ASSESSMENT REPORT

LORY 1 AND GRACE 1 CLAIMS

VERNON MINING DIVISION

82L/6E

Lat: 50° 17' N

Long: 119° 10' W

Owner: King Graybarr Resources Ltd.

Authors: C.E.Fipke
E.R. Capell

Kelowna, B.C.
26 April 1984

CONTENTS

INTRODUCTION

Mr. Dave King of King Graybarr Resources Ltd. requested C.F. Mineral Research Ltd. of Kelowna, B.C. to complete a heavy mineral geochemical survey on the Lory 1 and Grace 1 claims (Record numbers 1179 and 1180, Vernon Mining Division).

LOCATION AND ACCESS

The Lory and Grace claims are located on the north side of Vernon Hill approximately 3 miles east of the city of Vernon. (Figure 1) Access to the claims is available on numerous ranch and logging roads which transect the area and paved roads extend to within 2 miles of the claims. The use of a 4-wheel drive vehicle is preferred on the property due to several steep pitches and washed out grades. Winter operation would require continuous maintenance and snow removal.

TOPOGRAPHY AND VEGETATION

According to C.T. Pasieka, P.Eng.:

"The surface presented by the property is that of a rolling elevated plateau sometimes deeply incised by creek valleys with a general westerly drainage. Elevations vary from 3200' to 4200' ASL. Overburden cover is extensive with the exception of small areas resulting from mineral exploration or logging operations, so that outcrop available for geological observation is necessarily limited. Vegetative cover is extensive and consists of fir, spruce and cedar, with lesser amounts of alder and poplar. The timber available would necessarily be graded as sub-commercial, however probably sufficient for mining purposes. The creeks transecting the property are seasonal so that water for exploration purposes would be in short supply during the late summer."

GEOLOGY AND MINERALIZATION

According to C.T. Pasieka, P. Eng.:

"In the main the area of the property is underlain by Archean rocks and locally represented by members of the Shuswap Metamorphic Complex, consisting of granitoid gneiss, mica-sillimanite-garnet schist, quartzite, hornblend gneiss and slate phyllites with minor re-crystallized limestone. The basement rocks are in fault contact with rocks of Carboniferous age, and locally represented by an extensive carbonaceous argillite. Immediately without the limits of the property occur members as stocks or bosses of Coast Intrusives, namely, granodiorite, diorite, and minor syenite. On occasion may be found remnants of Kamloops Volcanics of Tertiary Age, consisting of basaltic lavas and rhyolyite breccias.

The main structural feature observed on the property is the south end of the Vernon-Slcamous Fault forming in part the contact between the Precambrian rocks and members of the Carboniferous Series. Locally, both the Carboniferous and the Precambrian rocks are highly distorted and where ruptured have been subject to intense silicification in the form of the box-works of quartz veins varying from a few inches to several feet in width. These quartz veins tend to occur in random orientation with no apparent regional uniformity.

Four discreet zones of mineralization are known to date on the property. These are disignated the Proctor, Rotar, King and the quartz diorite zone.

The Proctor and Rotar zones occur in dark carbonaceous argillite frequently transected in various directions by quartz veins varying from a few inches up to a few feet in width. These quartz veins contain knots and blebs of massive galena with lesser blebs of sphalerite.

The King mineral zone consists of a shear zone varying from a few inches to four feet wide containing pyrite, arsenopyrite and blebs and streaks of molybdenum disulphide.

To the northeast of the King mineral zone occurs the quartz diorite copper sulphide zone. This occurance consists of a small outcrop of quartz diorite containing disseminated chalcopyrite. "

HISTORY

According to C.T. Pasieka, P. Eng.:

"The early history of the property is not well known, however evidence of prospecting activity is available by way of old sluffed-in trenches. Work commenced in the area under the auspices of Vernon Copper limited, in 1966. It is reported that a grid was laid out over the property and some geophysics and geochemistry carried out. Two bulk shipments of silver-lead ore were made in 1966. The first comprising 4.24 tons yielded a gross value of $320.10. A second shipment of approximately five tons was shipped to another smelter, however settlement records are not available. In the latter part of 1968 the property was taken over by King Graybarr Mines Ltd. and further work carried out in the form of trenching, sampling, minor diamond drilling and airborne magnetics. In 1975 geological mapping and wide-spaced percussion drilling was carried out by Canadian Superior Exploration Ltd. More recently, Kandahar Resources Ltd. have carried out additional stripping and sampling within the limits of the property."

Reports detailing previous geophysical and geochemical exploration work, geological mapping and percussion drilling and sampling were not available to make a study of the results.

METHODOLOGY

Mr Stan Emerson of C.F. Mineral Research Ltd. visited the claims with Mr. David King of King Graybarr Resources Ltd. on November 22 and 23, 1983 and they collected 13 bulk heavy mineral stream sediment samples at sites previously selected by geologist C.E. Fipke. Sample sites are shown on Figure 2. A bulk talus sample was also collected (Sample B194) at the northern side of the Lory 1 claims.

The samples were transported by road to the C.F. Mineral Research Laboratory situated in Kelowna, B.C. The bulk stream and soil samples were washed, wet sieved and jigged. About 3000 gms of -35+60 mesh and all the -60 mesh concentrates were dried and submitted to a tetrabromoethane and a methylene iodide heavy liquid separation using double 0.5 micron filtration. The heaviest -35+150 mesh and -150 mesh fractions for all samples were electromagnetically separated into magnetic, weakly (para) magnetic and non magnetic concentrates. The intermediate (S.G. 2.9 - 3.2) -35+150 mesh and -150 mesh fractions of sample B192 were similarly electromagnetically separated to produce magnetic, weakly magnetic and non magnetic concentrates to be used for orientation purposes. All concentrates were weighed to 0.02 gm accuracy. The coarse heavy non-magnetic fractions were scanned to detect the presence of scheelite using an ultra violet lamp.

All the fine heavy non-magnetic fractions were vialed, tare weighed to 0.001 gm and sent to N.A.S. in Hamilton, Ontario for gold analysis. The coarse heavy non-magnetic fractions were submitted to Bondar-Clegg in Vancouver to be geochemically analysed for Cu-Pb-Zn-Ag-Mo-Sn and gold. In addition the fine heavy non-magnetic fraction of sample B192 was analysed for Ba-As-Sb-W and all the para-magnetic fractions for this sample were submitted for As and Sb analysis. The coarse para-magnetic fractions of B192 were also sent to Bondar-Clegg for Cu-Pb-Zn-Ag-Mo analysis.

RESULTS

Scheelite grain counts are shown on Table 1 with sample concentrate weights. None of the samples contained anomalous amounts of scheelite. N.A.S. analytical results for gold in the fine heavy non-magnetic concentrates and the Bondar-Clegg results for Cu-Pb-Zn-Ag-Mo-Sn-Au are shown on Table 2. These results have also been plotted on a map of the claims area (Figure 3).

There is very little data on background values for Au, Ag or base metals immediately available for the general area.

According to Mr. Ken Daughtry of Daughtry and Associates Ltd. based in Vernon, B.C. background values for Au in the Vernon area in -60 HN concentrates appear to range up to 500 p.p.b. Au. Values between 500 and 5,000 p.p.b. Au are considered to be either high threshold in the vicinity of mineralization or possibly weakly anomalous. Values greater than 5,000 p.p.b. Au are considered to be definitely anomalous. C.F. Mineral Research would anticipate that the background and threshold ranges provided by Mr. Daughtry for -60 HN fractions would not vary by more than ±100 p.p.b. for -150 HN or -35+150 HN concentrates. Values greater than 0.2 p.p.m. Ag are considered to be anomalous and base metal threshold values are believed to be about 70 p.p.m. Cu, 50 p.p.m. Pb, 100 p.p.m. Zn and 7 p.p.m. Mo. No data is available for background or threshold values for Sn, As or Sb in this type of area.

The -35+150 HN concentrates for the stream samples in the central claims area all contained weakly to moderately anomalous amounts of silver and gold with the exception of B185 which was only anomalous in silver. Samples B183, B184, B187 and B188 were all definitely anomalous with B184 and B188 containing strongly anomalous Au and Ag values. Copper values were weakly anomalous in four adjacent samples in the south central claims area and sample B183 contained a strongly anomalous Pb value. Zinc values were generally background with very weakly anomalous values in samples B190 and B193. Anomalous molybdenum values were found in samples B184 and B185. As the Sn values in samples B184 and B185 are significantly higher than Sn in the other samples these values are possibly also weakly anomalous.

Gold values in the -150 HN concentrates were all weakly to moderately anomalous or high local threshold in the vicinity of mineralization. Samples B181, B185 and B193 were definitely anomalous and samples B182, B183, B187 and B189 contained strongly anomalous values.

The IP and HP fractions of sample B192 contained weakly anomalous Cu, Zn, Ag and Mo values but none of these elements were anomalous in the -35+150 HN fraction of this sample. The HP fraction was found to contain higher base metal values than the IP fraction but Ag apparently concentrated in the IP fraction. The As and Sb values in the coarse and fine HP and IP and the -150 HN concentrates are believed to be background levels. Analytical results of 0.15% Ba and 26 p.p.m. W were obtained in the -150 HN concentrates of B192. These were not considered to be anomalous.

DISCUSSION OF RESULTS AND CONCLUSIONS AND RECOMMENDATIONS

Strongly anomalous gold and silver values in the central claims area indicate possible lode gold/silver mineralization upstream from samples B184 and B188. The geochemistry is more consistent with Au-Ag lode deposits than epithermal micron deposits that are characteristically much higher in elements such as As and Sb.

It is unlikely that the anomalous Au, Ag or base metal values obtained in the central claims area are associated with the exposed mineralization in the western claims area which drains to the west, but the weakly anomalous Cu-Zn-Ag-Mo values found in the IP and HP fractions of B192 and the weak value for Zn in B193 could be dispersion from the previously exposed Pb-Zn-Cu-Mo mineralization.

An aerial magnetometer survey carried out in 1969 indicated several magnetic anomalies in the central part of the claims as shown on Figure 4. Except for anomalies 'C' and 'D' all these magnetic anomalies occur in drainage areas upstream from the anomalous stream samples. Anomalies 'C' and 'D' are drained by streams flowing eastward and northward which were not sampled in the present sampling programme.

A follow-up sampling programme should be undertaken to further explore the coincident magnetic and stream anomalies. This should take the form of geochemical soil sampling on lines perpendicular to the local drainage. Streams draining the magnetic anomalies 'C' and 'D' should also be sampled and the samples submitted for heavy mineral concentration and analysis in order to determine whether there are silver/gold or base metal anomalous values in these areas. As the base metals of B192 are are most concentrated in the -35+150 HP (goethitic and hematitic oxide) fraction rather than in the -35+150 HN (sulphide) fraction, the -35+150 HP concentrates for the remaining 13 unanalysed samples should be analysed for Cu-Pb-Zn-Ag-Mo base metals. The unanalysed IP fractions for these 13 samples could also be analysed for silver.

APPENDIX A

Statement of Expenditures for Lory 1 and Grace Claims, Vernon Hill

- 2 days field collection (November 22 & 23, 1983) by C.F. Mineral Research professional prospector and sampler, Stan Emerson	$300.00
- 2 days wages of assistant Dave King	$200.00
- 4 wheel drive rental 2 days @ $55.00/day	$110.00
- expense allowance of above 4 days @ $25.00 /day	$100.00
- other expenses gasoline, maps, prelabelled plastic bags etc.	$ 60.00
- additional laboratory wet sieving of dry samples by Stan Emerson	$150.00
- Sample processing 14 bulk ±10 Kg samples (B181-B194) through multistage washing, sizing, semigravity concentration; processing ±3000 gms -35+60 and all -60 mesh through a tetrabromoethane and a methylene iodide heavy liquid separation using double 0.5-1.0 micron filtration; processing the heaviest -35+150 and -150 mesh concentrates through 6 electromagnetic separations @ quoted price $90.00 each	$1,260.00
- making additional -30+150 IM, IP, IN and -150 IM, IP, IN for B192	$ 10.00
- weighing 90 concentrates to ±0.02 gm tare accuracy @ $0.50 each	$ 45.00
- vialing 18 concentrates and tare weighing to 0.003 gm accuarcy @ $1.75 each	$ 31.50
- prepaid courier services to N.A.A., Hamilton and Bondar Clegg, Vancouver	$ 34.50
- analytical costs N.A.A. and Bondar Clegg	$390.00
- quote price for geologist organization of field sampling, preparation and analysis; organization and writing and drafting of report	$1,200.00

- proof reading and typing of report	$120.00
- copying and materials of report and telephone calls ($22.18) to Dave King in Vernon	$ 59.18
	$4,070.18

Please apply any excess credits granted to P.A.C. account of D. King

APPENDIX B

STATEMENT OF QUALIFICATIONS

The accompanying report and geochemical analysis was completed by geologists R. Capell and C. Fipke of C.F. Mineral Research Ltd.

Mrs Rosemary Capell is a 1965 BSc graduate of University College of Rhodesia. Between 1966 and 1975 Mrs Capell worked for Anglo American in Rhodesia chiefly on base metal geochemistry.

C. Fipke is a BSc Honors Geology graduate of the University of British Columbia. Between 1970 and 1977, C. Fipke worked as a geologist involved to a large extent in heavy mineral exploration and research for Kennecott Copper in New Guinea, Samedan Oil in Australia, Johannesburg Consolidated Investments in Southern Africa and Cominco Ltd. in Brazil and British Columbia. C. Fipke and L.M. Fipke organized C. F. Mineral Research Ltd. in 1977. Currently the C.F. Mineral Research heavy mineral laboratory which employes 25 to 35 people is involved in heavy mineral exploration and processing on behalf of many international companies.

C.F. MINERAL RESEARCH LIMITED
263 LAKE AVENUE
KELOWNA, BRITISH COLUMBIA
CANADA V1Y 5W6

83-144

TABLE 1

SAMPLE NO.	Net Wt *(gms)	Grains of Scheelite ? Blue-white S.W. & 'dead' L.W. Fluorescence	Possible Powellite ? Yellow S.W. & 'dead' L.W. Fluorescence	Others
B-181				
-35+150 HM	3.07			
HP	18.16			
HN	3.96	±3		
-150 HM	0.92			
HP	1.96			
HN	1.14			
Orig. Wt. Kg.	34.8			
B-182				
-35+150 HM	3.73			
HP	34.33			
HN	13.55	±2		
-150 HM	1.24			
HP	2.16			
HN	1.73			
Orig. Wt. Kg.	32.4			

SAMPLE NO.	Net .Wt *(gms)	Grains of Scheelite ? Blue-white S.W. & 'dead' L.W. Fluorescence	Possible Powellite ? Yellow S.W. & 'dead' L.W. Fluorescence	Others
B-183				
-35+150 HM	3.85			
HP	60.14			
HN	10.80	±3		
-150 HM	1.30			
HP	5.33			
HN	2.69			
Orig. Wt. Kg.	12.7			
B-184				
-35+150 HM	0.74			
HP	15.76			
HN	4.28	NIL		
-150 HM	0.21			
HP	1.38			
HN	0.91			
Orig. Wt. Kg.	22.0			

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B- 185					B- 187				
-35+150 HM	0.72				-35+150 HM	6.07			
HP	12.98				HP	76.24			
HN	3.52	± 3			HN	24.17	± 6		
-150 HM	0.19				-150 HM	0.96			
HP	0.97				HP	2.64			
HN	0.68				HN	2.60			
Orig. Wt. Kg.	22.5				Orig. Wt. Kg.	8.8			
B- 186					B- 188				
-35+150 HM	2.19				-35+150 HM	6.19			
HP	16.26				HP	56.33			
HN	4.30	NIL			HN	20.38	± 4		
-150 HM	0.64				-150 HM	2.11			
HP	1.15				HP	3.93			
HN	0.54				HN	3.55			
Orig. Wt. Kg.	26.6				Orig. Wt. Kg.	8.0			

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TABLE 1

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B-189				
-35+150 HM	6.27			
HP	93.79			
HN	32.82	±2		
-150 HM	1.48			
HP	4.79			
HN	3.78			
Orig. Wt. Kg.	10.6			
B-190				
-35+150 HM	6.55			
HP	29.08			
HN	13.93	NIL		
-150 HM	1.74			
HP	3.11			
HN	2.13			
Orig. Wt. Kg.	28.2			

SAMPLE NO.	Net Wt *(gms)	Grains of Scheelite ? Blue-white S.W. & 'dead' L.W. Fluorescence	Possible Powellite ? Yellow S.W. & 'dead' L.W. Fluorescence	Others
B-191				
-35+150 HM	7.72			
HP	83.41			
HN	46.12	±4		
-150 HM	1.72			
HP	4.76			
HN	4.54			
Orig. Wt. Kg.	10.6			
B-192				
-35+150 HM	5.88			
HP	72.69			
HN	32.59	±4		
IM	0.49			
IP	7.77			
IN	97.32			
-150 HM	2.26			
HP	6.58			
HN	5.54			
IM	0.05			
IP	2.48			
IN	6.18			

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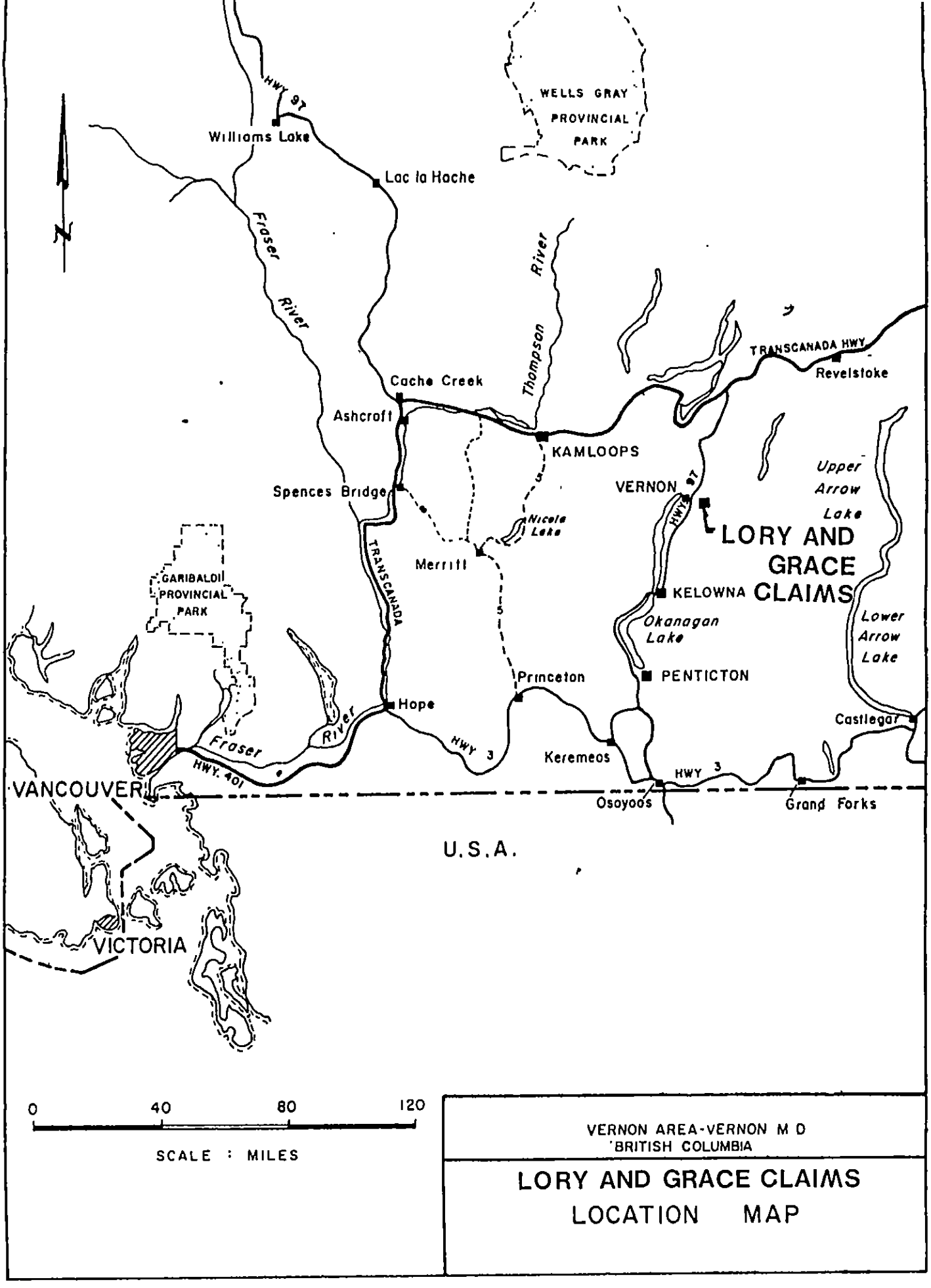
B- 193					B-				
-35+150 HM	1.07				-35+150 HM				
HP	29.93				HP				
HN	8.46	±2			HN				
-150 HM	0.64				-150 HM				
HP	3.82				HP				
HN	2.21				HN				
Orig. Wt. Kg.	23.1				Orig. Wt. Kg.				
B- 194					B-				
-35+150 HM	1.17				-35+150 HM				
HP	12.87				HP				
HN	11.97	NIL			HN				
-150 HM	1.38				-150 HM				
HP	3.41				HP				
HN	3.06				HN				
Orig. Wt. Kg.	13.7				Orig. Wt. Kg.				

TABLE 2

ANALYTICAL RESULTS

Sample	-150 HN Au ppb	-35+150 HN Au ppb	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Mo ppm	Sn ppm
B181	5800	300	39	6	45	1.2	3	33
B182	26000	3190	50	13	40	1.4	3	5
B183	13000	7035	71	800	40	1.4	6	20
B184	3500	15350	124	37	42	3.4	14	81
B185	8900	155	173	40	41	1.8	14	56
B186	710	2000	30	20	61	0.8	<1	16
B187	35000	5770	80	17	50	0.6	5	26
B188	3200	15500	29	10	58	2.1	1	<5
B189	12000	3030	35	11	40	1.6	2	14
B190	3400	1145	37	15	100	0.6	3	6
B191	2200	1810	44	11	70	<0.2	3	5
B192	2200	160	27	7	47	<0.2	1	11
B193	7200	790	19	4	122	0.5	<1	8
B194	310	25	19	110	40	<0.2	1	<5

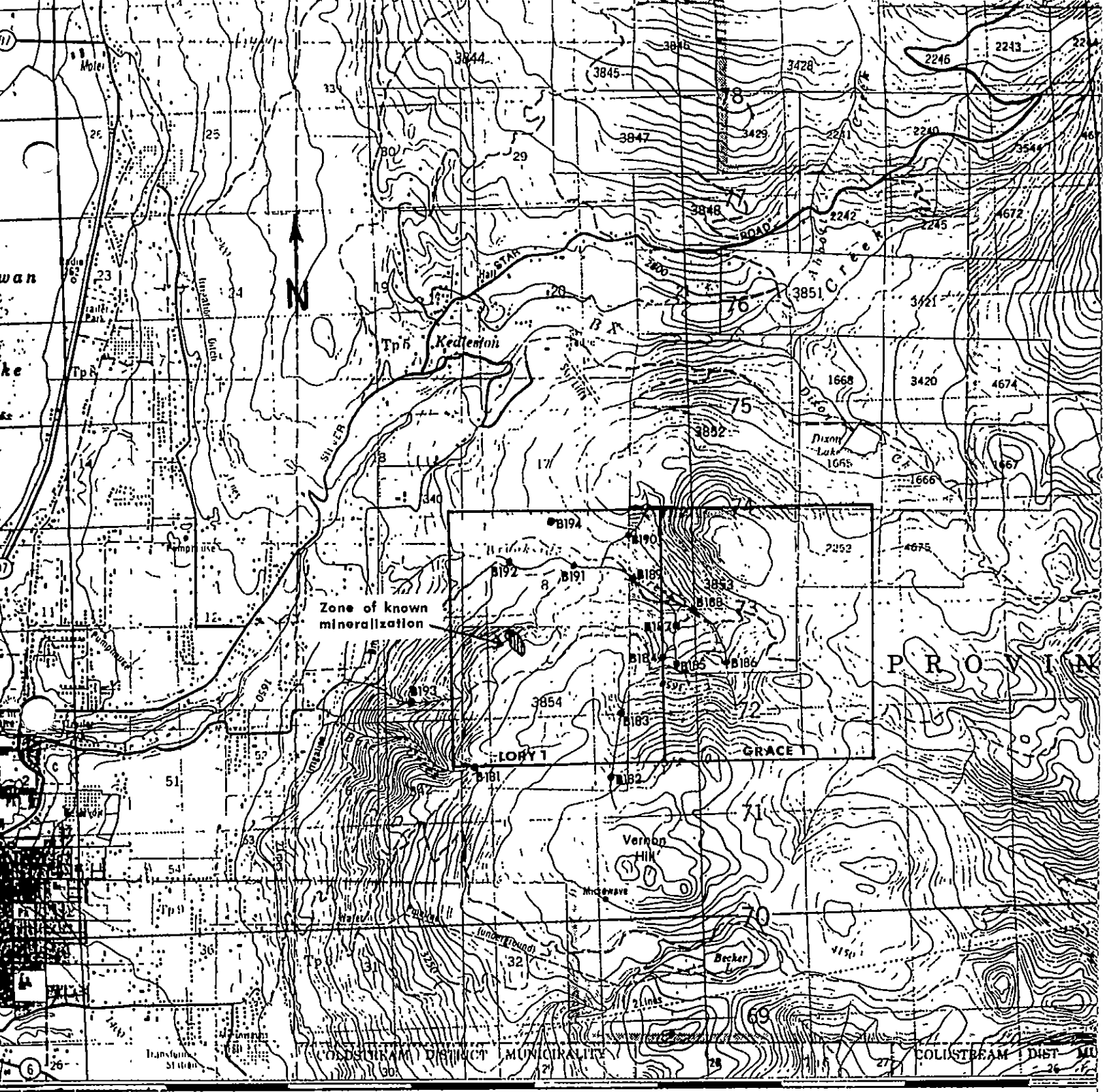
B192:	As ppm	Sb ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Mo ppm
-35+150IP	25	3	90	20	161	2.0	9
-35+150HP	58	11	102	38	195	0.6	13
-150IP	11	1					
-150HP	27	3					



VERNON AREA-VERNON M D
BRITISH COLUMBIA

LORY AND GRACE CLAIMS
LOCATION MAP

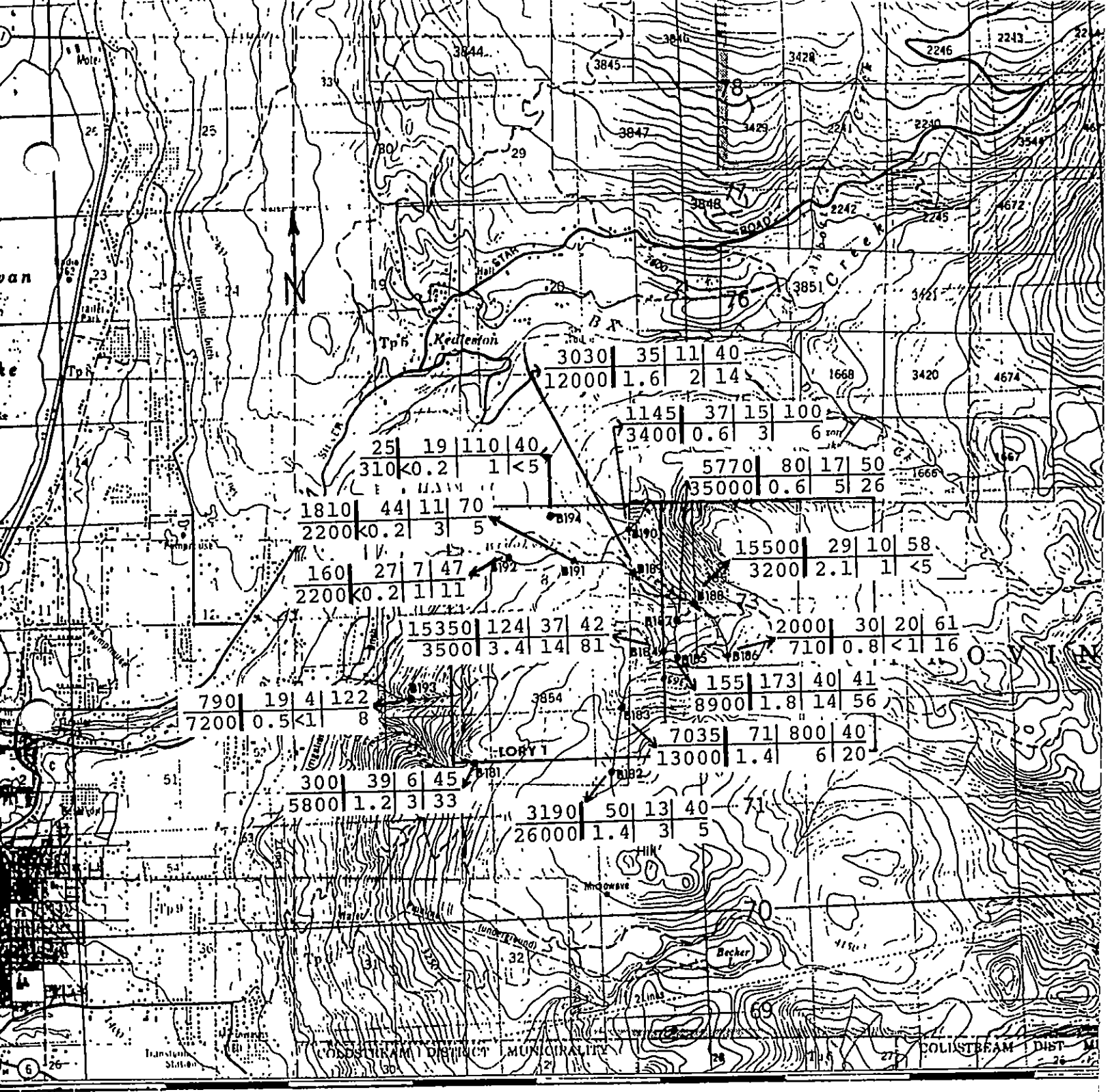
FIGURE 1



LORY AND GRACE CLAIMS

Sample Locations

FIGURE 2



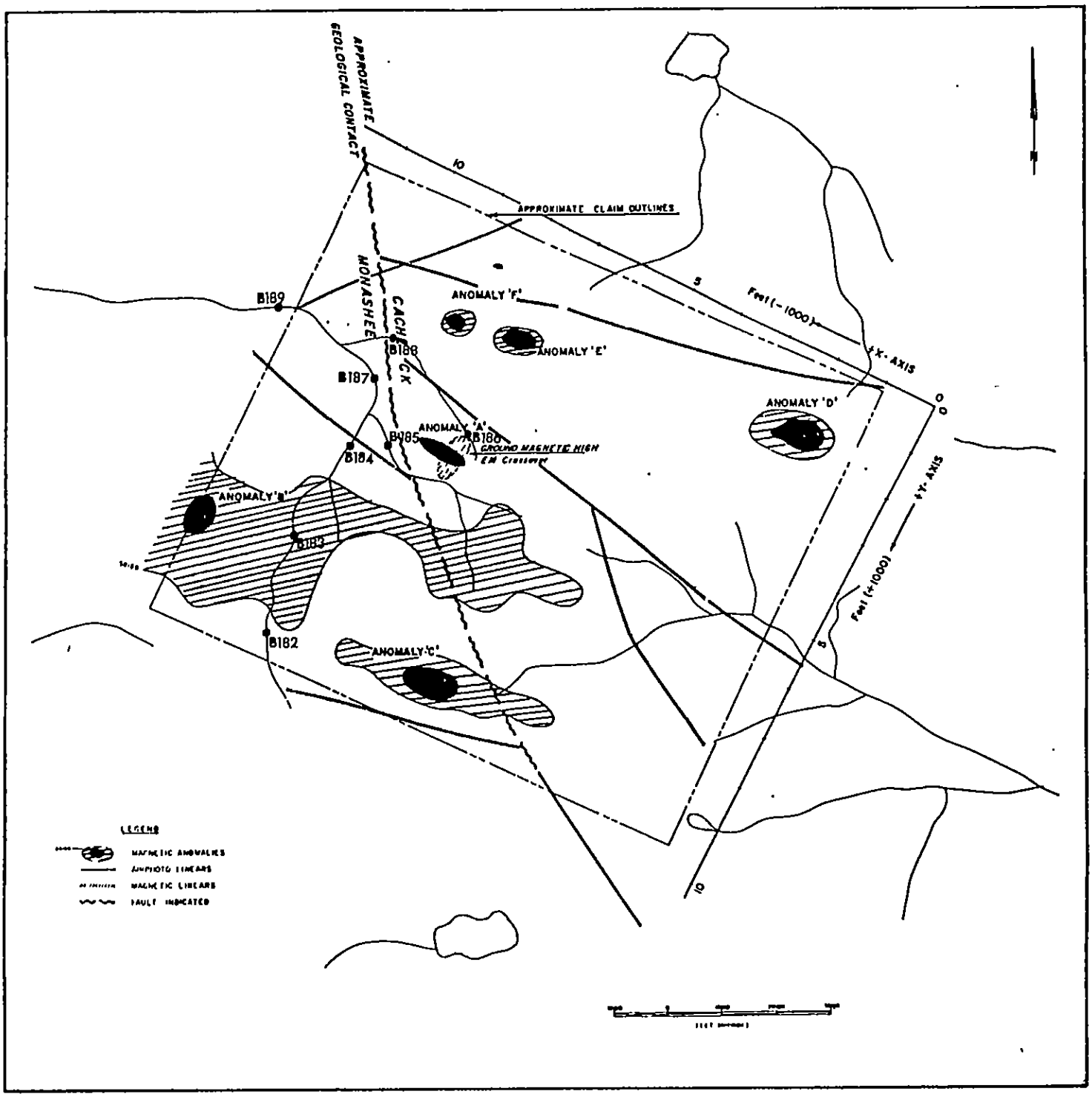
LEGEND

Coarse Au ppb	-35+150 HN Cu ppm	Pb ppm	Zn ppm
Fine Au ppb	Ag ppm	Mo ppm	Sn ppm

LORY AND GRACE CLAIMS

Sample Results

FIGURE 3



LORY AND GRACE CLAIMS
Magnetic Anomalies

FIGURE 4