

**NAVAJO NATION**

**APD**

**Tribal Operations on  
Tribal Lands**

**PERMIT**

**ACCEPTED FOR  
RECORD ONLY**

RCVD APR 15 '13  
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 B Pod 30 F #1
3b. Phone No. (include area code) 303 534 8300		9. API Well No. 30-045- 35427
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 2107' FNL & 1799' FWL At proposed prod. zone SAME		10. Field and Pool, or Exploratory BASIN FRUIT. COAL, WC GALL, & DK
14. Distance in miles and direction from nearest town or post office* 15 AIR MILES SW OF FARMINGTON, NM		11. Sec., T. R. M. or Blk. and Survey or Area SENW 30-27N-14W NMPM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 27,351'	16. No. of acres in lease 150,000	12. County or Parish SAN JUAN
17. Spacing Unit dedicated to this well W2 (Fruit. Coal & Dakota) and SENW (Gallup)	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2,758' (30-27-14 #8)	13. State NM
19. Proposed Depth 6,000'	20. BLM/BIA Bond No. on file RLB0006712	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5,877' UNGRADED subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4	22. Approximate date work will start* 03/01/2012	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:

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

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 must 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 BLM.

25. Signature 	Name (Printed/Typed) BRIAN WOOD (505 466-8120)	Date 11/22/2012
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)

\*(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.

ACCEPTED FOR RECORD

APR 11 2013

FARMINGTON FIELD OFFICE  
BY TL Salyers

APPENDIX 1-1

APR 25 2013 ca

NMOCD A

NOTIFY AZTEC OCD 24 HRS  
PRIOR TO CASING & CEMENT

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

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone (505)293-6161 Fax (505)293-0720  
District II  
511 S. First St., Artesia, NM 88210  
Phone (505)748-1285 Fax (505)748-9720  
District III  
1040 Rio Brazos Rd., Aztec, NM 87410  
Phone (505)334-6178 Fax (505)334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone (505)476-3460 Fax (505)476-3462

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

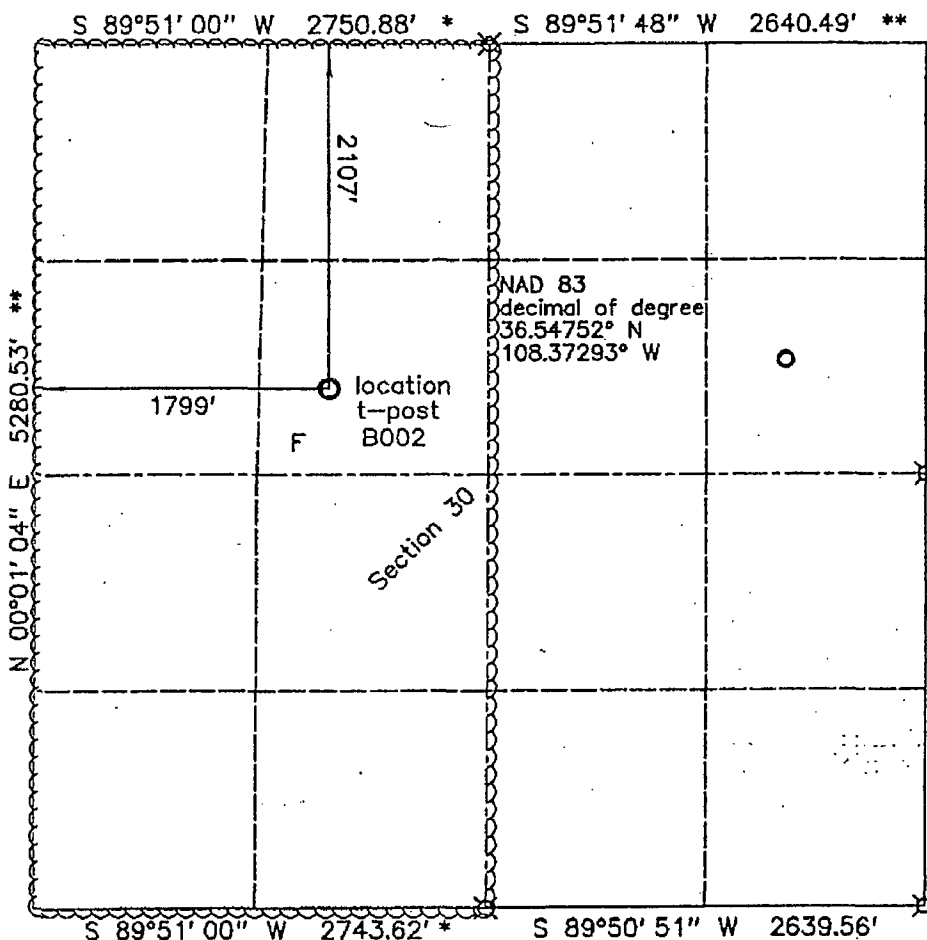
Form C - 102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-045- <b>35427</b>		2 Pool Code 71629		3 Pool Name BASIN FRUITLAND COAL (GAS)	
4 Property Code <b>39833</b>		5 Property Name CBM B Pod 30F			6 Well Number 1
7 OGRID No. <b>242847</b>		8 Operator Name NNOGC Exploration and Production LLC			9 Elevation 5877'
10 Surface Location					
UL or Lot F	Section 30	Township 27 N.	Range 14 W.	Lot Idn. <b>U00</b>	Feet from the North/South line 2107'
			Feet from the East/West line 1799'	County SAN JUAN	
11 Bottom Hole Location If Different From Surface					
UL or Lot	Section	Township	Range	Lot Idn.	Feet from the North/South line
			Feet from the East/West line	County	
12 Dedicated Acres 332.89		13 Joint or Infill		14 Consolidation Code	
15 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.



☒ BLM brass cap  
\* from 1994 BLM  
\*\* calculated

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 information was obtained from a working survey or other reliable source, and that I am not aware of any other information that would affect the accuracy of this information. <i>Brian Wood</i> 11-22-11 Signature Date Brian Wood Printed Name brian@permitswest.com E-mail Address	
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. 06/27/11 Date of Survey Signature and Seal of Registered Surveyor <i>Gerald G. Rudolston</i> 6844 Certificate Number 6844	

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone (575)393-6161 Fax (575)393-9720  
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Phone (575)748-1285 Fax (575)748-9720  
District III  
1069 Rio Brazos Rd., Aztec, NM 87410  
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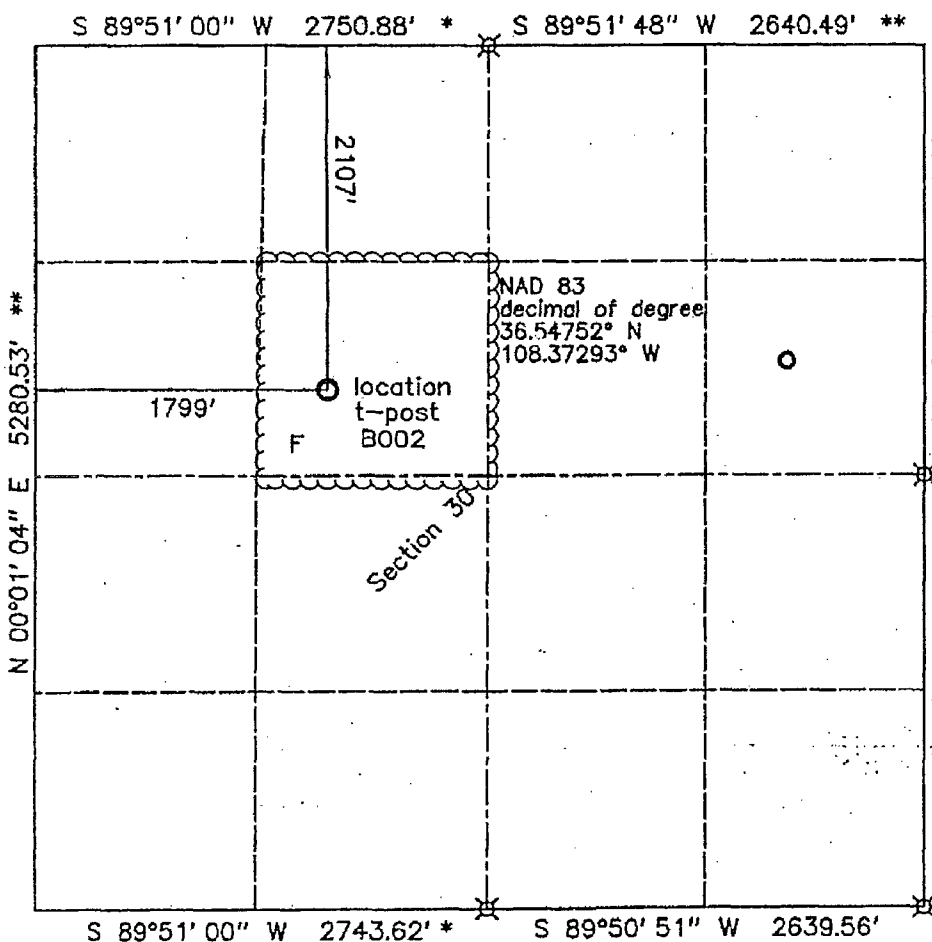
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WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045- 35427		<sup>2</sup> Pool Code 98020		<sup>3</sup> Pool Name WC 27N14W30; GALLUP	
<sup>4</sup> Property Code 39833		<sup>5</sup> Property Name CBM B Pod 30F			<sup>6</sup> Well Number 1
<sup>7</sup> OGRID No. 24284T		<sup>8</sup> Operator Name NNOGC Exploration and Production LLC			<sup>9</sup> Elevation 5877'
<sup>10</sup> Surface Location					
UL or Lot F	Section 30	Township 27 N.	Range 14 W.	Lot Idn. 400	Feet from the North/South line 2107'
			Feet from the East/West line 1799'	County SAN JUAN	
<sup>11</sup> Bottom Hole Location If Different From Surface					
UL or Lot	Section	Township	Range	Lot Idn.	Feet from the North/South line
					Feet from the East/West line
<sup>12</sup> Dedicated Acres 40		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code	
				<sup>15</sup> 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.



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\* from 1994 BLM  
\*\* calculated

<b>OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this information was obtained from a working interest or interest in mineral resources in the land including the bottom hole location or has the right to drill this well in this location pursuant to a contract with an owner of a mineral interest or working interest, or to a written agreement of a temporary pooling unit for drilling operations by the division.	
Signature Brian Wood	Date 11-22-11
Printed Name brian@permitswest.com	
E-mail Address	
<b>SURVEYOR CERTIFICATION</b> 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.	
Date of Survey 06/27/11	
Signature and Seal of Professional Surveyor GERALD G. WOODLESTON NEW MEXICO 6844 REGISTERED LAND SURVEYOR	
Certificate Number 6844	

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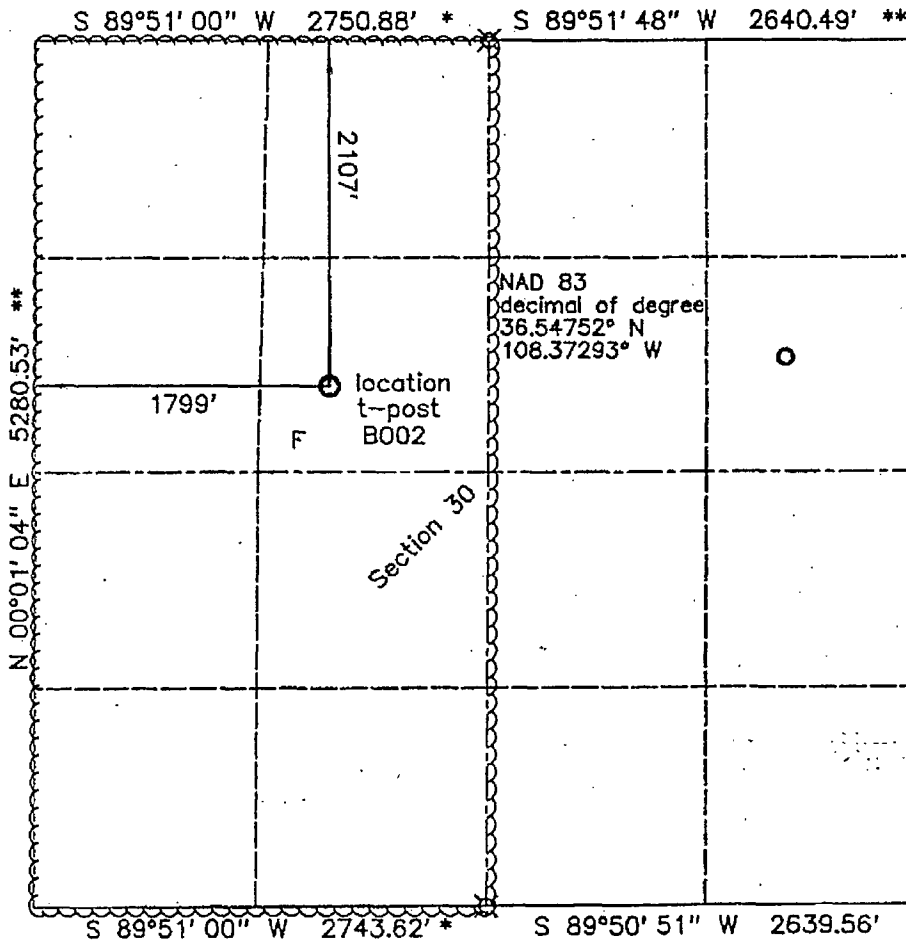
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Submit one copy to appropriate  
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WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045-35427		<sup>2</sup> Pool Code 71599		<sup>3</sup> Pool Name BASIN DAKOTA	
<sup>4</sup> Property Code 39833		<sup>5</sup> Property Name CBM B Pod 30F			<sup>6</sup> Well Number 1
<sup>7</sup> OGRID No. 24284T		<sup>8</sup> Operator Name NNOGC Exploration and Production LLC			<sup>9</sup> Elevation 5877'
<sup>10</sup> Surface Location					
UL or Lot F	Section 30	Township 27 N.	Range 14 W	Lot Idn. 400	Feet from the North/South line 2107'
			Feet from the East/West line 1799'	County SAN JUAN	
<sup>11</sup> Bottom Hole Location If Different From Surface					
UL or Lot	Section	Township	Range	Lot Idn.	Feet from the North/South line
			Feet from the East/West line	County	
<sup>12</sup> Dedicated Acres 332.89		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code	
<sup>15</sup> 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.



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\*\* calculated

<b>OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this represents the entire and correct location of the well and that the operator has the right to drill this well on this location pursuant to a contract with an owner of a mineral interest in working interest, or to a voluntary pooling agreement, or a leasehold pooling agreement, or a combination thereof, and by the division.	
Signature <i>Brian Wood</i>	Date 11-22-11
Printed Name brian@permitswest.com	
E-mail Address	
<b>SURVEYOR CERTIFICATION</b> 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.	
Date of Survey 06/27/11	
Signature and Seal of Professional Surveyor <i>Gerald G. Huddleston</i>	
Certificate Number 6844	

NNOGC Exploration and Production LLC  
CBM B Pod 30 F #1  
2107' FNL & 1799' FWL  
Sec. 30, T. 27 N., R. 14 W.  
San Juan County, New Mexico

PAGE 1

## 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'	+5,877'
Fruitland Formation	577'	559'	+5,300'
Pictured Cliffs Sandstone	977'	987'	+4,900'
Lewis Shale	1,102'	1,112'	+4,775'
Mesa Verde Sandstone	1,802'	1,812'	+4,075'
Point Lookout Sandstone	3,577'	3,587'	+2,300'
Mancos Shale	3,702'	3,712'	+2,175'
Gallup Sandstone	4,652'	4,662'	+1,225'
Sanostee	5,277'	5,287'	+600'
Dakota Sandstone	5,677'	5,687'	+200'
Morrison Formation	5,877'	5,887'	0'
Total Depth (TD)	6,000'	6,010'	-123'

### 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.



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PAGE 3

### 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 details on 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 on PAGE 2.

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  $\approx 30$  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 other joint above the shoe, 2 turbolizers on the collar below the DV tool, and



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PAGE 4

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.



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PAGE 5

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

The anticipated spud date is March 1, 2012. It is expected it will take  $\approx 10$  days to drill and  $\approx 2$  weeks to complete the well.



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PAGE 6

### Surface Use Plan

#### 1. DIRECTIONS (See PAGES 11 - 13)

From the NM 371 San Juan River bridge in southwest Farmington ....  
Go South  $\approx 6\frac{1}{2}$  miles on NM 371 to the equivalent of Mile Post 99.8  
Then turn right and go West 5.2 miles on paved N-3003  
Then turn left and go South 6.3 miles on paved N-4065  
Then turn right and go southwest 1.1 miles on a dirt road to a gate  
Go through the gate, turn left, and go South 0.15 mile on a dirt road  
Then turn right and go Southwest 0.5 mile on a dirt road  
Then turn left and go Southeast  $\frac{2}{3}$  mile on a dirt road  
Then turn right and go Southwest 100 yards on a dirt road  
Then bear left and go South  $\frac{1}{10}$  mile on a dirt road  
Then turn right and go West  $\frac{1}{4}$  mile on a dirt road  
Then turn right and go North 1,386.98' cross country to the proposed pad

Roads will be maintained to at least equal to their present condition.

#### 2. ROAD WORK (See PAGE 12 & 13)

The 1,386.98' of new road will be built to BLM Gold Book standards. Road will be crowned and ditched with a  $\approx 14'$  wide running surface and will be rocked as needed. No upgrade, culvert, gate, or vehicle turn out is needed. Maximum disturbed width = 20'. Maximum cut or fill = 3'. Maximum grade = 8%.

#### 3. EXISTING WELLS (See PAGE 14)

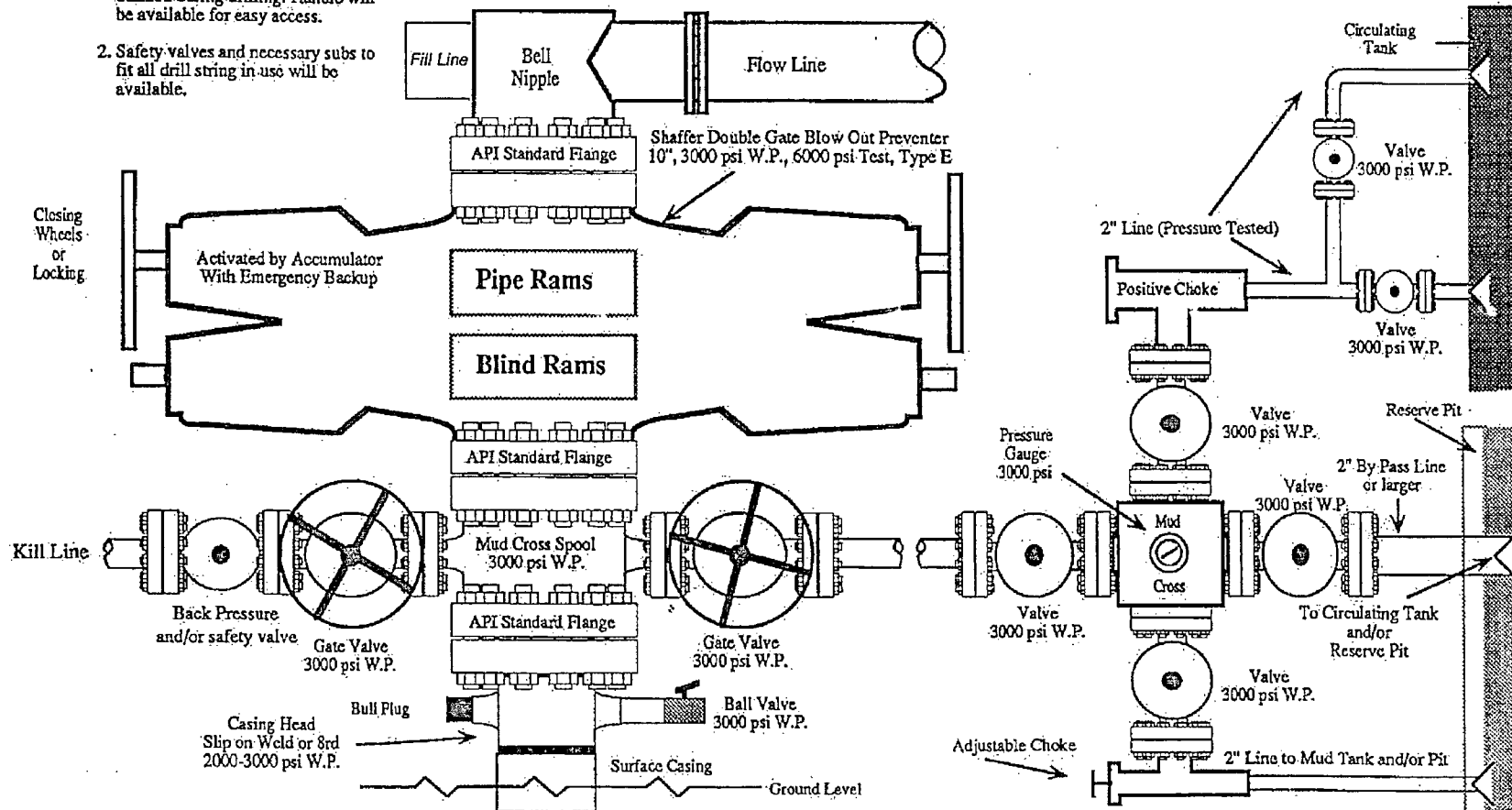
There is one plugged and abandoned well within a mile radius. There are no water, gas, oil, or injection wells within a mile.



# 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.