

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN

DEC 10 PM 1 26

b. TYPE OF WELL

OIL
WELL ☐

GAS
WELL ☒

OTHER

SINGLE
ZONE

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Williams Production Company, LLC

3. ADDRESS AND TELEPHONE NO.

P.O. Box 316— Ignacio, Colorado 81137-0316

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements *)

At surface

1,660' FSL, 2,625' FEL

NW/4 SE/4 (J)

At proposed prod. zone

1,660' FSL, 2,625' FEL

NW/4 SE/4 (J)

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

24 Miles NE of Blanco, NM

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

1,660'

16. NO. OF ACRES IN LEASE

2,460.23

17. NO. OF ACRES ASSIGNED
TO THIS WELL

320 acres

E/2

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

1,300

19. PROPOSED DEPTH

+/- 8,168'

20. ROTARY OR CABLE TOOLS

Rotary

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

6,386' GR

22. APPROX. DATE WORK WILL START*

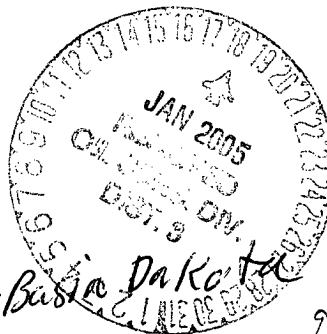
February 1, 2004

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
14-3/4"	10-3/4" H-40	32.75#	+/- 500'	460 sacks Type III cement + 2% CaCl ₂ + 1/4 #/sk. Cello-Flakes
9-7/8"	7-5/8" K-55	26.4#	+/- 3,673'	595 sacks Lead and 240 sacks Tail (see Drilling Plan)
6-3/4"	5-1/2" N-80	17#	+/- 8168'	30 sacks Lead and 290 sacks Tail (see Drilling Plan)

Other Information:

Drilling Plan and Surface Use Plan are attached.



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data 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 Don Hamilton Don Hamilton TITLE Agent for Williams

DATE December 9, 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.

APPROVED BY [Signature] TITLE AFM

DATE 1-14-04

*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 or the

DRILLING OPERATIONS AUTHORIZED
SUBJECT TO COMPLIANCE WITH ATTACHED
TECHNICAL REQUIREMENTS.

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

strict I
Box 1980, Hobbs, NM 88241-1980
strict II
Drawer 00, Artesia, NM 88211-0719

strict III
00 Rio Brazos Rd., Aztec, NM 87410

strict IV
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

API Number 30-045-32745		Pool Code 72319 - 71599		Pool Name Blanco Mesaverde - Basin Dakota	
Property Code 17033		Property Name ROSA UNIT			Well Number 1568
OGRID No. 120782		Operator Name WILLIAMS PRODUCTION COMPANY			Elevation 6386

10 Surface Location

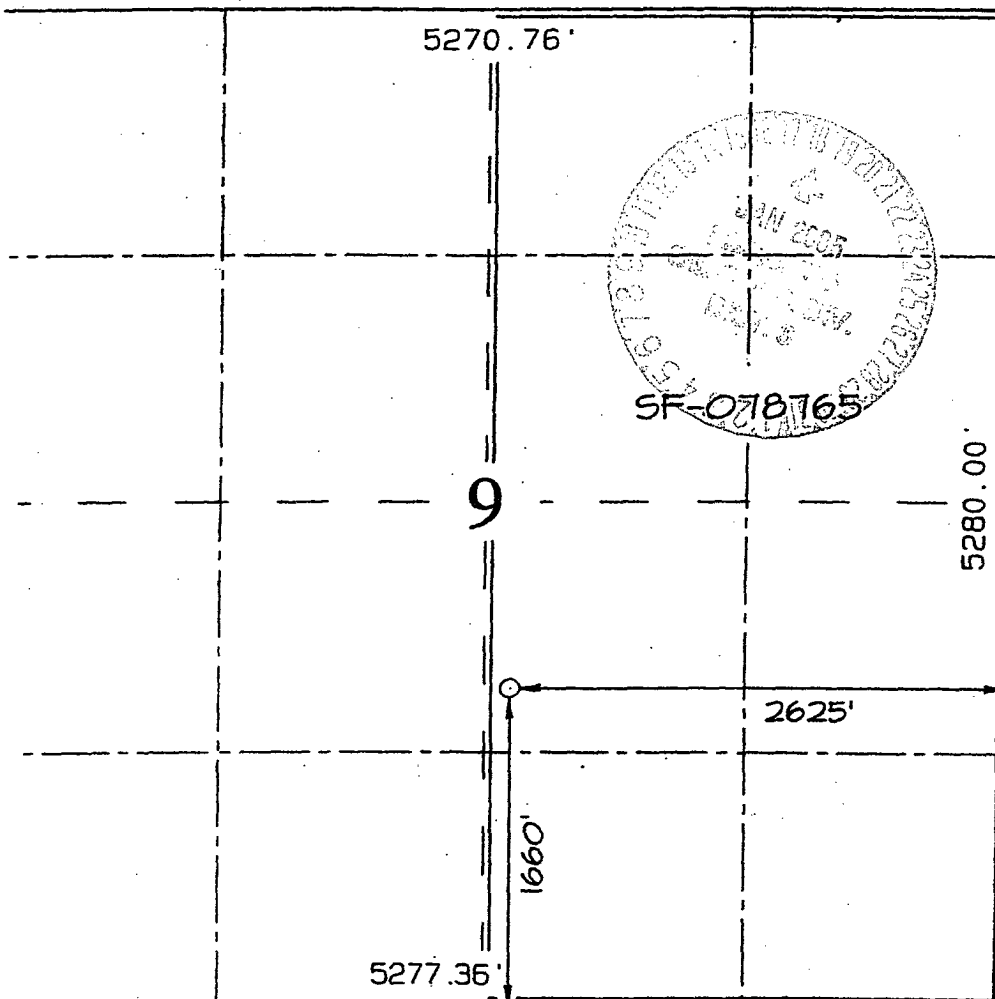
Cor lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	9	31N	6W		1660	SOUTH	2625	EAST	SAN JUAN

11 Bottom Hole Location If Different From Surface

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

Dedicated Acres 320.0 Acres - (E/2)	Joint or Infill 	Consolidation Code 	Order No.
---	----------------------------	-------------------------------	----------------------

10 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

Don Hamilton
Signature

Don Hamilton
Printed Name

Agent
Title

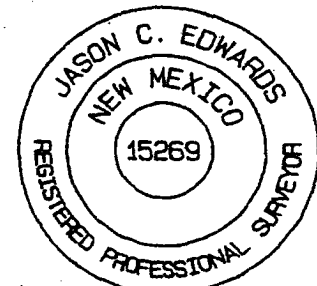
12-9-04
Date

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, 2001

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

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO.
1. Type of Well: Oil Well Gas Well <input checked="" type="checkbox"/> Other		5. Indicate Type of Lease Federal
2. Name of Operator Williams Production Company		6. State Oil & Gas Lease No.
3. Address of Operator P.O. Box 316, Ignacio, CO 81137		7. Lease Name or Unit Agreement Name Rosa Unit
4. Well Location Unit Letter <u>J</u> <u>1660</u> feet from the <u>South</u> line and <u>2625</u> feet from the <u>East</u> line Section <u>9</u> Township <u>31N</u> Range <u>6W</u> NMPM County <u>San Juan</u>		8. Well Number <u>#156B</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) <u>6,386' GR</u>		9. OGRID Number <u>120782</u>
Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure		10. Pool name or Wildcat Blanco MV
Pit type <u>Drilling</u> Depth to Groundwater <u>>50'</u> Distance from nearest fresh water well <u>>1000'</u> Distance from nearest surface water <u>>1000'</u> Pit Liner Thickness <u>12</u> mil Below-Grade Tank: Volume <u>10,971</u> 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.

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 X, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Don Hamilton TITLE Agent DATE December 9, 2004

Type or print name Don Hamilton E-mail address: starpoin@etv.net Telephone No. (435) 637-4075

For State Use Only

APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 02 DATE JAN 18 2005

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

Form C-144
June 1, 2004

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

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 ☒ 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 81137-0316

Facility or well name: Rosa Unit #156B API #: _____ U/L or Qtr/Qtr NW SE (J) Sec 9 T31N R6W

County: San Juan Latitude _____ Longitude _____ NAD: 1927 ☐ 1983 ☐ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

Pit

Type: Drilling Production ☒ Disposal ☐

Workover ☐ Emergency ☐

Lined ☒ Unlined ☐

Inner type: Synthetic ☒ Thickness 20 mil Clay ☐

Pit Volume _____ bbl

Below-grade tank

Volume: 120 bbl Type of fluid: Produced water

Construction material: Fiberglass

Double-walled, with leak detection? Yes ☒ 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

(20 points)

50 feet or more, but less than 100 feet ☒

(10 points)

100 feet or more

(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

(20 points)

No ☒

(0 points)

Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet

(20 points)

200 feet or more, but less than 1000 feet

(10 points)

1000 feet or more ☒

(0 points)

Ranking Score (Total Points)

10

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: (check the onsite box if you are burying in place) 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.

Additional Comments:

Below-grade tank to be located approximately 50 ft from the wellhead

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: 12-9-04

Printed Name/Title Don Hamilton, Agent

Signature Don Hamilton

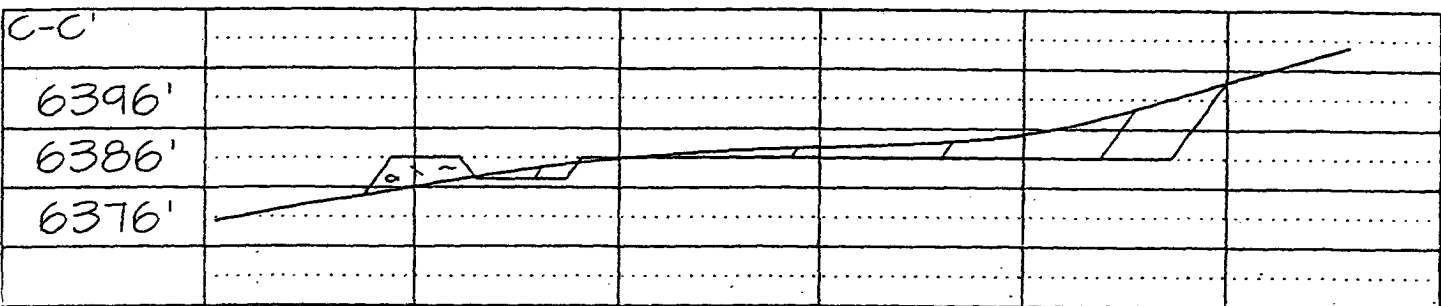
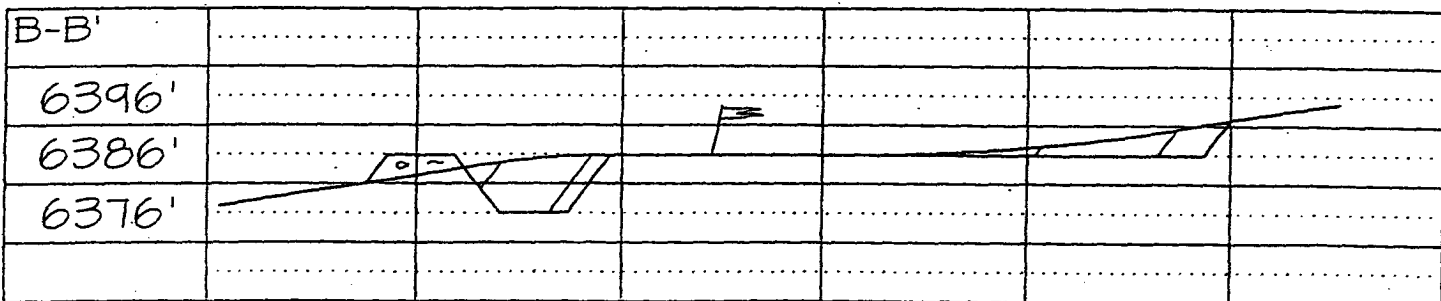
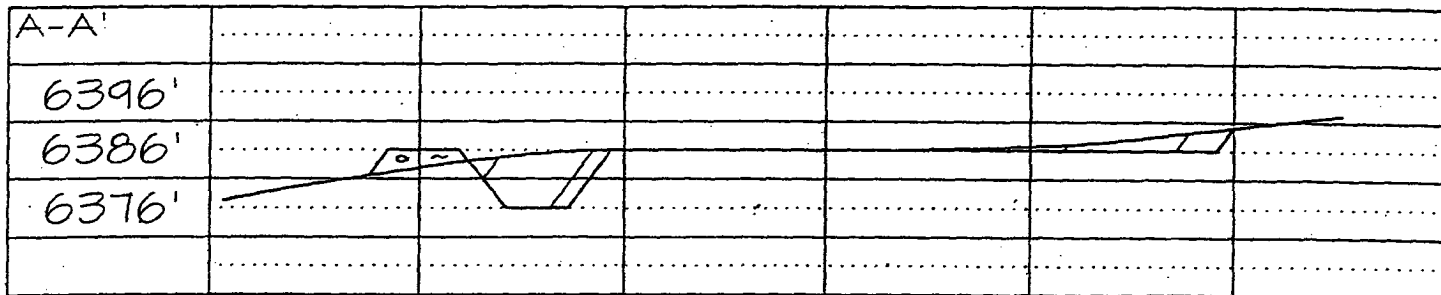
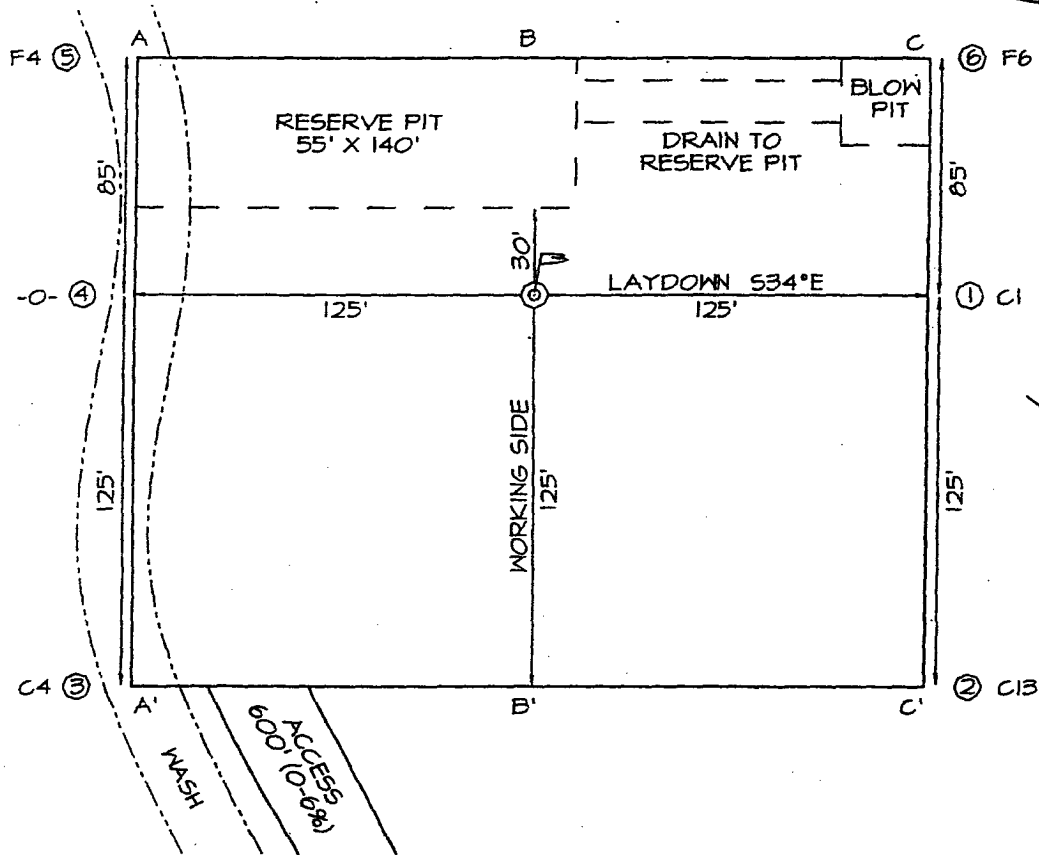
Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with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

Approval:

Printed Name/Title _____ Signature _____ Date: _____

WILLIAMS PRODUCTION COMPANY ROSA UNIT #156B
 1660' FSL & 2625' FEL, SECTION 9, T31N, R6W, NMPM
 SAN JUAN COUNTY, NEW MEXICO
 GROUND ELEVATION: 6386'

LATITUDE: 36°54'41"
 LONGITUDE: 107°28'03"
 DATUM: NAD1927



- A. **MUD PROGRAM:** Clear water with benex to 7" casing point. LSND to log and run pipe. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.
- B. **BOP TESTING:** While drill pipe is in use, the pipe rams will be function tested not less than once each day. 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 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:

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	14-3/4"	+/- 500'	10-3/4"	32.75# H-40
Intermediate	9-7/8"	+/- 3673'	7-5/8"	26.4# K-55
Prod. Casing	6-3/4"	+/- 8168'	5-1/2"	17.0# 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 (3) Joints.
2. INTERMEDIATE CASING: 7-5/8" 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 1500' to the surface. Total centralizers (5 regular and 13 turbulent).
3. PRODUCTION CASING: 5-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' bottom joint. Place 20' marker joint on top of 10 th joint and one above 5100'.

C. CEMENTING:

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

1. SURFACE: Use 460sx (625cu.ft.) of class "Type III" with 2% CaCl₂ and 1/4# of cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5 #/gal.). 125% excess to circulate the surface. WOC 12 hours. Test to 1500#.
2. INTERMEDIATE: Lead: 595sx (1242cu.ft.) of class "Premium Lite" 65/35, Type III/Poz with 8% gel and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail: 240sx (335cu.ft.) of class "Type III" with 1/4# cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5#/gal.). 100% excess in lead and tail to circulate to surface. Total volume = 1577 cu.ft. WOC 12 hours. Run a temperature survey after 8 hours if cement is not circulated.
3. PRODUCTION CASING: 30 sks Scavenger of Premium Light HS + 1% FL-52 + .2% CD-32 + 25 #/sk Celloflake + 4% Phenoseal + .3% R3. (Weight = 11 #/gal.). Cement Slurry: 290 sx (575 ft³) of Premium Light HS + 1% FL-52 + .2% CD-32 + 25 #/sk Celloflake + 4% Phenoseal + .1% R3. (Yield = 1.99 ft³/sk, Weight = 12.5 #/gal.). Displace cement at a minimum of 8 BPM. Use 50% excess in calculation to raise cement 100' into intermediate casing. Total volume 575 ft³. WOC 12 hours.

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

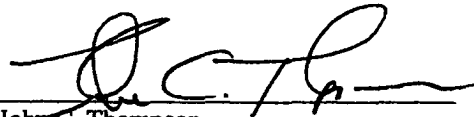
1. Pressure test 7 5/8" & 5-1/2" casing to 3300# for 15 minutes.

C. STIMULATION

1. Stimulate Dakota with approximately 70,000# of 20/40 sand in x-link foam.
2. Isolate Dakota with a RBP.
3. Stimulate Point Lookout with approximately 80,000# of 20/40 sand in slick water.
4. Isolate Point Lookout with a RBP.
5. Perforate the Menefee/Cliff House as determined from the open hole logs.
6. Stimulate with approximately 80,000# of 20/40 sand in slick water.
7. Test each zone before removing bridge plugs.

D. RUNNING TUBING

1. Dakota: Run 2-1/16", 3.25#, J-55, IJ tubing with 1/2 mule shoe on bottom, SN with pump-out plug on top of bottom joint. Will run a production packer with 5 Seal Units to isolate Dakota from Mesaverde formation. Land tubing approximately 100' below top Dakota perf.
2. Mesa Verde: Run 2-1/16", 2.9#, J-55, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing approximately 25' above the bottom Point Lookout perforations.


John C. Thompson
Engineer

General Rosa Unit Drilling Plan

OSA 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 Characteristics:

Formation	Lithology	Water	Gas	Oil	Over-Pres.	Lost Circ.
Nacimiento	Interbedded shales, siltstones & sandstones	No	No	No	No	No
Ojo Alamo	Sandstone & conglomerates w/ 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	No
Pictured Cliffs	Massive Sandstone w/ thin Interbedded Shales	Poss	Yes	Possible	No	Possible
Lewis	Shale w/ thin Interbedded sandstones & Siltstones	No	Possible	No	No	No
Cliff House	Transgressive sandstones	Poss	Yes	No	No	No
Menefee	Sandstones, Carb shales & coal	Poss	Yes	No	No	No
Point Lookout	Regressive coastal barrier sandstone	Poss	Yes	Possible	No	Yes
Mancos	Marine shale	No	No	No	No	No

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 #/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 #/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.

Well Control Equipment Schematic for 2M Service

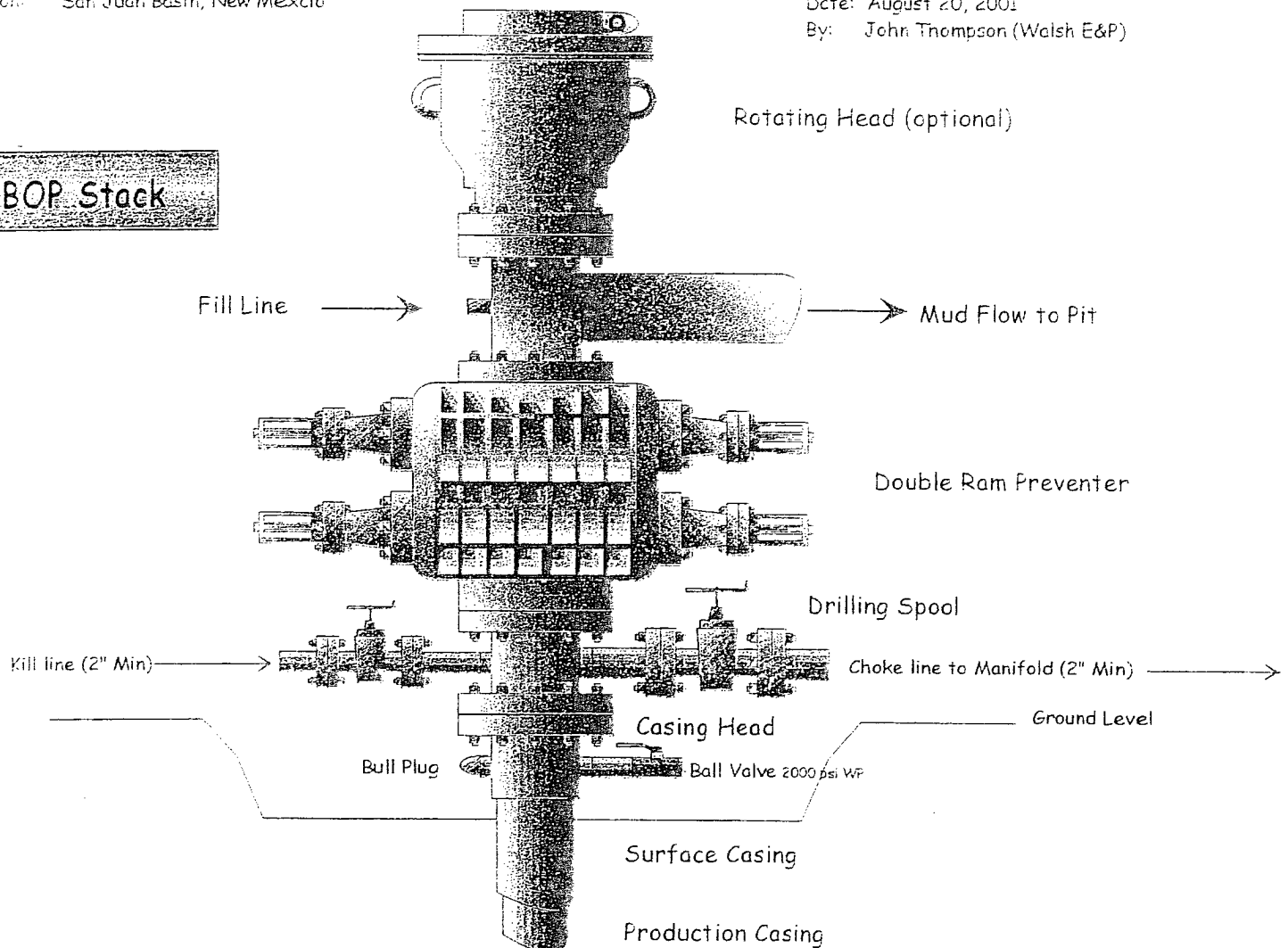
Typical BOP setup

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson (Walsh E&P)

BOP Stack



Choke & Kill Manifold

