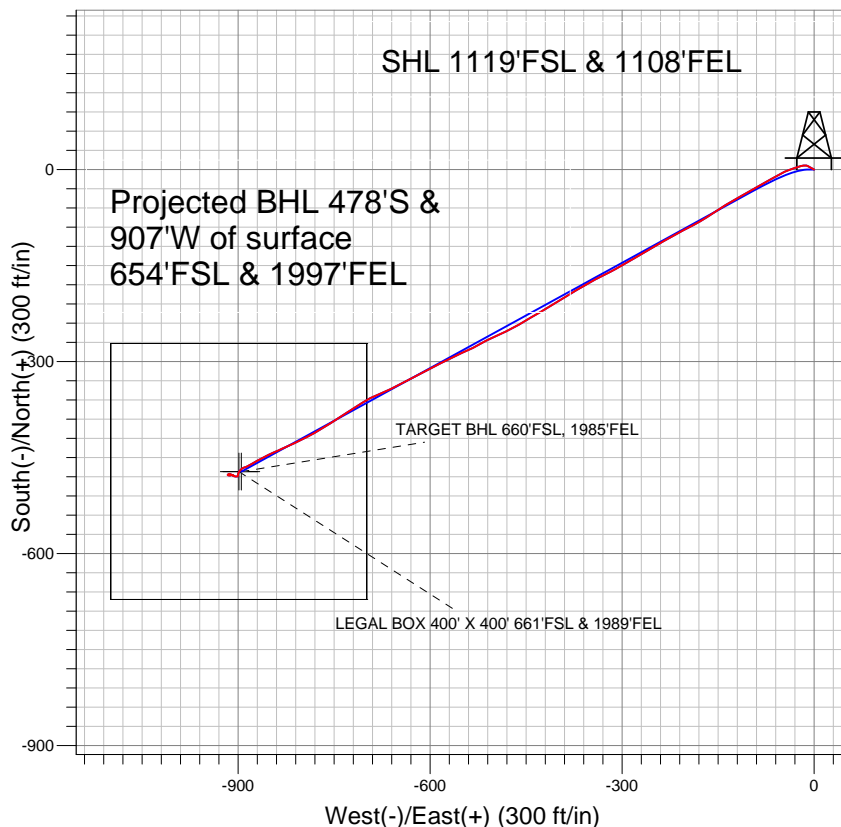
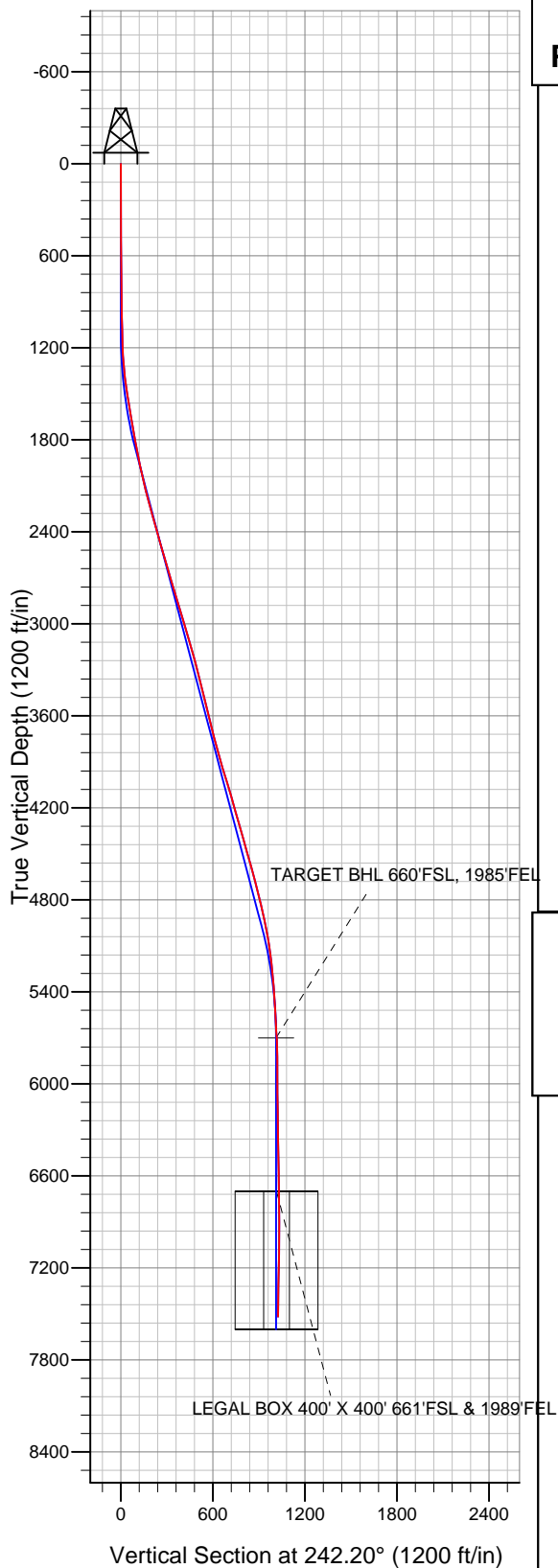


PETROLEUM DEVELOPMENT CORP Weld County CO



LEGEND

- Nelson 34-32D, Wellbore #1, Plan #2 (1-31-11) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
7642'MD & 7517'TVD @ 1025'VS
0.4 deg Inc 97.1 deg AZ

Project: SEC.32-T7N-R66W
Site: Nelson 33-32D Pad Sec.32-T7N-R66W
Well: Nelson 34-32D
Plan: Wellbore #1



Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.32-T7N-R66W

Nelson 33-32D Pad Sec.32-T7N-R66W

Nelson 34-32D

Wellbore #1

Survey: Survey #1

Standard Survey Report

23 June, 2011

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Nelson 34-32D
Project:	SEC.32-T7N-R66W	TVD Reference:	WELL @ 4873.0ft (Original Well Elev)
Site:	Nelson 33-32D Pad Sec.32-T7N-R66W	MD Reference:	WELL @ 4873.0ft (Original Well Elev)
Well:	Nelson 34-32D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.32-T7N-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	Nelson 33-32D Pad Sec.32-T7N-R66W				
Site Position:		Northing:	1,435,592.16ft	Latitude:	40.526980
From:	Lat/Long	Easting:	3,195,173.82ft	Longitude:	-104.797900
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.45 °

Well	Nelson 34-32D					
Well Position	+N-S	0.0 ft	Northing:	1,435,548.43 ft	Latitude:	40.526860
	+E-W	0.0 ft	Easting:	3,195,174.16 ft	Longitude:	-104.797900
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,860.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/17/2011	8.95	67.16	53,237

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	242.20	

Survey Program	Date 6/23/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
989.0	7,642.0	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
989.0	1.30	298.90	988.9	5.4	-9.8	6.2	0.13	0.13	0.00
1,084.0	1.50	286.10	1,083.9	6.3	-12.0	7.6	0.39	0.21	-13.47
1,179.0	2.20	265.80	1,178.8	6.5	-15.0	10.2	1.00	0.74	-21.37
1,274.0	4.40	255.10	1,273.7	5.4	-20.3	15.4	2.39	2.32	-11.26
1,369.0	6.10	253.00	1,368.3	3.0	-28.7	23.9	1.80	1.79	-2.21
1,464.0	8.10	249.20	1,462.5	-0.8	-39.7	35.6	2.16	2.11	-4.00
1,559.0	9.10	240.10	1,556.5	-7.0	-52.5	49.7	1.77	1.05	-9.58
1,654.0	10.00	242.50	1,650.2	-14.5	-66.3	65.5	1.04	0.95	2.53
1,749.0	10.00	241.40	1,743.7	-22.3	-80.9	82.0	0.20	0.00	-1.16
1,844.0	10.50	238.30	1,837.2	-30.8	-95.5	98.8	0.78	0.53	-3.26
1,939.0	11.40	240.30	1,930.5	-40.0	-111.0	116.9	1.03	0.95	2.11

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Nelson 34-32D
Project:	SEC.32-T7N-R66W	TVD Reference:	WELL @ 4873.0ft (Original Well Elev)
Site:	Nelson 33-32D Pad Sec.32-T7N-R66W	MD Reference:	WELL @ 4873.0ft (Original Well Elev)
Well:	Nelson 34-32D	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)
2,034.0	13.00	241.00	2,023.3	-49.8	-128.5	136.9	1.69	1.68	0.74
2,128.0	13.70	236.90	2,114.8	-61.0	-147.1	158.6	1.25	0.74	-4.36
2,228.0	15.20	237.20	2,211.6	-74.6	-168.0	183.4	1.50	1.50	0.30
2,318.0	16.00	241.10	2,298.3	-87.0	-188.8	207.6	1.47	0.89	4.33
2,413.0	15.90	242.00	2,389.6	-99.4	-211.8	233.7	0.28	-0.11	0.95
2,508.0	15.60	241.50	2,481.1	-111.6	-234.5	259.5	0.35	-0.32	-0.53
2,603.0	16.30	239.40	2,572.4	-124.5	-257.2	285.6	0.95	0.74	-2.21
2,698.0	16.70	238.80	2,663.5	-138.3	-280.3	312.5	0.46	0.42	-0.63
2,793.0	15.80	240.80	2,754.7	-151.7	-303.3	339.1	1.12	-0.95	2.11
2,888.0	17.60	244.10	2,845.7	-164.3	-327.5	366.4	2.14	1.89	3.47
2,983.0	16.60	240.30	2,936.5	-177.3	-352.2	394.3	1.58	-1.05	-4.00
3,078.0	16.20	238.20	3,027.6	-191.0	-375.3	421.1	0.75	-0.42	-2.21
3,173.0	16.40	238.70	3,118.8	-205.0	-398.0	447.7	0.26	0.21	0.53
3,268.0	15.90	240.40	3,210.1	-218.4	-420.8	474.1	0.72	-0.53	1.79
3,363.0	14.20	238.30	3,301.8	-230.9	-442.0	498.7	1.88	-1.79	-2.21
3,456.0	13.90	240.50	3,392.0	-242.4	-461.4	521.2	0.66	-0.32	2.37
3,551.0	13.80	244.20	3,484.3	-253.0	-481.6	544.0	0.94	-0.11	3.89
3,646.0	13.60	245.80	3,576.6	-262.5	-502.0	566.4	0.45	-0.21	1.68
3,741.0	14.50	240.50	3,668.7	-272.9	-522.5	589.5	1.65	0.95	-5.58
3,836.0	14.90	244.90	3,760.6	-283.9	-543.9	613.6	1.25	0.42	4.63
3,931.0	15.50	245.20	3,852.3	-294.4	-566.5	638.4	0.64	0.63	0.32
4,026.0	16.30	243.30	3,943.7	-305.8	-589.9	664.4	1.00	0.84	-2.00
4,121.0	17.20	242.10	4,034.6	-318.3	-614.3	691.8	1.01	0.95	-1.26
4,216.0	16.50	240.80	4,125.6	-331.5	-638.4	719.4	0.84	-0.74	-1.37
4,311.0	15.60	247.10	4,216.9	-343.0	-662.0	745.6	2.06	-0.95	6.63
4,406.0	16.10	245.30	4,308.2	-353.5	-685.7	771.4	0.74	0.53	-1.89
4,501.0	15.50	236.90	4,399.7	-365.9	-708.3	797.2	2.49	-0.63	-8.84
4,596.0	15.60	237.00	4,491.2	-379.8	-729.7	822.6	0.11	0.11	0.11
4,689.0	16.50	237.80	4,580.6	-393.7	-751.3	848.2	1.00	0.97	0.86
4,784.0	14.20	238.30	4,672.2	-407.0	-772.7	873.3	2.43	-2.42	0.53
4,879.0	14.20	243.70	4,764.3	-418.3	-793.0	896.6	1.39	0.00	5.68
4,974.0	12.90	244.20	4,856.6	-428.1	-813.0	918.8	1.37	-1.37	0.53
5,069.0	12.10	246.90	4,949.4	-436.6	-831.7	939.3	1.04	-0.84	2.84
5,164.0	9.80	245.00	5,042.6	-443.9	-848.2	957.4	2.45	-2.42	-2.00
5,259.0	8.00	242.70	5,136.5	-450.4	-861.4	972.0	1.93	-1.89	-2.42
5,354.0	5.70	240.60	5,230.8	-455.7	-871.4	983.4	2.43	-2.42	-2.21
5,449.0	4.50	240.60	5,325.4	-459.8	-878.8	991.8	1.26	-1.26	0.00
5,544.0	4.40	242.60	5,420.1	-463.4	-885.2	999.2	0.19	-0.11	2.11
5,639.0	3.40	251.30	5,514.9	-465.9	-891.2	1,005.6	1.22	-1.05	9.16
5,734.0	2.80	225.00	5,609.8	-468.5	-895.5	1,010.6	1.61	-0.63	-27.68
5,824.2	4.12	210.22	5,699.8	-472.8	-898.7	1,015.5	1.76	1.47	-16.39
TARGET BHL 660'FSL, 1985'FEL									
5,829.0	4.20	209.70	5,704.6	-473.1	-898.8	1,015.8	1.76	1.57	-10.81
5,924.0	1.70	171.70	5,799.5	-477.6	-900.3	1,019.2	3.21	-2.63	-40.00
6,019.0	0.30	227.00	5,894.5	-479.1	-900.3	1,019.9	1.63	-1.47	58.21
6,113.0	0.50	244.20	5,988.5	-479.5	-900.9	1,020.5	0.25	0.21	18.30
6,208.0	0.40	301.20	6,083.5	-479.5	-901.5	1,021.1	0.46	-0.11	60.00
6,303.0	0.80	273.90	6,178.5	-479.3	-902.5	1,021.8	0.51	0.42	-28.74
6,398.0	0.70	257.70	6,273.4	-479.3	-903.7	1,023.0	0.25	-0.11	-17.05
6,492.0	1.40	277.00	6,367.4	-479.3	-905.4	1,024.5	0.82	0.74	20.53
6,587.0	2.20	303.20	6,462.4	-478.2	-908.1	1,026.3	1.19	0.84	27.58
6,682.0	1.80	301.50	6,557.3	-476.4	-910.9	1,027.9	0.43	-0.42	-1.79
6,776.0	1.20	273.80	6,651.3	-475.6	-913.1	1,029.5	0.98	-0.64	-29.47

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Nelson 34-32D
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Well:	Nelson 34-32D	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)
6,824.5	0.91	261.35	6,699.8	-475.6	-914.0	1,030.3	0.76	-0.60	-25.69
LEGAL BOX 400' X 400' 661'FSL & 1989'FEL									
6,872.0	0.70	240.10	6,747.3	-475.8	-914.6	1,031.0	0.76	-0.44	-44.70
6,967.0	1.10	240.10	6,842.3	-476.5	-915.9	1,032.5	0.42	0.42	0.00
7,062.0	1.20	115.30	6,937.3	-477.4	-915.8	1,032.8	2.15	0.11	-131.37
7,157.0	1.10	92.30	7,032.2	-477.9	-914.0	1,031.4	0.49	-0.11	-24.21
7,252.0	0.90	78.40	7,127.2	-477.8	-912.4	1,029.9	0.33	-0.21	-14.63
7,346.0	1.00	83.90	7,221.2	-477.5	-910.8	1,028.4	0.14	0.11	5.85
7,441.0	0.80	88.40	7,316.2	-477.4	-909.3	1,027.0	0.22	-0.21	4.74
7,536.0	0.80	103.60	7,411.2	-477.6	-908.0	1,026.0	0.22	0.00	16.00
7,631.0	0.40	97.10	7,506.2	-477.8	-907.1	1,025.2	0.43	-0.42	-6.84
7,642.0	0.40	97.10	7,517.2	-477.8	-907.0	1,025.1	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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