

RECEIVED

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAR 15 2011

APPLICATION FOR PERMIT TO DRILL OR REENTER

Farmington Field Office
Bureau of Land Management

5. Lease Serial No.
NMSF-078771
6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement Name and No.
NMSM-78407A-MV
Rosa Unit NMSM-78407X-DK

8. Lease Name and Well No.
Rosa Unit #009D

9. API Well No.
30-039-31047

10. Field and Pool, or Exploratory
Blanco Mesa Verde/Basin Dakota

11. Sec., T., R., M., or Blk. and Survey or Area
Section 11, 31N, 6W

12. County or Parish
Rio Arriba

13. State
NM

1a. Type of Work: ☒ DRILL ☐ REENTER

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

2. Name of Operator
Williams Production Company, LLC

3a. Address
P.O. Box 640 Aztec, NM 87410

3b. Phone No. (include area code)
(505) 634-4222

4. Location of Well (Report location clearly and in accordance with any State requirements. *)
At surface C 1285' FNL & 2210' FWL SEC 11 31N 6W
At proposed prod. zone F 1950' FNL & 1450' FWL Section 6, T31N R5W

14. Distance in miles and direction from nearest town or post office*
approximately 25.4 miles northeast of Blanco, New Mexico

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 395'

16. No. of Acres in lease
2560

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 50' Rosa 9A

19. Proposed Depth
8426'

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
6,427' GR

22. Approximate date work will start*
April 15, 2011

23. Estimated duration
1 month

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature *Heather Riley* Name (Printed/Typed) Heather Riley Date 3/15/2011

Title Regulatory Specialist Sr

Approved by (Signature) *[Signature]* Name (Printed/Typed) Office FFO Date 5/12/11

Title AFM

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 Blanco Mesa Verde / 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 161.6 feet would be required for this well.

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOCD FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOCD PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

Hold C104
for Directional Survey
and "As Drilled" plat

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

Hold C104
for Directional Survey
and "As Drilled" plat

JUN 02 2011
AV NMOCD

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

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

MAR 15 2011

☐ AMENDED REPORT

Harrington Field Office
Bureau of Land Management

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-31047	*Pool Code 72319 / 71599	*Pool Name BLANCO MESAVERDE / BASIN DAKOTA
*Property Code 17033	*Property Name ROSA UNIT	*Well Number 9D
*GRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY	*Elevation 6427'

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
C	11	31N	6W		1285	NORTH	2210	WEST	RIO ARriba

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	11	31N	6W		1950	NORTH	1450	WEST	RIO ARriba

¹² Dedicated Acres 320.0 Acres - (W/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13123 A BmV
--	-------------------------------	----------------------------------	---

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

16 2210' 1450' 5280.00' 11 5289.24' 1285' 1950' S48°32.6'W 1009.7' SURFACE LOCATION LAT: 36.91788°N LONG: 107.43367°W DATUM: NAD1983 BOTTOM-HOLE LAT: 36.91606°N LONG: 107.43627°W DATUM: NAD1983 LEASE SF-078771 5287.92'	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. <i>Heather Riley</i> 3/15/11 Signature Date Heather Riley 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. Survey Date: SEPTEMBER 8, 2010 Signature and Seal of Professional Surveyor JASON C. EDWARDS Certificate Number 15269
--	--



WILLIAMS PRODUCTION COMPANY

Operations Plan

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

DATE: 3/14/2011 **FIELD:** Basin DK/ BlancoMV
WELL NAME: Rosa #9D **SURFACE:** BLM
BH LOCATION: SENW Sec 11-31N-6W **MINERALS:** BLM
Rio Arriba, NM
ELEVATION: 6,427' GR **LEASE #** SF-078771
MEASURED DEPTH: 8,426'

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

Name	TVD	MD	Name	TVD	MD
Ojo Alamo	2,476	2,595	Point Lookout	5,726	5,891
Kirtland	2,576	2,702	Mancos	6,066	6,231
Fruitland	2,986	3,137	Gallup	7,071	7,236
Pictured Cliffs	3,246	3,405	Greenhorn	7,781	7,946
Lewis	3,541	3,705	Graneros	7,831	7,996
Cliff House	5,446	5,611	Dakota	7,961	8,126
Menefee	5,491	5,656	Morrison	8,211	8,376
			TD	8,261	8,426

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

C. LOGGING PROGRAM: HRI/Temp/SDL/DSN from intermediate casing to TD

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" 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" 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 recorded in the tour book as to time and results.**

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	OH SIZE (IN)	DEPTH (MD) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	12 1/4	300	9 5/8	36	K-55
Intermediate	8 3/4	3,886	7	23	K-55
Longstring	6 1/4	8,426	4 1/2	11.6	P-110

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
2. INTERMEDIATE CASING: 7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) Turbulent centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) Turbulent centralizer at 2,700 ft., 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. (NTL-FRA 90-1).
3. PRODUCTION LINER / CASING: 4-1/2" 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 (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. **For 30 min.**
2. INTERMEDIATE: Lead - 550 sx (1498 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.). Total volume = 1615 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface **PT csg to 1500 psi For 30 min.**
3. PRODUCTION CASING: 10 bbl Gelled Water spacer. Cement: 610 sx (853 ft³) of "FRACCCEM" + 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. Total volume (853) 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 4-1/2" casing to 6000 psi max, hold at 1500 psi for 30 minutes.

C. STIMULATION

1. Stimulate Dakota with approximately 5000# 100 mesh sand and 120,000# Ottawa Sand in slick water.
2. Isolate Dakota with a RBP.
3. Stimulate Point Lookout with approximately 40,000# 20/40 Ottawa sand in slick water.
4. Isolate Point Lookout with a RBP.
5. Perforate the Menefee/Cliff House as determined from the open hole logs.
6. Stimulate with approximately 40,000# 20/40 Ottawa sand in slick water.
7. Test each zone before removing bridge plugs.

D. RUNNING TUBING



Weatherford International Ltd.

WFT Plan Report Lat, Long



Weatherford

Company: Williams Production	Date: 3/14/2011	Time: 10:18:57	Page: 1
Field: RIO ARRIBA CO. NM (NAD 83)	Co-ordinate(NE) Reference: Well: #9D, True North		
Site: Rosa Unit #9D	Vertical (TVD) Reference: SITE 6441.0		
Well: #9D	Section (VS) Reference: Well (0.00N,0.00E,228.92Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #1	Date Composed: 2/10/2011
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: IGRF2010

Site: Rosa Unit #9D

Site Position:	Northing: 2155551.22 ft	Latitude: 36 55 4.368 N
From: Geographic	Easting: 1294405.50 ft	Longitude: 107 26 1.212 W
Position Uncertainty: 0.00 ft		North Reference: True
Ground Level: 6427.00 ft		Grid Convergence: -0.71 deg

Well: #9D	Slot Name:
Well Position: +N/-S 0.00 ft	Latitude: 36 55 4.368 N
+E/-W 0.00 ft	Longitude: 107 26 1.212 W
Position Uncertainty: 0.00 ft	

Wellpath: 1	Drilled From: Surface
Current Datum: SITE	Tie-on Depth: 0.00 ft
Magnetic Data: 7/10/2011	Above System Datum: Mean Sea Level
Field Strength: 50924 nT	Declination: 9.77 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 63.67 deg
ft	+N/-S
ft	+E/-W
ft	Direction
ft	deg
0.00	0.00
0.00	0.00
0.00	228.92

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	228.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	228.92	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1114.13	21.42	228.92	1097.61	-86.72	-99.47	3.00	3.00	0.00	228.92	
2791.09	21.42	228.92	2658.69	-489.22	-561.20	0.00	0.00	0.00	0.00	
3886.03	5.00	228.92	3721.00	-653.10	-749.19	1.50	-1.50	0.00	180.00	Csg Tgt
4219.35	0.00	164.07	4053.91	-662.66	-760.15	1.50	-1.50	-19.45	-180.00	
8426.45	0.00	164.07	8261.00	-662.67	-760.15	0.00	0.00	0.00	0.00	Pbhl

Survey

MD	Incl	Azim	TVD	N/S	E/W	VS	DLS	Lat	Min	Sec	Long	Min	Sec	Comment
ft	deg	deg	ft	ft	ft	ft	deg/100ft							
400.00	0.00	228.92	400.00	0.00	0.00	0.00	0.00	36	55	4.368	107	26	1.212	Kop
500.00	3.00	228.92	499.95	-1.72	-1.97	2.62	3.00	36	55	4.351	107	26	1.236	
600.00	6.00	228.92	599.63	-6.87	-7.89	10.46	3.00	36	55	4.300	107	26	1.309	
700.00	9.00	228.92	698.77	-15.45	-17.72	23.51	3.00	36	55	4.215	107	26	1.430	
800.00	12.00	228.92	797.08	-27.42	-31.46	41.74	3.00	36	55	4.097	107	26	1.599	
900.00	15.00	228.92	894.31	-42.76	-49.05	65.08	3.00	36	55	3.945	107	26	1.816	Hold Nacimiento
1000.00	18.00	228.92	990.18	-61.42	-70.46	93.48	3.00	36	55	3.761	107	26	2.080	
1100.00	21.00	228.92	1084.43	-83.36	-95.62	126.85	3.00	36	55	3.544	107	26	2.389	
1114.13	21.42	228.92	1097.61	-86.72	-99.47	131.97	3.00	36	55	3.511	107	26	2.437	
1176.86	21.42	228.92	1156.00	-101.77	-116.75	154.88	0.00	36	55	3.362	107	26	2.650	
1200.00	21.42	228.92	1177.54	-107.33	-123.12	163.33	0.00	36	55	3.307	107	26	2.728	
1300.00	21.42	228.92	1270.63	-131.33	-150.65	199.86	0.00	36	55	3.070	107	26	3.067	
1400.00	21.42	228.92	1363.72	-155.33	-178.18	236.38	0.00	36	55	2.832	107	26	3.406	
1500.00	21.42	228.92	1456.81	-179.33	-205.72	272.91	0.00	36	55	2.595	107	26	3.745	
1600.00	21.42	228.92	1549.90	-203.33	-233.25	309.44	0.00	36	55	2.358	107	26	4.084	



Weatherford International Ltd.

WFT Plan Report Lat, Long



Weatherford

Company: Williams Production	Date: 3/14/2011	Time: 10:18:57	Page: 2
Field: RIO ARRIBA CO. NM (NAD 83)	Co-ordinate(NE) Reference: Well: #9D, True North		
Site: Rosa Unit #9D	Vertical (TVD) Reference: SITE 6441.0		
Well: #9D	Section (VS) Reference: Well (0.00N,0.00E,228.92Azi)		
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	DLS deg/100ft	Lat	Min	Sec	Long	Min	Sec	Comment
1700.00	21.42	228.92	1642.99	-227.34	-260.78	345.96	0.00	36	55	2.120	107	26	4.423	
1800.00	21.42	228.92	1736.08	-251.34	-288.32	382.49	0.00	36	55	1.883	107	26	4.762	
1900.00	21.42	228.92	1829.17	-275.34	-315.85	419.02	0.00	36	55	1.646	107	26	5.101	
2000.00	21.42	228.92	1922.26	-299.34	-343.39	455.54	0.00	36	55	1.408	107	26	5.440	
2100.00	21.42	228.92	2015.35	-323.35	-370.92	492.07	0.00	36	55	1.171	107	26	5.779	
2200.00	21.42	228.92	2108.44	-347.35	-398.45	528.60	0.00	36	55	0.934	107	26	6.118	
2300.00	21.42	228.92	2201.53	-371.35	-425.99	565.12	0.00	36	55	0.696	107	26	6.457	
2400.00	21.42	228.92	2294.62	-395.35	-453.52	601.65	0.00	36	55	0.459	107	26	6.796	
2500.00	21.42	228.92	2387.72	-419.35	-481.05	638.18	0.00	36	55	0.222	107	26	7.135	
2594.84	21.42	228.92	2476.00	-442.12	-507.17	672.82	0.00	36	54	59.997	107	26	7.457	Ojo Aloma S
2600.00	21.42	228.92	2480.81	-443.36	-508.59	674.70	0.00	36	54	59.984	107	26	7.474	
2700.00	21.42	228.92	2573.90	-467.36	-536.12	711.23	0.00	36	54	59.747	107	26	7.814	
2702.26	21.42	228.92	2576.00	-467.90	-536.74	712.06	0.00	36	54	59.742	107	26	7.821	Kirtland St
2791.09	21.42	228.92	2658.69	-489.22	-561.20	744.50	0.00	36	54	59.531	107	26	8.122	Drop
2800.00	21.29	228.92	2666.99	-491.35	-563.65	747.75	1.50	36	54	59.510	107	26	8.152	
2900.00	19.79	228.92	2760.63	-514.41	-590.09	782.83	1.50	36	54	59.282	107	26	8.478	
3000.00	18.29	228.92	2855.16	-535.85	-614.68	815.46	1.50	36	54	59.070	107	26	8.781	
3100.00	16.79	228.92	2950.50	-555.65	-637.40	845.59	1.50	36	54	58.874	107	26	9.061	
3137.02	16.24	228.92	2986.00	-562.56	-645.33	856.12	1.50	36	54	58.806	107	26	9.158	Fruitland F
3200.00	15.29	228.92	3046.61	-573.81	-658.23	873.22	1.50	36	54	58.695	107	26	9.317	
3300.00	13.79	228.92	3143.40	-590.30	-677.15	898.33	1.50	36	54	58.532	107	26	9.550	
3400.00	12.29	228.92	3240.82	-605.13	-694.16	920.89	1.50	36	54	58.385	107	26	9.760	
3405.30	12.21	228.92	3246.00	-605.87	-695.01	922.02	1.50	36	54	58.378	107	26	9.770	Pictured C
3500.00	10.79	228.92	3338.80	-618.28	-709.24	940.90	1.50	36	54	58.255	107	26	9.945	
3600.00	9.29	228.92	3437.26	-629.73	-722.38	958.33	1.50	36	54	58.142	107	26	10.107	
3700.00	7.79	228.92	3536.15	-639.49	-733.58	973.18	1.50	36	54	58.045	107	26	10.245	
3704.89	7.72	228.92	3541.00	-639.92	-734.07	973.84	1.50	36	54	58.041	107	26	10.251	Lewis Sh.
3800.00	6.29	228.92	3635.39	-647.54	-742.82	985.44	1.50	36	54	57.966	107	26	10.359	
3886.03	5.00	228.92	3721.00	-653.10	-749.19	993.90	1.50	36	54	57.911	107	26	10.437	Csg Tgt
3900.00	4.79	228.92	3734.92	-653.89	-750.09	995.09	1.50	36	54	57.903	107	26	10.448	
4000.00	3.29	228.92	3834.67	-658.52	-755.40	1002.14	1.50	36	54	57.857	107	26	10.514	
4100.00	1.79	228.92	3934.57	-661.43	-758.75	1006.57	1.50	36	54	57.828	107	26	10.555	
4200.00	0.29	228.89	4034.55	-662.62	-760.11	1008.39	1.50	36	54	57.816	107	26	10.572	
4219.35	0.00	164.07	4053.91	-662.66	-760.15	1008.44	1.50	36	54	57.816	107	26	10.572	Hold
4300.00	0.00	164.07	4134.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
4400.00	0.00	164.07	4234.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
4500.00	0.00	164.07	4334.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
4600.00	0.00	164.07	4434.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
4700.00	0.00	164.07	4534.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
4800.00	0.00	164.07	4634.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
4900.00	0.00	164.07	4734.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
5000.00	0.00	164.07	4834.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
5100.00	0.00	164.07	4934.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
5200.00	0.00	164.07	5034.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
5300.00	0.00	164.07	5134.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
5306.45	0.00	164.07	5141.00	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	Cliff House
5400.00	0.00	164.07	5234.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
5500.00	0.00	164.07	5334.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
5600.00	0.00	164.07	5434.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	
5611.45	0.00	164.07	5446.00	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	Cliff House
5656.45	0.00	164.07	5491.00	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	Menefee Fm.
5700.00	0.00	164.07	5534.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26	10.572	



Weatherford International Ltd.

WFT Plan Report Lat, Long



Weatherford

Company: Williams Production	Date: 3/14/2011	Time: 10:18:57	Page: 3
Field: RIO ARRIBA CO. NM (NAD 83)	Co-ordinate(NE) Reference: Well: #9D, True North		
Site: Rosa Unit #9D	Vertical (TVD) Reference: SITE 6441.0		
Well: #9D	Section (VS) Reference: Well (0.00N 0.00E 228.92Azi)		
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	DLS deg/100ft	Lat Min	Sec	Long Min	Sec	Comment
5800.00	0.00	164.07	5634.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
5891.45	0.00	164.07	5726.00	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
5900.00	0.00	164.07	5734.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
6000.00	0.00	164.07	5834.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
6100.00	0.00	164.07	5934.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
6200.00	0.00	164.07	6034.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
6231.45	0.00	164.07	6066.00	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
6300.00	0.00	164.07	6134.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
6400.00	0.00	164.07	6234.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
6500.00	0.00	164.07	6334.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
6600.00	0.00	164.07	6434.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
6700.00	0.00	164.07	6534.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
6800.00	0.00	164.07	6634.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
6900.00	0.00	164.07	6734.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
7000.00	0.00	164.07	6834.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
7100.00	0.00	164.07	6934.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
7200.00	0.00	164.07	7034.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
7236.45	0.00	164.07	7071.00	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
7300.00	0.00	164.07	7134.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
7400.00	0.00	164.07	7234.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
7500.00	0.00	164.07	7334.55	-662.66	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
7600.00	0.00	164.07	7434.55	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
7700.00	0.00	164.07	7534.55	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
7800.00	0.00	164.07	7634.55	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
7900.00	0.00	164.07	7734.55	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
7946.45	0.00	164.07	7781.00	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
7996.45	0.00	164.07	7831.00	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
8000.00	0.00	164.07	7834.55	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
8100.00	0.00	164.07	7934.55	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
8126.45	0.00	164.07	7961.00	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
8200.00	0.00	164.07	8034.55	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
8300.00	0.00	164.07	8134.55	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
8376.45	0.00	164.07	8211.00	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
8400.00	0.00	164.07	8234.55	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572
8426.45	0.00	164.07	8261.00	-662.67	-760.15	1008.44	0.00	36	54	57.816	107	26 10.572

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec	Longitude Deg Min Sec
Csg Tgt			3721.00	-653.10	-749.19	2154907.46	1293648.25	36 54 57.911 N	107 26 10.437 W
-Plan hit target									
Pbhl			8261.00	-662.67	-760.15	2154898.03	1293637.18	36 54 57.816 N	107 26 10.572 W
-Plan hit target									

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
300.00	300.00	9.625	12.250	9 5/8"
3886.03	3721.00	0.000	0.000	7



Weatherford International Ltd.
WFT Plan Report Lat, Long



Weatherford

Company: Williams Production Date: 3/14/2011 Time: 10:18:57 Page: 4
Field: RIO ARRIBA CO. NM (NAD 83) Co-ordinate(NE) Reference: Well: #9D, True North
Site: Rosa Unit #9D Vertical (TVD) Reference: SITE 6441.0
Well: #9D Section (VS) Reference: Well (0.00N,0.00E,228.92Azi)
Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
1176.86	1156.00	Nacimiento Fm.		0.00	0.00
2594.84	2476.00	Ojo Aloma SS.		0.00	0.00
2702.26	2576.00	Kirtland Sh.		0.00	0.00
3137.02	2986.00	Fruitland Fm.		0.00	0.00
3405.30	3246.00	Pictured Cliffs SS.		0.00	0.00
3704.89	3541.00	Lewis Sh.		0.00	0.00
5306.45	5141.00	Cliff House SS. Trans.		0.00	0.00
5611.45	5446.00	Cliff House SS.		0.00	0.00
5656.45	5491.00	Menefee Fm.		0.00	0.00
5891.45	5726.00	Point Lookout SS.		0.00	0.00
6231.45	6066.00	Mancos Sh.		0.00	0.00
7236.45	7071.00	Gallup SS.		0.00	0.00
7946.45	7781.00	Greenhorn Ls.		0.00	0.00
7996.45	7831.00	Graneros Sh.		0.00	0.00
8126.45	7961.00	Dakota Ss.		0.00	0.00
8376.45	8211.00	Morrison Fm		0.00	0.00

Annotation

MD ft	TVD ft	
400.00	400.00	Kop
1114.13	1097.61	Hold
2791.09	2658.69	Drop
3886.03	3721.00	Csg/Tgt/Drop
4219.35	4053.90	Hold
8426.45	8261.00	Pbhl



Weatherford International Ltd.

Anticollision Report



Weatherford

Company: Williams Production Date: 2/10/2011 Time: 08:50:00 Page: 1
 Field: RIO ARRIBA CO. NM (NAD 83)
 Reference Site: Rosa Unit #9D Co-ordinate(NE) Reference: Well: #9D True North
 Reference Well: #9D Vertical (TVD) Reference: SITE 6441.0
 Reference Wellpath: 1 Db: Sybase

NO GLOBAL SCAN: Using user defined selection & scan criteria
 Interpolation Method: MD Interval: 100.00 ft
 Depth Range: 0.00 to 8426.45 ft
 Maximum Radius: 10000.00 ft

Reference: Plan: Plan #1
 Error Model: ISCWSA Ellipse
 Scan Method: Closest Approach 3D
 Error Surface: Ellipse

Plan: Plan #1 Date Composed: 2/10/2011
 Version: 1
 Principal: Yes Tied-to: From Surface

Summary

Site	Offset Wellpath Well	Wellpath	Reference MD ft	Offset MD ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
Rosa Unit #217B	#217B	1 V0 Plan: Plan #1 V1	700.00	680.63	137.86	134.97	47.69	
Rosa Unit #9D	WPX 9A.	1 V0	600.00	599.92	57.83	55.48	24.63	

Site: Rosa Unit #217B
 Well: #217B
 Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference MD ft	TVD ft	Offset MD ft	TVD ft	Semi-Major Axis Ref ft	Offset ft	TFO-HS deg	Offset Location North ft	East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	96.27	-10.92	99.40	100.00			No Data
100.00	100.00	100.00	100.00	0.10	0.10	96.27	-10.92	99.40	100.00	99.81	517.33	
200.00	200.00	200.00	200.00	0.32	0.32	96.27	-10.92	99.40	100.00	99.36	155.56	
300.00	300.00	300.00	300.00	0.55	0.55	96.27	-10.92	99.40	100.00	98.91	91.54	
400.00	400.00	400.00	400.00	0.77	0.77	96.27	-10.92	99.40	100.00	98.46	64.86	
500.00	499.95	495.44	495.40	1.00	0.99	225.76	-9.95	101.58	103.98	101.99	52.37	
600.00	599.63	589.43	589.12	1.24	1.21	221.70	-7.09	107.97	116.33	113.90	47.78	
700.00	698.77	680.63	679.62	1.52	1.45	216.74	-2.52	118.19	137.86	134.97	47.69	
800.00	797.08	767.85	765.58	1.86	1.72	212.12	3.50	131.64	168.97	165.61	50.39	
900.00	894.31	850.12	845.96	2.27	2.03	208.40	10.64	147.59	209.43	205.61	54.80	
1000.00	990.18	926.69	920.04	2.77	2.35	205.62	18.55	165.27	258.62	254.33	60.18	
1100.00	1084.43	1000.88	991.07	3.37	2.72	203.52	27.30	184.81	315.59	310.80	65.76	
1200.00	1177.54	1079.49	1066.15	4.05	3.14	201.14	36.80	206.05	376.21	370.86	70.33	
1300.00	1270.63	1158.06	1141.20	4.74	3.58	199.31	46.31	227.29	437.20	431.29	73.98	
1400.00	1363.72	1236.63	1216.25	5.45	4.02	197.93	55.81	248.52	498.40	491.93	76.95	
1500.00	1456.81	1315.20	1291.30	6.16	4.47	196.85	65.31	269.76	559.75	552.70	79.39	
1600.00	1549.90	1393.77	1366.35	6.88	4.93	195.97	74.82	290.99	621.20	613.57	81.42	
1700.00	1642.99	1472.34	1441.40	7.61	5.39	195.26	84.32	312.23	682.72	674.51	83.13	
1800.00	1736.08	1550.92	1516.44	8.34	5.85	194.66	93.82	333.46	744.30	735.51	84.59	
1900.00	1829.17	1629.49	1591.49	9.07	6.31	194.15	103.32	354.70	805.93	796.54	85.85	
2000.00	1922.26	1708.06	1666.54	9.80	6.78	193.72	112.83	375.93	867.58	857.60	86.94	
2100.00	2015.35	1786.63	1741.59	10.53	7.25	193.34	122.33	397.17	929.26	918.69	87.89	
2200.00	2108.44	1865.20	1816.64	11.27	7.71	193.01	131.83	418.40	990.97	979.80	88.73	
2300.00	2201.53	1943.78	1891.69	12.00	8.18	192.72	141.34	439.64	1052.69	1040.93	89.48	
2400.00	2294.62	2022.35	1966.74	12.74	8.65	192.46	150.84	460.87	1114.43	1102.06	90.14	
2500.00	2387.72	2100.92	2041.79	13.47	9.12	192.23	160.34	482.11	1176.18	1163.22	90.74	
2600.00	2480.81	2179.49	2116.83	14.21	9.59	192.02	169.85	503.34	1237.94	1224.38	91.28	
2700.00	2573.90	2258.06	2191.88	14.95	10.07	191.83	179.35	524.58	1299.71	1285.55	91.77	
2800.00	2666.99	2336.64	2266.94	15.68	10.54	191.64	188.85	545.81	1361.48	1346.72	92.23	
2900.00	2760.63	2416.15	2342.88	16.23	11.02	191.27	198.47	567.30	1422.07	1406.77	92.96	
3000.00	2855.16	2497.19	2420.29	16.74	11.50	190.95	208.27	589.21	1480.60	1464.77	93.54	
3100.00	2950.50	2579.73	2499.13	17.24	12.00	190.69	218.25	611.51	1537.03	1520.68	94.01	
3200.00	3046.61	2663.70	2579.33	17.70	12.51	190.46	228.41	634.21	1591.32	1574.45	94.37	
3300.00	3143.40	2749.05	2660.85	18.12	13.02	190.27	238.73	657.27	1643.42	1626.06	94.64	
3400.00	3240.82	2835.71	2743.62	18.52	13.54	190.11	249.21	680.69	1693.32	1675.46	94.84	
3500.00	3338.80	2923.62	2827.60	18.87	14.07	189.98	259.84	704.45	1740.96	1722.63	94.97	



Weatherford International Ltd.

Anticollision Report



Weatherford

Company: Williams Production Date: 2/10/2011 Time: 08:50:00 Page: 2
 Field: RIO ARRIBA CO. NM (NAD 83)
 Reference Site: Rosa Unit #9D Co-ordinate(NE) Reference: Well: #9D True North
 Reference Well: #9D Vertical (TVD) Reference: SITE 6441.0
 Reference Wellpath: 1 Db: Sybase

Site: Rosa Unit #217B

Well: #217B

Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Distance	Edge Distance	Separation Factor	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East				
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
3600.00	3437.26	3012.74	2912.72	19.20	14.61	189.87	270.62	728.54	1786.32	1767.53	95.03	
3700.00	3536.15	3102.99	2998.92	19.48	15.16	189.79	281.54	752.93	1829.37	1810.13	95.04	
3800.00	3635.39	3183.69	3076.00	19.73	15.64	189.73	291.30	774.74	1870.11	1850.46	95.16	
3900.00	3734.92	3183.69	3076.00	19.94	15.64	189.61	291.30	774.74	1911.20	1891.42	96.63	
4000.00	3834.67	3183.69	3076.00	20.12	15.64	189.50	291.30	774.74	1954.24	1934.36	98.28	
4100.00	3934.57	3183.69	3076.00	20.26	15.64	189.37	291.30	774.74	1999.10	1979.13	100.09	
4200.00	4034.55	3183.69	3076.00	20.36	15.64	189.27	291.30	774.74	2045.62	2025.58	102.06	
4300.00	4134.55	3183.69	3076.00	20.44	15.64	254.07	291.30	774.74	2094.38	2074.21	103.82	
4400.00	4234.55	3183.69	3076.00	20.53	15.64	254.07	291.30	774.74	2146.66	2126.34	105.61	
4500.00	4334.55	3183.69	3076.00	20.63	15.64	254.07	291.30	774.74	2202.24	2181.76	107.52	
4600.00	4434.55	3183.69	3076.00	20.72	15.64	254.07	291.30	774.74	2260.88	2240.24	109.54	
4700.00	4534.55	3183.69	3076.00	20.81	15.64	254.07	291.30	774.74	2322.35	2301.55	111.65	
4800.00	4634.55	3183.69	3076.00	20.91	15.64	254.07	291.30	774.74	2386.42	2365.46	113.85	
4900.00	4734.55	3183.69	3076.00	21.01	15.64	254.07	291.30	774.74	2452.90	2431.77	116.11	
5000.00	4834.55	3183.69	3076.00	21.11	15.64	254.07	291.30	774.74	2521.59	2500.30	118.43	
5100.00	4934.55	3183.69	3076.00	21.22	15.64	254.07	291.30	774.74	2592.32	2570.86	120.80	
5200.00	5034.55	3183.69	3076.00	21.32	15.64	254.07	291.30	774.74	2664.93	2643.30	123.21	
5300.00	5134.55	3183.69	3076.00	21.43	15.64	254.07	291.30	774.74	2739.26	2717.46	125.65	
5400.00	5234.55	3183.69	3076.00	21.54	15.64	254.07	291.30	774.74	2815.18	2793.21	128.12	
5500.00	5334.55	3183.69	3076.00	21.65	15.64	254.07	291.30	774.74	2892.57	2870.42	130.60	
5600.00	5434.55	3183.69	3076.00	21.76	15.64	254.07	291.30	774.74	2971.31	2948.99	133.10	
5700.00	5534.55	3183.69	3076.00	21.88	15.64	254.07	291.30	774.74	3051.29	3028.79	135.60	
5800.00	5634.55	3183.69	3076.00	21.99	15.64	254.07	291.30	774.74	3132.43	3109.75	138.11	
5900.00	5734.55	3183.69	3076.00	22.11	15.64	254.07	291.30	774.74	3214.62	3191.76	140.61	
6000.00	5834.55	3183.69	3076.00	22.23	15.64	254.07	291.30	774.74	3297.81	3274.76	143.12	
6100.00	5934.55	3183.69	3076.00	22.35	15.64	254.07	291.30	774.74	3381.90	3358.67	145.61	
6200.00	6034.55	3183.69	3076.00	22.47	15.64	254.07	291.30	774.74	3466.83	3443.43	148.09	
6300.00	6134.55	3183.69	3076.00	22.60	15.64	254.07	291.30	774.74	3552.56	3528.96	150.56	
6400.00	6234.55	3183.69	3076.00	22.72	15.64	254.07	291.30	774.74	3639.01	3615.23	153.02	
6500.00	6334.55	3183.69	3076.00	22.85	15.64	254.07	291.30	774.74	3726.13	3702.17	155.46	
6600.00	6434.55	3183.69	3076.00	22.98	15.64	254.07	291.30	774.74	3813.89	3789.74	157.88	
6700.00	6534.55	3183.69	3076.00	23.11	15.64	254.07	291.30	774.74	3902.24	3877.90	160.28	
6800.00	6634.55	3183.69	3076.00	23.24	15.64	254.07	291.30	774.74	3991.14	3966.60	162.66	
6900.00	6734.55	3183.69	3076.00	23.37	15.64	254.07	291.30	774.74	4080.55	4055.83	165.02	
7000.00	6834.55	3183.69	3076.00	23.51	15.64	254.07	291.30	774.74	4170.45	4145.53	167.36	
7100.00	6934.55	3183.69	3076.00	23.64	15.64	254.07	291.30	774.74	4260.79	4235.68	169.67	
7200.00	7034.55	3183.69	3076.00	23.78	15.64	254.07	291.30	774.74	4351.56	4326.25	171.96	
7300.00	7134.55	3183.69	3076.00	23.92	15.64	254.07	291.30	774.74	4442.72	4417.22	174.22	
7400.00	7234.55	3183.69	3076.00	24.06	15.64	254.07	291.30	774.74	4534.26	4508.56	176.46	
7500.00	7334.55	3183.69	3076.00	24.20	15.64	254.07	291.30	774.74	4626.14	4600.25	178.67	
7600.00	7434.55	3183.69	3076.00	24.34	15.64	254.07	291.30	774.74	4718.36	4692.27	180.86	
7700.00	7534.55	3183.69	3076.00	24.49	15.64	254.07	291.30	774.74	4810.88	4784.60	183.02	
7800.00	7634.55	3183.69	3076.00	24.63	15.64	254.07	291.30	774.74	4903.70	4877.22	185.16	
7900.00	7734.55	3183.69	3076.00	24.78	15.64	254.07	291.30	774.74	4996.80	4970.12	187.27	
8000.00	7834.55	3183.69	3076.00	24.92	15.64	254.07	291.30	774.74	5090.16	5063.28	189.35	
8100.00	7934.55	3183.69	3076.00	25.07	15.64	254.07	291.30	774.74	5183.77	5156.69	191.41	
8200.00	8034.55	3183.69	3076.00	25.22	15.64	254.07	291.30	774.74	5277.61	5250.33	193.45	
8300.00	8134.55	3183.69	3076.00	25.37	15.64	254.07	291.30	774.74	5371.67	5344.19	195.45	
8400.00	8234.55	3183.69	3076.00	25.52	15.64	254.07	291.30	774.74	5465.95	5438.26	197.44	
8426.45	8261.00	3183.69	3076.00	25.56	15.64	254.07	291.30	774.74	5490.92	5463.18	197.96	



Weatherford International Ltd.

Anticollision Report



Weatherford

Company: Williams Production Date: 2/10/2011 Time: 08:50:00 Page: 3
 Field: RIO ARRIBA CO. NM (NAD 83)
 Reference Site: Rosa Unit #9D Co-ordinate(NE) Reference: Well: #9D, True North
 Reference Well: #9D Vertical (TVD) Reference: SITE 6441:0
 Reference Wellpath: 1 Db: Sybase

Site: Rosa Unit #9D
 Well: WPX 9A.
 Wellpath: 1 V0

Inter-Site Error: 0.00 ft

Reference MD ft	TVD ft	Offset MD ft	TVD ft	Semi-Major Axis Ref ft	Offset ft	TFO-HS deg	Offset Location North ft	East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	80.31	8.79	51.46	52.21			No Data
100.00	100.00	100.38	100.38	0.10	0.10	80.31	8.73	51.10	51.84	51.64	263.88	
200.00	200.00	200.41	200.40	0.32	0.29	80.31	8.58	50.29	51.01	50.41	83.91	
300.00	300.00	300.35	300.35	0.55	0.49	80.32	8.45	49.56	50.27	49.23	48.31	
400.00	400.00	400.30	400.29	0.77	0.70	80.32	8.34	48.93	49.64	48.16	33.69	
500.00	499.95	500.21	500.20	1.00	0.91	209.91	8.25	48.40	51.35	49.44	26.91	
600.00	599.63	599.92	599.91	1.24	1.12	206.11	8.17	47.95	57.83	55.48	24.63	
700.00	698.77	699.17	699.16	1.52	1.33	201.45	8.08	47.43	69.28	66.49	24.82	
800.00	797.08	797.65	797.63	1.86	1.53	197.08	7.97	46.84	85.93	82.69	26.55	
900.00	894.31	895.09	895.08	2.27	1.74	193.50	7.86	46.16	107.84	104.15	29.27	
1000.00	990.18	991.25	991.23	2.77	1.94	190.74	7.72	45.41	134.94	130.80	32.60	
1100.00	1084.43	1085.73	1085.71	3.37	2.14	188.66	7.58	44.62	167.15	162.55	36.33	
1200.00	1177.54	1178.96	1178.93	4.05	2.33	187.04	7.46	43.89	202.65	197.56	39.79	
1300.00	1270.63	1272.11	1272.09	4.74	2.53	185.90	7.34	43.24	238.38	232.78	42.59	
1400.00	1363.72	1365.23	1365.19	5.45	2.72	185.06	7.24	42.65	274.22	268.12	44.90	
1500.00	1456.81	1458.29	1458.26	6.16	2.92	184.42	7.15	42.14	310.18	303.55	46.84	
1600.00	1549.90	1551.31	1551.27	6.88	3.11	183.92	7.07	41.69	346.22	339.08	48.48	
1700.00	1642.99	1644.77	1644.73	7.61	3.31	183.51	6.99	41.26	382.29	374.62	49.88	
1800.00	1736.08	1738.35	1738.31	8.34	3.51	183.17	6.90	40.75	418.30	410.11	51.08	
1900.00	1829.17	1831.98	1831.94	9.07	3.70	182.87	6.80	40.15	454.25	445.54	52.12	
2000.00	1922.26	1925.67	1925.63	9.80	3.90	182.62	6.68	39.47	490.14	480.89	53.02	
2100.00	2015.35	2019.42	2019.37	10.53	4.10	182.39	6.54	38.70	525.96	516.18	53.81	
2200.00	2108.44	2113.22	2113.17	11.27	4.29	182.19	6.39	37.86	561.71	551.41	54.51	
2300.00	2201.53	2207.07	2207.02	12.00	4.49	182.01	6.23	36.93	597.40	586.56	55.13	
2400.00	2294.62	2300.98	2300.92	12.74	4.69	181.84	6.05	35.91	633.01	621.64	55.68	
2500.00	2387.72	2394.94	2394.88	13.47	4.88	181.69	5.86	34.81	668.56	656.66	56.17	
2600.00	2480.81	2488.82	2488.75	14.21	5.08	181.55	5.65	33.64	704.04	691.60	56.61	
2700.00	2573.90	2581.75	2581.67	14.95	5.28	181.43	5.44	32.49	739.54	726.57	57.02	
2800.00	2666.99	2674.64	2674.55	15.68	5.47	181.32	5.26	31.42	775.10	761.60	57.41	
2900.00	2760.63	2768.00	2767.91	16.23	5.67	181.21	5.08	30.43	809.30	795.30	57.81	
3000.00	2855.16	2862.17	2862.07	16.74	5.87	181.12	4.92	29.50	841.10	826.62	58.07	
3100.00	2950.50	2957.28	2957.18	17.24	6.07	181.05	4.77	28.65	870.49	855.53	58.19	
3200.00	3046.61	3054.46	3054.36	17.70	6.27	180.97	4.61	27.75	897.33	881.91	58.19	
3300.00	3143.40	3152.36	3152.25	18.12	6.48	180.91	4.43	26.74	921.55	905.68	58.08	
3400.00	3240.82	3250.91	3250.80	18.52	6.69	180.85	4.23	25.60	943.12	926.83	57.87	
3500.00	3338.80	3350.04	3349.91	18.87	6.89	180.79	4.01	24.35	962.04	945.33	57.57	
3600.00	3437.26	3449.66	3449.53	19.20	7.10	180.73	3.77	22.98	978.29	961.18	57.18	
3700.00	3536.15	3549.71	3549.56	19.48	7.31	180.67	3.51	21.49	991.84	974.35	56.70	
3800.00	3635.39	3650.10	3649.94	19.73	7.53	180.61	3.22	19.89	1002.71	984.85	56.15	
3900.00	3734.92	3749.86	3749.69	19.94	7.74	180.55	2.93	18.20	1010.89	992.69	55.54	
4000.00	3834.67	3848.75	3848.56	20.12	7.94	180.50	2.64	16.60	1016.52	997.99	54.86	
4100.00	3934.57	3947.75	3947.55	20.26	8.15	180.46	2.38	15.11	1019.64	1000.80	54.12	
4200.00	4034.55	4046.79	4046.59	20.36	8.36	180.45	2.13	13.72	1020.23	1001.09	53.33	
4300.00	4134.55	4146.24	4146.02	20.44	8.57	245.23	1.91	12.42	1019.13	999.65	52.32	
4400.00	4234.55	4246.23	4246.00	20.53	8.78	245.19	1.68	11.13	1018.01	998.16	51.28	
4500.00	4334.55	4346.22	4345.99	20.63	8.99	245.15	1.45	9.84	1016.88	996.66	50.28	
4600.00	4434.55	4446.21	4445.97	20.72	9.20	245.11	1.22	8.55	1015.76	995.16	49.31	
4700.00	4534.55	4548.66	4548.40	20.81	9.42	245.07	0.98	7.18	1014.59	993.61	48.35	
4800.00	4634.55	4655.79	4655.51	20.91	9.65	245.01	0.61	5.07	1012.88	991.50	47.38	
4900.00	4734.55	4762.88	4762.56	21.01	9.88	244.92	0.08	2.09	1010.46	988.68	46.40	
5000.00	4834.55	4869.91	4869.52	21.11	10.11	244.81	-0.59	-1.75	1007.33	985.16	45.42	



Weatherford International Ltd.

Anticollision Report



Weatherford

Company: Williams Production Date: 2/10/2011 Time: 08:50:00 Page: 4
Field: RIO ARRIBA CO. NM (NAD 83)
Reference Site: Rosa Unit #9D Co-ordinate(NE) Reference: Well: #9D, True North
Reference Well: #9D Vertical (TVD) Reference: SITE 6441:0
Reference Wellpath: 1 Db: Sybase

Site: Rosa Unit #9D
Well: WPX 9A.
Wellpath: 1 V0

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
MD ft	TVD ft	MD ft	TVD ft	Ref ft	Offset ft	TFO-HS deg	North ft	East ft				
5100.00	4934.55	4974.04	4973.56	21.22	10.34	244.67	-1.38	-6.22	1003.60	981.03	44.46	
5200.00	5034.55	5076.44	5075.84	21.32	10.57	244.53	-2.21	-10.95	999.59	976.62	43.51	
5300.00	5134.55	5178.81	5178.08	21.43	10.80	244.38	-3.10	-15.98	995.34	971.97	42.59	
5400.00	5234.55	5281.15	5280.28	21.54	11.03	244.21	-4.04	-21.29	990.85	967.07	41.68	
5500.00	5334.55	5383.45	5382.42	21.65	11.25	244.04	-5.03	-26.90	986.11	961.94	40.79	
5600.00	5434.55	5485.72	5484.52	21.76	11.48	243.86	-6.07	-32.81	981.14	956.56	39.91	
5700.00	5534.55	5583.68	5582.30	21.88	11.70	243.67	-7.09	-38.58	976.07	951.10	39.08	
5800.00	5634.55	5679.53	5678.00	21.99	11.91	243.50	-8.01	-43.81	971.39	946.02	38.29	
5900.00	5734.55	5775.42	5773.77	22.11	12.12	243.35	-8.85	-48.58	967.13	941.37	37.54	
6000.00	5834.55	5871.66	5869.91	22.23	12.33	243.21	-9.61	-52.91	963.28	937.12	36.83	
6100.00	5934.55	5971.57	5969.72	22.35	12.55	243.07	-10.37	-57.20	959.61	933.05	36.13	
6200.00	6034.55	6071.47	6069.53	22.47	12.77	242.93	-11.13	-61.49	955.95	928.99	35.46	
6300.00	6134.55	6171.38	6169.34	22.60	12.98	242.78	-11.88	-65.79	952.29	924.93	34.80	
6400.00	6234.55	6271.28	6269.15	22.72	13.20	242.64	-12.64	-70.08	948.64	920.87	34.16	
6500.00	6334.55	6371.19	6368.96	22.85	13.42	242.50	-13.40	-74.37	945.00	916.82	33.54	
6600.00	6434.55	6471.09	6468.77	22.98	13.64	242.35	-14.15	-78.66	941.36	912.77	32.93	
6700.00	6534.55	6571.00	6568.58	23.11	13.87	242.20	-14.91	-82.95	937.73	908.73	32.33	
6800.00	6634.55	6670.90	6668.39	23.24	14.09	242.05	-15.67	-87.24	934.10	904.68	31.75	
6900.00	6734.55	6770.81	6768.20	23.37	14.32	241.90	-16.42	-91.54	930.48	900.65	31.19	
7000.00	6834.55	6870.54	6867.84	23.51	14.54	241.75	-17.18	-95.82	926.87	896.62	30.64	
7100.00	6934.55	6969.51	6966.72	23.64	14.76	241.61	-17.91	-99.99	923.34	892.67	30.11	
7200.00	7034.55	7068.48	7065.61	23.78	14.97	241.46	-18.63	-104.04	919.91	888.83	29.61	
7300.00	7134.55	7167.47	7164.51	23.92	15.19	241.32	-19.32	-107.97	916.58	885.10	29.11	
7400.00	7234.55	7266.46	7263.43	24.06	15.40	241.18	-19.99	-111.78	913.37	881.47	28.64	
7500.00	7334.55	7365.47	7362.36	24.20	15.62	241.05	-20.64	-115.47	910.26	877.95	28.17	
7600.00	7434.55	7464.48	7461.31	24.34	15.83	240.92	-21.27	-119.04	907.26	874.54	27.73	
7700.00	7534.55	7563.55	7560.31	24.49	16.05	240.79	-21.88	-122.49	904.36	871.23	27.29	
7800.00	7634.55	7662.98	7659.69	24.63	16.26	240.66	-22.48	-125.87	901.54	868.00	26.87	
7900.00	7734.55	7762.42	7759.07	24.78	16.47	240.54	-23.06	-129.18	898.79	864.83	26.47	
8000.00	7834.55	7861.87	7858.46	24.92	16.68	240.42	-23.63	-132.42	896.09	861.72	26.07	
8100.00	7934.55	7961.32	7957.86	25.07	16.89	240.30	-24.19	-135.60	893.45	858.67	25.69	
8200.00	8034.55	8060.77	8057.27	25.22	17.09	240.18	-24.74	-138.71	890.87	855.68	25.31	
8300.00	8134.55	8160.23	8156.68	25.37	17.30	240.06	-25.28	-141.75	888.35	852.74	24.95	
8400.00	8234.55	8188.00	8184.43	25.52	17.36	240.03	-25.43	-142.59	888.80	852.93	24.78	
8426.45	8261.00	8188.00	8184.43	25.56	17.36	240.03	-25.43	-142.59	890.68	854.76	24.79	

**Weatherford****Weatherford Drilling Services**

GeoDec v5.03

Report Date: February 09, 2011
Job Number: _____
Customer: Williams
Well Name: Rosa Unit 9D
API Number: _____
Rig Name: _____
Location: Rio Arriba Co, NM (Nad 83)
Block: _____
Engineer: RWJ

Geodetic Latitude / Longitude	Geodetic Latitude / Longitude
System: Latitude / Longitude	System: Latitude / Longitude
Projection: Geodetic Latitude and Longitude	Projection: Geodetic Latitude and Longitude
Datum: North American Datum 1983	Datum: North American Datum 1983
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
Latitude 36.9178800 DEG	Latitude 36.9178800 DEG
Longitude -107.4336700 DEG	Longitude -107.4336700 DEG

Geodetic Location WGS84 Elevation = 0.0 Meters
Latitude = 36.91788° N 36° 55 min 4.368 sec
Longitude = 107.43367° W 107° 26 min 1.212 sec

Magnetic Declination =	9.77°	[True North Offset]	
Local Gravity =	.9992 g	Checksum =	6802
Local Field Strength =	50919 nT	Magnetic Vector X =	22254 nT
Magnetic Dip =	63.67°	Magnetic Vector Y =	3833 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z =	45638 nT
Spud Date =	Jul 10, 2011	Magnetic Vector H =	22581 nT

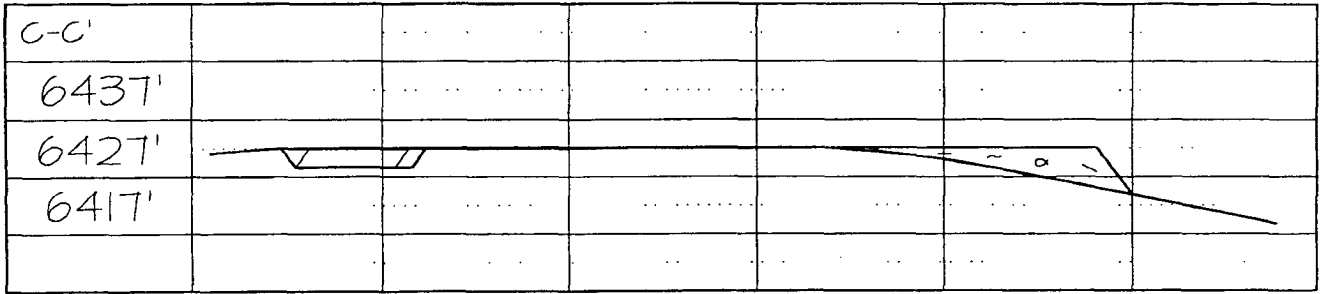
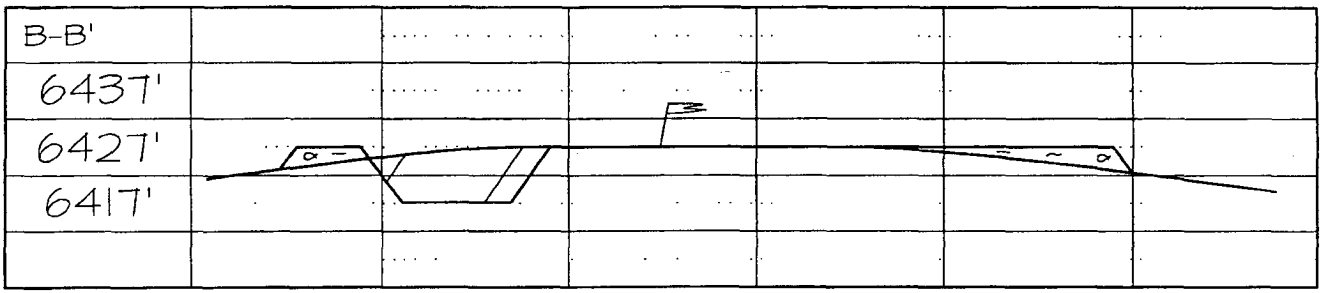
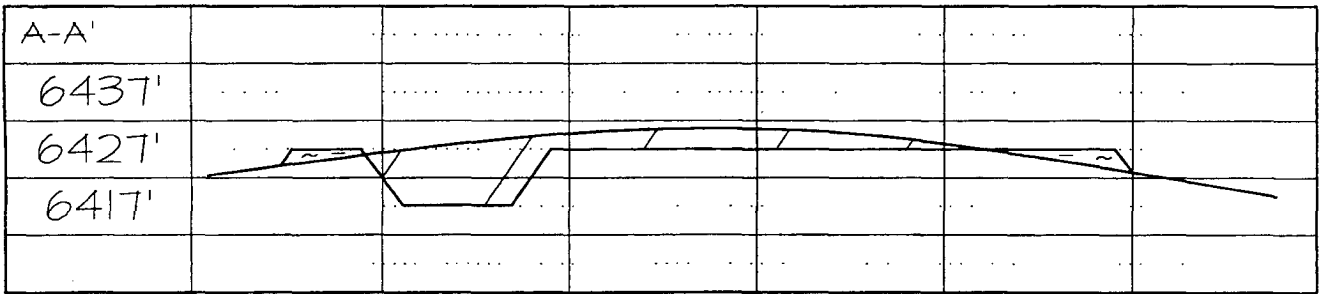
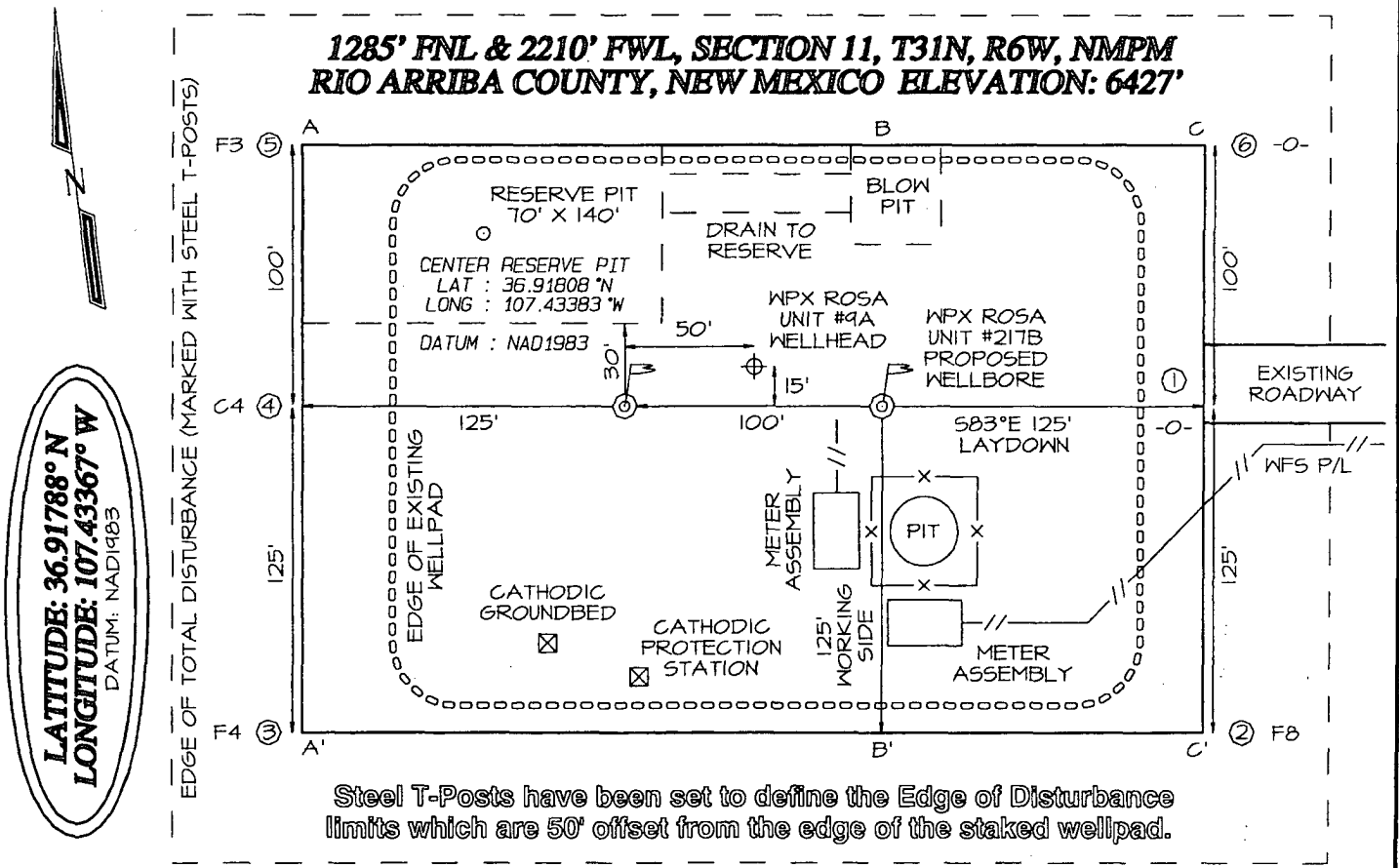
Signed: _____

Date: _____

PLA1 #1

WILLIAMS PRODUCTION COMPANY ROSA UNIT #9D

**1285' FNL & 2210' FWL, SECTION 11, T31N, R6W, NMPM
RIO ARriba COUNTY, NEW MEXICO ELEVATION: 6427'**



Well Control Equipment Schematic for 2M Service

Attachment to Drilling Technical Program

Exhibit #1 Typical BOP setup

Location: San Juan Basin, New Mexico

Date: August 20, 2001

By: John Thompson (Walsh E&P)

