

# Condor Energy

Well Name: **Wickstrom 4-2H**

Surface Location: Wickstrom 4-2H Pad Sec.4-T6N-R60W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

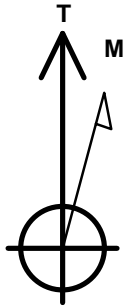
Ground Elevation: 4788.6

+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.0 0.0 1431988.15 3390718.40 40.510710 -104.094760

RKB-12.5' WELL @ 4801.1ft (RKB-12.5')

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
HARDLINE 600' BHL	1.0	4377.2	771.4	Polygon
HARDLINE 600' SHL	1.0	330.0	767.0	Polygon
SECTION LINE	1.0	-270.0	1367.0	Polygon
SHL 270'FSL & 1367'FEL	1.0	0.0	0.0	Point
BHL 660'FNL & 2022'FEL	6040.0	4317.2	-650.6	Point
LANDING POINT 660'FSL & 2014'FEL	6040.0	389.8	-645.1	Point



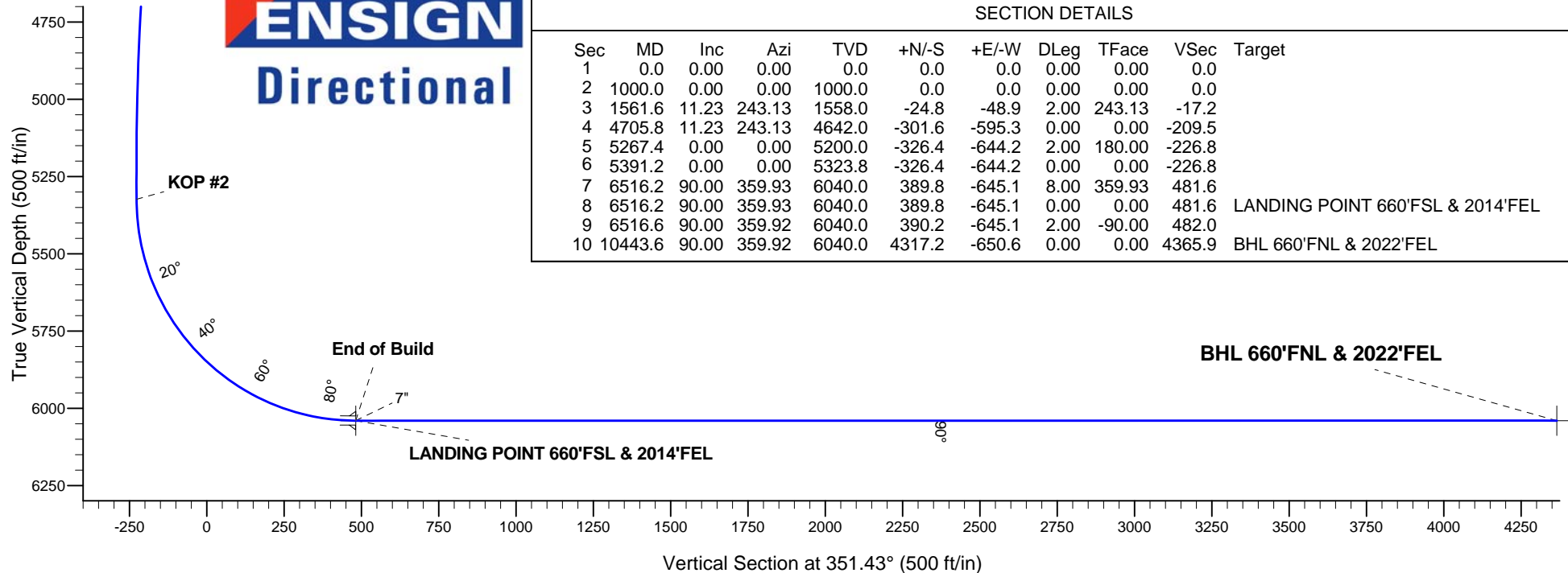
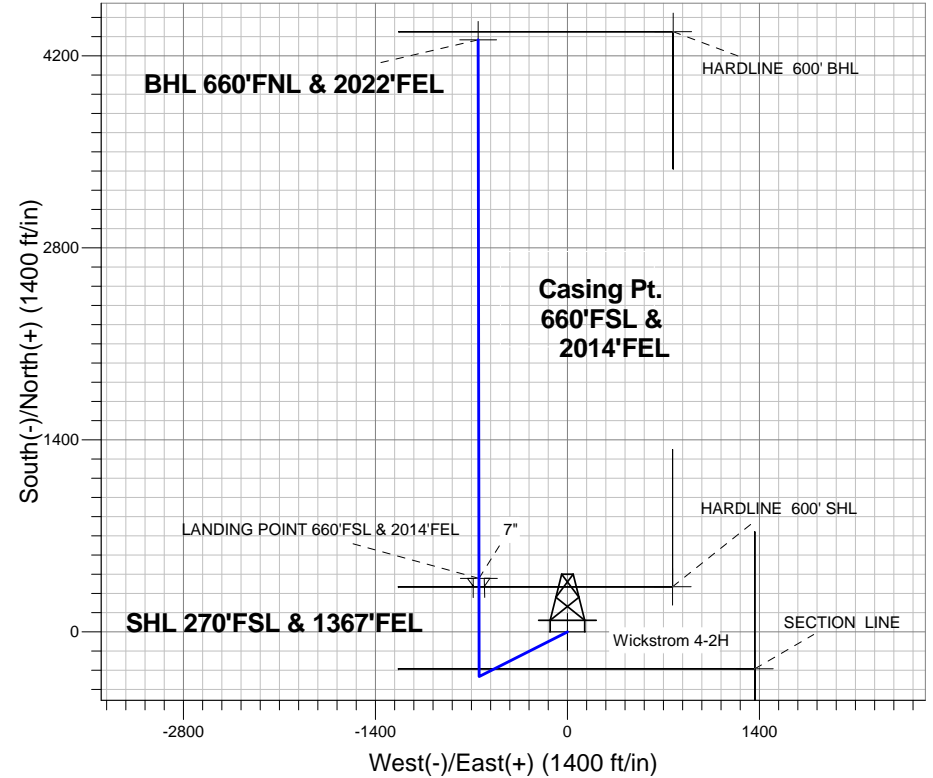
Azimuths to True North  
Magnetic North: 8.22°

Magnetic Field  
Strength: 53034.8snT  
Dip Angle: 67.17°  
Date: 7/30/2013  
Model: IGRF2010

Wickstrom 4-2H Pad Sec.4-T6N-R60W  
Wickstrom 4-2H  
Plan #1 (7-30-13)  
10:40, July 31 2013

## ANNOTATIONS

TVD	MD	Annotation
1000.0	1000.0	KOP #1
5323.8	5391.2	KOP #2
6040.0	6516.2	End of Build



## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1561.6	11.23	243.13	1558.0	-24.8	-48.9	2.00	243.13	-17.2	
4	4705.8	11.23	243.13	4642.0	-301.6	-595.3	0.00	0.00	-209.5	
5	5267.4	0.00	0.00	5200.0	-326.4	-644.2	2.00	180.00	-226.8	
6	5391.2	0.00	0.00	5323.8	-326.4	-644.2	0.00	0.00	-226.8	
7	6516.2	90.00	359.93	6040.0	389.8	-645.1	8.00	359.93	481.6	
8	6516.2	90.00	359.93	6040.0	389.8	-645.1	0.00	0.00	481.6	LANDING POINT 660'FSL & 2014'FEL
9	6516.6	90.00	359.92	6040.0	390.2	-645.1	2.00	-90.00	482.0	
10	10443.6	90.00	359.92	6040.0	4317.2	-650.6	0.00	0.00	4365.9	BHL 660'FNL & 2022'FEL



## **Condor Energy**

**SEC.4-T6N-R60W**

**Wickstrom 4-2H Pad Sec.4-T6N-R60W**

**Wickstrom 4-2H**

**Wellbore #1**

**Plan: Plan #1 (7-30-13)**

## **Standard Planning Report**

**31 July, 2013**

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wickstrom 4-2H
<b>Company:</b>	Condor Energy	<b>TVD Reference:</b>	WELL @ 4801.1ft (RKB-12.5')
<b>Project:</b>	SEC.4-T6N-R60W	<b>MD Reference:</b>	WELL @ 4801.1ft (RKB-12.5')
<b>Site:</b>	Wickstrom 4-2H Pad Sec.4-T6N-R60W	<b>North Reference:</b>	True
<b>Well:</b>	Wickstrom 4-2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-30-13)		

<b>Project</b>	SEC.4-T6N-R60W, Morgan County, CO		
<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	Wickstrom 4-2H Pad Sec.4-T6N-R60W				
Site Position:		Northing:	1,431,988.16ft	Latitude:	40.510710
From:	Lat/Long	Easting:	3,390,718.40ft	Longitude:	-104.094760
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.91 °

Well	Wickstrom 4-2H					
Well Position	+N-S	0.0 ft	Northing:	1,431,988.15 ft	Latitude:	40.510710
	+E-W	0.0 ft	Easting:	3,390,718.40 ft	Longitude:	-104.094760
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,788.6 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	7/30/2013	8.22	67.17	53,035

<b>Design</b>	Plan #1 (7-30-13)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<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	351.43

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,561.6	11.23	243.13	1,558.0	-24.8	-48.9	2.00	2.00	0.00	243.13	
4,705.8	11.23	243.13	4,642.0	-301.6	-595.3	0.00	0.00	0.00	0.00	
5,267.4	0.00	0.00	5,200.0	-326.4	-644.2	2.00	-2.00	0.00	180.00	
5,391.2	0.00	0.00	5,323.8	-326.4	-644.2	0.00	0.00	0.00	0.00	
6,516.2	90.00	359.93	6,040.0	389.8	-645.1	8.00	8.00	0.00	359.93	
6,516.2	90.00	359.93	6,040.0	389.8	-645.1	0.00	0.00	0.00	0.00	LANDING POINT 6
6,516.6	90.00	359.92	6,040.0	390.2	-645.1	2.00	0.00	-2.00	-90.00	
10,443.6	90.00	359.92	6,040.0	4,317.2	-650.6	0.00	0.00	0.00	0.00	BHL 660'FNL & 202

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wickstrom 4-2H
<b>Company:</b>	Condor Energy	<b>TVD Reference:</b>	WELL @ 4801.1ft (RKB-12.5')
<b>Project:</b>	SEC.4-T6N-R60W	<b>MD Reference:</b>	WELL @ 4801.1ft (RKB-12.5')
<b>Site:</b>	Wickstrom 4-2H Pad Sec.4-T6N-R60W	<b>North Reference:</b>	True
<b>Well:</b>	Wickstrom 4-2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-30-13)		

Planned 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
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>HARDLINE 600' SHL - SECTION LINE - HARDLINE 600' BHL - SHL 270'FSL &amp; 1367'FEL</b>									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP #1</b>									
1,100.0	2.00	243.13	1,100.0	-0.8	-1.6	-0.5	2.00	2.00	0.00
1,200.0	4.00	243.13	1,199.8	-3.2	-6.2	-2.2	2.00	2.00	0.00
1,300.0	6.00	243.13	1,299.5	-7.1	-14.0	-4.9	2.00	2.00	0.00
1,400.0	8.00	243.13	1,398.7	-12.6	-24.9	-8.8	2.00	2.00	0.00
1,500.0	10.00	243.13	1,497.5	-19.7	-38.8	-13.7	2.00	2.00	0.00
1,561.6	11.23	243.13	1,558.0	-24.8	-48.9	-17.2	2.00	2.00	0.00
1,600.0	11.23	243.13	1,595.7	-28.2	-55.6	-19.6	0.00	0.00	0.00
1,700.0	11.23	243.13	1,693.8	-37.0	-73.0	-25.7	0.00	0.00	0.00
1,800.0	11.23	243.13	1,791.8	-45.8	-90.4	-31.8	0.00	0.00	0.00
1,900.0	11.23	243.13	1,889.9	-54.6	-107.7	-37.9	0.00	0.00	0.00
2,000.0	11.23	243.13	1,988.0	-63.4	-125.1	-44.0	0.00	0.00	0.00
2,100.0	11.23	243.13	2,086.1	-72.2	-142.5	-50.2	0.00	0.00	0.00
2,200.0	11.23	243.13	2,184.2	-81.0	-159.9	-56.3	0.00	0.00	0.00
2,300.0	11.23	243.13	2,282.3	-89.8	-177.2	-62.4	0.00	0.00	0.00
2,400.0	11.23	243.13	2,380.4	-98.6	-194.6	-68.5	0.00	0.00	0.00
2,500.0	11.23	243.13	2,478.4	-107.4	-212.0	-74.6	0.00	0.00	0.00
2,600.0	11.23	243.13	2,576.5	-116.2	-229.4	-80.7	0.00	0.00	0.00
2,700.0	11.23	243.13	2,674.6	-125.0	-246.7	-86.9	0.00	0.00	0.00
2,800.0	11.23	243.13	2,772.7	-133.8	-264.1	-93.0	0.00	0.00	0.00
2,900.0	11.23	243.13	2,870.8	-142.6	-281.5	-99.1	0.00	0.00	0.00
3,000.0	11.23	243.13	2,968.9	-151.4	-298.9	-105.2	0.00	0.00	0.00
3,100.0	11.23	243.13	3,066.9	-160.2	-316.2	-111.3	0.00	0.00	0.00
3,200.0	11.23	243.13	3,165.0	-169.0	-333.6	-117.4	0.00	0.00	0.00
3,300.0	11.23	243.13	3,263.1	-177.8	-351.0	-123.5	0.00	0.00	0.00
3,400.0	11.23	243.13	3,361.2	-186.6	-368.4	-129.7	0.00	0.00	0.00
3,500.0	11.23	243.13	3,459.3	-195.4	-385.7	-135.8	0.00	0.00	0.00
3,600.0	11.23	243.13	3,557.4	-204.2	-403.1	-141.9	0.00	0.00	0.00
3,700.0	11.23	243.13	3,655.5	-213.0	-420.5	-148.0	0.00	0.00	0.00
3,800.0	11.23	243.13	3,753.5	-221.9	-437.9	-154.1	0.00	0.00	0.00
3,900.0	11.23	243.13	3,851.6	-230.7	-455.2	-160.2	0.00	0.00	0.00
4,000.0	11.23	243.13	3,949.7	-239.5	-472.6	-166.4	0.00	0.00	0.00
4,100.0	11.23	243.13	4,047.8	-248.3	-490.0	-172.5	0.00	0.00	0.00
4,200.0	11.23	243.13	4,145.9	-257.1	-507.4	-178.6	0.00	0.00	0.00
4,300.0	11.23	243.13	4,244.0	-265.9	-524.7	-184.7	0.00	0.00	0.00
4,400.0	11.23	243.13	4,342.0	-274.7	-542.1	-190.8	0.00	0.00	0.00
4,500.0	11.23	243.13	4,440.1	-283.5	-559.5	-196.9	0.00	0.00	0.00
4,600.0	11.23	243.13	4,538.2	-292.3	-576.9	-203.1	0.00	0.00	0.00
4,700.0	11.23	243.13	4,636.3	-301.1	-594.2	-209.2	0.00	0.00	0.00
4,705.8	11.23	243.13	4,642.0	-301.6	-595.3	-209.5	0.00	0.00	0.00
4,800.0	9.35	243.13	4,734.7	-309.2	-610.3	-214.8	2.00	-2.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wickstrom 4-2H
<b>Company:</b>	Condor Energy	<b>TVD Reference:</b>	WELL @ 4801.1ft (RKB-12.5')
<b>Project:</b>	SEC.4-T6N-R60W	<b>MD Reference:</b>	WELL @ 4801.1ft (RKB-12.5')
<b>Site:</b>	Wickstrom 4-2H Pad Sec.4-T6N-R60W	<b>North Reference:</b>	True
<b>Well:</b>	Wickstrom 4-2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-30-13)		

Planned 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)
4,900.0	7.35	243.13	4,833.6	-315.8	-623.2	-219.4	2.00	-2.00	0.00
5,000.0	5.35	243.13	4,933.0	-320.8	-633.1	-222.8	2.00	-2.00	0.00
5,100.0	3.35	243.13	5,032.7	-324.2	-639.8	-225.2	2.00	-2.00	0.00
5,200.0	1.35	243.13	5,132.6	-326.0	-643.5	-226.5	2.00	-2.00	0.00
5,267.4	0.00	0.00	5,200.0	-326.4	-644.2	-226.8	2.00	-2.00	0.00
5,300.0	0.00	0.00	5,232.6	-326.4	-644.2	-226.8	0.00	0.00	0.00
5,391.2	0.00	0.00	5,323.8	-326.4	-644.2	-226.8	0.00	0.00	0.00
<b>KOP #2</b>									
5,400.0	0.70	359.93	5,332.6	-326.3	-644.2	-226.7	8.00	8.00	0.00
5,500.0	8.70	359.93	5,432.2	-318.1	-644.2	-218.6	8.00	8.00	0.00
5,600.0	16.70	359.93	5,529.7	-296.2	-644.2	-196.9	8.00	8.00	0.00
5,700.0	24.70	359.93	5,623.1	-260.8	-644.3	-161.9	8.00	8.00	0.00
5,800.0	32.70	359.93	5,710.8	-212.9	-644.3	-114.5	8.00	8.00	0.00
5,900.0	40.70	359.93	5,790.9	-153.1	-644.4	-55.4	8.00	8.00	0.00
6,000.0	48.70	359.93	5,861.9	-82.8	-644.5	14.1	8.00	8.00	0.00
6,100.0	56.70	359.93	5,922.4	-3.4	-644.6	92.7	8.00	8.00	0.00
6,200.0	64.70	359.93	5,971.3	83.8	-644.7	178.9	8.00	8.00	0.00
6,300.0	72.70	359.93	6,007.6	176.9	-644.8	271.0	8.00	8.00	0.00
6,400.0	80.70	359.93	6,030.6	274.1	-645.0	367.2	8.00	8.00	0.00
6,500.0	88.70	359.93	6,039.8	373.6	-645.1	465.6	8.00	8.00	0.00
6,516.2	90.00	359.93	6,040.0	389.8	-645.1	481.6	7.98	7.98	0.00
<b>End of Build - 7" - LANDING POINT 660'FSL &amp; 2014'FEL</b>									
6,516.6	90.00	359.92	6,040.0	390.2	-645.1	482.0	2.00	0.09	-2.00
6,600.0	90.00	359.92	6,040.0	473.6	-645.2	564.5	0.00	0.00	0.00
6,700.0	90.00	359.92	6,040.0	573.6	-645.4	663.4	0.00	0.00	0.00
6,800.0	90.00	359.92	6,040.0	673.6	-645.5	762.3	0.00	0.00	0.00
6,900.0	90.00	359.92	6,040.0	773.6	-645.6	861.2	0.00	0.00	0.00
7,000.0	90.00	359.92	6,040.0	873.6	-645.8	960.1	0.00	0.00	0.00
7,100.0	90.00	359.92	6,040.0	973.6	-645.9	1,059.0	0.00	0.00	0.00
7,200.0	90.00	359.92	6,040.0	1,073.6	-646.1	1,157.9	0.00	0.00	0.00
7,300.0	90.00	359.92	6,040.0	1,173.6	-646.2	1,256.8	0.00	0.00	0.00
7,400.0	90.00	359.92	6,040.0	1,273.6	-646.3	1,355.7	0.00	0.00	0.00
7,500.0	90.00	359.92	6,040.0	1,373.6	-646.5	1,454.6	0.00	0.00	0.00
7,600.0	90.00	359.92	6,040.0	1,473.6	-646.6	1,553.5	0.00	0.00	0.00
7,700.0	90.00	359.92	6,040.0	1,573.6	-646.7	1,652.4	0.00	0.00	0.00
7,800.0	90.00	359.92	6,040.0	1,673.6	-646.9	1,751.3	0.00	0.00	0.00
7,900.0	90.00	359.92	6,040.0	1,773.6	-647.0	1,850.2	0.00	0.00	0.00
8,000.0	90.00	359.92	6,040.0	1,873.6	-647.2	1,949.1	0.00	0.00	0.00
8,100.0	90.00	359.92	6,040.0	1,973.6	-647.3	2,048.0	0.00	0.00	0.00
8,200.0	90.00	359.92	6,040.0	2,073.6	-647.4	2,146.9	0.00	0.00	0.00
8,300.0	90.00	359.92	6,040.0	2,173.6	-647.6	2,245.8	0.00	0.00	0.00
8,400.0	90.00	359.92	6,040.0	2,273.6	-647.7	2,344.7	0.00	0.00	0.00
8,500.0	90.00	359.92	6,040.0	2,373.6	-647.9	2,443.6	0.00	0.00	0.00
8,600.0	90.00	359.92	6,040.0	2,473.6	-648.0	2,542.5	0.00	0.00	0.00
8,700.0	90.00	359.92	6,040.0	2,573.6	-648.1	2,641.4	0.00	0.00	0.00
8,800.0	90.00	359.92	6,040.0	2,673.6	-648.3	2,740.4	0.00	0.00	0.00
8,900.0	90.00	359.92	6,040.0	2,773.6	-648.4	2,839.3	0.00	0.00	0.00
9,000.0	90.00	359.92	6,040.0	2,873.6	-648.6	2,938.2	0.00	0.00	0.00
9,100.0	90.00	359.92	6,040.0	2,973.6	-648.7	3,037.1	0.00	0.00	0.00
9,200.0	90.00	359.92	6,040.0	3,073.6	-648.8	3,136.0	0.00	0.00	0.00
9,300.0	90.00	359.92	6,040.0	3,173.6	-649.0	3,234.9	0.00	0.00	0.00
9,400.0	90.00	359.92	6,040.0	3,273.6	-649.1	3,333.8	0.00	0.00	0.00
9,500.0	90.00	359.92	6,040.0	3,373.6	-649.2	3,432.7	0.00	0.00	0.00
9,600.0	90.00	359.92	6,040.0	3,473.6	-649.4	3,531.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wickstrom 4-2H
<b>Company:</b>	Condor Energy	<b>TVD Reference:</b>	WELL @ 4801.1ft (RKB-12.5')
<b>Project:</b>	SEC.4-T6N-R60W	<b>MD Reference:</b>	WELL @ 4801.1ft (RKB-12.5')
<b>Site:</b>	Wickstrom 4-2H Pad Sec.4-T6N-R60W	<b>North Reference:</b>	True
<b>Well:</b>	Wickstrom 4-2H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-30-13)		

Planned 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)	
9,700.0	90.00	359.92	6,040.0	3,573.6	-649.5	3,630.5	0.00	0.00	0.00	
9,800.0	90.00	359.92	6,040.0	3,673.6	-649.7	3,729.4	0.00	0.00	0.00	
9,900.0	90.00	359.92	6,040.0	3,773.6	-649.8	3,828.3	0.00	0.00	0.00	
10,000.0	90.00	359.92	6,040.0	3,873.6	-649.9	3,927.2	0.00	0.00	0.00	
10,100.0	90.00	359.92	6,040.0	3,973.6	-650.1	4,026.1	0.00	0.00	0.00	
10,200.0	90.00	359.92	6,040.0	4,073.6	-650.2	4,125.0	0.00	0.00	0.00	
10,300.0	90.00	359.92	6,040.0	4,173.6	-650.4	4,223.9	0.00	0.00	0.00	
10,400.0	90.00	359.92	6,040.0	4,273.6	-650.5	4,322.8	0.00	0.00	0.00	
10,443.6	90.00	359.92	6,040.0	4,317.2	-650.6	4,365.9	0.00	0.00	0.00	
BHL 660'FNL & 2022'FEL										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,516.2	6,040.0	7"	7	7-1/2	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.0	1,000.0	0.0	0.0	KOP #1	
5,391.2	5,323.8	-326.4	-644.2	KOP #2	
6,516.2	6,040.0	389.8	-645.1	End of Build	