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A dragline dredge with a half-yard shovel was installed last winter by Ralph Foster and F. L. Wilson, both of Sumpter, Oregon, and operations are now on a larger scale. The property is in Baker County on the Powder River near Sumpter.

Sumpter Area
Baker Co.

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THE POWDER RIVER GOLD DREDGING COMPANY

The most important placer mining operation in the state is that of the Powder River Dredging company, located near Sumpter, Oregon. The total holdings of this company is about 1,500 acres, of which about 700 acres is to be dredged. This 700 acres of commercial gravel extends from a point a short distance north of Sumpter to McEwen, a total distance of about 5 miles.

The commercial gravel is in a meandering channel from 300 to 2,000 feet wide, and averaging about 1,000 feet, and occupies only a part of the valley floor. The average depth of the gravel is 18 to 20 feet. The bedrock is a soft, decomposed rock, which dredgers call "clay webfoot." Nearly all of the gold is on bed-rock, and the condition of the gravel and bed-rock is such as to be called quite hard digging. This fact will be better understood when it is known that the manganese steel bucket lips last only 5 months, while in California practice they last about 18 months.

The dredge is of the standard type and was constructed by the

Yuba Construction Company, of Marysville, California. Its 65 buckets have a capacity of 9 cubic feet each, and the dredge will dig to a maximum depth of 30 feet. It has an actual capacity of about 5,000 cubic yards daily. The dredge has a wood hull which, according to California experience, has an average life of 10 to 12 years. The dredge has no amalgamating plates. It is equipped with Hungarian riffles which have a slope of 1¼ inches to each foot of length.

The power is furnished by the Eastern Oregon Light & Power

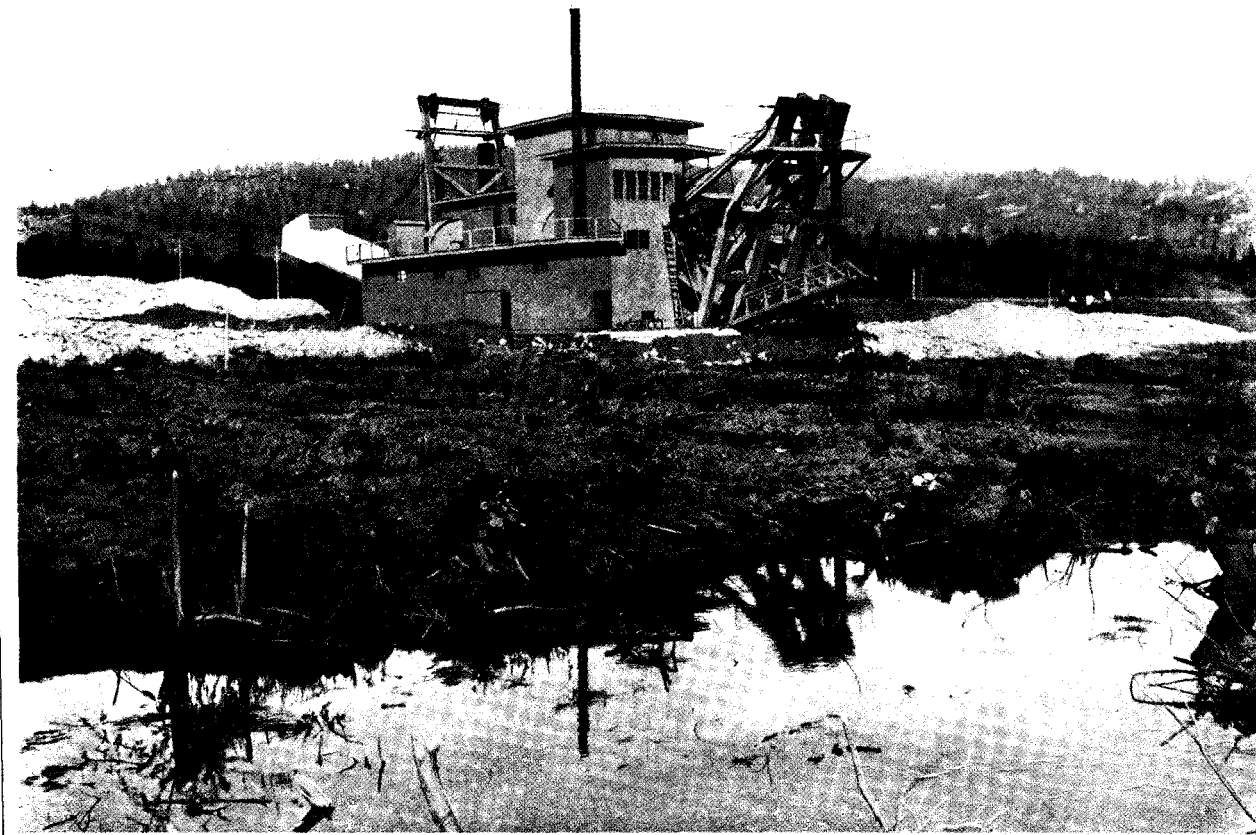
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company. The horsepower required is naturally variable. The consumption averages about 450-hp. in 7 motors.

The clean-up is made weekly, and the high extraction, estimated at 95 per cent, is made upon easily washed gravels, which contain but little clay. The gold is medium coarse. The particles average larger than those in the California dredging field. The largest nugget secured is $\frac{5}{8} \times \frac{3}{8}$ inch, while perforations in the revolving screen are $\frac{3}{4}$ inch. It is evident that no nuggets of gold are lost in the over-size. The average fineness of the gold is 785. The total cost per yard is approximately $3\frac{1}{2}$ cents, which is higher than California practice, due largely to the more difficult digging.

Between 100 to 105 acres was dredged from February 1, 1913, to October 8, 1914, a period of about 20 months, or about 60 acres annually.

This company secured in November, 1914, some additional ground for which negotiations had been in progress for some time. Since this purchase has been effected they have begun the digging of a pit to install another dredge to work the ground up-stream from the point where the present dredge began to dredge the channel down stream toward McEwen.



POWDER RIVER No. 2—A 7 Cubic-Foot Yuba Dredge owned and operated by the Powder River Gold Dredging Company at Sumpter, Oregon.