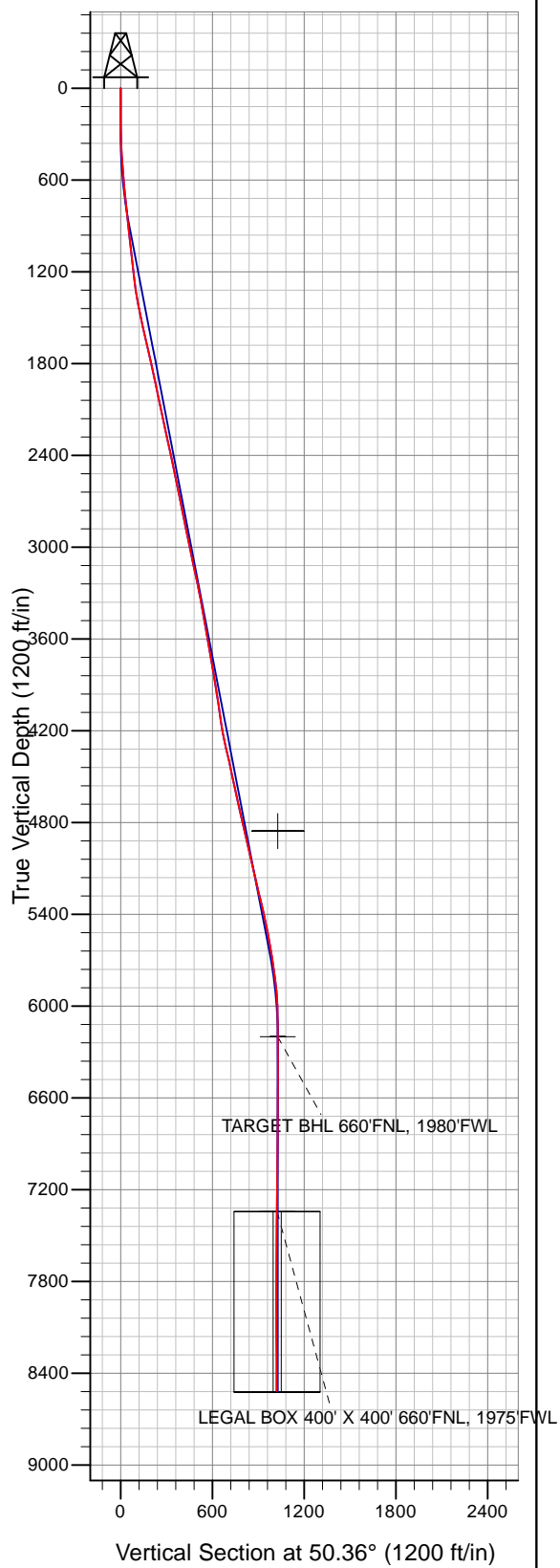
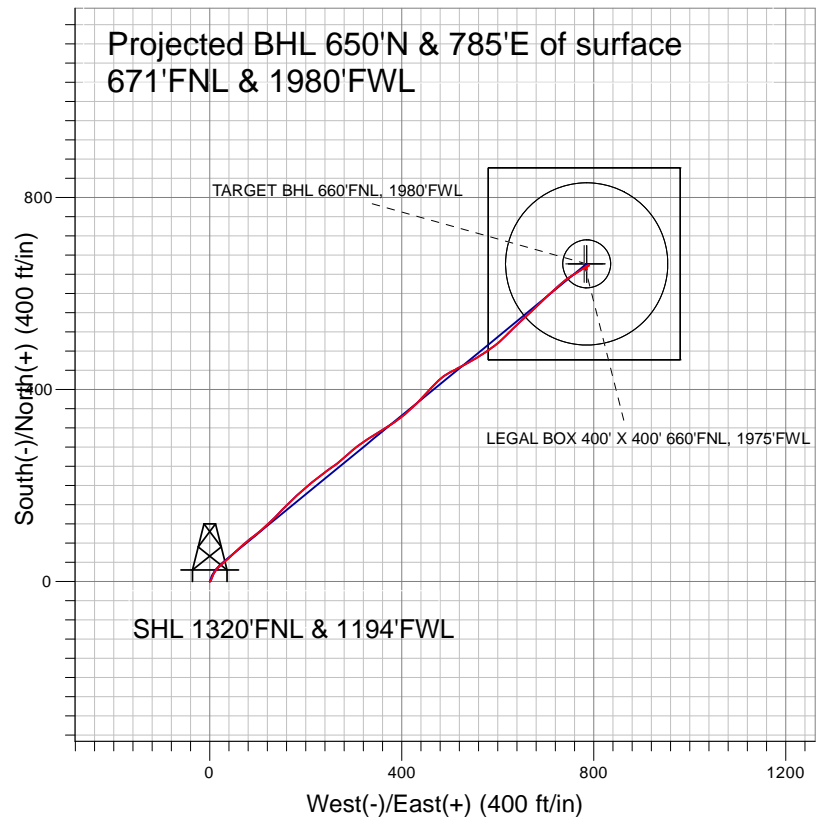


Surface Location: NRC 18-9 Pad Sec.9-T1N-R67W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 5021.0




+N/-S+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1268598.94	3167683.42	40° 4' 8.900 N 104° 54' 3.049 W	
		Original Well Elev	WELL @ 5036.0ft	(Original Well Elev)	



Anadarko, Weld County CO



LEGEND

-  NRC 3-9, Wellbore #1, Plan #1 (6-3-10) V0
-  Wellbore #1
-  Survey #1

Final Survey Plot

Projected Final Survey -
8615'MD & 8515'TVD @ 1020' VS
0.6 deg Inc 127.0 deg AZ

Project: SEC.9-T1N-R67W
Site: NRC 18-9 Pad Sec.9-T1N-R67W
Well: NRC 3-9
Plan: Wellbore #1



Anadarko, Weld County CO

SEC.9-T1N-R67W

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

NRC 3-9

Wellbore #1

Survey: Survey #1

Standard Survey Report

19 August, 2010



Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well NRC 3-9
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 3-9	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM den0-adp01 Server Data

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 3-9		
Well Position	+N-S	0.0 ft	Northing: 1,268,598.94 ft
	+E-W	0.0 ft	Easting: 3,167,683.42 ft
Position Uncertainty		0.0 ft	Wellhead Elevation: ft
			Latitude: 40° 4' 8.900 N
			Longitude: 104° 54' 3.049 W
			Ground Level: 5,021.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/21/2010	9.05	66.80	53,053

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	50.36	

Survey Program	Date	8/19/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
146.0	8,615.0	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	
146.0	0.40	172.40	146.0	-0.5	0.1	-0.3	0.27	0.27	0.00	
238.0	0.90	43.20	238.0	-0.3	0.6	0.3	1.30	0.54	-140.44	
331.0	2.20	29.70	331.0	1.8	2.0	2.7	1.44	1.40	-14.52	
426.0	3.20	22.60	425.9	5.8	3.9	6.7	1.11	1.05	-7.47	
518.0	4.60	20.70	517.6	11.6	6.2	12.2	1.53	1.52	-2.07	
611.0	5.40	30.70	610.3	18.9	9.8	19.6	1.27	0.86	10.75	
704.0	6.10	41.80	702.8	26.3	15.3	28.6	1.41	0.75	11.94	
796.0	6.50	48.90	794.3	33.4	22.5	38.6	0.95	0.43	7.72	
888.0	6.10	47.70	885.7	40.1	30.0	48.7	0.46	-0.43	-1.30	
967.0	5.90	47.60	964.3	45.7	36.1	56.9	0.25	-0.25	-0.13	
1,059.0	5.80	47.40	1,055.8	52.0	43.0	66.3	0.11	-0.11	-0.22	
1,148.0	7.00	47.60	1,144.2	58.7	50.3	76.2	1.35	1.35	0.22	

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well NRC 3-9
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 3-9	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM den0-adp01 Server Data

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)
1,238.0	7.10	47.40	1,233.6	66.2	58.5	87.3	0.11	0.11	-0.22
1,325.0	8.10	46.10	1,319.8	74.1	66.9	98.7	1.17	1.15	-1.49
1,415.0	10.10	52.60	1,408.7	83.3	77.7	112.9	2.50	2.22	7.22
1,504.0	12.30	51.90	1,496.0	93.9	91.4	130.2	2.48	2.47	-0.79
1,593.0	13.50	49.30	1,582.7	106.5	106.7	150.1	1.50	1.35	-2.92
1,681.0	12.70	47.40	1,668.4	119.7	121.6	170.0	1.03	-0.91	-2.16
1,772.0	12.60	45.20	1,757.2	133.5	136.0	189.9	0.54	-0.11	-2.42
1,859.0	12.20	43.90	1,842.2	146.8	149.1	208.5	0.56	-0.46	-1.49
1,949.0	12.00	43.90	1,930.2	160.4	162.2	227.2	0.22	-0.22	0.00
2,039.0	11.90	46.10	2,018.2	173.6	175.4	245.8	0.52	-0.11	2.44
2,130.0	12.40	49.40	2,107.2	186.4	189.5	264.9	0.94	0.55	3.63
2,221.0	12.10	49.00	2,196.1	199.0	204.2	284.2	0.34	-0.33	-0.44
2,311.0	12.00	51.90	2,284.1	211.0	218.6	303.0	0.68	-0.11	3.22
2,400.0	12.20	54.10	2,371.2	222.2	233.5	321.6	0.56	0.22	2.47
2,490.0	12.80	53.70	2,459.0	233.7	249.3	341.1	0.67	0.67	-0.44
2,579.0	11.60	52.80	2,546.0	245.0	264.4	359.8	1.37	-1.35	-1.01
2,668.0	11.50	49.00	2,633.2	256.2	278.2	377.7	0.86	-0.11	-4.27
2,758.0	10.50	49.00	2,721.6	267.5	291.1	394.8	1.11	-1.11	0.00
2,848.0	11.00	49.40	2,810.0	278.4	303.8	411.6	0.56	0.56	0.44
2,939.0	12.00	56.60	2,899.2	289.3	318.3	429.7	1.92	1.10	7.91
3,028.0	12.40	56.90	2,986.2	299.6	334.1	448.4	0.46	0.45	0.34
3,118.0	12.30	58.40	3,074.1	309.9	350.3	467.5	0.37	-0.11	1.67
3,207.0	11.80	58.40	3,161.1	319.6	366.2	485.9	0.56	-0.56	0.00
3,294.0	11.80	56.10	3,246.3	329.2	381.1	503.5	0.54	0.00	-2.64
3,383.0	10.60	52.50	3,333.6	339.3	395.2	520.8	1.56	-1.35	-4.04
3,472.0	9.80	49.30	3,421.2	349.2	407.4	536.5	1.10	-0.90	-3.60
3,562.0	10.00	47.10	3,509.8	359.5	418.9	552.0	0.48	0.22	-2.44
3,653.0	10.00	46.30	3,599.4	370.4	430.4	567.7	0.15	0.00	-0.88
3,743.0	10.60	43.50	3,688.0	381.8	441.8	583.8	0.87	0.67	-3.11
3,834.0	10.20	41.70	3,777.5	393.9	452.9	600.0	0.57	-0.44	-1.98
3,924.0	8.70	43.40	3,866.3	404.8	462.9	614.7	1.70	-1.67	1.89
4,013.0	8.10	45.30	3,954.3	414.1	472.0	627.6	0.74	-0.67	2.13
4,102.0	8.10	48.60	4,042.4	422.6	481.1	640.1	0.52	0.00	3.71
4,192.0	9.50	58.70	4,131.4	430.7	492.2	653.8	2.31	1.56	11.22
4,283.0	10.90	62.80	4,220.9	438.5	506.3	669.6	1.73	1.54	4.51
4,371.0	13.00	60.00	4,307.0	447.3	522.3	687.5	2.47	2.39	-3.18
4,460.0	13.30	62.40	4,393.7	457.0	540.0	707.4	0.70	0.34	2.70
4,549.0	12.10	60.50	4,480.5	466.4	557.2	726.6	1.43	-1.35	-2.13
4,638.0	11.60	54.80	4,567.6	476.1	572.6	744.7	1.43	-0.56	-6.40
4,725.0	12.70	53.70	4,652.7	486.8	587.5	763.0	1.29	1.26	-1.26
4,815.0	13.10	49.50	4,740.4	499.3	603.2	783.0	1.13	0.44	-4.67
4,902.0	13.40	44.80	4,825.1	512.8	617.8	802.9	1.28	0.34	-5.40
4,982.8	12.86	45.25	4,903.8	525.8	630.8	821.2	0.68	-0.67	0.55
4830' MD = 169' Radius									
4,992.0	12.80	45.30	4,912.7	527.3	632.3	823.2	0.68	-0.67	0.58
5,083.0	12.80	46.50	5,001.5	541.3	646.7	843.3	0.29	0.00	1.32
5,170.0	12.80	46.50	5,086.3	554.6	660.7	862.6	0.00	0.00	0.00
5,259.0	12.70	49.00	5,173.1	567.8	675.2	882.2	0.63	-0.11	2.81
5,350.0	14.50	45.70	5,261.6	582.3	690.9	903.6	2.15	1.98	-3.63
5,436.0	12.90	46.30	5,345.1	596.4	705.6	923.9	1.87	-1.86	0.70
5,527.0	12.30	47.70	5,433.9	610.0	720.1	943.7	0.74	-0.66	1.54
5,616.0	10.80	50.20	5,521.1	621.7	733.5	961.5	1.78	-1.69	2.81
5,706.0	9.60	55.50	5,609.7	631.3	746.2	977.4	1.69	-1.33	5.89
5,795.0	9.40	57.00	5,697.5	639.5	758.4	992.0	0.36	-0.22	1.69

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well NRC 3-9
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 3-9	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM den0-adp01 Server Data

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)
5,884.0	7.50	59.00	5,785.5	646.5	769.5	1,005.0	2.16	-2.13	2.25
5,975.0	5.80	57.90	5,875.9	652.0	778.5	1,015.4	1.87	-1.87	-1.21
6,063.0	3.60	63.50	5,963.6	655.6	784.7	1,022.5	2.55	-2.50	6.36
6,152.0	1.60	73.40	6,052.5	657.2	788.4	1,026.4	2.29	-2.25	11.12
6,241.0	0.40	351.90	6,141.5	657.8	789.5	1,027.7	1.79	-1.35	-91.57
6,299.5	0.39	13.33	6,200.0	658.2	789.6	1,027.9	0.25	-0.02	36.62
TARGET BHL 660'FNL, 1980'FWL									
6,330.0	0.40	24.30	6,230.5	658.4	789.6	1,028.1	0.25	0.05	35.99
6,418.0	0.50	322.00	6,318.5	659.0	789.5	1,028.4	0.54	0.11	-70.80
6,508.0	0.40	230.40	6,408.5	659.1	789.0	1,028.1	0.72	-0.11	-101.78
6,597.0	0.20	126.30	6,497.5	658.8	788.9	1,027.8	0.55	-0.22	-116.97
6,687.0	0.30	230.60	6,587.5	658.6	788.9	1,027.6	0.44	0.11	115.89
6,777.0	0.20	230.70	6,677.5	658.3	788.6	1,027.2	0.11	-0.11	0.11
6,867.0	0.20	225.80	6,767.5	658.1	788.3	1,026.9	0.02	0.00	-5.44
6,956.0	0.70	243.50	6,856.5	657.8	787.7	1,026.2	0.58	0.56	19.89
7,047.0	0.70	254.20	6,947.5	657.4	786.7	1,025.2	0.14	0.00	11.76
7,136.0	0.70	261.10	7,036.5	657.1	785.6	1,024.2	0.09	0.00	7.75
7,226.0	1.10	241.10	7,126.5	656.6	784.3	1,022.9	0.56	0.44	-22.22
7,316.0	0.70	209.20	7,216.4	655.7	783.3	1,021.5	0.70	-0.44	-35.44
7,407.0	0.30	211.00	7,307.4	655.0	782.9	1,020.8	0.44	-0.44	1.98
7,442.5	0.42	211.00	7,343.0	654.8	782.8	1,020.6	0.33	0.33	0.00
LEGAL BOX 400' X 400' 660'FNL, 1975'FWL									
7,498.0	0.60	211.00	7,398.4	654.4	782.5	1,020.1	0.33	0.33	0.00
7,588.0	0.10	186.10	7,488.4	653.9	782.3	1,019.6	0.57	-0.56	-27.67
7,678.0	0.50	137.90	7,578.4	653.6	782.6	1,019.6	0.49	0.44	-53.56
7,769.0	0.60	205.60	7,669.4	652.8	782.6	1,019.2	0.68	0.11	74.40
7,859.0	0.10	158.60	7,759.4	652.4	782.4	1,018.7	0.60	-0.56	-52.22
7,949.0	0.40	122.60	7,849.4	652.1	782.7	1,018.8	0.36	0.33	-40.00
8,040.0	0.00	176.70	7,940.4	651.9	783.0	1,018.9	0.44	-0.44	0.00
8,130.0	0.10	89.30	8,030.4	651.9	783.1	1,018.9	0.11	0.11	0.00
8,221.0	0.40	279.00	8,121.4	652.0	782.8	1,018.8	0.55	0.33	-187.14
8,310.0	0.60	99.00	8,210.4	652.0	783.0	1,018.9	1.12	0.22	202.25
8,400.0	0.70	99.00	8,300.4	651.8	784.0	1,019.6	0.11	0.11	0.00
8,493.0	0.50	189.00	8,393.4	651.3	784.5	1,019.6	0.92	-0.22	96.77
8,566.0	0.60	127.00	8,466.4	650.8	784.8	1,019.5	0.78	0.14	-84.93
8,615.0	0.60	127.00	8,515.4	650.5	785.2	1,019.6	0.00	0.00	0.00

Wellbore Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
4830'MD = 169' Radiu	0.00	0.00	4,856.0	661.6	785.3	1,269,265.77	3,168,464.22	40° 4' 15.438 N	104° 53' 52.948 W
- survey misses target center by 211.2ft at 4982.8ft MD (4903.8 TVD, 525.8 N, 630.8 E)									
- Circle (radius 169.0)									
TARGET BHL 660'FN	0.00	0.00	6,200.0	661.6	785.3	1,269,265.78	3,168,464.22	40° 4' 15.438 N	104° 53' 52.948 W
- survey misses target center by 5.4ft at 6299.5ft MD (6200.0 TVD, 658.2 N, 789.6 E)									
- Circle (radius 50.0)									
LEGAL BOX 400' X 400'	0.00	0.00	7,343.0	661.6	780.3	1,269,265.77	3,168,459.20	40° 4' 15.438 N	104° 53' 53.012 W
- survey misses target center by 7.2ft at 7442.5ft MD (7343.0 TVD, 654.8 N, 782.8 E)									
- Rectangle (sides W400.0 H400.0 D1,180.0)									

Company: Anadarko, Weld County CO
Project: SEC.9-T1N-R67W
Site: NRC 18-9 Pad Sec.9-T1N-R67W
Well: NRC 3-9
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well NRC 3-9
TVD Reference: WELL @ 5036.0ft (Original Well Elev)
MD Reference: WELL @ 5036.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM den0-adp01 Server Data

Checked By: _____ Approved By: _____ Date: _____