

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 30-039-30763	*Pool Code 97232 / 72319 / 71599	*Pool Name ENSL BASIN MANCOS / BLANCO MESAVERDE / BASIN DAKOTA
*Property Code 17033	*Property Name ROSA UNIT	*Well Number 91D
*GRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY	*Elevation 6324'

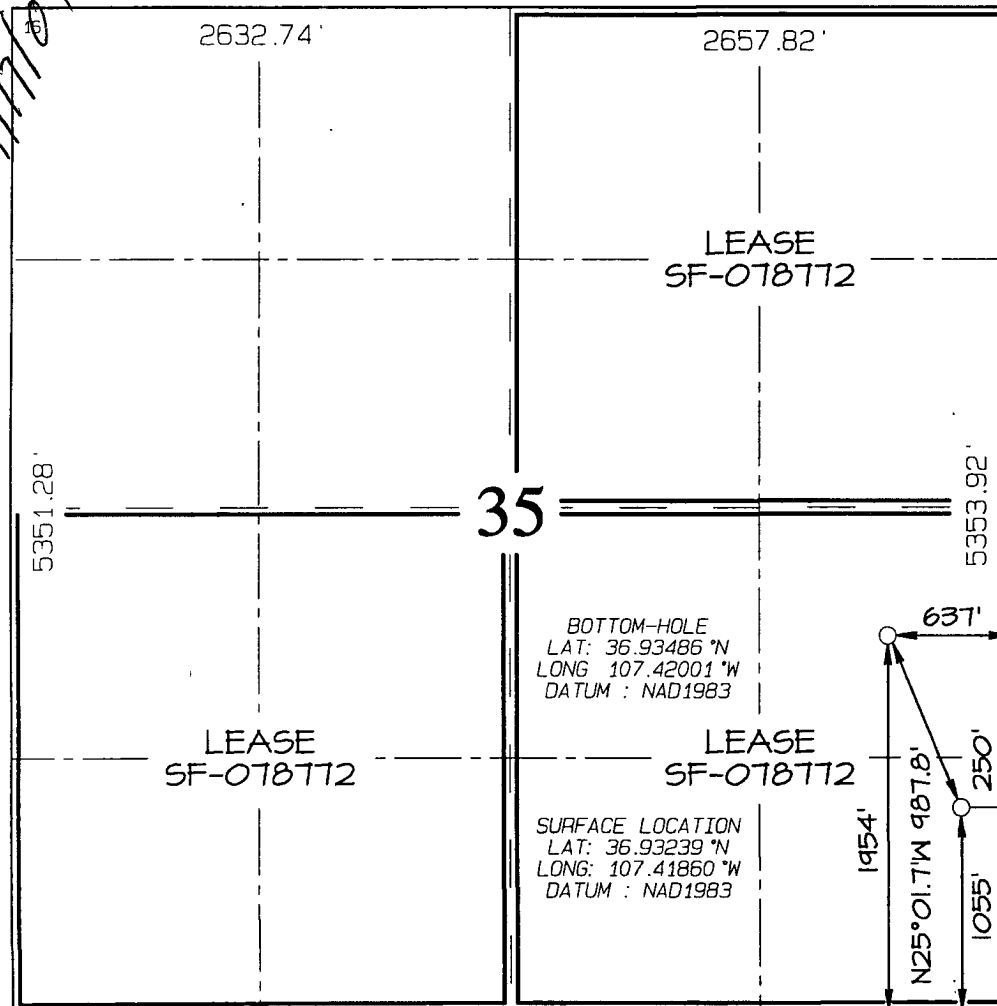
10 Surface Location

UL or lot no P	Section 35	Township 32N	Range 6W	Lot Idn	Feet from the 1055	North/South line SOUTH	Feet from the 250	East/West line EAST	County RIO ARRIBA
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11 Bottom Hole Location If Different From Surface

UL or lot no I	Section 35	Township 32N	Range 6W	Lot Idn	Feet from the 1954	North/South line SOUTH	Feet from the 637	East/West line EAST	County RIO ARRIBA
12 Dedicated Acres 320.0 Acres (MV) - E/2 320.0 Acres (MANCOS-DK) - S/2					13 Joint or Infill	14 Consolidation Code	15 Order No RCVD JUL 14 '09 OIL CONS. DIV.		

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 7-13-09
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

Survey Date: FEBRUARY 22, 2009

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269



**ROSA UNIT #91D
RIO ARriba CO., NEW MEXICO**

LEGEND

- #91D, 1, Plan #2
- - - WFT SVY

SECTION DETAILS

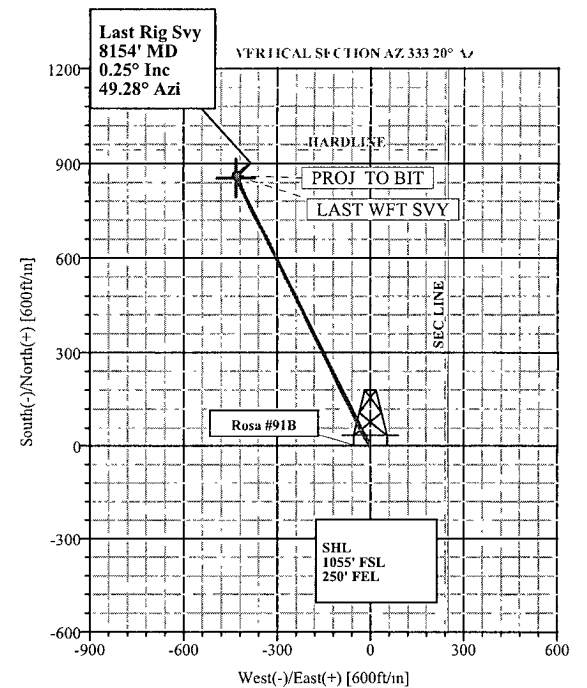
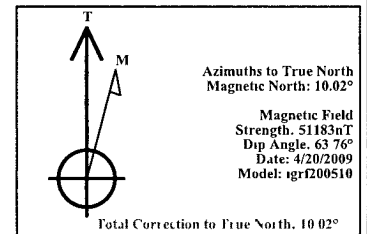
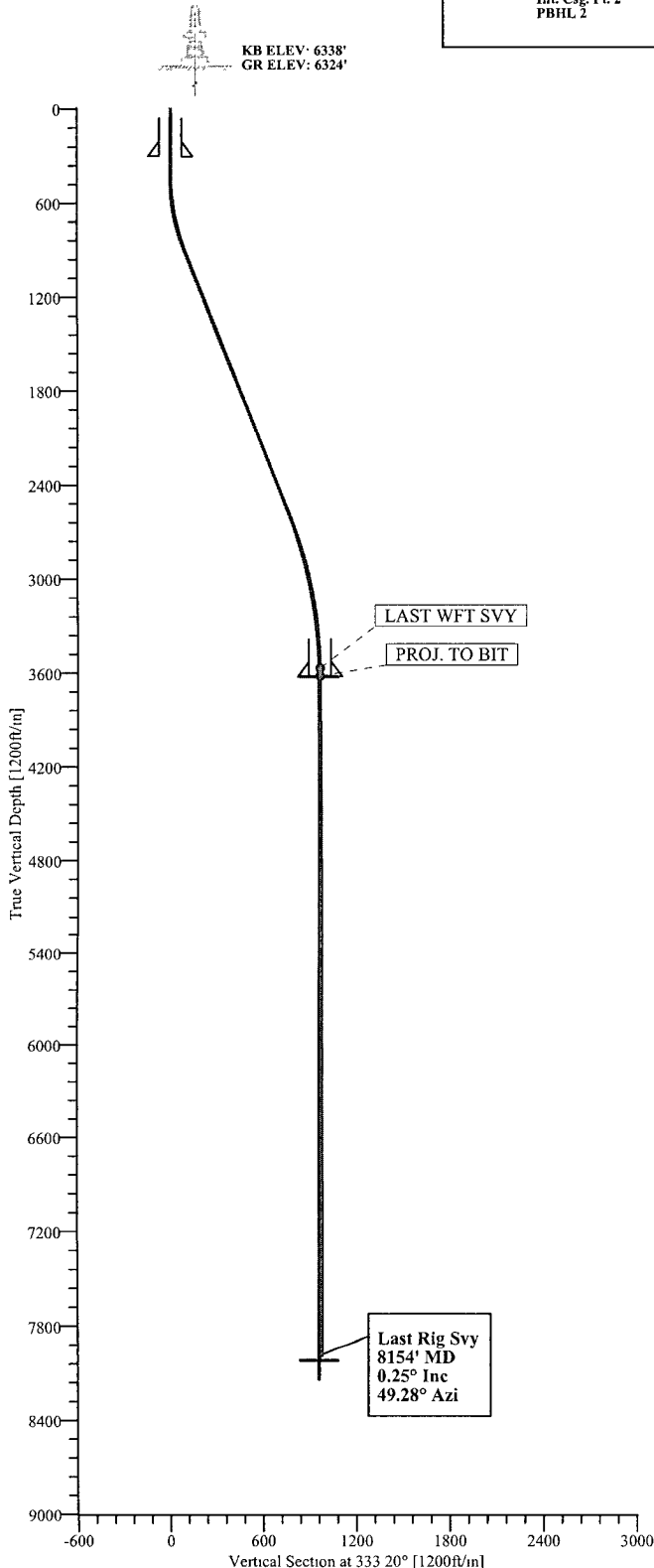
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0 00	0 00	333 20	0 00	0 00	0 00	0 00	0 00	0 00	
2	400 00	0 00	333 20	400 00	0 00	0 00	0 00	0 00	0 00	
3	944 28	21 77	333 20	931 28	91 20	-46 06	4 00	333.20	102 17	
4	2698 58	21 77	333 20	2560 45	672 00	-339 40	0 00	0 00	752 84	
5	3787 14	0 00	333 20	3623 00	854 39	-431 52	2 00	180 00	957 18	Int. Csg Pt. 2
6	8182 14	0 00	333 20	8018 00	854 39	-431 52	0 00	333 20	957 18	PBHL 2

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#91D	0 00	0 00	2160779.29	1298875.72	36°55'56.600N	107°25'06.960W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Int. Csg. Pt. 2	3623.00	854.39	-431.52	2161638.90	1298454.71	36°56'05.047N	107°25'12.275W	Point
PBHL 2	8018.00	854.39	-431.52	2161638.90	1298454.71	36°56'05.047N	107°25'12.275W	Point



Weatherford



Weatherford International Ltd.

SURVEY REPORT



Weatherford

Company: WILLIAMS PRODUCTION Date: 7/8/2009 Time: 10:06:03 Page: 1
 Field: Rio Arriba Co., NM (NAD 83) Co-ordinate(NE) Reference: Well: #91D, True North
 Site: Rosa Unit #91D Vertical (TVD) Reference: SITE 6338.0
 Well: #91D Section (VS) Reference: Well (0.00N;0.00E,333.20Azi)
 Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: WFT SVY Start Date: 6/24/2009
 Company: Weatherford International Ltd. Engineer: Jayme Wilson
 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: igrf200510

Site: Rosa Unit #91D
 1055' FSL 250' FEL of SEC 35 T32N R6W
 Site Position: Northing: 2160779.29 ft Latitude: 36 55 56.600 N
 From: Geographic Easting: 1298875.72 ft Longitude: 107 25 6.960 W
 Position Uncertainty: 0.00 ft North Reference: True
 Ground Level: 6324.00 ft Grid Convergence: -0.70 deg

Well: #91D Slot Name:
 Well Position: +N/-S 0.00 ft Northing: 2160779.29 ft Latitude: 36 55 56.600 N
 +E/-W 0.00 ft Easting: 1298875.72 ft Longitude: 107 25 6.960 W
 Position Uncertainty: 0.00 ft

Wellpath: 1 Drilled From: Surface
 Current Datum: SITE Height 6338.00 ft Tie-on Depth: 0.00 ft
 Magnetic Data: 4/20/2009 Above System Datum: Mean Sea Level
 Field Strength: 51183 nT Declination: 10.02 deg
 Vertical Section: Depth From (TVD) +N/-S Mag Dip Angle: 63.76 deg
 ft ft +E/-W Direction
 deg
 0.00 0.00 0.00 333.20

Survey

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	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
420.00	0.46	213.81	420.00	-1.40	-0.94	-0.83	0.11	0.11	0.00	
451.00	0.62	319.02	450.99	-1.38	-1.12	-0.73	2.79	0.52	339.39	
482.00	1.51	324.23	481.99	-0.92	-1.47	-0.16	2.88	2.87	16.81	
512.00	2.74	329.97	511.97	0.02	-2.06	0.95	4.16	4.10	19.13	
541.00	4.11	330.39	540.92	1.53	-2.92	2.68	4.72	4.72	1.45	
572.00	5.59	331.74	571.80	3.82	-4.18	5.30	4.79	4.77	4.35	
603.00	7.06	330.76	602.61	6.81	-5.83	8.71	4.75	4.74	-3.16	
634.00	8.64	329.83	633.32	10.49	-7.93	12.94	5.11	5.10	-3.00	
664.00	10.35	329.24	662.91	14.75	-10.44	17.88	5.71	5.70	-1.97	
695.00	12.21	329.60	693.31	19.97	-13.52	23.93	6.00	6.00	1.16	
726.00	13.71	330.84	723.52	26.01	-16.97	30.87	4.92	4.84	4.00	
757.00	14.64	331.85	753.58	32.67	-20.61	38.46	3.10	3.00	3.26	
787.00	15.76	332.50	782.53	39.63	-24.28	46.32	3.78	3.73	2.17	
818.00	17.61	332.87	812.22	47.54	-28.36	55.22	5.98	5.97	1.19	
849.00	19.77	333.41	841.58	56.40	-32.85	65.15	6.99	6.97	1.74	
878.00	21.08	334.71	868.76	65.50	-37.27	75.27	4.78	4.52	4.48	
909.00	21.29	335.37	897.66	75.66	-42.00	86.47	1.03	0.68	2.13	
939.00	21.54	333.66	925.59	85.55	-46.71	97.42	2.24	0.83	-5.70	
970.00	21.45	334.64	954.44	95.77	-51.66	108.77	1.19	-0.29	3.16	
1001.00	21.74	333.64	983.26	106.03	-56.64	120.18	1.51	0.94	-3.23	
1032.00	21.72	333.62	1012.06	116.32	-61.74	131.66	0.07	-0.06	-0.06	
1063.00	21.64	333.78	1040.87	126.58	-66.81	143.11	0.32	-0.26	0.52	
1093.00	21.95	331.82	1068.72	136.49	-71.90	154.25	2.64	1.03	-6.53	



Weatherford International Ltd.

SURVEY REPORT



Weatherford®

Company: WILLIAMS PRODUCTION
Field: Rio Arriba Co., NM (NAD 83)
Site: Rosa Unit #91D
Well: #91D
Wellpath: 1

Date: 7/8/2009 Time: 10:06:03 Page: 2
Co-ordinate(NE) Reference: Well: #91D, True North
Vertical (TVD) Reference: SITE 6338.0
Section (VS) Reference: Well (0.00N,0.00E,333.20Azi)
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	Build deg/100ft	Turn deg/100ft	Comment
1124.00	22.11	331.42	1097.46	146.72	-77.43	165.87	0.71	0.52	-1.29	
1154.00	22.06	331.29	1125.26	156.62	-82.84	177.14	0.23	-0.17	-0.43	
1185.00	21.78	331.82	1154.02	166.79	-88.35	188.71	1.11	-0.90	1.71	
1216.00	21.70	333.83	1182.81	177.01	-93.59	200.19	2.42	-0.26	6.48	
1247.00	21.50	334.62	1211.63	187.28	-98.56	211.60	1.14	-0.65	2.55	
1279.00	21.40	335.64	1241.42	197.90	-103.48	223.30	1.21	-0.31	3.19	
1310.00	21.36	334.27	1270.28	208.14	-108.26	234.59	1.62	-0.13	-4.42	
1342.00	21.21	335.17	1300.10	218.64	-113.22	246.20	1.12	-0.47	2.81	
1373.00	21.21	335.40	1329.00	228.83	-117.91	257.41	0.27	0.00	0.74	
1405.00	21.33	334.34	1358.82	239.34	-122.84	269.01	1.26	0.37	-3.31	
1437.00	21.32	334.87	1388.63	249.85	-127.83	280.65	0.60	-0.03	1.66	
1469.00	21.60	333.31	1418.41	260.38	-132.95	292.35	1.99	0.87	-4.87	
1500.00	21.97	332.28	1447.20	270.61	-138.21	303.86	1.72	1.19	-3.32	
1531.00	21.97	332.46	1475.95	280.88	-143.59	315.45	0.22	0.00	0.58	
1563.00	21.94	334.28	1505.63	291.58	-148.95	327.42	2.13	-0.09	5.69	
1594.00	22.19	333.44	1534.36	302.03	-154.08	339.06	1.30	0.81	-2.71	
1626.00	22.08	332.99	1564.00	312.80	-159.51	351.12	0.63	-0.34	-1.41	
1658.00	22.11	332.74	1593.65	323.51	-165.00	363.15	0.31	0.09	-0.78	
1689.00	22.17	332.80	1622.36	333.90	-170.35	374.84	0.21	0.19	0.19	
1720.00	22.05	332.92	1651.08	344.28	-175.67	386.50	0.41	-0.39	0.39	
1752.00	22.03	332.64	1680.75	354.96	-181.16	398.51	0.33	-0.06	-0.87	
1782.00	21.99	333.95	1708.56	365.00	-186.22	409.75	1.64	-0.13	4.37	
1814.00	21.93	334.84	1738.24	375.79	-191.39	421.72	1.06	-0.19	2.78	
1845.00	22.34	333.36	1766.95	386.30	-196.49	433.40	2.23	1.32	-4.77	
1875.00	22.39	334.92	1794.70	396.57	-201.47	444.81	1.99	0.17	5.20	
1906.00	22.27	335.59	1823.37	407.27	-206.40	456.58	0.91	-0.39	2.16	
1937.00	22.30	335.89	1852.06	417.98	-211.23	468.32	0.38	0.10	0.97	
1969.00	22.11	335.71	1881.68	429.01	-216.19	480.40	0.63	-0.59	-0.56	
2000.00	21.97	335.08	1910.42	439.59	-221.03	492.03	0.89	-0.45	-2.03	
2031.00	22.07	334.22	1939.16	450.09	-226.01	503.65	1.09	0.32	-2.77	
2062.00	22.29	332.97	1967.86	460.57	-231.21	515.35	1.68	0.71	-4.03	
2094.00	21.82	332.75	1997.52	471.27	-236.69	527.37	1.49	-1.47	-0.69	
2125.00	21.85	331.92	2026.30	481.48	-242.05	538.89	1.00	0.10	-2.68	
2156.00	22.00	331.30	2055.05	491.66	-247.55	550.46	0.89	0.48	-2.00	
2188.00	22.17	331.84	2084.71	502.24	-253.28	562.49	0.83	0.53	1.69	
2220.00	21.75	333.63	2114.39	512.88	-258.76	574.46	2.47	-1.31	5.59	
2252.00	21.67	333.36	2144.12	523.47	-264.04	586.29	0.40	-0.25	-0.84	
2282.00	21.92	333.05	2171.97	533.41	-269.06	597.43	0.92	0.83	-1.03	
2313.00	22.25	332.65	2200.70	543.78	-274.38	609.09	1.17	1.06	-1.29	
2345.00	22.31	332.45	2230.31	554.55	-279.98	621.22	0.30	0.19	-0.62	
2376.00	22.12	333.26	2259.01	564.98	-285.32	632.94	1.16	-0.61	2.61	
2438.00	21.63	334.45	2316.54	585.71	-295.50	656.04	1.07	-0.79	1.92	
2470.00	21.51	334.31	2346.30	596.32	-300.59	667.80	0.41	-0.37	-0.44	
2501.00	21.45	334.26	2375.15	606.55	-305.52	679.15	0.20	-0.19	-0.16	
2532.00	21.51	334.88	2404.00	616.80	-310.39	690.50	0.76	0.19	2.00	
2564.00	22.12	333.98	2433.70	627.53	-315.52	702.38	2.17	1.91	-2.81	
2595.00	22.26	332.51	2462.41	637.98	-320.79	714.09	1.85	0.45	-4.74	
2627.00	22.63	333.38	2491.98	648.86	-326.35	726.31	1.55	1.16	2.72	
2659.00	22.75	332.85	2521.51	659.87	-331.93	738.65	0.74	0.37	-1.66	
2690.00	22.25	332.24	2550.15	670.40	-337.40	750.51	1.78	-1.61	-1.97	
2722.00	21.84	331.69	2579.81	681.00	-343.05	762.52	1.43	-1.28	-1.72	
2754.00	21.34	330.63	2609.56	691.31	-348.72	774.29	1.98	-1.56	-3.31	



Weatherford International Ltd.

SURVEY REPORT

**Weatherford**

Company: WILLIAMS PRODUCTION Date: 7/8/2009 Time: 10:06:03 Page: 3
Field: Rio Arriba Co., NM (NAD 83) Co-ordinate(NE) Reference: Well: #91D, True North
Site: Rosa Unit #91D Vertical (TVD) Reference: SITE 6338.0
Well: #91D Section (VS) Reference: Well: (0.00N, 0.00E, 333.20Azi)
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	Build deg/100ft	Turn deg/100ft	Comment
2786.00	21.09	330.09	2639.39	701.38	-354.45	785.85	0.99	-0.78	-1.69	
2817.00	20.62	331.32	2668.36	711.00	-359.85	796.88	2.07	-1.52	3.97	
2849.00	19.83	331.23	2698.39	720.70	-365.17	807.94	2.47	-2.47	-0.28	
2880.00	19.21	331.33	2727.61	729.79	-370.15	818.29	2.00	-2.00	0.32	
2911.00	18.43	331.44	2756.95	738.57	-374.94	828.28	2.52	-2.52	0.35	
2943.00	17.91	333.89	2787.36	747.43	-379.52	838.26	2.89	-1.62	7.66	
2974.00	17.16	334.74	2816.91	755.84	-383.57	847.60	2.56	-2.42	2.74	
3005.00	16.69	335.55	2846.57	764.03	-387.36	856.62	1.70	-1.52	2.61	
3036.00	16.10	336.45	2876.31	772.02	-390.92	865.36	2.07	-1.90	2.90	
3068.00	15.43	336.31	2907.11	779.99	-394.41	874.04	2.10	-2.09	-0.44	
3099.00	14.31	336.93	2937.07	787.29	-397.56	881.98	3.65	-3.61	2.00	
3130.00	13.37	336.90	2967.17	794.11	-400.47	889.38	3.03	-3.03	-0.10	
3161.00	12.66	336.49	2997.37	800.52	-403.23	896.35	2.31	-2.29	-1.32	
3193.00	12.52	335.41	3028.60	806.89	-406.08	903.31	0.86	-0.44	-3.37	
3224.00	11.56	335.89	3058.92	812.78	-408.74	909.77	3.11	-3.10	1.55	
3255.00	10.56	335.38	3089.34	818.20	-411.19	915.71	3.24	-3.23	-1.65	
3286.00	10.10	337.90	3119.84	823.30	-413.40	921.26	2.08	-1.48	8.13	
3318.00	9.65	341.24	3151.37	828.44	-415.32	926.71	2.28	-1.41	10.44	
3350.00	9.34	342.82	3182.93	833.46	-416.95	931.93	1.27	-0.97	4.94	
3381.00	8.99	342.77	3213.53	838.18	-418.41	936.80	1.13	-1.13	-0.16	
3413.00	7.93	337.46	3245.19	842.61	-420.00	941.47	4.11	-3.31	-16.59	
3444.00	5.93	331.40	3275.96	845.99	-421.58	945.20	6.86	-6.45	-19.55	
3476.00	5.35	322.56	3307.80	848.62	-423.28	948.32	3.26	-1.81	-27.62	
3507.00	4.59	319.57	3338.69	850.72	-424.96	950.94	2.59	-2.45	-9.65	
3539.00	4.41	317.04	3370.59	852.59	-426.63	953.37	0.84	-0.56	-7.91	
3571.00	4.10	322.56	3402.50	854.40	-428.17	955.68	1.60	-0.97	17.25	
3603.00	3.73	327.85	3434.43	856.19	-429.42	957.84	1.61	-1.16	16.53	
3635.00	3.35	336.52	3466.36	857.93	-430.34	959.81	2.05	-1.19	27.09	
3667.00	2.66	349.59	3498.32	859.52	-430.85	961.45	3.03	-2.16	40.84	
3699.00	2.06	356.22	3530.29	860.82	-431.02	962.69	2.06	-1.87	20.72	
3730.00	1.53	62.00	3561.28	861.57	-430.69	963.21	6.45	-1.71	212.19	
3737.00	1.22	49.28	3568.28	861.66	-430.55	963.23	6.19	-4.43	-181.71	LAST WFT SVY
3787.00	1.22	49.28	3618.27	862.36	-429.75	963.49	0.00	0.00	0.00	PROJ. TO BIT
8154.00	0.25	49.28	7984.86	898.90	-387.29	976.97	0.02	-0.02	0.00	LAST RIG SVY

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
300.00	300.00	10.750	12.250	10 3/4"
3791.73	3623.00	0.000	0.000	7 5/8" Int. Csg.

Annotation

MD ft	TVD ft	
3737.00	3568.28	LAST WFT SVY
3787.00	3618.27	PROJ. TO BIT
8154.00	7984.86	LAST RIG SVY