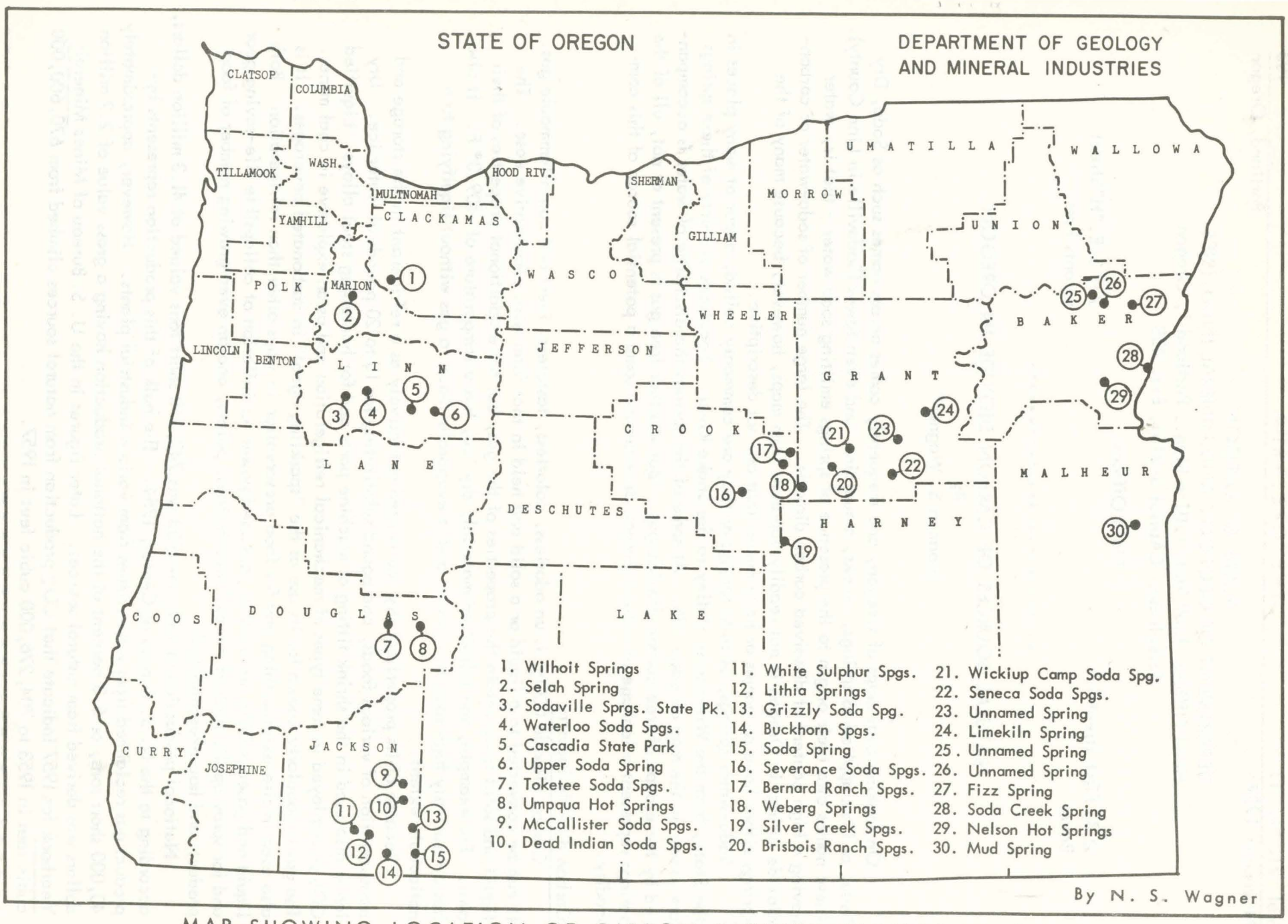

MAP SHOWING LOCATION OF CARBON DIOXIDE SPRINGS IN OREGON

STATE OF OREGON
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
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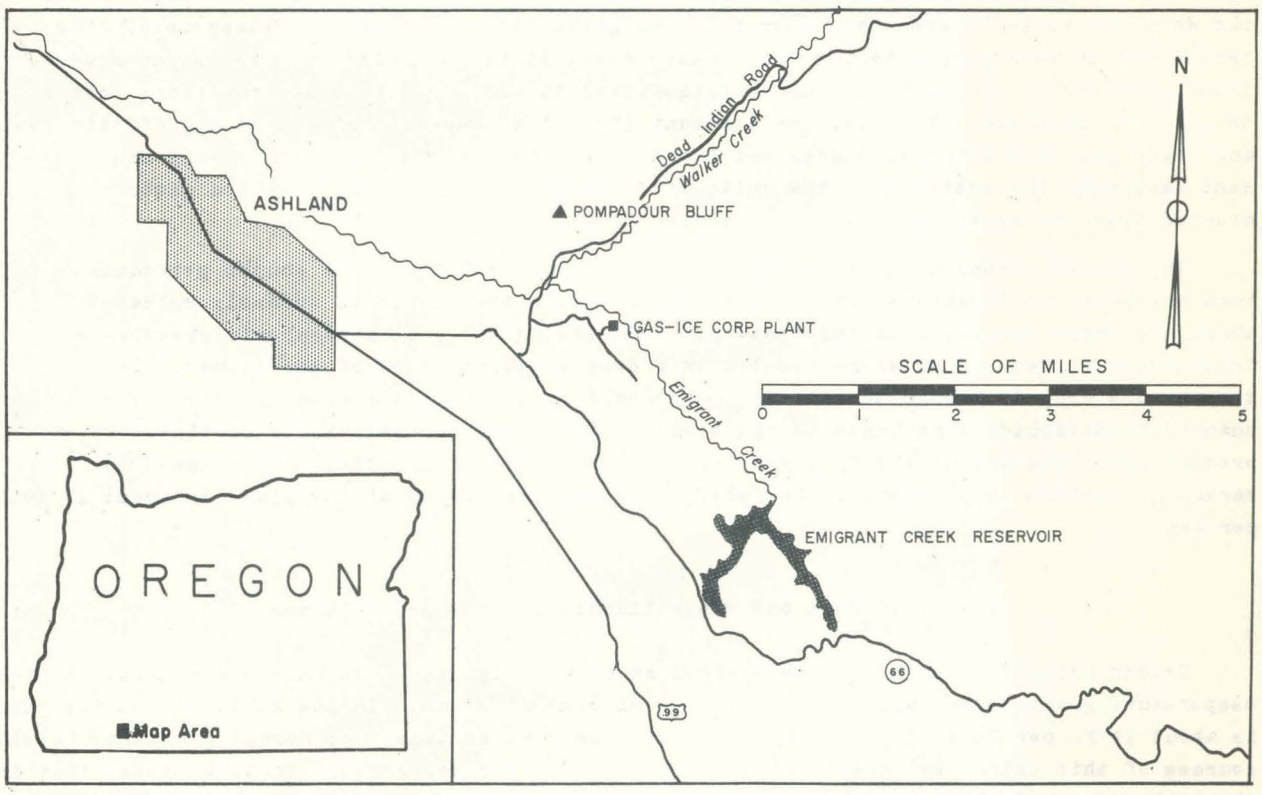
OCCURRENCE AND UTILIZATION OF CARBON-DIOXIDE-RICH WATER NEAR ASHLAND, OREGON

By
Max Schafer*

Introduction

Natural carbon-dioxide gas for the manufacture of solidified carbon dioxide (dry ice) is one of Oregon's lesser-known mineral products. Southeast of Ashland, Gas-Ice Corporation, whose headquarters are in Seattle, Washington, has an operation that obtains carbon dioxide from ground water in such quantities that in 1952 (latest U.S. Bureau of Mines figures) Oregon was the third-ranking state in the nation in the value of this product. The Ashland plant is the only one in the State that produces natural carbon dioxide. Portland Gas and Coke Company manufactures a liquid carbon dioxide scrubbed from flue gases.



Index Map

Reportedly the dry-ice industry came into being because of a British surgeon's liking for soda water with his Scotch whiskey. At his station in India, natural carbonated water, which came for the most part from Vichy, France, was often hard to come by. Through experimenting he was finally able to produce solidified carbon dioxide with which he could carbonate tap water, and he was happily assured of a steady supply of soda water. This use of dry ice for soda water is still important, although the refrigerating uses have since far surpassed it. Almost all "soda pop" and soda water is artificially carbonated with dry ice at the bottling plants.

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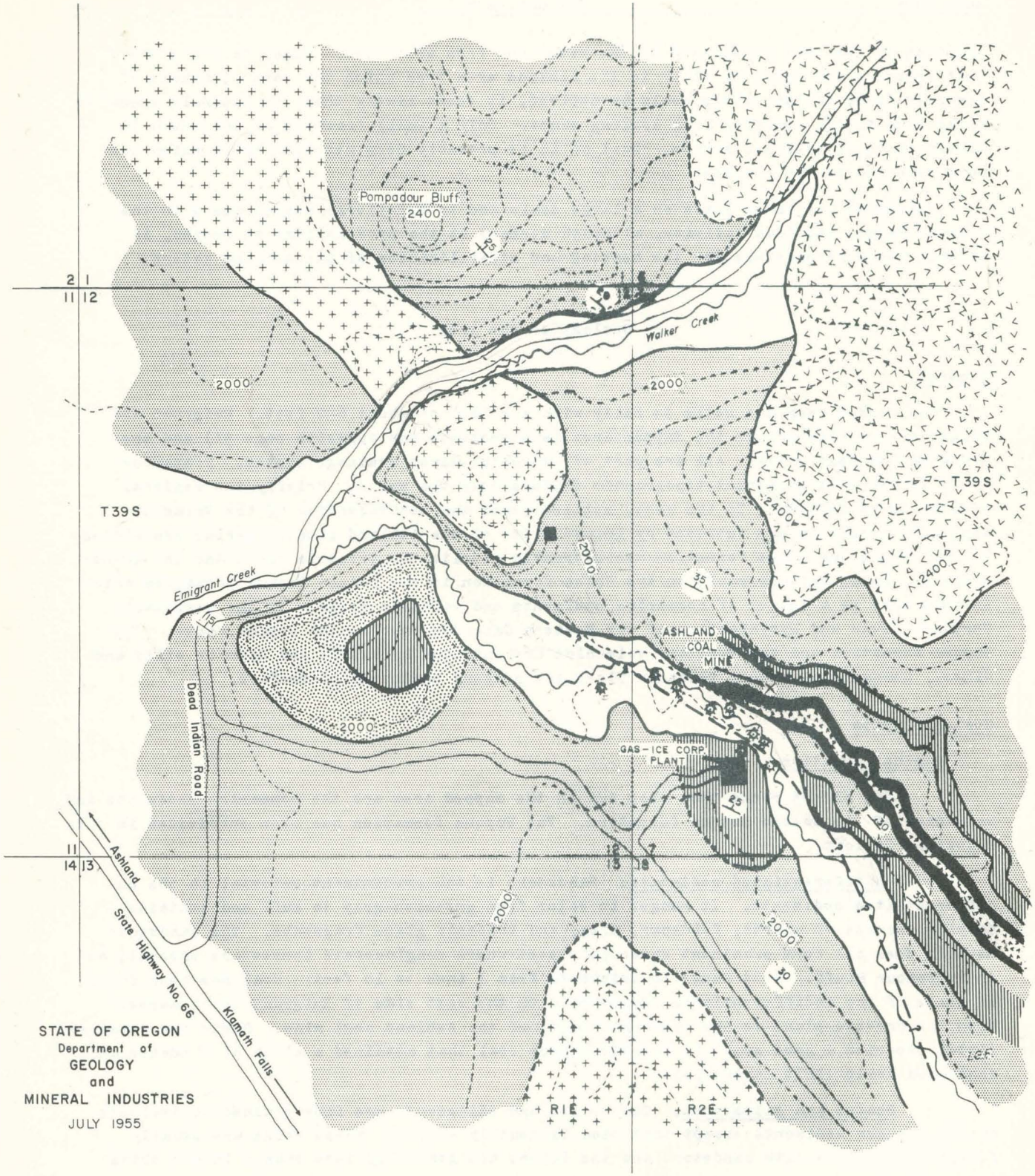
* Geologist, State Department of Geology and Mineral Industries.



STATE OF OREGON
Department of
GEOLOGY
and
MINERAL INDUSTRIES
JULY 1955

Geology of Area Around Gas–Ice Corp. Plant Near Ashland, Oregon.

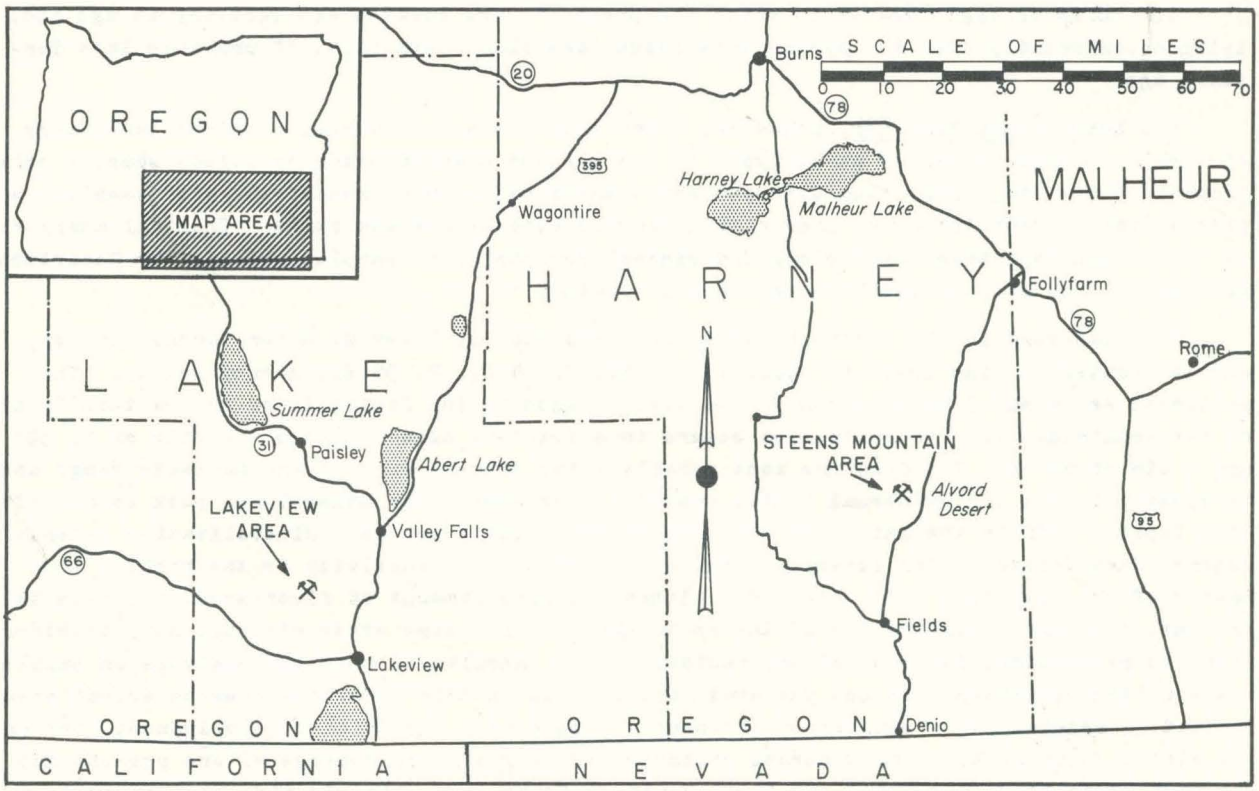
SCALE OF FEET

0 1000 2000 3000 4000 5000 6000

CONTOUR INTERVAL 80 FEET

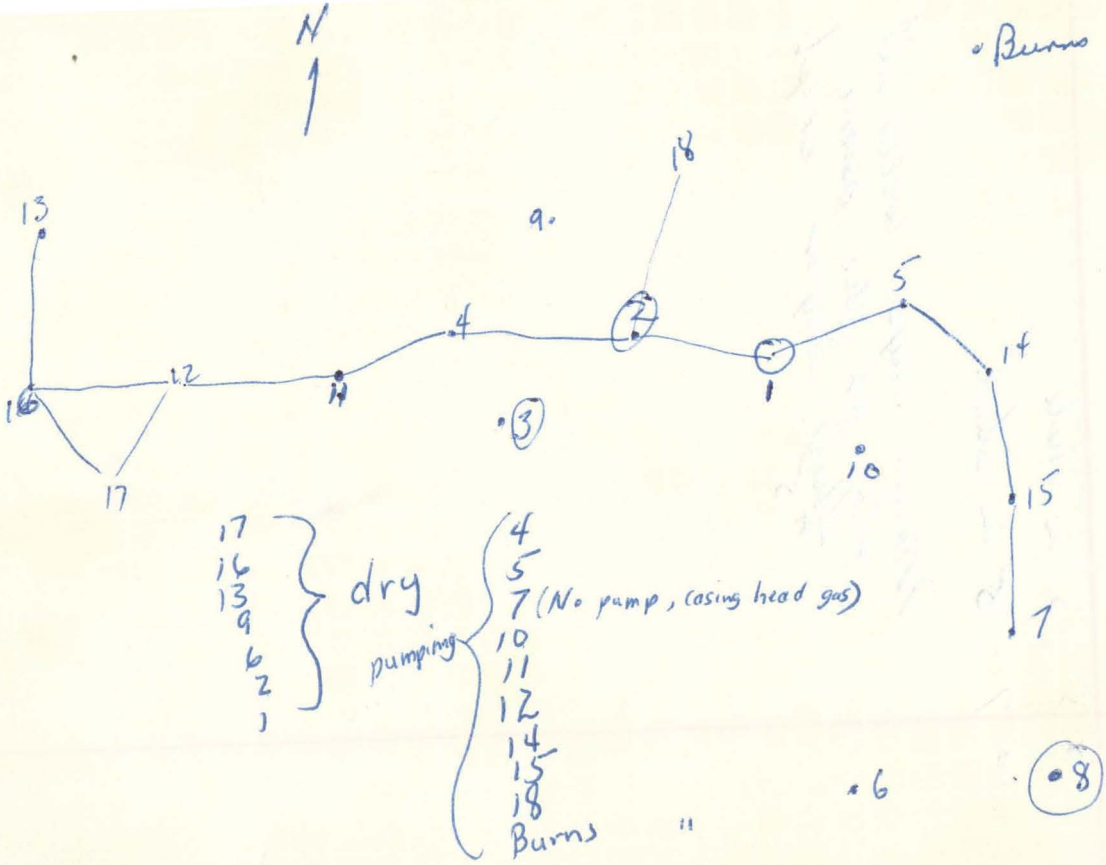
COMMERCIAL URANIUM DEPOSITS FOUND IN OREGON

Discovery of commercial-grade uranium deposits in two separate localities (see index map) in Oregon during June has recently been announced. Examinations of the prospects by geologists of the State of Oregon Department of Geology and Mineral Industries confirmed the presence of secondary uranium minerals and high radioactive anomalies in the areas of the prospects. Preliminary development indicates that both localities are capable of furnishing some tonnage of ore.

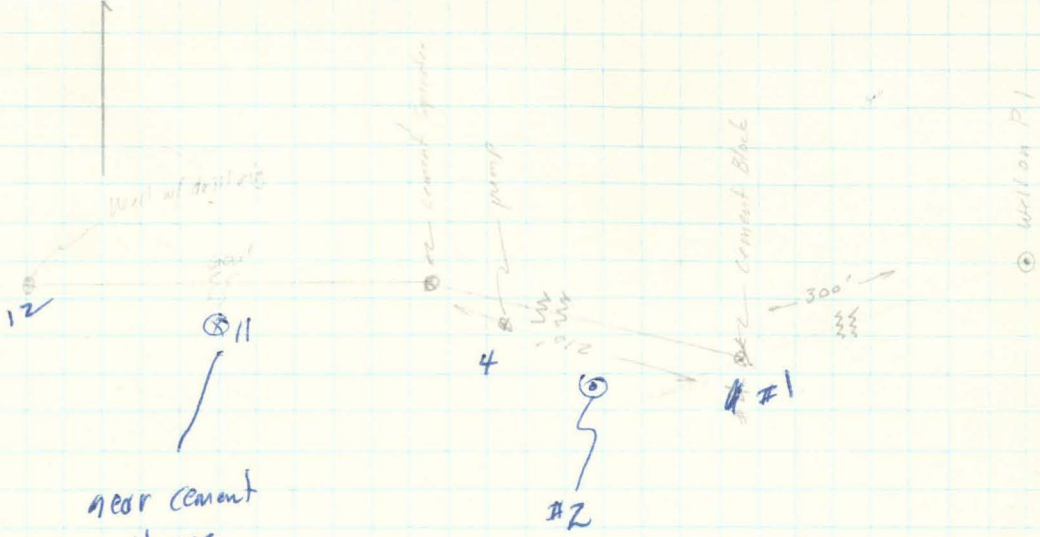


Index Map

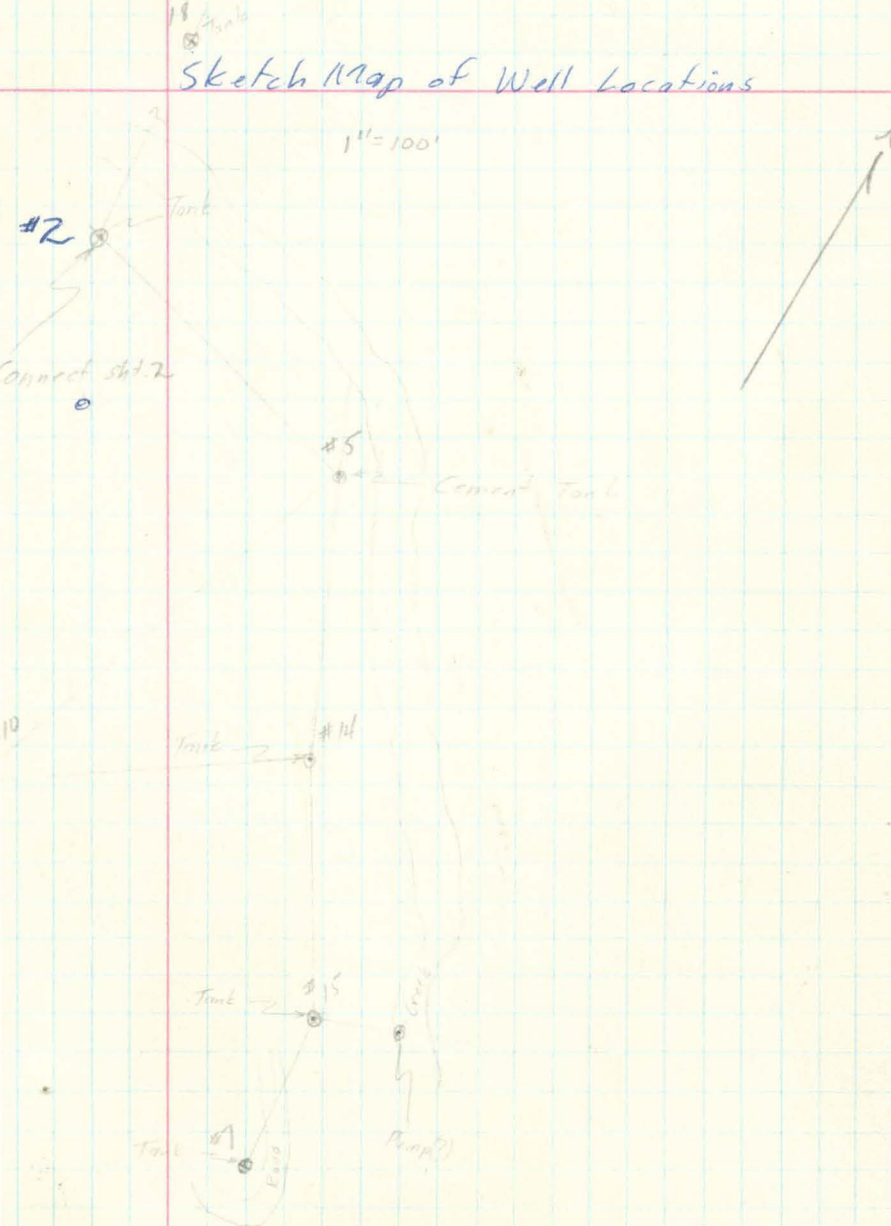
Deposits near Lakeview are located on Augur Creek in sec. 30, T. 37 S., R. 19 E. and in sec. 25, T. 37 S., R. 18 E. The area is approximately 14 miles northwest of Lakeview in Lake County. The original discovery was made on claims of the White King group by John Roush and Don Tracy, Lakeview. The early development work on these claims shows that a fluorescent, yellowish-green mineral thought to be autunite and a bright green, nonfluorescent mineral which may be torbernite are the principal uranium minerals. Associated minerals are mercury sulphide (cinnabar) and arsenic sulphides (realgar and orpiment). The host rock is volcanic tuff that has been silicified and altered. In places it is banded and is similar to opalite, a rock consisting of a mixture of chalcedony, quartz, and opal. Flaky crystals and masses of autunite fill fractures in the brittle opalite, and irregular disseminations of torbernite and autunite are found in the clayey, altered tuff. Occasionally a bright-green mineral, torbernite (?), is found as bladed aggregates in the form of rosettes, which may be as much as half an inch in diameter, and as small rectangular crystals. The mercury and arsenic sulphides occur as small irregular streaks and crystals in the host rock. Northwest-trending fractures cut the rocks of the exploration pits and may possibly control the mineralization. The exploration to date indicates an outcrop width of about 100 feet, and high radioactive anomalies are found along what is thought to be the strike for at least 300 feet. No definite uranium mineral is found in the pits until a depth below the soil zone of a foot or more is reached.

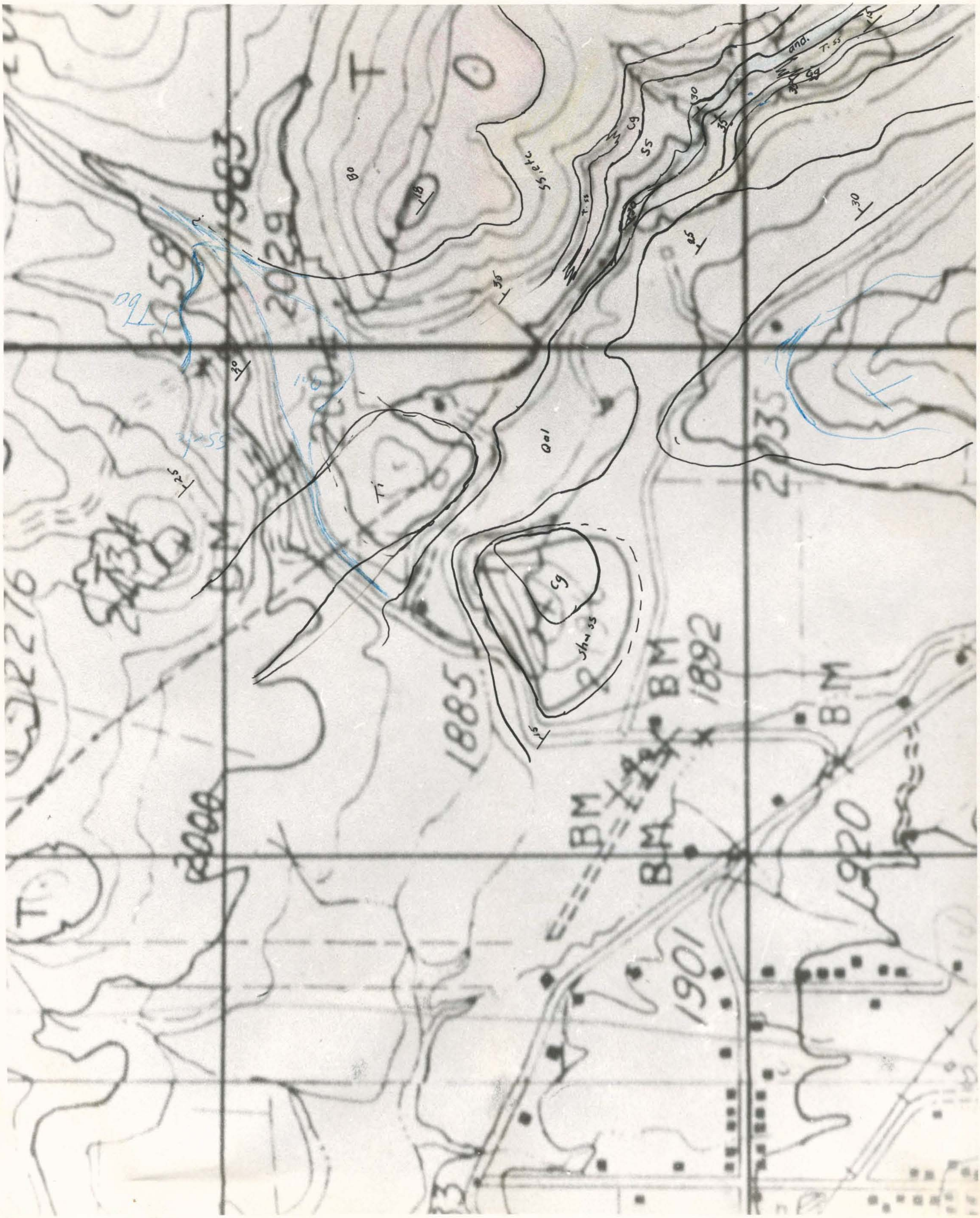

N
1
Burns
18
13
9.
5
4
2
14
12
16
11
1
3
10
17
15
7
6
8
dry
17
16
13
9
6
2
1
pumping
4
5
7 (No pump, casing head gas)
10
11
12
14
15
18
Burns

Well Locations Sheet 2



Sketch Map of Well Locations





BM
1885
BM
1892
B.M
BM
BM
1901
1920
2035
2029
Qal
Cg
Ss