BEFORE THE ENERGY FACILITY SITING COUNCIL
OF OREGON

In the Matter of the Application  
Of Oregon Natural Gas Development  
Corporation to Amend its Mist  
Underground Storage Facility Site  
Certificate Agreement

APPLICATION
TO AMEND SITE CERTIFICATE

Oregon Natural Gas Development Corporation (Oregon Natural) hereby applies to the Energy Facility Siting Council (Council), pursuant to Part VII of the Mist Underground Storage Facility Site Certificate Agreement (Certificate) for authority to amend the Certificate by expanding the related or supporting facilities for the Mist Project with the addition of one monitoring well to those shown on Appendix 1 of the Certificate and to conform Appendix 1 to reflect such addition.

I. Introduction

Pursuant to Part V of the Certificate, Oregon Natural is required to seek an amendment to the Certificate if it intends to add facilities to the Mist Project not now shown in Appendix 1 to or identified in Part II of the Certificate.
This application proposes the addition of a seventh monitoring well to the Mist Project. When the Mist Project was initially designed, Oregon Natural anticipated the need for six monitoring wells, three associated with each of the storage reservoirs. This additional well will be used in conjunction with the Bruer reservoir, the southern most reservoir in the Mist Project.

Further, pursuant to Part VI of the Certificate, Oregon Natural has filed a conditional use permit application with Columbia County to drill the subject monitoring well. A copy of the county's application is attached to this application as Exhibit No. 1.

II. Justification

Oregon Natural's understanding of the characteristics of the storage reservoirs is continuing to expand. With the addition of each new well within the parameters of the Mist Project and the new seismic data of the Mist area, a clearer picture of the reservoirs is developing.

When the Mist Project was initially designed, the known data indicated that the Bruer reservoir was restricted by two faults. The data also indicated that the spill-point of the reservoir, the point at which the gas would flow out of the bottom of the reservoir when filled beyond capacity,
would be in the west side of the reservoir in conjunction with the interpreted location of a north/south fault.

The drilling of the authorized monitoring well on the west side of the Bruer reservoir and seismic data secured from ARCO now indicates that the north/south fault is further west than initially indicated and is interpreted to be oriented north/northwest and in all likelihood does not form the western boundary of the reservoir. As a result of the additional information, it now appears that the east/west fault, which is the known southern boundary of the Bruer reservoir is not of the magnitude as originally interpreted and that the spill point of the reservoir may occur along it. As the water level in the Bruer reservoir declines, futures injections could reintroduce gas down to the anticipated spill-point on the south side of the reservoir. To monitor the aquifer activity in this area, the installation of a monitoring well south of the southern boundary of the reservoir is required.

III. Proposed Amendments

Oregon Natural is requesting authorization to add a seventh monitoring well as a related or supporting facility to the Mist Project. The designation of this new monitoring well is shown on Exhibit No. 2 to this application.
Appendix 1 of the Certificate should be conformed to reflect the addition of this new monitoring well. This can be accomplished by substituting Exhibit No. 2 of the application for Appendix 1 of the Certificate.

IV. Public Health, Safety or Welfare

The proposed amendment to the Certificate does not present a danger to the public health, safety or welfare under the provisions of Part VII(A) of the Certificate. The review of the proposed amendment should be addressed under the provisions of Part VII(F) of the Certificate.

WHEREFORE, Oregon Natural Gas Development Corporation respectfully requests that the Energy Facility Siting Council enter an Order granting this amended application.

DATED at Portland, Oregon this 24th Day of March, 1988.

OREGON NATURAL GAS DEVELOPMENT CORPORATION

Charles E. Stinson
Vice President

Robert M. Johnson
of Attorneys for Oregon Natural Gas Development Corporation

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STATE OF OREGON  
COUNTY OF MULTNOMAH

Charles E. Stinson, being duly sworn, deposes and says that he is a Vice President of Oregon Natural Gas Development Corporation, the Applicant named in the foregoing application; that he has read the application; including the exhibits thereto; knows the content thereof, and that the same are true to the best of his knowledge and belief.

Charles E. Stinson  
Vice President

SUBSCRIBED AND SWORN before me this 24th day of March, 1988.

Notary Public of Oregon
My commission expires: 2-8-89
STATE OF OREGON  
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
900 State Office Building  Portland, Oregon 97201

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 CRS 520, application is hereby made for permit to drill:
(an oil well) to be known as Oregon Natural Gas Development  
(Company or Operator)  
(Lease)  
(Well No.)

In _____ SE 1 of Sec. 10, T. SN, R. SW, W.B.M. Directional? No _____ Yes _____

Survey Coordinates: FROM S.E. corner, Section 10; north 2000' and west 500'

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

Elevation of ground above sea level is 750 feet. All depth measurements are taken from Kelly Bushing, which is 11.4 feet above ground.

Lessor (Mineral Owner): Oregon Natural Gas Development

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

Surface Owner: Longview Fibre Company

Address: P.O. Box 667  Longview, Washington 98630

Lessee: Oregon Natural Gas Development

Address: 220 N.W. Second Avenue  Portland, Oregon 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>121&quot;</td>
<td>8 5/8&quot;</td>
<td>32.0</td>
<td>K-55</td>
<td>450'</td>
<td>370 ft</td>
</tr>
<tr>
<td>7 7/8&quot;</td>
<td>5 1/2&quot;</td>
<td>15.5</td>
<td>N-55</td>
<td>3,900'</td>
<td>500 ft</td>
</tr>
</tbody>
</table>

Geologic Objectives  
Clark and Wilson Sand

Proposed Depth 3,600'

Company/Operator Oregon Natural Gas Development  
Sign signature

Position Field Operations Superintendent  
Date

SEND WELL COMMUNICATION TO:  
Name Todd Thomas

Address 220 N.W. Second Avenue  
Portland, Oregon 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 drill takes place. (4) Unless specifically exempted, permittee is obligated to comply with all current applicable statutes and rules including those adopted after permit issuance.
Name of applicant or agent: OREGON NATURAL GAS DEVELOPMENT CORPORATION

Mailing Address: 220 N. W. SECOND AVENUE Phone: Office 220-2573
               PORTLAND, OREGON 97209 Home 397-4958

Location or County Road ____________________ Total Acreage __________

Tax Account Number ______________________ Township/PN Range SW Section 10 SE 1/4

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 OBSERVATION AND MONITORING OF UNDERGROUND GAS STORAGE FIELDS.

   SEE EXHIBIT 'A'

   WELL SITE ON 43B-10 LONGVIEW FIBRE - SURFACE OWNERSHIP

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

__________________________________________
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 MONITOR UNDERGROUND GAS STORAGE FIELD.

2. Why is the property in question suitable for this use?  
   LOCATED NEAR GAS STORAGE FIELD AND COMPATIBLE WITH SURROUNDING AREA.

3. Is the use compatible with surrounding uses?  
   Yes  No
   In what way?  MONITORING PROCEDURE 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 FIELDS 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
LEGEND

- Dotted line: Storage Lease
- Dotted line: Mineral Ownership
- Solid line: Main Pipeline
- Dashed line: Existing Gathering Line
- Dash-dot line: Proposed Gathering Line
- Circle: Monitoring Well
- Triangle: Pressure Monitoring Well
- Asterisk: Injection/Withdrawal Well
- Star: Proposed Injection/Withdrawal Well
- Square: Withdrawal Well

Existing and proposed pipelines follow existing roads except where noted. No new roads planned.

SCALE: 1" = 1350'

OREGON NATURAL GAS DEVELOPMENT CORP
MIST UNDERGROUND STORAGE PROJECT
FACILITIES MAP: EXISTING AND PROPOSED

3/87 JM