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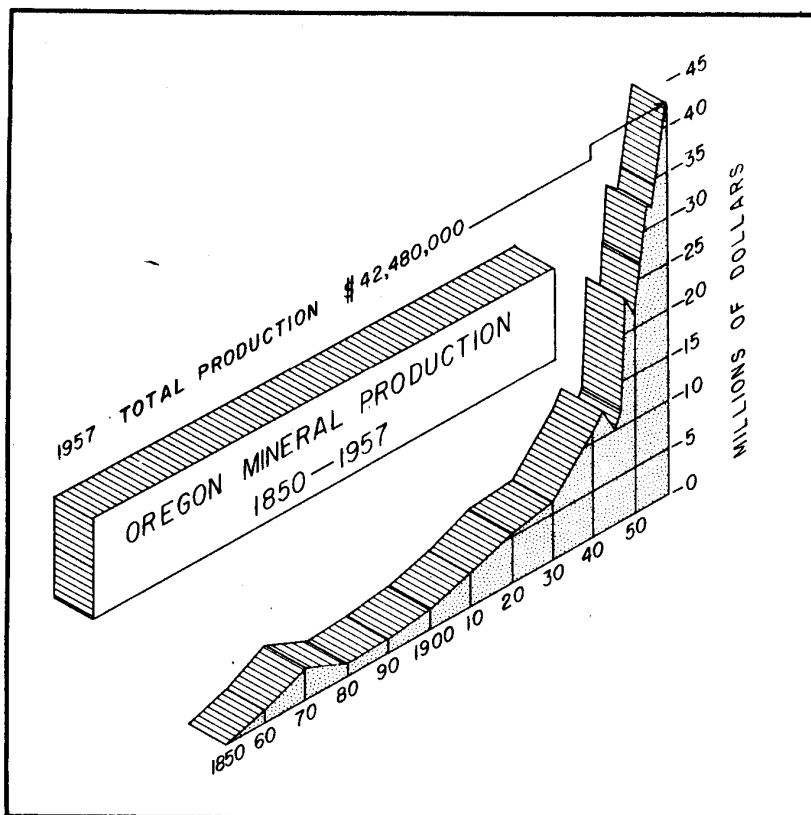
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OREGON MINERAL PRODUCTION REACHES NEW HIGH IN 1957

By Ralph S. Mason *

Oregon's mineral industries took a sharp upward surge during 1957 with a 25-percent increase in value over 1956 (see Table 1, p. 74). Value of Oregon's mineral production for 1957, according to U. S. Bureau of Mines advanced summary figures, was \$42,480,000 which is almost double the

1950 figure. Hand in hand with this growth was a 10-percent increase in mineral and metallurgical industry payrolls which last year totaled \$47,000,000 (see Table 2, p. 74). Discrepancy between payroll and mineral production figures lies in the fact that the payroll figures cover both mineral and metallurgical production, while the mineral production figure is restricted to minerals mined in the State and does not include the smelting, refining, or processing of minerals originating elsewhere.



The broad base of Oregon's mineral industry is shown in the accompanying map which lists the dollar value of minerals produced in each county and the percent of the total contributed by each county. Not all segments of the mining industry in the State showed a growth in volume over the previous year. Chromite producers expecting a termination of the government

stockpile program in the near future began curtailing development and mining, and clay and pumice were in less demand due to fewer starts in the building trades. On the plus side were cement, sand and gravel, and stone which were needed by the expanded highway program, and production of ferronickel increased 66 percent over 1956 due to modified ore-drying equipment at the Riddle nickel smelting plant. Other increases were mercury, 111 percent; diatomite, 12 percent; dimension stone, 30 percent; gold, 23 percent; and mineral pigments, 20 percent.

* Mining Engineer, State of Oregon Department of Geology and Mineral Industries.

Table 1.

Mineral Production in Oregon, 1956-1957^{1/}

Mineral	1956		1957	
	Short tons (unless other- wise stated)	Value	Short tons (unless other- wise stated)	Value
Chromium ore and concentrate - gross weight	2/ 54,577	\$ 2,001,083	7,900	\$ 674,631
Clays	256,942	278,205	239,595	265,556
Copper (recoverable content of ores, etc.)	7	5,950	23	13,846
Gold (recoverable content of ores, etc.) - troy ounces	2,738	95,830	3,381	118,335
Iron ore (limonite) - long tons	893	3/	3/	3/
Lead (recoverable content of ores, etc.)	'5	1,570	5	1,430
Mercury - 76-pound flasks	1,893	492,029	3,993	986,191
Nickel ore - nickel content	6,866	3/	12,276	3/
Pumice and volcanic cinders	3/	3/	123,644	294,374
Sand and gravel	11,637,183	11,646,367	12,842,941	13,481,263
Silver (recoverable content of ores, etc.) - troy ounces	13,542	12,256	15,924	14,412
Stone	6,097,965	7,890,197	10,311,229	11,404,962
Value of items that cannot be disclosed: Carbon dioxide, cement, diatomite, gem stones, lime (1957), mineral pigments, natural sodium carbonates (1956), tungsten, uranium, and values indi- cated by footnote 3		12,939,583		16,153,541
Total ^{4/}		\$34,021,000		\$42,480,000

^{1/} Production as measured by mine shipments, sales, or marketable production (including consumption by producers).^{2/} Includes 45,710 short tons of concentrate produced in 1955 and 1956 from low-grade ore and concentrate stockpiled near Coquille, Oregon, during World War II.^{3/} Figure withheld to avoid disclosing individual company confidential data.^{4/} Total adjusted to eliminate duplicating value of clays and stone; 1956 figure revised.

Table 2

Oregon Mineral Industry Employment and Payrolls*

	1956		1957	
	Employment	Payrolls	Employment	Payrolls
Mining	1,259	\$ 6,228,349	1,216	\$ 6,150,380
Mineral manufacturing	1,469	7,088,105	1,663	8,482,287
Primary metals	4,660	25,487,215	4,985	28,728,266
Miscellaneous	813	3,940,009	701	3,641,569
TOTALS	8,201	\$42,743,678	8,565	\$47,002,502

* Oregon State Unemployment Compensation figures. Only firms hiring two or more employees are included.

MINERALS SUBSIDY BILL KILLED

THE MINERALS SUBSIDY BILL WAS KILLED BY THE HOUSE ON AUGUST 21.

STATE OF OREGON
MINERAL PRODUCTION
BY COUNTIES
1957



LIST OF ACTIVE MINES AND MILLS IN OREGON 1958

METALS

Gold Lode Mines

Bald Mt. Mine Kenneth Grabner Sumpter, Oregon	Baker County Sec. 3 T. 3 S., R. 36 E.	Dry Diggings Walt Cannon Grants Pass, Oregon	Josephine County Sec. 14 T. 36 S., R. 5 W.	Reno Mine Quentin Stone Grants Pass, Oregon	Josephine County Galice area
Buffalo Mine J. P. Jackson, Jr. Granite, Oregon	Grant County Sec. 14 T. 8 S., R. 35½ E.	Greenback Mine Wes Pieren Grants Pass, Oregon	Josephine County Sec. 32 T. 33 S., R. 5 W.	Union Leader S. Vaughn and Sons Glendale, Oregon	Douglas County Sec. 36 T. 32 S., R. 5 W.
Charlotte Prospect Lloyd Warner and Dave Williams Grants Pass, Oregon	Jackson County Sec. 5 T. 40 S., R. 4 W.	Humdinger Mine Earl Young Grants Pass, Oregon	Josephine County Secs. 21, 16 T. 38 S., R. 5 W.	Warner Mine Frank Gelhaus Rogue River, Oregon	Jackson County Sec. 4 T. 33 S., R. 4 W.

Gold Placers (Mostly seasonal operations)

Cal.-Ore. Placers Ed Carlson Galice, Oregon	Josephine County Secs. 2, 3 T. 35 S., R. 8 W.	Leipold Placer Pieren and Connoly Galice, Oregon	Josephine County Sec. 3 T. 35 S., R. 8 W.	Smith Placer A.C. Smith Grants Pass, Oregon	Josephine County Sec. 10? T. 33 S., R. 5 W.
Federal Placer Orville Snavely Jacksonville, Oregon	Jackson County Sec. 13 T. 39 S., R. 3 W.	Lewis Placer Bud Lewis Galice, Oregon	Josephine County Sec. 36 T. 34 S., R. 8 W.	Speaker Placer Henry Speaker Wolf Creek, Oregon	Josephine County Sec. 9 T. 33 S., R. 5 W.
Golden Bar Placer R. L. Pancost Merlin, Oregon	Josephine County Sec. 2 T. 35 S., R. 8 W.	Palmer Creek Placer (China Diggings) Lewis Brothers Sierra Land Co. Grants Pass, Oregon	Jackson County Sec. 7 T. 40 S., R. 3 W.	Sterling Placer Paul Pearce Jacksonville, Oregon	Jackson County Sec. 33 T. 38 S., R. 2 W.

Mercury

Blue Ridge Mine Mia Mine, Inc. Prineville, Oregon	Crook County Sec. 15 T. 14 S., R. 20 E.	Bretz Mine Arentz-Comstock Mining Venture McDermitt, Nevada	Malheur County Sec. 3 T. 41 S., R. 41 E.	Towner Quicksilver Mine Frank Towner Post, Oregon	Crook County Sec. 10 T. 17 S., R. 19 E.
Bonanza Mine Bonanza Oil & Mine Corp. Sutherlin, Oregon	Douglas County Sec. 16 T. 25 S., R. 4 W.	Maury Mountain Mine F.D. & H.W. Eickemeyer Prineville, Oregon	Crook County Secs. 10, 15 T. 17 S., R. 19 E.	Western Minerals, Inc. P.O. Box 697 Lakeview, Oregon (Four Square Group)	Lake County Sec. 32 T. 37 S., R. 17 E.

Miscellaneous Metals

Hanna Nickel Smelting Co. (Nickel) Riddle, Oregon	Douglas County Nickel Mountain T. 30 S., R. 6 W.	Lakeview Mining Co. (Uranium) Lakeview, Oregon	Lake County T. 37 S., Rs. 18, 19 E.	Standard Mine (Copper, cobalt) Ray Summers John Day, Oregon	Grant County Sec. 12 T. 12 S., R. 33 E.
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NONMETALLICS

Building Stone

Idanha Tuff Stone Harold Hills, Detroit Larry and Ted Geck Mt. Angel, Oregon	Marion County Near Idanha	Northwest Granite Co. Haines, Oregon	Baker County Sec. 27 T. 7 S., R. 39 E.	Rocky Butte Quarry (Basalt) Joe Marston Portland, Oregon	Multnomah County Quarry at Rocky Butte
Indian Candy Stone (Rock Quarry) Melvin Parker Grants Pass, Oregon	Wasco County 4 mi. E. of Sinnasho	Pacific States Cut Stone Co. (Tuff) E. L. Keeter Madras, Oregon	Jefferson County Sec. 9 T. 9 S., R. 15 E.	Tuff Stone Co. Sublimity, Oregon	Marion County Sec. 29 T. 8 S., R. 1 E.
		Rainbow Rock Quarry (Tuff) Maupin, Oregon	Wasco County Sec. 11 T. 6 S., R. 11 E.		

Lightweight Aggregate Producers

Cascade Pumice Co. Bend, Oregon	Deschutes County Sec. 5 T. 18 S., R. 12 E. and Sec. 36 T. 16 S., R. 11 E.	Deschutes Concrete Products Co. (Pumice) Chester T. Lackey Redmond, Oregon	Deschutes County Sec. 30 T. 16 S., R. 12 E. and Sec. 33 T. 14 S., R. 13 E.	Harney Concrete Tile Co. (Pumice) Don Robbins Burns, Oregon	Harney County Sec. 3 T. 24 S., R. 30 E.
Central Oregon Pumice Co. W. E. Miller Bend, Oregon	Deschutes County Sec. 7 T. 17 S., R. 12 E. and Sec. 7 T. 18 S., R. 12 E.	Great Lakes Carbon Corp. (Diatomite) Dicalite Dept. Lower Bridge, Oregon	Deschutes County Sec. 16 T. 14 S., R. 12 E.	Northwest Aggregates, Inc. (Expanded shale) Portland, Oregon	Washington County Sec. 24 T. 3 N., R. 5 W.
Cinder Hill Quarry (Cinders) Leroy E. Grote Redmond, Oregon	Deschutes County Sec. 33 T. 14 S., R. 13 E.			Smithwick Concrete Products Co. (Expanded shale) Portland, Oregon	Washington County Sec. 8 T. 3 N., R. 4 W.

Limestone

Chemical Lime Co. (Burnt lime) Baker, Oregon	Baker County Plant at Wingville	Greely Lime Co. (Quarry near Enterprise) Portland, Oregon	Walla County Sec. 19 T. 2 S., R. 44 E.	National Industrial Products Co. Durkee, Oregon	Baker County Sec. 10 T. 12 S., R. 43 E.
Dewitt's Polk County Lime Co. Dallas, Oregon	Polk County SW of Dallas	Ideal Cement Co. (Quarry at Marble Mt.) Gold Hill, Oregon	Josephine County Sec. 30 T. 37 S., R. 6 W.	Oregon Portland Cement Co. (Quarries at Lime and Dallas; plant at Oswego) Portland, Oregon	Baker and Polk counties Secs. 26, 27, 34, 35 T. 13 S., R. 44 E. and Sec. 12 T. 8 S., R. 6 W.

Miscellaneous Nonmetals

Alkali Lake Sodium (Salines) A. M. Matlock Eugene, Oregon	Lake County Alkali Lake	Bristol Silica Co. (Crushed granite and quartz) F. I. Bristol Rogue River, Oregon	Jackson County Sec. 30 T. 36 S., R. 3 W.	Willhoit Coal Mine T. G. Mandrone Portland, Oregon	Clackamas County Sec. 15 T. 6 S., R. 2 E.
		Gas-Ice Corporation (Dry ice) Portland, Oregon	Jackson County Sec. 7 T. 39 S., R. 2 E.		

Miscellaneous Processing Plants

Electro Metallurgical Co. (Carbide, ferroalloys) Div. Union Carbide Co. Portland, Oregon	Multnomah County Plant in St. Johns	Oregon Metallurgical Corp. (Zirconium, titanium) Albany, Oregon	Linn County Albany	Reynolds Metals Co. (Aluminum) Troutdale, Oregon	Multnomah County
Harvey Aluminum Company The Dalles, Oregon	Wasco County	Oregon Steel Mills (steel) 5200 N.W. Front Avenue Portland, Oregon	Multnomah County	Supreme Perlite N. Suttle Road Portland, Oregon	Multnomah County Plant in N. Portland
Industrial Processing Co. (Calcium hydrate) 5005 N.W. Front Avenue Portland, Oregon	Multnomah County	Owens-Illinois Glass Co. (Glass containers) 5535 N.E. 101 Avenue Portland, Oregon	Multnomah County	Vermiculite-Northwest Inc. (Vermiculite) 2303 N. Harding Portland, Oregon	Multnomah County
Nat'l. Metallurgical Corp. (Aluminum silicon; silicon) Springfield, Oregon	Lane County Springfield	Pacific Carbide & Alloys Co. (Carbide) N. Columbia Blvd. & Hurst Portland, Oregon	Multnomah County Plant in N. Portland	Wah Chang Corp. (Zirconium) Albany, Oregon	Linn County Albany

MINING NEWS

Gold

At the Buffalo Mine, Grant County, work is underway to open a new and deeper operating level. When completed the new adit will intersect all known veins at a depth of approximately 230 feet below the present working level. The new adit will be approximately 1400 feet in length. Development of this level will necessitate eventual relocation of the mill. The Buffalo, operated by James P. Jackson, Jr., is the only lode gold mine in Oregon in steady, year-around operation. Mr. Jackson has been in charge of operations during the past five years.

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Four gold mines are active at the present time in Josephine and Jackson counties. The Daisy mine in sec. 14, T. 34 S., R. 5 W., Josephine County, is being leased to R.C. Hanford who is doing underground exploration. The Humdinger mine located about 25 miles south of Grants Pass in secs. 21 and 16, T. 38 S., R. 5 W., Josephine County, is being worked intermittently by Earl Young of Grants Pass. The Reno mine in the Galice area, Josephine County, is being worked by Quentin Stone of Grants Pass. Frank Gelhaus of Rogue River is mining and milling high-grade ore from the Warner mine in sec. 4, T. 33 S., R. 4 W., Gold Hill District, Jackson County.

Copper, lead, and zinc

The old Zinc mine on the South Umpqua River, sec. 23, T. 29 S., R. 1 W., Douglas County, is under lease to Mr. Moe Platt and associates who are conducting exploration work.

Quicksilver

Western Minerals, Inc., Lakeview, Oregon, has erected a 30-ton Lacèy furnace and is operating a new cinnabar occurrence on Angel Peak about 5 miles east of Quartz Mountain in western Lake County. The Four Square group of claims is being leased from Johnson, Tomlin, and Morrison of Lakeview. The operators are Phil Parks, Jr., Roy Matchett, and G.I. Bryant, who are producing and shipping quicksilver.

Uranium

The Lakeview Mining Company announces completion of the head-frame for the new uranium production shaft at the White King mine, Lake County. The new structure is all-steel, 96 feet high, and contains two ore compartments of 100 tons capacity each. The hoist for this shaft, a 150-horsepower double-drum unit, has also been installed and tested. The Company hopes shortly to resume sinking operations in the shaft, which will go down to 700 feet at an estimated initial cost of \$500,000.

* * * *

Kenneth Arnold, president and general manager of Solar-X Corporation, which is exploring the Steens Mountains uranium properties on Pike Creek in Harney County, brought several hundred pounds of the ore to Lakeview on August 1 for testing by the Lakeview Mining Company. If the ore proves to be of commercial grade and quantity, it will probably be hauled to Lakeview Mining Company's mill, now under construction, for processing.

* * * *

Leonard Lundgren and associates of Bend are leasing the Bear Creek uranium property in Crook County and have obtained a geologist, James Barlow, who will supervise further exploration.

Building stone

Tuff stone from a large deposit near Idanha, Marion County, is being mined by Harold Hills, Detroit, and Larry and Ted Geck of Mt. Angel. The tuff is a lightweight volcanic rock capable of being cut into any desirable size. It is suitable for either exterior building or for interior rock for fireplaces and flower planters, and comes in a variety of colors reported to include red, rose, green, purple, orange, and tan.

* * * *

Melvin Parker of Grants Pass is operating a building stone quarry 4 miles east of Simnasho on the Warm Springs Indian Reservation in Wasco County. The rock is a banded tuff called "Indian Candy Stone" and is similar to the "Rainbow Rock" that also comes from this area. First production from the quarry was made on July 1, 1958. Mr. Parker also opened a flagstone quarry near Riddle but is awaiting a hydraulic clipping machine before beginning production.

Limestone

The National Industrial Products Company has recently completed a drilling program to determine the available tonnage of hot spring travertine located on their property near Durkee, Baker County, Oregon. The company is now engaged in the production of limestone used in sugar refining, paper processing, and cement manufacture. The easily ground travertine represents a new product for the agricultural market.

NEW DRILLING PERMITS

Permit No. 33 was issued by the Department to Riddle Gas and Oil Producers, Oreg., Ltd., on July 25, 1958. This oil test hole will be drilled on the J. L. Aikins property located in the NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T. 30 S., R. 6 W., Douglas County. Elevation at ground level is 725 feet.

Permission to deepen Miriam Oil Company's "Elliott No. 1" (permit No. 17) was given by the Department on June 12, 1958. The hole was originally drilled to a depth of 1080 feet in 1956. The drilling is located in the SW $\frac{1}{4}$ sec. 9, T. 8 S., R. 5 W., Polk County.

EASTERN OREGON CHROME PRODUCTION

During the life of the GSA chrome-purchasing program, shipments of chromite from eastern Oregon amounted to 7,361 dry long tons of concentrates and lump ore. Shipments were made between August 4, 1952, and June 12, 1958, with the total value of \$789,332.00.

Leading producers in order of production were the Haggard and New, the Dry Camp, and the Carlsen properties. Both the Haggard and 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 GSA program, but all had minable ore exposed at the time the program terminated.

U.S.G.S. CONDUCTS SUMMER FIELD WORK IN OREGON

A program of geologic mapping and special field studies is being furthered in Oregon this summer by the U.S. Geological Survey. Geologists and projects worked on are as follows:

Thomas P. Thayer, assisted by Erving Brown, is working on Triassic rocks in the Blue Mountains. Aaron Waters is mapping in the Snake River area in northeastern Wallowa County. Dick Lewis, assisted by Omer B. Raup, is compiling the reconnaissance geology of north-eastern Oregon north of lat. 44° and east of long 121°. George Walker began field work on the Klamath 1° sheet, and will spend several months working in that area. Ralph Imlay is making further stratigraphic and paleontologic studies in central Oregon. Donald A. Lindsley is mapping the Spray quadrangle for a Doctor's Thesis, under a while-actually-employed status with the Survey. Francis G. Wells, accompanied by Dallas Peck, will spend a few weeks in the Grants Pass quadrangle making preparations for a geologic quadrangle report. Later Dr. Wells and Mr. Peck will make some studies in the Antelope quadrangle in central Oregon.

The Survey's Menlo Park office has geologists working in the Coast Range. Parke D. Snavely, Jr., Fuels Branch, is continuing geologic mapping and stratigraphic studies begun for maps OM 88 and 97. He will be accompanied part of the time by Weldon Rau with whom he will complete the systematic sampling for Foraminifera along the Siletz and Yaquina rivers. Bill Bromery and Dave Stuart of the Geophysics Branch are working on a project of correlating the aeromagnetism and geology across the central part of the Coast Range (between Corvallis and Newport). Ewart Baldwin and Weldon Rau will sample Eocene sections along the North Umpqua River and in the Dallas and Valsetz quadrangles. Linn Hoover is completing the bulletin report on the Anlauf and Drain quadrangles.

U. OF O. GRADUATE STUDENTS MAPPING IN OREGON

Six University of Oregon graduate students working for Master's degrees in geology are mapping sections of the Roseburg 30-minute quadrangle. The students are Charles Pyle, Ronald Larsen, John Lawrence, Charles Payton, Don Warner, and Keith Westhusing. Two other University of Oregon students are working in Malheur County; they are Ernest Wolff in an area just south of the Mormon Basin and Larry Kittleman (Ph. D. Thesis) in an area just south of the Mitchell Butte quadrangle.

SAND DUNE TREATISE PUBLISHED

"Coastal sand dunes of Oregon and Washington," by William S. Cooper, has been published as Memoir 72 by the Geological Society of America. It is a systematic study of coastal dunes from the standpoint of their origin and development. It also discusses rate of movement of the dunes and programs for controlling them. The book is cloth bound, has 169 pages, and is abundantly illustrated with photographs and maps. It may be obtained from the Geological Society of America, 419 West 117th Street, New York 27, N.Y. The price is \$3.50.

DEPARTMENT FIELD ACTIVITIES

N. S. Wagner (field geologist, Baker) is doing field mapping in the Imnaha River area and in the Elkhorn Mountain region, northeastern Oregon, for the State Geologic Map.

Howard C. Brooks (field geologist, Baker) has been visiting the quicksilver deposits of the State in order to revise and bring up to date Department Bulletin 4, "Quicksilver in Oregon."

Norman V. Peterson (field geologist, Grants Pass) has been spending most of the summer in Lake County doing geological reconnaissance. Peterson is attempting to establish stratigraphic position of the uranium deposits of Lake County. In the course of his work, Peterson has found several plant fossil sites and one fossil tooth. The tooth has been tentatively identified by Dr. J. A. Shotwell, University of Oregon, as an upper premolar of Diceratherium, a rhino of John Day age (lower Miocene).

Len Ramp (field geologist, Grants Pass) is completing his studies on the occurrence of chrome in southwestern Oregon. Ramp reports that the manuscript is nearly complete and that field investigations are limited to small prospects recently uncovered.

H. G. Schlicker (geologist, Portland) is doing reconnaissance work on the intrusives in the Coast Range. Schlicker's work will be coordinated with that of Mr. Parke Snavely of the U.S. Geological Survey and published as a Department bulletin.

Margaret L. Steere (geologist, Portland) is completing investigations for her bulletin on western Oregon fossil localities, and with the assistance of Mrs. Lillian F. Owen is compiling the third supplement (1951-1955) to Bibliography of Geology and Mineral Resources of Oregon.

R. E. Stewart (micropaleontologist, Portland) is continuing his studies on Oregon micropaleontology. Drawings of foraminifera are being made and will appear in Part IX of Department Bulletin 36.

Dr. George S. Koch, Jr., (professor of economic geology, Oregon State College) is working for the Department on a study of the copper deposits of the State. A reconnaissance of the deposits in northeastern Oregon has been completed and work is progressing in southwestern Oregon. Dr. Koch is assisted by William L. Rice, graduate student at Oregon State College.

Vernon Newton (petroleum engineer, Portland) is visiting oil tests throughout the State to check drilling and abandonment procedures in connection with enforcement of oil and gas regulations.

U.S. BUREAU OF MINES RESEARCH PROGRAMS ANNOUNCED

The Bureau of Mines has announced several research programs for the fiscal year 1959. Four experiment stations will participate in research on bauxite and aluminum to develop processes for producing aluminum from low-grade domestic materials. The program will be carried on at four Bureau laboratories including Albany, Oregon.

A columbium-tantalum research program to be carried on at the Albany laboratory will emphasize methods of producing cheaper and better columbium and tantalum metal, alloys, and compounds for nuclear reactors, guided missiles, jet engines, and other important uses.

The Bureau's research on mercury will continue at an accelerated rate to provide industry with pertinent information on the occurrence, mining, and recovery of mercury. Information will be compiled on mercury mines and prospects in Arizona, Arkansas, Alaska, California, Idaho, Nevada, Oregon, Texas, Utah, and Washington. Metallurgical studies to devise new or improved methods of extracting mercury from its ores are being conducted at Bureau laboratories in Albany, Oregon, and Juneau, Alaska.

LLOYD A. WILLIAMSON

The pumice industry lost one of its foremost champions with the death on July 29 of Lloyd A. Williamson, President of the Cascade Pumice Corporation. Williamson, a resident of Bend for the past 16 years, was responsible for many of the technological improvements in the production, beneficiation, and use of pumice as a lightweight aggregate for the construction industry. National recognition for his efforts came in 1955 when he was elected the first president of the National Pumice Institute. About a year ago Williamson sold his business to the Boise Cascade Corporation but continued his association as President of the new operation. His death followed an earlier injury suffered from a fall at the plant. He was 61.

UPPER CRETACEOUS OF PACIFIC COAST DESCRIBED

"Upper Cretaceous of the Pacific Coast," by F. M. Anderson, has been published as Memoir 71 by the Geological Society of America. Dr. Anderson was born and brought up in the Rogue River Valley of southern Oregon and was early attracted to the ammonites and other fossils in the Upper Cretaceous rocks. As early as 1895 he published a paper on the Cretaceous beds of the Rogue River Valley. In the later years of his life he returned from other fields of geology to the study of Upper Cretaceous rocks of the Pacific Coast, and the Memoir is the result of these studies. Final preparation of the manuscript for publication was done by J. Wyatt Durham after the death of Dr. Anderson.

The Memoir describes the subdivisions of the Upper Cretaceous rocks occurring along the Pacific Coast from Baja California to Queen Charlotte Islands, British Columbia. The term Upper Cretaceous series is adopted for these rocks rather than the term Chico, which is now restricted to the sequence in the Sacramento and San Joaquin valleys of California. The work is devoted primarily to the description and illustration of more than 500 species of invertebrates of which 223 are ammonites, 118 of them new species.

The book is cloth bound, has 378 pages, 75 plates, and is priced at \$6.75. It may be obtained from the Geological Society of America 419 West 117th Street, New York 27, N.Y.

ALUMINUM PRODUCTION BEGINS AT THE DALLES

Harvey Aluminum Company's multi-million dollar aluminum reduction plant west of The Dalles has started production, and the firm will begin delivery of its first commercial output of the primary metal within approximately 60 to 90 days, Lawrence A. Harvey, Executive Vice President, announced. Capacity of the new smelter is more than 100,000,000 pounds on an annual basis. The reduction facilities consist of two potlines comprising a total of 240 pots. Operating techniques include automatic control systems throughout. (From The Oregonian, August 5, 1958.)

WORLD'S DEEPEST WELLS

The deepest hole in the world is the Phillips Petroleum Company's 1-EE University wildcat well in Pecos County, Texas. The present depth is 24,357 feet with expectations to drill deeper after a precautionary shutdown. Just 30 miles away is Phillips 1-A Montgomery which runs second deepest at 23,400 feet. The third deepest well is Shell Oil Company's 5 Rumberger at 22,000 feet in the Elk City field, Oklahoma. (From Oil and Gas Journal, August 11, 1958.)
