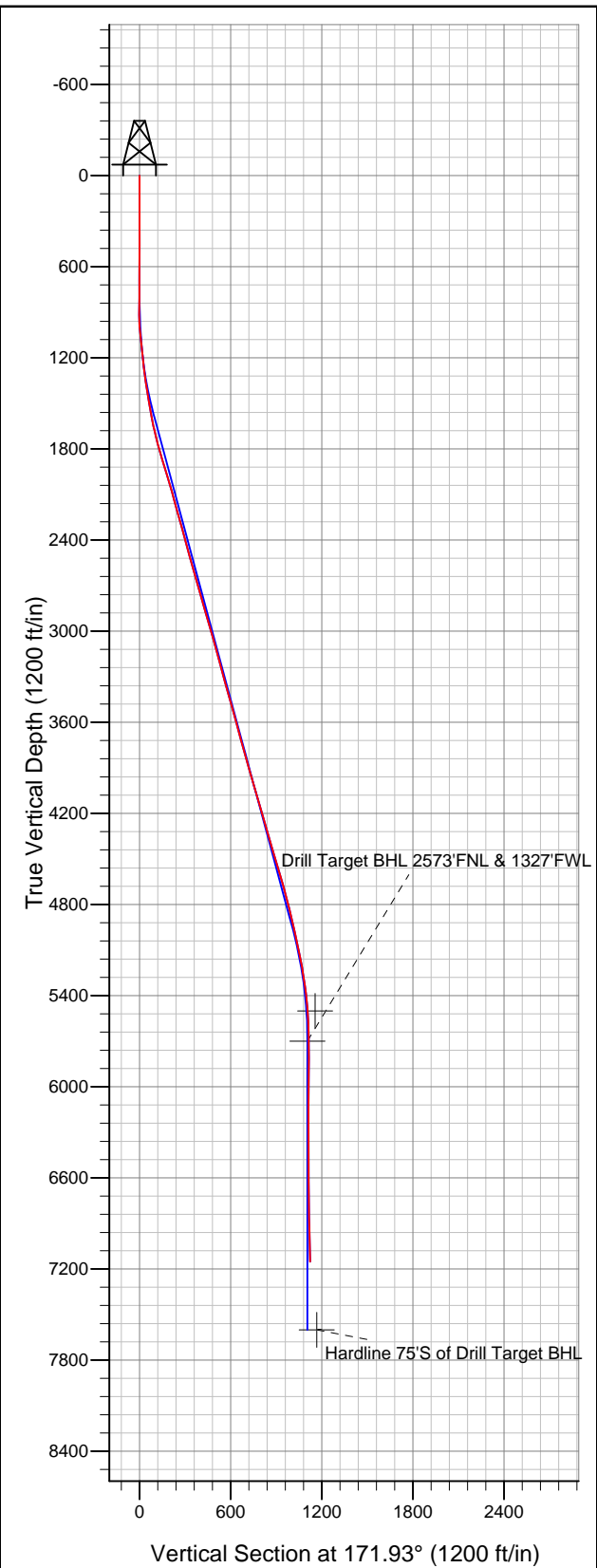




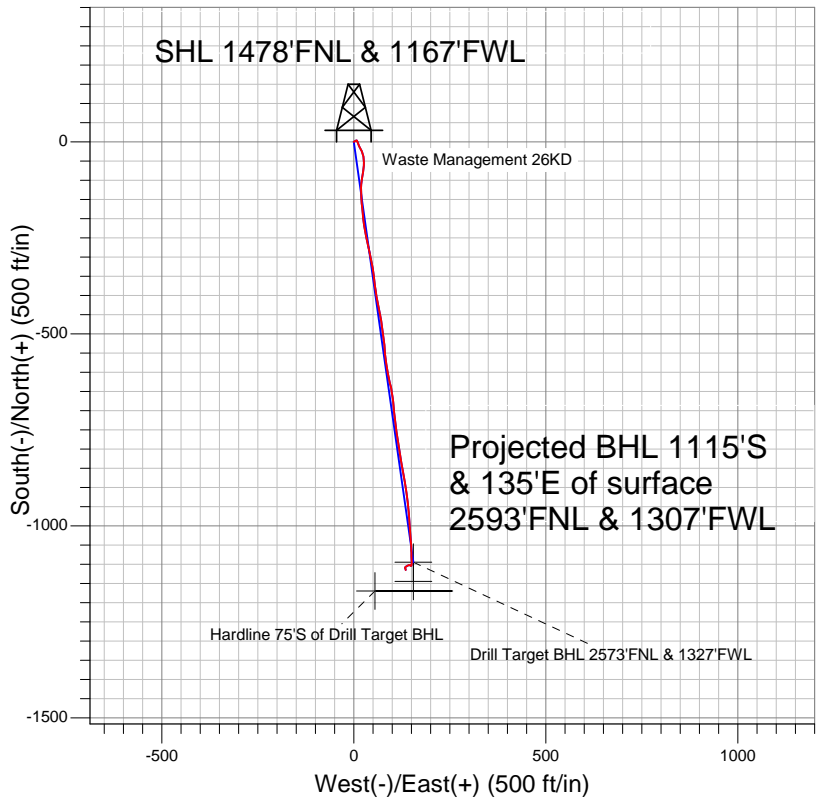
# Well Name: Waste Management 26KD

Surface Location: Waste Management 26FD Pad Sec.26-T3N-R64W  
North American Datum 1983 US State Plane 1983Colorado Northern Zone  
Ground Elevation: 4855.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1317039.23	3272657.84	40.199550	-104.523880	
Original Well EleWELL @ 4868.0ft (Original Well Elev)						



## PETROLEUM DEVELOPMENT CORP Weld County CO



### LEGEND

- Waste Management 26KD, Wellbore #1, Plan #1 (10-14-10) VO
- Wellbore #1
- Survey #1

## Final Survey Plot

Projected Final Survey -  
7295'MD & 7151'TVD @ 1123' VS  
1.7 deg Inc 164.5 deg AZ

Project: SEC.26-T3N-R64W  
Site: Waste Management 26FD Pad Sec.26-T3N-R64W  
Well: Waste Management 26KD  
Plan: Wellbore #1



# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.26-T3N-R64W**

**Waste Management 26FD Pad Sec.26-T3N-R64W**

**Waste Management 26KD**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**21 September, 2011**

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Waste Management 26KD
<b>Project:</b>	SEC.26-T3N-R64W	<b>TVD Reference:</b>	WELL @ 4868.0ft (Original Well Elev)
<b>Site:</b>	Waste Management 26FD Pad Sec.26-T3N-R64W	<b>MD Reference:</b>	WELL @ 4868.0ft (Original Well Elev)
<b>Well:</b>	Waste Management 26KD	<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.26-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		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site	Waste Management 26FD Pad Sec.26-T3N-R64W				
Site Position:		Northing:	1,317,057.27 ft	Latitude:	40.199600
From:	Lat/Long	Easting:	3,272,640.88 ft	Longitude:	-104.523940
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.63 °

Well	Waste Management 26KD					
Well Position	+N-S	0.0 ft	Northing:	1,317,039.23 ft	Latitude:	40.199550
	+E-W	0.0 ft	Easting:	3,272,657.84 ft	Longitude:	-104.523880
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,855.0 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	10/15/2010	8.81	66.95	53,122

<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>	
	5,700.0	0.0	0.0	171.93	

<b>Survey Program</b>	<b>Date</b>	9/21/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
252.0	7,295.0	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
252.0	0.10	60.40	252.0	0.1	0.2	-0.1	0.04	0.04	0.00
464.0	0.50	60.40	464.0	0.7	1.2	-0.5	0.19	0.19	0.00
618.0	0.50	60.40	618.0	1.3	2.3	-1.0	0.00	0.00	0.00
739.0	1.50	60.40	739.0	2.4	4.2	-1.8	0.83	0.83	0.00
834.0	1.20	64.50	833.9	3.4	6.1	-2.5	0.33	-0.32	4.32
929.0	0.80	86.40	928.9	3.9	7.7	-2.8	0.58	-0.42	23.05
1,024.0	6.40	159.60	1,023.7	-1.0	10.2	2.5	6.54	5.89	77.05
1,119.0	6.60	155.00	1,118.1	-11.0	14.4	12.9	0.59	0.21	-4.84
1,214.0	5.80	151.30	1,212.6	-20.1	19.0	22.6	0.94	-0.84	-3.89
1,308.0	7.20	163.10	1,306.0	-29.9	23.0	32.8	2.05	1.49	12.55

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Waste Management 26KD
<b>Project:</b>	SEC.26-T3N-R64W	<b>TVD Reference:</b>	WELL @ 4868.0ft (Original Well Elev)
<b>Site:</b>	Waste Management 26FD Pad Sec.26-T3N-R64W	<b>MD Reference:</b>	WELL @ 4868.0ft (Original Well Elev)
<b>Well:</b>	Waste Management 26KD	<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)
1,403.0	8.90	171.10	1,400.0	-42.9	25.8	46.1	2.14	1.79	8.42
1,498.0	10.20	182.70	1,493.7	-58.5	26.6	61.7	2.44	1.37	12.21
1,593.0	11.00	189.20	1,587.1	-75.9	24.7	78.6	1.51	0.84	6.84
1,688.0	13.80	190.30	1,679.9	-96.0	21.3	98.0	2.96	2.95	1.16
1,783.0	14.90	179.20	1,771.9	-119.4	19.4	120.9	3.11	1.16	-11.68
1,878.0	17.20	178.40	1,863.2	-145.6	20.0	147.0	2.43	2.42	-0.84
1,973.0	17.10	173.00	1,954.0	-173.5	22.1	174.9	1.68	-0.11	-5.68
2,068.0	16.10	175.00	2,045.0	-200.5	24.9	202.0	1.21	-1.05	2.11
2,163.0	15.40	168.90	2,136.5	-226.0	28.5	227.8	1.89	-0.74	-6.42
2,258.0	15.30	167.30	2,228.1	-250.6	33.7	252.9	0.46	-0.11	-1.68
2,353.0	15.80	168.50	2,319.6	-275.5	39.0	278.3	0.63	0.53	1.26
2,447.0	15.60	169.60	2,410.1	-300.5	43.8	303.7	0.38	-0.21	1.17
2,543.0	15.10	169.00	2,502.7	-325.5	48.6	329.1	0.55	-0.52	-0.63
2,637.0	15.90	173.40	2,593.3	-350.3	52.4	354.2	1.51	0.85	4.68
2,732.0	15.10	172.60	2,684.8	-375.5	55.5	379.5	0.87	-0.84	-0.84
2,827.0	16.40	169.70	2,776.2	-400.9	59.4	405.3	1.60	1.37	-3.05
2,922.0	16.20	169.50	2,867.4	-427.2	64.3	432.0	0.22	-0.21	-0.21
3,016.0	16.00	168.70	2,957.7	-452.8	69.2	458.0	0.32	-0.21	-0.85
3,111.0	15.90	173.20	3,049.1	-478.5	73.3	484.1	1.31	-0.11	4.74
3,206.0	15.20	171.10	3,140.6	-503.7	76.8	509.5	0.95	-0.74	-2.21
3,301.0	15.20	175.00	3,232.3	-528.5	79.8	534.4	1.08	0.00	4.11
3,395.0	15.60	175.00	3,322.9	-553.3	82.0	559.3	0.43	0.43	0.00
3,490.0	15.50	172.10	3,414.4	-578.6	84.8	584.8	0.83	-0.11	-3.05
3,585.0	15.60	168.90	3,505.9	-603.7	89.0	610.2	0.91	0.11	-3.37
3,680.0	15.00	166.20	3,597.6	-628.2	94.4	635.2	0.98	-0.63	-2.84
3,775.0	14.90	170.80	3,689.4	-652.2	99.3	659.7	1.25	-0.11	4.84
3,870.0	15.80	173.50	3,781.0	-677.1	102.7	684.8	1.21	0.95	2.84
3,965.0	16.30	173.10	3,872.3	-703.2	105.8	711.1	0.54	0.53	-0.42
4,060.0	16.20	174.80	3,963.5	-729.6	108.6	737.6	0.51	-0.11	1.79
4,155.0	15.70	173.00	4,054.8	-755.6	111.3	763.7	0.74	-0.53	-1.89
4,250.0	16.40	171.70	4,146.1	-781.6	114.8	790.0	0.83	0.74	-1.37
4,344.0	16.50	169.40	4,236.3	-807.9	119.2	816.6	0.70	0.11	-2.45
4,439.0	16.10	168.20	4,327.5	-834.0	124.4	843.2	0.55	-0.42	-1.26
4,534.0	16.00	170.00	4,418.8	-859.8	129.4	869.5	0.53	-0.11	1.89
4,629.0	17.00	172.80	4,509.8	-886.5	133.4	896.4	1.34	1.05	2.95
4,724.0	16.70	171.80	4,600.8	-913.8	137.1	924.0	0.44	-0.32	-1.05
4,819.0	15.30	172.60	4,692.1	-939.7	140.6	950.1	1.49	-1.47	0.84
4,913.0	14.30	173.70	4,783.0	-963.5	143.5	974.2	1.10	-1.06	1.17
5,008.0	13.60	179.30	4,875.2	-986.4	144.9	997.0	1.60	-0.74	5.89
5,103.0	12.70	173.10	4,967.7	-1,007.9	146.3	1,018.5	1.76	-0.95	-6.53
5,198.0	11.90	175.30	5,060.5	-1,028.0	148.4	1,038.7	0.98	-0.84	2.32
5,293.0	11.60	177.80	5,153.5	-1,047.4	149.5	1,058.0	0.62	-0.32	2.63
5,388.0	9.60	179.60	5,246.9	-1,064.8	150.0	1,075.3	2.13	-2.11	1.89
5,483.0	7.60	177.00	5,340.8	-1,079.0	150.3	1,089.4	2.14	-2.11	-2.74
5,577.0	5.80	176.90	5,434.2	-1,090.0	150.9	1,100.4	1.91	-1.91	-0.11
5,647.1	4.10	180.99	5,504.0	-1,096.0	151.1	1,106.4	2.48	-2.43	5.84
<b>Permit BHL 2623'FNL &amp; 1327'FWL</b>									
5,672.0	3.50	183.40	5,528.8	-1,097.7	151.0	1,108.0	2.48	-2.40	9.66
5,767.0	1.70	189.80	5,623.7	-1,101.9	150.6	1,112.2	1.92	-1.89	6.74
5,843.1	0.71	208.33	5,699.8	-1,103.5	150.2	1,113.6	1.39	-1.31	24.35
<b>Drill Target BHL 2573'FNL &amp; 1327'FWL</b>									
5,862.0	0.50	223.90	5,718.7	-1,103.6	150.1	1,113.8	1.39	-1.09	82.36

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Waste Management 26KD
<b>Project:</b>	SEC.26-T3N-R64W	<b>TVD Reference:</b>	WELL @ 4868.0ft (Original Well Elev)
<b>Site:</b>	Waste Management 26FD Pad Sec.26-T3N-R64W	<b>MD Reference:</b>	WELL @ 4868.0ft (Original Well Elev)
<b>Well:</b>	Waste Management 26KD	<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)
5,957.0	0.30	258.60	5,813.7	-1,104.0	149.5	1,114.0	0.32	-0.21	36.53
6,052.0	0.60	285.50	5,908.7	-1,103.9	148.8	1,113.9	0.38	0.32	28.32
6,147.0	0.60	293.30	6,003.7	-1,103.6	147.9	1,113.4	0.09	0.00	8.21
6,242.0	0.60	301.50	6,098.7	-1,103.1	147.0	1,112.8	0.09	0.00	8.63
6,337.0	0.70	312.40	6,193.7	-1,102.5	146.2	1,112.1	0.17	0.11	11.47
6,432.0	0.80	288.10	6,288.7	-1,101.9	145.1	1,111.3	0.35	0.11	-25.58
6,527.0	0.70	233.90	6,383.7	-1,102.0	144.0	1,111.3	0.73	-0.11	-57.05
6,622.0	1.40	246.80	6,478.7	-1,102.8	142.5	1,111.9	0.77	0.74	13.58
6,718.0	2.20	242.40	6,574.6	-1,104.1	139.7	1,112.8	0.85	0.83	-4.58
6,813.0	2.00	237.90	6,669.6	-1,105.8	136.7	1,114.1	0.27	-0.21	-4.74
6,908.0	1.10	227.60	6,764.5	-1,107.3	134.6	1,115.3	0.99	-0.95	-10.84
7,003.0	0.80	198.20	6,859.5	-1,108.6	133.8	1,116.4	0.59	-0.32	-30.95
7,098.0	1.20	157.30	6,954.5	-1,110.1	133.9	1,117.9	0.83	0.42	-43.05
7,193.0	1.50	163.40	7,049.5	-1,112.2	134.7	1,120.1	0.35	0.32	6.42
7,288.0	1.70	164.50	7,144.4	-1,114.8	135.4	1,122.8	0.21	0.21	1.16
7,295.0	1.70	164.50	7,151.4	-1,115.0	135.5	1,123.0	0.00	0.00	0.00
Hardline 75'S of Drill Target BHL									

Checked By: _____	Approved By: _____	Date: _____
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