

9/28/09 DB 9/28/09 NSL PTGW 0928938596
 DATE IN SUSPENSE ENGINEER LOGGED IN TYPE APP NO. ~~9/28/09 115~~

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



Williams
 Rosa Unit

ADMINISTRATIVE APPLICATION CHECKLIST #160D

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication
☒ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify _____

RECEIVED OGD
 2009 SEP 18 P 12:28

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
 [B] ☒ Offset Operators, Leaseholders or Surface Owner
 [C] ☐ Application is One Which Requires Published Legal Notice
 [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
 [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
 [F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Heather Riley
 Print or Type Name

Heather Riley
 Signature

Regulatory Specialist 9/17/09
 Title Date

heather.riley@williams.com
 e-mail Address



P. O. Box 640
Aztec, NM 87410
(505) 634-4222
(505) 634-4205 (fax)
Heather.riley@williams.com

SENT VIA FEDERAL EXPRESS

September 17, 2009

Mark E. Fesmire
NEW MEXICO OIL CONSERVATION DIVISION
1220 South Saint Francis Drive
Santa Fe, NM 87505

Re: *Request for Administrative Approval of a Non-Standard Basin Mancos and Basin Dakota BHL
Rosa Unit #160D
API # 30-039-30689
SHL: 1140' FSL & 1400' FWL, Sec. 25, T31N, R6W
BHL: 631' FSL & 679' FWL, Sec. 25, T31N, R6W*

Dear Mr. Fesmire:

Williams Production Co., LLC ("Williams"), pursuant to the provisions of Division Rule 104, hereby seeks administrative approval of an unorthodox location for the Basin Mancos (97232) and the Basin Dakota (71599) formations in Rosa Unit Well #160D. This is a directional well with a bottom hole location of 631' FSL & 679' FWL, Sec. 25, T31N, R6W. This well will be a triple completion in the Mesaverde, Basin Mancos and Basin Dakota formations and is part of the Pilot Project pursuant to Order No. R-13123, which allows for one additional Mesaverde infill well on each standard 320-acre gas proration unit. This well was originally staked to a standard bottom hole location; however, during drilling operations the wellbore deviated to the south causing it to become non-standard as to the Mancos and Dakota formations only. Based on our end of well report, as well as the directional drilling company's calculations, our BHL footages at the base of the Mesaverde are 667' FSL and 694' FWL, making the Mesaverde a standard BHL. See attached As Drilled Plat, Weatherford End of Well Report, and Weatherford Point Interpolation.

Pursuant to Division spacing requirements which require that no well shall be closer than 660 feet to the outer boundary of the federal exploratory unit, this BHL location is encroaching to the south (Section 36) by 29 feet and to the SW diagonal unit (Section 35) by 7' in the Basin Mancos and Dakota formations. These sections are outside the Rosa Unit. The offset operator is Conoco Phillips and they will receive a copy of this letter as notice.

Williams intends to capture the reserves from the Mesaverde, Basin Mancos and Dakota formations with a single well bore. Not only will the multiple completion help capture additional reserves that otherwise would not be able to be economically developed, but utilizing a single well bore for a triple completion will also negate the need for additional disturbance of another wellpad, road, and pipeline.

The surface for this well was located on a multi-well pad, therefore, we are utilizing existing surface disturbance. The bottom hole location was chosen by considering drainage patterns from the existing Mesaverde wells in that spacing unit, i.e. the Rosa Unit #160, #160A, #160B, and #160C. Further, drainage patterns from the other offset Mesaverde wells were also considered. They are the Rosa Unit #165, #165A, #165B, #165C, and the #165D in the North half of 25, the Rosa Unit #005Y, #005A, #005B, #005C, and #005D in the East half of 26, the San Juan 31 6 Unit Nos. 030 and 035G in the NE4 of 35, and the San Juan 31 6 Unit Nos. 42M, 42F and 42Y in the NW4 of 36. See attached drainage map.

The spacing unit for all three formations is the south half. The other Mesaverde wells in the spacing unit are the Rosa Unit #160, #160A, #160B, and #160C. The other Dakota wells in the spacing unit are the Rosa Unit #160B and the #059 (TD'd) and the other Basin Mancos well is the Rosa Unit #059.

Should you have any questions or concerns, please don't hesitate to contact me at the phone numbers listed above. You can also contact Vern Hansen at our Tulsa office at (918) 573-6169.

Sincerely,



Heather Riley
Regulatory Specialist

Enc.: 1st page of APD
As Drilled Plat
Weatherford End of Well Report
Weatherford Point Interpolation
Drainage Map
Mineral Ownership Map

Cc: ConocoPhillips Company
Land Department
Post Office Box 4289
Farmington, NM 87499-4289

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

O:TR
C:FLB
C:W Lane (TL)
C:WCI
C:WFFO
C:Dir + V
C:RISLZ
C:Sign

Sign 7/14/09

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMSF-078766	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Williams Production Company, LLC		7. If Unit or CA Agreement, Name and No. Rosa Unit ALMNM 784073-DK	
3a. Address P.O. Box 640 Aztec, NM 87410	3b. Phone No. (include area code) (505) 634-4208	8. Lease Name and Well No. 624-160D	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1375' FSL & 1510' FWL NESW At proposed prod. zone		9. API Well No. 30-039-30689	
14. Distance in miles and direction from nearest town or post office* approximately 31 miles northeast of Blanco, New Mexico		10. Field and Pool, or Exploratory Basin Mancos/Basin Dakota	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 1375'		11. Sec., T., R., M., or Blk. and Survey or Area Section 25, 31N, 6W	
16. No. of Acres in lease 2,552.710		12. County or Parish Rio Arriba	13. State NM
17. Spacing Unit dedicated to this well 272.32 - (S/2)		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 129' Rosa 160A	
19. Proposed Depth 8,017		20. BLM/BIA Bond No. on file UT0847 99	
21. Elevations (Show whether DF, KDB, RT, GL., etc.) 6,393' GR		22. Approximate date work will start* April 1, 2009	
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:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature <i>Larry Higgins</i>	Name (Printed/Typed) Larry Higgins	Date 2-25-09
Title Drilling COM		
Approved by (Signature) <i>B. J. Monke</i>	Name (Printed/Typed) B. J. Monke	Date 7/13/09
Title ATM	Office FFO	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on reverse)

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

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

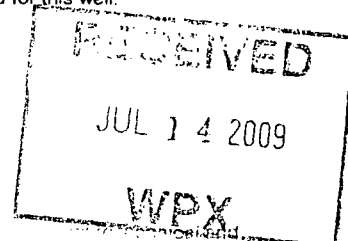
This location has been archaeologically surveyed by La Plata Archaeological Consultants. Copies of their report have been submitted directly to the BLM.

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

This APD is also serving as an application to obtain a pipeline right-of-way. An associated pipeline tie of 219 feet would be required for this well.

RECEIVAL OR ACCEPTANCE OF THIS
DOES NOT RELIEVE THE LESSEE AND
FROM OBTAINING ANY OTHER
AUTHORIZATION REQUIRED FOR OPERATIONS
ON FEDERAL AND INDIAN LANDS

OPERATOR



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NMSF-078766

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2.

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator
WILLIAMS PRODUCTION CO., LLC

3a. Address
P. O. BOX 640
AZTEC, NM 87410

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

7. If Unit of CA/Agreement, Name and/or No.
ROSA UNIT

8. Well Name and No.
ROSA UNIT #160D

9. API Well No.
3003930689

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Surface - 1140' FSL & 1400' FWL
BHL - 670' FSL & 670' FWL Sec 25, T31N, R6W

10. Field and Pool or Exploratory Area
BLANCO MV/BASIN MC/BASIN DK

11. Country or Parish, State
RIO ARRIBA, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13 Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

This well was originally permitted as the Rosa Unit #621, due to change in plans Williams Production intends to move this location and drill this well as a Blanco Mesa Verde, Basin Mancos and Basin Dakota. We also wish to change the name of this well to the Rosa Unit #160D. See attached plat, operation plan, directional plan, surface use plan and attachments.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Larry Higgins

Title Drilling COM

Signature

Date 06/12/2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice 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.

Title

Office

Date

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 page 2)

OPERATOR

☒ AMENDED REPORT
"AS DRILLED"

JASON C. EDWARDS
Certificate Number 15269

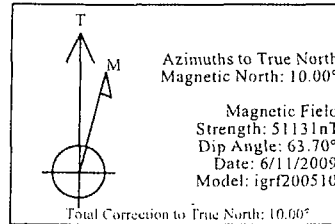
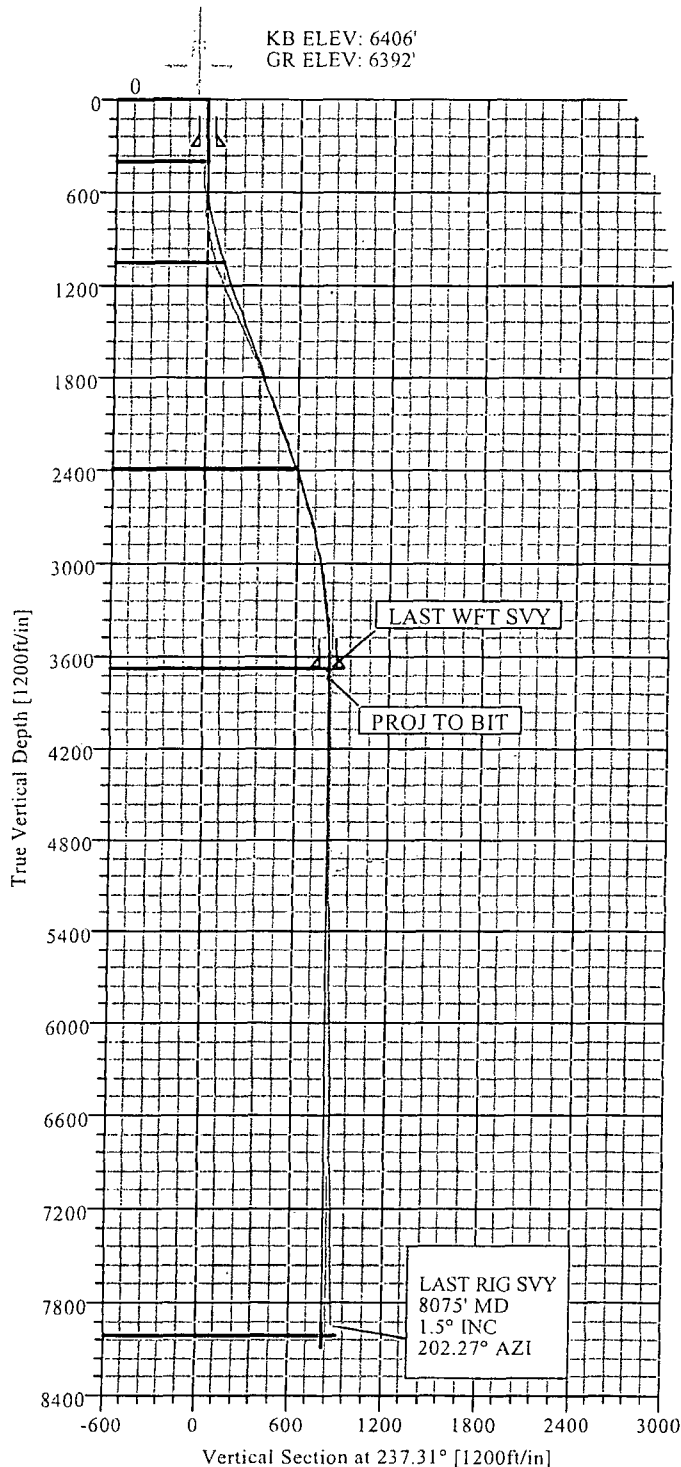


ROSA UNIT #160D
RIO ARriba CO., NEW MEXICO

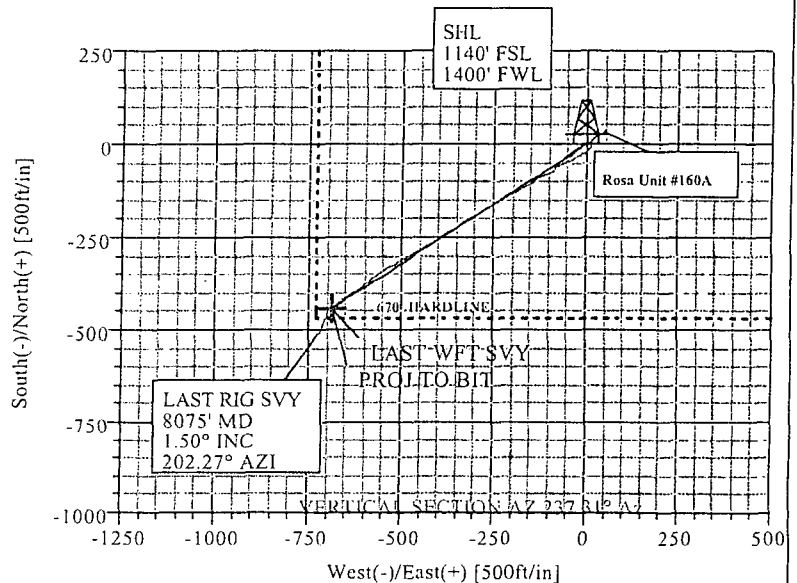
SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target	
1	0.00	0.00	237.31	0.00	0.00	0.00	0.00	0.00	0.00		
2	400.00	0.00	237.31	400.00	0.00	0.00	0.00	0.00	0.00		
3	1059.47	19.78	237.31	1046.44	-60.88	-94.88	3.00	237.31	112.73		
4	2479.99	19.78	237.31	2383.12	-320.53	-499.55	0.00	0.00	593.54		
5	3798.93	0.00	237.31	3676.00	-442.28	-689.31	1.50	180.00	819.00	Int. Csg. Pt. 2	
6	8133.93	0.00	237.31	8011.00	-442.28	-689.31	0.00	237.31	819.00	PBHL 2	

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#160D	0.00	0.00	2136785.68	1298649.31	36°51'59.360N	107°25'06.130W	N/A

TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Int. Csg. Pt. 2	3676.00	-442.28	-689.31	2136351.87	1297954.64	36°51'54.987N	107°25'14.612W	Point
PBHL 2	8011.00	-442.28	-689.31	2136351.87	1297954.64	36°51'54.987N	107°25'14.612W	Point



FORMATION TOP DETAILS			
No.	TVDPath	MDPath	Formation
1	2456.00	2557.17	Ojo Alamo Ss.
2	2591.00	2698.78	Kirtland Sh.
3	2976.00	3094.95	Fruitland Fm.
4	3201.00	3322.69	Pictured Cliffs Ss.
5	3516.00	3638.88	Lewis Sh.
6	5066.00	5188.93	Cliff House Ss. Trans.
7	5371.00	5493.93	Cliff House Ss.
8	5421.00	5543.93	Menefee Fm.
9	5621.00	5743.93	Point Lookout Ss.
10	5986.00	6108.93	Mancos Sh.
11	6966.00	7088.93	Gallup Ss.
12	7686.00	7808.93	Greenhorn Ls.
13	7731.00	7853.93	Graneros Sh.
14	7856.00	7978.93	Dakota Ss.



Weatherford®

CASING DETAILS				
No.	TVD	MD	Name	Size
1	300.00	300.00	10 3/4"	10.750
2	3676.00	3798.93	7 5/8" Int. Csg.	0.000

Plan: Plan #2 (#160D/1)

Created By: Lindsey Maddux

Date: 8/25/2009



Weatherford International, Inc.

Survey Report



Weatherford

Company: WILLIAMS PRODUCTION Date: 8/25/2009 Time: 15:53:59 Page: 1
 Field: RIO ARRIBA CO. NM (NAD 83) Co-ordinate(NE) Reference: Well: #160D, True North
 Site: Rosa Unit #160D Vertical (TYD) Reference: SITE 6406.0
 Well: #160D Section (VS) Reference: Well (0.00N,0.00E,237.31Azi)
 Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Field: RIO ARRIBA CO. NM (NAD 83)

Map System: US State Plane Coordinate System 1983
 Geo Datum: GRS 1980
 Sys Datum: Mean Sea Level

Map Zone: New Mexico, Central Zone
 Coordinate System: Well Centre
 Geomagnetic Model: igrf200510

Site: Rosa Unit #160D

1140' FSL 140' FWL of SEC 25 T31N R6W

Site Position: Northing: 2136785.68 ft Latitude: 36 51 59.360 N
 From: Geographic Easting: 1298649.31 ft Longitude: 107 25 6.130 W
 Position Uncertainty: 0.00 ft North Reference: True
 Ground Level: 6392.00 ft Grid Convergence: -0.70 deg

Well: #160D

Slot Name:

Well Position: +N/-S 0.00 ft Northing: 2136785.68 ft Latitude: 36 51 59.360 N
 +E/-W 0.00 ft Easting: 1298649.31 ft Longitude: 107 25 6.130 W
 Position Uncertainty: 0.00 ft

Wellpath: 1

Current Datum: SITE Height 6406.00 ft
 Magnetic Data: 6/11/2009
 Field Strength: 51131 nT
 Vertical Section: Depth From (TYD)

Drilled From: Surface
 Tie-on Depth: 0.00 ft
 Above System Datum: Mean Sea Level
 Declination: 10.00 deg
 Mag Dip Angle: 63.70 deg
 +E/-W Direction
 ft deg

0.00 0.00 0.00 237.31

Survey: WFT SVY

Start Date: 8/13/2009

Company: Weatherford International, Inc
 Tool: MWD/MWD - Standard

Engineer: Lindsey Maddux
 Tied-to: From Surface

Survey: WFT SVY

MD ft	Incl deg	Azim deg	TYD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
349.00	2.93	60.31	348.85	4.42	7.75	-8.91	0.84	0.84	0.00	MWD
380.00	2.70	62.87	379.81	5.14	9.09	-10.43	0.85	-0.74	8.26	MWD
411.00	1.94	63.59	410.78	5.71	10.21	-11.68	2.45	-2.45	2.32	MWD
441.00	1.55	80.20	440.77	6.01	11.06	-12.55	2.12	-1.30	55.37	MWD
472.00	1.13	100.18	471.76	6.02	11.78	-13.16	2.01	-1.35	64.45	MWD
503.00	1.10	135.78	502.76	5.76	12.29	-13.45	2.20	-0.10	114.84	MWD
533.00	1.71	164.75	532.75	5.12	12.60	-13.37	3.06	2.03	96.57	MWD
564.00	2.25	173.25	563.73	4.07	12.80	-12.97	1.98	1.74	27.42	MWD
595.00	3.00	175.50	594.70	2.65	12.93	-12.32	2.44	2.42	7.26	MWD
626.00	3.69	184.13	625.64	0.85	12.92	-11.34	2.75	2.23	27.84	MWD
657.00	4.88	194.13	656.56	-1.42	12.53	-9.78	4.52	3.84	32.26	MWD
687.00	5.75	200.38	686.43	-4.07	11.70	-7.64	3.48	2.90	20.83	MWD
718.00	6.75	207.00	717.24	-7.15	10.33	-4.83	3.97	3.23	21.35	MWD
749.00	8.06	213.00	747.99	-10.60	8.32	-1.28	4.90	4.23	19.35	MWD
779.00	8.49	220.56	777.67	-14.04	5.73	2.76	3.90	1.43	25.20	MWD
810.00	9.25	226.38	808.30	-17.50	2.44	7.40	3.79	2.45	18.77	MWD
841.00	9.88	231.88	838.87	-20.86	-1.46	12.49	3.58	2.03	17.74	MWD
871.00	10.19	236.50	868.41	-23.91	-5.69	17.71	2.87	1.03	15.40	MWD
903.00	11.13	239.50	899.86	-27.04	-10.72	23.62	3.41	2.94	9.37	MWD
934.00	12.13	242.75	930.23	-30.05	-16.19	29.86	3.86	3.23	10.48	MWD
966.00	13.19	243.25	961.45	-33.24	-22.44	36.84	3.33	3.31	1.56	MWD
997.00	14.81	241.63	991.53	-36.71	-29.08	44.30	5.38	5.23	-5.23	MWD
1029.00	16.40	243.25	1022.35	-40.69	-36.72	52.88	5.15	4.97	5.06	MWD



Weatherford International, Inc.

Survey Report



Weatherford

Company: WILLIAMS PRODUCTION Date: 8/25/2009 Time: 15:53:59 Page: 2
 Field: RIO ARRIBA CO: NM (NAD 83) Co-ordinate(NE) Reference: Well: #160D, True North
 Site: Rosa Unit #160D Vertical (TVD) Reference: SITE 6406.0
 Well: #160D Section (VS) Reference: Well: (0.00N, 0.00E, 237.31Azi)
 Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: WFT SVY

MD ft.	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1061.00	17.10	242.49	1052.99	-44.89	-44.92	62.06	2.29	2.19	-2.37	MWD
1093.00	18.00	241.25	1083.50	-49.45	-53.43	71.67	3.05	2.81	-3.87	MWD
1124.00	18.87	240.83	1112.91	-54.19	-62.01	81.46	2.84	2.81	-1.35	MWD
1156.00	20.17	239.93	1143.07	-59.48	-71.30	92.13	4.17	4.06	-2.81	MWD
1187.00	20.93	240.42	1172.09	-64.89	-80.74	103.00	2.51	2.45	1.58	MWD
1219.00	21.81	240.10	1201.89	-70.68	-90.87	114.65	2.77	2.75	-1.00	MWD
1251.00	22.66	240.09	1231.51	-76.71	-101.36	126.74	2.66	2.66	-0.03	MWD
1283.00	23.21	239.70	1260.98	-82.97	-112.15	139.20	1.78	1.72	-1.22	MWD
1314.00	23.63	240.20	1289.43	-89.14	-122.82	151.51	1.50	1.35	1.61	MWD
1346.00	24.43	240.58	1318.66	-95.58	-134.15	164.52	2.55	2.50	1.19	MWD
1378.00	24.99	239.98	1347.73	-102.21	-145.76	177.88	1.92	1.75	-1.87	MWD
1410.00	25.06	239.55	1376.72	-109.02	-157.46	191.40	0.61	0.22	-1.34	MWD
1442.00	25.24	240.33	1405.69	-115.84	-169.23	204.99	1.18	0.56	2.44	MWD
1473.00	25.53	239.97	1433.70	-122.45	-180.75	218.26	1.06	0.94	-1.16	MWD
1504.00	25.52	240.11	1461.67	-129.12	-192.33	231.60	0.20	-0.03	0.45	MWD
1535.00	25.44	239.75	1489.65	-135.80	-203.87	244.92	0.56	-0.26	-1.16	MWD
1566.00	24.94	240.75	1517.71	-142.35	-215.32	258.10	2.12	-1.61	3.23	MWD
1598.00	24.88	240.63	1546.73	-148.95	-227.08	271.55	0.25	-0.19	-0.37	MWD
1630.00	24.31	241.25	1575.83	-155.42	-238.72	284.85	1.96	-1.78	1.94	MWD
1662.00	23.56	240.63	1605.07	-161.72	-250.07	297.80	2.47	-2.34	-1.94	MWD
1694.00	23.25	240.50	1634.44	-167.97	-261.14	310.49	0.98	-0.97	-0.41	MWD
1725.00	23.06	240.13	1662.94	-174.01	-271.73	322.67	0.77	-0.61	-1.19	MWD
1757.00	22.55	239.49	1692.44	-180.24	-282.45	335.06	1.77	-1.59	-2.00	MWD
1789.00	22.50	239.00	1722.00	-186.51	-292.98	347.31	0.61	-0.16	-1.53	MWD
1821.00	21.81	240.00	1751.64	-192.64	-303.38	359.37	2.46	-2.16	3.12	MWD
1852.00	21.00	238.63	1780.50	-198.41	-313.11	370.67	3.07	-2.61	-4.42	MWD
1884.00	20.63	238.63	1810.41	-204.33	-322.82	382.04	1.16	-1.16	0.00	MWD
1916.00	20.63	237.50	1840.36	-210.29	-332.38	393.31	1.24	0.00	-3.53	MWD
1948.00	20.82	236.53	1870.29	-216.46	-341.88	404.64	1.23	0.59	-3.03	MWD
1979.00	20.94	237.44	1899.25	-222.48	-351.15	415.69	1.12	0.39	2.94	MWD
2009.00	21.02	236.52	1927.26	-228.33	-360.15	426.43	1.13	0.27	-3.07	MWD
2041.00	20.81	236.51	1957.16	-234.63	-369.68	437.85	0.66	-0.66	-0.03	MWD
2073.00	21.20	235.66	1987.03	-241.03	-379.20	449.32	1.55	1.22	-2.66	MWD
2105.00	21.61	235.28	2016.82	-247.65	-388.82	460.99	1.35	1.28	-1.19	MWD
2137.00	20.74	236.80	2046.66	-254.11	-398.41	472.54	3.21	-2.72	4.75	MWD
2168.00	20.10	236.92	2075.71	-260.03	-407.46	483.36	2.07	-2.06	0.39	MWD
2200.00	20.24	238.76	2105.75	-265.90	-416.80	494.39	2.03	0.44	5.75	MWD
2232.00	20.25	238.75	2135.77	-271.64	-426.27	505.46	0.03	0.03	-0.03	MWD
2264.00	20.13	241.25	2165.81	-277.16	-435.83	516.49	2.72	-0.37	7.81	MWD
2295.00	20.19	241.13	2194.91	-282.31	-445.19	527.15	0.24	0.19	-0.39	MWD
2326.00	20.00	241.13	2224.02	-287.45	-454.52	537.78	0.61	-0.61	0.00	MWD
2358.00	19.97	241.78	2254.10	-292.68	-464.13	548.69	0.70	-0.09	2.03	MWD
2390.00	18.75	239.88	2284.29	-297.84	-473.39	559.27	4.29	-3.81	-5.94	MWD
2422.00	18.56	240.38	2314.60	-302.94	-482.27	569.50	0.78	-0.59	1.56	MWD
2453.00	18.63	241.25	2343.99	-307.76	-490.90	579.36	0.92	0.23	2.81	MWD
2485.00	18.13	242.75	2374.35	-312.50	-499.80	589.42	2.15	-1.56	4.69	MWD
2517.00	17.25	242.63	2404.84	-316.96	-508.44	599.10	2.75	-2.75	-0.37	MWD
2548.00	17.18	241.87	2434.45	-321.23	-516.56	608.24	0.76	-0.23	-2.45	MWD
2579.00	16.94	239.88	2464.09	-325.66	-524.51	617.31	2.04	-0.77	-6.42	MWD
2610.00	16.38	239.13	2493.79	-330.17	-532.17	626.19	1.93	-1.81	-2.42	MWD
2642.00	16.13	237.50	2524.51	-334.87	-539.79	635.15	1.63	-0.78	-5.09	MWD
2674.00	16.00	237.63	2555.26	-339.62	-547.26	644.01	0.42	-0.41	0.41	MWD
2706.00	16.45	236.58	2585.98	-344.48	-554.77	652.95	1.68	1.41	-3.28	MWD



Weatherford International, Inc.

Survey Report

**Weatherford**

Company: WILLIAMS PRODUCTION
Field: RIO ARriba CO. NM (NAD 83)
Site: Rosa Unit #160D
Well: #160D
Wellpath: 1

Date: 8/25/2009 Time: 15:53:59 Page: 3
Co-ordinate(NE) Reference: Well: #160D, True North
Vertical (TVD) Reference: SITE 6406.0
Section (VS) Reference: Well (0.00N,0.00E,237.31Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: WFT SVY

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
2737.00	16.50	234.38	2615.71	-349.46	-562.01	661.73	2.02	0.16	-7.10	MWD
2769.00	16.31	235.00	2646.41	-354.68	-569.39	670.76	0.81	-0.59	1.94	MWD
2801.00	16.58	232.55	2677.10	-360.04	-576.69	679.80	2.33	0.84	-7.66	MWD
2833.00	16.15	233.08	2707.80	-365.49	-583.87	688.79	1.42	-1.34	1.66	MWD
2864.00	15.75	231.75	2737.61	-370.68	-590.62	697.27	1.75	-1.29	-4.29	MWD
2895.00	14.75	232.38	2767.52	-375.69	-597.05	705.39	3.27	-3.23	2.03	MWD
2927.00	14.31	234.63	2798.49	-380.47	-603.51	713.40	2.24	-1.37	7.03	MWD
2959.00	13.94	233.75	2829.53	-385.04	-609.84	721.20	1.34	-1.16	-2.75	MWD
2990.00	14.06	234.25	2859.61	-389.45	-615.91	728.69	0.55	0.39	1.61	MWD
3022.00	13.69	235.75	2890.67	-393.85	-622.19	736.35	1.61	-1.16	4.69	MWD
3054.00	13.31	236.88	2921.79	-397.99	-628.41	743.82	1.45	-1.19	3.53	MWD
3086.00	12.88	236.00	2952.96	-402.00	-634.45	751.07	1.48	-1.34	-2.75	MWD
3118.00	12.05	237.01	2984.20	-405.81	-640.21	757.98	2.68	-2.59	3.16	MWD
3149.00	11.06	236.63	3014.57	-409.21	-645.40	764.19	3.20	-3.19	-1.23	MWD
3181.00	10.44	237.75	3046.01	-412.45	-650.42	770.16	2.04	-1.94	3.50	MWD
3213.00	10.00	236.50	3077.50	-415.53	-655.19	775.83	1.54	-1.37	-3.91	MWD
3245.00	9.50	237.00	3109.04	-418.50	-659.72	781.25	1.58	-1.56	1.56	MWD
3276.00	8.69	235.50	3139.65	-421.22	-663.80	786.15	2.72	-2.61	-4.84	MWD
3307.00	7.63	230.88	3170.34	-423.84	-667.32	790.54	4.02	-3.42	-14.90	MWD
3339.00	7.06	229.50	3202.07	-426.46	-670.47	794.60	1.86	-1.78	-4.31	MWD
3370.00	7.13	228.13	3232.84	-428.98	-673.35	798.38	0.59	0.23	-4.42	MWD
3402.00	7.50	232.25	3264.58	-431.59	-676.48	802.42	2.01	1.16	12.87	MWD
3434.00	7.26	234.97	3296.31	-434.02	-679.78	806.52	1.32	-0.75	8.50	MWD
3465.00	6.53	237.55	3327.09	-436.10	-682.88	810.24	2.56	-2.35	8.32	MWD
3497.00	5.56	240.83	3358.91	-437.83	-685.77	813.61	3.22	-3.03	10.25	MWD
3528.00	4.54	243.27	3389.79	-439.11	-688.17	816.33	3.36	-3.29	7.87	MWD
3559.00	4.01	239.08	3420.70	-440.22	-690.20	818.63	1.98	-1.71	-13.52	MWD
3591.00	3.31	230.97	3452.64	-441.38	-691.88	820.67	2.72	-2.19	-25.34	MWD
3622.00	2.91	226.47	3483.59	-442.48	-693.14	822.33	1.51	-1.29	-14.52	MWD
3653.00	2.23	207.67	3514.56	-443.56	-693.99	823.63	3.47	-2.19	-60.65	MWD
3685.00	1.97	212.25	3546.54	-444.57	-694.57	824.67	0.97	-0.81	14.31	MWD
3717.00	1.05	203.50	3578.53	-445.31	-694.98	825.41	2.96	-2.87	-27.34	MWD
3748.00	0.49	185.37	3609.52	-445.70	-695.11	825.73	1.95	-1.81	-58.48	MWD
3780.00	0.35	205.00	3641.52	-445.93	-695.16	825.90	0.62	-0.44	61.34	MWD
3812.00	0.34	202.29	3673.52	-446.10	-695.24	826.06	0.06	-0.03	-8.47	LAST WFT SVY
3863.00	0.34	202.29	3724.52	-446.38	-695.36	826.30	0.00	0.00	0.00	PROJ TO BIT
8075.00	1.50	202.29	7935.91	-508.96	-721.01	881.69	0.03	0.03	0.00	LAST RIG SVY

Annotation

MD ft	TVD ft	
3812.00	3673.52	LAST WFT SVY
3863.00	3724.52	PROJ TO BIT
8075.00	7935.91	LAST RIG SVY

Point Interpolation [X]

Vertical Depth Reference

Reference Datum: SITE @ 6406.0 (Original Site Elev)

Interpolations

	MD (ft)	Inc (deg)	Azi (deg)	TVD (ft)	N/S (ft)	E/W (ft)	VSEC (ft)	DLS (deg/100ft)
1	6310.00	1.01	202.29	6171.34	-473.13	-706.32	849.98	0.03
2								

Notepad

Thanks,

Lindsey Maddux
 Weatherford Directional
 432-561-8892 - Main
 432-561-8895 - Fax
lindsey.maddux@weatherford.com



Do you really need to print this e-mail? GO GREEN!

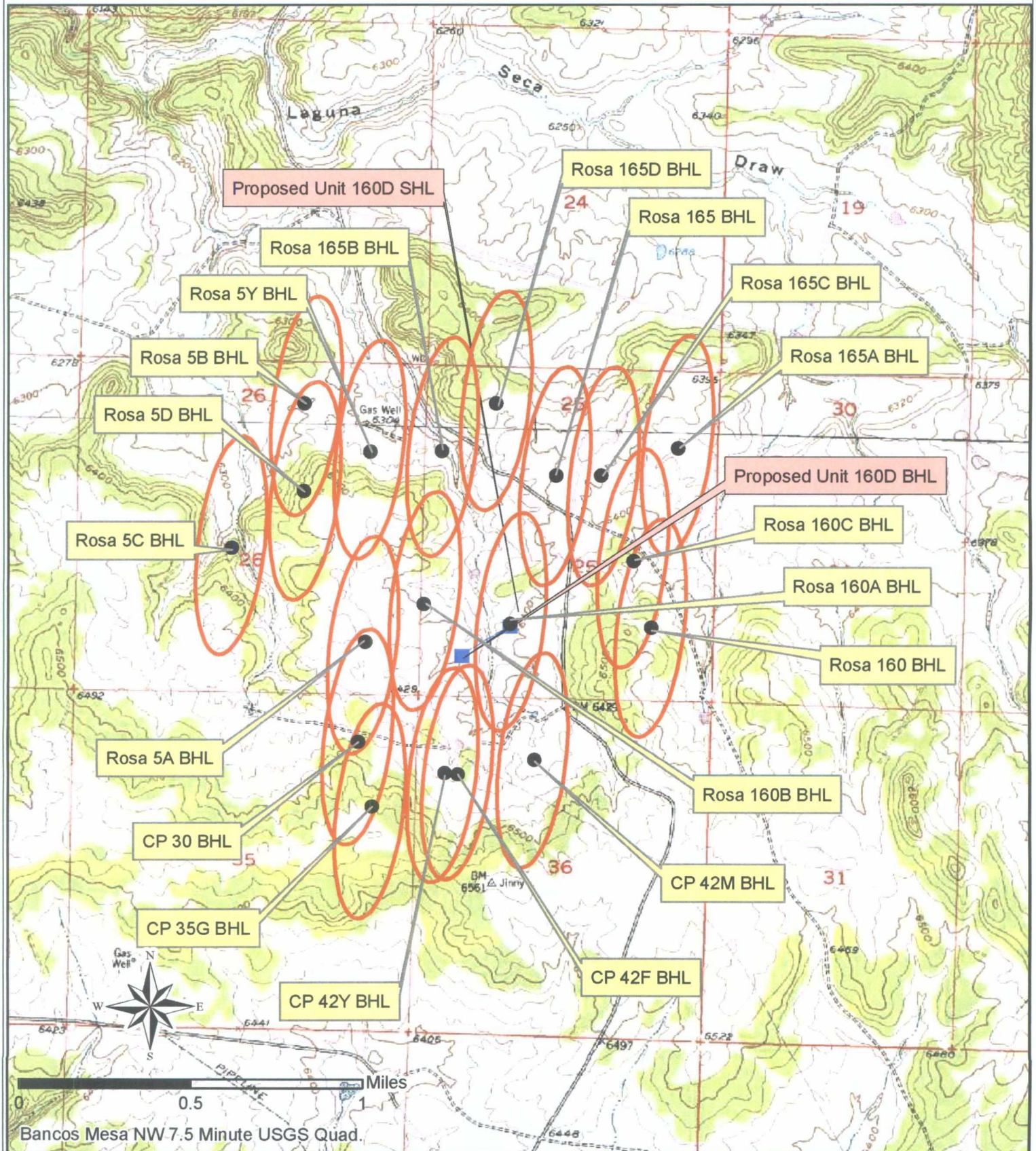
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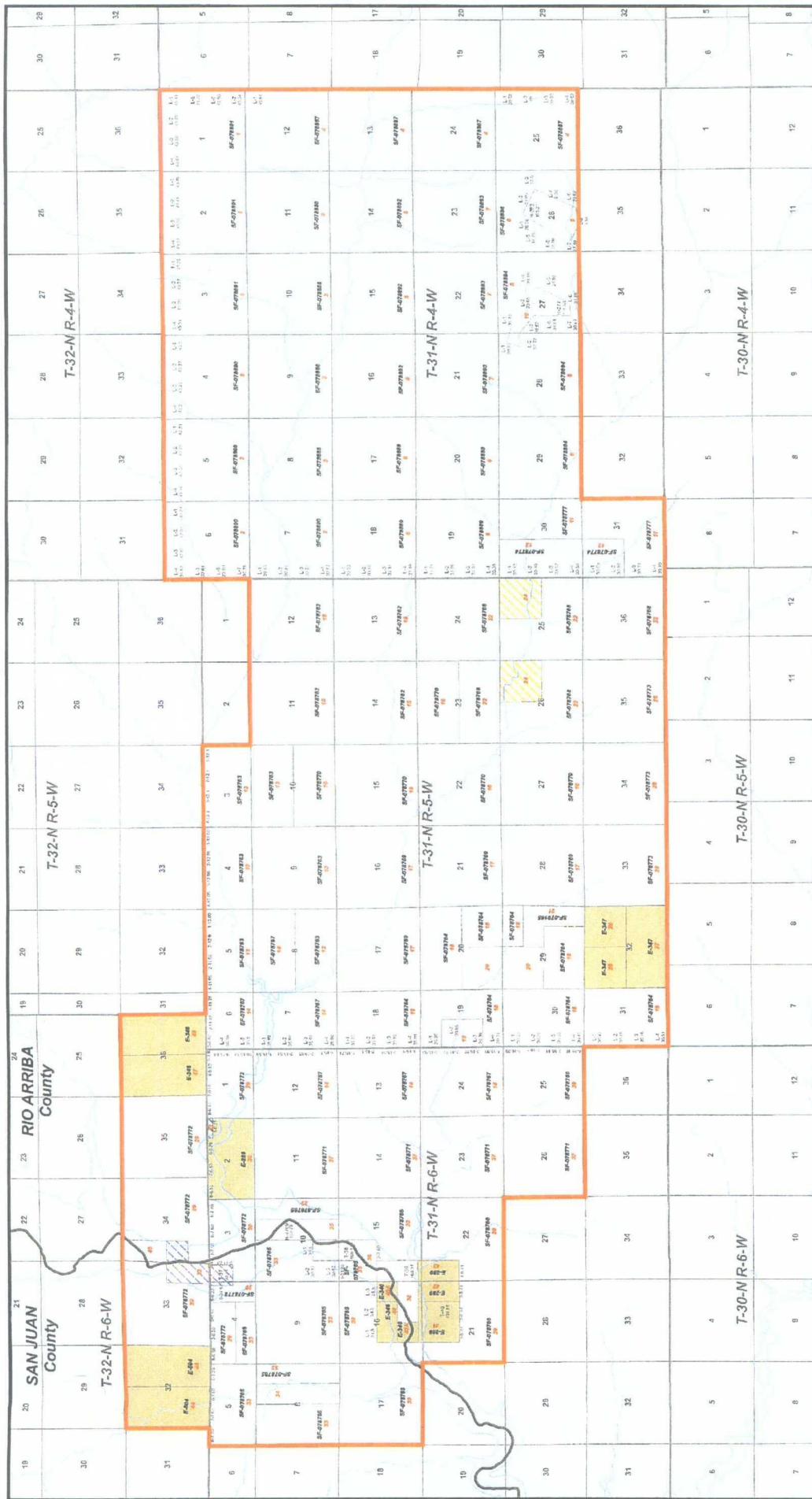
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9/17/2009

NSL Application Drainage Map
Williams Production Company, LLC
Proposed Rosa Unit No. 160D
T31N, R06W, Section 25 NMPM
Rio Arriba, New Mexico





Williams

Exploration & Production

Williams

Rosa Unit

San Juan and Rio Arriba Counties, New Mexico

Scale: 1:72,000

Projection: NAD 1983 State Plane N.M. Zone 1

Date: 3/5/2008

Author: TJ

12,000 Feet

6,000 3,000 0 6,000 12,000 Feet

Rosa Unit Tract No. XX

Mineral Ownership

Federal

Private/Corporated

State

Not Committed

Map Document: G:\Projects\San_Juan\Rosas_Unit\rosas_unit.mxd

3/5/2008 - 11:04 AM

Brooks, David K., EMNRD

From: Brooks, David K., EMNRD
Sent: Thursday, September 24, 2009 9:20 AM
To: 'Riley, Heather '
Subject: Rosa Unit #160D; NSL Application

Dear Ms. Riley

Your application in this case indicates that notice is being given to offsetting operator, ConocoPhillips "by copy of this letter."

However the application letter contains no language admonishing the offset operator, as required by our Rule 15.13.D, that the application may be granted unless a protest is received by OCD within 20 days.

If the copy of the application sent to ConocoPhillips was sent with a cover letter containing the required admonition, please so certify. Otherwise a separate notice to ConocoPhillips of this admonition will be required pursuant to the rule.

Sincerely

David K. Brooks
Legal Examiner
505-476-3450



WILLIAMS PRODUCTION COMPANY, LLC
One Williams Center
P.O. Box 3102
Tulsa, OK 74101-3102
918/573-6169

September 28, 2009

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

San Juan 31-6 Unit – Offset Operator

Re: Application of Williams Production Company, LLC for administrative approval of an unorthodox well location for its Rosa Unit #160D Mancos/Dakota formation well that was drilled to a bottom hole location at 631 feet from the south line and 679 feet from the west line of Section 25, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico.

Ladies and Gentlemen:

Enclosed is a copy of the above-referenced application which was filed with the New Mexico Oil Conservation Division on May 12 2009 by Williams Production Company, LLC for administrative approval of an unorthodox well location for its Rosa Unit #160D Mancos/Dakota formation well that was drilled to a bottom hole location at 631 feet from the south line and 679 feet from the west line of Section 25, Township 31 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico.

The S/2 of Sec. 25, T31N, R6W, a non-standard 272.32 acre proration unit is dedicated to the well.

As an owner of an interest that may be affected by the well, you may object to this application. Objections must be filed in writing within twenty days from this date at the Division's Santa Fe office that is located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. If no objection is received within this twenty-day period, this application for an unorthodox well location may be approved.

Enclosures

Sincerely,

M. Vern Hansen, CPL
Senior Staff Landman

Rosa Unit #160D Mancos/Dakota Formation Well
San Juan 31-6 Unit, Offset Operator
(Mancos and Dakota formations)

ConocoPhillips
Attn: Cherylene Charley
PO Box 4289
Farmington, NM 87499



P. O. Box 640
Aztec, NM 87410
(505) 634-4222
(505) 634-4205 (fax)
Heather.riley@williams.com

SENT VIA FEDERAL EXPRESS

September 17, 2009

Mark E. Fesmire
NEW MEXICO OIL CONSERVATION DIVISION
1220 South Saint Francis Drive
Santa Fe, NM 87505

*Re: Request for Administrative Approval of a Non-Standard Basin Mancos and Basin Dakota BHL
Rosa Unit #160D
API # 30-039-30689
SHL: 1140' FSL & 1400' FWL, Sec. 25, T31N, R6W
BHL: 631' FSL & 679' FWL, Sec. 25, T31N, R6W*

Dear Mr. Fesmire:

Williams Production Co., LLC ("Williams"), pursuant to the provisions of Division Rule 104, hereby seeks administrative approval of an unorthodox location for the Basin Mancos (97232) and the Basin Dakota (71599) formations in Rosa Unit Well #160D. This is a directional well with a bottom hole location of 631' FSL & 679' FWL, Sec. 25, T31N, R6W. This well will be a triple completion in the Mesaverde, Basin Mancos and Basin Dakota formations and is part of the Pilot Project pursuant to Order No. R-13123, which allows for one additional Mesaverde infill well on each standard 320-acre gas proration unit. This well was originally staked to a standard bottom hole location; however, during drilling operations the wellbore deviated to the south causing it to become non-standard as to the Mancos and Dakota formations only. Based on our end of well report, as well as the directional drilling company's calculations, our BHL footages at the base of the Mesaverde are 667' FSL and 694' FWL, making the Mesaverde a standard BHL. See attached As Drilled Plat, Weatherford End of Well Report, and Weatherford Point Interpolation.

Pursuant to Division spacing requirements which require that no well shall be closer than 660 feet to the outer boundary of the federal exploratory unit, this BHL location is encroaching to the south (Section 36) by 29 feet and to the SW diagonal unit (Section 35) by 7' in the Basin Mancos and Dakota formations. These sections are outside the Rosa Unit. The offset operator is Conoco Phillips and they will receive a copy of this letter as notice.

Mark E. Fesmire
September 17, 2009
Page 2 of 2

Williams intends to capture the reserves from the Mesaverde, Basin Mancos and Dakota formations with a single well bore. Not only will the multiple completion help capture additional reserves that otherwise would not be able to be economically developed, but utilizing a single well bore for a triple completion will also negate the need for additional disturbance of another wellpad, road, and pipeline.

The surface for this well was located on a multi-well pad, therefore, we are utilizing existing surface disturbance. The bottom hole location was chosen by considering drainage patterns from the existing Mesaverde wells in that spacing unit, i.e. the Rosa Unit #160, #160A, #160B, and #160C. Further, drainage patterns from the other offset Mesaverde wells were also considered. They are the Rosa Unit #165, #165A, #165B, #165C, and the #165D in the North half of 25, the Rosa Unit #005Y, #005A, #005B, #005C, and #005D in the East half of 26, the San Juan 31 6 Unit Nos. 030 and 035G in the NE4 of 35, and the San Juan 31 6 Unit Nos. 42M, 42F and 42Y in the NW4 of 36. See attached drainage map.

The spacing unit for all three formations is the south half. The other Mesaverde wells in the spacing unit are the Rosa Unit #160, #160A, #160B, and #160C. The other Dakota wells in the spacing unit are the Rosa Unit #160B and the #059 (TD'd) and the other Basin Mancos well is the Rosa Unit #059.

Should you have any questions or concerns, please don't hesitate to contact me at the phone numbers listed above. You can also contact Vern Hansen at our Tulsa office at (918) 573-6169.

Sincerely,

Heather Riley
Regulatory Specialist

Enc.: 1st page of APD
As Drilled Plat
Weatherford End of Well Report
Weatherford Point Interpolation
Drainage Map
Mineral Ownership Map

Cc: ConocoPhillips Company
Land Department
Post Office Box 4289
Farmington, NM 87499-4289

Brooks, David K., EMNRD

From: Winters, Lacey [Lacey.K.Winters@Williams.com]
Sent: Friday, October 16, 2009 9:51 AM
To: Brooks, David K., EMNRD
Cc: Riley, Heather
Subject: FW: Rosa Unit #160D; NSL Application
Attachments: RU #160D Affected Persons.pdf

Mr. Brooks

Heather Riley is out of the office today but wanted me to send this letter to you that went out on 9/28/09. Please let me know if you need anything else.

Have a good day.

Thanks

Lacey Winters
Permitting Tech
Williams E&P

From: Riley, Heather
Sent: Tuesday, September 29, 2009 10:36 AM
To: Brooks, David K., EMNRD
Cc: Higgins, Larry ; Winters, Lacey ; Hansen, Vern ; McQueen, Ken
Subject: RE: Rosa Unit #160D; NSL Application

Mr. Brooks,

Please find attached the Affected Persons letter that went out in yesterday's mail to Conoco Phillips.

Thank you.

Heather Riley
Regulatory Specialist
WILLIAMS PRODUCTION CO., LLC
P. O. Box 640
Aztec, NM 87410
(505) 634-4222 (Office)
(505) 634-4205 (Fax)
(970) 749-8747 (Cell)

From: Brooks, David K., EMNRD [mailto:david.brooks@state.nm.us]
Sent: Thursday, September 24, 2009 9:20 AM
To: Riley, Heather
Subject: Rosa Unit #160D; NSL Application

Dear Ms. Riley

Your application in this case indicates that notice is being given to offsetting operator, ConocoPhillips "by copy of this letter."

However the application letter contains no language admonishing the offset operator, as required by our Rule 15.13.D, that the application may be granted unless a protest is received by OCD within 20 days.

If the copy of the application sent to ConocoPhillips was sent with a cover letter containing the required admonition, please so certify. Otherwise a separate notice to ConocoPhillips of this admonition will be required pursuant to the rule.

Sincerely

David K. Brooks
Legal Examiner
505-476-3450

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Brooks, David K., EMNRD

From: Brooks, David K., EMNRD
Sent: Tuesday, October 20, 2009 8:46 AM
To: 'Riley, Heather '
Cc: Hayden, Steven, EMNRD; 'wesley_ingram@blm.gov'
Subject: Williams Production Co. - Rosa Unit Wells ##129D, 145D, 160D and 183C; NSL Applications

Dear Ms. Riley

The referenced administrative applications were granted on October 19 by the following orders.

#129D NSL-6014
#145D NSL-6013
#160D NSL-6015
#183C NSL-6012

The signed original orders will be posted on OCD's website.

Sincerely

David K. Brooks
Legal Examiner
505-476-3450