

RECEIVED

Form 3160-5
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Farmington Field Office
Bureau of Land Management

SEP 01 2011

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

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

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well		5. Lease Serial No NMSF-078771
☐ Oil Well ☒ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
2. Name of Operator Williams Production Company, LLC		7. If Unit of CA/Agreement, Name and/or No Rosa Unit
3a. Address PO Box 640 Aztec, NM 87410		8. Well Name and No Rosa Unit #14D
3b. Phone No. (include area code) 505-634-4208		9. API Well No. 30-039-31054
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Surf 1020' FNL & 1515' FEL, section 23, T31N, R6W Bhl: 418' FNL & 347' FEL		10. Field and Pool or Exploratory Area Blanco Mesaverde/Basin Dakota
		11. Country or Parish, State Rio Arriba, NM

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

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

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

8-3-11 – MIRU BWWC and run CBL, TOC @ 3620'

8-4-11 – MIRU AWS #449 for completion operations. Test 4-1/2" production casing to 1500 psi for 30 minutes, good test

8-5-11 – DO cement to PBTD @ 8189' Perf Dakota, 8076'-8144', with 27, 0.34" holes

8-8-11 – Frac Dakota with 5000# 100 mesh sand followed with 70,300# 30/70 Arizona sand

8-10-11 – Set CBP @ 6250'. Perf Mesaverde 1st stage, 5848'-6060', with 33, 0 34" holes

RCVD SEP 6 '11
OIL CONS. DIV.
DIST. 3

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) Larry Higgins		Title PERMT SUPERVISOR
Signature 		Date 9/1/11

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

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

(Instructions on page 2)

NMOCD

ACCEPTED FOR RECORD

SEP 01 2011

FARMINGTON FIELD OFFICE
BY 

Rosa Unit #14D – Page 2

8-14-11 – Frac Mesaverde 1st stage with 9900# 30/70 Ottawa sand followed with 84,100# 20/40 PSA sand. Set CBP @ 5820'. Perf Mesaverde 2nd stage, 5588'-5790', with 30, 0.34" holes. Frac Mesaverde 2nd stage with 17,100# 30/70 mesh Ottawa sand followed with 85,000# 20/40mesh PSA sand

8-17-11 – DO CBP @ 5820'

8-19-11 – Flow MV gas to sales

8-22-11 – DO CBP @ 6250'. Flow commingled MV/DK gas to sales (DHC-3639-AZ)

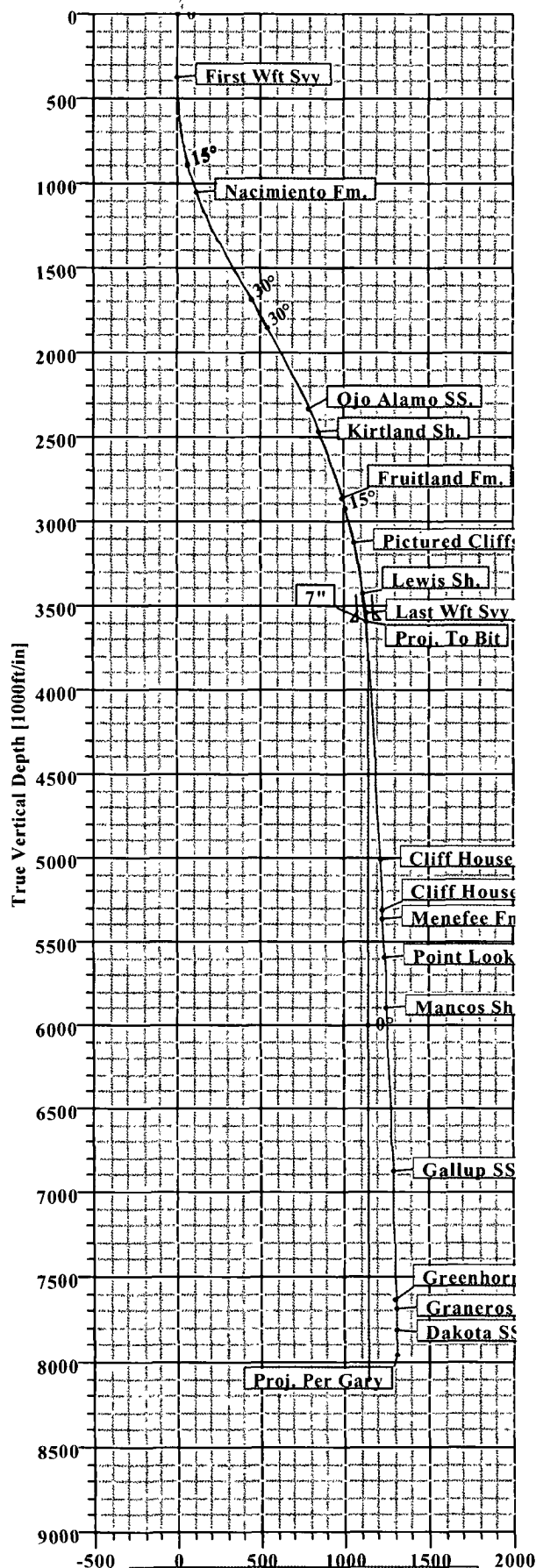
8-23 thru 8-30-11 – CO and flow well to sales

8-31-11 – Land well at 8134' KB as follows one 2.375" Notched Collar, one joint 2.375", N/80, 4.7 lb, EUE, 8 rnd jt of tbg, one Inline EXPCHK, 1.78" F Nipple @ 8102', 249 jts 2.375", N/80, 4.7 lb, EUE, 8 rnd tbg, (250 total jts)



Rosa Unit 14D
RIO ARRIBA CO. NM

KB ELEV: 6301
GL ELEV: 6287



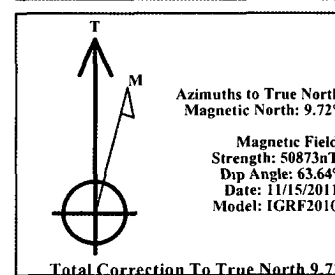
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	62.58	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	62.58	400.00	0.00	0.00	0.00	0.00	0.00	
3	1390.46	29.71	62.58	1346.65	115.64	222.91	3.00	62.58	251.12	
4	2183.71	29.71	62.58	2035.60	296.70	571.93	0.00	0.00	644.31	
5	3831.29	5.00	62.58	3596.00	521.28	1004.86	1.50	180.00	1132.02	Cst/Tgt
6	4164.62	0.00	0.00	3928.91	527.97	1017.76	1.50	-180.00	1146.56	Pbhl
7	8351.71	0.00	0.00	8116.00	527.97	1017.76	0.00	0.00	1146.56	Pbhl

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Rosa Unit 14D	0.00	0.00	2145210.20	1295842.01	36°53'22.308N	107°25'41.952W	N/A

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Cst/Tgt	3596.00	521.28	1004.86	36°53'27.462N	107°25'29.583W	Point
Pbhl	8116.00	527.97	1017.76	36°53'27.528N	107°25'29.424W	Point

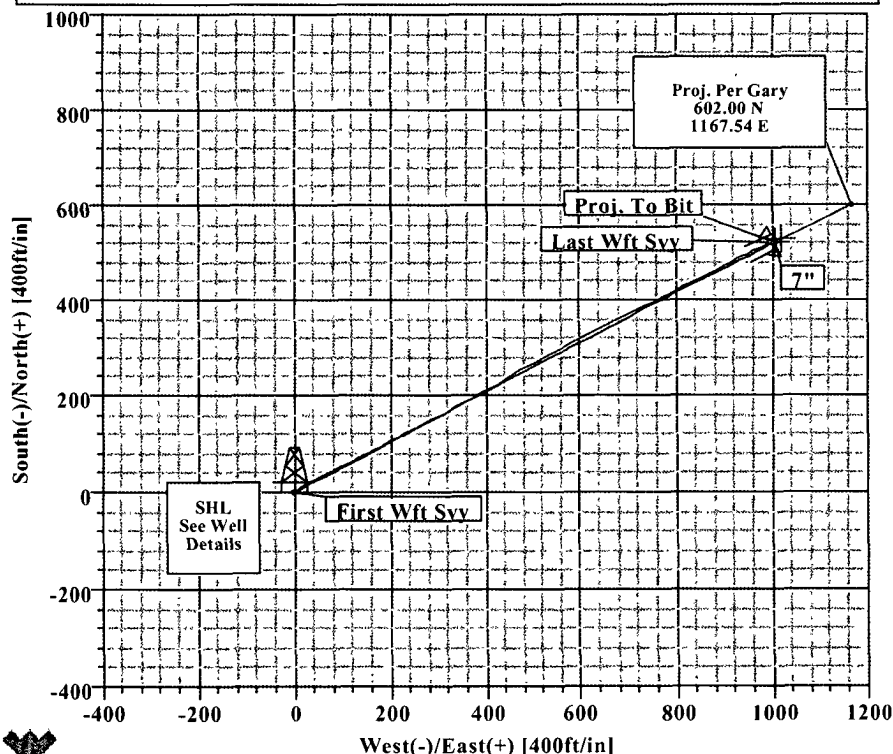
FORMATION TOP DETAILS			
No.	TVDPath	MDPath	Formation
1	1056.00	1069.79	Nacimiento Fm.
2	2331.00	2515.95	Ojo Alamo SS.
3	2471.00	2668.78	Kirtland Sh.
4	2866.00	3086.85	Fruitland Fm.
5	3121.00	3349.61	Pictured Cliffs SS.
6	3426.00	3660.28	Lewis Sh.
7	5006.00	5243.64	Cliff House SS. Trans.
8	5316.00	5553.99	Cliff House SS.
9	5361.00	5599.04	Menefee Fm.
10	5591.00	5829.27	Point Lookout SS.
11	5896.00	6134.53	Mancos Sh.
12	6876.00	7115.11	Gallup SS.
13	7631.00	7870.35	Greenhorn Ls.
14	7686.00	7925.37	Graneros Sh.
15	7816.00	8055.39	Dakota SS.

SITE DETAILS
Rosa Unit 14D
Site Centre Latitude: 36°53'22.308N
Longitude: 107°25'41.952W
Ground Level: 6287.00
Positional Uncertainty: 0.00
Convergence: -0.71



LEGEND
Rosa Unit 14D, Plan #1
60C (1)
Wft Svy

Survey: Wft Svy (Rosa Unit 14D/I)										
No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	
75	8200.00	1.00	63.75	7960.59	602.00	1167.54	0.06	180.00	1313.60	



Survey: Wft Svy (Rosa Unit 14D/I)
Created By: Russell W. Joyner
Date: 8/2/2011



Weatherford International Ltd.

WFT Survey Report Lat, Long



Weatherford

Company: Williams Production		Date: 8/2/2011	Time: 11:59:44	Page: 1
Field: RIO ARRIBA CO. NM (NAD 83)		Co-ordinate(NE) Reference: Well: Rosa Unit 14D, True North		
Site: Rosa Unit 14D		Vertical (TVD) Reference: SITE 6301.0		
Well: Rosa Unit 14D		Section (VS) Reference: Well (0.00N/0.00E/62.58Azi)		
Wellpath: 1		Survey Calculation Method: Minimum Curvature		Db: Sybase

Survey: Wft Svy	Start Date: 7/5/2011
Company: Weatherford International Ltd.	Engineer: Keith Noack
Tool: MWD/MWD - Standard	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 14D	
Site Position:	Northing: 2145210.20 ft
From: Geographic	Easting: 1295842.01 ft
Position Uncertainty: 0.00 ft	Latitude: 36 53 22.308 N
Ground Level: 6287.00 ft	Longitude: 107 25 41.952 W
	North Reference: True
	Grid Convergence: -0.71 deg

Well: Rosa Unit 14D		Slot Name:	
Well Position: +N/-S 0.00 ft	Northing: 2145210.20 ft	Latitude: 36 53 22.308 N	
+E/-W 0.00 ft	Easting: 1295842.01 ft	Longitude: 107 25 41.952 W	
Position Uncertainty: 0.00 ft			

Wellpath: 1		Drilled From: Surface	
Current Datum: SITE	Height 6301.00 ft	Tie-on Depth: 0.00 ft	
Magnetic Data: 11/15/2011		Above System Datum: Mean Sea Level	
Field Strength: 50873 nT		Declination: 9.72 deg	
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle: 63.64 deg	
ft	ft	+E/-W	Direction
		ft	deg
0.00	0.00	0.00	62.58

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								
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36	53	22.308	107	25	41.952	First Wft Sv	
379.00	0.09	292.10	379.00	0.11	-0.28	-0.19	0.02	36	53	22.309	107	25	41.955		
409.00	0.39	28.56	409.00	0.21	-0.25	-0.12	1.37	36	53	22.310	107	25	41.955		
439.00	1.57	59.15	438.99	0.51	0.15	0.37	4.17	36	53	22.313	107	25	41.950		
471.00	2.94	52.22	470.97	1.24	1.18	1.62	4.36	36	53	22.320	107	25	41.938		
502.00	3.63	54.60	501.92	2.29	2.61	3.37	2.27	36	53	22.331	107	25	41.920		
533.00	4.44	51.47	532.84	3.61	4.34	5.52	2.71	36	53	22.344	107	25	41.899		
563.00	5.19	51.60	562.74	5.18	6.32	7.99	2.50	36	53	22.359	107	25	41.874		
595.00	6.38	52.10	594.57	7.17	8.85	11.16	3.72	36	53	22.379	107	25	41.843		
625.00	7.25	52.72	624.36	9.34	11.68	14.66	2.91	36	53	22.400	107	25	41.808		
656.00	7.94	57.47	655.09	11.67	15.04	18.72	3.01	36	53	22.423	107	25	41.767		
688.00	8.00	62.22	686.78	13.90	18.87	23.15	2.07	36	53	22.445	107	25	41.720		
719.00	9.13	65.72	717.43	15.92	23.02	27.77	4.01	36	53	22.465	107	25	41.669		
749.00	9.94	64.47	747.02	18.01	27.53	32.73	2.79	36	53	22.486	107	25	41.613		
780.00	11.13	62.97	777.49	20.53	32.61	38.40	3.94	36	53	22.511	107	25	41.551		
809.00	11.88	61.72	805.91	23.21	37.73	44.18	2.73	36	53	22.537	107	25	41.488		
838.00	13.00	62.35	834.23	26.14	43.25	50.43	3.89	36	53	22.566	107	25	41.420		
870.00	14.00	64.60	865.35	29.47	49.93	57.89	3.53	36	53	22.599	107	25	41.337		
901.00	15.25	65.72	895.34	32.76	57.04	65.71	4.13	36	53	22.632	107	25	41.250		
932.00	16.56	67.22	925.15	36.14	64.83	74.19	4.43	36	53	22.665	107	25	41.154		
964.00	17.56	66.22	955.75	39.85	73.45	83.55	3.26	36	53	22.702	107	25	41.048		
996.00	17.94	63.97	986.22	43.96	82.29	93.30	2.45	36	53	22.743	107	25	40.939		
1027.00	18.94	62.10	1015.63	48.41	91.03	103.10	3.75	36	53	22.787	107	25	40.831		
1059.00	19.56	61.47	1045.84	53.40	100.33	113.65	2.04	36	53	22.836	107	25	40.717		



Weatherford International Ltd.

WFT Survey Report Lat, Long



Weatherford

Company:	Williams Production	Date:	8/2/2011	Time:	11:59:44	Page:	2
Field:	RIO ARRIBA CO. NM (NAD 83)	Co-ordinate(NE) Reference:	Well: Rosa Unit 14D	True North			
Site:	Rosa Unit 14D	Vertical (TVD) Reference:	SITE 6301.0				
Well:	Rosa Unit 14D	Section (VS) Reference:	Well (0.00N,0.00E,62.58Azi)				
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
1091.00	20.25	62.22	1075.93	58.54	109.93	124.54	2.30	36	53	22.887	107	25	40.599	
1122.00	21.13	62.97	1104.93	63.58	119.66	135.49	2.96	36	53	22.937	107	25	40.479	
1153.00	22.38	62.72	1133.72	68.83	129.88	146.98	4.04	36	53	22.988	107	25	40.353	
1185.00	23.31	62.60	1163.21	74.53	140.92	159.41	2.91	36	53	23.045	107	25	40.217	
1217.00	24.56	61.60	1192.46	80.61	152.39	172.39	4.11	36	53	23.105	107	25	40.076	
1248.00	25.25	60.60	1220.58	86.92	163.81	185.44	2.61	36	53	23.167	107	25	39.936	
1279.00	26.69	61.60	1248.45	93.48	175.70	199.01	4.86	36	53	23.232	107	25	39.789	
1310.00	27.28	62.24	1276.07	100.10	188.11	213.07	2.12	36	53	23.298	107	25	39.637	
1342.00	28.38	63.35	1304.37	106.92	201.40	228.01	3.80	36	53	23.365	107	25	39.473	
1374.00	29.44	63.60	1332.38	113.83	215.24	243.48	3.33	36	53	23.433	107	25	39.303	
1405.00	29.89	63.84	1359.32	120.62	229.00	258.82	1.50	36	53	23.501	107	25	39.133	
1468.00	29.56	63.09	1414.03	134.58	256.94	290.05	0.79	36	53	23.639	107	25	38.789	
1531.00	29.56	62.60	1468.83	148.76	284.60	321.13	0.38	36	53	23.779	107	25	38.449	
1595.00	29.56	62.10	1524.50	163.42	312.56	352.70	0.39	36	53	23.924	107	25	38.105	
1658.00	29.72	61.91	1579.25	178.04	340.08	383.86	0.29	36	53	24.068	107	25	37.766	
1720.00	29.75	61.22	1633.09	192.68	367.12	414.61	0.55	36	53	24.213	107	25	37.433	
1782.00	29.56	60.97	1686.97	207.51	393.97	445.27	0.37	36	53	24.360	107	25	37.103	
1845.00	29.00	61.10	1741.92	222.43	420.93	476.07	0.89	36	53	24.507	107	25	36.771	
1907.00	29.20	60.21	1796.09	237.21	447.21	506.21	0.77	36	53	24.653	107	25	36.447	
1971.00	30.00	61.10	1851.74	252.70	474.77	537.80	1.43	36	53	24.806	107	25	36.108	
2033.00	30.31	60.90	1905.35	267.80	502.01	568.93	0.53	36	53	24.956	107	25	35.773	
2096.00	30.06	62.85	1959.81	282.73	529.94	600.60	1.61	36	53	25.103	107	25	35.429	
2158.00	30.13	63.22	2013.45	296.83	557.65	631.69	0.32	36	53	25.243	107	25	35.088	
2221.00	28.44	63.47	2068.40	310.65	585.19	662.50	2.69	36	53	25.379	107	25	34.749	
2284.00	28.00	62.85	2123.91	324.10	611.77	692.29	0.84	36	53	25.512	107	25	34.422	
2346.00	26.94	62.85	2178.92	337.15	637.22	720.89	1.71	36	53	25.641	107	25	34.108	
2409.00	26.69	62.22	2235.15	350.26	662.43	749.31	0.60	36	53	25.771	107	25	33.798	
2471.00	26.50	63.85	2290.59	362.84	687.17	777.06	1.22	36	53	25.895	107	25	33.493	
2534.00	25.02	64.22	2347.32	374.83	711.78	804.43	2.36	36	53	26.014	107	25	33.190	
2596.00	23.06	63.22	2403.94	386.01	734.43	829.68	3.23	36	53	26.124	107	25	32.912	
2659.00	22.75	62.72	2461.98	397.15	756.27	854.20	0.58	36	53	26.235	107	25	32.643	
2723.00	21.81	62.85	2521.20	408.25	777.85	878.47	1.47	36	53	26.344	107	25	32.377	
2786.00	20.38	63.60	2579.97	418.47	798.09	901.14	2.31	36	53	26.445	107	25	32.128	
2848.00	18.56	64.22	2638.43	427.56	816.65	921.80	2.95	36	53	26.535	107	25	31.900	
2912.00	17.88	62.85	2699.22	436.47	834.56	941.80	1.26	36	53	26.623	107	25	31.679	
2975.00	17.67	62.15	2759.21	445.35	851.62	961.04	0.48	36	53	26.711	107	25	31.469	
3038.00	17.50	62.10	2819.27	454.25	868.45	980.07	0.27	36	53	26.799	107	25	31.262	
3100.00	16.00	60.47	2878.63	462.83	884.12	997.93	2.53	36	53	26.884	107	25	31.069	
3163.00	14.75	62.47	2939.38	470.81	898.79	1014.63	2.15	36	53	26.963	107	25	30.888	
3227.00	13.63	60.72	3001.42	478.27	912.59	1030.31	1.87	36	53	27.037	107	25	30.719	
3290.00	12.81	58.60	3062.76	485.54	925.03	1044.70	1.51	36	53	27.108	107	25	30.565	
3353.00	11.75	62.97	3124.31	492.09	936.70	1058.08	2.24	36	53	27.173	107	25	30.422	
3416.00	12.34	68.55	3185.93	497.47	948.68	1071.19	2.07	36	53	27.226	107	25	30.274	
3479.00	11.69	67.10	3247.55	502.41	960.83	1084.25	1.14	36	53	27.275	107	25	30.125	
3542.00	10.63	66.72	3309.36	507.19	972.05	1096.41	1.69	36	53	27.323	107	25	29.987	
3604.00	9.50	66.72	3370.40	511.48	982.00	1107.22	1.82	36	53	27.365	107	25	29.864	
3666.00	8.19	64.97	3431.66	515.37	990.70	1116.73	2.16	36	53	27.403	107	25	29.757	
3729.00	6.63	66.22	3494.13	518.73	998.10	1124.85	2.49	36	53	27.437	107	25	29.666	
3779.00	5.75	65.26	3543.84	520.94	1003.01	1130.23	1.77	36	53	27.459	107	25	29.606	Last Wft Svy
3831.00	3.70	63.75	3595.66	522.78	1006.88	1134.51	3.95	36	53	27.477	107	25	29.558	7"
8200.00	1.00	63.75	7960.59	602.00	1167.54	1313.60	0.06	36	53	28.260	107	25	27.580	Proj. Per Ga

Last Wft Svy
7"
Proj. Per Ga



Weatherford International Ltd.

WFT Survey Report Lat, Long

**Weatherford**

Company:	Williams Production	Date:	8/2/2011	Time:	11:59:44	Page:	3
Field:	RIO ARRIBA CO. NM (NAD 83)	Co-ordinate(NE) Reference:	Well: Rosa Unit 14D: True North				
Site:	Rosa Unit 14D	Vertical (TVD) Reference:	SITE 6301.0				
Well:	Rosa Unit 14D	Section (VS) Reference:	Well (0.00N,0.00E,62.58Azi)				
Wellpath:	1	Survey Calculation Method:	Minimum Curvature			Db:	Sybase

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
3831.00	3595.66	7.000	8.500	7"

Annotation

MD ft	TVD ft	
379.00	379.00	First Wft Svy
3779.00	3543.84	Last Wft Svy
3831.00	3595.66	Proj. To Bit
8200.00	7960.59	Proj. Per Gary

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
1069.79	1056.00	Nacimiento Fm.		0.00	0.00
2515.95	2331.00	Ojo Alamo SS.		0.00	0.00
2668.78	2471.00	Kirtland Sh.		0.00	0.00
3086.85	2866.00	Fruitland Fm.		0.00	0.00
3349.61	3121.00	Pictured Cliffs SS.		0.00	0.00
3660.28	3426.00	Lewis Sh.		0.00	0.00
5243.64	5006.00	Cliff House SS. Trans.		0.00	0.00
5553.99	5316.00	Cliff House SS.		0.00	0.00
5599.04	5361.00	Menefee Fm.		0.00	0.00
5829.27	5591.00	Point Lookout SS.		0.00	0.00
6134.53	5896.00	Mancos Sh.		0.00	0.00
7115.11	6876.00	Gallup SS.		0.00	0.00
7870.35	7631.00	Greenhorn Ls.		0.00	0.00
7925.37	7686.00	Graneros Sh.		0.00	0.00
8055.39	7816.00	Dakota SS.		0.00	0.00
	0.00	Morrison Fm.		0.00	0.00