

**NAVAJO NATION**

**APD**

**Tribal Operations on  
Tribal Lands**

**PERMIT**

**ACCEPTED FOR  
RECORD ONLY**

NNOGC ALL  
Expires 8/17/12  
Date 6/14/11 & 6/28/11

NOS:     
APDP:     
MP:     
SMA:     
BOND:     
CA/PA:   

RCVD APR 17 '12  
OIL CONS. DIV.  
DIST. 3

Form 3160-3  
(August 2007)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0137  
Expires July 31, 2010

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NO-G-1008-1773 ✓
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 NATION
2. Name of Operator NNOGC Exploration and Production LLC		7. If Unit or CA Agreement, Name and No.
3a. Address 1675 BROADWAY, SUITE 1100 DENVER, CO 80202		8. Lease Name and Well No. CBM A Pod 11 D #1
3b. Phone No. (include area code) 303 534 8300		9. API Well No. 30-045-35343
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 557' FNL & 1139' FWL <u>NNWNW</u> At proposed prod. zone <u>SAME</u> <u>Lot 400</u>		10. Field and Pool, or Exploratory BASIN FRUIT. COAL, WC GALL, & DK
14. Distance in miles and direction from nearest town or post office* 10 AIR MILES SW OF FARMINGTON, NM		11. Sec., T. R. M. or Blk. and Survey or Area NWNW 11-27N-14W NMPM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 9,421'	16. No. of acres in lease 150,000 ✓	17. Spacing Unit dedicated to this well N2 (Fruit. Coal & Dakota) and NWNW (Gallup)
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2,489' (A Pod 10 H 1)	19. Proposed Depth 6,000'	20. BLM/BIA Bond No. on file RLB0006712
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5,873' UNGRADED	22. Approximate date work will start* 12/01/2011	23. Estimated duration 1 MONTH

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must 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 must be filed with the appropriate Forest Service Office) | 6. Such other site specific information and/or plans as may be required by the BLM.             |

25. Signature <u>Brian Wood</u>	Name (Printed/Typed) BRIAN WOOD (505 466-8120)	Date 09/11/2011
Title CONSULTANT (FAX 505 466-9682)		
Approved by (Signature)	Name (Printed/Typed)	Date
Title	Office	

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.

(Continued on page 2)

Submit New PIAT-C-102

APR 30 2012 CA

ACCEPTED FOR RECORD

ENTERED

APR -9 2012

AFMSS

\*(Instructions on page 2)

ACCEPTED FOR RECORD

APR 13 2012

FARMINGTON FIELD OFFICE  
BY T. Salyers

NOTIFY AZTEC OCD 24 HRS.  
PRIOR TO CASING & CEMENT

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

RCVD APR 20 '12  
OIL CONS. DIV.

DIST. 3  
Form C - 102  
Revised July 16, 2011  
Subject to approval of  
District Office

District I  
1025 N. French Dr. Hobbs, NM 88240  
District II  
136 W. 1st St. Albuquerque, NM 87102  
District III  
1000 Rte. 180 NE. Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Mining Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

☐ AMENDED REPORT

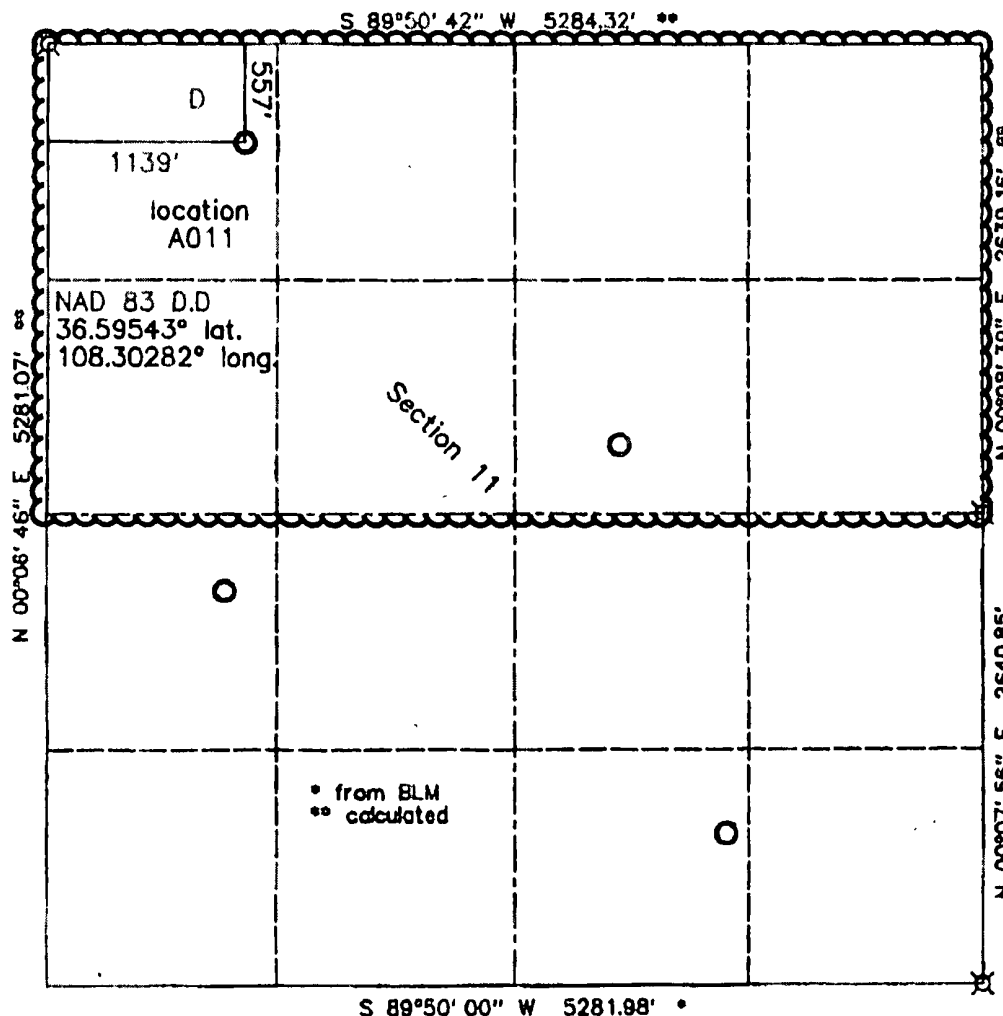
WELL LOCATION AND ACREAGE DEDICATION PLAN

1. API Number 30-045- <b>35343</b>		2. Pool Code 71629	3. Pool Name BASIN FRUITLAND COAL (GAS)
4. Paper Code <b>39778</b>	5. Property Name CBM A Pod 11D		6. Well Number 1
7. CURR No 242841	8. Operator Name NNOGC Exploration and Production LLC		9. Elevation 5873'

10. Surface Location									
11. Plat or Lot D	12. Section 11	13. Township 27 N.	14. Range 14 W.	15. Lot Idn 400	16. Feet from the 557'	17. North/South line NORTH	18. Feet from the 1139'	19. East/West line WEST	20. County SAN JUAN

11. Bottom Hole Location If Different From Surface									
21. Plat or Lot	22. Section	23. Township	24. Range	25. Lot Idn	26. Feet from the	27. North/South line	28. Feet from the	29. East/West line	30. County
31. Dedication Acres 320		32. Joint or Int'l		33. Consolidation Code		34. Order No			

No allowable will assigned to this completion until all interests have been consolidated or a non standard unit has been approved by the division.



OPERATOR CERTIFICATION	
Signature <i>Brian Wood</i>	Date 9-11-11
Printed Name BRIAN WOOD	
E-mail Address brian@permitswest.com	
SURVEYOR CERTIFICATION	
I hereby certify that the location of this well is as shown on the attached map and that the same is in accordance with the survey conducted by me or under my supervision on 09/10/11.	
rev: 09/10/11	
Date of Survey 09/10/11	
Signature and Seal of Surveyor <i>Gerald G. Huddleston</i>	
Certificate Number 6844	

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1001 W. Grand Avenue, Alameda, NM 88301  
District III  
6000 Rio Grande Blvd., Artes, NM 87710  
District IV  
1122 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Mining Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAN

API Number <b>30-045-35343</b>	Pool Code <b>97870</b>	Pool Name <b>W27N14W11; CALLUP(0)</b>
Property Code <b>39178</b>	Property Name <b>CBM A Pod 11D</b>	
CRUID No <b>242841</b>	Operator Name <b>NNOGC Exploration and Production LLC</b>	Well Number <b>1</b>
		Elevation <b>5873'</b>

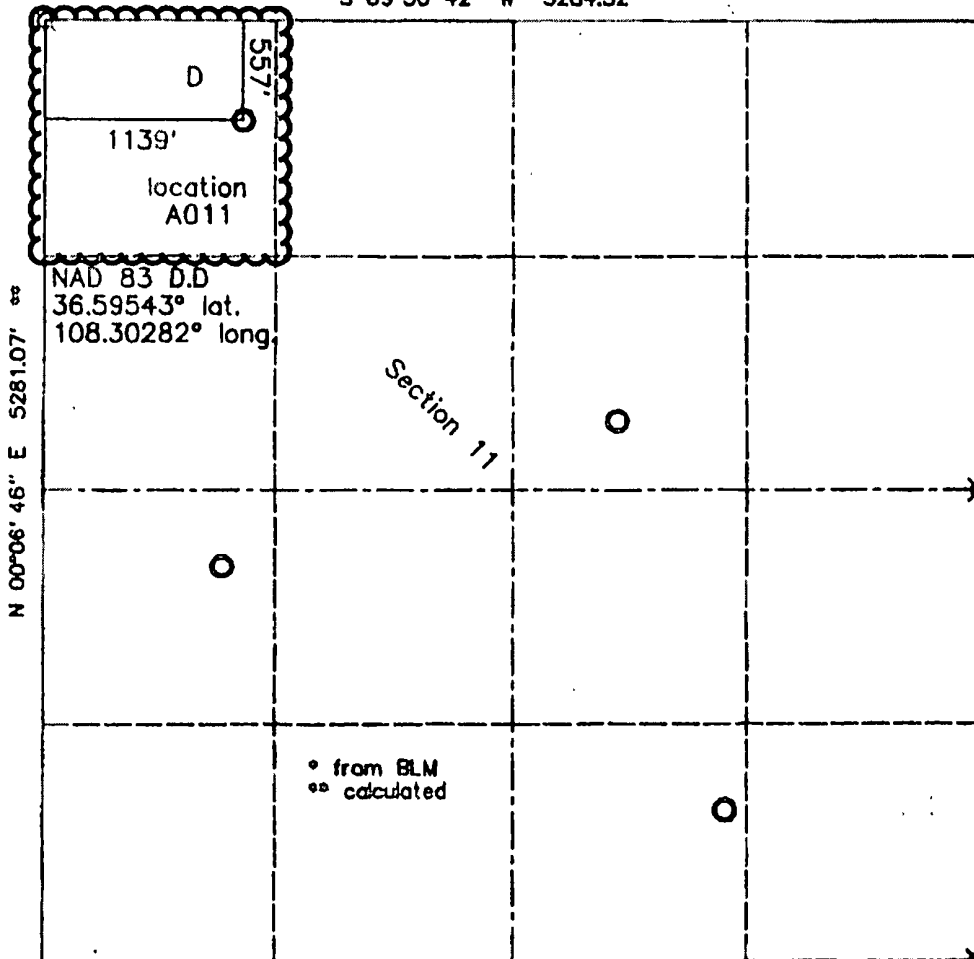
Surface Location									
Section	Township	Range	Foot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
<b>D</b>	<b>11</b>	<b>27 N.</b>	<b>14 W</b>	<b>460</b>	<b>557'</b>	<b>NORTH</b>	<b>1139'</b>	<b>WEST</b>	<b>SAN JUAN</b>

Bottom Hole Location If Different From Surface									
Section	Township	Range	Foot Idn	Feet from the	North/South line	Feet from the	East/West line	County	

Dedicated Acres <b>40</b>	Joint or Infill	Consolidation Code	Order No.
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No allowable will assigned to this completion until all interests have been consolidated or a non standard unit has been approved by the division.

S 89°50' 42" W 5284.32' \*\*



OPERATOR CERTIFICATION	
Signature <i>Brian Wood</i>	Date <b>9-11-11</b>
Printed Name <b>BRIAN WOOD</b>	
E-mail Address <b>brian@permitswest.com</b>	
SURVEYOR CERTIFICATION	
I hereby certify that this is a true and correct copy of the original survey plat as filed with the Bureau of Land Management, Santa Fe, New Mexico, and that the same is a true and correct copy of the original survey plat as filed with the Bureau of Land Management, Santa Fe, New Mexico.	
Date of Survey <b>rev: 09/10/11</b>	
Signature and Seal of Registered Surveyor <i>Gerald G. Middleton</i>	
Certificate Number <b>6844</b>	

RCVD APR 20 '12  
OIL CONS. DIV.  
DIST. 3

Form C - 102

Revised July 19, 2009

Submit one copy to your local District Office

District I  
1625 N. Lincoln Dr. Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Amarillo, NM 89120  
District III  
9000 Rock Drive, El Paso, NM 87410  
District IV  
1220 S. St. Francis Dr. Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Mining Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAN

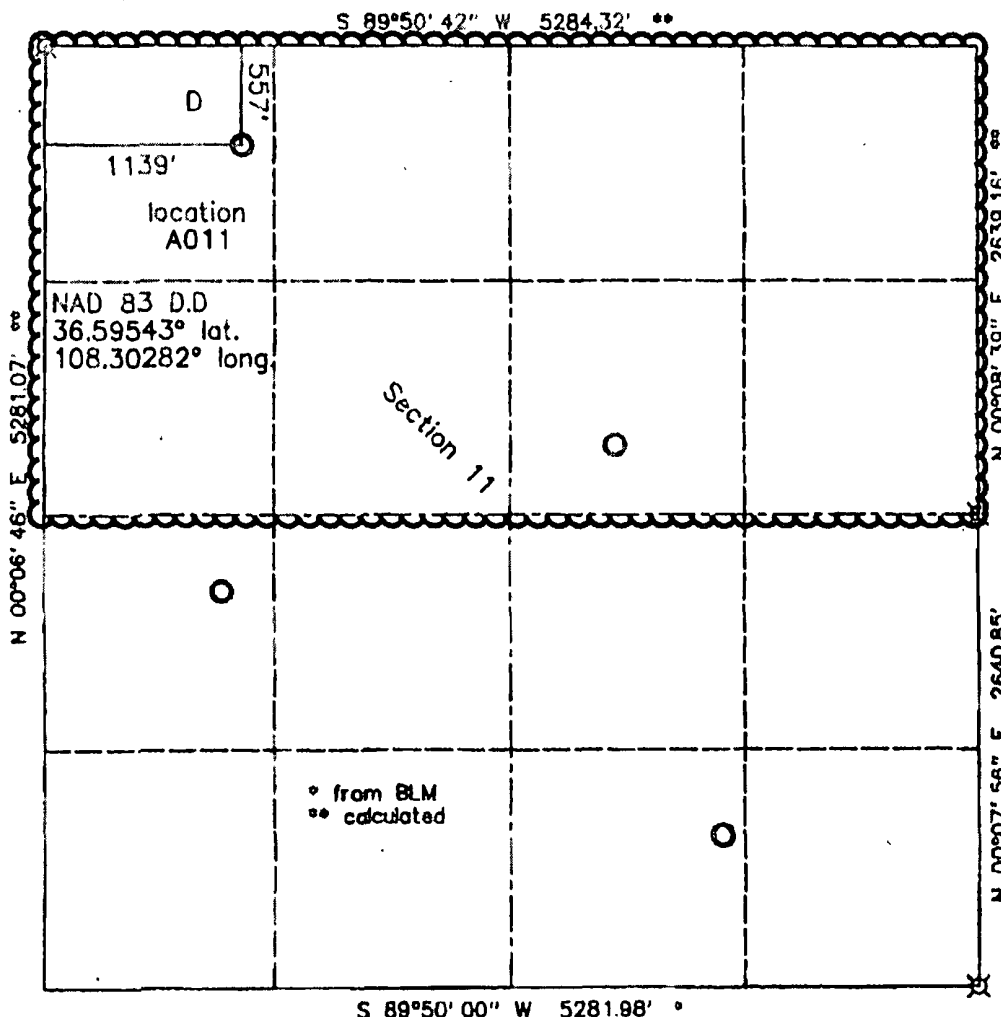
API Number <b>30-045-35343</b>	Pool Code <b>71599</b>	Pool Name <b>BASIN DAKOTA</b>
Property Code <b>39178</b>	Property Name <b>CBM A Pod 11D</b>	Well Number <b>1</b>
UGRID No <b>242841</b>	Operator Name <b>NNOGC Exploration and Production LLC</b>	Lease Area <b>5873'</b>

Surface Location									
Section	Township	Range	Lot	Feet from the	North/South line	Feet from the	East/West line	County	
<b>D</b>	<b>11</b>	<b>27 N.</b>	<b>14 W</b>	<b>557'</b>	<b>NORTH</b>	<b>1139'</b>	<b>WEST</b>	<b>SAN JUAN</b>	

Bottom Hole Location If Different From Surface									
Section	Township	Range	Lot	Feet from the	North/South line	Feet from the	East/West line	County	

Dedicate Acres <b>320</b>	Form of title	Consolidation Code	Order No.
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No allowable will assigned to this completion until all interests have been consolidated or a non standard unit has been approved by the division.



OPERATOR CERTIFICATION	
Signature <i>Brian Wood</i>	Date <b>9-11-11</b>
Printed Name <b>BRIAN WOOD</b>	
E-mail Address <b>brian@permitswest.com</b>	
SURVEYOR CERTIFICATION	
I hereby certify that the above described survey was made by me or under my direct supervision and that the same is true and correct to the best of my knowledge and belief.	
Date of Survey <b>rev: 09/10/11</b>	
Signature and Seal of Professional Surveyor <i>Gerald G. Wood</i>	
Certificate Number <b>6844</b>	

NNOGC Exploration and Production LLC  
CBM A Pod 11 D #1  
557' FNL & 1139' FWL  
Sec. 11, T. 27 N., R. 14 W.  
San Juan County, New Mexico

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## Drilling Program

### 1. FORMATION TOPS

The estimated tops of important geologic markers are:

<u>Formation</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Kirtland Shale	0'	10'	+5,873'
Fruitland Formation	848'	858'	+5,025'
Pictured Cliffs Sandstone	1,070'	1,080'	+4,803'
Lewis Shale	1,415'	1,425'	+4,458'
Mesa Verde Sandstone	2,002'	2,012'	+3,871'
Point Lookout Sandstone	3,745'	3,755'	+2,128'
Mancos Shale	3,938'	3,948'	+1,935'
Upper Gallup Sandstone	4,840'	4,850'	+1,033'
Lower Gallup Sandstone	5,030'	5,040'	+843'
Sanostee	5,301'	5,311'	+572'
Dakota Sandstone	5,723'	5,733'	+150'
Morrison Formation	5,898'	5,908'	-25'
Total Depth (TD)	6,000'	6,010'	-127'

### 2. NOTABLE ZONES

Fruitland coal gas is the primary goal. Gallup and Dakota are the secondary goals. Oil and gas shows which appear to the well geologist to be commercial will be tested. All fresh water and prospectively valuable minerals will be recorded by depth and protected with casing and cement. Water could be found in the Fruitland, Pictured Cliffs, Point Lookout, Gallup, and Dakota formations.

NNOGC Exploration and Production LLC  
CBM A Pod 11 D #1  
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Sec. 11, T. 27 N., R. 14 W.  
San Juan County, New Mexico

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### 3. PRESSURE CONTROL

A double ram type  $\geq 2,000$  psi working pressure BOP with a rotating head system will be used. See the preceding page for a diagram of the typical BOP equipment. All ram type preventers and related equipment will be hydraulically tested to  $\approx 1,500$  psi at nipple-up and after any use under pressure. A typical diagram is attached.

The blind rams will be hydraulically activated and checked for operational readiness each time the pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold. All will be rated to  $\geq 2,000$  psi.

### 4. CASING & CEMENT

<u>Hole Size</u>	<u>O. D.</u>	<u>Weight</u>	<u>Grade</u>	<u>Age</u>	<u>Coupling</u>	<u>Depth Set</u>
12-1/4"	8-5/8"	24#	J-55	New	ST & C	350'
7-7/8"	4-1/2"	10.5#	J-55	New	LT & C	6,000'

Surface casing will be cemented to the surface with 245 sacks (289 cubic feet) Class B with 3%  $\text{CaCl}_2$ . Yield = 1.18 cubic feet per sack. Slurry weight = 15.6 pounds per gallon. Excess = 100%. W.O.C.=12 hours. Pressure test the surface casing to  $\approx 1,500$  psi for 30 minutes. A notched collar and 3 centralizers will be used on the bottom 3 collars.

Production casing will be cemented to the surface. A DV tool will be set at  $\approx 3,000'$ . Hole will first be circulated with  $\geq 150\%$  hole volume of mud and  $\approx 30$  barrels of fresh water. Total cement volume = 2,284 cubic feet ( $\approx 65\%$  excess). A 4-1/2" cement guide shoe and self filling float collar will be used. Place the float one joint above the shoe. Place 10 centralizers spaced every

NNOGC Exploration and Production LLC  
CBM A Pod 11 D #1  
557' FNL & 1139' FWL  
Sec. 11, T. 27 N., R. 14 W.  
San Juan County, New Mexico

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other joint above the shoe, 2 turbolizers on the collar below the DV tool, and 2 turbolizers above the DV tool. Place 5 turbolizers every third joint from the top of the well.

First Stage: Lead with 570 sacks (1,003 cubic feet) Class B 65/35 poz with 6% gel + 1%  $\text{CaCl}_2$  + 4% phenoseal + 1/4 pound per sack cello flake. Yield = 1.76 cubic feet per sack. Slurry weight = 12.8 pounds per gallon.

First Stage: Tail with 100 sacks (146 cubic feet) Class B 50/50 poz with 0.15% dispersant + 1%  $\text{CaCl}_2$  + 1/4 pound per sack cello flake. Yield = 1.46 cubic feet per sack. Slurry weight = 13.0 pounds per gallon.

Second Stage: Precede cement with  $\approx 20$  barrels of water. Cement with  $\approx 645$  sacks (1,135 cubic feet) Class B 65/35 poz with 6% gel + 1%  $\text{CaCl}_2$  + 1/4 pound per sack cello flake. Yield = 1.76 cubic feet per sack. Slurry weight = 12.8 pounds per gallon.

#### 5. MUD PROGRAM

The surface hole will be drilled with a fresh water mud. The production hole will be drilled with a fresh water polymer. Weighting materials will be drill solids or, if conditions dictate, barite. Maximum expected mud weight = 9.5 pounds per gallon.

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

No cores or drill stem tests are currently planned. FDC/CNL/GR/SP and DIL logs will be run from the base of the surface casing to TD.



NNOGC Exploration and Production LLC  
CBM A Pod 11 D #1  
557' FNL & 1139' FWL  
Sec. 11, T. 27 N., R. 14 W.  
San Juan County, New Mexico

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7. DOWN HOLE CONDITIONS

No abnormal temperatures, abnormal pressures, or hydrogen sulfide are expected. Maximum expected bottom hole pressure will be  $\approx 2,598$  psi.

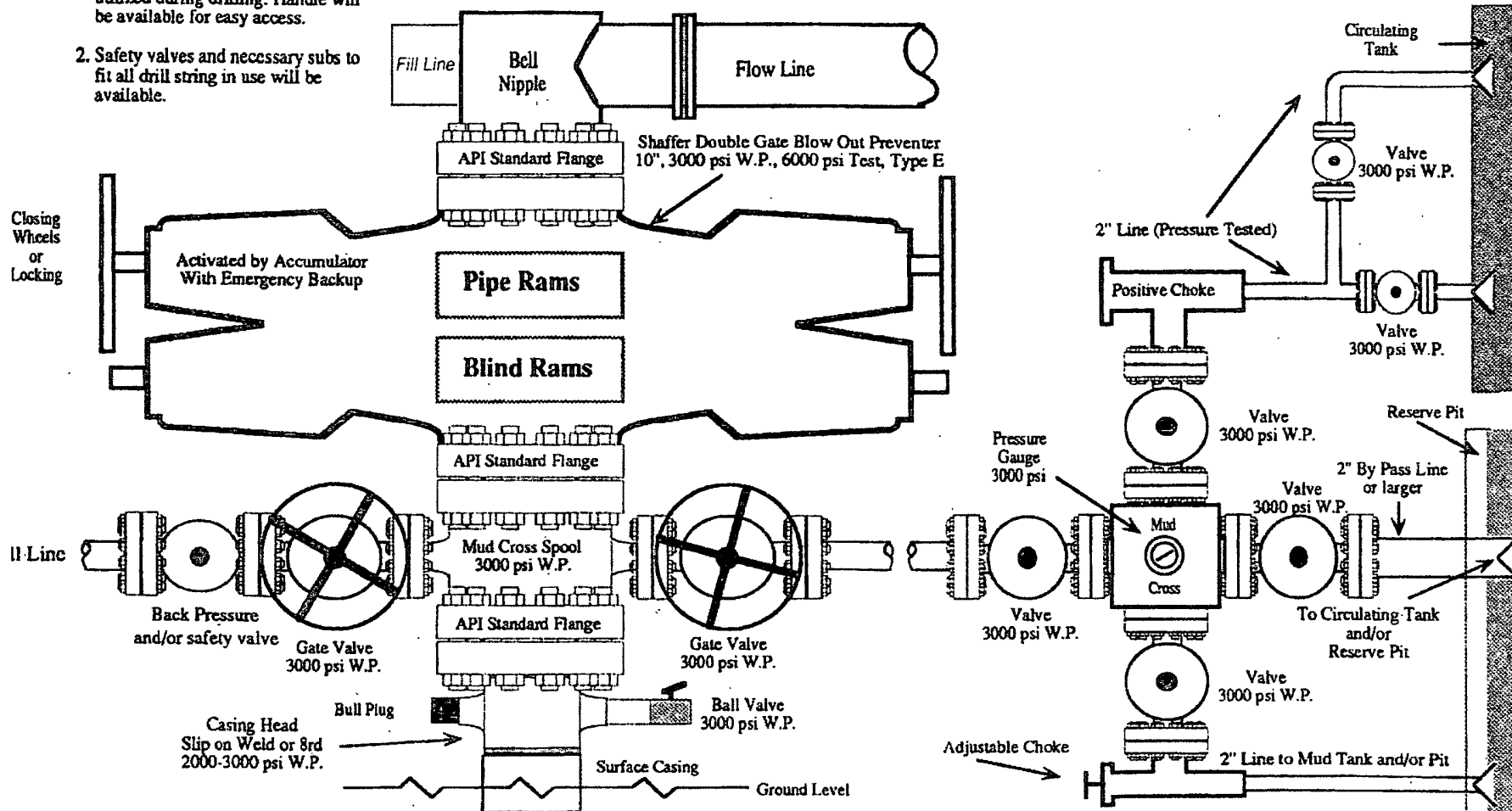
8. OTHER INFORMATION

It is expected it will take  $\approx 10$  days to drill and  $\approx 2$  weeks to complete the well.



# 2,000 PSI BOP SYSTEM

- Note: 1. An upper Kelly cock valve will be utilized during drilling. Handle will be available for easy access.
2. Safety valves and necessary subs to fit all drill string in use will be available.



Note: This equipment is designed to meet requirements for a 2-M rating standard per 43 CFR part 3160 (amended). Proper operation and testing of equipment will be carried out per standard. 2,000 psi equipment can be substituted in the drawing to meet minimum requirements per standard.