FORM 3160-3
(December 1990)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires December 31, 1991

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

2004 JUL 1 AM 10 U2

RECEIVED
070 FARMINGTON NM

AUG 2006
RECEIVED
OIL CONS. DIV.
DIST. 3

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: SF-078894

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ]

1b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER [ ] SINGLE ZONE [X] MULTIPLE ZONE [ ]

7. UNIT AGREEMENT NAME: Rosa Unit

8. FARM OR LEASE NAME, WELL NO.: 313A

2. NAME OF OPERATOR: Williams Production Company, LLC

9. API WELL NO.: 30039 27819

3. ADDRESS OF OPERATOR: P. O. Box 316 - Ignacio, CO 81137 (970) 563-3308

10. FIELD AND POOL OR WILDCAT: Basin Fruitland Coal

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At Surface: 1835' FNL and 1330' FWL
At proposed Prod. Zone:

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: F Sec. 29, T31N, R4W (F)

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 29 miles NE of Blanco, NM

12. COUNTY OR PARISH: Rio Arriba

13. STATE: NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.(Also to nearest drlg. unit line, if any): 1205'

16. NO. OF ACRES IN LEASE: 2284.16

17. NO. OF ACRES ASSIGNED TO THIS WELL: 320 (W/2)

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT.: 3250'

19. PROPOSED DEPTH: 3822'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 6867' GR

22. APPROX. DATE WORK WILL START*: July 30, 2004

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT/FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36.0#	+/- 300'	~206 cu.ft. Type III with 2% $CaCl_2$
8-3/4"	7"	20.0#	+/- 3617'	~947 cu.ft.65/35 poz & ~70 cu.ft.Type I
6-1/4"	5-1/2"	15.5#	+/- 3517' - 3722'	Open hole completion - no cement

Williams Production Company proposes to drill a well to develop the Fruitland Coal formation at the above described location in accordance with the attached drilling and surface use plans. The surface is under the jurisdiction of the United States Forest Service (USFS), Jicarilla Ranger District of the Carson National Forest. This location has been archaeologically surveyed by Independent Contract Archaeology. Copies of their report have be submitted directly to your office.

This APD also is serving as an application to obtain road and pipeline right-of-ways. This well will require approximately 5799' of new access road. This new This new roadis in the NW/4 of Sec. 29 and N/2 of Sec. 30 where it c with FS road #309.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM : If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Larry Higgins TITLE Larry Higgins, Drlg COM DATE 6/29/2004

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

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:

APPROVED BY Duane W. Spencer TITLE AFM DATE 8/2/06

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes 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.

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

NMOCD

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

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

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-039-27819	71629	BASIN FRUITLAND COAL

[4] Property Code	[5] Property Name	[6] Well Number
17033	ROSA UNIT	313A

[7] OGRID No.	[8] Operator Name	[9] Elevation
120782	WILLIAMS PRODUCTION COMPANY	6867'

[10] Surface Location

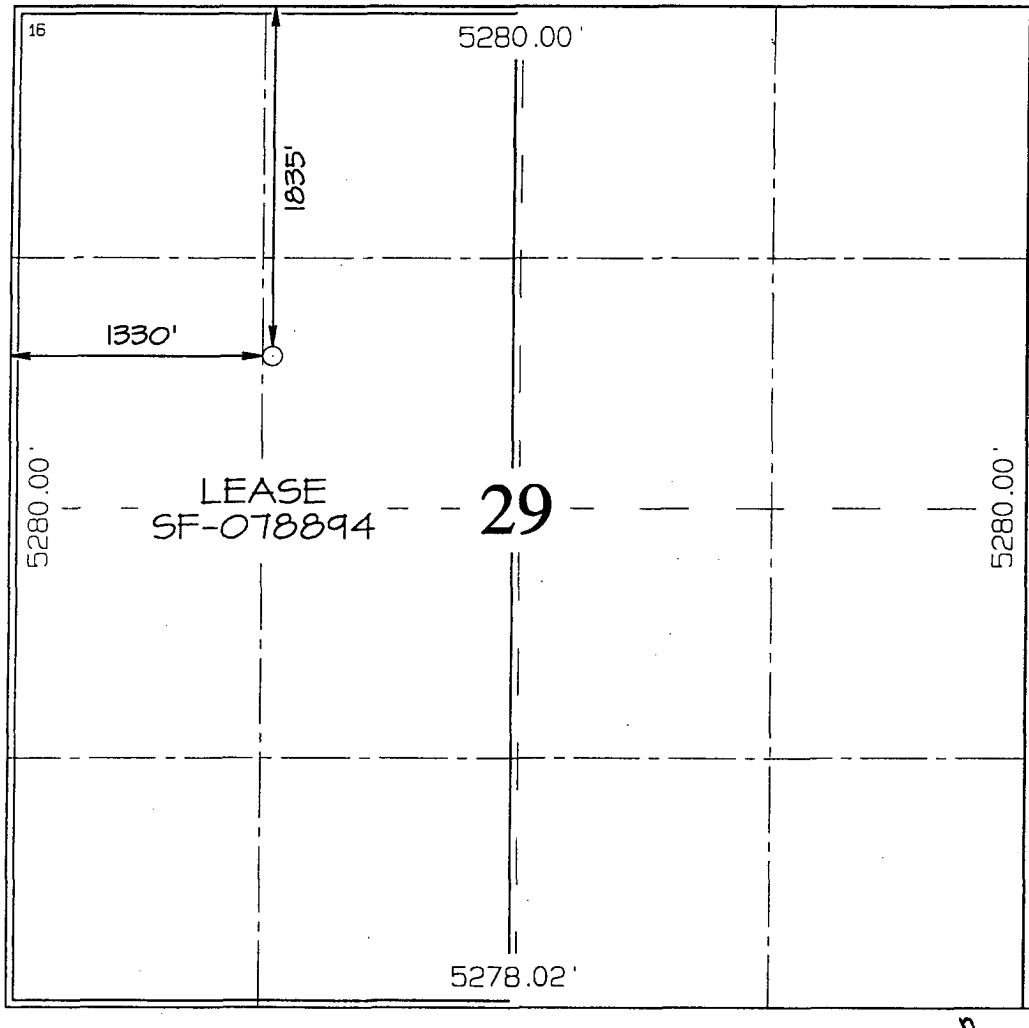
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	29	31N	4W		1835	NORTH	1330	WEST	RIO ARRIBA

[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

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

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

Signature: Larry Higgins

Printed Name: LARRY HIGGINS

Title: DRILLING COM

Date: 6-29-04

[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: APRIL 28, 2004

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS

Certificate Number 15269

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
March 12, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☐
Type of action: Registration of a pit or below-grade tank X Closure of a pit or below-grade tank ☐

Operator: **Williams Production Company** Telephone: **970-563-3308** e-mail address: **larry,higgins@williams.com**
Address: **P.O. Box 316 – Ignacio, CO 81137**
Facility or well name: **Rosa Unit 313A** API #: 30-039-27819 U/L or Qtr/Qtr ____ Sec **29** T **31N** R **4W**
County: **Rio Arriba** Latitude ____ Longitude ____ NAD: 1927 ☐ 1983 ☐ Surface Owner Federal **X** State ☐ Private ☐ Indian ☐

Pit	**Below-grade tank**	
Type: Drilling Production X Disposal ☐ Workover ☐ Emergency ☐ Lined_ Unlined ☐ Liner type: Synthetic Thickness __mil Clay ☐ Volume _____bbl	Volume: 120 bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes X If not, explain why not. _____	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more X	(20 points) (10 points) (0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No X	(20 points) (0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more X	(20 points) (10 points) (0 points)
	Ranking Score (Total Points)	

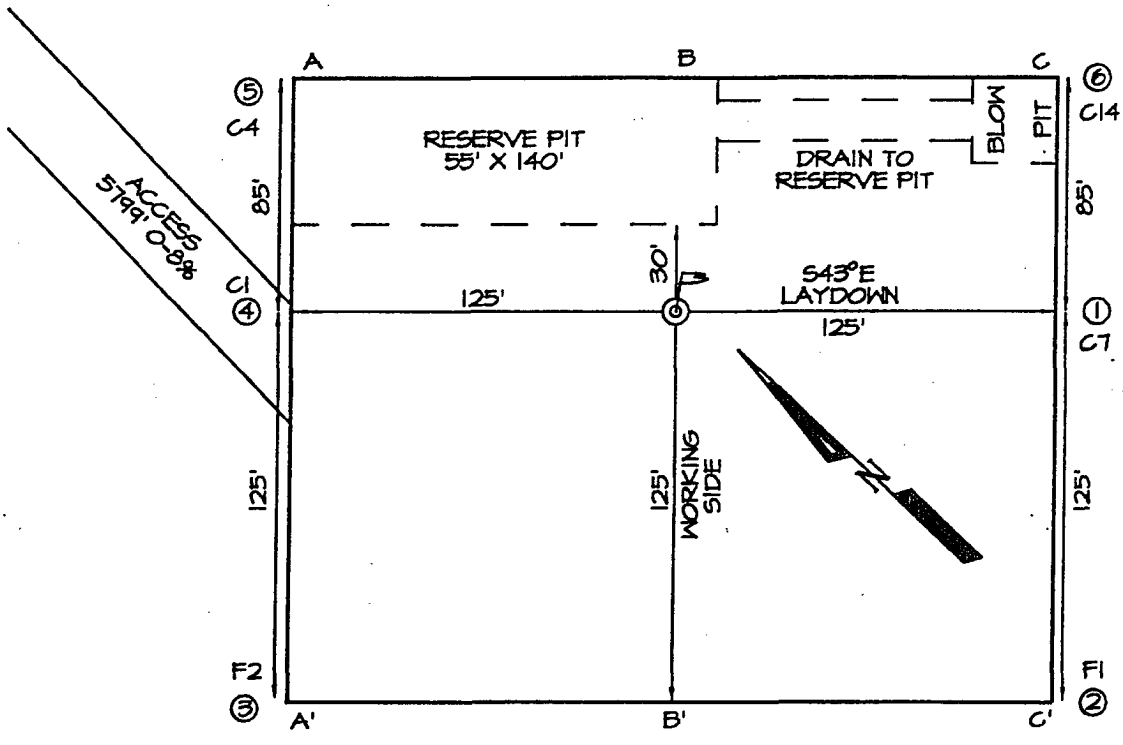
If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: onsite ☐ offsite ☐ If offsite, name of facility_____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface_____ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that the above-described 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 ☐.**
Date: **6-25-04**
Printed Name/Title **Larry Higgins** Signature Larry Higgins

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

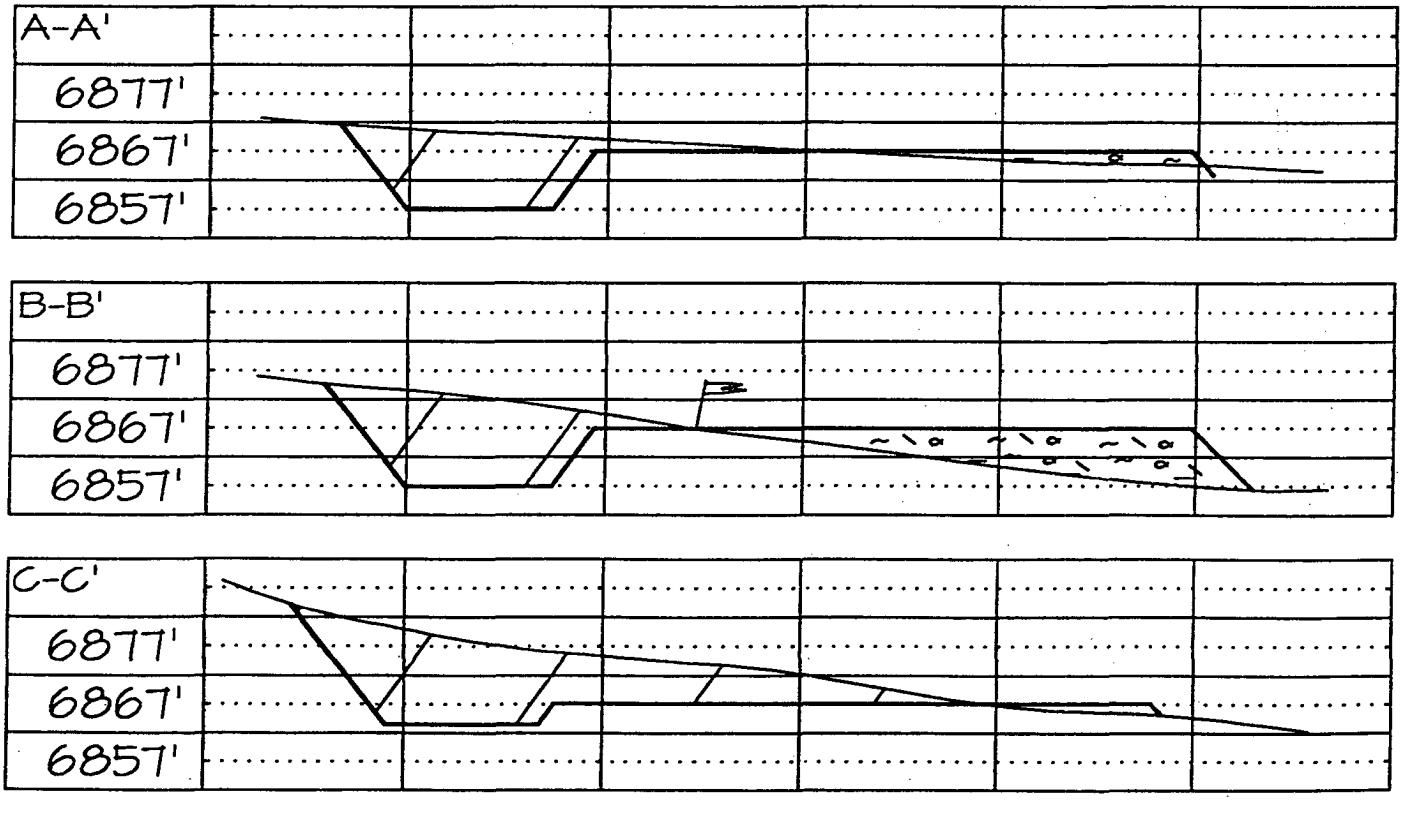
Approval: AUG 0 3 2006
Date: _____ DEPUTY OIL & GAS INSPECTOR, DIST. #3
Printed Name/Title _____ Signature _____

WILLIAMS PRODUCTION COMPANY ROSA UNIT #313A
1835' FNL & 1330' FWL, SECTION 29, T31N, R4W, NMPM
RIO ARRIBA COUNTY, NEW MEXICO
GROUND ELEVATION: 6867'



LATITUDE: 36°52'22"
LONGITUDE: 107°16'56"
DATUM: NAD1927

PLAT #2 – CUT & FILL



FILE NAME: ROSA313ACF	SHEET 2 OF 3	NICE SURVEYS, INC.	DRAWN BY: KER	CHECKED BY: JCE

WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE:	**6/22/2004**		
WELLNAME:	Rosa Unit #313A	**FIELD:**	Basin Fruitland Coal
LOCATION:	SENW Sec. 29-T31N-4W Rio Arriba, NM	**SURFACE:**	Forest
ELEVATION:	6,867' GR	**MINERALS:**	Federal
TOTAL DEPTH:	**3,822'**	**LEASE #**	SF-078894

I. GEOLOGY: Surface formation - San Jose

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

NAME		DEPTH		NAME		DEPTH
San Jose		Surface		Top Coal		3,637
Nancimiento		1,842		Top Main Coal		3,692
Ojo Alamo		3,117		Bottom Coal		3,722
Kirtland		3,227		Pictured Cliffs		3,727
Fruitland		3,537		**TD**		**3,822**

B. **LOGGING PROGRAM:** GR and Density/ Neutron log from intermediate shoe to TD. Density/ Neutron log from surface casing to TD. Onsite geologist will pick Density/ Neutron log intervals on both logging runs.

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

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 3,617' DO NOT drill deeper until Engineering is contacted.

B. **Drilling Fluid**: Coal section will be drilled with Fruitland Coal water.

C. **MUD LOGGING PRORAM:** Mud logger will be on location at drill out below 7" casing to TD. Desorption samples will be taken.

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 rams will be tested to 1500 psi. The surface and intermediate casing strings will be pressure tested to 1500 psi in conjunction with the BOP test before drilling out cement. The drum brakes will be inspected and tested each tour. All tests, inspections and SPR's will be recorded in the tour book as to time and results.

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	HOLE SIZE	DEPTH	CASING SIZE	WT. & GRADE
Surface	12-1/4"	+/- 300'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 3,617'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 3,517'- 3,722'	5-1/2"	15.5# K-55

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 9-5/8" notched regular pattern guide shoe.

2. INTERMEDIATE CASING: 7" cement nose guide shoe with a self- fill insert float. Place float one(1) joint above the shoe and five(5) centralizers, spaced every other joint, starting with the float collar. Place turbulent centralizers, at 120' intervals, starting at 1585' to the surface. Total centralizers = 5 regular and 14 turbulent.

3. PRODUCTION LINER: 5-1/2"liner with notched collar on bottom.

C. CEMENTING:

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

1. SURFACE: Use 155 sx (206 cu.ft.) of "Type III" with 2% $CaCl_2$ 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 - 450 sx (947 cu.ft.) of "Type III" 65/35 poz with 8% gel, 1% $CaCl_2$ 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, and 1% $CaCl_2$ (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 = 1,017 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

Pressure test 7" casing to 3300# for 15 minutes.

B. STIMULATION

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

C. RUNNING TUBING

1. *Fruitland Coal:* Run 2-3/8", 4.7#, J-55, EUE tubing with a SN (1.375" ID) on top of bottom joint. Land tubing approximately 50' above TD.

for Gary Sizemore
Sr. Drilling Engineer

file:Rosa202A

Williams Production Company, LLC

Well Control Equipment Schematic for 2M Service

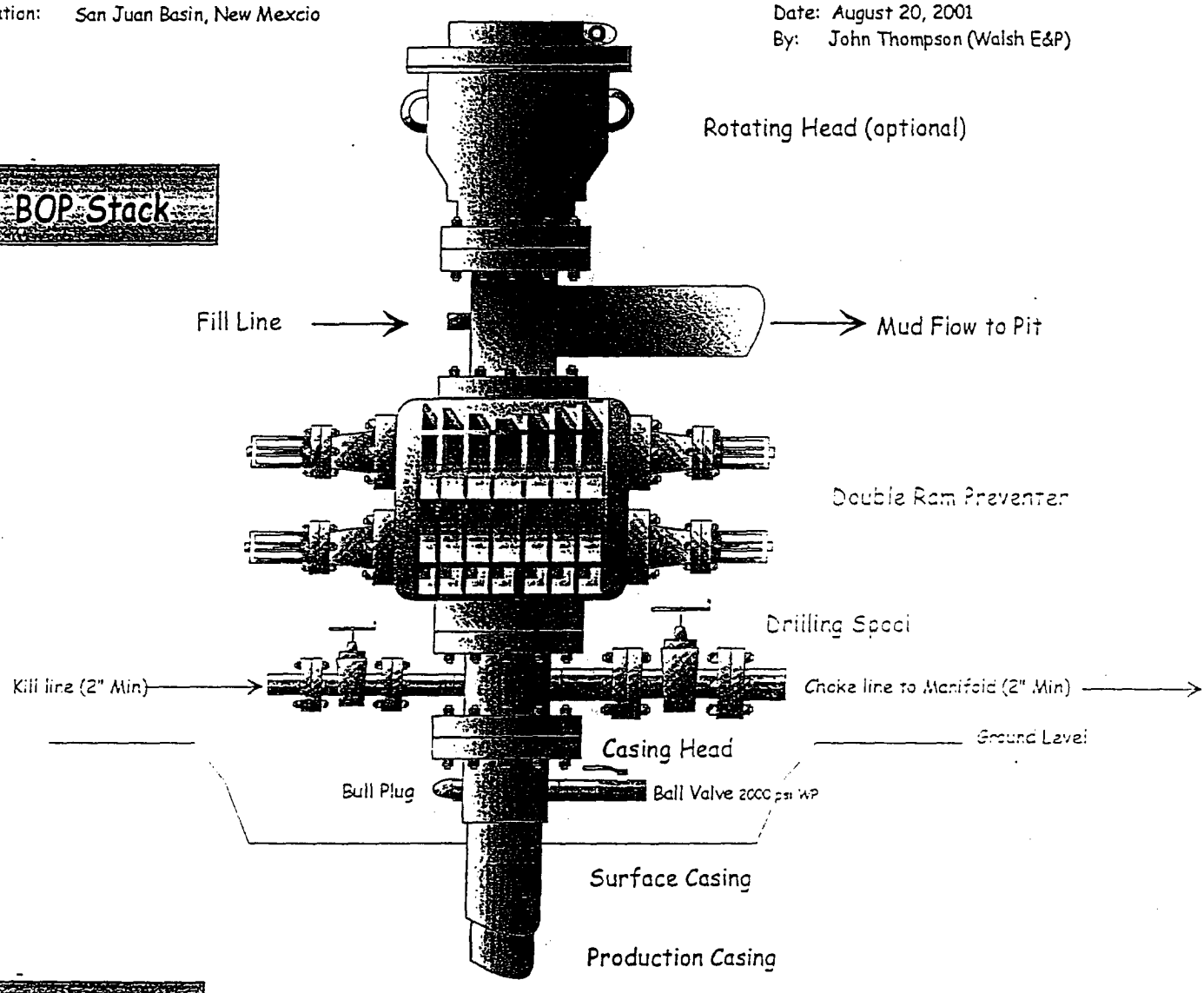
Attachment to Drilling Technical Program

Typical BOP setup

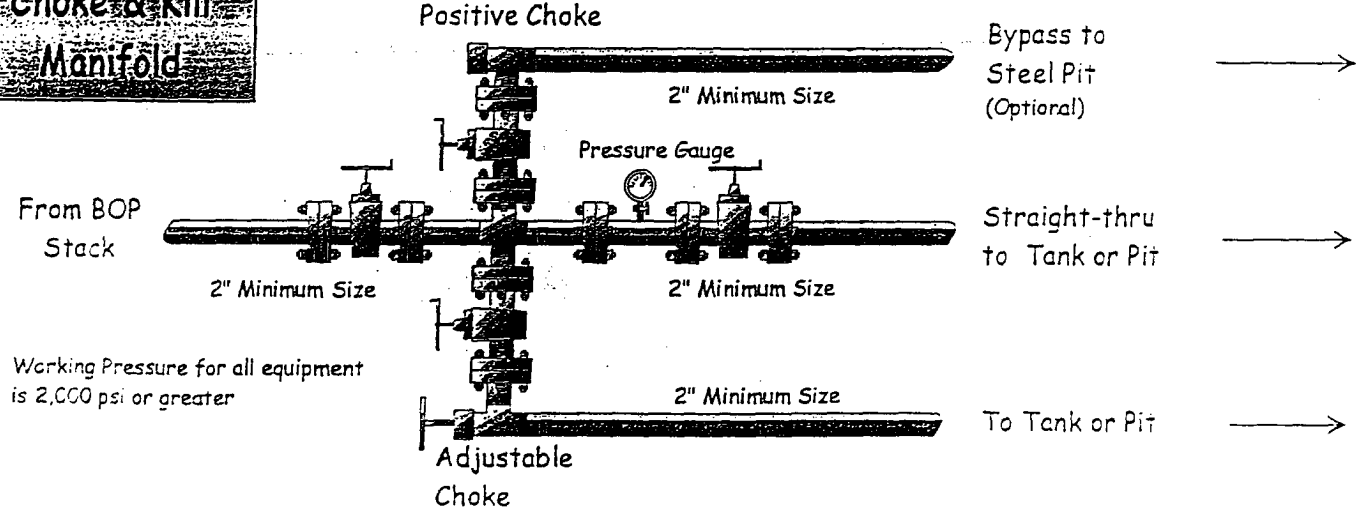
Location: San Juan Basin, New Mexcio

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

GENERAL ROSA DRILLING PLAN

Rosa Unit boundries:

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 Dadota	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.