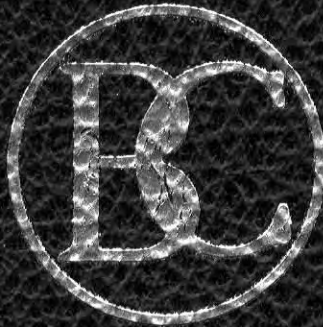


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REPORT

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CONSULTING ENGINEERS

VANCOUVER, B. C.

REPORT

on the

82 K/14

HUMPHREY CLAIMS

LARDEAU DISTRICT, B.C.

by

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Vancouver, B.C.

January 20th, 1969.

ABSTRACT

Mr. G.D. Humphrey of Tappen, British Columbia, represents interests that hold 54 claims in the Lardeau area. They are made up of nine groups that cover replacement-type lead-silver deposits, vein-type deposits of lead-zinc-silver, a potential quartz-gold vein and a lead-silver vein in limestones.

Of the nine groups only two appear to warrant additional exploration. The first, (Glengarry Group), is a lead-silver vein in limestone that averages two feet in width and assays in excess of \$100 per ton of ore; the second, (Canadian Group), is a vein-type silver property in a geologically favourable setting that could yield substantial tonnages. It must be remembered that the nearby producers used extensive hand-sorting to produce in excess of 35 oz. Ag per ton of ore. Little is known regarding actual grade of the veins but it was probably below 20 oz. Ag per ton.

Production from the only recent operation, the Sunshine Lardeau, totalled 141,000 tons grading 12.0 oz. Ag, 8.6% Pb and 9.0% Zn. The veins here were short and were found close to the favourable contact area between greenstones and incompetent phyllites.

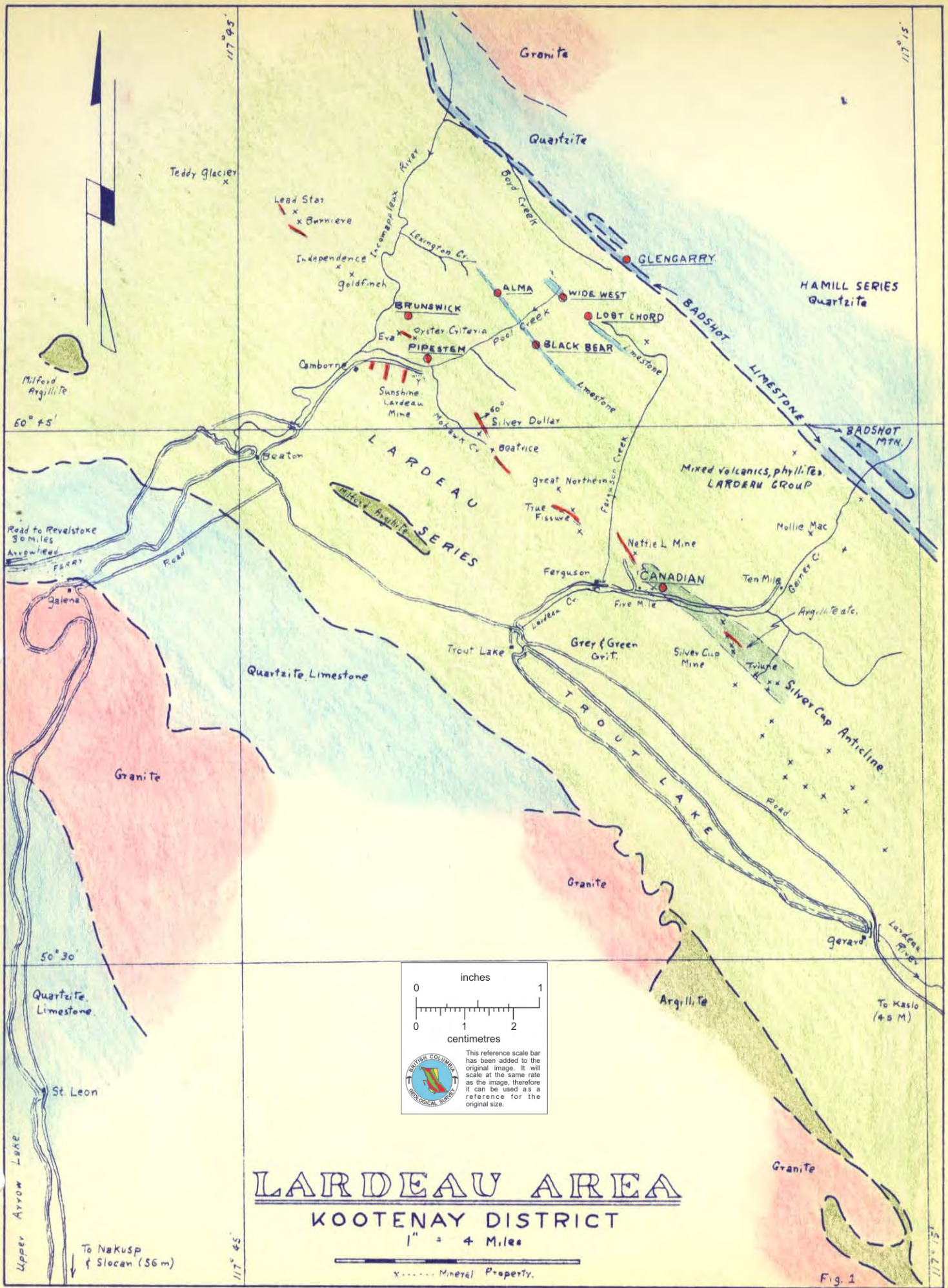
In general, the area cannot be considered to be prime prospecting ground for the discovery of sizeable deposits of economic ores.

ILLUSTRATIONS

- Figure 1. LARDEAU AREA LOCATION MAP 1" = 4 miles
2. LARDEAU MINES EXPLORATION CO. LOST CHORD GROUP 1" = 1500'
WIDE WEST GROUP " "
BLACK BEAR GROUP " "
3. " " " " ALMA GROUP GROUP " "
4. " " " " GLENGARRY GROUP " "
5. " " " " PIPESTEM GROUP " "
FREZENO GROUP " "
BRUNSWICK GROUP " "
6. " " " " CANADIAN GROUP " "

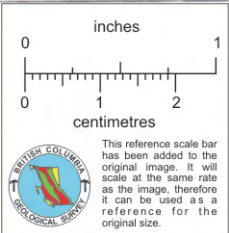
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LARDEAU AREA

KOOTENAY DISTRICT



This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

1" = 4 Miles

x..... Mineral Property.

Fig. 1

REPORT ON THE HUMPHREY CLAIMS
LARDEAU DISTRICT, BRITISH COLUMBIA

INTRODUCTION

Mining activity in the Lardeau district dates back to the late 1800's; production continued to 1958 when the only major producer in the area, the Sunshine Lardeau, shut down. Production in this mine was negligible up to 1952 but during the subsequent 6 years the property yielded 141,000 tons averaging 0.085 oz. Au, 12.0 oz. Ag, 0.07% Cu, 8.57% Pb, 8.97% Zn and 0.05% Cd. This was the best mineralized zone and most successful mining venture in the Lardeau area; it is one of about 50 vein-type mineral occurrences.

In addition to the vein-type mineral occurrences in the district, there are numerous replacement-type, silver-lead-zinc showings in limestone-chlorite schist contact areas. About thirty of these occurrences have been discovered and explored in the past but none has been worked commercially.

The fifty-four claims offered by Mr. G.D. Humphrey cover nine separate mineral zones, some of the fissure-vein type and some of the limestone-replacement type. All contain lead-zinc-silver mineralization with minor copper.

The mineral occurrences in the Lardeau district are located within the Kootenay arc, a curving belt of complexly deformed

sedimentary, volcanic and metamorphic rocks of Paleozoic age with a general southeasterly trend. Minor diorite intrusives are found along the west limit of the belt.

LOCATION AND ACCESS

The Lardeau area is in the Selkirk and Purcell Mountains of southeastern British Columbia, about forty miles southeast of Revelstoke and 130 miles north of Nelson. The Lardeau Mining District covers about seventy miles but the claim groups under discussion occur within a 20-mile radius.

Access is by road south from Revelstoke using three small auto ferries, or from the south either through Nelson, Kaslo and Lardeau or through South Slokan, Winlaw, New Denver and Nakusp. Distance from Vancouver to the area of the properties is 440 miles through Revelstoke, and through Nelson, about 550 miles.

Elevations range between 2000' and 10,000' and snowfall is relatively heavy. Timber and water is in abundant supply throughout the area.

HISTORY

Mining exploration work in the area dates back to 1890 although it is reported that Lardeau Creek was prospected for placer gold previous to this. It is believed that the Great Northern and the Silver Cup showings were staked in 1890 and that most of the showings in the district were discovered before 1900.

The first shipments were made from the Silver Cup mine in 1896 and, in five years, produced 1300 tons of ore grading 150 oz. Ag and 35% Pb. A mill was constructed at a cost of \$250,000 and about 10,000 tons of ore treated before the plant was shut down, results being unsatisfactory. This was prior to 1914 and, since then, activity has been sporadic with total production being 22,500 tons averaging 64.5 oz. Ag and 13.0% Pb. The last activity here was in 1941.

Other early producers are as follows:

<u>Mine</u>	<u>Year</u>	<u>Tons</u>	<u>Oz. Au</u>	<u>Oz. Ag</u>	<u>% Pb</u>	<u>% Zn</u>
Nettie L	1899-1904, 1912, 1922	12,820	0.06	35.80	5.1	-
Eva	1903-1908	31,656	0.236	-	-	-
Oyster-Criterion	1904	10,102	0.16	-	-	-
True Fissure	1908-1944	5,638	-	7.50	4.7	2.5

The history of the Sunshine Lardeau Mine began in 1899 when the Eclipse vein was staked. Tunnelling began the following year but little was found. About 1000' west and parallel to the Eclipse vein lies the Spider No. 4 vein. Underground work on this vein began in 1910 and minor development continued up to 1949.

In 1927-1928 the Consolidated Mining and Smelting Company diamond-drilled the Eclipse zone and drifted on the No. 1 vein for about 300 feet with poor results. In 1954 Sunshine Lardeau Mines Ltd. optioned the property from the Lardeau Mines Exploration Ltd. (Humphrey interests) and discovered the Eclipse No. 2 vein. Subsequently, the vein produced 35,000 tons of ore. As payments for the claim had not been completed on

shutdown in 1958, the claim reverted to the Lardeau Mines Exploration Ltd. and is presently part of the Pipestem claim group. The Sunshine Lardeau Mines Ltd. was organized in 1947 when the Spider claim was acquired. Subsequent exploration discovered additional veins. A 50-ton per day mill was constructed and production began in 1952. Berens River Mines provided funds and acquired control of the mine in that year but was liquidated in 1956 and Newmont Mining Corporation (the parent company) assumed control.

Production continued until May 1958 with total production for both veins up to that time being 141,000 tons grading 12.0 oz. Ag, 8.57% Pb and 8.97% Zn.

During the year previous to shutdown, effort was made to discover vein extensions to the south with little success. Upon the closing of mine operations, the Pipestem claims belonging to Lardeau Mines Exploration were optioned, examined, diamond drilled and the option dropped. The Pipestem claims are on the north of the Sunshine Lardeau claims but do not include the claim immediately along strike from the productive section of the Spider No. 4 vein.

In 1957 the Lardeau Mines Exploration Ltd., under the direction of Mr. G.D. Humphrey, carried out trenching and a self potential survey was conducted by Dr. A.C. Skerl over part of the Pipestem group. Apparently nothing more was warranted and the examination the following year by Sunshine Lardeau Mines Ltd. gave similar results.

In 1964 Sunshine Lardeau Mines Ltd. carried out an exploration program to determine ore possibilities below the lowest level (No. 10)

Twenty-five down holes were drilled on 50 foot centres and 200' of drifting was done. No work has been done since that time so it can be assumed that results did not warrant additional exploration work. Partial results from the first 16 drill holes that covered 200' of the No. 4 vein at depth showed the vein to average 0.11 oz. Au, 6.4 oz. Ag, 5.2% Pb and 7.0% Zn over an average width of 4.2'.

CLAIMS

Mr. G.D. Humphrey represents interests that hold 54 claims in the Lardeau area and they are made up of the following groups:

1. PIPESTEM GROUP - Moscow, Eclipse, Pipestem, B. & J., W.V., Comore, St. Joe, Emerald, Excelsior --- 9 claims.
2. BRUNSWICK GROUP --- 1 claim.
3. FREZENO GROUP - Frezeno and Bluebird --- 2 claims.
4. ALMA GROUP - Iola, Banner, Jumbo, Lone Star, Kitsap, Black Diamond, Mother Lode, Alma No. 2 and Alice --- 9 claims.
5. LOST CHORD GROUP - Last Chance, Lost Chord, Goodenough, and Goodenough 1 and 2 --- 5 claims.
6. BLACK BEAR GROUP - Kangaroo and Black Bear --- 2 claims.
7. WIDE WEST GROUP - Wide West 1, 2, 3, 4, 5, 6, 7 and 8 --- 8 claims.
8. GLENGARRY GROUP - Banwell, Glengarry and Prince Edward --- 3 claims.
9. CANADIAN GROUP - Morning Star, Jumbo, Florence, Pilot, Union Jack, Lardo, Independent, Canadian, Kootenay 1, 2 and 3, Glooscap 1, 2 and 3 and the A.K. Fraction --- 15 claims.

Some are owned by Lardeau Mines Exploration Ltd., some by the Wide West Syndicate, some by G.D. Humphrey and family, and some by the estate of J.M. Humphrey. All claims are crown grants.

GEOLOGY

The Lardeau area contains a thick sequence of highly deformed sedimentary and volcanic rocks intruded locally by small masses of diorite.

The Hamill series, the oldest, is dominantly quartzitic and outcrops widely as cliffs and jagged ridges on either side and at the head of Gainer Creek.

Overlying this thick sequence of quartzitic rocks is the Badshot formation, a light grey, thick bedded to massive, finely crystalline limestone that weathers to a series of high, wedge-shaped peaks extending for many miles along the formational strike. The Lode Peak formation, which is considered to be part of the Badshot formation, is exposed extensively throughout the overlying Lardeau group as isoclinal anticlines and it is within these limestone bands that many of the replacement-type mineral zones are found.

The Lardeau Group overlies the Hamill and Badshot formations and is a complex group of phyllites, argillites, slates and quartzites with minor limestones, pebble conglomerates and mixed volcanics. The group has been subdivided into six formations and has a combined thickness of more than 10,000'.

The Hamill and Badshot formations are believed to be Lower Cambrian but the age of the Lardeau group is not known. Carboniferous fossils have been found within the Milford Group, which overlies the Lardeau and consists mainly of grey and black argillite and slate, and grey, pink or green chert.

Southwest of the area under discussion is a prominent white crystalline limestone and dolomite which formerly was correlated with the Badshot formation. A detailed study of these and surrounding rocks by Dr. J.T. Fyles in 1962 discloses that the earlier correlations were not confirmed and the limestone formation mentioned above is in no way similar to the Badshot formation. He states in his memoir (Geology of the Ferguson Area - B.C. Dept. of Mines - 1962) that correlation of the southwestern rocks must be regarded as uncertain.

Small dykes, stocks or intrusive sheets of dark coloured rocks are found here and there in the Lardeau area. The rocks are generally massive, medium to coarse grained, and light to dark green or greenish-grey in colour.

The area in which the claims under discussion occur is near the northern end of the Kootenay arc, where the rocks strike uniformly northwest. The rocks are strongly sheared and folded. The largest composite fold is the Silvercup anticline and the adjacent Finkle Creek syncline to the northeast. These rocks have a general southwesterly dip.

Most of the vein-type mineral zones in the Central Mineral zone appear to be closely related to the Silver Cup anticline. The axis may be a zone of weakness with associated faulting that gave access to

mineralizing solutions. The vein-type mineral zones that lie close to the axis of the Silver Cup anticline or the extension of this line to the northwest are the following: Silver Cup, Triune, Canadian, Nettie L, True Fissure, Beatrice, Silver Dollar, Multiplex, Sunshine Lardeau, Pipestem, Independence, Eva, Burniere, Lead Star and others. All mineral lies on fractures parallel to the axis of the Silver Cup anticline or on well defined cross fractures.

MINERAL DEPOSITS

As early as 1903 it was recognized that mineral deposits in the Lardeau district fall into three belts. These are the lime dyke mineral belt, the central mineral belt and the southwest mineral belt. All trend northwesterly, parallel to the regional strike of the rock formations.

REPLACEMENT DEPOSITS

The most common deposits in the lime dyke mineral belt contain galena in siderite which has replaced limestone of the Lode Peak formation (Badshot) or the Molly Mac limestone (Index formation of the Lardeau Group).

Commonly the deposits consist of lenses of siderite which have replaced the limestone along crests or folds or in sheared zones and which contain massive pods or poorly defined disseminations of galena. These are typical "Manto" deposits. The siderite zones weather to a rusty brown colour and measure up to more than 100' in length and a few

tens of feet across. All do not contain galena pods, which are commonly only a few feet high, a few feet wide and continue several tens of feet along the plunge. Galena and pyrite are the principal sulphides and sphalerite is present in minor amount.

Silver content is relatively low, probably one ounce for every 5 per cent of lead. Samples containing 15 to 25% lead are common.

The following claim groups contain mineralization of the type described above and will be treated separately:

1. LOST CHORD - 5 claims (See Fig. 2)

The mineralization consists of replacement-type galena pods that measure between 1" and 2' wide and can be followed intermittently for 4500' along the strike of a band of crystalline limestone near its contact with green chlorite schist. The dip is close to vertical.

The limestone band is 1500' wide and is a folded portion of underlying limestone within the schists of the Lardeau Group. Both contacts of the limestone are mineralized and some small veinlets of galena have been observed within the limestone. Tetrahedrite has been identified by geologists from the Dept. of Mines, Ottawa, and a picked sample assayed 264.76 oz. Ag. Minor chalcopyrite has been reported.

The spotty nature of the mineralized pods indicates that this property has little chance of yielding sufficient quantities of lead-silver ores to support an underground mining operation.

2. WIDE WEST - 8 claims (See Fig. 2)

This group of claims lies one mile northwest of the Lost Chord group. No geology was available but it is reported to be on the

"Big Lime" dyke or the same band of limestone in which the mineralization occurs on the Lost Chord Group.

The claims lie at the head of Pool Creek at an elevation of 6600'.

A 511' tunnel is reported to have cut some mineral stringers, two of which measure 14" and 5', apparently in limestone in contact with highly chloritized, soft green schist. The tunnel was driven prior to 1915 but in 1938 additional galena veins were found which were exposed by the receding of the Pool Creek glacier. Samples taken at that time are reported as follows:

4.1 oz. Ag, 43.1% Pb - Vein width 4.0'

3.9 oz. Ag, 46.4% Pb - Vein width 5.0'

It is not known if the samples were taken across the entire vein width. The veins referred to above (from old reports) are undoubtedly mineral pods, which can be expected to lens out in either direction in, at most, a few tens of feet. Developing substantial tonnages of ore from this type of mineralization is improbable.

3. BLACK BEAR - 2 claims (See Fig. 2)

The Black Bear group is situated on Rennie Creek, a tributary of Pool Creek. The limestone formation in which this showing and the Alma showing to the northwest occur is relatively narrow but continuous.

Galena mineralization is found along the contact with greenstone of the Lardeau group and old reports state that open cuts show galena and the structure can be followed across the full length of

a claim. A 75' tunnel was driven soon after this claim was staked in 1894 but failed to reach its objective. A 1900 Minister of Mines report states that "12 men working on trenching and prospecting the vein which is said to average 18 feet in width." No assays are shown.

This property must be considered to be similar to the Lost Chord and Wide West - of little interest at the present time.

4. ALMA - 4 claims (See Fig. 3)

This group of claims extends for 2-1/2 miles in a north-westerly direction over Mount Lexington from Pool Creek on the southeast.

Sporadic galena mineralization can be found in a 40'-60' wide belt of limestone (strike N60°W, vertical dip) enclosed in the Lardeau series of chloritic, graphitic, slatey phyllites and schists with interbedded quartzites.

The ore deposition is strongly influenced by folding and cross fracturing. Although the mineral may be seen over numerous thousands of feet of strike length, it is not continuous but confined to certain places where the limestone has been cross fractured or sharply folded. Little major folding or flattening of the beds has been observed.

Some samples taken at various locations are as follows:

<u>Oz. Au</u>	<u>Oz. Ag</u>	<u>% Pb</u>	<u>Width</u>
0.04	1.3	11.0	3.5'
0.04	11.2	28.9	4.5'
0.01	1.4	6.9	11.0'
-	9.6	17.1	6.0'
-	1.1	1.5	1.0'
-	7.5	50.2	1.0'
-	0.2	4.8	10.0'

Width averages between 2' and 4' and continuous mineral lengths may extend along strike for 50'-90'.

Dr. V. Dolmage in 1929 states in a private report that "the present surface of the mountainside must be regarded as a typical section through the limestone and is a fair indication of the number and size of the nearly horizontal mineral shoots. Nevertheless the surface section does not offer very bright prospects for finding large quantities of workable ore."

As a general rule, the limestones stand at steep angles and there is little folding. This permitted mineralizing solutions to ascend freely along favourable bedding planes and sedimentary contacts. Consequently, the mineralization tends to be very widespread and is in many cases quite continuous, but there are few substantial orebodies. The structural conditions have permitted the solutions to dissipate themselves in small deposits over large areas.

Aeromagnetic maps of the region show the Alma-Black Bear mineralized limestone as a distinct high, traceable for four miles in a northwesterly direction.

With the low silver-lead ratio (1:3), it does not appear that this deposit has much possibility of yielding commercial quantities of ore at this time.

5. GLENGARRY - 3 claims (See Fig. 4)

This property lies on the contact between the Badshot limestone and the overlying Lardeau schist. Old reports describe the

mineralization as an argentiferous galena vein running parallel to a number of strong quartz veins, all in the lime dyke (limestone).

Stripping and trenching on the Glengarry vein has shown the width to be up to 28" within a 15' width of limestone. No systematic sampling has been done on the vein within the claim group, but it is reported to be continuous throughout the claims in a northwesterly direction. Samples taken from adjoining claims are as follows:

<u>Location</u>	<u>% Pb</u>	<u>Oz. Ag</u>
Kootenay Chief Claim - dump	78.0	48.0
Winnipeg Claim - vein	78.8	50.3
" " dump	<u>70.0</u>	<u>84.0</u>
Average	75.6	60.8

This vein apparently has good continuity and good grade with an average width of 2.0'. A 25' crosscut and 22' drift make access to a winze driven on 2' of mineralized material. Of this 2', one foot is galena and the other foot contains stringers of galena 1/2" to 2" in thickness.

This property appears to have some merit with the only drawback being the mineral width and the low silver-lead ratio. It is possible that the structure could support a small scale, underground operation.

VEIN-TYPE DEPOSITS

The central mineral belt is made up of numerous veins and lodes containing galena, argentiferous tetrahedrite, sphalerite and locally chalcopyrite. Some of these veins and lodes are apparently

related to and lie southwest of the Cup Creek fault. In the vicinity of the Silver Cup property, it appears that a favourable zone for mineralization developed where the Cup Creek fault zone came close to the crest of the Silver Cup anticline. Although the role of these two structures in controlling mineralization is not clear, probably the localization of most mineral zones in the Central mineral belt depends on one or both of these structures. Local sites for mineralization were probably controlled by sub-faults, rock competency, fractures and crushed zones related to the large structures.

1. PIPESTEM - 9 claims (See Fig. 5)

The Pipestem claims lie north of the Sunshine Lardeau Mine site but have few actual mineral showings, other than the Eclipse veins. The claim in which these veins lie was under option to Sunshine Lardeau Mines Ltd. and 35,000 tons of ore grading 12.0 oz. Ag, 8.57% Pb and 8.97% Zn was extracted. The claim reverted to the present owners in 1958.

The country rock in the vicinity of the Eclipse veins is greenstone and locally black phyllite. To the north of Pool Creek, which follows the northwesterly striking contact, are incompetent sedimentary rocks, presently metamorphosed to chlorite schists. Broad belts of either greenstones or schists are distinctly unfavourable to the formation of mineral deposits. In several cases in the Lardeau, veins have been observed to end abruptly where they encounter chlorite schists and it is believed that this occurs in the case of the Eclipse vein and the Spider vein (which produced most of the ore in the Sunshine Lardeau Mine).

There are actually two Eclipse veins and they strike slightly east of north and dip 75° to the east, almost normal to the northwesterly trend of the rock formations. The two veins appear to be an echelon, on separate faults that are sub-parallel. The No. 2 vein has a known vertical range of about 250' and a strike length of 200', with local mineralization in a southwesterly-striking cross fracture. The vein system has little ore possibility to the north, as the No. 1 vein, upon entering the black phyllite, contains nothing more than massive pyrite in a thick quartz vein.

The Spider vein is not expected to continue northward through the phyllites into the Pipestem claims.

The Conmore vein lies 2000' north of the Sunshine Lardeau Mines portal and has been traced for about 100' along strike. The strike of this vein is $N70^{\circ}W$ and dip is $70^{\circ}N$. One sample cut in 1957 across 3.0' averaged 10.25% Pb and 0.65 oz. Ag.

The Moscow-Mohawk vein has been drifted on within the Moscow claim for 205'. The vein which was lost or pinched out after 50', assayed 1.0 oz. Ag, 0.9% Pb across 1.0'. It appears to strengthen to the south as samples taken immediately south of Pool Creek across the claim line assayed 6.9 oz. Ag across 13" and 29.9 oz. Ag across 8". The adit, after 50', turns eastward and a second vein, the Fresno, was intersected. A few small lenses of galena-sphalerite mineralization were encountered and a raise was driven on the largest for 20'. Assays are as follows:

From raise - 20.6 oz. Ag, 24.2% Pb, 24.9% Zn across 1.0'
From floor - 15.4 oz. Ag, 14.7% Pb, 22.4% Zn across 0.3'

This vein was drifted on for 90' and it is reported that a 30' length of the vein averaged 17.0 oz. Ag, 20.0% Pb and 24.0% Zn across a width of 0.75'.

A third vein, the Graphite, has an easterly strike and lies a quarter of a mile east of the Moscow portal in Pool Creek. Vein width is 5.0' in a host of chlorite schist and graphitic phyllite - relatively unfavourable rock. It can be followed for a "great distance in either direction" (N.W. Emmens, 1928) but only quartz and pyrite were visible.

It is unfortunate that most of the Pipestem group is underlain by sediments. The Comore vein in the north part of the claims is underlain by favourable volcanics but much higher mineral content would be required at this time to make development on this vein attractive.

A self potential survey conducted by Dr. A.C. Skerl in 1957 came up with numerous areas of high readings, most of which can be explained by the presence of sheared graphitic sediments. He recommended extensive trenching but nothing was undertaken. It seems that expenditures of any kind do not appear to be attractive because the veins, as they are known, have too low mineral content to support underground mining operations at this time.

Regional aeromagnetic maps show anomalous high readings over the Eclipse and Spider veins.

2. FREZENO GROUP - 2 claims (See Fig. 5)

The Moscow-Mohawk vein and the Fresno vein mentioned above probably project southwards into these claims. They have been drifted on, the former in the foreign Mohawk claim and the Moscow claim to the north, and the latter for 40' on the Frezeno claim. The host rock is grey phyllite and only pyrite and a little galena were found. Galena mineralization has been found in the bed of Mohawk Creek on the Frezeno claim and may be the Mohawk vein.

A sample taken above the portal on the Fresno vein is reported to have assayed 24.9 oz. Ag.

The greenstones in which the Sunshine Lardeau veins occur pass through the Frezeno claims. It seems that broad units of either greenstones (volcanics) or chlorite schists are unfavourable for ore deposition, but the contact areas have greater potential. It is possible, then, that the two veins herein described could improve upon entering the contact zone, but nothing has been discovered in this region.

3. BRUNSWICK CLAIM - 1 claim (See Fig. 5)

This claim lies about 2 miles north of the Sunshine Lardeau Mine on Lexington Mountain and 1500' northwest of the Oyster-Criterion area - where 10,000 tons of gold quartz ore was mined prior to 1914. Grade of the ore mined was 0.16 oz. Au with a mining width of 5.0'. The principal structure strikes northwesterly and some cross faults containing galena are present.

Old reports referring to the Brunswick claim state that "some good ore is showing on this claim" and one must assume that this is gold-quartz ore of similar grade.

The Eva property lies immediately south of the Brunswick claim and between 1903-1908 produced 31,656 tons of 0,236 oz. Au. The first gold in the district was located on this claim in 1900, in a quartz vein within grey phyllites. It is evident from a study of reports on the Eva and the Criterion veins that they are part of the same vein system and that the Brunswick lies at least 1000' to the northeast.

The Brunswick claim is of little value at present gold prices.

4. CANADIAN GROUP - 15 claims (See Fig. 6)

This property lies four miles northeast of the upper end of Trout Lake, between the Nettie L Mine and the Silver Cup Mine. All three lie near the axis of the Silver Cup anticline and southwest of the major Cup Creek fault, within siliceous argillites and quartzites. These formations have been considerably fractured and faulted at the Nettie L and the Silver Cup, but no evidence of cross-faulting is present at the Canadian.

Both producing properties yielded hand-sorted ore in excess of 35 oz. Ag per ton with production totalling 35,000 tons.

Early exploration work on the Glooscap No. 2 claim within the Canadian Group disclosed the presence of a structure 1500' long (Glooscap vein). Extensive sampling of this, the principal vein, justified

the starting of a 3200' long adit crosscut in the Pilot claim. Only 1261' of it was completed in 1907 when funds ran out. Three promising veins were expected in the crosscut but none were cut in the distance driven.

There is no grade shown of the Glooscap vein in any of the old records but the Nettie L veins were believed to extend this far southeast.

An adit on the Union Jack claim intersected a vein that assayed 30 oz. Ag across 8.0'. The strike length of this vein is not known. One sample taken on the Reward vein on the Canadian claim by Kennco Explorations Ltd., who optioned the claim group in 1952, assayed 0.54 oz. Au, 8.8 oz. Ag, 8.8 oz. Ag, 8% Pb and 1.7% Zn.

Surface sampling appears to be warranted on the 1500' length of the Glooscap vein. The geological setting appears to be favourable for the presence of veins similar to that found on the Nettie L and the Silver Cup ground. (Good ore is reported to have been found to a depth of 1200' on the Silver Cup veins.)

CONCLUSIONS

Of the properties offered, only two give some encouragement as far as ore-making possibilities are concerned. The Glengarry Group contains a vein with good continuity, with an average width of 2.0' and average grades of 75% Pb and 60 oz. Ag per ton. It has the potential of supporting a small scale underground operation.

The Canadian Group of claims is favourably located and it is more by inference than actual fact that indicates this. Length of the Glooscap vein (1500'), indicated grade and width of the Union Jack vein (30 oz. Ag across 8.0'), and grade of nearby producing mines on similar structures (35 oz. per ton) leads one to state that additional exploration is warranted.

The Lost Chord, Wide West, Alma and Black Bear properties are replacement-type siderite-galena deposits with limited tonnage potential. Many of these deposits have been explored in the past eighty years and not more than a few tons of ore have been produced.

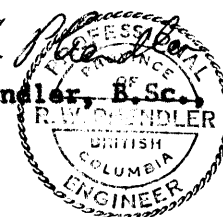
The Pipestem and Frezeno groups tie on to the Sunshine Lardeau Mines property but unfortunately are underlain mainly by unfavourable rock types. It must be remembered that the best producer in the district, the Sunshine Lardeau Mine, working under modern conditions (1958) only managed to produce ore grading 12.0 oz. Ag, 8.57% Pb and 8.97% Zn.

The Brunswick claim lies close to the gold producers, Eva and Criterion. The veins from these properties do not strike towards the Brunswick and at best produced 0.23 oz. Au per ton. This is not economic under present conditions with the present price of gold.

Respectfully submitted,

BACON & CROWHURST LTD.

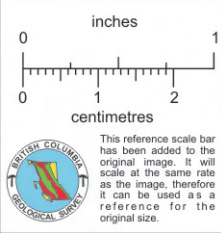
R.W. Phendler, B.Sc., P.Eng.



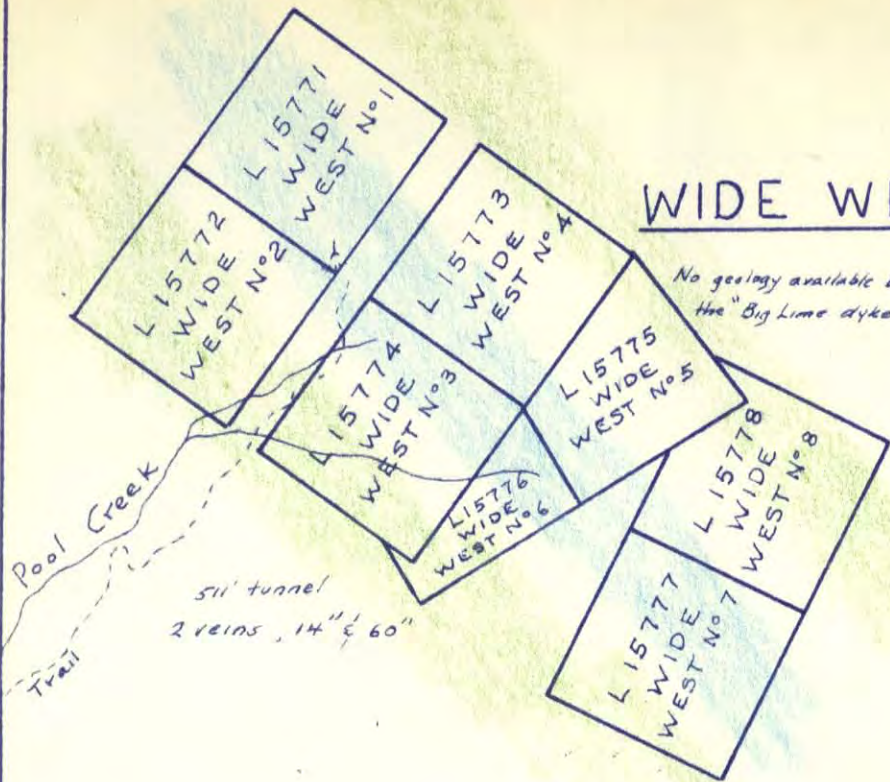
REFERENCE MATERIAL

1. Claim map Lardeau District.
2. Aeromagnetic map (G.S.C.) No. 3235G - Camborne, B.C.
3. Vernon-Golden Topog. Map 1:500,000.
4. Envelope containing G.D. Humphrey's report of Fresno L4572 and Bluebird No. 2 L4573 claims; also sketch location map, Eldridge assay report, and old 1" = 300' claim map of above.
5. Envelope containing
 - (a) Dr. Skerl's report on Pipestem Group, Lardeau, B.C.
 - (b) N.W. Emmen's report on Moscow-Mohawk (Pipestem) Group, Lardeau M.D.
 - (c) L.G. White's Shareholders Report on Sunshine Lardeau.
6. Reprint Economic Geology - Bannockburn Basin, Lardeau Area.
7. G.W. Oakey letter re Lost Chord Claim.
8. Extracts from A. St. Clair Brindle memo re Lardeau District.
9. J.M. Humphrey letter (1940) re Wide West Group
10. G.D. Humphrey letter re Pipestem Group & attached sketch claim map.
11. G.D. Humphrey letter to D.W. Tully of Cyprus Mines Corp.
12. Envelope from G.D. Humphrey containing:
 - (a) B.C. Bureau of Mines Bulletin No. 2 (1914) - Lardeau & Trout Lake.
 - (b) Memoir 161 - Lardeau Map Area - Walker, Bancroft & Gunning.
 - (c) Bulletin No. 45 - Geology of Ferguson Area, Lardeau District.
 - (d) Bulletin No. 49 - Geology of Duncan Lake Area.
13. Envelope from G.D. Humphrey containing:
 - (a) Letter describing Alma Group Crown Grants.
 - (b) D.B. Sterrett report on Alma-Paymaster Group for Lardeau Mines Exploration Ltd.

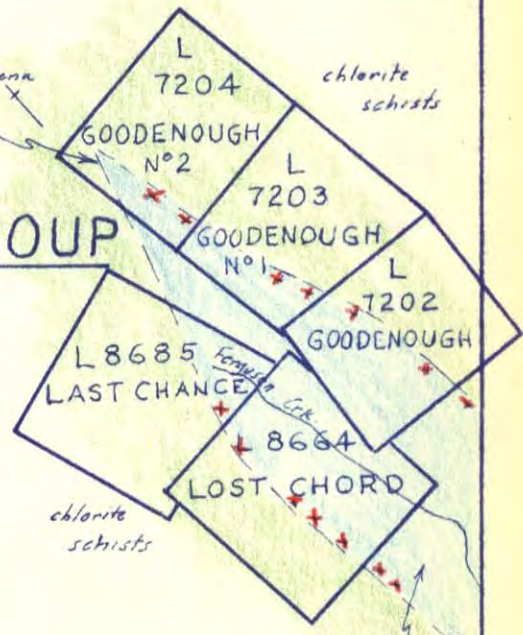
- (c) Report of Keystone, Alma, Paymaster, Moscow Claim Groups by Stewart, Batten & Associates.
- (d) N.W. Emmen's 1928 report on Alma Group.
- 14. G.D. Humphrey file on Black Bear & Kangaroo Claims.
- 15. Envelope from G.D. Humphrey containing geologic notes on Canadian, Fresno, Pipestem, Brunswick Claim Groups.
- 16. Envelope of Canadian Group containing:
 - (a) Notes on Canadian Group Crown Grants.
 - (b) Notes on Long Tunnel Group (Canadian Group).
- 17. Envelope of Glengarry Group with notes from 1898 Minister of Mines Report & a report on Glengarry and Kootenay Chief Mineral Claims.
- 18. Envelope of G.D. Humphrey containing report on Lost Chord Group.
- 19. Envelope from G.D. Humphrey containing Wide West Group file - notes of Wide West Group.
- 20. Minister of Mines Annual Report - Province of British Columbia - for the following years - 1899, 1900, 1902, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965.
- 21. Index No. 3 to Publications of the B.C. Dept. of Mines & Petroleum Resources.
- 22. Index No. 4 to Publications of the B.C. Dept. of Mines & Petroleum Resources.



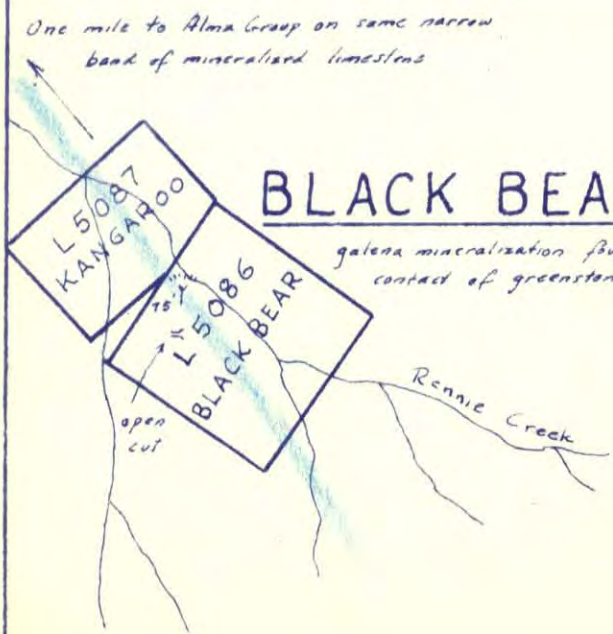
WIDE WEST GROUP



LOST CHORD GROUP



BLACK BEAR GROUP

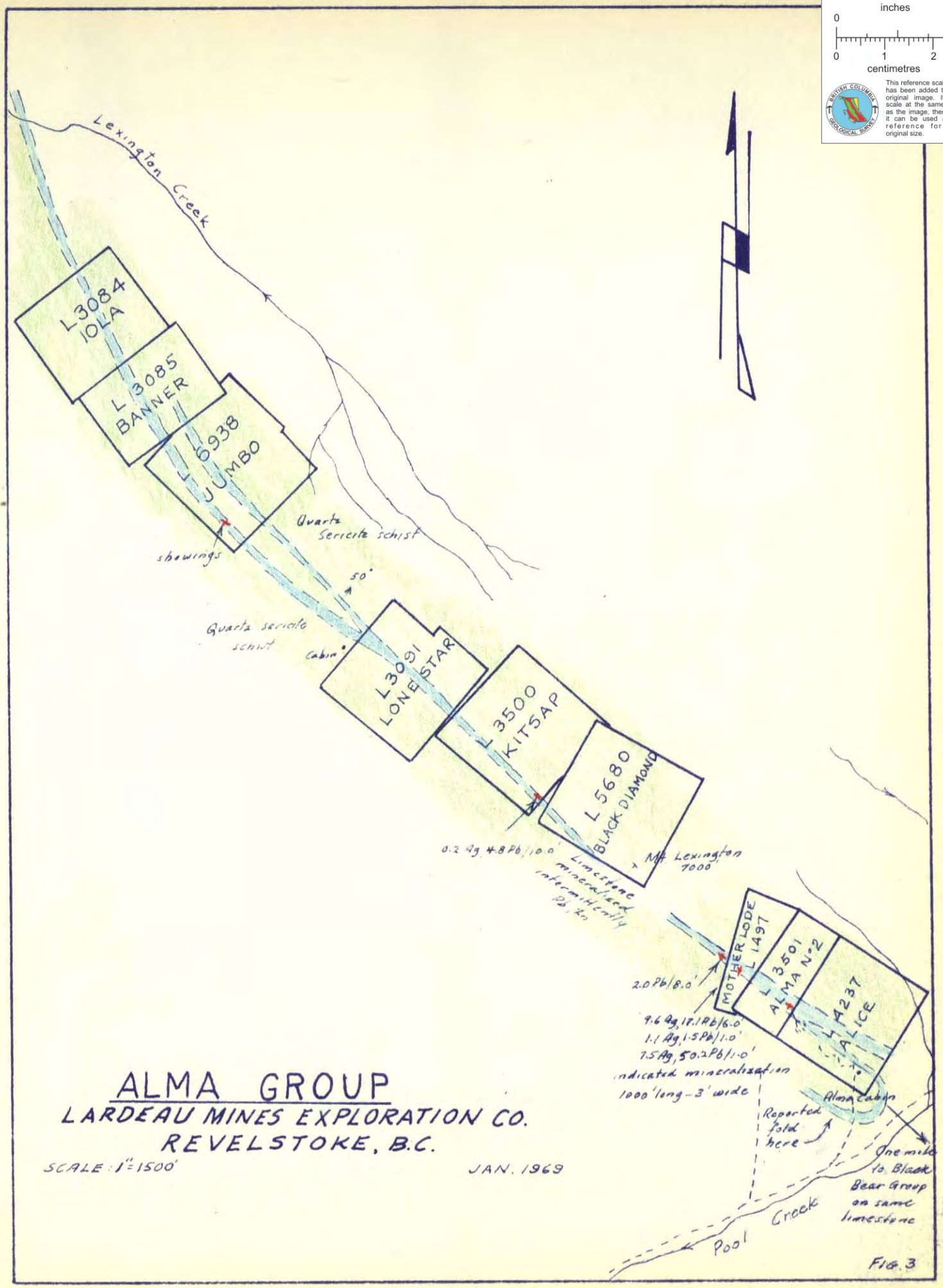
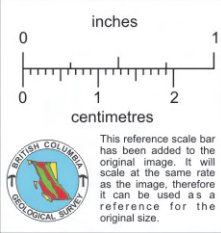


LARDEAU MINES EXPLORATION CO.
REVELSTOKE, B.C.

SCALE 1" = 1500'

JAN. 1969

FIG. 2

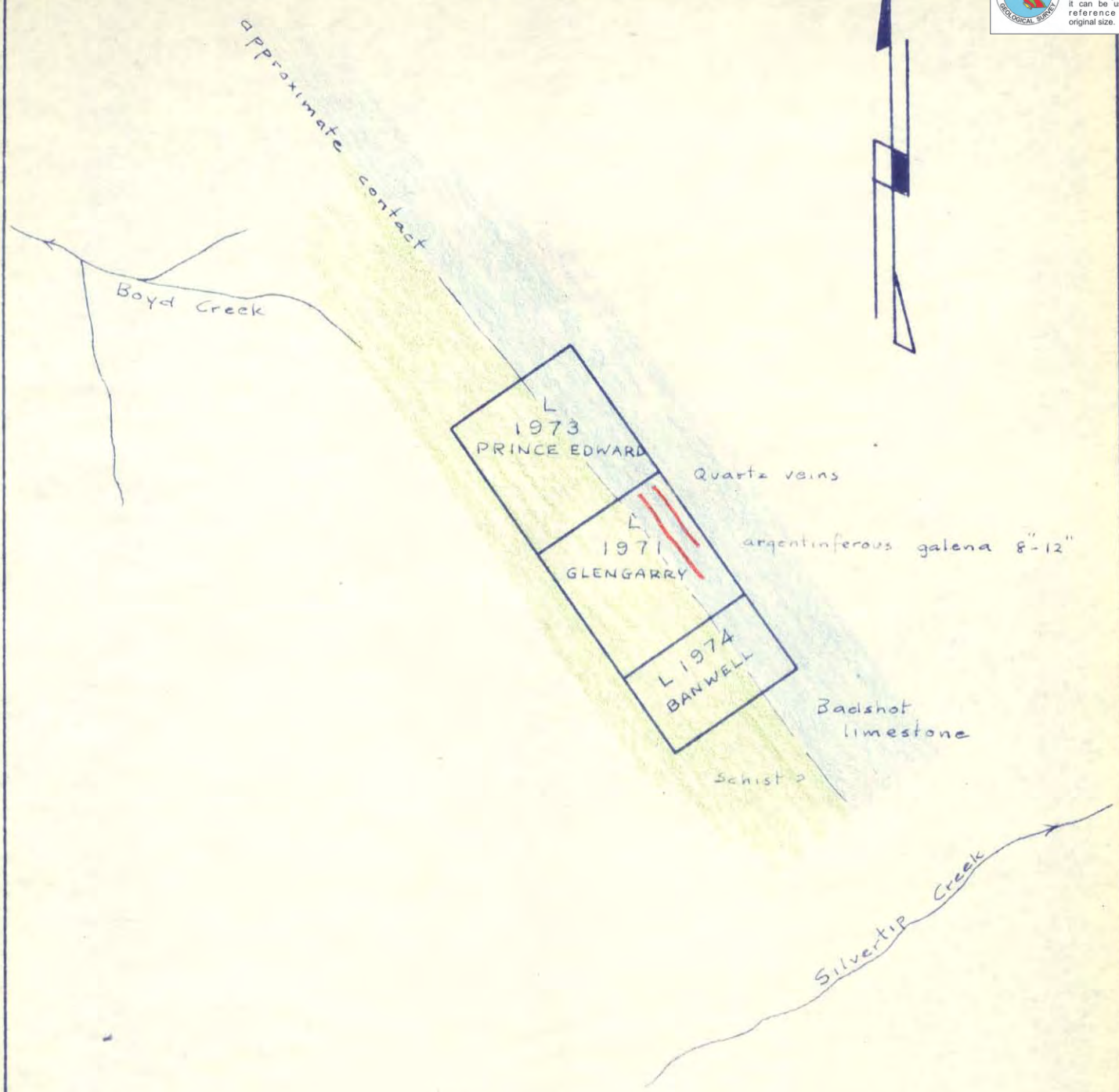
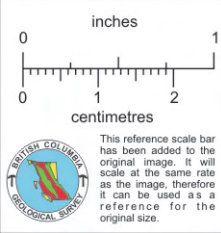


ALMA GROUP
LARDEAU MINES EXPLORATION CO.
REVELSTOKE, B.C.

SCALE: 1"=1500'

JAN. 1969

FIG. 3

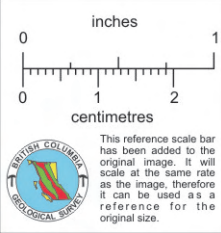


GLENGARRY GROUP
LARDEAU MINES EXPLORATION CO.
REVELSTOKE, B.C.

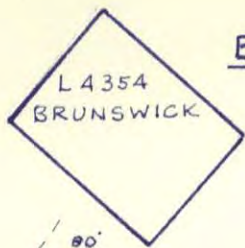
SCALE 1"=1500'

JAN. 1969

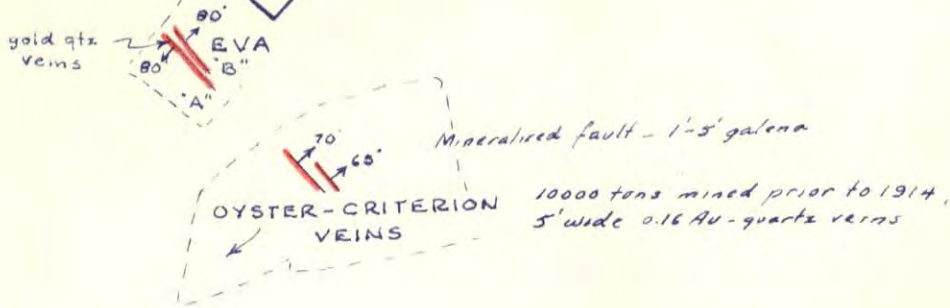
FIG. 4



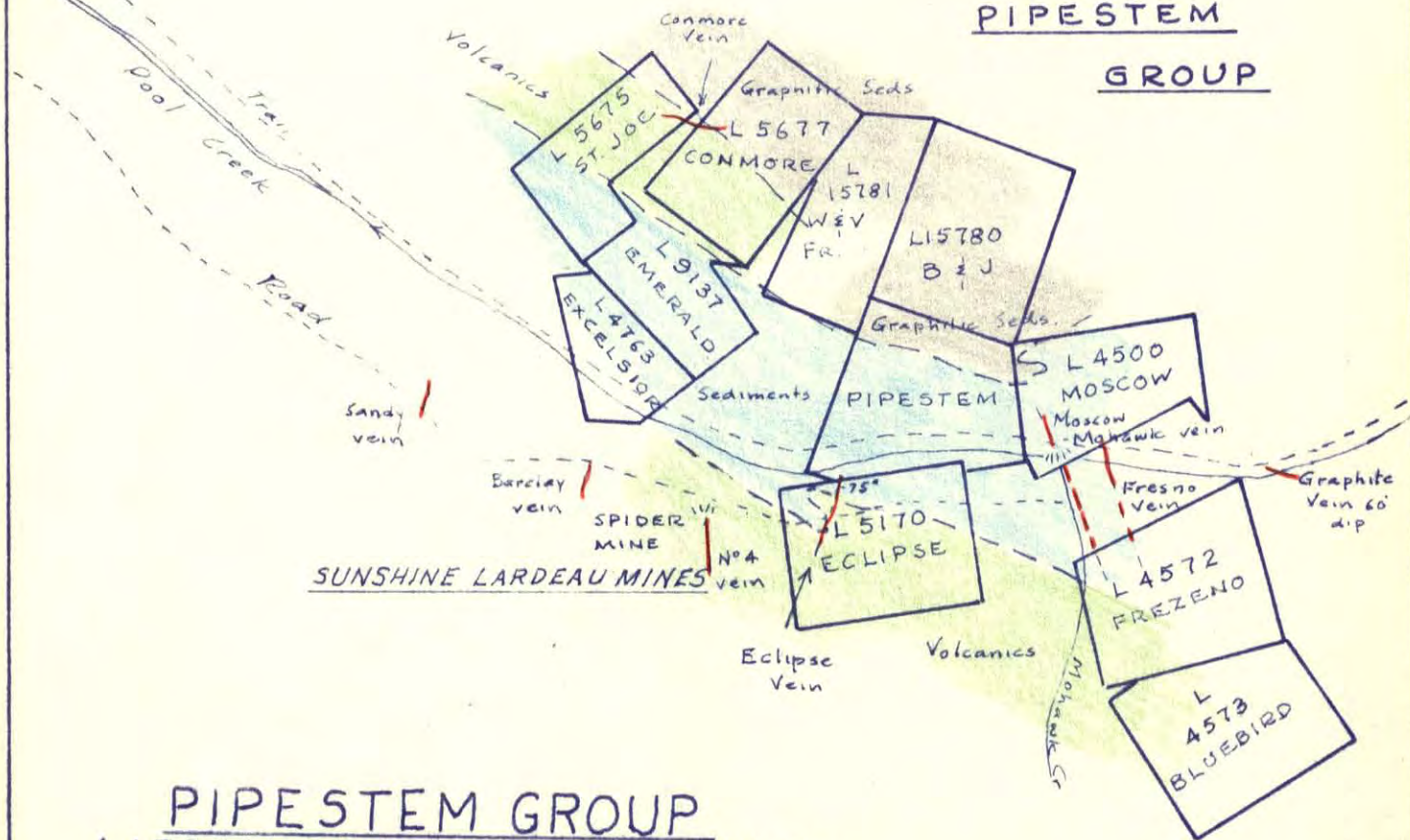
BRUNSWICK GROUP



Old Govt reports mention "ore" present



PIPESTEM GROUP

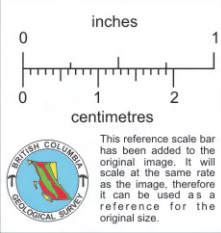


PIPESTEM GROUP
LARDEAU MINES EXPLORATION CO.
REVELSTOKE, B.C.

SCALE: 1" = 1500'

JAN. 1969

FREZENO GROUP



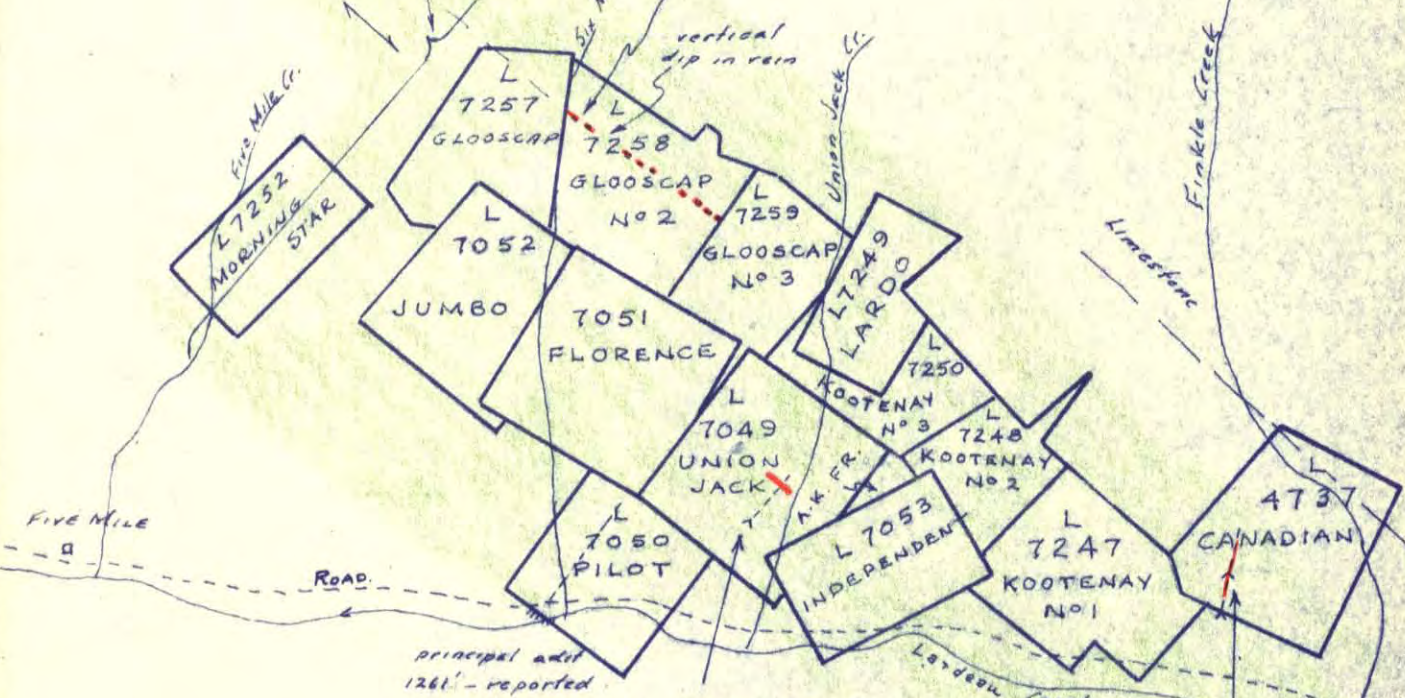
NETTIE L. MINE

Produced 12,820 tons averaging 35.80 Ag, 5.1 Pb, 0.06 Au

vein
Cross vein
Main vein - irregular, spotty mineralization

Banded quartzite, quartz sericite schist, chlorite schist

Principal vein - 1500' length - sample results of 30 test pits justified starting 3200' low level tunnel



principal adit 1261' - reported to expect 3 veins in 3200' - started in 1905
Adit cut 8' of 30% Ag at 350'

Reward vein
Au - 0.54 oz
Ag - 8.8 oz
Pb - 8.0%
Zn - 17%

CANADIAN GROUP
LARDEAU MINES EXPLORATION CO.
REVELSTOKE, B.C.

SCALE 1" = 1500'

JAN. 1969

SILVER CUP MINE - 2 MILES

FIG. 6