

RECEIVED

APR 28 2008

FORM APPROVED
OMB No 1004-0136
Expires July 31, 2010UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Bureau of Land Management
Farmington Field Office

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMSF079107
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
2. Name of Operator NOBLE ENERGY INC Contact: JEAN M MUSE E-Mail: jmuse@nobleenergyinc.com		7. If Unit or CA Agreement, Name and No.
3a. Address 5802 US HIGHWAY 64 FARMINGTON, NM 87401	3b. Phone No. (include area code) Ph: 303-228-4316 Fx: 303-228-4286	8. Lease Name and Well No. NCRA FEDERAL 22 #06
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SENW 1980FNL 1330FWL 36.47379 N Lat, 107.56707 W Lon At proposed prod. zone SENW 1980FNL 1330FWL 36.47379 N Lat, 107.56707 W Lon		9. API Well No. 30-039-30526
14. Distance in miles and direction from nearest town or post office* 18 MILES NORTH OF NAGEEZI, NM		10. Field and Pool, or Exploratory TAP PC-BLANCO MV-BASIN DK
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig unit line, if any) 1330' FWL OF SEC. 22	16. No. of Acres in Lease 320.00	11. Sec., T, R., M, or Blk. and Survey or Area Sec 22 T26N R7W Mer NMP
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 1040' (JOHN MILES #1)	19. Proposed Depth 6715 MD 6715 TVD	12. County or Parish RIO ARRIBA
21. Elevations (Show whether DF, KB, RT, GL, etc.) 6161 GL	22. Approximate date work will start 06/01/2008	13. State NM
23. Estimated duration 14 DAYS		17. Spacing Unit dedicated to this well 160 NW 1/4 PC 320.00 NW 1/4 MV, DK
20. BLM/BIA Bond No. on file LPM4138289 NM 0484		

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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature (Electronic Submission)	Name (Printed/Typed) JEAN M MUSE Ph: 303-228-4316	Date 04/23/2008
Title AUTHORIZED REPRESENTATIVE		
Approved by (Signature) 	Name (Printed/Typed)	Date 8/1/08
Title Acting AFM Minerals	Office	

Application approval does not warrant or certify 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.

Additional Operator Remarks (see next page)

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.

NOTIFY AZTEC OGD 24 HRS. PRIOR TO CASING & CEMENT OIL CONS. DIV.
mission #59834 verified by the BLM Well Information System DIST. 3
for NOBLE ENERGY INC, sent to the Farmington

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

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

NMOCD

AUG 05 2008

District I
1625 N. French Dr. Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesa, NM 88210
District III
1000 Rio Hachos Rd. Aztec, NM 87410
District IV
1770 S. 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 June 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

RCVD AUG 5 '08
OIL CONS. DIV.
DIST. 3

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 Well Number 30-039-30524	2 Pool Code 85920, 72319 & 71599	3 Pool Name IAPACITO-PICTURED CLIFFS, BASIN DAKOTA & BLANCO MESA VERDE
4 Property Code 304641	5 Property Name NCRA FEDERAL 22	6 Well Number 06
7 UPRID No 234550	8 Operator Name Noble Energy, Inc.	9 Elevation 6161'

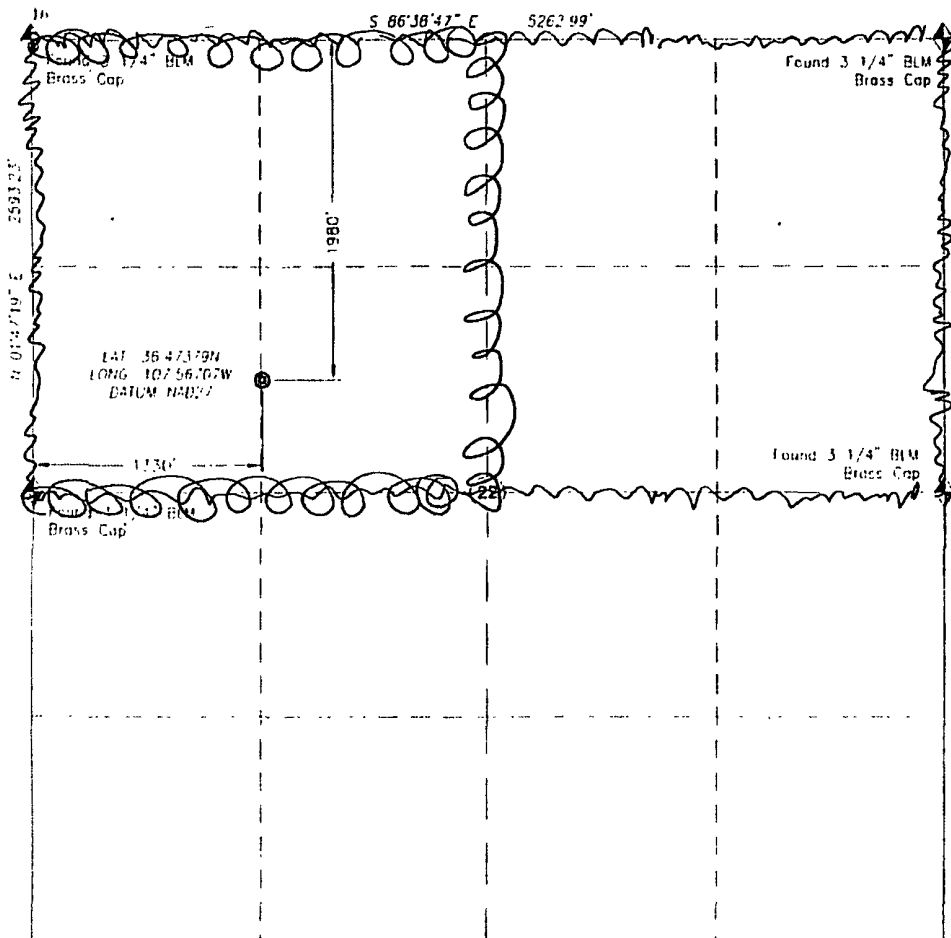
11 or lot no	Section	Township	Range	1 of 10	Feet from the	North South line	Feet from the	Last West line	County
F	22	26N	7W		1980	NORTH	1330	WEST	RIO ARriba

11 Bottom Hole Location If Different From Surface

11 or lot no	Section	Township	Range	1 of 10	Feet from the	North South line	Feet from the	Last West line	County

12 Dedicated Acre: **160 - 320 ACRES**
 13 Cont or In fill: **2N 1/4 PC, N 1/2 DK/MU**
 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.

Signature: **Jean M. Muse** Date: **8/4/08**
 Printed Name: **JEAN M. MUSE**

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.

October 10, 2004
 Date of Survey

DALE E. BELL
 NEW MEXICO
 14400
 REGISTERED PROFESSIONAL SURVEYOR
 10/10/04

Dale E. Bell
 New Mexico Reg. #5 No. 14400
 For and on behalf of Trigon Eng
 126 Park Point Dr., Suite 4
 Durango CO 81301
 (970) 385-9100

**NCRA Federal 22 #06
General Drilling Plan
Patina San Juan, Inc.
San Juan County, New Mexico**

1. LOCATION:

Elevation: 6161'
SENW Section 22-T26N-R7W
1980' FNL 1330' FWL
Rio Arriba County, New Mexico

Field: Huerfano
Surface: United States of America
Minerals: United States of America

2. SURFACE FORMATION, ESTIMATED TOPS AND WATER, OIL, GAS OR MINERAL BEARING FORMATIONS (TVD):

Surface formation – Nacimiento

Formation	drilling depth
Ojo Alamo	1145
Kirtland	1280
Fruitland	1947
Pictured Cliffs**	2221
Lewis	2291
Cliff House**	3863
Menefee	3913
Point Lookout**	4523
Mancos Shale	4636
Gallup**	5700
Greenhorn	6461
Graneros	6521
Dakota***	6575
TD	6715

Legend: * Freshwater bearing formation
 ** Possible hydrocarbon bearing formation
 *** Probable hydrocarbon bearing formation
 # Possible H2S bearing formation

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected.

3. **PRESSURE CONTROL EQUIPMENT:**

BOP equipment will be tested to its rated working pressure or 70-percent of the internal yield of the surface casing, but not to exceed 1,000 psi. See attachments for BOP and choke manifold diagrams.

Production Hole BOP Requirements and Test Plan

11" – 2,000 psi single ram (blind)

11" – 2,000 psi single ram (pipe)

Test as follows:

a) Pipe rams:	1,000 psi (High)	250 psi (low)
b) Choke manifold:	1,000 psi (High)	250 psi (low)
c) Choke lines:	1,000 psi (High)	250 psi (low)

All ram type preventers and related equipment will be hydraulically tested at nipple-up. They will also be retested in either of the following events:

- A pressure seal is broken.
- 30 days have elapsed since the last successful test of the equipment.

Furthermore, BOP's will be checked daily as to mechanical operating condition. All ram type preventers will have hand wheels, which will be operative and accessible at the time the preventers are installed. See attached Exhibit for details on the BOP equipment.

AUXILIARY EQUIPMENT:

- a) Manually operated kelly cock (upper and lower)
- b) Full opening manually operated safety valves in the full open position, capable of fitting all drill stem connections.

4. CASING DESIGN:

Hole Data				
Interval	Bit Size (Inches)	Casing Size (Inches)	Top (Ft)	Bottom (Ft)
Surface	12.25	9.625	0	300 320
Production	7 7/8	4.5	0	6781

Casing Data							
OD (Inches)	ID (Inches)	Weight (Lbs/Ft)	Grade	Thread	Collapse (psi)	Burst (psi)	Min. Tensile (Lbs)
9.625	8.921	36.0	J55	STC	2,020	3,520	394,000
4.5	4.276	11.6	N80	LTC	6,350	7,780	223,000

MINIMUM CASING DESIGN FACTORS:

COLLAPSE: 1.125

BURST: 1.00

TENSION: 1.80

Area Fracture Gradient Range: 0.7 – 0.8 psi/foot

Maximum anticipated reservoir pressure: 2,500 psi

Maximum anticipated mud weight: 9.0 ppg

Maximum surface treating pressure: 3,750 psi

Float Equipment:

Surface Casing: Guide shoe on bottom and 3 centralizers on the bottom 3 joints.

Production Casing: Float shoe on bottom joint and a float collar one joint up from float shoe. One centralizer 10 ft above float shoe and centralizers over potential hydrocarbon bearing zones. Stage tool above the Cliffhouse formation. One centralizer below stage tool and one centralizer above stage tool.

5. CEMENTING PROGRAMS:

9-5/8" Surface casing:

200 sx Type III cement with 3% CaCl_2 , 1/4#/sx cellofakes. 100% excess to circulate cement to surface. WOC 4 hrs. Pressure test surface casing to 1000 psi for 30 minutes.

Slurry weight: 15.2 ppg
Slurry yield: 1.28 ft³/sack

Volume basis:	40' of 9-5/8" shoe joint	17 cu ft
	300' of 12-1/4" x 9-5/8" annulus	100 cu ft
	<u>100% excess (annulus)</u>	<u>100 cu ft</u>
	Total	217 cu ft

Note:

1. Design top of cement is the surface.
2. Have available 100 sx Type III cement with 2% CaCl_2 for top out purposes.

4 1/2" Production casing:

1st Stage:

Lead: 145 sx of Type III cement plus additives

Slurry weight: 10.6 ppg

Slurry yield: 4.28 ft³/sx

Tail: 210 sx Type III cement plus additives

Slurry weight: 12.5 ppg

Slurry yield: 2.20 ft³/sx

2nd Stage:

Lead: 130 sx of Type III cement plus additives

Slurry weight: 10.6 ppg

Slurry yield: 4.28 ft³/sx

Tail: 180 sx Type III cement plus additives

Slurry weight: 12.5 ppg

Slurry yield: 2.20 ft³/sx

Volume basis:	1 st Stage:	
	40' of 4 1/2" shoe joint	5 cu ft
	3215' of 4 1/2" x 7 7/8" hole	730 cu ft
	2 nd Stage:	
	2600' of 4 1/2" x 7 7/8' hole	595 cu ft
	<u>30% excess (annulus)</u>	<u>400 cu ft</u>
	Total	1730 cu ft

CMT TO SURFACE

Note:

1. Design 1st stage top of cement is $\pm 3550'$ (300' above the top of the Cliff House formation).
2. DV tool is 300' below the top of the Lewis Shale formation.
3. Actual cement volumes to be based on caliper log plus 30%.

6. MUD PROGRAM:

The surface hole will be drilled with spud mud. Gel and polymer sweeps will be used from surface to 300 feet as necessary to keep hole clean.

The production hole will be drilled with water until mud up at about 3815 ft. From mud up point to total depth, it will be drilled with a LSND mud. Anticipated mud weight ranges from 8.5 – 9.2 ppg. Mud weight will be increased as required to maintain hole stability and control gas influx.

Sufficient mud materials to maintain stable wellbore conditions (for either well control or lost circulation scenarios) will be maintained at the well site.

No chrome-based additives will be used in the mud system.

7. EVALUATION PROGRAM:

Mud logger: From base of surface casing to TD.

Testing: No DST is planned

Coring: None Planned

Electric logs: Production Hole:
1) GR-Neutron: TD to surface.
2) SP-LDT-DIL-CAL-PE: TD to base of surface casing

8. ABNORMAL PRESSURE AND TEMPERATURE:

H ₂ S	None
Coal	Fruitland
Minerals	None
Water	None
Static BHT	175° F
Lost Circulation	Possible
Hole Deviation	None
Abnormal Pressures	None
Unusual Drilling Problems	None

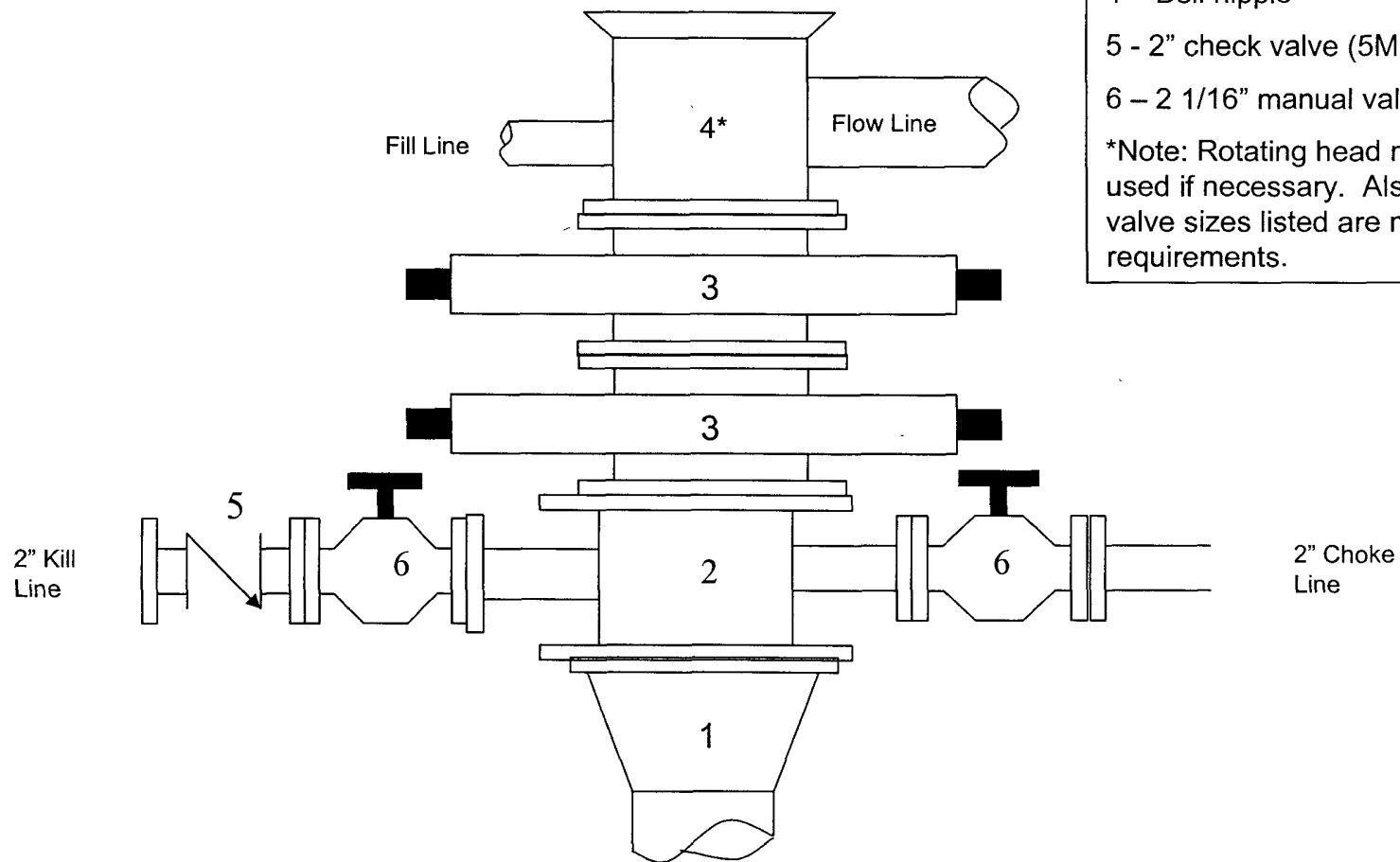
8. ANTICIPATED STARTING DATE: Q2, 2008

Anticipated duration: 14 days

NCRA Federal 22 #06

5000 psi BOP stack

Minimum requirements



Components

1 - Wellhead 9-5/8" (2M)

2 - Drilling spool 11" (2M)

3 - A double or two single rams with blinds on bottom 11" (5M)

4 - Bell nipple*

5 - 2" check valve (5M)

6 - 2 1/16" manual valve (5M)

*Note: Rotating head may also be used if necessary. Also, all line and valve sizes listed are minimum requirements.

NCRA Federal 22 #06

5000 psi Choke Manifold

Minimum requirements

Components

1 – 2 1/16" Valve (5M)

2 – 2 1/16" Valve (5M)

3 – Mud cross with gauge (5M) flanged below the gage.

4 – Adjustable choke (5M)

5 – Adjustable choke (5M)

