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THE NORTH

# CARIBOO GOLD Q. HAS 12 VEINS

## Low Level Tunnel in 2000 Feet — Will Step up Mill Shortly

O. H. Solibakke, director of Cariboo Gold Quartz Mining Co. Ltd., informed The Northern Miner in an interview that the pilot mill is handling 60 tons of ore and recovering about \$1,000 daily. Production is to be stepped up shortly to 100 tons. Development vein material only is being milled at the present time, the company's program calling for the advance of the main low level tunnel to intersect the Sanders vein, while carrying on development of No. 2 and other veins simultaneously.

In the low level tunnel operations twelve cross veins have been cut to date and the expectation is that several others will be intersected. The management hopes to cut the Sanders vein, which outcrops on surface 600 ft. up, within three weeks. The tunnel is now 2,000 ft. in Cow Mountain and has over a mile to go to reach the final objective. The plan is to drift on the Sanders and other veins, to reach the main strike vein which parallels the tunnel.

The cross veins average about three and a half feet in width and come in groups. Nos. 2 and 3 are fairly close together, Nos. 4, 5 and 6 likewise. Several isolated breaks follow and there is another grouping of three more veins. On No. 2 vein the management has driven for 600 ft. in length and put down a winze to open a level 100 ft. lower. At this horizon No. 2 vein shows a width of 50 ft., and values run \$8 to \$10 in gold. Mr. Solibakke states the company is highly gratified over this development. Raising has been done on several veins and it is found that in one raise carried to surface on No. 5 vein and in other work of this nature that the veins are narrow as they approach surface and also spread out into fingers. This evidence supports the theory of the operators that best results can be expected at depth. It also explains the determination of the company to put through this low level drive, in the face of considerable criticism.

The Strike vein, which is the major objective of the company, parallels the tunnel at about 1,000 ft. to the southwest. When this is opened and developed directors will give thought to mill enlargement, regarding the present plant as one for testing on a large scale. Ore tonnage will be first prepared and then a 1,000-ton plant will be built. At the present time the company is operating ten drills in the various operations in the tunnel workings.

The director reports that the ore offers no metallurgical problem, recovery with cyanide being about 96%. Power is developed by Diesel engines and the oil and other supplies are brought a distance of 55 miles from the railway, at a cost of \$10 a ton. Quesnel is the jumping point. There are 135 men at the property at this time.

The financial condition of the company is excellent, the director reports. He states that there is \$375,000 in cash on hand, the company has no outstanding indebtedness and of the 2,000,000 share capital there remain 764,000 shares in the treasury.

Substantial success at the Cariboo Gold Quartz property has revived a district which was once Mecca for thousands of placer miners. Several millions of dollars were taken from Lowhee Creek, which traverses this property. Hydraulic mining is actually going on at the present time and there is the rather odd spectacle of one company working placer deposits while another mines the same area underground. The early miners searched diligently for the mother lode and found a number of quartz veins which could not, however, be mined profitably in the old days before the coming of the cyanide process. The old stakings and discoveries are again sought and a group of important companies, including Newmont, Britannia, Howe Sound, Premier and others now have holdings adjoining or in close proximity to Cariboo Gold Quartz. It is believed that several excellent developments are anticipated on such holdings.

The Cariboo area owes its regeneration to Fred. M. Wells, pioneer B.C. mining man, whose faith in the district prompted the development of the property after many discouragements.

Clippings - Cariboo Gold Quartz 1930's.

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Alaska Weekly Feb-12-32.

THE ALASKA WEEKLY, FRIDAY, FEBRUARY

# Cariboo Gold Quartz To Have Mill This Summer

(Continued from Page 1)

low level tunnel through Barkerville mountain and under the Proserpine mountain properties a distance of about four miles. The mineral veins outcropping along the surface show great strength and the ore tonnage indicated is almost beyond conception. In the ground beyond our present holding, this tunnel will cut ore bodies at a vertical depth of from 1,000 to 2,000 feet below the surface outcroppings. An opportunity of tunnel development of such magnitude along assured ore bodies is unique in mining.

Our company holds the key position in respect to this development and our tunnel program is well under way, going ahead with two shifts backed by the most complete equipment consisting of Diesel engine, latest type compressor, drill sharpener, and electric lighting throughout. We are not prepared to go, but are well on the way.

A gold mining proposition must be accepted as it is today and not as we have been accustomed to it in years gone by. It is not alone the fact that the world has suddenly acquired a great desire for gold. The point is that through the advances made in mining machinery and mining methods in a big way, and the massing of capital, a proposition that was impossible of success a few years ago provides today the soundest class of mine investment. The magnitude of such undertakings assure long life and steady returns on an investment.

Referring to mining and milling in a big way on the Cariboo Gold Belt, we are thinking of tonnage of from 5,000 to 10,000 tons a day. We have sound reasons to believe that from our own holdings, ore to this tonnage can be developed, but by further extending development along the belt as suggested by our tunnel program, in my mind there is no question about tonnage. Long haulage ways underground have been proven to be the most economical method of transportation of heavy ore tonnage. The ore must be brought to one big plant for low cost treatment.

A tunnel may be extended from our camp on Jack O'Clubs Lake to a point anywhere up to five miles distant with the assurance of crosscutting workable gold quartz veins every few hundred feet. Work already done on our property is sufficient demonstration of this fact.

We are much enthused over the character of ore found by our tunnels. There is also another very important point; none of the several veins of ore so far cut by our tunnels outcropped on the surface. We have never yet cut a vein that showed on the surface. Some may have outcropped under the over-burden. This fact demonstrates that tunnel development is the only system and is proving a success.

As these gold quartz veins are cut by the tunnel, lateral development by drifts and uprisings will follow. All this work is going on at the present time. I am writing this report late at night, while in charge of the work, and have just come from the tunnel with fine samples of ore from the last round, this being a 5-foot round, the result of one shift with the big fast drilling machine.

When I wrote my first report on this property it was necessary to assume a lot. I did this using my judgment, backed by a knowledge gained by a long mining experience. Something has to be assumed when initiating work on a new mineral belt. Today, however it is altogether different. The results of our past work are before us and we can predict results of further work with far more assurance.

As noted before, our tunnel line projects under Proserpine mountain and we are following along the line of our plans—last week for instance, the tunnel progressed 56 feet. Our development so far has given real encouragement and veins of importance and value have been cut in the low level tunnel. Those veins have shown ore of the highest character. Free gold and tellurides assaying as high as thousands of dollars per ton in gold have been taken from these veins.

The first veins known to outcrop along the course of our tunnel are the Sanders group, several hundred feet ahead of the present tunnel face. We have special reasons to look for something good at that point and this will be the first vein cut the existence of which was known on the surface. That is where Al. Sanders made his first discovery and where the first telluride ore was found on the hill. While prospecting the surface of these veins, Sanders saved over \$3,000 gold. These veins will be cut over 700 feet below the surface where he panned gold. Farther on, we will cut the downward extension of the large vein encountered in the upper tunnel. Close to that point, we expect to also cut the vein that produced the huge, rich boulders formed in Lowee Gulch, and which represent a vein of great value and high grade gold ore.

The question is being asked if we have the mother lode of Cariboo. I believe there are several mother lodes along this mineral belt, but I believe we have the mother lode in a big quartz vein which should be known as the Wells vein, because I discovered it located it myself. This vein is higher up the hill than what is called the mineral belt, its course roughly paralleling our tunnel course and about 1,000 feet distant. The vein is 50 feet wide. All development is heading toward it and

in time this great ore body will be cut at a level of 850 feet below the surface. Only a little open-cutting has been done on the surface of this vein, but free gold can be mortared from the surface.

The matter of milling has been taken up by our company, and we have considered the installation of a 50-ton, or possibly 100-ton, pilot mill during the present season. This mill will run only on the better grade ore and will have no particular bearing on the main development program.

Assay values from veins cut in our tunnel indicates that the mill could be run on \$20 ore. Profits from operating such a plant would materially assist in the further development of the mine.

A list of assays results of my last work on these veins is shown below: Samples of Ores Herein Described and Received From Cariboo Gold Quartz

Mines, Barkerville, B. C.		
No.	Ounces Per Ton	Value Per Ton
1.....	0.96	19.20
2.....	0.30	6.00
3.....	0.20	4.00
4.....	0.54	10.80
5.....	1.54	30.80
6.....	3.86	77.20
7.....	1.50	30.00
8.....	0.66	13.20
9.....	2.08	41.60
10.....	0.30	6.00
11.....	1.04	20.80
12.....	6.20	124.00
13.....	1.48	29.60
14.....	2.44	48.80
15.....	0.84	16.80
16.....	1.52	30.40
17.....	0.50	10.00

—Assayed by J. R. WILLIAMS, Provincial Assayer.

We read of great mining development schemes such as presented in the Beattie Mine in Eastern Canada, where one of the most successful and conservative mining companies in Canada, the Nipissing Company, will spend millions of dollars creating a producer on ore that has a gross value of \$3 gold per ton. The Howe is another instance and others are on the way backed and constructed by our most successful mining companies.

We have the greatest low grade gold mine yet discovered in Canada.

Gold ore can be mined at a lower cost in the Cariboo Eastern property, mines, it is all developed. Cariboo we have the greatest of having a great

# CARIBOO QUARTZ SHOWINGS GUARANTEE BRIGHT FUTURE FOR BARKERVILLE SECTION

*Alaska Weekly* *Sept 4/31*  
Development Of Cariboo Gold Quartz Co. Bids Fair To Make  
The Once Famous Placer Camp Center Of Lode Mining  
Activity; Large Placer Projects Also Under Way.

By Earle W. Knight

For some time past The Alaska Weekly has been getting stories of one sort or another concerning the Cariboo Gold Quartz Company property and when an opportunity presented itself, to personally examine the property, it was eagerly embraced. Since this was the writer's first trip over the historic Cariboo trail, it may be said that it was approached with a great deal of pleasurable anticipation, for there are few places on the American continent which may be reached by automobile which combine unsurpassable grandeur of scenery with an historic background so replete with the colorful romance of a by-gone day.

We pulled out of Seattle bright and early one morning last week, turned off the main highway at Sedro-Woolley, crossed the British Columbia line at Sumas and in a couple of hours' drive were on the trail, now a good automobile road, where in the sixties hardy forty-niners from California and other adventuresome souls from the four corners of the earth had worked their weary way with ox teams and pack trains up the tortuous mountains and through canyons ground out by the Fraser and Thompson rivers to the new diggings from which they wrested millions in placer gold. Stopping that night at Clinton, we were on our way in the morning shortly after dawn, and by the middle of the afternoon had pulled up at the camp of the Cariboo Gold Quartz Company, about three miles from Barkerville—an easy two days' ride from Seattle, a large portion of which over roads leading through scenes of gorgeous splendor.

#### Ideal Location

The first thing which struck the party was the ideal location of the Cariboo Gold Quartz for mining operation. The present power house and the proposed millsite are located about 100 feet above the level of Jack o' Clubs Lake, a body of water about three miles long and a half to a mile in width and of great depth, a natural dumping ground for a practically unlimited time. The entire 2,000 acres comprising the company's property is heavily timbered with timber of just about the right size for mine use, and there is ample water for all mine requirements. After the introductions were over and a little preliminary scouting around was done, it was time for one of those mining camp dinners at which one is served with the sort of food city dwellers like to talk about but seldom get, and we were ready to turn in so as to be ready for the strenuous day to follow.

#### Fred M. Wells

In the morning the party got together and left camp under the guidance of Fred M. Wells, the company manager. Just a word at this point about Mr. Wells. He is one of the few men of mining experience in the writer's acquaintance who does not call himself a mining engineer. Mr. Wells is not a mining engineer and he is proud of it. He is simply a mining man of forty years' experience which has been spent in selecting good prospects and making mines of them. While he bitterly resents being called a mining engineer, we are going to brave his wrath with the statement that we consider him one of the most genuine engineers we ever met. If he has a fault, it is one of ultra conservatism, which those who have watched their money extravagantly dissipated by theorists will find easily forgivable.

(Continued on Page 8)

## Cariboo Quartz *Sept 4/31* Assure Future *Alaska* For Barkerville *Weekly*

(Continued from Page 1)

In going over the property we traced the development from the beginning examining first the open cut work on what were originally known as the Sanders claims. A. P. Sanders, a California pocket hunter of the old school, located these claims on Cow Mountain many years ago and, for several years following, open cut one vein after another, working out the quartz in which erosion had freed the gold, and passing on to the next when he began to get into sulphides, or when the vein uncovered did not carry sufficient values to make these primitive methods pay. In this manner he took out several thousand dollars. Sanders later sold his claims to Wells, agreeing to accept stock in the Cariboo Gold Quartz Company, to be organized, in full payment for them. Mr. Sanders' work and the later prospecting done under the direction of Mr. Wells show the property to have two distinct vein systems—one a series of strike veins running southeast to northwest, one of which, thirty feet in width, has been cut in the upper tunnel, and a series of cross veins, most of which are narrower and of higher grade. One of these cross veins, however, measures 50 feet across and gives an average assay of more than \$10 on the surface.

#### Assayed \$38,801.50 Ton

The property of the Cariboo Gold Quartz Company, partly on Cow Mountain and partly on Barkerville Mountain, is cut by Lowhee Creek, which was discovered in the early sixties and where a hydraulic operation is still paying handsome returns. All the work has thus far been done on the Cow Mountain portion of the property, and the first or upper tunnel was driven some 700 feet in on the creek side of the mountain. In driving this tunnel one of the cross veins above referred to was cut. This vein, twelve feet in width, was drifted on for 250 feet and carries heavy sulphides assaying well in gold, and with sufficient silver to be of commercial value even at present silver prices. It was in this tunnel that a sample of ore gave the tremendous assay of \$38,801.50 per ton. It may be well right here, however, to interpose the remark that, while some astounding assays have come from this property, it is upon a volume of \$10 ore that the company's officials base their expectations. To be sure, no vein has as yet showed an average assay as low as \$10, but that is one of the places where Mr. Wells comes in.

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### More Free Gold Specimens Found In Cariboo Mine

A wire received today at the office of O. H. Solibakke, fiscal agents for the Cariboo Gold Quartz Company, contains further good news for the shareholders of that company. Shortly after changing the course of the main tunnel so as to drive directly for the Sanders veins, which it is anticipated will be intercepted at depth, a shear was cut which is more than usually associated with the schist and which shows fine specimens of telluride and of free gold. This shear was expected by Manager Fred M. Wells and once more proves the accuracy of his judgment in the laying out of the development work being done on the property. The good ore and the veins already cut amply demonstrate the high character of the gold-bearing mineral belt passing through the company's property.

### 3,000-Foot Tunnel

After proving the ore at depth which was indicated by the open cut work, the management decided to cross the mountain and start a working tunnel from the lake side which would cut the ore bodies at much greater depth and at the same time be adjacent to the logical millsite. This tunnel when completed will be approximately 3,000 feet in length and will cut the cross vein system of the Sanders property at from 700 to 1,000 feet vertical depth. The astounding things about this tunnel development, however, is that while it was projected to cut known veins on the opposite side of the mountain it has already cut two veins in a distance of slightly over 500 feet, either one of which would have justified the total development expenditure to date and neither of which had been prospected on the surface. The first vein cut in this new tunnel is from three to four feet in width. It has been drifted on for a distance of 60 feet, holds strong and true and assays, on an average of thirty samples \$20.67 per ton. The second vein, about two feet in width, was cut the day the writer examined the property, and no assays are available. It appears to be a true fracture and is even more heavily mineralized than the wider vein. Another rather unusual thing which is peculiar to this district is the presence alongside of these veins of a wide ribbon of steel galena, a sample of which assayed 16 ounces of gold, 201 ounces of silver and lead 36.9 per cent, or a total value of \$414.90 per ton. Driving a tunnel for a known objective through ground which may at any moment produce hitherto unknown veins sufficient to make a mine in themselves must be rather exhilarating mining. Altogether approximately 2,000 feet of underground work has been completed and the entire force at present is being concentrated on driving the main tunnel to its objective—that of cutting at depth the series of veins already open cut on the old Sanders property. That once accomplished, drifting on the various veins will be started and sufficient ore will soon be blocked out to justify the installation of a large mill with sufficient ore developed in advance to assure its continuous operation. Here again the conservatism of the management is in evidence, for there will be no premature mill building on this property.

### Staggering Gold Values

The ore is all of a sulphide nature, although many samples show free gold visible to the naked eye. One of the things which has attracted the attention of mining men to the Cariboo property is the presence at depth of tellurium. While there has been some controversy over the exact nature of this ore, it having been pronounced chiviatite rather than tellurium by some competent authorities, the technical classification of the ore is of little consequence to the general public, inasmuch as the fact remains that it carries staggering values in gold.

**CARIBOO GOLD QUARTZ SUCCESS OF DEVELOPMENT**—Tunnel is now in over 500 feet. Already several veins have been encountered, varying in width up to six feet wide, the values ranging up to \$40 per ton, and a shear zone which is 30 feet wide where the tunnel cuts it. The values of the shear zone average about \$15 across the 30 feet. The vertical depth at this point is 125 feet. The shear zone has already been explored 40 feet by a drift tunnel. The main tunnel is following alongside the shear zone, intercepting numerous cross veins coming into the shear zone at right angles.

The building for housing the new power plant which was recently completed is of solid concrete and in it a 100-horsepower full Diesel engine has been installed together with an Ingersoll Rand compressor and 10-kilowatt generator. A change room and shower for the men is also included in this building. Present requirements leave about 25-horsepower unused and it is planned to install a generator and run wiring to the upper tunnel and transmit power sufficient for the operation of large drills in the upper tunnel. A raise run from the lower to the upper tunnel will furnish good ventilation. Ample camp quarters have been provided and the coming winter should see some great strides made in the further development of this extremely promising property.

### Incorporated in B. C.

The Cariboo Gold Quartz Company is incorporated under the laws of British Columbia with an authorized capitalization of 2,000,000 shares of \$1 par value. The officers are Dr. W. B. Burnett of Vancouver, president; J. R. V. Dunlop, secretary-treasurer. Mr. Burnett has been a well-known physician and surgeon in Vancouver for the past thirty-seven years, and Mr. Dunlop, also of that city, has been secretary-treasurer of the Canadian Club for twenty-two consecutive years. The directorate includes Fred M. Wells, managing director, and Thomas Mathews of Vancouver. Frederick Field & Co. are the company auditors, and O. H. Solibakke, a former Alaska miner, to whose untiring efforts is due the continued development of the property in spite of trying conditions, is the fiscal agent.

The days of the pack train, the stage coach, the dance hall and the faro layout are gone from the Cariboo, but the gold production which made Barkerville a city of fame and gave it a population of 15,000 when the nearest railroad point was Minneapolis, is now a thing of the past. The success of the Cariboo Gold Quartz Company will unquestionably focus the eyes of the mining world once more on this section and lead to the development of numerous quartz properties. Already the world-wide interest in gold which always follows in the wake of depression has caused many new developments in the placers of the district, and it is not unreasonable to predict that the Cariboo banner year of '63 will be repeated if not exceeded in the near future.

### CARIBOO GOLD QUARTZ

I AM a shareholder in this company and have read with interest the reports of those who visited the property a short time ago. As I contemplate buying more stock, would you give me what information you can before I do so?

While not much has been heard of this operation, work is proceeding steadily and with very satisfactory results. The principal work is driving the main tunnel which is now in over 500 feet, and which as noted from time to time has cross-cut several gold-bearing veins. The principal mineralized section struck was a shear zone 30 feet in width, with values across the full distance. As it would be necessary to timber the tunnel if it were continued in this shear zone, a diversion was made to run the tunnel alongside it, where crosscuts are being made of many small veins entering the zone. The prospects are that this property will develop into a large and profitable operation, for the values are consistent and of good average and seem to extend throughout the whole hill. It is seldom that better results are obtained in tunnel work over such a continued distance. You doubtless know that the surface showings on the property are gold and are not surpassed by the surface showings on any property in the province. The district has a record of gold production. It will thus be seen that the property is a promising one, and you would be safe in taking a chance on more stock. The management of the company is in good hands, the capitalization is low and approximately half of the stock is still in the treasury which should supply ample funds for future development.

# Ore Strike on Cariboo Gold Quartz Indicates That Gold Values Go To Depth

GOLD sulphides assaying \$20 per ton have been struck at depth at the operation of Cariboo Gold Quartz Mining Company, near Barkerville, a telegram to that effect having been received Monday by the president, Dr. W. B. Burnett, from Fred M. Wells, who is the director superintending the work. Apart from its importance to the company, spelling success as it does, the strike will have a great effect on quartz mining in Cariboo district, since this is the first practical demonstration that the high surface values go to depth. As the gold-bearing reef is some miles in length, it is very probable that other operations will be started.

Cariboo Gold Quartz property is located on Cow and Barkerville Mountains, three miles from Barkerville. On one side is Williams Creek, which has a world's record for placer gold production; further along is Stout's Gulch, and immediately in front of the property is Lowhee Creek. All were great gold producers, and the three creeks surrounding the property have an aggregate of about \$25,000,000.

Al. Sanders, the veteran prospector who died in Seattle a month or so ago, worked on the surface showings of the Cariboo Gold Quartz property and was able to mortar the rock and take out several thousand dollars' worth of gold. Fred Wells saw the possibil-

ities and secured a number of claims fronting on Lowhee Creek, one of the vendors being Charles F. Law, of Vancouver. Although the surface showings were rich, Mr. Wells started a tunnel and he is now cutting the veins at depth pretty much on schedule.

There has long been argument as to whether or not the placer gold of Cariboo was eroded from veins, and if from veins whether they had not all been eroded. This find shows that the quartz veins of Cariboo are worth developing. Mining men throughout the province have been watching this operation with interest, and Mr. Wells' telegram on page three will be read with great interest.

## MINING CO. LTD. (N.P.L.)



One of the 100-ton boulders in the bed of Lowhee creek, on the property of Cariboo Gold Quartz Mining Company. Two of these boulders were uncovered when the gravel was washed away during hydraulic operations. They are of gold-bearing quartz and assay about \$20 a ton. The placer miners could not mill them, and they lie there, evidence of big veins. The diameter of these boulders is about 10 feet, indicating that the veins from which they rolled must be at least that wide. Because of their massive weight, the boulders could have rolled but a very short distance.

## CARIBOO GOLD SHIPS FIRST BULLION

Cariboo Consolidated Cuts Vein—  
Other Activities in Area  
Are Promising

(Special to The Northern Miner)

Vancouver, B.C.—Latest items of interest in regard to the progress of developments in the Cariboo area, include the initial shipment of gold bullion from the Cariboo Gold Quartz Mining Company's operations. The actual tonnage of ore passed through the mill, which was put into commission on the 2nd. January, is not reported, but at the end of the first month's operation it is understood that the capacity was about 40 tons per day, and this amount has now been increased to over 60 tons per day.

The production, to date, is stated to be something over 1,400 oz. gold. The crosscut tunnel that is being driven under contract for the Cariboo Consolidated Mining Company, on Proserpine Mountain, has been advanced for a distance of over 100 feet towards the initial objective of cutting the "Forrest shaft" orebodies, and is reported to have encountered two veins of the "B" type, 20 inches and 6 inches wide respectively. It is considered possible that this tunnel may be continued beyond the 400 foot distance that is required for this primary investigation.

An eight foot vein is reported to have been cut in the first 50 feet of work in the 2,000 foot tunnel that is being driven on Island Mountain, by Cariboo Consolidated Mines Ltd. This vein is described as appearing to be as attractive as any yet disclosed in recent operations. A shipment of power-machinery has been despatched to the Burns Mountain property, and it is understood that tunnelling work is to be speeded up, with three shifts employed.

### Plans for Dunwell

Leasers, who have been engaged in exploiting individual sections of the holdings of Dunwell Mines Ltd., in the Portland Canal area, have co-operated, with a view to assisting production by the installation of a rough-and-ready treatment plant that will be operated on a customs basis. The Dunwell Mines plant was sold to Bralorne Mines Ltd. about 18 months ago, and all the effective machinery was dismantled, but the building remains, and is being used to house an assemblage of parts that have been picked up, here and there, at a nominal cost. This excellent community-spirit that is represented in this enterprise may be realized, when it is stated that no wages for labor on the construction work, have been asked, or paid. It is understood that this interesting experiment has been put into operation during the past few days.

Representatives of the parties interested in the re-opening of the Planet and Donohoe mines at Stump Lake in the Nicola district, have made a visit of inspection to the property recently, and it is understood that plans are practically completed for the extended operation of the combined properties.

Reports that were current of the projected participation by Britannia Mining and Smelting Company in the exploration of the upper section of the Cadwallader creek belt of the Bridge River area, were premature, according to the recent announcement that the parent organization, Howe Sound Company, is not interested in the acquisition of the holdings of Home Oils Ltd. covered by the Pioneer Extension group of claims.

### Copper Stocks Stored

It is reported that surplus stocks of copper at Anyox amount to about 25,000,000 lbs. in addition to between 50 and 60 million lbs. stored by Granby M. S. & P. Co., in the east. It is stated that the effects of the recent strike at Anyox are practically removed, and that normal efficiency has been regained with a large percentage of new operatives.

The Thurlow and Sonora groups of gold-quartz claims at Shoal Bay, are said to have been acquired under option by a Vancouver syndicate, and preparations are being made for a vigorous campaign of development. These properties lie in the same general belt as the Doratha Morton and Alexandria mines on Fanny Bay, and have been under development at various times. Some encouraging prospects have been uncovered, and two blind leads that were exposed in a crosscut tunnel that was driven some years ago by Thurlow Gold Mines Ltd. were stated to be deserving of further development. This tunnel was not carried far enough to reach its main objective, owing, it is understood, to financial difficulties.

### High Grade Silver Shipped

Shipment of high-grade silver ore continues to be made from the Portland Canal area, notably from the Silverado mine which has been under lease to John Haahti. A recent amount of 90 tons from this property is estimated to have had a value of \$6,000. Total shipments by Mr. Haahti are said to amount to 150 tons of an average grade of 260 oz. silver per ton.

It is reported that the Vancouver syndicate that recently obtained a government lease on reverted properties in the Harrison Lake area at a short distance from Harrison Hot Springs, is prepared to start exploration work as soon as snow is off the ground. As reported previously, gold-quartz veins were developed to some extent, many years ago by an English company, affiliated with the Whittaker Wright interests.

## GOLD FINDS IN CARIBOO STRONGLY INDICATIVE OF STEADY VALUES IN DEPTH

GEORGE A. CLOTHIER, resident engineer for the Coast district, and for some years resident engineer for the Portland Canal district, viewed the quartz specimens from Cariboo at the office of B.C. Chamber of Mines. He expressed great satisfaction regarding them, stating that they indicated that gold values were to be found at depth, which would mean much for the whole of Cariboo.

FRED. M. WELLS, manager of the operation of Cariboo Gold Quartz Mining Company, near Barkerville, is in Vancouver on a brief trip. Referring to the strike of ore in the company's tunnel, which was mentioned in a recent issue of this paper, Mr. Wells said that since the ore was encountered development has been going on and the nature and value of the ore body is better understood.

"While the ore body or vein is not very large," Mr. Wells explained, "its character indicates clearly that the sulphides increase and maintain their gold values with depth, which is a very important point. Our operation is not deep yet, but the ore is cut about 3500 feet in the tunnel and 125 feet below the surface. It is of great importance that we have cut ore showing such character and gold values as this vein does, for it proves absolutely that the gold values go down.

"The vein containing the better ore is from 18 inches to two feet in width, made up of white quartz, and so heavy with sulphides that they constitute at least 75 per cent. of the weight. The gold values are from \$10 to \$20 per ton. One carefully sampled mine car of ore gave a return of \$16.80 per ton, with a little silver."

Mr. Wells brought down several hundred pounds of the ore, samples of which may be seen at the company's office, while one large specimen, 150 pounds in weight, on exhibition at the B. C. Chamber

of Mines, is attracting attention from mining men, especially those who know Cariboo.

"Another vein or shear zone," Mr. Wells said, "containing a lower grade ore, was crossed for a width of between 15 and 20 feet. This large vein was not found on the surface. This feature goes to show that new veins and ore bodies may be encountered at other points along the course of the tunnel, veins which we do not know of at present.

"The real object of the Cariboo Gold Quartz development," Mr. Wells explained, "is to prove up a big mine of the lower grade class. While we will no doubt develop many good veins of the smaller class, the real feature of the property will be to work the mineral belt as a whole and probably in a very big way. The development at present being carried out was planned by myself, and is being carried out with the biggest object in view.

"What is called the Cariboo mineral belt is a belt of schist, roughly 1,000 feet wide, extending many miles across the country. The belt usually shows a large amount of quartz outcropping. There are certain areas along the belt in which gold values are more pronounced than in others. In these more favorable sections, as for instance at our property on Lowhee creek, the whole mineral belt has been subjected to intense fissuring and shearing, producing highly altered areas.

"The schists of the mineral belt have, I believe, been determined by geologists to be of quartzite origin, and as old, eruptive rocks are always close to this mineral belt, my opinion is that the intense folding and fissuring has been produced by deep-seated rock movement and at the same time mineralization of the fractured areas resulted.

"The veins and ore body in the big shear zone so far cut in our tunnel we accept as an indication of what will be encountered as the tunnel is extended. We have every reason to believe that we will develop ore for a large-scale operation."

# The Cariboo Gold Quartz Mining Co. Ltd. (N.P.L.)

## THE PROPERTY

This company commenced development based on surface indications that justified the belief that values would extend to depth.

On May 5th Fred M. Wells, who is in charge of development, wired that he had tapped the vein in the tunnel at the point where he expected to find it based on surface indications.

The ore body, based on careful sampling and assaying, indicates greater values in depth than what surface sampling and assaying would give us a right to expect.

Fine grinding and cyaniding will extract the gold and this is the cheapest method of extraction known.

The physical conditions of the property lends itself to very cheap mining costs.

The question of transportation is solved by the fact that we drive to the mine in a motor car.

**CARIBOO G. QUARTZ**  
**MINE LOOKS AHEAD**  
*Mar 2-33*  
Wells Figures on Large Tomage,  
Low Grade Development—Small  
Mill Works Satisfactorily

(Special to The Northern Miner)

Vancouver, B.C.—In a summary of the operations of Cariboo Gold Quartz Company Ltd., Fred M. Wells expresses the opinion that while milling operations with the existing plant will be conducted probably upon ore derived from the cross veins, the ultimate possibilities depend upon operations conducted on a greatly enlarged scale, with low grade ore derived from the series of "A" veins. In this connection, Mr. Wells points to the massive occurrences of quartz in this series, in which oreshoots are expected to be found at the intersection with the "B" series of veins.

It is further explained that the work of the company has been confined, up to the present time, to the area following "one strike, shear or break which accompanies the main uplift along the mineral belt" with which the orebodies so far encountered in association with the intersection of the groups of "E" veins have been identified. Another parallel belt of quartz veins occurs at a distance of about 1,000 ft., in which bodies of quartz, up to 50 ft. in width, have been uncovered; the major possibilities in connection with the company's operations may be considered to be in relation to oreshoots developed therein.

Mr. Wells' vision of ultimate development embraces an extensive system of cross-drifting at selected points in the "E" vein system, and of shaft sinking with a view to maintaining milling operations on a basis of 500 to 1,000 tons per day. The existing plant, which has been in operation since January 2nd, is described as being designed to treat 50 tons of ore per day, with the possibility of being stepped up to a capacity of 100 tons with little additional outlay. During the latter part of the initial run, the mill has been treating 40 tons per day and is said to be giving satisfaction.

# Cariboo Gold Quartz To Have Mill This Summer; Good Values at Depth

*Alaska Weekly  
Feb-12-1932*

## Fred M. Wells Describes Property as "Greatest Low Grade Gold Mine Yet Discovered in Canada"

EDITORIAL NOTE: Coming to British Columbia in 1884, Mr. Fred M. Wells is approaching the half-century mark in experience in hard-rock mining in that province. Probably the first rock mining of British Columbia was the work he carried on at the old Ruth-Vermont mine (now the Giant) in 1885. Always a pioneer, he has mined and prospected from the Selkirks to the Rossland and the Cariboo districts and has established a reputation for practical and successful mine development second to no man in British Columbia. It was he who built 22 miles of road and shipped the first carload of silver-lead ore from East Kootenay. He brought Surf Inlet into production and millions have since been taken out—shareholders of the Pioneer, British Columbia's greatest present gold producer, are today drawing dividends on the work he did on that great property. For years he was convinced that the Gold Belt of the Cariboo held greater riches in lode mining than it had already produced in placer and he has never changed his mind. The following statement by Mr. Wells, while ultra-conservative as compared with the statements of engineers who have visited the property, will be found extremely interesting to mining minded people in that it not only describes the present and prospective development of the Cariboo Gold Quartz Mining Company property, but covers, as well, the relationship the facts proven through this work bear to the entire belt.

By FRED M. WELLS

In view of events, I feel that some statement should be made by our company for the benefit of its many shareholders and others interested in our work. Plans of our contemplated development have never been much discussed, but even so I might say that we are working toward a very definite end and have been from the start.

The character of the Cariboo mineral belt favors a definite program of work far more than the usual quartz vein system occurrence of other camps. The mineralized belt as known today extends for many miles following a fairly straight course. The rock formation is quartzite, with lime interbedded. At a very early geological time, there has been a line of weakness along the strike of formation, followed by eruptive dykes breaking through and uplifting the strata along this line. Two distinct vein fracture systems followed. The first followed the formation strike, but cutting bedding in going down. The second is very pronounced cross fracture system which occurred at a later date and cross veins were formed. Thus there are the strike vein system and the cross veins for development.

Strike veins are usually larger than the cross vein type, but the cross veins seem to contain the better gold rock. During the many years of placer mining along this belt, it was found that any creek crossing the quartz vein belt formed rich placer diggings. The gold was rough with quartz attached showing its origin to be the nearby quartz veins. The surface of the hills along this belt is covered with much overburden, timber and glacial drift. In most instances, vein exposures have been made by years of placer workings. From these exposures, a study of some of the vein structures and ore depositions can be made.

From my earliest visits to the Cariboo, it was apparent to me that it was no small development camp. There were two reasons for this: The first was that the most of the veins would have to be prospected below the surface overburden; second, without fairly high grade ore, mining and milling to be profitable must be done on a large scale. With these points in mind, we secured ground on the belt which controlled the lowest level possible in the district. We then proceeded to prospect veins exposed at higher levels, to determine the character of the ore and also its continuation at depth.

At the higher level, several hundred feet of tunnel was driven, and it definitely proved the heavy sulphide gold ore to go to depth. Of still greater importance was the finding of rich telluride ore associated with specks of free gold. Having successfully proven the ore and veins by our initial work, we struck a low level tunnel site, built a cement power house, installed a Diesel engine and other equipment, and proceeded to carry out the long tunnel program laid down at the inception of this company's operations.

A glance at the working map in the company's office shows not only work already done but also our contemplated program of development.

The mineral belt in Cariboo is held for several miles by individual groups of claim holders, mostly of long standing. We hold nearly two miles of ground in the direction of our tunnel course. The extension of our development program would carry our present

(Continued on Page 4)

## DEVELOPMENTS IN CARIBOO DISTRICT ARE IMPORTANT

THAT Cariboo district, the great gold bearing section of the province, is on the eve of important developments, is borne out by the following article in the Cariboo Observer, published at Quesnel, sent in by its Barkerville correspondent:

The closing down of the Antler dredge will no doubt work to the disadvantage of encouraging similar enterprises in the district, even when the merits of the ground justify investment. The cessation of dredging, whether temporary or otherwise, was not due to lack of gold; but it appears that a hard limestone dyke crosses the pay channel, and that the main values are either on or embedded in the limestone rock too hard for the buckets to penetrate, and after passing over this limestone formation the schist bedrock containing most of the gold dipped beyond the reach of buckets. Although the drilling determined sufficient values, the recovery of sufficient gold, according to local reports, is economically problematical.

However, the indications are that the ill luck of the Antler dredge will be more than offset by the recent strike made by the Cariboo Gold Quartz Co., insofar as the district is concerned generally. If reports are true, there is every possibility of Cariboo having a paying quartz mine.

The object of development was to tap a rich surface outcrop by a 1000-ft. tunnel at about 350 feet deep. But in less than 400 feet they crosscut two large sulphide veins carrying high average values. The chief sulphide is arsenopyrite, which is the gold-bearing sulphide for the Barkerville district.

It is altogether likely that the veins recently struck have some relation to the huge quartz boulders, impregnated with the same kind of sulphides, that lie in the bed of Lowhee Creek, and have been the marvel of miners ever since the inception of mining in the district. Some of these boulders are twenty-five feet in diameter. Many and novel have been the theories expounded as to where these boulders came from, but the probabilities are they simply rolled out of veins in the immediate vicinity, and the discovery made by the Cariboo Gold Quartz Co. in their tunnel, at a little higher elevation, is almost conclusive evidence that this is so.

This discovery is of greater importance than most people imagine, because it is only one of a number of prospective mines that lie in the recognized mineralized shear zone that, according to the late Dr. W. Uglow, of the Dominion Geological Survey, strikes N. 35 degrees—40 degrees W., and varies in width from one-quarter to one mile, and longitudinally has been traced from Round Top Mountain on the S.E. to Sugar Creek on the N.W., distance of over twenty-five miles. And it is well recognized also that it was this zone that fed all the rich placer creeks in the district. There is little doubt that once a mine is proven on this mineralized shear zone it will lead to intensive prospecting along the whole line. Besides, there are already a number of undeveloped showings lying within this zone that, according to geologists, as well as practical prospectors, merit serious development.

On the zone, within a mile of the Cariboo Quartz Co. is the B. C., a large low grade deposit upon which considerable development was carried on in early days of Cariboo, before the days of cyanidation. But with modern facilities there has been brought into existence many valuable dividend paying mines where the values are much lower than that of the B. C. The vein is from 25 to 50 feet wide, and according to geologists is the best defined vein in the district. Adjoining the B. C. is the Myrtle group, a recent discovery, with a showing similar to the Rainbow group now being developed.

Within two miles of the Cariboo Quartz Co's operations this mineralized zone crosses Williams Creek, the richest part of the zone from a placer standpoint. Above the zone this creek was a blank, but in the first three miles below it produced approximately thirty million dollars. Lying where the zone crosses Williams Creek is the old Black Jack property. Here in the early days some development was done by placer prospectors. Although they got encouraging results, the mine was too remote from transportation to attract capital; as a result, the property has been lying idle for over forty years. Adjoining it is the Westport claim, on which some promising showings exist. According to the Minister of Mines' report of last year, a channel sample across one of the main

veins taken by the district engineer gave values approximating forty dollars a ton in gold. But gold values recovered close to home seldom attract attention; they are too prosaic, and lack the fascination of far away green fields.

Lying in the gold zone south of Williams Creek are the Proserpine Mountains' group. There, diagonally crossing a porphyry and schist formation, are veins running up to 80 feet wide. From these veins any kind of an assay is possible—from a trace up to \$500 per ton. The general values, according to government reports, are sufficiently high to attract attention. The annual reports, particularly the one for the year 1918, give a very good idea of these showings and their values, although showings of really greater importance have been unearthened since.

Again the zone is crossed by Grouse Creek. Above the zone this creek, like Williams Creek, was a blank; in two miles of the creek below the zone five million dollars in placer gold was recovered. The gold zone then crosses Antler Mountain, but there the overburden has prevented prospecting to any extent. The zone in this region fed Begg's Gulch, Stevens, California, China and Antler Creeks. Because of the heavy overburden but little is known of the bedrock until the zone crosses Upper Cunningham.

There the formation shows up once more, and some promising discoveries have been made by Delhanty and Campbell, and by Wells and Moore on the Hudson group. A sample from the latter won second prize for gold ore at the Vancouver Fair two years ago.

One developed mine on this gold zone is almost sure to lead to development of all these properties, as well as to the unearthing of perhaps even greater showings, the importance of which is as yet undreamed of. Developments at Barkerville, portend the dawn of a better day at Quesnel, the gateway. Bridging the Fraser and completing the P. G. E., are important, but a permanent mining camp at Barkerville, with a greatly increased population, means permanent prosperity at Quesnel, and particularly to the farmers, whose only salvation at this time is a market. It is, therefore to be hoped that the reports emanating from the mining town are as rosy as the most reliable sources of information suggest.

ERN MINER

## CARIBOO GOLD IS RIPE FOR MILL

"Highly Satisfactory Results" in Past Six Months, Says Government Report

That the property of Cariboo Gold Quartz Mining Co. Ltd., near Barkerville, B. C., is ripe for a mill is the conclusion reached by the Department of Mines, British Columbia, in describing recent developments at the property. The government report says, in part:

Highly satisfactory results were secured at the property of the Cariboo Gold Quartz Mining Co., Ltd., near Barkerville. Six additional veins have been penetrated by the main crosscut tunnel during the year, subsequent to developments recorded in bulletin No. 1, 1932.

The new veins are similar in character to those previously struck in this tunnel, showing a heavy sulphide mineralization of mainly pyrite, and in places the "high grade" mineral which is the concomitant of free gold and high local gold values. The width of these veins varies from two to six feet, and the last five encountered all occur within a belt of country 150 ft. in width only, between points 1,050 and 1,200 ft. from the portal of the tunnel, which on June 7th had reached a total length of 1,258 ft.

These veins are numbered by the management in order of penetration from the portal inwards, Nos. 1, 2, 3, 4, 5, 6, 6½, and 7. Of these only Nos. 1 and 2 had been encountered at the time of writing the report published in bulletin No. 1, 1932.

AUGUST 4th, 1932

In addition to advancing the main tunnel as above recorded, this company has carried out some hundreds of feet of development in all on veins Nos. 1 and 2 with apparently satisfactory results, establishing proof of continuity for material distances.

No samples were taken by the Resident Engineer but it is stated by the management that sampling has shown that all veins have been found to disclose commercial values. Installation of a mill is to be proceeded with at once, and preliminary work in this direction has been started. The exact capacity and flow sheet of the mill had not been finally decided upon the date of inspection. Assuming that sampling of the numerous ore showings has proved satisfactory, the time for the erection of a mill seems ripe.

While it cannot be said that there is a large tonnage actually "blocked out" at this property, nevertheless the large number of veins of good width exposed indicate a liberal factor of safety, and an over-conservative policy in connection with the commencement of milling would seem to be a mistake. Enlargement of camp buildings to accommodate the increase in the number of employees is also going forward.