

**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: 11/3/12

Well information;

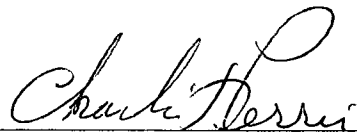
Operator NNOGC, Well Name and Number Old Trading Post 14G 1

API# 30-045-35443, Section 14, Township 26 N S, Range 14 E W

Conditions of Approval:

(See the below checked and handwritten conditions)

- ☒ Notify Aztec OCD 24hrs prior to casing & cement.
- ☐ Hold C-104 for directional survey & "As Drilled" Plat
- ☐ Hold C-104 for NSL, NSP, DHC
- ☐ 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
- ☐ 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
- ☐ 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

  
NMOCD Approved by Signature

1-15-14 ca  
Date

# RECEIVED

Form 3160-3  
(August 2007)

DEC 13 2012

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
Farmington Field Office  
Bureau of Land Management

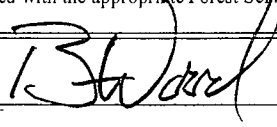
## APPLICATION FOR PERMIT TO DRILL OR REENTER

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 checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input 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. OLD TRADING POST 14 G #1	
3b. Phone No. (include area code) 303 534 8300		9. API Well No. 30-045-35443	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 1853' FNL & 1612' FEL At proposed prod. zone SAME		10. Field and Pool, or Exploratory BISTI LOWER-GALLUP (O)	
14. Distance in miles and direction from nearest town or post office* 16 AIR MILES SSW OF FARMINGTON, NM		11. Sec., T. R. M. or Blk. and Survey or Area SWSNE 14-26N-14W NMPM G	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 6,892'	16. No. of acres in lease 150,000	17. Spacing Unit dedicated to this well S2NE4 (= 80 acres) RCVD JAN 7 '14	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,850' (OTP 14 C)	19. Proposed Depth 5,300'	20. BLM/BIA Bond No. on file RLB0006712 OIL CONS. DIV. DIST. 3	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,311' UNGRADED	22. Approximate date work will start* 01/09/2013	23. Estimated duration 2 WEEKS	

### 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- 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 11/03/2012
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Title CONSULTANT (FAX 505 466-9682)

Approved by (Signature)	Name (Printed/Typed)	Date
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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)

ACCEPTED FOR RECORD

JAN - 3 2014

FARMINGTON FIELD OFFICE

BY TL Salvors

(Instructions on page 2)

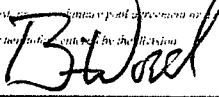
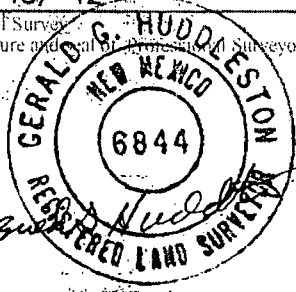
NMOCD

RV

This action is subject to technical and procedural review pursuant to 43 CFR 3160.3 and appeal pursuant to 43 CFR 3165.4

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".

<b>17 OPERATOR CERTIFICATION</b>	
<i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this signature is either mine or a working interest or indirect interest in the land containing the herein hole location or has the right to fill this well on his own part or in a contract with an owner of a working interest or a working interest in a contract with an owner of a working interest or a working interest in a contract with an owner of a working interest.</i>	
	
Signature	11-3-12
BRIAN WOOD	
Printed Name	
brian@permitswest.com	
E-mail Address	
<b>SURVEYOR CERTIFICATION</b>	
<i>I hereby certify 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.</i>	
05/13/12	
Date of Survey	
Signature and Seal of Registered Surveyor	
	
Certificate Number 6844	

NNOGC Exploration and Production LLC  
Old Trading Post 14 G #1  
1853' FNL & 1612' FEL  
Sec. 14, T. 26 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 Fruitland Formation	0'	10'	+6,311'
Pictured Cliffs Sandstone	1,461'	1,471'	+4,850'
Lewis Shale	1,561'	1,571'	+4,750'
Cliff House Sandstone	2,186'	2,196'	+4,125'
Point Lookout Sandstone	3,921'	3,931'	+2,390'
Mancos Shale	4,111'	4,121'	+2,200'
Gallup Sandstone	5,011'	5,021'	+1,300'
Total Depth (TD)	5,300'	5,310'	+1,011'

### 2. NOTABLE ZONES

Gallup oil is the primary goal. All 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 may be found in the Fruitland, Pictured Cliffs, Point Lookout, and Gallup 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 follows.



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PAGE 3

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. 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"	5-1/2"	15.5#	J-55	New	LT & C	5,300'

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  $\approx 3,500'$ . Hole will first be circulated with  $\geq 150\%$  of its volume with mud and  $\approx 25$  barrels of fresh water. Total cement volume = 1,849 cubic feet ( $\approx 100\%$  excess). A 5-1/2" cement guide shoe and self-filling float collar will be used. The float will be placed 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 volume will be  $\approx 634$  cubic feet consisting of  $\approx 150$  sacks of Halliburton light with 65/35 poz mix + 1/4 pound per sack cellophane + 2%  $\text{CaCl}_2$  (yield = 1.87 cubic feet per sack, weight = 12.7 pounds per gallon) followed by  $\approx 300$  sacks Class B with 2%  $\text{CaCl}_2$  (yield = 1.18 cubic feet per sack, weight = 15.2 pounds per gallon). Volume =  $> 100\%$  excess, but caliper logs will be used to determine actual volume needed.



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PAGE 4

Second stage volume will be  $\approx 1,215$  cubic feet consisting of  $\approx 618$  sacks of Halliburton light with 65/35 poz mix + 1/4 pound per sack cellophane + 2%  $\text{CaCl}_2$  (yield = 1.87 cubic feet per sack, weight = 12.7 pounds per gallon) followed by  $\approx 50$  sacks of Class B with 2%  $\text{CaCl}_2$  (yield = 1.18 cubic feet per sack, weight = 15.2 pounds per gallon). Volume = >100% excess, but caliper logs will be used to determine actual volume needed.

#### 5. MUD PROGRAM

Surface hole will be drilled with a fresh water mud. Production hole will be drilled with a fresh water polymer. Weight 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 temperature, abnormal pressure, or hydrogen sulfide is expected. Maximum expected bottom hole pressure will be  $\approx 2,295$  psi.

#### 8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take  $\approx 1$  week to drill and  $\approx 1$  week to complete the well.



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PAGE 5

Surface Use Plan

1. DIRECTIONS (See PAGES 10 - 13)

From the NM 371 San Juan River bridge in southwest Farmington...  
Go South 15-1/4 miles on NM 371 to the equivalent of Mile Post 91.1  
Then turn right and go West 2.2 miles on paved N-4178  
Then turn left and go South 1.3 miles on paved N-4055  
Then turn right and go West 0.9 mile on paved N-4065  
Then turn left through a yellow cattle guard and go SE 0.5 mile on a dirt road  
Then turn right and go West 0.5 mile on a dirt road  
Then turn left and go South-southwest 1,313.23' cross-country to the pad  
Roads will be maintained to at least equal to their present condition.

2. ROAD WORK (See PAGES 12 & 13)

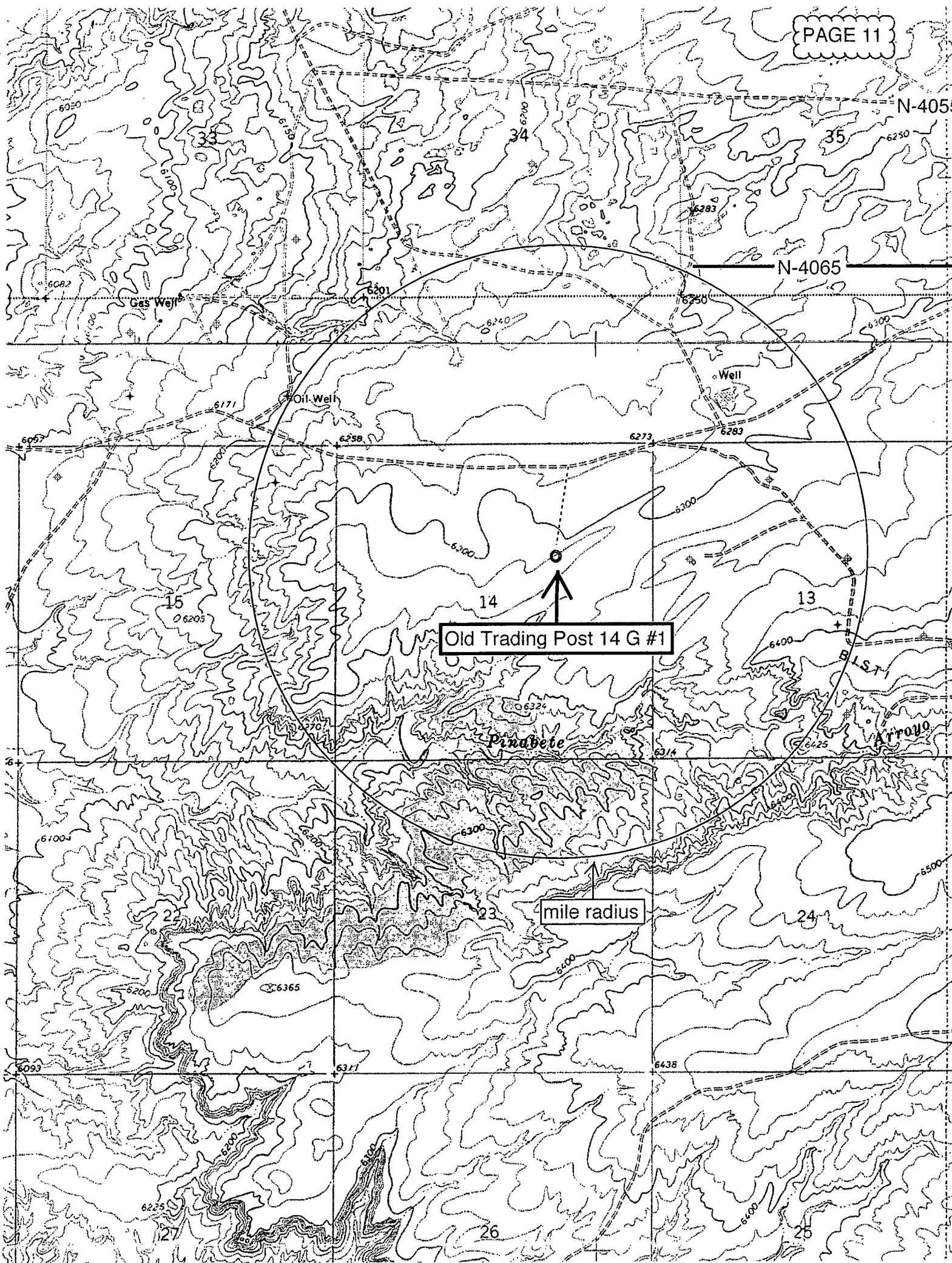
NM One Call (811) and NAPI (505 566-2623 or 505 793-4923) will be called at least 2 working days before construction starts. The 1,313.23' of new road will be built to BLM Gold Book standards. Road will have a  $\approx 14'$  wide running surface and will be rocked as needed. Upgrade of the existing road will consist of rocking where needed. No culvert, turn out, or cattle guard is needed. Maximum disturbed width = 20'. Maximum cut or fill = 6'. Maximum grade = 5%.

3. EXISTING WELLS (See PAGE 11)

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







# 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)

