

John Day Dredge Ground

NAME OLD NAMES PRINCIPAL ORE MINOR MINERALS

T R S

PUBLISHED REFERENCES

...Grant..... COUNTY
...Canyon..... AREA
..... ELEVATION
..... ROAD OR HIGHWAY
..... DISTANCE TO SHIPPING POINT

MISCELLANEOUS RECORDS

PRESENT LEGAL OWNER (S)

Address

OPERATOR

Table with 4 columns: Name of claims, Area, Pat., Unpat.

Table with 4 columns: Name of claims, Area, Pat., Unpat.

EQUIPMENT ON PROPERTY

No dredging operation in the State of Oregon has aroused so much public comment and criticism as that of the Western Dredging Co.—and none with less cause, as is abundantly shown by the panorama picture above. As shown in the picture, the dredge has been operating almost exclusively in the old Chinese tailings and gravel bars in the bed of the John Day River. The frog ponds and mosquito hatcheries in the foreground are typical of its ground.

But as these tailings lie along a highway and on the immediate outskirts of a town—note buildings of John Day, Ore., on the left—they have given rise to widespread comment.

The public does not stop to think the tails have merely replaced wasteland which was equally as sterile; nor does it know that owners of neighboring farmlands report that the dredging has lowered the water table and rendered adjoining meadows far more productive than they were before.



Dredging on the John Day

April 1939
Mining World

(Don't be -
Wagon
April 1962

GOLD dredging began on Grasshopper Creek near Bannack, Mont., and jumped from there to John Day, Ore. Right where the first dredge on the Pacific Slope started operating, dredging is being carried on today by the Western Dredging Co.

This San Francisco concern headed by Sanford Lowengart employs an all-steel 6-cu. ft. boat built by Walter W. Johnson, which started digging November 22, 1937, and was crowding 4,000,000 yards of material handled on her second anniversary. Between two and three years of digging remain on the present property, with from 10 to 12 years work further down the John Day River, below the town of Mount Vernon.

The operation is in charge of Fred Shiefer, dredgemaster, who came over from the high dredge ground above the Salmon River in Idaho. The chief engineer is Earl Trevethan.

The dredge has an exceptionally interesting power plant, a pair of 200-hp., 6-cyl., Atlas-Imperial diesel engines. They are placed at the bow of the boat on the port side, the forward one set athwartships and the other fore and aft from the inboard end of the first.

When MINING WORLD visited the boat the engines had been running 16,659 hours with never a breakdown. "They run fine," said Chief Trevethan. "No trouble; steady, even performance; need only routine care and maintenance." The engines are fitted with Vortex air cleaners as a good deal of dust blows around in summer.

Shell Oil Co. diesel fuel and lubricants are used, not only for the main engines but throughout the entire boat.

The thwartship Atlas drives the bucket line and the swing winch through belts. The fore and aft engine drives a 75-kw. G. E. generator, providing electric power for the revolving screen, stacker and lights; and also powers the two main pumps through double silent chain drives. The pumps are Byron-Jacksons, a 10-in. delivering 3,000 g. p. m. and an 8-in. 1,800 g. p. m.

Six-ft. Walter W. Johnson Co. dredge of the Western Dredging Co. at John Day, Ore. The bar in the left foreground is typical of the ground being dredged, consisting of old Chinese tailings in the river bed.



Two views in the engine room of the Western Dredging Co. Johnson boat, showing the twin Atlas diesels which power the craft. Each is of 200-hp. The thwartships engine is seen in the background, with the fore-and-aft installation at the right. Chief Engineer Earl Trevethan is wearing the cap, while his assistant in the checked shirt is Waldo Allen.



The principal load on the 75-kw. generator draws from a 40-hp. motor on the screen and a 25-hp. on the stacker. Both are G. E.

There is also a General Electric welder driven by a V-8 Ford motor; a 5-kw. generator powered with an 8-hp. Cushman gas engine for standby duty and to run a 3-in. clean-up pump; and a 5-hp. G. E. motor driving a small utility pump.

A little Atlas gas engine runs a compressor to provide starting air for the diesels.

The 6-ft. Amsco buckets are of special Walter W. Johnson design, exceptionally close-coupled, with flaring lips and with ears on the underside. These serve to guide into the screen material from the dumping bucket which strikes the underside of that which has just preceded it over the tumbler.

There are 72 buckets on the line, 28 dumping per minute. They will dig to a maximum of 23 ft., although the present ground runs only about 17 ft. below water level.

The screen is 6 by 35 ft., built of Amsco manganese screen plates. It discharges oversize onto an American Rubber Co. "Lightning" belt with ribbed center. Incidentally, not a little low-grade coal is ripped out of bedrock on occasion and shows up on the stacker belt as chunks and blocks

Oversize discharging from the trommel to the American Rubber Co. "Lightning" ribbed center stacking belt. The trommel screen is of Amsco manganese steel plates.

Distributor splitting the screened material between the port side sluices. Clean-up box at the right.

Closeup of the lower tumbler and the 6-ft. Amsco buckets. Note the typical Johnson flaring lips and the ears on the sides of the buckets, which serve to guide material from the following buckets as they dump over the upper tumbler. Very little of this stripping is necessary on the John Day.

of barely mineralized wood. At times some of it is burned in the heaters of the dredge. These, by the way, are Lang tank front stoves, situated at several points about the boat.

The recovery system on the Western dredge consists of sluices, and riffles, but with somewhat unusual arrangement. The central sluice under the screen consists of two levels, like a V lying on its side with the apex aft. The return run of this sluice discharges to the side sluices. There is also a two-level save-all under the bucket line.

Virtually all of the values are taken in the upper portion of the main

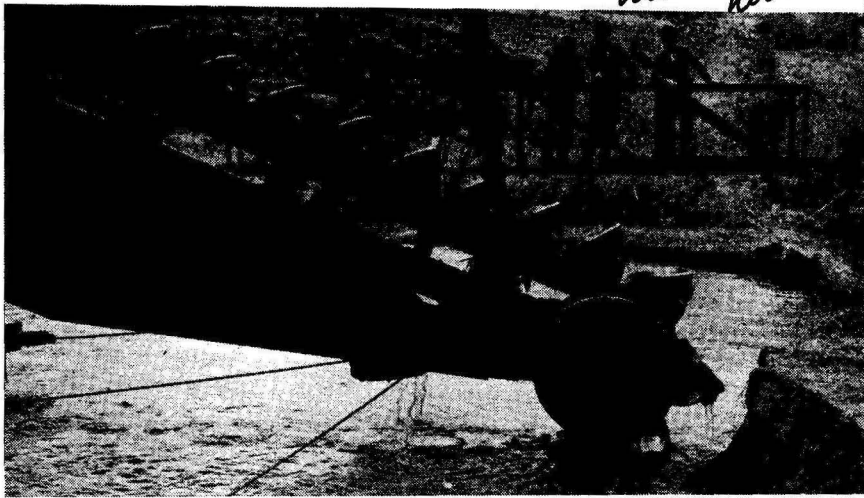


MINING WORLD

April 1939
Can't be - Wayne April 1962
Should be April 1940
according to date of chrome
article on reverse side
of this company
release of
March 1940
in many
sentences
details.
WJW

Above—Earl Trevethan, engineer, explains underwater lubricating problems to a couple of Shell Oil Co. salesmen from the gangplank as the dredge moves ahead for stripping. Here again the non-arable character of the ground is indicated by that at the right of the picture.

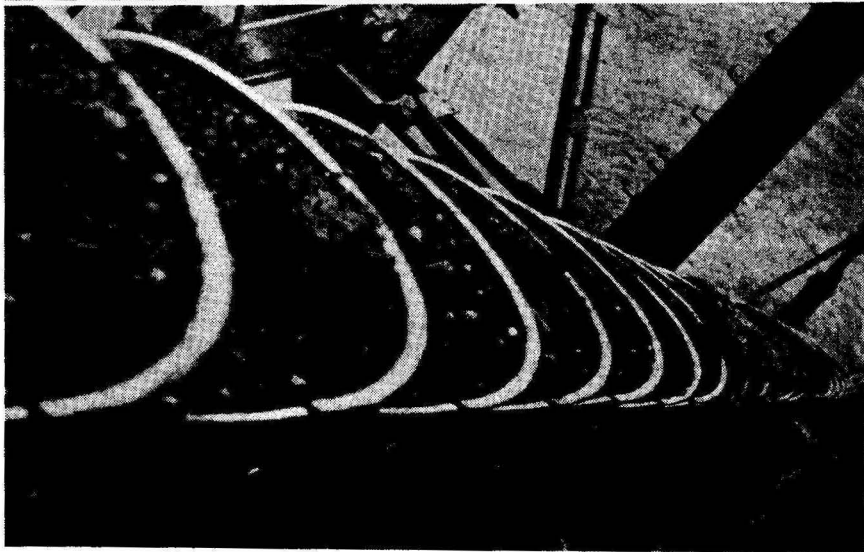
Below—The Amsco buckets come up from the bottom filled to the lip with fine gravel. It's this kind of digging that gets lots of yardage through the Johnson boat. There are 72 buckets on the line, 28 dumping per minute.



sluice. However, each clean-up produces some nuggets of fair size, usually with a quartz matrix. This lightens them sufficiently so that they are generally found well down on the primary riffle system. Recovery from the side and tail sluices is scant.

The Western Dredging Co. offices, shop and retort building are located ashore only a few hundred yards from the town of John Day. Last fall the retort room was entered by thieves who secured about \$5,000 in "quick" and amalgam. This case was not one of "high-grading," just ordinary grand larceny.

The Western dredge has a "Caterpillar" tractor armed with a LeTour-



Detail of a dredgemaster—Fred Shiefer, in charge of the Western Dredging Co. operations.

neau bulldozer as auxiliary equipment, this being used largely for clearing, maintaining roads, handling deadmen and similar duty. Stripping is a rather unimportant factor in the operation, inasmuch as the dredge is working in the river bed, very little arable ground being included in the property.

As a matter of fact, during the two years it has been operating the dredge has scarcely touched any property which could by any stretch of imagination have been used for agriculture. The property was largely stream-bordering swamps and frog ponds.

When the operation was visited, a point was made of discussing the operation of the dredge with a number of residents of John Day, businessmen, sportsmen and farmers. They expressed the opinion that the dredging had served the community well. It has produced a substantial payroll. It has improved the river channel through concentrating the flow, reducing the flooding effect of freshets and providing better conditions for fish life after dredging has been completed.

The ground in which the dredge is

working has almost entirely been worked over to some degree in the early days, largely by the Chinese, who followed the white miners into the camp after the first flush of production was past.

Canyon City, located only about two miles above the Western dredge was the most famous and productive placer camp in Oregon or Washington. Discovered in 1862, the diggings produced at least \$3,000,000 annually for a few years. They were not extensive, however, and fell off rapidly, being down to about \$100,000 a year within a decade.

The Ferris & Marchbank operation, described in the January, 1940, issue of MINING WORLD, is located immediately downstream from the Western Dredging Co. ground. In addition, there are several dragline washing plants further upstream. Beside the gold, there is substantial chromite mineralization in the vicinity, which is the locale of one of the federal "strategic minerals" investigation projects. Chromium studies were initiated by field parties in the fall of 1939.

April 1940

22

(see ORE-BIN, March 1940 on back of The Day Bridge clipping for dating basis)

Chromite Recovery from Black Sands May Prove Commercial

BLACK sand along the coastline of Southern Oregon has long attracted miners and investors, usually to their sorrow, but may be headed for commercial development as a source of chromite. Earlier efforts have largely been directed at recovering gold and platinum values found in some places.

The Oregon Department of Geology and Mineral Industries has been conducting some studies of the commercial possibilities of the chrome content in some of the black sands and Earl K. Nixon, director, recently made a somewhat guarded statement of the current situation.

In this statement he explained that black sand usually consists of magnetite which, due to the fact that it is usually twice as heavy as the rocks with which it is associated, is concentrated in beds by hydraulic action. In Southern Oregon the black sands may contain also other heavy minerals such as chromite, ilmenite, olivine, garnet and sometimes zircon. In some rare instances, they contain metallic gold and platinum.

Somewhat condensed, Mr. Nixon's statement goes on:

"Of the heavy minerals in the black sands, the one of particular interest at this time is chromite. The aggre-

gate quantity of chromite is undoubtedly enormous, but the critical commercial factor is whether the mineral can be made available.

"In order to determine the commercial possibilities, it is essential to know (1) whether the sands exist in mineable beds of economic size and grade, and (2) whether the minerals can be separated so that a product of commercial grade may be made.

"The Department of Geology and Mineral Industries has been concerned with the problem for over a year. Failing to interest chrome consumers in investigating the coastal black sands of Oregon, the department started field studies in November, 1939. Knowing that the difficult metallurgy of the materials, as well as the supposed lack of tonnage had discouraged investigation, work was started on the metallurgical angle first.

"Tests carried out by an eastern laboratory indicate that the metallurgy is relatively simple.

"The matter of tonnage is closely related to the metallurgy, for each deposit represents a different problem in minerals separation.

"The department has enough information to justify the opinion that the available tonnage is sufficient to

justify serious investigation and some exploration to obtain quantitative results. No more encouraging statement can be made at this time.

"Preliminary results on the better grade of bank material show about 90 per cent recovery of chromite. This chromite concentrate is low in titanium, but rather high in iron. The concentrate has reasonable possibilities for use in the production of ferro-chrome or refractories or bi-chromates.

"Much work has yet to be done on the mineral separation angle, but it shows enough promise to warrant our suggestion to consumers that they seriously consider some drilling and detailed sampling.

"The U. S. Geological Survey has agreed to do some preliminary investigation, and the Bureau of Mines has the matter of a strategic minerals drilling project under consideration.

"The possibility of recovering gold and platinum values in a chromite operation is very uncertain. These values are erratic in most beach deposits, and would not necessarily correspond with the chromite value.

"The public should be extremely cautious about accepting statement concerning unlimited tonnages of chrome-bearing sands in beach and back-beach deposits. Such statements are misleading. Also, chrome sands can be worked successfully only by skilled operators. The unskilled man would be foredoomed to failure."

Reno Gold Picks Up "C" Ore on New Level

Reno Gold Mines have picked up the "C" body of the Motherlode vein by the east drift on the eighth level, two levels above the main 4900-level crosscut, according to Secretary W. A. Sutton. The Reno mine is situated in British Columbia's Sheep Creek district.

The "C" orebody was the first encountered on the 4900 level.

Exploration of the Nugget vein is continuing from the 4900 level crosscut without positive results so far. At the separate Bluestone workings a winze is being sunk to give additional depth on this vein.

Reno also has a controlling interest in the Central Zeballos property on the west coast of Vancouver Island.

W. T. Burns Joins Imperial

William T. Burns, former chemist and metallurgist with the Bureau of

Mines and assayer at Fairbanks, Alaska, has become associated with Imperial Gold Mines, Inc., as engineer and geologist at the company's mine near Gold Hill, Ore.

The mine is the former Sylvanite. The company has its headquarters in Seattle.

Blue Dog Mine Near Weiser Producing

A small mill was put into operation this spring on the old Blue Dog mine about eight miles from Weiser, Idaho. The property is owned by R. A. Griffith, Cecil Wood, Jack Wood, W. C. Van Sice and Carl Morton of Weiser.

The mill was originally set up with a simple flow sheet of amalgamation following ball mill grinding, but tailing losses proved very high and flotation equipment was installed. Some of the ground in the vicinity of the mill has yielded in a small way to placering with a sluice box while the mill was under construction.

Sheep Creek Prospects Mt. Sicker Properties

Sheep Creek Gold Mines, with options on claims on Mount Sicker, Vancouver Island, near Duncan, are carrying on both surface and tunnel exploration in search of new ore bodies.

The Mount Sicker mines once was a busy mining camp populated by more than 600, and the ore kept the Ladysmith smelter working for years. In those days copper was the only metal mined, but Sheep Creek hopes to develop considerable gold as well as the red metal.

Most of the old workings are caved in and inaccessible. Sheep Creek has reopened one of the drifts of the old Lenora mine, however, and is driving eastward. Two shifts will soon be drifting.

G. L. Oates, Vancouver, is carrying on some electrical prospecting at the property. F. J. Hemsworth is in charge of the whole operation.