Property File

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REPORT

OF A BRIEF EXAMINATION

OF THE

CLUBINE-COMSTOCK MINE

SALMO, B. C.

To

Mr. A. M. Ham, Manager,
Western Exploration Co. Ltd.
Silverton, B. C.

By

Charles C. Starr, M. E.

October 1, 1949.

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THE CLUBINE-COMSTOCK MINE

SALMO, B. C.

INTRODUCTION:

Two days were spent on the property accompanied by Mr. Paul Lincoln, Managing Director.

Three levels only were examined, the No. 475, 5 and 575, as the others are caved and inaccessible except the No. 6 which has not yet reached the ore zone.

LOCATION:

The mine is on Key Creek and is reached from Salmo, B. C. by the highway for 3½ miles north to Boulder Creek, thence by 1½ miles of rather steep road. The claims are at an altitude of 3000 to 4500 feet.

PROPERTY:

There are about a dozen claims in the group, all held by location and said to be in good standing.

GENERAL:

The topography is fairly rough. The camp is at an altitude of about 3400 feet, 1100 feet higher than the valley floor and highway.

Water sufficient for camp and mine use is taken from Key Creek above the workings.

There is a scarcity of mine timber on the claims on account of fires which swept through the region some years ago.

Reports have been made on the property by the following:- J. F. Walker C. G. S. Memoir 172 (1928 or 9), C. C. Starr (1931), W. G. Norrie-Lowenthal (1934), P. W. Racey (1935), F. Buckle progress reports (1935), A. Lakes (1935), and P. E. Oscarson (1946 and 7). The latter is the most complete and is accompanied by detailed geological maps which I have used freely in my examination.

PRODUCTION: From reports to shareholders.

Years	Tons	Val./ton	Gross Val.	Ft. Devlp.	D. Drill Ft.
1932-6	336	$49.15	$16,516.69	?	?
1936-40	3435	32.44	111,474.67	4600	564
1940-7	-	-	-	?	?
	3771	33.94	127,991.36	Total production.	

Development costs prior to Jan. 30, 1936 is given as $36,775.12, road, camp, etc expense over $50,000 or a total of $86,775. Deducting shipments to 1936 of $16,516 it would appear that to date the mine has cost around $70,000 more than it hasproduced.

EQUIPMENT:

The power plant is at the portal of No. 5 tunnel and consists of the following:-

CCS

1 Cummins Diesel engine, 90 H. P., electric battery starter with "V" belt drive to --

1 Gardner-Denver air compressor, 395 cu. ft. per minute at 125 lbs. pressure, 870 R.P.M, Idler cut out.

1 Air receiver 2 x 6 feet

3 inch pipelines to No. 5 and 575 tunnels.

This equipment is said to be in good condition except that a new generator and starting battery is required, and a few other minor repairs.

The mining equipment consists of --

2 C.I.R. N82 drifters

1 Chicago Pneumatic jackhamer, mounted.

4 Bars, saddles, arms, etc.

2 Stopers (old)

Considerable 1" quarter octagon drill steel fitted for Liddicoat bits.

The camp buildings consist of an office, cook-house, a two story bunk house (2 rooms), a garage and a shed. These are all frame buildings without inside lining and are of a size to handle about a dozen men. There is little equipment left in the cook-house except a range. About ten tons of coal is stored in the shed.

DEVELOPMENT:

Omitting the caved and presumably worked out tunnels, development is approximately as follows:-

Tunnels	Elev.	Feet drifts	Remarks
475 N	3407	360	Plus a short X-c and several raises.
475 S	3407	70	No X-C or raises
#5 N	3375	775	Plus 115 ft. "back drifts" & several X-C and raises.
#5 S	3375	230	No X-C or raises.
575	3350?	240	from a 240 ft. X-C; no raises.
#6	3165	160	Main X-C 540 ft. No other X-C or raises.

The 475 tunnels are in poor condition; rotten timber has let some stope filling down and more is likely to come at any time in the north tunnel; the south tunnel is partly caved at the portal. No. 5 tunnel is in fair condition, both north and south. The two lower ones are in good condition.

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GEOLOGY: The country rock of the region is greenstone of the Beaver Mountain-Rossland volcanic group, which is made up of various altered flows and intrusions and in places includes some argillite and limestone. (C.G.S. Memoir 172).

The main vein occurs in a shear zone along a lamprophyre dike and consists of narrow veins and stringers of massive quartz containing gold, fine pyrite, a little chalcopyrite, and probably pyrrhotite. The vein quartz is in places continuous up to 200 feet in length, but more often occurs as a short stringer or lense which may practically pinch out and occur again a few feet further on, either along the same fracture or a parallel one. In addition to the main vein there are occasional stringers of quartz which carry gold but are seldom of ore grade and width, or close enough to the main vein to be mined with it.

As a rule thereis no gouge along the vein walls, although the quartz is not frozen to them; movement along the vein after its formation must have been slight, if any. In general the vein gives the impression of having formed in tension fissures wherever there were open spaces, and that little movement had taken place since. This, and the solid unfractured condition of the quartz would suggest that the vein is younger than all the dikes. However Mr. Oscarson believes that one or more of the dikes are younger than the vein and apparently saw proof of it.

The greatest width of vein now exposed is about one foot, although it is reported to have been two or three feet wide in places in the upper workings. The veins usually occur along the footwall of the lamprophyre dike and within a few feet of it, but some minor quartz stringers also occur in the hanging wall of the dike.

The strike of the dike and the veins is about N 20° W and the dip 30° to 40° easterly.

Both Mr. Racey and Mr. Oscarson state that several dikes of different types more or less parallel the vein shear and the lamprophyre dike. Mr. Oscarson classifies them as "felsite" and "porphyry". My own brief examination confirms the felsite, but I would be inclined to think the "porphyry" is altered Rossland volcanic. However this has little bearing on the future of the mine.

In No. 5 tunnel at 300 feet north of the portal a fault was encountered which strikes N 40° W, dips about 75° easterly and cuts the vein and dikes. It is also exposed in the 475 level at the top of a stope from No. 5 and also in a crosscut some 40 feet further north, and is younger than the dikes and the vein. The horizontal and vertical components of its throw cannot be given with any accuracy from present exposures, but would appear to be in excess of 50 feet horizontally and 20 feet vertically, the hanging wall side having moved up and southward as compared to the footwall side.

CCS

SAMPLES: In only one section of the mine, in No. 5 tunnel well toward the north end, is the vein wide enough and consistent enough to justify sampling. This section is on the hanging wall side of the fault, it starts at 20 feet south of #510 raise and continues to 10 feet north of the raise, then the vein narrows and appears lean to 35 feet north of the raise and after a few feet of slightly more than a half foot width it again is narrow and poor as far as visible. Where the vein is comparatively wide it has been dug out between the 35° dipping hanging wall and the floor of the drift making a difficult space to sample in, and in places water has accumulated; this accounts for the uneven spacing of the samples.

Sample Number	Location from center #510 Raise	Feet width	Oz.Au	Oz Ag	Remarks
4025	17.5' south	1.0	0.16	0.24	Banded Qtz. & pyrite
4026	5.5 "	0.9	0.36	Tr	" " "
4027	0.0	0.85	0.20	Tr	" " "
4028	10.5 north	0.5	0.44	0.56	" " "
4029	40.5 "	0.55	0.50	0.70	" " "

In the back of the drift above these samples there is practically no quartz, the samples therefore may represent the top of an oreshoot below No. 5 level.

RECOMMENDATIONS & CONCLUSION:

Mr. Oscarson gives detailed recommendations for the work to be done to pick up the vein both in the hanging wall and the footwall of the fault near the north face of the 475 level, that is in brief - crosscut northeast at the face of the level and raise on the vein expected to be found there, also explore the hanging wall side of the dike. I concur with this.

On the 575 level he recommends crosscutting at least 50 feet into the hanging wall at the face of the north drift, or until the main fault is cut. To this I would add ... and then drift northward and raise on the best showing found.

However, the reason for the present examination is to determine not only the best exploration work to develop ore, but whether any further exploration by outside capital is justified. In my opinion it is not justified for the following reasons:-

(1) It appears from the data at hand that in the past some $70,000 more has been spent on the property than has been produced, although most of the development and mining was done during the depression when costs were low and a good price was received for gold.

(2) The vein is narrow, oreshoots seem generally comparatively short, and the dip is too flat for economical working.

C.A.S.

(3) A large footage of development has been required in the past per ton of ore recovered, and there is no reason to expect any essential change in the future.

Further development can be expected to show more ore of commercial grade, but whether in sufficient quantity to show an overall profit is quite uncertain and, I believe, too great a risk to take.

Respectfully submitted,

Chas. C. Starr

Clubbing Comstock

No 4025 J. R. WILLIAMS & SON
576 Seymour St.

Oct 1, 1949

S ix ft N of A #5 Lev
Wid 1.0 Qtz + py
In "undhd" stope.

A is 23½' So of center #510 RA

No 4025

No 4027 J. R. WILLIAMS & SON
576 Seymour St.

S 23 N of T #5 Level
Wid 0.85 ft Qtz + py
In "undhd" stope

No 4027

No 4026 J. R. WILLIAMS & SON
576 Seymour St.

S 18' N of T #5 Lev
Wid 0.9 ft Qtz + py
In "undhd" stope

No 4026

No 4028 J. R. WILLIAMS & SON
576 Seymour St.

S 34' N of #5 Lev
Wid 0.5 ft of Qtz + py.
In "undhd" stope

No 4028

Clubbing Oct 1, 1949

No 4029 J. R. WILLIAMS & SON
576 Seymour St.

S 64' N from A #5 Lev
W = 0.55' Qtz + py
Vn mostly narrow clay
4028 to 10' So of 4029
+ lean + narrow N of 4029

No 4029

Walker Memoir #172 (1928 or 9)

Gold in fissures in greenstone of Beaverhill-Kerr Bank group.
#5 adit follows a fissure in gr. St. along the under side of a lamprodike that strikes 340° & dips 35° NE. @ 300' fr portal a small flt strikes 320° – 72° NE & with downthrow on the NE side displaces the dike, which is entered again around a short easterly bend in the adit & can be followed for 70' to the face of the adit. The "fissure" is a sheary of gr. St along the side of the dike & is not bounded by definite walls.
Only igneous rk known to cut the mineral occurrences are lamprophyre dikes. One fine grain dacite in Stew(?) is a syenite (not lamprophyre) (and slightly Sy + 10% Q)

Bourne-Sauerbeck 1934 - July Main vein narrow but persistent & gently on FW side of dike but abruptly on HW side. Ore in vn only in volcanics. 1st 66' of #3 Tunn in ore
#4 tunn ore fr portal to 200' in. Between #3 & 4 portals of #5 tunn.
& under creek appears top of important ore. BT O'Grady got 2.44 oz over 6' here; Co 1.18 oz over 2' & 3.44 oz over 4 ft.
In #5 tunn @ 50' in to NW is 12" vein in floor of rock 4" ran 0.22 oz
Dec 1934

PW Racey Feb 1935 3 or 4 dikes one after other (?qtz)
Ore in 2 or 4 Tunnels 60 × 100' long & 1–3 ft thick
#5 Tunn fault @ 300' in – NW moved rel.

F. Buckle ~~Eng~~ 1935 No vein material found in #6 X-C
"In my opinion" no comet ore has been developed (1930). The evidence that further expl will result in important discoveries.

A. Lakes 1935 Ore in 6 – if any could be further NW of face at 280 to 300 ft. Abandonment of #6 level recommended (or mine?)

Work & prod'n 1936 (Refit to Stewart Ch.) Ser 562' XC 129'
698 Tons (dry) for Smelter val $24,558.45 = $35.18 f.t. Rs 522' 40 ft 48'
1261
1937 Rept
997 Dry tons – for Smelter val $31,556.49 $31.66 f.t. 1166' of develp.
Stopg between 400 & 500 levs
1938 Rept
857.4 Tons – Val $26,268.60 = $30.85 1092' develp. 564' DD.
1939
710.74 Tons $19862.61 = $27.94 711 ft develp
1940 177 Tons $ 9,198.52 = 51.77 ft. develp 370'

over

Electrine Comstock

Gard-Denver Compr 385 CFM 125# 870 RPM

V belt drive by

90 HP. Cummins Diesel - Elec Starting.

& Idler cut out & gone.

Bought 2nd hand & after used 4 mo.

(Generator gone - batteries - & minor parts - needed only)

Receiver 2x6 - pipe 3" to 575 - 3" to 500 -

2 - I.R. drifters N82 fairly OK.

1 - mounted Jackhamer Chic-Pnew.

4 - Bars, saddles & arms

- Lot of drill steel 1" 140ct. for Liddicoat bits

2 - stopers - old.

10 T Coal Offc Bunk Hs. Cook hs & dry.
suitable for dozen men.

2½ mi fr Sandy Flat,

Productn 1932-1940 \$33.94 Tons 3,771.02 Gr Val \$127991.36

Devlp cost prior to Jan 30 1936 \$36,775.12 + extras on surfc over \$50,000.

1935 Buckle advised sell or abandon. Co. mined ore left - 3,435 tons Val \$111474.67

New capital hunted but not found

over

To be returned to Nelson via Ham —
1 - R.E. Oscarson Jan 21, 1947 report
2 - Prints of mine sections
1 - " " Dec (1946) with Oscarson Survey
acc Oct 3, 1949

See also Boulder City Group

October 6, 1949.

Mr. A. M. Ham, Manager,
Western Exploration Co. Ltd.
Silverton, B. C.

Dear Art:-

Herewith is my report on the Clubine-Comstock mine, near Salmo, in triplicate. I have attached a sketch to the original showing the location of the samples I took. I have left spaces in the report where the assays can be inserted later; please send me a copy of the certificate. Also enclosed is a copy of Mr. Oscarson's report and three of his maps which are supposed to be returned to Mr. I. C. Nelson when you are through with them. I have made no copy of the maps, thinking it was unnecessary under the circumstances.

The mine is rather complicated and I would have needed considerably more time to get a thorough understanding of the geology, however I do not think that it would alter my conclusion that it is inadvisable to invest money for further exploration. I am somewhat doubtful of Oscarson's conclusion that the vein is earlier than the dikes. I did not see much of the data on which he based his conclusion, but it is hard to conceive a small quartz vein going through the intrusion of one or more dikes without being crushed and fractured; the vein is exceptionally solid and unbroken. The relative age of the vein might alter the picture somewhat but probably not materially.

If the samples average around an ounce of gold it will not alter my conclusions, if much less they will strengthen it.

Messrs. Nelson and Lincoln did everything possible to aid in the examination and to make it pleasant.

Yours sincerely,

C Vanderburg

WESTERN EXPLORATION COMPANY LTD.

SILVERTON, B. C.

ASSAY REPORT. C. STARR. NOV. 15 1949

MILL SAMPLES	1st SHIFT Pb %	1st SHIFT Zn %	GRIND Ag Ozs. per ton	2nd SHIFT Pb %	2nd SHIFT Zn %	GRIND Ag Ozs. per ton	3rd SHIFT Pb %	3rd SHIFT Zn %	GRIND Ag Ozs. per ton
24 Hr. MILL HEADS Moist. %									
Pb Feed									
Zn Feed									
Pb Concentrates									
Zn Concentrates									
Final Tails									

No.	MINE SAMPLES	Pb %	Zn %	Ag Ozs. per ton	No.	MINE SAMPLES	Pb %	Zn %	Ag Ozs. per ton
	A4								
4022	〃			〃					
23	〃			〃		Charter's Group - Wilson Creek			
24	〃			〃					
25	0.16			0.24					
26	0.36			〃		Entered in Report			
27	0.20			〃					
28	0.44			0.56					
29	0.50			0.70					
	Lucky Thought.	0.8	19.9	11.0					
	N-E #1 Tunnel								
	Lucky Thought	0.8	35.7	11.6					
	#3 Dump								

H. M. WHIMSTER, PRINTER, NELSON

ASSAYER