

from the Old Ironsides and Knob Hill mines will reach 1,500 tons per day. The new 60-drill compressor built by the Canadian Rand Drill Company, of Sherbrooke, for the Granby Company's mines here, has been installed. The two 700-h.p. motors which will drive this compressor have arrived from Pittsburgh, Pa., where they were made by the Westinghouse Electric Manufacturing Co. These motors are now being erected and as everything else is ready, the compressor will be in working order very shortly.

At the Snowshoe mine the main shaft which is now down over three hundred feet, is to be sunk a further 40 feet. The electric hoist for this mine is now in place and the current to be supplied by the Cascade Water, Power and Light Company, may be turned on when required. The Snowshoe is now in a position to increase its output upon resumption of shipments to the Sunset smelter. A tonnage of 500 to 600 tons per day could be easily maintained, but the smelters are not at present able to handle that amount.

It is reported that the Mother Lode smelter is to take the ore now on the dumps of the Brooklyn and Stenwinder mines. Tracks are to be laid to reach the dumps and it is expected that between 5,000 and 10,000 tons will be shipped to the Greenwood smelter.

Outside of Phenix work is being performed on the Oro Denoro in Summit Camp; the Blue Jay, some two miles below Phenix, has two shifts extending the tunnel. The B. C. mine has a small force of men working, and ore is accumulating on the dump.

YMR DISTRICT.

(From our own Correspondent.)

DURING THE past month the almost impassable state of the roads has greatly hindered active mining developments. The Foghorn and Wilcox mines have both been temporarily obliged to reduce their forces at work in consequence of inability to get in sufficient supplies for a large crew. The Foghorn has a few men at work still, while the Wilcox has resumed operations with a full crew.

At the Ymir mine the force has been largely increased of late. On the 1000-foot level where it is nearly half a mile from the face of the east drift to the mouth of the adit tunnel, a number of large cars, holding two or three tons each, and drawn by horses, are being utilized instead of the ordinary mine cars. On this lower level, although no official announcements have been made, it is reported that good pay ore has been encountered in the drift to the east, and that it is well up to the average-mill stuff of the mine. The importance of this news can hardly be overestimated, as the existence of pay ore at this depth practically quadruples the amount of ore demonstrated in the mine. On the fifth level high-grade ore has been encountered in both the east and west drifts. A new theory as to the Ymir vein is that the ore body has split in two at a point near the shaft at the 500-foot level, so that practically two separate ore bodies now trend east and west with a zone of barren ore in between. The eastern ore body, it appears, has been caught on the 1,000-foot level.

One of the most enterprising companies operating in this district is the Active Company, of Cincinnati, Ohio, which owns the Union Jack group on Porcupine Creek. Clutronic drills of the latest improved Durkee pattern have been installed and are giving good satisfaction. On the Queen vein the lower tunnel is in some 270 feet in ore nearly all the way. The rich ore in this tunnel is about three feet wide and averages about \$20 besides about eight feet of free-milling quartz running about \$8 in gold. The tunnel is being run to get below a richer shoot exposed in the upper tunnel 100 feet above, where a quantity of solid galena ore running \$40 has been encountered. In addition to the Queen vein the company's property includes a second vein known as the Union Jack, which is crossed at right angles by a third vein. A tunnel has been run 305 feet on the third vein, and will intersect the main vein in the course of another 65 feet. Good ore has been shown up in this tunnel, getting noticeably richer as the point of intersection with the main vein is approached. When this point has been reached and the lower Queen tunnel has

reached the rich pay shoot the company will be guided by the results obtained as to the erection of a treating plant.

In addition to the promising prospect offered by the mine, the Active Company has an undoubted bonanza in its timber limit. It has purchased eight square miles of magnificent timber land lying between the mine and the railroad, and in view of the unlimited demand for B. C. lumber from the Northwest, proposes to turn it to instant account. A large plant including a shingle mill with a daily capacity of 60,000 and a sawmill of 25,000 feet per diem has been ordered and will be installed as rapidly as possible. By this means the company anticipate sufficient profits to amply provide for the complete development of the mine, and the equipment of a plant to treat the ore.

OIL CONCENTRATION AT LE ROI No. 2.

THE following is a brief description of the oil concentration plant to be installed shortly at the Le Roi No. 2 mine at Rossland: The cost of the concentrator completed, including buildings, is estimated at \$25,000. This provides for a plant of two units, capable of treating fifty tons of ore per day. Further units can be added at a much lower *pro rata* cost, but it is the company's intention to establish the practicability of the process beyond question on the smaller scale before making the expenditure on capital account necessary to mill a larger quantity on the start.

Briefly, the specifications for the plant are as follows: An estimated capacity of fifty tons per day of twenty-four hours, to consist of two units, each consisting of three mixing cylinders and accessories. The mixing cylinders will be six in number, each three feet in diameter and ten feet six inches long, complete with spiral inside and a pitch of twelve inches. Galvanized hoods and tanks are provided for each cylinder. Four carrier rollers are provided for each cylinder. The cylinders are to be driven through a worm operated by means of a jack clutch with striking lever suitably arranged. Galvanized launders for conducting the oil and concentrates from the separating tanks to the settling tanks are supplied. One settling tank is furnished, to be five feet in diameter, with coned bottom and steam coil rim. The oil storage tanks are two in number, each seven feet in diameter and ten feet deep. Oil meter pumps are six in number with one and a half inch outlets. The pumps are of a patent rotary type. An oil receiver tank goes with the equipment. It is four feet in diameter. There is a patent belt-driven suspended self-balancing centrifugal extractor with bottom discharge valve, safety outer case and solid basket 48 inches in diameter fitted with vertical vanes and diving ring, together with one trough with conveyor for leading concentrates from preliminary to final extractor. The balance of the apparatus consists of a tank for final separator, a tailings tank, and the shafting, pulleys and belts necessary for the operation of the works. The weight of the machinery is approximately 28 tons.

A wide range of experiments have been made with Le Roi No. 2 ores at the Elmore experimental works at Rossland, and the results secured are of an interesting nature. The real problem has been in connection with the extraction of the gold contents of the ore. It has been demonstrated that the percentage of extraction depends in large measure upon the fineness to which the ore is crushed, and the problem therefore resolves itself into a question of the advisability of crushing extra fine to recover a small additional percentage of gold, the copper contents being taken up with a comparatively coarse mesh.

The recovery of gold from pulp of thirty mesh has run from 71 per cent. to 80 per cent., the latter being the largest percentage of recovery secured with pulp of the mesh specified. Pulp passed through a sixty mesh has been found to return 90 per cent. of the copper contents and 90 per cent. of the gold contents. The difference in favour of the smaller mesh is 10 per cent., and it is a commercial equation whether the additional percentage of gold recovery will justify the extra cost of reducing the pulp to 60 mesh. This can be determined readily when the two unit plant has been in operation for a short time.