

**NAVAJO NATION**

**APD**

**Tribal Operations on  
Tribal Lands**

**PERMIT**

**ACCEPTED FOR**

**RECORD ONLY**

RECEIVED

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

Preliminary

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

AUG 09 2012

APPLICATION FOR PERMIT TO DRILL OR REENTER  
Farmington Field Office  
Bureau of Land Management

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

6. If Indian, Allottee or Tribe Name  
NAVAJO NATION

1a. Type of work:  DRILL  REENTER

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

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

8. Lease Name and Well No.  
CBM B Pod 29 K #1

2. Name of Operator NNOGC Exploration and Production LLC

9. API Well No.  
30-045- 35400

3a. Address 1675 BROADWAY, SUITE 1100  
DENVER, CO 80202

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

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

4. Location of Well (Report location clearly and in accordance with any State requirements.)\*  
At surface 2410' FSL & 2000' FWL  
At proposed prod. zone SAME

11. Sec., T. R. M. or Blk. and Survey or Area  
K NESW 29-27N-14W NMPM

14. Distance in miles and direction from nearest town or post office\*  
15 AIR MILES SW OF FARMINGTON, NM

12. County or Parish  
SAN JUAN

13. State  
NM

15. Distance from proposed\* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)  
24,400'

16. No. of acres in lease  
150,000

17. Spacing Unit dedicated to this well  
W2 (Fruit. Coal & Dakota) and NESW (Gallup)

18. Distance from proposed location\* to nearest well, drilling, completed, applied for, on this lease, ft.  
1,400' (P&A)

19. Proposed Depth  
6,000'

20. BLM/BIA Bond No. on file  
RLB0006712  
RCVD APR 15 '13  
OIL CONS. DIV.

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
5,942' UNGRADED

22. Approximate date work will start\*  
07/01/2012

23. Estimated duration  
1 MONTH  
DIST. 3

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 04/09/2012

Title CONSULTANT (FAX 505 466-9682) ACCEPTED FOR RECORD

Approved by (Signature) Name (Printed/Typed) Date APR 11 2013

Title Office FARMINGTON FIELD OFFICE  
TL Salyers

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)

HOLD ON FOR NLL

NOTIFY AZTEC OCD 24 HRS  
PRIOR TO CASING & CEMENT

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

NNOGC  
AV

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

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

APR 25 2013 ca

District I  
 1925 N. French Dr., Hobbs, NM 88240  
 Phone (575)393-6161 Fax (575)393-6720  
 District II  
 811 S. First St., Artesia, NM 88210  
 Phone (505)748-1283 Fax (505)748-9720  
 District III  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone (505)334-6178 Fax (505)334-6170  
 District IV  
 1220 S. St. Francis Dr., Santa Fe, NM 87503  
 Phone (505)476-5466 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

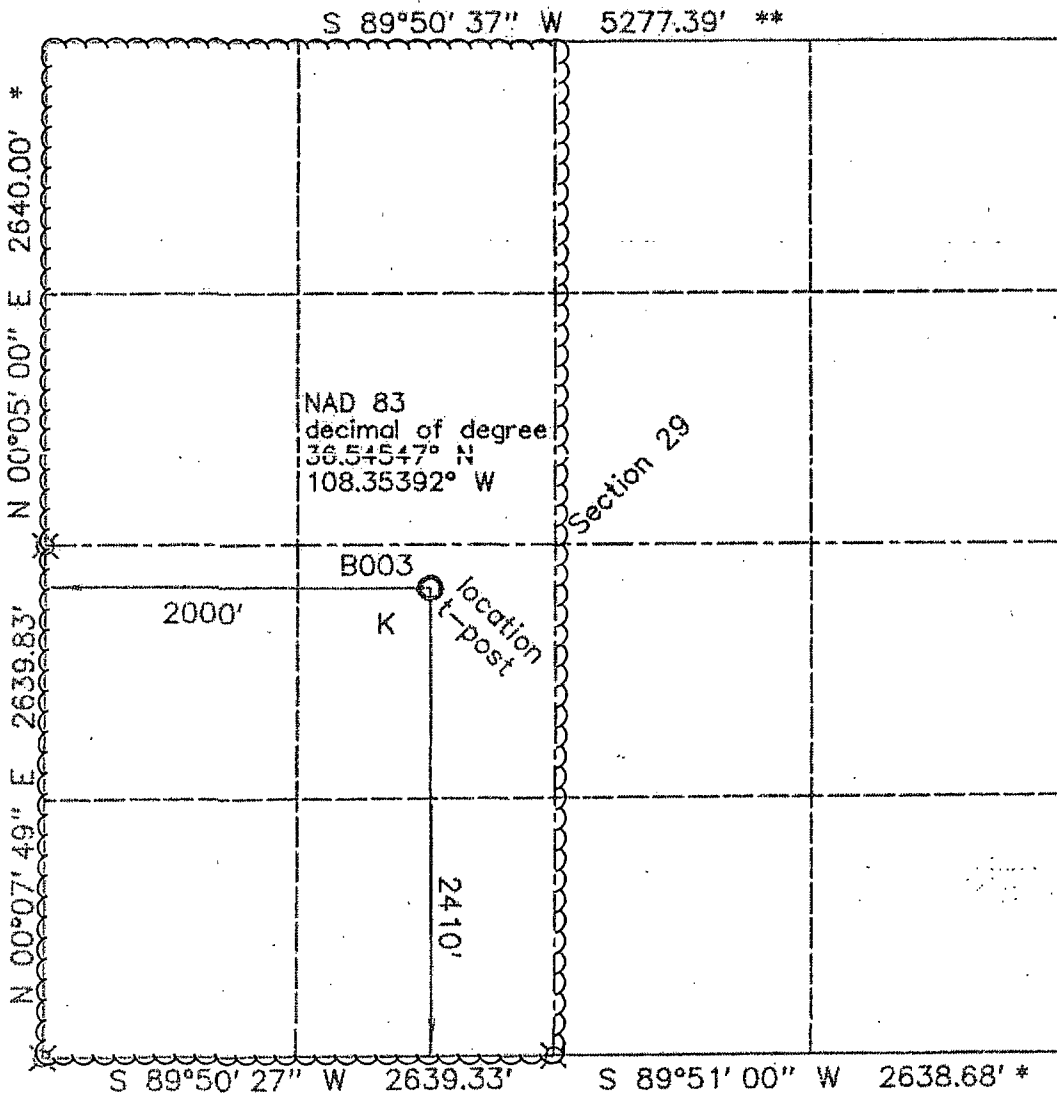
Form C - 102  
 Revised August 1, 2011  
 Submit one copy to appropriate  
 District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-045-35400		2 Pool Code 71629		3 Pool Name BASIN FRUITLAND COAL (GAS)					
4 Property Code 39832		5 Property Name CBM B Pod 29K			6 Well Number 1				
7 OGRID No. 242841		8 Operator Name NNOGC Exploration and Production LLC			9 Elevation 5942'				
10 Surface Location 292875									
UL or Lot K	Section 29	Township 27 N.	Range 14 W.	Lot Idn. 400	Feet from the 2410'	North/South line SOUTH	Feet from the 2000'	East/West line WEST	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 320		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 organization consents to working interest or mineral interest in the land including the bottom hole location or bore the right to drill this well at this location pursuant to a contract with an owner of a mineral interest or working interest, or to a voluntary pool agreement or a regulatory pooling under the rules established by the Division.	
Signature <i>Brian Wood</i>	Date 4-9-12
Printed Name BRIAN WOOD	
E-mail Address brian@permitswest.com	
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 10/27/11	
Signature of Licensed Professional Surveyor 	
Certificate Number 6844	

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone (575)393-6161 Fax (575)393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone (575)749-1283 Fax (575)748-0720  
District III  
1600 Rio Grande 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)476-3469 Fax (505)476-3462

State of New Mexico **RECEIVED**  
Energy, Minerals & Mining Resources Department  
OIL CONSERVATION DIVISION AUG 09 2012  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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Farmington Field Office  
Bureau of Land Management AMENDED REPORT

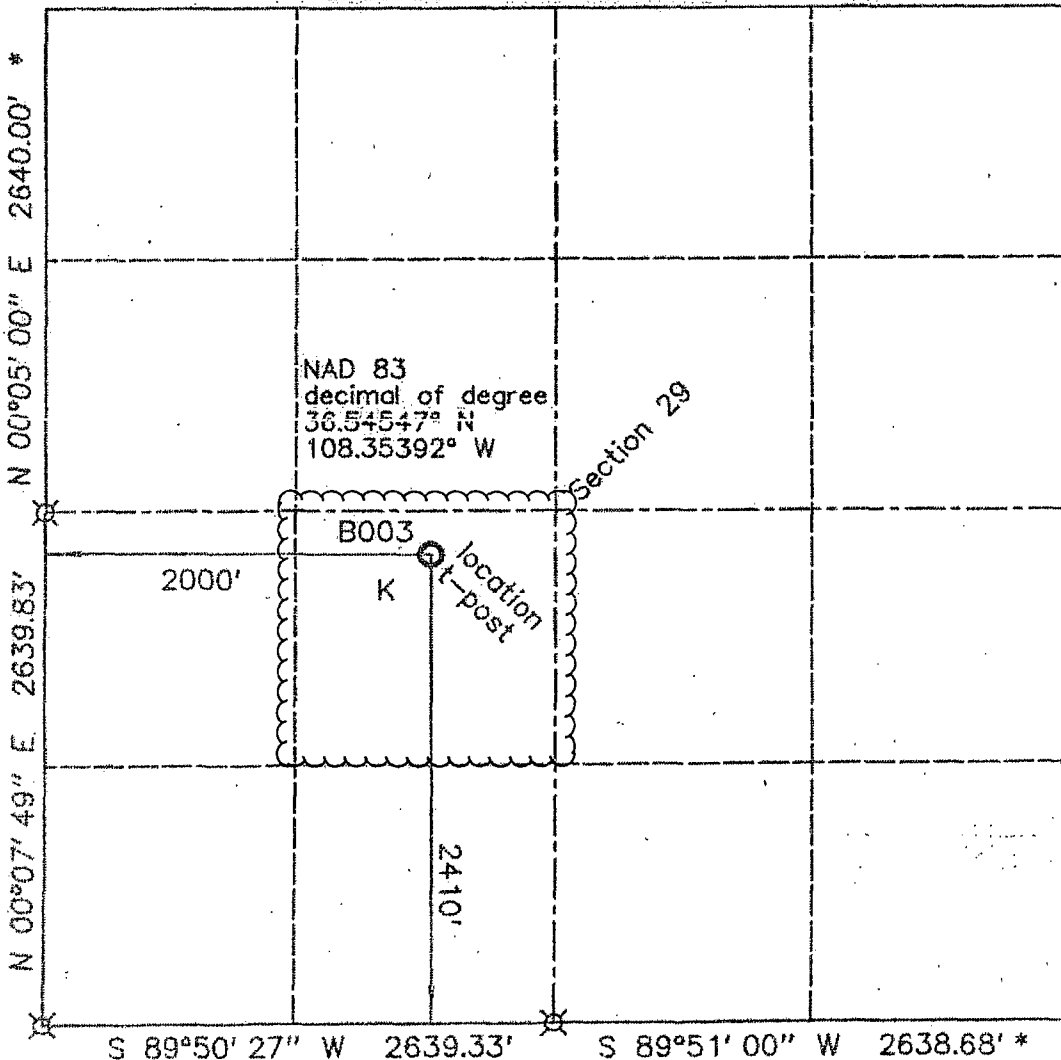
WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-045-35400		2 Pool Code 97935		3 Pool Name WC27N14W29; GALLUP OIL					
4 Property Code 39832		5 Property Name CBM B Pod 29K				6 Well Number 1			
7 OGRID No. 24284T 292875		8 Operator Name NNOGC Exploration and Production LLC				9 Elevation 5942'			
10 Surface Location									
UL or Lot K	Section 29	Township 27 N.	Range 14 W	Lot Idn. 400	Feet from the 2410'	North/South line SOUTH	Feet from the 2000'	East/West line WEST	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 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.

S 89°50' 37" W 5277.39' \*\*

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 organization either owns a working interest or undivided mineral interest in the land including the bottom hole location or has the right to drill this well at this location pursuant to a lease with a owner of a mineral interest or working interest or to a subsurface pool agreement or a compulsory pooling order hereby authorized by the Division.	
Signature <i>Brian Wood</i>	Date 4-9-12
Printed Name BRIAN WOOD	
E-mail Address brian@permitswest.com	
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 10/27/11	
Signature of Licensed Professional Surveyor <i>Gerald G. Hudleston</i>	
Certificate Number 6844	

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 1625 N. French Dr., Hobbs, NM 88240  
 Phone (575)399-6101 Fax (575)393-0720  
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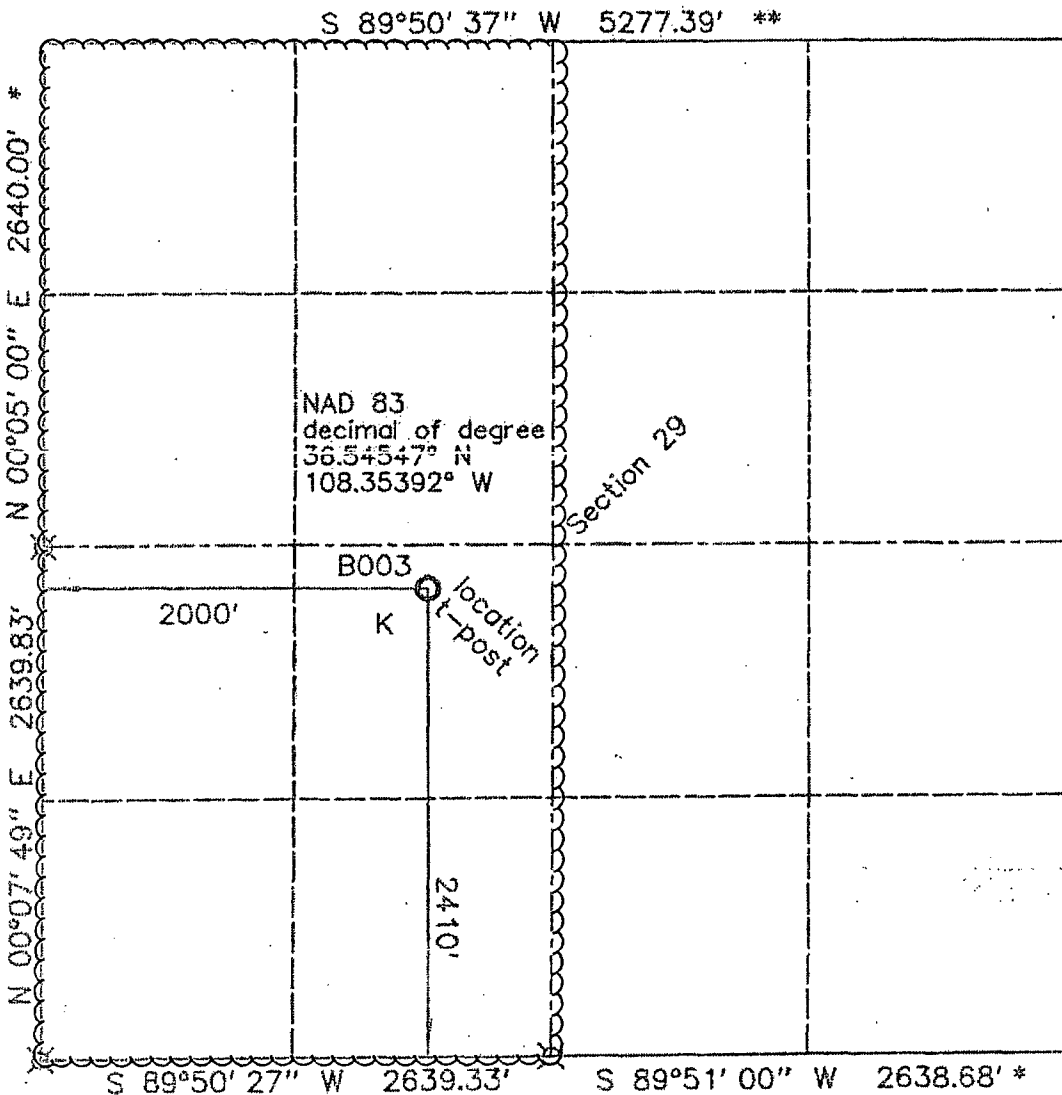
Form C - 102  
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AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045-35400		<sup>2</sup> Pool Code 71599		<sup>3</sup> Pool Name BASIN DAKOTA					
<sup>4</sup> Property Code 39832		<sup>5</sup> Property Name CBM B Pod 29K				<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 5942'			
<sup>10</sup> Surface Location									
UL or Lot K	Section 29	Township 27 N.	Range 14 W	Lot Idn. 400	Feet from the 2410'	North/South line SOUTH	Feet from the 2000'	East/West line WEST	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 320		<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.



BLM brass cap  
 \* 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 organization either owns a working interest or undivided mineral interest in the land including the bottom hole location or has the right to do it itself or its formation pursuant to a contract with an owner of a mineral interest or working interest, or is a voluntary pool agreement or a voluntary pooling under the provisions provided by the law.	
Signature <i>Brian Wood</i>	Date 4-9-12
Printed Name BRIAN WOOD	
E-mail Address brian@permitswest.com	
<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 10/27/11	
Signature of Licensed Professional Surveyor <i>Gerald C. Hoodleston</i>	
Certificate Number 6844	

NNOGC Exploration and Production LLC  
CBM B Pod 29 K #1  
2410' FSL & 2000' FWL  
Sec. 29, 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'	+5,942'
Fruitland Formation	642'	652'	+5,300'
Pictured Cliffs Sandstone	1,092'	1,102'	+4,850'
Lewis Shale	1,242'	1,252'	+4,700'
Mesa Verde Sandstone	1,862'	1,872'	+4,080'
Point Lookout Sandstone	3,642'	3,652'	+2,300'
Mancos Shale	3,782'	3,792'	+2,160'
Gallup Sandstone	4,922'	4,932'	+1,020'
Sanostee	5,442'	5,452'	+500'
Dakota Sandstone	5,792'	5,802'	+150'
Morrison Formation	5,942'	5,952'	0'
Total Depth (TD)	6,000'	6,012'	-58'

### 2. NOTABLE ZONES

Fruitland coal gas is the primary goal. Gallup and Dakota are the secondary goals. Oil and gas shows that 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.



### 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.

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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CBM B Pod 29 K #1  
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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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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 July 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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## Surface Use Plan

### 1. DIRECTIONS (See PAGES 11 & 12)

From the NM 371 San Juan River bridge in southwest Farmington ....  
Go South  $\approx 6\text{-}1/2$  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 7.5 miles on paved N-4065  
Then bear right and go Southwest 0.5 mile on a dirt road onto the pad

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

### 2. ROAD WORK

No new road is needed. An existing dirt road crosses the pad. Upgrade of the existing road will consist of rocking as needed. The existing road will stay open.

### 3. EXISTING WELLS (See PAGE 12)

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

### 4. PROPOSED PRODUCTION FACILITIES (See PAGE 13 & 14)

Production facilities will include a gas (propane or the well's own gas) powered pump, separator, meter run, and above ground tanks. All of the equipment will be painted a flat Carlsbad brown and installed on the pad.



# Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

## Exhibit #1 Typical BOP setup

Location: San Juan Basin, New Mexico

Date: January, 2012

By: John Thompson (Walsh E&P)

