

Lavina mine Prop.

821K

WESTERN UNION 810270

DOMESTIC SERVICE	
Check the class of service desired; otherwise message will be sent as rate telegram	
FULL RATE TELEGRAM	SERIAL
DAY LETTER	NIGHT LETTER

INTERNATIONAL SERVICE	
Check the class of service desired; otherwise this message will be sent at the full rate	
FULL RATE	DEFERRED
CODE	NIGHT LETTER

RECD. MAR 25 1952
 ANSD. BY
 RETURN TO W. P. MARSHALL, PRESIDENT

NO. WDS.-CL. OF SVC.	PD. OR COLL.	CASH NO.	LEASE	REPLY	CHARGE TO THE ACCOUNT OF	TIME FILED
	H S M	R W M	S G M			
	I M	B W S	L C D			
	G D D	L P	L C A			
	C W S	S A S	A L D			

Send the following message, subject to the terms on back of book which are hereby agreed to

DAY LETTER

LOS ANGELES MARCH 25. 1952

**MR EVAN JUST
HOTEL VANCOUVER
VANCOUVER, B. C.**

IF CONVENIENT PLEASE CONTACT E. M. THOMSON, ROOM 15, 709 DUNSMUIR STREET
 RE PROPERTY HE WROTE ME ABOUT MARCH 19. PROPERTY NEAR KALSO. WE HAVE NO
 INFORMATION OTHER THAN B. C. MINES REPORT NOR IDEA OF PROPOSAL. DOUBT IF
 MUCH INTEREST. YOU HAVE RESERVATION BILTMORE 27TH.

BLAIR W. STEWART

BWS/a

Charge: Cyprus Mines Corp.

1206-File & Book - Charge -
BWS

Property near Kootenay Lake

20-C-6 on Map

ALL MESSAGES TAKEN BY THIS COMPANY ARE SUBJECT TO THE FOLLOWING TERMS:

To guard against mistakes or delays, the sender of a message should order it repeated, that is, telegraphed back to the originating office for comparison. For this purpose, the sender of the message and this Company as follows: half the
between

1. The Company shall not be liable for mistakes or delays in the transmission or delivery, or for non-delivery, of any message received for transmission at the unrepeatable message rate beyond the sum of five hundred dollars; nor for mistakes or delays in the transmission or delivery, or for non-delivery, of any message received for transmission at the repeated-message rate beyond the sum of five thousand dollars, unless specially valued; nor in any case for delays arising from unavoidable interruption in the working of its lines.
2. In any event the Company shall not be liable for damages for mistakes or delays in the transmission or delivery, or for the non-delivery, of any message, whether caused by the negligence of its servants or otherwise, beyond the actual loss, not exceeding in any event the sum of five thousand dollars, at which amount the sender of each message represents that the message is valued, unless a greater value is stated in writing by the sender thereof at the time the message is tendered for transmission, and unless the repeated-message rate is paid or agreed to be paid, and an additional charge equal to one-tenth of one percent of the amount by which such valuation shall exceed five thousand dollars.
3. The Company is hereby made the agent of the sender, without liability, to forward this message over the lines of any other company when necessary to reach its destination.
4. Except as otherwise indicated in connection with the listing of individual places in the filed tariffs of the Company, the amount paid for the transmission of a domestic telegram or an incoming cable or radio message covers its delivery within the following limits: in cities or towns of 5,000 or more inhabitants where the Company has an office which, as shown by the filed tariffs of the Company, is not operated through the agency of a railroad company, within two miles of any open main or branch office of the Company; in cities or towns of 5,000 or more inhabitants where, as shown by the filed tariffs of the Company, the telegraph service is performed through the agency of a railroad company, within one mile of the telegraph office; in cities or towns of less than 5,000 inhabitants in which an office of the Company is located, within one-half mile of the telegraph office. Beyond the limits above specified the Company does not undertake to make delivery, but will endeavor to arrange for delivery as the agent of the sender, with the understanding that the sender authorizes the collection of any additional charge from the addressee and agrees to pay such additional charge if it is not collected from the addressee. There will be no additional charge for deliveries made by telephone within the corporate limits of any city or town in which an office of the Company is located.
5. No responsibility attaches to this Company concerning messages until the same are accepted at one of its transmitting offices; and if a message is sent to such office by one of the Company's messengers, he acts for that purpose as the agent of the sender.
6. The Company will not be liable for damages or statutory penalties when the claim is not presented in writing to the Company, (a) within sixty days after the message is filed with the Company for transmission in the case of a message between points within the United States (except in the case of an intrastate message in Texas) or between a point in the United States on the one hand and a point in Alaska, Canada, Labrador, Mexico, Newfoundland and St. Pierre & Miquelon Islands on the other hand, or between a point in the United States and a ship at sea or in the air, (b) within 95 days after the cause of action, if any, shall have accrued in the case of an intrastate message in Texas, and (c) within 180 days after the message is filed with the Company for transmission in the case of a message between a point in the United States and a foreign or overseas point other than the points specified above in this paragraph; provided, however, that this condition shall not apply to claims for damages or overcharges within the purview of Section 415 of the Communications Act of 1934.
7. It is agreed that in any action by the Company to recover the tolls for any message or messages the prompt and correct transmission and delivery thereof shall be presumed, subject to rebuttal by competent evidence.
8. Special terms governing the transmission of messages according to their classes, as enumerated below, shall apply to messages in each of such respective classes in addition to all the foregoing terms.
9. No employee of the Company is authorized to vary the foregoing.

1-49

CLASSES OF SERVICE

DOMESTIC SERVICES

FULL RATE TELEGRAM

A full rate expedited service.

DAY LETTER (DL)

A deferred service at lower than the full rate.

SERIAL (SER)

Messages sent in sections during the same day.

NIGHT LETTER (NL)

Accepted up to 2 A. M. for delivery not earlier than the following morning at rates substantially lower than the full rate telegram or day letter rates.

INTERNATIONAL SERVICES

FULL RATE (FR)

The standard fast service at full rates. May be written in any language that can be expressed in Roman letters, or in cipher.

CODE (CDE)

A fast message service consisting of code words not exceeding 5 letters each. Minimum charge for 5 words applies.

DEFERRED (LC)

Plain language messages, subordinated to full rate and code messages. Minimum charge for 5 words applies.

NIGHT LETTER (NLT)

Overnight plain language messages. Minimum charge for 25 words applies.

RECD. FEB 25 1952		
ANSD. BY		
RETURN TO		
PLEASE REPLY		
HSM	<input checked="" type="checkbox"/> RWM	ISGM
HIM	<input checked="" type="checkbox"/> BWS	LCD
<input checked="" type="checkbox"/> JLB	KKW	LWW
GDD	LP	LCA
CWS	SAS	ALD

Room 15,
709 Dunsmuir Street,
vancouver, B.C.
February 20th., 1952.

Mr. E. M. Spellmeyer,
c/o Coronado Copper Zinc Company,
Exploration Department,
1206 Pacific Mutual Building,
Los Angeles, California.

My Dear Mr. Spellmeyer: Re: Lavina Mine

I am enclosing herewith geological reports by Mr. B. T. O'Grady of the B. C. Department of Mines and by Dr. H. C. Gunning, who made his examination and report for the Dominion of Canada Geological Survey.

I recognize that the veins and indications developed, indicate only a silver lead deposit very rich and narrow. However, I thought that you might find that the last sentence by Dr. Gunning was of interest, in that he stresses the possibility of there being limestone replacements disclosed by further development. This limestone belt is attracting a great deal of interest and the following companies are carrying on active development on this formation: C. M. & S. with the Blue Bell Mine at Riandel, Sheep Creek Gold with the Wagoner Group, Teddy Glacier recently acquired by Toronto interests, Lardeau Lead and Zinc Mines on Duncan Lake, etc., etc.

I can obtain this property on terms well within the lines discussed when you were here.

Would it be too much to ask that you give me your personal reaction as promptly as possible as the owners wish to have arrangements made for work this summer and if I can assure them of the probability of an examination, they will be satisfied to wait for that.

Yours very truly,

E. M. Thomson

E. M. Thomson

LAVINA GROUP

by

H. C. GUNNING

Memoir 161

Geological Survey 1929

SILVER LEAD VEINS IN LIMESTONE

The seven crown granted claims comprising this group are at and above 7,000 feet elevation on Lavina Ridge, overlooking Hamill Creek and Duncan Valley. A trail leads to the property from White's ranch on the Argenta-Howser road.

Some 200 tons of ore, shipped from the property between 1899 and 1904 is reported to have assayed 50 to 60 per cent lead and 60 ounces and over in silver per ton. One carload was shipped by leasers in 1918. Since 1924 this group has been worked more or less continuously by Ed. Nordman and associates. (At present metal prices the 232 tons shipped in past years would have a value of approximately \$250.00 a ton, less freight and treatment, to the Consolidated Mining and Smelting Company at Trail.) A comfortable cabin stands near the top of the ridge. Under the direction of Mr. Nelson, operations were being carried on in a very efficient manner with a crew of four men.

The workings consist of many hundred feet of tunnels, raises and open cuts on both the Hamill Creek and Glacier Creek slopes of Lavina ridge. At the present time operations are confined to the underground workings on the Glacier Creek slope and to some surface showings on the southwest side of the ridge, overlooking Kootenay Lake. The old workings on the southeast side of the ridge were not examined as they were in a state of disrepair.

On the claims the rocks are grey to white crystalline limestones, grey to black carbonaceous schists, rusty weathering biotite schists, and a band of hard, grey silicified limestone or jasperoid which lies immediately northeast of the workings. These sediments strike northwest, varying from north 60 degrees west to north 20 degrees west, and dip 30 degrees to 60 degrees northeast.

Surface Workings on Southwest end of Ridge.

On the southwest end of the ridge a tunnel has been driven 51 feet on a north 28 degrees east course, in light grey to black marble. A fault follows the west side of the adit and dips 80 degrees east. Three veins of galena with oxidation products lie in the west wall, the largest being six inches wide. They strike northwest and dip about 30 degrees to the northeast. From the end of the adit a raise has been driven 23 feet and at its top dark grey, carbonaceous schists overlie the limestone. The contact strikes about north 60 degrees and dips 40 degrees northeast. Just below the schist a small amount of galena, badly oxidized, appears in the limestone. Quartz is present in the ore and also at the bottom of the raise.

Thirty-five feet above the adit and 25 feet north 25 degrees west from its portal is a new open-cut which exposes the contact of limestone and schist. A narrow vein of galena, cerussite ($PbCO_3$) and anglesite ($PbSO_4$) follows the bedding of the limestone below the contact.

In some parts of the vein milky white quartz is developed; in others, and particularly where ore is found, the gangue is calcite or limestone. Ten feet below and a little east of the out a similar 12 inch vein follows the bedding. The veins are quite discontinuous, forming lenses and bunches of clean lead ore which is being hand sorted for shipment to Trail.

Workings on Glacier Creek Slope

Figure 7 is a plan and section of the main workings on the north west side of the ridge, made by Brunton and chain, and accordingly its accuracy has limits.

No.1 adit, the upper adit, is driven along a fault dipping 60 degrees east in grey, crystalline limestone. Twenty-two feet northeast of the portal, on the surface, is a band of the dark grey, biotite schists. They continue on the surface, forming the hanging-wall of the vein, to the crest of the ridge 120 feet vertically above. In the adit the limestone is much fractured and oxidized. Considerable gangue appears on the fault.

Crosscut No. 103, has been driven 20 feet through limestone to hit a shear zone striking north 27 degrees west and dipping 50 degrees east. It carries galena and gouge and is well oxidized. The drift to the north from the end of the crosscut follows the lead for 20 feet and one foot of galena and oxidation products appear in the face. Below the drift a winze has been sunk about 25 feet on the vein, showing as much as one foot of good ore in the bottom.

Crosscut No.102 encountered the same shear zone as on crosscut 103, and in the face of the short drift to the south is 8 inches of oxidized ore. Dark grey to black biotite schists overlie the vein which is in limestone and dips 55 degrees northeast.

In crosscut 101, the vein was encountered at 25 feet, limestone lying to the west and schist to the east. The limestone is badly sheared in places and carries small lenses of ore. The dip of the vein is 50 degrees east.

The lower adit, No. 3, cuts massive or banded white to dark grey crystalline limestone for 350 feet. The strike is north 20 degrees west and the dip 30 degrees to 60 degrees east. Two main systems of fractures cut the limestone, one parallel to, and one approximately at right angles to the bedding. Numerous stringers and lenses of quartz generally follow the bedding.

Crosscut No.1 follows a fracture through 150 feet of limestone which is much sheared. At 150 feet a 5 foot band of dark biotite schist was encountered and beyond that lies, hard, banded silicified limestone. At the end of the crosscut a raise has been put up and apparently entered carbonaceous schists, for the crosscut is blocked by decomposed, black material.

South of the crosscut, the main drift approximately follows the bedding of the limestone and a strong fissure, dipping 55 degrees northeast. A raise goes up on this fissure 110 feet to the intermediate level. A little galena was encountered from 95 feet to 110 feet.

The workings on the intermediate level are in fractured and sheared limestones. There is some good ore on the north end, following a north 25 degrees west fissure dipping northeast, near the top of the raise from below. At the junction of a northeast fissure the ore is strongest. The raise from the south end of the level follows up a fault dipping 65 degrees. It is intended to top the ore showing in the winze below No.1 adit, but it had not reached its objective at the time of examination.

The ore consists of cubic or fine-grained galena. Oxidation has produced anglesite (dull grey - generally well banded) and cerussite (light grey to white crystalline) from the galena. The ore is found most commonly as lenses, bunches in fractures, or shear zones in the limestone, below a narrow band of dark grey biotite schist. As a general rule the leads are bedded, but exceptions exist. The gangue consists of limestone or calcite and minor amounts of quartz. Pyrite, oxidized to limonite, and some copper mineral, possibly chalcopyrite, are entirely secondary in amount. The "sand carbonates" of the upper workings consists of a mixture of galena, anglesite, cerussite, iron oxide and particles of gangue. Mineralized leads might be expected at almost any point in the limestone as well as near the schist contact. The schist-limestone contact is, of course, the most favourable horizon.

The following assays are quoted from the resident engineer's report:

Ore sorted for shipment.....	0.04 Au.	32.7 Ag.	77.1% Pb.
Across 4 inches galena in siliceous ledge matter in open cut on Hamill Creek slope..	0.03 Au.	17.8 Ag.	56.4% Pb.
Across 8 inches galena and carbonates in farthest west open cut on summit.....	0.04 Au.	20.4 Ag.	44.5% Pb.
Across 8 inches carbonate ore (including galena) in open cut on summit.....	0.02 Au.	14.6 Ag.	45.9 Pb.

Extracts from Geological Survey of Canada - Memoir 161, Lardeau Map Area.
covering Lavina geology, particularly in connection with folding,
faulting and flat dips (features encountered in replacement deposits.)

LARDEAU SERIES

The Lardeau series is named after Lardeau map-area. The rocks of this series lie in a great synclinal trough extending from Kootenay Lake northwesterly to near the watershed between Illecillewaet and Akolkolex rivers.

The Lardeau series comprises the youngest Windermere rocks in the map-area. Its base is taken at the top of the Badshot formation. Its upward extent is determined by erosion or the unconformity at the base of the Milford Group.

The Lardeau series is a heterogeneous assemblage of metamorphosed sediments. The lowest member is, in most places, a black, carbonaceous rock, a slate, phyllite or schist, depending on the degree of metamorphism. This member rests conformably on the Badshot formation. The black member is succeeded by grey to greenish phyllites and schists, calcareous in part in the southern part of the map-area, developing into bands of limestone north and along the strike.

Near the top of the section of the schists is a peculiar black rock weathering with a vesicular appearance which has caused it to be mistaken for an igneous rock. Both field and microscopic examination fail to show any trace of igneous ~~xxx~~ origin. It is apparently a fine-grained highly carbonaceous, siliceous rock with a minor amount of carbonate which on weathering out gives the porous appearance. It occurs at the same stratigraphic horizon on Lavina Ridge, Howser ridge, and near the head of Greeley Creek in the northern part of the map-area. Succeeding the schists in the southern part of the map-area is a prominent band of limestone, which will be referred to as the Lavina limestone. This limestone band is traceable northward from Lavina Ridge across Glacier Creek, the peninsula in Duncan Lake, and along the west side of Lake Creek valley. Succeeding the Lavina limestone are mica schists and massive quartzite which for convenience are referred to as the Lavina quartzites. The Lavina Limestone and quartzites cross Lavina Ridge about the southerly end of the 7,000 foot contour line. The quartzites are traceable north-westerly to about Healy Creek. North from there the trend appears to be farther away from the Badshot formation, which they have closely paralleled, due apparently to thickening of the intervening sediments. Succeeding the Lavina quartzites is a succession of mica, quartz and chlorite, phyllites and schists with, in the vicinity of Healy Creek, minor bands of quartzites and, in the vicinity of Hamill Creek, several large bands of limestone. The limestone bands appear to die out northward. A prominent band of quartzite outcrops on the ridge east from the pass between the south fork of Lardeau Creek and Healy Creek. This quartzite, with the immediately overlying schists and phyllites, appears to be about the highest known part of the Lardeau series.

The quartzites striking across the heads of Ottawa, Brown and Triune creeks, thence through the Silver Cup basin and across Lardeau Creek to the Nettie L, is apparently the Lavina quartzites.....

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HAMILL SERIES

Hamill series derives its name from Hamill Creek, south of which it is found with the underlying Horsethief formation of the Windermere series. This series has been referred to as the Duncan series, but a formation on Vancouver Island has a prior claim to that name.

The Hamill series borders the northeast side of Lardeau map-area from Hamill Creek to Incomapleux River. It outcrops along the summits south of Illecillewaet river and forms the eastern wall of Columbia valley, south of the Northeast arm of Upper Arrow Lake. It continues in two areas separated by granitic rocks, one along Upper Arrow Lake and the other along the summits west of the Beaton-Trout Lake Valley.

The Hamill series comprises the oldest known rocks in Lardeau map-area. It is made up of a succession of strata varying in nature from quartzite to schist and limestone. The quartzites form a large part of the series along the eastern side of the map-area. The division between Horsethief formation and Hamill Creek series is made at the base of a great thickness of massive quartzite well exposed between Hamill and Fry Creeks southeast of the map-area, and also on Glacier Creek just east of the map area. Approximately the same horizon is found at the first bend in Hall Creek a short distance west of Duncan River. Along the east side of the map-area the quartzites are white to grey with, in some places, pinkish to rusty tints. The quartzites are fairly uniform in character along the strike, but change in nature across it. In the western part of the map-area, the quartzites have changed to impure quartzites and schists. It is difficult to definite the lower limit of the series in this section and it is probable that considerable Horsethief formation is included in the Hamill series as shown on the map.

Above the massive quartzites of the eastern part of the map-area is a succession of quartzites, mica schists, mica phyllites and limestones. The most prominent and persistent of the Limestones, locally known as the Lime Dyke, has been mapped as a distinct formation and its base determines the top of the Hamill series.

From the Lavina Ridge to the head of Duncan Lake the strata of the Hamill series are overturned to the west and display easterly dips. Minor folding and faulting have been observed on Lavina Mountain and also on the slopes of Mount Simpson. North from Duncan Lake the dips vary from vertical to high to the west. On Hall Creek the general dip is westerly and the structures apparently corresponds to that displayed in the Badshot formation and described on a later page. On Boyd Ridge the massive quartzites are closely folded in anticlines and synclines. These folds are minor structures on the limb of what appears to be a major anticlinal structure to the east and a large synclinal structure to the west.

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BADSHOT (LIME DYKE) FORMATION

This formation, so well known locally as the "Lime Dyke," receives its name from Mount Badshot, one of several high, wedge-shaped, limestone peaks having the appearance of a ruined wall or dyke.

The Badshot formation outcrops in the above mentioned prominent manner from the head of Boyd Creek to Houser Ridge. South from this point it becomes narrower and loses its distinctive topographic character. Around the northwest end of the map-area from south of Albert Creek to Ghost Creek, the lower one of three prominent bands of limestone is taken as the equivalent of the Badshot formation. This limestone is traceable to the south side of Akolkolex River where it is lost in the heavily timbered hillside. Apparently the same horizon is found on Sproat Mountain and is traceable across the northeast arm and south to Trout Mountain. It is possible that a lower band of limestone may be the true stratigraphic equivalent of the Badshot, but the impossibility of following this defined horizon in the timbered hillsides led to the use of the better defined horizon as to defining the boundary between the Hamill and Lardeau series. The Badshot formation separates the Hamill series from Lardeau series and all are conformable and part of one great sedimentary succession.

The Badshot formation is a grey, crystalline, sometimes siliceous limestone in places well banded, at other points massive. In thickness it varies from 150 feet on Laving Ridge to several hundred in the region of Lake and Hall Creeks. Intense folding in this region makes it very difficult to form an estimate as to its thickness.

On Lavina Ridge the Badshot formation dips northeasterly about 45 degrees on the easterly limb of a large syncline overturned to the southwest. Following the formation northward its dip steepens and where it crosses Duncan Lake, becomes vertical. North along Lake Creek the dip is steeply west and continues to be vertical or nearly so to Boyd Creek, where, overturning to the southwest, it is again in evidence. As exposed in Mounts Abbot and Templeman the limestone is closely folded upon itself in an anticline with a syncline to the east. North of Cariboo Creek the fold opens and the arch of the anticline has been eroded away leaving the syncline exposed some distance east of the main band.

Around the northeast end of the map-area the formation dips at lower angles to the south and east. On Sproat Mountain it outcrops on the west limb of a synclinal structure overturned to the northeast. South from the northeast arm the dips are vertical to high to the northeast.

SILVER-LEAD VEINS IN LIMESTONE

In the Lardeau there are several veins in limestone which contain galena as essentially the only sulphide. They differ markedly from the lead-zinc replacement deposits and from the silver-lead-zinc fissure veins.

The Mammoth, Badshot and Lavina are of this type. The first two properties have been worked out but the third is still active. All three lie at elevations of 7,000 feet or over. In the first two, the ore, consisting of silver-bearing galena and some argentiferous tetrahedrite, occurred along distinct fissures cutting the limestone. Very little pyrite was present and the gangue was calcite or milky quartz. The ores, with much quartz on the Badshot and practically no gangue on the Mammoth completely filled the vein.

The Lavina ores - Galena, a little pyrite, and their oxidation products - occur along shear zones or fissures generally parallel to the bedding of the limestone. There has been a little replacement, but it is unimportant in the ore-bodies so far developed. No tetrahedrite was observed, but the silver values are good. A shipment made in the early days of 200 tons is reported to have assayed 50 to 60 per cent lead and 60 to 70 ounces silver per ton. On the hanging-wall side of the ore-

bodies the limestone has been extensively silicified to grey jasperoid in which no ore has been found. The Mammoth and Badshot, and one or two other properties like them, are small deposits that give little promise of future production. The Lavina, however, is more promising and it is possible that, with further development, replacement may be found to have played a more important part. (The geological structure of Lavina according to several engineers, B.T.O'Grady, etc., is very favourable for replacement deposit.)

LAVERA MINE - - - - - LARDERAU DISTRICT

BY

B.T.O'Grady, Engineer Dept. of Mines, 1925

This property consisting of the Lavina, Bute, Iron Cap, St. Joseph, and Ruthie Bell, crown granted claims, is situated on both sides of the summit of the ridge between Hamill and Glacier Creeks, tributaries of the Duncan River, north of Kootenay Lake, at an elevation of 7,000 feet (cabin). Formerly the claims were reached from Hamill Creek by a trail from the end of the wagon road, but as the upper part of the road has been washed out, the present route, more roundabout is by a trail leaving the Argenta-Howser road at White's Ranch.

A considerable amount of development work was done between 1899 and 1904 during which period some 200 tons of ore was shipped, reported to have assayed from 50 to 60 per cent lead and 60 to 70 ounces in silver to the ton. The mine was closed down until 1924, when Ed. Nordman, and associates took it over under lease and bond from the Bank of Montreal. Since 1924 development work has been proceeded with continuously except for short periods in the winter months when difficulty was experienced in getting in supplies.

The old workings, consisting of tunnels and open cuts are on both sides of the summit and extend down for several hundred feet below it. The formation is composed of phyllites, bands of limestones and a few bands of diabase-schist. In the centre of the mineralized area there is a banded siliceous rock, probably altered limestone. The strike of the formation is north-westerly across the ridge, with dips from 30 to 50 degrees to the north-east.

In the above rocks there is a network of small veins, some parallel to and others crossing the formation. The ore, which is chiefly clean galena and carbonates, shows a predilection for the limestone, occurring usually either in a limestone band or near one. The gangue in some of the veins is white milky quartz, in others, calcite.

The work done by the present operators from three to four men, includes a 176 foot raise put up from the No.2 (Iron Cap) tunnel on the Glacier Creek slope to tap a nice showing of ore in an underhand stope commenced from the No.1 tunnel level. They also have opened up several small showings of clean galena and carbonates on the surface near the summit and on the Hamill Creek slope. The following samples were taken from these new showings.

Ore sorted for shipment.....	0.04 oz. Gold	32.7 oz. Ag.	77.1% Pb.
Across 4 inches of galena in siliceous ledge matter in open cut on Hamill Creek slope.....	.05 oz. Gold	17.8 oz. Ag.	56.4% Pb.
Across 8 inches of galena and carbonates in farthest west open cut on summit04 oz. Gold	20.4 oz. Ag.	44.5% Pb.
Across 8 inches of carbonates ore (excluding nuggets of galena) in open cut on summit.02 oz. Gold	14.6 oz. Ag.	45.6% Pb.

RECD. DEC 18 1951		
ANSD.		BY
RETURN TO		
PLEASE REPLY		
HSM	RWM	ISGM
THM	BWS	LCDI
ILB	KKW	ILWW
GDD	LP	ILCA
GWS	SAS	ALU

1206-File
SAS

December 18, 1951

Col. E. Murray Thomson
Room 15
509 Dunsmuir Street
Vancouver, B. C.

Dear Col. Thomson:

Your letter of December 14th about the possible lead-zinc mine with rather high iron and manganese content. Off-hand, I think that 15% manganese content associated with high iron would not be economic in the north as a mixture of that sort would be unlikely to respond to either gravity concentration or to flotation. I know of no plants for chemical concentration of manganese in the north.

The U. S. Government has a program to buy 6,000,000 long ton units (22.4 lbs) of manganese. At the reception center in Deming, New Mexico it will take ore as low as 15% manganese but will only pay \$6.10 per ton for it. It will pay \$2.00 per unit for ore of the following assay:

Mn	48%
Fe	6% allowable
SiO ₂ + Al ₂ O ₃	11% allowable
Phosphorus	.12% "

There is a premium 1/2¢ per unit on an assay value of over 48% and another 1/2¢ per 1% for iron under 6%.

Any lot of ore which cannot be beneficiated to the following specification will be rejected:

Mn	40% minimum
Fe	16% maximum
SiO ₂ + Al ₂ O ₃	15% "
Phosphorus	.3% "
Cu+Pb+Zn	1% "

Even if treatable, freight rates would prohibit shipping ore of that grade.

Col. E. Murray Thomson
Page 2

It is suggested that if this property is located in the limestone area along a major break that the lead-zinc possibilities be investigated. We would be interested if it can be demonstrated that there is a good possibility of a 20' thick replacement ore body of sufficient combined lead-zinc to be ore.

With personal regards and best wishes for a Merry Christmas and Happy New Year, I am

Very truly yours,

S. A. Spellmeyer.

SAS/a

ROOM 510
425 HOWE STREET
VANCOUVER
15-509 Dunsmuir St.
Dec 14-51

Mr. S. C. Spellmeyer.
1206 Pacific Mutual Bldg.
Los Angeles 14.
California

My dear Mr Spellmeyer - I have been offered a mining property (re placement limestone) which while it has indications of lead and zinc and is in the lead and zinc area contains a vein averaging 20' in width which has a metal content of Iron. 35% and metallic manganese of 15%. As I have no knowledge of manganese or rather the economics of manganese, this letter is to enquire if there is a firm market for it and would such a deposit be one that could be treated economically. This property is in an area once on a break which has many profitable mines. I thought of doing some geological work before going much further, but the economics of manganese would seem to be the determining factor controlling as to whether it be regarded as a manganese or a lead zinc prospect.

Sincerely

E. M. Thomson.

P. S. Written long hand as my Secretary is away ill. E.M.T.

Under terms outlined further by
S.M. in his letter of October 18
this property is not of interest. I advised
S.M. Oct. 29 that if Thomson
could or would not gain
more equitable conditions etc
that he should definitely drop
the matter. We will of course
keep the matter before us in
case of a later proposal.
Proprietor, italy, does not appear to ^{be interested}
not 10/21/51

RECD. OCT 25 1951		
ANSO.	BY	
RETURN TO		
PLEASE REPLY		
HBM	RWM	ISGM
MTM	BWS	LCD
JLB	KKW	LWV
GDD	LP	ILCA
CWS	SAS	IALD

October 23, 1951

1206-File
BWS
SAS

To: Blair W. Stewart
From: S. A. Spellmeyer
Re: Seven Sisters Mine

Location: On the west flank of Seven Sisters Mountain at an elevation of about 4400 feet looking down on the Skeena River. It is 8 miles by trail from Cedervale and probably 4 miles air line from the track of the Canadian National Railroad.

Suggested by: Col. E. M. Thomson, Suite 81, 553 Granville, Vancouver, B. C.

Topography: The mine outcrops are just above timber line on the west flank of the mountain on rather even slope of about 20° toward the valley.

Geology: The outcrops are found in the argillites and quartzites of the Hazelton Series a short distance in the footwall of a granitic intrusive. In general the bedding strike is N10W dipping easterly into the mountain at 30°. The mineralization seems to follow the bedding and is of a replacement type. The favorable band is approximately 300' wide and can be traced for more than a mile. It is partly covered by glacial drift, sometimes rather heavily and at other times it is clear. There is no more than 200 feet of vertical distance at any point along the outcrop. There is no deep dissection in the mineralized zone but canyons cut across the projected strike, Coyote Creek to the north and the basin at the head of Flint Creek to the south.

The granitic batholith is toward the northeast (distance unspecified). Two andesite dikes of strength and regularity have been found, one of which has penetrated the mineral zone (no strike or dip given in report).

Mineralization: Pyrite, pyrrhotite, sphalerite and galena with some tetrahedrite with the lead. The silver values go up to 3 - 4 ounces of silver to 1% of lead at times. The ore occurs as lenticular replacement along bedding planes. (It is not stated whether argillite or quartzite is more favorable nor is any size given for the lenses.) The mineralized belt probably containing parallel lenses is about 300 feet wide and a mile in length. (300 feet on a 30° dip is a thickness of 100 feet of the bedding.)

The tenor of the assays of scattered samples from workings and open cuts is more or less as follows: Gold - none; silver 1 - 7-1/2 ounces; lead 0 to 3%; zinc, up to 25%. A picked sample of galena ran 111 oz. Ag., 48% Pb. and 6% Zn. A sample of pyrrhotite from the shaft ran 1 oz. Ag; no Pb and 16% Zn. The widths on these scattered samples were reported from 2 to 5 feet.

Workings: One 75-foot shaft along a vertical N20W andesite dike with a few short drifts and crosscuts. One 86-foot crosscut tunnel and a large number of pits and open cuts and short tunnels. (Nothing to do more than indicate mineralization - no ore blocked or developed to show size of lenses.)

Proposal: A free interest of 25%; about \$5000.00 cash; a commitment to spend \$25,000 per year for an unstated time; delivery of assay maps to vendors as they are made up.

Discussion: This is a prospect that might be worth a preliminary inspection when the snow has cleared away, provided a more satisfactory proposal could be arranged. It is not sufficiently attractive to warrant paying out any money for the privilege of getting an examination in the spring or summer of next year. From the sketchy report, probably a copy of the Minister of Mines Report for 1928, it looks as if the two principal places of operation were on the dike contacts though some mineral is found over a considerable area. So far, time has not been found to try to trace any history of the property in the literature at the Geological Survey Library. It is quite probable that the proposer, Col. Thomson, is feeling out the situation to see how much, if any, money could be obtained. While we don't want to discourage him, as yet, as he may turn up something more favorable, we'll have to convince him that we do not consider this an attractive proposition as presented and that before paying out cash we have to know what we are getting.

S. A. Spellmeyer

SAS/a

Excerpt from SAS memo to BWS 10-18-51
(Original filed in SAS Explorations - B.C. fldr.)

"One of the properties proposed by Thomson is the Seven Sisters on the west flank of Seven Sisters Mountain near Cedarvale in the Skeena River Valley. The proposal made is as follows: "A 25% interest in the operating company and some cash to allow them (the 5 vendors) to maintain themselves until work starts in the spring, which sum can be stipulated as \$5000.00 with the additional stipulation that a minimum of \$25,000 per year be spent on the property while the option is in existence. The vendors wish your company to agree that they will undertake that the issue of this stock to them will be free stock and not take any steps to escrow same.

The above are general terms and it is understood that they will be submitted into a regular option form agreement setting out the usual particulars, one of which should be that they are entitled to receive copies of all assay maps and assay plans as they become available. Mr. Thomson was told that these are not at all the terms we would consider satisfactory. In the first place we would not pay out any money before seeing a property (this property is at 4100' elev. and is already partly covered with snow), next that we would not commit ourselves in advance for definite or irrevokable expenditures. That we do not like the idea of having a large outside interest particularly when it is ^{not} under option and might be kicking around a market. That we are not in the habit of making public the results of our sampling or drilling, particularly when we know it is to be used to run a market up or down"

RECD. ²² OCT 25 1951		
ANSD.	BY	
RETURN TO		
PLEASE REPLY		
HSM	RWM	ISGM
HTM	BWS	LCD
JLB	KKW	LWW
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CWS	SAS	ALD

81 - 553 Granville Street,
 ROOM 510
 475-HOWE-STREET
 VANCOUVER

October 12, 1951

Mr. S. A. Spellmeyer,
 Mining Engineer,
 1206 Mutual Building,
 Los Angeles, California,
 U. S. A.

Dear Mr. Spellmeyer:

Re: Seven Sisters Mountain Group.

I attach herewith a copy of a report by a Geologist of the Department of Mines at Victoria, B. C.

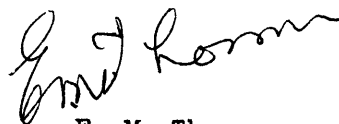
The following terms have been submitted to me as being acceptable to the vendors of whom there are five in number:

A 25% interest in the operating company and some cash payment to allow them to maintain themselves until work starts in the spring, which sum can be stipulated as \$5,000.00, with the additional stipulation that a minimum of \$25,000.00 per year be spent on the property while the option is in existence. The vendors wish your company to agree that they will undertake that the issue of this stock to them will be as free stock and not take any steps to escrow same.

The above are general terms and it is understood that they will be submitted into a regular option form agreement, setting out the usual particulars, one of which should be that they are entitled to receive copies of all assay maps and assay plans as they become available.

It would be advantageous if you would advise me if the above terms are such as you would be willing to recommend as there are several more properties on which I am negotiating and if I can get a clear picture of the way you wish the deals to go forward I can shorten the negotiating period a great deal.

Yours very truly,



E. M. Thomson.

EMT: jmp

Encl.

SEVEN SISTERS MOUNTAIN

This group, owned by Steve Young, is distant 8 miles by pack-trail from Cedarvale, on the Canadian National Railway. It is under option to the D. W. Mines, Limited, which has carried on work with a small force during the entire year, having erected camp buildings, sufficient to accommodate a force of 12 men, in a convenient location just below timber-line at 4,100 feet elevation. Workings are above timberline and lie between elevations of 4,300 to 4,500 feet. W. H. O'Connor is in charge of operations.

The salient features of the mineral occurrence are as follows: On the upper western flanks of Seven Sisters Mountain, overlooking the Skeena River, not far distant from an intrusion of granitic rock in the argillites and quartzites of the Hazelton series, there is exposed by open-cuts and shallow workings a replacement mineralization. This persists with remarkable regularity and can be readily traced for upwards of a mile in length. It is covered in places with glacial drift somewhat deeply, but in others the cover is very thin or non-existent. At the great majority of points, however, if it has not already been disclosed by natural agencies, it can be readily exposed by surface-trenching. The strike differs but little from true north and south, being on an average perhaps N. 10° W. (true). The dip is flat, at about 30° , and easterly into the mountain. The strike is such, likewise the topography, that all surface exposures are, broadly speaking, at much the same horizon, lying between elevations of 4,300 and 4,500 feet above sea-level. Further, the mountain-side slopes very gradually away from the surface exposures, at an angle in most places of not over 20° . There is practically no deep dissection of the surface near the mineralization, except at the extreme north and south ends of the property. In the former case Coyote Creek affords somewhat deep dissection and at the south end the basin at the head of Flint creek is of great size and depth.

The mineralization is essentially pyrrhotite-zinc blende-galena, with a large amount of accompanying iron pyrites. Silver values evidently vary considerably, but some of the galena lenses containing grey copper show quite high silver values; this class of ore carries from 3 to 4 oz. of silver to the unit of lead. The mineralization appears to be a replacement following the bedding-planes of the enclosing argillitic and quartzite country-rock, although the bedding-planes are somewhat obscured. While quite insufficient work has been done to prove the matter, it seems likely that a belt of rock about 300 feet in width will be found to contain parallel ore-lenses.

Besides the intrusion of batholithic rock, previously mentioned, in the north-eastern portion of the property in Coyote creek, another important geologic feature is the intrusion of certain igneous dykes of andesite porphyry in the sedimentaries. Two of these have been discovered so far, both of which persist for considerable distances with great regularity. One of these dykes, which has penetrated the mineralized zone, has probably influenced ore-deposition and this relationship should undoubtedly be closely studied.

Last winter, at the point of original discovery of galena of high silver content at 4,285 feet elevation, a shaft was sunk 75 feet on an incline of 32° on a bearing N. 85° E. (mag.). At the collar of the shaft a

vertical dyke of andesite porphyry, striking N. 20° W. (true) and about 3 feet wide, penetrates the ore-zone and ore occurs on both sides of it. While the ground encountered showed a considerable amount of massive zinc-blende with a little galena occurring in bunches, it will be noted that this shaft is in the nature of crosscutting, as the bearing is not at right angles to the observed strike of the ore on the surface at this point, which is N. 10° W. (true). Just below the collar of the shaft a tunnel was run a distance of 28 feet on a bearing S. 120° E. (mag.), which also does not coincide with the observed strike of the ore. Near the bottom of the shaft a crosscut was also run westerly a distance of about 30 feet. In the spring of 1927, owing to water, further sinking was stopped and an extensive system of surface-trenching was carried out south of this point, in the hope that the vein might be found to bear ore as far south as Flint Creek basin; in which event the vein could be advantageously developed in depth by an adit-drift from this basin.

The results of this open-cutting were not, however, very conclusive and the mantle of glacial drift was heavy in places necessitating deep trenching. Good ore, it is stated, was found at one point distant 1,087 feet from the shaft, and doubtless a very considerable extension of ore-bearing ground is to be expected south of the shaft. On the other hand, examination of the surface showings north of the shaft, coupled with the fact that the intrusion of batholithic rock with injection tongues therefrom is in the extreme northern portion of the property, and further, that an andesitic dyke striking N. 20° W. (true) penetrates the mineralized zone by the shaft, indicate major possibilities near and north of the latter. With this idea in mind, in September, investigation of the region in the more immediate vicinity of the shaft was commenced, with gratifying results. A few feet north of the shaft, and about 15 feet below the latter, an open-cut followed by a crosscut tunnel 86 feet in length struck a width of 4 feet of mixed galena and zinc-blende and pyrrhotite with much calcite. The strike of the ore is N. 10° W. (true), corresponding with that struck at the collar of the shaft and which latter is doubtless the apex. This ore was being followed by drifting at the close of the year. At the time of the inspection in November a width of 2 feet of ore was exposed. A sample across this width assayed: Gold, trace; silver, 7.5 oz. to the ton; lead, 3 per cent; zinc, 18 per cent.

At a point about 300 feet north of the shaft another open-cut exposed a width of 5 feet of ore consisting of zinc-blende and pyrrhotite with some galena. Very little ore showed at the surface at this point. A picked sample of this ore assayed: Gold, trace; silver, 3.6 oz. to the ton; lead, 2 per cent.; zinc, 25 per cent. By Chishold creek, about 750 feet north of the shaft, there is exposed a nice showing of solid zinc-blende. About 3,000 feet north of the shaft a large area of rock is heavily stained with iron, which probably marks the continuation downward of this mineral-zone. The elevation of this point is 4,530 feet. Still farther north, at an elevation of 4,460 feet, an old tunnel was run in the zone, crosscutting for a distance of 12 feet massive zinc-blende and pyrrhotite. The need of further work at this point is imperative. A sample of the ore at this point assayed 14 percent. zinc, no lead, and traces only of gold and silver.

A sample of picked galena from the shaft assayed; Gold, trace; silver, 111 oz. to the ton; lead, 48 per cent.; zinc, 6 per cent. A sample of zinc-blende and pyrrhotite from the shaft assayed: Gold, trace; silver, 1 oz. to the ton; lead, nil; zinc, 16 per cent.

During the winter of 1927-28 (at which time only underground development is possible) the intention is to drift and sink in the ore which has recently been struck near the shaft. It might be mentioned that in winter very little water is met with in sinking.

When seasonal conditions permit, the advisability of following up the various exposures north of the shaft is apparent. A very large amount of surface-trenching in this region will be necessary to determine the best points for further investigation; indeed, the property has hardly been scratched as yet. While ultimately the ores will require treatment by selective flotation prior to shipment, it is possible that development will yield lenses of galena, which can be hand-sorted and shipped direct. The galena evidently varies widely in silver content.

While this property is still in the prospect stage, it gives promise of developing into a property of magnitude. It is distant in a straight line from the railway probably not over 4 miles. It must therefore be apparent that, when developments justify such, a mill by the railway-track and an aerial tram thereto will satisfactorily dispose of the transportation question. Refer also to the 1925 and 1926 Annual Reports.

93.b

TABER, John W.

Mining Engr. App.

1947

BRITISH COLUMBIA

THOMSON PROSPECTS - General

1206 File