

APPLICATION TO DRILL OIL OR GAS WELL
STATE OF OREGON • DEPT OF GEOLOGY & MINERAL INDUSTRIES • 229 BROADALBIN ST SW • ALBANY OR 97321
 (In compliance with rules and regulations pursuant to ORS 520.)

2022

(1) Permittee Information

Name	NW Natural
Mailing Address	220 Northwest Second Ave.
City/State/Zip	Portland, OR 97209
Telephone	(503)226-4211
Fax	(503)220-2595
Email	Todd.thomas@nwnatural.com
Prepared by	Todd Thomas
On Site Contact	Ed Vader
Phone (day)	(780) 712-2986
Phone (night)	
Other	

(2) Well Information

County	Columbia
Lease	Northwest Natural Gas
Well No.	OM 23c-11-65
Location	1/4 SW S 11 T 6N R 5W
Wildcat or Field Name	Mist Storage
Surveyed SHL Coordinates. For directional wells include BHL.	SHL: 1735' East and 280' South from the West ¼ corner section 11; T6N; R5W BHL: 1700' East and 835' South from the West ¼ corner section 11; TN6; R5W
Geologic Objective	Clark and Wilson Sand
Proposed Depth	3363' MD

Todd Thomas
Signature

Project Manager
Title

May 13, 2005
Date

(3) Lease/Ownership (if other than applicant)

	Lessor (mineral owner)	Surface Owner	Lessee
Name	Northwest Natural Gas	Longview Fibre Co.	Northwest Natural Gas
Mailing Address	220 NW Second Ave.	P.O. Box 667	220 NW Second Ave.
City/State/Zip	Portland, OR 97209	Longview, WA 98632	Portland, OR 97209
Telephone	(503)226-4211	(360)575-5100	(503)226-4211
Fax	(503)220-2595	(360)575-5932	(503)220-2595
Email	Todd.thomas@nwnatural.com		Todd.thomas@nwnatural.com

(4) Proposed Well Design (use additional sheets if necessary)

Size of hole	Size of Casing	Weight (pounds per foot)	Grade/Type	Depth	Type and Amount of Cement	
12 ¼"	8 5/8"	32	J-55	480	Premium Plus	47 bbls.
7 7/8"	5 ½"	17	J-55	3360	Premium Plus	132 bbls.
						bbls.
						bbls.

(5) Slurry Design for each String (use additional sheets if necessary)

String 1	Annulus height	HT. left in casing	Excess	Density
Tail	293 ft.	40 ft.	5 bbls.	14.0 ppg.
Lead	187 ft.	0 ft.	3 bbls.	13.5 ppg.

String 2	Annulus height	HT. left in casing	Excess	Density
Tail	1942 ft.	40 ft.	18 bbls.	14.8 ppg.
Lead	1418 ft.	0 ft.	9 bbls.	13.0 ppg.

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MLRR
 36-009-00361
 #543

(6) Geologic Information - if known (use additional sheets if necessary)

	1	at
Assumed fracture gradient of rock vs. depth	0.77 psi/ft	440 ft.
Pore gradient of rock vs. depth (if known)	.441 psi/ft	ft.

2	at
0.86 psi/ft	990 ft.
psi/ft	ft.

3	at
psi/ft	ft.
psi/ft	ft.

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