STATE OF OREGON
DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES

PORTLAND, OREGON

THE ORE.-BIN

VOL. 10 NO. 4 PORTLAND, OREGON April 1948

STATE DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES
Head Office: 702 Woodlark Bldg., Portland 5, Oregon

****

O AND C LANDS

Thanks to the combined efforts of Congressman Harris Ellsworth and Senator Guy Cordon, the Ellsworth bill, H.R. 5049, was passed by Congress and signed by the President April 8, 1948. Therefore the O and C revested lands and the Coos Bay Wagon Road reconveyed lands have now been reopened to location and entry under the general mining laws. A copy of the bill in full follows:

H.R. 5049

IN THE HOUSE OF REPRESENTATIVES

January 20, 1948

Mr. Ellsworth introduced the following bill; which was referred to the Committee on Public Lands

A BILL

To reopen the revested Oregon and California Railroad and reconveyed Coos Bay Wagon Road grant lands to exploration, location, entry, and disposition under the general mining laws.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, THAT, NOTWITHSTANDING ANY PROVISIONS OF THE ACT OF AUGUST 28, 1937 (50 STAT. 874), OR ANY OTHER ACT RELATING TO THE REVESTED OREGON AND CALIFORNIA RAILROAD AND RECONVEYED COOS BAY WAGON ROAD GRANT LANDS, ALL OF SUCH REVESTED OR RECONVEYED LANDS, EXCEPT POWER SITES, SHALL BE OPEN FOR EXPLORATION, LOCATION, ENTRY, AND DISPOSITION UNDER THE MINERAL-LAND LAWS OF THE UNITED STATES, AND ALL MINERAL CLAIMS HERETOFORE LOCATED UPON SAID LANDS, IF OTHERWISE VALID UNDER THE MINERAL-LAND LAWS OF THE UNITED STATES, ARE HEREBY DECLARED VALID TO THE SAME EXTENT AS IF SUCH LANDS HAD REMAINED OPEN TO EXPLORATION, LOCATION, ENTRY, AND DISPOSITION UNDER SUCH LAWS FROM AUGUST 28, 1937, TO THE DATE OF ENACTMENT OF THIS ACT: Provided, THAT ANY PERSON WHO UNDER SUCH LAWS HAS ENTERED SINCE AUGUST 28, 1937, OR SHALL HEREAFTER ENTER, ANY OF SAID LANDS, SHALL NOT ACQUIRE TITLE, POSSESSORY OR OTHERWISE, TO THE TIMBER, NOW OR HEREAFTER GROWING THEREON, WHICH TIMBER MAY BE MANAGED AND DISPOSED OF AS IS OR MAY BE PROVIDED BY LAW, EXCEPT THAT SUCH PERSON SHALL HAVE THE RIGHT TO USE SO MUCH OF THE TIMBER THEREON AS MAY BE NECESSARY IN THE DEVELOPMENT AND OPERATION OF HIS MINE UNTIL SUCH TIME AS SUCH TIMBER IS DISPOSED OF BY THE UNITED STATES: Provided further, THAT LOCATIONS MADE PRIOR TO AUGUST 28, 1937, MAY BE PERFECTED IN ACCORDANCE WITH THE LAWS UNDER WHICH INITIATED.

THE OWNER OF ANY UNPATENTED MINING CLAIM LOCATED UPON ANY OF SUCH LANDS SHALL FILE FOR RECORD IN THE UNITED STATES DISTRICT LAND OFFICE OF THE LAND DISTRICT IN WHICH THE CLAIM IS SITUATED (1) WITHIN ONE HUNDRED AND EIGHTY DAYS AFTER THE EFFECTIVE DATE OF THIS ACT, AS TO LOCATIONS HERETOFORE MADE, OR WITHIN SIXTY DAYS OF LOCATIONS, AS TO LOCATIONS HEREAFTER MADE, A COPY OF THE NOTICE OF LOCATION OF THE CLAIM; (2) WITHIN SIXTY DAYS AFTER THE EXPIRATION OF ANY ANNUAL 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 ANY APPLICABLE RELIEF ACT.

It will be noted that the location of mining claims on these lands must be validated by recording the location notices in the United States district land office according to specifications in the bill. Also an affidavit covering all assessment work must be filed in the same district land office within sixty days of the expiration of an assessment year.

Presumably the district land office referred to is that at Roseburg, Oregon, for most of the area. Some of the land in the southern part of the State in Tps. 37, 38, 39, and 40 S., Rs. 6 and 7 E., is probably in the Lakeview district.

Originally the lands in question consisted of odd-numbered sections, but in a few places there have been some consolidations by exchange with the U.S. Forest Service. Questions concerning the areal distribution of these lands should be addressed to the O & C Lands Administration, Swan Island, Portland, Oregon, or the U.S. District Land Offices at Roseburg and Lakeview, or the county assessors of the counties of western Oregon.

A locator of a mining claim on O and C lands must conform to state laws as well as federal laws and, in addition to the regulations of H.R. 5049 covering the filing for record in the U.S. district land office, he must file a copy of the location notice together with an affidavit showing that the required location work has been done with the county recorder of the county in which the claim is located. State law requires also that a record of annual assessment must be filed with the county recorder of the county in which the mining claim is located. A copy of the section of the State law which applies to affidavit of annual labor is reproduced below:

> Recordation of affidavit of annual labor: Contents. Within 30 days after the performance of labor or making of improvements, required by law to be annually performed or made upon any mining claim, the person in whose behalf such labor was performed, or improvement made, or someone in his behalf, knowing the facts, shall make and have recorded in the mining records of the county in which said mining claim is situated, an affidavit setting forth:
>
> (1) The name of the claim or claims if grouped and the book and page of the record where the location notice of said claim or claims is recorded.
>
> (2) The number of days' work done and the character and value of the improvements placed thereon, together with the location of such work and improvements.
>
> (3) The date or dates of performing said labor and making said improvements.
>
> (4) At whose instance or request said work was done or improvements made.
>
> (5) The actual amount paid for said labor and improvements, and by whom paid, when the same was not done by the owner or owners of said claim.

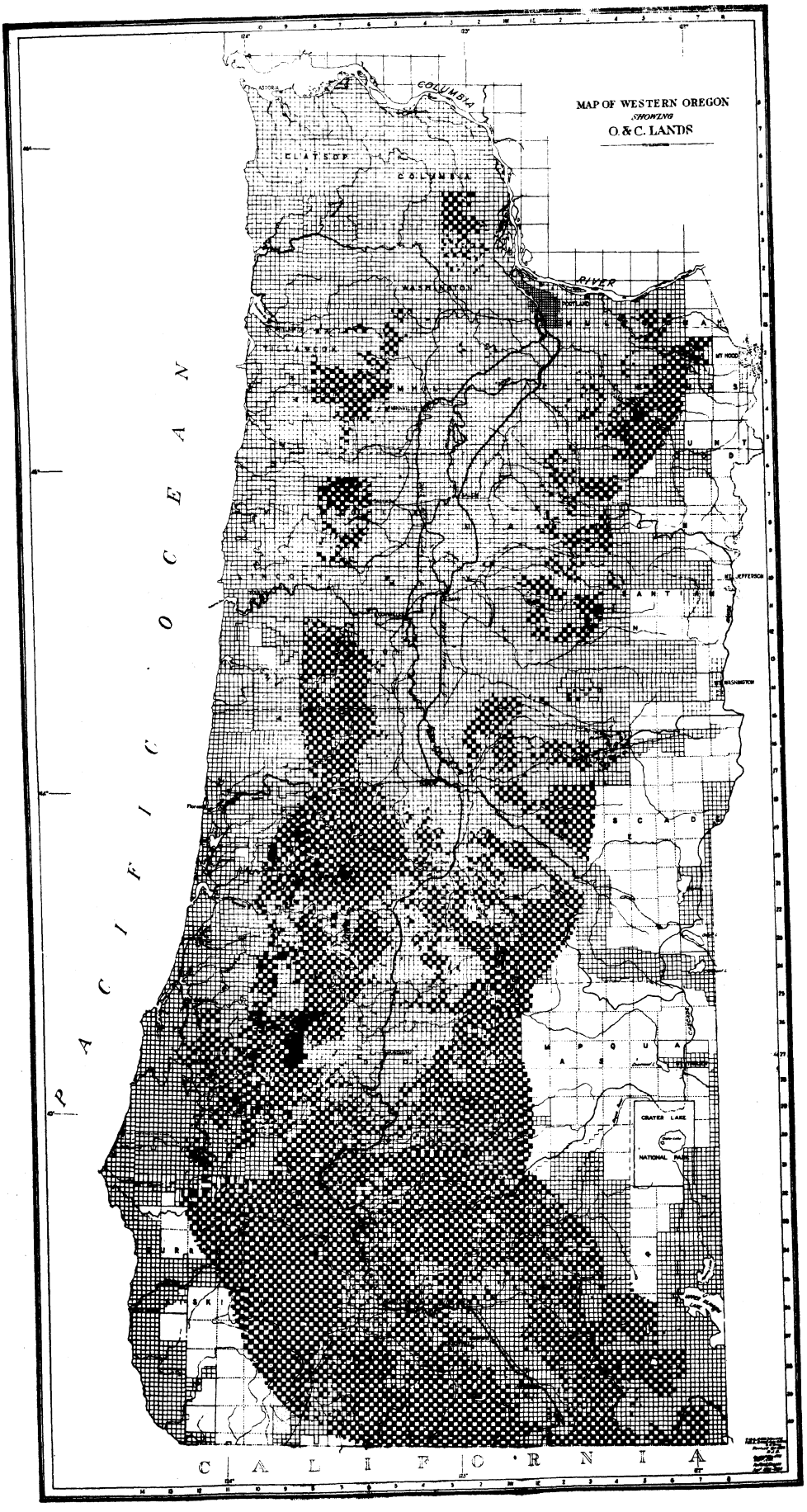
****

ATTENTION

ASSESSMENT WORK

OWNERS OF UNPATENTED MINING CLAIMS WHO WISH TO MAINTAIN THEIR POSSESSORY RIGHTS MUST DO ASSESSMENT WORK FOR THE CURRENT ASSESSMENT YEAR ENDING JULY 1, 1948.

****


MAP OF WESTERN OREGON
SHOWING
O. & C. LANDS
COLUMBIA
RIVER
PACIFIC OCEAN
CALIFORNIA
CRATER LAKE
NATIONAL PARK

THROWAWAY ROCK BIT

by

Ralph S. Mason*

A new detachable rock bit has been developed and patented by the Throwaway Bit Corporation, Portland, Oregon. Designed to be used without resharpening and then discarded, the new bit, although weighing half as much as regular bits, reportedly has been found to be capable of drilling from 2 to 2½ times as much hole. The Throwaway Bit Corporation, headed by Mr. Homer B. Morris, President, and Mr. R. S. Miller, Vice-President, is currently producing 5000 bits per day and expects to be in full production by May. The company anticipates a production of 15,000 bits per day.

In design the new bit differs from the orthodox styles in that it is attached to the drill shank by means of a press fit. Regular drill steel can be converted easily by cutting off the threaded shank and turning down the end to a diameter of 1 inch. The bits are removed by means of a slide hammer. Four sizes of bits, 1 3/4 inches, 1 11/16 inches, 1 5/8 inches, and 1 9/16 inches are being produced currently. This small number of sizes will be increased if necessary in the future. The manufacturers claim that fewer sizes of their bits are required since their bits drill more than twice as far before changing. It is stated that one bit drilled 60 feet of hole before being discarded. According to the manufacturers, the bits have been tested mostly in the Coeur d'Alene district and at the Hedley Mascot Mine in Canada where siliceous limestone, on the 3700-foot level, was drilled approximately 50 percent faster than with any other detachable bit. The secret of this increased drilling capacity lies, in part, in the special heat treatment applied to the alloy steel bits and in the design of the shoulder. Although some production details are still confidential, officers of the company have outlined the manufacturing process as follows: alloy 1 3/16-inch steel bars are cut into slugs with a shear, heated in a high frequency coil, forged at one blow in a 120-ton press, then trimmed and bored for water hole, and hardened by placing in a special high frequency furnace. The resulting bit has a cutting face having a hardness of approximately 66 Rockwell-C.

In a drilling test in the Coeur d'Alene district in Idaho, it is reported that the Throwaway bit, when tested against both detachable bits and forged steel, drilled from 2 to 2½ times as much footage as any of them.

An important advantage claimed for the new bit is the simplicity of the drill steel shank, which can be machined and tempered in any machine shop or well-equipped mine shop. So far, no breakage of either bit or shank has been noted and drillers have reported that the bits are smooth-running and have not come loose from the steel. The secret of the ability of the bit to remain firmly attached to the drill shank lies in the fact that the inside of the socket sides are slightly convex which wedges the bit onto the shank when it is given a few smart raps against a boulder. Once the bit has become dull, it is discarded and a new one inserted in a matter of seconds. The new bit should be particularly useful for small, isolated mining operations which do not have resharpening equipment and where any reduction in shipping weight is important. Simplicity of the manufacturing process plus precision heat control makes it easy to produce bits identical in quality and hardness. The manufacturers state that just as soon as the company can meet the demand, several mines in the Coeur d'Alene district will switch over to the Throwaway bits since the operators are satisfied that there will be an appreciable saving in drilling costs by doing so. The new bits will be sold for 20 cents each in all sizes in large orders and the company intends to reduce prices after production costs of full scale operation have been determined.

---

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

****

METAL MARKETS

According to E & M J Metal and Mineral Markets, April 15, 1948, the demand for principal nonferrous metals continues very strong. Shipments of copper to domestic consumers increased to 122,988 tons compared to 106,823 tons in February. This gain resulted largely from a carryover from February and did not mean a substantial increase in consumption. Domestic copper continued firm on the basis of 21½ cents Connecticut Valley.

The increase in the price of lead to 17½ cents is expected to bring out more metal and some improvement has already been noted in the movement of scrap. Australian lead has been sold to consumers in this country on the basis of the new quotation. The amount so sold was not made public but it is stated that between 20,000 and 25,000 tons of lead will be set aside for shipment from Australia for the balance of the year.

The supply of zinc is becoming tighter. This is partly due to shipments earmarked for the Government stockpile. The price of Prime Western continued at 12 cents East St. Louis. Because of exports and shipments on Government account, stocks on hand fell to 45,229 tons at the end of March compared to 48,261 tons on February 29 and 68,011 tons at the beginning of the year.

Spot quicksilver ranged in price from $76 to $78 per flask depending on quantity. This was $1.00 higher than the preceding week. It is stated that leading domestic producers have withdrawn from the market. It is reported that 1000 flasks of imported metal have been bought for a New England mercury boiler installation now under construction.

Foreign silver was unchanged at 74 5/8 cents per ounce. The domestic price is fixed by law at 90.5 cents.

****

HIGHER PRICE AND BONUS OFFERED FOR URANIUM ORE*

To stimulate exploration and production of uranium-bearing ores, the Atomic Energy Commission has raised its settlement basis for purchasing such ores. As a special incentive, the Commission will pay a bonus of $10,000 for the production and delivery of the first 20 tons of uranium ore or mechanically produced concentrates assaying 20 percent or more uranium oxide obtained from a new location.

The Commission plans to continue and expand its own exploration, development, and research relative to raw materials. This work, it points out, is designed to aid rather than limit the activities of private enterprise in prospecting, ore production, and ore beneficiation.

Minimum prices for delivery to AEC of domestic refined uranium, high-grade uranium-bearing ores and mechanical concentrates, guaranteed for 10 years, follow:

Ores and concentrates: $3.50 per pound of recoverable uranium oxide, less the cost per pound to refine to necessary purity as determined by the AEC after assay of a representative sample.

Refined uranium products: $3.50 per pound of uranium oxide.

Prices announced on April 10 are minimum prices for small lots. Higher prices may be established by negotiation with the seller for larger quantities, taking into account refining and milling costs, transportation costs, and other items. The Commission will give consideration to the presence of recoverable gold, silver, radium, thorium, and other valuable constituents.

---

*From E & M J Metal and Mineral Markets, April 15, 1948.

****

FERTILIZER SHORTAGE

The Ore.-Bin is indebted to the Oregon Voter, April 17, 1948, for the following:

Sulfate of ammonia fertilizer, much coveted by farmers, truck gardeners and other gardeners, is about as scarce and hard to get here in the Northwest as it was during the war emergency. Yet, there are plants in Salem, Salt Lake, and Oakland (Cal.) which are capable of producing something like 24,000 tons a month. Shortage of ammonia has the Salem and Salt Lake plants shut down and the Oakland plant operating on minimum basis. While this ammonia shortage thus cripples the 3 West Coast fertilizer factories, the US Army reportedly is shipping abroad 40,000 tons a month. More than 30,000 tons are sent monthly to Japan, the remainder to Europe. It seems that each ton of ammonia makes possible the manufacture of 4 tons of the coveted sulfate. The manufacturers and chambers of commerce, ably abetted by the growers, are putting up a fight to get the situation remedied. They are not asking that the shipments to other nations be stopped but merely that 6,000 tons a month out of the 40,000 tons be retained and turned over to the 3 western plants. Receipt of 2,000 tons of ammonia a month by each plant would mean a monthly output of 8,000 tons of fertilizer by each, it is said. If the Army or administration at Washington does not do something about the matter before then, it will be taken up at the scheduled Governors' Conference at Sacramento, April 22-24. Big plant of the Columbia Metals Corporation at Salem, output of which would materially relieve the shortage of the chemical fertilizer in this region, has been closed down since end of February. If our information is correct, a large part of the finished fertilizer produced in the Salem plant has, at least part of the time in the past, been shipped under government orders to China.

****

OREGON MINING NOTES

The El Rio Dredging Company has started dredging operations near Takilma, Josephine County. Equipment consists of a dragline and dry land washing plant. One hundred forty-two acres are under lease.

* * * * *

The Horsehead Lime Corporation has nearly finished installation of a rotary kiln near Williams, Josephine County. This property was operated before the war by the Washington Brick and Lime Company. It is planned to put the kiln into operation about June 1. Pulverized sawdust will be used for fuel. There is a good demand for chemical lime which this company will produce.

* * * * *

Mr. George Tulare is sinking a prospect shaft at the Sylvanite Mine near Gold Hill, Jackson County. The plan is to sink on an incline about 100 feet for the purpose of prospecting the vein. The production record of this old mine is reported to be something in excess of $700,000 in gold. The run consisting of quartz and some pyrite has also contained some scheelite.

****

EARTHQUAKES PREDICT FUTURE MOUNTAIN PEAKS

According to the Grants Pass Courier, March 24, 1948, Dr. James Gilluly, geology professor at UCLA, says that the earthquakes in southern California are a sign of new mountain peaks to come. Mt. Baldy, a bush league mountain in San Bernardino County, is rising between 20 and 40 inches a century and will be as high as Mt. Whitney in 200,000 years - a split second in geologic time.

****

OIL WELL AT OCEAN CITY, WASHINGTON

According to the Oregonian, April 2, 1948, W. L. Stanton, division geologist in Olympia, reports that the Union Oil Company's oil well near Ocean City, Grays Harbor County, produces both gas and oil of exceptionally high quality, but not enough to be considered commercial thus far. The well is one of six drilled by the company this year, the five others showing some oil, but not enough. The Ocean City well has been drilled 6278 feet and was stopped because of mechanical difficulties. The showing of gas and oil extends about 2600 feet. According to Mr. Stanton, the well seems capable of producing 10 to 20 barrels of oil per day. Quality of both oil and gas is high. The mechanical troubles caused a meeting of high officials of the company in the test area in order to make a decision as to further testing work.

An AP dispatch in the Oregonian, April 17, 1948, stated that Fred W. Bush, Pacific Northwest Division Land Manager for the Union Oil Company, said that as a result of favorable indications found in the Ocean City well, the company has leased 360,000 acres for exploration in Washington. As quoted, Bush said that $1,500,000 had been spent by the company so far and that several million dollars more would be spent in exploration. Twelve to fifteen more wells may be drilled. Bush stated that the next well to be drilled will be on property near Tokeland. Another hole will be drilled one mile east of the mouth of the Hoh River on the Olympic Peninsula. Further drilling will be done inland near the town of Forks. Another well is planned to check the Ocean City well.

****

CHEMICAL WARFARE ON INSECTS

For convenience we call it THIOPHOS 3422 Parathion but chemists call it diethyl nitrophenyl thiophosphate. Of greater importance to the American farmer is the fact that 165 entomologists distributed over 40 of these United States call it the most successful insecticide known. They arrived at this conclusion after testing it on practically every major crop and destructive insect. It is more deadly than the famous DDT and to a greater variety of insects. It is therefore an extremely potent weapon for chemical warfare on the insect hordes that are a menace to civilization.

The insect menace is far greater than is generally realized. Entomologists frequently remind us that insects appeared on earth before man and will probably survive him. Man's struggle for mastery over animals other than man has been quite successful but insects take many human lives each year and their destructiveness nullifies the work of a million men. There are several factors which help the insects to compete successfully with other forms of life. They can endure greater extremes of temperature and humidity; their skeleton is on the outside instead of inside like man's; some carry potent weapons and many are masters in the art of camouflage. The so-called social insects, such as termites, ants, and bees, have highly developed organizations in which different classes perform specialized functions for the benefit of the organization irrespective of the cost to the individual.

Man combats the insect in three ways; by quarantine, by biological warfare, and by chemical warfare. Quarantine prevents the entry of new pests and additions to those already established here. Biological warfare is carried on by growing or importing parasites to control destructive insects. Chemical warfare destroys them by applying poison to them or to their food.

For many years the principal chemicals available to entomologists were lead and calcium arsenates, lime sulphur solution, inorganic fluorine compounds, hydrogen cyanide, petroleum oils, pyrethrum extracts, and rotenone. The last two are obtained from plants and must be imported. Their active ingredients are complex compounds, impractical to synthesize, but they are highly toxic to insects and comparatively harmless to man and animals. Then came DDT (dichloro dephenyl trichloroethane) which performed yeoman service in World War II by controlling the malaria-carrying mosquito and the typhus-carrying body louse. It was logical

therefore to investigate other chlorinated compounds the best known of which are chlordane, chlorinated camphene, and hexachlorocyclohexane. Some enterprising chemists looked in other directions and found that certain esters of phospheric acid had remarkable potency as pesticides. The so-called hexaethyl tetraphosphate containing the effective tetraethyl pyrophosphate had merit but the latest in this type, parathion, is outstanding.

Although these new chemicals work wonders, some have detrimental traits. DDT is death to codling moths but mites resist it and multiply rapidly when their natural enemies have been decimated by DDT. Hexachlorocyclohexane leaves a disagreeable taste and odor and some phosphoric esters are very sensitive to moisture. But the newest development, parathion, is several times more powerful than DDT, affects a greater variety of insects, is quite stable to hydrolysis in normal waters, and any residue decreases rapidly by volatilizing. It is deadly for those troublesome mites on apples and pears and is highly effective against quite a number of insect pests on fruit and vegetables. No wonder then it was so highly acclaimed by the 165 entomologists who tested it during the 1947 season. However, information on toxicity does not permit recommending parathion for controlling household insects or pests on domestic animals.

The Department of Agriculture is continually urging the farmer to kill the bug and save the crop. This is particularly urgent with the present acute world shortage of food and every effort is being made by the Chemical Industry to provide the farmer with the most effective insecticides. It is startling to recall that, although the European corn borer was first recorded in Massachusetts in 1917, it now carries on its depredations as far south as North Carolina and west to Wisconsin and Iowa. Nearly three billion bushels of corn were grown in this area in 1946 and the borer could cause enormous loss unless active measures are maintained to control it. And the corn borer is only one of an imposing list of marauders that can reduce our productiveness and therefore lower our standard of living. They must be fought relentlessly with all the skill and ingenuity at our command. Research in the Chemical Industry is contributing by the development of new and more potent insecticides for aggressive warfare on all types of destructive insects.

From For Instance, No. 40, 1948. American Cyanamid Company, New York.

****

PRICE OF PLATINUM UPPED

Supplies of platinum in this country have been dwindling during the past several months and as a result the price has been going up. On April 17 an AP dispatch in the Oregonian quoted platinum at $98 per ounce wholesale and $101 retail. The price had been boosted $14 an ounce on March 30. A year ago the price was $63 wholesale and $66 retail. Reportedly Russia has withheld shipments for nearly a year. At this price Oregon dredges and hydraulic miners should investigate platinum possibilities very carefully.

****

WHEN WILL SUPPLY LINES BE CUT?

As this is being written the newspaper headlines say,"Russia Cuts Our Berlin Supply Line." How long will it be before she cuts our manganese, chrome, and other strategic material supply lines? And how long will it be before Congress and the Administration realize that we must depend for our stockpile, not on the Western Hemisphere, but those countries which border us and, more particularly, on our domestic production, technology, and skill?

The administration still choses the chimera of stockpiling from foreign sources exclusively, in spite of the developments which make the proponents of domestic self-sufficiency look like seers. No honest exponent of stockpiling objects to getting all the foreign material we can. No sensible Congress or Administration should delay stimulating domestic mining at whatever cost. No selfish interests, foreign or domestic, should stand in the way of quickly passing the best possible law combining flexible incentive payments to producers of all strategic and critical metals and minerals with stockpiling. The cost, however high, is sure to be only a fraction of what would be spent under war pressure to get the same, or lesser, results. Perhaps, even, such an incentive plan should be extended to Mexico and Canada.

From Pay Dirt, April 19, 1948.

****

The ORE.-BIN
State of Oregon
DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES
702 Woodlark Bldg., Portland 5, Oregon
POSTMASTER: Return Postage Guaranteed

Sec. 562, P. L. & R.