

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Waste Management 2I-401**

Surface Location: Waste Management 2IL-HZ Pad Sec.2-T2N-R64W

North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

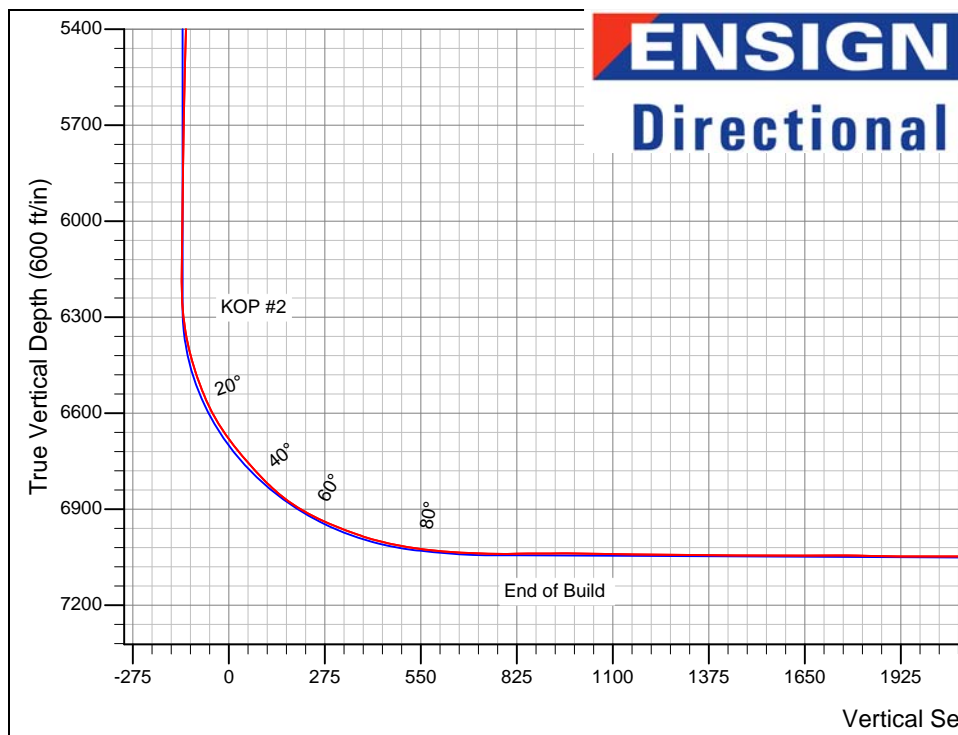
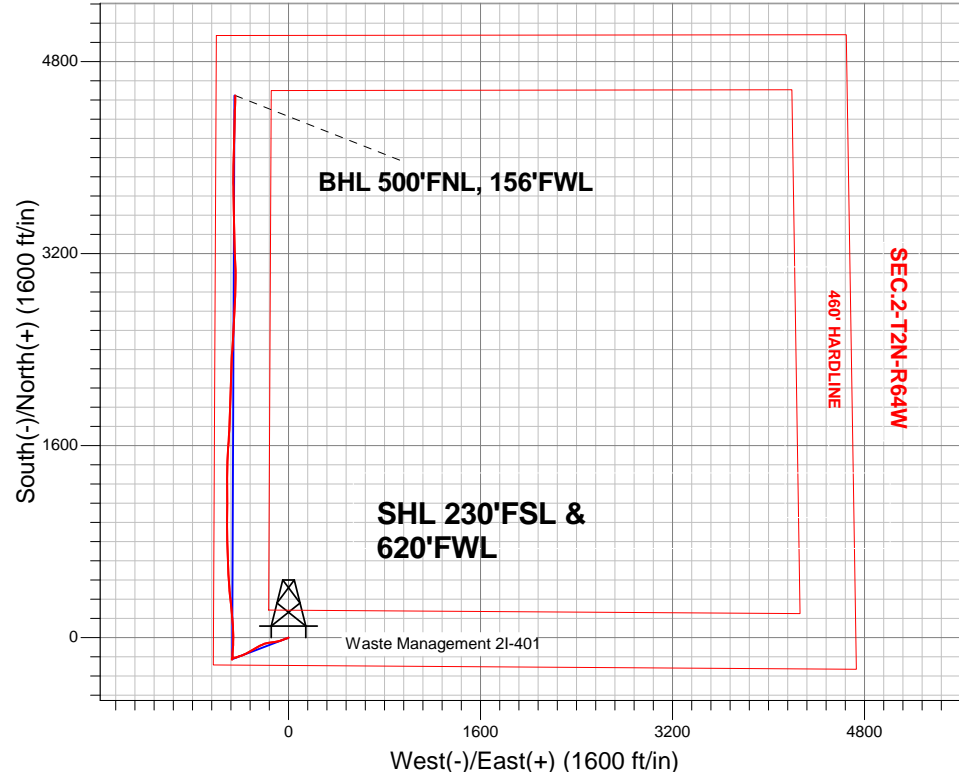
Ground Elevation: 4939.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1302935.67	3272203.76	40.160850	-104.526060	

RKB - 15' WELL @ 4954.0ft (RKB - 15')

FINAL SURVEY

Projected Bottom Hole Location
11425'MD 7053'TVD 4517'N &
444'W of SHL 92.90 degree Incl
@ 1.50 degree AZM



Waste Management 2IL-HZ Pad Sec.2-T2N-R64W
Waste Management 2I-401
Wellbore #1
8:23, June 03 2013

ANNOTATIONS

No annotation data is available.

LEGEND

- Waste Management 2I-401, Wellbore #1, Plan #1 (1-23-13) V0
- Wellbore #1
- Survey #1



Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.2-T2N-R64W

Waste Management 2IL-HZ Pad Sec.2-T2N-R64W

Waste Management 2I-401

Wellbore #1

Survey: Survey #1

Standard Survey Report

03 June, 2013

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Waste Management 2I-401
Project:	SEC.2-T2N-R64W	TVD Reference:	WELL @ 4954.0ft (RKB - 15')
Site:	Waste Management 2IL-HZ Pad Sec.2-T2N-R64W	MD Reference:	WELL @ 4954.0ft (RKB - 15')
Well:	Waste Management 2I-401	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.2-T2N-R64W, 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	Waste Management 2IL-HZ Pad Sec.2-T2N-R64W				
Site Position:		Northing:	1,302,936.01 ft	Latitude:	40.160850
From:	Lat/Long	Easting:	3,272,234.50 ft	Longitude:	-104.525950
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.63 °

Well	Waste Management 2I-401					
Well Position	+N-S	0.0 ft	Northing:	1,302,935.67 ft	Latitude:	40.160850
	+E-W	0.0 ft	Easting:	3,272,203.76 ft	Longitude:	-104.526060
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,939.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/22/2013	8.46	66.83	52,826

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	354.31	

Survey Program	Date	6/3/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
121.0	11,425.0	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
121.0	1.30	229.10	121.0	-0.9	-1.0	-0.8	1.07	1.07	0.00
210.0	2.50	247.40	209.9	-2.3	-3.6	-1.9	1.49	1.35	20.56
301.0	2.70	242.30	300.8	-4.1	-7.3	-3.3	0.34	0.22	-5.60
392.0	3.80	256.50	391.7	-5.8	-12.2	-4.5	1.49	1.21	15.60
487.0	3.60	258.50	486.5	-7.1	-18.1	-5.3	0.25	-0.21	2.11
581.0	4.90	246.50	580.2	-9.3	-24.7	-6.8	1.67	1.38	-12.77
676.0	5.10	246.70	674.9	-12.6	-32.3	-9.3	0.21	0.21	0.21
771.0	4.60	242.10	769.5	-16.0	-39.6	-12.0	0.67	-0.53	-4.84
864.0	5.60	252.30	862.2	-19.1	-47.2	-14.4	1.45	1.08	10.97
909.0	5.50	255.10	907.0	-20.4	-51.3	-15.2	0.64	-0.22	6.22

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Site:	Waste Management 2IL-HZ Pad Sec.2-T2N-R64W	MD Reference:	WELL @ 4954.0ft (RKB - 15')
Well:	Waste Management 2I-401	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)
998.0	5.30	251.80	995.6	-22.8	-59.4	-16.8	0.41	-0.22	-3.71
1,092.0	7.30	256.20	1,089.0	-25.5	-69.3	-18.5	2.19	2.13	4.68
1,248.0	7.20	254.40	1,243.7	-30.5	-88.3	-21.6	0.16	-0.06	-1.15
1,401.0	6.50	255.60	1,395.7	-35.3	-106.0	-24.6	0.47	-0.46	0.78
1,554.0	9.00	264.30	1,547.3	-38.6	-126.3	-25.9	1.80	1.63	5.69
1,706.0	8.50	262.00	1,697.5	-41.3	-149.2	-26.4	0.40	-0.33	-1.51
1,859.0	7.90	262.00	1,848.9	-44.4	-170.8	-27.2	0.39	-0.39	0.00
2,052.0	6.60	252.30	2,040.4	-49.6	-194.5	-30.1	0.92	-0.67	-5.03
2,210.0	8.20	246.90	2,197.1	-56.8	-213.5	-35.3	1.10	1.01	-3.42
2,369.0	7.30	242.30	2,354.6	-65.9	-232.9	-42.5	0.69	-0.57	-2.89
2,527.0	7.00	241.80	2,511.4	-75.1	-250.3	-50.0	0.19	-0.19	-0.32
2,686.0	5.90	241.10	2,669.4	-83.7	-266.0	-56.9	0.69	-0.69	-0.44
2,844.0	6.40	236.00	2,826.5	-92.5	-280.4	-64.3	0.47	0.32	-3.23
3,002.0	7.70	243.30	2,983.3	-102.2	-297.2	-72.2	1.00	0.82	4.62
3,160.0	7.10	242.10	3,139.9	-111.5	-315.2	-79.7	0.39	-0.38	-0.76
3,319.0	6.20	242.10	3,297.9	-120.1	-331.5	-86.7	0.57	-0.57	0.00
3,477.0	5.50	238.10	3,455.1	-128.1	-345.5	-93.3	0.51	-0.44	-2.53
3,636.0	6.20	238.80	3,613.2	-136.6	-359.3	-100.3	0.44	0.44	0.44
3,794.0	5.90	248.40	3,770.3	-144.0	-374.1	-106.2	0.67	-0.19	6.08
3,953.0	6.50	253.50	3,928.4	-149.6	-390.4	-110.2	0.51	0.38	3.21
4,111.0	6.70	250.90	4,085.4	-155.1	-407.7	-114.0	0.23	0.13	-1.65
4,270.0	6.10	249.00	4,243.4	-161.2	-424.3	-118.4	0.40	-0.38	-1.19
4,428.0	5.00	259.70	4,400.6	-165.4	-438.9	-121.1	0.95	-0.70	6.77
4,587.0	3.40	260.60	4,559.2	-167.5	-450.4	-122.0	1.01	-1.01	0.57
4,745.0	2.40	257.90	4,717.0	-168.9	-458.2	-122.7	0.64	-0.63	-1.71
4,904.0	1.10	310.70	4,875.9	-168.6	-462.7	-121.9	1.22	-0.82	33.21
5,062.0	1.30	289.00	5,033.9	-167.0	-465.5	-120.1	0.31	0.13	-13.73
5,220.0	1.10	235.80	5,191.9	-167.3	-468.5	-120.1	0.69	-0.13	-33.67
5,379.0	1.10	191.50	5,350.8	-169.7	-470.0	-122.2	0.52	0.00	-27.86
5,538.0	1.30	180.90	5,509.8	-173.0	-470.4	-125.5	0.19	0.13	-6.67
5,699.0	1.00	193.90	5,670.8	-176.2	-470.7	-128.6	0.25	-0.19	8.07
5,856.0	0.90	191.30	5,827.8	-178.7	-471.3	-131.1	0.07	-0.06	-1.66
6,014.0	0.70	183.40	5,985.7	-180.9	-471.6	-133.2	0.14	-0.13	-5.00
6,173.0	0.40	172.50	6,144.7	-182.4	-471.6	-134.8	0.20	-0.19	-6.86
6,205.0	0.50	192.70	6,176.7	-182.6	-471.6	-135.0	0.58	0.31	63.13
6,237.0	2.20	65.60	6,208.7	-182.5	-471.1	-134.9	7.92	5.31	-397.19
6,268.0	2.80	35.00	6,239.7	-181.7	-470.1	-134.2	4.65	1.94	-98.71
6,300.0	4.60	19.80	6,271.6	-179.8	-469.2	-132.4	6.36	5.63	-47.50
6,332.0	6.30	9.60	6,303.5	-176.9	-468.5	-129.6	6.09	5.31	-31.88
6,364.0	8.20	6.40	6,335.2	-172.9	-467.9	-125.6	6.07	5.94	-10.00
6,395.0	10.30	4.10	6,365.8	-167.9	-467.5	-120.7	6.88	6.77	-7.42
6,427.0	12.10	2.00	6,397.2	-161.7	-467.2	-114.6	5.77	5.63	-6.56
6,459.0	14.20	2.30	6,428.4	-154.4	-466.9	-107.4	6.57	6.56	0.94
6,490.0	16.40	1.50	6,458.3	-146.3	-466.6	-99.3	7.13	7.10	-2.58
6,522.0	17.90	359.70	6,488.8	-136.8	-466.5	-89.9	4.97	4.69	-5.63
6,554.0	18.90	2.90	6,519.2	-126.7	-466.3	-79.9	4.44	3.13	10.00
6,586.0	21.50	4.30	6,549.2	-115.7	-465.6	-69.0	8.26	8.13	4.38
6,617.0	24.40	4.30	6,577.8	-103.6	-464.7	-57.1	9.35	9.35	0.00
6,649.0	26.70	4.50	6,606.7	-89.9	-463.6	-43.5	7.19	7.19	0.63
6,681.0	29.70	4.10	6,634.9	-74.8	-462.5	-28.6	9.39	9.38	-1.25
6,713.0	32.40	1.80	6,662.3	-58.3	-461.7	-12.3	9.21	8.44	-7.19
6,744.0	35.10	1.30	6,688.0	-41.1	-461.2	4.8	8.76	8.71	-1.61
6,776.0	37.40	0.20	6,713.8	-22.2	-461.0	23.6	7.47	7.19	-3.44

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Survey									
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6,808.0	37.60	359.40	6,739.2	-2.7	-461.0	43.0	1.65	0.63	-2.50
6,840.0	38.50	359.70	6,764.4	17.0	-461.2	62.6	2.87	2.81	0.94
6,872.0	40.70	359.70	6,789.1	37.4	-461.3	82.9	6.88	6.88	0.00
6,904.0	43.10	358.50	6,812.9	58.8	-461.6	104.2	7.91	7.50	-3.75
6,932.0	45.00	356.40	6,833.0	78.2	-462.5	123.7	8.56	6.79	-7.50
6,965.0	47.70	355.50	6,855.8	102.0	-464.2	147.5	8.42	8.18	-2.73
6,996.0	51.80	355.70	6,875.8	125.6	-466.0	171.2	13.23	13.23	0.65
7,028.0	55.80	355.70	6,894.7	151.4	-467.9	197.0	12.50	12.50	0.00
7,060.0	60.00	355.00	6,911.7	178.4	-470.1	224.1	13.26	13.13	-2.19
7,091.0	61.60	355.30	6,926.8	205.3	-472.4	251.1	5.23	5.16	0.97
7,123.0	64.20	355.00	6,941.4	233.7	-474.8	279.6	8.17	8.13	-0.94
7,154.0	65.50	353.70	6,954.6	261.6	-477.6	307.7	5.66	4.19	-4.19
7,186.0	67.80	353.90	6,967.3	290.8	-480.8	337.1	7.21	7.19	0.63
7,218.0	69.30	353.70	6,979.0	320.5	-484.0	366.8	4.72	4.69	-0.63
7,249.0	71.90	353.60	6,989.3	349.5	-487.2	396.1	8.39	8.39	-0.32
7,281.0	74.20	353.90	6,998.6	379.9	-490.5	426.7	7.24	7.19	0.94
7,313.0	76.20	355.00	7,006.8	410.7	-493.5	457.6	7.08	6.25	3.44
7,345.0	77.50	356.40	7,014.1	441.8	-495.9	488.8	5.89	4.06	4.38
7,376.0	79.70	357.60	7,020.2	472.1	-497.5	519.1	8.05	7.10	3.87
7,401.0	81.70	357.40	7,024.2	496.8	-498.5	543.8	8.04	8.00	-0.80
7,437.0	84.20	357.50	7,028.6	532.5	-500.1	579.4	6.95	6.94	0.28
7,468.0	84.70	357.60	7,031.6	563.3	-501.4	610.2	1.64	1.61	0.32
7,498.0	85.30	357.30	7,034.3	593.2	-502.8	640.1	2.23	2.00	-1.00
7,528.0	86.60	357.30	7,036.4	623.1	-504.2	670.0	4.33	4.33	0.00
7,559.0	87.80	358.00	7,037.9	654.0	-505.5	700.9	4.48	3.87	2.26
7,589.0	88.50	358.00	7,038.9	684.0	-506.5	730.8	2.33	2.33	0.00
7,621.0	88.70	358.00	7,039.6	715.9	-507.6	762.7	0.63	0.63	0.00
7,653.0	90.40	358.00	7,039.9	747.9	-508.7	794.6	5.31	5.31	0.00
7,685.0	91.10	358.10	7,039.5	779.9	-509.8	826.6	2.21	2.19	0.31
7,717.0	90.60	358.50	7,039.0	811.9	-510.8	858.5	2.00	-1.56	1.25
7,749.0	89.70	359.40	7,038.9	843.9	-511.4	890.4	3.98	-2.81	2.81
7,780.0	90.60	359.70	7,038.8	874.9	-511.6	921.3	3.06	2.90	0.97
7,812.0	90.80	359.70	7,038.4	906.9	-511.8	953.1	0.63	0.63	0.00
7,844.0	89.30	0.20	7,038.4	938.9	-511.8	985.0	4.94	-4.69	1.56
7,876.0	88.60	0.80	7,039.0	970.8	-511.5	1,016.8	2.88	-2.19	1.88
7,907.0	89.00	1.10	7,039.7	1,001.8	-511.0	1,047.6	1.61	1.29	0.97
7,939.0	89.70	0.90	7,040.0	1,033.8	-510.4	1,079.3	2.28	2.19	-0.63
7,971.0	89.60	0.80	7,040.2	1,065.8	-510.0	1,111.1	0.44	-0.31	-0.31
8,002.0	89.00	359.90	7,040.6	1,096.8	-509.8	1,141.9	3.49	-1.94	-2.90
8,034.0	89.30	358.80	7,041.1	1,128.8	-510.1	1,173.8	3.56	0.94	-3.44
8,066.0	88.20	358.00	7,041.8	1,160.8	-511.0	1,205.7	4.25	-3.44	-2.50
8,097.0	88.30	358.30	7,042.7	1,191.8	-512.0	1,236.6	1.02	0.32	0.97
8,129.0	88.90	359.00	7,043.5	1,223.7	-512.8	1,268.5	2.88	1.88	2.19
8,161.0	89.30	0.40	7,044.0	1,255.7	-513.0	1,300.4	4.55	1.25	4.38
8,193.0	89.60	2.00	7,044.3	1,287.7	-512.3	1,332.2	5.09	0.94	5.00
8,225.0	90.00	1.80	7,044.4	1,319.7	-511.2	1,363.9	1.40	1.25	-0.63
8,257.0	88.80	1.50	7,044.7	1,351.7	-510.3	1,395.6	3.87	-3.75	-0.94
8,288.0	89.10	1.50	7,045.3	1,382.7	-509.5	1,426.4	0.97	0.97	0.00
8,320.0	90.00	1.10	7,045.6	1,414.7	-508.8	1,458.1	3.08	2.81	-1.25
8,351.0	90.80	0.90	7,045.4	1,445.7	-508.2	1,488.9	2.66	2.58	-0.65
8,383.0	90.80	1.60	7,044.9	1,477.7	-507.5	1,520.7	2.19	0.00	2.19
8,414.0	90.70	2.50	7,044.5	1,508.6	-506.4	1,551.4	2.92	-0.32	2.90

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
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8,446.0	89.60	3.20	7,044.4	1,540.6	-504.8	1,583.0	4.07	-3.44	2.19
8,478.0	89.10	3.60	7,044.8	1,572.5	-502.9	1,614.6	2.00	-1.56	1.25
8,509.0	89.60	3.20	7,045.1	1,603.5	-501.1	1,645.2	2.07	1.61	-1.29
8,541.0	89.70	3.60	7,045.3	1,635.4	-499.2	1,676.8	1.29	0.31	1.25
8,573.0	90.30	3.80	7,045.3	1,667.4	-497.1	1,708.4	1.98	1.88	0.63
8,604.0	90.20	3.40	7,045.2	1,698.3	-495.2	1,739.0	1.33	-0.32	-1.29
8,636.0	89.80	2.70	7,045.2	1,730.2	-493.5	1,770.6	2.52	-1.25	-2.19
8,668.0	89.10	2.20	7,045.5	1,762.2	-492.1	1,802.3	2.69	-2.19	-1.56
8,700.0	88.40	2.00	7,046.2	1,794.2	-490.9	1,834.0	2.27	-2.19	-0.63
8,731.0	88.90	1.60	7,046.9	1,825.2	-490.0	1,864.7	2.07	1.61	-1.29
8,763.0	89.90	1.50	7,047.3	1,857.1	-489.1	1,896.5	3.14	3.13	-0.31
8,795.0	89.70	1.80	7,047.4	1,889.1	-488.2	1,928.2	1.13	-0.63	0.94
8,827.0	89.00	2.50	7,047.7	1,921.1	-487.0	1,959.9	3.09	-2.19	2.19
8,858.0	89.10	2.70	7,048.3	1,952.1	-485.6	1,990.6	0.72	0.32	0.65
8,890.0	89.90	2.70	7,048.5	1,984.0	-484.1	2,022.2	2.50	2.50	0.00
8,922.0	90.60	2.50	7,048.4	2,016.0	-482.6	2,053.9	2.28	2.19	-0.63
8,953.0	90.20	2.30	7,048.2	2,047.0	-481.3	2,084.6	1.44	-1.29	-0.65
8,985.0	89.80	1.30	7,048.2	2,079.0	-480.3	2,116.3	3.37	-1.25	-3.13
9,017.0	88.80	0.80	7,048.6	2,111.0	-479.7	2,148.1	3.49	-3.13	-1.56
9,048.0	88.30	0.20	7,049.3	2,141.9	-479.5	2,178.9	2.52	-1.61	-1.94
9,080.0	88.20	0.90	7,050.3	2,173.9	-479.2	2,210.7	2.21	-0.31	2.19
9,111.0	87.90	2.20	7,051.4	2,204.9	-478.3	2,241.4	4.30	-0.97	4.19
9,143.0	87.50	2.90	7,052.7	2,236.8	-476.9	2,273.1	2.52	-1.25	2.19
9,175.0	87.80	2.90	7,054.0	2,268.8	-475.3	2,304.7	0.94	0.94	0.00
9,206.0	88.00	2.70	7,055.1	2,299.7	-473.8	2,335.3	0.91	0.65	-0.65
9,238.0	88.40	2.70	7,056.1	2,331.7	-472.3	2,367.0	1.25	1.25	0.00
9,269.0	89.20	2.90	7,056.8	2,362.6	-470.7	2,397.6	2.66	2.58	0.65
9,301.0	89.60	3.40	7,057.1	2,394.6	-469.0	2,429.3	2.00	1.25	1.56
9,332.0	89.80	3.90	7,057.3	2,425.5	-467.0	2,459.8	1.74	0.65	1.61
9,364.0	89.70	3.80	7,057.4	2,457.4	-464.9	2,491.4	0.44	-0.31	-0.31
9,396.0	89.40	3.90	7,057.7	2,489.4	-462.7	2,523.0	0.99	-0.94	0.31
9,427.0	89.30	4.10	7,058.0	2,520.3	-460.5	2,553.5	0.72	-0.32	0.65
9,459.0	89.80	3.90	7,058.3	2,552.2	-458.3	2,585.1	1.68	1.56	-0.63
9,491.0	90.60	2.90	7,058.1	2,584.1	-456.4	2,616.7	4.00	2.50	-3.13
9,523.0	91.30	2.70	7,057.6	2,616.1	-454.9	2,648.3	2.28	2.19	-0.63
9,554.0	91.60	2.00	7,056.8	2,647.1	-453.6	2,679.0	2.46	0.97	-2.26
9,586.0	91.20	3.10	7,056.1	2,679.0	-452.2	2,710.6	3.66	-1.25	3.44
9,618.0	91.50	3.10	7,055.3	2,711.0	-450.4	2,742.3	0.94	0.94	0.00
9,649.0	91.60	2.30	7,054.5	2,741.9	-449.0	2,772.9	2.60	0.32	-2.58
9,681.0	92.30	2.50	7,053.4	2,773.9	-447.6	2,804.6	2.27	2.19	0.63
9,713.0	92.00	2.00	7,052.2	2,805.8	-446.4	2,836.3	1.82	-0.94	-1.56
9,745.0	91.60	1.30	7,051.2	2,837.8	-445.5	2,868.0	2.52	-1.25	-2.19
9,777.0	91.20	0.90	7,050.4	2,869.8	-444.8	2,899.7	1.77	-1.25	-1.25
9,808.0	90.00	1.50	7,050.1	2,900.8	-444.2	2,930.5	4.33	-3.87	1.94
9,840.0	89.70	1.50	7,050.1	2,932.8	-443.4	2,962.3	0.94	-0.94	0.00
9,872.0	89.10	1.60	7,050.5	2,964.7	-442.5	2,994.0	1.90	-1.88	0.31
9,903.0	89.30	1.10	7,050.9	2,995.7	-441.8	3,024.8	1.74	0.65	-1.61
9,935.0	89.90	0.10	7,051.1	3,027.7	-441.4	3,056.6	3.64	1.88	-3.13
9,967.0	90.70	359.00	7,051.0	3,059.7	-441.7	3,088.4	4.25	2.50	-3.44
9,999.0	90.90	358.30	7,050.5	3,091.7	-442.4	3,120.3	2.27	0.63	-2.19
10,030.0	90.50	357.40	7,050.1	3,122.7	-443.6	3,151.3	3.18	-1.29	-2.90
10,062.0	89.50	357.40	7,050.1	3,154.7	-445.0	3,183.2	3.13	-3.13	0.00
10,094.0	88.90	357.60	7,050.6	3,186.6	-446.4	3,215.2	1.98	-1.88	0.63

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Waste Management 2I-401
Project:	SEC.2-T2N-R64W	TVD Reference:	WELL @ 4954.0ft (RKB - 15')
Site:	Waste Management 2IL-HZ Pad Sec.2-T2N-R64W	MD Reference:	WELL @ 4954.0ft (RKB - 15')
Well:	Waste Management 2I-401	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)
10,126.0	89.40	357.80	7,051.1	3,218.6	-447.7	3,247.1	1.68	1.56	0.63
10,157.0	90.00	357.80	7,051.2	3,249.6	-448.9	3,278.1	1.94	1.94	0.00
10,189.0	91.00	357.30	7,050.9	3,281.5	-450.3	3,310.0	3.49	3.13	-1.56
10,221.0	90.80	358.00	7,050.4	3,313.5	-451.6	3,342.0	2.27	-0.63	2.19
10,253.0	90.30	358.50	7,050.1	3,345.5	-452.6	3,373.9	2.21	-1.56	1.56
10,285.0	89.70	359.20	7,050.1	3,377.5	-453.2	3,405.8	2.88	-1.88	2.19
10,318.0	88.70	359.40	7,050.6	3,410.5	-453.6	3,438.6	3.09	-3.03	0.61
10,348.0	88.90	359.20	7,051.2	3,440.5	-454.0	3,468.5	0.94	0.67	-0.67
10,380.0	89.60	358.80	7,051.6	3,472.5	-454.5	3,500.4	2.52	2.19	-1.25
10,411.0	89.60	359.20	7,051.9	3,503.5	-455.1	3,531.3	1.29	0.00	1.29
10,443.0	89.30	359.40	7,052.2	3,535.5	-455.5	3,563.2	1.13	-0.94	0.63
10,475.0	88.60	359.70	7,052.8	3,567.4	-455.7	3,595.1	2.38	-2.19	0.94
10,507.0	88.90	359.40	7,053.4	3,599.4	-456.0	3,626.9	1.33	0.94	-0.94
10,538.0	89.30	359.40	7,053.9	3,630.4	-456.3	3,657.8	1.29	1.29	0.00
10,570.0	89.20	358.80	7,054.4	3,662.4	-456.8	3,689.7	1.90	-0.31	-1.88
10,602.0	89.20	358.80	7,054.8	3,694.4	-457.5	3,721.6	0.00	0.00	0.00
10,633.0	89.60	358.80	7,055.1	3,725.4	-458.1	3,752.5	1.29	1.29	0.00
10,665.0	89.80	358.80	7,055.3	3,757.4	-458.8	3,784.4	0.63	0.63	0.00
10,697.0	89.70	358.30	7,055.4	3,789.4	-459.6	3,816.3	1.59	-0.31	-1.56
10,729.0	89.80	359.40	7,055.6	3,821.4	-460.2	3,848.2	3.45	0.31	3.44
10,760.0	90.30	1.50	7,055.5	3,852.4	-460.0	3,879.0	6.96	1.61	6.77
10,792.0	90.30	1.60	7,055.4	3,884.4	-459.1	3,910.7	0.31	0.00	0.31
10,824.0	89.90	1.80	7,055.3	3,916.4	-458.2	3,942.5	1.40	-1.25	0.63
10,856.0	89.30	1.10	7,055.5	3,948.3	-457.4	3,974.2	2.88	-1.88	-2.19
10,887.0	89.80	0.90	7,055.8	3,979.3	-456.8	4,005.0	1.74	1.61	-0.65
10,919.0	90.20	0.80	7,055.8	4,011.3	-456.4	4,036.8	1.29	1.25	-0.31
10,951.0	90.10	1.10	7,055.7	4,043.3	-455.8	4,068.6	0.99	-0.31	0.94
10,983.0	88.70	2.30	7,056.0	4,075.3	-454.9	4,100.3	5.76	-4.38	3.75
11,014.0	87.40	1.60	7,057.1	4,106.3	-453.8	4,131.0	4.76	-4.19	-2.26
11,046.0	87.90	1.30	7,058.4	4,138.2	-453.0	4,162.8	1.82	1.56	-0.94
11,078.0	88.30	1.30	7,059.5	4,170.2	-452.3	4,194.5	1.25	1.25	0.00
11,110.0	88.30	1.30	7,060.4	4,202.2	-451.6	4,226.3	0.00	0.00	0.00
11,141.0	88.40	1.30	7,061.3	4,233.2	-450.9	4,257.0	0.32	0.32	0.00
11,173.0	89.40	0.60	7,061.9	4,265.2	-450.3	4,288.8	3.81	3.13	-2.19
11,205.0	90.80	1.30	7,061.9	4,297.2	-449.8	4,320.6	4.89	4.38	2.19
11,237.0	91.60	1.60	7,061.2	4,329.1	-449.0	4,352.3	2.67	2.50	0.94
11,268.0	92.20	2.00	7,060.2	4,360.1	-448.0	4,383.0	2.33	1.94	1.29
11,300.0	92.50	1.80	7,058.9	4,392.1	-447.0	4,414.7	1.13	0.94	-0.63
11,332.0	92.70	1.60	7,057.4	4,424.0	-446.0	4,446.4	0.88	0.63	-0.63
11,373.0	92.90	1.50	7,055.4	4,464.9	-444.9	4,487.1	0.55	0.49	-0.24
11,424.7	92.90	1.50	7,052.8	4,516.6	-443.6	4,538.3	0.00	0.00	0.00
BHL 500'FNL, 150'FWL									
11,425.0	92.90	1.50	7,052.8	4,516.9	-443.5	4,538.6	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____