

# State Department of Geology and Mineral Industries

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Portland 1, Oregon

ORE-BIN

## EASTERN OREGON CHROME PRODUCTION

During the life of the G. S. A. chrome purchasing program, this department made a practice of gathering pertinent data for all shipments of chromite originating from eastern Oregon sources. The data secured consisted of dry tonnage figures, assay statistics and dollar value. The information was copied primarily from the official depot settlement certificates, although property owners' royalty records were used as a substitute in some instances. The data thus gathered covers approximately 97 percent of all shipments made from the area and hence the record will therefore be of material value in making future appraisals of the grade and chromite-producing potentials of eastern Oregon properties. Thanks are due to the many shippers and property owners who have repeatedly cooperated with the department by making the settlement records available.

Tabulation of this data shows that 7,361 dry long tons of chromite, concentrates and lump ore were shipped between August 4, 1952 and June 12, 1958. The value of these shipments totals 789,322.00 dollars.

The amount of shipments for which no reliable settlement details could be secured is estimated at around 200 tons. Since this amounts to approximately 3 percent of the recorded total, it is apparent that the actual value of eastern Oregon chromite production was in excess of 800,000.00 dollars during the period under discussion.

Leading producers in order of production were the Haggard & New, the Dry Camp and the Carlsen properties. Both the Haggard & New and the Dry Camp are old properties with production records during World Wars I and II, but the Carlsen is a newly discovered prospect with no previous history of production. No appreciable amount of ore was exposed on any of these properties at the beginning of the G. S. A. program, but all had mineable ore exposed at the time the program terminated.

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## EASTERN OREGON CHROME PRODUCTION August 3, 1951 through December 31, 1956

The General Service Administration's chrome-purchasing depot at Grants Pass, Oregon, opened for business August 3, 1951,<sup>1</sup> for the purpose of purchasing domestic-mined chromite ores in accordance with the government's defense materials procurement program. Depot operation was predicated on a support price designed to make possible the operation of domestic chrome occurrences.

While the first ore purchased at the depot originated from the nearby Oregon Chrome Mine, Josephine County, subsequent depot purchases have included a considerable tonnage of ores and concentrates from many distantly located properties in California and eastern Oregon. This shows that the opening of the depot did stimulate the development and operation of domestic chrome properties in the intended manner. However, due to the fact that the ore-purchasing schedule contains no provisions for equalizing mine-to-depot transportation costs, except to the extent of provisions made August 10, 1956,<sup>2</sup> for purchases of carload lots, f.o.b., approved rail-siding nearest the mine, the operators of properties located far from the depot have been faced from the outset with high mine-to-depot delivery costs compared with the delivery costs faced by operators of properties situated close to the depot. As a consequence of this delivery situation, prospect development in the outlying chrome areas has lagged in comparison to what might have prevailed had this delivery cost inequality not existed.

The operators in the John Day chrome area of east-central Oregon represent a group which has had to absorb mine-to-depot delivery costs ranging from sixteen to eighteen dollars a ton, on top of their base operational

costs. This has constituted a serious deterrent to the development of the John Day area for the reason that most investors have been prone to spend their speculative capital on prospects located in closer proximity to the depot in order to gain the advantage of the more favorable delivery costs. Production from the John Day area is nevertheless impressive, despite the transportation penalty and the resultant reluctance of operators to tie up any very great capital outlay in extensive amounts of preliminary exploration work in such a remote locality.

With this background, it can now be pointed out that the first eastern Oregon shipment was not made until mid-summer of 1952, practically a year to within a matter of days after the depot had opened its doors. Once they were started, however, eastern Oregon deliveries were continued steadily with the result that approximately 4,616 dry long tons were delivered to the depot by the close of business, December 31, 1956. Tonnagewise, this represents approximately one-eighth of the recorded Oregon production, notwithstanding the fact that the depot had been in operation for nearly a year before the first eastern Oregon shipment was delivered.

Before proceeding further, it might be well to mention that the data from which the foregoing tonnage figure was calculated consists of copies of actual settlement shipment records for 4,415 dry long tons of the shipped ore and concentrates, plus closely controlled operators' record book figures for 201 tons for which the official settlement records were not available at the time the latest records were secured. Furthermore, this basic data is believed to cover approximately 99 percent of all chrome shipments made from eastern Oregon sources, thanks to the cooperation given by the many shippers and property owners in making this data available. Production not

represented in the above figures, or in the value figures given in the ensuing paragraphs, is believed to include not more than four small shipments involving an estimated total of not more than 35 tons.

From a dollar standpoint, the settlement value received by eastern Oregon producers for the recorded 4,616 tons shipped was \$481,064. An interesting sidelight here is that the average value of the eastern Oregon's chrome is \$104.20 per ton, as compared with a reported average of \$81.60<sup>3</sup> per ton for all chrome purchased from the state as a whole since the depot opened. The great difference in value undoubtedly reflects the purchase of greater amounts of crude lump ore from western Oregon shippers as essentially 99 percent of the eastern Oregon shipments have of necessity been concentrates, due in part to the prevalence of concentrating-type ores in eastern Oregon, and in part to the greater delivery costs faced by the eastern Oregon operator.

Most of the eastern Oregon chrome shipments have originated from the Haggard & New and Dry Camp Mines, both of which have a previous production record. The old Ward Mine, which has a World War I production record of between 2000 and 2500 tons,<sup>4</sup> and which has been idle ever since, is the third largest producer. It was reactivated during the summer of 1956. In all, the production as recorded above originated from thirteen different deposits and was made by fifteen different operators. Several of the smaller properties represent deposits having no previous record of attempted operation.

Five concentrating mills were erected in the John Day area during the period under discussion, the first being a small pilot plant constructed by Burt Hayes in the summer of 1952. Three of the five mills were intact at the close of 1956; all were in operation at various times during the 1956 season. These are (1) the Tri-County mill operated on a custom basis (2) the

Al Dunn mill, operated part-time on ore from the Dunn lease and part-time on a custom basis, and (3) the Haggard & New mill operated exclusively on ore from the Haggard & New Mine.

In addition to the shipments cited in the previous paragraphs, there was on hand in the John Day area at the end of 1956 an estimated 260 tons of ore ready to be milled and 50 tons of concentrates ready to be shipped as soon as weather conditions moderated. There were also 9 operators who announced plans for continued and expanded operation in 1957.

Such is the picture of eastern Oregon chrome mining at the close of 1956. Whether the 1956 production record of 1533 dry short tons and \$167,390 settlement value will be maintained during 1957, remains to be seen, but the year is in any event starting out strong, and the new carlot shipment plan should be a help to those operators who can afford to hold back their concentrates long enough to amass a carload.

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References:

1. Chrome News Item: Ore.-Bin, Vol. 13, no. 8, 1951.
2. Carlot Purchase Program for Chrome: Ore.-Bin, Vol. 18, no. 12, 1956.
3. Mason, R. S., Ore.-Bin, Vol. 19, no. 1, 1957.
4. Thayer, T. P., U.S.G.S. Bull. 922-D.

Report by:

N. S. Wagner, February 21, 1957.