

Longs Peak Resources  
Project: Weld County, Co (NAD 83)  
Site: Matira East Pad  
Well: Matira East Federal 3106-10CH  
Wellbore: Wellbore #1  
Plan: Plan #1 (Matira East Federal 3106-10CH/Wellbore #1)

WELL DETAILS: Matira East Federal 3106-10CH

Ground Elevation:: 6001.00  
RKB Elevation: KB=25' @ 6026.00ft  
Rig Name:

Northing	Easting	Latitude	Longitude
1597860.2375	3220525.5835	40° 58' 18.336 N	104° 42' 5.220 W

Planned Section Details									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	0.00
3	2700.47	2.01	75.57	2700.45	0.44	1.71	2.00	75.57	-0.40
4	8391.89	2.01	75.57	8388.37	50.18	194.97	0.00	0.00	-46.12
5	9296.90	90.00	180.00	8966.00	-522.76	214.60	10.00	104.42	527.10
6	19109.49	90.00	180.00	8966.00	-10335.35	214.64	0.00	0.00	10337.58

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Azimuths to Grid North

True North: -0.52°

Magnetic North: 7.74°

Magnetic Field

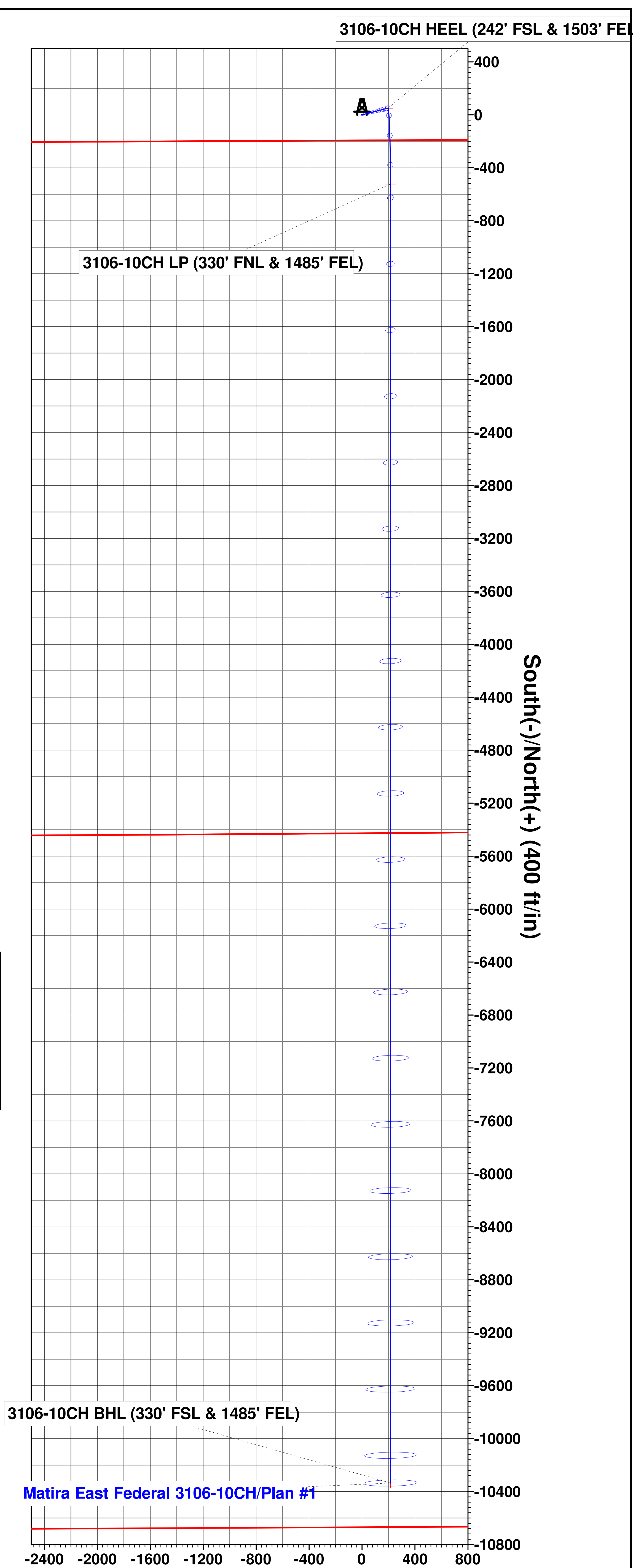
Strength: 52720.2snT

Dip Angle: 67.33°

Date: 2/21/2017

Model: IGRF2015

PROJECT DETAILS: Weld County, Co (NAD 83)  
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone  
System Datum: Mean Sea Level  
Local North: Grid



# **Longs Peak Resources**

**Weld County, Co (NAD 83)**

**Matira East Pad**

**Matira East Federal 3106-10CH**

**Wellbore #1**

**Plan: Plan #1**

## **Standard Survey Report**

**22 February, 2017**



# Integrity Directional Services, LLC

## Survey Report



<b>Company:</b>	Longs Peak Resources	<b>Local Co-ordinate Reference:</b>	Well Matira East Federal 3106-10CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25' @ 6026.00ft
<b>Site:</b>	Matira East Pad	<b>MD Reference:</b>	KB=25' @ 6026.00ft
<b>Well:</b>	Matira East Federal 3106-10CH	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5000.1 Multi User Db

<b>Project</b>	Weld County, Co (NAD 83)		
<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		

<b>Site</b>	Matira East Pad		
<b>Site Position:</b>		<b>Northing:</b>	1,598,041.7220 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,220,446.6213 usft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	40° 58' 20.136 N
		<b>Longitude:</b>	104° 42' 6.228 W
		<b>Grid Convergence:</b>	0.52 °

<b>Well</b>	Matira East Federal 3106-10CH		
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b> 1,597,860.2375 usft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b> 3,220,525.5834 usft
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft
		<b>Latitude:</b>	40° 58' 18.336 N
		<b>Longitude:</b>	104° 42' 5.220 W
		<b>Ground Level:</b>	6,001.00 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>
	IGRF2015	2/21/2017	8.26	67.33	52,720

<b>Design</b>	Plan #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	178.81	

<b>Survey Tool Program</b>	<b>Date</b>	2/21/2017			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.00	19,109.49	Plan #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Planned 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 (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	

# Integrity Directional Services, LLC

## Survey Report



<b>Company:</b>	Longs Peak Resources	<b>Local Co-ordinate Reference:</b>	Well Matira East Federal 3106-10CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25' @ 6026.00ft
<b>Site:</b>	Matira East Pad	<b>MD Reference:</b>	KB=25' @ 6026.00ft
<b>Well:</b>	Matira East Federal 3106-10CH	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5000.1 Multi User Db

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
2,700.00	2.00	75.57	2,699.98	0.43	1.69	-0.40	2.00	2.00	0.00
2,700.47	2.01	75.57	2,700.45	0.44	1.71	-0.40	2.00	2.00	0.00
<b>Start 5691.42 hold at 2700.47 MD</b>									
2,800.00	2.01	75.57	2,799.92	1.31	5.09	-1.20	0.00	0.00	0.00
2,900.00	2.01	75.57	2,899.86	2.18	8.48	-2.01	0.00	0.00	0.00
3,000.00	2.01	75.57	2,999.80	3.06	11.88	-2.81	0.00	0.00	0.00
3,100.00	2.01	75.57	3,099.73	3.93	15.27	-3.61	0.00	0.00	0.00
3,200.00	2.01	75.57	3,199.67	4.80	18.67	-4.42	0.00	0.00	0.00
3,300.00	2.01	75.57	3,299.61	5.68	22.06	-5.22	0.00	0.00	0.00
3,400.00	2.01	75.57	3,399.55	6.55	25.46	-6.02	0.00	0.00	0.00
3,500.00	2.01	75.57	3,499.49	7.43	28.86	-6.83	0.00	0.00	0.00
3,600.00	2.01	75.57	3,599.43	8.30	32.25	-7.63	0.00	0.00	0.00
3,700.00	2.01	75.57	3,699.36	9.17	35.65	-8.43	0.00	0.00	0.00
3,800.00	2.01	75.57	3,799.30	10.05	39.04	-9.24	0.00	0.00	0.00
3,900.00	2.01	75.57	3,899.24	10.92	42.44	-10.04	0.00	0.00	0.00
4,000.00	2.01	75.57	3,999.18	11.80	45.84	-10.84	0.00	0.00	0.00
4,100.00	2.01	75.57	4,099.12	12.67	49.23	-11.64	0.00	0.00	0.00
4,200.00	2.01	75.57	4,199.06	13.54	52.63	-12.45	0.00	0.00	0.00
4,300.00	2.01	75.57	4,299.00	14.42	56.02	-13.25	0.00	0.00	0.00
4,400.00	2.01	75.57	4,398.93	15.29	59.42	-14.05	0.00	0.00	0.00
4,500.00	2.01	75.57	4,498.87	16.17	62.81	-14.86	0.00	0.00	0.00
4,600.00	2.01	75.57	4,598.81	17.04	66.21	-15.66	0.00	0.00	0.00
4,700.00	2.01	75.57	4,698.75	17.91	69.61	-16.46	0.00	0.00	0.00
4,800.00	2.01	75.57	4,798.69	18.79	73.00	-17.27	0.00	0.00	0.00
4,900.00	2.01	75.57	4,898.63	19.66	76.40	-18.07	0.00	0.00	0.00
5,000.00	2.01	75.57	4,998.57	20.53	79.79	-18.87	0.00	0.00	0.00

# Integrity Directional Services, LLC

## Survey Report



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<b>Well:</b>	Matira East Federal 3106-10CH	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5000.1 Multi User Db

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.00	2.01	75.57	5,098.50	21.41	83.19	-19.68	0.00	0.00	0.00
5,200.00	2.01	75.57	5,198.44	22.28	86.58	-20.48	0.00	0.00	0.00
5,300.00	2.01	75.57	5,298.38	23.16	89.98	-21.28	0.00	0.00	0.00
5,400.00	2.01	75.57	5,398.32	24.03	93.38	-22.09	0.00	0.00	0.00
5,500.00	2.01	75.57	5,498.26	24.90	96.77	-22.89	0.00	0.00	0.00
5,600.00	2.01	75.57	5,598.20	25.78	100.17	-23.69	0.00	0.00	0.00
5,700.00	2.01	75.57	5,698.13	26.65	103.56	-24.50	0.00	0.00	0.00
5,800.00	2.01	75.57	5,798.07	27.53	106.96	-25.30	0.00	0.00	0.00
5,900.00	2.01	75.57	5,898.01	28.40	110.36	-26.10	0.00	0.00	0.00
6,000.00	2.01	75.57	5,997.95	29.27	113.75	-26.91	0.00	0.00	0.00
6,100.00	2.01	75.57	6,097.89	30.15	117.15	-27.71	0.00	0.00	0.00
6,200.00	2.01	75.57	6,197.83	31.02	120.54	-28.51	0.00	0.00	0.00
6,300.00	2.01	75.57	6,297.77	31.90	123.94	-29.32	0.00	0.00	0.00
6,400.00	2.01	75.57	6,397.70	32.77	127.33	-30.12	0.00	0.00	0.00
6,500.00	2.01	75.57	6,497.64	33.64	130.73	-30.92	0.00	0.00	0.00
6,600.00	2.01	75.57	6,597.58	34.52	134.13	-31.72	0.00	0.00	0.00
6,700.00	2.01	75.57	6,697.52	35.39	137.52	-32.53	0.00	0.00	0.00
6,800.00	2.01	75.57	6,797.46	36.27	140.92	-33.33	0.00	0.00	0.00
6,900.00	2.01	75.57	6,897.40	37.14	144.31	-34.13	0.00	0.00	0.00
7,000.00	2.01	75.57	6,997.34	38.01	147.71	-34.94	0.00	0.00	0.00
7,100.00	2.01	75.57	7,097.27	38.89	151.10	-35.74	0.00	0.00	0.00
7,200.00	2.01	75.57	7,197.21	39.76	154.50	-36.54	0.00	0.00	0.00
7,300.00	2.01	75.57	7,297.15	40.63	157.90	-37.35	0.00	0.00	0.00
7,400.00	2.01	75.57	7,397.09	41.51	161.29	-38.15	0.00	0.00	0.00
7,500.00	2.01	75.57	7,497.03	42.38	164.69	-38.95	0.00	0.00	0.00
7,600.00	2.01	75.57	7,596.97	43.26	168.08	-39.76	0.00	0.00	0.00
7,700.00	2.01	75.57	7,696.91	44.13	171.48	-40.56	0.00	0.00	0.00
7,800.00	2.01	75.57	7,796.84	45.00	174.87	-41.36	0.00	0.00	0.00
7,900.00	2.01	75.57	7,896.78	45.88	178.27	-42.17	0.00	0.00	0.00
8,000.00	2.01	75.57	7,996.72	46.75	181.67	-42.97	0.00	0.00	0.00
8,100.00	2.01	75.57	8,096.66	47.63	185.06	-43.77	0.00	0.00	0.00
8,200.00	2.01	75.57	8,196.60	48.50	188.46	-44.58	0.00	0.00	0.00
8,300.00	2.01	75.57	8,296.54	49.37	191.85	-45.38	0.00	0.00	0.00
8,391.89	2.01	75.57	8,388.37	50.18	194.97	-46.12	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 104.42</b>									
8,400.00	1.97	99.07	8,396.47	50.19	195.25	-46.13	10.00	-0.48	289.67
8,500.00	10.49	169.43	8,495.86	40.95	198.63	-36.81	10.00	8.52	70.36
8,600.00	20.40	174.76	8,592.14	14.58	201.90	-10.38	10.00	9.91	5.33
8,700.00	30.37	176.68	8,682.37	-28.12	204.96	32.37	10.00	9.97	1.92
8,800.00	40.35	177.71	8,763.82	-85.85	207.73	90.14	10.00	9.98	1.03
8,900.00	50.34	178.39	8,834.02	-156.85	210.12	161.18	10.00	9.99	0.68
9,000.00	60.33	178.89	8,890.83	-238.97	212.05	243.32	10.00	9.99	0.51
9,100.00	70.32	179.30	8,932.52	-329.72	213.47	334.08	10.00	9.99	0.41
9,200.00	80.32	179.67	8,957.83	-426.32	214.33	430.68	10.00	9.99	0.36



# Integrity Directional Services, LLC

## Survey Report



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### Planned Survey

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9,296.90	90.00	180.00	8,966.00	-522.76	214.60	527.10	10.00	9.99	0.34
<b>Start 9812.59 hold at 9296.90 MD</b>									
9,300.00	90.00	180.00	8,966.00	-525.86	214.60	530.21	0.00	0.00	0.00
9,400.00	90.00	180.00	8,966.00	-625.86	214.60	630.18	0.00	0.00	0.00
9,500.00	90.00	180.00	8,966.00	-725.86	214.60	730.16	0.00	0.00	0.00
9,600.00	90.00	180.00	8,966.00	-825.86	214.60	830.14	0.00	0.00	0.00
9,700.00	90.00	180.00	8,966.00	-925.86	214.61	930.12	0.00	0.00	0.00
9,800.00	90.00	180.00	8,966.00	-1,025.86	214.61	1,030.10	0.00	0.00	0.00
9,900.00	90.00	180.00	8,966.00	-1,125.86	214.61	1,130.08	0.00	0.00	0.00
10,000.00	90.00	180.00	8,966.00	-1,225.86	214.61	1,230.06	0.00	0.00	0.00
10,100.00	90.00	180.00	8,966.00	-1,325.86	214.61	1,330.03	0.00	0.00	0.00
10,200.00	90.00	180.00	8,966.00	-1,425.86	214.61	1,430.01	0.00	0.00	0.00
10,300.00	90.00	180.00	8,966.00	-1,525.86	214.61	1,529.99	0.00	0.00	0.00
10,400.00	90.00	180.00	8,966.00	-1,625.86	214.61	1,629.97	0.00	0.00	0.00
10,500.00	90.00	180.00	8,966.00	-1,725.86	214.61	1,729.95	0.00	0.00	0.00
10,600.00	90.00	180.00	8,966.00	-1,825.86	214.61	1,829.93	0.00	0.00	0.00
10,700.00	90.00	180.00	8,966.00	-1,925.86	214.61	1,929.90	0.00	0.00	0.00
10,800.00	90.00	180.00	8,966.00	-2,025.86	214.61	2,029.88	0.00	0.00	0.00
10,900.00	90.00	180.00	8,966.00	-2,125.86	214.61	2,129.86	0.00	0.00	0.00
11,000.00	90.00	180.00	8,966.00	-2,225.86	214.61	2,229.84	0.00	0.00	0.00
11,100.00	90.00	180.00	8,966.00	-2,325.86	214.61	2,329.82	0.00	0.00	0.00
11,200.00	90.00	180.00	8,966.00	-2,425.86	214.61	2,429.80	0.00	0.00	0.00
11,300.00	90.00	180.00	8,966.00	-2,525.86	214.61	2,529.78	0.00	0.00	0.00
11,400.00	90.00	180.00	8,966.00	-2,625.86	214.61	2,629.75	0.00	0.00	0.00
11,500.00	90.00	180.00	8,966.00	-2,725.86	214.61	2,729.73	0.00	0.00	0.00
11,600.00	90.00	180.00	8,966.00	-2,825.86	214.61	2,829.71	0.00	0.00	0.00
11,700.00	90.00	180.00	8,966.00	-2,925.86	214.61	2,929.69	0.00	0.00	0.00
11,800.00	90.00	180.00	8,966.00	-3,025.86	214.61	3,029.67	0.00	0.00	0.00
11,900.00	90.00	180.00	8,966.00	-3,125.86	214.61	3,129.65	0.00	0.00	0.00
12,000.00	90.00	180.00	8,966.00	-3,225.86	214.61	3,229.62	0.00	0.00	0.00
12,100.00	90.00	180.00	8,966.00	-3,325.86	214.62	3,329.60	0.00	0.00	0.00
12,200.00	90.00	180.00	8,966.00	-3,425.86	214.62	3,429.58	0.00	0.00	0.00
12,300.00	90.00	180.00	8,966.00	-3,525.86	214.62	3,529.56	0.00	0.00	0.00
12,400.00	90.00	180.00	8,966.00	-3,625.86	214.62	3,629.54	0.00	0.00	0.00
12,500.00	90.00	180.00	8,966.00	-3,725.86	214.62	3,729.52	0.00	0.00	0.00
12,600.00	90.00	180.00	8,966.00	-3,825.86	214.62	3,829.49	0.00	0.00	0.00
12,700.00	90.00	180.00	8,966.00	-3,925.86	214.62	3,929.47	0.00	0.00	0.00
12,800.00	90.00	180.00	8,966.00	-4,025.86	214.62	4,029.45	0.00	0.00	0.00
12,900.00	90.00	180.00	8,966.00	-4,125.86	214.62	4,129.43	0.00	0.00	0.00
13,000.00	90.00	180.00	8,966.00	-4,225.86	214.62	4,229.41	0.00	0.00	0.00
13,100.00	90.00	180.00	8,966.00	-4,325.86	214.62	4,329.39	0.00	0.00	0.00
13,200.00	90.00	180.00	8,966.00	-4,425.86	214.62	4,429.37	0.00	0.00	0.00
13,300.00	90.00	180.00	8,966.00	-4,525.86	214.62	4,529.34	0.00	0.00	0.00

# Integrity Directional Services, LLC

## Survey Report



<b>Company:</b>	Longs Peak Resources	<b>Local Co-ordinate Reference:</b>	Well Matira East Federal 3106-10CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25' @ 6026.00ft
<b>Site:</b>	Matira East Pad	<b>MD Reference:</b>	KB=25' @ 6026.00ft
<b>Well:</b>	Matira East Federal 3106-10CH	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5000.1 Multi User Db

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,400.00	90.00	180.00	8,966.00	-4,625.86	214.62	4,629.32	0.00	0.00	0.00
13,500.00	90.00	180.00	8,966.00	-4,725.86	214.62	4,729.30	0.00	0.00	0.00
13,600.00	90.00	180.00	8,966.00	-4,825.86	214.62	4,829.28	0.00	0.00	0.00
13,700.00	90.00	180.00	8,966.00	-4,925.86	214.62	4,929.26	0.00	0.00	0.00
13,800.00	90.00	180.00	8,966.00	-5,025.86	214.62	5,029.24	0.00	0.00	0.00
13,900.00	90.00	180.00	8,966.00	-5,125.86	214.62	5,129.21	0.00	0.00	0.00
14,000.00	90.00	180.00	8,966.00	-5,225.86	214.62	5,229.19	0.00	0.00	0.00
14,100.00	90.00	180.00	8,966.00	-5,325.86	214.62	5,329.17	0.00	0.00	0.00
14,200.00	90.00	180.00	8,966.00	-5,425.86	214.62	5,429.15	0.00	0.00	0.00
14,300.00	90.00	180.00	8,966.00	-5,525.86	214.62	5,529.13	0.00	0.00	0.00
14,400.00	90.00	180.00	8,966.00	-5,625.86	214.62	5,629.11	0.00	0.00	0.00
14,500.00	90.00	180.00	8,966.00	-5,725.86	214.62	5,729.09	0.00	0.00	0.00
14,600.00	90.00	180.00	8,966.00	-5,825.86	214.63	5,829.06	0.00	0.00	0.00
14,700.00	90.00	180.00	8,966.00	-5,925.86	214.63	5,929.04	0.00	0.00	0.00
14,800.00	90.00	180.00	8,966.00	-6,025.86	214.63	6,029.02	0.00	0.00	0.00
14,900.00	90.00	180.00	8,966.00	-6,125.86	214.63	6,129.00	0.00	0.00	0.00
15,000.00	90.00	180.00	8,966.00	-6,225.86	214.63	6,228.98	0.00	0.00	0.00
15,100.00	90.00	180.00	8,966.00	-6,325.86	214.63	6,328.96	0.00	0.00	0.00
15,200.00	90.00	180.00	8,966.00	-6,425.86	214.63	6,428.93	0.00	0.00	0.00
15,300.00	90.00	180.00	8,966.00	-6,525.86	214.63	6,528.91	0.00	0.00	0.00
15,400.00	90.00	180.00	8,966.00	-6,625.86	214.63	6,628.89	0.00	0.00	0.00
15,500.00	90.00	180.00	8,966.00	-6,725.86	214.63	6,728.87	0.00	0.00	0.00
15,600.00	90.00	180.00	8,966.00	-6,825.86	214.63	6,828.85	0.00	0.00	0.00
15,700.00	90.00	180.00	8,966.00	-6,925.86	214.63	6,928.83	0.00	0.00	0.00
15,800.00	90.00	180.00	8,966.00	-7,025.86	214.63	7,028.81	0.00	0.00	0.00
15,900.00	90.00	180.00	8,966.00	-7,125.86	214.63	7,128.78	0.00	0.00	0.00
16,000.00	90.00	180.00	8,966.00	-7,225.86	214.63	7,228.76	0.00	0.00	0.00
16,100.00	90.00	180.00	8,966.00	-7,325.86	214.63	7,328.74	0.00	0.00	0.00
16,200.00	90.00	180.00	8,966.00	-7,425.86	214.63	7,428.72	0.00	0.00	0.00
16,300.00	90.00	180.00	8,966.00	-7,525.86	214.63	7,528.70	0.00	0.00	0.00
16,400.00	90.00	180.00	8,966.00	-7,625.86	214.63	7,628.68	0.00	0.00	0.00
16,500.00	90.00	180.00	8,966.00	-7,725.86	214.63	7,728.65	0.00	0.00	0.00
16,600.00	90.00	180.00	8,966.00	-7,825.86	214.63	7,828.63	0.00	0.00	0.00
16,700.00	90.00	180.00	8,966.00	-7,925.86	214.63	7,928.61	0.00	0.00	0.00
16,800.00	90.00	180.00	8,966.00	-8,025.86	214.63	8,028.59	0.00	0.00	0.00
16,900.00	90.00	180.00	8,966.00	-8,125.86	214.63	8,128.57	0.00	0.00	0.00
17,000.00	90.00	180.00	8,966.00	-8,225.86	214.64	8,228.55	0.00	0.00	0.00
17,100.00	90.00	180.00	8,966.00	-8,325.86	214.64	8,328.53	0.00	0.00	0.00
17,200.00	90.00	180.00	8,966.00	-8,425.86	214.64	8,428.50	0.00	0.00	0.00
17,300.00	90.00	180.00	8,966.00	-8,525.86	214.64	8,528.48	0.00	0.00	0.00
17,400.00	90.00	180.00	8,966.00	-8,625.86	214.64	8,628.46	0.00	0.00	0.00
17,500.00	90.00	180.00	8,966.00	-8,725.86	214.64	8,728.44	0.00	0.00	0.00
17,600.00	90.00	180.00	8,966.00	-8,825.86	214.64	8,828.42	0.00	0.00	0.00

# Integrity Directional Services, LLC

## Survey Report



<b>Company:</b>	Longs Peak Resources	<b>Local Co-ordinate Reference:</b>	Well Matira East Federal 3106-10CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25' @ 6026.00ft
<b>Site:</b>	Matira East Pad	<b>MD Reference:</b>	KB=25' @ 6026.00ft
<b>Well:</b>	Matira East Federal 3106-10CH	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5000.1 Multi User Db

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,700.00	90.00	180.00	8,966.00	-8,925.86	214.64	8,928.40	0.00	0.00	0.00
17,800.00	90.00	180.00	8,966.00	-9,025.86	214.64	9,028.37	0.00	0.00	0.00
17,900.00	90.00	180.00	8,966.00	-9,125.86	214.64	9,128.35	0.00	0.00	0.00
18,000.00	90.00	180.00	8,966.00	-9,225.86	214.64	9,228.33	0.00	0.00	0.00
18,100.00	90.00	180.00	8,966.00	-9,325.86	214.64	9,328.31	0.00	0.00	0.00
18,200.00	90.00	180.00	8,966.00	-9,425.86	214.64	9,428.29	0.00	0.00	0.00
18,300.00	90.00	180.00	8,966.00	-9,525.86	214.64	9,528.27	0.00	0.00	0.00
18,400.00	90.00	180.00	8,966.00	-9,625.86	214.64	9,628.25	0.00	0.00	0.00
18,500.00	90.00	180.00	8,966.00	-9,725.86	214.64	9,728.22	0.00	0.00	0.00
18,600.00	90.00	180.00	8,966.00	-9,825.86	214.64	9,828.20	0.00	0.00	0.00
18,700.00	90.00	180.00	8,966.00	-9,925.86	214.64	9,928.18	0.00	0.00	0.00
18,800.00	90.00	180.00	8,966.00	-10,025.86	214.64	10,028.16	0.00	0.00	0.00
18,900.00	90.00	180.00	8,966.00	-10,125.86	214.64	10,128.14	0.00	0.00	0.00
19,000.00	90.00	180.00	8,966.00	-10,225.86	214.64	10,228.12	0.00	0.00	0.00
19,100.00	90.00	180.00	8,966.00	-10,325.86	214.64	10,328.09	0.00	0.00	0.00
19,109.49	90.00	180.00	8,966.00	-10,335.35	214.64	10,337.58	0.00	0.00	0.00
TD at 19109.49									

### Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
3106-10CH HEEL (24	0.00	0.00	8,396.52	50.19	195.25	1,597,910.427	3,220,720.834	40° 58' 18.814 N	104° 42' 2.669 W
- plan hits target center						4	1		
- Point									
3106-10CH LP (330' f	0.00	0.00	8,966.00	-522.76	214.60	1,597,337.478	3,220,740.186	40° 58' 13.152 N	104° 42' 2.484 W
- plan hits target center						2	7		
- Point									
3106-10CH BHL (330	0.00	0.00	8,966.00	-10,335.35	214.64	1,587,524.903	3,220,740.226	40° 56' 36.204 N	104° 42' 3.636 W
- plan hits target center						9	6		
- Point									

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
2600	2600	0	0	Start Build 2.00
2700	2700	0	2	Start 5691.42 hold at 2700.47 MD
8392	8388	50	195	Start DLS 10.00 TFO 104.42
9297	8966	-523	215	Start 9812.59 hold at 9296.90 MD
19,109	8966	-10,335	215	TD at 19109.49



**Integrity Directional Services, LLC**  
Survey Report



<b>Company:</b>	Longs Peak Resources	<b>Local Co-ordinate Reference:</b>	Well Matira East Federal 3106-10CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25' @ 6026.00ft
<b>Site:</b>	Matira East Pad	<b>MD Reference:</b>	KB=25' @ 6026.00ft
<b>Well:</b>	Matira East Federal 3106-10CH	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	EDM 5000.1 Multi User Db

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_