

THE TWIN "J" MINES LTD.

005405

DUNCAN, B.C.

GENERAL COMMENTS

APRIL, 1944.

DEVELOPMENT HEADINGS:

- 1-7 South Raise: 20 feet of advance. This raise is being driven from 1-7 Crosscut to contact the South vein ore body lying between the old 200' and 165' levels, West of the main Tye shaft. This raise broke thru into old 165' level May 5th, and work is now being carried out to clear out the 165' level in preparation to mine the ore above these sections. Several sections show good widths of ore in this zone. We expect to be mining this ore within a week.
- 2-5 Stope Raise: This raise was driven 24 feet from the back of 2-5 Stope to the 8th floor of 2-6 Stope to allow for easier servicing of the miner in 2-6 Stope.
- 2-1 South Raise: Two rounds were taken in this raise to break thru into the old Lenora No. 1 South Drift. The last round was drilled off but will not be blasted until the No. 1 level has been "caught up". This raise will make available small high grade lenses of copper ore left as pillars above the Lenora No. 1 level.
- No.1 North Drift East: 23.9 feet of advance. The ore in this heading pinched to a few inches of sulphide gouge. Heading was stopped to allow Diamond Drill to explore both hanging and foot walls for alternating ore lens.
- Old Workings Re-opened: The 2 Level Drift to Richard III property was started the first of April and rapid advance was made by a contract crew working on Graveyard. This project was completed May 4th. De-watering of a short winze is being undertaken to examine ore leads reported there. Re-opening of old Stope faces will be undertaken at once to determine extent of ore body in this section.
- DIAMOND DRILLING: 3 holes collared, 555 feet drilled. These holes drilled from one set up to intersect ore zone in pillar between Lenora and Tye properties. No ore has been intersected to date, however, due to type of ground drilled and nature of ore bodies several more holes must be drilled before this area can be considered as thoroughly drilled.

STOPES:

- 2-5 Stope: 58 tons broken, 43 tons trammed, 10 tons ore in stope, 10 tons waste

sorted, 8.4 setts of timber stood. A 5 x 5 raise was driven from back of this stope to 8th floor level to test ore believed to be in this area and to provide easier access to 2-6 Stope. No appreciable ore was intersected.

2-6 Stope:

194 tons broken, 182 tons trammed, 30 tons ore in Stope, 7 tons waste sorted, 12.8 setts of timber stood. Mining is continuing on the 8th floor; ore in back is pinching to approximately 3 feet in width. Upon completion of the 8th floor a small pilot raise will be driven in the widest back to test the possibility of another wider lens remaining above present back.

2-7 Stope:

222 tons broken, 176 tons trammed, 10 tons broken ore in stope, 52 tons waste sorted, 17 setts of timber stood. Footwall lens in vicinity of inclined raise was mined. This lens proved to be very narrow and cherty in this sector, mining has been halted. The remaining ore in this stope will come from small lens East of 2-7 raise.

2-8 Stope:

A chute was installed in this stope and it is intended to drive a small stope raise up on a 2' lead of ore to connect with the old 200' level north drift - our No. 1 Level. At the point of break thru there is approximately $2\frac{1}{2}$ feet of very rich Zinc and Copper ore showing in the back of this drift.

2-14 Stope:

835 tons broken, 734 tons trammed, 30 tons broken ore in stope, 90 tons waste sorted, 36.6 setts of timber stood. The possibilities of a large ore body in this area are looking better. Some pinching and faulting were intersected in first part of month, but further work has opened up some footwall leads which give every indication of containing a fair tonnage. The East face has been advanced past a faulted and sheared section and ore in face and back is over 8 feet wide and carrying good values in Zinc. Considerable difficulty is encountered in mining this section due to interference of tramming caused by other working places to the East.

3-1 Stope:

455 tons broken, 425 tons trammed, 20 tons broken ore in stope, 10 tons waste sorted, 12.6 setts of timber stood. East wing of the stope is being mined from 3-4 Stope and ore slushed to 3-4 ore pass by slusher. This saves 35 cents per ton direct labor cost against hand tramming to 3-1 ore pass.

3-3 S. Stope:

47 tons broken, 40 tons ore trammed, 5.0 setts of timber stood. This stope has been abandoned as ore has pinched to a very narrow width and lies only 7 to 8 feet below the 2 Level South drift above which are old caved stopes. These stopes and the nature of the ground make it too costly to recover the small amount of ore remaining in this section.

3-7 Stope:

404 tons broken, 383 tons trammed, 80 tons broken ore in stope, 16 tons waste sorted, 25.8 setts of timber stood. Mining in the last floor in this stope will start in first part of May.

3-9 Stope:

584 tons broken, 554 tons trammed, 60 tons broken ore in stope, 10 tons waste sorted, 49 setts of timber stood. One complete floor remains to be mined in this stope.

3-10 Stope:

This stope contained several setts of old fill which has had to be disposed of in 3-9 stope. Room for this waste is now available and the faces of the stope will be exposed early in May.

MINE GENERAL:

The ore body in the South vein above the old 165 foot level and west of the main Tye shaft has been opened up. A small amount of stoping had been done in this body that was not shown on the old maps. However, the majority of the old stope timber is in good shape and new mining can take place very easily.

The ore in 2-14 Stope has been improving over the first part of the month when it was cut off by shearing and folding reducing previous 14 foot widths to small cherty stringers. The ore in the East face has widened and now averages 8 feet in face and back and is of a very good grade. A footwall lead that was previously passed as being merely a small slab of ore is proving to be a fair sized roll which is now steepening to approximately 70 degree dip and has a width of approximately 8 feet. The vertical extent of this lead is unknown.

The re-opening of the No. 2 Level East to the Richard III has been completed and re-opening of old stope faces in Richard III will start immediately.

MILL:

Mill down for repairs and maintenance a total of 66 hours, distributed as follows:

57 hours Relining and repairing Ball Mill
3 hours Repairs to Classifier
3 hours Ball Mill Motor Switch Repair
2 hours Clogged Waterlines
1 hour Power Failure
66 hours

Considerable time was lost in relining the ball mill. In addition the new liners cut the efficiency of the mill over 10% in the first 20 days of operating. The daily tonnage was slowly increased from 115 tons per day on April 4th to 145 tons per day on April 28th. During the latter part of the month, 271 tons of stockpile ore was

fed to the Mill. The ore caused serious disturbances in the circuit. This was finally traced to spilled Diesel fuel from the tractor used in loading the ore, getting into the circuit. Precautions are now taken to avoid this and a great deal of trouble from this source has been eliminated.

Prior to feeding of stockpile ore to the Mill, the Mill Superintendent made a considerable improvement in grade of Copper concentrate. This was brought about by test work and when tried in the circuit very satisfactory results were obtained. The improvement was made by the stage feeding of Z-6 and Reagent 208 in the Copper circuit.

GENERAL:

The Department of Fisheries issued a directive in the latter part of April ordering us to cease dumping our Mill tailings into streams flowing into the Chamainus River. We were able to divert the tailings by flume into a small swamp, the lower end of which will be dammed off. The estimated holding area should give storage for over 150,000 tons of tailings which should be ample. The preliminary dam is to be constructed of plank and earth fill bulldozed into place. This dam was completed May 6th and approximately all solid matter is being removed from the tailings stream. This action and its results have been approved by the Fisheries Inspector and no more trouble of this nature is expected.

Weather conditions have been rather dry during the latter part of the month. However, all slashing piles have been cleared and burned and at present no known fire hazards exist on this property.

Respectfully submitted:

(Sgd) Robert B. Gayer

Robert B. Gayer - Superintendent.

926/130
926-1, 2, 3
Y

THE TWIN "J" MINES LTD.

DUNCAN, B. C.

GENERAL COMMENTS.

MAY, 1944.

Due to the closing down of operations at the Twin "J" Mine and Mill these comments will be a summarized statement of the operations during the production period of the mine, namely, that period between July 16, 1943 and May 17, 1944 - a total of 11 months of operations.

EXPLORATION AND DEVELOPMENT:

DRIFTS AND CROSS CUTS: A total of 471.2 feet of drifting and crosscutting was carried out. The bulk of this work was done on the 3 Level to advance that heading to a point where a transfer raise could be driven to connect with the Tye 265' Level workings.

A total of 62 feet of drifting was done advancing the East face of the Tye sublevel located at the elevation of the Tye 165' Level on the North vein between the old Tye Stope and Richard III property. This face was started with a full width of high grade Zinc barite ore but as the face advanced this lead gradually pinched to a sulphide gouge only a few inches wide. This gouge was followed for approximately 25 feet at which point the heading was stopped until the foot and hanging walls could be tested for an alternating ore structure. This program was not carried out due to the closing of the mine.

RAISES: 603 feet of raising was completed; 192 feet of these raises were driven to develop and act as transfer raises from the 3 Level to the lower limit of the North ore body a few feet below the 2 Level; the remainder were used as exploratory access raises driven from 2 Level to the upper limits of the North ore body with exception of 3-3 inclined raise driven on the South zone from the 3 Level to the 2 Level - a distance of 86.0 feet. Two types of raises were driven. Timbered Raises were driven 5' x 9' with a 4' x 4' cribbed manway. Small Exploratory Raises were driven 5' x 5' and were not timbered; these were driven at 55° and vertical where the raise was to be under 30 feet in length.

REOPENING OLD WORKINGS: 1430 feet of old workings were reopened. This consisted of repairing existing timber and standing new sets where necessary, spiling thru caved areas and installation of track. The principal job was the reopening of the drift driven by Sheep Creek on the 2 Level to connect with the Richard III workings. This was done on Graveyard shift by two contract miners who stood and lagged 22 drift sets, stood 35 stulls and head boards, scaled, mucked and trammed 164 tons of waste an average distance of 1,200 feet and laid 630 feet of track during a total of 50 manshifts of work. This crew cut and framed and transported all timber and materials used for the job.

DIAMOND DRILLING: 52 holes were drilled with a total of 2,536 feet of drilling. A large portion of this footage was drilled into the area on the South zone between the Lenora

and Tye boundaries in an attempt to prove ore reputed to have been left in this area. With the exception of approximately 5,000 tons of commercial ore located on the South zone West of the main Tye shaft and between the old 165' and 100' Tye Levels, no other ore lenses were located. Drilling immediately below the 2 Level in the South zone encountered old stopes not shown on existing old plans and it is felt that this entire area below the 2 Level has either been mined out or is barren of ore.

STOPING: This was carried out in two stages - Preparatory and Normal Stoping. A stope was classed as preparatory during the silling out and mining of the first floor above the sill floor, including the installation of stope chutes and first floor wing chutes. Following these operations all future mining in that section was classed as normal stoping. Due to the small vertical extent of the ore body, very often the major portion of a stope section would be removed before the so-called normal stoping operation could be carried out. The two outstanding exceptions to this were 2-0 and 2-6 stopes which were mined to an average height of 50 feet.

A total of 17,712 tons ore was broken during preparatory stoping and 12,965 tons during normal stoping, making a total of 30,677 tons broken in all stoping operations. With the exception of a few minor pillars the entire Lenora section of the North vein has been mined out. The remaining ore left in the North vein zone lies in the Tye and Richard III section of which approximately 4,700 tons has been mined from the tonnage originally estimated to be in this area.

MINE GENERAL: The ore body in the Tye South ore zone lying West of the main Tye shaft and between the old 100' and 165' Levels has been opened up. A small amount of stoping had been done in the earlier operations. However, no appreciable tonnage had been removed and the old timber is sound and only a small amount of preparatory work would be needed to mine this area.

Ore in the East face of 2-14 stope has widened and now averages 8 feet in the face and back and is a very good grade. A footwall lead that was previously overlooked is proving to be a fair sized roll which is steepening to approximately 70° dip. A small raise driven on this roll approximately 15 feet shows an approximate 4 feet of ore in the face of the raise.

An ore face in the Richard III ore zone was cleaned up and opened for inspection. Assays over 5 feet averaging 14 ounces Au, 2.1 ounces Ag, 0.9% Cu and 17.4% Zn were obtained. Ventilation in this section was very poor and a few days prior to shutting down it was necessary to cease operations.

MILLING: A total of 34,893 tons of ore was milled at an average daily tonnage of 117 tons. However, during February and March a daily average of 136 tons per day was maintained. Average recoveries to date were: Copper in Copper Concentrate 59.4%, Zinc in Zinc Concentrate 71.0%. The average grade of Copper Concentrate 19.26% Copper, and Zinc Concentrate 48.68% Zinc.

A few weeks prior to shutting down a mill run of 192 hours was made on mine run ore alone with a revised flow sheet and feeding of reagents. This run gave Copper

recovery of 75.5% of Copper in Copper Concentrate and 81.2% of Zinc in Zinc Concentrate. It is felt that the final setup of reagents and flow sheet would continue to give these results with fresh mine run ore. This test produced Copper Concentrates containing 23% Copper and Zinc Concentrates containing 49.2% Zinc.

GENERAL: Following instructions for shutting down, all equipment was cleaned and greased, electric motors were blown out, and all portable underground equipment was brought out, repaired and stored in machine shop. The river pump was brought up and stored in the Mill, all water lines inside buildings were drained, but surface lines were left intact as fire protection. Two 10,000 gallon water tanks give an emergency water supply. Mine portals have been fenced off and locked. All buildings have been boarded up and perishable supplies removed. The final details of closure are being carried out by Mr. C. Bruder, Accountant, and Secretary Mrs. E. H. Bates, who are remaining at the property for a short period to clean up office details.

Respectfully submitted:

(Sgd) Robert B. Gayer

Robert B. Gayer - Superintendent.