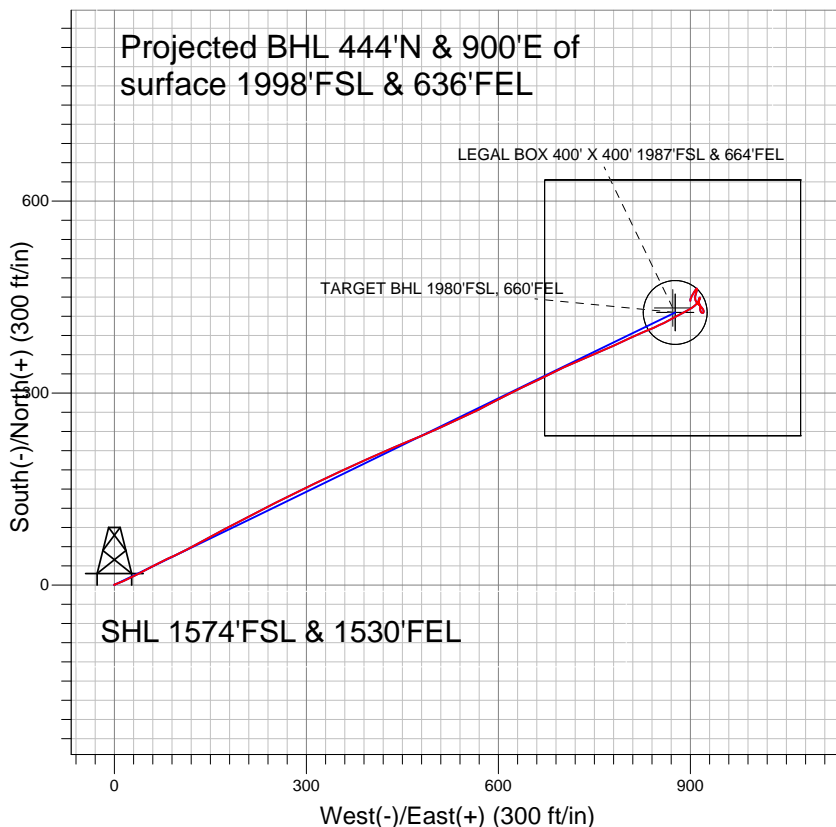


Anadarko, Weld County CO



LEGEND

- ◆ Nichols 9-6, Wellbore #1, Plan #2 (4-25-11) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
8278'MD & 8145'TVD @ 1004'VS
0.8 deg Inc 171.8 deg AZ

Project: SEC.6-T2N-R65W
Site: Nichols 20-6 Pad Sec.6-T2N-R65W
Well: Nichols 9-6
Plan: Wellbore #1



Directional

Anadarko, Weld County CO

SEC.6-T2N-R65W

Nichols 20-6 Pad Sec.6-T2N-R65W

Nichols 9-6

Wellbore #1

Survey: Survey #1

Standard Survey Report

24 May, 2011

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Nichols 9-6
Project:	SEC.6-T2N-R65W	TVD Reference:	WELL @ 4948.0ft (Original Well Elev)
Site:	Nichols 20-6 Pad Sec.6-T2N-R65W	MD Reference:	WELL @ 4948.0ft (Original Well Elev)
Well:	Nichols 9-6	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.6-T2N-R65W, 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	Nichols 20-6 Pad Sec.6-T2N-R65W				
Site Position:		Northing:	1,303,855.91 ft	Latitude:	40.164728
From:	Lat/Long	Easting:	3,222,897.70 ft	Longitude:	-104.702436
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.52 °

Well	Nichols 9-6					
Well Position	+N-S	0.0 ft	Northing:	1,303,855.38 ft	Latitude:	40.164727
	+E-W	0.0 ft	Easting:	3,222,881.49 ft	Longitude:	-104.702494
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,933.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/11/2011	8.83	66.88	53,032

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	64.08	

Survey Program	Date	5/24/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
144.0	8,278.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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	
144.0	0.40	306.90	144.0	0.3	-0.4	-0.2	0.28	0.28	0.00	
233.0	0.90	72.90	233.0	0.7	0.0	0.3	1.33	0.56	141.57	
324.0	2.00	67.60	324.0	1.5	2.2	2.6	1.22	1.21	-5.82	
415.0	3.60	70.40	414.9	3.1	6.3	7.0	1.76	1.76	3.08	
507.0	5.40	67.00	506.6	5.7	13.0	14.2	1.98	1.96	-3.70	
599.0	7.20	64.10	598.0	9.9	22.2	24.3	1.99	1.96	-3.15	
691.0	9.30	62.20	689.1	15.9	34.0	37.5	2.30	2.28	-2.07	
783.0	10.40	63.00	779.7	23.2	47.9	53.2	1.20	1.20	0.87	
817.0	10.90	61.70	813.1	26.1	53.5	59.5	1.63	1.47	-3.82	
946.0	11.60	64.90	939.6	37.4	76.0	84.7	0.73	0.54	2.48	
1,041.0	12.30	64.20	1,032.6	45.8	93.8	104.4	0.75	0.74	-0.74	
1,137.0	13.20	63.00	1,126.2	55.3	112.7	125.5	0.98	0.94	-1.25	

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Nichols 9-6
Project:	SEC.6-T2N-R65W	TVD Reference:	WELL @ 4948.0ft (Original Well Elev)
Site:	Nichols 20-6 Pad Sec.6-T2N-R65W	MD Reference:	WELL @ 4948.0ft (Original Well Elev)
Well:	Nichols 9-6	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)
1,232.0	13.70	61.30	1,218.6	65.6	132.3	147.6	0.67	0.53	-1.79
1,327.0	14.10	60.20	1,310.8	76.7	152.2	170.4	0.50	0.42	-1.16
1,422.0	14.80	62.80	1,402.8	88.0	173.0	194.1	1.00	0.74	2.74
1,517.0	15.60	63.30	1,494.5	99.3	195.2	219.0	0.85	0.84	0.53
1,612.0	16.10	62.30	1,585.9	111.2	218.3	244.9	0.60	0.53	-1.05
1,707.0	16.10	62.80	1,677.1	123.3	241.7	271.3	0.15	0.00	0.53
1,802.0	15.80	63.40	1,768.5	135.1	264.9	297.4	0.36	-0.32	0.63
1,898.0	15.40	64.50	1,861.0	146.5	288.1	323.2	0.52	-0.42	1.15
1,993.0	15.70	64.30	1,952.5	157.5	311.1	348.6	0.32	0.32	-0.21
2,088.0	16.10	63.90	2,043.8	168.8	334.5	374.7	0.44	0.42	-0.42
2,183.0	16.00	64.90	2,135.1	180.2	358.2	400.9	0.31	-0.11	1.05
2,281.0	16.10	66.90	2,229.3	191.3	382.9	428.0	0.57	0.10	2.04
2,376.0	16.10	66.00	2,320.6	201.8	407.1	454.3	0.26	0.00	-0.95
2,471.0	16.40	66.50	2,411.8	212.5	431.4	480.9	0.35	0.32	0.53
2,566.0	16.40	67.20	2,502.9	223.0	456.1	507.7	0.21	0.00	0.74
2,662.0	16.50	66.70	2,595.0	233.7	481.1	534.8	0.18	0.10	-0.52
2,757.0	16.70	65.60	2,686.0	244.7	505.9	562.0	0.39	0.21	-1.16
2,852.0	17.00	65.60	2,777.0	256.0	531.0	589.5	0.32	0.32	0.00
2,947.0	17.20	64.20	2,867.8	267.9	556.3	617.4	0.48	0.21	-1.47
3,043.0	18.30	62.80	2,959.2	280.9	582.5	646.7	1.23	1.15	-1.46
3,138.0	18.30	63.00	3,049.4	294.5	609.0	676.5	0.07	0.00	0.21
3,233.0	18.50	63.70	3,139.5	308.0	635.8	706.5	0.31	0.21	0.74
3,328.0	18.30	64.50	3,229.7	321.1	662.8	736.5	0.34	-0.21	0.84
3,423.0	17.80	63.70	3,320.0	333.9	689.3	765.9	0.59	-0.53	-0.84
3,518.0	17.20	66.50	3,410.6	346.0	715.2	794.5	1.09	-0.63	2.95
3,614.0	16.60	67.00	3,502.5	357.0	740.8	822.3	0.64	-0.63	0.52
3,708.0	15.30	66.30	3,592.8	367.2	764.5	848.1	1.40	-1.38	-0.74
3,803.0	14.00	65.50	3,684.7	377.0	786.5	872.2	1.38	-1.37	-0.84
3,899.0	12.80	65.30	3,778.1	386.3	806.7	894.4	1.25	-1.25	-0.21
3,994.0	11.80	66.10	3,871.0	394.6	825.1	914.6	1.07	-1.05	0.84
4,089.0	11.20	67.40	3,964.0	402.1	842.5	933.5	0.69	-0.63	1.37
4,184.0	10.30	63.50	4,057.4	409.4	858.6	951.2	1.22	-0.95	-4.11
4,279.0	9.40	60.20	4,151.0	417.1	873.0	967.5	1.12	-0.95	-3.47
4,374.0	9.00	62.30	4,244.8	424.4	886.3	982.6	0.55	-0.42	2.21
4,470.0	6.90	61.20	4,339.8	430.7	898.0	995.9	2.19	-2.19	-1.15
4,565.0	6.20	49.00	4,434.2	436.8	906.9	1,006.6	1.64	-0.74	-12.84
4,627.9	4.96	39.62	4,496.8	441.1	911.2	1,012.3	2.44	-1.97	-14.91
TARGET BHL 1980'FSL, 660'FEL									
4,660.0	4.40	32.90	4,528.8	443.2	912.7	1,014.6	2.44	-1.75	-20.94
4,755.0	2.00	2.00	4,623.7	447.9	914.8	1,018.5	3.02	-2.53	-32.53
4,850.0	1.30	220.00	4,718.6	448.7	914.1	1,018.3	3.29	-0.74	-149.47
4,945.0	1.90	193.70	4,813.6	446.4	913.1	1,016.3	0.98	0.63	-27.68
5,041.0	1.40	185.00	4,909.6	443.7	912.6	1,014.7	0.58	-0.52	-9.06
5,136.0	1.80	154.60	5,004.5	441.2	913.1	1,014.1	0.97	0.42	-32.00
5,230.0	2.50	153.80	5,098.5	438.0	914.7	1,014.1	0.75	0.74	-0.85
5,325.0	2.50	185.40	5,193.4	434.1	915.4	1,013.0	1.43	0.00	33.26
5,421.0	1.90	179.30	5,289.3	430.4	915.2	1,011.3	0.67	-0.63	-6.35
5,516.0	1.30	153.80	5,384.3	427.9	915.7	1,010.6	0.97	-0.63	-26.84
5,611.0	1.10	136.00	5,479.2	426.2	916.8	1,010.9	0.44	-0.21	-18.74
5,706.0	0.80	112.70	5,574.2	425.3	918.0	1,011.6	0.51	-0.32	-24.53
5,801.0	0.80	96.20	5,669.2	425.0	919.3	1,012.6	0.24	0.00	-17.37
5,896.0	0.80	17.00	5,764.2	425.6	920.2	1,013.6	1.07	0.00	-83.37
5,992.0	1.00	23.20	5,860.2	427.0	920.7	1,014.7	0.23	0.21	6.46
6,087.0	1.70	327.30	5,955.2	428.9	920.3	1,015.2	1.48	0.74	-58.84

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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)
6,182.0	1.60	337.30	6,050.1	431.3	919.0	1,015.1	0.32	-0.11	10.53
6,277.0	2.50	313.70	6,145.1	434.0	917.0	1,014.4	1.28	0.95	-24.84
6,372.0	2.20	315.10	6,240.0	436.7	914.2	1,013.1	0.32	-0.32	1.47
6,467.0	1.80	316.70	6,334.9	439.1	911.9	1,012.1	0.43	-0.42	1.68
6,563.0	1.60	323.70	6,430.9	441.3	910.1	1,011.4	0.30	-0.21	7.29
6,658.0	1.40	332.80	6,525.9	443.4	908.7	1,011.1	0.33	-0.21	9.58
6,753.0	1.30	341.80	6,620.8	445.4	907.9	1,011.2	0.25	-0.11	9.47
6,848.0	1.40	351.40	6,715.8	447.6	907.4	1,011.7	0.26	0.11	10.11
6,943.0	1.30	5.20	6,810.8	449.8	907.3	1,012.6	0.36	-0.11	14.53
7,038.0	1.60	15.20	6,905.8	452.2	907.7	1,014.1	0.41	0.32	10.53
7,133.0	1.40	11.70	7,000.7	454.6	908.3	1,015.7	0.23	-0.21	-3.68
7,141.3	1.46	12.77	7,009.0	454.8	908.4	1,015.8	0.78	0.71	12.85
LEGAL BOX 400' X 400' 1987'FSL & 664'FEL - TARGET CIRCLE 1980'FSL & 660'FEL									
7,229.0	2.10	20.30	7,096.7	457.4	909.2	1,017.6	0.78	0.73	8.59
7,324.0	2.00	14.00	7,191.6	460.6	910.2	1,020.0	0.26	-0.11	-6.63
7,419.0	1.00	331.10	7,286.6	463.0	910.2	1,021.0	1.51	-1.05	-45.16
7,514.0	2.00	219.10	7,381.6	462.4	908.7	1,019.4	2.68	1.05	-117.89
7,609.0	2.10	214.20	7,476.5	459.7	906.7	1,016.4	0.21	0.11	-5.16
7,704.0	1.80	209.70	7,571.5	456.9	905.0	1,013.7	0.35	-0.32	-4.74
7,800.0	2.00	206.60	7,667.4	454.1	903.5	1,011.1	0.23	0.21	-3.23
7,927.0	1.40	207.70	7,794.3	450.8	901.8	1,008.1	0.47	-0.47	0.87
8,023.0	1.40	202.60	7,890.3	448.6	900.8	1,006.3	0.13	0.00	-5.31
8,118.0	1.20	196.00	7,985.3	446.6	900.1	1,004.7	0.26	-0.21	-6.95
8,228.0	0.80	171.80	8,095.3	444.8	899.8	1,003.7	0.52	-0.36	-22.00
8,278.0	0.80	171.80	8,145.3	444.1	899.9	1,003.5	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____