STATE OF OREGON
DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES

PORTLAND, OREGON

THE ORE.-BIN

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O AND C MINING CLAIM FILING CONFUSION

Public Law 477, which reopened Oregon and California Railroad revested lands and Coos Bay Wagon Road grant lands to location and entry under the general mining laws, contained a provision wholly new to the United States mining statutes. This was the requirement that a copy of the notice of location of a mining claim must be filed for record in the United States district land office of the land district in which the claim is located. The time limit allowed is within 180 days from April 8, 1948, the effective date of the Act, in the case of claims located prior to that date, and within 60 days from April 8, 1948, in the case of claims located after that date. In addition, and this is the most urgently timely matter to note now, the law requires that the owner of an unpatented mining claim must file for record in the United States district land office within 60 days after the expiration of the assessment year "a statement under oath" as to the assessment work done or improvements made during the previous assessment year, or as to compliance, in lieu thereof, with the applicable relief Act, which is Public Law 665. These filings are in addition to those necessary under State law which requires filings with the county recorder. No information is yet available as to any required form of the "statement under oath" or as to filing fees payable.

Furthermore, there has arisen a question concerning compliance which will plague everybody concerned until some solution is found. How is any claim owner in western Oregon to know certainly whether or not his claim is on O and C revested land or Coos Bay Wagon Road grant land? Originally the revested and grant lands were in odd numbered sections, but there is the question of "controverted lands" and there have been exchanges so that now a claim owner may not feel certain whether or not his claim is in these land areas. If it is, he must file his records in the district land office (in addition to the filing with the county recorder); if it is not so located, he is not required to file in the district land office.

The obvious answer to the claim owner's question as to the status of his land is to ask the district land office. However, because of press of work at this time of year the inquirer may or may not get a clarifying answer. Remember, in order to comply with Public Law 477, the owner of a mining claim on O and C or Coos Bay grant lands must file the "statement under oath" required by the Act within 60 days of the end of the assessment year, or before August 30, 1948. Therefore, to insure his compliance with the law, he should make his filings in the office of the district land office at Roseburg (except for a small area in eastern Jackson County) unless he has assurance from the land office that his claim is not on O and C or Coos Bay grant lands.

Senator Cordon has wired that the Washington office has prepared regulations which, however, have not yet been approved. This Department will aid in publicizing the approved procedure when released.

In any event, however, it would appear that the result of the statutory requirements for filing in the United States district land offices will be to deluge the office at Roseburg with filings and requests for information, and it seems likely that the innocent sounding filing requirement will be found to be practically unworkable. Relief of some kind will be sought when Congress next meets.

Editor

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OREGON 1947 MINERAL PRODUCTION REACHES NEW HIGH

The State Department of Geology and Mineral Industries announces that preliminary figures of the United States Bureau of Mines give the 1947 value of mineral production in the State as $16,700,000 of which $800,000 represents metals and $15,900,000 nonmetallic minerals. This total compares with a value of $11,783,000 in 1946 and $14,065,572 in 1942, the former record year.

The 1947 value shows more than 41 percent increase over 1946 and reflects the great increase in production of nonmetallic minerals. The ratio of value of nonmetallic to metallic minerals is nearly 20 to 1.

The principal nonmetallic minerals produced were cement, clay and clay products, coal, diatomite, lime and limestone, perlite, pumice, sand and gravel, silica, and stone.

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MINING NEWS

Mine owners of the Bohemia district, Lane County, Oregon, have formed an association to aid in the development of the district. At the organization meeting held June 16, 1948, at Cottage Grove, Albert Helliwell and Ray E. Nelson were elected temporary chairman and temporary secretary, respectively.

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Bartells Brothers Mining Company has been organized to take over the operation of the Champion Mine, Bohemia district, Lane County, Oregon, formerly operated by Fred Bartells. The concentrator will be put into production and three 150-h.p. diesel engines have been purchased. The mill, which is expected to start about August 1, will treat ore mainly from the Champion Mine but will also receive ore from the Musick and Helena Mines controlled by Kenneth Watkins.

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The Bonanza Mine near Sutherlin is one of the few quicksilver mines in the United States which is continuing to operate under the very adverse conditions now existing in the domestic quicksilver industry. Bonanza employs from 18 to 20 men and is mining ore from three levels. The furnace is run about two weeks each month. C. G. Whelchel is general Superintendent.

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The Oregon Chrome Mine on the Illinois River, Josephine County, Oregon, is the only producing chrome mine in the United States. Ore is shipped to the Ohio Ferro Alloys Company, Tacoma, Washington.

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EARTHQUAKE FELT AT KLAMATH FALLS AT NOON DECEMBER 24, 1947*

December 24, 1947, at 12:02

Klamath Falls (central section). (VI)[1/] Motion trembling. Felt by several. Rattling of loose objects; buildings creaked. One report of cracked plaster. "Those reporting in rather wide area. Radio Station KFLW reported a momentary distortion at noon." Ground: Rocky.

Klamath Falls. (IV)[2/] Motion swaying, rapid onset. Felt by several. Rattling of loose objects and creaking of buildings heard by several. Faint, bumping sounds heard. Pictures on walls and suspended lighting fixtures swayed. Few alarmed.

[1/] (VI)(Mercalli Intensity Scale) = Felt by all; many frightened and ran outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.

[2/] (IV)(Mercalli Scale) = During the day felt indoors by many; outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls made creaking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.

* From abstracts of earthquake reports for the Pacific Coast and the Western Mountain region, U.S. Coast and Geodetic Survey, MSA-56, 1948.

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THE SEISMOGRAPH STATION AT OREGON STATE COLLEGE

By
H. R. Vinyard*

The purpose of a seismograph is to provide a continuous record of momentary displacements of the earth's crust from the normal undisturbed position. Until recently instruments for this purpose depended upon the inertia of a mass suspended in a manner such as to allow it to remain in its original position while the surroundings undergo short period displacements. The majority of instruments now used are of this kind. For directional analysis each of the three components of motion requires a separate seismograph and recording system: one instrument records north-south component of motion, another the east-west component, and the third instrument shows the vertical component. In order that each instrument will respond only to the directional component desired, the mass needs to be suspended in such a way as to make it not susceptible to motion in more than one direction. The horizontal pendulum form of mass suspension approximately satisfies this requirement: it can be made responsive only to the component of horizontal motion perpendicular to the pendulum, and can oppose the vertical component if held vertically rigid. The horizontal pendulum can also be made to respond exclusively to vertical motion if horizontally hinged and vertically spring supported.

When the supporting frame of a horizontal pendulum is subject to the displacement accompanying an earthquake wave, the mass tends to remain in its original position. By virtue of the axial hinge the earth motion causes an angular displacement of the pendulum with respect to its normal position, and at the same time the mass undergoes a positional displacement. Either of these motions relative to the surroundings may be used for recording an earthquake wave. For optical recording a small mirror is mounted near the hinge so as to turn with the angular displacement. A beam of light from a source near the instrument is directed to the mirror, and the reflected beam which experiences twice any angular displacement of mirror and pendulum is focused on photosensitive paper. The recording paper is ordinarily fastened to a large cylinder which rotates at a steady rate and at the same time moves laterally to give a helical trace of the point of light coming from the mirror. An accurate clock can be made to give time pips on the trace at one minute intervals. This system of recording is the one employed at the Oregon State College seismograph station.

The station, which has been in continuous operation since July 1, 1946, utilizes two Wood-Anderson type instruments. Like most of the earthquake detecting devices for indicating horizontal motion these are horizontal pendulums. The vertical support for each pendulum is a 10-inch length of tungsten wire of diameter 0.003 inch attached to a frame at top and bottom. At about the center of this wire there is attached a small silver cylinder of length one inch and diameter 0.16 inch. The wire lies along an element of the cylinder, thus making the line of attachment parallel to the axis of the cylinder. This is in effect a very short horizontal pendulum which has a very sensitive angular response to earth motion. A small mirror is mounted on the silver cylinder to permit optical recording of angular deflections.

An 8 by 10 foot pier is located in the basement of the physics building but is not attached to the floor of the building. It is embedded to a 10-foot depth in alluvial soil with bedrock perhaps 80 feet below. Because of undesirably large temperature variations in the pier room and also because of an unexpectedly large tilt due to student movements whenever classes change, it was necessary to sacrifice the large optical magnification obtainable with these instruments. After operating for some time another drawback to large magnifications appeared in the form of extreme microseismic activity, due both to man and nature. Using a short optical arm a dynamic magnification of about 100 is now being used although the instruments are capable of magnifications from 1000 to 1500.

*Department of Physics, Oregon State College, in charge of station.

A single motor drives two recording cylinders which are 20 inches long and 15 inches in diameter. Lateral motion due to one revolution of the cylinders is 1/8 inch and takes place in 48 minutes. The rate of travel of the recording point of light is about one inch per minute. At this rate a 48-inch strip of 15-inch wide photostat paper will last 3½ days. It is planned sometime in the future to increase the speed to about three times its present value and then change the record every day.

A single light source is used; the beam, divided by a pair of prisms, directs light to the two instruments. These prisms are rigidly held to a semi-rotatable table which is given a slight thrust each minute in order to produce time indication on the record. The timing impulses are from a fairly good clock which is checked by radio every time the record is changed.

Considerable work is planned for the future in improving the station. A vertical component instrument of the Sprengnether type is now being constructed. A seismograph vault remote from all disturbances is highly desirable, and there is hope that financial provisions will be made for such a building.

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MAP OF OREGON 1870

On the opposite page there is reproduced a map originally published in Johnson's New Illustrated Family Atlas of the World, New York, A. J. Johnson, Publisher, 276 and 278 Mulberry Street, 1870.

Many errors will be found especially in Eastern Oregon where the lack of professional mapping is evident. Note the courses of the John Day and Grande Ronde rivers.

The following information concerning Oregon counties as shown on the map was taken from Oregon Geographic Names by Lewis A. McArthur. Wasco County was created January 11, 1854, and originally comprised all the area of Oregon Territory between the Cascade Range and the Rocky Mountains. Baker County was carved out of Wasco County by act of the State legislature September 22, 1862. Union County was taken from the northern part of Baker County as it then existed on October 14, 1864. (The map appears to be in error as to the area of Baker County as it existed at that time. Although the northern county boundary is not shown, Union County area shows coverage of Powder and Burnt rivers which is obviously wrong even for that date. Present northern boundary of Baker County is plus 45 degrees north latitude.) Benton County was created December 23, 1847, by the provisional legislature. The western part was cut off to form Lincoln County February 20, 1893. One wonders why Benton County, already small, as Oregon counties go, was further reduced in area and deprived of her coast line.

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NEW ENGINEERING FIRM

Announcement has been made of the formation of the engineering firm of Anderson, Richards, and Spencer with offices in the Palmer Building, Baker, Oregon. They will engage in a general consulting practice of mining and metallurgical engineering. The members of the firm are H. Ferrel Anderson, Leslie C. Richards, and Richard N. Spencer, all members of the American Institute of Mining and Metallurgical Engineers.

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THREE OREGON LAND OFFICES CONSOLIDATED INTO ONE

A Washington dispatch in the Oregonian of July 22 states that beginning in August the three district Land Offices, now at Lakeview, Roseburg, and The Dalles, will be consolidated into one single office at Portland. The reason given is the dwindling amount of public land.

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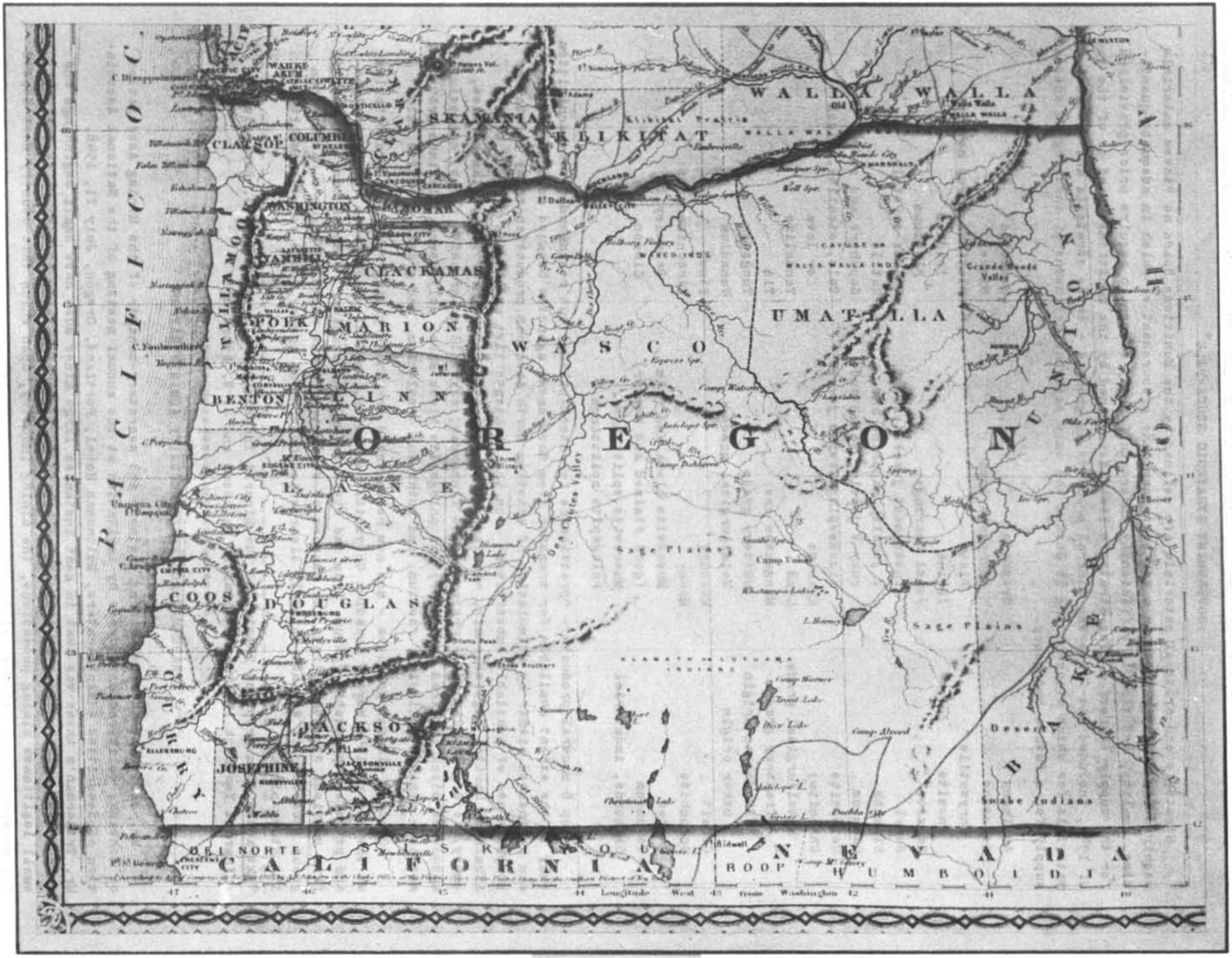

Map of Oregon 1870

GOVERNMENT STRATEGIC STOCK PILE*

Strategic and critical materials are defined by the Munitions Board as "those materials required for essential uses in a war emergency, the procurement of which in adequate quantities, quality, and time is sufficiently uncertain for any reason to require prior provisions for the supply thereof." The strategic list, determined by the Munitions Board as of the end of 1946, included the following mineral products in group A - those strategic and critical materials for which stock-piling is deemed the only satisfactory means of insuring an adequate supply for a future emergency.

Antimony
Asbestos
  Chrysotile
  Amosite
Bauxite
Beryl
Bismuth
Cadmium
Celestite
Chromite:
  Metallurgical grade
  Refractory grade:
    Rhodesian origin
    Other origin
Cobalt
Columbite
Copper
Corundum
Diamonds, industrial
Graphite:
  Amorphous lump
  Flake
Iodine
Jewel bearings:
  Instrument jewels(except V jewels), sapphire and ruby V jewels, watch and timekeeping device jewels
Kyanite
Lead
Manganese ore:
  Battery grade
  Metallurgical grade
Mercury
Mica:
  Muscovite block and film (good stained and better)
  Muscovite splittings
  Phlogopite splittings
Monazite
Nickel
Platinum-group metals:
  Iridium
  Platinum
Quartz crystals
Rutile
Sapphire and ruby
Talc, steatite, block or lava
Tantalite
Tin
Tungsten
Vanadium
Zinc
Zirconium ores:
  Baddeleyite
  Zircon

Group B mineral products - "practicable for stock-piling, but recommended for acquisition only to the extent available for transfer from Government agencies because adequacy of supply can be insured either by stimulation of existing North American production or by partial or complete use of available substitutes" - on the strategic list at the end of 1946 were: Aluminum, barite, English chalk, chemical-grade chromite, natural cryolite, diamond dies, emery, acid-grade and metallurgical-grade fluorspar, crystalline graphite fines, magnesium, muscovite block (stained and lower) and phlogopite block mica, molybdenum, platinum-group metals - osmium, palladium, rhodium, and ruthenium - selenium, and ground steatite talc.

Group C mineral products - not now recommended for stock-piling - on the strategic list at the end of 1946 were: Canadian Chrysotile asbestos, optical glass, iron ore, petroleum and petroleum products, radium, iron and steel scrap, and uranium. Uranium had been omitted from previous strategic lists for reasons of security; it was added to group C rather than group A because it was not entirely clear which Government agency would be responsible for its stock-piling.

*Extracted from preprint "Review of the Mineral Industries in 1946" from U.S. Bur. Mines Minerals Yearbook in 1946 by Allan F. Matthews and E. W. Pehrson.

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TRAUERMAN ADDRESSES SECURITY ADMINISTRATORS

Mr. Carl J. Trauerman, mining engineer and secretary-manager of the Mining Association of Montana, delivered an address by invitation at the annual meeting of the National Association of Securities Administrators, Multnomah Hotel, Portland, Oregon, July 21, 1948. Mr. Trauerman's theme was that in most instances large mines must have small beginnings and that unless encouragement by those in authority is given to raising of venture capital by small legitimate mining promotions, the mining industry, upon which this country must depend for prosperity and defense, will suffer greatly.

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State of Oregon
DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES
702 Woodlark Bldg., Portland 5, Oregon
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