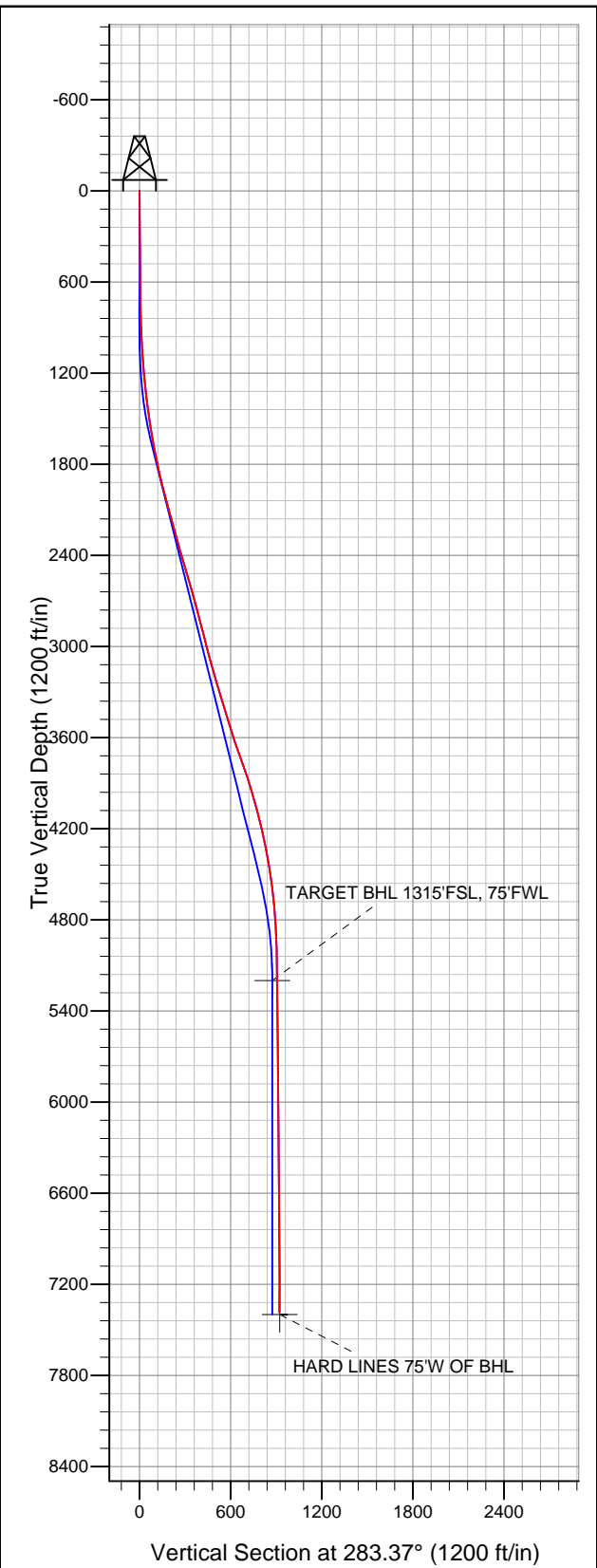


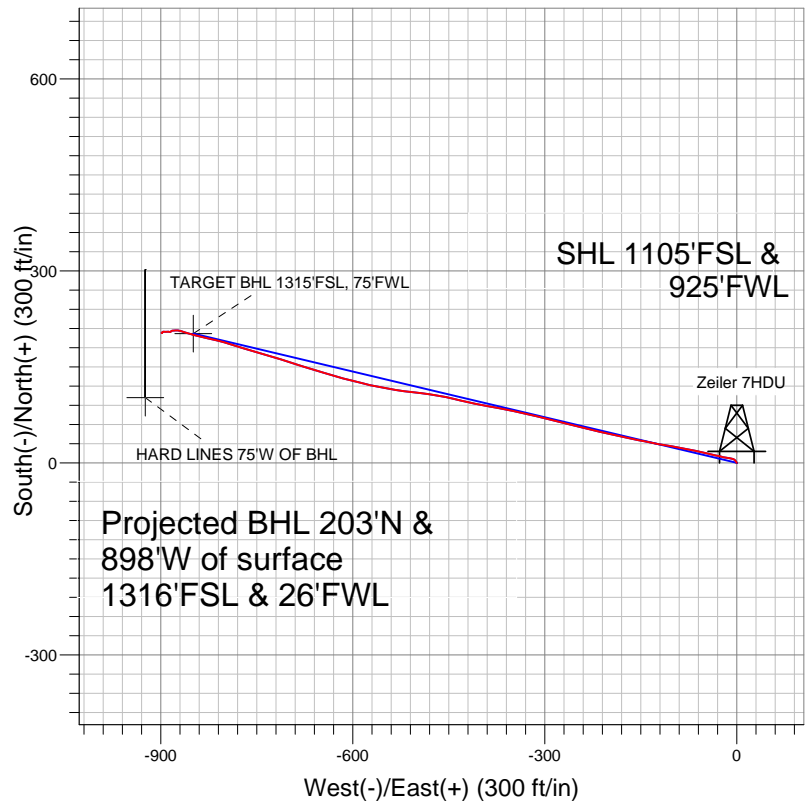


Well Name: Zeiler 7HDU

Surface Location: Zeiler 23-7DU Pad Sec.7-T5N-R67W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone
Ground Elevation: 4960.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1392690.01 3155607.62 40.409990 -104.941200
Original Well Elev WELL @ 4973.0ft (Original Well Elev)



PETROLEUM DEVELOPMENT CORP Weld County CO



LEGEND

- Zeiler 7HDU, Wellbore #1, Plan #1 (11-28-11) R V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
7498'MD & 7385'TVD @ 921'VS
0.2 deg Inc 41.2 deg AZ

Project: SEC.7-T5N-R67W
Site: Zeiler 23-7DU Pad Sec.7-T5N-R67W
Well: Zeiler 7HDU
Plan: Wellbore #1



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.7-T5N-R67W

Zeiler 23-7DU Pad Sec.7-T5N-R67W

Zeiler 7HDU

Wellbore #1

Survey: Survey #1

Standard Survey Report

02 December, 2011

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Zeiler 7HDU
Project:	SEC.7-T5N-R67W	TVD Reference:	WELL @ 4973.0ft (Original Well Elev)
Site:	Zeiler 23-7DU Pad Sec.7-T5N-R67W	MD Reference:	WELL @ 4973.0ft (Original Well Elev)
Well:	Zeiler 7HDU	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.7-T5N-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		Zeiler 23-7DU Pad Sec.7-T5N-R67W			
Site Position:		Northing:	1,392,755.59ft	Latitude:	40.410170
From:	Lat/Long	Easting:	3,155,607.21 ft	Longitude:	-104.941200
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.36 °

Well	Zeiler 7HDU					
Well Position	+N-S	0.0 ft	Northing:	1,392,690.01 ft	Latitude:	40.409990
	+E-W	0.0 ft	Easting:	3,155,607.62 ft	Longitude:	-104.941200
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,960.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/28/2011	8.96	67.05	53,173

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 (°)	
	5,200.0	0.0	0.0	283.37	

Survey Program	Date	12/2/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
454.0	7,498.0	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	
454.0	0.80	324.50	454.0	2.6	-1.8	2.4	0.18	0.18	0.00	
547.0	0.70	325.70	547.0	3.6	-2.5	3.3	0.11	-0.11	1.29	
640.0	0.70	310.20	640.0	4.4	-3.3	4.2	0.20	0.00	-16.67	
733.0	1.30	297.10	733.0	5.3	-4.7	5.8	0.69	0.65	-14.09	
826.0	1.40	295.80	825.9	6.2	-6.6	7.9	0.11	0.11	-1.40	
920.0	2.10	278.50	919.9	7.0	-9.4	10.7	0.92	0.74	-18.40	
1,013.0	3.10	275.20	1,012.8	7.5	-13.6	14.9	1.09	1.08	-3.55	
1,106.0	3.90	285.40	1,105.6	8.5	-19.1	20.6	1.09	0.86	10.97	
1,199.0	5.10	281.90	1,198.3	10.2	-26.2	27.9	1.32	1.29	-3.76	
1,292.0	5.80	282.60	1,290.9	12.1	-34.8	36.7	0.76	0.75	0.75	
1,385.0	7.20	282.90	1,383.3	14.4	-45.1	47.2	1.51	1.51	0.32	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Zeiler 7HDU
Project:	SEC.7-T5N-R67W	TVD Reference:	WELL @ 4973.0ft (Original Well Elev)
Site:	Zeiler 23-7DU Pad Sec.7-T5N-R67W	MD Reference:	WELL @ 4973.0ft (Original Well Elev)
Well:	Zeiler 7HDU	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)
1,477.0	8.30	281.60	1,474.5	17.1	-57.2	59.6	1.21	1.20	-1.41
1,570.0	9.10	281.60	1,566.4	19.9	-71.0	73.7	0.86	0.86	0.00
1,663.0	10.20	281.80	1,658.1	23.0	-86.3	89.3	1.18	1.18	0.22
1,756.0	11.40	278.00	1,749.4	26.0	-103.4	106.6	1.50	1.29	-4.09
1,849.0	12.30	281.10	1,840.4	29.2	-122.3	125.7	1.19	0.97	3.33
1,941.0	14.00	281.00	1,930.0	33.2	-142.8	146.6	1.85	1.85	-0.11
2,034.0	15.00	282.10	2,020.1	37.9	-165.6	169.9	1.12	1.08	1.18
2,127.0	15.80	282.20	2,109.7	43.1	-189.8	194.6	0.86	0.86	0.11
2,220.0	15.30	282.70	2,199.3	48.4	-214.1	219.5	0.56	-0.54	0.54
2,313.0	15.00	284.40	2,289.1	54.1	-237.7	243.8	0.58	-0.32	1.83
2,406.0	16.40	284.60	2,378.6	60.4	-262.1	269.0	1.51	1.51	0.22
2,499.0	17.00	283.10	2,467.7	66.8	-288.0	295.7	0.79	0.65	-1.61
2,592.0	15.80	283.30	2,556.9	72.8	-313.6	321.9	1.29	-1.29	0.22
2,685.0	15.20	282.80	2,646.5	78.4	-337.8	346.8	0.66	-0.65	-0.54
2,778.0	15.30	280.40	2,736.3	83.4	-361.8	371.2	0.69	0.11	-2.58
2,871.0	15.10	281.10	2,826.0	87.9	-385.7	395.6	0.29	-0.22	0.75
2,965.0	14.40	280.60	2,916.9	92.4	-409.2	419.5	0.76	-0.74	-0.53
3,058.0	14.30	284.70	3,007.0	97.5	-431.7	442.5	1.10	-0.11	4.41
3,152.0	15.60	281.20	3,097.8	102.9	-455.3	466.8	1.68	1.38	-3.72
3,245.0	16.10	278.50	3,187.3	107.2	-480.4	492.1	0.96	0.54	-2.90
3,338.0	17.00	275.30	3,276.4	110.4	-506.6	518.4	1.38	0.97	-3.44
3,431.0	17.00	279.70	3,365.4	113.9	-533.6	545.5	1.38	0.00	4.73
3,524.0	16.70	281.20	3,454.4	118.8	-560.1	572.4	0.57	-0.32	1.61
3,617.0	17.60	284.00	3,543.2	124.8	-586.8	599.8	1.31	0.97	3.01
3,711.0	18.80	284.80	3,632.5	132.1	-615.3	629.1	1.30	1.28	0.85
3,804.0	19.50	286.90	3,720.4	140.4	-644.6	659.6	1.06	0.75	2.26
3,897.0	19.50	287.00	3,808.1	149.5	-674.3	690.6	0.04	0.00	0.11
3,989.0	17.00	288.30	3,895.4	158.2	-701.8	719.3	2.75	-2.72	1.41
4,082.0	15.90	285.60	3,984.6	165.9	-726.9	745.6	1.44	-1.18	-2.90
4,174.0	15.40	286.60	4,073.2	172.8	-750.8	770.4	0.62	-0.54	1.09
4,268.0	13.90	287.40	4,164.2	179.7	-773.5	794.1	1.61	-1.60	0.85
4,360.0	13.10	287.70	4,253.6	186.2	-794.0	815.5	0.87	-0.87	0.33
4,454.0	10.90	283.70	4,345.6	191.5	-812.8	835.1	2.50	-2.34	-4.26
4,547.0	9.30	281.40	4,437.1	195.1	-828.7	851.4	1.77	-1.72	-2.47
4,641.0	7.60	285.00	4,530.1	198.2	-842.2	865.2	1.89	-1.81	3.83
4,735.0	6.50	284.60	4,623.4	201.2	-853.3	876.7	1.17	-1.17	-0.43
4,828.0	5.20	287.50	4,715.9	203.8	-862.4	886.2	1.43	-1.40	3.12
4,921.0	4.10	286.80	4,808.6	206.0	-869.6	893.7	1.18	-1.18	-0.75
5,015.0	2.10	276.20	4,902.4	207.1	-874.6	898.7	2.20	-2.13	-11.28
5,108.0	1.70	258.20	4,995.4	207.0	-877.6	901.7	0.77	-0.43	-19.35
5,201.0	1.00	271.60	5,088.4	206.8	-879.8	903.7	0.82	-0.75	14.41
5,294.0	0.90	260.00	5,181.4	206.7	-881.3	905.2	0.23	-0.11	-12.47
5,312.2	0.86	258.43	5,199.6	206.6	-881.6	905.5	0.26	-0.22	-8.62
TARGET BHL 1315'FSL, 75'FWL									
5,388.0	0.70	250.00	5,275.3	206.4	-882.6	906.4	0.26	-0.21	-11.12
5,481.0	0.80	229.80	5,368.3	205.7	-883.6	907.2	0.30	0.11	-21.72
5,574.0	1.20	229.30	5,461.3	204.7	-884.8	908.2	0.43	0.43	-0.54
5,667.0	0.70	281.30	5,554.3	204.2	-886.1	909.3	1.02	-0.54	55.91
5,760.0	0.60	304.50	5,647.3	204.5	-887.1	910.3	0.30	-0.11	24.95
5,853.0	0.30	286.00	5,740.3	204.9	-887.7	911.0	0.35	-0.32	-19.89
5,946.0	0.20	260.30	5,833.3	204.9	-888.1	911.4	0.16	-0.11	-27.63
6,039.0	0.60	262.30	5,926.3	204.8	-888.7	912.0	0.43	0.43	2.15
6,132.0	0.50	275.10	6,019.3	204.8	-889.6	912.9	0.17	-0.11	13.76

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Zeiler 7HDU
Project:	SEC.7-T5N-R67W	TVD Reference:	WELL @ 4973.0ft (Original Well Elev)
Site:	Zeiler 23-7DU Pad Sec.7-T5N-R67W	MD Reference:	WELL @ 4973.0ft (Original Well Elev)
Well:	Zeiler 7HDU	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)
6,225.0	0.70	265.30	6,112.3	204.8	-890.6	913.8	0.24	0.22	-10.54
6,318.0	0.40	256.10	6,205.3	204.7	-891.5	914.7	0.34	-0.32	-9.89
6,411.0	0.40	282.90	6,298.3	204.7	-892.1	915.3	0.20	0.00	28.82
6,504.0	0.60	266.40	6,391.3	204.7	-892.9	916.1	0.26	0.22	-17.74
6,597.0	0.50	285.10	6,484.3	204.8	-893.8	916.9	0.22	-0.11	20.11
6,690.0	0.40	257.30	6,577.3	204.8	-894.5	917.6	0.25	-0.11	-29.89
6,783.0	0.50	276.60	6,670.3	204.8	-895.2	918.3	0.19	0.11	20.75
6,876.0	0.60	269.70	6,763.3	204.8	-896.1	919.2	0.13	0.11	-7.42
6,969.0	0.60	232.70	6,856.3	204.5	-897.0	920.0	0.41	0.00	-39.79
7,062.0	0.70	233.30	6,949.3	203.9	-897.8	920.6	0.11	0.11	0.65
7,156.0	0.40	232.10	7,043.2	203.4	-898.6	921.2	0.32	-0.32	-1.28
7,249.0	0.20	177.90	7,136.2	203.0	-898.8	921.4	0.35	-0.22	-58.28
7,343.0	0.30	99.60	7,230.2	202.8	-898.6	921.1	0.35	0.11	-83.30
7,436.0	0.20	41.20	7,323.2	202.9	-898.2	920.8	0.28	-0.11	-62.80
7,498.0	0.20	41.20	7,385.2	203.0	-898.1	920.7	0.00	0.00	0.00
HARD LINES 75'W OF BHL									

Checked By: _____	Approved By: _____	Date: _____
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