

**Longs Peak Resources  
Project: Weld County, Co (NAD 83)  
Site: Motu West Pad  
Well: Motu West 3304-2CH  
Wellbore: Wellbore #1  
Plan: Plan #1 (Motu West 3304-2CH/Wellbore #1)**



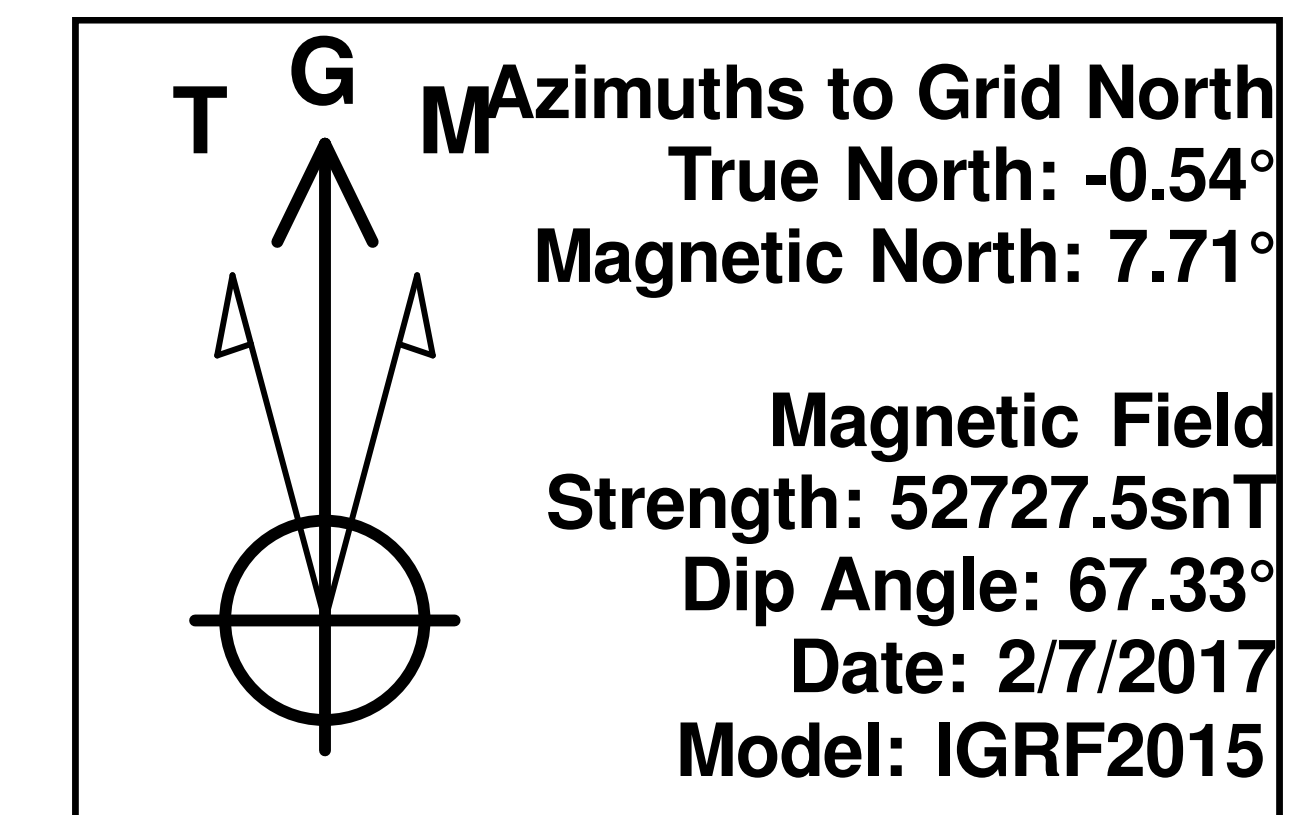
**WELL DETAILS: Motu West 3304-2CH**

Ground Elevation:: 6050.00  
RKB Elevation: KB=25' @ 6075.00ft  
Rig Name:

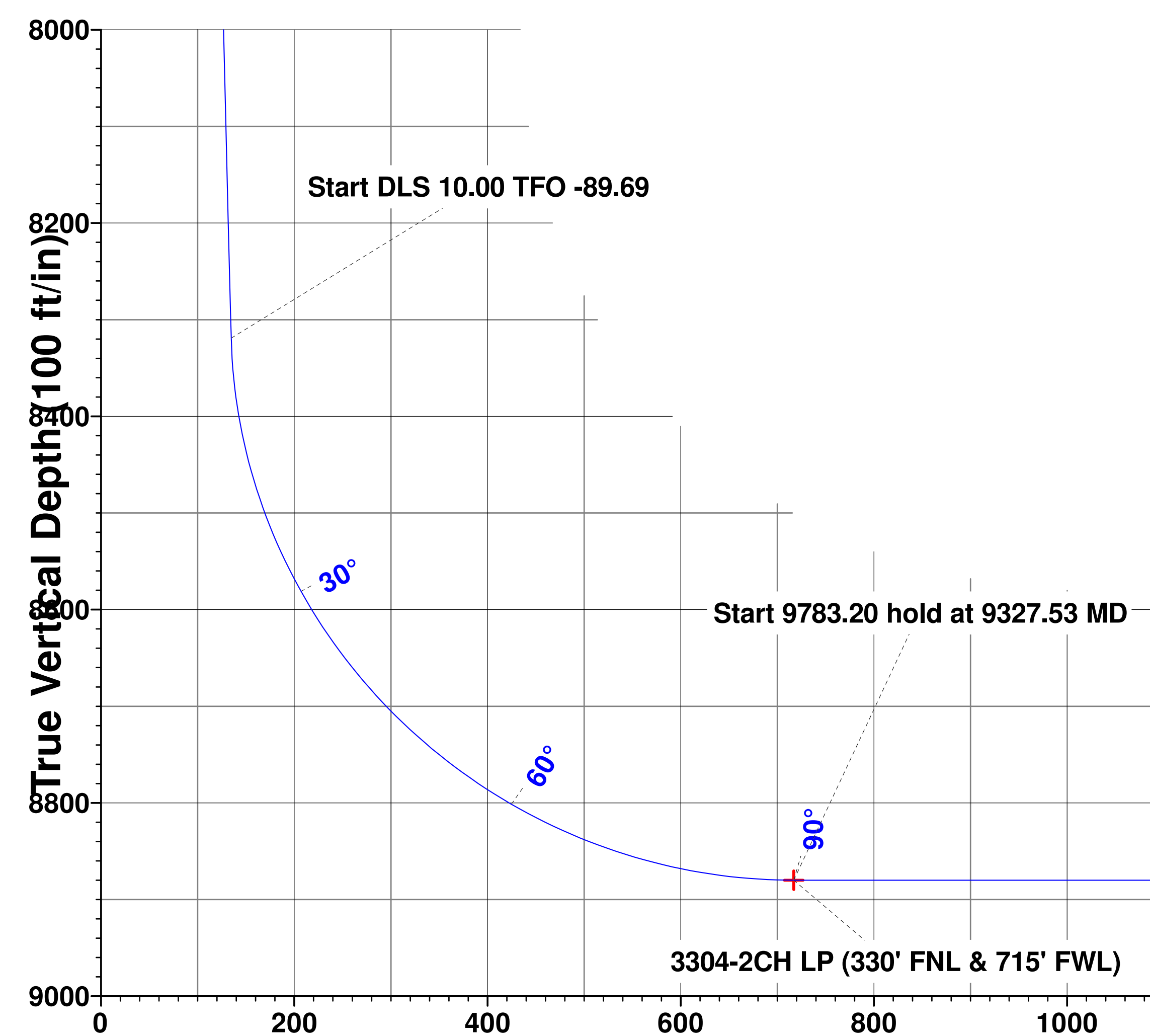
Northings	Easting	Latitude	Longitude
1597938.2350	3229412.1115	40° 58' 18.300 N	104° 40' 9.372 W

### Planned Section Details

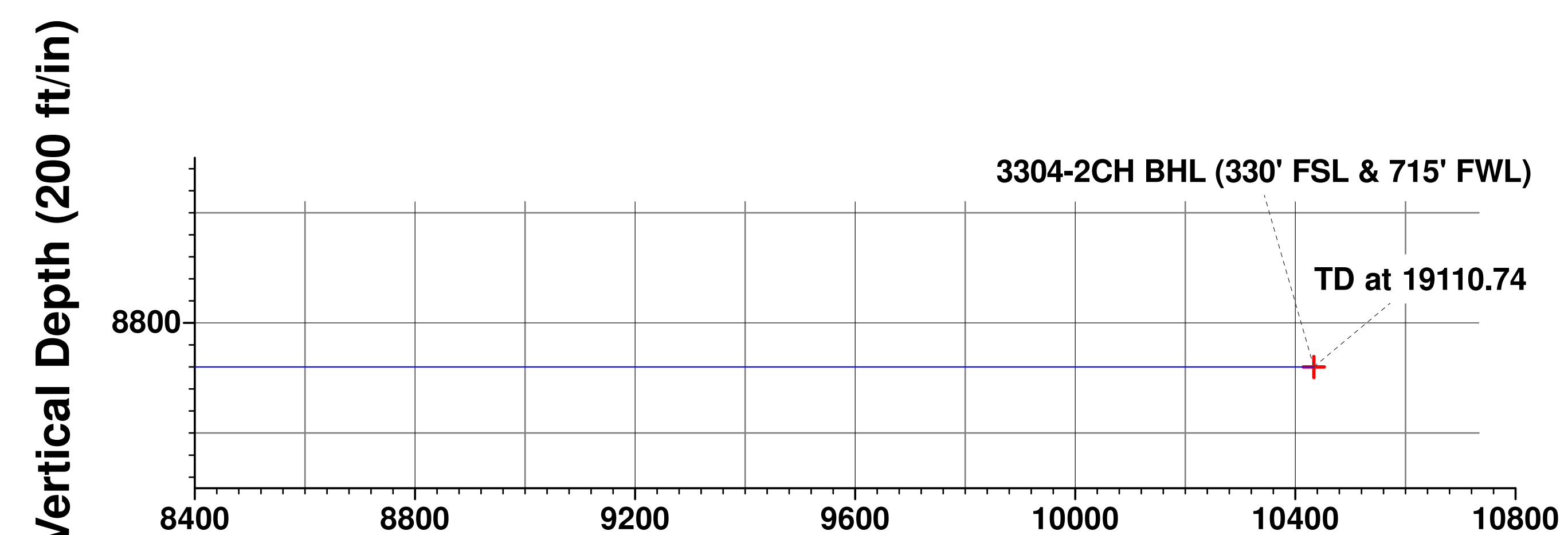
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	0.00
3	3174.24	11.48	269.48	3170.40	-0.52	-57.36	2.00	269.48	7.00
4	8428.15	11.48	269.48	8319.12	-10.05	-1103.40	0.00	0.00	134.70
5	9327.53	90.00	179.79	8880.00	-583.42	-1215.25	10.00	-89.69	717.05
6	19110.74	90.00	179.79	8880.00	-10366.56	-1179.34	0.00	0.00	10433.42



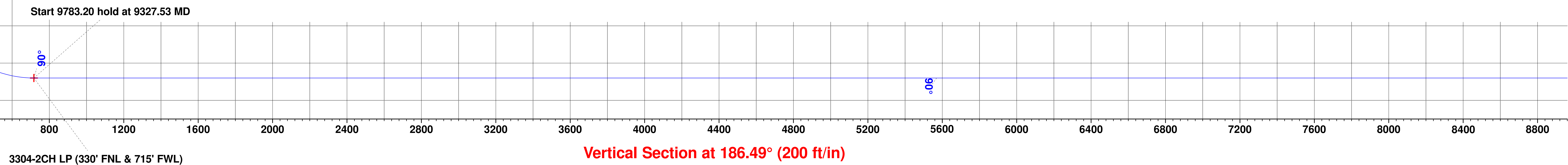
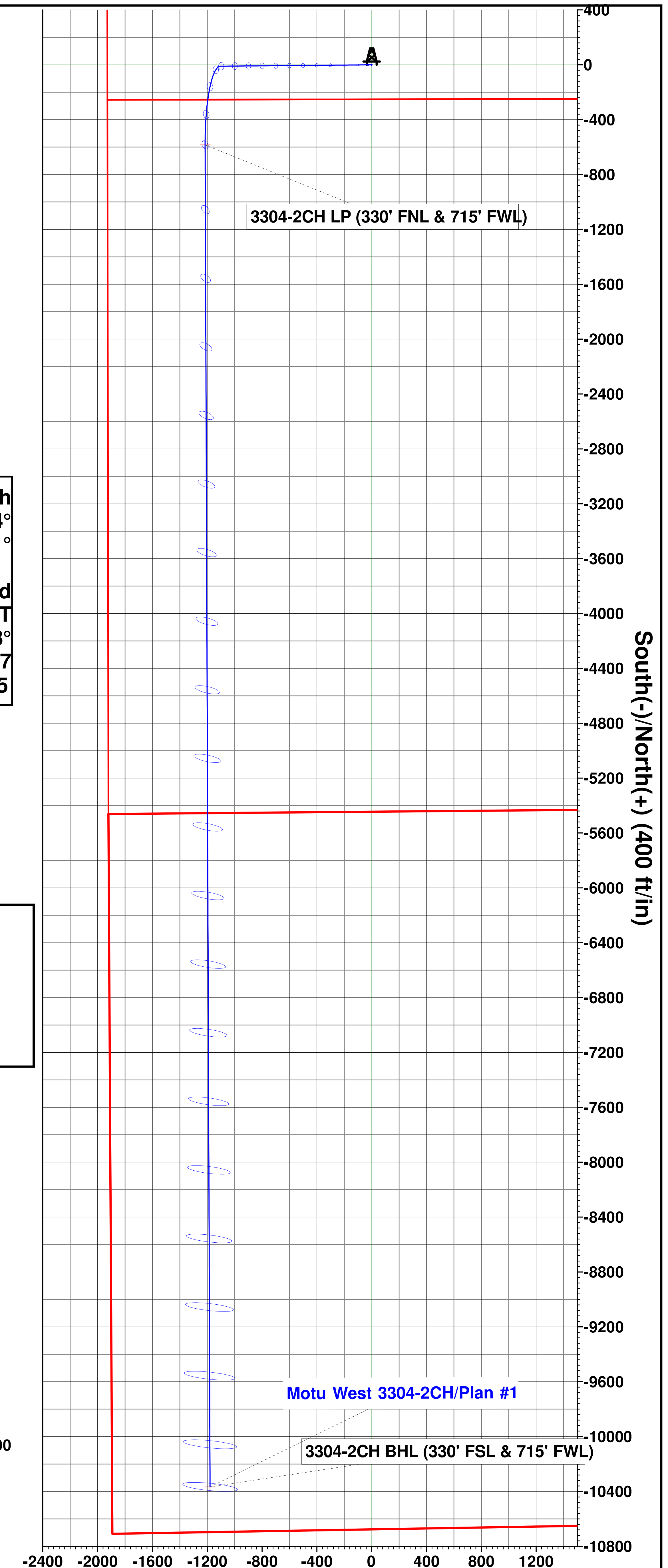
**PROJECT DETAILS:** Weld County, Co (NAD 83)  
**Geodetic System:** US State Plane 1983  
**Datum:** North American Datum 1983  
**Ellipsoid:** GRS 1980  
**Zone:** Colorado Northern Zone  
**System Datum:** Mean Sea Level  
**Local North:** Grid



### Vertical Section at 186.49° (100 ft/in)



### Vertical Section at 186.49° (200 ft/in)



### Vertical Section at 186.49° (200 ft/in)

# **Longs Peak Resources**

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

**Motu West Pad**

**Motu West 3304-2CH**

**Wellbore #1**

**Plan: Plan #1**

## **Standard Survey Report**

**07 February, 2017**



# Integrity Directional Services, LLC

## Survey Report



<b>Company:</b>	Longs Peak Resources	<b>Local Co-ordinate Reference:</b>	Well Motu West 3304-2CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25' @ 6075.00ft
<b>Site:</b>	Motu West Pad	<b>MD Reference:</b>	KB=25' @ 6075.00ft
<b>Well:</b>	Motu West 3304-2CH	<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		

Site	Motu West Pad				
Site Position:		Northing:	1,597,873.4995 usft	Latitude:	40° 58' 17.670 N
From:	Lat/Long	Easting:	3,229,307.7717 usft	Longitude:	104° 40' 10.740 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.54 °

Well		Motu West 3304-2CH				
Well Position	+N/-S	0.00 ft	Northing:	1,597,938.2349 usfl	Latitude:	40° 58' 18.300 N
	+E/-W	0.00 ft	Easting:	3,229,412.1114 usfl	Longitude:	104° 40' 9.372 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	6,050.00 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	2/7/2017	8.25	67.33	52,728

<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	186.49	

<b>Survey Tool Program</b>	<b>Date</b>	2/7/2017			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.00	19,110.74	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 Motu West 3304-2CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25' @ 6075.00ft
<b>Site:</b>	Motu West Pad	<b>MD Reference:</b>	KB=25' @ 6075.00ft
<b>Well:</b>	Motu West 3304-2CH	<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	269.48	2,699.98	-0.02	-1.75	0.21	2.00	2.00	0.00
2,800.00	4.00	269.48	2,799.84	-0.06	-6.98	0.85	2.00	2.00	0.00
2,900.00	6.00	269.48	2,899.45	-0.14	-15.69	1.92	2.00	2.00	0.00
3,000.00	8.00	269.48	2,998.70	-0.25	-27.88	3.40	2.00	2.00	0.00
3,100.00	10.00	269.48	3,097.47	-0.40	-43.52	5.31	2.00	2.00	0.00
3,174.24	11.48	269.48	3,170.40	-0.52	-57.36	7.00	2.00	2.00	0.00
<b>Start 5253.92 hold at 3174.24 MD</b>									
3,200.00	11.48	269.48	3,195.65	-0.57	-62.49	7.63	0.00	0.00	0.00
3,300.00	11.48	269.48	3,293.64	-0.75	-82.40	10.06	0.00	0.00	0.00
3,400.00	11.48	269.48	3,391.64	-0.93	-102.31	12.49	0.00	0.00	0.00
3,500.00	11.48	269.48	3,489.64	-1.11	-122.22	14.92	0.00	0.00	0.00
3,600.00	11.48	269.48	3,587.64	-1.29	-142.13	17.35	0.00	0.00	0.00
3,700.00	11.48	269.48	3,685.64	-1.48	-162.04	19.78	0.00	0.00	0.00
3,800.00	11.48	269.48	3,783.63	-1.66	-181.95	22.21	0.00	0.00	0.00
3,900.00	11.48	269.48	3,881.63	-1.84	-201.85	24.64	0.00	0.00	0.00
4,000.00	11.48	269.48	3,979.63	-2.02	-221.76	27.07	0.00	0.00	0.00
4,100.00	11.48	269.48	4,077.63	-2.20	-241.67	29.50	0.00	0.00	0.00
4,200.00	11.48	269.48	4,175.62	-2.38	-261.58	31.93	0.00	0.00	0.00
4,300.00	11.48	269.48	4,273.62	-2.56	-281.49	34.37	0.00	0.00	0.00
4,400.00	11.48	269.48	4,371.62	-2.74	-301.40	36.80	0.00	0.00	0.00
4,500.00	11.48	269.48	4,469.62	-2.93	-321.31	39.23	0.00	0.00	0.00
4,600.00	11.48	269.48	4,567.62	-3.11	-341.22	41.66	0.00	0.00	0.00
4,700.00	11.48	269.48	4,665.61	-3.29	-361.13	44.09	0.00	0.00	0.00
4,800.00	11.48	269.48	4,763.61	-3.47	-381.04	46.52	0.00	0.00	0.00
4,900.00	11.48	269.48	4,861.61	-3.65	-400.95	48.95	0.00	0.00	0.00
5,000.00	11.48	269.48	4,959.61	-3.83	-420.86	51.38	0.00	0.00	0.00



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<b>Site:</b>	Motu West Pad	<b>MD Reference:</b>	KB=25' @ 6075.00ft
<b>Well:</b>	Motu West 3304-2CH	<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	11.48	269.48	5,057.60	-4.01	-440.77	53.81	0.00	0.00	0.00
5,200.00	11.48	269.48	5,155.60	-4.19	-460.68	56.24	0.00	0.00	0.00
5,300.00	11.48	269.48	5,253.60	-4.38	-480.59	58.67	0.00	0.00	0.00
5,400.00	11.48	269.48	5,351.60	-4.56	-500.50	61.10	0.00	0.00	0.00
5,500.00	11.48	269.48	5,449.60	-4.74	-520.41	63.53	0.00	0.00	0.00
5,600.00	11.48	269.48	5,547.59	-4.92	-540.32	65.96	0.00	0.00	0.00
5,700.00	11.48	269.48	5,645.59	-5.10	-560.23	68.39	0.00	0.00	0.00
5,800.00	11.48	269.48	5,743.59	-5.28	-580.14	70.82	0.00	0.00	0.00
5,900.00	11.48	269.48	5,841.59	-5.46	-600.05	73.26	0.00	0.00	0.00
6,000.00	11.48	269.48	5,939.58	-5.64	-619.96	75.69	0.00	0.00	0.00
6,100.00	11.48	269.48	6,037.58	-5.83	-639.87	78.12	0.00	0.00	0.00
6,200.00	11.48	269.48	6,135.58	-6.01	-659.78	80.55	0.00	0.00	0.00
6,300.00	11.48	269.48	6,233.58	-6.19	-679.69	82.98	0.00	0.00	0.00
6,400.00	11.48	269.48	6,331.58	-6.37	-699.60	85.41	0.00	0.00	0.00
6,500.00	11.48	269.48	6,429.57	-6.55	-719.51	87.84	0.00	0.00	0.00
6,600.00	11.48	269.48	6,527.57	-6.73	-739.42	90.27	0.00	0.00	0.00
6,700.00	11.48	269.48	6,625.57	-6.91	-759.33	92.70	0.00	0.00	0.00
6,800.00	11.48	269.48	6,723.57	-7.09	-779.24	95.13	0.00	0.00	0.00
6,900.00	11.48	269.48	6,821.56	-7.28	-799.15	97.56	0.00	0.00	0.00
7,000.00	11.48	269.48	6,919.56	-7.46	-819.06	99.99	0.00	0.00	0.00
7,100.00	11.48	269.48	7,017.56	-7.64	-838.97	102.42	0.00	0.00	0.00
7,200.00	11.48	269.48	7,115.56	-7.82	-858.88	104.85	0.00	0.00	0.00
7,300.00	11.48	269.48	7,213.56	-8.00	-878.79	107.28	0.00	0.00	0.00
7,400.00	11.48	269.48	7,311.55	-8.18	-898.70	109.71	0.00	0.00	0.00
7,500.00	11.48	269.48	7,409.55	-8.36	-918.61	112.15	0.00	0.00	0.00
7,600.00	11.48	269.48	7,507.55	-8.55	-938.52	114.58	0.00	0.00	0.00
7,700.00	11.48	269.48	7,605.55	-8.73	-958.43	117.01	0.00	0.00	0.00
7,800.00	11.48	269.48	7,703.55	-8.91	-978.34	119.44	0.00	0.00	0.00
7,900.00	11.48	269.48	7,801.54	-9.09	-998.25	121.87	0.00	0.00	0.00
8,000.00	11.48	269.48	7,899.54	-9.27	-1,018.16	124.30	0.00	0.00	0.00
8,100.00	11.48	269.48	7,997.54	-9.45	-1,038.07	126.73	0.00	0.00	0.00
8,200.00	11.48	269.48	8,095.54	-9.63	-1,057.98	129.16	0.00	0.00	0.00
8,300.00	11.48	269.48	8,193.53	-9.81	-1,077.89	131.59	0.00	0.00	0.00
8,400.00	11.48	269.48	8,291.53	-10.00	-1,097.80	134.02	0.00	0.00	0.00
8,428.15	11.48	269.48	8,319.12	-10.05	-1,103.40	134.70	0.00	0.00	0.00
<b>Start DLS 10.00 TFO -89.69</b>									
8,500.00	13.55	237.23	8,389.34	-14.68	-1,117.65	140.91	10.00	2.88	-44.89
8,600.00	20.62	212.46	8,484.99	-35.93	-1,137.01	164.22	10.00	7.07	-24.76
8,700.00	29.40	200.93	8,575.57	-73.81	-1,155.27	203.92	10.00	8.77	-11.54
8,800.00	38.73	194.46	8,658.35	-127.16	-1,171.89	258.81	10.00	9.33	-6.46
8,900.00	48.30	190.22	8,730.80	-194.36	-1,186.37	327.22	10.00	9.57	-4.24
9,000.00	57.98	187.09	8,790.73	-273.37	-1,198.25	407.06	10.00	9.68	-3.13
9,100.00	67.73	184.56	8,836.30	-361.79	-1,207.19	495.92	10.00	9.75	-2.53
9,200.00	77.51	182.37	8,866.15	-456.93	-1,212.90	591.10	10.00	9.78	-2.19



# Integrity Directional Services, LLC

## Survey Report



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<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)
9,300.00	87.30	180.34	8,879.35	-555.90	-1,215.22	689.70	10.00	9.80	-2.03
9,327.53	90.00	179.79	8,880.00	-583.42	-1,215.25	717.05	10.00	9.80	-1.99
<b>Start 9783.20 hold at 9327.53 MD</b>									
9,400.00	90.00	179.79	8,880.00	-655.88	-1,214.99	789.02	0.00	0.00	0.00
9,500.00	90.00	179.79	8,880.00	-755.88	-1,214.62	888.33	0.00	0.00	0.00
9,600.00	90.00	179.79	8,880.00	-855.88	-1,214.25	987.65	0.00	0.00	0.00
9,700.00	90.00	179.79	8,880.00	-955.88	-1,213.88	1,086.97	0.00	0.00	0.00
9,800.00	90.00	179.79	8,880.00	-1,055.88	-1,213.52	1,186.29	0.00	0.00	0.00
9,900.00	90.00	179.79	8,880.00	-1,155.88	-1,213.15	1,285.60	0.00	0.00	0.00
10,000.00	90.00	179.79	8,880.00	-1,255.88	-1,212.78	1,384.92	0.00	0.00	0.00
10,100.00	90.00	179.79	8,880.00	-1,355.88	-1,212.42	1,484.24	0.00	0.00	0.00
10,200.00	90.00	179.79	8,880.00	-1,455.88	-1,212.05	1,583.55	0.00	0.00	0.00
10,300.00	90.00	179.79	8,880.00	-1,555.88	-1,211.68	1,682.87	0.00	0.00	0.00
10,400.00	90.00	179.79	8,880.00	-1,655.88	-1,211.32	1,782.19	0.00	0.00	0.00
10,500.00	90.00	179.79	8,880.00	-1,755.88	-1,210.95	1,881.50	0.00	0.00	0.00
10,600.00	90.00	179.79	8,880.00	-1,855.88	-1,210.58	1,980.82	0.00	0.00	0.00
10,700.00	90.00	179.79	8,880.00	-1,955.88	-1,210.21	2,080.14	0.00	0.00	0.00
10,800.00	90.00	179.79	8,880.00	-2,055.88	-1,209.85	2,179.45	0.00	0.00	0.00
10,900.00	90.00	179.79	8,880.00	-2,155.87	-1,209.48	2,278.77	0.00	0.00	0.00
11,000.00	90.00	179.79	8,880.00	-2,255.87	-1,209.11	2,378.09	0.00	0.00	0.00
11,100.00	90.00	179.79	8,880.00	-2,355.87	-1,208.75	2,477.41	0.00	0.00	0.00
11,200.00	90.00	179.79	8,880.00	-2,455.87	-1,208.38	2,576.72	0.00	0.00	0.00
11,300.00	90.00	179.79	8,880.00	-2,555.87	-1,208.01	2,676.04	0.00	0.00	0.00
11,400.00	90.00	179.79	8,880.00	-2,655.87	-1,207.64	2,775.36	0.00	0.00	0.00
11,500.00	90.00	179.79	8,880.00	-2,755.87	-1,207.28	2,874.67	0.00	0.00	0.00
11,600.00	90.00	179.79	8,880.00	-2,855.87	-1,206.91	2,973.99	0.00	0.00	0.00
11,700.00	90.00	179.79	8,880.00	-2,955.87	-1,206.54	3,073.31	0.00	0.00	0.00
11,800.00	90.00	179.79	8,880.00	-3,055.87	-1,206.18	3,172.62	0.00	0.00	0.00
11,900.00	90.00	179.79	8,880.00	-3,155.87	-1,205.81	3,271.94	0.00	0.00	0.00
12,000.00	90.00	179.79	8,880.00	-3,255.87	-1,205.44	3,371.26	0.00	0.00	0.00
12,100.00	90.00	179.79	8,880.00	-3,355.87	-1,205.08	3,470.57	0.00	0.00	0.00
12,200.00	90.00	179.79	8,880.00	-3,455.87	-1,204.71	3,569.89	0.00	0.00	0.00
12,300.00	90.00	179.79	8,880.00	-3,555.87	-1,204.34	3,669.21	0.00	0.00	0.00
12,400.00	90.00	179.79	8,880.00	-3,655.86	-1,203.97	3,768.53	0.00	0.00	0.00
12,500.00	90.00	179.79	8,880.00	-3,755.86	-1,203.61	3,867.84	0.00	0.00	0.00
12,600.00	90.00	179.79	8,880.00	-3,855.86	-1,203.24	3,967.16	0.00	0.00	0.00
12,700.00	90.00	179.79	8,880.00	-3,955.86	-1,202.87	4,066.48	0.00	0.00	0.00
12,800.00	90.00	179.79	8,880.00	-4,055.86	-1,202.51	4,165.79	0.00	0.00	0.00
12,900.00	90.00	179.79	8,880.00	-4,155.86	-1,202.14	4,265.11	0.00	0.00	0.00
13,000.00	90.00	179.79	8,880.00	-4,255.86	-1,201.77	4,364.43	0.00	0.00	0.00
13,100.00	90.00	179.79	8,880.00	-4,355.86	-1,201.41	4,463.74	0.00	0.00	0.00
13,200.00	90.00	179.79	8,880.00	-4,455.86	-1,201.04	4,563.06	0.00	0.00	0.00
13,300.00	90.00	179.79	8,880.00	-4,555.86	-1,200.67	4,662.38	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 Motu West 3304-2CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25' @ 6075.00ft
<b>Site:</b>	Motu West Pad	<b>MD Reference:</b>	KB=25' @ 6075.00ft
<b>Well:</b>	Motu West 3304-2CH	<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	179.79	8,880.00	-4,655.86	-1,200.30	4,761.70	0.00	0.00	0.00
13,500.00	90.00	179.79	8,880.00	-4,755.86	-1,199.94	4,861.01	0.00	0.00	0.00
13,600.00	90.00	179.79	8,880.00	-4,855.86	-1,199.57	4,960.33	0.00	0.00	0.00
13,700.00	90.00	179.79	8,880.00	-4,955.86	-1,199.20	5,059.65	0.00	0.00	0.00
13,800.00	90.00	179.79	8,880.00	-5,055.86	-1,198.84	5,158.96	0.00	0.00	0.00
13,900.00	90.00	179.79	8,880.00	-5,155.85	-1,198.47	5,258.28	0.00	0.00	0.00
14,000.00	90.00	179.79	8,880.00	-5,255.85	-1,198.10	5,357.60	0.00	0.00	0.00
14,100.00	90.00	179.79	8,880.00	-5,355.85	-1,197.73	5,456.91	0.00	0.00	0.00
14,200.00	90.00	179.79	8,880.00	-5,455.85	-1,197.37	5,556.23	0.00	0.00	0.00
14,300.00	90.00	179.79	8,880.00	-5,555.85	-1,197.00	5,655.55	0.00	0.00	0.00
14,400.00	90.00	179.79	8,880.00	-5,655.85	-1,196.63	5,754.86	0.00	0.00	0.00
14,500.00	90.00	179.79	8,880.00	-5,755.85	-1,196.27	5,854.18	0.00	0.00	0.00
14,600.00	90.00	179.79	8,880.00	-5,855.85	-1,195.90	5,953.50	0.00	0.00	0.00
14,700.00	90.00	179.79	8,880.00	-5,955.85	-1,195.53	6,052.82	0.00	0.00	0.00
14,800.00	90.00	179.79	8,880.00	-6,055.85	-1,195.17	6,152.13	0.00	0.00	0.00
14,900.00	90.00	179.79	8,880.00	-6,155.85	-1,194.80	6,251.45	0.00	0.00	0.00
15,000.00	90.00	179.79	8,880.00	-6,255.85	-1,194.43	6,350.77	0.00	0.00	0.00
15,100.00	90.00	179.79	8,880.00	-6,355.85	-1,194.06	6,450.08	0.00	0.00	0.00
15,200.00	90.00	179.79	8,880.00	-6,455.85	-1,193.70	6,549.40	0.00	0.00	0.00
15,300.00	90.00	179.79	8,880.00	-6,555.85	-1,193.33	6,648.72	0.00	0.00	0.00
15,400.00	90.00	179.79	8,880.00	-6,655.84	-1,192.96	6,748.03	0.00	0.00	0.00
15,500.00	90.00	179.79	8,880.00	-6,755.84	-1,192.60	6,847.35	0.00	0.00	0.00
15,600.00	90.00	179.79	8,880.00	-6,855.84	-1,192.23	6,946.67	0.00	0.00	0.00
15,700.00	90.00	179.79	8,880.00	-6,955.84	-1,191.86	7,045.98	0.00	0.00	0.00
15,800.00	90.00	179.79	8,880.00	-7,055.84	-1,191.50	7,145.30	0.00	0.00	0.00
15,900.00	90.00	179.79	8,880.00	-7,155.84	-1,191.13	7,244.62	0.00	0.00	0.00
16,000.00	90.00	179.79	8,880.00	-7,255.84	-1,190.76	7,343.94	0.00	0.00	0.00
16,100.00	90.00	179.79	8,880.00	-7,355.84	-1,190.39	7,443.25	0.00	0.00	0.00
16,200.00	90.00	179.79	8,880.00	-7,455.84	-1,190.03	7,542.57	0.00	0.00	0.00
16,300.00	90.00	179.79	8,880.00	-7,555.84	-1,189.66	7,641.89	0.00	0.00	0.00
16,400.00	90.00	179.79	8,880.00	-7,655.84	-1,189.29	7,741.20	0.00	0.00	0.00
16,500.00	90.00	179.79	8,880.00	-7,755.84	-1,188.93	7,840.52	0.00	0.00	0.00
16,600.00	90.00	179.79	8,880.00	-7,855.84	-1,188.56	7,939.84	0.00	0.00	0.00
16,700.00	90.00	179.79	8,880.00	-7,955.84	-1,188.19	8,039.15	0.00	0.00	0.00
16,800.00	90.00	179.79	8,880.00	-8,055.84	-1,187.82	8,138.47	0.00	0.00	0.00
16,900.00	90.00	179.79	8,880.00	-8,155.83	-1,187.46	8,237.79	0.00	0.00	0.00
17,000.00	90.00	179.79	8,880.00	-8,255.83	-1,187.09	8,337.11	0.00	0.00	0.00
17,100.00	90.00	179.79	8,880.00	-8,355.83	-1,186.72	8,436.42	0.00	0.00	0.00
17,200.00	90.00	179.79	8,880.00	-8,455.83	-1,186.36	8,535.74	0.00	0.00	0.00
17,300.00	90.00	179.79	8,880.00	-8,555.83	-1,185.99	8,635.06	0.00	0.00	0.00
17,400.00	90.00	179.79	8,880.00	-8,655.83	-1,185.62	8,734.37	0.00	0.00	0.00
17,500.00	90.00	179.79	8,880.00	-8,755.83	-1,185.26	8,833.69	0.00	0.00	0.00
17,600.00	90.00	179.79	8,880.00	-8,855.83	-1,184.89	8,933.01	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 Motu West 3304-2CH
<b>Project:</b>	Weld County, Co (NAD 83)	<b>TVD Reference:</b>	KB=25' @ 6075.00ft
<b>Site:</b>	Motu West Pad	<b>MD Reference:</b>	KB=25' @ 6075.00ft
<b>Well:</b>	Motu West 3304-2CH	<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	179.79	8,880.00	-8,955.83	-1,184.52	9,032.32	0.00	0.00	0.00
17,800.00	90.00	179.79	8,880.00	-9,055.83	-1,184.15	9,131.64	0.00	0.00	0.00
17,900.00	90.00	179.79	8,880.00	-9,155.83	-1,183.79	9,230.96	0.00	0.00	0.00
18,000.00	90.00	179.79	8,880.00	-9,255.83	-1,183.42	9,330.27	0.00	0.00	0.00
18,100.00	90.00	179.79	8,880.00	-9,355.83	-1,183.05	9,429.59	0.00	0.00	0.00
18,200.00	90.00	179.79	8,880.00	-9,455.83	-1,182.69	9,528.91	0.00	0.00	0.00
18,300.00	90.00	179.79	8,880.00	-9,555.83	-1,182.32	9,628.23	0.00	0.00	0.00
18,400.00	90.00	179.79	8,880.00	-9,655.82	-1,181.95	9,727.54	0.00	0.00	0.00
18,500.00	90.00	179.79	8,880.00	-9,755.82	-1,181.59	9,826.86	0.00	0.00	0.00
18,600.00	90.00	179.79	8,880.00	-9,855.82	-1,181.22	9,926.18	0.00	0.00	0.00
18,700.00	90.00	179.79	8,880.00	-9,955.82	-1,180.85	10,025.49	0.00	0.00	0.00
18,800.00	90.00	179.79	8,880.00	-10,055.82	-1,180.48	10,124.81	0.00	0.00	0.00
18,900.00	90.00	179.79	8,880.00	-10,155.82	-1,180.12	10,224.13	0.00	0.00	0.00
19,000.00	90.00	179.79	8,880.00	-10,255.82	-1,179.75	10,323.44	0.00	0.00	0.00
19,100.00	90.00	179.79	8,880.00	-10,355.82	-1,179.38	10,422.76	0.00	0.00	0.00
19,110.74	90.00	179.79	8,880.00	-10,366.56	-1,179.34	10,433.42	0.00	0.00	0.00
TD at 19110.74									

### 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									
3304-2CH LP (330' FI	0.00	0.00	8,880.00	-583.42	-1,215.25	1,597,354.816	3,228,196.862	40° 58' 12.648 N	104° 40' 25.284 W
- plan hits target center									
- Point									
3304-2CH BHL (330' I	0.00	0.00	8,880.00	-10,366.56	-1,179.34	1,587,571.699	3,228,232.770	40° 56' 35.988 N	104° 40' 26.004 W
- plan hits target center									
- Point									

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
2600	2600	0	0	Start Build 2.00
3174	3170	-1	-57	Start 5253.92 hold at 3174.24 MD
8428	8319	-10	-1103	Start DLS 10.00 TFO -89.69
9328	8880	-583	-1215	Start 9783.20 hold at 9327.53 MD
19,111	8880	-10,367	-1179	TD at 19110.74

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