

**Powder River Placers  
(including the Carpenter &  
Vertex Mining Co. claims)**

Au

PRINCIPAL ORE

MINOR MINERALS

NAME	OLD NAMES	
10 S 38 E	24 & 25	
10 S 39 E	19 & 30	
T	R	S

PUBLISHED REFERENCES

..... Baker ..... COUNTY  
 ..... Sumpter ..... AREA  
 ..... ELEVATION  
 ..... ROAD OR HIGHWAY  
 ..... 18 miles to Baker ..... DISTANCE TO SHIPPING POINT

MISCELLANEOUS RECORDS

PRESENT LEGAL OWNER (S) .Vertex Mining Co.....  
 ..... Mr. & Mrs. Carpenter.....  
 .....  
 .....

Address ..c/o Sumpter Stage, Baker, Oregon.....  
 ..... " " " " .....  
 .....  
 .....  
 ..9206 N. Commendo Ave., Portland 3, Oregon.....

OPERATOR ..Vertex Mining Co.....

Name of claims	Area	Pat.	Unpat.
River Side Placers	40 acres		
Mountain Home Placer	20	"	
Vertex Placer	20	"	
Last Chance Placer	20	"	

Name of claims	Area	Pat.	Unpat.

EQUIPMENT ON PROPERTY

BALD MT -  
ELKHORN R  
POWDER R  
DREDGING

**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

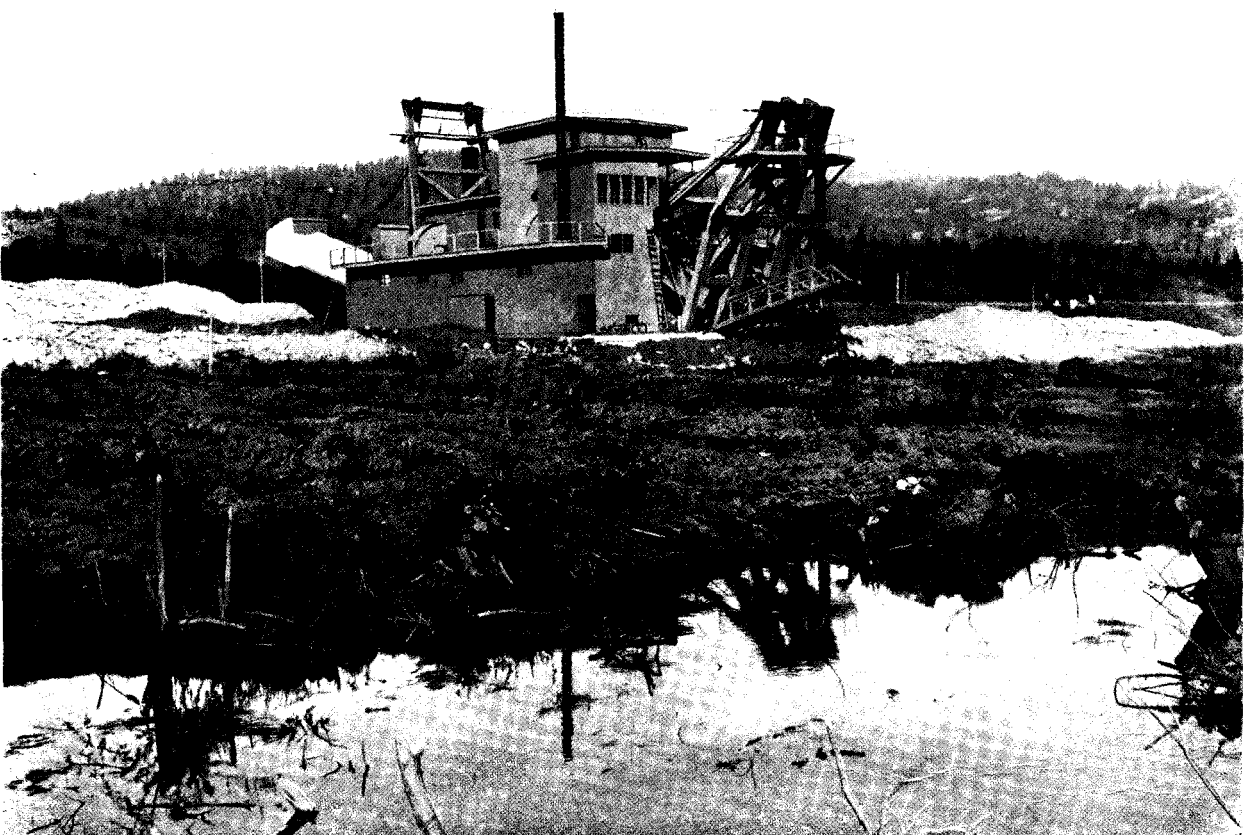
BALD MT -  
ELKHORN R  
POWDER R.  
DREDGING CO.

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.

# State Department of Geology and Mineral Industries

702 Woodlark Building  
Portland, Oregon

POWDER RIVER PLACERS

BAKER & SUMPTER DISTRICTS

BAKER COUNTY

(Including Carpenter and Vertex Mining Co. claims)

The classifier mentioned in the green paper edition of this report is rather interesting. According to Shannon, care must be taken to maintain an even flow of gravel (as against a pulsating or intermittent one) and also the density of the water-sand mixture in the cone below must be checked frequently and corrected when necessary for best results.

Shannon of course reports very extra excellent results from the Colorado testing and possesses a big docket full of bank, mint and smelter receipts covering the sale of substantial amounts of gold. Unfortunately data concerning the yardage and head assays of much of the material handled is lacking so that the receipts have lessened significance accordingly. However, Shannon claims to have worked on the tails of several different going placer operations, and to have made very good recovery of fine gold. He claims that the classifying and jig combination yield a very clean sand concentrate as compared to common placer concentrates, and that the machine is sensitive to slight differences in gravity.

More important than the foregoing, perhaps, is Shannon's claim to intimate past association with Fahrenwald. Shannon claims they worked together for years, that Fahrenwald is currently in Canada, but is coming down for a grand inspection of the plant when he returns in a month or two.

In many ways the classifier looks to be a halfway practical and sensible gadget, and one that might well be worth playing with, but other aspects of this company's operation are open to question. Just why they assume the expense of diverting the river when the whole valley is composed of nothing but river bed material, is a question I never could get an answer on. Further, the complete lack of prospect testing speaks for itself.

Patents for the classifier and amalgamator have been issued in the U. S., Mexico, and Canada.

Report by:

N. S. Wagner, July 3, 1947

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