New Mining Day

Oregon's Mineral Production Led by Nickel, Zirconium, Uranium, Gems

Back in Oregon's territorial days, when people spoke of mining they were thinking of gold. California gold had captured the imagination of Oregon's normally conservative people—first upsetting Oregon's economy by attracting away thousands who were building up the territory, and later strengthening it by providing markets for a swelling flood of Oregon products. Meanwhile, after 1852, placer mining was building up along Oregon streams; then came the successive rushes to Idaho and British Columbia gold mines.

Gold production in Oregon itself maintained a fairly high level until it fell into a precipitous decline in 1942. In 1940 the state's production had been close to $4,000,000; now the annual output has fallen below $100,000. Oregon's output of nickel is now many times as valuable as that of the one-time king of the "precious metals." Freezing of the price of gold at the 1934 level, together with increased cost of production, is held responsible for the decline.

Uranium Most Valuable

One of the potentially most valuable mineral resources of Oregon is uranium, which has been discovered in several areas of the state, notably in Lake, Crook, and Harney counties. Most advanced at present are the deposits near Lakeview the first of which were discovered in 1954 after several years of prospecting. Discoverer was John Roush. He staked many claims, all of which were regarded as of too low grade for profitable development.

The next year, however, another discovery was made, which is said to promise big returns. The discoverer was Walter Leehmann Jr., who had been prospecting in the Augur Creek region. He showed some bits of rock to Dan and Irma Tracy, who were out searching for semi-precious gems. They in turn showed the speciments to Roush, who identified them as uranium ore. The find had been made inside the Fremont National Forest, adjacent to property owned by Walter Leehmann Sr., father of the man who made the discovery. The Leehmanns, the Tracys, and Roush formed a partnership to develop the claims, which they called the White King.

The story of the find was told in the Lake County Examiner in its issue of July 14, 1955.)

The next week others made a discovery, which they called the Lucky Lass, near the White King. Uranium-hunting became a vocation for some, an avocation for many. Texas men, including the Murchison group of Dallas, became interested. The exploration area now includes Camp Creek, Thomas Creek, and Dairy Creek in addition to the original Augur Creek. Altogether, several thousand uranium claims have been filed in Lake County.

The Lakeview Mining Co. has been formed by the Thornburg Bros. of Grand Junction, Colo., the Richardson-Bass partnership of Ft. Worth, Texas, and the Murchisons. The Thornburgs had already leased the White King, Lucky Lass, and other claims nearby. The new concern pushed exploration through '56 and 1957. Up to last December the company had spent $3,000,000 in exploration and mine development.

The Lakeview Mining Co. now has close to 200 men and women in its employ, has contracted with the Atomic Energy Commission to take the output of its reducation plant at Lakeview. This reduction plant bleaches the uranium oxide by use of keroene and amine (ammonia) as a solvent. The processing finally leaves the yellow cake of uranium oxide. Marketing this product is no problem; the output is contracted to the AEC.

Only U.S. Nickel Mines

The only nickel mine and smelter in the United States are situated in Oregon; this valuable metal is turned out a few miles from Riddle, in Douglas County. Establishment of this industry followed discovery of extensive deposits of low-grade garnierite nickel silicate high in the Douglas County hills. Ore is carried from the deposits at the mountain-top along the largest tramway ever built—8800 feet long—to a smelter 2400 feet below the silicate bed. The plant was built late in 1954 at a cost of $35,000,000. This is one of Oregon's largest industrial enterprises.

When the old Albany College, a struggling little Presbyterian school, moved away to Portland, about twenty years ago, to become the thriving Lewis and Clark College, enterprising Albany men succeeded in bringing in the Northwest electrodevelopment laboratory of the U. S. Bureau of Mines, which occupies the grounds and building vacated by the college. Dr. E. J. Kroll of Corvallis, one of the laboratory's mineralogists, succeeded in perfecting an economically dependable process of smelting and refining zirconium ore.

Zirconium Ingots Produced

The Bureau then erected a building and plant on the old college grounds to produce zirconium ingots, and soon the government was turning out many tons of the non-conducting metal, which was used in the interior of the Nautilus, atomic-powered U. S. submarine, and is now being used in similar craft under construction.

All this resulted in the development of a valuable new enterprise for Albany and Oregon. The new Oregon Metallurgical Co., managed by the former director of the electrodevelopment laboratory, Stephen M. Shelton, who resigned to undertake the new work, has a large plant of its own on the outskirts of Albany, engaged profitably in turning out titanium and zirconium for government and industrial uses. The Wa Chang Co., a large eastern concern, has taken over from the Bureau of Mines the building and plant in which the electrodevelopment laboratory produced zirconium. The laboratory, under Director Mark Wright, continues active in its experimental work with minerals and metals.

Mercury Mining

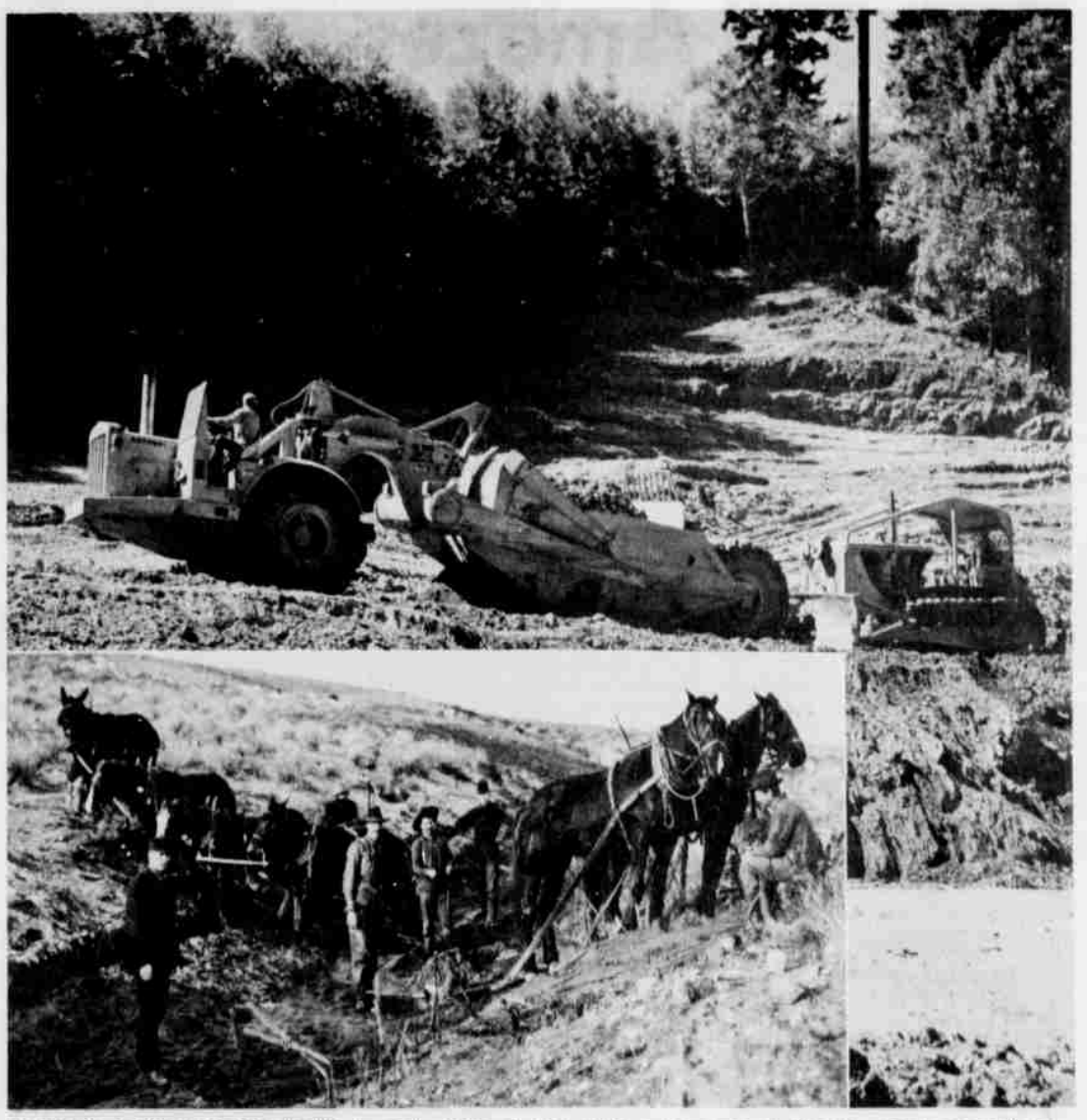
Oregon is one of only five states in the country that produce mercury (quicksilver). One of the mines producing this liquid metal is in the Black Butte area about twenty miles southeast of Cottage Grove. Other deposits have been found in Malheur and Harney Counties. Production has been irregular at Black Butte in the last few years.

Limonite iron deposits are among the resources of Columbia and Clackamas counties. Limonite for paint production is produced near Scappoose, in Columbia County. Oswego, in Clackamas, has an iron-production history that ran for a quarter of a century up to about 1900.

Oregon is rich in some other minerals, which have undergone more or less development. Among these are limestone, bauxite, subbituminous coal, diatomine, pumice, silica, common clays used for brick.

Limestone of high quality, found in large deposits of pre-Tertiary geological age, in the northwestern and southwestern parts of the state, is used primarily in making portland cement. Impure limestone is found in the northern Willamette valley. A lime-burning plant was constructed near Baker in 1957 using high-grade limestone trucked to the plant from a quarry ten miles distant.

Probably few realize the magnitude of Oregon's output of semi-precious gems. This is one of the leading states in that field of minerals. Oregon is famous for its agates — collecting which is such a delightful pastime on Oregon's beautiful beaches and its interior hills — and for its petrified wood, its opal, jasper, and the "thunder eggs" of Eastern Oregon. The aggregate value of these varieties of gems found in this state is estimated at about a million dollars a year.



MOVING DIRT WAS TEDIOUS in early days. A man with a team moved 20 cubic yards of earth in a day. Now a tractor-scraper handles 800. Horsedrawn rig (inset) is digging an eastern Oregon irrigation canal (1900). The Caterpillar is building a Coast road.