

APPLICATION FOR PERMIT TO DRILL AN OIL OR GAS WELL

(To be accompanied by a \$100 permit fee, a surety bond conditioned as provided by law, and evidence of mineral rights ownership or lease.) This application becomes a permit to drill when signed and dated by DOGAMI in box below.

In compliance with rules and regulations pursuant to ORS 520, application is hereby made for permit to drill

(a gas well) to be known as Northwest Natural Gas Company NNG (Company or operator) (Lease) IW 13b-11 (Well No.)

in SW 1/4 of Sec. 11, T. 6N, R. 5W W.B.&M. Directional? No Yes X

Survey Coordinates: 80' South and 250' East from the West 1/4 corner (bottom hole location)

Wildcat: _____ (or) Field Name: Mist Underground Storage County: Columbia

Elevation of ground above sea level is 850 feet. All depth measurements are taken from _____

Kelly Bushing, which is 11.4 feet above ground.

Lessor (Mineral Owner): 222 Northwest Natural Gas Co.

Address: 220 N.W. Second Ave., Portland, Or. 97209

Surface Owner: 285 Cavenham Forest Industries

Address: 62424 N. Nehalem Highway, Vernonia, Or. 97064

Lessee: 222 Northwest Natural Gas Co.

Address: 220 N.W. Second Ave., Portland, Or. 97209

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/Type	Depth	Amount of cement
17 1/2"	13 3/8"	54.5	K-55	450'	545 sx
12 1/4"	8 5/8"	36.0	K-55	2100'	950 sx

Geologic Objectives Clark and Wilson Sand

Proposed Depth 2600' TVD

Company/Operator Oregon Natural Gas Development ²²⁹

Signature Todd Thomas

Position Senior Operations Superintendent

Date 8/3/90

SEND WELL COMMUNICATION TO:

Name Todd Thomas

Address 221 N.W. Second Ave.

Portland, Or. 97209

Phone 220-2573 (Day) 359-4956 (Night)

DOGAMI Approved August 29, 19 90
 This well is permitted as a gas injection withdrawal service well, and is not permitted as an exploratory production well. The July 1987 stipulations approved by the State Geologist are conditions of this permit. Notify DOGAMI to witness BOP test.
 By Dennis L. Olmstead
Dennis L. Olmstead, Petroleum Engineer

NOTE: (1) Issuance of this permit is not a finding of compliance with the Statewide Planning Goals or the acknowledged comprehensive plan. (2) Permit expires one year from date of issue. (3) Land use approval must be obtained from the county or city in which the drilling takes place. (4) Unless specifically exempted, permittee is obligated to comply with all current applicable statutes and rules including those adopted after permit issuance.