

DATE <u>10-2-09</u>	SUSPENSE	ENGINEER <u>Brooks</u>	LOGGED BY <u>10-209</u>	TYPE <u>NISL</u>	PTG-W APP NO. <u>0927549477</u>
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ABOVE THIS LINE FOR DIVISION USE ONLY

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



Williams Prod.
12082
Rosa Unit #181D

ADMINISTRATIVE APPLICATION CHECKLIST 30-039-3075

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]

6096

[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 OCT -2 P 12:41

[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 Spec.
Title

9/20/09
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 30, 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
Location
Rosa Unit #181D
API # 30-039-30795
SHL: 1230' FNL & 730' FEL, Sec. 15, T31N, R6W
BHL: 100' FSL & 1400' FEL, Sec. 10, 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 #181D. This is a directional well with a bottom hole location of 100' FSL & 1400' FEL, Sec. 10, 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.

Pursuant to Order No. R-12984, spacing requirements allow for up to 4 Basin Mancos wells in a standard spacing unit and for wells inside a federal exploratory unit and in a non-participating spacing unit they shall not be closer than 660 feet to the outer boundary of its spacing unit. Additionally, pursuant to Order No. R-10987-B(2), spacing requirements allow for up to 4 Dakota wells in a standard GPU and they shall be located not closer than 660 feet to the outer boundary of the GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary. Given these requirements, this location is encroaching to the south (E2 of Section 15).

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

Mark E. Fesmire
September 30, 2009
Page 2 of 2

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 is being located on a multi-well pad, therefore, we will be 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 #181, #181A, #181B, and #181C. Further, drainage patterns from the other offset Mesaverde wells were also considered. They are the Rosa Unit #075A and #075C in the SW4 of 10, Rosa Unit #012, #012A, #012B, and #012C in the E2 of 15, the Rosa Unit #009, #009A, #009B and #009C in the W2 of 11, and the Rosa Unit #016A and #016C in the NW4 of Section 14. See attached drainage map.

As the Unit Operator of the Rosa Unit, Williams Production is the only offset operator, thereby this proposed non-standard location would not affect any other operators.

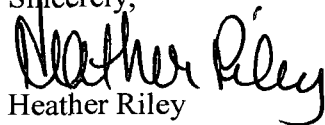
Enclosed for your reference are copies of the Participating Area maps for the Mesaverde and Dakota Formations. All of Sections 10 and 15 are in the PA in the Mesaverde Formation therefore no setback requirements apply. Neither Section 10 or 15 are in the PA in the Dakota, therefore setback requirements do apply. There is no PA in the Mancos so setback requirements apply in that formation as well.

The offset units' working interest owners are common in the Mancos and the Dakota so notice is not required. Mineral interest is uncommon but there are no unleased minerals.

The spacing unit for all three formations is the east half. The other Mesaverde wells in the spacing unit are the Rosa Unit #181, #181A, #181B, and #0815C. There are no other Mancos or Dakota wells in the unit.

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
Plat
Drainage Map
PA Maps (MV & DK)
Mineral ownership map

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

S-1K
C:file
C:HS
C:AKI
C:Dir1
C:12512C:Signma
C:mlane/TL

Su

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address Williams Production Company, LLC P.O. Box 640 Aztec, NM 87410-0640		OGRID Number 120782	
Property Code 17033		API Number 30 - 029-30795	
Property Name Rosa Unit		Well No 181D	
Proposed Pool 1 Blanco Mesa Verde	Proposed Pool 2 Basin Mancos	Proposed Pool 3 Basin Dakota	

Surface Location

UI or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	15	31N	6W		1230	North	730	East	Rio Arriba

Proposed Bottom Hole Location If Different From Surface

UI or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	10	31N	6W		100	South	1400	Ineast	Rio Arriba

Additional Well Information

Work Type Code N	Well Type Code G	Cable/Rotary C	Lease Type Code P	Ground Level Elevation 6268'
Multiple Yes	Proposed Depth 8511'	Formation Basin Dakota	Contractor	Spud Date 8-10-09

Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
14.750"	10.750"	40.5#	300'	290	Surface
9.875"	7.625"	26.4#	3971'	625	Surface
6.750"	5.500"	17.0#	8511'	375	3821'

22 Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

This well will be drilled and completed in the Basin Dakota, Basin Mancos and Blanco Mesa Verde formations. This well will be drilled with fresh water to intermediate casing depth and then drilled to TD with an A 2000# Double Ram BOP system will be used.

RCVD JUL 21 '09
OIL CONS. DIV.
DIST. 3

23 I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature

Printed name.

Larry Higgins

Title: Drilling COM

E-mail Address.

Larry.higgins@williams.com

Date:

7-20-09

Phone.

(505) 634-4208

OIL CONSERVATION DIVISION

Approved by

Title: DEPUTY OIL & GAS INSPECTOR, DIST. 3

Approval Date: JUL 27 2009

Expiration Date: JUL 27 2011

Conditions of Approval Attached ☐

Hold C104

for Directional Survey
and AC Drilled plot

JUL 27 2009

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

HOLD C104 FOR

Mancos &
Dakota

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

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

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102

Revised October 12, 2005

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number	*Pool Code 97232 / 72319 / 71599	*Pool Name BASIN MANCOS / BLANCO MESAVERDE / BASIN DAKOTA
*Property Code 17033	*Property Name ROSA UNIT	*Well Number 181D
*GRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY	*Elevation 6268'

¹⁰ Surface Location

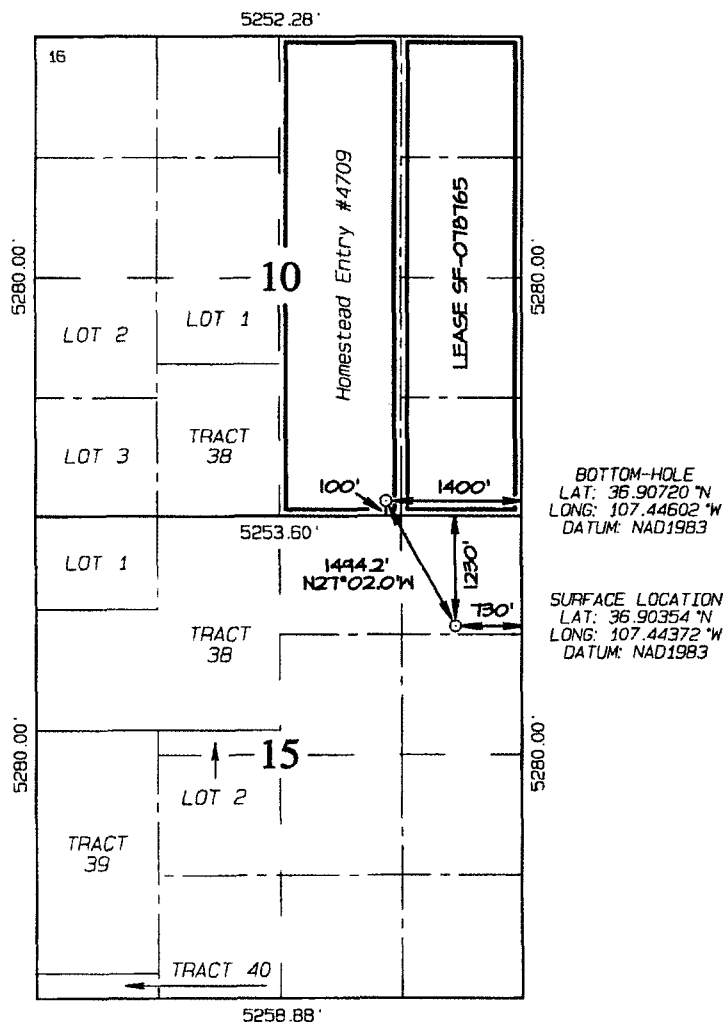
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	15	31N	6W		1230	NORTH	730	EAST	RIO ARriba

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
0	10	31N	6W		100	SOUTH	1400	EAST	RIO ARriba

¹² Dedicated Acres 320.0 Acres E/2 Section 10	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, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling, agreement or a compulsory pooling order heretofore entered by the division.

Signature _____ Date _____

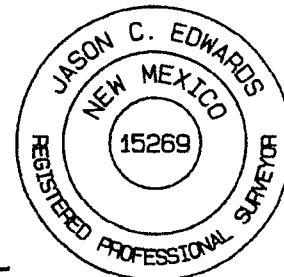
Printed Name _____

¹⁸ SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief

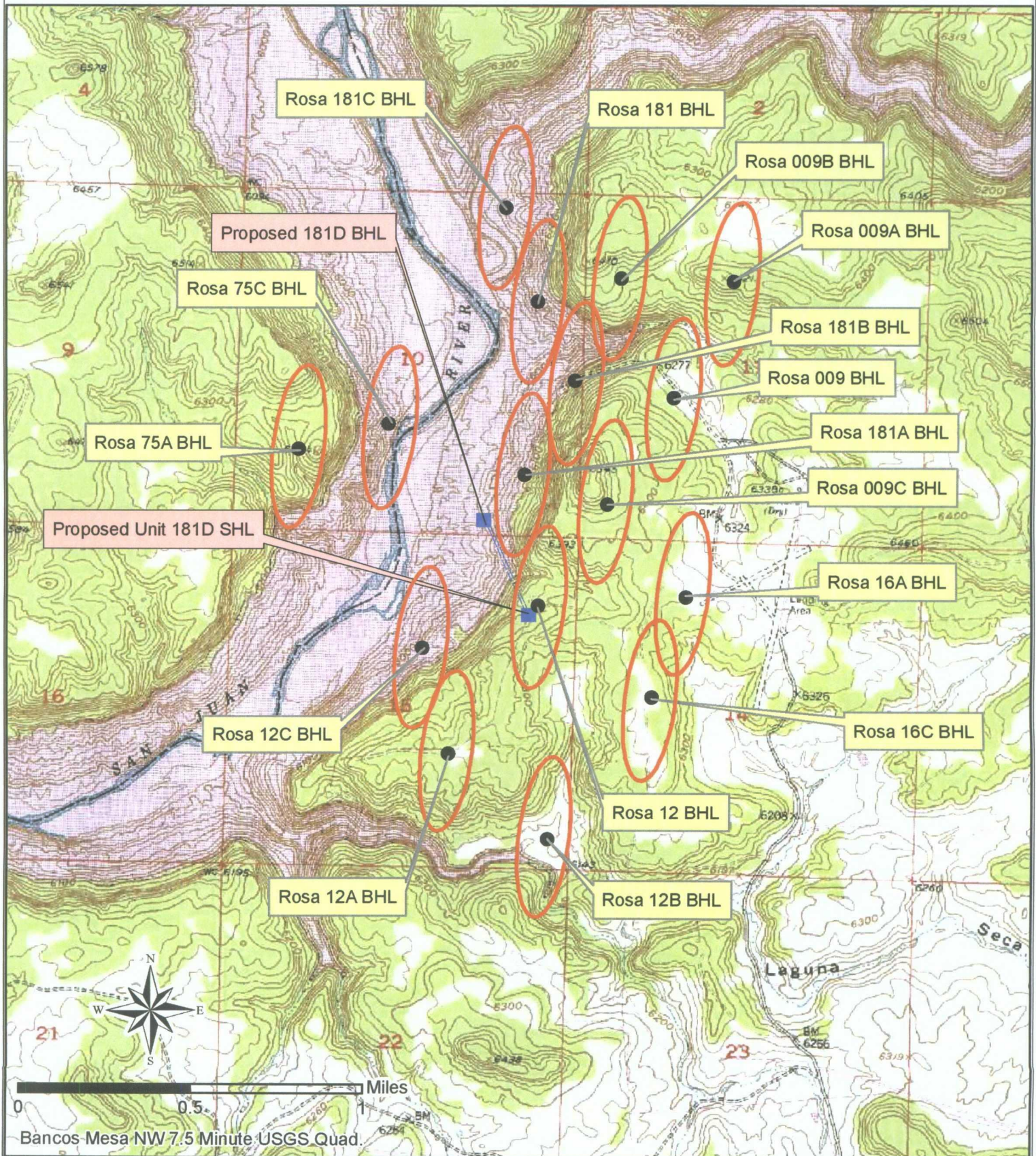
Date of Survey: MAY 24, 2009

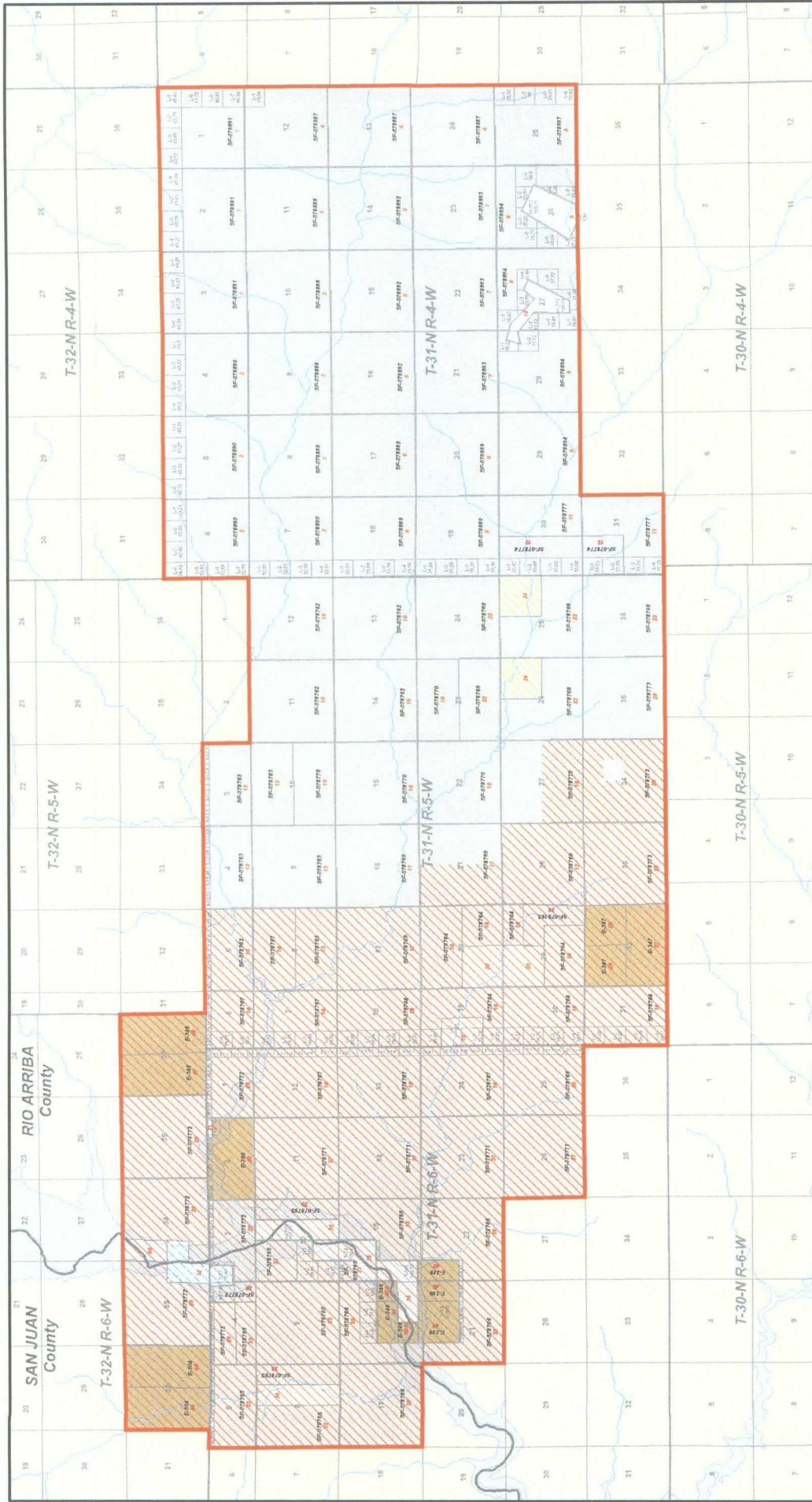
Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

NSL Application Drainage Map
Williams Production Company, LLC
Proposed Rosa Unit No. 181D
T31N, R06W, Section 15 NMPM
Rio Arriba County, New Mexico





Williams

Exploration & Production

Williams

Exploration & Production

Rosa Unit

Mesaverde Formation

San Juan and Rio Arriba Counties, New Mexico

Scale: 1:72,000

Date: 3/7/2007

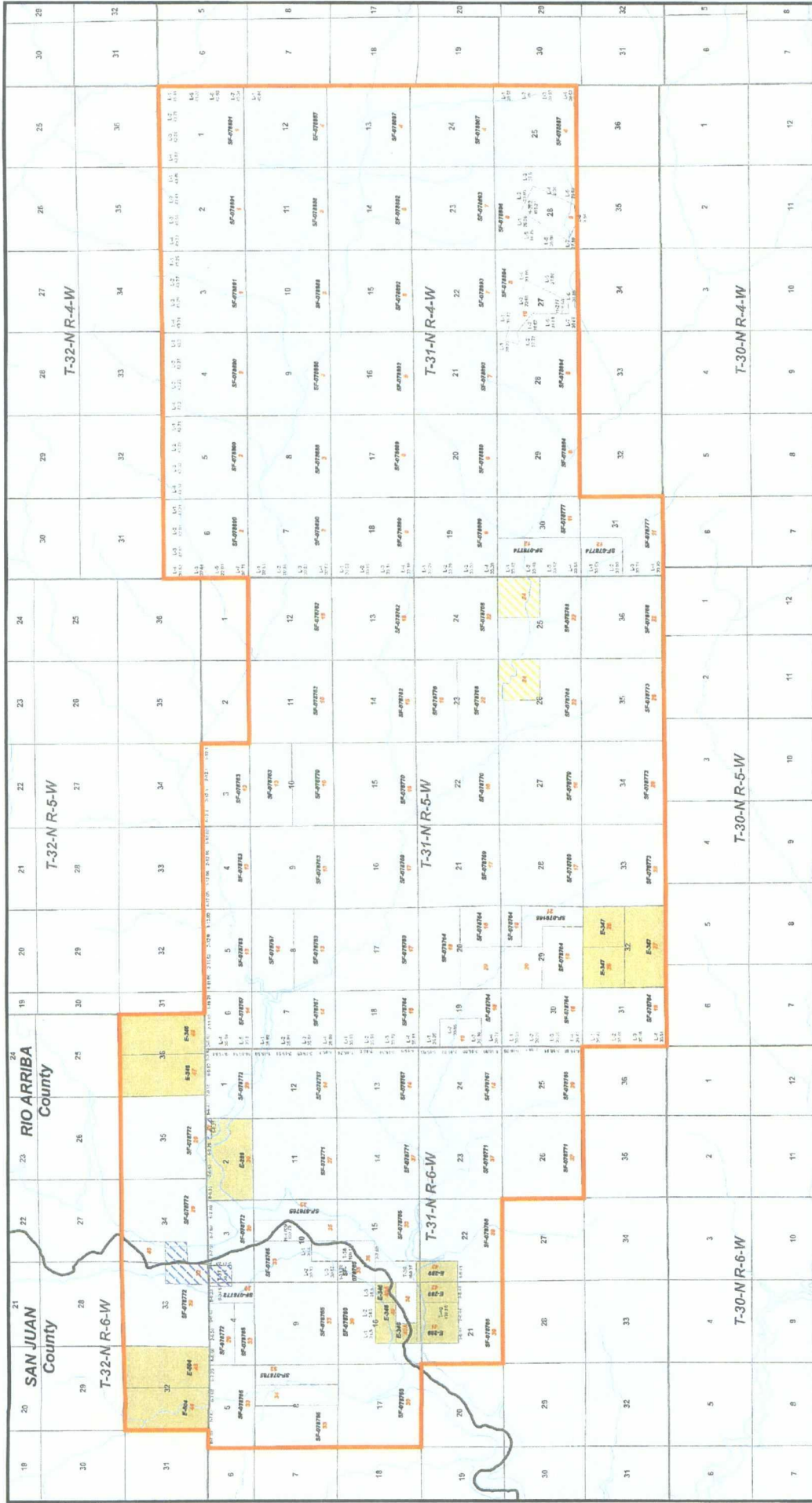
Projection: NAD 1983 State Plane NM West

Author: SA

Rosa Unit Tract No: XX

Map Document: G:\Project\San_Juan\Ross_Unit\Participating_Areas\ross-unit_mv_25.mxd

3/7/2007 - 11:09:51 AM



Rosa Unit Tract No. XX

Map Document: (G:\Projects\San_Juan\Rosas_Lithology.mxd)

3/5/2008 - 11:04:48 PM

Williams

Exploration & Production

Rosa Unit

San Juan and Rio Arriba Counties, New Mexico

Scale: 1:72,000

Projection: NAD 1983 State Plane NM West

Date: 3/5/2008

Author: TJ

Brooks, David K., EMNRD

From: Brooks, David K., EMNRD
Sent: Monday, October 05, 2009 11:39 AM
To: 'Riley, Heather '
Subject: Rosa Unit #181D; NSL Application

Dear Ms. Riley

Because the surface location of this directional well is not within the designated project area, and the bottom hole location is extremely close to the boundary of the project area, please provide us with a summary of your drilling plan, so we can be satisfied that the actual completion locations for all formations will be in Section 10, and not in Section 15.

Sincerely
David K. Brooks
Legal Examiner
505-476-3450

Brooks, David K., EMNRD

From: Riley, Heather [Heather.Riley@Williams.com]
Sent: Monday, October 05, 2009 3:08 PM
To: Brooks, David K., EMNRD
Cc: Higgins, Larry ; McQueen, Ken ; Sizemore, Gary ; Hansen, Vern ; Winters, Lacey
Subject: RE: Rosa Unit #181D; NSL Application
Attachments: Rosa #181D MVMCDK drill.doc; Rosa 181-D P1 Proposal.pdf

Mr. Brooks,

Attached please find the Drilling Plans and Directional Proposal for this well. Once TD is reached, we will be submitting an EOW report and an As Drilled Plat pinpointing the exact location of the bottom hole.

Please let me know if you need any additional information.

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: Monday, October 05, 2009 11:39 AM
To: Riley, Heather
Subject: Rosa Unit #181D; NSL Application

Dear Ms. Riley

Because the surface location of this directional well is not within the designated project area, and the bottom hole location is extremely close to the boundary of the project area, please provide us with a summary of your drilling plan, so we can be satisfied that the actual completion locations for all formations will be in Section 10, and not in Section 15.

Sincerely
David K. Brooks
Legal Examiner
505-476-3450

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Weatherford®

Drilling Services

PROPOSAL



WILLIAMS PRODUCTION COMPANY
ROSA UNIT #181-D
RIO ARRIBA COUNTY, NEW MEXICO
WELL FILE: **PLAN 1**

Submitted: June 15, 2009

Weatherford International Ltd.
P.O. Box 61028
Midland, Texas 79711 USA
+1.432.561.8892 Main
+1.432.561.8895 Fax
www.weatherford.com



ROSA UNIT #181D RIO ARriba COUNTY, NM

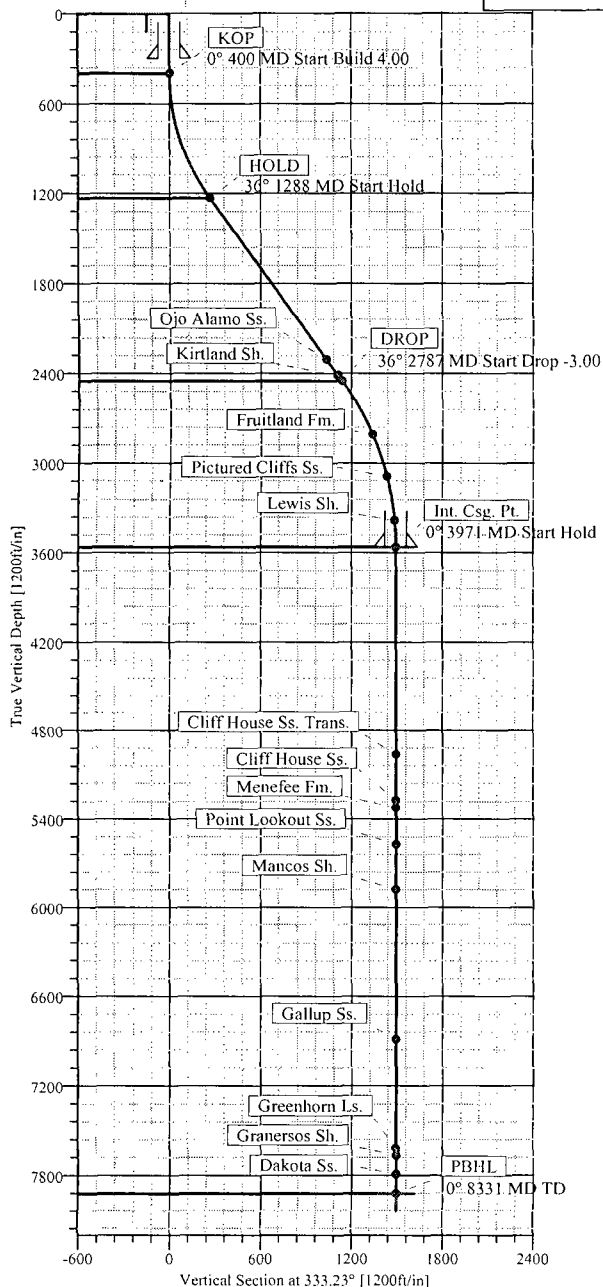
SITE DETAILS

Rosa Unit #181-D
1230' FNL & 730' FEL

Site Centre Latitude: 36°54'12.740N
Longitude: 107°26'37.390W

Ground Level: 6268.00
Positional Uncertainty: 0.00
Convergence: -0.72

KB ELEV: 6282'
GR ELEV: 6268'



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	333.23	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	333.23	400.00	0.00	0.00	0.00	0.00	0.00	
3	1288.11	35.52	333.23	1232.29	238.04	-120.09	4.00	333.23	266.61	
4	2787.11	35.52	333.23	2452.28	1015.67	-512.40	0.00	0.00	1137.60	
5	3971.25	0.00	333.23	3562.00	1333.05	-672.52	3.00	180.00	1493.08	Int. Csg. Pt.
6	8331.25	0.00	333.23	7922.00	1333.05	-672.52	0.00	333.23	1493.08	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
181-D	0.00	0.00	2150366.52	1291402.35	36°54'12.740N	107°26'37.390W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Rosa #12	0.00	-36.00	257.16	36°54'12.384N	107°26'34.224W	Point
Int. Csg. Pt.	3562.00	1333.05	-672.52	36°54'25.920N	107°26'45.670W	Point
PBHL	7922.00	1333.05	-672.52	36°54'25.920N	107°26'45.670W	Point

CASING DETAILS

No.	TVD	MD	Name	Size
1	300.00	300.00	10 3/4"	10.750
2	3562.00	3971.25	7 5/8"	7.625

FIELD DETAILS

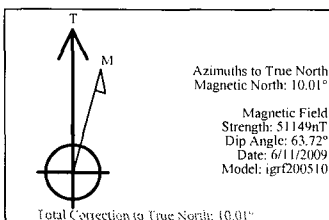
Rio Arriba Co., NM (NAD 83)

Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: New Mexico, Central Zone
Magnetic Model: igrf200510

System Datum: Mean Sea Level
Local North: True North

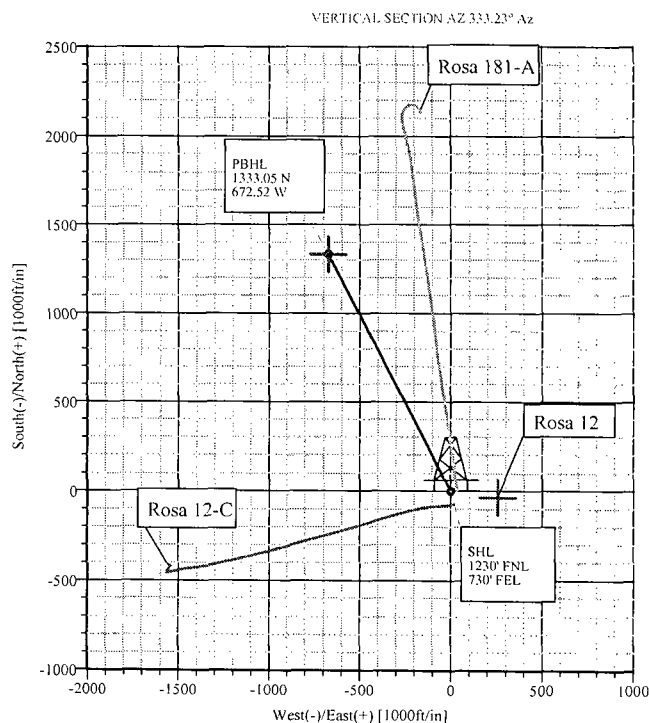
FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	2307.00	2608.60	Ojo Alamo Ss.
2	2412.00	2737.61	Kirtland Sh.
3	2807.00	3195.06	Fruitland Fm.
4	3087.00	3491.21	Pictured Cliffs Ss.
5	3382.00	3790.98	Lewis Sh.
6	4962.00	5371.25	Cliff House Ss. Trans.
7	5272.00	5681.25	Cliff House Ss.
8	5322.00	5731.25	Menefee Fm.
9	5572.00	5981.25	Point Lookout Ss.
10	5877.00	6286.25	Mancos Sh.
11	6887.00	7296.25	Gallup Ss.
12	7617.00	8026.25	Greenhorn Ls.
13	7667.00	8076.25	Graneros Sh.
14	7792.00	8201.25	Dakota Ss.



LEGEND

- 12-C (1)
- 181-A (1)
- Plan #1



Created By: Jayme Wilson

Date: 6/15/2009



Weatherford International Ltd.

PROPOSAL PLAN REPORT



Weatherford

Company: WILLIAMS PRODUCTION Date: 6/15/2009 Time: 18:03:31 Page: 1
 Field: Rio Arriba Co., NM (NAD 83) Co-ordinate(NE) Reference: Well: 181-D, True North
 Site: Rosa Unit #181-D Vertical (TVD) Reference: SITE 6282.0
 Well: 181-D Section (VS) Reference: Well (0.00N,0.00E,333.23Azi)
 Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Plan: Plan #1 Date Composed: 6/11/2009
 Principal: Yes Version: 1
 Tied-to: From Surface

Field: Rio Arriba Co., NM (NAD 83)

Map System: US State Plane Coordinate System 1983 Map Zone: New Mexico, Central Zone
 Geo Datum: GRS 1980 Coordinate System: Well Centre
 Sys Datum: Mean Sea Level Geomagnetic Model: igrf200510

Site: Rosa Unit #181-D

1230' FNL & 730' FEL

Site Position: Northing: 2150366.52 ft Latitude: 36 54 12.740 N
 From: Geographic Easting: 1291402.35 ft Longitude: 107 26 37.390 W
 Position Uncertainty: 0.00 ft North Reference: True
 Ground Level: 6268.00 ft Grid Convergence: -0.72 deg

Well: 181-D

Slot Name:

Well Position: +N/-S 0.00 ft Northing: 2150366.52 ft Latitude: 36 54 12.740 N
 +E/-W 0.00 ft Easting: 1291402.35 ft Longitude: 107 26 37.390 W
 Position Uncertainty: 0.00 ft

Wellpath: 1

Current Datum: SITE Height 6282.00 ft Drilled From: Surface
 Magnetic Data: 6/11/2009 Tie-on Depth: 0.00 ft
 Field Strength: 51149 nT Above System Datum: Mean Sea Level
 Vertical Section: Depth From (TVD) +N/-S Declination: 10.01 deg
 ft ft +E/-W Mag Dip Angle: 63.72 deg
 Direction
 deg
 0.00 0.00 0.00 333.23

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	333.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	333.23	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1288.11	35.52	333.23	1232.29	238.04	-120.09	4.00	4.00	0.00	333.23	
2787.11	35.52	333.23	2452.28	1015.67	-512.40	0.00	0.00	0.00	0.00	
3971.25	0.00	333.23	3562.00	1333.05	-672.52	3.00	-3.00	0.00	180.00	Int. Csg. Pt.
8331.25	0.00	333.23	7922.00	1333.05	-672.52	0.00	0.00	0.00	333.23	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	Build deg/100ft	Turn deg/100ft	DLS deg/100ft	TFO deg	Comment
300.00	0.00	333.23	300.00	0.00	0.00	0.00	0.00	0.00	0.00	333.23	
400.00	0.00	333.23	400.00	0.00	0.00	0.00	0.00	0.00	0.00	333.23	KOP
500.00	4.00	333.23	499.92	3.12	-1.57	3.49	4.00	0.00	4.00	0.00	
600.00	8.00	333.23	599.35	12.45	-6.28	13.94	4.00	0.00	4.00	0.00	
700.00	12.00	333.23	697.81	27.95	-14.10	31.30	4.00	0.00	4.00	0.00	
800.00	16.00	333.23	794.82	49.54	-24.99	55.49	4.00	0.00	4.00	0.00	
900.00	20.00	333.23	889.91	77.12	-38.91	86.38	4.00	0.00	4.00	0.00	
1000.00	24.00	333.23	982.61	110.56	-55.78	123.84	4.00	0.00	4.00	0.00	
1100.00	28.00	333.23	1072.47	149.69	-75.52	167.67	4.00	0.00	4.00	0.00	
1200.00	32.00	333.23	1159.05	194.33	-98.04	217.66	4.00	0.00	4.00	0.00	
1288.11	35.52	333.23	1232.29	238.04	-120.09	266.61	4.00	0.00	4.00	0.00	HOLD
1300.00	35.52	333.23	1241.97	244.21	-123.20	273.52	0.00	0.00	0.00	0.00	
1400.00	35.52	333.23	1323.36	296.08	-149.37	331.63	0.00	0.00	0.00	0.00	
1500.00	35.52	333.23	1404.74	347.96	-175.54	389.73	0.00	0.00	0.00	0.00	
1600.00	35.52	333.23	1486.13	399.84	-201.72	447.84	0.00	0.00	0.00	0.00	



Weatherford International Ltd.

PROPOSAL PLAN REPORT

**Weatherford**

Company: WILLIAMS PRODUCTION
Field: Rio Arriba Co., NM (NAD 83)
Site: Rosa Unit #181-D
Well: 181-D
Wellpath: 1

Date: 6/15/2009 Time: 18:03:31 Page: 2
Co-ordinate(NE) Reference: Well: 181-D, True North
Vertical (TVD) Reference: SITE 6282.0
Section (VS) Reference: Well (0.00N,0.00E,333.23Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	Build deg/100ft	Turn deg/100ft	DLS deg/100ft	TFO deg	Comment
1700.00	35.52	333.23	1567.52	451.71	-227.89	505.94	0.00	0.00	0.00	0.00	
1800.00	35.52	333.23	1648.90	503.59	-254.06	564.05	0.00	0.00	0.00	0.00	
1900.00	35.52	333.23	1730.29	555.47	-280.23	622.15	0.00	0.00	0.00	0.00	
2000.00	35.52	333.23	1811.68	607.34	-306.40	680.26	0.00	0.00	0.00	0.00	
2100.00	35.52	333.23	1893.07	659.22	-332.57	738.36	0.00	0.00	0.00	0.00	
2200.00	35.52	333.23	1974.45	711.10	-358.75	796.47	0.00	0.00	0.00	0.00	
2300.00	35.52	333.23	2055.84	762.97	-384.92	854.57	0.00	0.00	0.00	0.00	
2400.00	35.52	333.23	2137.23	814.85	-411.09	912.67	0.00	0.00	0.00	0.00	
2500.00	35.52	333.23	2218.61	866.73	-437.26	970.78	0.00	0.00	0.00	0.00	
2600.00	35.52	333.23	2300.00	918.60	-463.43	1028.88	0.00	0.00	0.00	0.00	
2700.00	35.52	333.23	2381.39	970.48	-489.60	1086.99	0.00	0.00	0.00	0.00	
2787.11	35.52	333.23	2452.28	1015.67	-512.40	1137.60	0.00	0.00	0.00	0.00	DROP
2800.00	35.14	333.23	2462.80	1022.33	-515.76	1145.06	-3.00	0.00	3.00	180.00	
2900.00	32.14	333.23	2546.05	1071.78	-540.71	1200.45	-3.00	0.00	3.00	180.00	
3000.00	29.14	333.23	2632.08	1117.27	-563.66	1251.40	-3.00	0.00	3.00	180.00	
3100.00	26.14	333.23	2720.66	1158.68	-584.55	1297.78	-3.00	0.00	3.00	180.00	
3200.00	23.14	333.23	2811.54	1195.90	-603.32	1339.46	-3.00	0.00	3.00	180.00	
3300.00	20.14	333.23	2904.49	1228.81	-619.93	1376.33	-3.00	0.00	3.00	180.00	
3400.00	17.14	333.23	2999.23	1257.34	-634.32	1408.29	-3.00	0.00	3.00	180.00	
3500.00	14.14	333.23	3095.52	1281.40	-646.46	1435.24	-3.00	0.00	3.00	180.00	
3600.00	11.14	333.23	3193.08	1300.94	-656.32	1457.12	-3.00	0.00	3.00	180.00	
3700.00	8.14	333.23	3291.66	1315.88	-663.86	1473.86	-3.00	0.00	3.00	180.00	
3800.00	5.14	333.23	3390.98	1326.20	-669.06	1485.41	-3.00	0.00	3.00	180.00	
3900.00	2.14	333.23	3490.77	1331.86	-671.92	1491.76	-3.00	0.00	3.00	180.00	
3971.25	0.00	333.23	3562.00	1333.05	-672.52	1493.08	-3.00	0.00	3.00	180.00	Int. Csg. Pt.
4000.00	0.00	333.23	3590.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
4100.00	0.00	333.23	3690.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
4200.00	0.00	333.23	3790.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
4300.00	0.00	333.23	3890.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
4400.00	0.00	333.23	3990.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
4500.00	0.00	333.23	4090.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
4600.00	0.00	333.23	4190.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
4700.00	0.00	333.23	4290.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
4800.00	0.00	333.23	4390.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
4900.00	0.00	333.23	4490.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
5000.00	0.00	333.23	4590.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
5100.00	0.00	333.23	4690.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
5200.00	0.00	333.23	4790.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
5300.00	0.00	333.23	4890.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
5400.00	0.00	333.23	4990.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
5500.00	0.00	333.23	5090.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
5600.00	0.00	333.23	5190.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
5700.00	0.00	333.23	5290.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
5800.00	0.00	333.23	5390.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
5900.00	0.00	333.23	5490.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
6000.00	0.00	333.23	5590.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
6100.00	0.00	333.23	5690.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
6200.00	0.00	333.23	5790.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
6300.00	0.00	333.23	5890.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
6400.00	0.00	333.23	5990.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
6500.00	0.00	333.23	6090.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
6600.00	0.00	333.23	6190.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
6700.00	0.00	333.23	6290.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	



Weatherford International Ltd.

PROPOSAL PLAN REPORT



Weatherford

Company: WILLIAMS PRODUCTION Date: 6/15/2009 Time: 18:03:31 Page: 3
 Field: Rio Arriba Co., NM (NAD 83) Co-ordinate(NE) Reference: Well: 181-D, True North
 Site: Rosa Unit #181-D Vertical (TVD) Reference: SITE 6282.0
 Well: 181-D Section (VS) Reference: Well (0.00N,0.00E,333.23Azi)
 Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	Build deg/100ft	Turn deg/100ft	DLS deg/100ft	TFO deg	Comment
6800.00	0.00	333.23	6390.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
6900.00	0.00	333.23	6490.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
7000.00	0.00	333.23	6590.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
7100.00	0.00	333.23	6690.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
7200.00	0.00	333.23	6790.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
7300.00	0.00	333.23	6890.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
7400.00	0.00	333.23	6990.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
7500.00	0.00	333.23	7090.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
7600.00	0.00	333.23	7190.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
7700.00	0.00	333.23	7290.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
7800.00	0.00	333.23	7390.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
7900.00	0.00	333.23	7490.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
8000.00	0.00	333.23	7590.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
8100.00	0.00	333.23	7690.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
8200.00	0.00	333.23	7790.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
8300.00	0.00	333.23	7890.75	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	
8331.25	0.00	333.23	7922.00	1333.05	-672.52	1493.08	0.00	0.00	0.00	333.23	PBHL

Targets

Name	Description	TVD	+N/-S	+E/-W	Map Northing	Map Easting	<--- Latitude ---> Deg Min Sec	<--- Longitude ---> Deg Min Sec
Rosa #12		0.00	-36.00	257.16	2150327.30	1291659.04	36 54 12.384 N	107 26 34.224 W
Int. Csg. Pt.		3562.00	1333.05	-672.52	2151707.88	1290746.56	36 54 25.920 N	107 26 45.670 W
-Plan hit target								
PBHL		7922.00	1333.05	-672.52	2151707.88	1290746.56	36 54 25.920 N	107 26 45.670 W
-Plan hit target								

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
2608.60	2307.00	Ojo Alamo Ss.		0.00	0.00
2737.61	2412.00	Kirtland Sh.		0.00	0.00
3195.06	2807.00	Fruitland Fm.		0.00	0.00
3491.21	3087.00	Pictured Cliffs Ss.		0.00	0.00
3790.98	3382.00	Lewis Sh.		0.00	0.00
5371.25	4962.00	Cliff House Ss. Trans.		0.00	0.00
5681.25	5272.00	Cliff House Ss.		0.00	0.00
5731.25	5322.00	Menefee Fm.		0.00	0.00
5981.25	5572.00	Point Lookout Ss.		0.00	0.00
6286.25	5877.00	Mancos Sh.		0.00	0.00
7296.25	6887.00	Gallup Ss.		0.00	0.00
8026.25	7617.00	Greenhorn Ls.		0.00	0.00
8076.25	7667.00	Graneros Sh.		0.00	0.00
8201.25	7792.00	Dakota Ss.		0.00	0.00

Annotation

MD ft	TVD ft	
400.00	400.00	KOP
1288.11	1232.29	HOLD
2787.11	2452.28	DROP
3971.25	3562.00	Int. Csg. Pt.
8331.24	7921.99	PBHL



Weatherford International Ltd.
PROPOSAL PLAN REPORT



Weatherford

Company:	WILLIAMS PRODUCTION	Date:	6/15/2009	Time:	18:03:31	Page:	4
Field:	Rio Arriba Co., NM (NAD 83)	Co-ordinate(NE) Reference:	Well: 181-D, True North				
Site:	Rosa Unit #181-D	Vertical (TVD) Reference:	SITE 6282.0				
Well:	181-D	Section (VS) Reference:	Well (0.00N,0.00E,333.23Azi)				
Wellpath:	1	Survey Calculation Method:	Minimum Curvature		Db:	Sybase	

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
300.00	300.00	10.750	12.250	10 3/4"
3971.25	3562.00	7.625	8.500	7 5/8"



WILLIAMS PRODUCTION COMPANY
Drilling Plan

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

<u>DATE:</u>	9/25/2009	<u>FIELD:</u>	Basin DK/ Basin MC/BlancoMV
<u>WELL NAME:</u>	Rosa Unit #181-D	<u>SURFACE:</u>	State
<u>S. LOCATION:</u>	NE/4 NE/4 Sec 15-31N-6W Rio Arriba, NM	<u>MINERALS:</u>	Federal
<u>ELEVATION:</u>	6,268' ft. GL	<u>LEASE #</u>	SF-078765
<u>MEASURED DEPTH:</u>	8,297 ft. (MD)	<u>API#:</u>	30-039-30795
<u>I. GEOLOGY:</u>	Surface formation - San Jose	<u>TEAM LEAD:</u>	Mark Lepich (505)320-1338 Cell (505) 634-4203 Office

CALL 72 HRS BEFORE RIG MOVE

A. FORMATION TOPS: (KB)

Name	TVD	MD	Name	TVD	MD
Ojo Alamo	2,307	2,550	Menefee	5,322	5,698
Kirtland	2,412	2,673	Point Lookout	5,572	5,948
Fruitland	2,807	3,137	Mancos	5,877	6,253
Pictured Cliffs	3,087	3,448	Gallup	6,887	7,263
Lewis	3,382	3,755	Greenhorn	7,617	7,993
Intermediate Csg	3,562	4,138	Graneros	7,667	8,043
Cliff House	5,272	5,648	Dakota	7,792	8,168
			TD	7,922	8,297

B. LOGGING PROGRAM: SEE ATTACHED GEOLOGIC PROGNOSIS

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: *Rig up closed loop flow system.* Use Water + Gel/Polymer sweeps to drill Surface hole. Convert to a LSLD - EZ-MUD system mud (+/-50 Vis.) to drill 9-7/8 in. Intermediate Hole. Increase vis to +/-60 to run Casing. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses. Use Air , Air Hammer and 6-3/4 in. Flat btm. bit to drill-out of 7-5/8 in. csg. and to TD well at +/- 8,138. (MD). **Run TOTCO Survey at TD.**

B. BOP TESTING: While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes and 1500 psi (High) for 10 minutes.** Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The surface and Intermediate casing will be pressure tested to **1500 psi for 30 minutes** after the BOPE 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 (MD)</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	14-3/4"	+310'	10-3/4"	40.5# K-55
Intermediate	9-7/8"	4,138'	7-5/8"	26.4# K-55
Prod. Casing	6-3/4"	+/-8,297'-Surf.	4-1/2"	11.6# N-80 LTC

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 10-3/4" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (3) joints of Surface Casing.
2. INTERMEDIATE CASING: 7-5/8" cement nose guide shoe with a self-fill float Collar. Place Float Collar one joint above the shoe. Install (1) Turbulent centralizer on each of the bottom (3) joints. 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). (**Call this in to BLM for approval. If denied, follow what is in the Operations Plan in the Permit package.)**
3. PRODUCTION CASING: 5-1/2" whirler type cement nose guide shoe with a float collar on top of bottom joint. Place marker joint above 5,600'. Place one turbolizer every third joint thru Dakota and Mesa Verde intervals.). (**Call this in to BLM for approval. If denied, follow what is in the Operations Plan in the Permit package.)**

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

1. SURFACE: Slurry: 290sx (521 cu.ft.) of "Type III" + 2% Cal-Seal 60 + 1/4 # of poly-e-flake/sk + 0.3% Versaset + 2% Econolite + 6% Salt (Yield = 1.796 cu.ft./sk, Weight = 13.5 #/gal.). The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 1500psi.
2. INTERMEDIATE: 20 bbl Water Spacer + Lead - 535 sx (1460 cu.ft.) of of "EXTENDACEM" + 5 #/sk pheno-seal + 5% Cal-Seal 60 + 0.5% D-Air-3000 (Yield = 2.73 cu.ft./sk, Weight = 11.5 #/gal.). Tail - 100 sx (117.8cu.ft.) of Premium cement + 0.125 #/sk Poly-E-Flake, (Yield = 1.178 cu.ft./sk, Weight = 15.6#/gal.). **NO EXCESS PUMP AS WRITTEN SHOULD CIRCULATE TO SURFACE** Total volume = 1578 cu.ft. Bump Plug to 1,500 psi.
3. PRODUCTION CASING: 10 bbl Gelled Water spacer. Cement: 555sx (777ft³) of "FRACCEM" + 0.8% Halad-9 + 0.1% CFR-3 + 5 #/sk Gilsonite + 0.125 #/sk Poly-E-Flake + 0.15% HR-5 + 0.3% D-Air-3000. (Yield = 1.4 ft³/sk, Weight = 13.1 #/gal.). Displace cement at a minimum of 8 BPM. **NO EXCESS SHOULD COVER 150 FEET INTO 7-5/8" CASING** Total volume 777ft³. WOC 12 hours.

(NOTE: Notify BLM and OCD if no cement is circulated to the surface on Surface or Intermediate Casing)

NOTE TO DIRECTIONAL: 1,400 ft FEL is a HARDLINE. South line of Sec. 10 is a HARDLINE. We can extend VS further into the W-half of E-half of Section 10 to stay away from hardlines.

GEOLOGIC PROGNOSIS			
Company:	Williams Production Company. LLC		
Project:	2009 Drilling Plan		
Area:	Rosa Unit		
Operator:	Williams Production Company. LLC		
Well Name:	<u>Rosa Unit No. 181D (Kmv/Km/Kd-Directional)</u>		
Location:	NENE 15-31N-06W		
Footage:	1230' FNL & 0730' FEL		
County/State:	Rio Arriba/New Mexico		
Surveyed GL:	6268	Estimate (14') KB:	6282
<u>Formation</u>	<u>Thickness</u>	<u>TVD</u>	<u>Struct. Elev.</u>
San Jose Fm.	2307	Surface	6268
Ojo Alamo Ss.	105	2307	3975
Kirtland Sh.	395	2412	3870
Fruitland Fm.	280	2807	3475
Pictured Cliffs Ss.	295	3087	3195
Lewis Sh.	180	3382	2900
Intermediate Casing Depth	1400	3562	2720
Cliff House Ss. Trans.	310	4962	1320
Cliff House Ss.	50	5272	1010
Menefee Fm.	250	5322	960
Point Lookout Ss.	305	5572	710
Mancos Sh.	1010	5877	405
Gallup Ss.	730	6887	-605
Greenhorn Ls.	50	7617	-1335
Graneros Sh.	125	7667	-1385
Dakota Ss.	130	7792	-1510
Total Depth	100	7922	-1640
Morrison Fm.	NA	8022	-1740
Mud Log:	Mud log from intermediate casing to TD (Mud logger to pick TD)		
Mechanical Logs:	HRI/TEMP from intermediate casing to TD; SDL/DSEN over intervals of interest		
Correlation Logs:	Rosa Unit No. 16A (NENW 14-31N-06W) Rosa Unit No. 67 (SWNE 14-31N-06W) Rosa Unit No. 9C (Dir.) (SWSW 11-31N-06W)		
Notes:	This well will be directionally drilled to a BHL 0100' FSL & 1400' FEL 10-31N-06W		

State of New Mexico
 Energy, Minerals & Natural Resources Department
 THE CONSERVATION DIVISION
 1220 South St. Francis Ave.
 Santa Fe, NM 87505

Form C-103
 Revised October 10, 2005
 Instructions on Page
 Submit to: Spacegrant Testnet Office
 State Letter - 4 Copies
 Fee Letter - 3 Copies

1. AMEN - 1 - 1111

WELL BEHAVIOR AND AGRICULTURE CERTIFICATION IN AT

Well Number	Field Code	Field Name
0700P / 0701B / 0700U	BASIN MANDOS / BLANCO MESA RUL / BASIN JACITA	
Property Code	Property Name	Well Number
1700B	ROSA UNIT	0610
Operator No.	Operator Name	Elevation
100700	WILLIAMS PRODUCTION COMPANY	5050

¹⁰ <http://www.fishbase.org/locations>

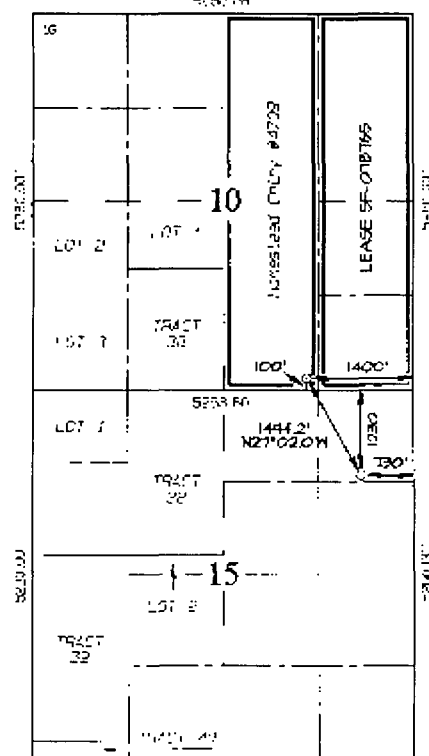
Case No.	Section	Percent	Range	Location	East from the North-South Line	East from the East-West Line	Estimated Area	Work Done
4	15	31%	5W		1230 NORTH	730	EAST	100 4 1/2 HA

¹ Bottom Hole Location If Different From Surface

DATE	TIME IN	LOCATION	THREATS	RANGE	DIST.	ESTIMATED ALTITUDE	TYPE OF WEAPON	STATUS	REMARKS
07-08-68	10	31A	3B		100	SOUTH	1200	F-4D1	Seen 400 ft

14. Document name	FIELD ACCESS F/A Section 10	15. Date of Entry	16. Scheduled Date	17. Entry Date	18. Entry Time
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NO A FICARF WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE
BEEN CONSIDERED OF A NON-REANDARD ONE HAS BEEN APPROVED BY THE DIVISION



²⁷ 24-65106-113 2-124113

I would certify that the information provided herein is true and conforms to the best of my knowledge and belief; and that this pertinent author gave a knowing release or informed consent to the use of his name in connection with the proposed detention-site location or has a right to void, at his will, any such agreement entered into a contract with an owner of such a facility or smoking premises, or with a purchaser of such agreement or a compulsory pooling order thereto.

Signature _____ Date _____

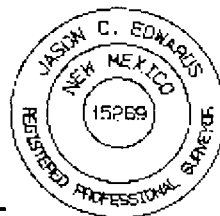
120736 1078

*9,374,700 FEB 11 10 41 10X

"I hereby certify that the well known or known or this plot was plotted from these copies of Indian surveys made by or under my supervision and that the same are true and correct in the best of my belief."

DATE OF SURVEY: MAY 24, 2005

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JASON C. EDWARDS
De lifecale Number 19239

Brooks, David K., EMNRD

From: Brooks, David K., EMNRD
Sent: Tuesday, October 13, 2009 9:47 AM
To: 'Riley, Heather '
Cc: Perrin, Charlie, EMNRD
Subject: Williams Production Co. - Rosa Unit #181D; NSL approval

Dear Ms. Riley

This application was approved October 7, 2009 by Order No. NSL 6096.

A copy of the signed order will be posted on our website.

Sincerely

David K. Brooks