

Well Name: **Pierson 28-34**

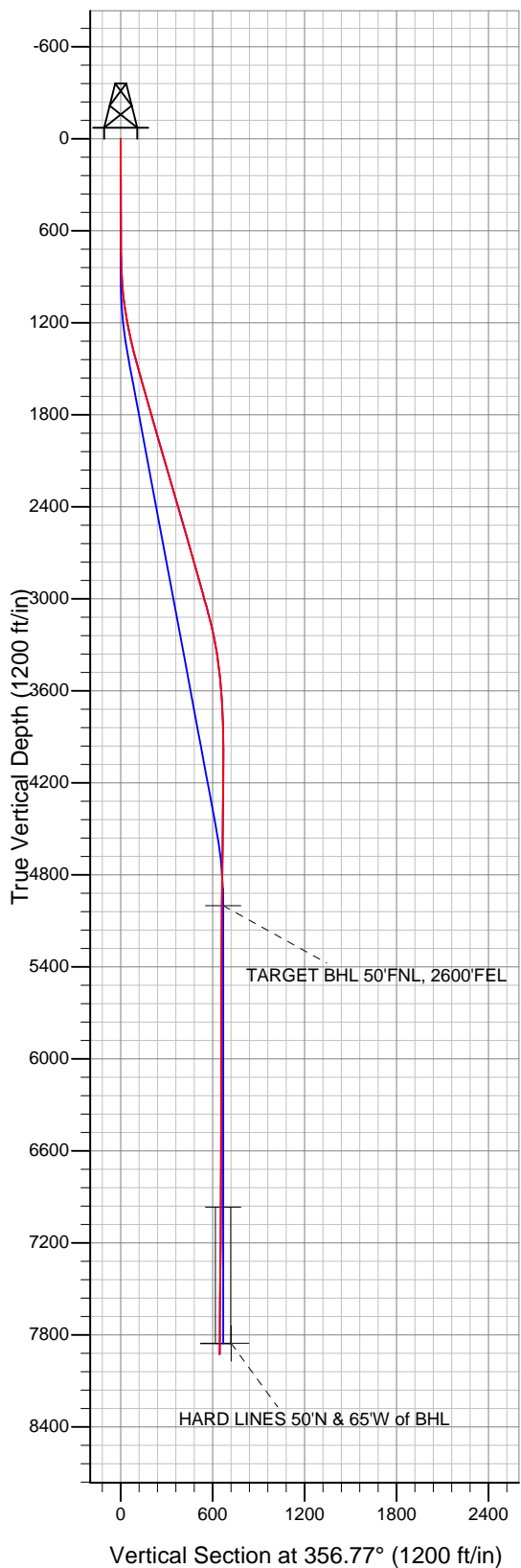
Surface Location: Pierson 21-34 Pad Sec.34-T4N-R66W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

Ground Elevation: 4783.0

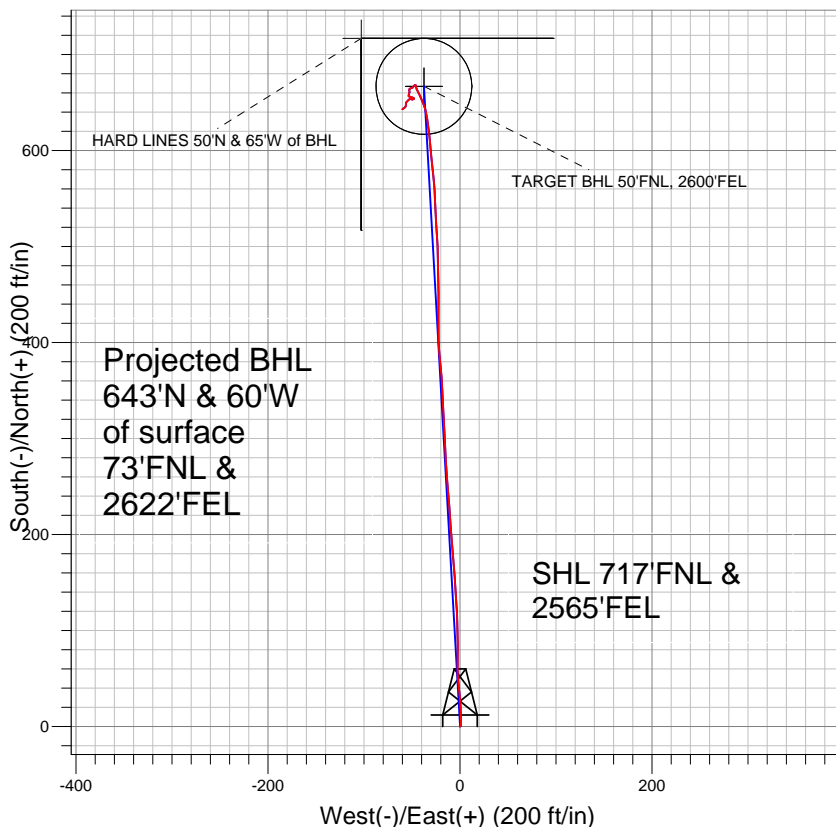
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1343327.14	3205626.91	40° 16' 24.553 N	104° 45' 47.005 W

Original Well Elev WELL @ 4797.0ft (Original Well Elev)

Slot



Anadarko, Weld County CO



LEGEND

- △ Pierson 28-34, Wellbore #1, Plan #1 (1-11-11) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
8010'MD & 7926'TVD @ 645'VS
0.8 deg Inc 232.6 deg AZ

Project: SEC.34-T4N-R66W
Site: Pierson 21-34 Pad Sec.34-T4N-R66W
Well: Pierson 28-34
Plan: Wellbore #1



Anadarko, Weld County CO

SEC.34-T4N-R66W

Pierson 21-34 Pad Sec.34-T4N-R66W

Pierson 28-34

Wellbore #1

Survey: Survey #1

Standard Survey Report

30 March, 2011



Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Pierson 28-34
Project:	SEC.34-T4N-R66W	TVD Reference:	WELL @ 4797.0ft (Original Well Elev)
Site:	Pierson 21-34 Pad Sec.34-T4N-R66W	MD Reference:	WELL @ 4797.0ft (Original Well Elev)
Well:	Pierson 28-34	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.34-T4N-R66W		
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	Pierson 21-34 Pad Sec.34-T4N-R66W				
Site Position:		Northing:	1,343,327.65 ft	Latitude:	40° 16' 24.557 N
From:	Lat/Long	Easting:	3,205,642.81 ft	Longitude:	104° 45' 46.800 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.48 °

Well	Pierson 28-34					
Well Position	+N-S	0.0 ft	Northing:	1,343,327.14 ft	Latitude:	40° 16' 24.553 N
	+E-W	0.0 ft	Easting:	3,205,626.91 ft	Longitude:	104° 45' 47.005 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,783.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/21/2011	8.91	66.96	53,107

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	356.77	

Survey Program	Date	3/30/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
114.0	8,010.0	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	
114.0	0.10	136.80	114.0	-0.1	0.1	-0.1	0.09	0.09	0.00	
207.0	0.30	8.50	207.0	0.1	0.2	0.1	0.40	0.22	-137.96	
300.0	0.50	66.80	300.0	0.5	0.6	0.5	0.46	0.22	62.69	
408.0	0.00	349.10	408.0	0.7	1.0	0.6	0.46	-0.46	0.00	
497.0	0.20	20.90	497.0	0.8	1.1	0.8	0.22	0.22	0.00	
597.0	0.50	332.70	597.0	1.4	0.9	1.3	0.40	0.30	-48.20	
688.0	0.50	343.70	688.0	2.1	0.6	2.1	0.11	0.00	12.09	
777.0	0.40	18.70	777.0	2.8	0.6	2.8	0.32	-0.11	39.33	
865.0	2.30	1.40	865.0	4.8	0.8	4.8	2.18	2.16	-19.66	
954.0	4.60	358.90	953.8	10.2	0.7	10.1	2.59	2.58	-2.81	
1,043.0	6.60	358.40	1,042.4	18.9	0.5	18.8	2.25	2.25	-0.56	
1,131.0	9.20	354.90	1,129.5	30.9	-0.2	30.9	3.00	2.95	-3.98	

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Site:	Pierson 21-34 Pad Sec.34-T4N-R66W	MD Reference:	WELL @ 4797.0ft (Original Well Elev)
Well:	Pierson 28-34	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)
1,220.0	10.90	353.50	1,217.2	46.4	-1.8	46.4	1.93	1.91	-1.57
1,309.0	12.60	0.70	1,304.3	64.5	-2.7	64.5	2.52	1.91	8.09
1,397.0	14.50	0.80	1,389.8	85.1	-2.4	85.1	2.16	2.16	0.11
1,486.0	14.70	357.50	1,476.0	107.5	-2.7	107.5	0.96	0.22	-3.71
1,575.0	15.90	356.30	1,561.8	131.0	-4.0	131.0	1.39	1.35	-1.35
1,663.0	16.50	356.30	1,646.3	155.5	-5.6	155.5	0.68	0.68	0.00
1,752.0	16.00	354.40	1,731.8	180.3	-7.6	180.4	0.82	-0.56	-2.13
1,840.0	16.40	356.40	1,816.3	204.7	-9.6	205.0	0.78	0.45	2.27
1,929.0	16.00	356.00	1,901.7	229.5	-11.2	229.8	0.47	-0.45	-0.45
2,018.0	15.30	354.70	1,987.4	253.4	-13.2	253.8	0.88	-0.79	-1.46
2,106.0	16.50	357.70	2,072.1	277.5	-14.7	277.9	1.65	1.36	3.41
2,195.0	16.20	356.30	2,157.5	302.5	-16.0	302.9	0.56	-0.34	-1.57
2,284.0	16.10	357.00	2,243.0	327.2	-17.5	327.7	0.25	-0.11	0.79
2,372.0	15.70	357.80	2,327.6	351.3	-18.6	351.8	0.52	-0.45	0.91
2,461.0	16.50	353.40	2,413.1	375.9	-20.5	376.5	1.64	0.90	-4.94
2,550.0	16.30	358.30	2,498.5	400.9	-22.3	401.6	1.57	-0.22	5.51
2,638.0	16.60	0.80	2,582.9	425.9	-22.5	426.4	0.87	0.34	2.84
2,727.0	16.30	359.30	2,668.2	451.1	-22.5	451.6	0.58	-0.34	-1.69
2,816.0	16.20	359.60	2,753.7	476.0	-22.7	476.5	0.15	-0.11	0.34
2,904.0	16.00	356.90	2,838.2	500.3	-23.5	500.9	0.88	-0.23	-3.07
2,993.0	14.50	356.90	2,924.1	523.7	-24.7	524.3	1.69	-1.69	0.00
3,081.0	16.20	357.30	3,009.0	547.0	-25.9	547.6	1.94	1.93	0.45
3,170.0	14.90	354.10	3,094.7	570.8	-27.7	571.4	1.75	-1.46	-3.60
3,259.0	13.80	354.80	3,180.9	592.7	-29.8	593.5	1.25	-1.24	0.79
3,347.0	10.80	354.00	3,266.9	611.4	-31.6	612.2	3.41	-3.41	-0.91
3,436.0	8.90	352.80	3,354.6	626.5	-33.4	627.4	2.15	-2.13	-1.35
3,525.0	7.00	348.30	3,442.7	638.6	-35.3	639.6	2.24	-2.13	-5.06
3,613.0	5.40	339.30	3,530.2	647.8	-37.9	648.9	2.12	-1.82	-10.23
3,702.0	4.70	335.80	3,618.9	655.0	-40.8	656.3	0.86	-0.79	-3.93
3,791.0	2.90	330.70	3,707.7	660.3	-43.4	661.7	2.06	-2.02	-5.73
3,879.0	2.40	339.90	3,795.6	664.0	-45.2	665.5	0.74	-0.57	10.45
3,968.0	1.60	349.90	3,884.5	666.9	-46.0	668.5	0.98	-0.90	11.24
4,056.0	0.20	294.60	3,972.5	668.2	-46.4	669.8	1.70	-1.59	-62.84
4,189.0	1.00	238.00	4,105.5	667.7	-47.6	669.3	0.68	0.60	-42.56
4,322.0	0.80	200.40	4,238.5	666.2	-48.9	667.9	0.46	-0.15	-28.27
4,455.0	1.20	262.70	4,371.5	665.2	-50.6	667.0	0.82	0.30	46.84
4,588.0	0.80	218.90	4,504.4	664.3	-52.5	666.2	0.63	-0.30	-32.93
4,721.0	0.70	166.30	4,637.4	662.8	-52.9	664.7	0.50	-0.08	-39.55
4,854.0	0.80	176.70	4,770.4	661.0	-52.7	663.0	0.13	0.08	7.82
4,987.0	0.70	201.50	4,903.4	659.4	-52.9	661.3	0.25	-0.08	18.65
5,083.4	0.99	197.55	4,999.8	658.0	-53.4	660.0	0.31	0.30	-4.09
TARGET BHL 50°FNL, 2600°FEL									
5,120.0	1.10	196.60	5,036.4	657.4	-53.6	659.4	0.31	0.30	-2.60
5,253.0	1.10	94.70	5,169.4	656.0	-52.7	658.0	1.28	0.00	-76.62
5,386.0	0.90	119.00	5,302.3	655.4	-50.5	657.2	0.35	-0.15	18.27
5,519.0	0.30	89.90	5,435.3	654.9	-49.2	656.7	0.49	-0.45	-21.88
5,652.0	0.40	122.20	5,568.3	654.7	-48.5	656.4	0.16	0.08	24.29
5,785.0	0.40	134.10	5,701.3	654.1	-47.8	655.8	0.06	0.00	8.95
5,918.0	1.00	254.70	5,834.3	653.5	-48.6	655.2	0.94	0.45	90.68
6,051.0	0.40	243.40	5,967.3	653.0	-50.1	654.8	0.46	-0.45	-8.50
6,184.0	0.40	11.60	6,100.3	653.2	-50.4	655.0	0.54	0.00	96.39
6,317.0	0.40	305.90	6,233.3	653.9	-50.7	655.8	0.33	0.00	-49.40
6,450.0	0.20	266.00	6,366.3	654.2	-51.3	656.1	0.21	-0.15	-30.00
6,583.0	0.40	223.60	6,499.3	653.8	-51.9	655.7	0.22	0.15	-31.88

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6,716.0	0.70	243.10	6,632.3	653.1	-52.9	655.1	0.26	0.23	14.66
6,849.0	0.70	223.70	6,765.3	652.2	-54.2	654.2	0.18	0.00	-14.59
6,982.0	0.50	208.80	6,898.3	651.1	-55.0	653.2	0.19	-0.15	-11.20
7,050.5	0.60	220.17	6,966.8	650.6	-55.4	652.7	0.21	0.14	16.61
TARGET CIRCLE 50'FNL & 2600'FEL									
7,115.0	0.70	227.80	7,031.3	650.0	-55.9	652.2	0.21	0.16	11.82
7,247.0	0.40	177.40	7,163.3	649.0	-56.5	651.2	0.41	-0.23	-38.18
7,380.0	0.80	175.20	7,296.3	647.6	-56.4	649.8	0.30	0.30	-1.65
7,513.0	0.60	204.10	7,429.3	646.1	-56.6	648.3	0.30	-0.15	21.73
7,646.0	0.20	208.10	7,562.3	645.2	-57.0	647.4	0.30	-0.30	3.01
7,779.0	0.50	238.30	7,695.3	644.7	-57.6	647.0	0.26	0.23	22.71
7,890.0	0.80	232.60	7,806.2	644.0	-58.6	646.3	0.28	0.27	-5.14
HARD LINES 50'N & 65'W of BHL									
8,010.0	0.80	232.60	7,926.2	643.0	-60.0	645.4	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____