

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER



FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

5. Lease Serial No. **NMSF078931D**
NM 0309373

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.
Callow #1G

9. API Well No.
30045 32164

10. Field and Pool, or Exploratory
Basin Dakota

11. Sec., T., R., M., or Blk. and Survey or Area
0 Sec. 33, T29N, R13W

12. County or Parish
San Juan

13. State
NM

1a. Type of Work: ☒ DRILL ☐ REENTER

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

2. Name of Operator
Great Western Drilling Company

3a. Address
c/o Walsh Engineering, 7415 E. Main, Farmington, NM 87402

3b. Phone No. (include area code)
(505) 327-4892

4. Location of Well (Report location clearly and in accordance with any State requirements. *)
At surface **835' FSL and 1915' FEL**

At proposed prod. Zone

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

3 miles south of Farmington, NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
835'

16. No. of Acres in lease
640 +

17. Spacing Unit dedicated to this well
S/2 320 acres

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.

19. Proposed Depth
6330' +/-

20. BLM/BIA Bond No. on file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
5727' GR

22. Approximate date work will start*
April 1, 2004

23. Estimated duration
2 weeks

24. Attachments

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

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office. | 6. Such other site specific information and/or plans as may be required by the authorized office. |

25. Signature Paul C. Thompson	Name (Printed/Typed) Paul C. Thompson, P.E.	Date 1/30/2004
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Title _____ **Agent**

Approved by (Signature) DM	Name (Printed/Typed)	Date 4-16-04
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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.

*(Instructions on reverse)

See attached Conditions of Approval

NMOC

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

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

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer DD, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised February 21, 1994

Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30045-3216.4	*Pool Code 71599	*Pool Name BASIN DAKOTA
*Property Code 33867	*Property Name CALLOW	*Well Number 16
*GRID No. 9338	*Operator Name GREAT WESTERN DRILLING	*Elevation 5727'

¹⁰ Surface Location

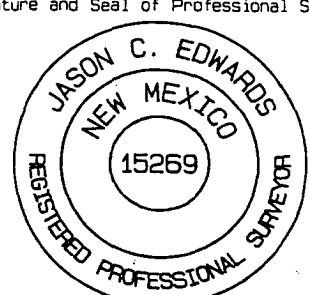
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	33	29N	13W		835	SOUTH	1915	EAST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres 320.0 Acres - (S/2)	¹³ Joint or Infill Y	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16	5293.20'	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief <u>Paul C. Thompson</u> Signature <u>PAUL C. THOMPSON</u> Printed Name <u>AGENT</u> Title <u>1/29/04</u> Date
5280.00'	33	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: JULY 31, 2003 Signature and Seal of Professional Surveyor  <u>JASON C. EDWARDS</u> Certificate Number 15269
	LAT: 36°40.6867' N LONG: 108°12.5157' W DATUM: NAD27 5280.00'	

GREAT WESTERN DRILLING
OPERATIONS PLAN
CALLOW #1G

I. Location: 835' FSL and 1915' FEL Date: January 28, 2004
 Sec 33 T29N R13W
 San Juan County, NM

Field: Basin Dakota Elev: 5727' GL
Surface: Tommy Bolack
Minerals: Federal

II. Geology: Surface formation _ Ojo Alamo

<u>A. Formation Tops</u>	<u>Depths</u>
Kirtland	149'
Fruitland	1104'
Pictured Cliffs	1449'
Cliff House	1649'
Menefee	2994'
Point Lookout	3924'
Mancos	4209'
Gallup	5119'
Dakota	6034'
Total Depth	6330'

Estimated depths of anticipated water, oil, gas, and other mineral bearing formations which are expected to be encountered:

Water and gas - 1104, 1449, 3924, 5119, and 6034.

B. Logging Program: FDC/CNL/GR/SP and DIL logs at TD.

C. The Dakota zone may be over pressured. No H₂S zones will be penetrated in this well. Max. BHP = 3000 psig.

III. Drilling

A. Contractor:

B. Mud Program:

The surface hole will be drilled with a fresh water mud.

The production hole will be drilled with a fresh water polymer mud. The weighting material will be drill solids or if conditions dictate, barite. The maximum mud weight expected is 9.5 ppg.

C. Minimum Blowout Control Specifications:

Double ram type 2000 psi working pressure BOP with a rotating head. See the attached Exhibit #1 for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi.

The blind rams will be hydraulically activated and checked for operational readiness each time 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 rated to 2000 psi.

IV. Materials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt. & Grade
12-1/4"	350'	8-5/8"	24# J-55
7-7/8"	6330'	4-1/2"	10.5# J-55

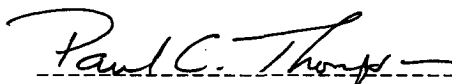
B. Float Equipment:

- a) Surface Casing: Notched collar and 3 centralizers on the bottom 3 collars.
- b) Production Casing: Production Casing: 4-1/2" cement guide shoe and self fill insert float collar. Place float one joint above shoe. **Place DV tool at 2950'**. Place ten centralizers spaced every other joint above the shoe, two turbolizers on the collars below the DV tool and two turbolizers above the DV tool. Place five turbolizers every third joint from the top of the well.

V. Cementing:

Surface casing: 8-5/8" - Use 245 sx (289 cu. ft.) of Cl "B" with 3% CaCl₂ (Yield = 1.18 cu. ft./sk; slurry weight = 15.6 PPG). 100% excess to circulate cement to surface. WOC 12 hours. Pressure test the surface casing to 1500 psi for 30 min.

Production Casing: 4-1/2" - Before cementing circulate hole with at least 1-1/2 hole volumes of mud. Precede cement with 30 bbls of fresh water. **1st Stage: Lead** with 640 sx (1126 cu.ft.) of Cl "B" 65/35 poz with 6% gel, 1% CaCl₂, 4% phenoseal, and ¼ #/sx celloflake (Yield = 1.76 cu. ft./sk; slurry weight = 12.8 PPG). **Tail** with 100 sx (146 cu.ft.) of Cl "B" 50/50 poz with 0.15% dispersant, 1% CaCl₂ and ¼#/sk. celloflake. (Yield = 1.46 cu. ft./sk; slurry weight = 13.0 PPG). **2nd Stage:** Precede cement with 20 bbls of water. Cement with 630 sx (1109 cu.ft) Cl "B" 65/35 poz with 6% gel, 1% CaCl₂, and ¼ #/sx celloflake (Yield = 1.76 cu. ft./sk; slurry weight = 12.8 PPG). Total cement volume is 2381 cu.ft. (65% excess to circulate cement to surface).



Paul C. Thompson, P.E.

Great Western Drilling Company

Well Control Equipment Schematic for 2M Service

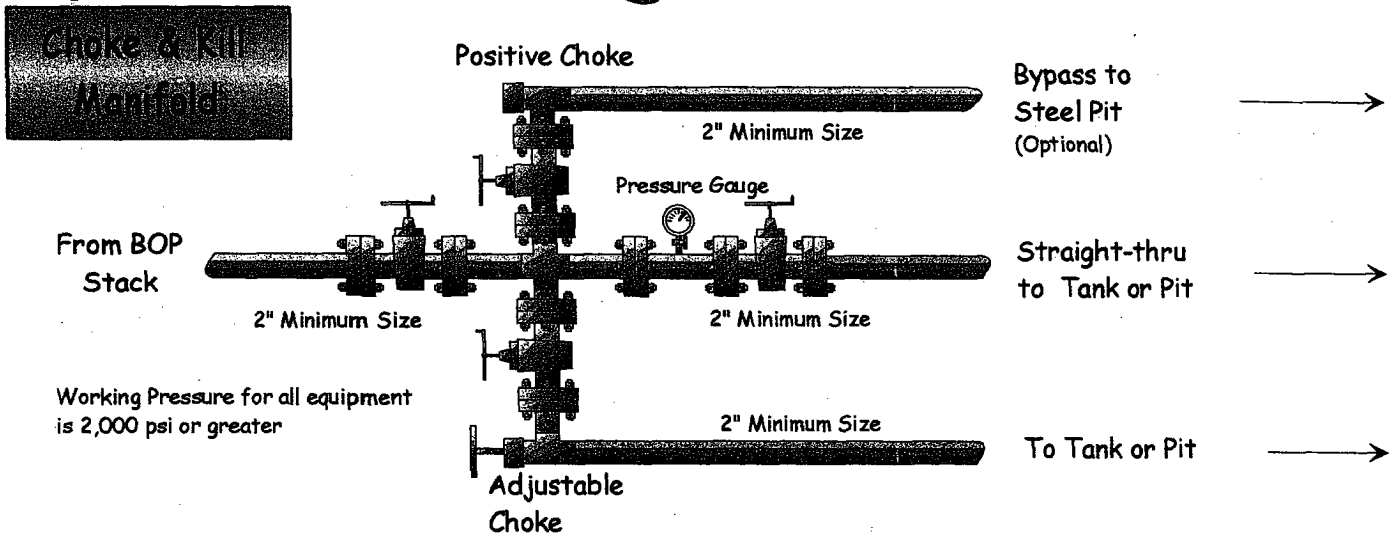
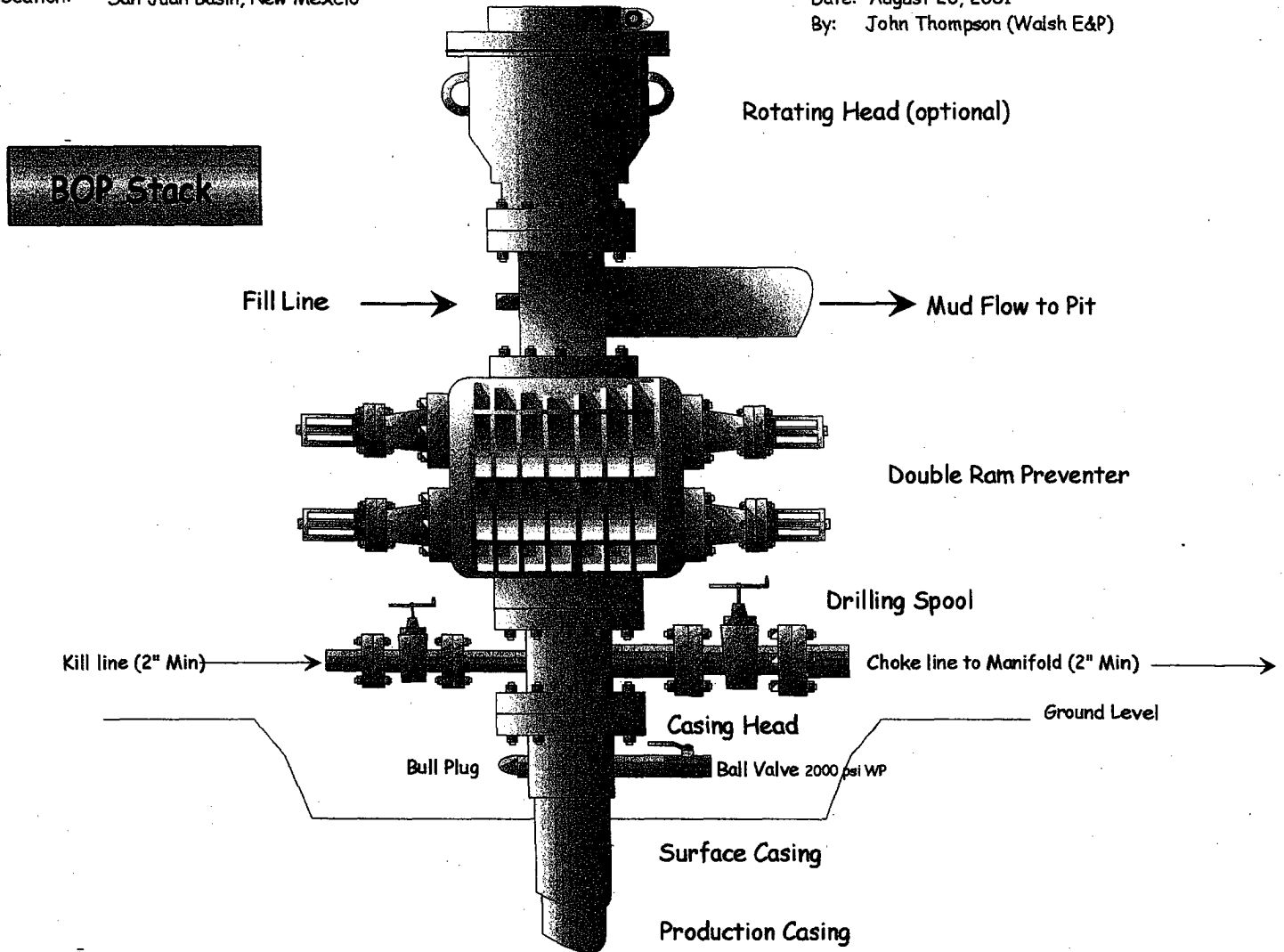
Attachment to Drilling Technical Program

Exhibit #1 Typical BOP setup

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson (Walsh E&P)



GREAT WESTERN DRILLING CALLOW #1G
835' FS & 1915' FEL, SECTION 33, T29N R13W, NMPM
SAN JUAN COUNTY, NEW MEXICO GROUND ELEVATION: 5727'

PLAT #2

LATITUDE: 36°40'41"
LONGITUDE: 108°12'31"
 DATUM: NAD1927

