BEFORE THE ENERGY FACILITY SITING COUNCIL
OF THE STATE OF OREGON

In the Matter of the Amendment
of the Underground Storage Facility Site Certification
Agreement Between the State of Oregon Acting By and Through its Energy Facility Siting Council and Northwest Natural Gas Company

APPLICATION FOR SITE CERTIFICATE AMENDMENT

Northwest Natural Gas Company ("NNG") hereby applies to the Energy Facility Siting Council ("EFSC" or "Council"), pursuant to Parts V and VII of the Mist Underground Storage Facility Site Certificate Agreement ("Certificate"), as amended, for authority to amend the Certificate to add four injection/withdrawal wells, two of which are replacements for nonfunctioning or marginal injection/withdrawal wells and two of which are additional injection/withdrawal wells.

I. INTRODUCTION

The Certificate for underground storage of natural gas at the Mist site was issued by the Council on September 30, 1981 to Oregon Natural Gas Development Corporation ("ONG"), a subsidiary of NNG. The assets of the Mist storage project were transferred from ONG to NNG effective April 11, 1988, subsequent to approval by the Oregon Public Utility Commission. (OPUC Order 88-375, Docket UP 38). Therefore NNG is the entity applying for this Amendment. By its terms the Certificate contemplated this
transfer and applies equally to NNG and ONG: "Any reference herein to ONG shall also include NNG". Certificate, p. 1.

The Certificate was granted after public hearings pursuant to CRS 469. It approved construction and operation of an underground storage facility for natural gas in the Flora and Bruer reservoirs and related facilities.

Two amendments have been made to the Certificate:
Amendment No. 1, executed on October 29, 1987, extended the construction time for the project. In addition, Amendment No. 1 states as follows at Part V.1 of the Certificate:

"It is agreed by ONG and EFSC that construction or replacement of any monitoring well, injection/withdrawal well, pipeline or gathering line * * shall require an amendment of this agreement as provided in Part VII below." Amendment 1, Part V.1.

Amendment No. 2, executed on August 2, 1988 added one monitoring well.

**II. PERFORMANCE OF INJECTION/Withdrawal Wells**

The completed storage facility began full-scale operations with injection of natural gas during the summer of 1989 and full withdrawal during the 1989/1990 heating season. One full annual injection withdrawal cycle has now been completed
and the operation is in its second injection cycle.

NNG has examined the results obtained during the first year's experience with the storage project with regard to the performance of the injection/withdrawal wells and system capacity needs. Two improvements are necessary: more reliable withdrawal performance and additional capacity for withdrawal.

III. REPLACEMENT WELLS

There are three injection/withdrawal wells in each of the Flora and Bruer reservoir pools. In each pool, one of the wells has been a "dud": one well in the Flora pool (IW 33d-3) delivers virtually no gas (0.039 million therms or 0.2 percent of the total Flora pool flow in 1989-1990) and one in the Bruer pool (IW 22d-10) performs at a very low rate (1.108 million therms or 4.3 percent of the total Bruer pool flow for the same time period.)

Well IW 33d-3 in the Flora pool encountered a fault zone at the top of the reservoir sand which reduced the thickness of the gas column exposed in the well bore. Subsequent attempts to produce the well have clearly shown that the well is useless for injection/withdrawal. The low production well in the Bruer pool, IW 22d-10, is marginal due to a combination of lower quality reservoir rock and a thin gas column.

NNG now relies heavily on the two producing wells in
each pool. This could result in damage to the producing wells or reservoirs during peak usage periods.

NNG proposes to drill two replacement wells, one in each reservoir. The replacement well in the Flora pool will be drilled to a target 200 feet west of the present bottom hole location of the IW 33d-3. Although on the same well pad as the non-functioning well, we believe this bottom hole location to be out of the fault zone which has interfered with IW 33d-3. The bottom hole location of the replacement well in the Bruer pool will be sited 470 feet east southeast of the marginal 22d-10 well.

The nonfunctioning well in the Flora pool will be retained only as a monitoring well since it produces virtually no gas. We propose to continue use of the marginal well in Bruer, which, along with the replacement well, will contribute to a reliable 80 MMcfd peak day flow in winter 1990-1991. This flow rate, the initial rate planned for the project, cannot be reliably sustained at present because of the two poorly functioning wells.

The original wells and their proposed replacements are identified on Exhibit A. The replacement wells are identified as IW 32c-10 and IW 33ac-3. They will be drilled on sites immediately adjacent to existing well pads.
Timing For Replacement Wells

The replacement wells must be drilled in the fall of 1990 for two reasons. First, the flow from the replacements will be needed to meet peak demand in the 1990-1991 heating season. Second, the optimum time to drill any well in the storage field is at the end of the injection cycle when the reservoir is full. This optimal time is in the late fall, when the reservoir has been injected with gas for use at winter peak days. If the reservoir pressure is too low, mud from the drilling may invade the reservoir sand and create significant risk of formation damage.

IV. TWO NEW WELLS

Two additional wells are proposed for the existing reservoirs. The main purpose of these two wells is to bring the capability of the system to 100 million cubic feet per day ("MMcfd") from the current design of 80 MMcfd. The additional wells will add some flexibility to the system so that it can more easily adjust to peak demands and/or provide a degree of redundancy to minimize any production or mechanical problems in an existing well.

The booming economy in the northwest region has accelerated NNG's peak load requirements. NNG added 11,000 new residential and 2,000 new commercial customers in 1989. We project that the current firm peak day requirement of 580 MMcfd
(the amount required system wide in case of extremely cold weather) may increase by as much as 25 MMcfd annually if the current rate of increase in new customers continues. Thus we propose to expand the Mist system capacity to 100 MMcfd.

The facilities now in place at Mist, including the pipeline to Portland and associated systems, are capable of handling 100 MMcfd, but the current withdrawal capacity even with two successful replacement wells cannot sustain reliability over 80 MMcfd. With the two additional wells, we expect to be able to withdraw sufficient quantities of gas to meet the increasing level of demand using the 100 MMcfd capability of the current reservoirs and associated facilities.

The location of the two new wells is described on the map at Exhibit A to this document. They are identified as IW 23d-3 and IW 13b-11. Both are entirely within the boundaries of the Certificate. These wells will be located on new drill pads. One will be located in a recent clear cut area and the other in trees less than twelve years old. Each site is located adjacent to existing access roads and will be no larger than 200 feet by 250 feet in size.

**Timing for Two New Wells**

NNG plans to drill the two new wells in 1991.
V. PUBLIC HEALTH, SAFETY AND WELFARE

Pursuant to Section VII F. of the Certificate, amendments which do not affect the public health, safety, and welfare may be granted at a regular Council meeting without public hearings if Company and EFSC agree that the amendment is desirable. The proposed amendment will not adversely affect the public health, safety, or welfare.

NNG has made application for permits for the four wells through the Oregon State Department of Geology, Minerals and Industries; Columbia County conditional use permitting; the Mist Birkenfeld Fire District; and the Oregon Department of Forestry. These applications are attached to this document as Exhibit B.

To the best of NNG's knowledge, the four wells will meet all applicable rules of the State of Oregon and all applicable criteria warranted in the Certificate. The location of the wells as demonstrated on Exhibit A is adjacent to areas in which there are already operating wells and no new access roads will be required. Likewise, the proximity of all four wells to existing wells means that very little new pipe will be needed to connect the new wells to the system.
**Vibration Monitoring**

Under the Certificate, a vibration monitoring program has been in effect at the Mist site since December 18, 1987. Under the terms of the program, local residents were given forms to file vibration reports if they believed vibrations to have occurred. Only four such incident reports have been filed, all within the same week in February 1988. The incident was determined to have had the characteristics of an airborne disturbance unrelated to the underground storage operation.

No reports have been submitted since the full operation of the storage area began with the injection of gas in July 1989. Thus full underground storage operations with injection/withdrawal wells have had no vibration impact on the area. There is no reason to expect any different result with the four new wells.

**VI. Conclusion**

Based on the foregoing, NNG respectfully requests that EFSC amend the Certificate in accordance with the attached Exhibit A and pursuant to Section VII F. of the Certificate.

Dated: August 3, 1990

[Signature]

Carla U. Kelley
Assistant Counsel
Northwest Natural Gas Company
EXHIBIT B

<table>
<thead>
<tr>
<th>Agency</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of Oregon</td>
<td>1-21</td>
</tr>
<tr>
<td>Department of Geology and Mineral Industries</td>
<td></td>
</tr>
<tr>
<td>Columbia County Land Development Services</td>
<td>22-41</td>
</tr>
<tr>
<td>Mist-Birkenfeld Rural Fire Protection District</td>
<td>42-47</td>
</tr>
<tr>
<td>Department of Forestry/Application for Permits</td>
<td>48-51</td>
</tr>
</tbody>
</table>
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 OOGAM 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 (Company or operator) TW 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): NorthWest Natural Gas Co.
Address: 220 N.W. Second Ave., Portland, Or. 97209

Surface Owner: Cavenham Forest Industries
Address: 62424 N. Nehalem Highway, Vernonia, Or. 97064

Lessee: 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:

<table>
<thead>
<tr>
<th>Size of Hole</th>
<th>Size of Casing</th>
<th>Weight in Pounds per Foot</th>
<th>Grade/Type</th>
<th>Depth</th>
<th>Amount of Cement</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 1/2&quot;</td>
<td>13 3/8&quot;</td>
<td>54.5</td>
<td>K-55</td>
<td>450'</td>
<td>545 SX</td>
</tr>
<tr>
<td>12 1/2&quot;</td>
<td>8 5/8&quot;</td>
<td>36.0</td>
<td>K-55</td>
<td>2100'</td>
<td>950 SX</td>
</tr>
</tbody>
</table>

Geologic Objectives Clark and Wilson Sand

Proposed Depth 2600' TVD

Company/Operator Oregon Natural Gas Development
Signature
Position Senior Operations Superintendent
Date 8/13/90

SEND WELL COMMUNICATION TO:

Name Todd Thomas
Address 221 N.W. Second Ave.
Portland, Or. 97209

Phone 220-2574 (Day) 259-3956 (Night)

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.

EXHIBIT B Page 1
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 Co., NNG, IIW33ac-3 (Company or Operator) (Lease) (Well No.)

in SE 1/4 of Sec. 3, T. 5N, R. 5W, W. of M. Direction? No Yes X

Survey Coordinates: 2025' West and 750' South from the East 1/4 corner (bottom hole location)

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

Elevation of ground above sea level is 1080 feet. All depth measurements are taken from Kelly Bushing, which is 11.4 feet above ground.

Lessor (Mineral Owner): Northwest Natural Gas Co.

Address: 220 N.W. Second Avenue, Portland, OR 97209

Surface Owner: Cavenham Forest Industries

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

Lessee: Northwest Natural Gas Co.

Address: 220 N.W. Second Avenue, Portland, OR 97209

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

<table>
<thead>
<tr>
<th>Size of hole</th>
<th>Size of casing</th>
<th>Weight in pounds per foot</th>
<th>Grade/Type</th>
<th>Depth</th>
<th>Amount of cement</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 1/2&quot;</td>
<td>13 3/8&quot;</td>
<td>54.5</td>
<td>K-55</td>
<td>450'</td>
<td>545SX</td>
</tr>
<tr>
<td>12 1/4&quot;</td>
<td>8 5/8&quot;</td>
<td>36.0</td>
<td>K-55</td>
<td>2600'</td>
<td>1175SX</td>
</tr>
</tbody>
</table>

Geologic Objectives: Clark and Wilson Sand

Proposed Depth: 2900 TVD

Company/Operator: Oregon Natural Gas Development

Signature: ____________________________

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)

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.

Form 1 (5-85)
APPLICATION FOR PERMIT TO DRILL AN OIL OR GAS WELL

In compliance with rules and regulations pursuant to ORS 520, this application becomes a permit to drill when signed and dated below.

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

[Space for information]

Lessee: [Name]
Address: [Address]

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

<table>
<thead>
<tr>
<th>Size of hole</th>
<th>Size of casing</th>
<th>Weight in pounds per foot</th>
<th>Grade/Type</th>
<th>Depth</th>
<th>Amount of cement</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 1/2&quot;</td>
<td>13 3/8&quot;</td>
<td>34.5</td>
<td>K-55</td>
<td>650'</td>
<td>345 SX</td>
</tr>
<tr>
<td>12 1/4&quot;</td>
<td>8 5/8&quot;</td>
<td>26.0</td>
<td>K-55</td>
<td>1200'</td>
<td>1200 SX</td>
</tr>
</tbody>
</table>

Proposed Depth: 3000' TVD

Geologic Objectives: Clark & Wilson Sand

Company/Operator: Oregon Natural Gas Development
Signature: [Signature]
Position: Senior Operations Superintendent
Date: [Date]

Send Well Communication To:
Name: Todd A. Thomas
Address: 221 N.W. Second Ave.
Portland, OR 97209
Phone: 220-2573 (Day), 359-4256 (Night)

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, permitee is obligated to comply with all current applicable statutes and rules including those adopted after permit issuance.

Form: 1
(S-89)
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) (an oil well) to be known as [Company or operator] (lease) (Well No.) in NE 1/4 of Sec. 10, T. 6N., R. 3W., W.B.M., Directional, No. gas X

Survey Coordinates: 116' North and 2715' 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 __ feet. All depth measurements are taken from.

Kelly Bushing, which is __ feet above ground.

Lessee (Mineral Owner): Northwest Natural Gas Company
Address: 220 N.W. Second Ave., Portland, OR 97209

Surface Owner: Longview Fibre Company
Address: P.O. Box 667, Longview, WA 98630

Lessor: Northwest Natural Gas Company
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:

<table>
<thead>
<tr>
<th>Size of hole</th>
<th>Size of casing</th>
<th>Weight in pounds per foot</th>
<th>Grade/Type</th>
<th>Depth</th>
<th>Amount of cement</th>
</tr>
</thead>
<tbody>
<tr>
<td>17½&quot; x 3/8&quot;</td>
<td>13 3/8&quot;</td>
<td>54.3</td>
<td>K-55</td>
<td>450'</td>
<td>545 SX</td>
</tr>
<tr>
<td>12½&quot; x 5/8&quot;</td>
<td>8 5/8&quot;</td>
<td>36.0</td>
<td>K-55</td>
<td>2000'</td>
<td>350 SX</td>
</tr>
</tbody>
</table>

Geologic Objectives Clark and Wilson Sand

Proposed Depth 2600' TVD

Company/Operator Oregon Natural Gas Development
Signature
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)

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.

EXHIBIT B Page 4
SURETY RIDER

To be attached to and form a part of

Bond No. 5263368

Type of Bond: Oil and Gas Well Bond

dated effective June 24, 1986

executed by OREGON NATURAL GAS DEVELOPMENT CORPORATION as Principal,

and by SAFECO INSURANCE COMPANY OF AMERICA as Surety,

in favor of STATE OF OREGON, Department of Geology and Mineral Resources

in consideration of the mutual agreements herein contained the Principal and the Surety hereby consent to changing the name of the Principal herein FROM: OREGON NATURAL GAS DEVELOPMENT CORPORATION

TO: OREGON NATURAL GAS DEVELOPMENT CORPORATION and NORTHWEST NATURAL GAS COMPANY

Nothing herein contained shall vary, alter or extend any provision or condition of this bond except as herein expressly stated.

This rider is effective August 1, 1990

Signed and Sealed August 1, 1990

OREGON NATURAL GAS DEVELOPMENT CORPORATION and NORTHWEST NATURAL GAS COMPANY

Treasurer

By: [Signatures]

Vice President

By: [Signatures]

SAFECO INSURANCE COMPANY OF AMERICA

By: [Attorney-in-Fact] Muriel M. van Veen

EXHIBIT B Page 5
KNOW ALL BY THESE PRESENTS:

That SAFECO INSURANCE COMPANY OF AMERICA and GENERAL INSURANCE COMPANY OF AMERICA, each a Washington corporation, does each hereby appoint

MURIEL M. VAN VEEZ, Portland, Oregon

its true and lawful attorney(s)-in-fact, with full authority to execute on its behalf fidelity and surety bonds or undertakings, and other documents of a similar character issued in the course of its business, and to bind the respective company thereby.

IN WITNESS WHEREOF, SAFECO INSURANCE COMPANY OF AMERICA and GENERAL INSURANCE COMPANY OF AMERICA have each executed and attested these presents

this____20th____day of ______January____, 1964

CERTIFICATE

Extract from the By-Laws of SAFECO INSURANCE COMPANY OF AMERICA and of GENERAL INSURANCE COMPANY OF AMERICA:

"Article V, Section 13. — FIDELITY AND SURETY BONDS... the President, any Vice President, the Secretary, and any Assistant Vice President appointed for that purpose by the officer in charge of surety operations, shall each have authority to appoint individuals as attorneys-in-fact or under other appropriate titles with authority to execute on behalf of the company fidelity and surety bonds and other documents of similar character issued by the company in the course of its business. On any instrument making or evidencing such appointment, the signatures may be affixed by facsimile. On any instrument conferring such authority or on any bond or undertaking of the company, the seal, or a facsimile thereof, may be impressed or affixed or in any other manner reproduced; provided, however, that the seal shall not be necessary to the validity of any such instrument or undertaking."


"On any certificate executed by the Secretary or an assistant secretary of the Company setting out,

(i) The provisions of Article V, Section 13 of the By-Laws, and

(ii) A copy of the power-of-attorney appointment, executed pursuant thereto, and

(iii) Certifying that said power-of-attorney appointment is in full force and effect,

the signature of the certifying officer may be by facsimile, and the seal of the Company may be a facsimile thereof."

I, BOB A. Dickey, Secretary of SAFECO INSURANCE COMPANY OF AMERICA and of GENERAL INSURANCE COMPANY OF AMERICA, do hereby certify that the foregoing extracts of the By-Laws and of a Resolution of the Board of Directors of these corporations, and of a Power of Attorney issued pursuant thereto, are true and correct, and that both the By-Laws, the Resolution and the Power of Attorney are still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of said corporation

this ______1st____ day of ______August____, 1990

EXHIBIT B Page 6
In the following document:

1. The principal shall be **DEVELOPMENT CORPORATION**, a corporation organized under the laws of the State of **Oregon** and existing thereby, and having its headquarters at **220 N.W. Second Avenue** in the county of **Multnomah**. State of **Oregon**.

2. The surety shall be **SAFECO INSURANCE COMPANY OF AMERICA**, a corporation organized under the laws of the State of **Washington** and existing thereby, and authorized to transact a surety business in the State of **Oregon**.

This document jointly obligates the principal and the surety to the State of Oregon for the sum of **$150,000.00**, for the payment of which we obligate our respective successors and assignees.

The principal intends to:

☐ [ ] A well located in Sec. ___, T.___, R. ___ W.3.M. ______ County Oregon, Survey Coordinates ____________________________ and has applied for a permit to do so. ($25,000 bond)

☒ [ ] More than one well in the State of Oregon and has applied for a permit or permits to do so. ($150,000 bond)

If the principal complies with all of the provisions and rules of OGS Chapter 520 and obeys all orders of the State Geologist and the Governing Board of the State Department of Geology and Mineral Industries (OGAMI), this bond may be terminated and cancelled and the surety relieved of all obligations thereunder, otherwise, it shall remain in full force and effect. This bond will not be cancelled unless the well, the subject of this bond, has been abandoned pursuant to OGS Chapter 520, or until another valid bond for such well has been submitted and approved by the Board. If the Governing Board declares a well to be unlawfully abandoned, and that certain work shall be done, the surety shall be responsible for arranging to have it done according to OGAMI’s specifications and time schedule.

OREGON NATURAL GAS

Principal: **DEVELOPMENT CORPORATION**
Signature: [Signature]
Position: **President**
Date: June 24, 1986

Surety: **SAFECO INSURANCE COMPANY OF AMERICA**
Signature: [Signature]
Position: **Attorney-in-fact**
Date: [Signature]

Form 13a (12/85)
Oregon Natural Gas Development Corporation, an Oregon corporation ("Grantor"), hereby conveys and specially warrants to Northwest Natural Gas Company, an Oregon corporation ("Grantee"), effective April 11, 1988, its overriding royalty interest which Granter received from Wesley G. Bruer and Odetha P. Bruer by Special Warranty Deed dated April 4, 1986 and recorded at Book 261, page 774 in the deed records of Columbia County, State of Oregon, free of encumbrances.

The true consideration for this conveyance is $10.00 and other good and valuable consideration.

Done by order of the grantor's board of directors with its corporate seal affixed on July 31, 1990.

This instrument does not guarantee that any particular use may be made of the property described in this instrument. A buyer should check with the appropriate city or county planning department to verify approved uses.

Oregon Natural Gas Development Corporation

By [Signature]
President

By [Signature]
Secretary

(Corporate Seal)

STATE OF OREGON, County of Multnomah ) ss.

[Signature]
Dwayne L. Foley
President

[Signature]
C. J. Rue
Secretary

Who, each being first duly sworn, did say that the former is the president and that the latter is the secretary of Oregon Natural Gas Development Corporation, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors; and each of them acknowledged said instrument to be its voluntary act and deed.

R.L. Hordichok
Notary Public Oregon

Before me:

My Commission Expires 10-6-92

Notary Public for Oregon; My commission expires

STATE OF OREGON, )
County of ____________ )

I certify that the within instrument was received for record on the _____ day of __________, 19__, at __ o'clock _______ M, and recorded in book/reel/volume No. _____ on page _____ or as document/fee/file/instrument/microfilm No. _____, Record of Deeds of said county.

Witness my hand and seal of County affixed.

Name __________________________ Title __________________________

By __________________________ Deputy

EXHIBIT B Page 8
QUITCLAIM DEED

Oregon Natural Gas Development Corporation, an Oregon corporation ("Grantor"), hereby conveys, releases and quitclaims to Northwest Natural Gas Company, an Oregon corporation ("Grantee"), effective April 11, 1988, the property rights which Grantor received from Wesley G. Bruer and Odetha P. Bruer by Quitclaim Deed dated April 4, 1986 and recorded at Book 261, Page 784, in the deed records of Columbia County, State of Oregon.

The true consideration for this conveyance is $10.00 and other good and valuable consideration.

Done by order of the grantor's board of directors with its corporate seal affixed on July 31, 1990.

THIS INSTRUMENT DOES NOT GUARANTEE THAT ANY PARTICULAR USE MAY BE MADE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT. A BUYER SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES.

OREGON NATURAL GAS DEVELOPMENT CORPORATION

By ________________ President

By ________________ Secretary

(Corporate Seal)

STATE OF OREGON, County of Multnomah ) ss.

7-31-90

Personally appeared Dwayne L. Foley and C. J. Rue who, each being first duly sworn, did say that the former is the president and that the latter is the secretary of Oregon Natural Gas Development Corporation, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors; and each of them acknowledged said instrument to be its voluntary act and deed.

(Official Seal)

R.L. HORDICHOK
NOTARY PUBLIC - OREGON
My Commission Expires 10-4-92

Before me:

Notary Public for Oregon; My commission expires

---------------------

QUITCLAIM DEED

Oregon Natural Gas Development Corporation

Northwest Natural Gas Company

220 N.W. Second Avenue
Portland, OR 97209

Grantee

Grantee's Address, Zip

After recording, send to:
Northwest Natural Gas Company
Risk & Land Management
220 N.W. Second Avenue
Portland, OR 97209

Name, Address, Zip

I certify that the within instrument was received for record on the day of ________, 19______, at _______ o'clock ______ M, and recorded in book/reel/volume No. ________ on page ____, or as documents/file/instrument/microfilm No. ________. Record of Deeds of said county.

Witness my hand and seal of County affixed.

Name ___________________________ Title ___________________________

By ___________________________ Deputy

STATE OF OREGON, ________)

County of ________________ )

EXHIBIT B Page 9
Oregon Natural Gas Development Corporation, an Oregon corporation (‘Grantor’), hereby conveys and specially warrants effective to Northwest Natural Gas Company, an Oregon corporation (‘Grantee’), April 11, 1988, the overriding royalty interest which Grantor received from Charles O. Newell and Sally N. Newell by Special Warranty Deed dated April 11, 1986 and recorded at Book 261, Page 766, in the deed records of Columbia County, State of Oregon, free of encumbrances.

The true consideration for this conveyance is $10.00 and other good and valuable consideration.

Done by order of the grantor’s board of directors with its corporate seal affixed on July 31, 1990.

THIS INSTRUMENT DOES NOT GUARANTEE THAT ANY PARTICULAR USE MAY BE MADE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT. A BUYER SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES.

OREGON NATURAL GAS DEVELOPMENT CORPORATION

By __________________________ President

By __________________________ Secretary

STATE OF OREGON, County of Multnomah ss.

Personally appeared ________________ and ________________, who, each being first duly sworn, did say that the former is the president and that the latter is the secretary of Oregon Natural Gas Development Corporation, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors; and each of them acknowledged said instrument to be its voluntary act and deed.

Before me: __________________________ Notary Public for Oregon; My commission expires __________________________

STATE OF OREGON, } } County of _____________

I certify that the within instrument was received for record on the day of ________________, 19__, at ________________ o’clock ________________ M., and recorded in book/reel/volume No. ________________ on page ___________ or as document/file/instrument/microfilm No. ________________; Record of Deeds of said county.

Witness my hand and seal of County affixed.

________________________ Title

By __________________________ Deputy

EXHIBIT B Page 10
QUITCLAIM DEED

Oregon Natural Gas Development Corporation, an Oregon corporation ("Grantor"), hereby conveys, releases and quitclaims to Northwest Natural Gas Company, an Oregon corporation ("Grantee"), effective April 11, 1988, the property rights which Granter received from Charles O. Newell and Sally N. Newell by Quitclaim Deed dated April 1, 1986 and recorded at Book 261, Page 750 in the deed records of Columbia County, State of Oregon.

The true consideration for this conveyance is $10.00 and other good and valuable consideration.

Done by order of the grantor's board of directors with its corporate seal affixed on July 31, 1990.

This instrument does not guarantee that any particular use may be made of the property described in this instrument. A buyer should check with the appropriate city or county planning department to verify approved uses.

Oregon Natural Gas Development Corporation

By

[Signature]

President

By

[Signature]

Secretary

Oregon Natural Gas Development Corporation

(Drug & Land Management

220 N.W. Second Avenue

Portland, OR 97209

State of Oregon, County of Multnomah ) ss.

7-31-90

Personally appeared DWAYNE L. FULZY and C. J. RUE who, each being first duly sworn, did say that the former is the president and that the latter is the secretary of Oregon Natural Gas Development Corporation, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and each of them acknowledged said instrument to be its voluntary act and deed.

[Signature]

R.L. HORDICHOK

Notary Public - Oregon; My commission expires

UNITED STATES DISTRICT COURT

STATE OF OREGON,

County of ___________


 Quitclaim Deed

Grantee

Northwest Natural Gas Company

800 N.W. Second Avenue

Portland, OR 97209

Grantee's Address, Zip

After recording return to:

Northwest Natural Gas Company

Risk & Land Management

220 N.W. Second Avenue

Portland, OR 97209

Name, Address, Zip

I certify that the within instrument was received for record on the _____ day of ______, 19____ at ___ o'clock ___ M, and recorded in book/reel/volume No. _____ on page ______ of document/file/film/instrument/microrfilm No. _____ Record of Deeds of said county.

Witness my hand and seal of County affixed.

[Signature] Title

Deputy

Exhibit B Page 11
Oregon Natural Gas Development Corporation, an Oregon corporation ("Grantor"), hereby conveys and warrants to Northwest Natural Gas Company, an Oregon corporation ("Grantee"), effective April 11, 1988, the property rights which Grantor received from Longview Fibre Company by Warranty Deed dated April 7, 1986 and recorded at Book 261 Page 753 in the deed records of Columbia County, State of Oregon, free of encumbrances.

The true consideration for this conveyance is $10.00 and other good and valuable consideration.

Done by order of the grantor’s board of directors with its corporate seal affixed on July 31, 1990.

This instrument does not guarantee that any particular use may be made of the property described in this instrument. A buyer should check with the appropriate city or county planning department to verify approved uses.

OREGON NATURAL GAS DEVELOPMENT CORPORATION

By _________________________ President
By _________________________ Secretary

(Corporate Seal)

STATE OF OREGON, County of Multnomah ) ss.

7-31-90

Personally appeared Dwayne L. Foley and C. J. R. V., who, each being first duly sworn, did say that the former is the president and that the latter is the secretary of Oregon Natural Gas Development Corporation, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors; and each of them acknowledged said instrument to be its voluntary act and deed.

(R.L. HORCHICHOK)

Before me: ______________________
Notary Public for Oregon; My commission expires

WARRANTY DEED

Oregon Natural Gas Development Corporation

Northwest Natural Gas Company

220 N.W. Second Avenue
Portland, OR 97209

Grantee’s Address, Zip

After recording refer to:
Northwest Natural Gas Company
Risk & Land Management
220 N.W. Second Avenue
Portland, OR 97209

Name, Address, Zip

If a change is requested, all tax statements shall be sent to the following address:
Northwest Natural Gas Company
Risk & Land Management
220 N.W. Second Avenue
Portland, OR 97209

(Official Seal)

STATE OF OREGON, )
County of ____________

I certify that the within instrument was received for record on the day of ____________ 19__, at _____ o’clock _____ M, and recorded in book/reel/volume No. _____ on page _____ or as document/file/instrument/microfilm No. _____ Record of Deeds of said county.

Witness my hand and seal of County affixed.

Name ____________ Title ____________

By _________________________ Deputy

EXHIBIT B Page 12
Oregon Natural Gas Development Corporation, an Oregon corporation ("Grantor"), hereby conveys and releases to Northwest Natural Gas Company, an Oregon corporation ("Grantee"), effective April 11, 1988, the property rights Grantor received from Columbia County by Bargain and Sale Deed dated July 2, 1986 and recorded at Book 262, Page 946 in the deed records of Columbia County, State of Oregon.

The true consideration for this conveyance is $10.00 and other good and valuable consideration.

Done by order of the grantor's board of directors with its corporate seal affixed on July 31, 1990.

THIS INSTRUMENT DOES NOT GUARANTEE THAT ANY PARTICULAR USE MAY BE MADE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT. A BUYER SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES.

OREGON NATURAL GAS DEVELOPMENT CORPORATION

By ______________________ President
By ______________________ Secretary

(Corporate Seal)

STATE OF OREGON, County of Multnomah ) ss.

7-31-90

Personally appeared DUANE L. FOLLY and C V RUE who, each being first duly sworn, did say that the former is the president and that the latter is the secretary of Oregon Natural Gas Development Corporation, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors; and each of them acknowledged said instrument to be its voluntary act and deed.

Before me: ______________________
Notary Public for Oregon; My commission expires ______________________

(R.L. HORDICK)
NOTARY PUBLIC - OREGON
My Commission Expires 10-9-92

BARGAIN & SALE DEED

Oregon Natural Gas Development Corporation
Owner
220 N.W. Second Avenue
Portland, OR 97209

Northwest Natural Gas Company
Owner
220 N.W. Second Avenue
Portland, OR 97209

After recording above by
Northwest Natural Gas Company
Risk & Land Management
220 N.W. Second Avenue
Portland, OR 97209

ACKNOWLEDGEMENT

Agent Address, Zip

STATE OF OREGON,

County of ____________

I certify that the within instrument was received for record on the day of ____________ 19__ at __ o'clock _____ M. and recorded in book/reel/Volume No. _____ on page _____ or as document/file/instrument/microfilm No. _____, Record of Deeds of said county.

Witness my hand and seal of County affixed.

Name ______________________ Title ______________________

By ______________________ Deputy

EXHIBIT B Page 13
QUITCLAIM DEED

Oregon Natural Gas Development Corporation, an Oregon corporation ("Grantor"), hereby conveys, releases and quitclaims to Northwest Natural Gas Company, an Oregon corporation ("Grantee"), effective April 11, 1988, the property rights which Grantor received from Columbia County by Quitclaim Deed dated July 2, 1986 and recorded at Book 262, Page 988 in the deed records of Columbia County, State of Oregon.

The true consideration for this conveyance is $10.00 and other good and valuable consideration.

Done by order of the grantor's board of directors with its corporate seal affixed on July 31, 1990.

THIS INSTRUMENT DOES NOT GUARANTEE THAT ANY PARTICULAR USE MAY BE MADE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT. A BUYER SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES.

OREGON NATURAL GAS DEVELOPMENT CORPORATION

By [Signature] President

By [Signature] Secretary

(Corporate Seal)

STATE OF OREGON, County of Multnomah

7-31-90

Personally appeared Dwayne F. Riley and C. J. Ruc who, each being first duly sworn, did say that the former is the president and that the latter is the secretary of Oregon Natural Gas Development Corporation, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors; and each of them acknowledged said instrument to be its voluntary act and deed.

(Official Seal)

R.L. HORDICHOK
NOTARY PUBLIC • OREGON
My Commission Expires 10-4-92

Before me: ____________________________
Notary Public for Oregon; My commission expires

STATE OF OREGON,

County of ________________________

I certify that the within instrument was received for record on the _____ day of ________, 19____, at ______ o'clock ______ M., and recorded in book/reel/volume No. ______ on page ______ or as document/file/instrument/microfilm No. ______ Record of Deeds of said county.

Witness my hand and seal of County affixed.

Name

Title

By ___________________________ Deputy

EXHIBIT B Page 14
ASSIGNMENT
of
UNDERGROUND GAS STORAGE LEASES

Oregon Natural Gas Development Corporation, an Oregon corporation with its principal place of business at 221 N.W. Second Avenue, Portland, Oregon ("Assignor"), does hereby assign and convey to Northwest Natural Gas Company, an Oregon corporation with its principal place of business at 220 N.W. Second Avenue, Portland, Oregon ("Assignee") all of its right, title and interest in the underground storage leases described in Exhibits A, B and C attached hereto.

The true consideration for this Assignment is Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged.

This Assignment is made without representation of warranty of title, either express or implied, and shall be binding upon and inure to the benefit of the Assignor and Assignee, and their successors and assigns, and shall be effective for all purposes as of April 11, 1988.

Assignor:
OREGON NATURAL GAS DEVELOPMENT CORPORATION
By
STATE OF OREGON
County of MULTNOMAH s.s.

On this 31st day of JULY, 1988 before me, the undersigned, a Notary Public in and for said County and State, personally appeared JOHANNES A. FOLLY known to me to be the PRESIDENT of Oregon Natural Gas Development Corporation, the corporation that executed the within instrument, and known to me to be the person who executed the within instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the same pursuant to its by-laws or a resolution of its board of directors.

Assignee:
NORTHWEST NATURAL GAS COMPANY
By
STATE OF OREGON
County of MULTNOMAH s.s.

On this 31st day of JULY, 1988 before me, the undersigned, a Notary Public in and for said County and State, personally appeared C. J. RUE known to me to be the SECRETARY of Northwest Natural Gas Company, the corporation that executed the within instrument, and known to me to be the person who executed the within instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the same pursuant to its by-laws or a resolution of its board of directors.

R.L. HORDICHOK
NOTARY PUBLIC - OREGON
My Commission Expires 10-9-92

R.L. HORDICHOK
NOTARY PUBLIC - OREGON
My Commission Expires 10-9-92
EXHIBIT A

to

OREGON NATURAL GAS DEVELOPMENT CORPORATION'S

ASSIGNMENT of

UNDERGROUND GAS STORAGE LEASES

Description of Lease

That underground gas storage lease agreement dated January 31, 1983, by and between Oregon Natural Gas Development Corporation, an Oregon corporation, (Lessee) and Crown Zellerbach Corporation, a Nevada corporation, (Lessor) covering certain land situated in the County of Columbia, State of Oregon, described as follows, to wit:

Township 6 North, Range 5 West of Willamette Meridian

Section 2: W 1/2 SW 1/4, W 1/2 SE 1/4 SW 1/4
Section 3: SE 1/4
Section 10: NE 1/4
Section 11: SW 1/4 NE 1/4, NW 1/4, NW 1/4, SE 1/4

(containing 645 acres more or less)

Crown Zellerbach Corporation transferred its interest in this underground storage lease to Cavenham Forest Industries, Inc., a Delaware corporation, on April 23, 1986. Said transfer was recorded on May 2, 1986, at Book 262, Page 58, in the deed records of Columbia County, State of Oregon.
EXHIBIT B

to

OREGON NATURAL GAS DEVELOPMENT CORPORATION'S

ASSIGNMENT of

UNDERGROUND GAS STORAGE LEASES

Description of Lease

That underground gas storage lease agreement dated November 1, 1983, by and between Oregon Natural Gas Development Corporation, an Oregon corporation, ("Lessee") and Thomas Sweet ("Lessor") covering certain land situated land situated in the County of Columbia, State of Oregon, described as follows, to wit:

Township 6 North, Range 5 West of the Willamette Meridian

Section 2: SW 1/4 NW 1/4
Section 3: S 1/2 NE 1/4

(containing 120 acres more or less)
EXHIBIT C

to

OREGON NATURAL GAS DEVELOPMENT CORPORATION'S

ASSIGNMENT of

UNDERGROUND GAS STORAGE LEASES

Description of Lease

That underground gas storage lease agreement dated July 6, 1984, by and between Oregon Natural Gas Development Corporation, an Oregon corporation, ("Lessee") and Longview Fibre Company, a Delaware corporation ("Lessor") covering certain land situated in the County of Columbia, State of Oregon, described as follows, to wit:

Township 6 North, Range 5 West of the Willamette Meridian

Section 3: S 1/2 NW 1/4, SW 1/4

Section 4: SE 1/4 NE 1/4, NE 1/4 SE 1/4, E 1/2 SE 1/4

Section 10: E 1/2 NW 1/4, E 1/2 NW 1/4, NW 1/4 NW 1/4, SW 1/4

Section 11: N 1/2 SW 1/4, N 1/2 SW 1/4 SW 1/4

(containing 800 acres more or less)
QUITCLAIM DEED

Oregon Natural Gas Development Corporation, an Oregon corporation ("Grantor"), hereby conveys, releases and quitclaims to Northwest Natural Gas Company, an Oregon corporation ("Grantee"), effective April 11, 1988, the property rights which Grantor received from the Assignment Agreement entered into by Reichhold Energy Corporation ("REC"), Diamond Shamrock Exploration Company ("DSC"), as assignors, and Grantor, as assignee, on November 1, 1984 wherein REC and DSC assigned all of their right, title and interest in and to the Brue and Flora pools to Grantor.

The true consideration for this conveyance is $10.00 and other good and valuable consideration.

Done by order of the grantor's board of directors with its corporate seal affixed on July 31, 1990.

This instrument does not guarantee that any particular use may be made of the property described in this instrument. A buyer should check with the appropriate city or county planning department to verify approved uses.

OREGON NATURAL GAS DEVELOPMENT CORPORATION

By [Signature]
President

By [Signature]
Secretary

(Corporate Seal)

STATE OF OREGON, County of Multnomah              ) ss.

7-31-90

Personally appeared Dwayne L. Foley and C. J. Rue, who, each being first duly sworn, did say that the former is the president and that the latter is the secretary of Oregon Natural Gas Development Corporation, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors; and each of them acknowledged said instrument to be its voluntary act and deed.

(Corporate Seal)

R.L. HORDICHOK
NOTARY PUBLIC - OREGON
My Commission Expires 10-4-92

Before me:
Notary Public for Oregon; My commission expires

STATE OF OREGON.   )

County of ___________  )

I certify that the within instrument was received for record on the ___ day of _________, 19____ at o'clock ___ M., and recorded in book/reel/volume No. ___ on page ___ or as document/fee/instrument/microfilm No. ___, Record of Deeds of said county.

Witness my hand and seal of County affixed.

_________________________ Title

By ______________________ Deputy

EXHIBIT B Page 19
WARRANTY DEED

Oregon Natural Gas Development Corporation, an Oregon corporation ("Grantor"), hereby conveys and warrants effective April 11, 1988, to Northwest Natural Gas Company, an Oregon corporation ("Grantee"), the real property described on Exhibit A attached hereto situated in Columbia County, Oregon, free of encumbrances.

The true consideration for this conveyance is $88,366 and other good and valuable consideration.

Done by order of the grantor's board of directors with its corporate seal affixed on July 31, 1990.

THIS INSTRUMENT DOES NOT GUARANTEE THAT ANY PARTICULAR USE MAY BE MADE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT. A BUYER SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES.

OREGON NATURAL GAS DEVELOPMENT CORPORATION

By W. Wayne J. Foley
President
By C. J. R. U.
Secretary

(Corporate Seal)

STATE OF OREGON, County of Multnomah ) ss.
7-31-90

Personally appeared Duane L. Foley and C. J. R. U. who, each being first duly sworn, did say that the former is the president and that the latter is the secretary of Oregon Natural Gas Development Corporation, a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors; and each of them acknowledged said instrument to be its voluntary act and deed.

(Official Seal)

Before me:

Notary Public for Oregon; My commission expires

STATE OF OREGON, }
County of _________)

I certify that the within instrument was received for record on the day of _______, 19____ at o'clock _______ M., and recorded in book/vol/volume No. ______ on page ______ or as document/file/instrument/microfilm No. ______ Record of Deeds of said county.

Witness my hand and seal of County affixed.

Name _______ Title _______

By ___________________________ Deputy

EXHIBIT B Page 20
EXHIBIT A

to

WARRANTY DEED

of

OREGON NATURAL GAS DEVELOPMENT CORPORATION

Property Description

A tract of land located in the northwest quarter of Section 11, Township 6 North, Range 5 West
of the Willamette Meridian, Columbia County, Oregon, more particularly described as follows:

Beginning at a point that bears South 88° 51' 00" East, 1,308.21 feet
from the west quarter corner of said Section 11; thence North 14° 18' 06" East, 561.56 feet; thence on the arc of a 255.00 foot radius curve
to the left with a chord that bears North 17° 00' 08" West, 264.89 feet,
an arc distance of 278.65 feet; thence North 48° 18' 25" West, 338.55 feet;
thence on the arc of a 350.00 foot radius curve to the right with a
chord that bears North 20° 54' 25" West, 322.14 feet, an arc distance
of 334.76 feet; thence North 08° 29' 36" East, 100.74 feet; thence on
the arc of a 32.00 foot radius curve to the right with a chord that bears
North 70° 56' 14" east, 57.74 feet, an arc distance of 71.99 feet to a
point of compound curve; thence on the arc of a 260.00 foot radius curve
to the right with a chord that bears South 53° 53' 41" East, 104.20
feet, an arc distance of 104.82 feet; thence South 236,36 10' 14" East,
184.00 feet; thence on the arc of a 360.00 foot radius curve to the left
with a chord that bears South 52° 1' 31" East, 347.47 feet, an arc distance
of 362.60 feet; thence South 50° 52' 48" East, 85.22 feet;
thence on the arc of a 180.00 foot radius curve to the right with a chord
that bears South 60° 42' 10" East, 124.17 feet, an arc distance of 126.78
feet to a point of reverse curve; thence on the arc of a 330.00 foot
radius curve to the left with a chord that bears South 57° 29' 7" East,
192.52 feet, an arc distance of 195.36 feet; thence South 74° 26' 42"
East, 79.20 feet; thence on the arc of a 50.00 foot radius curve to the
right with a chord that bears South 29° 41' 37" East, 84.48 feet, an arc
distance of 93.73 feet; thence South 15° 03' 28" West, 209.50 feet;
thence South 28° 50' 51" West, 108.11 feet; thence on the arc of a
273.50 foot radius curve to the left with a chord that bears South 01°
37' 57" West, 250.16 feet, an arc distance of 259.82 feet; thence South
25° 34' 58" East, 183.86 feet to a point that bears North 88° 51' 00"
West, 161.48 feet from the center of said Section 11; thence North 88°
51' 00" West, 502.58 feet to the point of beginning.
Zone Change
Conditioned Use Permit
Planned Development
Williamette River Greenway Permit
Exception
Special Review Permit

Name of applicant or agent: Northwest Natural Gas Co.

Mailing Address: 220 N.W. Second Ave. Phone: Office 220-2573
Portland, Or. 97209 Home 359-3956

Location or County Road See below Total Acreage

Tax Account Number Townshp Range Sec Section

List other contiguous property under your ownership:

1. Proposed use(s), sequence of construction, anticipated timetable for project, and specific reasons for the request:
   - Drilling of gas well for the injection and withdrawal of natural gas for underground storage

   See Exhibit "A"

   Wellsite TW 13b-11 Cavenham Forest Industries - Surface Owner
   Surface location: 270' North and 350' East from the west
   ¼ corner of section 11; Bottom hole location: 80' South and
   250' East from the West ¼ corner

2. Present use of the property: Forest Land

3. Method of sewage disposal:

4. Water Supply: Well Community Other

5. Has Subsurface Sewage Department approved this request? Yes No X

6. Total employees and/or occupants: Present ___ Proposed ___

7. Present Zoning Primary Forest Land

I hereby certify the statements contained herein along with the evidence submitted, are in all respects true and correct to the best of my knowledge and belief.

Date: 03/00

Applicant or Agent

Receipt No. ______ Fee ______ Date Received ______

Hearing Date: _______ Staff Member: ______

Present Zoning: ______

NOTE: Attach accurate and detailed plot plan indicating such items as property lines, dimensions, and all existing and proposed facilities, etc.
CONDITIONAL USE PERMIT FACT SHEET

Please complete the following:

1. What type of use will occur on the property if the conditional use is allowed?
   Drilling Well to inject and withdraw natural gas for underground storage.

2. Why is the property in question suitable for this use? Located in developed gas storage field and is compatible with surrounding area.

3. Is the use compatible with surrounding uses? Yes  X  No __
   In what way? The well installation for injection and withdrawal is very localized with minimal impact on present use of property.

4. Will the use affect the existing public facilities or surrounding property or neighbors? No. 

5. Will a public need or convenience be met by this use that is not already being met in the general area? Yes.
   In what way? This Well will assist in the operation of the Mist Underground Storage Field which will contribute to providing an energy source for the area's future demands.

The applicant must submit the following 35 DAY PRIOR to the Planning Commission hearing regularly scheduled for the 1st Monday of each month.

1. Answers to the above questions.
2. The application form attached.
3. Vicinity map.
4. One hundred and twenty-five dollar ($125.00) fee
EXHIBIT A

NORTHWEST NATURAL GAS COMPANY
COLUMBIA COUNTY CONDITIONAL USE PERMIT APPLICATION
DRILLING & CONSTRUCTION PROCEDURE

1. Drill pad is constructed and gravelled, as required, per site plan. Reserve pit is dug according to DOGAMI requirements. Conductor casing is set and rat hole is drilled.

2. Drilling rig is moved in and rigged up.

3. Drilling operations commence. A 17 1/2" hole is drilled to approximately 450' and surface casing is run and cemented to surface.

4. Weld on wellhead, rig up blow out preventer test per DOGAMI requirements.

5. Drill a 12 1/4" hole to the top of the zone of interest. Evaluate hole with wire line tools.

6. Casing is run to bottom and cemented to surface.

7. Drilling continues to the objective total depth. The open hole below casing is evaluated with wireline tools.

8. A slotted liner is run and set below the casing. Gravel is placed behind the liner and production tools and tubing are run and the production tree installed.

9. The reserved pit is cleaned and back filled. Any portion of the drill site location no longer needed is restored to original condition.
COLUMBIA COUNTY
Site Plan
Drill Site for Observation and Monitoring
Underground Gas Storage Field
OREGON NATURAL GAS DEVELOPMENT CORPORATION
Taylor Drilling Company, Rig #5

1. Drill Cuttings Sump
2. Drilling Mud Tanks
3. Mud Loggers' Trailer
4. Mud Pumps
5. Drill Rig Floor
6. Diesel Tank
7. Draw Works
8. Drill Hole
9. Cat Walk
10. Pipe Racks
11. Water Tank
12. Dog House
13. Location Roads
14. Tool House and General Building

WATER SOURCE: TRUCKED
COLUMBIA COUNTY LAND DEVELOPMENT SERVICES
Planning Division
Courthouse, St. Helens, Oregon 97051

Zone Change
Conditional Use Permit
Planned Development
Willamette River Greenway Permit
Exception
Special Review Permit

Name of applicant or agent:  Northwest Natural Gas Company
Mailing Address:  220 N.W. Second Avenue  Phone:  office 220-2573
Portland, OR 97209  Home 359-4956

Location or County Road:  See below  Total Acreage:  
Tax Account Number:  TownsendSW Range5W Section 3
List other contiguous property under your ownership:  

1. Proposed use(s), sequence of construction, anticipated timetable for project, and specific reason for the request:
   Drilling of gas well for the injection and withdrawal of natural gas for underground storage
   See Exhibit "A"
   Wellsite IN3ac-3 Cavenham Forest Industries - surface owner
   Surface location: 1700' West and 1070' South from the east 1/4 corner of Sec. 3. Bottom hole location: 2025' west and 750' South from the East 1/4 corner

2. Present use of the property:  Forest Land/Existing I/W wellsites

3. Method of sewage disposal:  

4. Water Supply: Well  Community  Other  

5. Has Subsurface Sewage Department approved this request?  Yes  No  

6. Total employees and/or occupants:  Present  Proposed  

7. Present Zoning  Primary forest land  

I hereby certify the statements contained herein, along with the evidence submitted, are in all respects true and correct to the best of my knowledge and belief.

Date  Applicant or Agent

[Signature]

For Office Use Only
Receipt No.  Fee  Date Received
Hearing Date  Staff Member
Present Zoning  

NOTE: Attach accurate and detailed plot plan indicating such items as property lines, dimensions, and all existing and proposed facilities, etc.
Please complete the following:

1. What type of use will occur on the property if the conditional use is allowed?  
   Drilling well to inject and withdraw natural gas for underground storage.

2. Why is the property in question suitable for this use? Located in 
   developed gas storage field and is compatible with surrounding area.

3. Is the use compatible with surrounding uses? Yes  No
   In what way? The well installation for injection and withdrawal is very
   localized with minimal impact on present use of property.

4. Will the use affect the existing public facilities or surrounding property or 
   neighbors?  No

5. Will a public need or convenience be met by this use that is not already being 
   met in the general area? Yes
   In what way? This well will assist in the operation of the Mist
   underground storage field which will contribute to providing an energy
   source for the area's future demands.

The applicant must submit the following 35 DAY PRIOR to the Planning Commission 
hearing regularly scheduled for the 1st Monday of each month.

1. Answers to the above questions.
2. The application form attached.  $125.00
3. Vicinity map.
4. One hundred and twenty-five dollar ($125.00) fee
1. Drill pad is constructed and gravelled, as required, per site plan. Reserve pit is dug according to DOGAMI requirements. Conductor casing is set and rat hole is drilled.

2. Drilling rig is moved in and rigged up.

3. Drilling operations commence. A 17 1/2" hole is drilled to approximately 450' and surface casing is run and cemented to surface.

4. Weld on wellhead, rig up blow out preventer test per DOGAMI requirements.

5. Drill a 12 1/4" hole to the top of the zone of interest. Evaluate hole with wire line tools.

6. Casing is run to bottom and cemented to surface.

7. Drilling continues to the objective total depth. The open hole below casing is evaluated with wireline tools.

8. A slotted liner is run and set below the casing. Gravel is placed behind the liner and production tools and tubing are run and the production tree installed.

9. The reserved pit is cleaned and back filled. Any portion of the drill site location no longer needed is restored to original condition.
COLUMBIA COUNTY
Site Plan
Drill Site for Observation and Monitoring
Underground Gas Storage Field
OREGON NATURAL GAS DEVELOPMENT CORPORATION
Taylor Drilling Company, Rig #5

1. Drill Cuttings Sump
2. Drilling Muds Tanks
3. Mud Loggers Trailer
4. Mud Pumps
5. Drill Rig Floor
6. Diesel Tank
7. Draw Works
8. Drill Hole
9. Cat Walk
10. Pipe Racks
11. Water Tank
12. Dog House
13. Location Roads
14. Tool House and Genl Building

WATER SOURCE: TRUCKED
COLUMBIA COUNTY LAND DEVELOPMENT SERVICES
Planning Division
Courthouse, St. Helens, Oregon 97051

397-1501

☐ Lane Change
☐ Conditional Use Permit
☐ Planned Development
☐ Mill Creek River Greenway Permit
☐ Exception
☐ Special Review Permit

Name of applicant or agent: Northwest Natural Gas Company

Mailing Address: 220 N.W. Second Avenue
Phone: Office 220-2573
Home 339-4320
Portland, OR 97209

Location or County Road: See below
Total Acreage

Tax Account Number: See below
Township 13N, Range 34W, Section 3

List other contiguous property under your ownership:

1. Proposed use(s), sequence of construction, anticipated timetable for project, and specific reason for the request:
   Drilling of gas well for the injection and withdrawal of natural gas for underground storage
   See Exhibit "A"

   Wellsite IN 23d-3 Longview Fibre Co. surface owner
   Surface location: 330' South and 2470' East from the West 1/4 corner of Sec. 3. Bottom hole location: 800' South and 2500' East from the west 1/4 corner

2. Present use of the property: Forest land

3. Method of sewage disposal:

4. Water Supply: Well ______ Community ______ Other ______

5. Has Subsurface Sewage Department approved this request? Yes ______ No X ______ Not Consulted X ______

6. Total employees and/or occupants: Present ______ Proposed ______

7. Present Zoning: primary forest land

I hereby certify the statements contained herein, along with the evidence submitted, are in all respects true and correct to the best of my knowledge and belief.

8/13/90
Date

[Signature]
Applicant or Agent

EXHIBIT B Page 30
CONDITIONAL USE PERMIT FACT SHEET

Please complete the following:

1. What type of use will occur on the property if the conditional use is allowed?

   Drilling well to inject and withdraw natural gas for underground storage.

2. Why is the property in question suitable for this use?

   Located in a developed gas storage field and is compatible with surrounding areas.

3. Is the use compatible with surrounding uses? Yes X No __

   In what way? The well installation for injection and withdrawal is very localized with minimal impact on present use of property.

4. Will the use affect the existing public facilities or surrounding property or neighbors?

   No

5. Will a public need or convenience be met by this use that is not already being met in the general area? Yes

   In what way? This well will assist in the operation of the Misr underground storage field which will contribute to providing an energy source for the area's future demands.

The applicant must submit the following 35 DAY PRIOR to the Planning Commission hearing regularly scheduled for the 1st Monday of each month.

1. Answers to the above questions.
2. The application form attached.
3. Vicinity map.
4. One hundred and twenty-five dollar ($125.00) fee.
1. Drill pad is constructed and gravelled, as required, per site plan. Reserve pit is dug according to DOGAMI requirements. Conductor casing is set and rat hole is drilled.

2. Drilling rig is moved in and rigged up.

3. Drilling operations commence. A 17 1/2" hole is drilled to approximately 450' and surface casing is run and cemented to surface.

4. Weld on wellhead, rig up blow out preventer test per DOGAMI requirements.

5. Drill a 12 1/4" hole to the top of the zone of interest. Evaluate hole with wire line tools.

6. Casing is run to bottom and cemented to surface.

7. Drilling continues to the objective total depth. The open hole below casing is evaluated with wireline tools.

8. A slotted liner is run and set below the casing. Gravel is placed behind the liner and production tools and tubing are run and the production tree installed.

9. The reserved pit is cleaned and back filled. Any portion of the drill site location no longer needed is restored to original condition.
COLUMBIA COUNTY
Site Plan
Drill Site for Observation and Monitoring Underground Gas Storage Field
OREGON NATURAL GAS DEVELOPMENT CORPORATION
Taylor Drilling Company, Rig #5

1. Drill Cuttings Sump
2. Drilling Muds Tanks
3. Mud Loggers Trailer
4. Mud Pumps
5. Drill Rig Floor
6. Diesel Tank
7. Draw Works
8. Drill Hole
9. Cat Walk
10. Pipe Racks
11. Water Tank
12. Dog House
13. Location Roads
14. Tool House and Gene Building

WATER SOURCE: TRUCKED IN
COLUMBIA COUNTY LAND DEVELOPMENT SERVICES
Planning Division
Courthouse, St. Helens, Oregon 97051

Zone Change
Conditional Use Permit
Planned Development
Willamette River Greenway Permit
Exception
Special Review Permit

Name of applicant or agent: Northwest Natural Gas Co.

Mailing Address: 220 N.W. Second Ave.
Phone: Office 220-2573
Home 359-4956

Location or County Road See below Total Acreage

Tax Account Number Township Range Section 10

List other contiguous property under your ownership:

1. Proposed use(s), sequence of construction, anticipated timetable for project, and specific reason for the request:
   Drilling of gas well for the injection and withdrawal of natural gas for underground storage

   See Exhibit "A"

   Wellsite LW32c-10 Longview Fibre-Surface ownership
   Surface location: 2670' E and 285' N from the west 1/4 corner of Sec. 10. Bottom hole location: 110' North and 2715' east from the west 1/4 corner

2. Present use of the property: Forest Land/existing 1/4 well site

3. Method of sewage disposal:

4. Water Supply: Well Community Other

5. Has Subsurface Sewage Department approved this request? Yes No X

6. Total employees and/or occupants: Present Proposed

7. Present Zoning Primary forest land

I hereby certify that the statements contained herein, along with the evidence submitted, are in all respects true and correct to the best of my knowledge and belief.

8/3/9X

Applicant or Agent

For Office Use Only

Receipt No. Fee Date Received

Hearing Date Staff Member

Present Zoning

NOTE: Attach accurate and detailed plot plan indicating such items as property lines, dimensions, and all existing and proposed facilities, etc.
Please complete the following:

1. What type of use will occur on the property if the conditional use is allowed?
   Drilling well to inject and withdraw natural gas for underground storage.

2. Why is the property in question suitable for this use? Located in
developed gas storage field and is compatible with surrounding area.

3. Is the use compatible with surrounding uses? Yes X No
   In what way? The well installation for injection and withdrawal is very
   localized with minimal impact on present use of property.

4. Will the use affect the existing public facilities or surrounding property or neighbors?
   No.

5. Will a public need or convenience be met by this use that is not already being
   met in the general area? Yes
   In what way? This well will assist in the operation of the Mist underground
   storage field which will contribute to providing an energy source for the
   area's future demands.

The applicant must submit the following 35 DAY PRIOR to the Planning Commission
hearing regularly scheduled for the 1st Monday of each month.

1. Answers to the above questions.
2. The application form attached.
3. Vicinity map.
4. One hundred and twenty-five dollar ($125.00) fee
1. Drill pad is constructed and gravelled, as required, per site plan. Reserve pit is dug according to DOGAMI requirements. Conductor casing is set and rat hole is drilled.

2. Drilling rig is moved in and rigged up.

3. Drilling operations commence. A 17 1/2" hole is drilled to approximately 450' and surface casing is run and cemented to surface.

4. Weld on wellhead, rig up blow out preventer test per DOGAMI requirements.

5. Drill a 12 1/4" hole to the top of the zone of interest. Evaluate hole with wire line tools.

6. Casing is run to bottom and cemented to surface.

7. Drilling continues to the objective total depth. The open hole below casing is evaluated with wireline tools.

8. A slotted liner is run and set below the casing. Gravel is placed behind the liner and production tools and tubing are run and the production tree installed.

9. The reserved pit is cleaned and back filled. Any portion of the drill site location no longer needed is restored to original condition.
COLUMBIA COUNTY
Site Plan
Drill Site for Observation and Monitoring
Underground Gas Storage Field
OREGON NATURAL GAS DEVELOPMENT CORPORATION
Taylor Drilling Company, Rig #5

1. Drill Cuttings Sump
2. Drilling Muds Tanks
3. Mud Loggers Trailer
4. Mud Pumps
5. Drill Rig Floor
6. Diesel Tank
7. Draw Works
8. Drill Hole
9. Cat Walk
10. Pipe Racks
11. Water Tank
12. Dog House
13. Location Roads
14. Tool House and General Building

WATER SOURCE: TRUCKED IN
MIST-BIRKENFELD RURAL FIRE PROTECTION DISTRICT

MAILING ADDRESS: Olympic Road, Mist Route
Clatskanie, Oregon 97016

LOCATION: Olympic Road
Mist, Oregon

TELEPHONE NO.: (503) 220-2573

APPLICATION TO DRILL, OWN, OPERATE OR MAINTAIN OIL WELL

DATE: July 31, 1990

PERMISSION IS HEREBY REQUESTED OF THE MIST-BIRKENFELD RURAL FIRE PROTECTION DISTRICT TO DRILL, OWN, OPERATE OR MAINTAIN IN ACCORDANCE WITH THE DISTRICT FIRE PREVENTION CODE THE FOLLOWING DESCRIBED OIL WELL:

OWNER Northwest Natural Gas Co.

ADDRESS 220 N.W. Second Ave., Portland, Or. 97209

APPLICANT Northwest Natural Gas Co.

ADDRESS 220 N.W. Second Ave., Portland, Or. 97209

NAME OR NO. OF WELL IV 13h-11
LEASE NAME Northwest Natural Gas Co.

LOCATION (NEAREST STREET ADDRESS OR LEGAL DESCRIPTION) 270' North and 350' East

from the west ¼ corner of section 11 T.6N. R.5W

Cavenham Forest Industry - Surface owner

NAME OF OIL FIELD Mist Underground Storage

REMARKS: SUBMIT PLOT PLAN SHOWING LOCATION OF EACH WELL

PERMIT FEE OF $100.00 MUST BE PAID WHEN APPLICATION IS MADE AND REMITTANCE MUST BE IN CASH, CHECK OR MONEY ORDER PAYABLE TO THE MIST-BIRKENFELD RURAL FIRE PROTECTION DISTRICT.

TELEPHONE NO. (503) 220-2573

PERMIT ISSUED PERMIT NUMBER RECEIPT NUMBER

EXHIBIT B Page 42
MIST-BIRKENFELD RURAL
FIRE PROTECTION DISTRICT

MAILING
ADDRESS: Olympic Road, Mist Route
Clatskanie, Oregon 97016

LOCATION: Olympic Road
Mist, Oregon

TELEPHONE NO.: (503) 220-2573

APPLICATION TO DRILL, OWN, OPERATE OR MAINTAIN OIL WELL

DATE: July 31, 1990

PERMISSION IS HEREBY REQUESTED OF THE MIST-BIRKENFELD RURAL FIRE PROTECTION DISTRICT TO DRILL, OWN, OPERATE OR MAINTAIN IN ACCORDANCE WITH THE DISTRICT FIRE PREVENTION CODE THE FOLLOWING DESCRIBED OIL WELL:

OWNER
Northwest Natural Gas Co.

ADDRESS
220 N.W. Second Avenue, Portland, OR 97209

APPLICANT
Northwest Natural Gas Co.

ADDRESS
220 N.W. Second Avenue, Portland, OR 97209

NAME OR NO. OF WELL
Iw33ac-3

LEASE NAME
Northwest Natural Gas Co.

LOCATION (NEAREST STREET ADDRESS OR LEGAL DESCRIPTION)
1700' West and 1070' South from the east 1/4 corner of Sec. 3; T5N; R5W

Cavenham Forest Industries - surface owner

NAME OF OIL FIELD
Mist Underground Storage

BY

TELEPHONE NO. (503) 220-2573

REMARKS: SUBMIT PLOT PLAN SHOWING LOCATION OF EACH WELL.

PERMIT FEE OF $100.00 MUST BE PAID WHEN APPLICATION IS MADE AND REMITTANCE MUST BE IN CASH, CHECK OR MONEY ORDER PAYABLE TO THE MIST-BIRKENFELD RURAL FIRE PROTECTION DISTRICT.

PERMIT ISSUED
PERMIT NUMBER
RECEIPT NUMBER
MIST-BIRKENFELD RURAL 
FIRE PROTECTION DISTRICT

MAILING ADDRESS: Olympic Road, Mist Route Clatskanie, Oregon 97016

LOCATION: Olympic Road Mist, Oregon

TELEPHONE NO.: (503) 220-2573

APPLICATION TO DRILL, OWN, OPERATE OR MAINTAIN OIL WELL

DATE: July 31, 1990

PERMISSION IS HEREBY REQUESTED OF THE MIST-BIRKENFELD RURAL FIRE PROTECTION DISTRICT TO DRILL, OWN, OPERATE OR MAINTAIN IN ACCORDANCE WITH THE DISTRICT FIRE PREVENTION CODE THE FOLLOWING DESCRIBED OIL WELL:

OWNER Northwest Natural Gas Company

ADDRESS 220 N.W. Second Avenue, Portland, OR 97209

APPLICANT Northwest Natural Gas Company

ADDRESS 220 N.W. Second Avenue, Portland, OR 97209

NAME OR NO. OF WELL TW23d-3

LEASE NAME Northwest Natural Gas Co.

LOCATION (NEAREST STREET ADDRESS OR LEGAL DESCRIPTION)

330' South and 2470' East from the west 1/4 corner of Sec. 3; T6N; R5W

Longview Fibre Co. - surface owner

NAME OF OIL FIELD Mist Underground Storage

BY

TELEPHONE NO. (503) 220-2573

REMARKS: SUBMIT PLOT PLAN SHOWING LOCATION OF EACH WELL

PERMIT FEE OF $100.00 MUST BE PAID WHEN APPLICATION IS MADE AND REMITTANCE MUST BE IN CASH, CHECK OR MONEY ORDER PAYABLE TO THE MIST-BIRKENFELD RURAL FIRE PROTECTION DISTRICT.

PERMIT ISSUED PERMIT NUMBER RECEIPT NUMBER
APPLICATION TO DRILL, OWN, OPERATE OR MAINTAIN OIL WELL

DATE: July 31, 1990

PERMISSION IS HEREBY REQUESTED OF THE MIST-BIRKENFELD RURAL FIRE PROTECTION DISTRICT TO DRILL, OWN, OPERATE OR MAINTAIN IN ACCORDANCE WITH THE DISTRICT FIRE PREVENTION CODE THE FOLLOWING DESCRIBED OIL WELL:

OWNER
Northwest Natural Gas Company

ADDRESS
220 N.W. Second Avenue, Portland, OR 97209

APPLICANT
Northwest Natural Gas Company

ADDRESS
220 N.W. Second Avenue, Portland, OR 97209

NAME OR NO. OF WELL
IW32c-10

LEASE NAME
Northwest Natural Gas Co.

LOCATION (NEAREST STREET ADDRESS OR LEGAL DESCRIPTION)
285' North and 2670' East from
the west 1/4 corner of Sec. 10 T6N; RSW

NAME OF OIL FIELD
Mist Underground Storage

TELEPHONE NO. (503) 220-2573

REMARKS: SUBMIT PLOT PLAN SHOWING LOCATION OF EACH WELL.

PERMIT FEE OF $100.00 MUST BE PAID WHEN APPLICATION IS MADE AND REMITTANCE MUST BE IN CASH, CHECK OR MONEY ORDER PAYABLE TO THE MIST-BIRKENFELD RURAL FIRE PROTECTION DISTRICT.

EXHIBIT B Page 45
### NOTICE OF OPERATION / APPLICATION FOR PERMITS

**STATE OF OREGON**

**DEPARTMENT OF FORESTRY**

**DEPARTMENT OF REVENUE**

**1 County (Enter only one):** Columbia

**2 Check Appropriate Boxes (2A, 2B, or 2C):**
- [ ] 2A NOTICE TO THE STATE FORESTER THAT OPERATION WILL BE CONDUCTED ON LANDS DESCRIBED ON REVERSE (ORS 537.575)
- [ ] 2B APPLICATION FOR PERMITS TO OPERATE POWER DRIVEN MACHINERY (ORS 477.325), Expires at end of calendar year.
- [ ] 2C APPLICATION FOR PERMIT TO CLEAR RIGHTS-OF-WAY (ORS 477.565)
- [ ] 2D NOTICE TO THE STATE FORESTER AND THE DEPARTMENT OF REVENUE OF THE INTENT TO HARVEST TIMBER (ORS 321.560)

**3 Person to be contacted in case of Fire Emergency (Designated Representative):**
- **Name:** Todd A. Thomas
- **Phone No:** (503) 220-2573 (day)
- **Address:** P.O. Box 667, Longview, WA 98630 (206) 425-1550

**4 Operator Information**

- **Name/Title:** Todd Thomas - Senior Operations Superintendent
- **Company Name:** Northwest Natural Gas Co.
- **Mailing Address:** 220 N.W. Second Ave.
- **City, State, Zip Code:** Portland, OR 97209
- **Phone No:** (503) 220-2573

**5 Landowner Information**

- **Name/Title:** Longview Fibre Co.
- **Company Name:** Longview Fibre Co.
- **Mailing Address:** P.O. Box 667
- **City, State, Zip Code:** Longview, WA 98630
- **Phone No:** (206) 425-1550

**6 Timberowner and Harvest Tax Payor**

- **Name/Title:** Longview Fibre Co.
- **Company Name:** Longview Fibre Co.
- **Mailing Address:** P.O. Box 667
- **City, State, Zip Code:** Longview, WA 98630
- **Phone No:** (206) 425-1550

**7 Timber Sale Name and/or No:**

**8 WESTERN OREGON PRIVATE LAND ONLY**

- **Is any timber being harvested certified under the Western Oregon Small Tract Optimal Tax (HOSTOT) program?**
  - [ ] Yes
  - [ ] No
  - [ ] All

If you have checked "Part" or "All" please list the number in the "HOSTOT Certificate Number" box.
<table>
<thead>
<tr>
<th>No.</th>
<th>Unit</th>
<th>Activity</th>
<th>Method</th>
<th>Quantity</th>
<th>Approx. MBF</th>
<th>S E C</th>
<th>T P Q R</th>
<th>Starting Date</th>
<th>Ending Date</th>
<th>Tax Unit</th>
<th>Drum, W. S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Dozer, backhoe</td>
<td>.5A</td>
<td></td>
<td>X</td>
<td>10</td>
<td>6N</td>
<td>10/15/90</td>
<td>10/30/90</td>
<td>D3, T1, T2</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>Dozer, backhoe</td>
<td>.5A</td>
<td></td>
<td>X</td>
<td>3</td>
<td>6N</td>
<td>10/1/90</td>
<td>10/30/90</td>
<td>D3, T1, T2</td>
<td></td>
</tr>
</tbody>
</table>

Complete for areas outside of regular sections.

14. **Fill in Government Lot Numbers Below.**

16. If the applicant waives the waiver of the 15 day waiting period, check the box.

**Signatures:**
- Todd A. Thomas
- Date: 8/30/90

18. Attach map and/or aerial photos.
<table>
<thead>
<tr>
<th>SPP</th>
<th>Unit</th>
<th>Activity</th>
<th>Methods</th>
<th>Quantity</th>
<th>Approx. MBF</th>
<th>Location</th>
<th>Operation</th>
<th>Legal Descriptions</th>
<th>Written Plans</th>
<th>Regulated Use Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>Dozer, backhoe</td>
<td>.5A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Dozer, backhoe</td>
<td>.5A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Complete for areas outside of regular sections.

14. Fill in government lot numbers below.

---

15. If the applicant waives the period of the 15 day waiting period, check the box.

16. Print name of applicant here.

17. Applicant certifies that all information is true and correct. (Signature)

18. Attach map and/or aerial photos.