

Department of Geology and Mineral Industries
Administrative Overview
July, 1996

Introduction

The Department of Geology and Mineral Industries (DOGAMI), formed on July 1, 1937, operates under ORS Chapters 516, 517, 520, and 522. The State Geologist, appointed by the Geology and Mineral Industries governing board, heads the agency. The three member board is appointed by the governor to four year terms. DOGAMI's mission "is to serve as the cost-effective centralized source of geologic information in Oregon for the public and for government. Its mission is also to serve as a cost-effective steward of mineral production with attention paid to environment, reclamation, conservation, and other engineering and technical issues."

The department, whose main office is located in Portland, is the state's centralized source of geologic information that can be used by the public and by government to reduce the future loss of life and property due to earthquakes, tsunamis, coastal erosion, and other geologic hazards. The department facilitates the preparation and release of geologic maps that provide the framework for understanding hazards, such as earthquakes. In addition to serving as a cost-effective steward of mineral production, it is the lead regulator for geologic resources such as oil, gas, geothermal energy, metallic and industrial minerals, and sand, gravel, and crushed stone.

The department's Mined Land Reclamation Program, located in Albany, is the lead coordinating agency for state mining regulation, operating through an interagency team-permit process (exploration and operating permits and bonds are required in Oregon to ensure reclamation of land disturbed by mining).

DOGAMI emphasizes information dissemination as a public service and objective use of geologic data to assist in policy development is a key goal. Accurate geologic information is effectively provided to the public through publications and release of electronic data and through department participation in and coordination with state, federal, and local government natural resource agencies as well as with industry and other private sector groups. The department's geologic library is a specialized central repository for both published and unpublished state geologic information. Technical and non-technical publications are available at the Nature of the Northwest Information Center in Portland, operated by DOGAMI in cooperation with other natural resource agencies and U.S. Forest Service, and at DOGAMI's field offices in Baker City and Grants Pass.

History

Gold was discovered in 1851 in the territory that was eight years later to become the State of Oregon. This and the other gold discoveries that followed led directly to the admission of Oregon as the thirty third state in the Union in 1859. Since then, gold, other minerals, and the geologic landscape have remained valuable resources for the state.

The first state geologist was appointed by the State Legislature in 1872 (Laws of Oregon, 1872, pg. 104). Thomas Condon, a pioneer Congregational missionary whose main interest was fossils, served for four years without office or staff on a stipend of \$1,000 per year. He resigned in 1876 to become the first professor of geology at the newly formed University of Oregon.

On a national level, the U.S. Geological Survey (USGS) was established in 1879. It was placed in the Department of the Interior and charged with a combination of responsibilities: classification of public lands, and examination of the geological structure, mineral resources, and products of the national domain.

The Federal Bureau of Mines was created in 1910 to conduct mining and minerals research and analyses. The next year, the Oregon Legislature took action by creating a full-fledged department, the State Bureau of Mines (General Laws of Oregon, 1911, c. 227). The name was changed in 1913 to the Oregon Bureau of Mining and Geology. While the state Bureau's achievements were many, particularly in the area of publishing technical information and assembling fundamental geologic data about Oregon, it was disbanded in 1923. Overlapping authorities, budget problems, public apathy to scientific investigations, and delayed publication of findings all contributed to its demise. All its files were turned over to the School of Mines at Oregon Agricultural College in Corvallis in 1925 (General Laws of Oregon, 1925, c. 296).

In an attempt to remedy the situation, the Legislature created an Oregon Mining Survey Board in 1925 but provided neither an office nor staff (General Laws of Oregon, 1925, c. 304). In 1929, a new State Mining Board was created specifically for the purpose of conducting mineral investigations under the supervision of the Federal Bureau of Mines. It ceased to function when the project was completed in 1933. That same year, a new Oregon State Mining Board was created having broad powers, but again with no operating funds (O.L. 1933, c. 292). Efforts were made in 1934 and 1935 to establish adequate funding, but these failed.

Finally, in 1937, the Legislature created the present Department of Geology and Mineral Industries (O.L. 1937, c. 179). The department was required to initiate and conduct studies and surveys of the geologic and mineral resources of the state; to evaluate their commercial utility; and to consider and study scientific and economic questions in the

field of geology and mining that were deemed to be of value to the people of Oregon. (Since its creation, the department has remained administratively separate from any other state agency, although attempts are made from time to time to consolidate its responsibilities with another natural resource agency.)

For the first biennium, \$60,000 was appropriated for operating costs, plus an additional \$40,000 for administering the "Grubstake Act" (O.L. 1937, c. 179, section 11), grubstakes for placer miners. DOGAMI's new governing board, three citizens appointed by the Governor for four years terms, immediately took action to organize the department by hiring the first Director. (The title of State Geologist was not given to the new Director. It wasn't until 1963 that the position of State Geologist was restored, at no cost to the taxpayers [O.L. 1963, c. 192]. The department head wore the two hats of Director and State Geologist with no increase in salary.)

That first year, the board met ten times and, in cooperation with the Director, launched an ambitious list of programs and projects. In its first year, DOGAMI published ten publications; started a state-wide minerals inventory; processed over 300 grubstake applications; responded to a flood of inquiries from the public and professionals; set up assay offices in Grants Pass and Baker; and began issuing monthly Press Bulletins. The bulletins were replaced in 1939 with the monthly publication The Ore.-Bin.

The two field assay offices provided analyses for up to two samples per month supplied by the public from mines and prospects within the state. The service was free of charge and the results were placed in file where anyone could examine them.

DOGAMI assisted in the creation of the Rogue River Coordination Board in 1939 when a major controversy grew out of disagreements between miners and fishermen (O.L. 1939, c. 377). Placer mining activities had increased to the point that river waters were becoming increasingly muddied and affecting the fish populations downstream. The Board and the published studies which resulted from the situation was one of the first efforts in the state to deal with environmental problems.

By 1940, DOGAMI reported over 200 mines active in the state. One of them, the Oregon Bonanza mine, was the largest quicksilver (mercury) mine in the U.S. One year later, 79 placer mines and dredges were active.

The period from Pearl Harbor to VJ Day found the department almost exclusively engaged in purely war efforts, including field investigations for strategic and critical minerals (particularly chromite and mercury), stockpile programs, access roads, underground shelters, and the creation of camouflage paints from mineral sources. DOGAMI's spectrographic laboratory started operation in 1942 providing a much needed analytical service for the metallurgical plants and shipyards in the area during

World War II. In 1943, the field offices' assay services were consolidated and moved to the Portland office as a wartime conservation measure.

In the late 1940s, the department spearheaded the formation of a State Mapping Advisory Committee that was composed of map users from many organizations and businesses. The committee coordinated the needs of various agencies for new mapping into a single request to the Topographic Branch of the U.S. Geological Survey. After several moves between 1969 and 1978, the committee was finally placed under the administration of DOGAMI.

The importance of natural resources had been recognized early on, although it wasn't until 1951 that a Committee on Natural Resources was created by the Legislature (O.L. 1951, c. 340). The Director of DOGAMI was one of the members.

The postwar years and the beginning of the Atomic Age brought attention to the importance of radioactive minerals. The department was besieged by professional and novice prospectors who wanted information on where to look and how to have samples tested. The interest paid off when the first uranium strike occurred in Oregon in 1954.

During the same time period, the Legislature adopted the Oil and Gas Conservation Act in 1953 (ORS 1953, c. 667) assigning regulatory responsibilities for drilling and operation of wells to DOGAMI. In 1958, a petroleum engineer position was created within the department for the purpose of administering the Act. One of the responsibilities was that the engineer had to be present to witness the critical stages during drilling operations from site preparation to final capping. DOGAMI was also required to maintain a collection of cuttings and cores from oil and gas wells drilled in the state. At the same time, DOGAMI began in earnest to study geothermal resources in the state.

During the early 1960s, DOGAMI became involved with the National Aeronautic and Space Agency's (NASA) lunar program. Astronauts in the program came to central Oregon to study the volcanic terrain and geologic features that were thought to be similar to the moon's surface. DOGAMI was involved in several phases of the lunar program prior to the first manned landing on the moon. One project in particular, the Water-from-Rocks project, garnered national media attention and appeared as a story on Walter Cronkite's news program on CBS.

In anticipation of increasing land use activities, DOGAMI began assessing the geologic capabilities and hazards of the state's lands during the 1960s, an activity which still continues today. When Tom McCall, an advocate for environmental protection in the state, became governor in 1967, DOGAMI's workload increased significantly. The department became busily engaged providing geologic information for assistance with land use decisions by state agencies and local governments. In 1967, the Legislature

adopted an act requiring state agencies to consult with DOGAMI before issuing leases for mining or for oil and gas exploration (O.L. 1967, c. 421, section 83).

The first commercial use of geothermal heat in Oregon began in 1969. At the urging of the department, the Legislature passed the Geothermal Resources Act in 1971 which assigned regulatory responsibilities to DOGAMI (O.L. 1971, c. 776). The department was required to monitor all wells drilled for geothermal energy. That same year, the Mined Land Reclamation Act was adopted and enforcement responsibilities were assigned to DOGAMI (O.L. 1971, c. 719). The act ensured that all open mining pits would be reclaimed upon abandonment. DOGAMI opened an office in Albany for the purpose of administering the reclamation program.

The oil energy crisis of the early 1970s precipitated more interest in gas and oil resources. After several years, the first commercial natural gas well began operation in 1979 near Mist, Oregon. That same year, DOGAMI changed the title of their publication The Ore. Bin to Oregon Geology.

In 1971, a change was made to the assay service that had been provided free of charge to the public since 1938. A fee was established for the service and the restrictions of two samples per month was removed.

Congress passed the Surface Mining Control and Reclamation Act in 1977 for the purpose of regulating and enforcing the reclamation of surface mined lands, the safe operation of coal mines, and reclamation of abandoned mine sites.

Throughout the 1970s and 80s, DOGAMI became increasingly involved in interagency projects and cooperative programs with state and local governments. The department functioned as both a scientific research and investigative body and as a service arm of the State government. Most local governments had no staff geologists and DOGAMI was relied upon heavily to supply geologic planning assistance and information.

The 1980s began with a big bang when Mount. St. Helens erupted in southwestern Washington in 1980, prompting significant renewed interest in volcanic information and activities. In 1981, DOGAMI discontinued assay services for the public since the Department became so busy with its own projects. The assay facilities were reserved for in-house research and analysis. DOGAMI provided lists of laboratories with assay services to the public where they would be charged for the service.

The Mined Land Reclamation law was amended and expanded during the decade to include non-aggregate mineral mining operations (O.L. 1981, c. 622); surface impacts of underground mining (O.L. 1983, c. 46); and feasibility plans for re-vegetation of reclaimed lands (O.L. 1985, c. 291). The Geothermal Resources law expanded to include unitization in 1981 (O.L. 1981, c. 694).

Other changes that occurred in the past ten years were noise pollution controls on mining operations (O.L. 1985, c. 292); the development of ocean resource planning as part of the Ocean Resources Management Task Force (O.L. 1987, c. 576); the requirement for mining exploration permits, considered a separate action from mining operations; and placer mining was made illegal on designated scenic waterways (O.L. 1995, c. 223).

In 1992, the National Geologic Mapping Act was passed by Congress for the purpose of enhancing the geologic mapping of the United States. The U.S. Geological Survey is responsible and works in collaboration with the State Geological Surveys, including DOGAMI. National concerns continue to rise over global environmental changes. USGS continues its work researching and analyzing information about geologic hazards (volcanoes, earthquakes, and landslides), marine and coastal geology, and energy resource surveys. In addition, the Federal Bureau of Mines was terminated in 1996 and its mineral responsibilities have been newly transferred to the USGS.

Throughout its history, DOGAMI has been known for its technical information publications and for its encouragement and assistance to industry. In addition to industry related information, DOGAMI also publishes scenic geology guidebooks, special reports on geologic catastrophes and hazards, and other public interest materials written for the layperson. The department has accumulated a large amount of published and non-published materials and makes these available at their extensive library, managed in cooperation with Oregon State Library, located at their Portland office. The public can also visit the Nature of the Northwest Information Center in Portland, which opened in 1991 and is operated cooperatively by DOGAMI and the U.S. Forest Service.

Current Organization

Administration:

Director/State Geologist

The Director holds the position of State Geologist (ORS 516.120-516.130) and is responsible for implementing the policies of the Geology and Mineral Industries Governing Board (ORS 516.080-516.090). The Director oversees the administrative responsibilities for the Board and directs the technical and administrative operation of the Department in accordance with the Board's direction.

Deputy State Geologist

The Deputy State Geologist oversees the technical and administrative operation of the agency in accordance with the Director's direction.

Duties include tracking legislation, coordinating agency projects, budget development, and administrative rule development.

Program 1 - Geologic Investigations and Regulation:

Regional Geology

Regional geologists complete a wide variety of geology projects statewide, operating from the main Portland office and field offices in Baker City and Grants Pass. Project results are published and made available to the public.

Economic Geology

The agency is responsible for the assessment, interpretation, and evaluation of mineral resources within the state. The section collects field data, performs laboratory analysis, conducts studies of mineral resources, and publishes the results. The section also maintains the MILO (Mineral Layer for Oregon) database.

Planning

The agency provides geologic planning advice and assistance to state, local, and federal agencies for land use planning and policy development purposes. The section also provides geologic mapping and database resources, referrals, and publications to planning efforts.

Drilling Regulation

The agency is responsible for regulating the drilling of wells for energy sources such as natural gas and petroleum (ORS 520) and geothermal energy (ORS 522). The section issues permits, inspects well sites, maintains well records and samples, interprets and analyzes information, and coordinates with other agencies to address environmental and land use issues.

Earthquake Mitigation

The Earthquake Mitigation unit provides geologic hazard maps and information about potential earthquake and tsunami activity in Oregon. The section analyzes a variety of information and publishes reports and maps, in addition to providing advice and assistance for earthquake response training, preparedness, policy and planning.

Program 2 - Reclamation of Surface Mined Lands:

Reclamation of Surface Mined Lands

The agency is responsible for regulating surface mined land reclamation per ORS 517. This section, located in the Albany field office, issues permits, enforces the law at current mining operations, coordinates with other agencies who issue mine related permits, and coordinates reclamation operations on illegally abandoned sites.

Program 3 - Technical Support and Administration:

Business Office

The Business Office provides support administrative, personnel, and fiscal services for the agency.

Publications

The Publications section coordinates all production phases for agency publications, including *Oregon Geology*, a subscription-based bi-monthly periodical designed to reach a wide spectrum of readers interested in the geology and mineral industry of Oregon.

Cartography

The Cartography section produces various maps, charts, and other graphics for agency projects and publications.

Library

DOGAMI operates a unique geologic technical library managed in cooperation with the Oregon State Library. The library is a specialized, central repository for both historic and current, published and unpublished geologic information about Oregon. Field offices also maintain small library extensions.

Nature of the Northwest Information Center

The Nature of the Northwest Information Center is operated by DOGAMI on behalf of other state natural resource agencies in partnership with the USDA Forest Service. The center, which opened in 1991, provides one-stop shopping for natural resource, natural science, and outdoor recreation maps, books, and brochures produced primarily by state, federal, and local government natural resource agencies, including DOGAMI.

Primary Agency Statutes and Administrative Rule Chapters

ORS 516, Department of Geology and Mineral Industries

ORS 517, Mining and Mining Claims

ORS 520, Conservation of Gas and Oil

ORS 522, Geothermal Resources

OAR 632, Department of Geology and Mineral Industries

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Chronology

- 1851 Gold discovered in Oregon Territory.
- 1859 Oregon becomes the 33rd U.S. state.
- 1872 First State Geologist, Dr. Thomas Condon, appointed.
- 1879 U.S. Geological Survey established.
- 1910 Federal Bureau of Mines established.
- 1911 Oregon State Bureau of Mines created.
- 1913 Bureau is renamed the Oregon Bureau of Mining and Geology and its responsibilities are expanded by the Legislature.
- 1923 Oregon Bureau of Mining and Geology is disbanded.
- 1925 Legislature creates Oregon Mining Survey but without office or staff.
- 1929 Legislature creates State Mining Board but without office or staff.
- 1937 Department of Geology and Mineral Industries (DOGAMI) created with offices in Portland, Baker City, and Grants Pass. Legislature passes the Grubstake Act. Free of charge assay services are provided to the public.
- 1939 DOGAMI reports over 200 mines active in the state. *The Ore. Bin* begins publication. The Rogue River Coordination Board is created.
- 1940 Oregon Bonanza quicksilver mine becomes largest U.S. producer.
- 1943 Assay services are consolidated and moved to Portland office.
- 1953 Oregon Oil and Gas Conservation Act adopted. Regulatory responsibilities assigned to DOGAMI.
- 1954 First uranium strike in Oregon.
- 1955 DOGAMI starts investigating uranium deposits in southern Oregon.

- 1956 DOGAMI published first volcanic study map. First Cascades vulcanism report is published in 1957.
- 1958 DOGAMI begins long term study of geothermal resources in the state.
- 1969 First commercial use of geothermal heat in the state.
- 1971 Oregon Geothermal Resources Act and Mined Land Reclamation Act adopted. Regulatory responsibilities assigned to DOGAMI.
- 1977 Federal Surface Mining Control and Reclamation Act passed.
- 1979 First commercial natural gas well in the state begins operation. DOGAMI becomes responsible for the State Mapping Advisory Committee. *The Ore. Bin* changes its name to *Oregon Geology*.
- 1980 Mt. St. Helens erupts in southwestern Washington.
- 1981 Mined Land Reclamation Act expanded to include nonaggregate operations. Assay services were discontinued for the public.
- 1991 The Nature of the Northwest Information Center opened in Portland.
- 1992 National Geologic Mapping Act was adopted.
- 1996 Federal Bureau of Mines was disbanded. Its responsibilities were transferred to the U.S. Geological Survey.