

Longs Peak Resources  
 Project: Weld County, CO  
 Site: Southblock Ph 2 - Oxnard West Pad SEC.31-T12N-R66W  
 Well: Oxnard West 3130-5NH  
 Wellbore: Wellbore #1  
 Design: Design #1  
 Lat: 40.95897°N  
 Long: 104.82252°W  
 Pad GL: 6010.0  
 KB: GL 6010 + 25 KB @ 6035.0usft

#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2600.0	0.00	0.00	2600.0	0.0	0.0	0.00	0.00	0.0	
3018.8	8.38	186.46	3017.3	-30.4	-3.4	2.00	186.46	-30.3	
7640.5	8.38	186.46	7589.7	-699.3	-79.2	0.00	0.00	-698.6	
8059.3	0.00	0.00	8007.0	-729.7	-82.6	2.00	180.00	-728.9	
8559.3	0.00	0.00	8507.0	-729.7	-82.6	0.00	0.00	-728.9	
9459.3	90.00	359.97	9080.0	-156.7	-82.9	10.00	359.97	-156.0	
19315.3	90.00	359.97	9080.0	9699.3	-88.4	0.00	0.00	9699.7	

#### WELL DETAILS: Oxnard West 3130-5NH

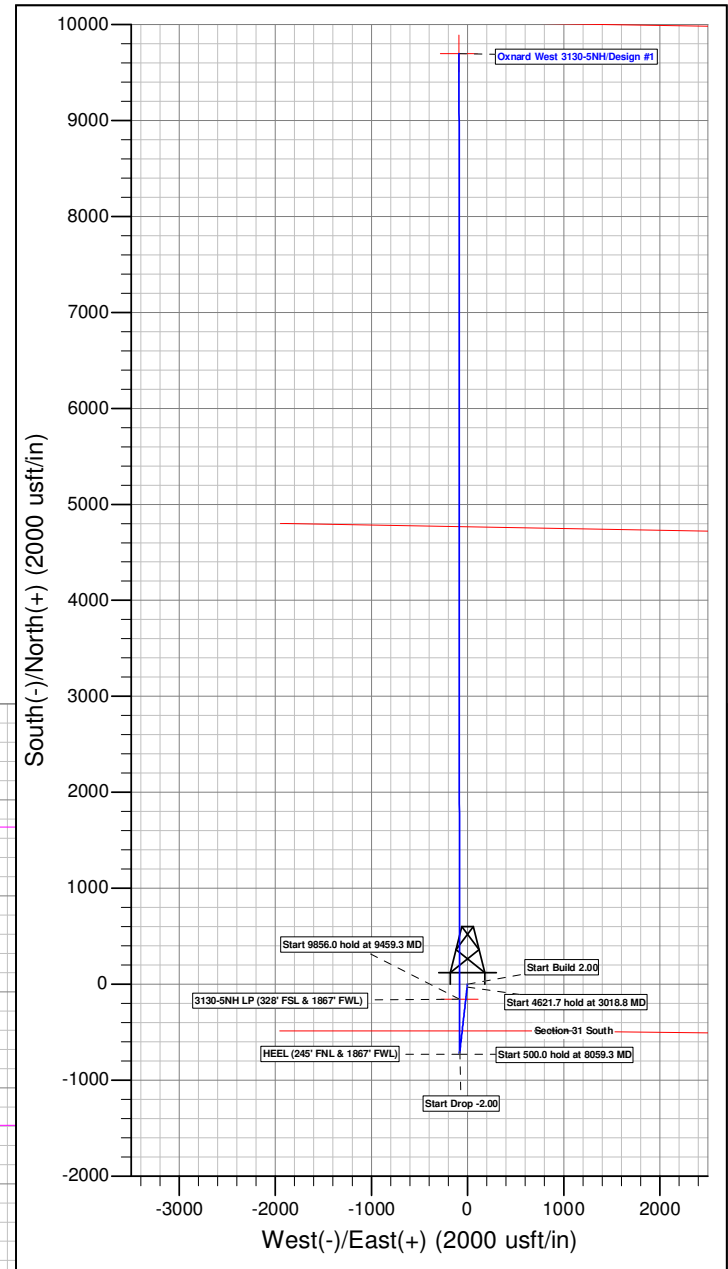
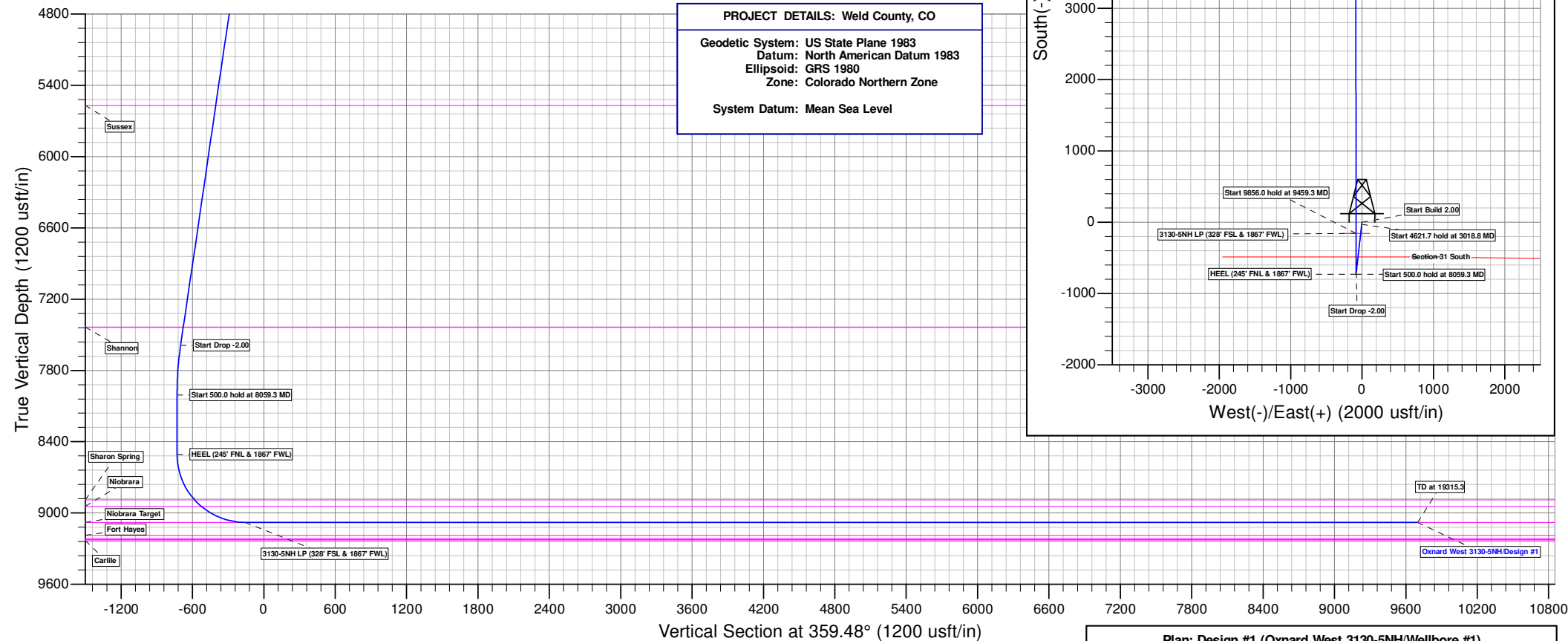
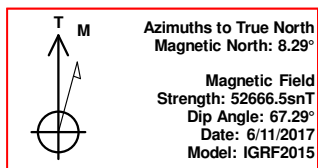
+N/-S	+E/-W	Northing	Easting	6010.0	Latitude	Longitude	Slot
0.0	0.0	1592921.95	3187127.51		40.95897°N	104.82252°W	

#### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
3130-5NH BHL	9080.0	9699.3	-88.4	40.98559°N	104.82284°W	Point
3130-5NH LP	9080.0	-156.7	-82.9	40.95854°N	104.82282°W	Point

#### PROJECT DETAILS: Weld County, CO

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: Colorado Northern Zone  
 System Datum: Mean Sea Level



Plan: Design #1 (Oxnard West 3130-5NH/Wellbore #1)

Created By: Stephanie Sneesby

Date: 18:28, June 28 2017

# **Longs Peak Resources**

**Weld County, CO**

**Southblock Ph 2 - Oxnard West Pad SEC.31-T12N-R66W**

**Oxnard West 3130-5NH**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**25 June, 2017**

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Oxnard West 3130-5NH
<b>Company:</b>	Longs Peak Resources	<b>TVD Reference:</b>	GL 6010 + 25 KB @ 6035.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	GL 6010 + 25 KB @ 6035.0usft
<b>Site:</b>	Southblock Ph 2 - Oxnard West Pad SEC.31-T12N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Oxnard West 3130-5NH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	Weld 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		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		Southblock Ph 2 - Oxnard West Pad SEC.31-T12N-R66W			
Site Position:		Northing:	1,592,920.72 usft	Latitude:	40.95897°N
From:	Lat/Long	Easting:	3,186,967.31 usft	Longitude:	104.82310°W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.44 °

Well	Oxnard West 3130-5NH					
Well Position	+N/-S	0.0 usft	Northing:	1,592,921.94 usft	Latitude:	40.95897°N
	+E/-W	160.2 usft	Easting:	3,187,127.51 usft	Longitude:	104.82252°W
Position Uncertainty		0.0 usft	Wellhead Elevation:	25.0 usft	Ground Level:	6,010.0 usft

<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>
	IGRF2015	6/11/2017	8.29	67.29	52,666.47415583

<b>Design</b>	Design #1			
<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) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	9,080.0	0.0	0.0	359.48

<b>Plan Survey Tool Program</b>	<b>Date</b>	6/25/2017		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.0	19,315.3	Design #1 (Wellbore #1)	

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,018.8	8.38	186.46	3,017.3	-30.4	-3.4	2.00	2.00	0.00	186.46	
7,640.5	8.38	186.46	7,589.7	-699.3	-79.2	0.00	0.00	0.00	0.00	
8,059.3	0.00	0.00	8,007.0	-729.7	-82.6	2.00	-2.00	0.00	180.00	
8,559.3	0.00	0.00	8,507.0	-729.7	-82.6	0.00	0.00	0.00	0.00	
9,459.3	90.00	359.97	9,080.0	-156.7	-82.9	10.00	10.00	0.00	359.97	3130-5NH BHL
19,315.3	90.00	359.97	9,080.0	9,699.3	-88.4	0.00	0.00	0.00	0.00	3130-5NH BHL

# Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Oxnard West 3130-5NH
<b>Company:</b>	Longs Peak Resources	<b>TVD Reference:</b>	GL 6010 + 25 KB @ 6035.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	GL 6010 + 25 KB @ 6035.0usft
<b>Site:</b>	Southblock Ph 2 - Oxnard West Pad SEC.31-T12N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Oxnard West 3130-5NH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
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
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,152.0	0.00	0.00	2,152.0	0.0	0.0	0.0	0.00	0.00	0.00
Fox Hills									
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,426.0	0.00	0.00	2,426.0	0.0	0.0	0.0	0.00	0.00	0.00
Pierre									
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	2.00	186.46	2,700.0	-1.7	-0.2	-1.7	2.00	2.00	0.00
2,781.1	3.62	186.46	2,781.0	-5.7	-0.6	-5.7	2.00	2.00	0.00
Teapot									
2,800.0	4.00	186.46	2,799.8	-6.9	-0.8	-6.9	2.00	2.00	0.00
2,900.0	6.00	186.46	2,899.5	-15.6	-1.8	-15.6	2.00	2.00	0.00
3,000.0	8.00	186.46	2,998.7	-27.7	-3.1	-27.7	2.00	2.00	0.00
3,018.8	8.38	186.46	3,017.3	-30.4	-3.4	-30.3	2.00	2.00	0.00
3,100.0	8.38	186.46	3,097.6	-42.1	-4.8	-42.1	0.00	0.00	0.00
3,200.0	8.38	186.46	3,196.6	-56.6	-6.4	-56.5	0.00	0.00	0.00
3,300.0	8.38	186.46	3,295.5	-71.1	-8.0	-71.0	0.00	0.00	0.00
3,400.0	8.38	186.46	3,394.4	-85.5	-9.7	-85.4	0.00	0.00	0.00
3,500.0	8.38	186.46	3,493.4	-100.0	-11.3	-99.9	0.00	0.00	0.00
3,600.0	8.38	186.46	3,592.3	-114.5	-13.0	-114.4	0.00	0.00	0.00
3,700.0	8.38	186.46	3,691.2	-129.0	-14.6	-128.8	0.00	0.00	0.00
3,800.0	8.38	186.46	3,790.2	-143.4	-16.2	-143.3	0.00	0.00	0.00
3,900.0	8.38	186.46	3,889.1	-157.9	-17.9	-157.7	0.00	0.00	0.00
4,000.0	8.38	186.46	3,988.0	-172.4	-19.5	-172.2	0.00	0.00	0.00
4,100.0	8.38	186.46	4,087.0	-186.9	-21.2	-186.7	0.00	0.00	0.00
4,200.0	8.38	186.46	4,185.9	-201.3	-22.8	-201.1	0.00	0.00	0.00
4,300.0	8.38	186.46	4,284.8	-215.8	-24.4	-215.6	0.00	0.00	0.00
4,400.0	8.38	186.46	4,383.8	-230.3	-26.1	-230.0	0.00	0.00	0.00
4,500.0	8.38	186.46	4,482.7	-244.8	-27.7	-244.5	0.00	0.00	0.00

# Planning Report

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<b>Company:</b>	Longs Peak Resources	<b>TVD Reference:</b>	GL 6010 + 25 KB @ 6035.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	GL 6010 + 25 KB @ 6035.0usft
<b>Site:</b>	Southblock Ph 2 - Oxnard West Pad SEC.31-T12N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Oxnard West 3130-5NH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.0	8.38	186.46	4,581.6	-259.2	-29.3	-259.0	0.00	0.00	0.00
4,689.3	8.38	186.46	4,670.0	-272.2	-30.8	-271.9	0.00	0.00	0.00
<b>Parkman</b>									
4,700.0	8.38	186.46	4,680.6	-273.7	-31.0	-273.4	0.00	0.00	0.00
4,800.0	8.38	186.46	4,779.5	-288.2	-32.6	-287.9	0.00	0.00	0.00
4,900.0	8.38	186.46	4,878.4	-302.7	-34.3	-302.3	0.00	0.00	0.00
5,000.0	8.38	186.46	4,977.4	-317.1	-35.9	-316.8	0.00	0.00	0.00
5,100.0	8.38	186.46	5,076.3	-331.6	-37.5	-331.3	0.00	0.00	0.00
5,200.0	8.38	186.46	5,175.2	-346.1	-39.2	-345.7	0.00	0.00	0.00
5,300.0	8.38	186.46	5,274.2	-360.6	-40.8	-360.2	0.00	0.00	0.00
5,400.0	8.38	186.46	5,373.1	-375.0	-42.5	-374.6	0.00	0.00	0.00
5,500.0	8.38	186.46	5,472.0	-389.5	-44.1	-389.1	0.00	0.00	0.00
5,599.0	8.38	186.46	5,570.0	-403.8	-45.7	-403.4	0.00	0.00	0.00
<b>Sussex</b>									
5,600.0	8.38	186.46	5,571.0	-404.0	-45.7	-403.6	0.00	0.00	0.00
5,700.0	8.38	186.46	5,669.9	-418.5	-47.4	-418.0	0.00	0.00	0.00
5,800.0	8.38	186.46	5,768.8	-432.9	-49.0	-432.5	0.00	0.00	0.00
5,900.0	8.38	186.46	5,867.8	-447.4	-50.6	-446.9	0.00	0.00	0.00
6,000.0	8.38	186.46	5,966.7	-461.9	-52.3	-461.4	0.00	0.00	0.00
6,100.0	8.38	186.46	6,065.6	-476.4	-53.9	-475.8	0.00	0.00	0.00
6,200.0	8.38	186.46	6,164.6	-490.8	-55.6	-490.3	0.00	0.00	0.00
6,300.0	8.38	186.46	6,263.5	-505.3	-57.2	-504.8	0.00	0.00	0.00
6,400.0	8.38	186.46	6,362.4	-519.8	-58.8	-519.2	0.00	0.00	0.00
6,500.0	8.38	186.46	6,461.4	-534.3	-60.5	-533.7	0.00	0.00	0.00
6,600.0	8.38	186.46	6,560.3	-548.7	-62.1	-548.1	0.00	0.00	0.00
6,700.0	8.38	186.46	6,659.2	-563.2	-63.8	-562.6	0.00	0.00	0.00
6,800.0	8.38	186.46	6,758.2	-577.7	-65.4	-577.1	0.00	0.00	0.00
6,900.0	8.38	186.46	6,857.1	-592.2	-67.0	-591.5	0.00	0.00	0.00
7,000.0	8.38	186.46	6,956.0	-606.6	-68.7	-606.0	0.00	0.00	0.00
7,100.0	8.38	186.46	7,055.0	-621.1	-70.3	-620.4	0.00	0.00	0.00
7,200.0	8.38	186.46	7,153.9	-635.6	-71.9	-634.9	0.00	0.00	0.00
7,300.0	8.38	186.46	7,252.8	-650.1	-73.6	-649.4	0.00	0.00	0.00
7,400.0	8.38	186.46	7,351.8	-664.5	-75.2	-663.8	0.00	0.00	0.00
7,484.1	8.38	186.46	7,435.0	-676.7	-76.6	-676.0	0.00	0.00	0.00
<b>Shannon</b>									
7,500.0	8.38	186.46	7,450.7	-679.0	-76.9	-678.3	0.00	0.00	0.00
7,600.0	8.38	186.46	7,549.6	-693.5	-78.5	-692.7	0.00	0.00	0.00
7,640.5	8.38	186.46	7,589.7	-699.3	-79.2	-698.6	0.00	0.00	0.00
7,700.0	7.19	186.46	7,648.7	-707.3	-80.1	-706.6	2.00	-2.00	0.00
7,800.0	5.19	186.46	7,748.1	-718.0	-81.3	-717.3	2.00	-2.00	0.00
7,900.0	3.19	186.46	7,847.8	-725.3	-82.1	-724.5	2.00	-2.00	0.00
8,000.0	1.19	186.46	7,947.7	-729.1	-82.5	-728.3	2.00	-2.00	0.00
8,059.3	0.00	0.00	8,007.0	-729.7	-82.6	-728.9	2.00	-2.00	0.00
8,100.0	0.00	0.00	8,047.7	-729.7	-82.6	-728.9	0.00	0.00	0.00
8,200.0	0.00	0.00	8,147.7	-729.7	-82.6	-728.9	0.00	0.00	0.00
8,300.0	0.00	0.00	8,247.7	-729.7	-82.6	-728.9	0.00	0.00	0.00
8,400.0	0.00	0.00	8,347.7	-729.7	-82.6	-728.9	0.00	0.00	0.00
8,500.0	0.00	0.00	8,447.7	-729.7	-82.6	-728.9	0.00	0.00	0.00
8,559.3	0.00	0.00	8,507.0	-729.7	-82.6	-728.9	0.00	0.00	0.00
8,600.0	4.07	359.97	8,547.7	-728.3	-82.6	-727.5	10.00	10.00	0.00
8,650.0	9.07	359.97	8,597.3	-722.5	-82.6	-721.8	10.00	10.00	0.00
8,700.0	14.07	359.97	8,646.3	-712.5	-82.6	-711.7	10.00	10.00	0.00
8,750.0	19.07	359.97	8,694.2	-698.2	-82.6	-697.5	10.00	10.00	0.00

# Planning Report

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<b>Company:</b>	Longs Peak Resources	<b>TVD Reference:</b>	GL 6010 + 25 KB @ 6035.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	GL 6010 + 25 KB @ 6035.0usft
<b>Site:</b>	Southblock Ph 2 - Oxnard West Pad SEC.31-T12N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Oxnard West 3130-5NH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

## Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,800.0	24.07	359.97	8,740.7	-679.9	-82.6	-679.1	10.00	10.00	0.00
8,850.0	29.07	359.97	8,785.4	-657.5	-82.6	-656.7	10.00	10.00	0.00
8,900.0	34.07	359.97	8,828.0	-631.3	-82.7	-630.6	10.00	10.00	0.00
8,950.0	39.07	359.97	8,868.1	-601.6	-82.7	-600.8	10.00	10.00	0.00
8,978.8	41.95	359.97	8,890.0	-582.9	-82.7	-582.1	10.00	10.00	0.00
<b>Sharon Spring</b>									
9,000.0	44.07	359.97	8,905.5	-568.4	-82.7	-567.6	10.00	10.00	0.00
9,050.0	49.07	359.97	8,939.9	-532.1	-82.7	-531.3	10.00	10.00	0.00
9,057.9	49.86	359.97	8,945.0	-526.1	-82.7	-525.3	10.00	10.00	0.00
<b>Niobrara</b>									
9,100.0	54.07	359.97	8,971.0	-492.9	-82.7	-492.2	10.00	10.00	0.00
9,150.0	59.07	359.97	8,998.5	-451.2	-82.8	-450.4	10.00	10.00	0.00
9,200.0	64.07	359.97	9,022.3	-407.3	-82.8	-406.5	10.00	10.00	0.00
9,250.0	69.07	359.97	9,042.2	-361.4	-82.8	-360.6	10.00	10.00	0.00
9,300.0	74.07	359.97	9,058.0	-314.0	-82.8	-313.2	10.00	10.00	0.00
9,350.0	79.07	359.97	9,069.6	-265.4	-82.9	-264.6	10.00	10.00	0.00
9,400.0	84.07	359.97	9,076.9	-215.9	-82.9	-215.2	10.00	10.00	0.00
9,450.0	89.07	359.97	9,079.9	-166.0	-82.9	-165.3	10.00	10.00	0.00
9,459.3	90.00	359.97	9,080.0	-156.7	-82.9	-156.0	10.00	10.00	0.00
<b>Niobrara Target</b>									
9,459.4	90.00	359.97	9,080.0	-156.7	-82.9	-155.9	0.00	0.00	0.00
<b>3130-5NH LP</b>									
9,500.0	90.00	359.97	9,080.0	-116.0	-82.9	-115.3	0.00	0.00	0.00
9,600.0	90.00	359.97	9,080.0	-16.0	-83.0	-15.3	0.00	0.00	0.00
9,700.0	90.00	359.97	9,080.0	84.0	-83.0	84.7	0.00	0.00	0.00
9,800.0	90.00	359.97	9,080.0	184.0	-83.1	184.7	0.00	0.00	0.00
9,900.0	90.00	359.97	9,080.0	284.0	-83.2	284.7	0.00	0.00	0.00
10,000.0	90.00	359.97	9,080.0	384.0	-83.2	384.7	0.00	0.00	0.00
10,100.0	90.00	359.97	9,080.0	484.0	-83.3	484.7	0.00	0.00	0.00
10,200.0	90.00	359.97	9,080.0	584.0	-83.3	584.7	0.00	0.00	0.00
10,300.0	90.00	359.97	9,080.0	684.0	-83.4	684.7	0.00	0.00	0.00
10,400.0	90.00	359.97	9,080.0	784.0	-83.4	784.7	0.00	0.00	0.00
10,500.0	90.00	359.97	9,080.0	884.0	-83.5	884.7	0.00	0.00	0.00
10,600.0	90.00	359.97	9,080.0	984.0	-83.5	984.7	0.00	0.00	0.00
10,700.0	90.00	359.97	9,080.0	1,084.0	-83.6	1,084.7	0.00	0.00	0.00
10,800.0	90.00	359.97	9,080.0	1,184.0	-83.7	1,184.7	0.00	0.00	0.00
10,900.0	90.00	359.97	9,080.0	1,284.0	-83.7	1,284.7	0.00	0.00	0.00
11,000.0	90.00	359.97	9,080.0	1,384.0	-83.8	1,384.7	0.00	0.00	0.00
11,100.0	90.00	359.97	9,080.0	1,484.0	-83.8	1,484.7	0.00	0.00	0.00
11,200.0	90.00	359.97	9,080.0	1,584.0	-83.9	1,584.7	0.00	0.00	0.00
11,300.0	90.00	359.97	9,080.0	1,684.0	-83.9	1,684.7	0.00	0.00	0.00
11,400.0	90.00	359.97	9,080.0	1,784.0	-84.0	1,784.7	0.00	0.00	0.00
11,500.0	90.00	359.97	9,080.0	1,884.0	-84.0	1,884.7	0.00	0.00	0.00
11,600.0	90.00	359.97	9,080.0	1,984.0	-84.1	1,984.7	0.00	0.00	0.00
11,700.0	90.00	359.97	9,080.0	2,084.0	-84.2	2,084.7	0.00	0.00	0.00
11,800.0	90.00	359.97	9,080.0	2,184.0	-84.2	2,184.7	0.00	0.00	0.00
11,900.0	90.00	359.97	9,080.0	2,284.0	-84.3	2,284.7	0.00	0.00	0.00
12,000.0	90.00	359.97	9,080.0	2,384.0	-84.3	2,384.6	0.00	0.00	0.00
12,100.0	90.00	359.97	9,080.0	2,484.0	-84.4	2,484.6	0.00	0.00	0.00
12,200.0	90.00	359.97	9,080.0	2,584.0	-84.4	2,584.6	0.00	0.00	0.00
12,300.0	90.00	359.97	9,080.0	2,684.0	-84.5	2,684.6	0.00	0.00	0.00
12,400.0	90.00	359.97	9,080.0	2,784.0	-84.5	2,784.6	0.00	0.00	0.00

# Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Oxnard West 3130-5NH
<b>Company:</b>	Longs Peak Resources	<b>TVD Reference:</b>	GL 6010 + 25 KB @ 6035.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	GL 6010 + 25 KB @ 6035.0usft
<b>Site:</b>	Southblock Ph 2 - Oxnard West Pad SEC.31-T12N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Oxnard West 3130-5NH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,500.0	90.00	359.97	9,080.0	2,884.0	-84.6	2,884.6	0.00	0.00	0.00
12,600.0	90.00	359.97	9,080.0	2,984.0	-84.6	2,984.6	0.00	0.00	0.00
12,700.0	90.00	359.97	9,080.0	3,084.0	-84.7	3,084.6	0.00	0.00	0.00
12,800.0	90.00	359.97	9,080.0	3,184.0	-84.8	3,184.6	0.00	0.00	0.00
12,900.0	90.00	359.97	9,080.0	3,284.0	-84.8	3,284.6	0.00	0.00	0.00
13,000.0	90.00	359.97	9,080.0	3,384.0	-84.9	3,384.6	0.00	0.00	0.00
13,100.0	90.00	359.97	9,080.0	3,484.0	-84.9	3,484.6	0.00	0.00	0.00
13,200.0	90.00	359.97	9,080.0	3,584.0	-85.0	3,584.6	0.00	0.00	0.00
13,300.0	90.00	359.97	9,080.0	3,684.0	-85.0	3,684.6	0.00	0.00	0.00
13,400.0	90.00	359.97	9,080.0	3,784.0	-85.1	3,784.6	0.00	0.00	0.00
13,500.0	90.00	359.97	9,080.0	3,884.0	-85.1	3,884.6	0.00	0.00	0.00
13,600.0	90.00	359.97	9,080.0	3,984.0	-85.2	3,984.6	0.00	0.00	0.00
13,700.0	90.00	359.97	9,080.0	4,084.0	-85.3	4,084.6	0.00	0.00	0.00
13,800.0	90.00	359.97	9,080.0	4,184.0	-85.3	4,184.6	0.00	0.00	0.00
13,900.0	90.00	359.97	9,080.0	4,284.0	-85.4	4,284.6	0.00	0.00	0.00
14,000.0	90.00	359.97	9,080.0	4,384.0	-85.4	4,384.6	0.00	0.00	0.00
14,100.0	90.00	359.97	9,080.0	4,484.0	-85.5	4,484.6	0.00	0.00	0.00
14,200.0	90.00	359.97	9,080.0	4,584.0	-85.5	4,584.6	0.00	0.00	0.00
14,300.0	90.00	359.97	9,080.0	4,684.0	-85.6	4,684.6	0.00	0.00	0.00
14,400.0	90.00	359.97	9,080.0	4,784.0	-85.6	4,784.6	0.00	0.00	0.00
14,500.0	90.00	359.97	9,080.0	4,884.0	-85.7	4,884.6	0.00	0.00	0.00
14,600.0	90.00	359.97	9,080.0	4,984.0	-85.8	4,984.6	0.00	0.00	0.00
14,700.0	90.00	359.97	9,080.0	5,084.0	-85.8	5,084.5	0.00	0.00	0.00
14,800.0	90.00	359.97	9,080.0	5,184.0	-85.9	5,184.5	0.00	0.00	0.00
14,900.0	90.00	359.97	9,080.0	5,284.0	-85.9	5,284.5	0.00	0.00	0.00
15,000.0	90.00	359.97	9,080.0	5,384.0	-86.0	5,384.5	0.00	0.00	0.00
15,100.0	90.00	359.97	9,080.0	5,484.0	-86.0	5,484.5	0.00	0.00	0.00
15,200.0	90.00	359.97	9,080.0	5,584.0	-86.1	5,584.5	0.00	0.00	0.00
15,300.0	90.00	359.97	9,080.0	5,684.0	-86.1	5,684.5	0.00	0.00	0.00
15,400.0	90.00	359.97	9,080.0	5,784.0	-86.2	5,784.5	0.00	0.00	0.00
15,500.0	90.00	359.97	9,080.0	5,884.0	-86.2	5,884.5	0.00	0.00	0.00
15,600.0	90.00	359.97	9,080.0	5,984.0	-86.3	5,984.5	0.00	0.00	0.00
15,700.0	90.00	359.97	9,080.0	6,084.0	-86.4	6,084.5	0.00	0.00	0.00
15,800.0	90.00	359.97	9,080.0	6,184.0	-86.4	6,184.5	0.00	0.00	0.00
15,900.0	90.00	359.97	9,080.0	6,284.0	-86.5	6,284.5	0.00	0.00	0.00
16,000.0	90.00	359.97	9,080.0	6,384.0	-86.5	6,384.5	0.00	0.00	0.00
16,100.0	90.00	359.97	9,080.0	6,484.0	-86.6	6,484.5	0.00	0.00	0.00
16,200.0	90.00	359.97	9,080.0	6,584.0	-86.6	6,584.5	0.00	0.00	0.00
16,300.0	90.00	359.97	9,080.0	6,684.0	-86.7	6,684.5	0.00	0.00	0.00
16,400.0	90.00	359.97	9,080.0	6,784.0	-86.7	6,784.5	0.00	0.00	0.00
16,500.0	90.00	359.97	9,080.0	6,884.0	-86.8	6,884.5	0.00	0.00	0.00
16,600.0	90.00	359.97	9,080.0	6,984.0	-86.9	6,984.5	0.00	0.00	0.00
16,700.0	90.00	359.97	9,080.0	7,084.0	-86.9	7,084.5	0.00	0.00	0.00
16,800.0	90.00	359.97	9,080.0	7,184.0	-87.0	7,184.5	0.00	0.00	0.00
16,900.0	90.00	359.97	9,080.0	7,284.0	-87.0	7,284.5	0.00	0.00	0.00
17,000.0	90.00	359.97	9,080.0	7,384.0	-87.1	7,384.5	0.00	0.00	0.00
17,100.0	90.00	359.97	9,080.0	7,484.0	-87.1	7,484.5	0.00	0.00	0.00
17,200.0	90.00	359.97	9,080.0	7,584.0	-87.2	7,584.5	0.00	0.00	0.00
17,300.0	90.00	359.97	9,080.0	7,684.0	-87.2	7,684.5	0.00	0.00	0.00
17,400.0	90.00	359.97	9,080.0	7,784.0	-87.3	7,784.4	0.00	0.00	0.00
17,500.0	90.00	359.97	9,080.0	7,884.0	-87.4	7,884.4	0.00	0.00	0.00
17,600.0	90.00	359.97	9,080.0	7,984.0	-87.4	7,984.4	0.00	0.00	0.00
17,700.0	90.00	359.97	9,080.0	8,084.0	-87.5	8,084.4	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Oxnard West 3130-5NH
<b>Company:</b>	Longs Peak Resources	<b>TVD Reference:</b>	GL 6010 + 25 KB @ 6035.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	GL 6010 + 25 KB @ 6035.0usft
<b>Site:</b>	Southblock Ph 2 - Oxnard West Pad SEC.31-T12N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Oxnard West 3130-5NH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,800.0	90.00	359.97	9,080.0	8,184.0	-87.5	8,184.4	0.00	0.00	0.00
17,900.0	90.00	359.97	9,080.0	8,284.0	-87.6	8,284.4	0.00	0.00	0.00
18,000.0	90.00	359.97	9,080.0	8,384.0	-87.6	8,384.4	0.00	0.00	0.00
18,100.0	90.00	359.97	9,080.0	8,484.0	-87.7	8,484.4	0.00	0.00	0.00
18,200.0	90.00	359.97	9,080.0	8,584.0	-87.7	8,584.4	0.00	0.00	0.00
18,300.0	90.00	359.97	9,080.0	8,684.0	-87.8	8,684.4	0.00	0.00	0.00
18,400.0	90.00	359.97	9,080.0	8,784.0	-87.8	8,784.4	0.00	0.00	0.00
18,500.0	90.00	359.97	9,080.0	8,884.0	-87.9	8,884.4	0.00	0.00	0.00
18,600.0	90.00	359.97	9,080.0	8,984.0	-88.0	8,984.4	0.00	0.00	0.00
18,700.0	90.00	359.97	9,080.0	9,084.0	-88.0	9,084.4	0.00	0.00	0.00
18,800.0	90.00	359.97	9,080.0	9,184.0	-88.1	9,184.4	0.00	0.00	0.00
18,900.0	90.00	359.97	9,080.0	9,284.0	-88.1	9,284.4	0.00	0.00	0.00
19,000.0	90.00	359.97	9,080.0	9,384.0	-88.2	9,384.4	0.00	0.00	0.00
19,100.0	90.00	359.97	9,080.0	9,484.0	-88.2	9,484.4	0.00	0.00	0.00
19,200.0	90.00	359.97	9,080.0	9,584.0	-88.3	9,584.4	0.00	0.00	0.00
19,300.0	90.00	359.97	9,080.0	9,684.0	-88.3	9,684.4	0.00	0.00	0.00
19,315.3	90.00	359.97	9,080.0	9,699.3	-88.4	9,699.7	0.00	0.00	0.00
3130-5NH BHL									

### Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
3130-5NH LP - plan misses target center by 0.1usft at 9459.4usft MD (9080.0 TVD, -156.7 N, -82.9 E) - Point	0.00	0.00	9,080.0	-156.7	-82.9	1,592,764.65	3,187,045.84	40.95854°N	104.82282°W
3130-5NH BHL - plan hits target center - Point	0.00	0.00	9,080.0	9,699.3	-88.4	1,602,620.28	3,186,965.05	40.98559°N	104.82284°W

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,152.0	2,152.0	Fox Hills			
2,426.0	2,426.0	Pierre			
2,781.1	2,781.0	Teapot			
4,689.3	4,670.0	Parkman			
5,599.0	5,570.0	Sussex			
7,484.1	7,435.0	Shannon			
8,978.8	8,890.0	Sharon Spring			
9,057.9	8,945.0	Niobrara			
9,459.3	9,080.0	Niobrara Target			