

413 Granville St.

Silverton, B. C.
May 18, 1954.Mr. A. M. Ham, Manager,
Western Exploration Co. Ltd.
Silverton, B. C.

Dear Art:-

The following is a brief account of what Mr. R. T. Avison and I saw, and were told, as to the conditions and working of the lease system of mining at the Constitution and Douglas mines of the Spokane-Idaho Mining Co. on Pine Creek, near Kellogg, Idaho. We spent several hours in the mines under the guidance of Mr. John H. Wilson Jr., their Chief Engineer.

We were first taken to the 1800 foot level of the Constitution mine, which is an old mine in which the upper levels are worked out, except for a few pillars and some stope-filling. On this level, which is reached through a well equipped vertical shaft from the lowest tunnel level, one set of leasers are stoping and a man is driving a 5 x 6½ foot drift on contract. He, alone, does all the drilling and mucking with a jack-leg drill and a mucking machine. The Company furnishes a man to do the tramming and all supplies and equipment. The average advance is 5.2 feet per shift for which the contractor is paid \$7.00 per foot. The ore at the face was 8 inches wide and apparently seldom over a foot. The rock appears to be quartzite which is finely sheared parallel to the vein and generally stands quite well.

On the same level we were taken up a stope where two men were leasing. The vein has a dip of about 70 degrees and probably averages slightly less than a foot in width. Timbering is by stulls and posts or by rough half-sets irregularly spaced and without hitches. The manway has no platforms, some broken stulls, and in general would not comply with British Columbia regulations. The stope is being carried as narrow as possible, around 2½ feet wide, which is narrower than was attainable when worked by the Company, and this probably accounts for the better grade of ore obtained. These leasers tram their own ore to the shaft pocket. The Company hoists it and trams it to the mill which is at the portal of the tunnel.

We were then taken to a higher level where extensive "roof-bolting" of the drift has been done. The ground in which the roof-bolts were used is sheared and cross-fractured and has a ragged appearance without any very large slabs. Instead of the usual bolting with iron rods 2 inch round wooden rods four feet long are used with a wooden wedge in the upper end and a 3 x 10 x 18 inch head-board, also wedged, at the lower end.

These are apparently quite satisfactory to hold the ground in this mine and would be much cheaper than timbering wherever conditions are suitable. Roof-bolts are not used in the stopes, which are too narrow to permit the drilling of the holes at the proper angle.

Mr. Wilson had planned to take us to an upper level where the ore was wider, but the manway was blocked. Instead he took us to the Douglas mine, a mile or more below the mill by road. This is also an old mine, opened below the lowest tunnel level by a small 45 degree incline. We visited the 6th level where a leaser, with three men hired, is driving several raises through a block of ore in preparation for stoping. He has also just finished a second shaft-pocket to handle waste. For this the Company turned over to him a subsidy for new development which they received from the Government. The Company has made application for a subsidy to apply on the development raises, and if they get it, it will be turned over to the leaser. However, without the subsidy the lease is said to be making money. The Company supplies all equipment, tools, timber etc. except explosives and drill bits. The leaser delivers his ore to the shaft pocket, the Company hoists and trams it to the surface bins and charges the leaser 25 cents per ton to haul it to the mill.

Mr. Wilson emphasized the fact that there must be no supervision of the leasers other than to insist that they operate in a miner-like-manner and do not endanger life or the mine by improper mining methods or carelessness. Otherwise, by U. S. or Idaho laws, they are not true leasers but have the status of employees receiving a bonus. The legal status of a similar system of leasing in B. C. should be looked into very carefully before attempting to instal one.

Our impressions of the leasing system at the Spokane Idaho Mines are that it results in a better grade of ore and a much better tonnage per man-shift. That the timbering is rather haphazard, and that stopes, drifts and manways are messy and unkempt. The single stope we visited was open and apparently had no filling or cribbing.

It is probable that in the case of the Mammoth 801 Stope, a leaser would concentrate on the higher grade ore and leave the leaner ore, which would only a little more than pay its way, which the Company would take if they were doing the work. Thereby decreasing the total production. This would also apply to other working places but to a lesser degree.

We believe that in the case of wide stopes in soft heavy ground, such as those at the Mammoth mine, it would be necessary to use extreme care in picking the proper men to handle such ground, and constant inspection and insistence that they operate safely.

Yours sincerely,

Chas. C. Starr
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R. Prinson
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