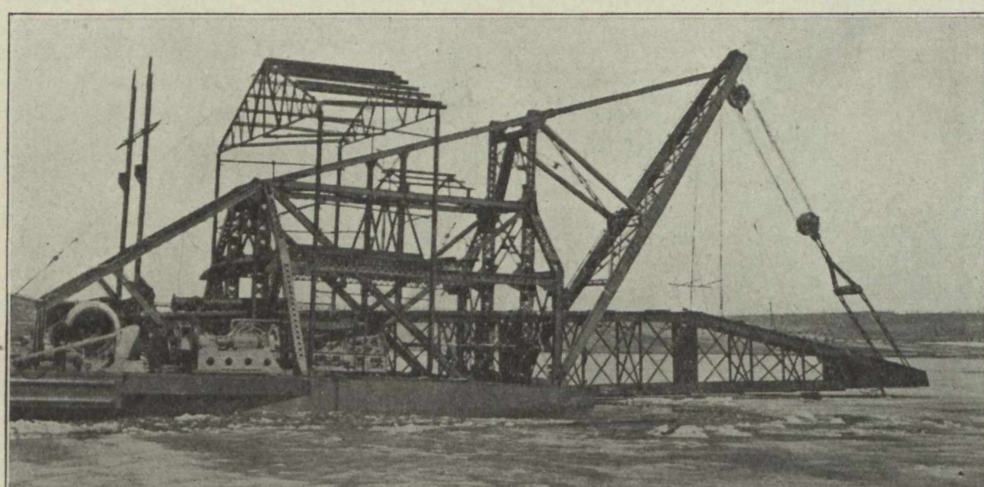
As the dredge is to be worked the year round, a 75 h.p. boiler is provided for heating purposes and for driving the capstans and electric light plant when the dredge is being shifted and no electric power is available.

The two-pump feature has necessitated a number of unusual features of control. The pumps, in the first place must be balanced, so that No. 1 will not deliver more material than No. 2 can take care of. This is possible as No. 1 is working under a constant load, while the load No. 2 carries varies according to the length of the discharge pipe which is in use. This necessitates a careful adjusting of the speeds of the pumps. After thorough study a water rheostat was adopted, the first time that this has ever been tried in the United States for large motors. This device gives an infinite number of speed control points and thus great flexibility. The speed is governed by the height of the liquid in the rheostat tanks, and the flow by a pivoted overflow pipe, which is full on when in a vertical position and off when horizontal. The operator controls the position of the pipe. The liquid must be kept in circulation because of the danger of heating. It is pumped through cooling coils, and returned to a storage tank overhead, from which it flows by gravity into the rheostat tanks. The flow is controlled by a valve with an automatic solonoid control. A 3-in. centrifugal pump driven by an independent motor does the pumping.

Another interesting feature is the interlocking electrical control, in order to prevent starting and stopping the pumps in the wrong order.

The electric power used is 2,100 volts, 25 cycle, 3 phase. The dredge is about to be tested at the present time, but doubtless will not be operated to full capacity until next spring.



Dredge No. 1. Calumet and Hecla Mining Co.

HUDSON BAY MINING CO.

The annual report of the Hudson Bay Mining Co. shows a total production of 391,360 oz. of silver valued at $196,435.92 from the Cobalt property, now worked out and closed down.

The total income for the year was $198,082.50, while the expenditure was $145,521.79, leaving a balance of $52,560.71.

During the past year there was spent at the Dome Lake Mine in Porcupine, the controlling interest of which is now held by the Hudson Bay, a total of $119,375.

The end of the ore reserves at No. 1 mine in Cobalt was reached in June of this year, and the following months the mine was closed down, after a production for the fiscal year to that date of 393,360 oz. of silver, which had a value of $196,435.92.

Speaking of the Porcupine camp, the President stated that the purchase of the Dome Lake Mining Company stock was considered a very important one by the directors, and although requiring a large investment of cash surplus, the results to date in development work justified the action of the directors.

The company now holds 540,000 shares of the stock The total issue is 940,312 shares.

An option is now held by the company on the remaining shares in the treasury of the Dome Lake.

During the past year several mining claims had been examined, but none were taken up. On some claims at one time under option to the company in the Kirkland Lake section, assessment work was done, but the option was ultimately dropped.

Mr. A. H. Brown, general manager of the company, in his report to the directors, spoke in hopeful terms of both the Cobalt and Porcupine properties.

In Cobalt work is being continued at No. 2 camp, near the McKinley-Darragh, and while no favorable developments have been met with to date, there is every possibility that the thorough exploration work being carried on will result in values being proven.

At Porcupine the outlook is promising for additional ore shoots on No. 1 and 3 veins of the Dome Lake mines.

The annual report shows a total production since 1907 at the Cobalt property closed down in July last, of 5,604,168 oz. of silver. The total value of this production was $2,965,523.18, of which the greater portion has been returned to the shareholders in dividends. These dividends amounted to several hundred dollars a share.

The action of the directors in purchasing control of the Dome Lake Mines was endorsed by action, and a resolution was passed advancing further money for development purposes at that property if necessary.

The old Board of Directors were elected, and at a subsequent meeting of the directors the same officers were again elected to the offices.

The Officers of the company are as follows: President, George Taylor; Vice-President, A. A. McKelvie; directors, Thomas McCamus, D. M. Ferguson, J. J. Grills and S. S. Ritchie, all of New Liskeard, and Charles L. Sherrill, of Buffalo, N. Y.