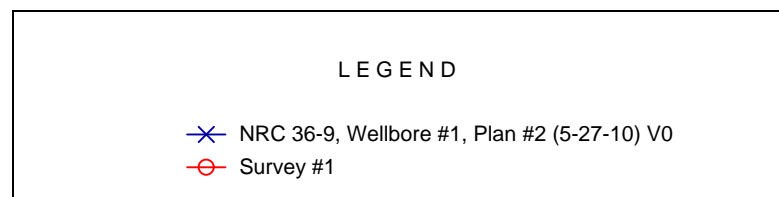
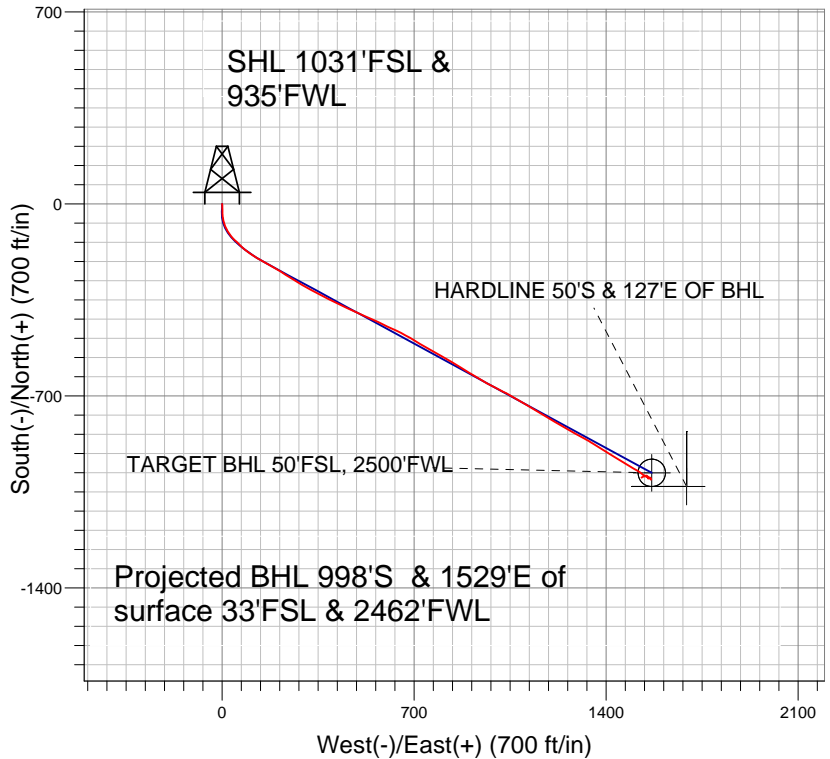
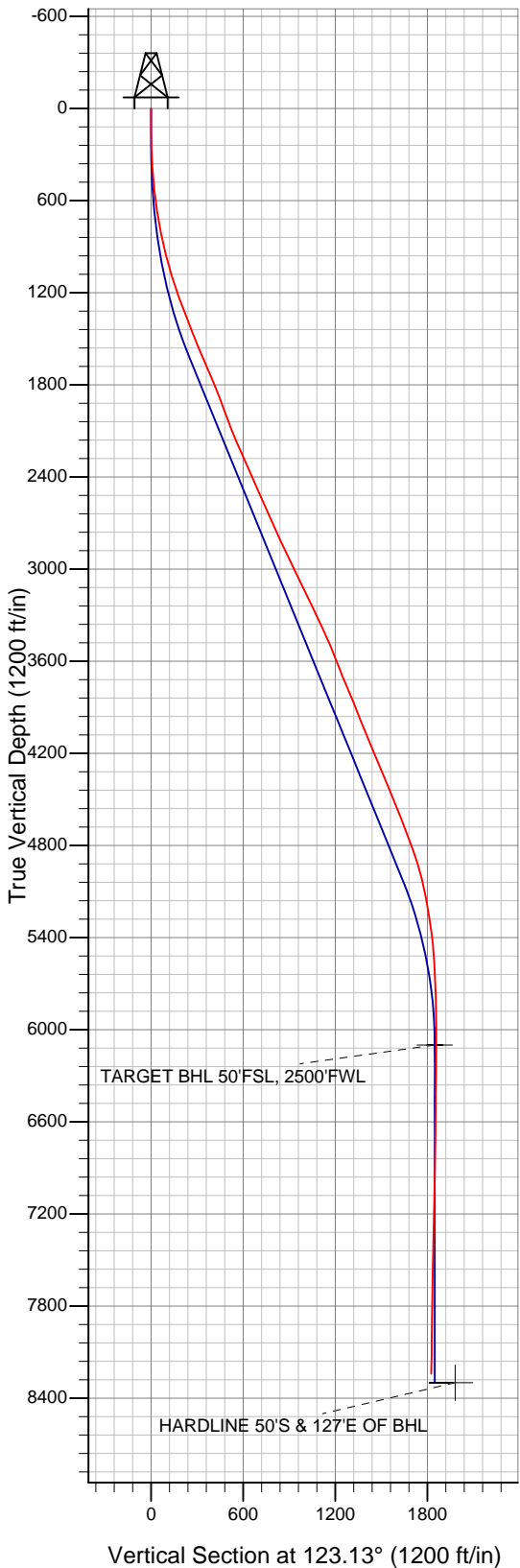


## Anadarko, Weld County CO



## Final Survey Plot

Projected Final Survey -  
 8595'MD & 8240'TVD @ 1820' VS  
 1.1 deg Inc 252.8 deg AZ



Project: SEC.9-T1N-R67W  
 Site: NRC 19-9 Pad Sec.9-T1N-R67W  
 Well: NRC 36-9  
 Plan: Wellbore #1



# **Anadarko, Weld County CO**

**SEC.9-T1N-R67W**

**NRC 19-9 Pad Sec.9-T1N-R67W**

**NRC 36-9**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**06 July, 2010**

<b>Company:</b>	Anadarko, Weld County CO	<b>Local Co-ordinate Reference:</b>	Well NRC 36-9
<b>Project:</b>	SEC.9-T1N-R67W	<b>TVD Reference:</b>	WELL @ 5067.0ft (Original Well Elev)
<b>Site:</b>	NRC 19-9 Pad Sec.9-T1N-R67W	<b>MD Reference:</b>	WELL @ 5067.0ft (Original Well Elev)
<b>Well:</b>	NRC 36-9	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

<b>Project</b>	SEC.9-T1N-R67W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	NRC 19-9 Pad Sec.9-T1N-R67W		
<b>Site Position:</b>		<b>Northing:</b>	1,265,668.11 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,167,496.09 ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40° 3' 39.949 N
		<b>Longitude:</b>	104° 54' 5.713 W
		<b>Grid Convergence:</b>	0.39 °

<b>Well</b>	NRC 36-9		
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	5/15/2010	9.05	66.79	53,050

<b>Design</b>	Wellbore #1			
<b>Audit Notes:</b>				
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	0.00

<b>Date</b>				
<b>From ( )</b>	<b>To ( )</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
		( )		

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
111.0	0.60	172.80	111.0	-0.6	0.1	-0.6	0.54	0.54	0.00	
142.0	1.00	164.00	142.0	-1.0	0.2	-1.0	1.35	1.29	-28.39	
173.0	1.40	169.40	173.0	-1.6	0.3	-1.6	1.34	1.29	17.42	
204.0	1.80	176.80	204.0	-2.5	0.4	-2.5	1.45	1.29	23.87	
234.0	2.30	173.80	234.0	-3.6	0.5	-3.6	1.70	1.67	-10.00	
264.0	3.10	176.20	263.9	-5.0	0.6	-5.0	2.69	2.67	8.00	
295.0	4.10	180.80	294.9	-6.9	0.7	-6.9	3.36	3.23	14.84	
326.0	5.10	176.20	325.8	-9.4	0.7	-9.4	3.44	3.23	-14.84	
371.0	6.10	174.50	370.5	-13.8	1.1	-13.8	2.25	2.22	-3.78	
421.0	7.00	178.30	420.2	-19.5	1.4	-19.5	2.00	1.80	7.60	
466.0	8.30	179.90	464.8	-25.4	1.5	-25.4	2.93	2.89	3.56	
513.0	9.50	178.80	511.3	-32.7	1.6	-32.7	2.58	2.55	-2.34	

<b>Company:</b>	Anadarko, Weld County CO	<b>Local Co-ordinate Reference:</b>	Well NRC 36-9
<b>Project:</b>	SEC.9-T1N-R67W	<b>TVD Reference:</b>	WELL @ 5067.0ft (Original Well Elev)
<b>Site:</b>	NRC 19-9 Pad Sec.9-T1N-R67W	<b>MD Reference:</b>	WELL @ 5067.0ft (Original Well Elev)
<b>Well:</b>	NRC 36-9	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

## Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
558.0	10.50	176.20	555.6	-40.5	2.0	-40.5	2.44	2.22	-5.78
606.0	11.40	171.50	602.7	-49.6	3.0	-49.6	2.64	1.88	-9.79
651.0	11.70	168.80	646.8	-58.5	4.5	-58.5	1.37	0.67	-6.00
699.0	12.20	164.40	693.7	-68.1	6.8	-68.1	2.16	1.04	-9.17
744.0	12.70	159.90	737.7	-77.3	9.8	-77.3	2.42	1.11	-10.00
791.0	13.10	156.20	783.5	-87.1	13.7	-87.1	1.95	0.85	-7.87
836.0	13.40	150.90	827.3	-96.3	18.3	-96.3	2.78	0.67	-11.78
883.0	13.90	146.00	873.0	-105.7	24.1	-105.7	2.68	1.06	-10.43
928.0	14.40	141.30	916.6	-114.6	30.6	-114.6	2.78	1.11	-10.44
987.0	15.00	137.20	973.7	-125.9	40.4	-125.9	2.04	1.02	-6.95
1,055.0	16.20	133.60	1,039.2	-138.9	53.3	-138.9	2.27	1.76	-5.29
1,101.0	16.30	134.00	1,083.3	-147.8	62.5	-147.8	0.33	0.22	0.87
1,146.0	18.30	133.40	1,126.3	-157.1	72.2	-157.1	4.46	4.44	-1.33
1,189.0	19.50	130.90	1,167.0	-166.4	82.6	-166.4	3.37	2.79	-5.81
1,235.0	19.50	125.90	1,210.4	-175.9	94.6	-175.9	3.63	0.00	-10.87
1,325.0	21.00	120.90	1,294.8	-193.0	120.6	-193.0	2.54	1.67	-5.56
1,412.0	20.60	120.50	1,376.1	-208.8	147.2	-208.8	0.49	-0.46	-0.46
1,501.0	21.60	118.70	1,459.2	-224.6	175.0	-224.6	1.34	1.12	-2.02
1,589.0	22.70	120.50	1,540.7	-241.0	203.9	-241.0	1.47	1.25	2.05
1,676.0	23.50	122.90	1,620.7	-258.9	232.9	-258.9	1.42	0.92	2.76
1,763.0	22.90	122.30	1,700.6	-277.4	261.8	-277.4	0.74	-0.69	-0.69
1,852.0	22.60	120.70	1,782.7	-295.4	291.1	-295.4	0.77	-0.34	-1.80
1,939.0	21.70	118.70	1,863.3	-311.6	319.6	-311.6	1.35	-1.03	-2.30
2,030.0	20.30	118.60	1,948.3	-327.3	348.2	-327.3	1.54	-1.54	-0.11
2,120.0	20.60	114.30	2,032.6	-341.3	376.3	-341.3	1.70	0.33	-4.78
2,210.0	22.40	115.70	2,116.3	-355.2	406.2	-355.2	2.08	2.00	1.56
2,299.0	24.00	116.80	2,198.1	-370.7	437.7	-370.7	1.86	1.80	1.24
2,388.0	24.20	116.70	2,279.4	-387.1	470.1	-387.1	0.23	0.22	-0.11
2,477.0	23.40	112.70	2,360.8	-402.1	502.7	-402.1	2.02	-0.90	-4.49
2,567.0	24.10	112.80	2,443.2	-416.1	536.1	-416.1	0.78	0.78	0.11
2,656.0	25.00	116.20	2,524.1	-431.5	569.8	-431.5	1.88	1.01	3.82
2,745.0	24.00	114.50	2,605.1	-447.3	603.1	-447.3	1.37	-1.12	-1.91
2,833.0	24.10	115.10	2,685.5	-462.3	635.7	-462.3	0.30	0.11	0.68
2,924.0	24.60	119.30	2,768.4	-479.5	669.0	-479.5	1.98	0.55	4.62
3,014.0	25.30	121.00	2,850.0	-498.6	701.8	-498.6	1.11	0.78	1.89
3,103.0	25.50	119.40	2,930.4	-517.8	734.8	-517.8	0.80	0.22	-1.80
3,193.0	25.70	121.00	3,011.6	-537.3	768.4	-537.3	0.80	0.22	1.78
3,282.0	26.30	119.30	3,091.6	-556.9	802.2	-556.9	1.07	0.67	-1.91
3,371.0	25.50	120.10	3,171.6	-576.2	835.9	-576.2	0.98	-0.90	0.90
3,460.0	25.60	121.40	3,251.9	-595.8	868.9	-595.8	0.64	0.11	1.46
3,549.0	25.90	120.80	3,332.1	-615.8	902.0	-615.8	0.45	0.34	-0.67
3,639.0	24.80	122.40	3,413.4	-635.9	934.9	-635.9	1.44	-1.22	1.78
3,730.0	22.80	118.00	3,496.7	-654.4	966.5	-654.4	2.94	-2.20	-4.84
3,820.0	21.30	117.90	3,580.1	-670.3	996.4	-670.3	1.67	-1.67	-0.11
3,910.0	21.80	116.40	3,663.8	-685.4	1,025.8	-685.4	0.83	0.56	-1.67
4,001.0	22.90	121.30	3,748.0	-702.1	1,056.1	-702.1	2.38	1.21	5.38
4,089.0	23.40	121.20	3,828.9	-720.0	1,085.6	-720.0	0.57	0.57	-0.11
4,180.0	22.00	118.00	3,912.8	-737.4	1,116.2	-737.4	2.05	-1.54	-3.52
4,270.0	21.30	119.40	3,996.5	-753.3	1,145.3	-753.3	0.97	-0.78	1.56
4,361.0	21.80	121.50	4,081.1	-770.3	1,174.1	-770.3	1.01	0.55	2.31
4,449.0	22.80	123.70	4,162.5	-788.3	1,202.2	-788.3	1.48	1.14	2.50
4,538.0	22.40	120.10	4,244.7	-806.3	1,231.2	-806.3	1.62	-0.45	-4.04
4,627.0	22.50	118.00	4,327.0	-822.8	1,260.9	-822.8	0.91	0.11	-2.36
4,716.0	23.40	117.90	4,408.9	-839.1	1,291.6	-839.1	1.01	1.01	-0.11

<b>Company:</b>	Anadarko, Weld County CO	<b>Local Co-ordinate Reference:</b>	Well NRC 36-9
<b>Project:</b>	SEC.9-T1N-R67W	<b>TVD Reference:</b>	WELL @ 5067.0ft (Original Well Elev)
<b>Site:</b>	NRC 19-9 Pad Sec.9-T1N-R67W	<b>MD Reference:</b>	WELL @ 5067.0ft (Original Well Elev)
<b>Well:</b>	NRC 36-9	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,803.0	23.60	120.10	4,488.7	-855.9	1,321.9	-855.9	1.03	0.23	2.53	
4,894.0	20.60	122.20	4,573.0	-873.6	1,351.2	-873.6	3.41	-3.30	2.31	
4,981.0	20.70	119.20	4,654.4	-889.3	1,377.6	-889.3	1.22	0.11	-3.45	
5,071.0	21.30	124.10	4,738.5	-906.2	1,405.0	-906.2	2.06	0.67	5.44	
5,162.0	19.80	123.70	4,823.7	-924.0	1,431.5	-924.0	1.66	-1.65	-0.44	
5,249.0	17.60	118.70	4,906.1	-938.5	1,455.3	-938.5	3.13	-2.53	-5.75	
5,339.0	15.10	119.10	4,992.4	-950.7	1,477.5	-950.7	2.78	-2.78	0.44	
5,430.0	12.20	124.20	5,080.8	-961.9	1,495.8	-961.9	3.45	-3.19	5.60	
5,516.0	9.80	119.10	5,165.3	-970.6	1,509.8	-970.6	3.01	-2.79	-5.93	
5,607.0	8.70	124.20	5,255.1	-978.2	1,522.2	-978.2	1.51	-1.21	5.60	
5,696.0	8.90	126.50	5,343.0	-986.1	1,533.3	-986.1	0.45	0.22	2.58	
5,787.0	6.10	123.10	5,433.2	-992.9	1,543.0	-992.9	3.11	-3.08	-3.74	
5,875.0	4.30	97.70	5,520.9	-995.9	1,550.2	-995.9	3.27	-2.05	-28.86	
5,964.0	3.70	102.00	5,609.7	-997.0	1,556.3	-997.0	0.75	-0.67	4.83	
6,055.0	2.10	114.40	5,700.6	-998.3	1,560.7	-998.3	1.88	-1.76	13.63	
6,144.0	0.20	190.20	5,789.5	-999.1	1,562.2	-999.1	2.31	-2.13	85.17	
6,233.0	1.40	167.50	5,878.5	-1,000.3	1,562.4	-1,000.3	1.37	1.35	-25.51	
6,322.0	1.80	158.80	5,967.5	-1,002.7	1,563.1	-1,002.7	0.52	0.45	-9.78	
6,410.0	0.50	135.40	6,055.5	-1,004.2	1,563.9	-1,004.2	1.54	-1.48	-26.59	
6,454.6	0.20	3.15	6,100.1	-1,004.3	1,564.0	-1,004.3	1.45	-0.68	-296.49	
TARGET BHL 50'FSL, 2500'FWL										
6,498.0	0.80	336.40	6,143.5	-1,003.9	1,563.9	-1,003.9	1.45	1.39	-61.63	
6,588.0	0.60	313.90	6,233.5	-1,003.0	1,563.3	-1,003.0	0.37	-0.22	-25.00	
6,677.0	0.90	317.50	6,322.5	-1,002.2	1,562.5	-1,002.2	0.34	0.34	4.04	
6,766.0	1.10	292.60	6,411.4	-1,001.3	1,561.3	-1,001.3	0.53	0.22	-27.98	
6,856.0	0.20	289.20	6,501.4	-1,001.0	1,560.3	-1,001.0	1.00	-1.00	-3.78	
6,947.0	0.40	307.50	6,592.4	-1,000.7	1,559.9	-1,000.7	0.24	0.22	20.11	
7,037.0	0.70	273.20	6,682.4	-1,000.5	1,559.1	-1,000.5	0.48	0.33	-38.11	
7,128.0	0.90	250.50	6,773.4	-1,000.7	1,557.9	-1,000.7	0.41	0.22	-24.95	
7,218.0	1.40	256.50	6,863.4	-1,001.2	1,556.1	-1,001.2	0.57	0.56	6.67	
7,308.0	1.80	296.00	6,953.4	-1,000.8	1,553.8	-1,000.8	1.27	0.44	43.89	
7,399.0	2.20	1.80	7,044.3	-998.5	1,552.6	-998.5	2.42	0.44	72.31	
7,489.0	1.40	343.40	7,134.3	-995.7	1,552.3	-995.7	1.09	-0.89	-20.44	
7,578.0	1.50	329.80	7,223.3	-993.6	1,551.4	-993.6	0.40	0.11	-15.28	
7,668.0	1.20	313.60	7,313.2	-992.0	1,550.1	-992.0	0.54	-0.33	-18.00	
7,758.0	0.80	292.60	7,403.2	-991.1	1,548.9	-991.1	0.60	-0.44	-23.33	
7,848.0	1.20	263.80	7,493.2	-990.9	1,547.4	-990.9	0.70	0.44	-32.00	
7,939.0	1.50	255.40	7,584.2	-991.3	1,545.3	-991.3	0.39	0.33	-9.23	
8,029.0	2.10	252.30	7,674.1	-992.1	1,542.6	-992.1	0.68	0.67	-3.44	
8,119.0	1.90	248.50	7,764.1	-993.2	1,539.6	-993.2	0.27	-0.22	-4.22	
8,210.0	1.80	257.30	7,855.0	-994.0	1,536.8	-994.0	0.33	-0.11	9.67	
8,300.0	1.30	225.80	7,945.0	-995.1	1,534.7	-995.1	1.08	-0.56	-35.00	
8,389.0	1.30	244.20	8,034.0	-996.2	1,533.1	-996.2	0.47	0.00	20.67	
8,480.0	1.30	242.10	8,125.0	-997.1	1,531.2	-997.1	0.05	0.00	-2.31	
8,544.0	1.10	252.80	8,188.9	-997.7	1,530.0	-997.7	0.47	-0.31	16.72	
8,595.0	1.10	252.80	8,239.9	-998.0	1,529.1	-998.0	0.00	0.00	0.00	
HARDLINE 50'S & 127'E OF BHL										

<b>Company:</b>	Anadarko, Weld County CO	<b>Local Co-ordinate Reference:</b>	Well NRC 36-9
<b>Project:</b>	SEC.9-T1N-R67W	<b>TVD Reference:</b>	WELL @ 5067.0ft (Original Well Elev)
<b>Site:</b>	NRC 19-9 Pad Sec.9-T1N-R67W	<b>MD Reference:</b>	WELL @ 5067.0ft (Original Well Elev)
<b>Well:</b>	NRC 36-9	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_