

**FEB - 3 1995**  
Gold Commissioner's Office  
VANCOUVER, B.C.

LOG NO:	FEB 17 1995 U
ACTION:	
FILE NO:	

1994 REPORT  
DIAMOND DRILLING PROGRAM  
ON THE EHOLT 2 CLAIM  
EHOLT PROJECT

Greenwood Mining Division  
British Columbia

NTS 82E/2E  
Latitude 49°10' N  
Longitude 118°32' W

FILMED

Ian Thomson  
and  
Doyle Albers

Orvana Minerals Corp. **GEOLOGICAL BRANCH**  
**ASSESSMENT REPORT**

January 5, 1995

23,777

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## INTRODUCTION

The Eholt Project is located approximately 20 Km west of Grand Forks, British Columbia (Fig. 1). The property lies northeast of the Phoenix-Greenwood Mining Camp, which has been a significant producer of Cu-Au ores from skarn deposits. The largest deposit discovered thus far in the camp was at Phoenix, where almost 27 million tonnes of ore grading 0.85% Cu and 1.1 grams/tonne Au were mined earlier this century. The Eholt property is underlain by a stratigraphic package similar to that in the Phoenix camp. The property is accessed from a series of logging roads which intersect B.C. Hwy 3, at the Kettle Valley Railroad siding of Eholt.

## PROPERTY

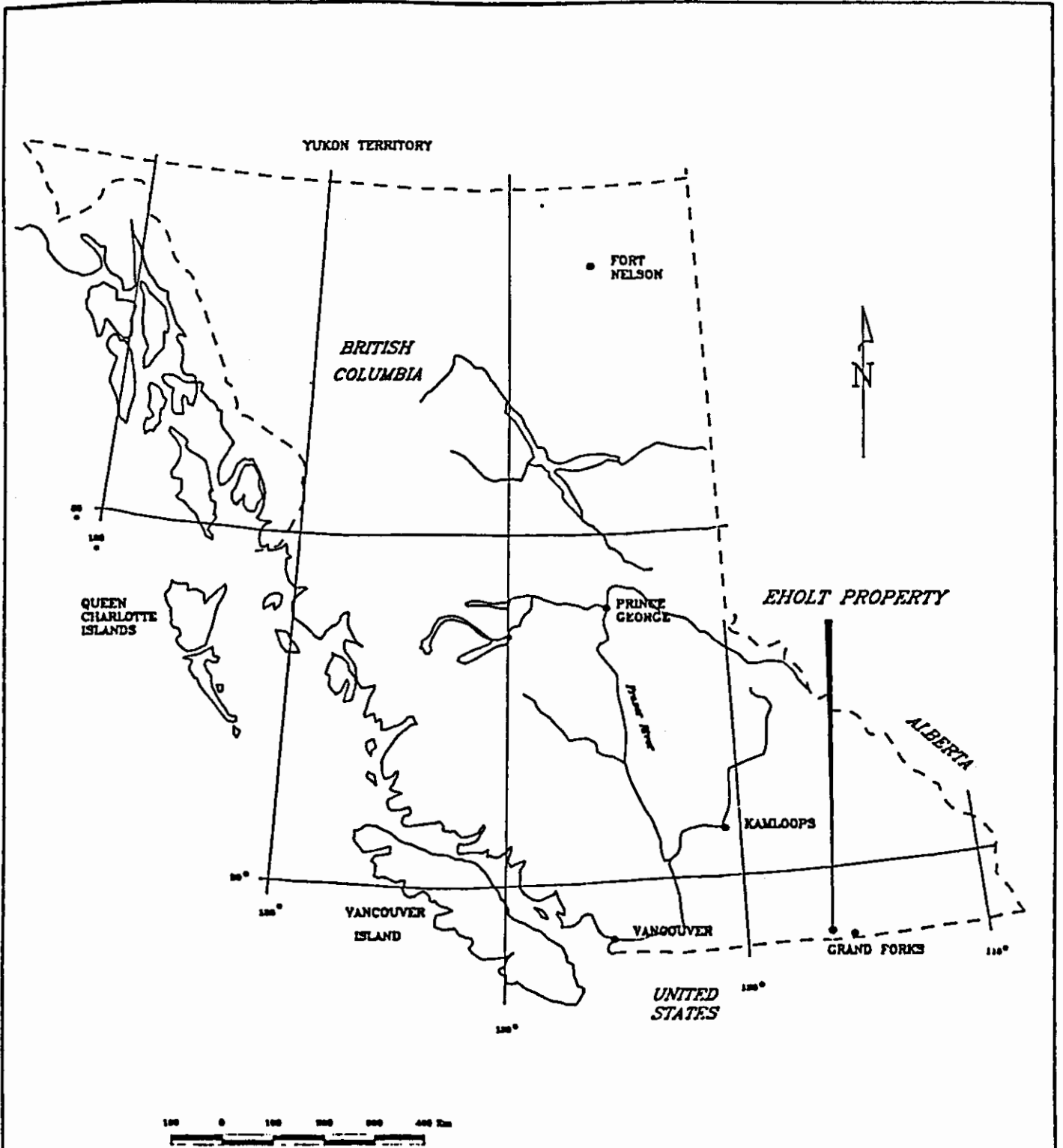
The Eholt property consists of five contiguous 4-post mineral claims and ten 2-post claims comprising a total of 58 units (Fig. 2). The claims are held under option by Orvana Mineral Corp. from Mr. Herman Hoehn of Grand Forks, B.C.


Pertinent claim information is summarized below:

Name	No. of Units	Record No.
Pt. Eholt	6	1810
Eholt	12	4867
Eholt # 1	20	4906
Eholt # 2	20	4907
Eholt # 4	12	215013
Buddy # 1	1	215975
Buddy # 2	1	215976
Buddy # 3	1	215977
Buddy # 4	1	305778
John # 1	1	305797
John # 2	1	305798
John # 3	1	305799
John # 4	1	305800
John # 5	1	305801
John # 6	1	305802

## LOCATION AND ACCESS

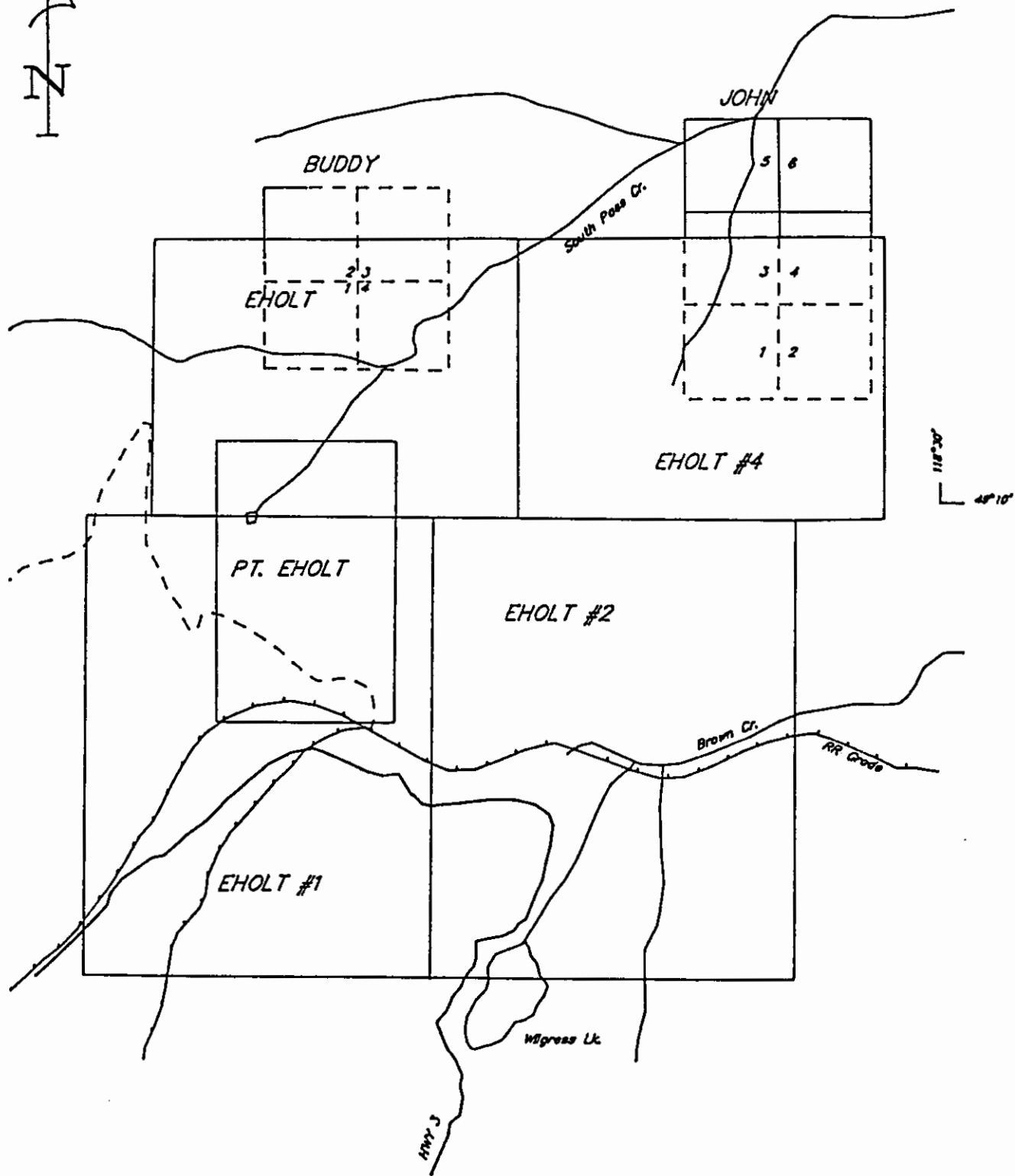
The Eholt property is located 11 km NE of Greenwood and 16 km NW of Grand Forks, B.C. at latitude 49°10'N, longitude 118°32'W. Access is good and is provided by Highway 3, which traverses the property, several logging roads, and two old abandoned railroad grades. The site of Eholt, a loosely-bounded settlement which is still inhabited, is located just north of Highway 3, on the property.




**orvana**  
 RESOURCES

**Fig. 1**  
**LOCATION MAP**  
 OK SYNDICATE  
 Northeastern Washington and  
 southern British Columbia

Oct. 81



0 500 1000 m

NTS 82E/2E



EHOLT PROJECT  
Claim Locations  
Fig. 2

OK SYNDICATE  
British Columbia, Canada

4/93  
6/92

## **PHYSIOGRAPHY AND CLIMATE**

The Eholt property is characterized by relatively subdued, low-lying, mountainous terrain. Elevations range 900-1200 m. Relief is generally mild, though a few bluffs do occur on the hill immediately north of the Eholt settlement site. Most of the property is covered with timber land, with some brush-grassland on slopes with southern exposure.

The climate is moderate. Precipitation is typically low during the summer and fall, and moderate during the rest of the year.

Snow cover during December-February averages 0.5-1.5 m. Annual temperature range is approximately -20° to 35°C.

## **PREVIOUS WORK**

Mining and exploration in the Eholt area began around the beginning of the 20th century. Production during the period of several hundred thousand tons of ore grading approximately 1% Cu and 0.02 oz/ton Au came from the Oro Denoro and Emma mines located 3 km south of Eholt. Numerous old shallow shafts, short adits, and prospect pits, probably dating from this period, occur on the Eholt property.

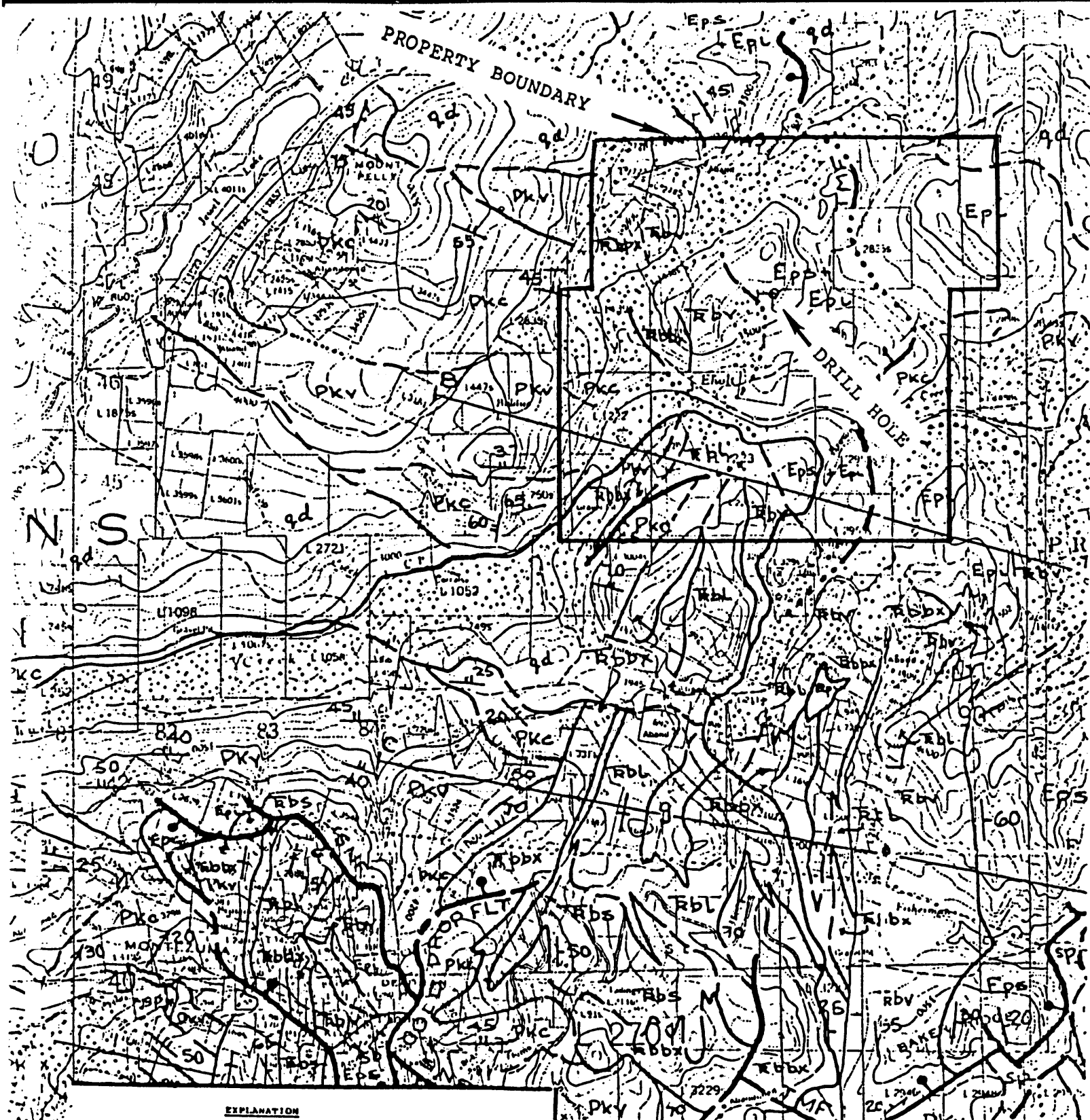
Recent, documented exploration on the Eholt property was conducted by Golden Kootenay Resources, Inc. during the period May 11, 1987-January, 1989. This work included grid installation, soil geochemistry, and diamond drilling (3 holes). VLF-Em was run over the grid, and a magnetometer survey was run over part of the grid. Different core drilling programs have reportedly been carried out on the property by Mr. Herman Hoehn of Grand Forks, and Mssrs. Cashman and Stanley, also of Grand Forks. These programs are apparently undocumented.

Orvana installed 37.5 km of grid, and conducted a soil sampling program over this grid during 1991 and 1992. Orvana also conducted a ground magnetic survey, VLF-EM survey, and an I.P. survey during the 1991-1992 field season. This work is documented in an assessment report filed May 17, 1993.

## **1994 PROGRAM**

The ground magnetic survey mentioned above delineated a substantial dipole anomaly near Eholt Mountain. A single NQ diamond drill hole was completed on this magnetic anomaly during December 1994. The Orvana grid coordinates for this hole are 9760N, 11160E (UTH 388100E/5446750N); the azimuth for this hole was 270°, with an inclination of -75° (see Fig 4). The hole went to a depth of 202m. The diamond drill log for this hole can be found in the Appendix along with the assay data. All work was conducted on the Eholt # 2 claim. Core is stored undercover in Greenwood.

The first 152 m (500 feet) of this hole is dominantly comprised of fine grained, porphyritic latite extrusive volcanic rocks which are preserved in a north-trending graben structure. These rocks are believed to be Tertiary in age. They are in fault contact with, and intruded by younger monzonite and syenite intrusive rocks. All of these rocks are weakly magnetic, containing <0.5% finely disseminated magnetite and minor magnetite veinlets. Some very minor quartz-pyrite zones cross-cut the core, and all of these were sampled, but most of the rock in this hole shows little hydrothermal alteration or mineralization.



**EXPLANATION**

**EOCENE**

Panclinton Grp. Epi Coryell syenite, monsonite, diorite  
 Eps Kettle River Fm. sediments and Mazon Fm. sandstone, trachyte

**CRETACEOUS**

Nelson Int. qd Granodiorite, quartz diorite, diorite

**TRIASSIC**

Brownly Fm. Tsbv Greenstone, microdiorite  
 Tsb1 Limestone  
 Tsb2 Sandstone, siltstone, hornfels  
 Tsb3 Chert breccia or sharpstone conglomeration, tuff, tuffaceous siltstone

**PENNIAN**

Knob Hill Fm. Pkc Chert, argillite, limestone  
 Pkv Greenstone, pillow lava, breccia

References: Fyles, J. P., 1998  
 Geology of the Greenwood-Grand Forks Area, B.C. - MEMA  
 Open File, 1998-25



**orvana**  
 RESOURCES COMP.  
 Coeur d'Alene, Idaho



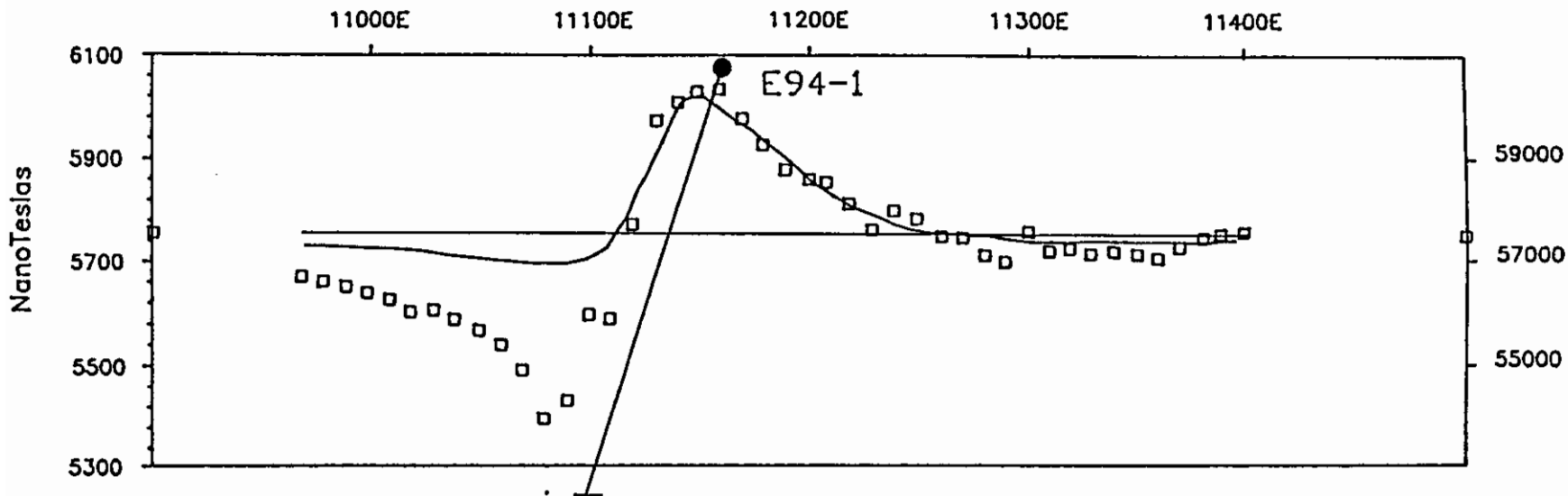
DATE 12/94

REVISED BY DATE

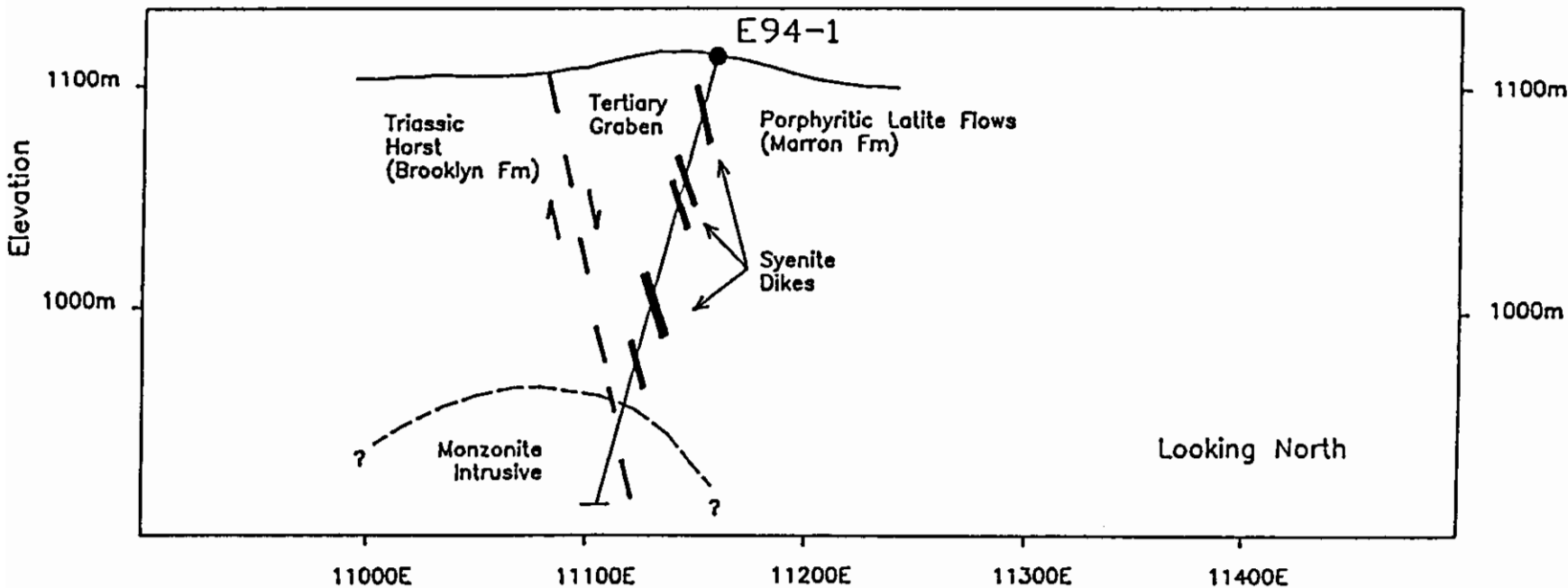

Fig. 3  
 EHOLT PROJECT  
 Regional Geology  
 Claim Block Boundary  
 Drill Hole Location

DATA BY	SCALE	SHEET NO.
RF/DA	1:50000	PLATE NO.

MAGNETIC PROFILE



GENERALIZED GEOLOGIC CROSS SECTION



EHOLT PROJECT  
1994 DIAMOND DRILL PROGRAM



**CONCLUSIONS**

The objective of this hole was to evaluate the large dipole anomaly in hopes that it would correspond to a large replacement body within the older Triassic marine sediments and volcanics of the Brooklyn Formation; however, no Triassic rocks were seen in this drill hole. Upon exiting the Tertiary-filled graben, this hole intersected what are believed to be younger Tertiary-aged intrusive rocks. We had hoped that the Tertiary volcanic cover would be relatively thin, masking the older Triassic rocks from view, but this hole demonstrates that the Tertiary volcanic cover is quite thick (at least 150 m), and the minor disseminated magnetite within these volcanics must be responsible for the magnetic dipole anomaly.

**RECOMMENDATIONS**

This program has eliminated one potential target from a list of several good possibilities. Other areas of known alteration and mineralization exist with coincident geophysical anomalies, and these could be further evaluated with continued drilling. Plans to further evaluate the Eholt area are being finalized, and hopefully exploration work will continue next field season.

**STATEMENT OF COSTS**

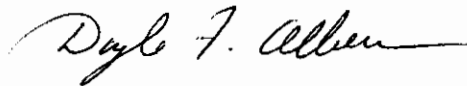
Drilling		
	Mob-Demob, set-up, plus 202 m (663 feet) NQ	\$ 13189
Salaries		
	14 man days @ \$200/day	2800
Room and Board		
	10 days @ \$60/day	600
Laboratory Assays		250
Vehicles/Transportation		1000
Field Supplies		<u>300</u>
	TOTAL (Cdn)	\$ 18139

STATEMENT OF QUALIFICATIONS

I, Doyle F. Albers, of Sagle, Idaho, U.S.A., certify that:

1. I am a geologist employed by Orvana Minerals Corporation, 710 - 1177 West Hastings Street, Vancouver, B.C., V6E 2K3, in their office located at 1755 Silver Beach Loop Coeur d'Alene, Idaho 83814 U.S.A.
2. I am a graduate of the University of Idaho, Moscow, Idaho, and hold a M.S. degree in Geology.
3. I have been practicing my profession for the past nineteen years.
4. This report is based on information that I and others under my supervision obtained while on the Eholt property during the period December, 1994.

Doyle F. Albers  
Geologist, Orvana Minerals Corporation.

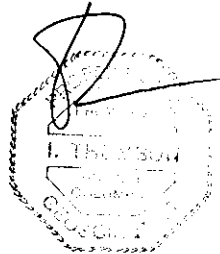
A handwritten signature in cursive script that reads "Doyle F. Albers". The signature is written in black ink and is positioned to the right of the typed name and title.

STATEMENT OF QUALIFICATIONS

I, Ian Thomson of 1628 West 66 Avenue, Vancouver, British Columbia, V6P 2S2, do hereby certify that:

1. I am a graduate (1967) of the University of London, England, with a Bachelor of Science degree in Geology and a graduate (1971) of the University of London, England, with a Doctor of Philosophy degree in Applied Geochemistry.
2. I am a registered Professional Geoscientist in the Province of British Columbia.
3. I have been continuously employed as a geologist-geochemist involved with mineral exploration for 21 years.
4. I hold the position of Chief Geologist with Orvana Minerals Corp.
5. This report is based on information obtained by myself and others working under my guidance and from analytical data obtained from commercial laboratories.

Ian Thomson, B.Sc., Ph. D., P. Geo.  
Chief Geologist, Orvana Minerals Corporation



REFERENCES

- Church, B.N., 1986, Geologic Setting and Mineralization in the Mount Attwood - Phoenix Area of the Greenwood Mining Camp, British Columbia Ministry of Energy, Mines and Petroleum Resources, Paper 1986-2 65 pp.
- Fyles, J.T., 1990, Geology of the Greenwood-Grand Forks Area, British Columbia, NTS 82E/1,2, British Columbia Geological Survey Open File 1990-25.
- McLeod, J.W., 1988, Report on the Eholt Property, Unpublished Assessment Report #17488.
- McLeod, J.W., 1991, Report on the Eholt Property, Unpublished Report on behalf of Golden Kootenay Resources, Inc.

**APPENDIX 1  
DIAMOND DRILL LOGS**



# DIAMOND DRILL HOLE LOG

Company Orvana**LEGEND**

Porphyritic Latite <input checked="" type="checkbox"/>	calcite veins <input checked="" type="checkbox"/>
Porphyritic Syenite <input checked="" type="checkbox"/>	Pyrite <input checked="" type="checkbox"/>
Monzonite Porphyry <input checked="" type="checkbox"/>	Beccation <input checked="" type="checkbox"/>
<input type="checkbox"/>	Quartz veins <input type="checkbox"/>

**SURVEY**

Footage      Bearing      Inclination

_____	_____	_____
_____	_____	_____
_____	_____	_____

Property <u>Eholt</u>	Hole No <u>E94-1</u>
Location <u>Magnetic dipole anomaly</u>	Bearing at Collar <u>270°</u>
	Inclination at Collar <u>-75°</u>
Coord. - Collar N <u>9760N</u>	
E <u>11160E</u>	Length <u>663'</u>
Elev. - Collar <u>1115'</u>	Core Size <u>NQ</u>
Date started <u>12/16/94</u>	
Completed <u>12/18/94</u>	Logged by <u>DFA</u>

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY				ANALYTICAL					BOX
				Run	Run length	Core	%	Sample	Interval				
<p>20-56.5 - medium to dark gray-green porphyritic Latite flows, 20-30% phos, of mostly feld - distinctly zoned probably both plag + K-spar, generally 0.1-0.4 cm.</p> <p>Very weakly altered to chlorite, with minor calcite veining. Also minor magnetite (~0.5%) generally disseminated with minor veining - partly altered to hem.</p>	10												
	20			0.2-0.5% disseminated with some minor magnetite veins									
	23.0			Some clots of weakly magnetic hematite associated with small breccia zone and weak silicification	3.0	3.0	100						
	26.0				10.0	10.0	100		5.0				1
	30				33.0				31.0				
40				42.0	9.0	9.0	100						
50				49.0	7.0	7.0	100						
													2

LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY				ANALYTICAL						BOX	
				Run	Run length	Core	%	Sample	Interval						
				53.0	4.0	4.0	100								2
56.5-69.0 Lt. green to pink fine grained porphyritic syenite (poluskitite) dike. 5-7% phenos of K-spar + plag in a fine grained aphanitic matrix - <1% mafic phenos (altered to chlorite)	60		Feldspar phenos in the latite porphyry are hematite stained near the margins of the poluskitite.		10.0	10.0	100								55.5
				63.0											3
					14.0	10.0	100								
69.0-158.5 Dark grey porphyritic latite with 20-30% phenos of feld in a fine grained aphanitic matrix. 2-3% mafic phenos mostly altered to chlorite.	70		69.0-158.5 generally 40.5% magnetite dissem throughout also ~0.5% calcite common as veinlets throughout. occasional minor pyrite along fxs.	73.0											74.0
					10.0	10.0	100								
				83.0											4
					10.0	10.0	100								
				93.0											93.0
					10.0	10.0	100								
				103.0											5
					10.0	10.0	100								
			110-125 broken core	113.0											111.7
					10.0	10.0	100	113.0							
					10.0	10.0	100		5.0						
					10.0	10.0	100	118.0							
					10.0	10.0	100		5.0						











LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY				ANALYTICAL						BOX		
				Run	Run length	Core	%	Sample	Interval							
	400															
					403											404.5
						10.0	10.0	100	407.0							
	410								410.0	3.0						
					413											22
						8.0	8.0	100	414.0	4.0						
	420				421											423
						9.0	9.0	100								
	430				430											23
						10.0	10.0	100								
	440				440											442
					443	3.0	3.0	100								
422.8-445 Fine grained greyish-pink porphyritic plagioclase w 5-10% feld phenos and 3-5% hbl-bio phenos in a pink, Kspar-rich matrix. (Could pass as either monzonite or syenite)																
	450					10.0	10.0	100								24
445-514 Dark gray f.g. porphyritic latite with 15-20% phenos of feld in a nearly black aphanitic matrix - felds commonly zoned - 1-2% mafic phenos -					453											
	460					10.0	10.0	100								460.5
					463				461.0							
									466.0	5.0						
						10.0	10.0	100								25
	470															

Qtz-pyrite bx zone with numerous sub rounded volc clasts in a clast to matrix supported bx with Qtz-py cement. - weakly magnetic with weak-mod chl-epd alt.

445-514 - weakly magnetic with <0.5% disseminated minor calcite vnlts; little to no sulfides. weakly alt -> chl + epd.

Qtz-pyrite bx zone similar to above, but less intense.



LITHOLOGY, ALTERATION, MISC.	FT.	GRAPHIC LOG	MINERALIZATION	RECOVERY				ANALYTICAL						BOX		
				Run	Run length	Core	%	Sample	Interval							
	540															
					543											29
						9.0	9.0	100								548.5
	550				552											
						?	?			Block missing?						
						11.0	11.0	100								30
	560				563											
																567
						10.0	10.0	100	567.0							
	570									5.0						
					573				572.0							
																31
						10.0	10.0	100								
	580				583											586
						10.0	10.0	100								
	590				593											
																32
						10.0	10.0	100								
	600				603											
																605.5
	610															

567-598.5 - Grayish pink f.g. porphyritic plaskite with 5-7% plug phenos in a f.g. pink sphenitic matrix - minor zbl - some bxn near contact. - younger than monzite above.

567-598.5  
Weakly magnetic with <0.5% mt dissem throughout v. weak chl-epd alt. minor calcite vults.

598.5-603 - Monzite similar to above slightly more porphyritic



**APPENDIX 2**  
**LABORATORY ASSAYS**



**SVL ANALYTICAL, INC.**  
**REPORT OF ANALYTICAL RESULTS**

SVL Job Number :X40343  
 Sample Receipt :12/21/94  
 Date of Report : 1/06/95  
 No. of Samples : 98 DC  
 P.O. No. :SKARN PACKAGE  
 Page 3 of 6

Client: PAUL DIRCKSEN  
 ORVANA RESOURCES  
 1755 SILVER BEACH LOOP  
 COEUR D'ALENE ID 83814  
 ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test :	Au	Ag	As	Bi	Co	Cu	Pb	Mo
	Units :	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Method:	FA+AA	FA+AA	ICP	ICP	ICP	ICP	ICP	ICP
TM94-4:250-253		18.	0.3	<10	<10	11	56	17	<2
TM94-4:253-259		12.	1.0	<10	14	11	73	53	<2
TM94-4:343-348		21.	0.3	<10	<10	9	36	19	<2
TM94-4:422-426		24.	0.7	<10	<10	13	98	32	13
TM94-4:468-472.5		22.	1.9	<10	11	11	260	78	<2
TM94-4:501.5-508		33.	0.4	<10	13	13	96	26	<2
TM94-4:508-513		8.	0.2	<10	<10	6	27	8	<2
TM94-4:513-518		<5.	0.2	<10	<10	10	21	13	<2
E94-1:26-31		<5.	0.1	<10	34	9	9	59	<2
E94-1:113-118		<5.	<0.1	<10	35	14	14	85	<2
E94-1:118-123		<5.	0.1	<10	42	14	11	72	<2
E94-1:170-175		10.	<0.1	<10	<10	8	30	22	<2
E94-1:301-306		15.	0.1	<10	44	13	11	35	62
E94-1:407-410		20.	0.2	<10	<10	12	5	61	31
E94-1:410-414		29.	0.1	<10	<10	9	8	41	15
E94-1:461-466		21.	<0.1	<10	18	10	7	49	<2
E94-1:567-572		6.	0.1	<10	<10	<2	6	16	3
TM94-4:137-143 EXTRA		31.	0.2	<10	<10	9	67	7	<2

**SVL ANALYTICAL, INC.**  
**REPORT OF ANALYTICAL RESULTS**

SVL Job Number :X40343  
 Sample Receipt :12/21/94  
 Date of Report : 1/06/95  
 No. of Samples : 98 DC  
 P.O. No. :SKARN PACKAGE  
 Page 6 of 6

Client: PAUL DIRCKSEN  
 ORVANA RESOURCES  
 1755 SILVER BEACH LOOP  
 COEUR D'ALENE ID 83814  
 ATTN: DOYLE ALBERS

CLIENT SAMPLE ID	Test :	Zn	Ba
	Units :	ppm	ppm
	Method:	ICP	ICP
TM94-4:250-253		66	150
TM94-4:253-259		150	280
TM94-4:343-348		51	200
TM94-4:422-426		77	38
TM94-4:468-472.5		180	67
TM94-4:501.5-508		60	71
TM94-4:508-513		30	11
TM94-4:513-518		39	120
E94-1:26-31		80	46
E94-1:113-118		87	280
E94-1:118-123		77	410
E94-1:170-175		35	23
E94-1:301-306		61	380
E94-1:407-410		87	56
E94-1:410-414		55	55
E94-1:461-466		110	57
E94-1:567-572		52	16
TM94-4:137-143 EXTRA		33	140

Reviewed By: Carol Williams Date: 1/6/95 Charges : \$1,591.25

