

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

5. Lease Serial No.

NMSF-0078762

6. If Indian, Allottee or Tribe Name

2004 DEC 9 20 3 37

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

RECEIVED

8. Lease Name and Well No.

351A

9. API Well No.

30039 29365

10. Field and Pool, or Exploratory

Basin Fruitland Coal

11. Sec., T., R., M., or Blk. and Survey or Area

Section 11, T. 31N. R. 5W

12. County or Parish

Rio Arriba

13. State

NM

1a. Type of Work: ☒ DRILL

☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other

☒ Single Zone

☐ Multiple Zone

2. Name of Operator

Williams Exploration and Production Company

3a. Address

P.O. Box 316 Ignacio, CO 81137

3b. Phone No. (include area code)

(970) 563-3308

4. Location of Well (Report location clearly and in accordance with any State requirements. *)

At surface 1310' FNL & 215' FWL

At proposed prod. zone from 1390' FNL & 705' FWL to 1650' FNL & 2310' FWL

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

approximately 30 miles northeast of Blanco, NM

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

215'

16. No. of Acres in lease

2,560.00

17. Spacing Unit dedicated to this well

320.00 (W/2)

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

1,000'

19. Proposed Depth

5,954

20. BLM/BIA Bond No. on file

UT 0847

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

6,825' GR

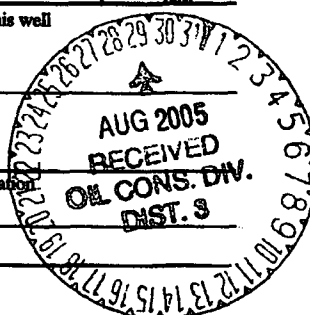
22. Approximate date work will start*

April 1, 2005

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

Larry Higgins

Name (Printed/Typed)

Larry Higgins

Date

12/08/04

Title

Drilling COM

Approved by (Signature)

Jim Lebel

Name (Printed/Typed)

Office

Date

7/15/05

Title

Field Manager - Minerals

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 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 jurisdiction of the Carson National Forest, Jicarilla Ranger District.

This action is a twinned location with the proposed Rosa 350.

This location has been culturally surveyed by La Plata Archaeological Consultants. Copies of their reports have been submitted directly to your office.

This APD is also serving as an application to obtain pipeline right-of-way. An associated pipeline tie of 74.9 feet would be required for this location to connect the proposed Rosa 350 to the proposed Rosa 351A. Approximately 1,097 feet of an existing 2-track road would be upgraded to access the site.

HOLD C104 FOR Directional Survey

OPERATOR

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

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

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

*API Number		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 351A
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6825'

¹⁰ Surface Location

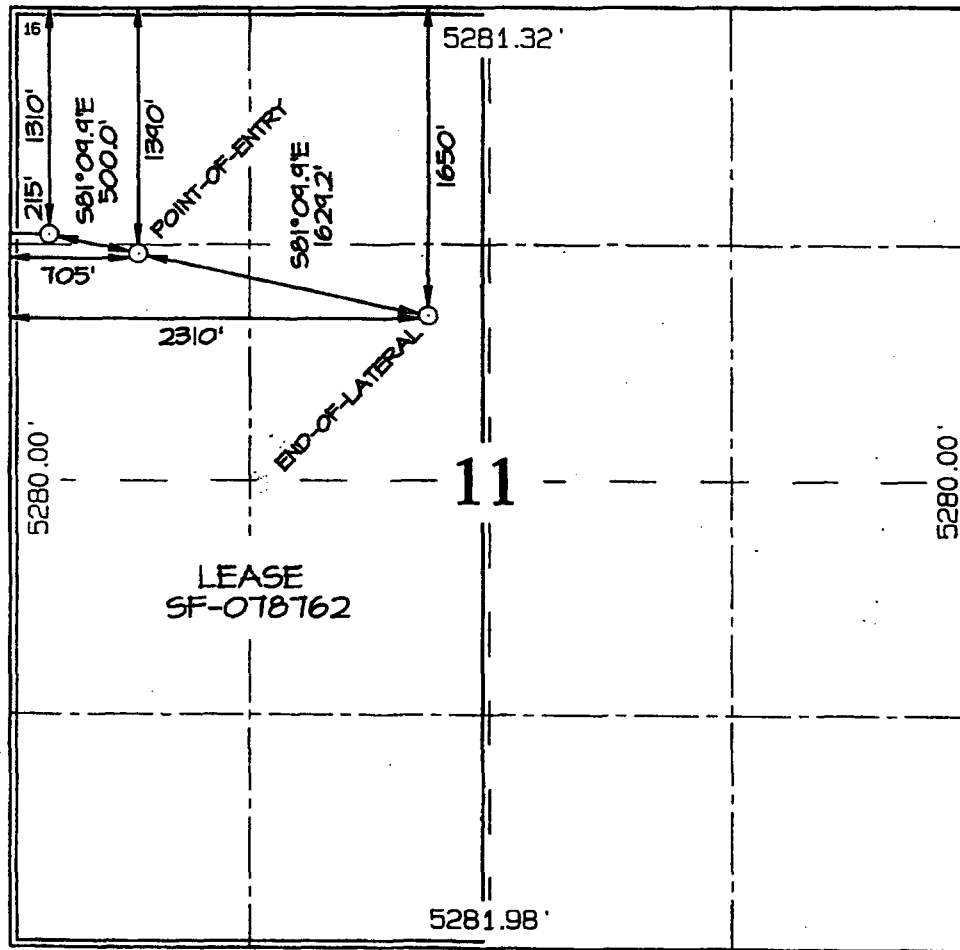
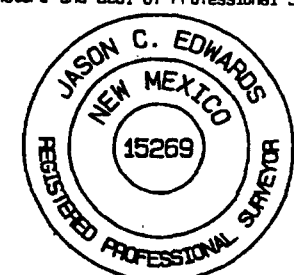
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	11	31N	5W		1310	NORTH	215	WEST	RIO ARriba

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
F	11	31N	5W		1650	NORTH	2310	WEST	RIO ARriba

¹² Dedicated Acres 320.0 Acres - (W/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 <i>Larry Higgins</i> Signature <i>Larry Higgins</i> Printed Name <i>Drilling Com</i> Title <i>12-6-04</i> 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: JUNE 8, 2004 Signature and Seal of Professional Surveyor  <i>JASON C. EDWARDS</i> 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

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

Form C-103
May 27, 2004

WELL API NO.

5. Indicate Type of Lease **FEDERAL X**
STATE ☐ FEE ☐

6. State Oil & Gas Lease No.
Federal NMSF-0078762

7. Lease Name or Unit Agreement Name

Rosa Unit

8. Well Number 351A

9. OGRID Number 120782

10. Pool name or Wildcat
Basin Fruitland Coal

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.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

2. Name of Operator

Williams Exploration and Production Company

3. Address of Operator

P.O. Box 316, Ignacio, CO 81137

4. Well Location

Unit Letter D: 1310 feet from the south line and 215 feet from the west line

Section 11 Township 31N Range 5 W NMPM County Rio Arriba

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6,825' GR

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type production Depth to Groundwater >100' Distance from nearest fresh water well >1,000' Distance from nearest surface water >1,000'

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:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

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.

Reserve pit to be constructed in accordance with NMOCD Interim Pit and Below-grade Tank Guidelines

Production pit to be located approximately 50 feet south of the well head

Reserve pit to be located approximately 30 feet north of the well head, in the northwest corner of the pad.

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 12-02-2004

Type or print name Larry Higgins E-mail address: larry.higgins@williams.com Telephone No. (970) 563-3308

For State Use Only

APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 29 DATE AUG 29 2005

Conditions of Approval (if any):

Submit 3 Copies To Appropriate District Office
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1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
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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.

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STATE ☐ FEE ☐

6. State Oil & Gas Lease No.
Federal NMSF-0078762

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Rosa Unit

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9. OGRID Number 120782

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TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

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SIGNATURE Larry Higgins TITLE Drilling COM DATE 12-02-2004

Type or print name Larry Higgins E-mail address: larry.higgins@williams.com Telephone No. (970) 563-3308

For State Use Only

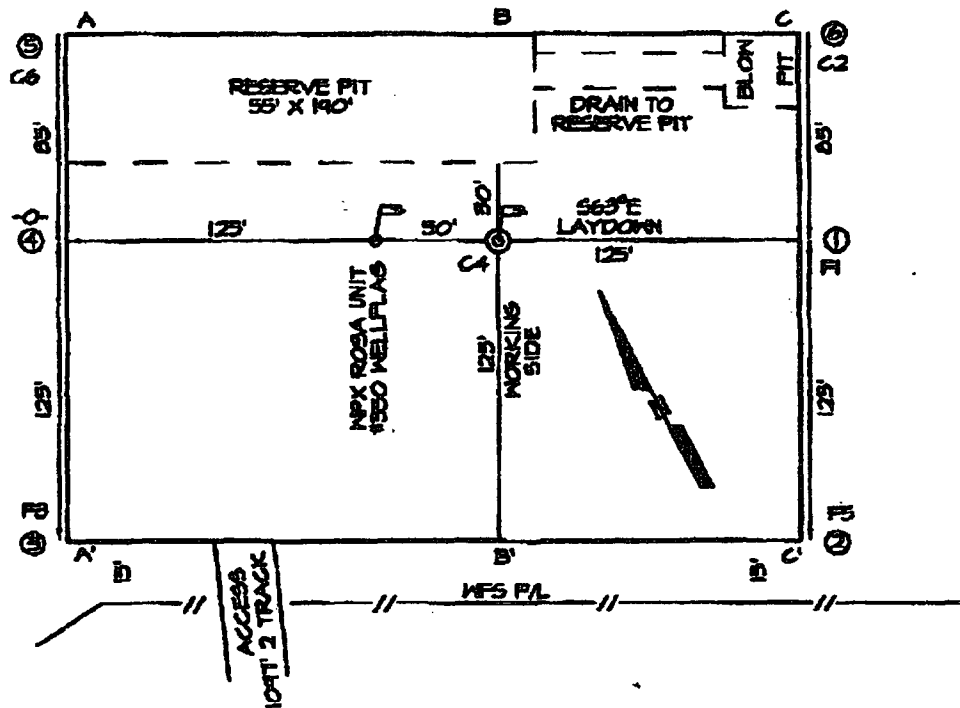
APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 1 DATE

Conditions of Approval (if any):

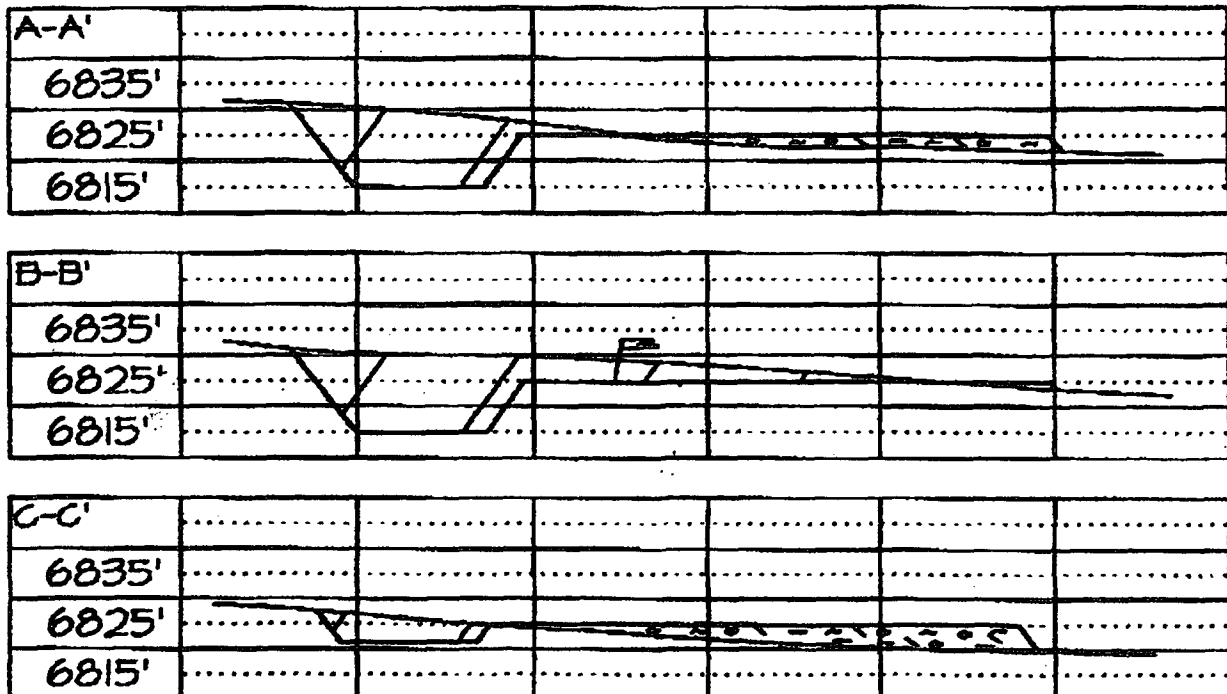
AUG 29 2005

WILLIAMS PRODUCTION COMPANY ROSA UNIT #351A
1310' FNL & 215' FWL, SECTION 11, T31N, R5W, NMPM
RIO ARriba COUNTY, NEW MEXICO
GROUND ELEVATION: 6825'

Plat #2 Location Layout



LATITUDE: 36°33'09"
 LONGITUDE: 107°20'22"
 DATUM: NAD83





WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE: 10/19/2004

WELLNAME: Rosa #351A **FIELD:** Basin Fruitland Coal

SURF LOCATION: NWNW Sec. 11-T31N-R5W **SURFACE:** Forest
San Juan, NM

BH LOCATION SENW Sec 11-31N-5W

ELEVATION: 6,825' GR **MINERALS:** Federal

TOTAL DEPTH: 5,542' **LEASE #** SF-078762

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

		TVD	MD			TVD	MD
San Jose		Surface	Surface		Top Coal	3,515	3,566
Nancimiento		1,625	1,625		Top Target Coal	3,625	3,887
Ojo Alomo		2,965	2,965		Bottom Target Coal	3,625	
Kirtland		3,080	3,080		Base Coal	3,630	
Fruitland		3,365	3,373		TD	3,630	5,542

B. LOGGING PROGRAM: None

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 3459' DO NOT drill deeper until Engineering is contacted.

B. **Drilling Fluid:** Horizontal section will be drilled with Calcium Chloride water.

C. **MUD LOGGING PRORAM:** Mud logger will pick intermediate casing point and TD.

D. **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:

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	12-1/4"	+/- 300'	9-5/8"	36# K-55
Intermediate	8-3/4"	+/- 3,877'	7"	20# K-55
Prod. Liner	6-1/4"	+/- 3,200-5,542'	4-1/2" perfed	10.5# K-55

*Note: All casing depths are measured depths.

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:** 4-1/2" perforated liner with guide shoe 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 - 470 sx (979 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 - 100 sx (139 cu.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 **120% excess in Lead Slurry** to circulate to surface. **No excess in Tail Slurry.** Total volume = 1,118 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

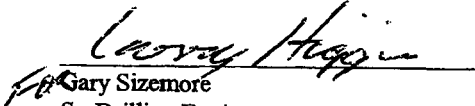
Pressure test 7" casing to 3300# for 15 minutes.

B. STIMULATION

None

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 at approximately 3,730'.


Gary Sizemore
Sr. Drilling Engineer



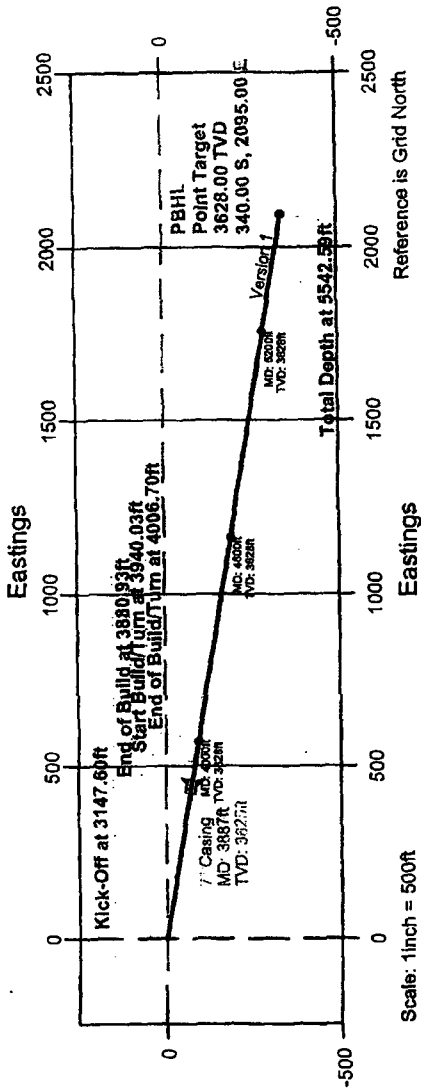
New Mexico
Rio Arriba County, NM
Sec. 11 - T31N - R5W
Rosa Unit #351A
Version 1

Rosa Unit #351A Surface Location
RKB Elevation: 6940.00ft above Mean Sea Level
RKB (8825' + 15' est)
Ref. NW Corner Sec. 11: 1310.00 S, 215.00 E
Ref. Global Coordinates: 2153608.69 N, 644379.24 E
Ref. Geographical Coordinates: 36° 55' 03.0000" N, 107° 20' 22.0000" W

Version 1 Bottom Hole Location
Ref. RKB (8825' + 15' est): 3628.00ft
Ref. Mean Sea Level: -3212.00ft
Ref. Wellhead: 340.00 S, 2095.00 E
Ref. NW Corner Sec. 11: 1650.00 S, 2310.00 E
Ref. Global Coordinates: 2153268.69 N, 646474.24 E
Ref. Geographical Coordinates: 36° 54' 58.5288" N, 107° 19' 56.2235" W

Northings

Eastings



Scale: 1 inch = 500ft

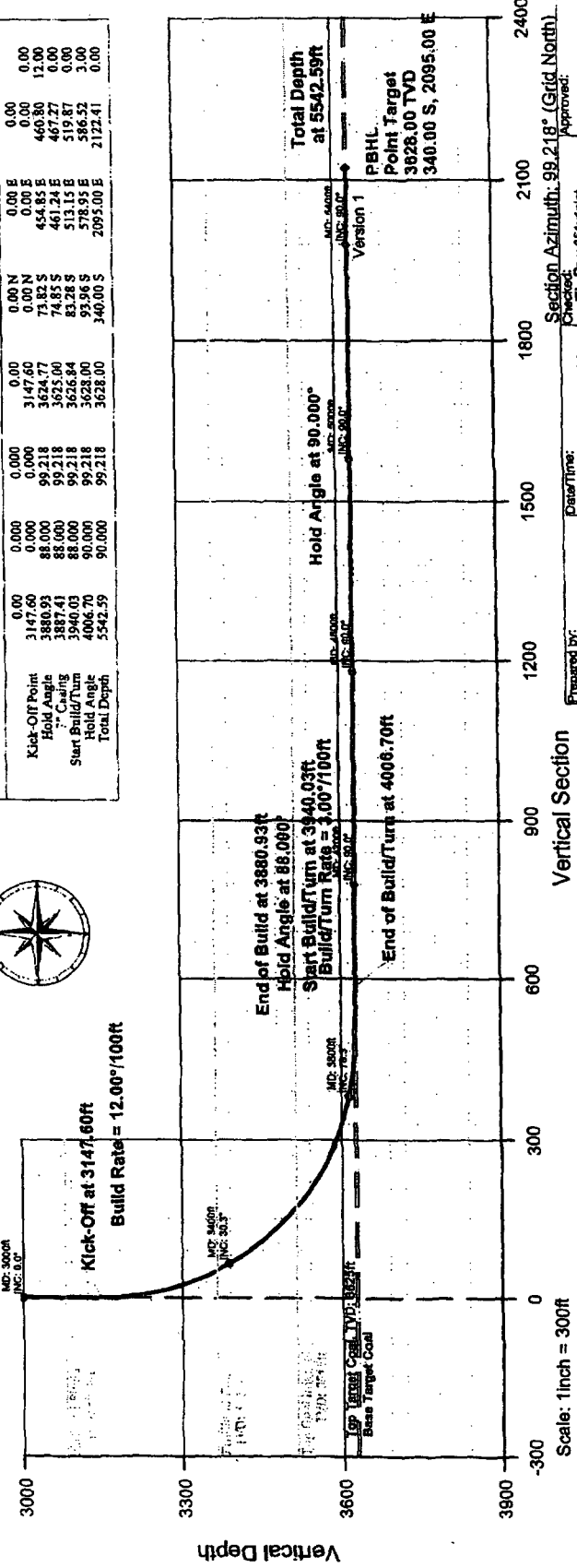
Reference is Grid North



Version 1 Proposal Data

Coordinate System: NAD27 New Mexico State Planes, Western Zone

	Measured Depth	Incl. Azim.	Vertical Depth	Eastings	Northings	Vertical Section	Degleg Rate
Kick-Off Point	0.00	0.000	0.00	0.00 N	0.00 E	0.00	0.00
Hold Angle	3147.60	0.000	3147.60	0.00 N	0.00 E	0.00	0.00
Casing	3880.93	88.000	3624.77	73.82 S	454.83 E	460.80	12.00
Start Build/Turn	3940.03	88.000	3625.00	74.85 S	461.24 E	467.27	0.00
Hold Angle	3947.01	88.000	3626.84	83.28 S	513.15 E	519.87	0.00
End of Build/Turn	4006.70	90.000	3628.00	93.96 S	578.95 E	586.52	3.00
Total Depth	5542.59	90.000	3628.00	340.00 S	2095.00 E	2122.41	0.00



Scale: 1 inch = 300ft

Vertical Section

Prepared by:
Brend McClurgDate/Time:
14 October, 2004 - 14:36Checked:
File Roas351v1.pct

Approved:

Section Azimuth: 99.218° (Grid North)

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
Marcos	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.

Williams Production Company, LLC
Well Control Equipment Schematic for 2M Service

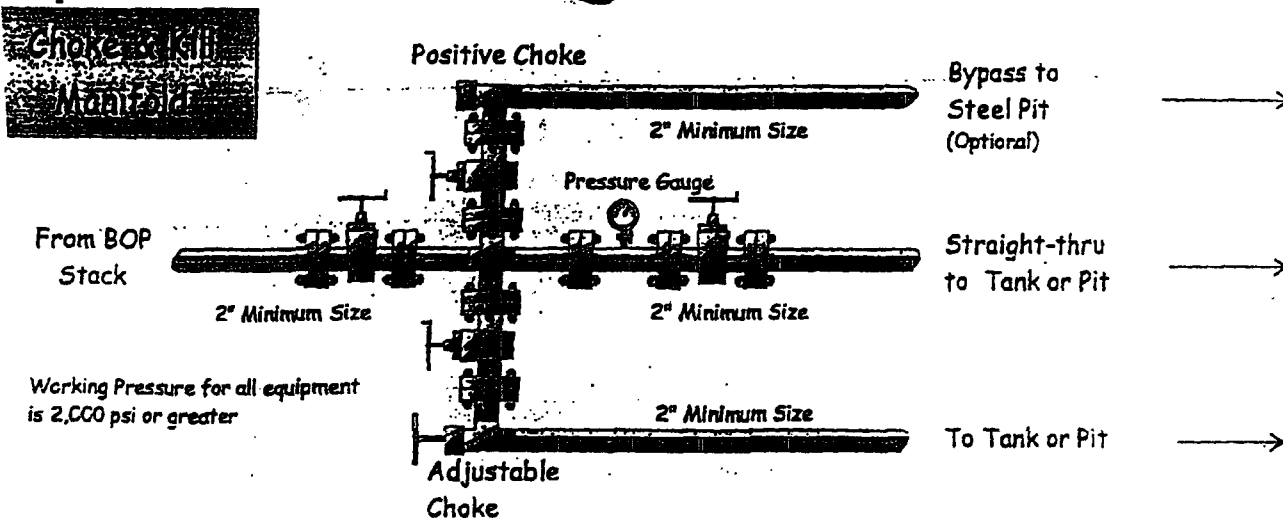
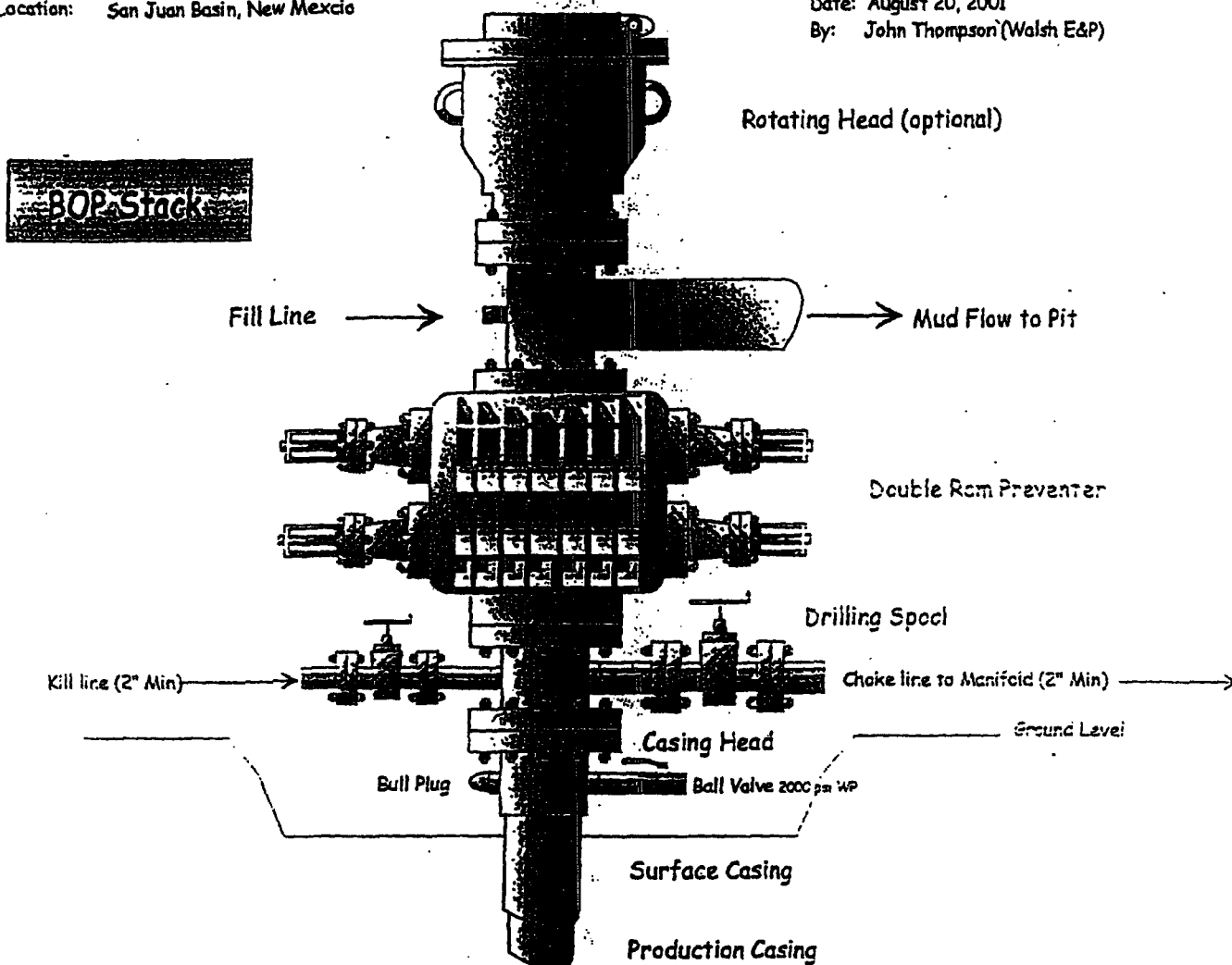
Attachment to Drilling Technical Program

Typical BOP setup

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson (Walsh E&P)



UNITED STATES
DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICE AND REPORTS ON WELLS

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5. Lease Designation and Serial No.
NMSF-078762

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

SUBMIT IN TRIPLICATE

1. Type of Well
Oil Well ☒ Gas Well ☐ Other ☐

8. Well Name and No.
ROSA UNIT #351A

2. Name of Operator
WILLIAMS PRODUCTION COMPANY

9. API Well No.
30-039-29365

3. Address and Telephone No.
PO BOX 3102 MS 25-2, TULSA, OK 74101 (918) 573-6254

10. Field and Pool, or Exploratory Area
BASIN FRUITLAND COAL

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1310' FNL & 215' FWL, NW/4 NW/4 SEC 11-T31N-R05W

11. County or Parish, State
RIO ARRIBA, NM

CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
Notice of Intent	Abandonment
☒ Subsequent Report	Recompletion
Final Abandonment	Plugging Back
	Casing Repair
	Altering Casing
	Other <u>Spud</u>
	Change of Plans
	New Construction
	Non-Routine Fracturing
	Water Shut-Off
	Conversion to Injection
	Dispose Water
	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

This well was spud @ 1800 hrs 10/08/05

APD/ROW



RECEIVED
OCT 13 10 10 06
070 FARMINGTON

14. I hereby certify that the foregoing is true and correct

Signed Tracy Ross
Tracy Ross

Title Sr. Production Analyst

Date October 12, 2005

(This space for Federal or State office use)

Approved by _____

Title _____

Date OCT 24 2005

Conditions of approval, if any:

ACCEPTED FOR RECORD

FARMINGTON FIELD OFFICE
BY JB

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.

NMOCD

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

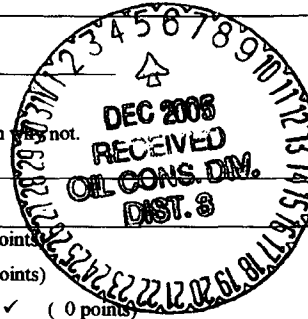
Form C-144
June 1, 2004

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 ☐ Closure of a pit or below-grade tank ☒

Operator: <u>Williams Production Co. LLC</u> Telephone: <u>505/634-4219</u> e-mail address: <u>myke.lane@williams.com</u>		
Address: <u>PO Box 640, Aztec, NM 87410</u>		
Facility or well name: <u>Rosa #351A</u> API #: <u>30-039-29365</u> U/L or Qtr/Qtr <u>D</u> Sec <u>11</u> T <u>31N</u> R <u>5W</u>		
County: <u>Rio Arriba</u> Latitude _____ Longitude _____ NAD: 1927 ☐ 1983 ☐		
Surface Owner: Federal ☒ State ☐ Private ☐ Indian ☐		
Pit Type: Drilling ☒ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☒ Unlined ☐ Liner type: Synthetic ☒ Thickness <u>12</u> mil Clay ☐ Pit Volume <u>~11,000</u> bbl	Below-grade tank Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes ☐ If not, explain <u>yes not.</u>	
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 ft or more, but less than 1000 ft (10 points) 1000 feet or more (0 points)	
Ranking Score (Total Points) 10		

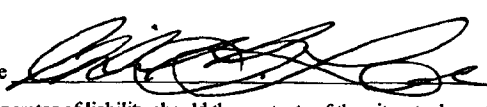
If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☒ offsite ☐ If offsite, name of facility _____. (3) Attach a general description of remedial 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: Pit also associated with Rosa 350.
Former Drilling/Completion pit located as specified on APD plat. Remediation initiated on Nov 30, completed Dec 1, 2005.
Pit closed in accordance with NMOCD guidelines and approved Williams's closure procedures.

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 ☐.

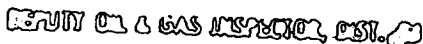
Date: 12/2/05

Printed Name/Title Michael K. Lane, San Juan Basin EH&S Specialist Signature 

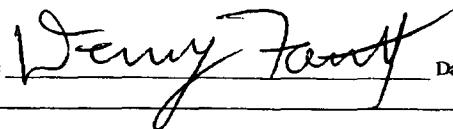
Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with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

Approval:

Printed Name/Title



Signature



Date:

DEC 05 2005

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Williams Production Company					Lease or Unit Name Rosa Unit				
Test Type ☒ Initial ☐ Annual ☐ Special			Test Date 12/14/2005		Well Number (API #) #351A (API # 30-039-29365)				
Completion Date 10/26/2005		Total Depth 3274'		Plug Back TD		Elevation 6266'		Unit Sec Twp Rng E 22 31N 06W	
Casing Size 4 1/2"		Weight 11.6		Set At 4445'		Perforations: 3153' - 4444'		County Rio Arriba	
Tubing Size 2 3/8"		Weight 4.7		Set At 3885'		Perforations:		Pool Basin	
Type Well - Single-Bradenhead-GG or GO Multiple					Packer Set At		Formation Fruitland Coal		
Producing Thru Tubing		Reservoir Temp. oF		Mean Annual Temp. oF		Barometer Pressure - Pa		Connection	
L	H	Gq 0.6	%CO2	%N2	%H2S	Prover 3/4"	Meter Run	Taps	

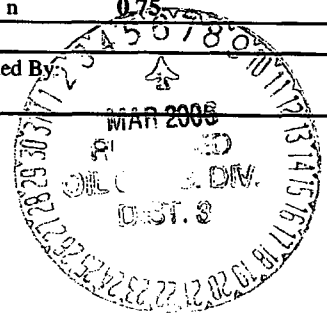
FLOW DATA					TUBING DATA		CASING DATA		
NO	Prover Line Size	X Orifice Size	Pressure p.s.i.q	Temperature oF	Pressure p.s.i.q	Temperature oF	Pressure p.s.i.q	Temperature oF	Duration of Flow
SI		2" X 3/4"			250	69	1200		0
1					240	69	1160		0.5 hr
2					240	62	1160		1.0 hr
3					210	62	1040		1.5 hrs
4					205	54	1040		2.0 hrs
5					205	54	990		3.0 hrs

RATE OF FLOW CALCULATION										
NO	Coefficient (24 Hours)				hwPm	Pressure Pm	Flow Temp. Factor Fl	Gravity Factor Fq	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	9.604					217	1.0058	1.29	1.018	2753
2										
3										
4										

NO	Pr	Temp. oR	Tr	Z	Gas Liquid Hydrocarbon Ration	Mcf/bbl.
1					A.P.I Gravity of Liquid Hydrocabrons _____	Deq.
2					Specific Gravity Separator _____	XXXXXX
3					Specific Gravity Flowing Fluid xxxxxxxxxx	
4					Critical Pressure _____ p.s.i.a.	_____ p.s.i.a.
5					Critical Temperature _____ R	_____ R

Pc 1212	Pc2 1468944					
NO	Pt1	Pw	Pw2	Pc2-Pw2	(1) $Pc2 = 3.159427$ Pc2-Pw2	(2) $Pc2^n = 2.3697703$ Pc2-Pw2
1		1002	1004004	464940		
2						
3						
4						

Absolute Open Flow 6523		Mcf @ 15.025	Angle of Slope _____	Slope, n 0.75
--------------------------------	--	--------------	----------------------	----------------------

Remarks:			
Approved By Commission:	Conducted By: Mark Lepich	Calculated By: Tracy Ross	Checked By: 

UNITED STATES
DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICE AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION TO DRILL" for permit for such proposals

2006 MAR 2 PM 2:36
RECEIVED
070 FARMINGTON NM

5. Lease Designation and Serial No.
SF-078762
6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

SUBMIT IN TRIPLICATE

8. Well Name and No.
ROSA UNIT #351A

9. API Well No.
30-039-29365

10. Field and Pool, or Exploratory Area
BASIN FRUITLAND COAL

11. County or Parish, State
RIO ARRIBA, NM

1. Type of Well
Oil Well ☒ Gas Well ☐ Other ☐

2. Name of Operator
WILLIAMS PRODUCTION COMPANY

3. Address and Telephone No.
PO BOX 3102 MS 25-2, TULSA, OK 74101 (918) 573-6254

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1310' FNL & 215' FWL, NW/4 NW/4 SEC 11-T31N-R05W

CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
Notice of Intent	Abandonment
X Subsequent Report	Recompletion
Final Abandonment	Plugging Back
	Casing Repair
	Altering Casing
	Other <u>Production Test</u>
	Change of Plans
	New Construction
	Non-Routine Fracturing
	Water Shut-Off
	Conversion to Injection
	Dispose Water
	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Attached is the IP test that was conducted on the above well on December 14, 2005.

14. I hereby certify that the foregoing is true and correct

Signed Tracy Ross
Tracy Ross

Title Sr. Production Analyst

Date February 27, 2006

(This space for Federal or State office use)

Approved by _____

Title _____

Date _____

Conditions of approval, if any:

RECEIVED FOR RECORD
MAR 03 2006
FARMINGTON FIELD OFFICE

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.

NMOCD

**NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL**

Operator Williams Production Company					Lease or Unit Name Rosa Unit				
Test Type X Initial Annual Special			Test Date 12/14/2005		Well Number (API #) #351A (API # 30-039-29365)				
Completion Date 10/26/2005		Total Depth 3274'		Plug Back TD		Elevation 6266'		Unit Sec Twp Rng E 22 31N 06W	
Casing Size 4 1/2"		Weight 11.6		Set At 4445'		Perforations: 3153' - 4444'		County Rio Arriba	
Tubing Size 2 3/8"		Weight 4.7		Set At 3885'		Perforations:		Pool Basin	
Type Well - Single-Bradenhead-GG or GO Multiple					Packer Set At		Formation Fruitland Coal		
Producing Thru Tubing		Reservoir Temp. oF		Mean Annual Temp. oF		Barometer Pressure - Pa		Connection	
L	H	Gq 0.6	%CO2	%N2	%H2S	Prover 3/4"		Meter Run	Taps

FLOW DATA					TUBING DATA		CASING DATA		
NO	Prover Line Size	X Orifice Size	Pressure p.s.i.q	Temperature oF	Pressure p.s.i.q	Temperature oF	Pressure p.s.i.q	Temperature oF	Duration of Flow
SI		2" X 3/4"			250	69	1200		0
1					240	69	1160		0.5 hr
2					240	62	1160		1.0 hr
3					210	62	1040		1.5 hrs
4					205	54	1040		2.0 hrs
5					205	54	990		3.0 hrs

RATE OF FLOW CALCULATION										
NO	Coefficient (24 Hours)				hwPm	Pressure Pm	Flow Temp. Factor Fl	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	9.604					217	1.0058	1.29	1.018	2753
2										
3										
4										

NO	Pr	Temp. oR	Tr	Z	Gas Liquid Hydrocarbon Ration	Mcf/bbl.
1					A.P.I Gravity of Liquid Hydrocabrons _____	Deq.
2					Specific Gravity Separator _____	XXXXXX
3					Specific Gravity Flowing Fluid xxxxxxxxxxxx ,	
4					Critical Pressure _____ p.s.i.a.	_____ p.s.i.a.
5					Critical Temperature _____ R	_____ R

Pc	1212	Pc2	1468944	
NO	Pt1	Pw	Pw2	Pc2-Pw2
1		1002	1004004	464940
2				
3				
4				

(1) $Pc2 = 3.159427$		(2) $Pc2^n = 2.3697703$	
$Pc2 - Pw2$		$Pc2 - Pw2$	
AOF = Q $Pc2^n = 6523$			
$Pc2 - Pw2$			

Absolute Open Flow 6523		Mcf/d @ 15.025		Angle of Slope _____		Slope, n 0.75	
--------------------------------	--	----------------	--	----------------------	--	----------------------	--

Remarks:			
Approved By Commission:	Conducted By: Mark Lepich	Calculated By: Tracy Ross	Checked By:

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN
DUPLICATE

(See other instructions on
reverse side)

FORM APPROVED
OMB NO. 1004-0137
Expires: February 28, 1995

5. LEASE DESIGNATION AND LEASE NO.
NMSF-078762

6. IF INDIAN, ALLOTTEE OR

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.
ROSA UNIT #351A

9. API WELL NO.
30-039-29365

10. FIELD AND POOL, OR WILDCAT
BASIN FRUITLAND COAL

11. SEC., T., R., M., OR BLOCK AND
SURVEY OR AREA
NW/4 NW/4 SEC 11-31N-05W

12. COUNTY OR
RIO ARRIBA

13. STATE
NEW MEXICO

19. ELEVATION CASINGHEAD

ROTARY TOOLS
x

CABLE TOOLS

25. WAS DIRECTIONAL SURVEY MADE
YES

27. WAS WELL CORED
NO

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: ☐ OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER
b. TYPE OF COMPLETION:
☒ NEW WELL ☐ WORKOVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER

2. NAME OF OPERATOR
WILLIAMS PRODUCTION COMPANY

3. ADDRESS AND TELEPHONE NO.
P.O. BOX 3102 MS 25-1 TULSA, OK 74101 (918) 573-6254

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At Surface: 1310' FNL & 215' FWL
At top production interval reported below:
At total depth: 1459' FNL & 1287' FWL

14. PERMIT NO.
DATE ISSUED
18. ELEVATIONS (DK, RKB, RT, GR, ETC.)*
6825' GR

15. DATE
SPUDDED
10/08/05

16. DATE T.D.
REACHED
10/25/05

17. DATE COMPLETED (READY TO PRODUCE)
10/26/05

20. TOTAL DEPTH, MD & TVD
4452' MD

21. PLUG, BACK T.D., MD & TVD

22. IF MULTICOMP.,
HOW MANY

23. INTERVALS
DRILLED BY

24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)*
BASIN FRUITLAND COAL 0000' - 0000'

26. TYPE ELECTRIC AND OTHER LOGS RUN

28. CASING REPORT (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB./FT	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
9-5/8" J-55	36#	338'	12-1/4"	200 SX - SURFACE	
7" K-55	23#	3918'	8-3/4"	625 SX - SURFACE	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
4 1/2" 11.6# J-55	3070'	4445'	0 SX		2 1/4" J-55 6.5#	3885'	

31. PERFORATION RECORD (Interval, size, and number)

Basin Fruitland Coal: Ran 33 jts of pre-perforated csg

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)
AMOUNT AND KIND OF MATERIAL USED
WELL WAS NOT ACIDIZED OR FRACED

33. PRODUCTION

DATE OF FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping-size and type of pump) Flowing				WELL STATUS (PRODUCING OR SHUT) Producing	
DATE OF TEST	TESTED	CHOKE SIZE	PROD'N FOR TEST PERIOD	OIL - BBL	GAS - MCF	WATER - BBL	GAS-OIL RATIO
12/14/05		3/4"	3 hrs		344		
FLOW TBG PRESS	CASING PRESSURE	CALCULATED 24-HOUR RATE			OIL - BBL	GAS - MCF	WATER - BBL
205	990						

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.): TO BE SOLD

TEST WITH FARMINGTON FIELD OFFICE

35. LIST OF ATTACHMENTS: SUMMARY OF POROUS ZONES, WELLBORE DIAGRAM

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

Tracy Rose

TITLE Production Analyst

DATE February 27, 2006

NMOCD

38. GEOLOGIC MARKERS

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; core intervals, and all drill-stem tests, including depth interval tested, casing used, time tool open, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP		
					NAME	MEASURED DEPTH	TRUE VERTICAL DEPTH
					OJO ALAMO	2772'	2592'
					KIRTLAND	2878'	2692'
					FRUITLAND	3302'	3107'
					BASE OF COAL	3503'	3307'

**ROSA UNIT #351A
BASIN FRUITLAND COAL**

Surface Location:

1310' FNL and 215' FWL
NW/4 NW/4 Sec 11(D), T31N, R5W
Rio Arriba, NM

Spud: 10/08/05

Completed: 10/26/05

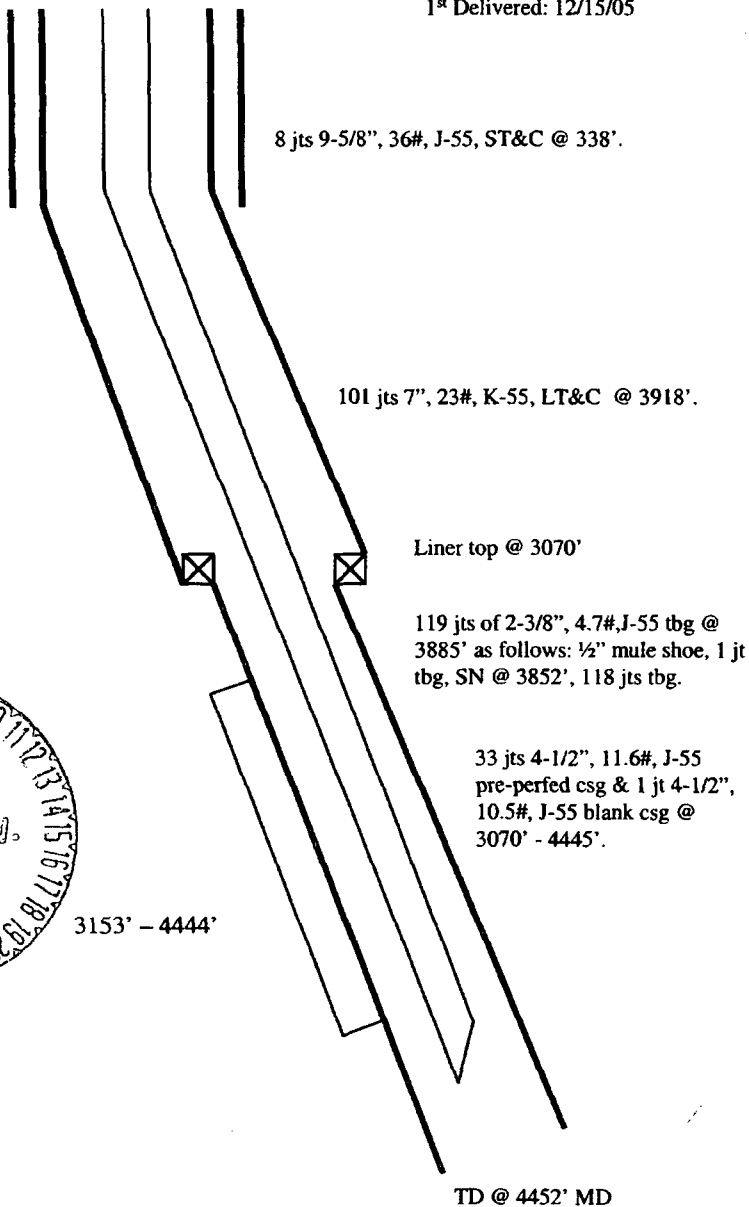
1st Delivered: 12/15/05

Bottom Hole Location:

1459' FNL and 1287' FWL
SW/4 NW/4 Sec 11(E), T31N, R5W
Rio Arriba, NM

Elevation: 6825' GR
API # 30-039-29365

<u>Top</u>	<u>MD</u> <u>Depth</u>
Ojo Alamo	2943'
Kirtland	3060'
Fruitland	3402'
Base of Coal	3622'
Pictured Cliffs	3624'



Hole Size	Casing	Cement	Volume	Top of Cmt
12-1/4"	9-5/8", 36#	200 sx	282 cu. ft.	Surface
8-3/4"	7", 23#	625 sx	1212 cu. ft.	Surface
6-1/4"	4-1/2", 11.6#	Did Not Cmt		

UNITED STATES
DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICE AND REPORTS ON WELLS

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2005 MAR 2 PM 2 36
RECEIVED
070 FARMINGTON NM

5. Lease Designation and Serial No.
NMSF-078762

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

SUBMIT IN TRIPLICATE

8. Well Name and No.
ROSA UNIT #351A

9. API Well No.
30-039-29365

10. Field and Pool, or Exploratory Area
BASIN FRUITLAND COAL

11. County or Parish, State
RIO ARRIBA, NM

CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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	Dispose Water
	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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10-08/09-2005 MIRU, drill rat & mouse holes. Spud 12 1/4" surface hole @ 1800 hrs, 10/8/05. Drilling from 0' to 284'.

10-10-2005 Drilling 12 1/4" hole from 284' to 346', circulate & condition hole. Run 8 jts 9 5/8", 36#, J-55, ST&C csg, texas pattern guide shoe. Csg length = 323', landed @ 338', float insert @ 296', ran centralizers on bottom 3 jts. Circulate csg on bottom & WO cmt equipment.

10-11-2005 Circulate csg on bottom & WO cmt equipment. RU BJ Services, cmt surface csg as follows: 20 bbls FW flush, 60 bbls (200 sxs, 282 cu.ft.) Type III w/ 3% CaCl, 1/4#/sx Cello Flake, mixed @ 14.5 ppg. Plug down @ 1805 hrs, 10/10/05. Circulated 23 bbls cmt to surface. RD cementers, WOC, NU BOPE. Pressure test - install test plug, test blind rams, pipe rams, choke manifold, bop valves, floor valve, upper kelly valve. Pull test plug, pressure test casing @ 1500# for 30 mins, all tests 250 - 10 min, 1500 - 20 min. All tests OK.

10-12-2005 Pressure test - install test plug, test blind rams, pipe rams, choke manifold, bop valves, floor valve, upper kelly valve. Pull test plug, pressure test casing @ 1500# 30 MIN. All tests 250 - 10 min, 1500 - 20 min. All tests OK. TIH w/ bit #2. Drilling cmt & equipment. Rotary drill from 346' to 1701'.

Continued on Back

14. I hereby certify that the foregoing is true and correct

Signed Tracy Ross
Tracy Ross

Title Sr. Production Analyst

Date February 27, 2006

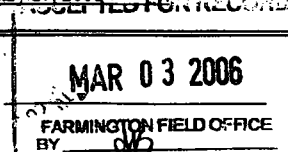
(This space for Federal or State office use)

Approved by _____

Title _____

Date _____

Conditions of approval, if any:



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.

NMOCU

10-13-2005 Rotary drilling from 1701' to 2732'.

10-14-2005 Rotary drilling from 2732' to 3170'.

10-15-2005 Rotary drilling from 3170' to 3640'.

10-16-2005 Rotary drilling from 3640' to 3723', circulate & condition hole for logs @ 3723'. TOOH for logs, RU Halliburton & log. Loggers TD = 3724'. TIH open ended w/ 22 jts 3 ½" DP & 96 jts 4 ½" DP.

10-17-2005 RU BJ, pump KOP as follows: 20 bbls FW ahead, 350 sxs (80 bbls, 452 cu.ft.) Type III w/ .1% CD-32, ¼# /sk Cello Flake, WT = 15 #PG. YLD = 1.29 cu.ft./sk. Displace w/ 5 bbls FW & 30 bbls drilling mud. Bottom of plug @ 3723', top of plug @ 2647'. WOC, TOOH slowly to 2100' & circulate hole @ 3 bbls/min.

10-18-2005 WOC, TIH, tag @ 2750', TOOH & LD 600' 3 ½" DP & 600' 4 ½" DP. WOC, PU bit #4, TIH, took wt @ 2722'. Drilling cmt from 2722' to 3076'. Circulate & condition hole to PU directional tools @ 3076'. TOOH, PU directional assembly, orientate same. TIH w/ same.

10-19-2005 TIH w/ directional assembly, plugged bit. TOOH, unplug bit & jet suction pit. TIH w/ directional assembly, time drilling off cmt plug 4 FPH from 3072' to 3133'. Directionally drilling from 3133' to 3200'.

10-20-2005 Directionally drilling from 3200' to 3477'.

10-21-2005 Directionally drilling from 3477' to 3775'.

10-22-2005 Directionally drilling from 3775' to 3918' (TD), circulate & condition hole, short trip to surface csg.

10-23-2005 Circulate & condition hole @ 3918'. LD DP, BHA & directional tools. RU csg crew, run 101 jts 7", 23#, K-55, LT&C csg, landed w/ cmt nose guide shoe @ 3918' (TMD & 3603' (TVD). Float insert on top of bottom jt. Ran turbolizers on bottom 4 jts. Circulate csg to bottom & RD csg crew. RU BJ Services & cmt as follows: 10 bbls FW. Lead: 475 sxs (1002 cu.ft., 176 bbls) Type III + CaCl₂ & ¼# Cello Flake/sk. (yld=2.11 cu ft sk wt=12.1#gal). Tail: 150 sxs (210 cu.ft., 37 bbls) Type III w/ ¼# Cello Flake/sk & 1% CaCl₂. (yld=1.4cu/ft sk wt=14.5 ppg). Displace w/ 152 bbls CaCl @ 9.6# gal. Circulate out 51 bbls cmt to surface. Plug down @ 2245 hrs, 10/22/05. Bumped plug w/ 1350 psi, float held. RD BJ Services, WOC, ND BOP, NU tbq head, test csg, good test.

10-24-2005 Test BOP, rams & csg @ 1500 psi, change tools to 3 ½". PU directional tools, TIH, PU pipe, drilling cmt & equipment.

10-25-2005 Horizontally drilling 6 ¼" hole from 3918' to 4452'. Circulate bottoms up, TOOH, stand back 40 stds DP & LD DP & BHA. RIH w/ 33 jts 4 ½", 11.6#, J-55 csg & liner hanger. TIH w/ liner on 3 ½" DP.

10-26-2005 Set liner & release, pack off liner top, liner top @ 3070', liner shoe @ 4445' (TMD) & 3615' (TVD). Ran TIW shoe & 33 jts of 4 ½", 11.6#, J-55 pre-perforated csg & one jt of 4 ½", 10.5#, J-55 blank csg on top, total length = 1375', overlap = 848'. Circulate bottoms up, LD DP & setting tool, LD 20 5" DC's. PU 119 jts 2 ¾" tbq, ran ½" muleshoe on bottom, SN on top of bottom jt, total length = 3871', land tbq @ 3885'. ND BOP, clean mud tanks, turn well to production department, release rig @ 0000 hrs, 10/25/05.

sperry-sun
DRILLING SERVICES



End of Well Report

Rosa Unit #351-A

Williams Production Company

30-039-29365

10/31/2005

MO 3958, TWD 3607
TO

Surface	1310/N	215/W
BHL 1 (start)	1403/N	997/W
BHL 2 (end lat)	1559/N	1287/W

HALLIBURTON

9800 W RENO • OKLA CITY, OK 73127
PHONE 405.324.2222 • FAX 405.324.1009

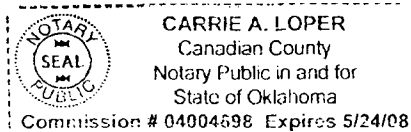
November 14, 2005

Re: Williams Production Co.
Rosa Unit #351-A
Sec. 11-T31N-R05W
Rio Arriba County, New Mexico

Enclosed please find the original and one copy of the surveys performed on the referenced well by Halliburton/Sperry Drilling Services.

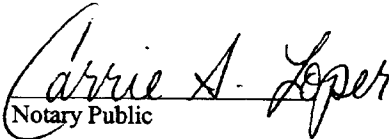
<u>Name & Title of Supervisor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Dennis Cook Directional Supervisor	Original	550' – 4,372'	10/17/05 – 10/24/05	MWD
Dennis Cook Directional Supervisor	Projection to TD	4,372' – 4,452'		MWD

If any other information is required, please contact the undersigned at the letterhead address and phone number.




Dennis Cook
Directional Supervisor

My Commission Expires: 5/24/08


Notary Public



**Williams Production Company
New Mexico
Rio Arriba County
Sec. 11-T31N-R05W
Rosa Unit #351A - MWD Survey**

Halliburton Sperry-Drilling Survey Report

31 October, 2005

Surface Coordinates: 2153778.68 N, 644275.04 E (36° 55' 04.6862" N, 107° 20' 23.2724" W)
Grid Coordinate System: NAD27 New Mexico State Planes, Western Zone

Surface Coordinates relative to Global Coordinates: 648787.56 N, 346594.28 E (Grid)
Surface Coordinates relative to Structure: 1310.00 S, 215.00 E (True)
Kelly Bushing Elevation: 6840.00ft above Mean Sea Level
Kelly Bushing Elevation: 73.00ft above Structure

Survey Ref: svy9426

HALLIBURTON
Sperry Drilling Services

HALLIBURTON**Sperry Drilling Services****Williams Production Company**
New Mexico
Rio Arriba County**Survey Report for Sec. 11-T31N-R05W - Rosa Unit #351A - MWD Survey**

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth	Vertical Section (ft)	Local Coordinates		Dogleg Severit (°/100ft)	Lease Calls		Global Coordinates	
					N-S (ft)	E-W (ft)		FNL-FSL (ft)	FEL-FWL (ft)	Grid Y (ft)	Grid X (ft)
0.00	0.000	0.000	0.00	0.00	0.00 N	0.00 E		1310.00 FNL	215.00 FWL	2153778.68 N	644275.04 E
550.00	0.280	110.140	550.00	1.32	0.46 S	1.26 E	0.05	1310.46 FNL	216.26 FWL	2153778.22 N	644276.31 E
1016.00	0.710	143.340	1015.98	4.49	3.17 S	4.05 E	0.11	1313.17 FNL	219.05 FWL	2153775.53 N	644279.11 E
1490.00	0.970	180.270	1489.93	7.19	9.54 S	5.79 E	0.12	1319.54 FNL	220.79 FWL	2153769.17 N	644280.88 E
1978.00	0.530	168.460	1977.89	8.59	15.88 S	6.22 E	0.10	1325.88 FNL	221.22 FWL	2153762.83 N	644281.35 E
2480.00	0.700	253.750	2479.87	6.62	19.01 S	3.74 E	0.17	1329.01 FNL	218.74 FWL	2153759.69 N	644278.88 E
2985.00	0.880	313.340	2984.83	0.63	17.22 S	2.04 W	0.16	1327.22 FNL	212.96 FWL	2153761.45 N	644273.09 E
3017.00	0.620	318.080	3016.83	0.29	16.92 S	2.33 W	0.83	1326.92 FNL	212.87 FWL	2153761.75 N	644272.80 E
3047.00	0.700	340.230	3046.82	0.08	16.62 S	2.51 W	0.88	1326.62 FNL	212.49 FWL	2153762.04 N	644272.62 E
3078.00	0.880	32.960	3077.82	0.08	16.25 S	2.44 W	2.32	1326.25 FNL	212.56 FWL	2153762.42 N	644272.69 E
3110.00	2.990	73.750	3109.80	0.94	15.81 S	1.50 W	7.48	1325.81 FNL	213.50 FWL	2153762.87 N	644273.62 E
3142.00	6.680	87.460	3141.68	3.52	15.49 S	1.16 E	12.00	1325.49 FNL	216.16 FWL	2153763.20 N	644276.28 E
3172.00	11.340	92.380	3171.31	8.17	15.54 S	5.85 E	15.73	1325.54 FNL	220.85 FWL	2153763.17 N	644280.97 E
3203.00	16.080	94.310	3201.41	15.48	15.99 S	13.18 E	15.36	1325.99 FNL	228.18 FWL	2153762.76 N	644288.31 E
3233.00	20.650	96.250	3229.88	24.91	16.87 S	22.59 E	15.37	1326.87 FNL	237.59 FWL	2153761.92 N	644297.72 E
3266.00	24.610	96.420	3260.33	37.59	18.28 S	35.20 E	12.00	1328.28 FNL	250.20 FWL	2153760.59 N	644310.34 E
3297.00	27.860	97.300	3288.14	51.29	19.92 S	48.81 E	10.56	1329.92 FNL	263.81 FWL	2153759.01 N	644323.95 E
3327.00	30.230	98.530	3314.36	65.85	21.93 S	63.23 E	8.15	1331.93 FNL	278.23 FWL	2153757.08 N	644338.39 E
3359.00	31.990	99.410	3341.76	82.38	24.51 S	79.56 E	5.68	1334.51 FNL	294.56 FWL	2153754.58 N	644354.73 E
3390.00	34.720	98.180	3367.65	99.42	27.11 S	96.40 E	9.07	1337.11 FNL	311.40 FWL	2153752.07 N	644371.58 E
3422.00	37.090	98.000	3393.57	118.19	29.75 S	114.98 E	7.41	1339.75 FNL	329.98 FWL	2153749.53 N	644390.18 E
3453.00	39.990	97.300	3417.81	137.49	32.32 S	134.12 E	9.46	1342.32 FNL	349.12 FWL	2153747.06 N	644409.33 E
3485.00	43.490	97.480	3441.69	158.79	35.06 S	155.25 E	10.94	1345.06 FNL	370.25 FWL	2153744.43 N	644430.47 E
3516.00	47.810	97.830	3463.35	180.95	38.01 S	177.21 E	13.96	1348.01 FNL	392.21 FWL	2153741.58 N	644452.45 E
3548.00	52.210	98.180	3483.91	205.45	41.43 S	201.48 E	13.78	1351.43 FNL	416.48 FWL	2153738.29 N	644476.74 E

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth	Vertical Section (ft)	Local Coordinates N-S (ft)	E-W (ft)	Dogleg Severity (°/100ft)	Lease Calls FNL-FSL (ft)	FEL-FWL (ft)	Global Coordinates Grid Y (ft)	Grid X (ft)
3579.00	55.810	98.000	3502.12	230.53	44.96 S	226.31 E	11.62	1354.96 FNL	441.31 FWL	2153734.89 N	644501.58 E
3611.00	59.410	97.650	3519.26	257.54	48.63 S	253.08 E	11.29	1358.63 FNL	468.08 FWL	2153731.36 N	644528.37 E
3643.00	62.490	98.000	3534.80	285.51	52.44 S	280.79 E	9.67	1362.44 FNL	495.79 FWL	2153727.69 N	644556.10 E
3674.00	65.210	98.330	3548.46	313.33	56.39 S	308.33 E	8.83	1366.39 FNL	523.33 FWL	2153723.88 N	644583.66 E
3706.00	68.160	98.580	3561.12	342.72	60.71 S	337.39 E	9.25	1370.71 FNL	552.39 FWL	2153719.71 N	644612.75 E
3737.00	71.000	98.990	3571.94	371.76	65.15 S	366.10 E	9.24	1375.15 FNL	581.10 FWL	2153715.42 N	644641.48 E
3770.00	73.780	99.170	3581.92	403.21	70.12 S	397.16 E	8.44	1380.12 FNL	612.16 FWL	2153710.62 N	644672.56 E
3801.00	76.590	99.000	3589.85	433.18	74.85 S	426.75 E	9.08	1384.85 FNL	641.75 FWL	2153706.04 N	644702.17 E
3832.00	80.350	98.100	3596.04	463.55	79.36 S	456.78 E	12.46	1389.36 FNL	671.78 FWL	2153701.68 N	644732.23 E
3866.00	85.060	97.250	3600.36	497.26	83.86 S	490.19 E	14.07	1393.86 FNL	705.19 FWL	2153697.35 N	644765.66 E
3958.00	86.490	93.690	3607.14	588.83	92.60 S	581.51 E	4.16	1402.60 FNL	796.51 FWL	2153689.08 N	644857.02 E
3990.00	86.730	96.000	3609.03	620.70	95.30 S	613.34 E	7.25	1406.30 FNL	828.34 FWL	2153686.55 N	644888.86 E
4022.00	86.610	96.400	3610.89	652.61	98.75 S	645.10 E	1.30	1408.75 FNL	860.10 FWL	2153683.27 N	644920.64 E
4054.00	88.180	97.890	3612.35	684.56	102.73 S	676.81 E	6.76	1412.73 FNL	891.81 FWL	2153679.45 N	644952.38 E
4085.00	89.860	98.320	3612.93	715.55	107.10 S	707.50 E	4.97	1417.10 FNL	922.50 FWL	2153675.24 N	644983.08 E
4117.00	91.200	98.970	3612.69	747.55	111.90 S	739.13 E	5.22	1421.90 FNL	954.13 FWL	2153670.60 N	645014.74 E
4149.00	90.930	99.290	3612.09	779.54	116.98 S	770.72 E	1.31	1426.98 FNL	985.72 FWL	2153665.68 N	645046.36 E
4181.00	91.420	98.920	3611.44	811.53	122.04 S	802.31 E	1.92	1432.04 FNL	1017.31 FWL	2153660.78 N	645077.97 E
4213.00	89.260	97.210	3611.25	843.53	126.53 S	833.99 E	8.61	1436.53 FNL	1048.99 FWL	2153656.46 N	645109.68 E
4277.00	89.630	96.770	3611.87	907.49	134.32 S	897.51 E	0.90	1444.32 FNL	1112.51 FWL	2153649.00 N	645173.24 E
4340.00	87.720	94.610	3613.33	970.37	140.56 S	960.18 E	4.58	1450.56 FNL	1175.18 FWL	2153643.08 N	645235.93 E
last MWD survey											
4372.00	87.130	94.120	3614.76	1002.24	143.00 S	992.05 E	2.40	1453.00 FNL	1207.05 FWL	2153640.81 N	645267.82 E
projection to TD											
4452.00	89.400	94.120	3617.19	1081.93	148.74 S	1071.80 E	2.84	1458.74 FNL	1286.80 FWL	2153635.48 N	645347.60 E

All data is in Feet (US) unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to RKB(6825' ± 15' KB). Northings and Eastings are relative to Wellhead.

Based upon Minimum Curvature type calculations, at a Measured Depth of 4452.00ft.,
The Bottom Hole Displacement is 1082.08ft., in the Direction of 97.901° (True).

HALLIBURTON

Sperry Drilling Services

Williams Production Company
New Mexico
Rio Arriba County

Survey Report for Sec. 11-T31N-R05W - Rosa Unit #351A - MWD Survey

Comments

Measured Depth (ft)	Station Coordinates		Comment
	TVD (ft)	Northings (ft)	
4372.00	3614.76	143.00 S	last MWD survey projection to TD
4452.00	3617.19	148.74 S	

North Reference Sheet for Sec. 11-T31N-R05W - Rosa Unit #351A

Coordinate System is NAD27 New Mexico State Planes, Western Zone, US Foot
Source: Snyder, J.P., 1987, Map Projections - A Working Manual

Datum is North American Datum of 1927 (US48, AK, HI, and Canada)

Spheroid is Clarke - 1866

Equatorial Radius: 6378206.400m.

Polar Radius: 6356583.800m.

Inverse Flattening: 294.978698213901

Projection method is Transverse Mercator or Gauss Kruger Projection

Central Meridian is -107.833°

Longitude Origin: 0.000°

Latitude Origin: 31.000°

False Easting: 152400.00m

False Northing: 0.00m

Scale Reduction: 0.99991667

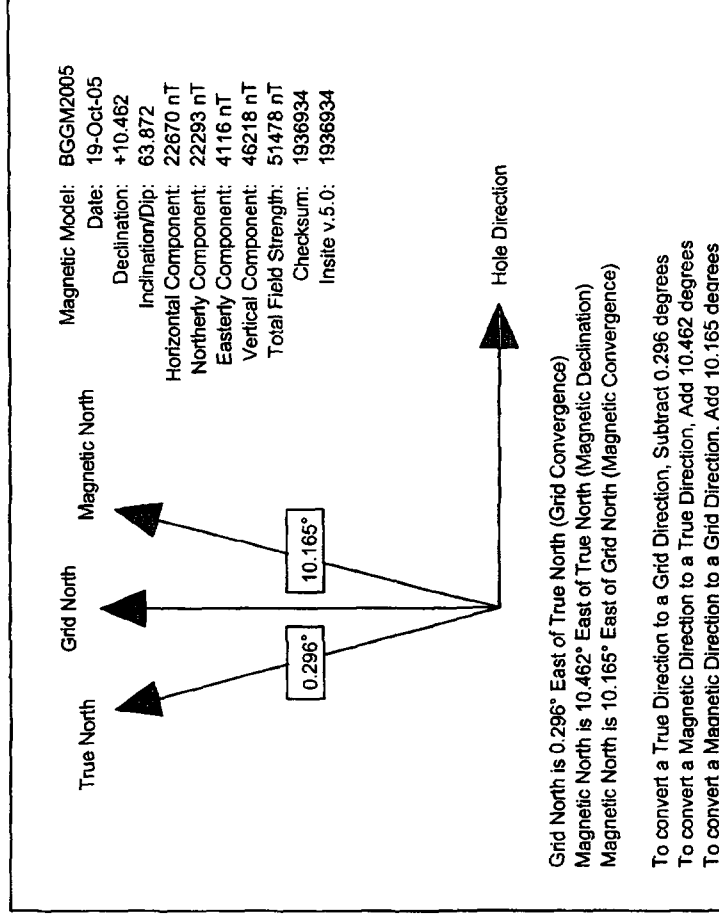
Grid Coordinates of Well: 2153778.68 N, 644275.04 E

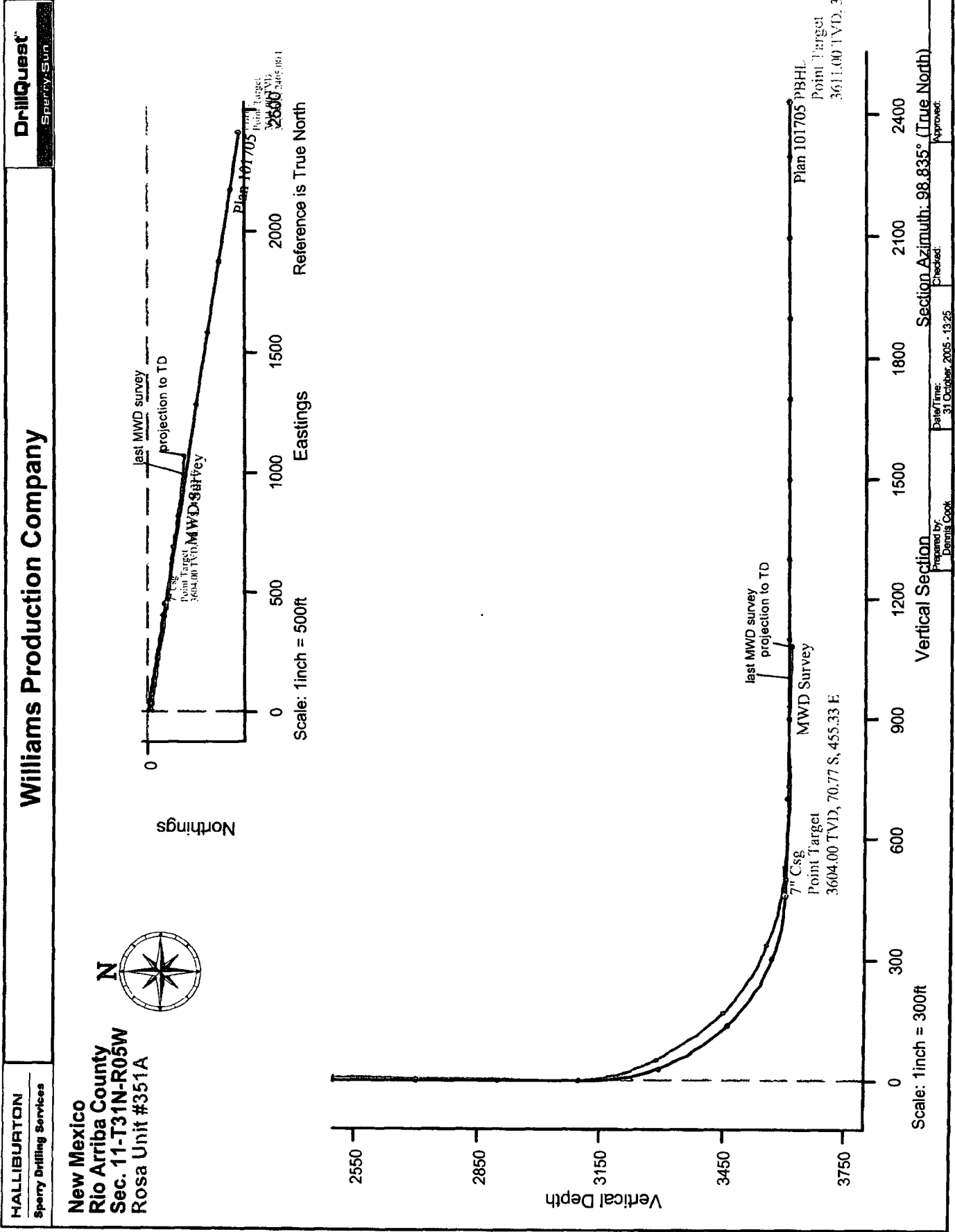
Geographical Coordinates of Well: 36° 55' 04.6862" N, 107° 20' 23.2724" W

Surface Elevation of Well: 6840.00ft

Grid Convergence at Surface is +0.296°

Magnetic Declination at Surface is +10.462° (19 October, 2005)





MAY-25-2005 14:15
87/27/2004 10:05

WILLIAMS
370553300

9185731298 P.06

District I
PO Box 1950, Hobbs, NM 88241-1980

District II
PO Drawer 00, 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-10
Revised February 21, 199
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	Pool Code 71629	Pool Name BASIN FRUITLAND COAL
Property Code 17033	Property Name ROSA UNIT	Well Number 351A
GRID No. 120782	Operator Name WILLIAMS PRODUCTION COMPANY	Elevation 6925

10 Surface Location

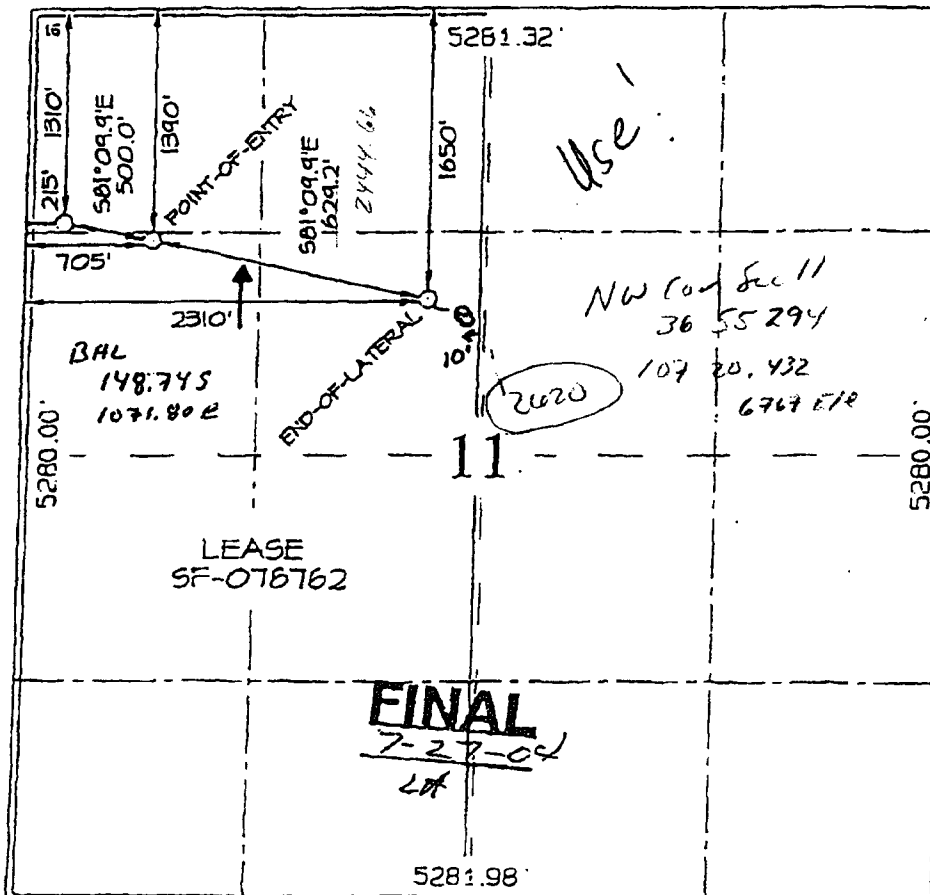
U. or lot No.	Section	Township	Range	Loc. Ion	Feet from line	North/South line	Feet from line	East/West line	County
D	11	31N	5W		1310	NORTH	215	WEST	RIO ARriba

11 Bottom Hole Location If Different From Surface

U. or lot No.	Section	Township	Range	Loc. Ion	Feet from line	North/South line	Feet from line	East/West line	County
F	11	31N	5W		1650	NORTH	2310	WEST	RIO ARriba

Dedicated Acres 320.0 Acres - (W/2)	Joint or Infill	Consolidation Code	Owner 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



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Printed Name

Title

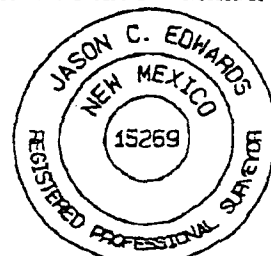
Date

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: JUNE 8, 2004

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

NE 1/4 Sec 11 =

TOTAL P.06

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

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

Form C-104
Reformatted July 20, 2001

Submit to Appropriate District Office
5 Copies

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

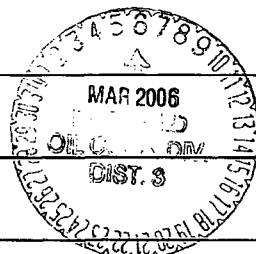
¹ Operator name and Address WILLIAMS PRODUCTION COMPANY P O BOX 3102, MS 25-1 TULSA, OK 74101				² OGRID Number 120782					
				³ Reason for Filing Code/ Effective Date NW					
⁴ API Number 30 - 039-29365		⁵ Pool Name BASIN FRUITLAND COAL			⁶ Pool Code 71629				
⁷ Property Code 17033		⁸ Property Name ROSA UNIT			⁹ Well Number 351A				
¹⁰ UL or lot no. D	¹¹ Section 11	¹² Township 31N	¹³ Range 5W	¹⁴ Lot Idn	¹⁵ Feet from the 1310	¹⁶ North/South Line NORTH	¹⁷ Feet from the 215	¹⁸ East/West line WEST	¹⁹ County RIO ARRIBA

II. Bottom Hole Location

²⁰ UL or lot no. E	²¹ Section 11	²² Township 31N	²³ Range 5W	²⁴ Lot Idn	²⁵ Feet from the 1459	²⁶ North/South line NORTH	²⁷ Feet from the 1287	²⁸ East/West line WEST	²⁹ County RIO ARRIBA
³⁰ Lse Code		³¹ Producing Method Code		³² Gas Connection Date		³³ C-129 Permit Number		³⁴ C-129 Effective Date	³⁵ C-129 Expiration Date

III. Oil and Gas Transporters

³⁶ Transporter OGRID 009018	³⁷ Transporter Name and Address GIANT REFINING P O BOX 12999 SCOTTSDALE, AZ 85267	³⁸ POD	³⁹ O/G O	⁴⁰ POD ULSTR Location and Description
⁴¹ 025244	⁴² WILLIAMS FIELD SERVICES P O BOX 645 TULSA, OK 74102		⁴³ G	



IV. Produced Water

⁴⁴ POD	⁴⁵ POD ULSTR Location and Description
-------------------	--

V. Well Completion Data

⁴⁶ Spud Date 10/08/05	⁴⁷ Ready Date 10/26/05	⁴⁸ TD 4452'	⁴⁹ PBTB	⁵⁰ Perforations 0000' - 0000'	⁵¹ DHC, MC
⁵² Hole Size		⁵³ Casing & Tubing Size	⁵⁴ Depth Set	⁵⁵ Sacks Cement	
12-1/4"		9-5/8", 36#, J-55	338'	200	
8-3/4"		7", 23#, K-55	3918'	625	
6-1/4"		4-1/2", 11.6#, J-55	4445'	0	
		2-3/8", 6.5#, J-55	3885'		

VI. Well Test Data

⁵⁶ Date New Oil	⁵⁷ Gas Delivery Date	⁵⁸ Test Date 12/14/05	⁵⁹ Test Length 3 HRS	⁶⁰ Tbg. Pressure 205	⁶¹ Csg. Pressure 990
⁶² Choke Size 3/4"	⁶³ Oil 0	⁶⁴ Water 0	⁶⁵ Gas 344	⁶⁶ AOF	⁶⁷ Test Method PITOT
⁶⁸ I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: Tracy Ross			OIL CONSERVATION DIVISION Approved by: <i>Charles Herrin</i>		
Printed name: TRACY ROSS			Title: SUPERVISOR DISTRICT # 3		
Title: SR. PRODUCTION ANALYST			Approval Date: MAR 06 2006		
Date: 02/27/06		Phone: 918-573-6254			

Williams Production Company LLC
Rosa Unit Well No. 351-A
30-089-29365

Spud Date: ~~10/28/04~~ October 8, 2005

Surface Loc: 1310' FNL - 215' FNL (D) 11-T31-N-RSW

TD: 4452' MD (3617 TVD) @ 1459' FNL + 1287' FNL (E) 11-T31-N-RSW
on 10-25-2005

Reported top of coal ~~3402' ^{at the bottom}~~ ~~3302' on Comp. Report~~
3566 on proposals

Surface Location: 1310' FNL - 215' FNL

Subsurface Locations:

KOP @ 3133' MD

Top of coal @ 3566' MD

calculated: 1353' FNL - 431' FNL

Horizontal Inclination achieved @ 3958' MD

1406' FNL - 797' FNL

TD @ 4452' MD (3617 TVD)

1459' FNL + 1287' FNL

length of horizontal = 494'

7" Casing landed @ 3918' MD (cemented to surface)
1399' FNL + 757' FNL

4 1/2" liner from 3070' to 4445'

33 joints of pre-perforated pipe

1 joint of non-perforated pipe @ the top