

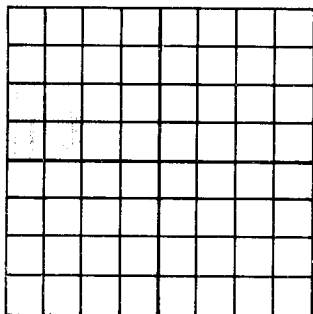
APPLICATION FOR PERMIT TO DRILL A GEOTHERMAL WELL
(To be accompanied by a \$25.00 permit fee for new wells only and a surety bond conditioned as provided by law.)
1979

Department of Geology and Mineral Industries
Portland, Oregon 97201

Portland, Oregon May 3, 1979

In compliance with rules and regulations pursuant to ORS 522 (Chapter 776 OL 1971) application is hereby made for permit to drill

a (new well / prospect well): Northwest Natural Gas Company U.S. Forest Service
Zigzag River SW 1/4 of (company or operator) (lease)
Well No. 1 in NW 1/4 of sec. 14, T. 3S, R. 8E W. B. & M.,
Field, Clackamas County.



Section of land
Area 640 acres

This well is 1,800 feet ~~(S)~~ of the north line and 400 feet
(E) of the west line of Section 14.

(Give location from section or other legal subdivision lines or corners; cross out wrong directions.)

Elevation of ground above sea level is 3,120 feet. All depth measurements are taken from
top of rotary table, which is + 3.0' above ground.

The lessee is on application

Address U.S. Forest Service Mt. Hood District

The lessor is _____

LOCATE WELL CORRECTLY Address _____

We propose to use the following strings of casing and to land or cement them as herein indicated:

Size of hole	Size of casing	Weight in pounds per foot	Grade and type	New or second hand	Depth	Landed or cemented No. sacks cement
12	8-5/8	22	F-25	New	200	Cement to Surface

Method of drilling: rotary X, cable _____, other _____.

Proposed objectives: Drill 6" hole to a depth of 2,000 ft.
Install 2" tubing to 2,000 ft., capped on lower end and filled with water
Monitor earth temperature

Approved June 1, 1979
except as follows: Stipulations approved
by the Governing Board of the
Department will be made a condition
of this permit
DEPT. OF GEOLOGY & MINERAL INDUS.
By _____ Director

Northwest Natural Gas Company
company or operator
By Edward A. Rowan Project Manager
position
Send communications regarding well to:
Name _____
Address _____