

later superintendent of the International smelter, at Tooele, Utah, has been appointed to the chair of metallurgy, University of British Columbia, at Vancouver.

W. M. Dake, Jr., formerly general superintendent of the Carbon Fuel Company's Utah coal mines, and of the Morton Fuel Company, as well, has been appointed general manager of the Rock Springs Coal & Mining Company, of Sweetwater, Wyoming.

James W. Wade, manager of the Utah Zinc Company, spent a few days in the camps around Ely during the first half of the month looking into conditions affecting the zinc mining business and the prospects of securing tonnage for the new zinc smelting plant.

Kirby Thomas, consulting mining engineer, has returned to New York City after several weeks spent in Colorado, examining mining properties in San Juan district and in Gilpin county, and in investigating the uranium and vanadium deposits of Utah and Colorado and the oil-shale deposits and processes in western Colorado.

#### WALKER COPPER NOT CLOSED DOWN.

Operations have not stopped at the Walker Copper mine, according to President J. R. Walker, who says the report published to that effect is in error. Shipment of concentrates has been stopped and will be until metal prices are better. Development work in the mine will be continued and surface improvements now under way will be completed. Mr. Walker said the Walker Copper Company is one of the lowest cost copper producers in the country, but that the drop in the price of the metal would compel the company to market a large quantity of concentrates already made at a price not satisfactory to the company.

The Walker company is one of the most fortunate of the big copper companies in that its property is such that curtailed production can be made without disrupting a large organization and that the mine and mill can be maintained at minimum expense so that large production can be started quickly.

#### Concentrates on Hand.

According to Mr. Walker's statement information furnished him by O. M. Kuchs, assistant general manager of the International Smelting Company, is that there are 8,500 tons of concentrates at the mine ready to ship. Each decline of a cent in the price of copper therefore meant a drop in value of \$30,000 on that supply of concentrates.

Mr. Walker said the Walker interests own 450,000 shares of stock in the company which is capitalized for 1,250,000 shares. Control is held by the Anaconda Copper Company, of which International Smelting is a subsidiary. The Anaconda company is under contract with the Walker Copper people to operate the mine for the best interest of the Walker Copper and the manage-

ment of the property has been entirely satisfactory to the Walker interests, he said.

#### Development Work.

As to development work which is being done and will continue in the mine Mr. Walker said he was informed by Mr. Kuchs that the new boarding house will be completed. This will permit of consolidating the camps for the mine and mill and affect a saving for the company of \$73,000 a year. Work will be continued in the main incline shaft which will be sunk from the 400 to the 800 or 1,000 level. The new 500 level, which is next below the present deepest level, will be run and put in readiness for stoping operations when production work is resumed.

A new rock house will be completed for the rock crusher recently purchased, this improvement to cost \$20,000. Thirty pound rails are being installed in the main tunnel level which is 1,000 feet deep on the dip of the vein and which will cut the main shaft at a distance of a mile and a half from the face of the tunnel. Cars with a capacity of two and a half tons will be purchased to supplant the cars now used for haulage, the new equipment to be drawn by electric motors in place of mules, as at present.

The upraise from the tunnel level to the upper workings has been completed. This raise is 300 feet south of the main incline shaft and will drain the upper workings so that no pumping will be required.

#### Many Improvements.

In summing up the mine conditions, Mr. Walker said:

"The mine is drained; the new aerial tram, which cost more than \$200,000, has been completed; the property is supplied with electric power over a line which the company built, fifteen miles in length, about two years ago. The new tailings dam just completed, at a cost of thousands of dollars, is several hundred feet in length and 135 feet in width at the base. A new sawmill has been completed with a capacity of 25,000 feet per day; a new hospital has just been completed for the benefit of the employees. With all these modern improvements, the company should be in the very best position to produce copper at a low cost when the price of the metal warrants it.

"Walker Mines ore not only has a high grade copper content, but the concentrates carry in gold and silver from \$10 to \$13 per ton in addition.

"Returns of concentrates which have been received so far this month from the International Smelting Company amounted to 478 tons, and produced \$31,691, or \$45 per ton, after all smelting charges and after freight from the mill to Tooele have been deducted.

In other words, over \$45 per ton. Figuring a ratio of concentration of 5½ tons of crude to one of concentrates, the crude ore has produced over \$8 per ton, from which

amount should be deducted mining, milling and overhead. The above is figured with copper at 15 cents a pound. The moisture in the above shipments averages over 12 per cent, which is a very large item, as the freight rate is over \$9 per ton.

"The company is contracting ore broken in the stopes at \$1.25 a cubic yard; a cubic yard of ore contains about 2.7 tons. In other words, ore is being broken in stopes for 46 cents a ton.

"From all the above facts, with the very small mill of 250 tons capacity per day, it can readily be seen with copper even at 15 cents the company can produce at a very low cost, and a good profit."

#### COLUMBUS-REXALL OPERATIONS.

Despite the unusually bad condition of the roads in the Alta-Cottonwood region at this season of the year, M. R. Evans, president and general manager of the Columbus-Rexall Consolidated Mines Company, with holdings in both Little and Big Cottonwood districts, is optimistic regarding the future.

"We were able to haul ore only fourteen days in October," said Mr. Evans recently, "and so far in November have been precluded from any steady shipments. But we are keeping the force at the mine busy in the necessary 'dead work' and further exploration with good results."

When the weather would permit hauling the Columbus-Rexall has been able to average a car every alternate day. During the open season, Mr. Evans said, the company could easily have more than trebled this record had it been possible to secure efficient miners for the work. Two cars of ore now at the smelter, which Mr. Evans and the mine superintendent believe to be a fair average of the ores that will be sent down as the autumn and winter shipments proceed, give assay values of 52.2 ounces silver, 21.3 per cent lead and 4.42 per cent copper. This is a net smelter value of a little better than \$70 per ton.

"The physical condition of the mine is better than ever before," said Mr. Evans. There are half a dozen different workings from which commercial ore in considerable quantities can easily be taken, and it requires only the setting in of a little colder weather to put the roads in fair condition for hauling. The extent of the winter shipments will depend entirely upon the weather conditions. There is nothing at all to worry about as regards the quality or quantity of the ore."

The management of Butte & Superior has ordered a shutdown of the property so far as the production of zinc is concerned. While the high cost of operation and low price of zinc remain this shutdown will continue, it was stated. A campaign of moderate underground development, however, will be continued during the period of non-production.