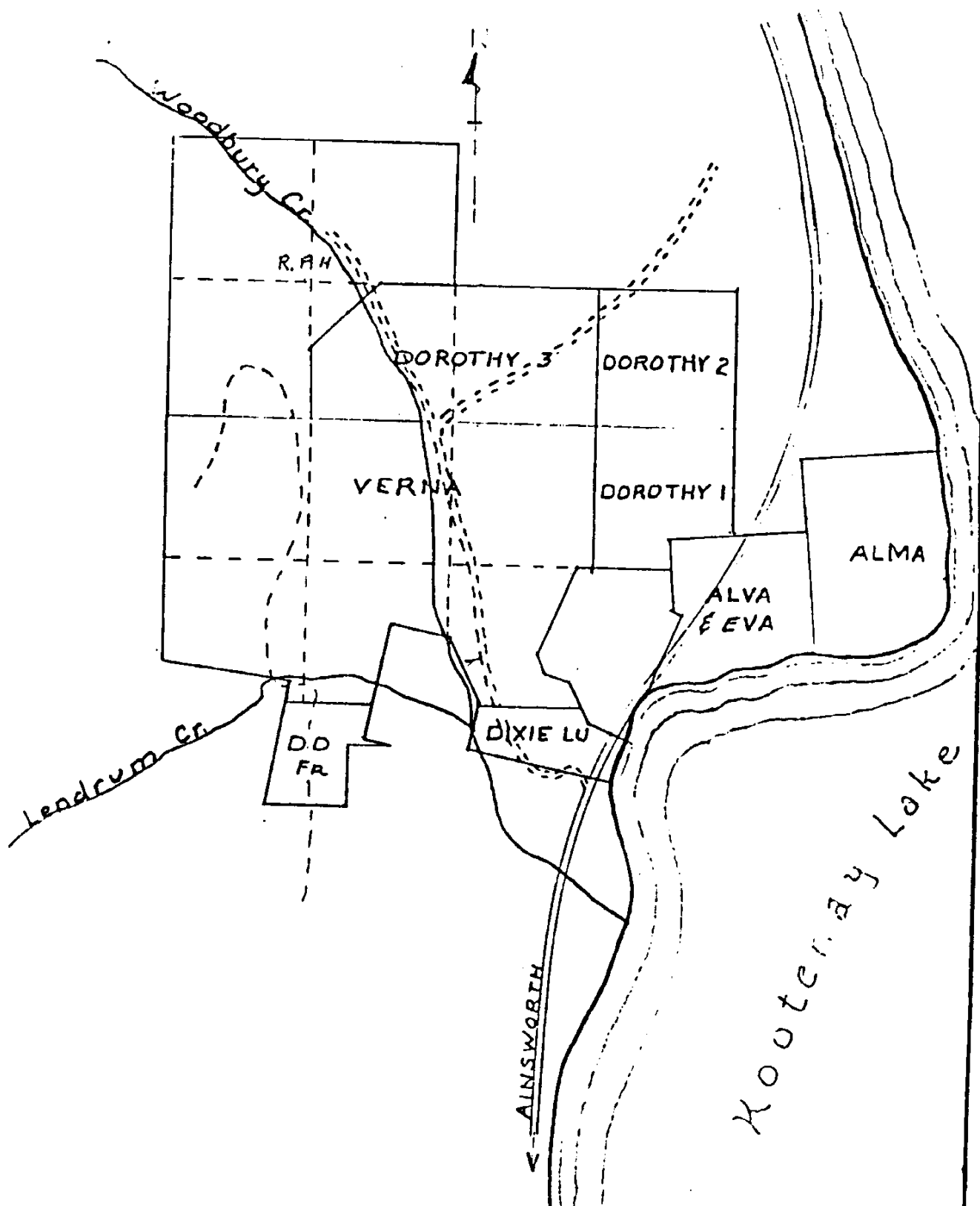


Fig. 2
 CASCADIA RESOURCES LTD.
PROPERTY MAP
 Scale: 1 cm = 200 m
 1 in = 1600 ft

SETTING

The claims are located in Central Kootenay Regional District and lie in the moderately rugged upland surface of the Selkirk Mountains. It is an area dominated by deep north-south trending valleys and high, isolated and often glacier covered mountain peaks. Kootenay Lake, to the east of the claims, lies at an elevation of 530 meters above sea level, and Kokanee Peak and its associated glacier lies to the west of the property and rises to in excess of 2,600 meters above sea level.

The claims under consideration lie at relatively low elevations and just above the west shore of Kootenay Lake near the mouth of Woodbury Creek. The country is moderately gently rolling and cut by the narrow canyons of Woodbury and Lendrum Creeks. The average mean temperature of the Ainsworth-Kaslo area is 7 C and the summers are warm and winters fairly mild. The precipitation may be described as moderate and there are approximately 160 frost free days per year. Surface exploration work can often be carried out year round.

The principal sustaining economic activities in the Central Kootenay Region are forestry and the mineral industry. There are local commercial logging and sawmill operations, and mining and exploration continue to be an integral part of the region's economic base.

HISTORY

The Verna Group lies in an old mining area known as the Ainsworth Camp. Because of its proximity to Kootenay Lake, an important transportation route since the mid 1800's, this camp was prospected and exploited with much success in the last two decades of the century and has been an intermittent producer of silver, lead and zinc ever since. More than 50 properties have

been in production to date. Although most of them shipped sorted ore, a number of mills with attendant facilities were built to produce concentrates.

The only known producer in the Verna area was the Vigilant located on the east bank of Woodbury Creek. Production started in 1949 and ended in 1953 when the known shoot was worked out. In this period, production and recoveries were:

Tons	Gold (oz)	Silver (oz)	Lead (lb)	Zinc (lb)	Cadmium (lb)
5163	2	13,615	941,441	369,174	704
Average Grade	-	2.64 oz./ton	8.2%	3.6%	0.01%

At least five other short adits were driven on narrow mineralized veins in widely separated areas, and numerous pits and trenches were dug by early operators.

The present operators acquired the first of the claims in 1976. After trenching and stripping on a mineralized shear zone some 1,000 feet north of the Vigilant Mine, six diamond drill holes totalling 1,454 feet were drilled in 1977. They indicated the existence of two narrow mineralized veins, almost vertical and about 30 feet apart, averaging nearly six percent in combined lead and zinc, and about half an ounce per ton in silver. Core intersections ranged from one to ten feet with the average being 3.3 feet.

In 1979 a geochemical survey was made of the gridded area, over the eastern half of the group. The soil samples were assayed for

lead, zinc, silver, cadmium and mercury. About a quarter of them were also run for copper. Several small anomalous areas were delineated.

GEOLOGY

The Ainsworth Mining Camp, and the property under consideration, lies within a remarkable productive lead-zinc metalogenic belt and along a complex regional geologic structure called the Kootenay Arc (Hedley, 1955). The metamorphic rocks in the Arc trend northerly and have been traced from Northern Washington State to north of Revelstoke B.C. a distance of some 320 kilometers (200 miles). The complexly folded arc contains a large number of lead-zinc deposits which extend from those at Metaline Falls in Washington, through Salmo B.C., Aspen, Ymir, Nelson, Ainsworth-Riondel, Kaslo, Duncan Lake and to Ruddock Creek.

The main marker horizon and host rocks at the Bluebell Mine is the Reeves-Badshot formation, a lower Cambrian limestone member. (Fyles, 1967). In general, the grade of metamorphism of the rocks within the Kootenay Arc varies from fairly low grade (chlorite and biotite schist) in the south, to sillimanite grade at Riondel; and finally, to north of Arrowhead, the metamorphism increases to higher grades characteristic of Shuswap terrain. (Muraro, 1966).

Metamorphic grade at Ainsworth also varies east to west. Many of the rocks in the arc are limey schists and impure quartzites sometimes cut by granitic sills and satellitic bodies believed to be part of the Nelson Batholith.

The rock units strike north and south parallel to Kootenay Lake, and dip gently to moderately to the west in the Ainsworth area.

The host rocks are sometimes complexly folded, and faulted both along bedding planes and across them. Mineralization in the camp is of two types, namely:

- (a) fissure veins consisting of quartz and calcite, and often with sphalerite, galena, pyrrhotite, pyrite and chalcopryrite;
- (b) replacement deposits (disseminated sulphides) in limestones and limey schists, often adjacent to fissure veins.

The vast bulk of production in the Ainsworth Camp has been from fissure vein deposits, and replacement type deposits such as the "Bluebell Type" across the lake, have been actively sought since before the turn of the century. The search for "Bluebell" type replacement deposits in Ainsworth was conducted near the mouth of Woodbury Creek, and east of the Verna and Dorothy claims by Cominco, in previous years.

1986 PROGRAM

During the Fall of 1986, a geochemical survey was conducted over the southwest portion of the Verna group, west of Woodbury Creek.

A base line was flagged at 335 with cross lines spaced at 100 meter intervals. Samples were taken every 25 meters. A total of approximately 350 samples were collected, however, results are currently available for 138 samples.

Samples were collected from the "B" horizon by Mr. Jack Hale of Kaslo, B.C.

The samples were analyzed by Chemex Labs Ltd., of Vancouver for lead, zinc, silver, after dragging and screening. Metal contents were determined by atomic absorption methods.

RESULTS

Only partial results are available at this time, covering lines 12W to 15W on the northern section of the new grid. Additional values for the remainder of the grid are expected in the near future.

A field plot of the values to date accompanies this report.

Background values for lead, by inspection are in the range of 20 - 30 p.p.m. and for zinc 150 - 200 p.p.m.

A narrow zinc anomalous area occurs lines 12 and 13W in the western section of the grid with a one point coincident lead anomalous value in line 13W.

A few anomalous erratic zinc and silver one point values occur, however do not appear to have continuity.

Results from the remainder of the grid will be required to provide an accurate interpretation of the geochemical survey.

CONCLUSIONS

A weak extensive anomaly lies in the Dorothy #3 claim as outlined by the 1979 geochemical survey.

Anomalous values obtained by the 1986 survey may exhibit further continuity when the remainder of the geochemical soil samples are plotted.

Anomalous area should be followed up by electromagnetic surveys.

Respectfully submitted,



March 23rd, 1987

W.G. Timmins, P.Eng.

BIBLIOGRAPHY

Rice, H.N.A., Geological Survey of Canada, Nelson Map-Area, East Half, 1941

Files, J.T., B.C. Department of Mines and Petroleum Resources, Geology of the Ainsworth-Kaslo Area, 1967

Meyer, W., P.Eng., Progress Report on the Verna Claim, Assessment Report No. 6582, 1977

Cochrane, D.R., P.Eng., Geological Report on the Verna-Dorothy, Private Report, 1978

Cochrane, D.R., P.Eng., Summary Report on the Verna-Dorothy, Private Report, 1979

Lorimer, M.K., P.Eng., Geochemical Report on Verna Group, Private Report, 1980

B.C. Dept. of Mines and G.S.C., Aeromagnetic Map 8478G

COST SUMMARY

(Based on Company Records)

Field: Jack Hale - 42 Days @ \$125./day	\$ 5,250.00
M. ARchambault - geologist - 2 days	600.00
Transportation	1,500.00
Room & Board	1,050.00
Analysis	655.50
Equipment	30.00
Report	<u>500.00</u>
TOTAL	<u>\$ 9,585.50</u>

APPENDIX I



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
 212 BROOKSBANK AVE., NORTH VANCOUVER,
 BRITISH COLUMBIA, CANADA V7J-2C1
 PHONE (604) 984-0221

CERTIFICATE OF ANALYSIS A8712428

To : CASCADIA MINES & RESOURCES LTD.

615 - 736 GRANVILLE ST.
 VANCOUVER, BC
 V6Z 1G3

*Page No. : 1
 Tot. Pages: 4
 Date : 23-MAR-87
 Invoice # : I-8712428
 P.O. # : NONE

Project :
 Comments: ATTN: DOROTHY DENNIS

SAMPLE DESCRIPTION	PREP CODE	Pb ppm	Zn ppm	Ag ppm Aqua R							
BL. 12.00W+0.00N	201	--	249	145	3.3						
BL. 12.00W+0.25N	201	--	21	163	0.4						
BL. 12.00W+0.50N	201	--	27	154	0.8						
BL. 12.00W+0.75N	201	--	17	190	0.4						
BL. 12.00W+1.00N	201	--	33	146	0.7						
BL. 12.00W+1.25N	201	--	14	141	0.2						
BL. 12.00W+1.50N	201	--	12	203	0.3						
BL. 12.00W+1.75N	201	--	14	80	0.2						
BL. 12.00W+0.25S	201	--	18	139	0.2						
BL. 12.00W+0.50S	201	--	18	127	0.5						
BL. 12.00W+0.75S	201	--	11	59	0.3						
BL. 12.00W+1.00S	201	--	18	187	0.5						
BL. 12.00W+1.25S	201	--	23	160	0.2						
BL. 12.00W+1.50S	201	--	25	175	0.3						
BL. 12.00W+1.75S	201	--	21	173	0.4						
BL. 12.00W+2.00S	201	--	31	145	0.8						
BL. 12.00W+2.25S	201	--	17	173	0.3						
BL. 12.00W+2.50S	201	--	20	144	0.1						
BL. 12.00W+2.75S	201	--	35	167	0.5						
BL. 12.00W+3.00S	201	--	16	205	0.6						
BL. 12.00W+3.25S	201	--	14	145	0.9						
BL. 12.00W+3.50S	201	--	13	132	0.9						
BL. 12.00W+3.75S	201	--	23	159	0.7						
BL. 12.00W+4.00S	201	--	45	247	0.4						
BL. 12.00W+4.25S	201	--	31	189	0.8						
BL. 12.00W+4.50S	201	--	21	238	0.6						
BL. 12.00W+4.75S	201	--	3	89	0.1						
BL. 12.00W+5.00S	201	--	12	74	0.1						
BL. 12.00W+5.25S	201	--	11	86	0.4						
BL. 12.00W+5.50S	201	--	42	434	0.6						
BL. 12.00W+5.75S	201	--	31	434	0.3						
BL. 12.00W+6.00S	201	--	14	317	0.6						
BL. 12.00W+6.25S	201	--	37	510	2.4						
BL. 12.00W+6.50S	201	--	42	214	0.3						
BL. 12.00W+6.75S	201	--	82	197	0.3						
BL. 12.00W+7.00S	201	--	23	165	0.6						
BL. 13.00W+0.00N	201	--	22	169	1.0						
BL. 13.00W+0.25N	201	--	19	172	0.5						
BL. 13.00W+0.50N	201	--	23	88	0.8						
BL. 13.00W+0.75N	201	--	24	79	0.5						

CERTIFICATION :

Handwritten signature



Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers
 212 BROOKSBANK AVE., NORTH VANCOUVER,
 BRITISH COLUMBIA, CANADA V7J-1C1
 PHONE (604) 984-0221

CERTIFICATE OF ANALYSIS A8712428

To: CASCADIA MINES & RESOURCES LTD.

615 - 736 GRANVILLE ST.
 VANCOUVER, BC
 V6Z 1G3

•Page No. :2
 Tot. Pages:4
 Date :23-MAR-87
 Invoice #:I-8712428
 P.O. # :NONE

Project :
 Comments: ATTN: DOROTHY DENNIS

SAMPLE DESCRIPTION	PREP CODE	Pb ppm	Zn ppm	Ag ppm Aqua R						
BL.13.00W+1.00N	201	---	11	76	0.2					
BL.13.00W+1.25N	201	---	7	88	0.1					
BL.13.00W+1.50N	201	---	8	77	0.1					
BL.13.00W+1.75N	201	---	10	84	0.3					
BL.13.00W+2.25N	201	---	6	151	0.1					
BL.13.00W+3.00N	201	---	1	61	0.1					
BL.13.00W+0.25S	201	---	16	115	0.3					
BL.13.00W+0.50S	201	---	15	129	0.5					
BL.13.00W+0.75S	201	---	31	379	0.3					
BL.13.00W+1.00S	201	---	37	230	0.2					
BL.13.00W+1.25S	201	---	11	122	0.3					
BL.13.00W+1.50S	201	---	17	129	0.3					
BL.13.00W+1.75S	201	---	9	113	0.2					
BL.13.00W+2.00S	201	---	22	150	0.2					
BL.13.00W+2.25S	201	---	14	140	0.4					
BL.13.00W+2.50S	201	---	20	139	0.3					
BL.13.00W+2.75S	201	---	16	137	0.2					
BL.13.00W+3.25S	201	---	1	52	0.1					
BL.13.00W+3.50S	201	---	2	76	0.2					
BL.13.00W+3.75S	201	---	14	100	0.1					
BL.13.00W+4.00S	201	---	19	210	0.8					
BL.13.00W+4.25S	201	---	22	173	0.3					
BL.13.00W+4.50S	201	---	21	332	0.1					
BL.13.00W+4.75S	201	---	5	90	0.1					
BL.13.00W+5.00S	201	---	113	550	0.5					
BL.13.00W+5.25S	201	---	27	190	0.8					
BL.13.00W+5.50S	201	---	11	318	0.2					
BL.13.00W+5.75S	201	---	10	127	0.2					
BL.13.00W+6.00S	201	---	17	127	0.4					
BL.13.00W+6.25S	201	---	15	187	0.6					
BL.13.00W+6.50S	201	---	11	114	0.7					
BL.14.00W+0.00N	201	---	15	231	0.5					
BL.14.00W+0.25N	201	---	13	167	0.5					
BL.14.00W+0.50N	201	---	60	152	1.1					
BL.14.00W+0.75N	201	---	13	94	0.3					
BL.14.00W+1.00N	201	---	19	95	0.1					
BL.14.00W+1.25N	201	---	13	93	0.2					
BL.14.00W+1.50N	201	---	12	206	0.4					
BL.14.00W+1.75N	201	---	13	126	0.2					
BL.14.00W+2.00N	201	---	10	101	0.1					

CERTIFICATION :

Handwritten signature



Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 BROOKSBANK AVE., NORTH VANCOUVER,
BRITISH COLUMBIA, CANADA V7J-1C1

PHONE (604) 984-0211

CERTIFICATE OF ANALYSIS A8712428

To: CASCADIA MINES & RESOURCES LTD.

615 - 736 GRANVILLE ST.
VANCOUVER, BC
V6Z 1G3

*Page No. : 3
Tot. Pages: 4
Date : 23-MAR-87
Invoice # : I-8712428
P.O. # : NONE

Project :
Comments: ATTN: DOROTHY DENNIS

SAMPLE DESCRIPTION	PREP CODE	Pb ppm	Zn ppm	Ag ppm Aqua R							
BL 14.00W+2.25N	201	---	18	120	0.8						
BL 14.00W+2.50N	201	---	12	101	0.2						
BL 14.00W+0.25S	201	---	18	141	0.2						
BL 14.00W+0.50S	201	---	16	180	0.4						
BL 14.00W+0.75S	201	---	21	173	0.3						
BL 14.00W+1.00S	201	---	17	153	3.7						
BL 14.00W+1.25S	201	---	12	126	0.2						
BL 14.00W+1.50S	201	---	13	125	1.3						
BL 14.00W+1.75S	201	---	11	223	0.3						
BL 14.00W+2.00S	201	---	1	60	0.1						
BL 14.00W+2.25S	201	---	4	78	1.0						
BL 14.00W+2.50S	201	---	5	81	0.5						
BL 14.00W+2.75S	201	---	12	124	0.6						
BL 14.00W+3.00S	201	---	19	179	0.1						
BL 14.00W+3.25S	201	---	22	246	0.6						
BL 14.00W+3.50S	201	---	12	185	0.4						
BL 14.00W+3.75S	201	---	5	181	0.1						
BL 14.00W+4.00S	201	---	3	99	0.1						
BL 14.00W+4.25S	201	---	13	112	0.3						
BL 14.00W+4.50S	201	---	4	73	0.7						
BL 14.00W+4.75S	201	---	11	143	2.3						
BL 14.00W+5.00S	201	---	5	120	0.6						
BL 14.00W+5.25S	201	---	4	142	0.6						
BL 14.00W+5.50S	201	---	4	89	0.1						
BL 15.00W+0.25N	201	---	15	115	0.3						
BL 15.00W+0.50N	201	---	29	151	0.7						
BL 15.00W+0.75N	201	---	13	123	0.3						
BL 15.00W+1.00N	201	---	14	141	0.3						
BL 15.00W+1.25N	201	---	15	140	0.5						
BL 15.00W+1.50N	201	---	19	115	0.5						
BL 15.00W+1.75N	201	---	18	122	0.5						
BL 15.00W+2.00N	201	---	14	142	0.4						
BL 15.00W+2.25N	201	---	10	57	0.1						
BL 15.00W+2.50N	201	---	18	83	0.8						
BL 15.00W+2.75N	201	---	15	63	1.0						
BL 15.00W+0.00S	201	---	7	112	0.1						
BL 15.00W+0.25S	201	---	9	132	0.4						
BL 15.00W+0.50S	201	---	15	207	0.6						
BL 15.00W+0.75S	201	---	12	189	0.2						
BL 15.00W+1.00S	201	---	12	117	0.6						

CERTIFICATION :

Hart Bickler



Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 BROOKSBANK AVE., NORTH VANCOUVER,
BRITISH COLUMBIA, CANADA V7J-3C1

PHONE (604) 954-0221

CERTIFICATE OF ANALYSIS A8712428

To: CASCADIA MINES & RESOURCES LTD.

615 - 736 GRANVILLE ST.
VANCOUVER, BC
V6Z 1G3

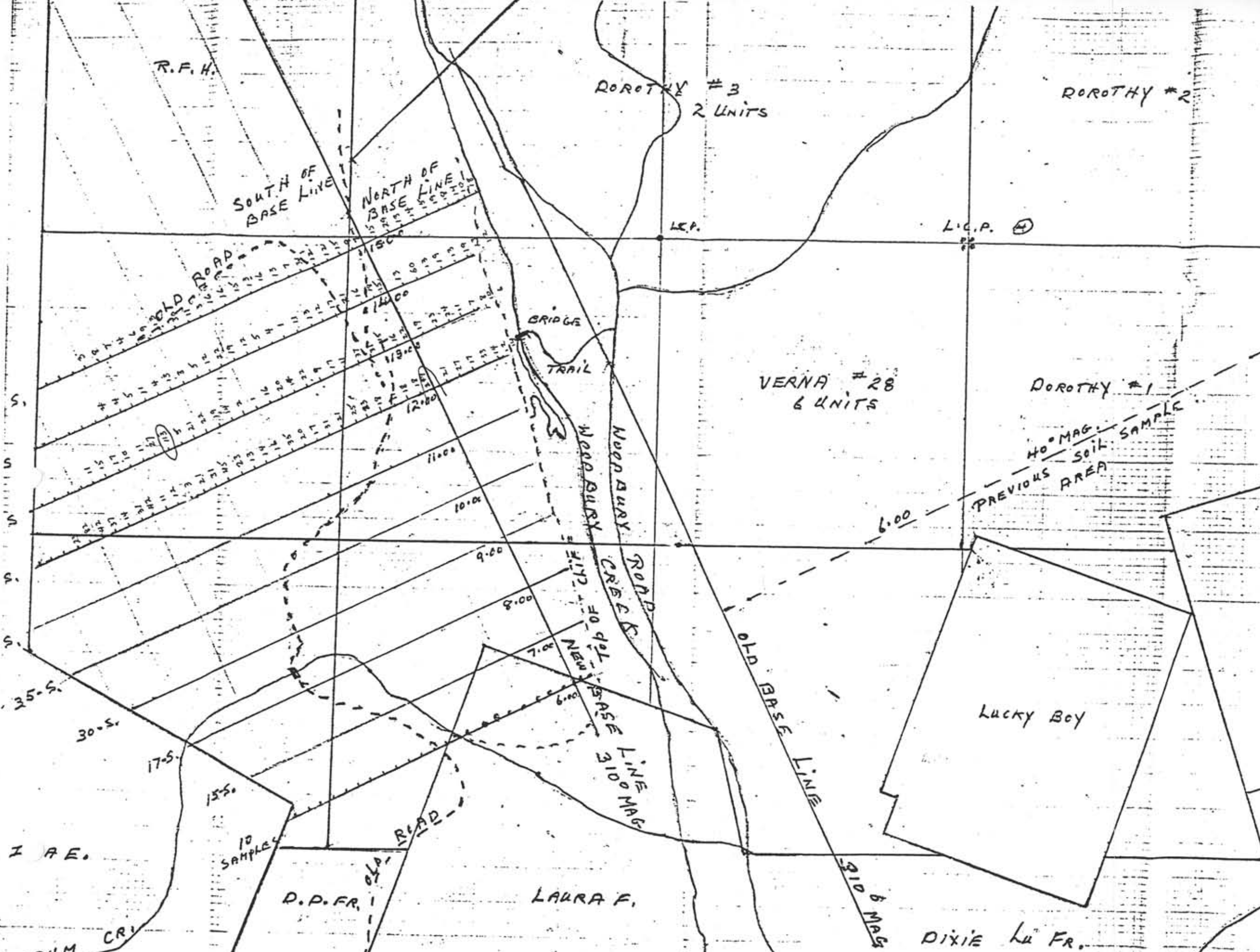
•Page No. : 4
Tot. Pages: 4
Date : 23-MAR-87
Invoice # : I-8712428
P.O. # : NONE

Project :
Comments: ATTN: DOROTHY DENNIS

SAMPLE DESCRIPTION	PREP CODE	Pb ppm	Zn ppm	Ag ppm Aqua R							
BL.15.00W+1.25S	201 ---	31	176	0.3							
BL.15.00W+1.50S	201 ---	7	88	0.4							
BL.15.00W+1.75S	201 ---	13	121	0.3							
BL.15.00W+2.00S	201 ---	16	125	0.3							
BL.15.00W+2.25S	201 ---	13	141	0.5							
BL.15.00W+2.50S	201 ---	15	179	1.0							
BL.15.00W+2.75S	201 ---	16	166	0.2							
BL.15.00W+3.00S	201 ---	16	266	0.2							
BL.15.00W+3.25S	201 ---	3	91	0.1							
BL.15.00W+3.50S	201 ---	11	1860	0.2							
BL.15.00W+3.75S	201 ---	30	255	0.4							
BL.15.00W+4.00S	201 ---	13	135	0.3							
BL.15.00W+4.25S	201 ---	9	170	0.1							
BL.15.00W+4.50S	201 ---	6	90	0.6							
BL.15.00W+4.75S	201 ---	4	71	0.2							
BL.15.00W+5.00S	201 ---	7	63	1.6							
BL.15.00W+5.25S	201 ---	8	251	0.1							
BL.15.00W+5.50S	201 ---	3	69	0.2							

CERTIFICATION :

Hart Bickler



VERNA PROPERTY
 SLOCAN M.D.
 CASCADIA MINES
 GEOCHEMICAL
 SURVEY
 MARCH, 1987
 LEAD - PPM.

GEOLOGICAL BRANCH
 ASSESSMENT REPORT
 AREA X EVA
15,793

KOOTEN

I A E.

ARM CR

D.P. FR.

LARRA F.

DIXIE LU FR.

Lucky Boy

VERNA #28
6 UNITS

DOROTHY #3
2 UNITS

DOROTHY #2

DOROTHY #1

R.F.H.

SOUTH OF
BASE LINE

NORTH OF
BASE LINE

K.P.

L.C.P. ⊕

BRIDGE

TRAIL

WOOD BURY
CREEK

ROAD

NEW LINE

TOP OF
BASE LINE

310 MAG.

OLD BASE
LINE

310 MAG

40 MAG. SOIL
SAMPLE
PREVIOUS AREA

6.00

10.00

9.00

8.00

7.00

6.00

14.00

13.00

12.00

11.00

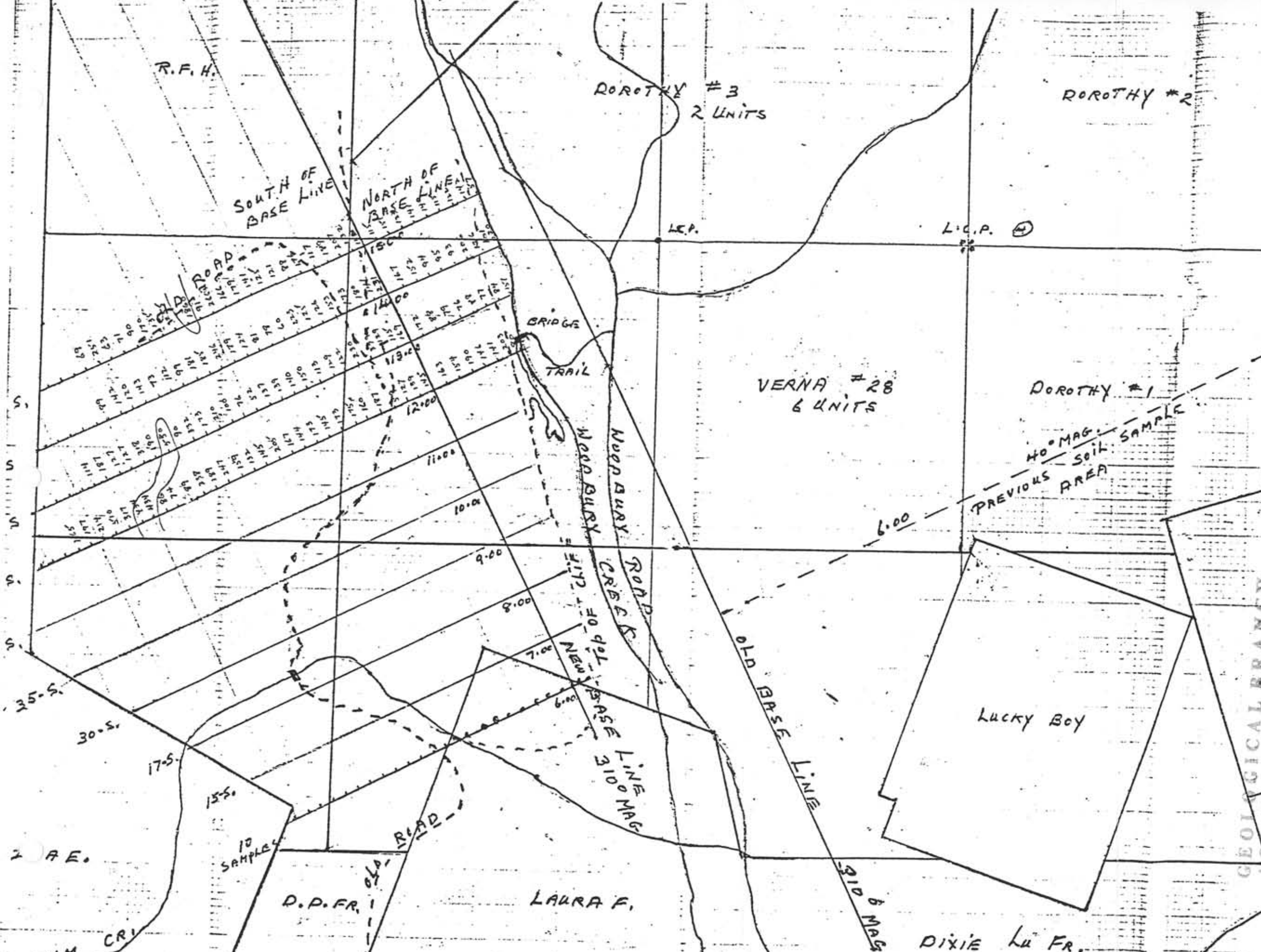
17.5

15.5

30.5

35.5

10 SAMPLE



VERNA PROPERTY
 SLOCAN M.D.
 CASCADIA MINES
 GEOCHEMICAL SURVEY
 MARCH, 1987
 ZINC - PPM.

GEOLOGICAL BRANCH
 ASSESSMENT REPORT
 ALVA X EVA
15,793

KOOTENAI

2 A.E.

ARM CR

10 SAMPLES

D.P. FR.

LAURA F.

DIXIE LU FR.

Lucky Boy

VERNA #28
 6 UNITS

DOROTHY #3
 2 UNITS

DOROTHY #2

DOROTHY #1

NO MAG. SOIL SAMPLE
 PREVIOUS AREA

SOUTH OF
 BASE LINE

NORTH OF
 BASE LINE

OLD BASE LINE

NEW BASE LINE
 100 MAG

BRIDGE

TRAIL

WOODBURY
 CREEK

ROAD

R.F.H.

L.P.

L.C.P. (D)

NORTH