

RECEIVED

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAR 25 2009

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

5. Lease Serial No
NMSF-078767

6. If Indian, Allottee or Tribe Name
DK/Mancos-lease
NMMW78407A-MV

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

8. Lease Name and Well No.
149C

9. API Well No.
30-039-30723

10. Field and Pool, or Exploratory
Basin Mancos/Blanco Mesaverde/Basin Dakota

11. Sec., T., R., M., or Blk. and Survey or Area
F Section 12, 31N, 6W

12. County or Parish
Rio Arriba

13. State
NM

17. Spacing Unit dedicated to this well
RCVD MAY 12 '09
OIL CONS. DIV.
0899
UT0847

23. Estimated duration
1 month
DIST. 3

1a. Type of Work: DRILL REENTER

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

2. Name of Operator
Williams Production Company, LLC

3a. Address
P.O. Box 640 Aztec, NM 87410

3b. Phone No. (include area code)
(505) 634-4208

4. Location of Well (Report location clearly and in accordance with any State requirements. *)
At surface 1910' FNL & 2225' FWL F
At proposed prod. zone 990' FNL & 1650' FWL C

14. Distance in miles and direction from nearest town or post office*
approximately 32 miles northeast of Blanco, New Mexico

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
990'

16. No. of Acres in lease
2,518.040

17. Spacing Unit dedicated to this well
RCVD MAY 12 '09

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
50' Rosa 149A

19. Proposed Depth
8,196'

20. BLM/BIA Bond No. on file
0899
UT0847

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
6,286' GR

22. Approximate date work will start*
April 1, 2009

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, shall 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 shall 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 authorized officer.

25. Signature
Larry Higgins

Name (Printed/Typed)
Larry Higgins

Date
3-25-09

Title
Drilling COM
Approved by (Signature)
Wayne Townsend
Title
Acting AFM

Name (Printed/Typed)
Wayne Townsend

Date
5/8/09

Application approval does not warrant or certify that the applicant holds legal or equitable title to those lands in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

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

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 or cause to be made any statement or representation as to any matter within its jurisdiction.

*(Instructions on reverse)

Williams Production Company, LLC, proposes to develop the Basin Mancos, Blanco Mesaverde, and Basin Dakota formations at the above described location in accordance with the attached drilling and surface use plans.

The well pad surface is under jurisdiction of the Bureau of Land Management, Farmington Field Office (BLM/FFO).

This location has been archaeologically surveyed by La Plata Archaeological Consultants. Copies of their report have been submitted directly to the BLM.

No new access road will be required for this proposed well.

This APD is also serving as an application to obtain a pipeline right-of-way. An associated pipeline tie of 133.8 feet would be required for this well.

MAY 14 2009 *aw*

Hold C104
for Directional Survey
and "As Drilled" plat

NOTIFY AZTEC UCD 24 HRS.
PRIOR TO CASING & CEMENT

This action is subject to technical and procedural review pursuant to 43 CFR 3165.5 and appeal pursuant to 43 CFR 3165.4

NMOCD
HOLD C104 for change in status TO #149A of #149B for Blanco Mesaverde

Drilling operations authorized are subject to compliance with attached "General Requirements".

District I
1625 N French Dr., Hobbs, NM 88240

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102

Revised October 12, 2005

District II
1301 W. Grand Avenue, Artesia, NM 88210

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

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

District IV
1220 S St. Francis Dr., Santa Fe, NM 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-39-30723	² Pool Code 97232 / 72319 / 71599	³ Pool Name BASIN MANCOS / BLANCO MESAVERDE / BASIN DAKOTA
⁴ Property Code 17033	⁵ Property Name ROSA UNIT	
⁶ Well Number 149C	⁷ Operator Name WILLIAMS PRODUCTION COMPANY	
⁸ OGRID No. 120782	⁹ Elevation 6286'	

¹⁰ Surface Location

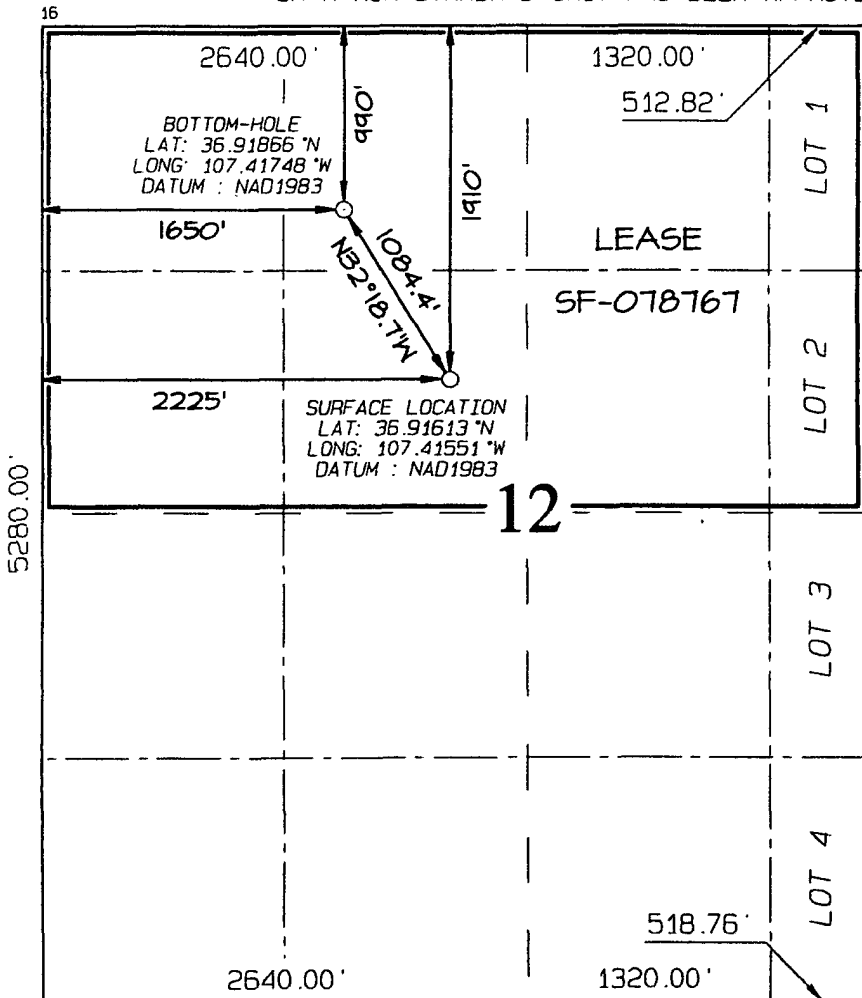
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	12	31N	6W		1910	NORTH	2225	WEST	RIO ARRIBA

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
C	12	31N	6W		990	NORTH	1650	WEST	RIO ARRIBA

¹² Dedicated Acres 271.17 Acres - (N/2)	¹³ Joint or Infill	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



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

Larry Higgins 3-25-09
Signature Date
LARRY HIGGINS
Printed Name

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

Survey Date: DECEMBER 2, 2008
Signature and Seal of Professional Surveyor

JASON C. EDWARDS
Certificate Number 15269

III. MATERIALS**A. CASING PROGRAM:**

CASING TYPE	OH SIZE (IN)	DEPTH (MD) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	14 3/4	300	10 3/4	40.5	K-55
Intermediate	9 7/8	3,836	7 5/8	26.4	K-55
Longstring	6 3/4	8,196	5 1/2	17	N-80

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 10 3/4" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
2. INTERMEDIATE CASING: 7 5/8" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) Turbulent centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) Turbulent centralizer at 2,700 ft., 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. (N^TL-FRA 90-1).
3. PRODUCTION LINER / CASING: 5-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' bottom joint. Place marker joint above 5,400'. Place centralizers as needed across selected production intervals.

C. CEMENTING:

(Note: Volumes may be adjusted onsite due to actual conditions)

1. SURFACE: Slurry: 290_{SX} (341 cu.ft.) of "Type III" + 2% Cal-Seal 60 + ¼ # of poly-e-flake/sk + 0.3% Versaset + 2% Econolite + 6% Salt (Yield = 1.796 cu.ft./sk, Weight = 13.5 #/gal.). The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 1500psi.
2. INTERMEDIATE: Lead - 525_{SX} (1430 cu.ft.) of "EXTENDACEM" + 5 #/sk pheno-seal + 5% Cal-Seal 60 (Yield = 2.723 cu.ft./sk, Weight = 11.5 #/gal.). Tail - 100_{SX} (117.8cu.ft.) of Premium cement + 0.125 #/sk Poly-E-Flake, (Yield = 1.178 cu.ft./sk, Weight = 15.6#/gal.). **NO EXCESS PUMP AS WRITTEN SHOULD CIRCULATE TO SURFACE** Total volume = 1198 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface
3. PRODUCTION CASING: 10 bbl Gelled Water spacer. Cement: 325_{SX} (454 ft³) of "FRACCEM" + 0.8% Halad-9 + 0.1% CFR-3 + 5 #/sk Gilsonite + 0.125 #/sk Poly-E-Flake + 0.15% HR-800. (Yield = 1.398 ft³/sk, Weight = 13.1 #/gal.). Displace cement at a minimum of 8 BPM. **NO EXCESS SHOULD COVER 150 FEET INTO 7" CASING** Total volume (342) ft³. WOC 12 hours.

IV. IV COMPLETION**A. CBL**

1. Run Cement Bond Log across all intervals to be perforated and find Top of Cement behind all casing strings if cement not circulated to surface..

B. PRESSURE TEST

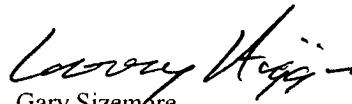
1. Pressure test 5-1/2" casing to 6000 psi max, hold at 1500 psi for 30 minutes.

C. STIMULATION

1. Stimulate Dakota with approximately 10,000# of LiteProp 108™ sand in slick water.
2. Isolate Dakota with a RBP.
3. Perforate Mancos as determined from the open hole logs
4. Stimulate Mancos with 3 stages of approximates 117,000# 40/70 white sand and 7500# 100 mesh white sand
5. Stimulate Point Lookout with approximately 9300# of 14/30 LiteProp™ in slick water.
6. Isolate Point Lookout with a RBP.
7. Perforate the Menefee/Cliff House as determined from the open hole logs.
8. Stimulate with approximately 9300# of 14/30 LiteProp™ in slick water.
9. Test each zone before removing bridge plugs.

D. RUNNING TUBING

1. Production Tubing: Run 2-3/8", 4.7#, J-55, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing approximately 25' above the bottom Point Lookout perforation


FOR Gary Sizemore
Sr. Drilling Engineer

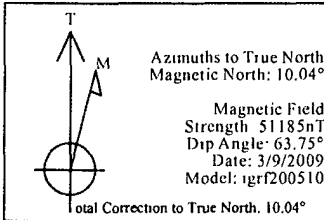
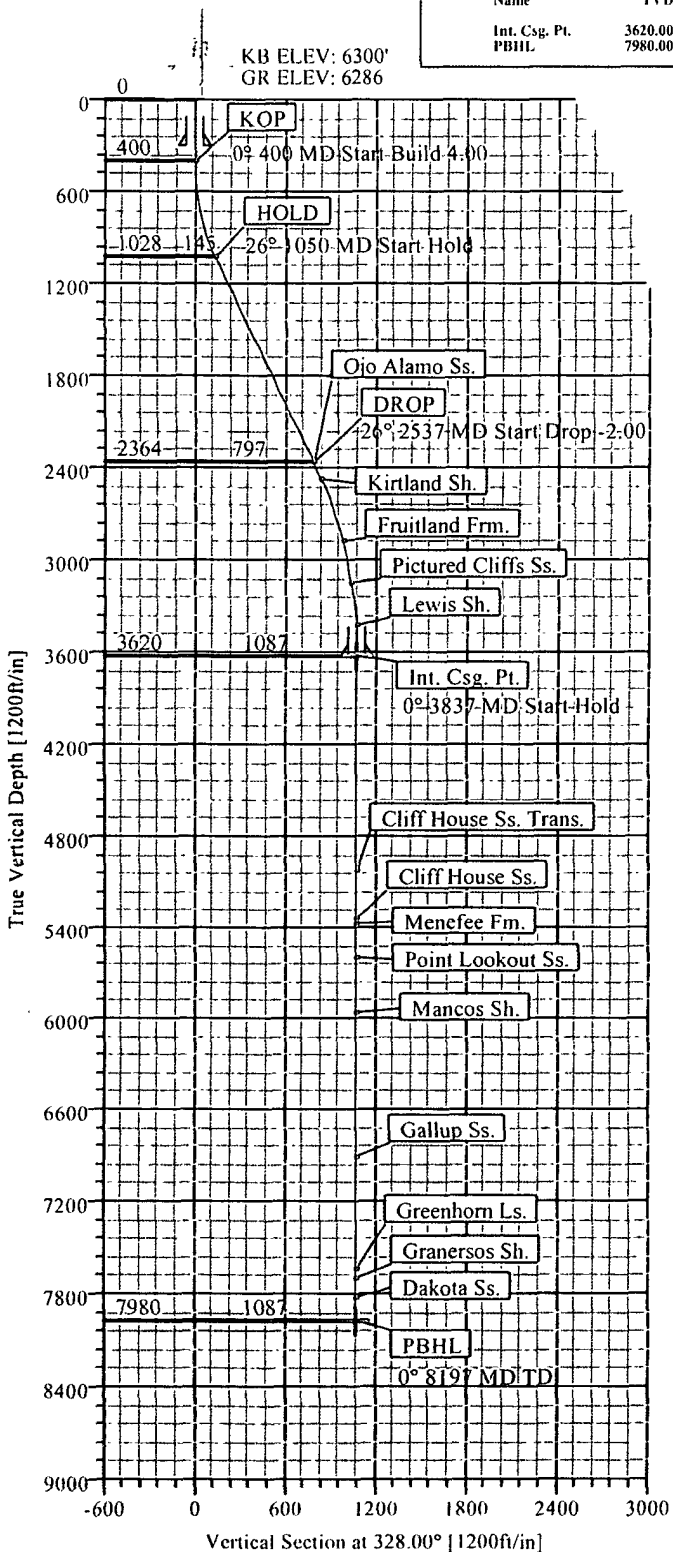


ROSA UNIT #149C
RIO ARRIBA CO., NEW MEXICO

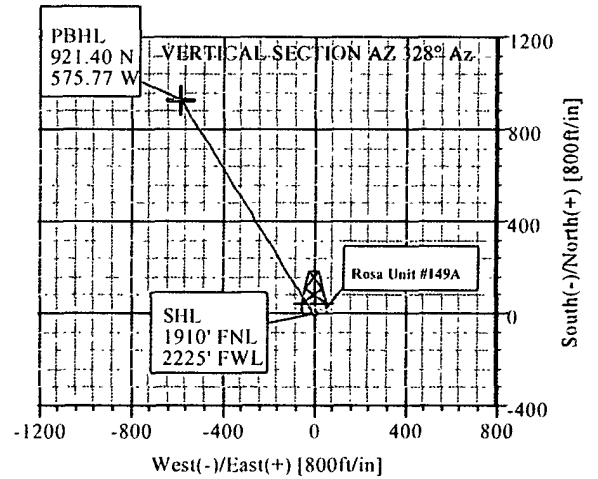
SECTION DETAILS										
Sec	MD	Inc	Az	TVD	+N-S	+E-W	DLeg	TFace	VSec	Target
1	0.00	0.00	328.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	328.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	1049.89	26.00	328.00	1027.82	122.90	-76.80	4.00	328.00	144.92	
4	2536.86	26.00	328.00	2364.35	675.60	-422.18	0.00	0.00	796.66	
5	3836.65	0.00	328.00	3620.00	921.40	-575.77	2.00	180.00	1086.50	Int. Csg. Pt.
6	8196.65	0.00	328.00	7980.00	921.40	-575.77	0.00	328.00	1086.50	PBHL

WELL DETAILS							
Name	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot
#149C	0.00	0.00	2154848.90	1299706.19	36°54'58.070N	107°24'55.840W	N/A

TARGET DETAILS									
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape	
Int. Csg. Pt.	3620.00	921.40	-575.77	2155777.27	1299141.72	36°55'07.180N	107°25'02.930W	Point	
PBHL	7980.00	921.40	-575.77	2155777.27	1299141.72	36°55'07.180N	107°25'02.930W	Point	



FORMATION TOP DETAILS			
No.	TVDPath	MDPath	Formation
1	2360.00	2532.02	Ojo Alamo Ss.
2	2470.00	2653.28	Kirtland Sh.
3	2875.00	3082.98	Fruitland Frm.
4	3145.00	3359.44	Pictured Cliffs Ss.
5	3425.00	3641.50	Lewis Sh.
6	5025.00	5241.65	Cliff House Ss. Trans.
7	5335.00	5551.65	Cliff House Ss.
8	5380.00	5596.65	Menefee Fm.
9	5595.00	5811.65	Point Lookout Ss.
10	5960.00	6176.65	Mancos Sh.
11	6910.00	7126.65	Gallup Ss.
12	7635.00	7851.65	Greenhorn Ls.
13	7695.00	7911.65	Graneros Sh.
14	7825.00	8041.65	Dakota Ss.



CASING DETAILS				
No.	TVD	MD	Name	Size
1	300.00	300.00	10 3/4"	10.750
2	3620.00	3836.65	7 5/8" Int. Csg.	0.000

Plan: Plan #1 (#149C/1)
Created By: Lindsey Maddux Date: 3/10/2009



Weatherford International, Inc.

Proposal Plan Report



Weatherford

Company: WILLIAMS PRODUCTION	Date: 3/10/2009	Time: 14:42:26	Page: 3
Field: Rio Arriba Co., NM (NAD 83)	Co-ordinate(NE) Reference: Well: #149C, True North		
Site: Rosa Unit #149C	Vertical (TVD) Reference: SITE 6300.0		
Well: #149C	Section (VS) Reference: Well (0.00N,0.00E,328.00Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	Build deg/100ft	Turn deg/100ft	DLS deg/100ft	TFO deg	Comment
5811.65	0.00	328.00	5595.00	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	Point Lookout Ss.
5900.00	0.00	328.00	5683.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
6000.00	0.00	328.00	5783.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	Mancos Sh.
6100.00	0.00	328.00	5883.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
6176.65	0.00	328.00	5960.00	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
6200.00	0.00	328.00	5983.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
6300.00	0.00	328.00	6083.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
6400.00	0.00	328.00	6183.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	Gallup Ss
6500.00	0.00	328.00	6283.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
6600.00	0.00	328.00	6383.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
6700.00	0.00	328.00	6483.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
6800.00	0.00	328.00	6583.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
6900.00	0.00	328.00	6683.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
7000.00	0.00	328.00	6783.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
7100.00	0.00	328.00	6883.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
7126.65	0.00	328.00	6910.00	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
7200.00	0.00	328.00	6983.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
7300.00	0.00	328.00	7083.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	Greenhorn Ls.
7400.00	0.00	328.00	7183.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
7500.00	0.00	328.00	7283.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
7600.00	0.00	328.00	7383.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
7700.00	0.00	328.00	7483.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
7800.00	0.00	328.00	7583.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	Granerosos Sh
7851.65	0.00	328.00	7635.00	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
7900.00	0.00	328.00	7683.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
7911.65	0.00	328.00	7695.00	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	Dakota Ss.
8000.00	0.00	328.00	7783.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
8041.65	0.00	328.00	7825.00	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	PBHL
8100.00	0.00	328.00	7883.35	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	
8196.65	0.00	328.00	7980.00	921.40	-575.77	1086.50	0.00	0.00	0.00	328.00	

Targets

Name	Description Dip.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude →		← Longitude →					
							Deg	Min	Sec	Deg	Min	Sec		
Int. Csg Pt.		3620.00	921.40	-575.77	2155777.27	1299141.72	36	55	7.180	N	107	25	2.930	W
-Plan hit target														
PBHL		7980.00	921.40	-575.77	2155777.27	1299141.72	36	55	7.180	N	107	25	2.930	W
-Plan hit target														

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
2532.02	2360.00	Ojo Alamo Ss.		0.00	0.00
2653.28	2470.00	Kirtland Sh		0.00	0.00
3082.98	2875.00	Fruitland Frm.		0.00	0.00
3359.44	3145.00	Pictured Cliffs Ss.		0.00	0.00
3641.50	3425.00	Lewis Sh.		0.00	0.00
5241.65	5025.00	Cliff House Ss. Trans.		0.00	0.00
5551.65	5335.00	Cliff House Ss.		0.00	0.00
5596.65	5380.00	Menefee Fm.		0.00	0.00
5811.65	5595.00	Point Lookout Ss.		0.00	0.00
6176.65	5960.00	Mancos Sh.		0.00	0.00
7126.65	6910.00	Gallup Ss.		0.00	0.00
7851.65	7635.00	Greenhorn Ls.		0.00	0.00



Weatherford International, Inc.
Proposal Plan Report



Company: WILLIAMS PRODUCTION	Date: 3/10/2009	Time: 14:42:26	Page: 4
Field: Rio Arriba Co., NM (NAD 83)	Co-ordinate(NE) Reference: Well: #149C, True North		
Site: Rosa Unit #149C	Vertical (TVD) Reference: SITE 6300.0		
Well: #149C	Section (VS) Reference: Well (0.00N,0.00E,328.00Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
7911.65	7695.00	Graneros Sh.		0.00	0.00
8041.65	7825.00	Dakota Ss		0.00	0.00

Annotation

MD ft	TVD ft	
400.00	400.00	KOP
1049.99	1027.91	HOLD
2536.86	2364.35	DROP
3836.65	3620.00	Int. Csg Pt
8196.65	7980.00	PBHL

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
300.00	300.00	10.750	12.250	10 3/4"
3836.65	3620.00	0.000	0.000	7 5/8" Int. Csg

Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

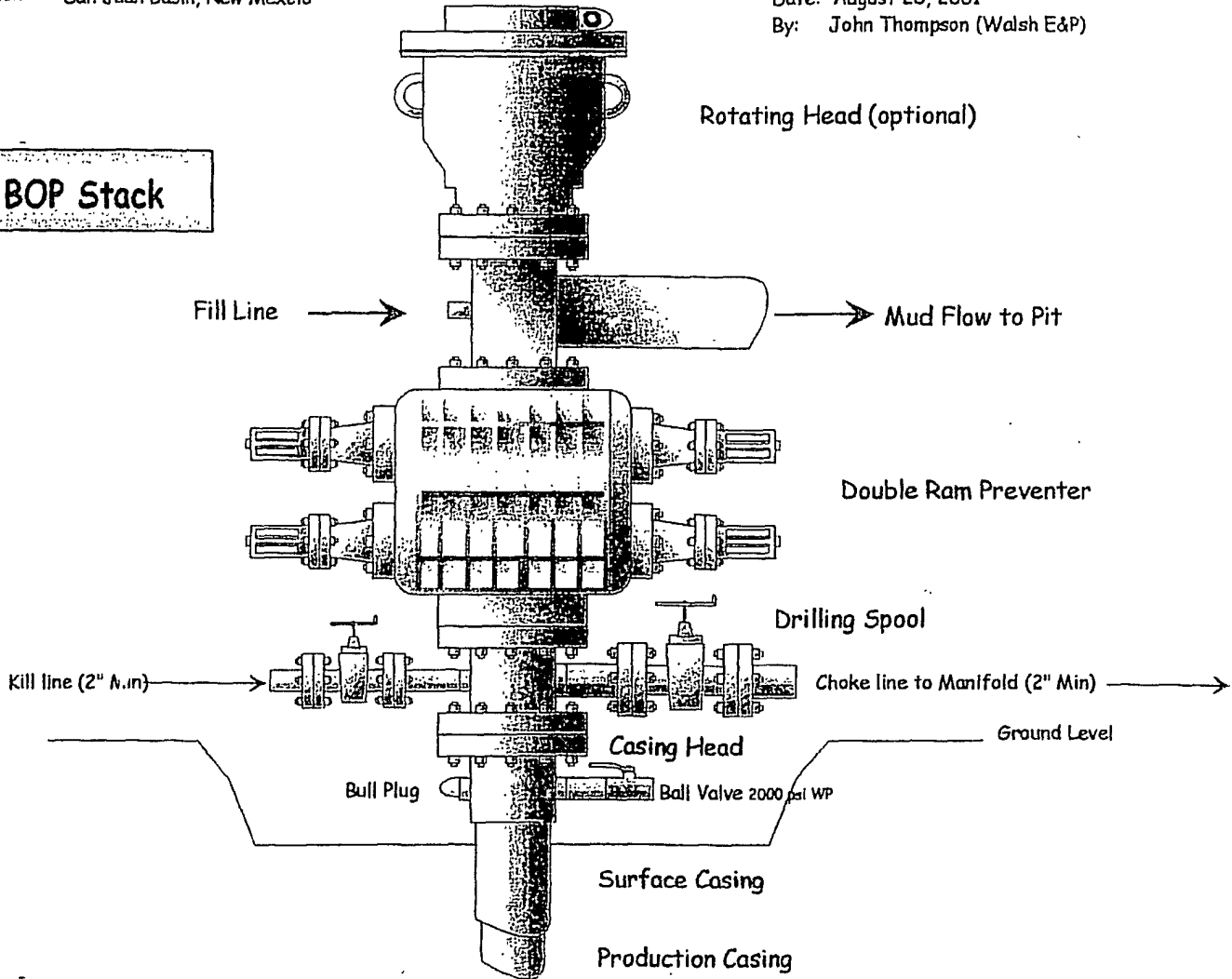
Exhibit #1 Typical BOP setup

Location: San Juan Basin, New Mexico

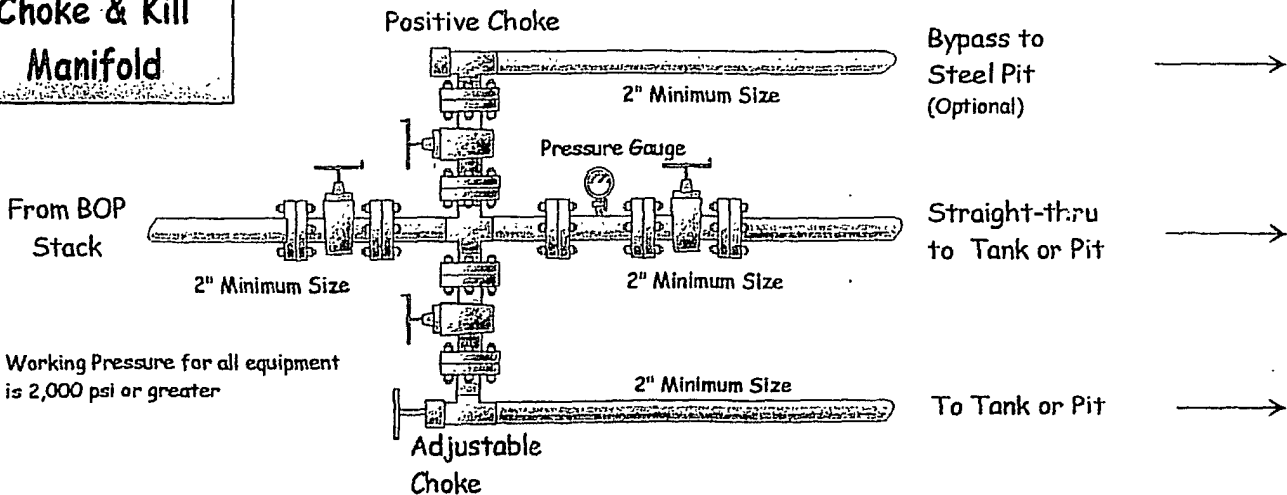
Date: August 20, 2001

By: John Thompson (Walsh E&P)

BOP Stack



**Choke & Kill
Manifold**



Working Pressure for all equipment is 2,000 psi or greater