REPORT OF THE 1991-1992 GEOLOGIC MAPPING AND ROCK SAMPLING PROGRAM

STRIM CLAIM GROUP

GREENWOOD MINING DIVISION
BRITISH COLUMBIA

NTS 82E/1
Latitude 49°11'N
Longitude 118°29'W

September, 1992
Coeur d'Alene, Idaho

Robert T. Fredericks
Orvana Minerals Corp.

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INTRODUCTION

The Strim Claim Group, located north of Grand Forks, British Columbia (Fig. 1), was partly explored by means of reconnaissance geologic mapping and rock sampling by Orvana Minerals Corporation personnel during the period June 29, 1991, to June 12, 1992. The Strim Claim Group covers intrusive and metasedimentary rocks that could potentially host Cu-Au mineralization in the form of skarn or porphyry deposits. The purpose of this program is to evaluate this potential, and to recommend further work in exploration for these deposit types.

PROPERTY

The Strim Claim Group consists of one 4-post claim and eighteen 2-post claims (Fig. 2). The claims are all held under option by Orvana Minerals Corporation. Pertinent claim information is summarized below:

Name	No. of Units	Record No.	Expiry Date	Owner
Straw	10 (1 ea)	5151	May 2, 1993	Herman Hoehn
Rim 1-10	4 (1 ea)	300267-300276	June 14, 1993	John R. Lucke
Rim 11-14	4 (1 ea)	300286-300289	June 14, 1993	John R. Lucke
Rim 15-18	4 (1 ea)	301947-301950	July 17, 1993	John R. Lucke

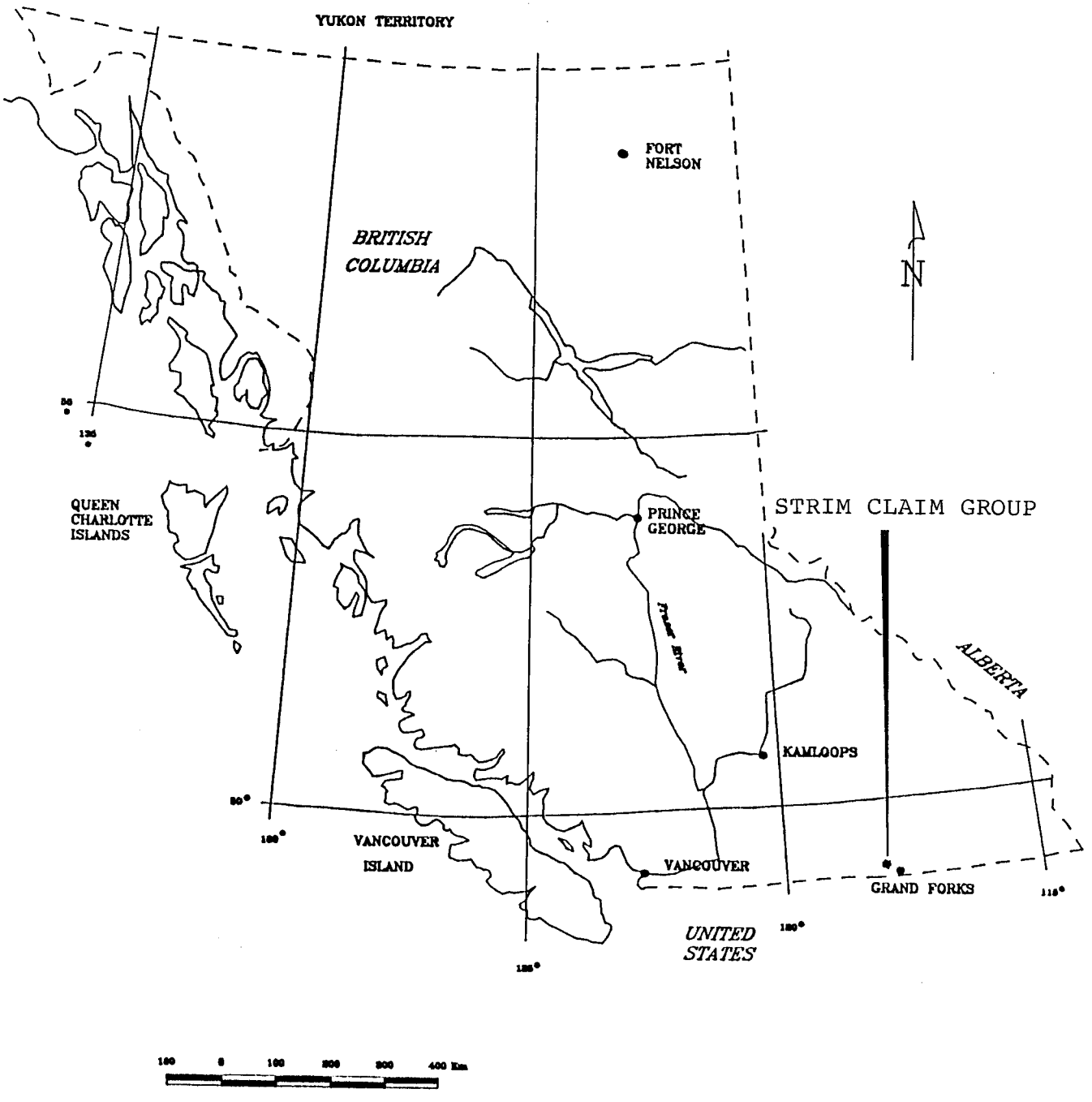
Additionally, one Crown Grant, the Strawberry (L1765) lies within the Straw Claim and is also owned by Herman Hoehn.

LOCATION AND ACCESS

The Strim Claim Group is located 15 Km north of Grand Forks, B.C., at latitude 49°11'N., longitude 118°29'W. Access is good and is provided by the North Fork Road, which is paved, the Brown Creek Road (gravel), and small 4 wheel drive tracks.

PHYSIOGRAPHY AND CLIMATE

The Strim Claim Group lays on the west side of the Granby River Valley. From the valley floor (el. 1800 ft.), the claims cover hills that rise steeply to the west, reaching a maximum of 3600 ft. The upland area is typified by rounded hill tops. Brown Creek, a perennial stream most years, bisects the southern part of the property. The floor of the Granby River Valley, just east of the claims, is inhabited by farm and ranch families.



orvana RESOURCES

Fig. 1

LOCATION MAP

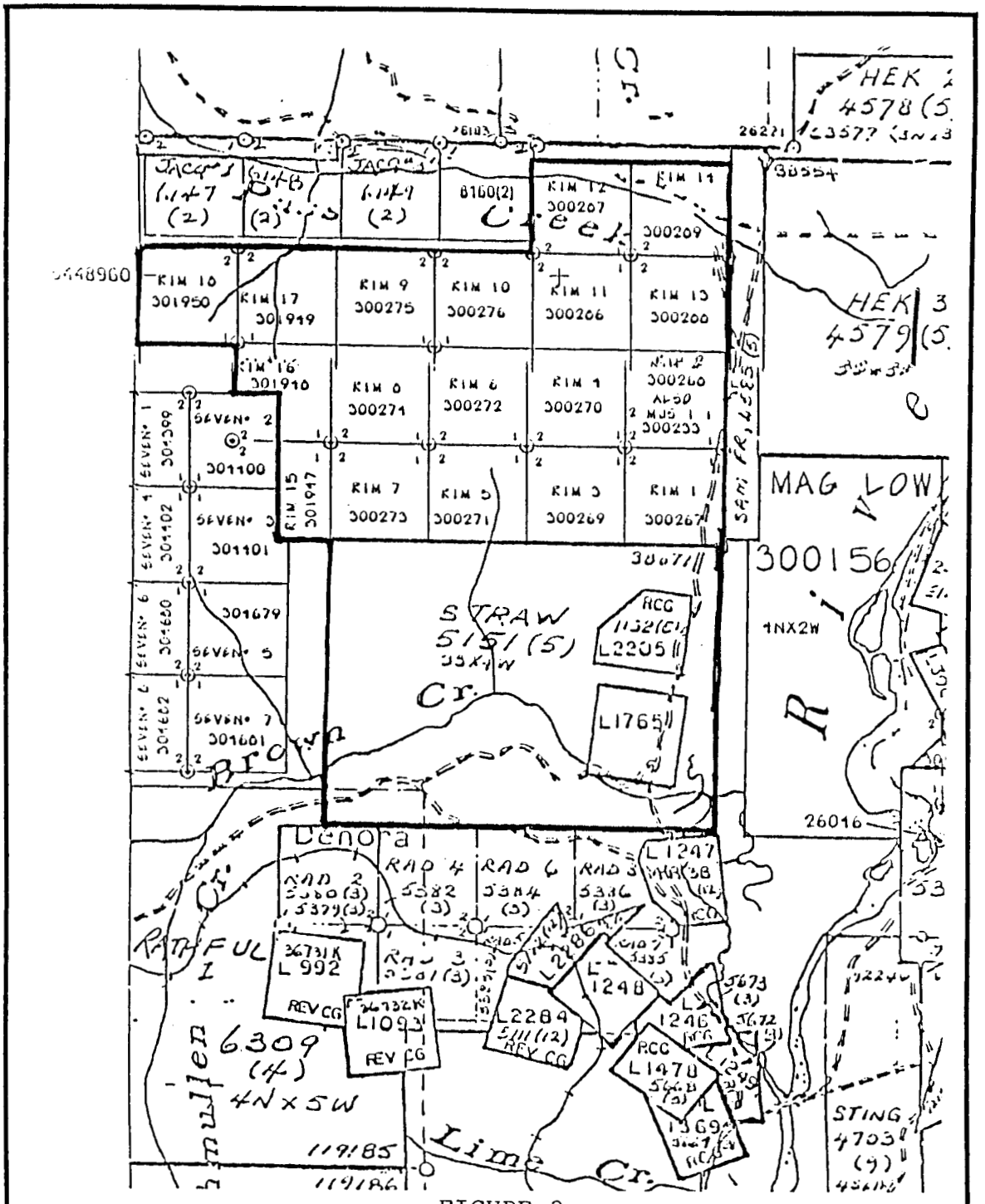

KIM 10
301950
KIM 17
301949
KIM 9
300275
KIM 10
300276
KIM 11
300206
KIM 12
300207
KIM 13
300208
KIM 16
301910
KIM 8
300271
KIM 6
300272
KIM 4
300270
KIM 2
300260
KIM 15
301947
KIM 7
300273
KIM 5
300271
KIM 3
300269
KIM 1
300267
SEVEN 2
301100
SEVEN 3
301101
SEVEN 5
SEVEN 7
301601
STRAW
5151 (5)
RCG
1132(C)
L2205
L1765
Cr.
Denora
RAD 2
5380 (3)
5379 (3)
RAD 4
5382
(3)
RAD 6
5384
(5)
RAD 3
5386
(3)
L1247
L1248
L2284
5111 (12)
REV CG
L1470
L1369
6309
(4)
4N x 5W
Lime Cr.
MAG LOW
300156
1NX2W
STING
4703
(9)
HEK
4578 (5
HEK
4579 (5
26221
26016
38554
SCALE
1:50,000
DATE
9/92
STRIM PROPERTY
Claim Locations
orvana
RESOURCES CORP.

FIGURE 2

The climate in the area is moderate. Precipitation is typically low during the summer and fall, and moderate during the rest of the year. Snow may cover the ground for several weeks during the winter, especially above the valley floor. Annual temperature range is approximately -20° to 35° C.

PREVIOUS WORK

The Strim claim group covers, in part, rocks of the Knob Hill and Brooklyn Formations, which have historically been significant producers of Cu-Au ores in the Phoenix-Greenwood mining camps (Fig. 3).

Past work on the Strim Claim group was focused on two separate areas. On the Strawberry Crown Grant two shallow shafts were sunk on sulphide mineralization. Report to the Minister of Mines, 1926, notes that the shafts are 40 ft and over 100 ft deep and include drifts. Several short adits explore sulphide mineralization of the Mono Reverted Crown Grant, located immediately to the north. This claim was explored by ground magnetic surveys conducted by J. Lucke for F. J. Flanagan in 1985 and 1987.

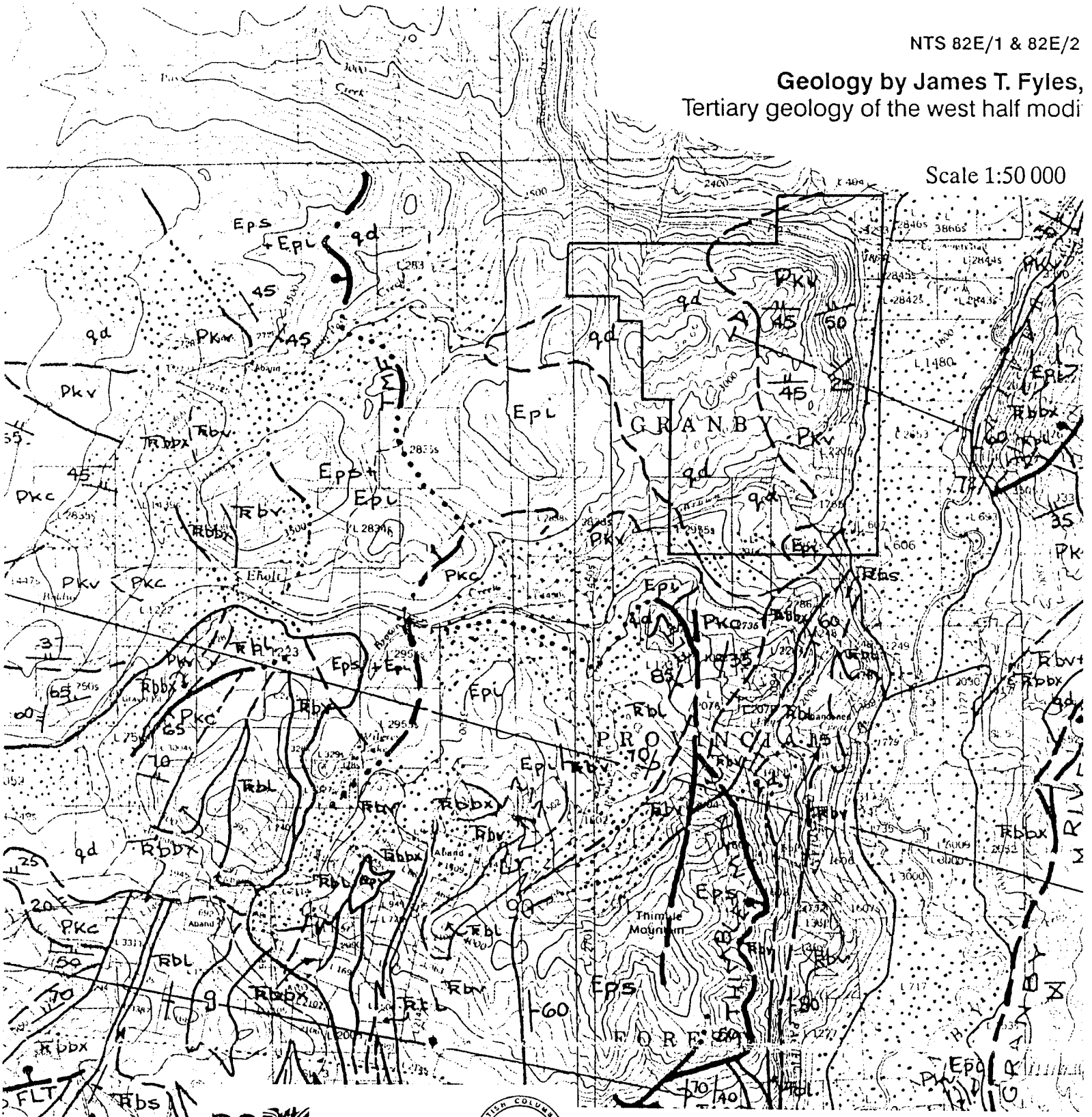
In another area to the NW on the Rim Claims, a group of old hand trenches, pits, and shallow shafts expose heavy pyrrhotite mineralization in diorite intrusive rock. No historical documentation of these old workings was found. In 1983 a program consisting of rock chip geochemistry and geologic mapping was conducted over the general area of these workings by J. Richardson for Big Duke Exploration. Also in 1983, a program of soil geochemistry and ground VLF-EM and magnetic surveys were conducted in this area by M. Klein.

1991-1992 PROGRAM

A program consisting of reconnaissance geologic mapping and rock sampling was conducted between June 1991 and June 1992. Mapping was conducted on a scale of 1:10,000. Rock samples were collected from most of the known workings and from a few outcrops. This work was directed toward assessing the potential of the property for hosting large-tonnage Au-Cu mineralization.

Property Geology

Rocks observed on the property include Permo-Triassic metasedimentary and metavolcanic rocks of the Knob Hill and possibly Brooklyn Formations and intrusive rocks of both the Nelson (Cretaceous) and Coryell (Eocene) Groups (Fig. 4).



BC Ministry of Energy, Mines and Petroleum Resources

BRITISH COLUMBIA GEOLOGICAL SURVEY

OPEN FILE 1990-25

GEOLOGY OF THE GREENWOOD - GRAND FORKS AREA, BRITISH COLUMBIA

NTS 82E/1 & 82E/2

Geology by James T. Fyles, 1981-1989.
Tertiary geology of the west half modified from Little (1983)

orvana RESOURCES CORP.
Coeur d'Alene, Idaho

DATE 9/92		
REVISED BY	DATE	
		STRIM CLAIM GROUP
		Regional Geology
		Figure 3
DATA BY	SCALE 1:50,000	SHEET NO. / PLATE NO.

LEGEND

TERTIARY

PENTICTON GROUP (Ep)

i	Dikes, sills and intrusions of syenite, pulaskite, monzonite and diorite.(Coryell Intrusions).
s	Stratiform Units-volcaniclastic and arkosic sediments (Kettle River fm), flows of andesite, trachyte and phonolite (Marron fm).
bx	Slide breccia.

JURASSIC AND CRETACEOUS

NELSON PLUTONIC ROCKS

qd	Quartz diorite and granodiorite
d	Diorite
g	Gabbro

LEXINGTON INTRUSIONS

qfp	Quartz feldspar porphyry, quartz porphyry and porphyritic diorite

TRIASSIC

BROOKLYN FORMATION (Trb)

v	Fragmental greenstone and related microdiorite.
l	Limestone, calcareous sandstone and conglomerate, minor skarn.
s	Green and maroon tuffaceous sandstone, siltstone and hornfels.
a	Dark grey to black siltstone.
bx	Chert breccia,and minor tuff, tuffaceous sandstone and maroon and green limestone cobble conglomerate

CARBONIFEROUS OR PERMIAN

ATTWOOD GROUP (Pa)

a	Black siltstone and phyllite, cherty siltstone, minor sandstone,conglomerate and greenstone.
l	Grey and white limestone, cherty limestone and minor white dolomite
v	Andesite

KNOB HILL GROUP (Pk)

c	Chert, grey argillite, siliceous greenstone and minor limestone.
v	Greenstone, pillow lava and breccia, amphibolite and minor limestone
bx	Chert breccia and conglomerate
m	Grey and green schist and phyllite, buff to white quartzite, minor crystalline limestone, white dolomite, fine grained calc-silicate gneiss, quartz biotite gneiss and amphibolite.
od	Old diorite complex-coarse to fine-grained hornblende diorite laced with felspathic veinlets.
sp	Serpentinite and listwanite.

GRAND FORKS GROUP (Preto,1970)

Id	Sillimanite and/or biotite paragneiss
V	Fine grained hornblende schist and amphibolite
IX	Granodiorite gneiss
X	Crushed and mylonitized quartz monzonite

AREAS WITH LITTLE OR NO OUTCROP

GEOLOGICAL CONTACT
Located, Approximate, Assumed or Gradational

FAULT
Low dip
Steep dip
Thrust

25 TREND AND PLUNGE OF FOLD AXES AND LINEATIONS

30 ATTITUDE OF FOLIATION

ATTITUDE OF BEDDING

Fault names and Abbreviations - Bodie Mountain Fault (BMF), Copper Camp Fault (CCF) Deadwood Ridge Fault (DRF), Eagle Mountain Faul (EMF), Gold Drop Fault (GDF), Greyhound Creek Fault (DRF), Granby River Fault (GRF), July Creek Fault (JCF), Lind Creek Fault (LCF), Mount Attwood Fault (MAF), Mount Wright Fault (MWF), No7. Fault (No7F), Snowshoe Fault (SNF), Thimble Mountain Fault (TMF), Wallace Creek Faul (WCF)

The layered rocks form a belt that outcrops along the east side of the property forming bluffs along the west side of the Granby River Valley. These rocks include sharpstone conglomerate, greenstone, quartzite, and siltite. They strike NNW to NE and have variable dips; the general trend of the stratigraphy is NNE, with moderate dips to the west. A general stratigraphic succession is noted which consists of sharpstone conglomerate interbedded with greenstone in the Strawberry Crown Grant area, grading to dominant greenstone, then interbedded quartzite, siltite, and greenstone, finally becoming quartzite and siltite dominant in a south to north transect which moves stratigraphically up-section. The units are thickly-bedded, commonly 2 to over 10 m thick.

The sharpstone conglomerate is commonly clast-rich. Clasts are subrounded to subangular, and range 1/4 - 3 cm in diameter. Compositionally, the clasts are light grey, buff, to tan quartzite and chert. The matrix is fine-grained, medium to dark grayish green, and probably altered to produce fine-grained disseminated amphibole, chlorite, and pyroxene.

The greenstone is generally massive, though some fragmental textures were noted in outcrop. Color is dark green. In places the greenstone is altered to predominantly a felted mass of fine-grained actinolite. The greenstone, in places, is quite strongly magnetic, probably containing several percent disseminated magnetite.

The quartzite and siltite is white, pale to dark green, grey, and brown, and is very fine to medium-grained. A weak fabric created by parallel alignment of chlorite and biotite crystals is present. This fabric becomes more pronounced and biotitic in the bluffs north of the Mono Reverted Crown Grant.

The intrusive rocks observed on the property have a wide range of composition and texture. A large area in the western part of the property is underlain by medium-grained granodiorite and diorite that is probably Nelson (Cretaceous) age. This rock and the Permo-Triassic country rocks are intruded by dikes and sills of syenite and latite that are probably Coryell (Eocene) age. These smaller intrusives range in color from medium grey to pink and in texture from fine-grained equigranular to porphyritic/aphanitic. Where observed, they range in thickness 1-15 m. They are commonly biotite-rich.

Mineralization

Three different styles of mineralization were noted on the Strim property. These include calcsilicate skarn with associated sulphides, disseminated pyrrhotite in diorite, and pyrite in breccia zones in quartzite.

Two shafts on the Strawberry Crown Grant explore calcsilicate skarn with a mineral assemblage including garnet, actinolite, epidote, diopside, pyrrhotite, pyrite, magnetite, and chalcopyrite. These zones occur within the Permo-Triassic metavolcanic/sedimentary country rock assemblage. Diorite outcrops within 10 m of the southern shaft; porphyritic latite outcrops within 20 m of the northern shaft.

Several old shafts and trenches located in the Rim #7 claim expose disseminated pyrrhotite mineralization in diorite. The pyrrhotite ranges 1-30% of the mode. It is moderately magnetic. A few chunks of pyrite were found on the dumps in this area. No obvious structural control was noted with this mineralization.

Pyrite occurring as disseminations and stringers was observed in quartzite in the Mono Claim area. Several short adits explored this mineralization, which occurs within 1-3 m wide zones of brecciation along dike/sill contacts.

Lithogeochemistry

Rock chip and dump samples were collected in various locations to help assess the potential of the property. Locations of these samples are noted on Figure 4; sample assay results and field descriptions are presented in Appendix 1 and 2 respectively. Twenty-five samples were collected.

The highest gold value obtained is 0.24 oz/t. This was obtained from a sample of massive pyrrhotite collected from the southern shaft dump on the Strawberry Crown Grant. This same sample contained 9140 ppm copper. Other metals found in anomalous concentrations in this area include arsenic (maximum 546 ppm), cobalt (maximum 662 ppm), tellurium (maximum 17 ppm), tungsten (maximum 523 ppm), and nickel (maximum 474 ppm).

The highest copper value is 1.57% and was obtained from a sample of semi-massive (30%) pyrrhotite with >5% chalcopyrite collected from a shaft dump located in the south part of the Rim #8 claim. Several samples collected in this area contained >100 ppm cobalt; one sample contained 1639 ppm cobalt. Arsenic was also found in anomalous concentrations in this area (maximum value of 415 ppm).

CONCLUSIONS

Mineral showings on the Strim property include sulphides and magnetite associated with calc-silicate skarn, sulphide stringers and disseminations within breccia zones in quartzite along dike/sill margins, and heavy sulphide disseminations lacking obvious structural control in diorite. Significant gold and copper values were recovered in both the skarn and diorite-hosted mineralization. While the showings on both of these types of mineralization are small, either could potentially host sufficient tonnage and grade to be economically significant.

RECOMMENDATIONS

Follow-up work is warranted over those parts of the Strim property hosting the known showings. This work should include grid geochemistry, ground magnetics, and VLF-EM. Additionally, more detailed geologic mapping should be conducted in an attempt to further define lithologic, stratigraphic, and structural controls to mineralization.

STATEMENT OF COSTS

Geologist 7 days @ $200/day	$1400
Meals and Lodging 6 days @ $50/day	300
Mileage/truck 6 days	200
Geochemical Analysis, shipping - 22 samples	420
TOTAL	$2320

Robert D Frederick

STATEMENT OF QUALIFICATIONS

I, Robert T. Fredericks, of Moscow, 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, at their offices located at 2005 Ironwood Parkway, Suite 222, Coeur d'Alene, Idaho 83814 U.S.A.

2. I am a graduate of the University of Idaho, Moscow, Idaho, and hold a B.Sc. degree in Geology.

3. I have been practicing my profession for the past five years.

4. I am registered as a Geologist in Training (GIT) with the Idaho State Board of Registration for Professional Geologists.

5. This report is based on information that I and others under my supervision obtained while on the Strim Claim Group property during the period June 29, 1991, to June 12, 1992.

Robert T. Fredericks
Geologist, Orvana Minerals Corporation

REFERENCES

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.

Lucke, J. R., 1987, 1987 Assessment Report on the Mono Mineral Claim, #16123

Lucke, J. R.. 1985, 1985 Assessment Report - Geophysical Survey, on the Mono Mineral Claim, #13685.

Sookochoff, L., 1983, 1983 Assessment Report, Geochemical and Geophysical Survey, SAM Mineral Claim, #11680.

Richardson, J., 1983, Geological Report, Duke Mineral Claims #2, 4, 5, 6, Greenwood Mining Division, #11522.

APPENDIX 1

Rock Sample Assay Certificates

SILVER VALLEY LABORATORIES, INC.
P.O. Box 929 - One Gov't Gulch
Kellogg, Idaho 83837
(208) 784-1258

ORVANA RESOURCES - P.DIRCKSEN/R.FREDERICKS
2005 IRONWOOD PKWY #222
COEUR D'ALENE, ID 83814
CC: PAN ORVANA RESOURCES - VANCOUVER,BC
RE: SKARN PACKAGE

DECEMBER 24, 1991 X1OR1101.345

TEST FOR:	Au	Ag	Pb	Zn	Cu	As	Co	Bi
METHOD:	FA+AA	FA+AA	ICAP	ICAP	ICAP	ICAP	ICAP	ICAP
USED:	-	-	-	-	-	-	-	-
RESULTS IN:	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	59	.2	6	19	41	16	5	<2
	39	.1	5	21	32	<5	5	2
	30	.1	9	30	41	<5	14	4
	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	82	>25	23881	>10000	73	177	18	3
	5	.6	83	178	56	30	27	<2
	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	<5	.9	61	181	32	284	9	5
	5	.2	15	40	24	77	3	4
	<5	.5	22	1329	251	99	29	5
	294	6.0	69	>10000	2295	41	67	22
	24	1.2	78	7147	363	35	13	22
	148	>25	48	481	>10000	18	6	5
	<5	.4	21	110	63	<5	5	6
	<5	.4	12	89	151	8	10	4
	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
19607	73	1.7	17	39	482	<5	27	<2
19608	6	.6	14	46	366	<5	21	3
19609	9	.2	<5	29	196	6	26	<2
19610	160	.4	12	26	326	6	36	<2
	<5	.1	10	42	34	11	18	<2
	<5	.3	10	45	63	<5	17	<2
	8	.2	7	58	21	32	18	<2
	5	.4	15	55	51	23	9	4
	7	.2	20	107	39	<5	15	<2
	11	.5	11	87	118	19	4	4
	603	.4	13	55	102	7	15	3
	16	.2	7	237	17	28	9	<2
	1662	>25	220	>10000	5024	570	<1	65
	<5	.2	7	421	25	<5	7	<2
	37476	>25	276	1331	4474	1351	<1	23

Excellence Begins Here...

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Kellogg, Idaho 83837
(208) 784-1258

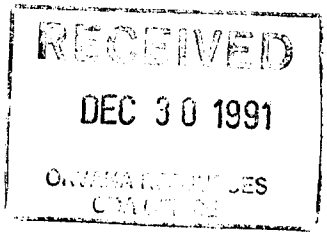
ORVANA RESOURCES - P.DIRCKSEN/R.FREDERICKS
2005 IRONWOOD PKWY #222
COEUR D'ALENE, ID 83814
CC: PAN ORVANA RESOURCES - VANCOUVER,BC
RE: SKARN PACKAGE

DECEMBER 24, 1991 X10R1101.345

TEST FOR:	Te	W	Ni
METHOD:	ICAP	ICAP	ICAP
USED:	-	-	-
RESULTS IN:	ppm	ppm	ppm
	N/S	N/S	N/S
	<.3	<10	11
	<.3	<10	16
	<.3	<10	48
	N/S	N/S	N/S
	3	<10	45
	.4	<10	49
	N/S	N/S	N/S
	N/S	N/S	N/S
	N/S	N/S	N/S
	N/S	N/S	N/S
	N/S	N/S	N/S
	N/S	N/S	N/S
	<.3	10	94
	<.3	15	22
	.6	<10	20
	3	<10	64
	<.3	<10	10
	<.3	15	25
	<.3	<10	8
	.4	<10	12
	N/S	N/S	N/S
19607	.5	<10	143
19608	<.3	<10	20
19609	<.3	<10	33
19610	.7	<10	30
	<.3	<10	60
	<.3	<10	47
	<.3	<10	41
	<.3	<10	10
	<.3	<10	30
	.3	<10	<5
	2	15	8
	<.3	<10	24
	4	<10	10
	<.3	<10	108
	2	<10	<5

CHARGES _____

cm/ W. Sorensen
Wayne Sorensen, Manager



SILVER VALLEY LABORATORIES, INC.
P.O. Box 929 - One Gov't Gulch
Kellogg, Idaho 83837
(208) 784-1258

ORVANA RESOURCES - PAUL DIRCKSEN
2005 IRONWOOD PARKWAY, #222
COEUR D ALENE, ID 83814
ATTN: PAUL DIRCKSEN
RE: SKARN PACKAGE

JULY 19, 1991 X10R1102.187

TEST FOR:	Au	Ag	Pb	Zn	Cu	As	Co	Bi	Te	W	Ni
METHOD:	FA+AA	FA+AA	ICAP	ICAP	ICAP	ICAP	ICAP	ICAP	ICAP	ICAP	ICAP
USED:	-	-	-	-	-	-	-	-	-	-	-
RESULTS IN:	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	167	>25	3361	>10000	3294	531	12	<2	<5	292	64
	915	>25	>25000	>10000	>5000	133	9	401	<5	<10	115
	55	>25	16080	>10000	244	125	8	<2	<5	26	<5
	104	1.4	140	301	232	130	2	3	<5	<10	<5
	83	1.4	110	259	1206	341	192	9	<5	1071	25
	4011	.8	18	43	57	21	3	17	7	<10	<5
	<5	.8	<5	104	62	23	38	<2	<5	<10	319
	10	.8	<5	44	36	<5	5	<2	<5	<10	29
	401	1.2	6	106	108	<5	24	<2	<5	<10	<5
	29	3.0	<5	34	1114	62	22	<2	<5	<10	27
	12	1.6	8	39	465	125	54	<2	<5	15	7
	57	6.3	<5	61	3201	151	59	<2	<5	41	93
	17	8.3	22	127	1502	283	13	6	<5	88	<5
	8	.1	<5	39	79	91	18	<2	<5	<10	<5
	<5	.1	<5	10	14	<5	<1	<2	<5	<10	<5
	267	5.2	7	1	1472	254	92	<2	<5	<10	595
	15	1.8	<5	37	409	65	32	<2	<5	<10	11
	11	1.8	<5	68	725	115	46	<2	<5	<10	79
	<5	.1	<5	9	39	26	5	<2	<5	<10	<5
19062	390	2.7	30	30	1203	415	1639	9	<5	46	<5
19063	33	2.2	12	29	1599	157	36	<2	<5	17	12
19064	48	2.6	11	38	680	152	70	<2	<5	<10	<5
19065	22	.8	8	66	1041	202	102	<2	<5	28	108
19066	258	3.4	19	27	2700	311	161	<2	<5	<10	27
19067	239	4.2	24	29	1915	262	407	<2	<5	40	8
19068	<5	.1	<5	41	50	<5	18	<2	<5	<10	29
19069	37	.6	<5	4	489	57	31	<2	<5	21	55
19070	33	.3	<5	9	249	7	15	<2	<5	<10	<5
19071	435	2.4	7	8	369	52	26	<2	<5	12	14
19072	800	5.9	213	172	1221	377	21	4	<5	174	<5
19073	86	5.7	<5	91	4704	17	16	<2	<5	<10	<5
19074	833	6.9	38	<1	>5000	217	245	<2	17	523	203
19075	1523	21	56	65	>5000	546	662	<2	9	177	263
19076	19	.1	<5	10	53	11	9	<2	<5	<10	<5
19077	11	.1	<5	69	26	30	30	<2	<5	<10	16
19078	8442	7.3	51	215	>5000	356	92	<2	<5	274	474
19079	4167	9.4	19	111	>5000	300	236	<2	<5	55	144
19080	987	2.8	43	264	2121	277	87	32	<5	548	<5
19081	133	.2	<5	9	235	16	10	<2	<5	<10	16
19082	27	<.1	<5	11	53	<5	8	<2	<5	<10	<5
	2266	2.3	<5	3	50	52	14	8	<5	12	<5
	131	4.1	11	91	3814	160	76	<2	<5	<10	<5
	74	1.9	32	59	1897	300	240	4	<5	82	17
	5072	6.6	<5	67	2053	197	156	<2	<5	24	13
	1084	7.8	17	89	3455	342	96	5	<5	48	21
	5795	9.9	<5	96	3105	93	29	<2	<5	42	<5
	2171	2.8	13	29	2295	244	174	4	<5	40	27
	269	4.3	18	35	536	263	44	7	<5	88	<5
	255	6.3	13	32	1717	208	137	2	<5	65	27
	274	3.7	20	30	1437	278	165	10	<5	74	44

SILVER VALLEY LABORATORIES, INC.
P.O. Box 929 - One Gov't Gulch
Kellogg, Idaho 83837
(208) 784-1258

ORVANA RESOURCES
2005 IRONWOOD PKWY #222
COEUR D'ALENE, ID 83814
ATTN: PAUL DIRCKSEN
RE: SKARN PKG.

AUGUST 6, 1991 X10R1102.187

TEST FOR:	Au	Ag	Pb	Zn	Cu	As	Co	Bi	Te	W	Ni
METHOD:	FA+AA	FA+AA	ICAP	ICAP	ICAP	ICAP	ICAP	ICAP	ICAP	ICAP	ICAP
USED:	-	-	-	-	-	-	-	-	-	-	-
RESULTS IN:	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	864	6.3	16	71	1119	45	14	6	<5	<10	6
	242	12	<5	91	3412	75	16	<2	<5	<10	9
	9	.6	<5	43	157	9	2	<2	<5	<10	<5
	353	4.3	38	29	471	437	149	12	<5	481	<5
	472	4.3	219	29	1080	1702	108	10	<5	575	81
19098	1913	>25	22	208	>10000	301	33	15	<5	73	314
	21	.5	<5	8	50	<5	4	<2	<5	<10	19

CHARGES _____

Wayne Sorensen, Manager

SILVER VALLEY LABORATORIES, INC.
P.O. Box 929 - One Gov't Gulch
Kellogg, Idaho 83837
(208) 784-1258

ok - Cu reruns

ORVANA RESOURCES
2005 IRONWOOD PKWY #222
COEUR D'ALENE, ID 83814
ATTN: PAUL DIRCKSEN
NOTE: Assay as req. from X10R1102.187

AUGUST 9, 1991 X10R0302.212

TEST FOR:	Pb	Zn	Cu
METHOD:	AA	AA	AA
USED:	ASSAY	ASSAY	ASSAY
RESULTS IN:	%	%	%
	N/R	3.43	N/R
	4.89	13.48	4.33
	N/R	5.06	N/R
19098	N/R	N/R	1.57

CHARGES

WNS/W. Sorensen
Wayne Sorensen, Manager

APPENDIX 2

Rock Sample Field Descriptions

ORVANA

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2005 Ironwood Parkway
Coeur d'Alene, Idaho 83814
(208) 667-6000

DATE 6/30/91
SAMPLED BY RTF

№ 19062
OWNER OR CLAIM Rim
LOCATION workings @ end of old road up thru Straw claim
KIND OF SAMPLE dump char
DESCRIPTION Pyrite - high grade sample. Massive c.g. py pieces up to 2 in. diam. Not a lot on the dump. Located 240m NW, 325m S of initial post Rim 7,8.

Au	Ag	Cu	As	Co
390ppb	2.7ppm	1263ppm	415ppm	1639ppm

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DATE 6/30/91
SAMPLED BY RTF

№ 19063
OWNER OR CLAIM Rim
LOCATION same as #62
KIND OF SAMPLE dump, char
DESCRIPTION Altered pyrrhotitic silicified diorite med grey, med.-grained, dense & very hard. 5-30% dissem. m.g. po, tr py.

Au	Ag	Cu	As		
33	2.2	1599	157		

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DATE 6/30/91
SAMPLED BY RTF

№ 19064
OWNER OR CLAIM Rim
LOCATION Old trench on N side of road, 50 yds above shaft
KIND OF SAMPLE 15 ft horiz grab
DESCRIPTION Pyrrhotite altered diorite. Strong FeOx - pervasive over 30 ft. 5-20% dissem po, tr py or cpy, v.f.g.

Au	Ag	Cu	As		
48	2.6	680	152		

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DATE 6/30/91
SAMPLED BY RTF

№ 19065
OWNER OR CLAIM Rim claims
LOCATION prospect pit ± 50m N and 50m E of initial post Rim 7,8.
KIND OF SAMPLE dump char.
DESCRIPTION Dk greenish black fine-grained rock w/ blebs & stringers of pyrite 2-15%. Mod FeOx staining. From near monzanite contact - looks like metased (clastic).

Au	Ag	Cu	As	Co	
22	0.8	1041	202	102	

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(208) 667-6000

DATE 6/30/91
SAMPLED BY RTF

№ 19066
OWNER OR CLAIM Rim claims
LOCATION down in brushy swale, in NW corner Rim #7, prospect pit, or near center.
KIND OF SAMPLE dump char.
DESCRIPTION Altered diorite. Med.-grained, very pyrrhotitic, ranges 5-30% m.g. po. Strong org/brn FeOx weathering.

Au	Ag	Cu	As	Co	
258	3.4	2700	311	161	

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DATE 6/30/91
SAMPLED BY RTF

№ 19067
OWNER OR CLAIM Rim claims
LOCATION downhill ± 25m from #66.
KIND OF SAMPLE grab
DESCRIPTION Massive rotton pyrite, Crumbly. Occurs as pods up to 2 ft wide, in altered diorite. Diorite is bleached, ranges from being pyritic to not.

Au	Ag	Cu	As	Co
239	4.2	1915	262	407

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(208) 667-6000

DATE 7/1/91
SAMPLED BY RTF

№ 19068
OWNER OR CLAIM Straw claims
LOCATION up on W side of nose, near top
KIND OF SAMPLE grab over 10'x15'
DESCRIPTION Dk green altered intrusive. Fine grained, looks like dense mass of chlorite, biotite and altered feldspar. Minor veinlets of c.g. feldspar (white) and dk green amphibole or pyx (disbtry)

Au	Ag
<5 ppb	0.1 ppm

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DATE 7/1/91
SAMPLED BY RTF

№ 19069
OWNER OR CLAIM Straw (Mono)
LOCATION Roughly near top center of Mono RCG above small ledge
KIND OF SAMPLE float
DESCRIPTION Pyritic quartzite w/ med green flakes that could be amph skarn. Pyrite restricted to fracture fillings. Stg. rusty weathering. Fairly common in float.

Au	Ag
37	0.6

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DATE 7/1/91
SAMPLED BY RTF

№ 19070
OWNER OR CLAIM Straw (Mono)
LOCATION buff right below # 69
KIND OF SAMPLE grab over 3'x 10'
DESCRIPTION Pyritic volcanic tuff or altered intrusive. Med grey, dense, w/ some ghost crystal faces. Py is dissem and on fx, tr - 1%.

Au	Ag
33	0.3

ORVANA

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(208) 667-6000

DATE ~~6~~ 7/1/91
SAMPLED BY RTF

№ 19071
OWNER OR CLAIM Straw
LOCATION ≈ 120 yds above road on N side of Strawberry C.G. @ adit
KIND OF SAMPLE 4 ft vert. chip
DESCRIPTION Altered, pyritized, brecciated intrusive? Stg pervasive FeOx, minor py remaining. Taken on right rib @ portal of 30 ft adit.

Au	Ag
435	2.4

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(208) 667-6000

DATE 7/7/91
SAMPLED BY RTF

№ 19072
OWNER OR CLAIM Strawberry C.G.
LOCATION prospect pit just above main shaft
KIND OF SAMPLE 18 in horiz. chip
DESCRIPTION Shear gouge w/ stg. FeOx cement. Structure @ 020°, 65°NW. Gouge is ≈ 1-2 ft. wide. Lots of limonite veinlets.

Au	Ag	Cu	As	W
800	5.9	1221 ppm	377 ppm	174 ppm

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(208) 667-6000

DATE 7/1/91
SAMPLED BY RTF

№ 19073
OWNER OR CLAIM Strawberry C.G.
LOCATION same as # 72
KIND OF SAMPLE grab
DESCRIPTION Wall rock - hornfels. Looks clastic - volcaniclastic or pebble conglomerate. Color varies lt - dk grey, green. Selvages of amph or pyx on some fx. Tr cpy and po.

Au	Ag	Cu
86	5.7	4704

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(208) 667-6000

DATE 7/1/91
SAMPLED BY RTF

№ 19074
OWNER OR CLAIM Strawberry C.G.
LOCATION Dump for main shaft, ≈ 250m N of house
KIND OF SAMPLE dump char
DESCRIPTION Massive pyrrhotite. Coarse-grained. Tr cpy. Common on dump.

W = 523 ppm
Ni = 203 ppm

Au	Ag	Cu	As	Co	Te
833	6.9	>5000	217	245 ppm	17 ppm

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(208) 667-6000

DATE 7/1/91
SAMPLED BY RTF

№ 19075
OWNER OR CLAIM Strawberry C.G.
LOCATION Same as #74
KIND OF SAMPLE dump char.
DESCRIPTION Dk green amph/pyx skarn w/ pyrite. Py ranges 50% - 100%, and is coarse-grained, looks like replacements. Not real common on dump.

Au	Ag	Cu	As	Co	Te
1523	21.0	>5000	546	662	9

W = 177 ppm Ni = 263 ppm

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Coeur d'Alene, Idaho 83814
(208) 667-6000

DATE 7/1/91
SAMPLED BY RTF

№ 19076
OWNER OR CLAIM Strawberry C.G.
LOCATION 30m W of main mine shaft, uphill.
KIND OF SAMPLE grab over 3' x 6'
DESCRIPTION Skarn. Contains 50% bright green epidote, 40% coarse-grained amphibole (radial crystals up to 3 in. long) 10% dk red/brn garnet, which appears to fill vugs. Tr py.

Au	Ag
19	0.1

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Coeur d'Alene, Idaho 83814
(208) 667-6000

DATE 7/1/91
SAMPLED BY RTF

№ 19077
OWNER OR CLAIM Strawberry C.G.
LOCATION uphill & a bit N of mine workings ≈ 100 yds, small bluff
KIND OF SAMPLE grab over 5' x 10'
DESCRIPTION DK green, fine-grained dense rock. Possibly chl/py siltstone or amph/pyx skarn? Quite hard & massive. Has mod. magnetism — must be f.g. magnetite.

Au	Ag
11	0.1

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(208) 667-6000

DATE 7/1/91
SAMPLED BY RTF

№ 19078
OWNER OR CLAIM Strawberry C.G.
LOCATION 50ft shaft located W of house ≈ 200m, next to swale
KIND OF SAMPLE dump char.
DESCRIPTION Massive pyrrhotite. Coarse-grained, possibly from seam 1 ft wide exposed in side of shaft.

Au	Ag	Cu	As	W	Ni
8442	7.3	>5000	356	274	474

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(208) 667-6000

DATE 7/1/91
SAMPLED BY RTF

№ 19079
OWNER OR CLAIM Strawberry C.G.
LOCATION Same as #78
KIND OF SAMPLE dump char.
DESCRIPTION Pyrite in green skarn composed of amphibole and epidote. Some amph. is c.g., skarn generally f.g. Py med-coarse grained, occurs in blebs & stringers. Also some po in groundmass. Some massive

Au	Ag	Cu	As	Co	Py · Ni
4167	9.4	>5000	300	236	144

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DATE 7/1/91

№ 19080 SAMPLED BY RTF

OWNER OR CLAIM Strawberry C.G.

LOCATION Same as # 78, 79

KIND OF SAMPLE dump char.

DESCRIPTION Massive magnetite. Fine grained, contains minor py dots (c.g.) and calcite seams. Not a lot on dump.

Au	Ag	Cu	As	Bi	W
987	2.8	2121	277	32	548

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DATE 7/1/91

№ 19081 SAMPLED BY RTF

OWNER OR CLAIM Strawberry C.G.

LOCATION Same as previous Sx.

KIND OF SAMPLE dump char.

DESCRIPTION Skarn. Mostly epidote, minor garnet (med red/brn). Also minor f.g. dk green augite or pyx w/ d.ssem mt.

Au	Ag
133	0.2

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(208) 667-6000

DATE 7/1/91

№ 19082 SAMPLED BY RTF

OWNER OR CLAIM Strawberry C.G.

LOCATION 100 ft ph.NW (N) of shaft sampled in 78-81

KIND OF SAMPLE grab 10'x3'

DESCRIPTION altered diorite. Pale greenish grey - bleached. Minor amount of mafics have been chloritized. Tr mt - weakly magnetic.

Au	Ag
27	<0.1

ORVANA

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2005 Ironwood Parkway
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(208) 667-6000

DATE 11/24/91

№ 19607 SAMPLED BY RTF

OWNER OR CLAIM Strawberry

LOCATION 650 ft N of Brown Cr Rd. near top of N. Fk Rd cut.

KIND OF SAMPLE grab over 5 ft

DESCRIPTION Volcanic? Med-dk green, mottled w/ pale grey ghosts of crystals. Stg FeOx stain on surfaces. 2-4% m.g. py as clots and disseminations. Old DDH collar.

Au	Ag	Ni
73ppb	1.7ppm	143ppm

ORVANA

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2005 Ironwood Parkway
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(208) 667-6000

DATE Nov. 24, 1991

№ 19608 SAMPLED BY RTF

OWNER OR CLAIM Strawberry

LOCATION 880 ft N of Brown Cr Rd on N Fk Rd cut.

KIND OF SAMPLE 20 ft horiz chip

DESCRIPTION Metavolcanic / skarn. Dk green, dense rock, mostly grainy texture but some fiberous - possible amphibole skarn. Dissem, m.g. magnetite 3-5%; s-o magnetic. Minor epidote selvages. No FeOx stain Tr py + $CuCO_3$ fx related

Au	Ag
6ppb	0.6ppm

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2005 Ironwood Parkway
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(208) 667-6000

DATE Nov. 24, 1991

№ 19609 SAMPLED BY RTF

OWNER OR CLAIM Strawberry

LOCATION 1950 ft N of Brown Cr Rd jct w/ N Fk Rd. rd cut

KIND OF SAMPLE 6 ft ~~hand~~ notiz chip.

DESCRIPTION Metavolcanic. Dense, dark green, fine-grained. Moderately magnetic. Tr-2% clots & blebs of pyrite, fine-med.-grained. Stg. yellow & dk brown/orange FeOx stain. Epidote selvages. Small area.

Au	Ag
9	0.7

ORVANA

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2005 Ironwood Parkway
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(208) 667-6000

DATE 7/3/91

№ 19098 SAMPLED BY J. Lucke

OWNER OR CLAIM Rim claims

LOCATION @ large stuff @ end of old road @ base of bluff

KIND OF SAMPLE grab from dump

DESCRIPTION Massive sulphide in altered intrusive, 30% pyrrhotite, 5-10% cpy, minor py ?

Jack says 3.3 %

Rob says 2.0 %

Au	Ag	Cu	As	Ni
1913	0.67 oz/t	>5000 ppm	301 ppm	314 ppm

ORVANA

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2005 Ironwood Parkway
Coeur d'Alene, Idaho 83814
(208) 667-6000

DATE Nov. 24, 1991

№ 19610 SAMPLED BY KTF

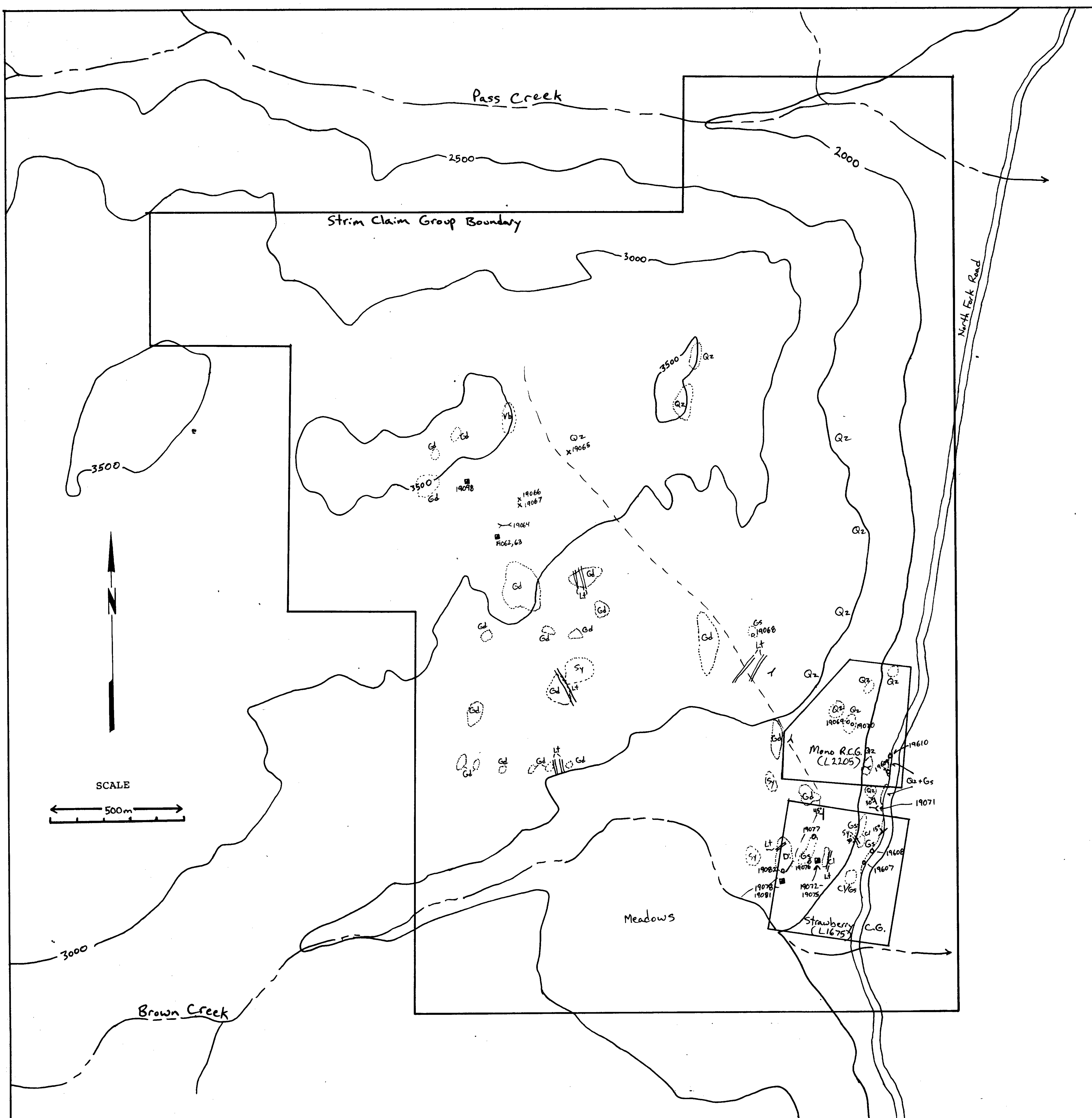
OWNER OR CLAIM Strawberry

LOCATION 2190 ft N of Brown Cr Rd jct, up N Fk rd

KIND OF SAMPLE grab over 20 ft

DESCRIPTION Siltstone, chert pebble conglomerate, minor dk. green mafic metavolcanic. 1-5% py > po as blebs & minor stringers. Po after py. Stg. org/brn FeOx stain, Po replaces dk green f.g. mineral - chlorite or amphibole?

Au	Ag
160	0.4



EXPLANATION

Tertiary

Kettle River Formation

Vb - Volcanic breccia

Coryell Intrusives

Lt - Porphyritic latite
Sy - Syenite

Cretaceous

Nelson Intrusives

Gd - Granodiorite
Di - Diorite

Permian - Triassic

Knob Hill Formation?

Qz - Quartzite/Siltite
Gs - Greenstone
Cl - Conglomerate

// - Dike or Sill

- Outcrop

x - Prospect pit

- Adit

- Trench

- Shaft

- Geologic contact

- Strike and dip of bedding

19062 o - Rock sample location/number

orvana
RESOURCES CORP.
Coeur d'Alene, Idaho

DATE 9/92	STRIM PROPERTY Outcrop Geology and Rock Sample Locations Figure 4	
REVISED BY / DATE		
DATA BY RTF	SCALE 1:10000	SHEET NO. PLATE NO.