

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.)

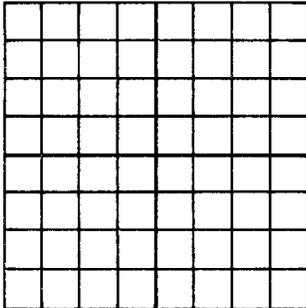
Portland, Oregon August 22, 1977

Department of Geology and Mineral Industries
Portland, Oregon 97201

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
(company or operator) (lease)

Well No. A in proj of sec. 15, T. 2S, R. 8E WM W. B. & M.,
Old Maid Flat (see location plat) Field, Clackamas County.



Section of land
Area 640 acres

This well is _____ feet (N) (S) of the _____ line and _____ feet
(E) (W) of the (see attached map) line of _____.

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

Elevation of ground above sea level is 2720 feet. All depth measurements are taken from
top of Rotary Table, which is ± 3.0' above ground.

The lessee is Exploration Permit

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
20"	16"	55	F-25	New	50'	45 sacks
15"	10 3/4"	32	F-25	New	200'	115 sacks

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

Proposed objectives: Drill 6" hole to a depth of 2000 Ft
Install 2" tubing to 2000', capped on the lower end and filled with water
Monitor earth temperature

Northwest Natural Gas Company
company or operator

By _____ position

Send communications regarding well to:

Name _____

Address _____

Approved August 22, 1977
except as follows:
USGS Regs to Apply
DEQ 2/27/75 to apply
Condit. on archeol. requiremtns
DEPT. OF GEOLOGY & MINERAL INDUS.
By Ralph M. May Director