



Final Survey Plot

Projected Final Survey -
 7706'MD & 7517'TVD @ 1249' VS
 0.3 deg Inc 332.2 deg AZ

Project: SEC.2-T6N-R66W
 Site: Anderson 2GD Pad Sec.2-T6N-R66W
 Well: Anderson 2AD
 Plan: Wellbore #1



Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.2-T6N-R66W

Anderson 2GD Pad Sec.2-T6N-R66W

Anderson 2AD

Wellbore #1

Survey: Survey #1

Standard Survey Report

04 January, 2011

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Site Anderson 2GD Pad Sec.2-T6N-R66W
Project:	SEC.2-T6N-R66W	TVD Reference:	WELL @ 4888.0ft (Original Well Elev)
Site:	Anderson 2GD Pad Sec.2-T6N-R66W	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Well:	Anderson 2AD	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.2-T6N-R66W, 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	Anderson 2GD Pad Sec.2-T6N-R66W				
Site Position:		Northing:	1,432,293.22 ft	Latitude:	40° 31' 3.432 N
From:	Lat/Long	Easting:	3,208,734.72 ft	Longitude:	104° 44' 57.192 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.49 °

Well	Anderson 2AD					
Well Position	+N-S	0.0 ft	Northing:	1,432,293.57 ft	Latitude:	40° 31' 3.432 N
	+E-W	41.7 ft	Easting:	3,208,776.42 ft	Longitude:	104° 44' 56.652 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,875.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/20/2010	8.98	67.18	53,281

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	41.7	338.76	

Survey Program	Date	1/4/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
699.0	7,706.0	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	41.7	0.0	0.00	0.00	0.00	
699.0	1.10	170.20	699.0	-6.6	42.8	-6.6	0.16	0.16	0.00	
793.0	1.20	119.00	792.9	-8.0	43.9	-8.2	1.06	0.11	-54.47	
886.0	0.50	38.50	885.9	-8.1	45.0	-8.8	1.31	-0.75	-86.56	
979.0	0.60	21.90	978.9	-7.4	45.4	-8.2	0.20	0.11	-17.85	
1,072.0	1.90	334.90	1,071.9	-5.5	44.9	-6.3	1.67	1.40	-50.54	
1,165.0	4.20	347.80	1,164.8	-0.8	43.6	-1.4	2.57	2.47	13.87	
1,258.0	6.10	349.40	1,257.4	7.4	41.9	6.8	2.05	2.04	1.72	
1,352.0	8.00	345.30	1,350.7	18.6	39.3	18.2	2.09	2.02	-4.36	
1,445.0	9.70	339.10	1,442.6	32.2	34.9	32.5	2.09	1.83	-6.67	
1,538.0	11.80	340.30	1,533.9	48.5	28.9	49.8	2.27	2.26	1.29	
1,631.0	13.70	336.80	1,624.6	67.6	21.4	70.3	2.20	2.04	-3.76	

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Site:	Anderson 2GD Pad Sec.2-T6N-R66W	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Well:	Anderson 2AD	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)
1,725.0	15.20	336.70	1,715.7	89.1	12.1	93.8	1.60	1.60	-0.11
1,818.0	16.40	335.30	1,805.1	112.2	1.8	119.1	1.35	1.29	-1.51
1,911.0	17.10	339.60	1,894.2	137.0	-8.5	145.9	1.53	0.75	4.62
2,004.0	18.90	339.20	1,982.6	163.9	-18.6	174.6	1.94	1.94	-0.43
2,097.0	18.70	339.40	2,070.7	191.9	-29.2	204.6	0.23	-0.22	0.22
2,190.0	18.90	342.30	2,158.7	220.2	-39.0	234.5	1.03	0.22	3.12
2,283.0	17.80	340.30	2,247.0	247.9	-48.4	263.7	1.36	-1.18	-2.15
2,376.0	18.80	340.00	2,335.3	275.4	-58.3	292.9	1.08	1.08	-0.32
2,470.0	18.20	339.30	2,424.4	303.4	-68.7	322.8	0.68	-0.64	-0.74
2,563.0	18.10	334.20	2,512.8	330.0	-80.1	351.7	1.71	-0.11	-5.48
2,656.0	18.90	336.90	2,601.0	356.8	-92.3	381.1	1.26	0.86	2.90
2,749.0	18.80	337.90	2,689.0	384.6	-103.8	411.2	0.36	-0.11	1.08
2,842.0	19.70	337.20	2,776.8	412.9	-115.5	441.8	1.00	0.97	-0.75
2,935.0	19.20	335.50	2,864.5	441.3	-127.9	472.8	0.81	-0.54	-1.83
3,028.0	21.00	338.10	2,951.8	470.7	-140.5	504.7	2.16	1.94	2.80
3,121.0	19.80	338.70	3,039.0	500.8	-152.4	537.1	1.31	-1.29	0.65
3,215.0	19.80	336.20	3,127.5	530.2	-164.7	568.9	0.90	0.00	-2.66
3,308.0	20.10	338.40	3,214.9	559.5	-176.9	600.7	0.87	0.32	2.37
3,401.0	19.80	338.00	3,302.3	588.9	-188.7	632.4	0.35	-0.32	-0.43
3,495.0	18.20	337.10	3,391.2	617.2	-200.4	663.0	1.73	-1.70	-0.96
3,588.0	17.30	336.30	3,479.7	643.3	-211.6	691.3	1.00	-0.97	-0.86
3,681.0	17.10	335.70	3,568.6	668.4	-222.7	718.8	0.29	-0.22	-0.65
3,774.0	17.00	338.30	3,657.5	693.5	-233.4	746.0	0.83	-0.11	2.80
3,868.0	17.00	341.20	3,747.4	719.2	-242.9	773.5	0.90	0.00	3.09
3,961.0	17.20	341.80	3,836.3	745.2	-251.6	800.8	0.29	0.22	0.65
4,054.0	18.90	344.20	3,924.7	772.7	-260.0	829.5	1.99	1.83	2.58
4,148.0	19.60	343.30	4,013.4	802.5	-268.7	860.4	0.81	0.74	-0.96
4,241.0	19.70	343.70	4,101.0	832.5	-277.5	891.6	0.18	0.11	0.43
4,334.0	19.30	343.40	4,188.7	862.2	-286.3	922.5	0.44	-0.43	-0.32
4,427.0	18.30	339.20	4,276.7	890.6	-295.9	952.4	1.81	-1.08	-4.52
4,520.0	19.00	336.80	4,364.9	918.2	-307.1	982.2	1.12	0.75	-2.58
4,613.0	18.40	339.40	4,452.9	945.8	-318.2	1,012.0	1.10	-0.65	2.80
4,706.0	19.40	338.00	4,540.9	973.9	-329.1	1,042.1	1.18	1.08	-1.51
4,799.0	18.60	339.00	4,628.9	1,002.1	-340.2	1,072.4	0.93	-0.86	1.08
4,893.0	17.30	335.70	4,718.3	1,028.8	-351.4	1,101.3	1.76	-1.38	-3.51
4,986.0	14.60	335.00	4,807.7	1,052.0	-362.0	1,126.8	2.91	-2.90	-0.75
5,079.0	12.40	336.60	4,898.1	1,071.8	-370.9	1,148.5	2.40	-2.37	1.72
5,173.0	11.30	335.90	4,990.1	1,089.5	-378.7	1,167.8	1.18	-1.17	-0.74
5,266.0	10.80	344.30	5,081.4	1,106.2	-384.8	1,185.6	1.81	-0.54	9.03
5,360.0	10.40	344.60	5,173.8	1,122.9	-389.4	1,202.8	0.43	-0.43	0.32
5,452.0	7.80	342.70	5,264.6	1,136.8	-393.5	1,217.3	2.84	-2.83	-2.07
5,546.0	6.40	346.50	5,357.9	1,148.0	-396.6	1,228.8	1.57	-1.49	4.04
5,639.0	4.60	351.50	5,450.5	1,156.7	-398.4	1,237.6	2.00	-1.94	5.38
5,732.0	2.50	343.30	5,543.3	1,162.4	-399.5	1,243.3	2.32	-2.26	-8.82
5,825.0	0.80	312.70	5,636.3	1,164.8	-400.5	1,245.9	2.00	-1.83	-32.90
5,918.0	0.80	304.80	5,729.2	1,165.6	-401.6	1,247.0	0.12	0.00	-8.49
5,988.8	0.68	291.98	5,800.0	1,166.0	-402.4	1,247.7	0.29	-0.16	-18.11
Target BHL 1246'FNL & 1304'FWL									
6,104.0	0.60	263.20	5,915.2	1,166.2	-403.6	1,248.3	0.29	-0.07	-24.98
6,288.0	0.60	250.00	6,099.2	1,165.8	-405.5	1,248.6	0.07	0.00	-7.17
6,475.0	0.30	51.50	6,286.2	1,165.7	-406.0	1,248.7	0.48	-0.16	86.36
6,660.0	0.60	250.60	6,471.2	1,165.7	-406.5	1,248.9	0.48	0.16	-86.97
6,846.0	0.40	228.20	6,657.2	1,164.9	-407.9	1,248.7	0.15	-0.11	-12.04

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6,888.7	0.38	229.82	6,699.9	1,164.8	-408.1	1,248.6	0.06	-0.06	3.80
Legal Box 400'x400' 1256'FNL, 1332'FWL									
7,032.0	0.30	237.10	6,843.2	1,164.3	-408.8	1,248.4	0.06	-0.05	5.08
7,219.0	0.20	168.40	7,030.2	1,163.7	-409.2	1,248.0	0.16	-0.05	-36.74
7,407.0	0.20	243.80	7,218.2	1,163.2	-409.4	1,247.6	0.13	0.00	40.11
7,593.0	0.40	305.70	7,404.2	1,163.4	-410.2	1,248.1	0.19	0.11	33.28
7,656.0	0.30	332.20	7,467.2	1,163.7	-410.5	1,248.5	0.30	-0.16	42.06
7,706.0	0.30	332.20	7,517.2	1,163.9	-410.6	1,248.7	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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