

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMSF-0078765
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. Indian Allottee or Tribe Name 207 T&E 30 AMZ T2
2. Name of Operator Williams Production Company, LLC		7. If Unit or Agreement Name and No. Rosa Unit
3a. Address P.O. Box 640 Aztec, NM 87410		8. Lease Name and Well No. 261A
3b. Phone No. (include area code) (505) 634-4208		9. API Well No. 30-045-34258
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1695' FNL & 350' FEL, Section 9, T. 31N., R. 6W. At proposed prod zone 1050' FNL & 660' FWL, Section 10, T. 31N., R. 6W.		10. Field and Pool, or Exploratory Basin Fruitland Coal
14. Distance in miles and direction from nearest town or post office* approximately 25 miles northeast of Blanco, New Mexico		11. Sec., T., R., M., or Blk. and Survey or Area H Section 9, T. 31N., R. 6W. - surface
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 350'	16. No. of Acres in lease 2460.230	12. County or Parish San Juan
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 600'	19. Proposed Depth 3637'	13. State NM
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,447' GR	22. Approximate date work will start* April 1, 2007	17. Spacing Unit dedicated to this well 319.56 311.41 328.0 - (W/2) RCVD MAY3'07 BIL CONS. DIV. DIST. 3
23. Estimated duration 1 month		

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 <i>Larry Higgins</i>	Name (Printed Typed) Larry Higgins	Date 3-30-07
Title Drilling COM		
Approved by (Signature) <i>[Signature]</i>	Name (Printed Typed) AEM	Date 4/30/07
Title AEM	Office FFO	

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)

Williams Exploration and Production Company, LLC, proposes to develop the Basin Fruitland Coal formation at the above described location in accordance with the attached drilling and surface use plans.

The well pad surface is under jurisdiction of the BLM.

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 as the proposed 50 foot access road to the proposed Rosa 156C will be utilized. A pipeline tie of 119.6 feet would be required for this well. The proposed pipeline would also be located on public lands.

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

HOLD G104 FOR directional survey

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

NMOCD

5/9/07

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

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

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

2007 MAR 30 PM 12:12

☐ AMENDED REPORT

RCVD MAY3'07

210 EAST WASHINGTON OIL CONS. DIV.

WELL LOCATION AND ACREAGE DEDICATION PLAT

DIST. 3

*API Number 30-045-34258		*Pool Code 71629		*Pool Name BASIN FRUITLAND COAL	
*Property Code 17033		*Property Name ROSA UNIT			*Well Number 261A
*GRID No. 120782		*Operator Name WILLIAMS PRODUCTION COMPANY			*Elevation 6447'

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
H	9	31N	6W		1695	NORTH	350	EAST	SAN JUAN

11 Bottom Hole Location If Different From Surface

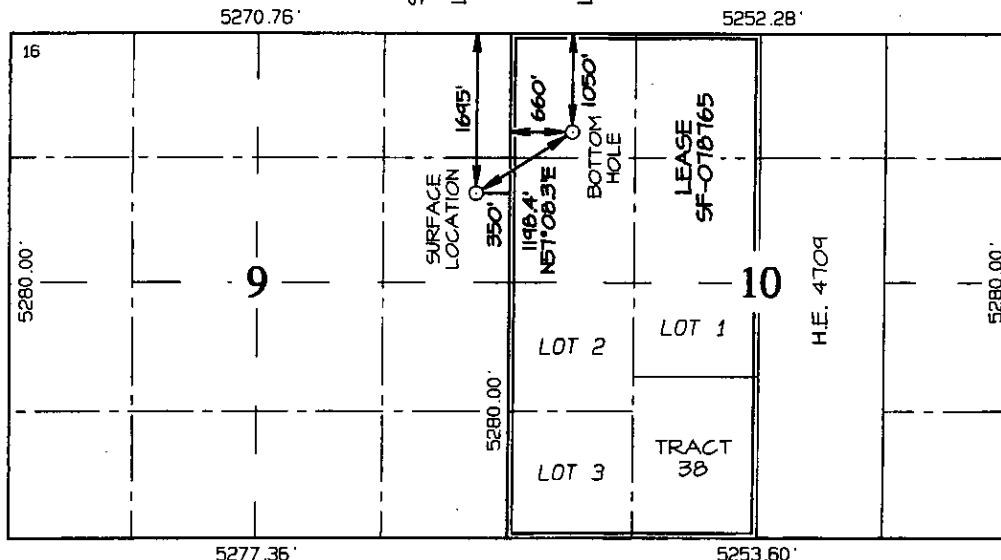
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	10	31N	6W		1050	NORTH	660	WEST	SAN JUAN

12 Dedicated Acres 311.41 320.0 Acres - (W/2)					13 Joint or Infill	14 Consolidation Code	15 Order No.
---	--	--	--	--	--------------------	-----------------------	--------------

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

SURFACE LOCATION
LAT: 36°16'08"N
LONG: 107°46'03"W
DATUM: NAD1983

BOTTOM-HOLE
LAT: 36°18'45"N
LONG: 107°45'42"W
DATUM: NAD1983



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 3-30-07
Signature Date

Larry Higgins
Printed Name **LARRY HIGGINS**

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: MAY 2, 2006

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

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

WELL API NO. 30-045-34258	
5. Indicate Type of Lease FEDERAL X STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No. NMSF-078765	
7. Lease Name or Unit Agreement Name Rosa	
8. Well Number 261A	
9. OGRID Number 120782	
10. Pool name or Wildcat Basin Fruitland Coal	

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6447' GR

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type Drilg/Completion Depth to Groundwater >100 ft Distance from nearest fresh water well >1000 ft Distance from nearest surface water >500 ft

Pit Liner Thickness: 12 mil Below-Grade Tank: Volume _____ bbls: Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: <input type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Drilling/Completion pit to be located approximately 50 to 75 feet from well head. Pit multi-use drilling and completion to avoid additional site disturbance and pit will be considered out of service once production tubing set. Pit to be constructed, operated and closed in accordance with NMOCD guidelines and Williams procedures.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Larry Higgins TITLE Drilling Com DATE 8-30-07

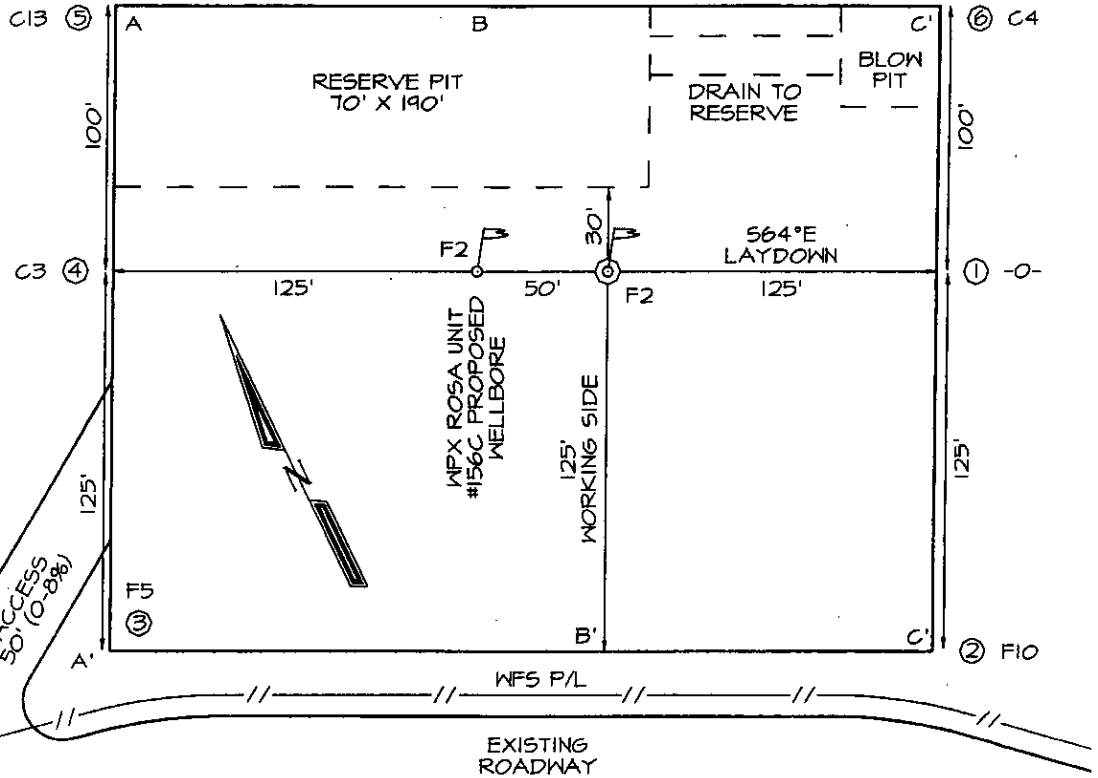
Type or print name Larry Higgins E-mail address: larry.higgins@williams.com Telephone No. 505-634-4208

For State Use Only

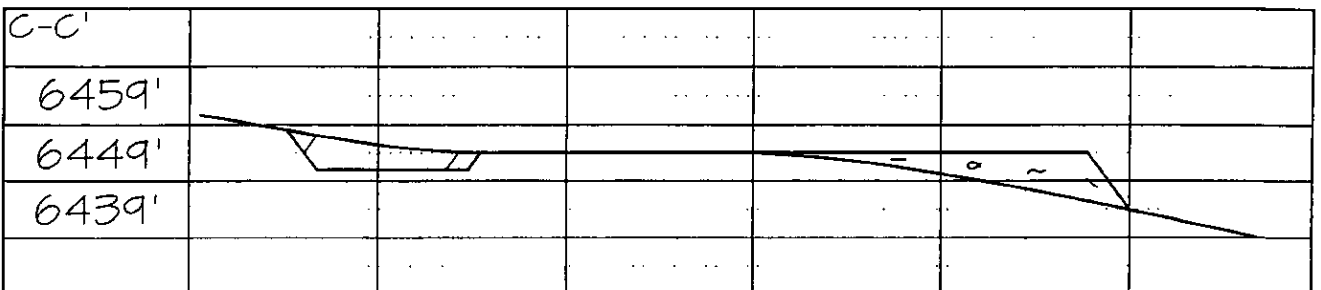
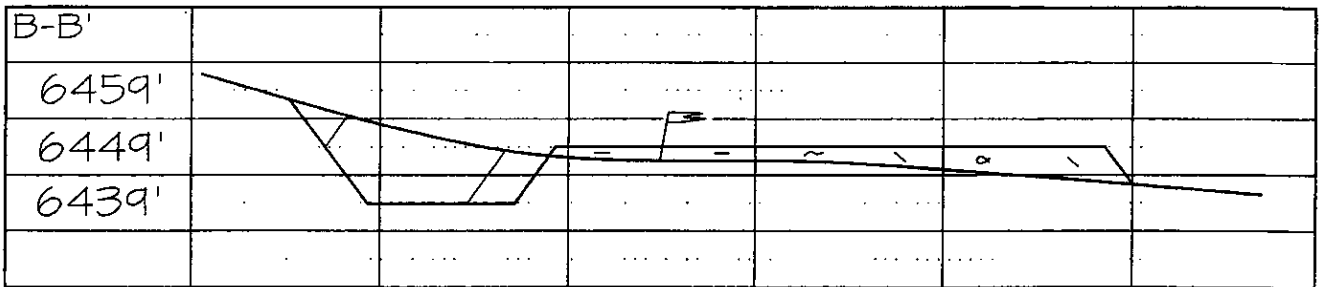
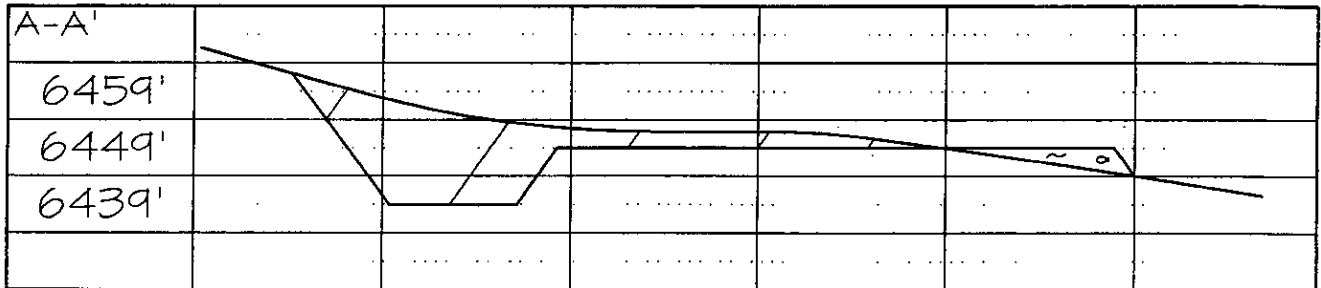
APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. #2 DATE MAY 09 2007
Conditions of Approval (if any): _____

WILLIAMS PRODUCTION COMPANY ROSA UNIT #261A
1695' FNL & 350' FEL, SECTION 9, T31N, R6W, NMPM
SAN JUAN COUNTY, NEW MEXICO ELEVATION: 6447'

LATITUDE: 36.91668° N
LONGITUDE: 107.46038° W
 DATUM: NAD1983



PLAT #1





WILLIAMS PRODUCTION COMPANY

Operations Plan

(Note: This procedure will be adjusted on site based upon actual conditions)

DATE: 3/26/2007

WELLNAME: Rosa Unit #261A **FIELD:** Basin Fruitland Coal

BH LOCATION: NWNW Sec. 10-T31N-6W **SURFACE:** BLM

SURF LOCATION: SENE Sec 9-31N-6W
San Juan, NM **MINERALS:** BLM

ELEVATION: 6,447' GR **LEASE #** SF-078765

TOTAL DEPTH: 3,637'

I. **GEOLOGY:** Surface formation - San Jose

A. **FORMATION TOPS:** (KB)

NAME		TVD	MD		NAME		TVD	MD
San Jose		Surface	Surface		Top Coal		3,151	3,441
Nacimiento		1,131	1,167		Bottom Coal		3,246	3,536
Ojo Alamo		2,426	2,672		Pictured Cliffs		3,246	3,536
Kirtland		2,556	2,822		TD		3,346	3,637
Fruitland		3,041	3,331					

B. **LOGGING PROGRAM:** none

C. **NATURAL GAUGES:** Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

D. **MUD LOGGING PRORAM:** Mud logger will be on location at drill out below 7" casing to TD. Mud Logger to pick TD

II. **DRILLING**

A. **MUD PROGRAM:** Clear water with benex to 7" casing point. Treat for lost circulation as necessary. Expect 100% returns prior to cementing. Notify Engineering of any mud losses. If coal is detected before 3,497', **DO NOT** drill deeper until Engineering is contacted.

B. **DRILLING FLUID:** Coal section will be drilled with Fruitland Coal water.

- C. **BOP TESTING:** While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. **All tests and inspections will be recorded in the tour book as to time and results.**

III. **MATERIALS**

A. **CASING PROGRAM:**

CASING TYPE	OH SIZE (IN)	DEPTH (MD) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	12 1/4	300	9 5/8	36	K-55
Intermediate	8 3/4	3,497	7	20	K-55
Liner	6 1/4	3,397 3,536	5 1/2	15.5	J-55

B. **FLOAT EQUIPMENT:**

1. **SURFACE CASING:** 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
2. **INTERMEDIATE CASING:** 7" 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. (NTL-FRA 90-1).
3. **PRODUCTION LINER / CASING:** 5-1/2" whirler type cement nose guide shoe

C. **CEMENTING:**

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

1. **SURFACE:** Use 160 sx (224 cu.ft.) of "Type III" with 2% CaCl₂ and 1/4# of cello-flake/sk (Yield = 1.41 cu.ft./sk, Weight = 14.5 #/gal.). Use **100% excess** to circulate the surface. WOC 12 hours. Total volume = 206 cu.ft. Test to 1500#.
2. **INTERMEDIATE:** Lead - 425 sx (911 cu.ft.) of "Premium Light" with 8% gel, 1% CaCl₂ and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 50 sx (70cu.ft.) of "Type III" with 1/4# cello-flake/sk (Yield = 1.4 cu.ft./sk, Weight = 14.5#/gal.). Use **100% excess in Lead Slurry** to circulate to surface. **No excess in Tail Slurry**. Total volume = 981 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.
3. **PRODUCTION LINER:** Open hole completion. No cement.

IV. COMPLETION

A. PRESSURE TEST

1. Pressure test 7" casing to 1500# for 30 minutes.

B. STIMULATION

1. Cavitate well with reciprocation and rotation. Surge wells with water and air and then flow back. Cavitate for 2 to 3 weeks. Maximum pressure not expected to exceed 2,000 psi.

C. RUNNING TUBING

1. Fruitland Coal: Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing approximately 50' above TD.

for Larry Aggins
Gary Sizemore
Sr. Drilling Engineer

Well Control Equipment Schematic for 2M Service

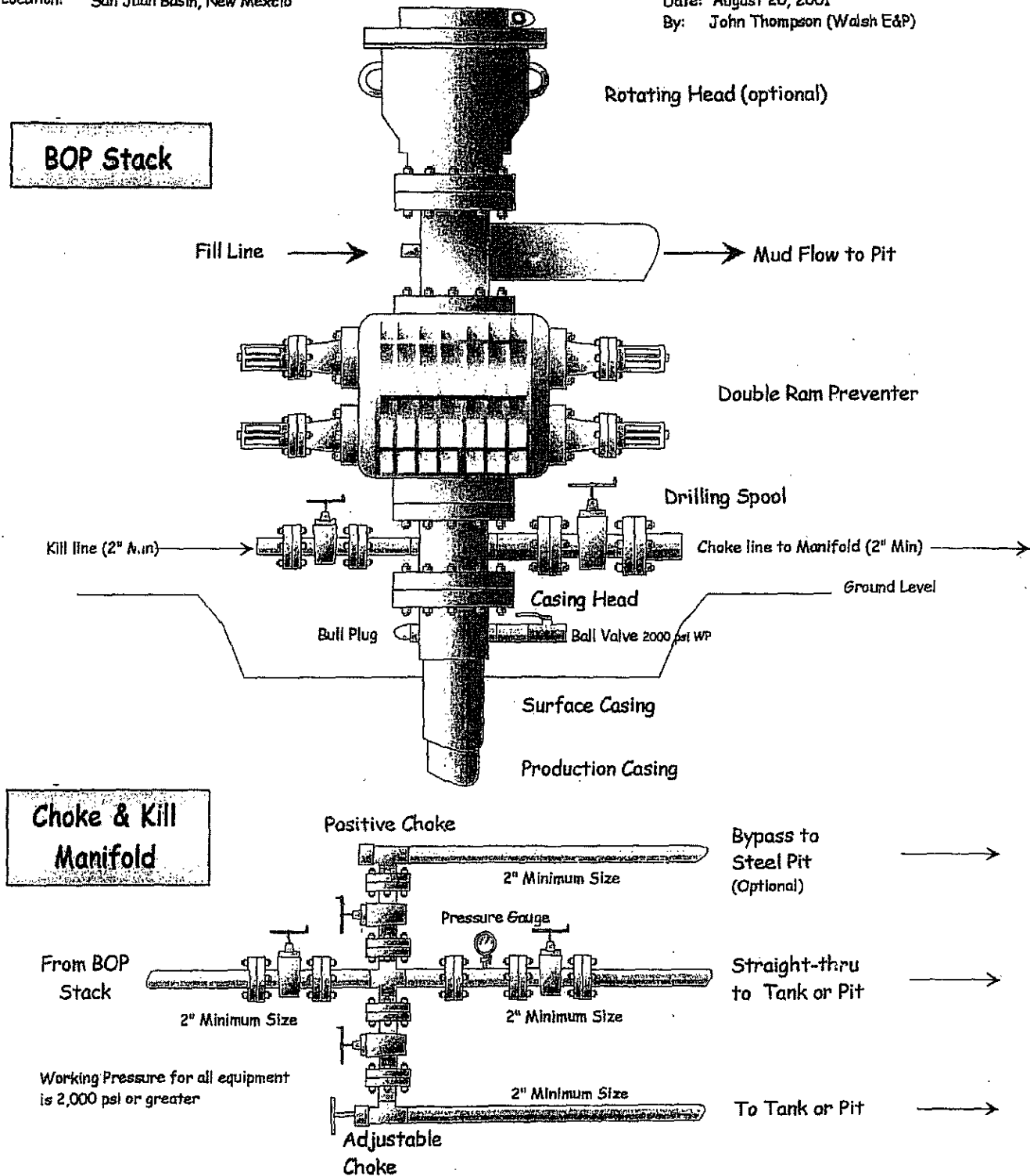
Attachment to Drilling Technical Program

Exhibit #1 Typical BOP setup

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson (Walsh E&P)



GENERAL ROSA DRILLING PLAN

Rosa Unit boundaries:

T31N, R4W: all except sections 32-36

T31N, R5W: all except sections 1 & 2

T31N, R6W: all except sections 6,7,18,20, & 27-36

T32N, R6W: sections 32-36

FORMATION	LITHOLOGY	WATER	GAS	OIL/COND	OVER-PRES	LOST CIRC
Nacimiento	Interbedded shales, siltstones and sandstones	Possible	Possible	No	No	No
Ojo Alamo	Sandstone and conglomerates with lenses of shale	Fresh	No	No	No	No
Kirtland	Shale w/interbedded sandstones	No	Possible	No	No	No
Fruitland	Inter, SS, SiltSt, SH & Coals w/carb. SS, SiltSt, SH	Yes	Yes	No	Possible	Possible
Pictured Cliffs	Massive Sandstone w/thin interbedded shales	Possible	Yes	Possible	No	Possible
Lewis	Shale w/thin interbedded sandstones and siltstones	No	Possible	No	No	No
Cliff House	Transgressive sandstones	Possible	Yes	No	No	No
Menefee	Sandstones, carb shales and coal	Possible	Yes	No	No	No
Point Lookout	Regressive coastal barrier sandstone	Possible	Yes	Possible	No	Yes
Mancos	Marine shale and interbedded sandstone	No	Possible	Possible	No	Possible
Upr Dakota	Marine sand and shales	No	Yes	Possible	No	Possible
Lwr Dakota	Fluvial sands, shales, & coal	Possible	Yes	Possible	No	Possible

DRILLING

Potential Hazards:

1. There are no overpressured zones expected in this well.
2. No H₂S zones will be penetrated while drilling this well.

Mud System:

1. Surface - The surface hole will be drilled with a low-solids, non-dispersed system with starch and lost circulation material as needed. Expected mud weights will be in the 8.4 to 9.0 lb per gal range. Viscosities will be in the 30 to 60 sec/qrt range as needed to remove drill cuttings.
2. Intermediate - The intermediate hole will be drilled with clear water and Benex to TD where the well will be mudded up to log and run casing. The mud system will be low-solids, non-dispersed with mud weights in the 9 to 10 lb per gal range as needed to control the well. Viscosities will be in the 45 to 55 range as needed to support any weight material. The weight material will consist of Barite.
3. Production - The well will be drilled using air from the intermediate casing point to TD. For Fruitland Coal wells, the coal section will be drilled with air/mist.



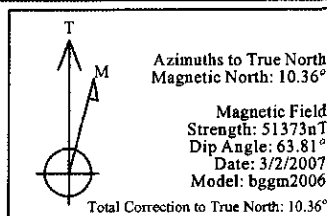
ROSA UNIT #261-A
SEC9 T31N R6W
1695' FNL, 350' FEL
SAN JUAN COUNTY, NM

KB ELEVATION: 6461'
GR ELEVATION: 6447'

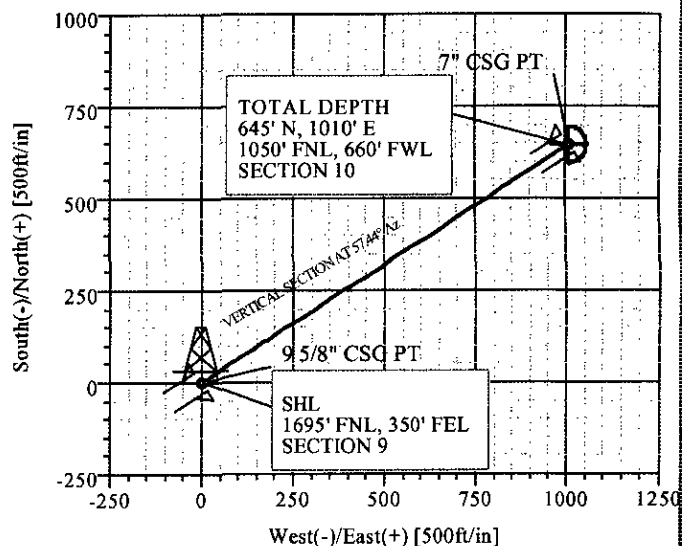
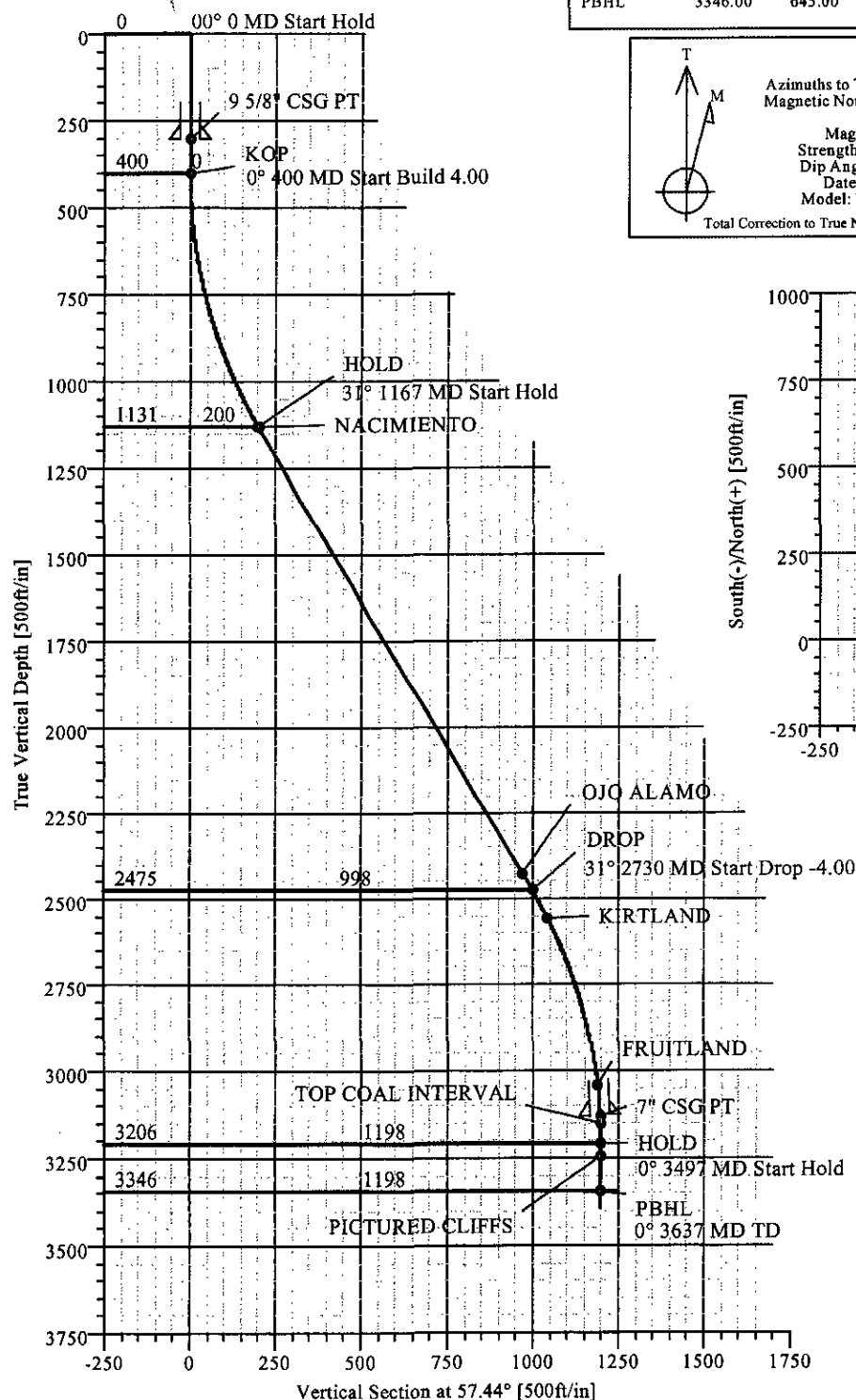
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	57.44	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	57.44	400.00	0.00	0.00	0.00	0.00	0.00	
3	1166.90	30.68	57.44	1130.78	107.88	168.93	4.00	57.44	200.44	
4	2730.08	30.68	57.44	2475.22	537.12	841.07	0.00	0.00	997.94	
5	3496.97	0.00	57.44	3206.00	645.00	1010.00	4.00	180.00	1198.38	
6	3636.97	0.00	57.44	3346.00	645.00	1010.00	0.00	57.44	1198.38	PBHL

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
ROSA UNIT #261A	0.00	0.00	2153216.31	2832121.67	36°55'00.048N	107°27'37.368W	N/A

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	3346.00	645.00	1010.00	2153865.26	2833129.14	Circle (Radius: 50)



FORMATION TOP DETAILS			
No.	TVDPath	MDPath	Formation
1	0.00	0.00	SAN JOSE
2	1131.00	1167.15	NACIMIENTO
3	2426.00	2672.85	OJO ALAMO
4	2556.00	2822.30	KIRTLAND
5	3041.00	3331.61	FRUITLAND
6	3151.00	3441.96	TOP COAL INTERVAL
7	3246.00	3536.97	PICTURED CLIFFS



FIELD DETAILS	
SAN JUAN COUNTY, NM (NAD83)	
Geodetic System:	US State Plane Coordinate System 1983
Ellipsoid:	GRS 1980
Zone:	New Mexico, Western Zone
Magnetic Model:	bggm2006
System Datum:	Mean Sea Level
Local North:	True North



Weatherford®