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A GEOLOGICAL REPORT  
ON THE  
JORDAN RIVER PROPERTY

REVELSTOKE MINING DIVISION,  
BRITISH COLUMBIA

Lat: 51 08 North Long: 118 24 West

FOR

FIRST STANDARD MINING LTD.  
Goldcrest Acres  
R.R. #1  
Gilford, Ontario  
L0L 1R0

BY

R.G. MACGILLIVRAY, B.Sc.  
and  
J. LAIRD

20,513

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

SEARCHED	INDEXED
SERIALIZED	FILED
OCT 19 1990	
M.R.#	
VANCOUVER, B.C.	

October 4, 1990

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## JORDAN RIVER PROPERTY

### SUMMARY AND RECOMMENDATIONS

The Jordan River Deposit is a large, stratiform, massive sulphide body formed by replacement of a marble horizon within the Monashee Group, located 19 km northwest of the town of Revelstoke in south-central British Columbia.

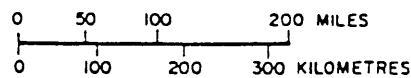
Silver, lead and zinc are the economic constituents. During the period Monday September the 3rd through to Tuesday September the 11th, 1990, the Jordan River Property was examined by geologist R.MacGillivray and prospector J.Laird. The focus of the program was to prospect the Pb-Zn-Ag sedex layer and to examine and sample late cross cutting faults on the property in search for anomalous gold values. During this time period 31 rock samples were collected along with 2 silt samples.

An anomalous gold value of 892 ppb, along with an arsenic value of 25156 ppm was sampled in one of the cross cutting structures on North Copeland Ridge and represents the highest gold value obtained.

Attention on the Jordan River Property should be directed towards defining the reserves and grades of the sulphide layer at depth. The assay results released in this report present the ability to delineate higher grade zones than previously sampled. Prospecting done in this time frame further traced the outcropping of the Pb-Zn-Ag layer to show



FIRST STANDARD MINING LTD.	
JORDAN RIVER PROPERTY LOCATION MAP	
EQUINOX OPERATIONS GROUP	
SCALE As shown	DATE. OCT., 1990
DRAWN.	FIG. No. 1





Jordan River Project  
 Claim Map NTS 82M 1/W



1:50,000

Revelstoke M.D. Figure 2

## JORDAN RIVER PROPERTY

greater continuity within the deposit. Drill hole locations were chosen to test continuity and grade at depth and to test increased grade at cross cutting fault contacts. Eleven drill sites have been chosen and plotted to suggest a program of 21 holes involving approximately 3000m of drilling.

### LOCATION AND ACCESS

The Jordan River Property is situated 19 km northeast of the city of Revelstoke, B.C.. Revelstoke is serviced by the Trans Canada Highway, Canadian Pacific Railway and a municipal airport. From Revelstoke an all weather logging road services the Jordan River Valley up to Hiren Creek which flows on the south side of Copeland Ridge. Historically a trail was cut through the remaining section, up the Jordan River and into the Copeland Creek Valley to the property. Access for this work program was supplied by helicopter involving a fifteen minute flight time from Revelstoke. Hydro electric power is readily available as the Revelstoke Dam lies 18 kilometers to the southeast.

The Copeland claims are comprised of 70 units which cover 1750 hectares of land. The claim boundaries of the property encompass Mount Copeland, a section of Copeland Creek and a section of the south facing slope of the ridge north of Copeland Creek. The property centers on the coordinates 51

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degrees 8 minutes North and 118 degrees 24 minutes West.

### HISTORY

Annual reports from the Ministry of Mines first mention activity in this area during the years 1895, 1896 and 1898. No specific developements are mentioned. The next mention of work refers to the staking of the ground by S. and A. Brewer, who granted an option late in 1955 to American Standard Mines Limited. Work in 1956 was restricted to sampling and open-cut work. In 1958 the property, under option to Bunker Hill Exploration Ltd., saw bulk sampling and metallurgical testing as trenches were blasted across the mineralized bed at 25 foot intervals. In 1963 the registered owners, Jordan Mines Limited and Bralorne Pioneer Mines Limited, drilled five diamond drill holes with a total length of 4,929 feet. Bralorne Pioneer Mines Limited, under option from Consolidated Standard Mines Limited, drilled two holes totaling 2,966 feet in 1965 and completed a fan of four holes in the western part of the mineralized area and one more in the eastern part of the property in 1966. The total length of drilling was 7,979 feet. In 1975 Consolidated Standard became Golden Standard and in 1978 became International Standard Resources Ltd., which is now First Standard Mines Ltd.; the current owner of the property.

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### GEOLOGY

The Jordan River Property lies within the Shuswap Metamorphic complex, specifically it is composed of the metasedimentary gneisses and schists which drape the southeastern flank of the Frenchman Cap dome. The metasedimentary rocks include quartzite, mica schist, calc-silicate gneiss and minor amounts of marble. The marble and the quartzite layers provide for excellent marker beds within this stratigraphy. These rocks have undergone high grade regional metamorphism to the kyanite/garnet/amphibolite facies. Folding is locally complex and has formed an isoclinal syncline with the deposit and the surrounding rocks. The southern limb is overturned. The fold axis trends NW/SE with a 45 degree dip to the south. The hinge of the fold plunges 12-15 degrees to the SE. The stratigraphically lowest unit seen on the property is termed a grey green gneiss (unit 6, Fyles 1970). The rocks are mainly quartz-biotite-hornblende gneiss with lesser amounts of calc-silicate gneiss, fine-grained mica schist, and a few thin, well-defined layers of white quartzite (Fyles 1970). Overlying unit 6 is the calcareous portion of unit 5, which hosts the sulphide layer. This part of unit 5 is characterized by porphyroblastic and calcareous mica schist, thin layers of calc-silicate gneiss, and three distinct marble layers (Fyles 1970). The sulphide layer is of a



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sedimentary exhalative origin, it is described as a partial replacement of an impure marble layer by iron, zinc and lead sulphides, that has since undergone regional metamorphism. The deposit appears continuous for the 2.5 kilometers of its exposed strike length, but moraine, ice and steep topography do not allow complete access. An extrusive carbonatite layer has also been discovered within unit 5, and conformably underlies the marble unit denoted 5e on Fyles map. The carbonatite lies approximately 10 meters below the forementioned 5e layer and is up to 5 meters thick. The stratigraphic occurrence and appearance of this carbonatite closely resembles the Mount Grace carbonatite as described by Hoy (M.E.M.P.R. Bulletin 80).

The younger portion of unit 5 is the quartzitic section containing white, greyish, and greenish quartzite interlayered with greyish and brownish micaceous quartzite and mica schist. This rock directly underlies Fyles unit 4, a medium-grained rusty-weathering biotite-sillimanite gneiss and schist. Late cross-structures appear on the property and were investigated for shear or vein hosted sulphide zones. The faults trend north/south with a moderate to steep easterly dip and frequently are host to lamprophyre dyke swarms. The dykes appear elsewhere on the property and indiscriminately cut stratigraphy. They strike north to

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northeast with a steep dip and cut country rock with no mineralizing effect.

Immediately to the west of the property lies the Mount Copeland gneissic nepheline syenite intrusion. The margins of the syenite is persistantly mineralized with molybdenite. Pods or veins of granular aplitic phase of the syenite produce the best values. Mount Copeland saw the developement of a molybdenum mine that started producing in 1970. Production to the end of 1973 was 188,602 tons from which 2,352,547 pounds of molybdenite was recovered (B.C.D.M. Annual Report 1973, pg.104).

### DISCUSSION

During the nine day program a total of 31 rock samples and 2 silt samples were taken on the property. Six of these days were spent on or around the sulphide layer and three days were spent prospecting in the tributaries of Copeland Creek that occur within the claim boundaries.

Although not much encouragement was seen in the Copeland Creek valley, the results from the sedex layer show the possiblity of a substantial increase in the grade of the potential reserves.

The extension of ore for 400 meters through the Northwest Zone is also of importance as it expresses increased

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continuity from the South Limb through to the North Limb. Economic implications with regards to the rare earth content of the carbonatite should be given merit as a large reserve is present on this property.

### COST PROJECTIONS

These estimates are based on a two month field program of which the first two weeks would be devoted to mobilization and the establishment of control. Three thousand meters of drilling is recommended at a price of \$140/meter exclusive of helicopter support.

Permitting, reports, office, etc.	10,000
Camp construction, mobilization, demob.	20,000
Field expenses 60 days, excluding drill crew	8,000
Transport	
Helicopter and fuel	32,500
Other	2,500
Wages (70 days + benefits)	
Geologist	21,000
Assistant	15,000
Assay	2,000
Drilling	420,000
	<hr/>
Subtotal	531,000
Contingencies	53,100
TOTAL	<hr/> 584,100

**STATEMENT OF COSTS**

Field personnel wages:

1 geologist, 13 days @ \$210/day	2,730.00	
1 prospector, 13 days @ \$185/day	2,405.00	
Salary benefits, expenses	<u>1,223.93</u>	6,358.93

Field expenses, incl. accommodation 2,313.75

Helicopter and travel 2,194.60

Assaying, 33 samples 1,005.75  
11,863.03

10% overhead 1,186.30

\$ 13,049.33

STATEMENT OF QUALIFICATIONS

I, R.G. MacGillivray hereby certify:

1. That I am a Geologist residing at 201-995 Hugh Allen Dr. Kamloops, B.C..
2. That I am a Graduate of the University of British Columbia, B.Sc. (Geol.) 1989.
3. I personally participated in the field project described in this report.
4. I have not received, or do I expect to receive any interest, direct or indirect, in the Jordan River Property or the securities of First Standard Mining Ltd.
5. I consent to the use of this report, or excerpts therefrom, in any prospectus, statement of material facts, or other compilation as required.

Dated at Kamloops, British Columbia this 1st day of October, 1990.

  
\_\_\_\_\_  
R.G. MacGillivray, B.Sc.

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APPENDIX I  
SAMPLE DESCRIPTIONS

Jordan River Area - King Fissure Ag, Pb, Zn, Ba Deposit

Sample Descriptions and Anomalous Values

Camp Fault Zone

#JLR-1 Grab sample from an old trench dump, centered on the N-S trending, east dipping, dextral Camp Fault. The fault cuts well-bedded marble, gneiss, shist, calc-silicate layers, extrusive carbonatite tuffs and breccias, and the stratiform sedimentary-exhalative Ag, Pb, Zn, Ba layer. The fault zone and conjugate structures are intruded by Tertiary biotite lamprophyre dike swarms. The mineralized zone is poorly exposed in dump rubble and oxidized subcrop for several meters in width. Mineralization consists of massive, fine to coarse-grained sheared galena, minor sphalerite and some chalcopyrite, in a manganese and iron oxide coated silicified gangue rock. Alteration minerals include; wad, pyrolusite, botryoidal psilomelane, jarosite, cerrusite, hydrozincite, malachite and azurite. Partially conductive, non-magnetic. 8.69 oz/ton Ag, 40.3% Pb, 3.45% Zn, 6130 ppm Cu, 283 ppm Sb. Ag:Pb ratio = 1:4.6

#JLR-2 Same sample type as JLR-1, grab sample from another old trench located 5 meters south. 8.31 oz/ton Ag, 41.2% Pb, 7008 ppm Zn, 5340 ppm Cu, 293 ppm Sb. Ag:Pb ratio = 1:4.9

#JLR-3 Same sample type as JLR-1&2, grab sample from subcrop in old diggings about 25 meters south of the old trenches. 8.58 oz/ton Ag, 45.5% Pb, 11894 ppm Zn, 967 ppm Cu, 384ppm Sb Ag:Pb ratio = 1:5.3

Camp Fault Zone...cont.

#JLR-4 Grab sample of massive, dark sphalerite and lesser galena in veins and wallrock replacements along lamprophyre dikes in the Camp Fault, adjacent to the sedex sulphide layer. Poorly exposed in subcrop and rubble. Other minerals noted include; manganese and iron oxides, hydrozincite, cerrusite, and scattered pyralspite garnets. Non-conductive, Non-magnetic. 7.61 oz/ton Ag, 16.1% Pb, 26.6% Zn, 1503 ppm Cd, 241 ppm Sb. Ag:Pb ratio = 1:2.1

#JLR-5 Grab sample of a narrow 10 cm. contact zone between a lamprophyre dike and a 1.5 meter wide barren quartz-breccia vein. Minerals noted include; small stringers of galena, green mariposite-fuchsite mica, quartz, ankerite, calcite, manganese and iron oxides in a grey to black silicified rock. Located on the Camp Fault, N-S strike dipping east. Non-conductive, non-magnetic. 8.7 ppm Ag, 7339 ppm Pb, 947 ppm Zn. Ag:Pb ratio = 1:2.9

#JLR-6 Grab sample of a 1 meter wide mineralized alteration zone along the edge of a lamprophyre dike 10 meters south of JLR-5. Minor galena and sphalerite with quartz, ankerite, and calcite in a manganese and iron oxide altered silicified wallrock. The Camp Fault cuts quartz-biotite gneiss and quartzite in this area. Non-conductive and non-magnetic. 11.1 ppm Ag, 2.74% Pb, 1581 ppm Zn. Ag:Pb ratio = 1:8.4



Camp Fault Zone...cont.

#JLR-7 Grab sample of a 30 cm. pod of massive coarse galena with quartz, calcite, ankerite, cerrusite, manganese and iron oxides in a NE-striking, steeply dipping conjugate fracture system about 20 meters east of JLR-6. Conductive, non-magnetic. 13.48 oz/ton Ag, 63.4% Pb, 1319 ppm Zn, 381 ppm Sb. Ag:Pb ratio = 1:4.7

#JLR-21 Grab sample of dump rubble and subcrop near an old trench or pit in the marker marble unit adjacent to the Camp Fault. Fine to coarse-grained sheared galena and minor sphalerite, with quartz, calcite, ankerite, cerrusite, iron and manganese oxides in silicified rock. Non-magnetic, partially conductive. 9.98 oz/ton Ag, 48.1% Pb, 7204 ppm Zn, 228 ppm Sb, 226 ppb Au. Ag:Pb ratio = 1:4.8

#JLR-22 Grab sample of dump rubble and subcrop near some old trenches and pits in the marker marble unit about 30 meters east of JLR-21, possibly on a conjugate fracture system. Coarse yellow-green sphalerite and lesser galena in a manganese and iron oxidized silicified wallrock. Non-conductive, non-magnetic. 11.52 oz/ton Ag, 3.37% Pb, 43.4% Zn, 553 ppm Cd. Ag:Pb ratio = 1:0.29

### Copeland Extrusive Carbonatite

#JLR-8 Grab sample of bedded tuffaceous carbonatite located about 20 meters north (down section) of the marker marble unit near sample JLR-22. The bedded carbonatite unit may be more than 5 meters in thickness and is of regional extent. Published mineralogy includes; 80-90% calcite, phlogopite, biotite and muscovite micas, apatite, amphibole, plagioclase feldspar, dolomite, sphene, zircon, barite, strontianite, and graphite, with minor pyrrhotite, pyrite, magnetite, ilmenite, chalcopyrite, molybdenite, pyrochlore, allanite, and monazite. It is noted to carry high contents of La, Ce, Nd, Nb, Sr, Ba, Mn and others. Total niobium and rare earth contents may approach 1% combined. Non-conductive, rarely magnetic. ICP- 6.1 ppm Ag, 1773 ppm Pb, 577 ppm Zn, 1622 ppm Ba. REE assays - 69 ppm Y, 348 ppm Ce, 354 ppm La, 628 ppm Nd, 231 ppm Tm, 33 ppm Nb.

#JLR-9 Grab sample of a bedded carbonatite pyroclastic breccia near JLR-8, same mineralogy. The clasts are up to 30 cm. in size and are composed of albitite with biotite and phlogopite micas. Samples of the tuff, breccia, and clasts have been sent to Victoria for positive identification. ICP - 5.6 ppm Ag, 1825 ppm Pb, 136 ppm Zn, 2198 ppm Ba. REE assays - 84 ppm Y, 527 ppm Ce, 491 ppm La, 1209 ppm Nd, 626 ppm Tm, 115 ppm Gd, 112 ppm Sc, 72 ppm Nb.

North West Limb - Lake Zone

#JLR-10 Grab sample from the west end of the Lake Zone, a 30-50 cm. thick extension of the sedex sulphide horizon, which is continuously exposed for more than 400 meters in length. Host rock is a calc-silicate marble layer in grey micaceous porphyroblastic shist. The marble layer contains pinkish-orange pyralspite garnets, quartz, calcite, ankerite, and a gemmy green silicate mineral which may be tourmaline or chrome diopside. A specimen has been sent to Victoria for identification. Sulphide mineralization includes; galena, sphalerite and greenockite, with cerrusite, hydrozincite, manganese and iron oxide alterations. Non-conductive and non-magnetic. 9.48 oz/ton Ag, 18.6% Pb, 14.75% Zn, 690ppm Cd 320 ppm Sb. Ag:Pb ratio = 1:1.96

#JLR-11 Same sample type as JLR-10, located about 20 meters west, near a lamprophyre dike swarm and ankerite stockwork. 10.44 oz/ton Ag, 25.2% Pb, 15.2% Zn, 898 ppm Cd, 338 ppm Sb. Ag:Pb ratio = 1:2.4

#JLR-12 Same sample type as previous samples, located about midway along the exposed layer. The mineralized layer is distinctly banded in this area. 3.49 oz/ton Ag, 9.68% Pb, 22.1% Zn, 1055 ppm Cd, 168 ppm Sb. Ag:Pb ratio = 1:2.8

#JLR-13 Same sample type as previous samples, located at the east end of the exposed layer, adjacent to the Lake Fault. 3.5 oz/ton Ag, 11.3% Pb, 19.5% Zn, 773 ppm Cd, 149 ppm Sb. Ag:Pb ratio = 1:3.23

### South Limb - Cliff Zone

#JLR-14 Grab sample from a ±1 meter thick layer at the base of the over-turned Cliff Zone sedex ore horizon. The sulphide layer is hosted in a contorted calc-silicate marble layer in grey shists and gneiss, with a total thickness of 3-5 meters. Galena, sphalerite, pyrite, pyrrhotite, minor chalcopyrite, quartz, and possibly barite are concentrated near the base; the central ore section consists of massive pyrrhotite with lesser galena, sphalerite, pyrite, chalcopyrite, and watery grey quartz eyes; and an erratic silica cap of quartz and pyrite, with lesser pyrrhotite, galena, and sphalerite. Alteration is to manganese and iron oxides. Conductive and magnetic. 7.0 oz/ton Ag, 19.7% Pb, 15.45% Zn, 344 ppm Cd, 236 ppm Sb. Ag:Pb ratio = 1:2.8

#JLR-15 Grab sample from the quartz-pyrite rich upper layer on the Cliff ore zone, with lesser pyrrhotite, galena, and sphalerite. Located about 20 meters west of sample JLR-14. Magnetic and conductive. 4 ppm Ag, 2.68% Pb, 5.47% Zn, 139 ppm Cd, 22 ppm Sb. Ag:Pb ratio = 1:22.9

#JLR-16 Float sample of minor disseminated chalcopyrite, malachite, and iron oxide in quartz and calc-silicate marble. The host rock was found in place but is unmineralized where located. The calc-silicate band is located perhaps 50 meters up-section from the Cliff ore zone and is very similar to the ore host. Non-magnetic, non-conductive. 3189 ppm Cu.

### North East Limb

#JLR-17 Mixed grab sample from an old shallow adit on the sedex horizon, with three parallel sulphide layers up to 50 cm. thick, in several meters of calc-silicate marble and shist. The mineralization includes; galena, sphalerite and pyrrhotite, with quartz, calcite, possibly barite, iron and manganese oxides. Magnetic and conductive. 82 ppm Ag, 21.68% Pb, 5.47% Zn, 328 ppm Sb. Ag:Pb ratio = 1:9.1

#JLR-18 Grab sample from the sedex layer about 150 meters west of the adit. Up to 50 cm. thick layer of massive grey barite with finely disseminated galena in a calc-silicate marble and grey shist. Minor iron and manganese alteration. Non-magnetic, non-conductive. 88 ppm Ag, 12.7% Pb, 1555 ppm Zn, 409 ppm Sb, 37.8% Ba. Ag:Pb ratio = 1:4.96

#JLR-19 Waterfall Fault Zone. Grab sample of fine to coarse grained sheared galena, 25 cm. maximum width, occurring as a bedding plane replacement in the marker marble unit adjacent to the poorly exposed Waterfall Fault. Alteration includes cerrusite and bindheimite (Sb oxide), and minor manganese and iron oxides. Strong manganese alteration and disseminated galena was noted near the fault. Conductive and non-magnetic. 19.4 oz/ton Ag, 75.5% Pb, 759 ppm Zn, 380 ppm Sb. Ag:Pb ratio = 1:3.89

### North East Limb...cont.

#JLR-20 Grab sample of the sedex horizon near the Waterfall Fault, with up to 1 meter of massive, dark sphalerite in calc-silicate shist. Non-magnetic, non-conductive. 19 ppm Ag, 8042 ppm Pb, 46.3% Zn, 2401 ppm Cd. Ag:Pb ratio = 1:1.45

### North Copeland Ridge

#JLR-23 Grab sample from a silicified shear zone trending N-S dipping east, exposed for about 5 meters in width and 50 meters in length along a creek. The silicified zone contains disseminated pyrite and narrow quartz veins with pyrite and some arsenopyrite. Iron and manganese altered. Non-magnetic, non-conductive. 892 ppb Au, 12.4 ppm Ag, 2512 ppm Pb, 900 ppm Zn, 420 ppm Cd, 25196 ppm As.

#JLR-24 Grab sample of a silicified, pyritized 1-3 meter wide shear zone along a creek. Iron and manganese altered. Non-conductive, non-magnetic. 4.5 ppm Ag, 1016 ppm Pb, 2296 ppm Zn, 568 ppm As.

### West Zone

#JLR-25 Grab sample of the sedex horizon at the western end of the syncline, 2-4 meters thick with galena, sphalerite, barite, pyrite and pyrrhotite, with quartz and calcite in a contorted calc-silicate marble layer. Iron and manganese altered. Magnetic, conductive. 89 ppm Ag, 15% Pb, 2.43% Zn, 23% Ba, 149 ppm Sb. Ag:Pb ratio = 1:5.7

## JORDAN RIVER PROPERTY

### North East Limb

#RMR-1 Grab sample of medium to coarse grained galena, hosted in an impure marble occurring in a north/south trending fault zone. The sample showed minor cerrusite and strong manganese alteration. Sample was obtained from subcrop. 50.7 ppm Ag, 12.10% Pb, 523 ppm Zn

Ag:Pb ratio = 1:8.12

#RMR-2 Grab sample of a siliceous horizon immediately overlying the 0.50 meter Pb-Zn layer. Sample contained fine to medium grained galena, with disseminated pyrite and pyrrhotite. 17.3 ppm Ag, 3.51% Pb, 2584 ppm Zn

Ag:Pb ratio = 1:7.00

#RMR-3 Grab sample in the Pb-Zn layer. Sample showed pyrite, sphalerite, quartz with lesser pyrrhotite and galena. Heavy manganese and iron staining. RMR-3 taken 2 meters east of sample RMR-2. 8.3 ppm Ag, 5303 ppm Pb, and 4.97% Zn.

Ag:Pb ratio = 1:2.05

### North Copeland Ridge

#RMS-4 Silt sample of a stream in a north/south trending fault on the south facing slope of a ridge north of Copeland Creek. The silt was taken at an altitude of 4300 feet and at a bearing of 217 degrees from the lake in the valley.

## JORDAN RIVER PROPERTY

#RMS-5 Silt sample from the same creek at an altitude of 4500 feet.

#RMR-6 Grab sample of a quartz vein occurring in a fault that strikes 003 degrees and dips 55 degrees to the east. Quartz contained very fine grained disseminated sulphides. The exposed cross section of the vein measured 3 feet by 1 foot. The sample site was located at an elevation of 4820 feet on a west branch of the creek mentioned in RMS-4.

#RMR-7 Grab sample of hanging wall rock of fault described in RMR-6. Sample is of silicified grey green gneiss with 2% disseminated sulphides. Sample site is same location as RMR-6.

### Camp Fault Zone

#RMR-8 Grab sample of fault gouge taken in Camp Fault on the north facing slope of Mount Copeland at an elevation of 6300 feet. Sample was a limonitic stained, kaolinite altered siliceous dyke rock with quartz stringers parrallel to the fault. Fault orientation is 010 degrees with a 63 degree dip to the east.



JORDAN RIVER PROPERTY

APPENDIX II  
SAMPLE RESULTS



**MIN-EN LABORATORIES**  
 (DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS  
 CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

**VANCOUVER OFFICE:**  
 705 WEST 15TH STREET  
 NORTH VANCOUVER, B.C. CANADA V7M 1T2  
 TELEPHONE (604) 980-5814 OR (604) 988-4524  
 FAX (604) 980-9621

**THUNDER BAY LAB.:**  
 TELEPHONE (807) 622-8958  
 FAX (807) 623-5931

**SMITHERS LAB.:**  
 TELEPHONE/FAX (604) 847-3004

*Assay Certificate*

0V-1454-RA2

Company: **EQUINOX RES/LAIRD EXPL.**  
 Project: 237 JORDAN RIVER  
 Attn: R.BEATY/J.LAIRD

Date: **SEP-20-90**  
 Copy 1. EQUINOX RESOURCES, VANCOUVER, B.C.  
 2. LAIRD EXPL., NORTH VANCOUVER, B.C.

**We hereby certify** the following Assay of 19 ROCK samples submitted SEP-14-90 by J.LAIRD.

Sample Number	AG g/tonne	AG oz/ton	PB %	ZN %
JLR 01	298.0	8.69	40.30	3.45
JLR 02	285.0	8.31	41.20	
JLR 03	294.0	8.58	45.50	
JLR 04	261.0	7.61	16.10	26.60
JLR 06			2.74	
JLR 07	462.0	13.48	63.40	
JLR 10	325.0	9.48	18.60	14.75
JLR 11	358.0	10.44	25.20	15.20
JLR 12	119.5	3.49	9.68	22.10
JLR 13	120.0	3.50	11.30	19.50
JLR 14	240.0	7.00	19.70	15.45
JLR 15			2.68	5.47
JLR 17			21.68	5.47
JLR 18			12.70	
JLR 19	665.0	19.40	75.50	
JLR 20				46.30
JLR 21	342.0	9.98	48.10	
JLR 22	395.0	11.52	3.37	43.40
JLR 25			15.00	2.43

Certified by

MIN-EN LABORATORIES

COMP: EQUINOX RES/LAIRD EXPL.  
 PROJ: 237 JORDAN RIVER  
 ATTN: R.BEATY/J.LAIRD

MIN-EN LABS — ICP REPORT  
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2  
 (604)980-5814 OR (604)988-4524

FILE NO: OV-1454-RJ1  
 DATE: 90/09/20  
 \* ROCK \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	U PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU PPM
JLR 01	218.1	760	1	6	70	.1	2	800	97.5	17	6130	126840	600	1	1060	27477	3	10	32	90	53224	283	34	1	1	12.6	20745	1	2	1	1	57
JLR 02	232.4	970	1	5	84	.1	3	430	32.1	15	5340	136120	690	1	830	29528	1	10	38	160	52646	293	22	1	1	12.6	7008	1	2	1	1	38
JLR 03	290.1	310	1	1	87	.1	5	310	58.9	9	967	55730	150	1	380	15114	13	10	22	170	61223	384	27	1	1	5.5	11894	1	2	1	9	20
JLR 04	255.2	4910	90	25	105	.7	10	5550	1503.0	19	55	48680	1030	3	2320	2466	23	60	8	430	54564	241	44	1	1	10.2	199591	1	6	2	2	144
JLR 05	8.7	6620	3	1	1492	2.8	2	55830	2.4	19	37	44750	4010	5	28230	4300	1	70	25	7490	7339	14	649	1	4	60.5	947	1	3	1	44	18
JLR 06	11.1	2630	1	1	98	.1	4	15780	7.7	18	14	60670	2220	1	5030	14705	10	10	55	340	19268	25	19	1	1	19.1	1585	1	2	1	48	1
JLR 07	396.2	420	132	1	53	.1	3	17490	18.2	8	12	40870	280	1	2510	10003	4	10	34	90	58591	381	44	1	1	5.7	1319	1	2	1	1	29
JLR 08	6.1	12290	39	1	1622	1.4	5	77580	.8	10	18	22560	10150	18	22460	423	2	1380	12	400	1773	1	153	1	4	76.0	577	5	1	1	49	4
JLR 09	5.6	18690	1	1	2198	.1	5	73170	.1	11	13	29400	10150	34	27420	2175	3	1770	18	1600	1825	1	899	1	6	44.8	136	1	2	1	51	7
JLR 10	306.6	26690	37	12	215	.5	9	15720	689.9	15	86	30820	3270	11	6660	1466	16	370	17	380	56570	320	37	1	1	25.3	112296	1	3	1	47	130
JLR 11	332.3	8890	79	13	162	1.4	8	4360	898.3	22	302	41820	1550	8	6500	1203	17	20	18	430	60972	338	32	1	1	16.9	122601	1	4	1	18	78
JLR 12	120.6	15780	66	22	204	.2	9	14420	1055.2	17	152	44540	1460	5	4700	3184	19	550	18	470	57150	168	46	1	1	16.7	171665	1	4	1	40	74
JLR 13	116.8	25850	65	16	227	.6	9	21340	773.2	17	50	35440	2820	7	6420	1857	17	260	15	320	58039	149	48	1	1	16.8	135167	1	4	1	38	70
JLR 14	206.2	810	162	16	25	.8	7	2230	344.0	33	36	106990	330	1	870	615	16	10	1	320	51148	236	20	1	1	4.7	131186	1	4	1	1	51
JLR 15	4.0	680	28	7	33	.9	1	450	139.2	19	110	133760	140	1	230	141	4	10	1	80	17663	22	10	1	1	24.8	50404	1	3	1	17	12
JLR 16	1.8	550	40	1	8	.1	1	100	1.6	9	3189	13170	190	1	60	52	1	10	14	10	608	5	1	1	1	1.2	560	1	1	1	157	3
JLR 17	81.8	6420	7	10	117	.1	2	11310	59.3	21	771	152620	320	1	650	1052	20	20	1	130	51228	328	130	1	1	12.8	56543	1	5	1	1	30
JLR 18	87.8	670	70	1	202	.2	2	1170	9.7	6	319	15010	20	1	30	51	5	10	12	60	83813	409	578	1	3	1.8	1555	1	2	1	8	61
JLR 19	614.3	90	47	1	43	.1	6	380	13.1	1	55	7280	30	1	50	2678	4	10	4	50	140445	380	67	1	1	1.4	759	1	1	1	6	80
JLR 20	19.0	230	73	48	84	.5	13	540	2401.4	19	63	60810	60	1	390	3813	29	10	7	640	8042	68	47	1	1	2.6	261971	1	5	9	1	80
JLR 21	322.6	600	29	1	162	.1	64	70	27.4	6	449	56960	240	1	70	6034	5	10	1	180	56106	228	15	1	1	5.6	7204	1	2	1	1	226
JLR 22	320.0	990	48	34	198	.1	11	860	553.1	19	412	45650	140	1	680	9587	25	10	23	610	19294	89	33	1	1	6.4	220195	1	5	5	2	44
JLR 23	12.4	960	25156	4	44	.1	14	17230	420.5	48	60	153230	1300	1	4220	5408	1	10	1	70	2512	21	33	1	1	3.9	900	1	3	1	1	892
JLR 24	4.5	3020	568	1	65	1.0	4	1860	9.7	25	25	54500	3650	1	210	178	1	30	1	960	1016	4	5	1	1	4.0	2296	1	1	1	65	89
JLR 25	89.4	970	257	2	84	.5	3	13130	65.0	18	326	62420	80	1	310	387	4	10	2	100	58815	149	151	1	1	7.7	15078	1	3	1	19	36



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 FAX (604) 980-9621

**THUNDER BAY LAB.:**  
 TELEPHONE (807) 622-8958  
 FAX (807) 623-5931

**SMITHERS LAB.:**  
 TELEPHONE/FAX (604) 847-3004

Geochemical Analysis Certificate

OV-1454-RG2

Company: **EQUINOX RES/LAIRD EXPL.**  
 Project: 237 JORDAN RIVER  
 Attn: R.BEATY/J.LAIRD

Date: **SEP-28-90**

Copy 1. EQUINOX RESOURCES, VANCOUVER, B.C.  
 2. LAIRD EXPL., NORTH VANCOUVER, B.C.

*We hereby certify* the following Geochemical Analysis of 2 ROCK samples submitted SEP-14-90 by J.LAIRD.

Sample Number	Y PPM	CE PPM	EU PPM	LA PPM	ND PPM	TM PPM	GD PPM	SC PPM	DY PPM	ER PPM	HO PPM	NB PPM
JLR 08	69	348	23	354	628	231	80	68	15	32	7	33
JLR 09	84	527	39	491	1209	626	115	112	37	63	12	72

Certified by \_\_\_\_\_

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 FAX (807) 623-5931

**SMITHERS LAB.:**  
 TELEPHONE/FAX (604) 847-3004

Assay Certificate

OV-1454-RA1

Company: **EQUINOX RES/LAIRD EXPL.**  
 Project: 237 JORDAN RIVER  
 Attn: R.BEATY/J.LAIRD

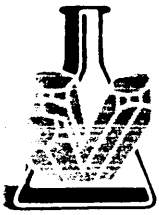
Date: **SEP-21-90**  
 Copy 1. EQUINOX RESOURCES, VANCOUVER, B.C.  
 2. LAIRD EXPL., NORTH VANCOUVER, B.C.

*We hereby certify* the following Assay of 2 ROCK samples  
 submitted SEP-14-90 by J.LAIRD.

Sample Number	BA %
JLR 18	37.80
JLR 25	23.00

Certified by \_\_\_\_\_

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FAX (604) 980-9621

**THUNDER BAY LAB.:**  
TELEPHONE (807) 622-8958  
FAX (807) 623-5931

**SMITHERS LAB.:**  
TELEPHONE/FAX (604) 847-3004

*Assay Certificate*

OV-1455-RA1

Company: **EQUINOX RES./LAIRD EXPL.**  
Project: 237 JORDAN RIVER  
Attn: R. BEATY/J. LAIRD

Date: **SEP-20-90**  
Copy 1. EQUINOX RESOURCES, VANCOUVER, B.C.  
2. LAIRD EXPLORATION, NORTH VAN., B.C.

*We hereby certify the following Assay of 3 ROCK samples  
submitted SEP-14-90 by J.LAIRD.*

Sample Number	PB %	ZN %
RMR 1	12.10	
RMR 2	3.51	
RMR 3		4.97

Certified by \_\_\_\_\_

**MIN-EN LABORATORIES**







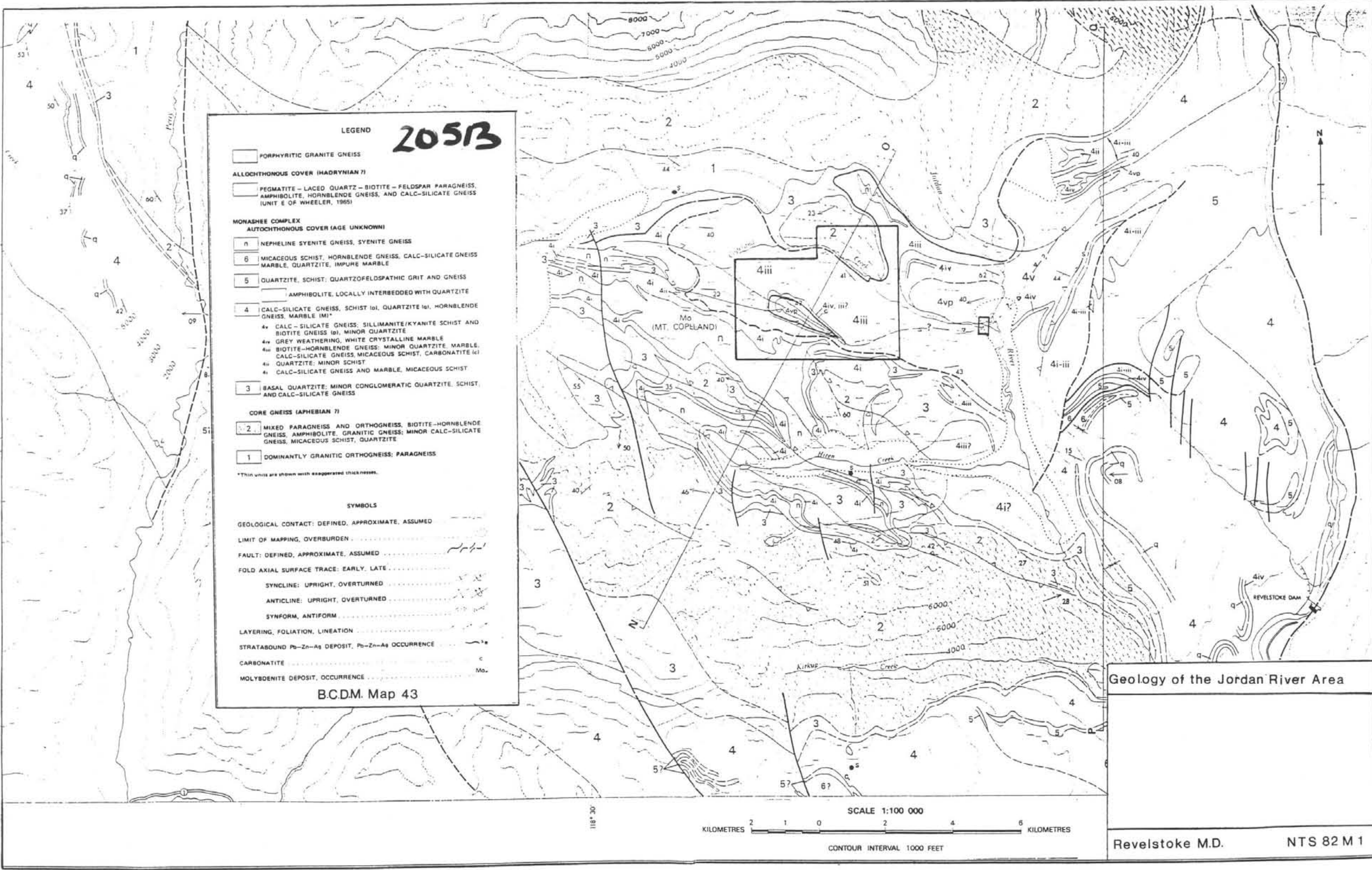
## JORDAN RIVER PROPERTY

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**LEGEND** 205B

**PORPHYRITIC GRANITE GNEISS**

**ALLOCHTHONOUS COVER (HADRYNIAN ?)**

PEGMATITE - LACED QUARTZ - BIOTITE - FELDSPAR PARAGNEISS, AMPHIBOLITE, HORNBLende GNEISS, AND CALC-SILICATE GNEISS (UNIT E OF WHEELER, 1965)

**MONASHEE COMPLEX**

**AUTOCHTHONOUS COVER (AGE UNKNOWN)**

n NEPHELINE SYENITE GNEISS, SYENITE GNEISS

6 MICACEOUS SCHIST, HORNBLende GNEISS, CALC-SILICATE GNEISS, MARBLE, QUARTZITE, IMPURE MARBLE

5 QUARTZITE, SCHIST, QUARTZOFELDSPATHIC GRIT AND GNEISS, AMPHIBOLITE, LOCALLY INTERBEDDED WITH QUARTZITE

4 CALC-SILICATE GNEISS, SCHIST (q), QUARTZITE (q), HORNBLende GNEISS, MARBLE (m)\*

4v CALC-SILICATE GNEISS, SILLIMANITE/KYANITE SCHIST AND BIOTITE GNEISS (q), MINOR QUARTZITE

4w GREY WEATHERING, WHITE CRYSTALLINE MARBLE

4iii BIOTITE-HORNBLende GNEISS: MINOR QUARTZITE, MARBLE, CALC-SILICATE GNEISS, MICACEOUS SCHIST, CARBONATITE (c)

4ii QUARTZITE: MINOR SCHIST

4i CALC-SILICATE GNEISS AND MARBLE, MICACEOUS SCHIST

3 BASAL QUARTZITE: MINOR CONGLOMERATIC QUARTZITE, SCHIST, AND CALC-SILICATE GNEISS

**CORE GNEISS (APHEBIAN ?)**

2 MIXED PARAGNEISS AND ORTHOGNEISS, BIOTITE-HORNBLende GNEISS, AMPHIBOLITE, GRANITIC GNEISS; MINOR CALC-SILICATE GNEISS, MICACEOUS SCHIST, QUARTZITE

1 DOMINANTLY GRANITIC ORTHOGNEISS: PARAGNEISS

\*Thin units are shown with exaggerated thicknesses.

**SYMBOLS**

GEOLOGICAL CONTACT: DEFINED, APPROXIMATE, ASSUMED

LIMIT OF MAPPING, OVERBURDEN

FAULT: DEFINED, APPROXIMATE, ASSUMED

FOLD AXIAL SURFACE TRACE: EARLY, LATE

SYNCLINE: UPRIGHT, OVERTURNED

ANTICLINE: UPRIGHT, OVERTURNED

SYNFORM, ANTIFORM

LAYERING, FOLIATION, LINEATION

STRATABOUND Pb-Zn-Ag DEPOSIT, Pb-Zn-Ag OCCURRENCE

CARBONATITE

MOLYBDENITE DEPOSIT, OCCURRENCE

**BCDM. Map 43**

**Geology of the Jordan River Area**

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Revelstoke M.D. NTS 82 M 1

SCALE 1:100 000

KILOMETRES 2 1 0 2 4 6 KILOMETRES

CONTOUR INTERVAL 1000 FEET

# 20,513


LEGEND

SULPHIDE LAYER  MARBLE / CARBONITITE LAYER 

UNIT 4 BIOTITE SILLIMANITE SCHIST

UNIT 5 CALC SILICATE GNEISS

UNIT 6 GREY GNEISS AND SCHIST

DRILL SITES 

FAULTS 

SAMPLE SITES 

