

RECEIVED

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SEP 16 2008

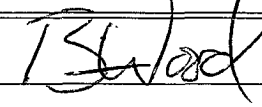
APPLICATION FOR PERMIT TO DRILL OR REENTER

RCVD MAY 1 '09  
OIL CONS. DIV.  
DIST. 3


1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>NO-G-0611-1747</b>
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name <b>Navajo Allotment</b>
2. Name of Operator <b>Pro NM Energy, Inc.</b>		7. If Unit or CA Agreement, Name and No. <b>N/A</b>
3a. Address <b>460 St. Michael's Drive Santa Fe, NM 87505</b>	3b. Phone No. (include area code) <b>(505) 988-4171</b>	8. Lease Name and Well No. <b>Bisti Otero 23 #1</b>
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface <b>970' FSL &amp; 920' FEL</b> At proposed prod. zone <b>Same</b>		9. API Well No. <b>30-045-34799</b>
14. Distance in miles and direction from nearest town or post office* <b>16 air miles NW of Nageezi, NM</b>		10. Field and Pool, or Exploratory <b>Bisti Lower-Gallup &amp; Basin Dakota</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>920'</b>	16. No. of acres in lease <b>160</b>	11. Sec., T. R. M. or Blk. and Survey or Area <b>23-25N-11W NMPM</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>967' (TP 2)</b>	19. Proposed Depth <b>6,500'</b>	12. County or Parish <b>San Juan</b>
20. BLM/BIA Bond No. on file <b>B4502</b>	21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>6,523' GL</b> This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4	13. State <b>NM</b>
22. Approximate date work will start* <b>12/01/2008</b>	23. Estimated duration <b>4 weeks</b>	24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature 	Name (Printed/Typed) <b>BRIAN WOOD</b>	Date <b>09/11/2008</b>
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Title **CONSULTANT** PHONE: (505) 466-8120 FAX: (505) 466-9682

Approved by (Signature) 	Name (Printed/Typed) <b>D. Manliester</b>	Date <b>4/28/09</b>
Title <b>AFM</b>	Office <b>FFC</b>	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.


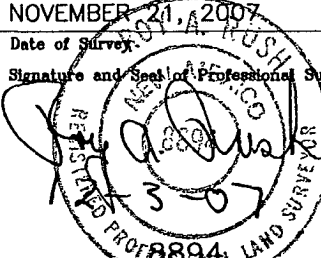
\*(Instructions on page 2)

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOCD FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOCD PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

MAY 05 2009

NMOCD

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

<div>16</div>	<div>17</div> <div>OPERATOR CERTIFICATION</div> <div>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</div> <div><div></div><div>9-11-08</div></div> <div><div>Signature</div><div>Date</div></div> <div><div>Printed Name</div><div>BRIAN WOOD</div></div>	
<div>23</div>	<div>FD. 2 1/2" BC. 1932 G.L.O.</div>	
<div>LAT: 36.38194° N. (NAD 83) LONG: 107.96766° W. (NAD 83) LAT: 36°22'54.98782" N. (NAD 27) LONG: 107°58'03.57010" W. (NAD 27)</div>	<div>N 00-06-57 W 2643.86' (M)</div>	<div>18</div> <div>SURVEYOR CERTIFICATION</div> <div>I hereby certify that the well location shown on this plan was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</div> <div><div>NOVEMBER 21, 2007</div><div>Date of Survey</div></div> <div><div>Signature and Seal of Professional Surveyor:</div><div></div></div>
<div>FD. 2 1/2" BC. 1932 G.L.O.</div>	<div>N 89-56-49 W 2637.61 (M)</div> <div>970'</div> <div>920'</div> <div>FD. 2 1/2" BC. 1932 G.L.O.</div>	<div>Certificate Number</div>

18

23

LAT: 36.38194° N. (NAD 83)

LONG: 107.96766° W. (NAD 83)

LAT: 36°22'54.98782" N. (NAD 27)

LONG: 107°58'03.57010" W. (NAD 27)

FD. 2 1/2" BC.

1932 G.L.O.

FD. 2 1/2" BC.

1932 G.L.O.

N 89-56-49 W

2637.61 (M)

N 00-06-57 W

2643.86' (M)

920'

970'

17

### OPERATOR CERTIFICATION

*I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.*

Signature

9-11-08  
 Date

BRIAN WOOD

Printed Name

18

### SURVEYOR CERTIFICATION

*I hereby certify that the well location shown on this plan was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.*

NOVEMBER 21, 2007

Date of Survey

Signature and Seal of Professional Surveyor:

8894

Certificate Number

Pro NM Energy Inc.  
Bisti Otero 23 #1  
970' FSL & 920' FEL  
Sec. 23, T. 25 N., R. 11 W.  
San Juan County, New Mexico

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## Drilling Program

### 1. ESTIMATED FORMATION TOPS

<u>Formation</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Nacimiento	0'	15'	+6,523'
Pictured Cliffs Sandstone	1,346'	1,361'	+5,177'
Mesa Verde Sandstone	2,126'	2,141'	+4,397'
Gallup Sandstone	4,991'	5,006'	+1,532'
Dakota Sandstone	5,891'	5,906'	+632'
Total Depth (TD)	6,500'	6,515'	+23'

### 2. NOTABLE ZONES

<u>Gas &amp; Oil Zones</u>	<u>Water Zones</u>	<u>Coal Zones</u>
Fruitland	Nacimiento	Fruitland
Pictured Cliffs	Fruitland	
Gallup		
Dakota		

Water zones will be protected with casing, cement, and weighted mud. Fresh water found while drilling will be recorded.

### 3. PRESSURE CONTROL

BOP systems will follow Onshore Order No. 2. The drilling contract has not yet been awarded, thus the exact BOP model to be used is not yet known. A typical model is shown on the Page 3.

Once out from under the surface casing, a minimum 3,000 psi BOP and choke

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manifold system will be used. BOP controls will be installed before drilling the surface casing plug and used until the well is completed or abandoned.

Pressure tests to  $\approx 2,500$  psi will be conducted with a BOP tester. All BOP mechanical and pressure tests will be recorded on the driller's log. BOPs will be inspected and operated at least daily to assure good mechanical working order. The inspection will be recorded on the daily drilling report.

#### 4. CASING & CEMENT

<u>Hole Size</u>	<u>O. D.</u>	<u>Pounds/Foot</u>	<u>Grade</u>	<u>Age</u>	<u>Connections</u>	<u>Depth Set</u>
12-1/4"	8-5/8"	24	J-55	New	ST & C	320'
7-7/8"	5-1/2"	17	J-55	New	ST & C	6,500'

Surface casing will be cemented to the surface with  $\approx 275$  sacks ( $\approx 324.5$  cubic feet) of Class B cement containing 2%  $\text{CaCl}_2$  and 1/4 pound per sack cello flakes. Yield = 1.18 cubic feet per sack. Weight = 15.6 pounds per gallon. Excess >100%. A centralizer will be placed on the bottom joint.

Production casing will be cemented to the surface in two stages with >100% excess. DV tool will be set at least 50' into the Mancos shale. Will install centralizer above and centralizer below DV tool plus  $\approx 6$  centralizers each across Gallup and across Dakota.

First stage:  $\approx 670$  sacks ( $\approx 1,380$  cubic feet) of Class B cement containing 2% sodium metasilicate followed by  $\approx 100$  sacks ( $\approx 118$  cubic feet) of Class B cement containing 2%  $\text{CaCl}_2$ . Second stage:  $\approx 360$  sacks ( $\approx 742$  cubic feet) of Class B cement containing 2% sodium metasilicate followed by  $\approx 100$  sacks ( $\approx 118$  cubic feet) Class B cement containing 2%  $\text{CaCl}_2$ . The total cement volume for the long string will be  $\approx 2,358$  cubic feet.

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#### 5. MUD PROGRAM

<u>Depth</u>	<u>Type</u>	<u>ppg</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0 - 320'	Spud mud and Gel Lime	8.8	50	N/A
300' - 4000'	Spud mud and Gel Lime	8.8	50	N/A
4000' - TD	LSND	9.2	45	10 cc

#### 6. CORES, TESTS, & LOGS

No cores or drill stem tests are planned. The following logs will be run from TD to the base of the surface casing:

dual induction, formation density  
compensated neutron, SP, gamma ray

#### 7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum expected bottom hole pressure will be  $\approx$ 2,200 psi.

#### 8. OTHER INFORMATION

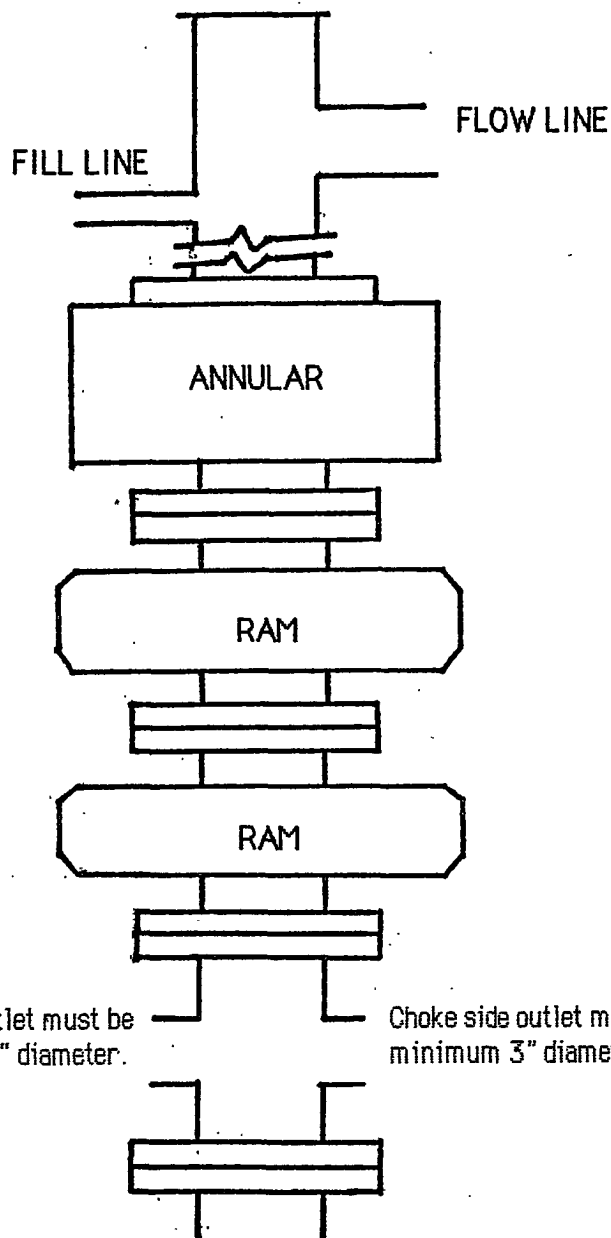
The anticipated spud date is upon approval. It is expected it will take about  $\approx$ 1 month to drill and complete the well.

## **DRILLING CONDITIONS OF APPROVAL**

**Operator:** Pro NM Energy Inc.  
**Lease No.:** NO-G-0611-1747  
**Well Name:** Bisti Otero 23 #1  
**Well Location:** Sec. 23, T25N, R11W; 970' FSL & 920' FEL

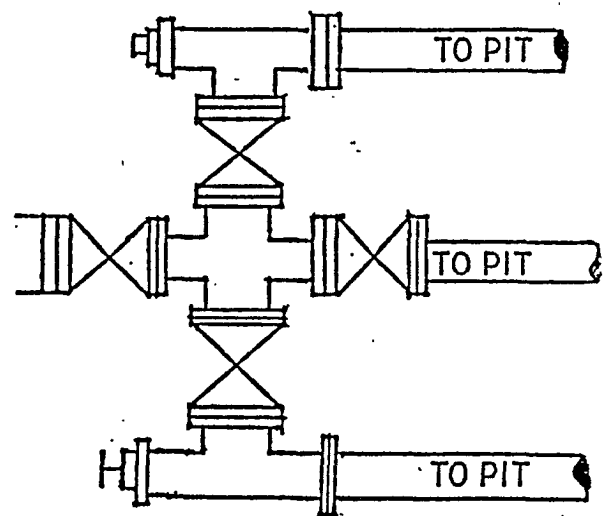
**Refer to Onshore Order 2 III. B. 1. f.**

1. Centralizers must be run on the bottom (3) three joints on the surface casing according to Onshore Order No. 2 *Casing and Cementing Requirements* and NTL –FRA 90-1 *Requirements to Operate on Federal and Indian Leases: Casing and Cementing Requirements*.



TYPICAL BOP STACK  
& CHOKE MANIFOLD

There will be at least 2 chokes and 2 choke line valves (3" minimum). The choke line will be 3" in diameter. There will be a pressure gauge on the choke manifold.



Kill line will be minimum 2" diameter and have 2 valves, one of which shall be a minimum 2" check valve.

Upper kelly cock will have handle available.  
Safety valve and subs will fit all drill string connections in use.  
All BOPE connections subjected to well pressure will be flanged, welded, or clamped.