

RECEIVED

SEP 15 2008

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

UNITED STATES **Bureau of Land Management**
DEPARTMENT OF THE INTERIOR **Farmington Field Office**
BUREAU OF LAND MANAGEMENT

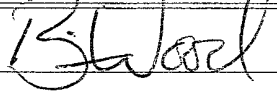
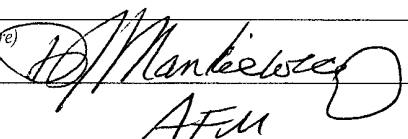
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NO-G-9403-1260
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 Navajo Allotment
2. Name of Operator Pro NM Energy, Inc.		7. If Unit or CA Agreement, Name and No. N/A
3a. Address 460 St. Michael's Drive Santa Fe, NM 87505	3b. Phone No. (include area code) (505) 988-4171	8. Lease Name and Well No. Bisti Otero 22 #1
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 1900' FSL & 975' FWL At proposed prod. zone Same		9. API Well No. 30-045-34797
11. Sec., T. R. M. or Blk. and Survey or Area L 22-25N-11W NMPM		10. Field and Pool, or Exploratory Bisti Lower-Gallup & Basin Dakota
14. Distance in miles and direction from nearest town or post office* 16 air miles NW of Nageezi, NM		12. County or Parish San Juan
13. State NM		15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 780'
16. No. of acres in lease 160		17. Spacing Unit dedicated to this well N2SW4 (Gallup) & S2 (Dakota)
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,128' (TP 22-1)		19. Proposed Depth 6,500'
20. BLM/BIA Bond No. on file B4502		21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,482' GL
22. Approximate date work will start* 11/01/2008		23. Estimated duration 4 weeks DIST. 3
24. Attachments		

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

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

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

25. Signature 	Name (Printed/Typed) BRIAN WOOD	Date 09/04/2008
Title CONSULTANT		
PHONE: (505) 466-8120 FAX: (505) 466-9682		
Approved by (Signature) 	Name (Printed/Typed) AFM	Date 12/21/09
Title PFO		

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.

This action is subject to technical and procedural review pursuant to 43 CFR 3165.9 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

JAN 04 2010

NMOCD

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.

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
1301 W. Grand Ave., Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

Bureau of Land Management
Farmington Field Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-34797	² Pool Code 5890	³ Pool Name BISTI LOWER-GALLUP
⁴ Property Code 37948	⁵ Property Name BISTI OTERO 22	
⁷ GRID No. 018118	⁶ Operator Name PRO NM ENERGY INC.	⁸ Well Number 1
		⁹ Elevation 6482

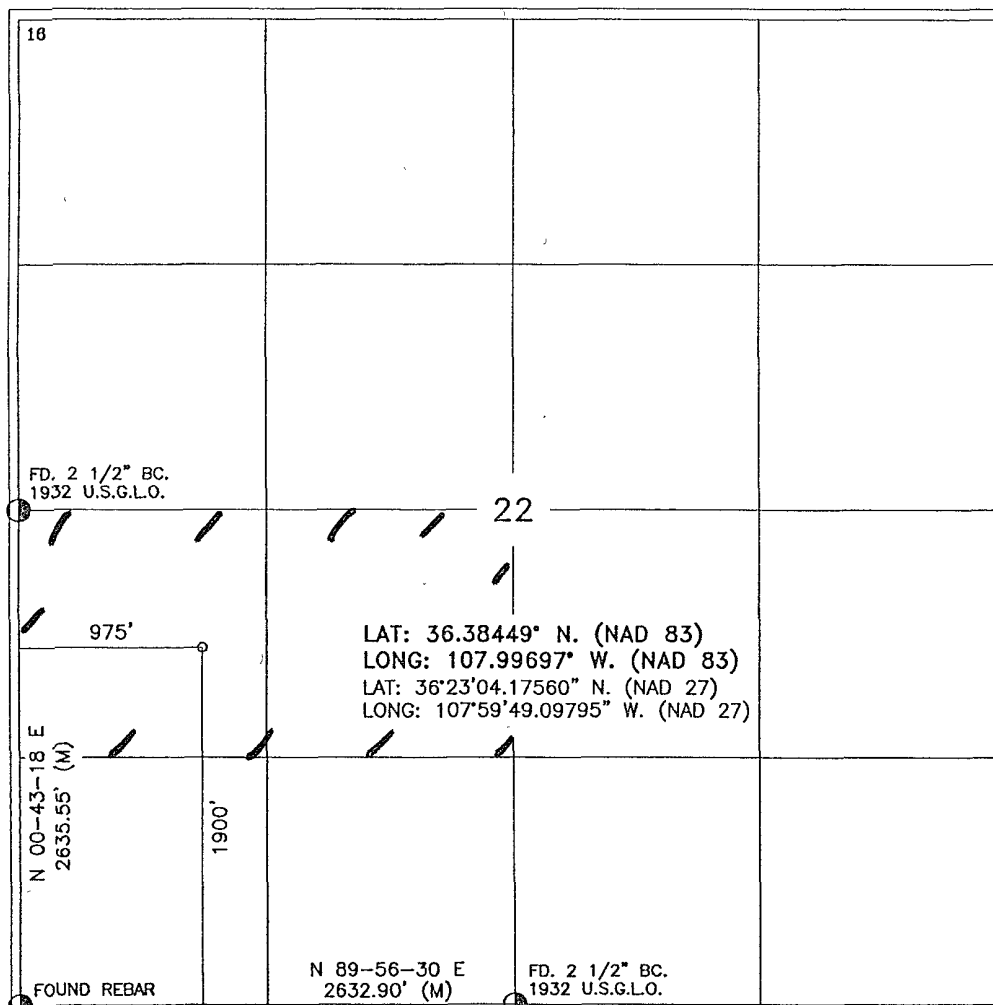
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	22	25-N	11-W		1900	SOUTH	975	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 80			¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



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.

Brian Wood **9-4-08**
Signature Date
BRIAN WOOD
Printed Name

18

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat 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.

DECEMBER 17 2007
Date of Survey
Signature and Seal of Professional Surveyor:
[Signature]
8894
Certificate Number

DISTRICT I
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State Lease - 4 Copies
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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-	² Pool Code 71599	³ Pool Name BASIN DAKOTA
⁴ Property Code	⁵ Property Name BISTI OTERO 22	⁶ Well Number 1
⁷ OGRID No. 018118	⁸ Operator Name PRO NM ENERGY INC.	⁹ Elevation 6482

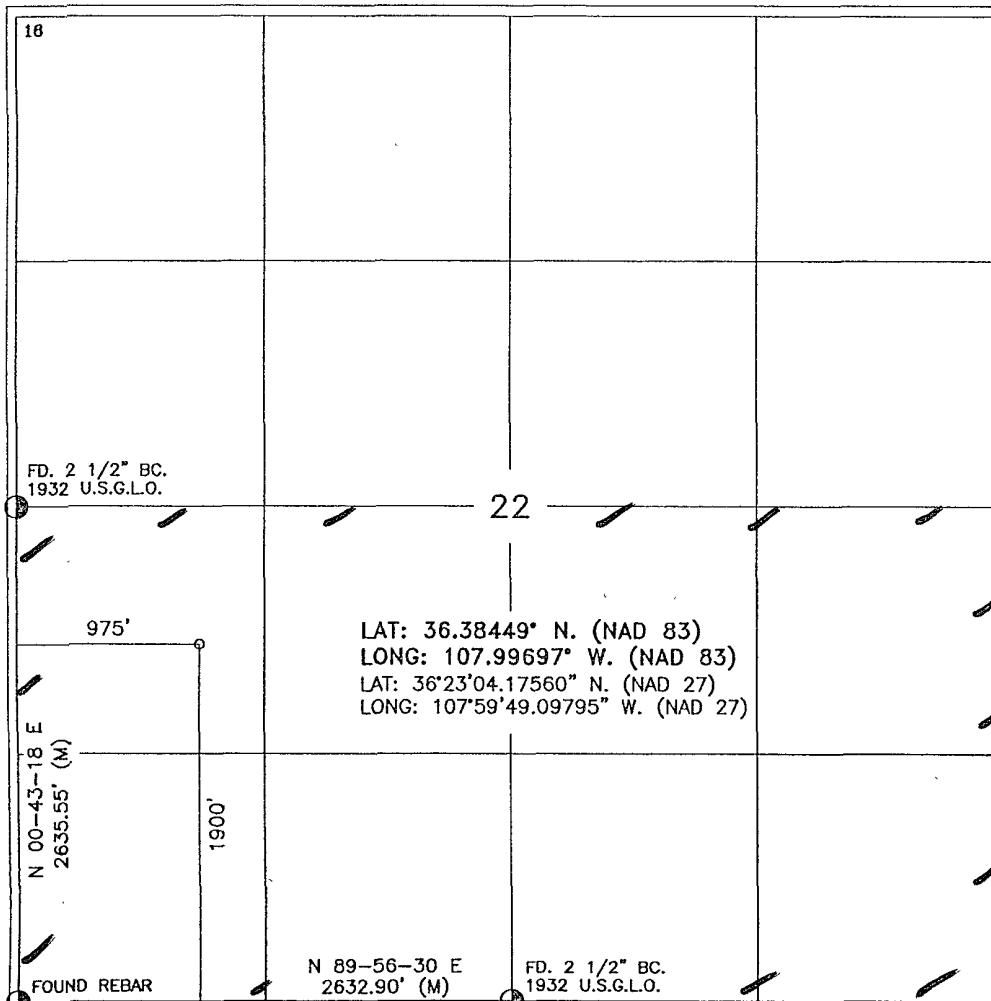
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L	22	25--N	11--W		1900	SOUTH	975	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 320			¹³ Joint or Infill		¹⁴ Consolidation Code C		¹⁵ Order No.		

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Signature and Seal of Professional Surveyor:
[Signature]
Certificate Number

Pro NM Energy Inc.
Bisti Otero 22 #1
1900' FSL & 975' FWL
Sec. 22, 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'	+6,482'
Pictured Cliffs Sandstone	1,288'	1,303'	+5,179'
Mesa Verde Sandstone	2,048'	2,063'	+4,419'
Gallup Sandstone	4,773'	4,788'	+1,694'
Dakota Sandstone	6,010'	6,025'	+625'
Total Depth (TD)	6,500'	6,515'	-18'

2. NOTABLE ZONES

<u>Gas & 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

Pro NM Energy Inc.
Bisti Otero 22 #1
1900' FSL & 975' FWL
Sec. 22, T. 25 N., R. 11 W.
San Juan County, New Mexico

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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.

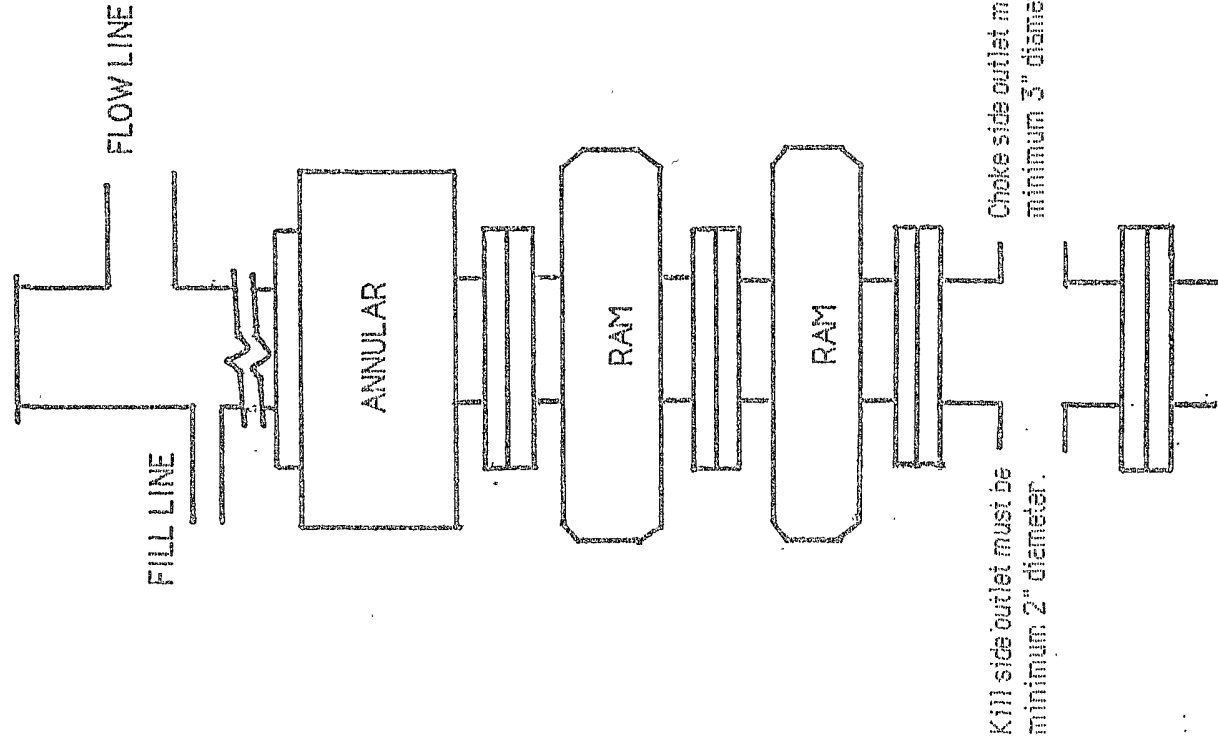
4. CASING & CEMENT

<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 ≈ 275 sacks (≈ 324.5 cubic feet) of Class B cement containing 2% 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.

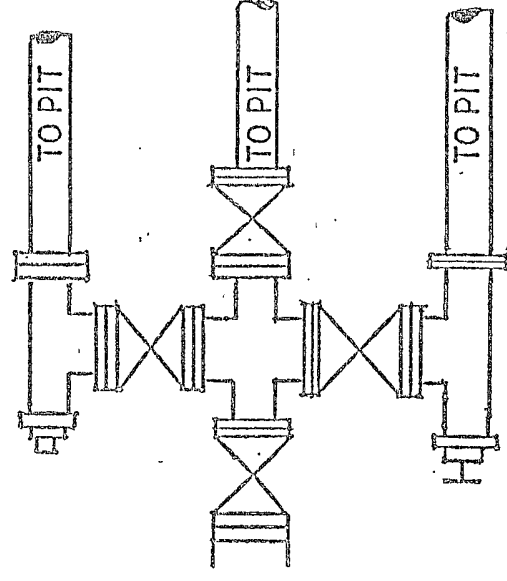
Production casing will be cemented to the surface in two stages with >100% excess. DV tool will be set at least 50' into the Mancos shale. Will install centralizer above and centralizer below DV tool plus ≈ 6 centralizers each across Gallup and across Dakota.

First stage: ≈ 670 sacks ($\approx 1,380$ cubic feet) of Class B cement containing 2% sodium metasilicate followed by ≈ 100 sacks (≈ 118 cubic feet) of Class B cement containing 2% CaCl_2 . Second stage: ≈ 360 sacks (≈ 742 cubic feet) of Class B cement containing 2% sodium metasilicate followed by ≈ 100 sacks (≈ 118 cubic feet) Class B cement containing 2% CaCl_2 . The total cement volume for the long string will be $\approx 2,358$ cubic feet.



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.



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

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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-9403-1260
Well Name: Bisti Otero 22 #1
Well Location: Sec.22, T25N, R11W; 1900' FSL & 975' FWL

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*.

2) Centralizers to impart a swirling action around the casing (such as turbolators) are required just below and into the base of the lowest usable water zone.