outstanding Features of Progress during 1934, on the

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Hudson Bay It. Oninoon Dist. B. C.
(in successive order)
PROPERTY Ft
 work on the Rio Grande Group pertains to transportation facilities. To this and a $1 \frac{1}{3}$ ton Dodge Tun ok woo bought at
 and general utility ann. This truck, emblazoned with the Syndicates' nome, was then loaded up with tools, building materials, and other paraphernalia useful in the construction of a substantial camp, according to plans prepared by the undersigned.

With reference to local improvenente for transporation in the Omineca Mining District, : Jo desire to express our gratitude to the Minister of $\frac{1}{i n}$ es for valued assistance rendered the Mining interests on Hudson Bay Lounta in by Granting a substanti 1 appropriation for the widening. grading, and gravelling the abovementioned Silver Lake road for approximately four miles. This rot d is now in excellent shape for motor traffic and connects with all points along: the Canadian National Railway line and highways.

At Toboggan creek Crossing, where the mountain trail coomfences, a substantial bridge was also put in, this year, by the Public Works Department, to replace the one carried away during the freshet season.

On our arrival at Smithers, July 14th, we bought 5000 feet of first-rate lumber from a load dealer at standard prices After cutting it into 8 foot lengths for convenient handing on horseback, this, together with provisions and the necessary camping outfits, was then transferred to Toboggan creek Terminal by the truck and from there, packed on horses to the mine.

A suitable builaing-site for a new carp had, in the meantime, been chosen on the Rio Grequde claim at an elevation or 2846 Leet above the can. Wot. My. track. This corresponds to a height of 4490 feet above sea level.

By trail, the new coup is approximately four railes from the briage* al thourh the first olaim of the group, known as the "May Fraction". is less than two niles fron this terminal in a straight ine. It is on this latter chan that the future aeriel tramey for handing ores to a reduation plont, situated at a spur from the Can. Nat. Ry. IIne, will be exected. The total distonce for brineing ores down to rail-tmnsportation, by eravitation, will, therefore, not exceed $2 \frac{1}{4}$ miles, as shown on the attached key map. From this description it will be observed that the economio handing of ores and all mine aupplies is not a serious problem at the Rlo Grande uine.
CASP BUILDINGS: Our next item of importance was to provide suitable living quarters. These consiated of a mess-house and a bunk-house of mufficient size to accommodate a dozen mon.

Both of these buildings were erected and completed by Mr. Gillile and the undersigned within five weeks. The two buildines, while under the same roof, are separated by a six foot portico that serves many purposes to adventage.
"Ice-oold" water of excellent quality, is fumished by two or three natural springs in the inmediate vioinity. funning water can therefore be brought in to the mess-house at any time. Short trails were put in on the Rio Grande olaim to connect the camp with the main-trail and all workine places. With regard to position, transporttion, sunlight and scenic beauty, the R1o Grande Lodge can hardy be surpessed anyWhere in British Columbia. A number of viaitors, including members of the Boord and Minime Eneineers representing the Provincial and Federal Governments, will be able to verify this statenent. IHCPEASED ARRA: Standing timber for fuel and future mining purposes abound olose by. In this connection, I desire to mention that aside from the nine original mining olaims that cover an area of 350 acres, five new alaims heve been located curing the season. This has inoreased the total acregee to 560 or $60 \%$ above the former area. The writers' object in locatine those claims was:

1. To obviate encoachments by outsiders.
2. To inareage the acreage of standing timber in an easterly and westerly direction.
3. To pxovide suitable sites for permanent oams and a main tranel on the May Fraction.
4. To allow for the discovery of other veins in the new territory and the tracing or existing ones.
any of the above proviso may prove of inportance to the Syndicate in the near future, as they include looations for trampay, reduction plant, town-sites and water-power, all of which recelved consideration this year.

On the attached survey-map sor 1934, recently completed by J. A. Rutherford, B. C. I. S. of Smithers. B. C. and the undersigred, the boundaries of all mininc claims (14) and other data of importance is olearly shown.

A series of representative photographs, showine numerous points of interest were produeed during the season, also 200 pounds of new samples from the various exposures of ore. GEOLOGY: A Oloser study of the rock formation was oontinued by the undersigned and disoussed with Hr. Douglas Lay, Resident Rngineor for the aistrict and Dr. F. A. Kerr, of the Geolegical Survey Department, Ottawa, durin their visit at the property, both these gentiemen expressed mach interest in the promising geologic structure of Fhaison Bay Mountuth, with apeoi al regard to the Rio Crande reef. Barometrical altituaes of all working places were, at the seme time, establishad. Unfortunately, an early snow-fall prevented a close ingpection of the upper claims, where several important parallel veins of silver orea are predominately exposed had to be postponed until next season. DLAMOXD DRILIING: Shortly apter the oompletion and proper furnithinc of the new camp for the recoption of a mining crew, the main objective for thia years' developnent work was ready to be advanced. This objective consisted in alamonadrilling and exploration of the Rio Grande and Jumbo reef.


#### Abstract

The almond drill, together with a arew of five men arrived in Smithers from the Premier Mine, on the 8 th day of September, in charge of Mr. Eouis Swiggum, dianond-drilisetter for Doylo Bros. Ltta. A contract, to put down four arill holes, totaliing 1000 feet, was entered into by this Company in Vancouver, on August 25th.

On arrival. the dienona drill wos transported on a truak to Tobogean croek texminal and from there it was packea, In sections, by horses to the first setmp on the Rio Grande Clain, where it was assernbled and ready for service on september 14th. Tifa set-up was selected at a point 200 feet below the surface croppings of the reef, or 100 feet lowes than the old Rio Grande Tunnel where the lode had already been established and sampled on severral occasions for a width of 15 feet by the writer, as aentioned in general report, aated lay 14th, 1934 .

The abtached detail plan, drawn to acale, showe crosse section of the ifrst and second set-ups. Two holes, on double shifte: were drizled fifteen sixteenths of an inch in dirmeter, 

The formation through which the first 142 feet was drilled consisted of andesitio aggiomerates, quite soft and very wet. It therefore produced less than $25 \%$ of broken cores, not over four inches long.

At this point, the Rio Grande lode was intersected for a widh of 62 teet by whioh time a aistance of 204 feet from the collar of the hole was reached.

Here, the flow of ecround-water increased materially and turned black, producing la ree quantitios of sulphide outtines but no alld cores for a apace of 40 feet. The absence of coring was a disaappointment. Sludcemsampling was resorted to, but proved of no ava 11 under the high water-pressure, as all or most of the fine cuttings escaped through the strad-pipe and apilled on the ground.


For the next 20 feet an improvement took place and approximetely one-third of the core-barrels filled with sections of core from 1 to 3 inches long. These, after sampling and assaying, proved to contain precious metals from 0.26 to $0.33 \mathrm{oz}$. in gold and 2 oz . in slilver.

At present quotations this represents values from $\$ 10.00$ to $\$ 12.00$ per ton, which corresponds closely to samples secured in the old tunnel 150 feet above. In the writers' opinion, $\$ 10.00$ per ton can be relied on, even where no solid cores were secured.

Drilling was continued to a depth of 367 feet, in order to penetrate the grano-diorite contact, which is showing plainiy on the surface, at the northerly boundary of the Rio Grande Claim, but was no reached, due to the danger of losing the diamond-bit (valued at $\$ 2,000.00$ ) in the constantly caving formation and excessive flow of ground-water. It was therefore decided to move the drill and pump 800 feet eastwardly, close to the Jumbo boundary line, and keep the same elevation as near as possible. At this set-up the drill was started on October 9th. The formation here appeared more solid, nevertheless, it did not core much better than at the first set-up. The Rio Grande lode, however, was encountered at a depth of 87 feet from the collar of the stand pipe in perfect line with the corresponding contact at the first set-up. Fragments of solid cores recovered in the barrels, furthermore established the value per ton of ore of similar grade to the assays of the first drill hole for a width of 20 feet, thereby proving a very considerable tonnege of commercail ore.

On Oetober 19th, the weather conditions for doing work on the outside became too severe. It was therefore decided to postpone operations until the latter of April or the first week in May 1935.

FUTURE DEVELOPMSNT WORK: The intention is to continue drilling at this set-up next spring for addit-
ional 100 feet. Within that distance it is confidentiny expected that other branches of the lode will be encountered, also that the grano-diorite contact showing airectly above on Fisher Fraction will be reached.

Fifteen years ago a long tunnel wes ariven on the Fisher Fraction claim by the early locetors and forgotten. This tunnel, which is now in poor conaition for a safe examination, Was, this year, inspected by the writer for the first time. From present indication, it appears to be a strong contact-vein that probably will prove of much interest when intersected by the diamond-drill at an elevation of approximately 400 feet lower down. The footwall, which, in this case, is grano-diorite, may be regarded as the host for mineralization, not only in the Hudson Bay Fange, but throughtut British Columbia. The hanging well of the Fisher lode is an andesitic flow-rock. Evidently the rock formations at higher elevations towards east are much firmer will no doubt core to better advantage than at the two set-ups of this season. There will also be considerably less water according to surface showings.

SILVER SHOWINGS: These same favourable conditions exist at the three silver ore veins exposures on the Spondulix claims, which are at least 1000 feet higher up. on account of these good showings and recent advance in silver quotations, it is strongly recommended to explore the three parallel Spondulix veins as soon as the season will permit. From all indications, the price of silver is on the upward move and it is quite likely to be placed at a fixed ratio to gold before long. If so, the intrinsic value of the Rio Grande units will be materially enhanced.

GENERAI REMARKS: Of the fourteen claims in the group, only one, the Rio Grand received special atention during the few months' work, as considerable time was spent in building the new camp. The actual time of drilling was therefore curtailed to one month and presented unusual difficulties. Casing, and stand-piping had to be resorted to at both set-ups. To overcome serious caving in the second hole, it was even necessary to cement and re-drill it for the first 40 feetas it was of great importance to keep going. Had it not been for the persistent efforts and the resourcefulness of Mr. L. Swiggum and his loyal crew, we should never have achieved the results mentioned in the foregoing. Much credit is therefore due to Boyle Bros. Ltd. Not even the weather favoured us during September and October while we were drilling, but we can say that we gained much knowledge in exploring the rather unusual rock formations. While the conglomerates and agglomerates formations proved the most difficult I can say for them that they carry from one to three dollars in gold per ton. In this respect, they are not unlike the South African reefs on the Rend, where the greatest production of gold in the world has been carried on for more than 50 years.

That our experience this year will be of much value to us in future developments, there is not the least doubt. Our prospects for establishing a mine on Hudson Bay Mountain are very good. A considerable tonnage of commercial ore has been already proven this year, and if the campaign is continued early this next spring, with further success, we shall probably be justified in starting a main tunnel on the May fraction and develop the ore bodies known to exist so far.

Thanking you for your kind attention, I beg to remain, Respectfully yours,

Vancouver, B . C.,
November 27, 1934.
Addressed to:


The Unitholders of the RIO GRANDE SYNDICATE

## R10 GRANDE SYNDICATE REPORT fog 1934 ${ }^{\text {Ty }}$ A.C.GARDE,$M . E$.



