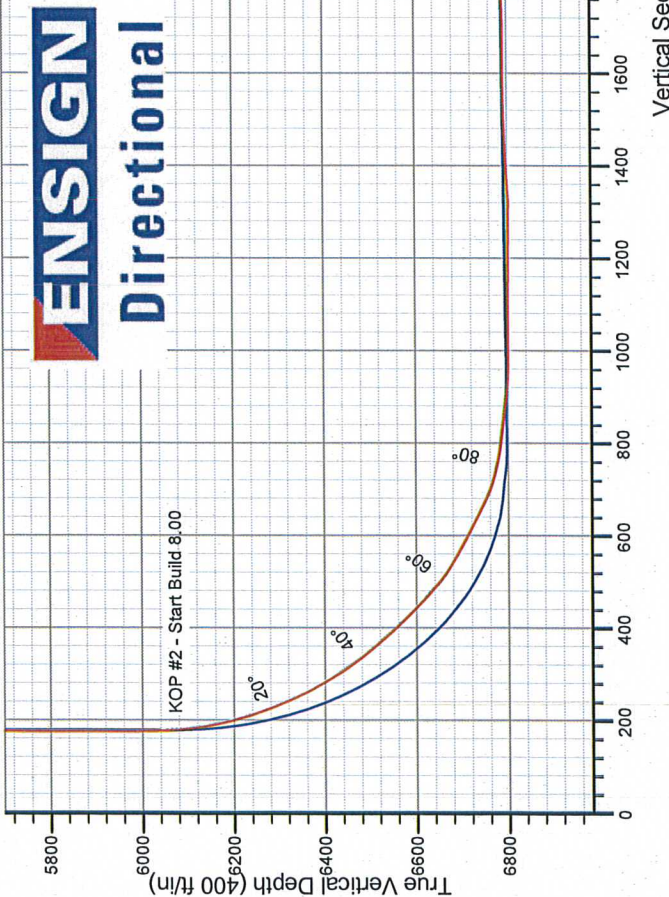
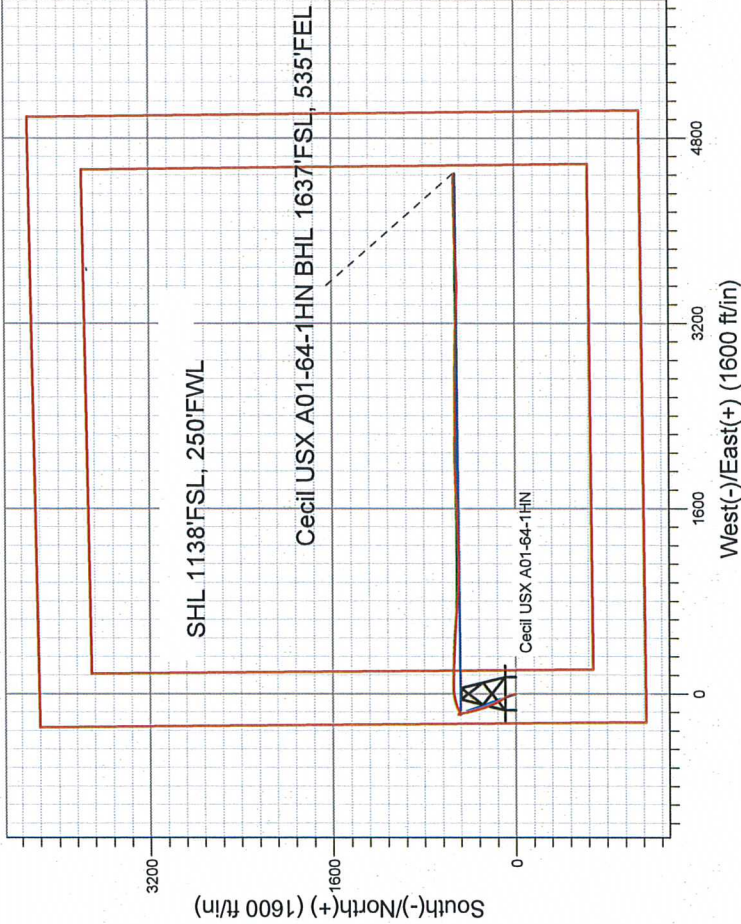


NOBLE ENERGY INC WELD COUNTY CO

Well Name: Cecil USX A01-64-1HN			
Surface Location: Cecil USX A01-63HN Pad Sec.1-T6N-R64W			
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone			
+N/-S +E/-W		Slot	
0.0	0.0	Ground Elevation: 4749.0	
1430609.74	3276134.82	Latitude	Longitude
0.0	0.0	40.511180	-104.506880
Original Well Elev WELL @ 4762.0ft (Original Well Elev)			

FINAL SURVEY

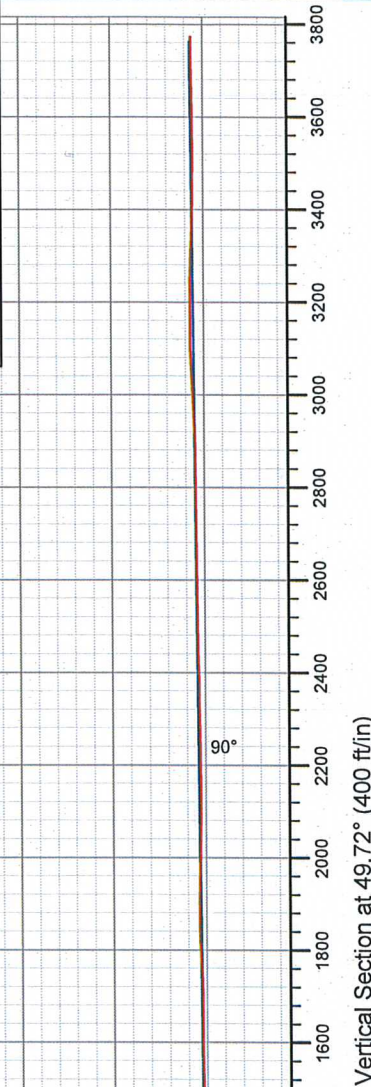
Projected Bottom Hole Location
11185' MD 6774.1' TVD 537.61' N &
4490.33' E of SHL
90.7 degree Incl @ 87.7 degree AZM



LEGEND

- Cecil USX A01-64-1HN, Wellbore #1, Plan A Rev 2 V0
- Cecil USX A01-64-1HN, Wellbore #1, Plan A - Rev 1 (Updated 5/1/12) V0
- Wellbore #1

Cecil USX A01-63HN Pad Sec.1-T6N-R64W
Cecil USX A01-64-1HN
Wellbore #1
17-42, May 10 2012





Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.1-T6N-R64W

Cecil USX A01-63HN Pad Sec.1-T6N-R64W

Cecil USX A01-64-1HN

Wellbore #1

Design: Wellbore #1

Standard Survey Report

10 May, 2012



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Cecil USX A01-64-1HN
Project:	SEC.1-T6N-R64W	TVD Reference:	WELL @ 4762.0ft (Original Well Elev)
Site:	Cecil USX A01-63HN Pad Sec.1-T6N-R64W	MD Reference:	WELL @ 4762.0ft (Original Well Elev)
Well:	Cecil USX A01-64-1HN	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.1-T6N-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		Cecil USX A01-63HN Pad Sec.1-T6N-R64W			
Site Position:		Northing:	1,430,569.68 ft	Latitude:	40.511070
From:	Lat/Long	Easting:	3,276,135.26 ft	Longitude:	-104.506880
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.64 °

Well	Cecil USX A01-64-1HN					
Well Position	+N/-S	0.0 ft	Northing:	1,430,609.74 ft	Latitude:	40.511180
	+E/-W	0.0 ft	Easting:	3,276,134.82 ft	Longitude:	-104.506880
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,749.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	4/5/2012	8.58	67.16	53,155

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	49.72	

Survey Program	Date 5/10/2012				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
914.0	11,185.0	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	
914.0	0.00	0.00	914.0	0.0	0.0	0.0	0.00	0.00	0.00	
943.0	0.40	16.60	943.0	0.1	0.0	0.1	1.38	1.38	0.00	
1,005.0	0.20	2.30	1,005.0	0.4	0.1	0.3	0.34	-0.32	-23.06	
1,098.0	0.40	27.60	1,098.0	0.9	0.3	0.7	0.25	0.22	27.20	
1,197.0	2.30	339.60	1,197.0	3.0	-0.3	1.7	2.07	1.92	-48.48	
1,292.0	4.60	333.30	1,291.8	8.2	-2.7	3.3	2.45	2.42	-6.63	
1,386.0	6.00	351.90	1,385.4	16.5	-5.0	6.8	2.34	1.49	19.79	
1,481.0	8.00	343.50	1,479.7	27.7	-7.6	12.1	2.36	2.11	-8.84	
1,576.0	9.90	348.10	1,573.5	42.0	-11.2	18.6	2.14	2.00	4.84	
1,670.0	11.60	344.40	1,665.9	59.1	-15.4	26.4	1.95	1.81	-3.94	
1,762.0	12.20	333.70	1,755.9	76.7	-22.2	32.6	2.48	0.65	-11.63	
1,856.0	13.50	329.10	1,847.5	95.0	-32.2	36.8	1.76	1.38	-4.89	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Cecil USX A01-64-1HN
Project:	SEC.1-T6N-R64W	TVD Reference:	WELL @ 4762.0ft (Original Well Elev)
Site:	Cecil USX A01-63HN Pad Sec.1-T6N-R64W	MD Reference:	WELL @ 4762.0ft (Original Well Elev)
Well:	Cecil USX A01-64-1HN	North Reference:	Grid
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)
1,952.0	15.10	328.20	1,940.6	115.2	-44.6	40.5	1.68	1.67	-0.94
2,047.0	16.30	329.30	2,032.0	137.2	-57.9	44.5	1.30	1.26	1.16
2,140.0	15.70	332.40	2,121.4	159.6	-70.4	49.5	1.12	-0.65	3.33
2,235.0	17.00	334.20	2,212.6	183.5	-82.4	55.8	1.47	1.37	1.89
2,330.0	17.70	336.10	2,303.3	209.2	-94.3	63.3	0.95	0.74	2.00
2,425.0	17.10	339.60	2,393.9	235.5	-105.0	72.1	1.27	-0.63	3.68
2,519.0	16.70	338.80	2,483.9	261.0	-114.7	81.3	0.49	-0.43	-0.85
2,614.0	17.10	341.00	2,574.8	287.0	-124.2	90.8	0.79	0.42	2.32
2,709.0	17.00	347.00	2,665.6	313.7	-131.9	102.2	1.85	-0.11	6.32
2,804.0	15.60	346.10	2,756.8	339.6	-138.1	114.3	1.50	-1.47	-0.95
2,899.0	16.80	346.70	2,848.0	365.4	-144.3	126.2	1.28	1.26	0.63
2,994.0	16.70	346.70	2,939.0	392.0	-150.6	138.6	0.11	-0.11	0.00
3,089.0	14.50	343.70	3,030.5	416.8	-157.1	149.6	2.47	-2.32	-3.16
3,184.0	14.20	349.50	3,122.5	439.6	-162.5	160.2	1.55	-0.32	6.11
3,279.0	11.50	351.60	3,215.1	460.5	-166.0	171.0	2.88	-2.84	2.21
3,374.0	7.70	347.00	3,308.8	476.0	-168.8	178.9	4.08	-4.00	-4.84
3,469.0	6.10	341.40	3,403.1	487.0	-171.9	183.7	1.83	-1.68	-5.89
3,564.0	4.00	335.40	3,497.7	494.8	-174.9	186.5	2.28	-2.21	-6.32
3,659.0	2.10	0.20	3,592.6	499.6	-176.2	188.5	2.39	-2.00	26.11
3,753.0	1.10	63.70	3,686.5	501.7	-175.4	190.5	2.01	-1.06	67.55
3,848.0	1.90	139.20	3,781.5	500.9	-173.6	191.4	2.04	0.84	79.47
3,943.0	1.80	143.50	3,876.5	498.5	-171.7	191.3	0.18	-0.11	4.53
4,038.0	1.40	153.80	3,971.4	496.3	-170.3	190.9	0.52	-0.42	10.84
4,133.0	1.10	196.20	4,066.4	494.4	-170.0	189.9	1.00	-0.32	44.63
4,228.0	0.90	173.70	4,161.4	492.7	-170.2	188.7	0.46	-0.21	-23.68
4,323.0	1.30	189.20	4,256.4	490.9	-170.3	187.5	0.52	0.42	16.32
4,418.0	0.80	190.40	4,351.4	489.2	-170.6	186.1	0.53	-0.53	1.26
4,513.0	0.70	200.10	4,446.3	488.0	-170.9	185.1	0.17	-0.11	10.21
4,608.0	0.40	193.40	4,541.3	487.1	-171.2	184.4	0.32	-0.32	-7.05
4,703.0	0.40	262.40	4,636.3	486.8	-171.6	183.8	0.48	0.00	72.63
4,798.0	0.30	327.30	4,731.3	486.9	-172.0	183.6	0.41	-0.11	68.32
4,893.0	0.40	272.50	4,826.3	487.2	-172.5	183.4	0.35	0.11	-57.68
4,987.0	0.50	294.60	4,920.3	487.4	-173.2	182.9	0.21	0.11	23.51
5,082.0	0.50	332.80	5,015.3	487.9	-173.8	182.9	0.34	0.00	40.21
5,177.0	0.50	331.20	5,110.3	488.6	-174.2	183.0	0.01	0.00	-1.68
5,272.0	0.40	254.20	5,205.3	488.9	-174.7	182.8	0.60	-0.11	-81.05
5,367.0	0.90	231.00	5,300.3	488.3	-175.6	181.8	0.58	0.53	-24.42
5,462.0	0.60	234.70	5,395.3	487.6	-176.6	180.5	0.32	-0.32	3.89
5,557.0	0.70	270.70	5,490.3	487.3	-177.5	179.6	0.43	0.11	37.89
5,652.0	0.50	219.40	5,585.3	487.0	-178.4	178.7	0.58	-0.21	-54.00
5,747.0	1.10	197.60	5,680.3	485.8	-178.9	177.6	0.70	0.63	-22.95
5,842.0	1.00	161.60	5,775.3	484.1	-178.9	176.5	0.69	-0.11	-37.89
5,937.0	0.70	139.20	5,870.3	482.9	-178.3	176.2	0.47	-0.32	-23.58
6,032.0	0.40	84.90	5,965.3	482.5	-177.6	176.5	0.60	-0.32	-57.16
6,127.0	2.70	76.70	6,060.2	483.1	-175.1	178.7	2.43	2.42	-8.63
6,222.0	11.90	62.80	6,154.4	488.1	-164.2	190.3	9.79	9.68	-14.63
6,317.0	18.60	62.80	6,246.0	499.5	-142.0	214.6	7.05	7.05	0.00
6,412.0	25.40	68.40	6,334.0	513.9	-109.5	248.7	7.48	7.16	5.89
6,507.0	34.10	73.70	6,416.4	528.9	-64.9	292.4	9.56	9.16	5.58
6,602.0	42.60	80.40	6,490.9	541.8	-7.5	344.5	9.95	8.95	7.05
6,697.0	51.40	90.20	6,555.7	547.0	61.5	400.6	11.93	9.26	10.32
6,792.0	53.90	91.80	6,613.3	545.7	137.0	457.3	2.95	2.63	1.68
6,887.0	62.30	92.70	6,663.5	542.5	217.6	516.7	8.88	8.84	0.95
6,934.0	66.80	91.80	6,683.7	540.8	260.0	548.0	9.73	9.57	-1.91

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Cecil USX A01-64-1HN
Project:	SEC.1-T6N-R64W	TVD Reference:	WELL @ 4762.0ft (Original Well Elev)
Site:	Cecil USX A01-63HN Pad Sec.1-T6N-R64W	MD Reference:	WELL @ 4762.0ft (Original Well Elev)
Well:	Cecil USX A01-64-1HN	North Reference:	Grid
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)
6,982.0	68.70	90.70	6,701.8	539.9	304.4	581.2	4.49	3.96	-2.29
7,029.0	68.90	92.00	6,718.8	538.9	348.2	614.0	2.61	0.43	2.77
7,077.0	69.60	92.80	6,735.8	537.0	393.0	647.0	2.13	1.46	1.67
7,124.0	71.30	93.40	6,751.6	534.6	437.2	679.2	3.81	3.62	1.28
7,172.0	76.50	93.70	6,764.9	531.7	483.3	712.4	10.85	10.83	0.63
7,219.0	80.30	94.10	6,774.3	528.6	529.2	745.4	8.13	8.09	0.85
7,256.0	82.90	94.20	6,779.7	525.9	565.7	771.6	7.03	7.03	0.27
7,307.0	85.00	94.20	6,785.1	522.2	616.3	807.8	4.12	4.12	0.00
7,344.0	84.70	93.90	6,788.4	519.6	653.0	834.1	1.14	-0.81	-0.81
7,392.0	85.30	95.10	6,792.6	515.9	700.7	868.1	2.79	1.25	2.50
7,487.0	87.20	95.10	6,798.8	507.4	795.1	934.7	2.00	2.00	0.00
7,582.0	90.20	93.20	6,801.0	500.6	889.8	1,002.5	3.74	3.16	-2.00
7,677.0	90.50	91.40	6,800.4	496.8	984.7	1,072.4	1.92	0.32	-1.89
7,772.0	89.50	90.40	6,800.4	495.3	1,079.7	1,143.9	1.49	-1.05	-1.05
7,867.0	89.70	89.20	6,801.1	495.6	1,174.7	1,216.6	1.28	0.21	-1.26
7,962.0	89.30	86.90	6,801.9	498.8	1,269.6	1,291.1	2.46	-0.42	-2.42
8,057.0	93.10	88.10	6,799.9	503.0	1,364.5	1,366.2	4.19	4.00	1.26
8,152.0	92.50	87.20	6,795.3	506.9	1,459.3	1,441.0	1.14	-0.63	-0.95
8,247.0	91.20	87.20	6,792.2	511.5	1,554.2	1,516.4	1.37	-1.37	0.00
8,342.0	89.90	87.40	6,791.3	516.0	1,649.0	1,591.7	1.38	-1.37	0.21
8,437.0	90.00	87.60	6,791.4	520.1	1,744.0	1,666.7	0.24	0.11	0.21
8,532.0	91.90	89.30	6,789.8	522.7	1,838.9	1,740.8	2.68	2.00	1.79
8,627.0	92.00	88.10	6,786.6	524.8	1,933.8	1,814.7	1.27	0.11	-1.26
8,722.0	89.30	88.30	6,785.5	527.8	2,028.8	1,889.0	2.85	-2.84	0.21
8,817.0	89.20	89.50	6,786.7	529.7	2,123.7	1,962.6	1.27	-0.11	1.26
8,912.0	88.90	90.60	6,788.3	529.6	2,218.7	2,035.1	1.20	-0.32	1.16
9,007.0	90.00	90.40	6,789.2	528.7	2,313.7	2,107.0	1.18	1.16	-0.21
9,102.0	90.60	91.40	6,788.7	527.2	2,408.7	2,178.5	1.23	0.63	1.05
9,197.0	90.50	90.00	6,787.8	526.1	2,503.7	2,250.2	1.48	-0.11	-1.47
9,292.0	90.30	90.60	6,787.1	525.6	2,598.7	2,322.4	0.67	-0.21	0.63
9,387.0	90.90	90.40	6,786.1	524.8	2,693.7	2,394.3	0.67	0.63	-0.21
9,482.0	91.50	90.00	6,784.2	524.4	2,788.6	2,466.5	0.76	0.63	-0.42
9,577.0	89.50	91.40	6,783.3	523.3	2,883.6	2,538.3	2.57	-2.11	1.47
9,672.0	91.50	90.90	6,782.5	521.4	2,978.6	2,609.5	2.17	2.11	-0.53
9,767.0	89.90	90.70	6,781.3	520.0	3,073.6	2,681.1	1.70	-1.68	-0.21
9,862.0	90.40	91.80	6,781.1	518.0	3,168.6	2,752.2	1.27	0.53	1.16
9,957.0	90.50	92.50	6,780.3	514.4	3,263.5	2,822.3	0.74	0.11	0.74
10,052.0	90.40	92.50	6,779.6	510.3	3,358.4	2,892.0	0.11	-0.11	0.00
10,147.0	92.10	92.00	6,777.5	506.5	3,453.3	2,962.0	1.87	1.79	-0.53
10,242.0	92.80	88.80	6,773.5	505.9	3,548.2	3,034.0	3.45	0.74	-3.37
10,337.0	91.10	86.70	6,770.2	509.6	3,643.0	3,108.8	2.84	-1.79	-2.21
10,431.0	89.30	86.90	6,769.9	514.8	3,736.9	3,183.8	1.93	-1.91	0.21
10,526.0	89.50	87.90	6,770.9	519.1	3,831.8	3,259.0	1.07	0.21	1.05
10,621.0	87.60	87.00	6,773.3	523.4	3,926.7	3,334.1	2.21	-2.00	-0.95
10,716.0	89.50	89.20	6,775.7	526.5	4,021.6	3,408.5	3.06	2.00	2.32
10,811.0	89.80	89.00	6,776.3	528.0	4,116.6	3,481.9	0.38	0.32	-0.21
10,906.0	90.10	88.80	6,776.4	529.8	4,211.5	3,555.6	0.38	0.32	-0.21
11,001.0	90.80	89.30	6,775.6	531.4	4,306.5	3,629.1	0.91	0.74	0.53
11,096.0	90.70	87.70	6,774.4	533.9	4,401.5	3,703.1	1.69	-0.11	-1.68
11,184.6	90.70	87.70	6,773.3	537.5	4,490.0	3,772.9	0.00	0.00	0.00
Cecil USX A01-64-1HN BHL 1620'FSL, 535'FEL									
11,185.0	90.70	87.70	6,773.3	537.5	4,490.4	3,773.3	0.00	0.00	0.00

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Cecil USX A01-64-1HN
Project:	SEC.1-T6N-R64W	TVD Reference:	WELL @ 4762.0ft (Original Well Elev)
Site:	Cecil USX A01-63HN Pad Sec.1-T6N-R64W	MD Reference:	WELL @ 4762.0ft (Original Well Elev)
Well:	Cecil USX A01-64-1HN	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Checked By: _____	Approved By: _____	Date: _____
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