The Deer Horn Property

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THE Deer Horn property is situated 85 miles southwest of Burns Lake, Omineca Mining Division, B.C. Located on the eastern flank of the coast range mountains, near Lindquist Peak, mainly on the south slope of the Linquist range, it partly includes and is immediately north of Lindquist Lake in Tweedsmuir Park.

The property lies within the hydro-power reserve areas held by the vast multi-million dollar Kitimat project of the Aluminum Company of Canada. The water level, at full capacity of the reservoir, will be 2,820 feet.

The Kitimat reservoir flooding will simplify transportation to the property as the power-dam will create a single navigable sheet of water between the highway and the Deer Horn property.

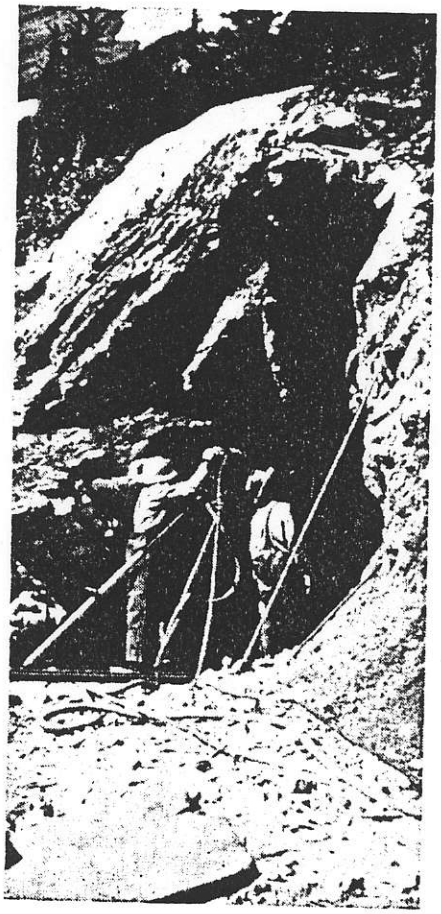
Access to the property from Burns Lake where the company maintains a temporary office, is by road to Wistaria on Ootsa Lake, a distance of 56 miles, then by boat for 58 miles west to the southwestern tip of Whitesail Lake, then to Lindquist Lake by a three mile road commenced last season to Lindquist Lake base camp, from which the three-mile mountain road to the adit portal and mine site was completed this past season.

A sea-plane base at Burns Lake provides service by plane for light equipment and personnel but weather conditions make it unreliable.

Radio communication is maintained from the office at Burns Lake to the property. At the mine is a 75-watt 5-band Spillsbury Tindall receiver and transmitter, transmitting on 1698 kilocycles to Deer Horn office at Burns Lake, and transmitting on 4270 kilocycles to Pacific Western Airlines, Burns Lake and to Kemano. At the Burns Lake office, is a 5-watt single band Spillsbury Tindall 8010 receiver and transmitter, transmitting on 1698 kilocycles to the mine. The mine office instrument can also transmit to Vancouver.

Topography and Physical Features

The country is mountainous with steep slopes and with many talus slides above timber line. Elevations vary from 2,900 feet at Lindquist Lake to over 5,700 feet at the top of the main tungsten talus zone. All known mineral deposits are above timber line, which is at an approximate elevation of 3,700 feet.



Collaring the 4160 portal on the "Main" vein at the Deer Horn Mines, Ltd. property.

The weather conditions in the area are severe at times. A moderate to heavy rainfall and some fog are common during the summer months. During winter the snowfall is very heavy and snow remains for at least eight months of the year.

History

In September, 1943, three Harrison brothers of Wistaria, B.C., discovered a scheelite showing and staked six claims on what is now part of the Deer Horn property. When en route to examine the tungsten showings, Franc R. Joubin, in 1944, noted gold and silver bearing quartz veins on and adjacent to the tungsten claims. Additional claims were staked to protect these promising quartz vein deposits.

During the summer of 1944, the group of claims was optioned and the company concerned undertook surface trenching and diamond drilling on the principal outcropping vein. This work continued during the summer seasons of 1944, 1945 and 1946. In the fall of 1946 the optioning company failed to secure an extension on the option which was allowed to lapse. Title of the property reverted to the original owners who, in July 1950, sold the property to Deer Horn Mines Ltd. No further work was done on the property until the summer of 1952 when J. S. Ross made an examination of the two tungsten-bearing talus zones and the two known gold-silver veins known as the "Main" vein and "Contact" vein. During the same season, the old trenches and diamond drill holes completed by the predecessor company were mapped and bulk samples from the main vein were shipped out for mill tests. Complete diamond drilling equipment was shipped into the property with supplies. The route for a road was located from

Linquist Lake to the adit portal.

In early 1953, a mining plant was purchased and moved by barge to the west end of Whitesail Lake. The construction of the road from the west end of Whitesail Lake to the adit portal was started on August 20th, 1953, and continued until mid-October, when heavy rains and snows compelled suspension of the work. During this same period, a limited amount of diamond drilling was successful in testing the downward and westward continuation of the Contact vein beyond the limits previously explored by drilling.

The 1954 season was one of considerable accomplishment. Work was under the directon of S. M. "Mac" Manning, field engineer for Technical Mine Consultants. The season's first objective was to complete the road from Lindquist Lake to the site of the adit portal which was collared at an elevation of 4,260 feet and to finish it in time to move a complete mining plant, camp construction supplies and a large inventory of operation supplies to the mine site over this road, also to assure the arrival of this equipment and supplies at the mine site in time to get underground work started and winter camp construction completed before commencement of the heavy winter snowfall at this elevation.

Due to the lateness of the spring season, work could not commence on the last three miles of road from Lindquist Lake to the adit portal until July 1st, 1954. The snowline on July 4th, 1954 was only 100 feet above the base camp on Lindquist Lake or at approximately 3,050 feet elevation.

The heavy duty bulldozing equipment did an excellent job as a time-saving factor and the first underground work was started on the adit on August 21st, 1954, and the winter camp construction completed by September 28th, which assures a continuing mining operation for the property this coming winter season.

The road presented many problems. The approach was heavily treed and covered with large granite boulder areas and old rock slides consisting of cemented gravel and boulders. Its course wound across the southwest slope of Lindquist Peak to the development site along steep rock bluffs requiring considerable rock work.

Geology

The thirty-four Deer Horn claims are underlain by geological conditions similar to those of the Bralorne and Pioneer Gold Mining operations farther to the south.

J. S. Ross, mining geologist, formerly with Technical Mine Consultants, describes the geology of the property as follows:

Regional Geology

The Deer Horn claims lie along part of the eastern contact of the Coast Range batholith. This contact strikes in a northeasterly direction from the west end of Tesla Lake through the eastern part of Lindquist Lake to the western end of Tahtsa Lake. The undulating contact contains many large embayments. "Islands" of sediment are common in the batholith near its eastern boundary.

As far as is known, the only rocks in contact with the batholith are those of the Hazelton Group, Jurassic in age. These consist of a thick conformable succession with a lower volcanic member, a middle sedimentary member and upper volcanic and sedimentary members. The Coast Range batholith is post-Hazelton in age, Upper Jurassic and/or Lower Cretaceous.

Local Geology

The property lies along the south side of a prominent embayment in the batholith contact. Thus, the contact strikes east-west across the group rather than in the regional northwesterly direction. Locally it is straight.

The Hazelton Group consists of conformable interbedded formations of black slate, tuff, tuffaceous argillite, grey limestone and volcanic breccia. The tuff varies from green to purple in colour, is fine-grained and thinly bedded whereas tuffaceous argillite is commonly light green to grey and is very poorly banded. Volcanic breccia has been reported by a government geologist. All rocks strike roughly parallel to the contact and dip from 35 to 80 degrees south.

The sediments have been intruded by granite rocks of the Coast Range batholith which include granodiorite and quartz diorite. Quartz diorite is by far the most common granitic rock near the contact whereas granodiorite becomes more prominent away from the contact. Quartz diorite near the sediments is sometimes gneissic and has been hydrothermally altered near the major quartz veins. Feldspar is commonly altered in part to sericite and minor saussurite and quartz-sericite and sericite schist are usually the by-product of alteration adjacent to quartz veins. Quartz diorite near the contact with the sediments has been silicified as well as sericitized and may have the appearance of aplite. More commonly it is present as quartz-sericite schist in the immediate hanging wall.

Structure

A considerable distance east of the mineral deposits, a major fault strikes southeast and has a horizontal displacement of approximately 900 feet. Many post-vein cross-faults striking from N 25 deg. W. to N. 20 deg. E. offset the two gold-bearing veins for relatively short distances.

The sediment-quartz diorite contact dips from 55 to 65 deg. south. The hanging wall rocks have been altered and sheared for widths up to 100 feet suggesting a major zone of structural weakness.

Ore Deposits

Two gold silver veins and several tungsten zones have been explored to date. The gold bearing veins, named the Main vein and Contact zone, are sub-parallel along strike and diamond drilling has indicated that this Main vein joins the Contact zone at depth.

Main Vein

This vein is a wide quartz vein in

The Deer Horn mine camp under construction. Underground operations will be carried on all winter.

quartz diorite striking roughly east-west, dips 5 to 45 degrees north and varies in width from 3 feet to 20 feet. It is well defined and contains pyrite, magnetite, sphalerite, chalcopyrite, galena, pyrrhotite and gold-silver tellurides.

Diamond drilling, surface trenching and sampling have indicated the following ore potential with the depth limited to between 130 and 250 feet where it is indicated by diamond drilling to join the Contact zone. Excellent chances are present for additional ore along its western extension. The summarized ore data are as follows:

Known length: 2580 feet plus.

Explored length (surface), 1220 ft.

Explored length (drilling), 1550 ft.

Grade indicated (surface sampling), 1075 feet, average width 9.51 feet averaging 0.255 ozs. gold per ton, 6.34 ozs. silver per ton with indications of appreciable zinc values. Gross value is $14.63 per ton.

Grade indicated (diamond drilling): 600 foot length, average width 11.2 feet, averaging 0.283 ozs. gold per ton and 8.3 ozs. silver per ton. Gross value, $17.38 per ton.

Tonnage indicated (surface sampling): 818 tons per slope foot.

Tonnage indicated (diamond drilling): 538 tons per slope foot.

Contact Zone

The Contact zone is sub-parallel to and 530 feet horizontally north of the Main vein and dips from 55 to 65 degrees south towards it. It is mainly in quartz-sericite schist formed as a product of metamorphism of quartz diorite. This contact zone is commonly within 100 feet of the Main contact zone with Hazelton sediments. The mineralization of this vein is comparable to the Main vein but contains considerably more zinc and precious metals.

Exploration on this vein has indicated the following ore potential with excellent chances for additional ore along its western extension and down dip. The eastern extension may be faulted and more exploration is required.

Length explored by drilling: 950 ft.

Grade indicated by drilling: 725 foot strike length, averaging 8.7 feet in width, containing 0.407 ozs. gold per ton, 12.25 ozs. silver per ton. Gross value, $25.26 per ton.

Tonnage indicated: 505 tons per slope foot.

Maximum slope depth tested: 175 feet.

Main Tungsten Deposit

There are several tungsten deposits on the property. The Main tungsten deposit is situated 650 feet west of the most westerly drill intersection on the Contact zone upslope from the Main vein. This main tungsten zone consists of several outcrops of tuffaceous argillite in a large talus slide.

A thorough sampling has indicated the following tonnage and grade:

Dimensions of talus slide: 1590 feet long by 172.6 feet wide.

Tonnage talus material: 21,100 tons per vertical foot.

Grade of talus material: 0.35 per cent WO_3.

Surface sampling in the only trench completed across a zone width of 125 feet indicated a WO_3 content of 1.20 per cent.

Other Properties

In the fall of 1953, claims were staked adjoining on the northwest and on the northeast the property of Rexspar Uranium & Metals Mining Co. Ltd. The Rexspar Company is currently developing, by underground work, large low-grade uranium ore bodies outlined by surface diamond drilling.

The radioactivity on the Deer Horn property occurs in pyritized brecciated trachyte similar to the uranium occurrences on the adjoining Rexspar property.

A programme of surface exploration and diamond drilling is in progress on the property and has indicated promising areas of radioactivity.

The claim group is located about 1½ miles south of the highway and C.N.R. mainline station of Birch Island, 70 miles north of Kamloops, southern B.C.

Future Programme

The underground development programme now underway on the gold-silver veins will be a continuous one of development.

The No. 1 adit which has been collared at an elevation of 4,260 feet will be driven as a cross-cut for a distance of 300 feet to the Contact vein and plans then call for a minimum of 1,000 feet of drifting, in conjunction with an underground diamond drill programme.

Portal preparation will also commence on a second adit drift located 150 feet below the No. 1 Adit.