

Well Name: **Pierson 18-34**

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

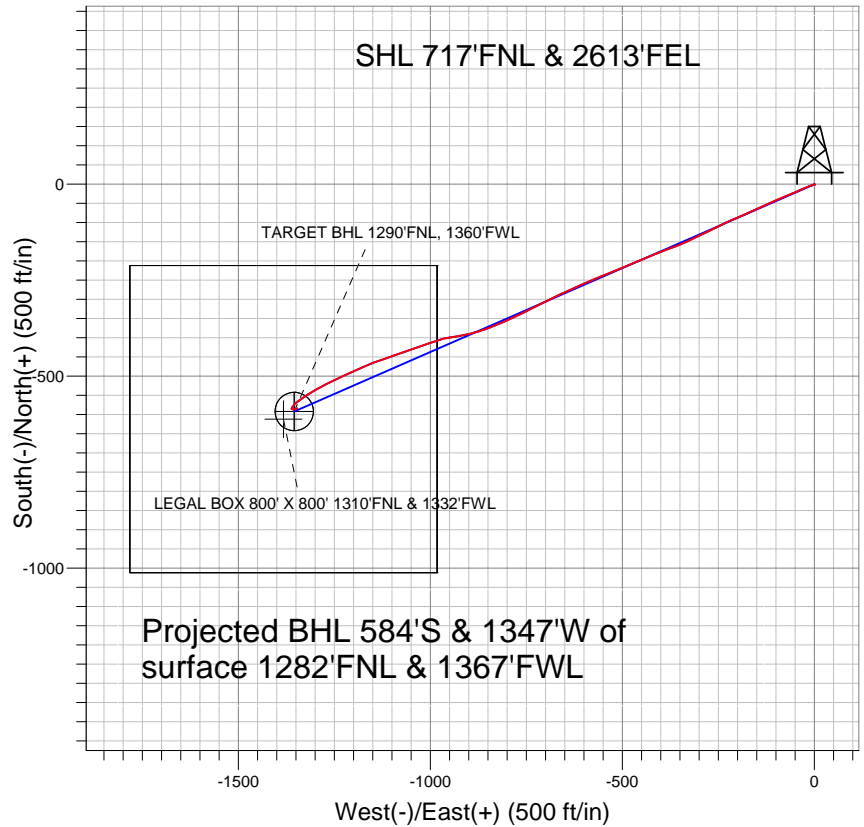
Ground Elevation: 4783.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1343326.01	3205578.92	40° 16' 24.546 N	104° 45' 47.624 W

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

Slot

Anadarko, Weld County CO

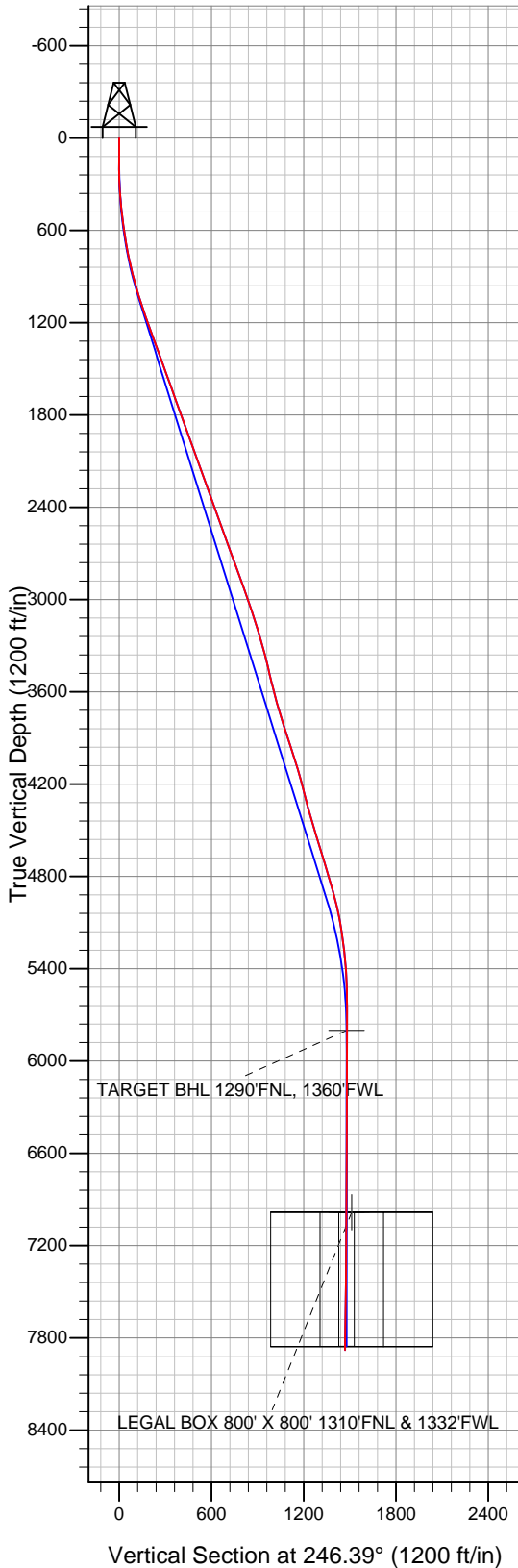


LEGEND

- ◆ Pierson 18-34, Wellbore #1, Plan #1 (1-11-11) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
8104'MD & 7879'TVD @ 1468'VS
0.7 deg Inc 56.0 deg AZ



Project: SEC.34-T4N-R66W
Site: Pierson 21-34 Pad Sec.34-T4N-R66W
Well: Pierson 18-34
Plan: Wellbore #1



Directional

Anadarko, Weld County CO

SEC.34-T4N-R66W

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

Pierson 18-34

Wellbore #1

Survey: Survey #1

Standard Survey Report

06 May, 2011

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Pierson 18-34
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 18-34	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
From:	Lat/Long	Easting:	3,205,642.81 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40° 16' 24.557 N
		Longitude:	104° 45' 46.800 W
		Grid Convergence:	0.48 °

Well	Pierson 18-34		
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	3/30/2011	8.88	66.96	53,088

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	246.39	

Survey Program	Date	5/6/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
111.0	8,104.0	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	
111.0	1.00	113.20	111.0	-0.4	0.9	-0.7	0.90	0.90	0.00	
203.0	0.60	188.30	203.0	-1.2	1.6	-1.0	1.11	-0.43	81.63	
297.0	2.60	263.80	297.0	-1.9	-0.6	1.3	2.68	2.13	80.32	
361.0	4.00	254.60	360.8	-2.6	-4.2	4.9	2.33	2.19	-14.38	
449.0	6.10	251.00	448.5	-5.0	-11.6	12.6	2.41	2.39	-4.09	
514.0	7.10	249.90	513.1	-7.5	-18.6	20.1	1.55	1.54	-1.69	
593.0	7.60	246.00	591.4	-11.3	-28.0	30.2	0.89	0.63	-4.94	
684.0	9.70	245.90	681.4	-16.9	-40.5	43.9	2.31	2.31	-0.11	
774.0	11.80	247.20	769.8	-23.5	-55.9	60.7	2.35	2.33	1.44	
863.0	13.30	248.30	856.7	-30.8	-73.8	80.0	1.71	1.69	1.24	
951.0	15.50	246.10	941.9	-39.3	-94.0	101.9	2.58	2.50	-2.50	
1,040.0	17.70	245.50	1,027.2	-49.8	-117.2	127.3	2.48	2.47	-0.67	

Company:	Anadarko, Weld County CO	Local Co-ordinate Reference:	Well Pierson 18-34
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 18-34	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)
1,129.0	18.90	245.00	1,111.7	-61.5	-142.5	155.2	1.36	1.35	-0.56
1,217.0	18.80	246.40	1,195.0	-73.2	-168.4	183.6	0.53	-0.11	1.59
1,306.0	20.30	247.30	1,278.8	-84.9	-195.8	213.4	1.72	1.69	1.01
1,395.0	20.40	244.70	1,362.3	-97.5	-224.1	244.4	1.02	0.11	-2.92
1,483.0	19.90	243.80	1,444.9	-110.6	-251.4	274.7	0.67	-0.57	-1.02
1,572.0	19.90	244.60	1,528.6	-123.8	-278.7	304.9	0.31	0.00	0.90
1,661.0	19.90	243.70	1,612.3	-137.0	-305.9	335.2	0.34	0.00	-1.01
1,749.0	19.50	245.70	1,695.1	-149.7	-332.7	364.9	0.89	-0.45	2.27
1,838.0	19.80	248.40	1,778.9	-161.4	-360.3	394.8	1.07	0.34	3.03
1,926.0	20.40	250.10	1,861.6	-172.1	-388.6	425.0	0.95	0.68	1.93
2,015.0	20.20	247.80	1,945.0	-183.2	-417.4	455.8	0.92	-0.22	-2.58
2,104.0	19.70	246.80	2,028.7	-194.9	-445.4	486.2	0.68	-0.56	-1.12
2,192.0	20.00	248.60	2,111.5	-206.2	-473.1	516.0	0.77	0.34	2.05
2,281.0	19.50	246.10	2,195.2	-217.8	-500.8	546.1	1.10	-0.56	-2.81
2,370.0	18.90	248.20	2,279.3	-229.2	-527.8	575.4	1.03	-0.67	2.36
2,458.0	20.00	247.90	2,362.3	-240.1	-554.9	604.7	1.26	1.25	-0.34
2,547.0	20.40	246.90	2,445.8	-251.9	-583.3	635.4	0.59	0.45	-1.12
2,636.0	19.60	245.60	2,529.4	-264.2	-611.2	665.8	1.03	-0.90	-1.46
2,723.0	20.40	245.50	2,611.2	-276.5	-638.3	695.6	0.92	0.92	-0.11
2,812.0	20.10	244.40	2,694.7	-289.5	-666.2	726.4	0.54	-0.34	-1.24
2,900.0	20.20	244.20	2,777.3	-302.7	-693.5	756.7	0.14	0.11	-0.23
2,989.0	20.10	243.90	2,860.8	-316.1	-721.1	787.3	0.16	-0.11	-0.34
3,078.0	18.70	242.40	2,944.8	-329.4	-747.4	816.8	1.67	-1.57	-1.69
3,166.0	19.30	244.00	3,028.0	-342.3	-773.0	845.4	0.90	0.68	1.82
3,255.0	18.20	247.40	3,112.3	-354.1	-799.1	874.0	1.74	-1.24	3.82
3,344.0	17.40	247.30	3,197.0	-364.6	-824.2	901.2	0.90	-0.90	-0.11
3,432.0	15.00	248.30	3,281.5	-373.9	-846.9	925.7	2.75	-2.73	1.14
3,521.0	15.70	253.00	3,367.3	-381.7	-869.1	949.2	1.60	0.79	5.28
3,610.0	12.50	255.00	3,453.6	-387.7	-889.9	970.7	3.64	-3.60	2.25
3,698.0	14.50	257.30	3,539.2	-392.6	-909.9	990.9	2.35	2.27	2.61
3,787.0	16.20	262.80	3,625.0	-396.6	-933.1	1,013.8	2.51	1.91	6.18
3,876.0	15.60	259.20	3,710.6	-400.4	-957.1	1,037.4	1.30	-0.67	-4.04
3,964.0	17.40	251.20	3,795.0	-406.8	-981.2	1,062.0	3.29	2.05	-9.09
4,053.0	18.70	250.60	3,879.6	-415.9	-1,007.3	1,089.5	1.48	1.46	-0.67
4,141.0	18.10	251.20	3,963.1	-425.0	-1,033.5	1,117.2	0.71	-0.68	0.68
4,230.0	17.70	251.20	4,047.8	-433.8	-1,059.4	1,144.5	0.45	-0.45	0.00
4,319.0	15.60	250.70	4,133.1	-442.1	-1,083.5	1,169.9	2.37	-2.36	-0.56
4,407.0	14.00	248.80	4,218.2	-449.9	-1,104.6	1,192.3	1.90	-1.82	-2.16
4,496.0	15.20	251.90	4,304.3	-457.4	-1,125.7	1,214.7	1.61	1.35	3.48
4,585.0	15.60	249.50	4,390.1	-465.2	-1,148.0	1,238.3	0.85	0.45	-2.70
4,673.0	16.70	245.20	4,474.6	-474.6	-1,170.6	1,262.7	1.85	1.25	-4.89
4,762.0	17.20	247.50	4,559.8	-485.0	-1,194.4	1,288.7	0.94	0.56	2.58
4,851.0	16.60	245.70	4,644.9	-495.3	-1,218.1	1,314.5	0.89	-0.67	-2.02
4,939.0	17.00	243.80	4,729.2	-506.2	-1,241.1	1,340.0	0.77	0.45	-2.16
5,028.0	17.00	243.70	4,814.3	-517.7	-1,264.5	1,365.9	0.03	0.00	-0.11
5,116.0	15.50	242.00	4,898.8	-528.9	-1,286.4	1,390.5	1.79	-1.70	-1.93
5,205.0	13.30	239.50	4,985.0	-539.7	-1,305.7	1,412.5	2.57	-2.47	-2.81
5,294.0	11.00	236.70	5,072.0	-549.5	-1,321.6	1,431.1	2.67	-2.58	-3.15
5,382.0	8.90	235.70	5,158.6	-558.0	-1,334.3	1,446.0	2.39	-2.39	-1.14
5,471.0	7.40	233.30	5,246.7	-565.3	-1,344.5	1,458.4	1.73	-1.69	-2.70
5,560.0	5.80	223.90	5,335.1	-571.9	-1,352.3	1,468.1	2.16	-1.80	-10.56
5,648.0	4.30	217.30	5,422.8	-577.8	-1,357.3	1,475.1	1.83	-1.70	-7.50
5,737.0	2.20	204.40	5,511.6	-582.0	-1,360.1	1,479.3	2.48	-2.36	-14.49
5,826.0	1.20	192.40	5,600.6	-584.4	-1,361.0	1,481.1	1.19	-1.12	-13.48

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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)
5,914.0	0.20	130.80	5,688.6	-585.4	-1,361.1	1,481.6	1.27	-1.14	-70.00
6,025.4	0.36	83.57	5,800.0	-585.5	-1,360.6	1,481.2	0.24	0.14	-42.38
TARGET BHL 1290'FNL, 1360'FWL									
6,047.0	0.40	79.50	5,821.6	-585.5	-1,360.4	1,481.1	0.24	0.20	-18.89
6,180.0	0.40	98.10	5,954.6	-585.5	-1,359.5	1,480.2	0.10	0.00	13.98
6,313.0	0.30	78.00	6,087.6	-585.5	-1,358.7	1,479.5	0.12	-0.08	-15.11
6,446.0	0.10	140.70	6,220.6	-585.5	-1,358.3	1,479.1	0.20	-0.15	47.14
6,579.0	0.20	166.60	6,353.6	-585.8	-1,358.2	1,479.1	0.09	0.08	19.47
6,712.0	0.10	155.10	6,486.6	-586.2	-1,358.1	1,479.1	0.08	-0.08	-8.65
6,846.0	0.20	86.10	6,620.6	-586.2	-1,357.8	1,478.9	0.14	0.07	-51.49
6,979.0	0.30	93.10	6,753.6	-586.2	-1,357.2	1,478.4	0.08	0.08	5.26
7,112.0	0.40	101.00	6,886.6	-586.4	-1,356.4	1,477.7	0.08	0.08	5.94
7,207.4	0.40	94.68	6,982.0	-586.4	-1,355.7	1,477.1	0.05	0.00	-6.62
TARGET CIRCLE 1290'FNL & 1360'FWL									
7,208.2	0.40	94.63	6,982.8	-586.4	-1,355.7	1,477.1	0.05	0.00	-6.62
LEGAL BOX 800' X 800' 1310'FNL & 1332'FWL									
7,245.0	0.40	92.20	7,019.6	-586.5	-1,355.5	1,476.9	0.05	0.00	-6.61
7,378.0	0.40	98.60	7,152.6	-586.5	-1,354.6	1,476.1	0.03	0.00	4.81
7,511.0	0.50	93.00	7,285.6	-586.6	-1,353.5	1,475.2	0.08	0.08	-4.21
7,644.0	0.50	87.20	7,418.6	-586.7	-1,352.4	1,474.1	0.04	0.00	-4.36
7,777.0	0.70	71.00	7,551.6	-586.4	-1,351.0	1,472.8	0.20	0.15	-12.18
7,910.0	0.90	50.90	7,684.6	-585.4	-1,349.4	1,470.9	0.26	0.15	-15.11
8,043.0	0.70	56.00	7,817.5	-584.3	-1,347.9	1,469.1	0.16	-0.15	3.83
8,104.0	0.70	56.00	7,878.5	-583.9	-1,347.3	1,468.4	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____