Form 3160-3 (August 1999)

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FORM APPROVED OMB NO. 1004-0136 Expires: November 30, 2000

5 Lease Serial No.

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

2004 APR 20 PM 12: 27

NO-G-9909-1358

6. If Indian, Allottee or Tribe Name

APPLICATION FOR PERMIT TO D	RILL OR REENTER	MARK 18CY	Navajo Allotted
la. Type of Work:    X DRILL   REEN'	TER	UN, NIII	7. If Unit or CA Agreement, Name and No.
	_	<u> </u>	3. Lease Name and Well No.
1b. Type of Well: Oil Well X Gas Well Other	X Single Zone M	ultiple Zone	5. Deade Ivanie und Wen Ivo.
			Bisti Max 24 F No. 1
2. Name of Operator Pro NM Energy, Inc.			30045 32318
3a. Address 460 St. Michael's Drive, Suite 300 Santa Fe, NM 87505	3b. Phone No. (include of 505) 2080 1 107	area code)	10. Field and Pool, or Exploratory  Basin Dakota
Location of Well (Report location clearly and in accordance with any State At surface	te requiremnets.*)  Out  20	04	11. Sec., T., R., M., or Blk. and Survey or Area  Sec. 24, T 25 N, R 11 W
14. Distance in miles and direction from nearest town or post office*	E 0/40 0	m. 3	12. County or Parish 13. State
Seven miles south of Carson Trading Post			San Juan New Mexico
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any)	16. No. of Acresciplease	17. Spacing C	Jnit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth <b>6230'</b>	20. BLM/BIA	A Bond No. on file <b>B03641</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	2	23. Estimated duration
6550' GL	As soon as permitted		30 days
	24. Attachments		
The following, completed in accordance with the requirements of Onshore Oi	l and Gas Order No. 1, shall be attached t	o this form:	
Well plat certified by a registered surveyor.	4. Bond to cover the or	perations unles	s covered by and existing bond on file (see
2. A Drilling Plan.	Item 20 above.		, , ,
3. A Surface Use Plan (if the location is on National Forest System Lands, the	e 5. Operator certificatio	n.	
SUPO shall be filed with the appropriate Forest Service Office).	Such other site speci authorized officer.	ific information	n and/or plans as may be required by the
25. Signature	Name (Printed/Typed)		Date
Dava J. Delucuthal	Dana L. Delven	thal	19-Apr-04
Title Agent			•
Approved by (Signature)  Approved by (Signature)  Approved by (Signature)  Approved by (Signature)	Name (Printed/Typed)		Date 7-12-04
Title AFM	Office FFS		
Application approval does not warrant or certify that the applicant holds legal operations thereon.  Conditions of approval, if any, are attached.	or quitable title to those rights in the sub	ject lease whic	th would entitle the applicant to conduct
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crim States any false, fictitious or fraudulent statements or representations as to any		to make to an	y department or agency of the United

NMOCD

\*(Instructions on reverse)

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

#### State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised June 10, 2003

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

DISTRICT III 1000 Rio Brazos Rd., Aztec, N.M. 87410 OIL CONSERVATION DIVISION 1220 South St. Francis Dr.

Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

14827

DISTRICT IV 1220 South St. F	rancis Dr.,	Santa Fe, NM	£ 87505		Santa F	e, NM	87505			AMEN	DED REI	20R'
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OGRID N			**************************************		BISTI MAX		·			• •	levation	
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UL or lot no.	Section	Township	Range	Lot Idn	Feet from		North/South line	Feet from the	East	/West line	Co	ounty
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# **Drilling Program**

# 1. Formation Tops

The estimated tops of important geologic markers are:

Formation Name	GL Depth	KB Depth	SS Elev.
Pictured Cliffs	1444'	1459'	5106'
Mesaverde	2266'	2281'	4284'
Mancos Shale	4149'	4164'	2401'
Gallup	4953'	4968'	1597'
Greenhorn	5838'	5853'	712'
Graneros	5902'	5917'	648'
Dakota	6085'	6100'	465'
Total Depth (TD)	6215'	6230'	335'

<sup>\*</sup>All elevations reflect the ungraded ground level of 6550'.

## 2. Notable Zones

## Oil and Gas Zones

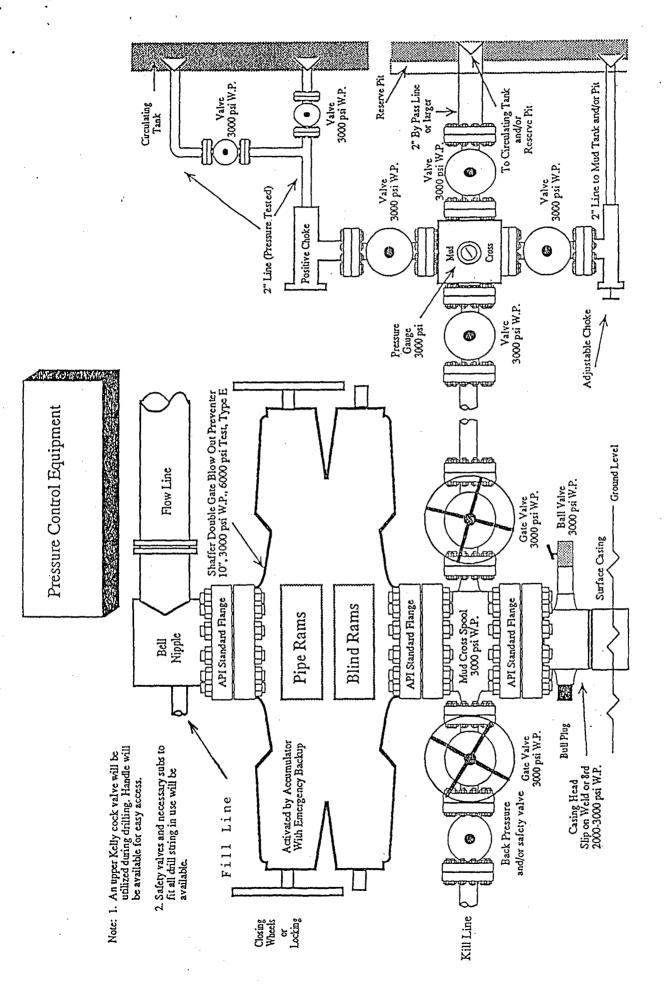
Pictured Cliffs (1459') Mesaverde (2281') Gallup (4968') Graneros (5917') Dakota (6100')

The primary objective is the Basin Dakota formation. Completion may require fracturing. The entire wellbore will be cased. Water zones will be protected with casing, cement, and weighted mud. Oil and gas shows will be tested for commercial potential based on the well site geologist's recommendations.

## 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 attached page.

Once out from under the surface casing, a minimum 3000 psi BOP and choke 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.



Note: This equipment is designed to meet requirements for a3:-M rating standard per 43 CFR part 3160 (amended). Proper operation and testing of equipment will be caried out per standard. 3,000 psi equipment can be substituted in the drawing to meet minimum requirements per standard.

Pro NM Energy, Inc. Bisti Max 24 F No. 1 1855' FNL, 1960' FWL Sec. 24, T25N, R11W

Pressure tests to 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 and Cement

Hole Size	$\underline{\text{OD}}$	Weight (lb/ft)	<u>Grade</u>	<u>Depth</u>
12 1/2"	8 5/8"	24.00	J-55	300 320'
6 1/4"	4 1/2"	11.60	J-55	6230'

Surface casing will be cemented to surface with 275 sx (324.5 cf) of Class B cement containing 2% CaCl and 1/4 #/sk cello flakes. Production casing will be cemented to surface in two stages. 1st stage: 670 sx (1380 cf) of Class B cement containing 2% Sodium Metasilicate and 1/4 #/sk cello flakes followed by 160 sx (119 cf) of Class B cement containing 2% CaCl and 1/4 #/sk cello flakes. 2nd stage: 360 sx (742 cf) of Class B cement containing 2% Sodium Metasilicate and 1/4 #/sk cello flakes followed by 100 sx (118 cf) of Class B cement containing 2% CaCl and 1/4 #/sk cello flakes.

The total cement for the surface casing is 324.5 cf. The total cement for the long string is 2,359 cf. The entire wellbore will be cased. Water zones will be protected with casing, cement, and weighted mud.

#### 5. Mud Program

The proposed mud program is:

<u>Depth</u>	<u>Type</u>	ppg	$\underline{\text{Vis}(cp)}$	F1(cc)
0-300'	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

#### 6. Coring, Testing, and Logging

No cores are planned. The following logs are likely to be run:

Dual Induction, Formation Density, Compensated Neutron, SP, Gamma Ray

PRO N.M. ENERGY, INC. COMPANY:\_ BISTI MAX 24 F No. 1 LEASE: \_ FOOTAGE: \_ 1960 FWL 1855 FNL SEC.: 24 TWN: 25-N \_\_\_\_ RNG:\_ 11-W , NMPM NOTE: 6550' ELEVATION: \_ DAGGETT ENTERPRISES, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. UTILITY NOTIFICATION CENTER OF COLORADO TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION. С C 7.9 80, F 0.8 REAR NEW ACCESS ROAD C' F 9.9 B C 9.5 C 0.0 B' F 6.1

100

SCALE: 1"=100"

ELEV. A	-A'		· c,	/L	
6580					
6570					
6560					
6550		<u> </u>			
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C 0.7

C 6.1

C 5.8