

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

"As Drilled"

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-089-30689	*Pool Code 97232 / 72319 / 71599	*Pool Name BASIN MANCOS / BLANCO MESAVERT / BASIN DAKOTA	
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 160D
*GRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6392'

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
N	25	31N	6W		1140	SOUTH	1400	WEST	RIO ARriba

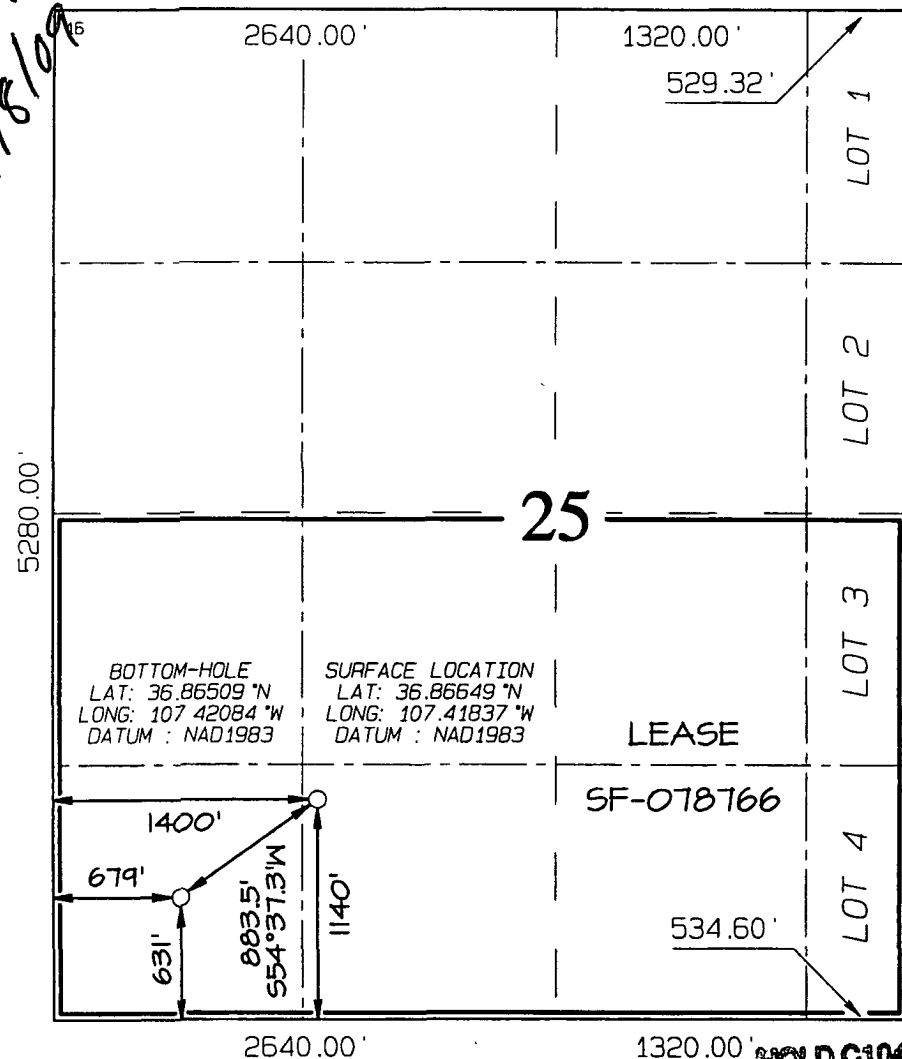
11 Bottom Hole Location If Different From Surface

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	25	31N	6W		631	SOUTH	679	WEST	RIO ARriba

12 Dedicated Acres 272.32 Acres - S/2	13 Joint or Infill	14 Consolidation Code	15 Order No RCVD SEP 3 '09 OIL CONS. DIV.
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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

DIST. 3



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

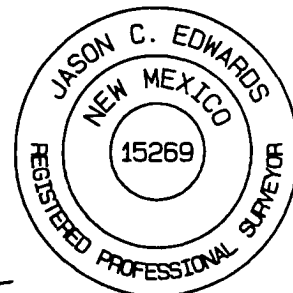
Larry Higgins 9-2-09
Signature Date
LARRY HIGGINS
Printed Name

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 Revised: AUGUST 31, 2009
Date of Survey: MAY 16, 2009

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

HOLD C104 FOR NSL-All Pools



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

API #

30-039-30689

SECTION DETAILS

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

WELL DETAILS

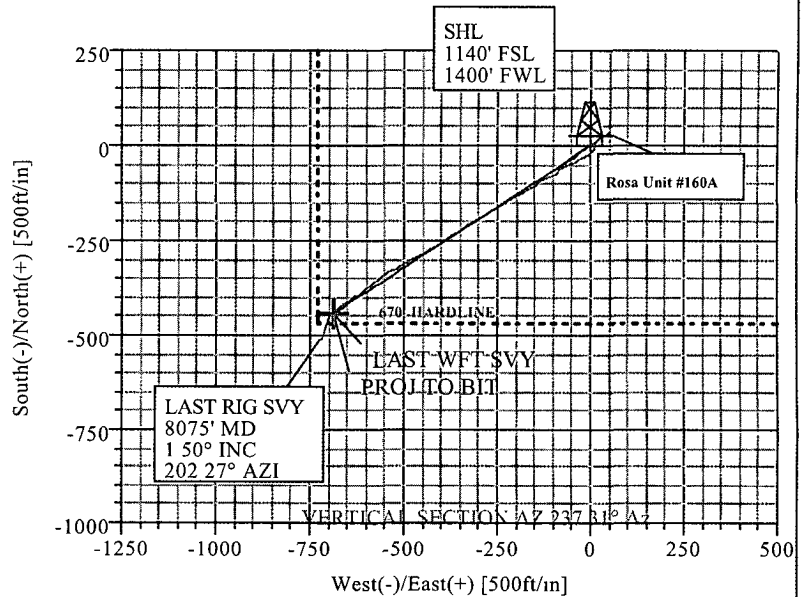
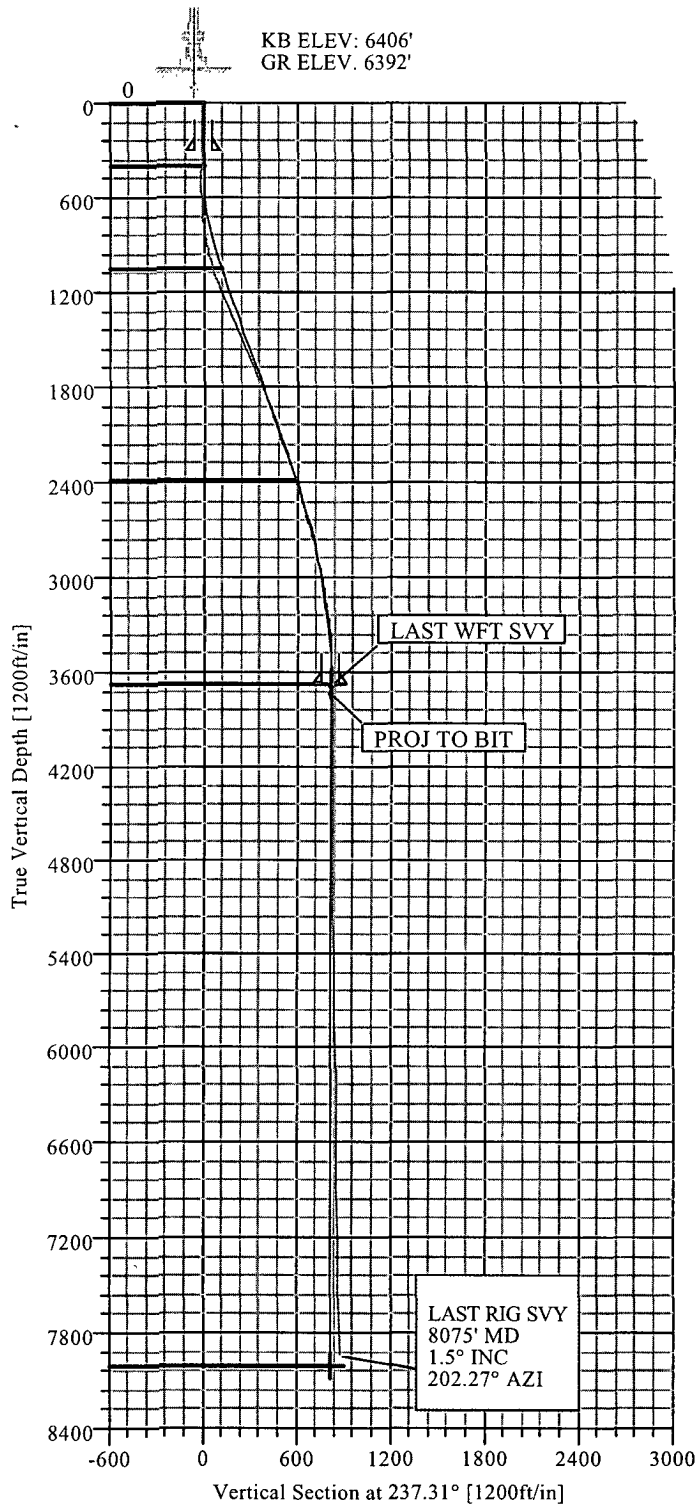
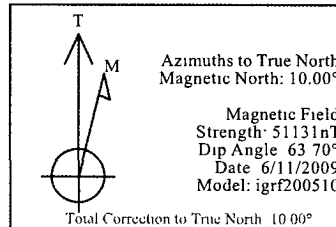
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#160D	0.00	0.00	2136785.68	1298649.31	36°51'59.360N	107°25'06.130W	N/A

TARGET DETAILS

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

FORMATION TOP DETAILS

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



RCVD SEP 3 '09
OIL CONS. DIV.



DIST. 3

Weatherford

CASING DETAILS

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

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

Created By: Lindsey Maddux

Date: 8/25/2009



Weatherford International, Inc.

Survey Report



Weatherford

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

Field: RIO ARRIBA CO. NM (NAD 83)

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

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

Site: Rosa Unit #160D

1140' FSL 140' FWL of SEC 25 T31N R6W

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

Well: #160D

Slot Name:

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

Wellpath: 1

Current Datum:	SITE	Height	6406.00 ft	Drilled From:	Surface
Magnetic Data:	6/11/2009			Tie-on Depth:	0.00 ft
Field Strength:	51131 nT			Above System Datum:	Mean Sea Level
Vertical Section:	Depth From (TVD)	+N/-S		Declination:	10.00 deg
	ft	ft		Mag Dip Angle:	63.70 deg
				+E/-W	Direction
				ft	deg
	0.00	0.00		0.00	237.31

Survey: WFT SVY

Start Date: 8/13/2009

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

Engineer: Lindsey Maddux
Tied-to: From Surface

Survey: WFT SVY

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



Weatherford International, Inc.

Survey Report

**Weatherford**

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

Survey: WFT SVY

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



Weatherford International, Inc.

Survey Report

**Weatherford**

Company:	WILLIAMS PRODUCTION	Date:	8/25/2009	Time:	15:53:59	Page:	3
Field:	RIO ARRIBA CO. NM (NAD 83)	Co-ordinate(NE) Reference:	Well: #160D, True North:				
Site:	Rosa Unit #160D	Vertical (TVD) Reference:	SITE 6406.0				
Well:	#160D	Section (VS) Reference:	Well (0.00N,0.00E,237.31Azi)				
Wellpath:	1	Survey Calculation Method:	Minimum Curvature	Db:	Sybase		

Survey: WFT SVY

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

Annotation

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