

Submit 3 Copies To Appropriate District
Office
District I
1625 N French Dr., Hobbs, NM 88240
District II
1301 W Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd, Aztec, NM 87410
District IV
1220 S. St Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
June 19, 2008

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

WELL API NO. 03-039-30381
5. Indicate Type of Lease STATE FEE X
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Rosa Unit
8. Well Number Rosa Unit #17C
9. OGRID Number 120782
10. Pool name or Wildcat Blanco MV/BasinMC/Basin DK

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 x ☒ Other

2. Name of Operator
Williams Production Company, LLC

3. Address of Operator
P.O. Box 640 Aztec, NM 87410

4. Well Location
Unit Letter L : 1940 feet from the SOUTH line and 535 feet from the WEST line.
Section 20 Township 31N Range 05W NMPM County RIO ARRIBA

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6341'

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☒	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
OTHER: ☐		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.

Williams Production Company, LLC. hereby requests authorization to drill the above referenced well to include the Basin Mancos and Basin Dakota formations per attached C-102, directional plan and operations plan.

RCVD MAR 24 '09

Hold C104
for Directional Survey
and "As Drilled" plat
CONS. DIV.
3357.3

Spud Date:

Rig Release Date:

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

SIGNATURE Larry Haggin TITLE Drilling COM DATE 3-24-09

Type or print name _____ E-mail address: _____ PHONE: _____

For State Use Only

APPROVED BY: [Signature] TITLE Deputy Oil & Gas Inspector, DATE MAR 27 2009
Conditions of Approval (if any): District #3

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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	*Pool Name
	97232 / 72319 / 71599	BASIN MANCOS / BLANCO MESAVARDE / BASIN DAKOTA
*Property Code	*Property Name	*Well Number
17033	ROSA UNIT	17C
*GRID No.	*Operator Name	*Elevation
120782	WILLIAMS PRODUCTION COMPANY	6341'

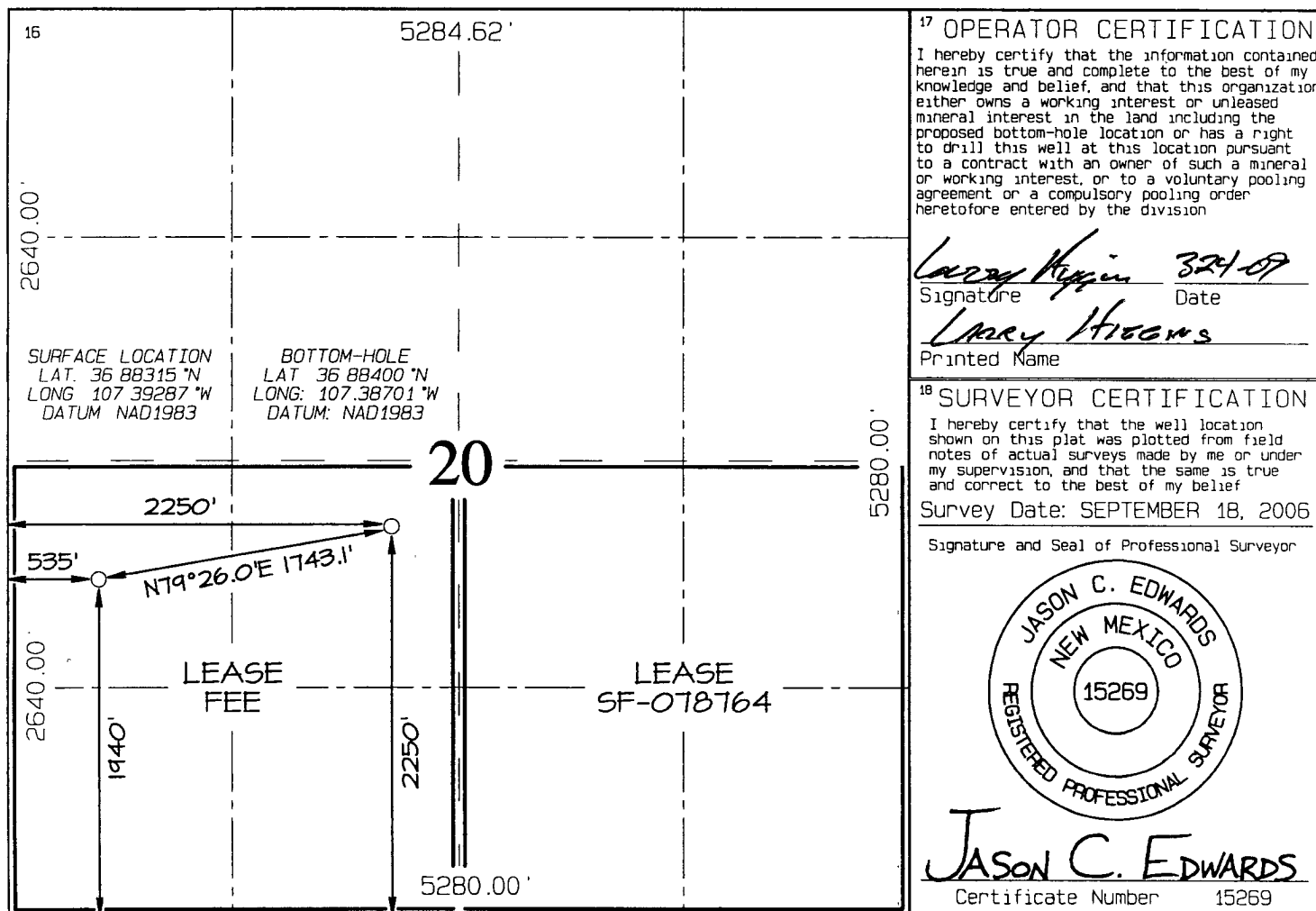
¹⁰ Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	20	31N	5W		1940	SOUTH	535	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
K	20	31N	5W		2250	SOUTH	2250	WEST	RIO ARriba
¹² Dedicated Acres					¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No		
320.0 Acres - (S/2)									

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION





WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE: 3/24/2009 **FIELD:** Basin DK/ Basin MC/BlancoMV
WELL NAME: Rosa #17C **SURFACE:** NM G&F
BH LOCATION: NESW Sec 20-31N-5W **MINERALS:** FEE
Rio Arriba, NM
ELEVATION: 6,341' GR **LEASE #** SF-078764
MEASURED DEPTH: 8,563'

I. **GEOLOGY:** Surface formation - San Jose

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

Name	TVD	MD	Name	TVD	MD
Ojo Alamo	2,485	2,917	Menefee	5,445	5,978
Kirtland	2,590	3,049	Point Lookout	5,660	6,193
Fruitland	2,965	3,479	Mancos	5,965	6,498
Pictured Cliffs	3,220	3,748	Gallup	6,970	7,503
Lewis	3,500	4,032	Greenhorn	7,680	8,213
Cliff House	5,400	5,933	Graneros	7,735	8,268
			Dakota	7,865	8,398
			TD	8,030	8,563

B. **MUD LOGGING PROGRAM:** Mudlogger on location from intermediate csg to TD. Mud logger to pick TD.

C. **LOGGING PROGRAM:** HRI/Temp from intermediate casing to TD. SDL\ DSEN over zones of interest.

D. **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 7-5/8" casing point. Convert to a LSND mud to log and run pipe. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses. Use air w/Air Hammer from 7-5/8in. csg.to 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 drum brakes will be inspected and tested each tour. **All tests and inspections will be**

III. MATERIALS**A. CASING PROGRAM:**

CASING TYPE	OH SIZE (IN)	DEPTH (MD) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	14 3/4	300	10 3/4	40.5	K-55
Intermediate	9 7/8	4,228	7 5/8	26.4	K-55
Longstring	6 3/4	8,563	5 1/2	17	N-80

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 10 3/4" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
2. INTERMEDIATE CASING: 7 5/8" 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 / CASING: 5-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' bottom joint. Place marker joint above 5,400'. Place centralizers as needed across selected production intervals.

C. CEMENTING:

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

1. SURFACE: Slurry: 290sx (341 cu.ft.) of "Type III" + 2% Cal-Seal 60 + ¼ # 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: Lead - 525 sx (1430 cu.ft.) of "EXTENDACEM" + 5 #/sk pheno-seal + 5% Cal-Seal 60 (Yield = 2.723 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 = 1198 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface
3. PRODUCTION CASING: 10 bbl Gelled Water spacer. Cement: 325 sx (454 ft³) of "FRACCEM" + 0.8% Halad-9 + 0.1% CFR-3 + 5 #/sk Gilsonite + 0.125 #/sk Poly-E-Flake + 0.15% HR-800. (Yield = 1.398 ft³/sk, Weight = 13.1 #/gal.). Displace cement at a minimum of 8 BPM. **NO EXCESS SHOULD COVER 150 FEET INTO 7" CASING** Total volume (342) ft³. WOC 12 hours.

IV. IV COMPLETION**A. CBL**

1. Run Cement Bond Log across all intervals to be perforated and find Top of Cement behind all casing strings if cement not circulated to surface..

B. PRESSURE TEST

1. Pressure test 5-1/2" casing to 6000 psi max, hold at 1500 psi for 30 minutes.

C. STIMULATION

1. Stimulate Dakota with approximately 10,000# of LiteProp 108™ sand in slick water.
2. Isolate Dakota with a RBP.
3. Perforate Mancos as determined from the open hole logs
4. Stimulate Mancos with 3 stages of approximates 117,000# 40/70 white sand and 7500# 100 mesh white sand
5. Stimulate Point Lookout with approximately 9300# of 14/30 LiteProp™ in slick water.
6. Isolate Point Lookout with a RBP.
7. Perforate the Menefee/Cliff House as determined from the open hole logs.
8. Stimulate with approximately 9300# of 14/30 LiteProp™ in slick water.
9. Test each zone before removing bridge plugs.

D. RUNNING TUBING

1. Production Tubing: Run 2-3/8", 4.7#, J-55, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing approximately 25' above the bottom Point Lookout perforation


Gary Sizemore
 Sr. Drilling Engineer



Weatherford[®]

Drilling Services

PROPOSAL



WILLIAMS PRODUCTION COMPANY
ROSA UNIT #17C
RIO ARriba COUNTY, NEW MEXICO
WELL FILE: **PLAN 1**

Submitted: March 23, 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 #17C
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	79.76	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	79.76	400.00	0.00	0.00	0.00	0.00	0.00	
3	1397.89	39.92	79.76	1319.11	59.33	328.44	4.00	79.76	333.76	
4	2897.80	39.92	79.76	2469.52	230.43	1275.54	0.00	0.00	1296.19	
5	4228.32	0.00	79.76	3695.00	309.54	1713.47	3.00	180.00	1741.20	Int. Csg. Pt.
6	8563.32	0.00	79.76	8030.00	309.54	1713.47	0.00	79.76	1741.20	PBHL

WELL DETAILS

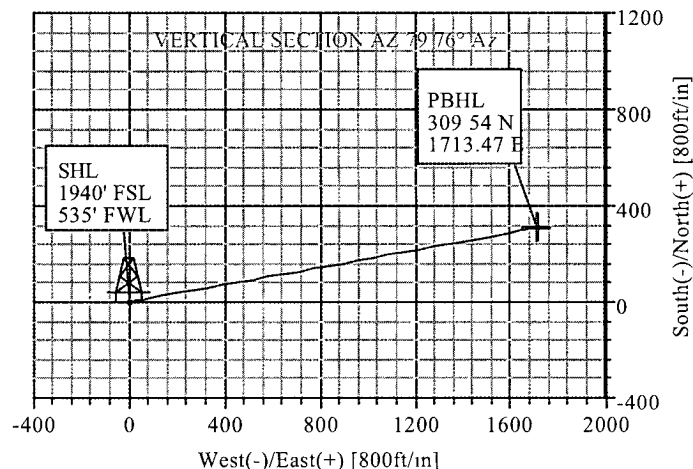
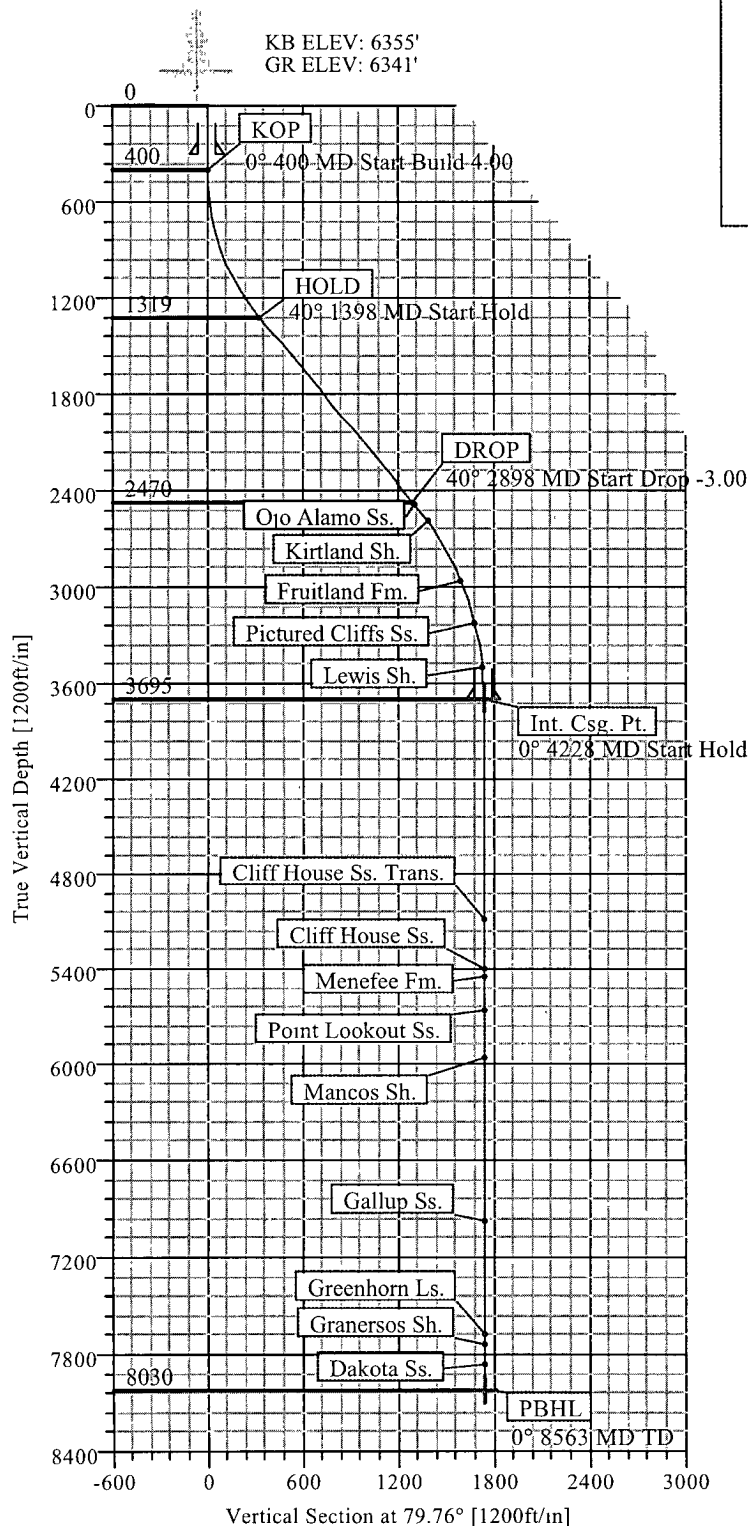
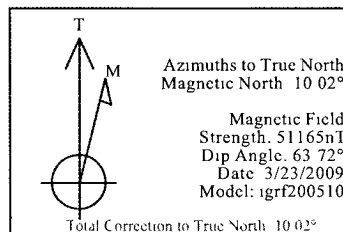
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#17C	0.00	0.00	2142761.32	1306181.45	36°52'59.340N	107°23'34.330W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Int. Csg. Pt.	3695.00	309.54	1713.47	2143050.32	1307898.50	36°53'02.400N	107°23'13.240W	Point
PBHL	8030.00	309.54	1713.47	2143050.32	1307898.50	36°53'02.400N	107°23'13.240W	Point

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	2485.00	2917.89	Ojo Alamo Ss.
2	2590.00	3049.97	Kirtland Sh.
3	2965.00	3479.26	Fruitland Fm.
4	3220.00	3748.28	Pictured Cliffs Ss.
5	3500.00	4032.98	Lewis Sh.
6	5090.00	5623.32	Cliff House Ss. Trans.
7	5400.00	5933.32	Cliff House Ss.
8	5445.00	5978.32	Menefee Fm.
9	5660.00	6193.32	Point Lookout Ss.
10	5965.00	6498.32	Mancos Sh.
11	6970.00	7503.32	Gallup Ss.
12	7680.00	8213.32	Greenhorn Ls.
13	7735.00	8268.32	Graneros Ss.
14	7865.00	8398.32	Dakota Ss.



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CASING DETAILS

No.	TVD	MD	Name	Size
1	300.00	300.00	10 3/4"	10.750
2	3695.00	4228.32	7 5/8" Int. Csg.	0.000

Plan: Plan #1 (#17C/1)

Created By: Lindsey Maddux

Date: 3/23/2009



Weatherford International, Inc.

Proposal Plan Report



Weatherford

Company: WILLIAMS PRODUCTION Date: 3/23/2009 Time: 16:30:32 Page: 1
 Field: Rio Arriba Co., NM (NAD 83) Co-ordinate(NE) Reference: Well: #17C True North
 Site: Rosa Unit #17C Vertical (TVD) Reference: SITE 6355.0
 Well: #17C Section (VS) Reference: Well (0.00N,0.00E,79.76Azi)
 Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Plan: Plan #1 Date Composed: 3/23/2009
 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 #17C

1940' FSL 535' FWL of SEC 20 T31N R5W

Site Position: Northing: 2142761.32 ft Latitude: 36 52 59.340 N
 From: Geographic Easting: 1306181.45 ft Longitude: 107 23 34.330 W
 Position Uncertainty: 0.00 ft North Reference: True
 Ground Level: 6341.00 ft Grid Convergence: -0.69 deg

Well: #17C Slot Name:
 Well Position: +N/-S 0.00 ft Northing: 2142761.32 ft Latitude: 36 52 59.340 N
 +E/-W 0.00 ft Easting: 1306181.45 ft Longitude: 107 23 34.330 W
 Position Uncertainty: 0.00 ft

Wellpath: 1 Drilled From: Surface
 Current Datum: SITE Tie-on Depth: 0.00 ft
 Magnetic Data: 3/23/2009 Height 6355.00 ft Above System Datum: Mean Sea Level
 Field Strength: 51165 nT Declination: 10.02 deg
 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction
 ft ft ft deg
 0.00 0.00 0.00 79.76

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	79.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	79.76	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1397.89	39.92	79.76	1319.11	59.33	328.44	4.00	4.00	0.00	79.76	
2897.80	39.92	79.76	2469.52	230.43	1275.54	0.00	0.00	0.00	0.00	
4228.32	0.00	79.76	3695.00	309.54	1713.47	3.00	-3.00	0.00	180.00	Int Csg. Pt.
8563.32	0.00	79.76	8030.00	309.54	1713.47	0.00	0.00	0.00	79.76	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
400.00	0.00	79.76	400.00	0.00	0.00	0.00	0.00	0.00	0.00	79.76	KOP
500.00	4.00	79.76	499.92	0.62	3.43	3.49	4.00	0.00	4.00	0.00	
600.00	8.00	79.76	599.35	2.48	13.72	13.94	4.00	0.00	4.00	0.00	
700.00	12.00	79.76	697.81	5.56	30.80	31.30	4.00	0.00	4.00	0.00	
800.00	16.00	79.76	794.82	9.86	54.60	55.49	4.00	0.00	4.00	0.00	
900.00	20.00	79.76	889.91	15.36	85.01	86.38	4.00	0.00	4.00	0.00	
1000.00	24.00	79.76	982.61	22.02	121.86	123.84	4.00	0.00	4.00	0.00	
1100.00	28.00	79.76	1072.47	29.81	164.99	167.67	4.00	0.00	4.00	0.00	
1200.00	32.00	79.76	1159.05	38.69	214.19	217.66	4.00	0.00	4.00	0.00	
1300.00	36.00	79.76	1241.94	48.63	269.21	273.56	4.00	0.00	4.00	0.00	
1397.89	39.92	79.76	1319.11	59.33	328.44	333.76	4.00	0.00	4.00	0.00	HOLD
1400.00	39.92	79.76	1320.73	59.57	329.78	335.12	0.00	0.00	0.00	0.00	
1500.00	39.92	79.76	1397.43	70.98	392.92	399.28	0.00	0.00	0.00	0.00	
1600.00	39.92	79.76	1474.12	82.39	456.06	463.45	0.00	0.00	0.00	0.00	
1700.00	39.92	79.76	1550.82	93.80	519.21	527.61	0.00	0.00	0.00	0.00	



Weatherford International, Inc.

Proposal Plan Report



Weatherford

Company: WILLIAMS PRODUCTION	Date: 3/23/2009	Time: 16:30:32	Page: 2
Field: Rio Arriba Co., NM(NAD 83)	Co-ordinate(NE) Reference: Well: #17C, True North		
Site: Rosa Unit #17C	Vertical (TVD) Reference: SITE 6355.0		
Well: #17C	Section (VS) Reference: Well (0.00N,0.00E,79.76Azi)		
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
1800.00	39.92	79.76	1627.52	105.20	582.35	591.78	0.00	0.00	0.00	0.00	
1900.00	39.92	79.76	1704.22	116.61	645.50	655.94	0.00	0.00	0.00	0.00	
2000.00	39.92	79.76	1780.92	128.02	708.64	720.11	0.00	0.00	0.00	0.00	
2100.00	39.92	79.76	1857.62	139.42	771.78	784.28	0.00	0.00	0.00	0.00	
2200.00	39.92	79.76	1934.32	150.83	834.93	848.44	0.00	0.00	0.00	0.00	
2300.00	39.92	79.76	2011.02	162.24	898.07	912.61	0.00	0.00	0.00	0.00	
2400.00	39.92	79.76	2087.72	173.65	961.21	976.77	0.00	0.00	0.00	0.00	
2500.00	39.92	79.76	2164.42	185.05	1024.36	1040.94	0.00	0.00	0.00	0.00	
2600.00	39.92	79.76	2241.12	196.46	1087.50	1105.10	0.00	0.00	0.00	0.00	
2700.00	39.92	79.76	2317.81	207.87	1150.65	1169.27	0.00	0.00	0.00	0.00	
2800.00	39.92	79.76	2394.51	219.27	1213.79	1233.44	0.00	0.00	0.00	0.00	
2897.80	39.92	79.76	2469.52	230.43	1275.54	1296.19	0.00	0.00	0.00	0.00	DROP
2900.00	39.85	79.76	2471.21	230.68	1276.93	1297.60	-3.00	0.00	3.00	180.00	
2917.89	39.31	79.76	2485.00	232.71	1288.15	1309.00	-3.00	0.00	3.00	180.00	Ojo Alamo Ss.
3000.00	36.85	79.76	2549.63	241.71	1337.98	1359.64	-3.00	0.00	3.00	180.00	
3049.97	35.35	79.76	2590.00	246.94	1366.95	1389.08	-3.00	0.00	3.00	180.00	Kirtland Sh.
3100.00	33.85	79.76	2631.18	251.99	1394.91	1417.49	-3.00	0.00	3.00	180.00	
3200.00	30.85	79.76	2715.65	261.50	1447.56	1470.99	-3.00	0.00	3.00	180.00	
3300.00	27.85	79.76	2802.81	270.22	1495.79	1520.00	-3.00	0.00	3.00	180.00	
3400.00	24.85	79.76	2892.41	278.11	1539.46	1564.38	-3.00	0.00	3.00	180.00	
3479.26	22.47	79.76	2965.00	283.76	1570.76	1596.19	-3.00	0.00	3.00	180.00	Fruitland Fm.
3500.00	21.85	79.76	2984.21	285.15	1578.46	1604.01	-3.00	0.00	3.00	180.00	
3600.00	18.85	79.76	3077.96	291.33	1612.68	1638.78	-3.00	0.00	3.00	180.00	
3700.00	15.85	79.76	3173.40	296.63	1642.02	1668.60	-3.00	0.00	3.00	180.00	
3748.28	14.40	79.76	3220.00	298.87	1654.41	1681.19	-3.00	0.00	3.00	180.00	Pictured Cliffs Ss.
3800.00	12.85	79.76	3270.27	301.04	1666.40	1693.38	-3.00	0.00	3.00	180.00	
3900.00	9.85	79.76	3368.30	304.54	1685.77	1713.05	-3.00	0.00	3.00	180.00	
4000.00	6.85	79.76	3467.23	307.12	1700.05	1727.57	-3.00	0.00	3.00	180.00	
4032.98	5.86	79.76	3500.00	307.77	1703.65	1731.22	-3.00	0.00	3.00	180.00	Lewis Sh.
4100.00	3.85	79.76	3566.78	308.77	1709.23	1736.89	-3.00	0.00	3.00	180.00	
4200.00	0.85	79.76	3666.68	309.50	1713.26	1740.99	-3.00	0.00	3.00	180.00	
4228.32	0.00	79.76	3695.00	309.54	1713.47	1741.20	-3.00	0.00	3.00	180.00	Int. Csg. Pt.
4300.00	0.00	79.76	3766.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
4400.00	0.00	79.76	3866.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
4500.00	0.00	79.76	3966.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
4600.00	0.00	79.76	4066.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
4700.00	0.00	79.76	4166.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
4800.00	0.00	79.76	4266.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
4900.00	0.00	79.76	4366.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
5000.00	0.00	79.76	4466.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
5100.00	0.00	79.76	4566.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
5200.00	0.00	79.76	4666.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
5300.00	0.00	79.76	4766.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
5400.00	0.00	79.76	4866.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
5500.00	0.00	79.76	4966.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
5600.00	0.00	79.76	5066.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
5623.32	0.00	79.76	5090.00	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	Cliff House Ss. Trans.
5700.00	0.00	79.76	5166.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
5800.00	0.00	79.76	5266.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
5900.00	0.00	79.76	5366.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
5933.32	0.00	79.76	5400.00	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	Cliff House Ss.
5978.32	0.00	79.76	5445.00	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	Menefee Fm.
6000.00	0.00	79.76	5466.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	



Weatherford International, Inc.

Proposal Plan Report



Weatherford

Company: WILLIAMS PRODUCTION	Date: 3/23/2009	Time: 16:30:32	Page: 3
Field: Rio Arriba Co., NM (NAD 83)	Co-ordinate(NE) Reference:	Well: #17C, True North	
Site: Rosa Unit #17C	Vertical (TVD) Reference:	SITE 6355.0	
Well: #17C	Section (VS) Reference:	Well (0.00N;0.00E;79.76Azi)	
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
6100.00	0.00	79.76	5566.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
6193.32	0.00	79.76	5660.00	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	Point Lookout Ss.
6200.00	0.00	79.76	5666.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
6300.00	0.00	79.76	5766.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
6400.00	0.00	79.76	5866.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
6498.32	0.00	79.76	5965.00	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	Mancos Sh.
6500.00	0.00	79.76	5966.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
6600.00	0.00	79.76	6066.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
6700.00	0.00	79.76	6166.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
6800.00	0.00	79.76	6266.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
6900.00	0.00	79.76	6366.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
7000.00	0.00	79.76	6466.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
7100.00	0.00	79.76	6566.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
7200.00	0.00	79.76	6666.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
7300.00	0.00	79.76	6766.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
7400.00	0.00	79.76	6866.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
7500.00	0.00	79.76	6966.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
7503.32	0.00	79.76	6970.00	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	Gallup Ss.
7600.00	0.00	79.76	7066.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
7700.00	0.00	79.76	7166.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
7800.00	0.00	79.76	7266.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
7900.00	0.00	79.76	7366.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
8000.00	0.00	79.76	7466.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
8100.00	0.00	79.76	7566.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
8200.00	0.00	79.76	7666.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
8213.32	0.00	79.76	7680.00	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	Greenhorn Ls.
8268.32	0.00	79.76	7735.00	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	Graneros Sh.
8300.00	0.00	79.76	7766.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
8398.32	0.00	79.76	7865.00	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	Dakota Ss.
8400.00	0.00	79.76	7866.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
8500.00	0.00	79.76	7966.68	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	
8563.32	0.00	79.76	8030.00	309.54	1713.47	1741.20	0.00	0.00	0.00	79.76	PBHL

Targets

Name	Description Dip.	TVD Dir.	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec	Longitude Deg Min Sec
Int. Csg. Pt.		3695.00	309.54	1713.47	2143050.32	1307898.50	36 53 2.400 N	107 23 13.240 W
-Plan hit target								
PBHL		8030.00	309.54	1713.47	2143050.32	1307898.50	36 53 2.400 N	107 23 13.240 W
-Plan hit target								

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
2917.89	2485.00	Ojo Alamo Ss.		0.00	0.00
3049.97	2590.00	Kirtland Sh.		0.00	0.00
3479.26	2965.00	Fruitland Fm.		0.00	0.00
3748.28	3220.00	Pictured Cliffs Ss.		0.00	0.00
4032.98	3500.00	Lewis Sh.		0.00	0.00
5623.32	5090.00	Cliff House Ss. Trans.		0.00	0.00
5933.32	5400.00	Cliff House Ss.		0.00	0.00
5978.32	5445.00	Menefee Fm.		0.00	0.00
6193.32	5660.00	Point Lookout Ss.		0.00	0.00
6498.32	5965.00	Mancos Sh.		0.00	0.00



Weatherford International, Inc.

Proposal Plan Report

**Weatherford**

Company:	WILLIAMS PRODUCTION	Date:	3/23/2009	Time:	16:30:32	Page:	4
Field:	Rio Arriba Co., NM (NAD'83)	Co-ordinate(NE) Reference:	Well: #17C, True North				
Site:	Rosa Unit #17C	Vertical (TVD) Reference:	SITE 6355.0				
Well:	#17C	Section (VS) Reference:	Well: (0.00N,0.00E,79.76Azi)				
Wellpath:	1	Survey Calculation Method:	Minimum Curvature			Db:	Sybase

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
7503.32	6970.00	Gallup Ss.		0.00	0.00
8213.32	7680.00	Greenhorn Ls.		0.00	0.00
8268.32	7735.00	Graneros Sh.		0.00	0.00
8398.32	7865.00	Dakota Ss.		0.00	0.00

Annotation

MD ft	TVD ft	
400.00	400.00	KOP
1397.89	1319.11	HOLD
2897.80	2469.53	DROP
4228.32	3695.00	Int. Csg. Pt.
8563.32	8030.00	PBHL

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
300.00	300.00	10.750	12.250	10 3/4"
4228.32	3695.00	0.000	0.000	7 5/8" Int. Csg.