Navajo Nation

APD

Tribal Operations on

Tribal Lands

Permit

Accepted for

Record Only

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 3-11-12
Well information;
Operator NMOGC, Well Name and Number CBM B POD 29 Oscar #1
API# 30-045-35398 Section 29, Township 27 (N)/S, Range 14 E/(W)

Conditions of Approval:
(See the below checked and handwritten conditions)

- ✓ Notify Aztec OCD 24hrs prior to casing & cement.
- o Hold C-104 for directional survey & "As Drilled" Plat
- o Hold C-104 for NSL, NSP, DHC
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- ✓ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
  - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
  - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
  - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- o Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- o Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils

Charlie Perrin — 7-8-13 — JUL 09 2013 ca

NMOCD Approved by Signature — Date

Preliminary

RECEIVED
AUG 09 2012
Farmington Field Office
Bureau of Land Management

Form 3160-3
(August 2007)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

6. If Indian, Allotee 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 Oscar #1

2. Name of Operator NNOGC Exploration and Production LLC

9. API Well No.
30-045- 35398

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 822' FSL & 1530' FEL
At proposed prod. zone SAME

11. Sec., T. R. M. or Blk. and Survey or Area
SWSE 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) 22,650'

16. No. of acres in lease
150,000

17. Spacing Unit dedicated to this well
E2 (Fruit. Coal & Dakota) and SWSW (Gallup)
320 40

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2,626' (29-27-14 #13)

19. Proposed Depth
6,000'

20. BLM/BIA Bond No. on file
RLB0006712

RCVD JUN 20 '13
OIL CONS. DIV.
DIST. 3

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
5,975' UNGRADED

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

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:

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)*	Date
B. Wood	BRIAN WOOD (505 466-8120)	03/16/2012

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)

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

ACCEPTED FOR RECORD
JUN 18 2013
FARMINGTON FIELD OFFICE
BY TL Salyers

NMOCD

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

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

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)748-1283 Fax (575)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 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

RECEIVED
AUG 09 2012
Farmington Field Office
Bureau of Land Management

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	2 Pool Code	3 Pool Name
30-045- 35398	71629	BASIN FRUITLAND COAL (GAS)

4 Property Code	5 Property Name	6 Well Number
39998	CBM B Pod 29 Oscar	1

7 OGRID No.	8 Operator Name	9 Elevation
~~242841~~ 292875	NNOGC Exploration and Production LLC	5975'

10 Surface Location

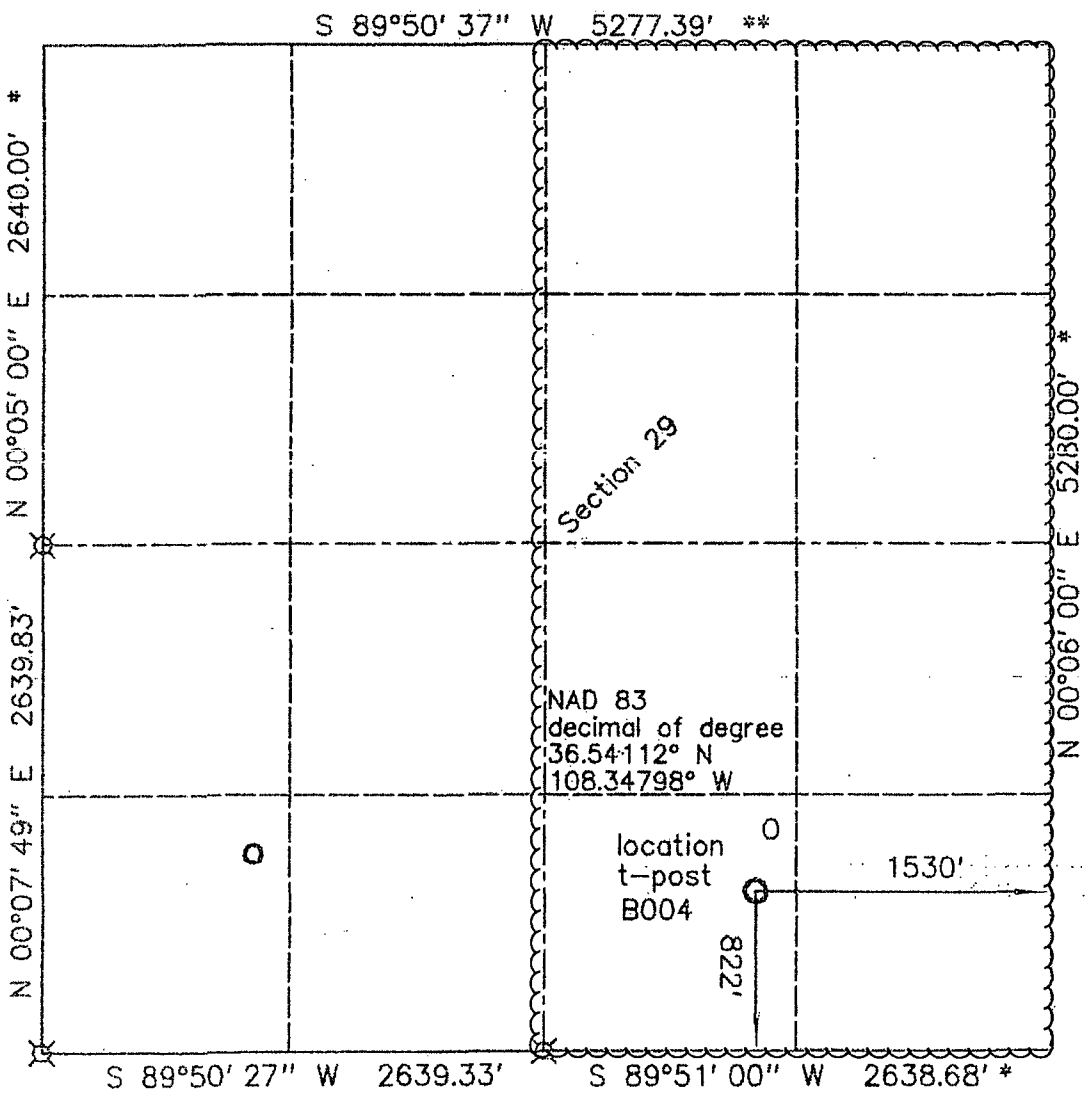
UL or Lot	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
O	29	27 N.	14 W.	400	822'	SOUTH	1530'	EAST	SAN JUAN

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	13 Joint or Infill	14 Consolidation Code	15 Order No.
320			

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 either owns a working interest or unleased mineral interest in the land including the bottom hole location or has the right to drill this well at this location pursuant to a contract with an owner of such a mineral interest or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Brian Wood 3-16-12

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 Professional Surveyor

GERALD C. HUDDLESTON
NEW MEXICO
6844
REGISTERED PROFESSIONAL SURVEYOR

Certificate Number 6844

District I
1625 N. French Dr., Hobbs, NM 88240
Phone (575)393-6161 Fax (575)393-0726
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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	2 Pool Code	3 Pool Name
30-045- 35398	71599	BASIN DAKOTA

4 Property Code	5 Property Name	6 Well Number
39998	CBM B Pod 29 Oscar	1

7 OGRID No.	8 Operator Name	9 Elevation
~~24284T~~ 292875	NNOGC Exploration and Production LLC	5975'

10 Surface Location

UL or Lot	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
O	29	27 N.	14 W.	400	822'	SOUTH	1530'	EAST	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	13 Joint or Infill	14 Consolidation Code	15 Order No.
320			

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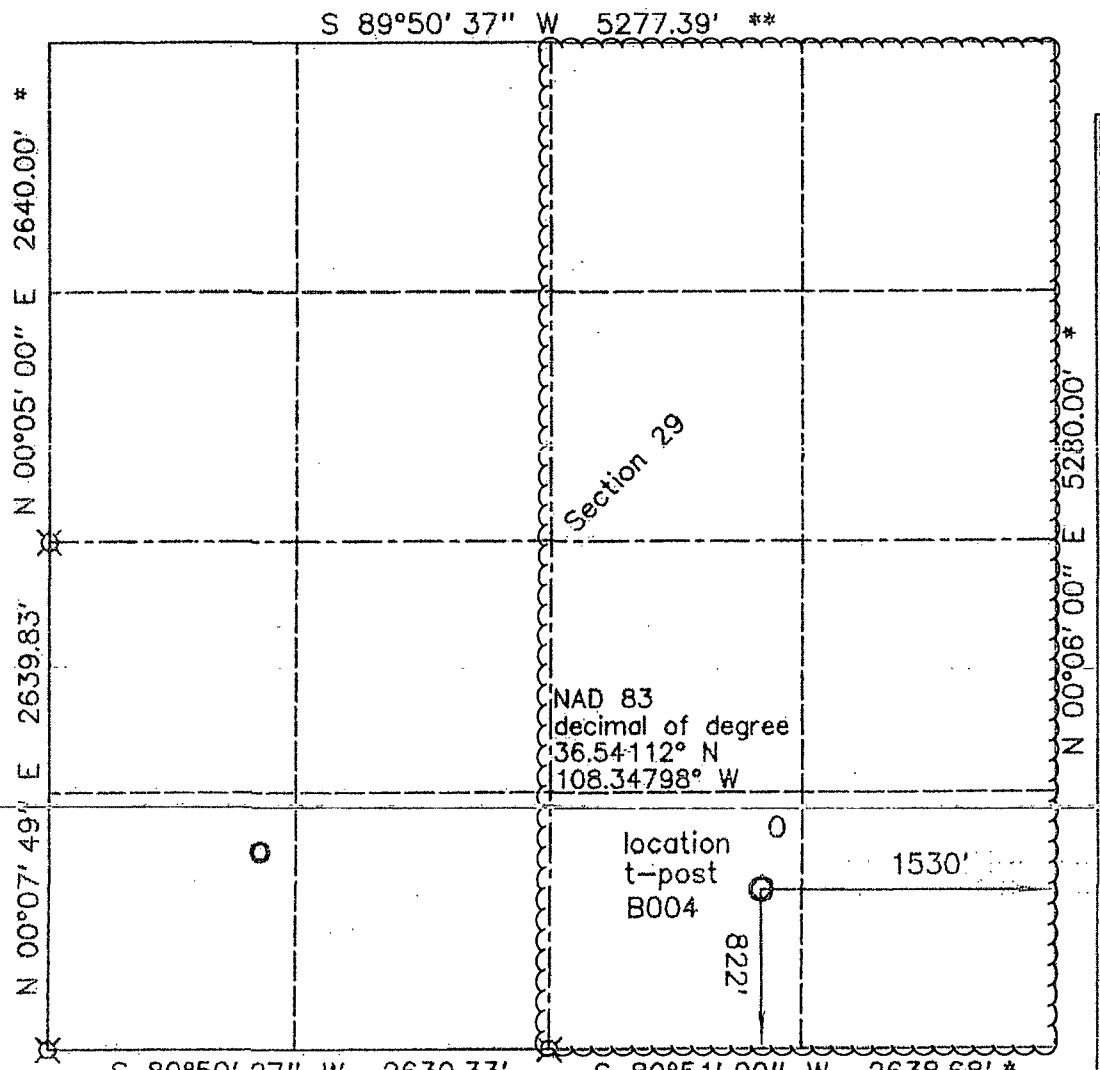

BLM brass cap
* from 1994 BLM
** calculated

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3-16-12
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
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Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-045- 35398	97232	BASIN MANCOS

4 Property Code	5 Property Name	6 Well Number
39998	CBM B Pod 29 Oscar	1

7 OGRID No.	8 Operator Name	9 Elevation
292875	NNOGC Exploration and Production LLC	5975'

10 Surface Location

UL or Lot	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	29	27 N.	14 W	400	822'	SOUTH	1530'	EAST	SAN JUAN

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UL or Lot	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County

OIL CONS. DIV DIST. 3

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
320			

JUL 01 2013

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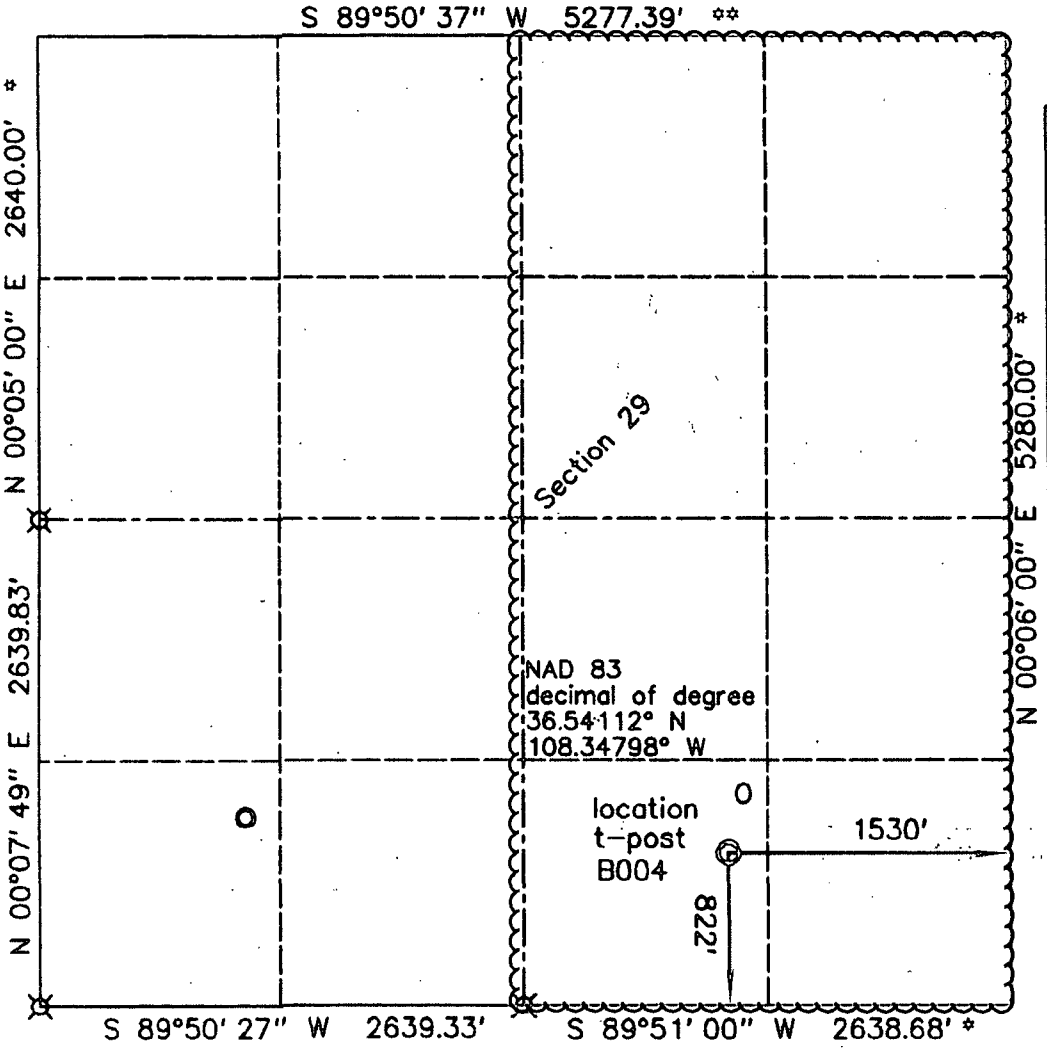

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6-28-13
Signature Date

BRIAN WOOD
Printed Name

brian@permitswest.com
E-mail Address

SURVEYOR CERTIFICATION

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06/27/11
Date of Survey
Signature and Seal of Professional Surveyor

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NEW MEXICO
6844
REGISTERED PROFESSIONAL SURVEYOR

Certificate Number 6844

NNOGC Exploration and Production LLC
CBM B Pod 29 Oscar #1
822' FSL & 1530' FEL
Sec. 29, T. 27 N., R. 14 W.
San Juan County, New Mexico

Drilling Program

1. FORMATION TOPS

The estimated tops of important geologic markers are:

Formation	GL Depth	KB Depth	Elevation
Kirtland Shale	0'	10'	+5,975'
Fruitland Formation	675'	685'	+5,300'
Pictured Cliffs Sandstone	1,125'	1,135'	+4,850'
Lewis Shale	1,275'	1,285'	+4,700'
Mesa Verde Sandstone	1,895'	1,905'	+4,080'
Point Lookout Sandstone	3,675'	3,685'	+2,300'
Mancos Shale	3,815'	3,825'	+2,160'
Gallup Sandstone	4,955'	4,965'	+1,020'
Sanostee	5,475'	5,485'	+500'
Dakota Sandstone	5,825'	5,835'	+150'
Morrison Formation	5,975'	5,985'	0'
Total Depth (TD)	6,000'	6,012'	-25'

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 ≥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 ≈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 ≥2,000 psi.

4. CASING & CEMENT

Hole Size	O. D.	Weight	Grade	Age	Coupling	Depth Set
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% $CaCl_2$. 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 ≈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 ≈3,000'. Hole will first be circulated with ≥150% hole volume of mud and ≈30 barrels of fresh water. Total cement volume = 2,284 cubic feet (≈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

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% CaCl2 + 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% $CaCl_2$ + 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 ≈20 barrels of water. Cement with ≈645 sacks (1,135 cubic feet) Class B 65/35 poz with 6% gel + 1% CaCl2 + 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.

7. DOWN HOLE CONDITIONS

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

8. OTHER INFORMATION

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

Surface Use Plan

1. DIRECTIONS (See PAGES 11 - 13)

From the NM 371 San Juan River bridge in southwest Farmington ....
Go South ≈6-1/2 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 7.7 miles on paved N-4065
Then bear right at a curve and go South 0.15 mile on a dirt road
Then turn right and go West 1/4 mile on a dirt road parallel to a power line
Then turn left and go SW 359.71' cross country to the proposed pad

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

2. ROAD WORK (See PAGES 12 & 13)

NM One Call (811) and NAPI (505 566-2623 or 505 793-4923) will be called at least 2 working days before construction starts. The 359.71' of new road will be built to BLM Gold Book standards. Road will have a ≈14' wide running surface and will be rocked as needed. Upgrade of the existing road will consist of rocking as needed. No culvert, vehicle turn out, or cattle guard is needed. Maximum disturbed width = 20'. Maximum cut or fill = 2'. Maximum grade = 3%.

3. EXISTING WELLS (See PAGE 14)

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

Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

Exhibit #1
Typical BOP setup

Location: San Juan Basin, New Mexcio

Date: Janurary, 2012
By: John Thompson (Walsh E&P)