



Final Survey Plot

Projected Final Survey -
8610'MD & 8275'TVD @ 1864' VS
0.8 deg Inc 205.7 deg AZ

Project: SEC.9-T1N-R67W
Site: NRC 18-9 Pad Sec.9-T1N-R67W
Well: NRC 25-9
Plan: Wellbore #1



Anadarko, Weld County CO

SEC.9-T1N-R67W

NRC 18-9 Pad Sec.9-T1N-R67W

NRC 25-9

Wellbore #1

Survey: Survey #1

Standard Survey Report

13 August, 2010

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well NRC 25-9
Project:	SEC.9-T1N-R67W	TVD Reference:	WELL @ 5036.0ft (Original Well Elev)
Site:	NRC 18-9 Pad Sec.9-T1N-R67W	MD Reference:	WELL @ 5036.0ft (Original Well Elev)
Well:	NRC 25-9	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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

Site	NRC 18-9 Pad Sec.9-T1N-R67W		
Site Position:		Northing:	1,268,598.84 ft
From:	Lat/Long	Easting:	3,167,667.18 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40° 4' 8.900 N
		Longitude:	104° 54' 3.258 W
		Grid Convergence:	0.39 °

Well	NRC 25-9		
Well Position	+N/-S	0.0 ft	Northing:
	+E/-W	0.0 ft	Easting:
Position Uncertainty		0.0 ft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/28/2010	9.05	66.79	53,051

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

Date				
From ()	To ()	Survey (Wellbore)	Tool Name	Description
		()		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
146.0	0.10	356.80	146.0	0.1	0.0	0.1	0.07	0.07	0.00
239.0	1.10	126.70	239.0	-0.3	0.7	-0.3	1.25	1.08	139.68
332.0	2.90	142.60	331.9	-2.7	2.8	-2.7	2.01	1.94	17.10
426.0	5.20	147.50	425.7	-8.2	6.6	-8.2	2.47	2.45	5.21
519.0	7.70	148.20	518.1	-17.1	12.1	-17.1	2.69	2.69	0.75
611.0	9.80	147.10	609.0	-28.9	19.6	-28.9	2.29	2.28	-1.20
704.0	11.60	145.20	700.4	-43.2	29.3	-43.2	1.97	1.94	-2.04
796.0	12.40	142.80	790.4	-58.7	40.5	-58.7	1.02	0.87	-2.61
888.0	13.10	140.40	880.1	-74.6	53.1	-74.6	0.95	0.76	-2.61
968.0	14.50	139.50	957.8	-89.2	65.4	-89.2	1.77	1.75	-1.13
1,058.0	14.50	140.40	1,044.9	-106.4	79.9	-106.4	0.25	0.00	1.00
1,146.0	15.10	140.50	1,130.0	-123.7	94.2	-123.7	0.68	0.68	0.11

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Site:	NRC 18-9 Pad Sec.9-T1N-R67W	MD Reference:	WELL @ 5036.0ft (Original Well Elev)
Well:	NRC 25-9	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)	
1,237.0	15.20	138.20	1,217.9	-141.8	109.7	-141.8	0.67	0.11	-2.53	
1,324.0	17.40	136.20	1,301.4	-159.7	126.3	-159.7	2.61	2.53	-2.30	
1,412.0	20.20	139.40	1,384.7	-180.7	145.3	-180.7	3.39	3.18	3.64	
1,501.0	22.10	140.50	1,467.7	-205.3	166.0	-205.3	2.18	2.13	1.24	
1,590.0	24.00	141.10	1,549.6	-232.3	188.0	-232.3	2.15	2.13	0.67	
1,677.0	23.90	141.60	1,629.1	-259.9	210.1	-259.9	0.26	-0.11	0.57	
1,766.0	22.80	140.80	1,710.8	-287.4	232.2	-287.4	1.29	-1.24	-0.90	
1,853.0	23.00	140.40	1,790.9	-313.5	253.6	-313.5	0.29	0.23	-0.46	
1,944.0	21.40	139.00	1,875.2	-339.8	275.9	-339.8	1.85	-1.76	-1.54	
2,034.0	20.30	136.70	1,959.3	-363.5	297.3	-363.5	1.52	-1.22	-2.56	
2,124.0	21.40	132.50	2,043.4	-386.0	320.2	-386.0	2.06	1.22	-4.67	
2,215.0	22.10	133.90	2,127.9	-409.1	344.7	-409.1	0.96	0.77	1.54	
2,305.0	22.00	134.40	2,211.3	-432.6	369.0	-432.6	0.24	-0.11	0.56	
2,394.0	19.90	131.00	2,294.4	-454.2	392.3	-454.2	2.73	-2.36	-3.82	
2,484.0	19.70	129.20	2,379.1	-473.8	415.6	-473.8	0.71	-0.22	-2.00	
2,575.0	21.50	135.20	2,464.3	-495.4	439.3	-495.4	3.05	1.98	6.59	
2,663.0	21.70	135.50	2,546.1	-518.4	462.1	-518.4	0.26	0.23	0.34	
2,752.0	20.60	136.60	2,629.1	-541.5	484.3	-541.5	1.31	-1.24	1.24	
2,842.0	20.30	137.30	2,713.5	-564.5	505.8	-564.5	0.43	-0.33	0.78	
2,933.0	20.90	135.20	2,798.6	-587.6	528.0	-587.6	1.05	0.66	-2.31	
3,022.0	22.80	138.90	2,881.2	-611.9	550.5	-611.9	2.64	2.13	4.16	
3,112.0	23.50	139.70	2,964.0	-638.7	573.5	-638.7	0.85	0.78	0.89	
3,201.0	24.10	142.10	3,045.4	-666.6	596.2	-666.6	1.28	0.67	2.70	
3,290.0	22.70	140.50	3,127.1	-694.2	618.3	-694.2	1.73	-1.57	-1.80	
3,379.0	22.30	139.70	3,209.3	-720.3	640.1	-720.3	0.57	-0.45	-0.90	
3,467.0	21.00	142.30	3,291.1	-745.5	660.6	-745.5	1.84	-1.48	2.95	
3,558.0	22.10	136.80	3,375.8	-770.9	682.3	-770.9	2.53	1.21	-6.04	
3,584.7	21.54	136.83	3,400.6	-778.2	689.1	-778.2	2.11	-2.11	0.10	
intermediate target										
3,648.0	20.20	136.90	3,459.7	-794.6	704.5	-794.6	2.11	-2.11	0.11	
3,739.0	17.80	130.50	3,545.8	-815.1	725.8	-815.1	3.49	-2.64	-7.03	
3,829.0	17.80	129.30	3,631.4	-832.8	746.9	-832.8	0.41	0.00	-1.33	
3,919.0	15.90	133.10	3,717.6	-849.9	766.5	-849.9	2.44	-2.11	4.22	
4,008.0	17.40	131.00	3,802.8	-867.0	785.5	-867.0	1.82	1.69	-2.36	
4,099.0	16.80	128.20	3,889.8	-884.0	806.1	-884.0	1.12	-0.66	-3.08	
4,189.0	16.10	125.00	3,976.1	-899.2	826.5	-899.2	1.27	-0.78	-3.56	
4,280.0	15.60	124.30	4,063.7	-913.4	847.0	-913.4	0.59	-0.55	-0.77	
4,368.0	18.60	122.70	4,147.8	-927.6	868.6	-927.6	3.45	3.41	-1.82	
4,457.0	22.10	124.30	4,231.2	-944.7	894.3	-944.7	3.98	3.93	1.80	
4,545.0	24.50	123.90	4,312.0	-964.2	923.2	-964.2	2.73	2.73	-0.45	
4,633.0	26.80	122.40	4,391.4	-985.0	955.1	-985.0	2.72	2.61	-1.70	
4,720.0	24.50	121.00	4,469.8	-1,004.8	987.1	-1,004.8	2.73	-2.64	-1.61	
4,809.0	25.80	122.60	4,550.3	-1,024.8	1,019.2	-1,024.8	1.65	1.46	1.80	
4,897.0	28.40	124.20	4,628.7	-1,046.9	1,052.7	-1,046.9	3.07	2.95	1.82	
4,987.0	27.70	125.30	4,708.1	-1,071.0	1,087.5	-1,071.0	0.97	-0.78	1.22	
5,078.0	27.10	127.40	4,788.9	-1,095.8	1,121.2	-1,095.8	1.25	-0.66	2.31	
5,164.0	26.90	127.60	4,865.5	-1,119.6	1,152.2	-1,119.6	0.26	-0.23	0.23	
5,255.0	23.80	131.50	4,947.8	-1,144.3	1,182.2	-1,144.3	3.87	-3.41	4.29	
5,346.0	21.70	131.20	5,031.7	-1,167.5	1,208.6	-1,167.5	2.31	-2.31	-0.33	
5,432.0	19.40	131.90	5,112.2	-1,187.6	1,231.2	-1,187.6	2.69	-2.67	0.81	
5,523.0	16.40	127.00	5,198.8	-1,205.4	1,252.8	-1,205.4	3.69	-3.30	-5.38	
5,612.0	14.30	130.60	5,284.6	-1,220.1	1,271.1	-1,220.1	2.59	-2.36	4.04	
5,702.0	12.20	128.40	5,372.2	-1,233.2	1,287.0	-1,233.2	2.40	-2.33	-2.44	
5,791.0	9.30	130.40	5,459.6	-1,243.7	1,299.9	-1,243.7	3.28	-3.26	2.25	

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5,880.0	8.30	124.80	5,547.6	-1,252.1	1,310.6	-1,252.1	1.48	-1.12	-6.29
5,971.0	6.60	123.80	5,637.8	-1,258.7	1,320.4	-1,258.7	1.87	-1.87	-1.10
6,059.0	7.10	109.70	5,725.2	-1,263.4	1,329.7	-1,263.4	1.99	0.57	-16.02
6,149.0	4.80	118.60	5,814.7	-1,267.1	1,338.2	-1,267.1	2.75	-2.56	9.89
6,238.0	4.30	119.90	5,903.4	-1,270.5	1,344.4	-1,270.5	0.57	-0.56	1.46
6,327.0	4.00	115.00	5,992.2	-1,273.5	1,350.1	-1,273.5	0.52	-0.34	-5.51
6,335.1	3.79	115.51	6,000.3	-1,273.7	1,350.6	-1,273.7	2.57	-2.54	6.22
TARGET BHL 2590'FNL, 2585'FWL									
6,415.0	1.80	126.60	6,080.1	-1,275.6	1,354.0	-1,275.6	2.57	-2.50	13.89
6,505.0	0.90	232.30	6,170.1	-1,276.9	1,354.6	-1,276.9	2.47	-1.00	117.44
6,594.0	1.30	279.10	6,259.0	-1,277.1	1,353.0	-1,277.1	1.06	0.45	52.58
6,683.0	1.10	263.00	6,348.0	-1,277.1	1,351.2	-1,277.1	0.44	-0.22	-18.09
6,772.0	1.60	255.30	6,437.0	-1,277.5	1,349.1	-1,277.5	0.60	0.56	-8.65
6,859.0	0.70	341.60	6,524.0	-1,277.3	1,347.8	-1,277.3	1.96	-1.03	99.20
6,949.0	0.50	237.20	6,614.0	-1,277.0	1,347.3	-1,277.0	1.06	-0.22	-116.00
7,040.0	0.40	234.10	6,705.0	-1,277.4	1,346.7	-1,277.4	0.11	-0.11	-3.41
7,131.0	0.50	211.80	6,796.0	-1,277.9	1,346.2	-1,277.9	0.22	0.11	-24.51
7,221.0	0.70	260.60	6,886.0	-1,278.4	1,345.5	-1,278.4	0.59	0.22	54.22
7,312.0	0.60	258.00	6,977.0	-1,278.5	1,344.5	-1,278.5	0.11	-0.11	-2.86
7,402.0	0.70	242.50	7,067.0	-1,278.9	1,343.5	-1,278.9	0.22	0.11	-17.22
7,493.0	0.90	230.40	7,158.0	-1,279.6	1,342.5	-1,279.6	0.29	0.22	-13.30
7,583.0	0.80	209.80	7,247.9	-1,280.6	1,341.6	-1,280.6	0.35	-0.11	-22.89
7,673.0	1.00	210.90	7,337.9	-1,281.8	1,340.9	-1,281.8	0.22	0.22	1.22
7,763.0	0.50	170.50	7,427.9	-1,282.9	1,340.6	-1,282.9	0.78	-0.56	-44.89
7,853.0	0.70	137.60	7,517.9	-1,283.7	1,341.0	-1,283.7	0.43	0.22	-36.56
7,943.0	0.80	120.50	7,607.9	-1,284.4	1,341.9	-1,284.4	0.27	0.11	-19.00
8,033.0	0.80	143.80	7,697.9	-1,285.2	1,342.8	-1,285.2	0.36	0.00	25.89
8,124.0	0.50	117.80	7,788.9	-1,285.9	1,343.5	-1,285.9	0.45	-0.33	-28.57
8,214.0	0.70	120.80	7,878.9	-1,286.4	1,344.4	-1,286.4	0.22	0.22	3.33
8,304.0	0.50	127.40	7,968.9	-1,286.9	1,345.1	-1,286.9	0.23	-0.22	7.33
8,394.0	0.90	156.40	8,058.9	-1,287.8	1,345.7	-1,287.8	0.58	0.44	32.22
8,407.0	0.70	130.00	8,071.9	-1,287.9	1,345.8	-1,287.9	3.18	-1.54	-203.08
8,561.0	0.80	205.70	8,225.9	-1,289.5	1,346.1	-1,289.5	0.60	0.06	49.16
8,610.0	0.80	205.70	8,274.9	-1,290.1	1,345.8	-1,290.1	0.00	0.00	0.00
HARDLINES 50'S & 50'E OF BHL									

Checked By: _____ Approved By: _____ Date: _____