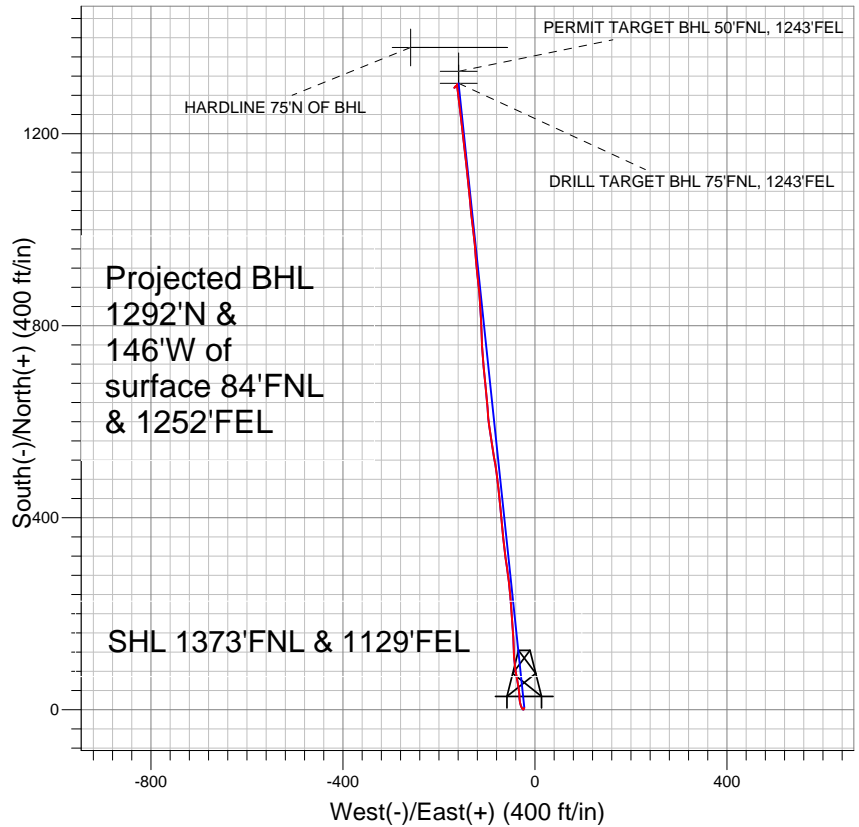
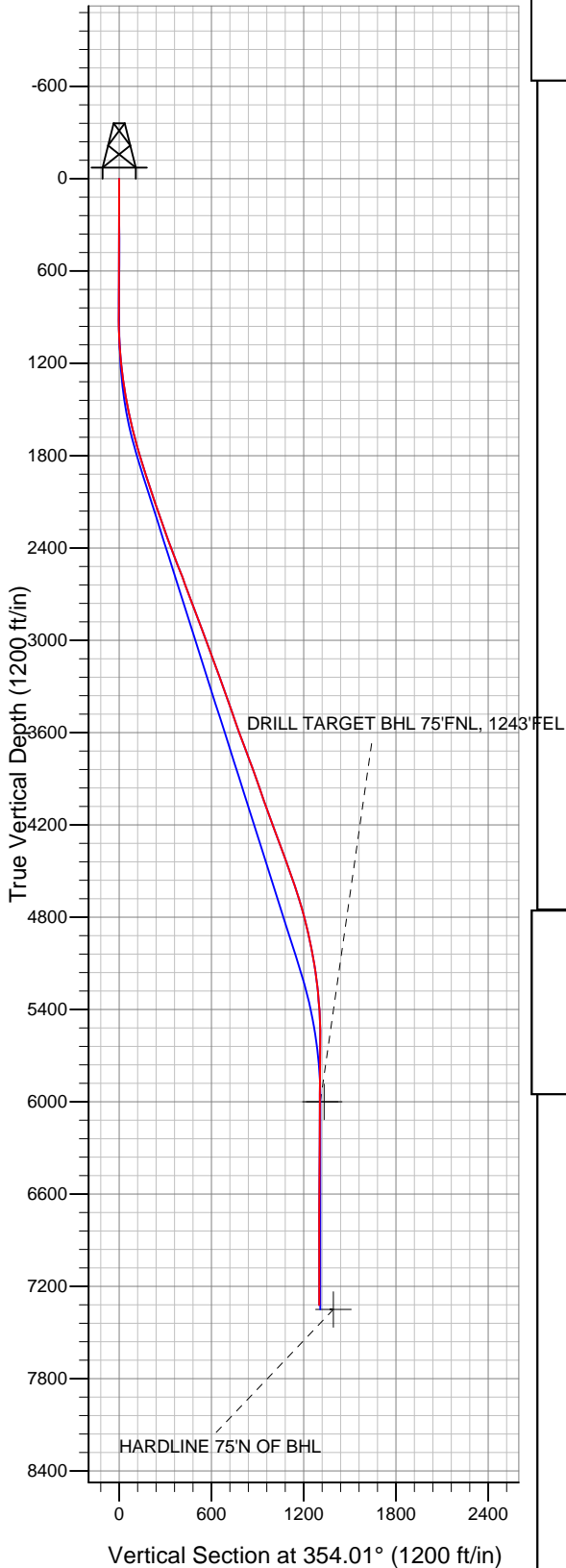


PETROLEUM DEVELOPMENT CORP Weld County CO



LEGEND

- Lajco 17RD, Wellbore #1, Plan #2 (6-20-10) VO
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
7530'MD & 7321'TVD @ 1300' VS
0.1 deg Inc 16.6 deg AZ

Project: SEC.17-T4N-R67W
Site: Lajco Pad Sec.17-T4N-R67W
Well: Lajco 17RD
Plan: Wellbore #1



Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.17-T4N-R67W

Lajco Pad Sec.17-T4N-R67W

Lajco 17RD

Wellbore #1

Survey: Survey #1

Standard Survey Report

03 March, 2011

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Site Lajco Pad Sec.17-T4N-R67W
Project:	SEC.17-T4N-R67W	TVD Reference:	WELL @ 4803.0ft (Original Well Elev)
Site:	Lajco Pad Sec.17-T4N-R67W	MD Reference:	WELL @ 4803.0ft (Original Well Elev)
Well:	Lajco 17RD	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.17-T4N-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	Lajco Pad Sec.17-T4N-R67W		
Site Position:		Northing:	1,358,656.65 ft
From:	Lat/Long	Easting:	3,164,558.76 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40° 18' 59.076 N
		Longitude:	104° 54' 35.532 W
		Grid Convergence:	0.38 °

Well	Lajco 17RD		
Well Position	+N/-S	3.6 ft	Northing:
	+E/-W	-22.3 ft	Easting:
Position Uncertainty	0.0 ft		Wellhead Elevation:
			ft
			Latitude:
			40° 18' 59.112 N
			Longitude:
			104° 54' 35.820 W
			Ground Level:
			4,790.0 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	5/19/2010	9.08
			Dip Angle (°)
			67.00
			Field Strength (nT)
			53,185

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)
	0.0	3.6	-22.3
			Direction (°)
			354.01

Survey Program	Date 3/3/2011		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name
735.0	7,530.0	Survey #1 (Wellbore #1)	MWD
			Description
			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	3.6	-22.3	0.0	0.00	0.00	0.00
735.0	0.40	202.90	735.0	1.3	-23.3	-2.2	0.05	0.05	0.00
829.0	0.70	209.00	829.0	0.5	-23.7	-3.0	0.32	0.32	6.49
922.0	0.70	289.20	922.0	0.2	-24.5	-3.2	0.97	0.00	86.24
1,016.0	2.70	323.90	1,015.9	2.1	-26.4	-1.1	2.30	2.13	36.91
1,109.0	4.70	339.90	1,108.7	7.5	-29.0	4.5	2.40	2.15	17.20
1,203.0	5.90	348.10	1,202.3	15.8	-31.3	13.1	1.51	1.28	8.72
1,296.0	7.30	359.40	1,294.7	26.4	-32.3	23.7	2.05	1.51	12.15
1,390.0	9.30	354.00	1,387.7	39.9	-33.2	37.2	2.28	2.13	-5.74
1,483.0	11.30	348.20	1,479.2	56.3	-35.8	53.8	2.42	2.15	-6.24
1,577.0	13.50	350.30	1,571.0	76.2	-39.6	73.9	2.39	2.34	2.23
1,670.0	14.00	354.30	1,661.4	98.1	-42.5	96.0	1.15	0.54	4.30

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Site Lajco Pad Sec.17-T4N-R67W
Project:	SEC.17-T4N-R67W	TVD Reference:	WELL @ 4803.0ft (Original Well Elev)
Site:	Lajco Pad Sec.17-T4N-R67W	MD Reference:	WELL @ 4803.0ft (Original Well Elev)
Well:	Lajco 17RD	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)
1,764.0	15.60	358.50	1,752.3	122.0	-44.0	120.0	2.05	1.70	4.47
1,857.0	17.60	357.10	1,841.4	148.6	-45.0	146.5	2.19	2.15	-1.51
1,951.0	18.50	356.40	1,930.8	177.6	-46.7	175.6	0.98	0.96	-0.74
2,044.0	18.00	355.30	2,019.1	206.7	-48.8	204.7	0.65	-0.54	-1.18
2,138.0	18.60	354.80	2,108.3	236.1	-51.3	234.2	0.66	0.64	-0.53
2,231.0	19.30	353.40	2,196.3	266.1	-54.4	264.4	0.90	0.75	-1.51
2,325.0	18.70	351.40	2,285.2	296.5	-58.5	295.0	0.94	-0.64	-2.13
2,418.0	21.40	352.80	2,372.5	328.0	-62.8	326.9	2.95	2.90	1.51
2,512.0	21.40	354.60	2,460.0	362.1	-66.6	361.2	0.70	0.00	1.91
2,605.0	21.10	355.10	2,546.7	395.7	-69.6	394.9	0.38	-0.32	0.54
2,699.0	19.60	354.10	2,634.8	428.2	-72.7	427.5	1.64	-1.60	-1.06
2,792.0	20.50	354.00	2,722.2	460.0	-76.0	459.4	0.97	0.97	-0.11
2,886.0	21.10	352.40	2,810.1	493.1	-80.0	492.8	0.88	0.64	-1.70
2,979.0	20.30	349.80	2,897.1	525.6	-85.0	525.6	1.31	-0.86	-2.80
3,073.0	20.90	350.80	2,985.1	558.2	-90.6	558.6	0.74	0.64	1.06
3,167.0	20.60	352.70	3,073.0	591.1	-95.4	591.9	0.78	-0.32	2.02
3,260.0	20.00	356.90	3,160.2	623.2	-98.3	624.1	1.69	-0.65	4.52
3,354.0	19.90	354.10	3,248.6	655.2	-100.8	656.2	1.02	-0.11	-2.98
3,447.0	19.40	353.10	3,336.1	686.3	-104.3	687.5	0.65	-0.54	-1.08
3,541.0	18.80	355.40	3,425.0	716.9	-107.4	718.2	1.02	-0.64	2.45
3,635.0	19.40	357.20	3,513.8	747.6	-109.4	748.9	0.89	0.64	1.91
3,728.0	20.40	358.00	3,601.2	779.2	-110.7	780.5	1.11	1.08	0.86
3,822.0	20.60	356.50	3,689.3	812.1	-112.3	813.4	0.60	0.21	-1.60
3,915.0	20.70	356.60	3,776.3	844.8	-114.3	846.2	0.11	0.11	0.11
4,009.0	19.60	354.60	3,864.6	877.1	-116.7	878.5	1.38	-1.17	-2.13
4,102.0	18.70	353.20	3,952.4	907.4	-120.0	909.0	1.09	-0.97	-1.51
4,196.0	19.50	356.50	4,041.2	938.0	-122.7	939.8	1.43	0.85	3.51
4,289.0	19.90	353.80	4,128.8	969.3	-125.4	971.1	1.07	0.43	-2.90
4,383.0	20.70	353.40	4,217.0	1,001.7	-129.0	1,003.7	0.86	0.85	-0.43
4,476.0	21.10	353.80	4,303.8	1,034.6	-132.7	1,036.9	0.46	0.43	0.43
4,570.0	19.50	355.30	4,392.0	1,067.1	-135.8	1,069.5	1.79	-1.70	1.60
4,663.0	19.40	353.60	4,479.7	1,097.9	-138.8	1,100.5	0.62	-0.11	-1.83
4,757.0	18.90	354.10	4,568.5	1,128.6	-142.1	1,131.3	0.56	-0.53	0.53
4,851.0	18.30	352.80	4,657.6	1,158.4	-145.5	1,161.3	0.78	-0.64	-1.38
4,944.0	16.10	353.40	4,746.4	1,185.7	-148.8	1,188.8	2.37	-2.37	0.65
5,038.0	13.60	353.40	4,837.3	1,209.6	-151.6	1,212.9	2.66	-2.66	0.00
5,131.0	12.40	353.60	4,927.9	1,230.4	-154.0	1,233.8	1.29	-1.29	0.22
5,225.0	11.40	353.40	5,019.9	1,249.6	-156.2	1,253.2	1.06	-1.06	-0.21
5,318.0	8.90	353.80	5,111.4	1,265.9	-158.0	1,269.6	2.69	-2.69	0.43
5,412.0	7.10	354.00	5,204.5	1,278.9	-159.4	1,282.6	1.92	-1.91	0.21
5,506.0	5.50	352.50	5,297.9	1,289.2	-160.6	1,293.0	1.71	-1.70	-1.60
5,599.0	4.40	351.20	5,390.6	1,297.1	-161.7	1,301.0	1.19	-1.18	-1.40
5,692.0	2.00	354.90	5,483.4	1,302.3	-162.4	1,306.2	2.59	-2.58	3.98
5,786.0	0.40	132.50	5,577.4	1,303.7	-162.3	1,307.6	2.46	-1.70	146.38
5,880.0	0.50	183.70	5,671.4	1,303.0	-162.1	1,306.9	0.42	0.11	54.47
5,973.0	0.60	181.10	5,764.4	1,302.2	-162.1	1,306.0	0.11	0.11	-2.80
6,067.0	0.40	193.80	5,858.4	1,301.3	-162.2	1,305.2	0.24	-0.21	13.51
6,160.0	0.30	210.30	5,951.4	1,300.8	-162.4	1,304.7	0.15	-0.11	17.74
6,208.5	0.35	207.60	5,999.8	1,300.6	-162.5	1,304.5	0.11	0.11	-5.57
PERMIT TARGET BHL 50'FNL, 1243'FEL									
6,208.6	0.35	207.60	6,000.0	1,300.6	-162.5	1,304.5	0.00	0.00	0.00
DRILL TARGET BHL 75'FNL, 1243'FEL									
6,254.0	0.40	205.70	6,045.4	1,300.3	-162.7	1,304.2	0.11	0.11	-4.19

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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)
6,347.0	0.40	252.30	6,138.4	1,299.9	-163.1	1,303.9	0.34	0.00	50.11
6,441.0	0.40	254.10	6,232.4	1,299.7	-163.8	1,303.8	0.01	0.00	1.91
6,535.0	0.60	236.00	6,326.4	1,299.4	-164.5	1,303.5	0.27	0.21	-19.26
6,628.0	0.50	221.10	6,419.4	1,298.8	-165.2	1,303.0	0.19	-0.11	-16.02
6,722.0	0.70	218.00	6,513.4	1,298.0	-165.8	1,302.3	0.22	0.21	-3.30
6,815.0	0.70	216.20	6,606.4	1,297.1	-166.5	1,301.5	0.02	0.00	-1.94
6,909.0	0.40	204.60	6,700.4	1,296.4	-166.9	1,300.8	0.34	-0.32	-12.34
7,002.0	0.20	201.50	6,793.3	1,295.9	-167.1	1,300.3	0.22	-0.22	-3.33
7,096.0	0.30	251.80	6,887.3	1,295.7	-167.4	1,300.1	0.25	0.11	53.51
7,189.0	0.20	288.60	6,980.3	1,295.7	-167.8	1,300.2	0.20	-0.11	39.57
7,283.0	0.00	26.40	7,074.3	1,295.7	-168.0	1,300.2	0.21	-0.21	0.00
7,376.0	0.10	243.10	7,167.3	1,295.7	-168.0	1,300.2	0.11	0.11	0.00
7,470.0	0.10	16.60	7,261.3	1,295.7	-168.1	1,300.2	0.20	0.00	142.02
7,530.0	0.10	16.60	7,321.3	1,295.8	-168.1	1,300.3	0.00	0.00	0.00
HARDLINE 75'N OF BHL									

Checked By: _____	Approved By: _____	Date: _____
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