

Well Name: **Coors Energy 25HD**

Surface Location: Coors Energy 13-25D Pad Sec.25-T3N-R64W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

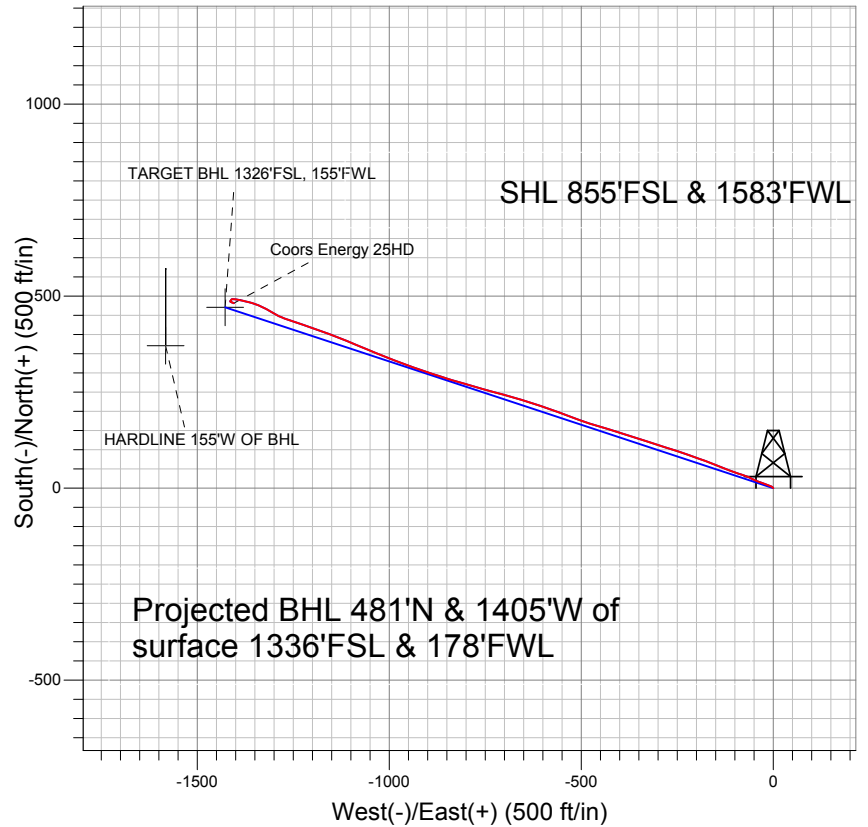
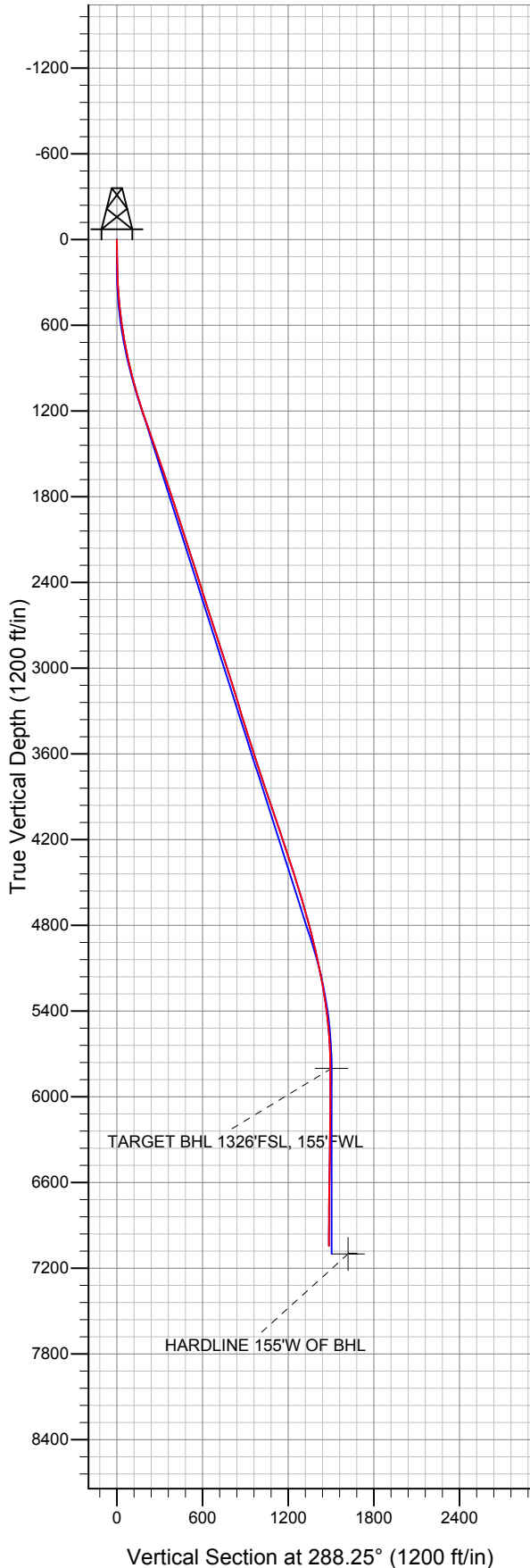
Ground Elevation: 4815.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1314162.85	3278372.17	40° 11' 29.328 N	104° 30' 12.744 W

Original Well Elev WELL @ 4828.0ft (Original Well Elev)

Slot

PETROLEUM DEVELOPMENT CORP Weld County CO



LEGEND

- △ Coors Energy 25HD, Wellbore #1, Plan #5 (1-25-11) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
7263'MD & 7044'TVD @ 1485'VS
0.2 deg Inc 137.4 deg AZ

Project: SEC.25-T3N-R64W
Site: Coors Energy 13-25D Pad Sec.25-T3N-R64W
Well: Coors Energy 25HD
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 25HD

Wellbore #1

Survey: Survey #1

Standard Survey Report

15 July, 2011

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

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

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

Well	Coors Energy 25HD		
Well Position	+N-S	0.0 ft	Northing:
	+E-W	0.0 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40° 11' 29.328 N
		Longitude:	104° 30' 12.744 W
		Ground Level:	4,815.0 ft

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

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	0.0	0.0
			Direction (°)
			288.25

Survey Program	Date 7/15/2011		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name
210.0	7,263.0	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	0.0	0.0	0.0	0.00	0.00	0.00
210.0	1.50	315.10	210.0	1.9	-1.9	2.5	0.71	0.71	0.00
301.0	2.80	299.00	300.9	3.9	-4.7	5.7	1.56	1.43	-17.69
392.0	4.70	289.90	391.7	6.2	-10.2	11.6	2.18	2.09	-10.00
483.0	6.00	289.00	482.3	9.0	-18.2	20.1	1.43	1.43	-0.99
576.0	7.50	289.80	574.7	12.7	-28.5	31.0	1.62	1.61	0.86
669.0	9.60	294.00	666.6	17.9	-41.3	44.8	2.35	2.26	4.52
763.0	11.10	295.00	759.1	24.9	-56.6	61.6	1.61	1.60	1.06
831.0	12.50	290.40	825.7	30.2	-69.5	75.4	2.48	2.06	-6.76
926.0	13.70	287.90	918.2	37.3	-89.8	97.0	1.40	1.26	-2.63
1,021.0	15.20	291.80	1,010.2	45.4	-112.1	120.7	1.88	1.58	4.11
1,116.0	16.80	290.00	1,101.5	54.7	-136.6	146.8	1.76	1.68	-1.89

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Site:	Coors Energy 13-25D Pad Sec.25-T3N-R64W	MD Reference:	WELL @ 4828.0ft (Original Well Elev)
Well:	Coors Energy 25HD	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)
1,211.0	18.20	292.50	1,192.1	65.0	-163.2	175.3	1.67	1.47	2.63
1,306.0	19.30	289.80	1,282.1	76.0	-191.6	205.8	1.47	1.16	-2.84
1,401.0	19.30	288.80	1,371.7	86.4	-221.3	237.2	0.35	0.00	-1.05
1,496.0	19.20	288.20	1,461.4	96.4	-251.0	268.5	0.23	-0.11	-0.63
1,591.0	19.20	288.00	1,551.1	106.1	-280.7	299.8	0.07	0.00	-0.21
1,686.0	18.90	287.60	1,640.9	115.5	-310.2	330.8	0.34	-0.32	-0.42
1,781.0	18.70	287.50	1,730.9	124.8	-339.4	361.4	0.21	-0.21	-0.11
1,876.0	18.20	288.50	1,821.0	134.1	-368.0	391.5	0.62	-0.53	1.05
1,971.0	18.70	287.50	1,911.1	143.4	-396.6	421.5	0.62	0.53	-1.05
2,066.0	17.40	286.10	2,001.4	151.9	-424.7	450.9	1.44	-1.37	-1.47
2,160.0	17.50	285.90	2,091.1	159.6	-451.8	479.1	0.12	0.11	-0.21
2,255.0	17.50	288.90	2,181.7	168.2	-479.1	507.7	0.95	0.00	3.16
2,350.0	18.20	290.10	2,272.1	177.9	-506.5	536.8	0.83	0.74	1.26
2,445.0	18.20	291.10	2,362.4	188.3	-534.3	566.4	0.33	0.00	1.05
2,540.0	16.90	289.50	2,452.9	198.3	-561.2	595.0	1.46	-1.37	-1.68
2,635.0	17.40	288.80	2,543.7	207.5	-587.6	623.1	0.57	0.53	-0.74
2,729.0	18.40	288.10	2,633.2	216.6	-615.0	651.9	1.09	1.06	-0.74
2,824.0	18.50	287.40	2,723.3	225.8	-643.7	682.0	0.26	0.11	-0.74
2,919.0	17.80	287.20	2,813.6	234.6	-671.9	711.6	0.74	-0.74	-0.21
3,014.0	18.10	285.30	2,903.9	242.8	-700.0	740.9	0.69	0.32	-2.00
3,109.0	17.30	283.70	2,994.4	250.0	-728.0	769.7	0.99	-0.84	-1.68
3,204.0	17.10	286.50	3,085.2	257.3	-755.1	797.7	0.90	-0.21	2.95
3,299.0	17.30	287.20	3,175.9	265.5	-782.0	825.8	0.30	0.21	0.74
3,394.0	17.10	285.40	3,266.7	273.4	-809.0	853.9	0.60	-0.21	-1.89
3,489.0	17.00	285.90	3,357.5	280.9	-835.8	881.7	0.19	-0.11	0.53
3,583.0	18.10	288.00	3,447.1	289.1	-862.9	910.0	1.35	1.17	2.23
3,678.0	18.00	288.50	3,537.5	298.4	-890.8	939.5	0.19	-0.11	0.53
3,773.0	17.50	289.10	3,627.9	307.7	-918.3	968.4	0.56	-0.53	0.63
3,868.0	18.20	289.60	3,718.4	317.3	-945.7	997.5	0.75	0.74	0.53
3,963.0	19.30	291.40	3,808.3	328.1	-974.3	1,028.0	1.31	1.16	1.89
4,058.0	19.60	291.00	3,897.9	339.5	-1,003.8	1,059.6	0.35	0.32	-0.42
4,153.0	18.30	291.60	3,987.8	350.7	-1,032.6	1,090.4	1.38	-1.37	0.63
4,248.0	17.50	293.50	4,078.2	361.9	-1,059.5	1,119.6	1.04	-0.84	2.00
4,343.0	18.90	291.70	4,168.4	373.3	-1,086.9	1,149.1	1.59	1.47	-1.89
4,438.0	18.60	292.00	4,258.4	384.6	-1,115.3	1,179.6	0.33	-0.32	0.32
4,533.0	17.70	291.20	4,348.6	395.5	-1,142.8	1,209.2	0.98	-0.95	-0.84
4,628.0	17.90	291.70	4,439.1	406.1	-1,169.8	1,238.2	0.26	0.21	0.53
4,723.0	18.00	288.00	4,529.5	416.1	-1,197.3	1,267.4	1.20	0.11	-3.89
4,818.0	16.90	288.80	4,620.1	425.1	-1,224.4	1,295.9	1.19	-1.16	0.84
4,913.0	15.60	287.80	4,711.3	433.4	-1,249.6	1,322.5	1.40	-1.37	-1.05
5,006.0	15.30	290.70	4,800.9	441.6	-1,273.0	1,347.2	0.89	-0.32	3.12
5,101.0	13.70	298.50	4,892.9	451.4	-1,294.6	1,370.8	2.65	-1.68	8.21
5,196.0	12.20	300.90	4,985.5	461.9	-1,313.1	1,391.7	1.68	-1.58	2.53
5,291.0	12.50	296.10	5,078.3	471.6	-1,330.9	1,411.7	1.13	0.32	-5.05
5,386.0	11.30	287.30	5,171.3	478.9	-1,349.1	1,431.2	2.29	-1.26	-9.26
5,480.0	9.80	285.70	5,263.7	483.8	-1,365.6	1,448.4	1.63	-1.60	-1.70
5,575.0	7.90	283.70	5,357.5	487.5	-1,379.7	1,463.0	2.03	-2.00	-2.11
5,670.0	6.50	279.20	5,451.8	489.9	-1,391.3	1,474.8	1.59	-1.47	-4.74
5,765.0	5.20	277.80	5,546.3	491.4	-1,400.9	1,484.3	1.38	-1.37	-1.47
5,860.0	2.70	268.90	5,641.1	491.9	-1,407.4	1,490.7	2.70	-2.63	-9.37
5,955.0	1.40	232.40	5,736.0	491.2	-1,410.6	1,493.4	1.87	-1.37	-38.42
6,019.6	1.32	222.97	5,800.6	490.1	-1,411.7	1,494.2	0.37	-0.12	-14.60
TARGET BHL 1326'FSL, 155'FWL									

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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)
6,050.0	1.30	218.20	5,831.0	489.6	-1,412.2	1,494.5	0.37	-0.08	-15.68
6,144.0	1.10	211.50	5,925.0	488.0	-1,413.3	1,495.0	0.26	-0.21	-7.13
6,239.0	0.70	193.10	6,019.9	486.6	-1,413.9	1,495.2	0.51	-0.42	-19.37
6,334.0	0.50	150.20	6,114.9	485.7	-1,413.8	1,494.8	0.50	-0.21	-45.16
6,429.0	0.70	126.30	6,209.9	485.0	-1,413.1	1,494.0	0.33	0.21	-25.16
6,524.0	0.90	112.60	6,304.9	484.4	-1,412.0	1,492.7	0.29	0.21	-14.42
6,619.0	1.00	120.20	6,399.9	483.7	-1,410.6	1,491.1	0.17	0.11	8.00
6,714.0	1.10	102.00	6,494.9	483.1	-1,409.0	1,489.4	0.36	0.11	-19.16
6,809.0	0.80	105.40	6,589.9	482.7	-1,407.4	1,487.8	0.32	-0.32	3.58
6,904.0	0.50	127.90	6,684.9	482.3	-1,406.5	1,486.8	0.41	-0.32	23.68
6,999.0	0.50	116.90	6,779.9	481.8	-1,405.8	1,486.0	0.10	0.00	-11.58
7,094.0	0.40	110.00	6,874.9	481.5	-1,405.1	1,485.2	0.12	-0.11	-7.26
7,189.0	0.20	137.40	6,969.9	481.3	-1,404.7	1,484.8	0.25	-0.21	28.84
7,263.0	0.20	137.40	7,043.9	481.1	-1,404.5	1,484.5	0.00	0.00	0.00
HARDLINE 155°W OF BHL									

Checked By: _____	Approved By: _____	Date: _____
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