

APPLICATION FOR PERMIT TO DRILL A GEOTHERMAL WELL
(To be accompanied by a ~~525.00~~ permit fee for new wells only and a surety bond conditioned as provided by law.)

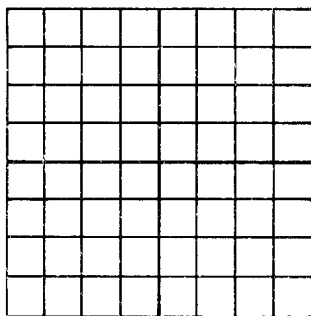
Portland, Oregon February 15, 1980
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FEB 28 1980

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 a permit to drill

a (new well / prospect well): Northwest Natural Gas Co. OR 13994
(company or operator) (lease)

Well No. 7A in NE 1/4 of sec. 15, T. 2S, R. 8E W. B. & M.,
Old Maid Flat Field, Clackamas County.



This well is 2460 feet (~~N~~) (S) of the N line and 2091 feet
(~~E~~) (W) of the E line of Sect. 15.

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

Elevation of ground above sea level is 2760 feet. All depth measurements are taken from
top of Surface csg., which is 0 above ground.

The lessee is Northwest Natural Gas Company

Address _____

Section of land
Area 640 acres

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
26"	16"			New	Max. 100'	To Surface
14-3/4"	10-3/4"	40.5 #/ft	K55	New	1000'	200 ft. 3
9-3/4"					800' to 3200'	
9-3/4"	7-5/8"	26.4 #/ft	K55	Liner	800' to 3200'	W/packers

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

Proposed objectives:

Drill and test structure and fluids to 5000'. The liner will be run if required to complete testing.

Approved April 2, 1980
except as follows.

DEPT. OF GEOLOGY & MINERAL INDUS.
By Simon C. Newton Director
Petroleum Engineer

Northwest Natural Gas Co.
company or operator
By _____, Exploration Supervisor
position

Send communications regarding well to:

Name W.F. Covert

Address 123 N.W. Flanders

Portland, Oregon 97209

(Submit in triplicate)