

**NAVAJO NATION**

**APD**

**Tribal Operations on  
Tribal Lands**

**PERMIT**

**ACCEPTED FOR  
RECORD ONLY**

RECD APR 11/12  
OIL CONS. DIV.  
DIST. 3

RECEIVED

MAR 28 2012

Form 3160-3  
(August 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

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

5. Lease Serial No.  
NO-G-1008-1773

6. If Indian, Allottee or Tribe Name  
NAVAJO NATION

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.  
CBM A Pod 14 J #1

9. API Well No.  
30-045-35333

10. Field and Pool, or Exploratory  
BASIN FRUIT COAL, WC GALL, & DK

11. Sec., T. R. M. or Blk. and Survey or Area  
NWSE 14-27N-14W NMPM

12. County or Parish  
SAN JUAN

13. State  
NM

1a. Type of work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone

2. Name of Operator NNOGC Exploration and Production LLC

3a. Address 1875 BROADWAY, SUITE 1100  
DENVER, CO 80202

3b. Phone No. (include area code)  
303 534 8300

4. Location of Well (Report location clearly and in accordance with any State requirements.)

At surface 32041' FSL & 1847' FEL NWSE

At proposed prod. zone SAME

LOT 400

14. Distance in miles and direction from nearest town or post office\*

11 AIR MILES SSW OF FARMINGTON, NM

15. Distance from proposed\*  
location to nearest 6,927'  
property or lease line, ft.  
(Also to nearest drg. unit line, if any)

16. No. of acres in lease  
150,000

17. Spacing Unit dedicated to this well  
S2 (Fruit. Coal & Dakota) and NWSE (Gallup)

18. Distance from proposed location\*  
to nearest well, drilling, completed, 2,761' (CBM 14-27-14 1)  
applied for, on this lease, ft.

19. Proposed Depth  
6,000'

20. BLM/BIA Bond No. on file  
RLB0006712

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
6,032' UNGRADED

22. Approximate date work will start\*  
10/01/2011

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.

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

*Brian Wood*

Name (Printed/Typed)

BRIAN WOOD (505 466-8120)

Date

08/10/2011

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)

\*(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 10 2012

FARMINGTON FIELD OFFICE  
BY *[Signature]*

NMOCD  
A

APR 18 2012 *ca*

NOTIFY AZTEC OCD 24-HRS  
PRIOR TO CASING & CEMENT

**Certificate Number 6844.**

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., 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

Form C - 102  
Revised July 16, 2010  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

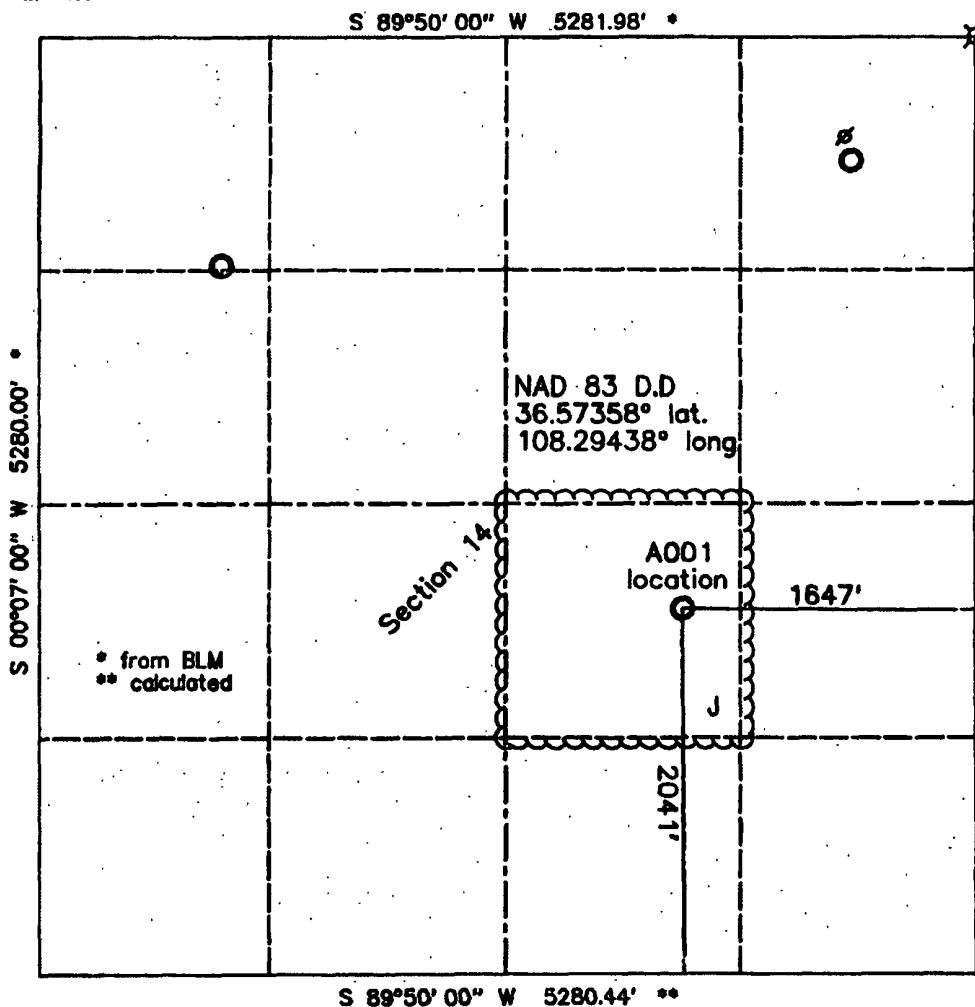
1 API Number 30-045-35333		2 Pool Code 97871		3 Pool Name WC27N14W; GALLUP OIL	
4 Property Code 39162		5 Property Name CBM A Pod 14J			6 Well Number 1
7 OGRID No 242841		8 Operator Name NNOGC Exploration and Production LLC			9 Elevation 6032'

10 Surface Location									
11 U/L or Lot	12 Section	13 Township	14 Range	15 Lot Idn	16 Feet from the	17 North/South line	18 Feet from the	19 East/West line	20 County
J	14	27 N.	14 W.	U60	2041'	SOUTH	1647'	EAST	SAN JUAN

11 Bottom Hole Location If Different From Surface									
11 U/L or Lot	12 Section	13 Township	14 Range	15 Lot Idn	16 Feet from the	17 North/South line	18 Feet from the	19 East/West line	20 County

12 Dedicated Acres 40	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.



17 OPERATOR CERTIFICATION	
I hereby certify that the information furnished hereon is true and correct to the best of my knowledge and belief, and that I am not aware of any information which would materially and adversely affect the accuracy of the information furnished hereon.	
Signature <i>Brian Wood</i>	Date 8-10-11
Printed Name BRIAN WOOD	
E-mail Address brian@permitswest.com	
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.	
Date of Survey 05/03/11	
Signature and seal of Registered Surveyor <i>Gerald B. Huddleston</i>	
Certificate Number 6844.	

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WELL LOCATION AND ACREAGE DEDICATION PLAT

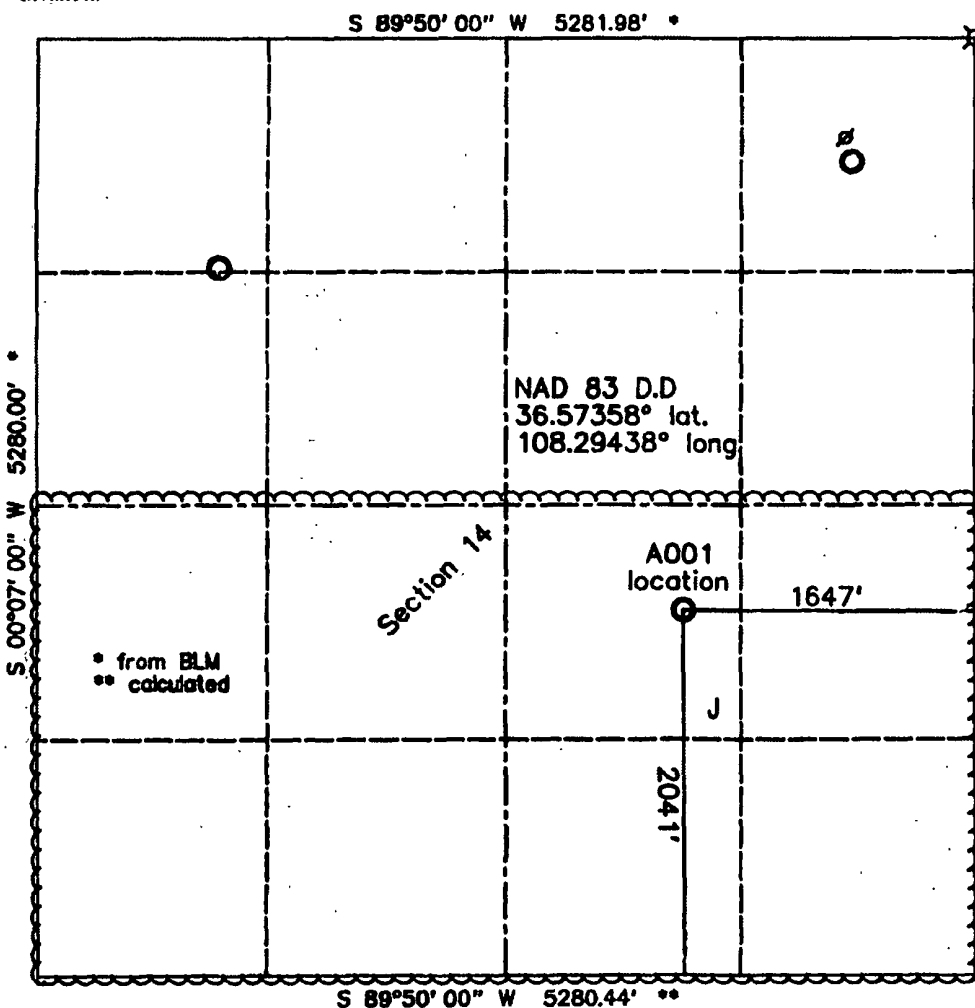
<sup>1</sup> API Number 30-045-35333		<sup>2</sup> Pool Code 71599	<sup>3</sup> Pool Name BASIN DAKOTA
<sup>4</sup> Property Code 39162	<sup>5</sup> Property Name CBM A Pod 14J		<sup>6</sup> Well Number 1
<sup>7</sup> (GRID) No 242841	<sup>8</sup> Operator Name NNOGC Exploration and Production LLC		<sup>9</sup> Elevation 6032'

<sup>10</sup> Surface Location									
<sup>11</sup> U or Lot J	Section 14	Township 27 N.	Range 14 W.	Lot Idn. 400	Feet from the 2041'	North/South line SOUTH	Feet from the 1647'	East/West line EAST	County SAN JUAN

<sup>11</sup> Bottom Hole Location If Different From Surface									
<sup>11</sup> U 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 320	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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.



<sup>17</sup> OPERATOR CERTIFICATION	
I hereby certify that the information contained herein is true and correct to the best of my knowledge and belief, and that the same was obtained from reliable sources.	
Signature <i>Brian Wood</i>	Date 8-10-11
Printed Name BRIAN WOOD	
E-mail Address brian@permitswest.com	
<sup>18</sup> 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.	
Date of Survey 05/03/11	
Signature and Seal of Professional Surveyor <i>Gerald H. Wood</i>	
Certificate Number 6844.	

NNOGC Exploration and Production LLC  
CBM A Pod 14 J #1  
2041' FSL & 1647' FEL  
Sec. 14, 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'	+6,032'
Fruitland Formation	1,007'	1,017'	+5,025'
Pictured Cliffs Sandstone	1,237'	1,247'	+4,795'
Lewis Shale	1,557'	1,567'	+4,475'
Mesa Verde Sandstone	2,047'	2,057'	+3,985'
Point Lookout Sandstone	3,832'	3,842'	+2,200'
Mancos Shale	3,992'	4,002'	+2,040'
Upper Gallup Sandstone	4,882'	4,892'	+1,150'
Lower Gallup Sandstone	5,142'	5,152'	+890'
Sanostee	5,357'	5,367'	+675'
Dakota Sandstone	5,882'	5,892'	+150'
Morrison Formation	5,990'	6,000'	+42'
Total Depth (TD)	6,000'	6,010'	+32'

### 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 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



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PAGE 4

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% CaCl<sub>2</sub> + 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% CaCl<sub>2</sub> + 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 ≈20 barrels of water. Cement with ≈645 sacks (1,135 cubic feet) Class B 65/35 poz with 6% gel + 1% CaCl<sub>2</sub> + 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.

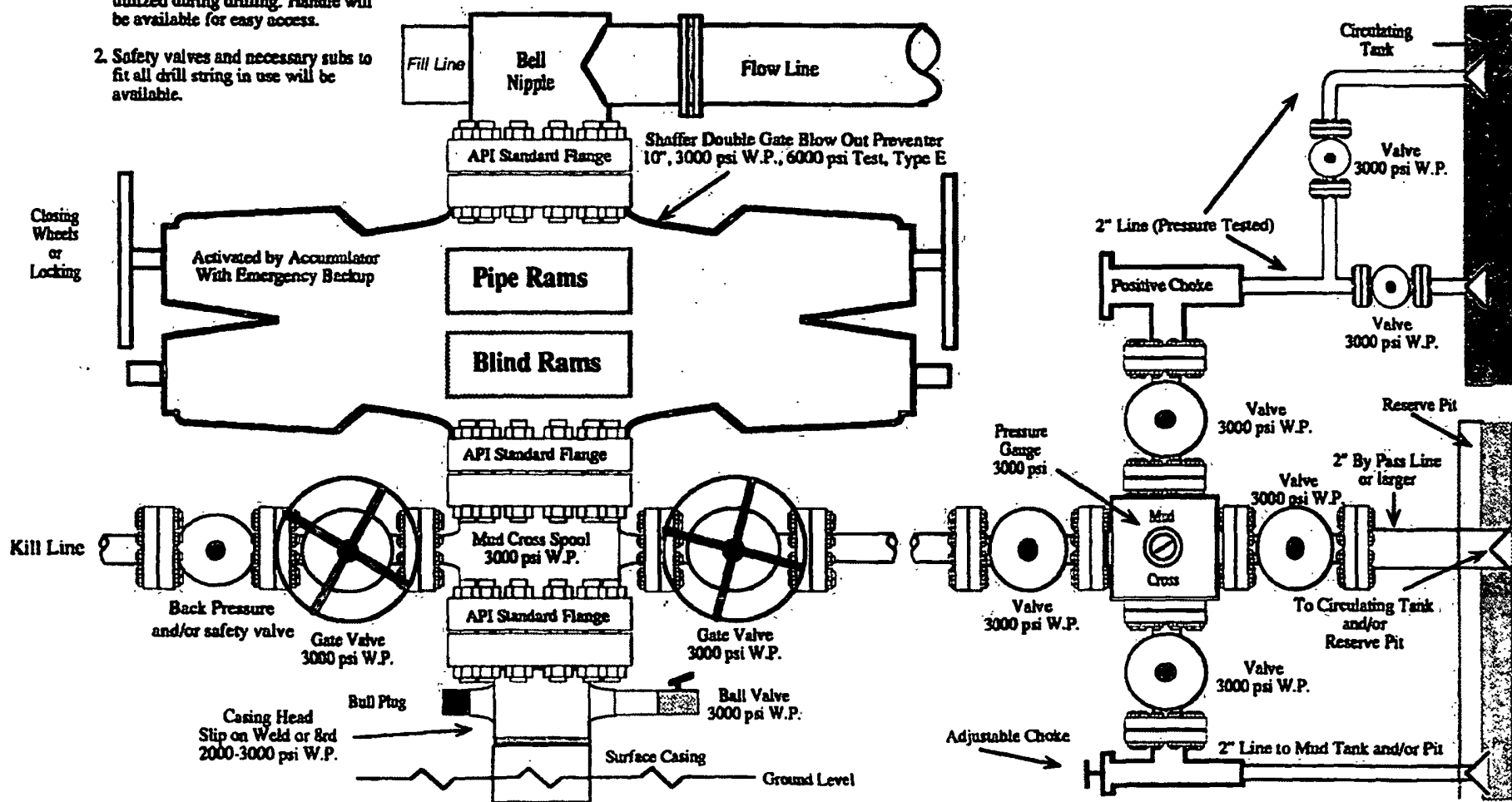
8. OTHER INFORMATION

The anticipated spud date is October 1, 2011. 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.