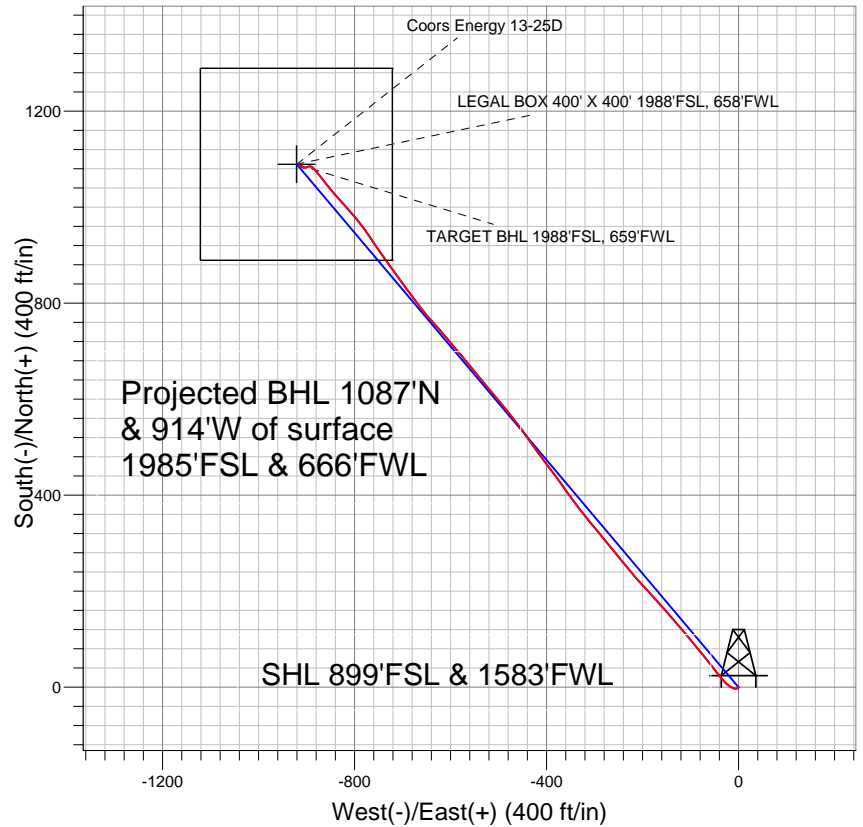
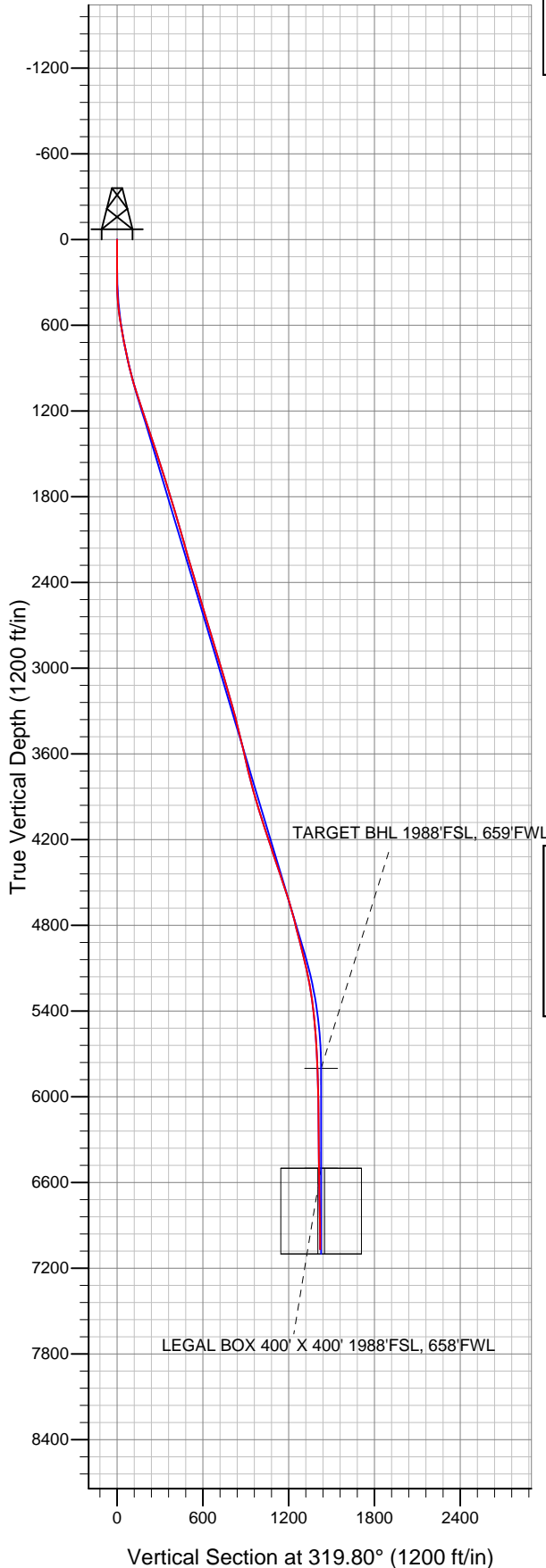


**PETROLEUM DEVELOPMENT CORP Weld County CO**



**LEGEND**

- Coors Energy 13-25D, Wellbore #1, Plan #2 (1-25-11) V0
- Wellbore #1
- Survey #1

**Final Survey Plot**

Projected Final Survey -  
7262'MD & 7068'TVD @ 1420'VS  
0.6 deg Inc 316.0 deg AZ

Project: SEC.25-T3N-R64W  
Site: Coors Energy 13-25D Pad Sec.25-T3N-R64W  
Well: Coors Energy 13-25D  
Plan: Wellbore #1



## **Directional**

# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.25-T3N-R64W**

**Coors Energy 13-25D Pad Sec.25-T3N-R64W**

**Coors Energy 13-25D**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**06 July, 2011**

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Coors Energy 13-25D
<b>Project:</b>	SEC.25-T3N-R64W	<b>TVD Reference:</b>	WELL @ 4828.0ft (Original Well Elev)
<b>Site:</b>	Coors Energy 13-25D Pad Sec.25-T3N-R64W	<b>MD Reference:</b>	WELL @ 4828.0ft (Original Well Elev)
<b>Well:</b>	Coors Energy 13-25D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

<b>Project</b>	SEC.25-T3N-R64W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site	Coors Energy 13-25D Pad Sec.25-T3N-R64W				
Site Position:		Northing:	1,314,206.56ft	Latitude:	40° 11' 29.760 N
From:	Lat/Long	Easting:	3,278,371.68ft	Longitude:	104° 30' 12.744 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.64 °

Well	Coors Energy 13-25D					
Well Position	+N-S	0.0 ft	Northing:	1,314,206.55 ft	Latitude:	40° 11' 29.760 N
	+E-W	0.0 ft	Easting:	3,278,371.68 ft	Longitude:	104° 30' 12.744 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,815.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	1/25/2011	8.76	66.94	53,091

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N-S (ft)</b>	<b>+E-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	319.80	

<b>Survey Program</b>	<b>Date</b> 7/6/2011				
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
91.0	7,262.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N-S (ft)</b>	<b>+E-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
91.0	0.30	190.40	91.0	-0.2	0.0	-0.2	0.33	0.33	0.00
180.0	0.40	177.90	180.0	-0.8	-0.1	-0.5	0.14	0.11	-14.04
271.0	1.50	234.70	271.0	-1.8	-1.0	-0.7	1.45	1.21	62.42
361.0	3.70	260.90	360.9	-2.9	-4.9	0.9	2.72	2.44	29.11
452.0	5.80	291.10	451.6	-1.7	-12.1	6.5	3.51	2.31	33.19
545.0	8.60	307.90	543.9	4.2	-21.9	17.4	3.74	3.01	18.06
638.0	9.80	320.70	635.7	14.6	-32.4	32.1	2.54	1.29	13.76
733.0	11.90	321.70	729.0	28.6	-43.6	50.0	2.22	2.21	1.05
831.0	11.90	321.50	824.9	44.4	-56.2	70.2	0.04	0.00	-0.20
926.0	14.10	320.60	917.4	61.0	-69.6	91.5	2.33	2.32	-0.95
1,021.0	16.70	321.20	1,009.0	80.6	-85.5	116.8	2.74	2.74	0.63

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Coors Energy 13-25D
<b>Project:</b>	SEC.25-T3N-R64W	<b>TVD Reference:</b>	WELL @ 4828.0ft (Original Well Elev)
<b>Site:</b>	Coors Energy 13-25D Pad Sec.25-T3N-R64W	<b>MD Reference:</b>	WELL @ 4828.0ft (Original Well Elev)
<b>Well:</b>	Coors Energy 13-25D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
1,116.0	18.30	320.30	1,099.6	102.7	-103.6	145.3	1.71	1.68	-0.95
1,211.0	18.20	320.50	1,189.8	125.6	-122.6	175.1	0.12	-0.11	0.21
1,306.0	18.30	318.00	1,280.0	148.2	-142.0	204.8	0.83	0.11	-2.63
1,401.0	18.60	318.40	1,370.2	170.6	-162.0	234.9	0.34	0.32	0.42
1,496.0	18.40	317.50	1,460.2	193.0	-182.2	265.0	0.37	-0.21	-0.95
1,591.0	18.00	317.30	1,550.5	214.8	-202.3	294.6	0.43	-0.42	-0.21
1,686.0	17.70	320.50	1,640.9	236.7	-221.4	323.8	1.08	-0.32	3.37
1,781.0	16.60	320.20	1,731.7	258.3	-239.3	351.8	1.16	-1.16	-0.32
1,876.0	16.80	320.90	1,822.7	279.4	-256.7	379.1	0.30	0.21	0.74
1,971.0	17.00	320.60	1,913.6	300.8	-274.1	406.7	0.23	0.21	-0.32
2,066.0	16.60	320.70	2,004.5	322.0	-291.5	434.1	0.42	-0.42	0.11
2,166.0	15.50	320.30	2,100.6	343.4	-309.1	461.8	1.11	-1.10	-0.40
2,256.0	15.30	320.90	2,187.4	361.8	-324.3	485.7	0.28	-0.22	0.67
2,351.0	17.00	324.00	2,278.7	382.8	-340.4	512.1	2.01	1.79	3.26
2,445.0	17.00	324.50	2,368.5	405.1	-356.4	539.5	0.16	0.00	0.53
2,540.0	15.70	324.50	2,459.7	426.9	-371.9	566.1	1.37	-1.37	0.00
2,635.0	16.40	323.10	2,551.0	448.0	-387.5	592.3	0.84	0.74	-1.47
2,730.0	16.90	322.20	2,642.0	469.7	-404.0	619.5	0.59	0.53	-0.95
2,825.0	17.10	324.70	2,732.9	492.0	-420.5	647.2	0.80	0.21	2.63
2,920.0	17.10	325.80	2,823.7	514.9	-436.4	675.0	0.34	0.00	1.16
3,015.0	16.80	322.60	2,914.5	537.4	-452.6	702.6	1.03	-0.32	-3.37
3,110.0	16.50	322.70	3,005.6	559.0	-469.1	729.8	0.32	-0.32	0.11
3,205.0	16.00	320.60	3,096.8	579.9	-485.6	756.4	0.81	-0.53	-2.21
3,303.0	16.70	321.00	3,190.8	601.3	-503.1	783.9	0.72	0.71	0.41
3,393.0	15.60	319.40	3,277.2	620.5	-519.1	809.0	1.32	-1.22	-1.78
3,488.0	13.50	318.60	3,369.2	638.5	-534.7	832.8	2.22	-2.21	-0.84
3,583.0	14.00	323.10	3,461.5	656.0	-548.9	855.4	1.24	0.53	4.74
3,678.0	13.40	319.90	3,553.8	673.6	-562.9	877.9	1.02	-0.63	-3.37
3,773.0	13.80	320.00	3,646.1	690.7	-577.3	900.2	0.42	0.42	0.11
3,868.0	12.50	319.30	3,738.6	707.2	-591.3	921.8	1.38	-1.37	-0.74
3,963.0	14.90	319.50	3,830.9	724.3	-605.9	944.3	2.53	2.53	0.21
4,058.0	16.70	319.30	3,922.3	743.9	-622.8	970.2	1.90	1.89	-0.21
4,153.0	17.20	318.00	4,013.2	764.7	-641.1	997.9	0.66	0.53	-1.37
4,248.0	18.40	321.90	4,103.6	787.0	-659.7	1,026.9	1.78	1.26	4.11
4,343.0	18.70	323.60	4,193.7	811.0	-678.0	1,057.1	0.65	0.32	1.79
4,437.0	17.20	324.00	4,283.1	834.4	-695.1	1,086.0	1.60	-1.60	0.43
4,532.0	19.70	324.10	4,373.2	858.7	-712.8	1,116.0	2.63	2.63	0.11
4,627.0	19.20	323.90	4,462.8	884.3	-731.4	1,147.5	0.53	-0.53	-0.21
4,722.0	18.20	325.50	4,552.8	909.2	-749.0	1,177.9	1.18	-1.05	1.68
4,817.0	16.10	326.90	4,643.6	932.4	-764.6	1,205.7	2.25	-2.21	1.47
4,912.0	14.90	324.60	4,735.1	953.4	-778.8	1,230.9	1.42	-1.26	-2.42
5,007.0	15.10	319.80	4,826.9	972.8	-793.9	1,255.5	1.32	0.21	-5.05
5,102.0	13.60	318.30	4,918.9	990.6	-809.3	1,279.0	1.63	-1.58	-1.58
5,197.0	14.10	319.60	5,011.2	1,007.8	-824.3	1,301.8	0.62	0.53	1.37
5,292.0	12.70	317.50	5,103.6	1,024.3	-838.8	1,323.8	1.56	-1.47	-2.21
5,387.0	10.40	320.80	5,196.6	1,038.6	-851.3	1,342.8	2.52	-2.42	3.47
5,482.0	8.30	322.50	5,290.4	1,050.7	-860.9	1,358.2	2.23	-2.21	1.79
5,577.0	7.00	320.70	5,384.5	1,060.6	-868.7	1,370.8	1.39	-1.37	-1.89
5,672.0	5.00	318.50	5,479.0	1,068.2	-875.1	1,380.8	2.12	-2.11	-2.32
5,763.0	4.40	324.40	5,569.7	1,074.0	-879.8	1,388.2	0.85	-0.66	6.48
5,860.0	3.10	319.50	5,666.5	1,079.1	-883.7	1,394.5	1.38	-1.34	-5.05
5,955.0	2.50	307.00	5,761.4	1,082.3	-887.0	1,399.1	0.90	-0.63	-13.16
5,994.9	2.36	302.95	5,801.3	1,083.2	-888.4	1,400.8	0.55	-0.34	-10.14

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Coors Energy 13-25D
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<b>Site:</b>	Coors Energy 13-25D Pad Sec.25-T3N-R64W	<b>MD Reference:</b>	WELL @ 4828.0ft (Original Well Elev)
<b>Well:</b>	Coors Energy 13-25D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
TARGET BHL 1988'FSL, 659'FWL									
6,050.0	2.20	296.60	5,856.3	1,084.3	-890.3	1,402.8	0.55	-0.30	-11.53
6,145.0	2.00	275.90	5,951.2	1,085.3	-893.5	1,405.7	0.82	-0.21	-21.79
6,240.0	2.10	245.60	6,046.2	1,084.8	-896.8	1,407.4	1.13	0.11	-31.89
6,335.0	1.80	242.00	6,141.1	1,083.3	-899.7	1,408.2	0.34	-0.32	-3.79
6,430.0	1.30	257.80	6,236.1	1,082.4	-902.1	1,409.0	0.69	-0.53	16.63
6,524.0	1.10	275.50	6,330.1	1,082.3	-904.0	1,410.1	0.45	-0.21	18.83
6,619.0	0.70	276.60	6,425.0	1,082.4	-905.5	1,411.2	0.42	-0.42	1.16
6,694.2	0.85	292.07	6,500.2	1,082.7	-906.5	1,412.0	0.34	0.20	20.57
LEGAL BOX 400' X 400' 1988'FSL, 658'FWL									
6,714.0	0.90	295.20	6,520.0	1,082.8	-906.7	1,412.3	0.34	0.24	15.81
6,809.0	0.90	273.10	6,615.0	1,083.2	-908.2	1,413.5	0.36	0.00	-23.26
6,904.0	1.30	290.30	6,710.0	1,083.6	-909.9	1,414.9	0.54	0.42	18.11
6,999.0	0.90	308.10	6,805.0	1,084.4	-911.5	1,416.6	0.55	-0.42	18.74
7,094.0	0.70	313.70	6,900.0	1,085.3	-912.5	1,417.9	0.23	-0.21	5.89
7,180.0	0.60	309.90	6,986.0	1,085.9	-913.2	1,418.9	0.13	-0.12	-4.42
7,262.0	0.60	316.00	7,068.0	1,086.5	-913.9	1,419.7	0.08	0.00	7.44

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_