

April 1951

## STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

Portland, Oregon

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## CHROMITE

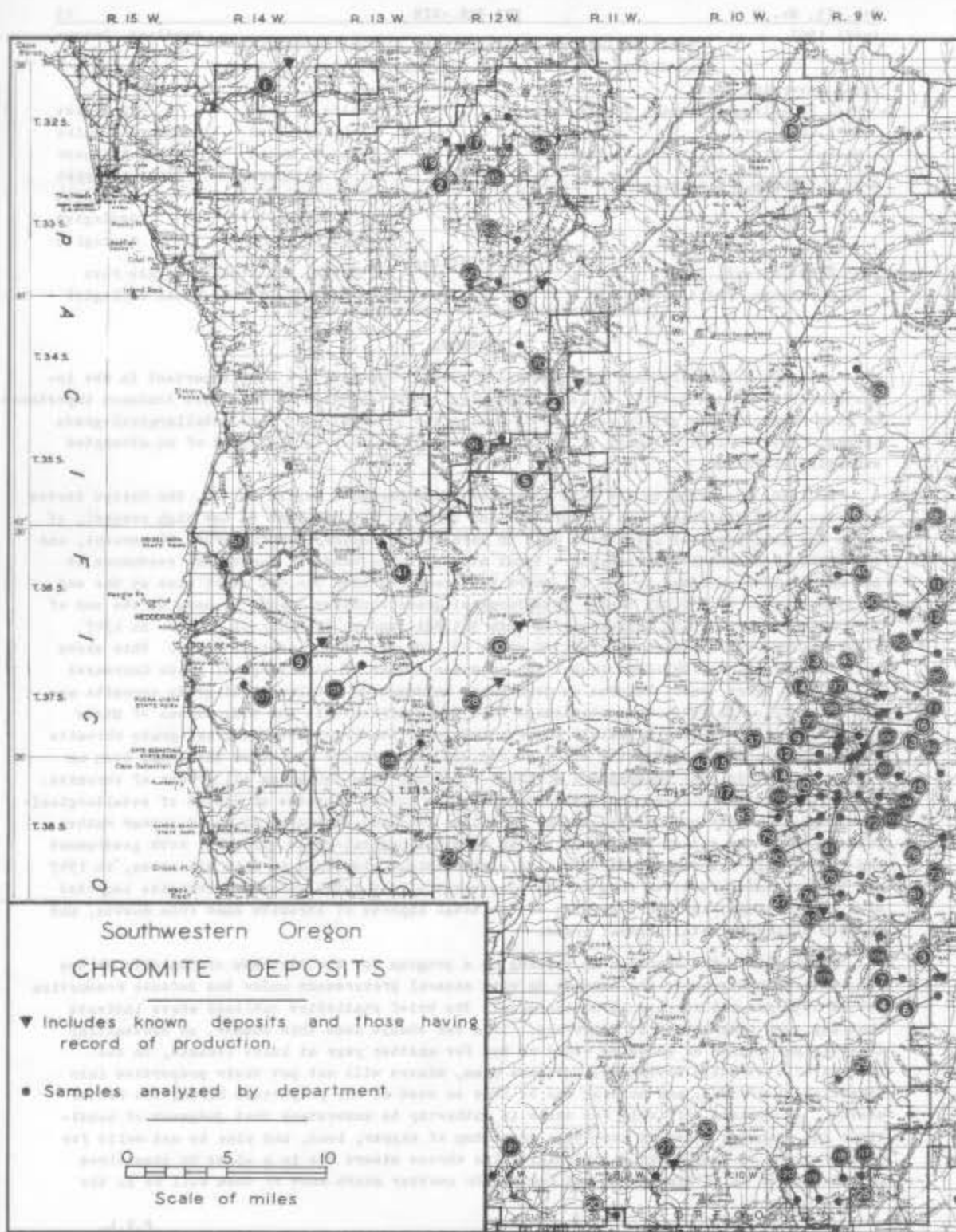
Although both refractory and chemical grades of chromite are very important in the industrial life of the nation, it is metallurgical-grade chromite that assumes dominant importance in time of war. Many alloys required in making war material must have metallurgical-grade chrome. Have we a safe supply of it on hand to tide us over in the event of an attempted submarine blockade?

In 1950, according to the U.S. Bureau of Mines Chromite Report No. 20, the United States imported 1,298,725 short tons of chromite and consumed 980,369 tons (a new high record), of which the metallurgical industries used 50 percent, refractory manufacturers 36 percent, and the chemical industries 14 percent. Total stocks in the hands of industrial consumers at the end of 1950 amounted to 606,271 short tons compared with 756,995 short tons at the end of 1949, a loss of 150,724 tons. Metallurgical-grade consumer stocks on hand at the end of 1950 amounted to 248,872 tons compared with 325,881 tons on December 31, 1949. In 1947 total consumer stocks were 411,067, of which 191,104 were metallurgical grade. This shows that in four years (1947-1950 inclusive) consumer stocks of metallurgical grade increased only 57,768 short tons. Figures on Government holdings of metallurgical-grade chromite are not available. In 1946, when statistics were not confidential, the U.S. Bureau of Mines reported that the office of Metals Reserve had total stocks of metallurgical-grade chromite in stockpiles, purchase depots, etc., of 263,409 tons. Since that time there has been an excess of imports over consumption of about 1,794,000 tons including all grades of chromite. There is no information on what percentage of this excess consists of stocks of metallurgical-grade chrome. Also part of the excess went into consumer stocks so it would appear rather plain that at the end of 1950 total stocks of metallurgical-grade chromite, both government and industrial, are dangerously low. As a statistical sidelight on this situation, in 1947 the United States received from Russia 47 percent of the total amount of chromite imported of 1,106,180 tons; in 1950 2 percent of our total imports of chromite came from Russia, and Russian chrome is metallurgical grade.

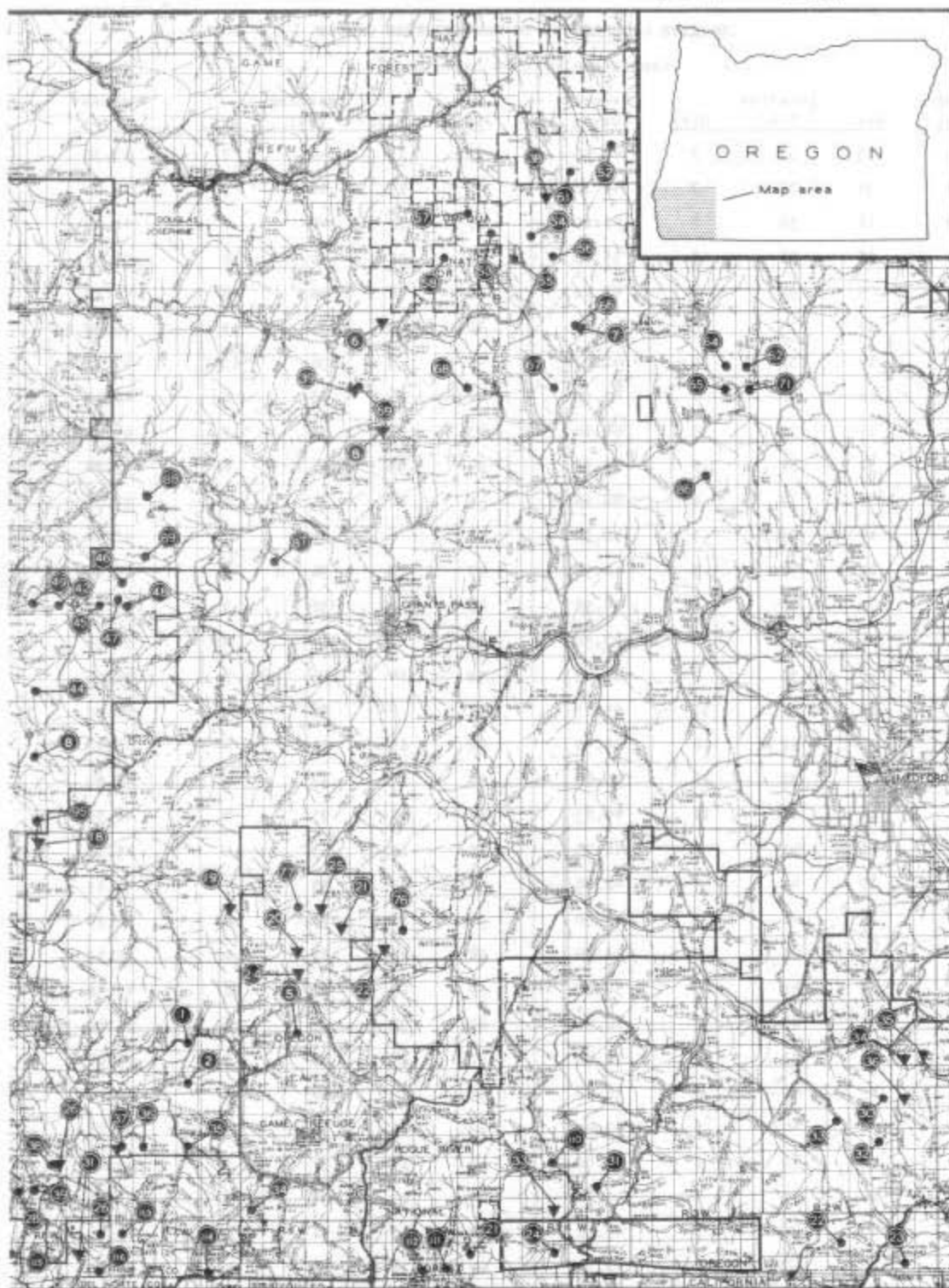
Judging from the inaction in setting up a program for the purchase of domestic chrome ore, Government agencies who have to do with mineral procurement under the Defense Production Act of 1950 are not worried about chromite. The brief statistics outlined above indicate that any such complacency is dangerous. If a war should come this summer, no substantial domestic production of chromite could be had for another year at least because, in the absence of a definite Government purchase plan, miners will not put their properties into condition to produce, and nothing can be done on most of the properties during the winter months. It appears difficult for those in authority to understand that judgment of conditions and planning based on knowledge of mining of copper, lead, and zinc is not valid for chrome mining in Oregon and California. Also chrome miners are in a class by themselves and the number is getting fewer and fewer. In another month most of them will be in the logging camps.

F.W.L.

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R. 6 W. R. 7 W. R. 8 W. R. 9 W. R. 10 W. R. 11 W. R. 12 W.



## CHROMITE OCCURRENCES IN SOUTHWESTERN OREGON

Samples Analyzed by Department\*

Map No.	Sec.	Location T(S)	R(W)	Percent Cr <sub>2</sub> O <sub>3</sub>	Map No.	Sec.	Location T(S)	R(W)	Percent Cr <sub>2</sub> O <sub>3</sub>
1	3	39	7	41.50	35	15	40	7	43.70
2	34	39	7	40.18	36	17	40	7	47.80
3	18	39	8	42.60	37	18	40	7	41.00
4	18	39	8	55.40	38	22	40	8	58.52
5	4	39	6	47.20	39	28	40	8	42.20
6	19	39	8	48.14	40	5	36	9	40.37
7	14	39	9	41.81	41	3	36	13	47.12
8	16	37	8	42.57	42	10	36	8	49.10
9	17	37	9	44.60	43	34	36	9	54.10
10	32	37	9	46.67	44	33	36	8	47.90
11	11	37	9	46.69	45	12	36	8	57.87
12	19	37	9	40.50	46	6	36	7	52.40
13	22	37	9	48.30	47	7	36	7	46.80
14	30	37	9	54.52	48	7	36	7	49.10
15	26	37	9	47.50	49	9	36	8	51.56
16	29	35	9	44.03	50	14	36	9	41.60
17	16	32	12	45.19	51	8	36	14	42.40
18	12	32	10	49.50	52	25	32	4	48.23
19	19	32	12	50.10	53	13	33	5	48.70
20	16	41	11	40.83	54	17	33	4	46.72
21	11	41	5	48.99	55	19	33	4	45.10
22	10	41	2	42.20	56	21	33	4	43.15
23	18	41	1	47.50	57	11	33	5	54.20
24	9	41	4	43.10	58	22	33	5	55.40
25	8	41	9	50.80	59	23	33	12	45.50
26	1	41	8	40.92	60	34	33	12	48.80
27	2	41	11	52.60	61	34	32	4	45.00
28	29	40	8	56.08	62	13	34	3	46.60
29	8	40	9	43.95	63	16	34	9	40.85
30	1	40	2	51.00	64	14	34	3	49.20
31	26	40	4	55.90	65	23	34	3	49.10
32	13	40	2	47.10	66	3	34	4	46.30
33	10	40	2	42.20	67	21	34	4	50.40
34	31	40	6	42.90	68	23	34	5	46.30

\* Analyses below 40 percent not listed.

Map No.	Sec.	Location T(S)	R(W)	Percent Cr <sub>2</sub> O <sub>3</sub>	Map No.	Sec.	Location T(S)	R(W)	Percent Cr <sub>2</sub> O <sub>3</sub>
69	24	34	6	47.06	96	1	37	9	46.20
70	14	34	12	45.80	97	3	37	9	41.60
71	24	34	3	52.50	98	10	37	9	46.60
72	5	38	9	44.44	99	16	37	9	48.30
73	23	38	9	54.10	100	21	37	9	51.60
74	29	38	9	45.30	101	28	37	9	52.40
75	21	38	9	40.04	102	31	37	9	47.00
76	29	38	5	40.90	103	33	37	9	48.50
77	21	38	6	47.60	104	34	37	9	44.43
78	7	38	8	55.40	105	4	37	13	42.40
79	6	38	9	41.60	106	25	37	13	40.90
80	7	38	9	45.80	107	9	37	14	47.80
81	27	38	9	45.80	108	3	39	9	45.80
82	32	38	9	45.28	109	8	39	9	45.30
83	2	38	10	46.01	110	21	40	4	43.08
84	15	32	12	45.40	111	15	41	5	41.00
85	21	32	12	49.00	112	16	41	5	43.30
86	10	35	3	55.04	113	6	41	7	46.30
87	32	35	6	49.30	114	14	41	7	41.70
88	17	35	7	49.30	115	8	41	8	44.20
89	32	35	7	45.00	116	13	41	8	50.40
90	25	35	9	49.15	117	4	41	9	62.40
91	10	35	12	49.10	118	5	41	9	51.20
92	30	36	8	40.80	119	7	41	9	43.56
93	21	37	9	44.80	120	12	41	10	41.60
94	30	37	8	48.50	121	4	41	12	43.45
95	33	37	8	53.50					

A list of former producers of chromite as well as some additional known occurrences is given on the following page. Analyses of samples of three of these occurrences show less than 40 percent Cr<sub>2</sub>O<sub>3</sub>.

Map No.	Name	Location Sec. T(S) R(W)			Percent Cr <sub>2</sub> O <sub>3</sub>	Map No.	Name	Location Sec. T(S) R(W)			Percent Cr <sub>2</sub> O <sub>3</sub>
1	Trails End	35	31	14		22		31	38	5	
2	Salmon Mt.	20?	32	12		23		22	38	6	
3	Independence	36	33	12		24		4	39	6	
4	Illaha	29	34	11	48.	25	Chollard	18	40	7	49.
5	Agness	13	35	12		26	Esterley	22	40	8	
6	Graves Cr.	6	34	5	35.	27		31	38	9	
7	Chrome King	3	34	4		28	Windy Valley	9	37	12	
8	Hammersley	31	34	5		29	Chetco	8	38	12	
9	Signal Buttes	31	36	13	50.	30	Sourdough	36	40	11	43.03
10	Game Lake	27	36	12		31	Owen	11	41	8	
11	Sordy (Briggs Cr.)	14	36	9	40.	32	Burro Claim	30	37	9	35.84
12	Elkhorn	24	36	9	47.	33		33	40	4	
13	Horse Mt.	3	37	9	35.	34		30	39	1	
14	Black Rock	10	37	9		35	Cass Ranch	29	39	1	
15	Oregon Chrome	21	37	9	47.01	36	Horseshoe	6	40	1	
16	Shade	21	37	9		37	Oregon Chro- mite No. 1	20	37	9	44.32
17	Dailey Cr.	36	37	10	44.73	38	Starveout Cr.	5	33	4	40.
18	Squaw Cr.	4	38	8		39	Sexton Peak	24	34	6	
19		24	38	7		40	Black Beauty	21	37	9	45.59
20		33	38	6		41	Deep Gorge	32	37	9	45.17
21	Mungers Cr.	26	38	6							

(R.S.M.)

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## TUNGSTEN ORE PURCHASE BY THE GOVERNMENT

On April 24, 1951, the press announced that the General Services Administration, Washington, D.C., had decided to buy tungsten ore at a price of \$63 a short ton unit. (No specifications were given but presumably they would be the standard specifications of ore of known good quality, basis of 60 percent WO<sub>3</sub>.) The directive from GSA stated that the guaranteed price would extend over a period of five years and would apply only to (1) newly discovered or developed ore, and (2) production above 1950 levels "where this is excess production" (Not very clear. Ed.) with some exceptions to be approved by the administrator. In order to obtain the benefits under the ruling, tungsten miners and tungsten prospectors must register with GSA in the United States Courthouse Building, Seattle. Buying of ore is scheduled to begin July 1. It is stated that notification to GSA may be in the form of a letter, telegram, or postcard postmarked not later than midnight June 30.

What happens if a prospector looking for some other mineral and not previously interested in tungsten happens to stumble onto a commercial deposit after June 30? According to the press notice, he would be disqualified from selling the needed tungsten ore to the government.

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## RESOLUTION

IT IS RESOLVED by the Board of Governors of the Oregon State Department of Geology and Mineral Industries, in session this 30th day of March 1951, that

WHEREAS this board has been advised through the press and otherwise:

1. That this country is at a critical point of international relations;
2. That a vast defense program has been ordered by Congress;
3. That in order to implement this program certain metals are vital; and

WHEREAS this board has been informed that metallurgical grade chrome is essential and over 90 percent of requirements comes from overseas;

This board heretofore has advised the DMA and other Government departments that it believes that southwestern Oregon and northwestern California can produce substantial tonnages of metallurgical chrome, if

- (a) A price is set that is realistic as related to local economic conditions;
- (b) Contracts be given for a long enough time to permit proper exploration, development, and production;
- (c) There be immediate commencement of this program because of the necessity of road development and preliminary work which must be done during the dry season:

NOW THEREFORE this board, being the department of the government of the State of Oregon charged by law with encouraging and developing mineral production in this State, respectfully demands to be advised by Defense Minerals Administration, as follows:

- (1) Does DMA believe there is a crisis?
- (2) In the opinion of DMA, is metallurgical-grade chrome necessary for national defense?
- (3) Does DMA wish to develop chrome production of metallurgical grade, in southwestern Oregon and other portions of this State and elsewhere, or not?

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## OREGON MINING NOTES

Mr. Lester L. Sibley of Medford, Oregon, has formed the Tyrrell Manganese Company which will reopen the old Tyrrell manganese mine located east of Medford in the Lake Creek area. It is stated that the company will install a 50-ton concentrating mill which will be used also for custom milling.

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Mr. H. L. Wadell, Grants Pass, has leased the Liberty mine which contains white tremolite asbestos and will operate under the name of Oregon Asbestos and Mining Company. The Liberty mine is located on Cedar Springs Mountain in northern Jackson County.

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Pedro Brothers are placing on lower Connor Creek in southeastern Baker County. Operations are located about 2 miles from the mouth of the creek.

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The M. A. Hanna Company has started testing the nickel deposit located on Nickel Mountain near Riddle in southern Douglas County, Oregon. A test shaft is being sunk and two rigs owned by the C. Kirk Hillman Company, Seattle, Washington, are churn drilling.

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## TIDELANDS BILL INTRODUCED

Thirty-five United States senators have introduced legislation (S.940) in Congress to quit-claim tidelands to adjoining states. This bill, almost identical to one introduced a year ago, would quitclaim all offshore lands to the states to the low-water mark out 3 miles or to their historical boundaries. (From Compact Comments, March 1951, published by the Interstate Oil Compact Commission)

## EXEMPTION OF ASSESSMENT WORK FOR THOSE IN MILITARY SERVICE

The Soldiers and Sailors Civil Relief Act of 1940 exempted assessment work on mining claims for those claimants in military service. The Act specifies that the holder of a mining location who desires to obtain the relief and protection under this act must, before the expiration of the assessment year during which he enters the military service, file or cause to be filed in the county recording office in which the location notice or certificate is recorded, a notice that he has entered such service and that he desires to hold the mining claim under provisions of the Soldiers and Sailors Civil Relief Act of 1940. If application for patent to the mining claim has been made, notice of the military service must also be filed in the proper district land office.

It was specified in the act that it should remain in force until May 15, 1945, but that should the United States be then engaged in a war, the act would remain in force until such war is terminated by treaty of peace proclaimed by the President and for six months thereafter. Since no treaty of peace has been proclaimed by the President, the act remains in effect. In 1947 Congress changed some of the relief provisions of the act but not the provisions relating to holders of mining claims.

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## PRICE FOR CHROMITE

A House of Representatives subcommittee was told that the DMA has recommended a government floor price of \$115 a ton for 48 percent chrome ore, with a \$4 premium for each 1 percent over the 48 percent analysis and a \$3 penalty for each 1 percent below. Concentrates would be bought at \$110 a ton. (From the morning Oregonian, April 21, 1951)

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## TOPOGRAPHIC MAPPING IN OREGON

Topographic mapping in Oregon during 1950 by the Topographic Division of the U.S. Geological Survey covered 704 square miles. The newly mapped areas represent seven-tenths of one percent of the total area of the State. Total area mapped is now 38,008 square miles, or 39.2 percent of the State, but some coverage is not of first-grade quality.

Comparable topographic mapping programs during the last fiscal year are as follows: California, 5,669 square miles mapped with 84.1 percent total coverage; Washington, 2,374 square miles with 68.4 percent of the State covered; Idaho, 1,127 square miles and 48.6 percent of the State mapped.

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## WESTERN ALUMINUM OUTLOOK

Northwest aluminum plants would have to expand approximately 60 percent, or from 320,000 short tons to 517,500 short tons if they are to maintain their relative production to national capacity by 1960. This is the forecast of Nathanael H. Engle, director, Bureau of Business Research, University of Washington.

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Pointing out that western aluminum producers are penalized by having to pay freight in excess of \$8 a short ton on alumina, this economist reports that Pacific Northwest producers would materially improve their competitive position by building Bayer process alumina plants in that area. He states that evidence exists that costs of producing alumina at Pacific tide water points should be no higher than elsewhere.

(From Iron Age, West Coast Edition, April 5, 1951)

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