

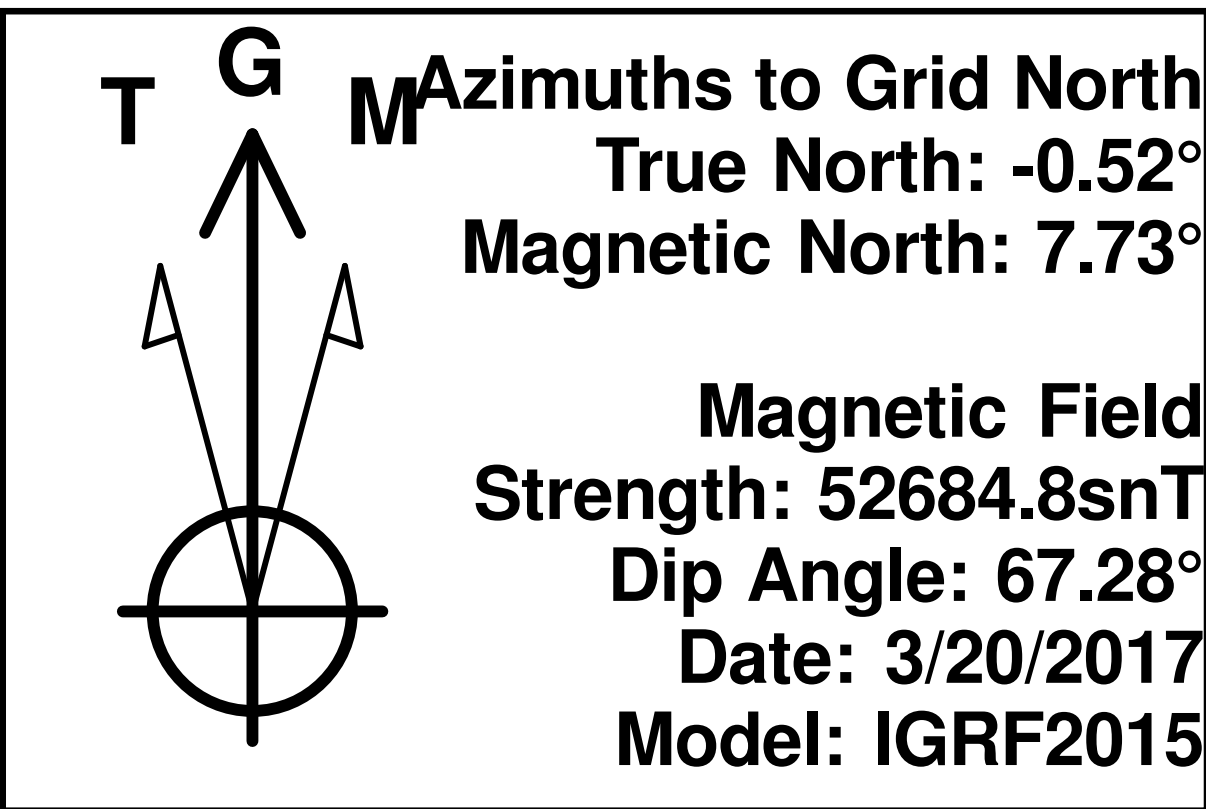
Longs Peak Resources
Project: Weld County, Co (NAD 83)
Site: Jaco East Pad
Well: Jaco East 1807-11NH
Wellbore: Wellbore #1
Plan: Design #1 (Jaco East 1807-11NH/Wellbore #1)

WELL DETAILS: Jaco East 1807-11NH
Ground Elevation:: 5599.00
RKB Elevation: KB=25' @ 5624.00ft
Rig Name:

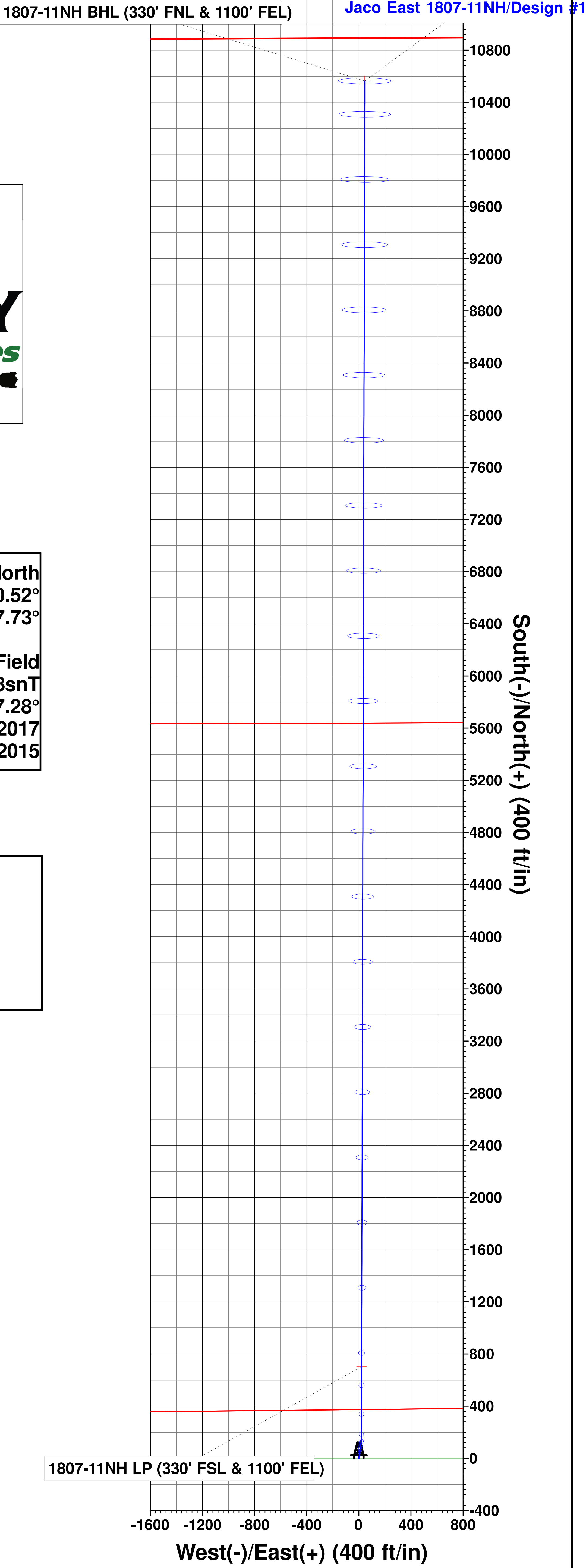
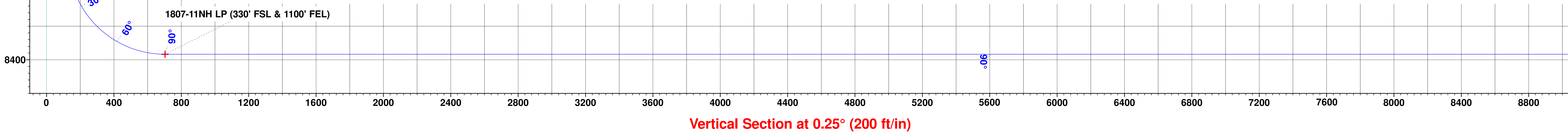
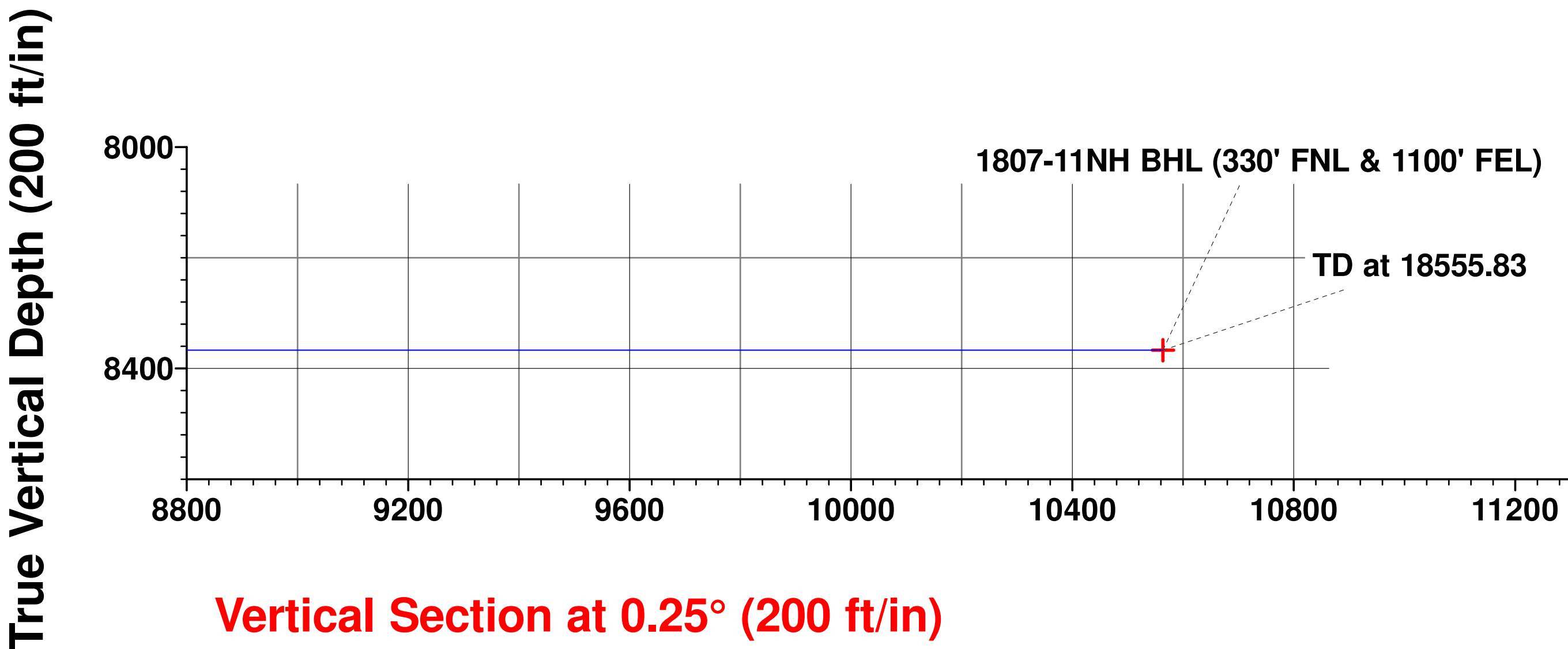
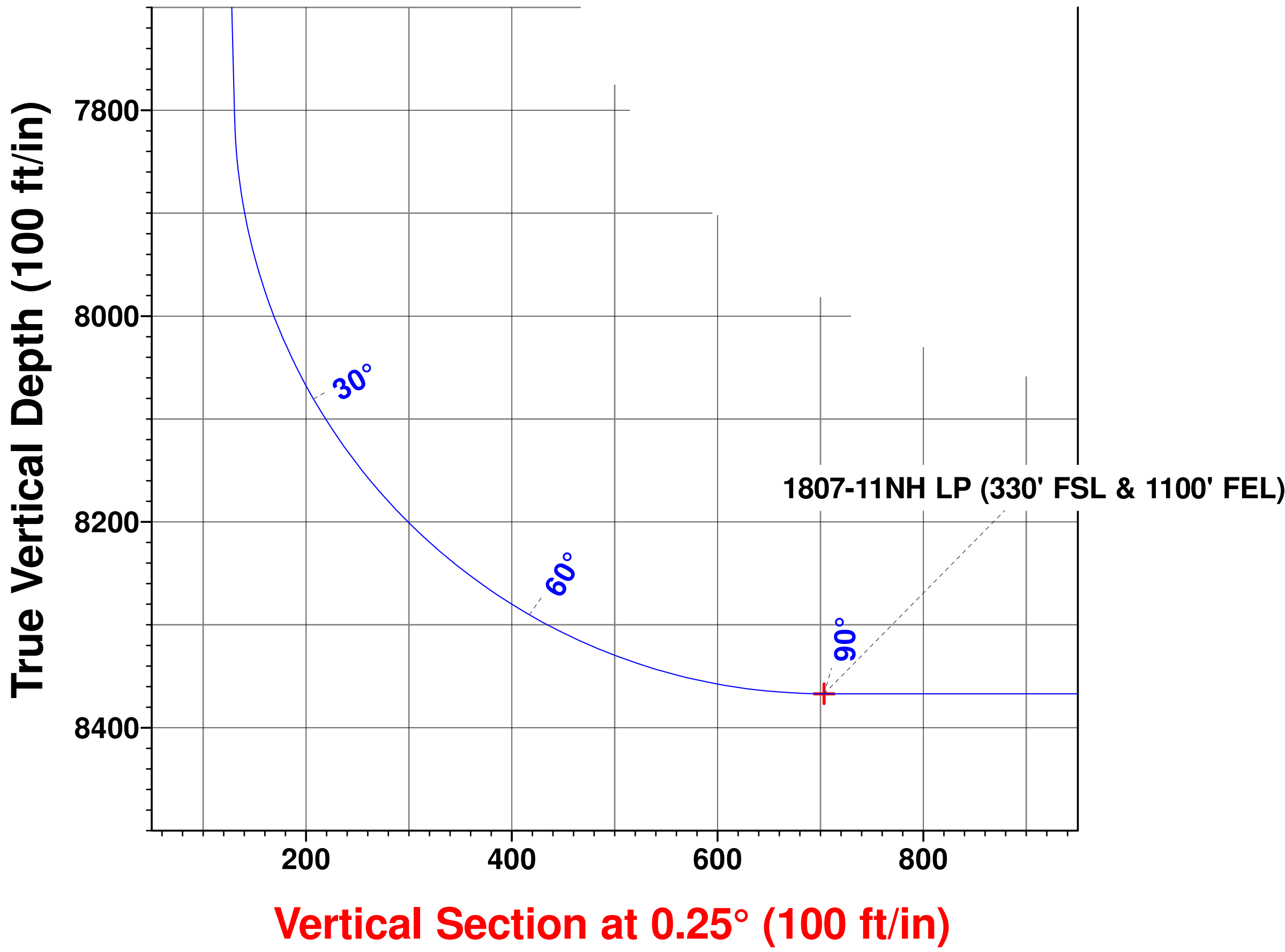
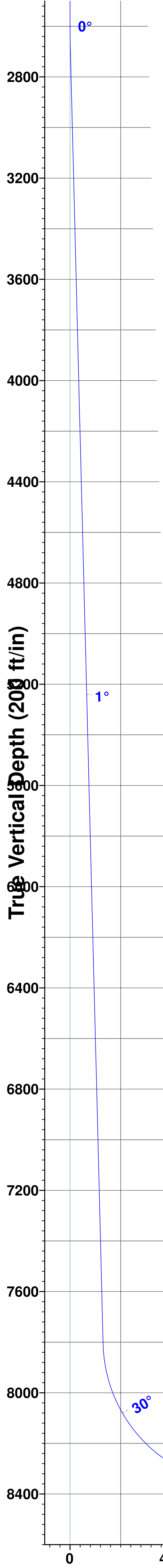
Northing Easting Latitude Longitude
1576301.7569 3221081.8353 40° 54' 45.288 N 104° 42' 0.504 W



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	2673.04	1.46	7.83	2673.03	0.92	0.13	2.00	7.83	0.92
4	7810.20	1.46	7.83	7808.52	130.66	17.98	0.00	0.00	130.74
5	8695.72	90.00	0.14	8367.00	703.43	21.30	10.00	-7.69	703.52
6	18555.83	90.00	0.14	8367.00	10563.50	45.62	0.00	0.00	10563.60



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)

Jaco East Pad

Jaco East 1807-11NH

Wellbore #1

Plan: Design #1

Standard Survey Report

20 March, 2017



Integrity Directional Services, LLC

Survey Report



Company:	Longs Peak Resources	Local Co-ordinate Reference:	Well Jaco East 1807-11NH
Project:	Weld County, Co (NAD 83)	TVD Reference:	KB=25' @ 5624.00ft
Site:	Jaco East Pad	MD Reference:	KB=25' @ 5624.00ft
Well:	Jaco East 1807-11NH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM 5000.1 Multi User Db

Project	Weld County, Co (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	Jaco East Pad		
Site Position:		Northing:	1,576,300.3192 usft
From:	Lat/Long	Easting:	3,220,921.5272 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	40° 54' 45.288 N
		Longitude:	104° 42' 2.592 W
		Grid Convergence:	0.52 °

Well	Jaco East 1807-11NH		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	0.00 ft
		Latitude:	40° 54' 45.288 N
		Longitude:	104° 42' 0.504 W
		Ground Level:	5,599.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/20/2017	8.25	67.28	52,685

Design	Design #1				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	0.25	

Survey Tool Program	Date	3/20/2017			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	18,555.83	Design #1 (Wellbore #1)	MWD	MWD - Standard	

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)	
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



Company:	Longs Peak Resources	Local Co-ordinate Reference:	Well Jaco East 1807-11NH
Project:	Weld County, Co (NAD 83)	TVD Reference:	KB=25' @ 5624.00ft
Site:	Jaco East Pad	MD Reference:	KB=25' @ 5624.00ft
Well:	Jaco East 1807-11NH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	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
2,673.04	1.46	7.83	2,673.03	0.92	0.13	0.92	2.00	2.00	0.00
2,700.00	1.46	7.83	2,699.98	1.60	0.22	1.60	0.00	0.00	0.00
2,800.00	1.46	7.83	2,799.95	4.13	0.57	4.13	0.00	0.00	0.00
2,900.00	1.46	7.83	2,899.92	6.65	0.92	6.66	0.00	0.00	0.00
3,000.00	1.46	7.83	2,999.89	9.18	1.26	9.19	0.00	0.00	0.00
3,100.00	1.46	7.83	3,099.85	11.71	1.61	11.71	0.00	0.00	0.00
3,200.00	1.46	7.83	3,199.82	14.23	1.96	14.24	0.00	0.00	0.00
3,300.00	1.46	7.83	3,299.79	16.76	2.31	16.77	0.00	0.00	0.00
3,400.00	1.46	7.83	3,399.76	19.28	2.65	19.29	0.00	0.00	0.00
3,500.00	1.46	7.83	3,499.72	21.81	3.00	21.82	0.00	0.00	0.00
3,600.00	1.46	7.83	3,599.69	24.33	3.35	24.35	0.00	0.00	0.00
3,700.00	1.46	7.83	3,699.66	26.86	3.70	26.87	0.00	0.00	0.00
3,800.00	1.46	7.83	3,799.63	29.38	4.04	29.40	0.00	0.00	0.00
3,900.00	1.46	7.83	3,899.59	31.91	4.39	31.93	0.00	0.00	0.00
4,000.00	1.46	7.83	3,999.56	34.43	4.74	34.45	0.00	0.00	0.00
4,100.00	1.46	7.83	4,099.53	36.96	5.08	36.98	0.00	0.00	0.00
4,200.00	1.46	7.83	4,199.50	39.49	5.43	39.51	0.00	0.00	0.00
4,300.00	1.46	7.83	4,299.46	42.01	5.78	42.04	0.00	0.00	0.00
4,400.00	1.46	7.83	4,399.43	44.54	6.13	44.56	0.00	0.00	0.00
4,500.00	1.46	7.83	4,499.40	47.06	6.47	47.09	0.00	0.00	0.00
4,600.00	1.46	7.83	4,599.37	49.59	6.82	49.62	0.00	0.00	0.00
4,700.00	1.46	7.83	4,699.33	52.11	7.17	52.14	0.00	0.00	0.00
4,800.00	1.46	7.83	4,799.30	54.64	7.52	54.67	0.00	0.00	0.00
4,900.00	1.46	7.83	4,899.27	57.16	7.86	57.20	0.00	0.00	0.00
5,000.00	1.46	7.83	4,999.24	59.69	8.21	59.72	0.00	0.00	0.00
5,100.00	1.46	7.83	5,099.20	62.21	8.56	62.25	0.00	0.00	0.00
5,200.00	1.46	7.83	5,199.17	64.74	8.91	64.78	0.00	0.00	0.00

Integrity Directional Services, LLC

Survey Report



Company:	Longs Peak Resources	Local Co-ordinate Reference:	Well Jaco East 1807-11NH
Project:	Weld County, Co (NAD 83)	TVD Reference:	KB=25' @ 5624.00ft
Site:	Jaco East Pad	MD Reference:	KB=25' @ 5624.00ft
Well:	Jaco East 1807-11NH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	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)
5,300.00	1.46	7.83	5,299.14	67.27	9.25	67.31	0.00	0.00	0.00
5,400.00	1.46	7.83	5,399.11	69.79	9.60	69.83	0.00	0.00	0.00
5,500.00	1.46	7.83	5,499.07	72.32	9.95	72.36	0.00	0.00	0.00
5,600.00	1.46	7.83	5,599.04	74.84	10.30	74.89	0.00	0.00	0.00
5,700.00	1.46	7.83	5,699.01	77.37	10.64	77.41	0.00	0.00	0.00
5,800.00	1.46	7.83	5,798.98	79.89	10.99	79.94	0.00	0.00	0.00
5,900.00	1.46	7.83	5,898.94	82.42	11.34	82.47	0.00	0.00	0.00
6,000.00	1.46	7.83	5,998.91	84.94	11.69	84.99	0.00	0.00	0.00
6,100.00	1.46	7.83	6,098.88	87.47	12.03	87.52	0.00	0.00	0.00
6,200.00	1.46	7.83	6,198.85	90.00	12.38	90.05	0.00	0.00	0.00
6,300.00	1.46	7.83	6,298.81	92.52	12.73	92.57	0.00	0.00	0.00
6,400.00	1.46	7.83	6,398.78	95.05	13.08	95.10	0.00	0.00	0.00
6,500.00	1.46	7.83	6,498.75	97.57	13.42	97.63	0.00	0.00	0.00
6,600.00	1.46	7.83	6,598.72	100.10	13.77	100.16	0.00	0.00	0.00
6,700.00	1.46	7.83	6,698.68	102.62	14.12	102.68	0.00	0.00	0.00
6,800.00	1.46	7.83	6,798.65	105.15	14.47	105.21	0.00	0.00	0.00
6,900.00	1.46	7.83	6,898.62	107.67	14.81	107.74	0.00	0.00	0.00
7,000.00	1.46	7.83	6,998.59	110.20	15.16	110.26	0.00	0.00	0.00
7,100.00	1.46	7.83	7,098.55	112.72	15.51	112.79	0.00	0.00	0.00
7,200.00	1.46	7.83	7,198.52	115.25	15.86	115.32	0.00	0.00	0.00
7,300.00	1.46	7.83	7,298.49	117.78	16.20	117.84	0.00	0.00	0.00
7,400.00	1.46	7.83	7,398.46	120.30	16.55	120.37	0.00	0.00	0.00
7,500.00	1.46	7.83	7,498.42	122.83	16.90	122.90	0.00	0.00	0.00
7,600.00	1.46	7.83	7,598.39	125.35	17.25	125.43	0.00	0.00	0.00
7,700.00	1.46	7.83	7,698.36	127.88	17.59	127.95	0.00	0.00	0.00
7,800.00	1.46	7.83	7,798.33	130.40	17.94	130.48	0.00	0.00	0.00
7,810.20	1.46	7.83	7,808.52	130.66	17.98	130.74	0.00	0.00	0.00
7,900.00	10.43	1.20	7,897.75	139.94	18.30	140.02	10.00	9.99	-7.38
8,000.00	20.43	0.67	7,994.02	166.51	18.70	166.59	10.00	10.00	-0.54
8,100.00	30.43	0.47	8,084.22	209.39	19.11	209.47	10.00	10.00	-0.19
8,200.00	40.43	0.37	8,165.60	267.28	19.53	267.37	10.00	10.00	-0.10
8,300.00	50.43	0.30	8,235.69	338.43	19.95	338.51	10.00	10.00	-0.07
8,400.00	60.43	0.25	8,292.36	420.67	20.34	420.75	10.00	10.00	-0.05
8,500.00	70.43	0.21	8,333.89	511.49	20.71	511.58	10.00	10.00	-0.04
8,600.00	80.43	0.17	8,359.02	608.15	21.03	608.24	10.00	10.00	-0.04
8,695.72	90.00	0.14	8,367.00	703.43	21.30	703.52	10.00	10.00	-0.03
8,700.00	90.00	0.14	8,367.00	707.71	21.31	707.79	0.00	0.00	0.00
8,800.00	90.00	0.14	8,367.00	807.71	21.55	807.79	0.00	0.00	0.00
8,900.00	90.00	0.14	8,367.00	907.71	21.80	907.79	0.00	0.00	0.00
9,000.00	90.00	0.14	8,367.00	1,007.71	22.05	1,007.79	0.00	0.00	0.00
9,100.00	90.00	0.14	8,367.00	1,107.71	22.29	1,107.79	0.00	0.00	0.00
9,200.00	90.00	0.14	8,367.00	1,207.71	22.54	1,207.79	0.00	0.00	0.00
9,300.00	90.00	0.14	8,367.00	1,307.71	22.79	1,307.79	0.00	0.00	0.00

Integrity Directional Services, LLC

Survey Report



Company:	Longs Peak Resources	Local Co-ordinate Reference:	Well Jaco East 1807-11NH
Project:	Weld County, Co (NAD 83)	TVD Reference:	KB=25' @ 5624.00ft
Site:	Jaco East Pad	MD Reference:	KB=25' @ 5624.00ft
Well:	Jaco East 1807-11NH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	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)
9,400.00	90.00	0.14	8,367.00	1,407.71	23.03	1,407.79	0.00	0.00	0.00
9,500.00	90.00	0.14	8,367.00	1,507.71	23.28	1,507.79	0.00	0.00	0.00
9,600.00	90.00	0.14	8,367.00	1,607.71	23.53	1,607.79	0.00	0.00	0.00
9,700.00	90.00	0.14	8,367.00	1,707.71	23.77	1,707.79	0.00	0.00	0.00
9,800.00	90.00	0.14	8,367.00	1,807.70	24.02	1,807.79	0.00	0.00	0.00
9,900.00	90.00	0.14	8,367.00	1,907.70	24.27	1,907.79	0.00	0.00	0.00
10,000.00	90.00	0.14	8,367.00	2,007.70	24.51	2,007.79	0.00	0.00	0.00
10,100.00	90.00	0.14	8,367.00	2,107.70	24.76	2,107.79	0.00	0.00	0.00
10,200.00	90.00	0.14	8,367.00	2,207.70	25.01	2,207.79	0.00	0.00	0.00
10,300.00	90.00	0.14	8,367.00	2,307.70	25.25	2,307.79	0.00	0.00	0.00
10,400.00	90.00	0.14	8,367.00	2,407.70	25.50	2,407.79	0.00	0.00	0.00
10,500.00	90.00	0.14	8,367.00	2,507.70	25.75	2,507.79	0.00	0.00	0.00
10,600.00	90.00	0.14	8,367.00	2,607.70	25.99	2,607.79	0.00	0.00	0.00
10,700.00	90.00	0.14	8,367.00	2,707.70	26.24	2,707.79	0.00	0.00	0.00
10,800.00	90.00	0.14	8,367.00	2,807.70	26.49	2,807.79	0.00	0.00	0.00
10,900.00	90.00	0.14	8,367.00	2,907.70	26.73	2,907.79	0.00	0.00	0.00
11,000.00	90.00	0.14	8,367.00	3,007.70	26.98	3,007.79	0.00	0.00	0.00
11,100.00	90.00	0.14	8,367.00	3,107.70	27.23	3,107.79	0.00	0.00	0.00
11,200.00	90.00	0.14	8,367.00	3,207.70	27.47	3,207.79	0.00	0.00	0.00
11,300.00	90.00	0.14	8,367.00	3,307.70	27.72	3,307.79	0.00	0.00	0.00
11,400.00	90.00	0.14	8,367.00	3,407.70	27.97	3,407.79	0.00	0.00	0.00
11,500.00	90.00	0.14	8,367.00	3,507.70	28.21	3,507.79	0.00	0.00	0.00
11,600.00	90.00	0.14	8,367.00	3,607.70	28.46	3,607.79	0.00	0.00	0.00
11,700.00	90.00	0.14	8,367.00	3,707.70	28.71	3,707.79	0.00	0.00	0.00
11,800.00	90.00	0.14	8,367.00	3,807.70	28.96	3,807.79	0.00	0.00	0.00
11,900.00	90.00	0.14	8,367.00	3,907.70	29.20	3,907.79	0.00	0.00	0.00
12,000.00	90.00	0.14	8,367.00	4,007.70	29.45	4,007.79	0.00	0.00	0.00
12,100.00	90.00	0.14	8,367.00	4,107.70	29.70	4,107.79	0.00	0.00	0.00
12,200.00	90.00	0.14	8,367.00	4,207.70	29.94	4,207.79	0.00	0.00	0.00
12,300.00	90.00	0.14	8,367.00	4,307.70	30.19	4,307.79	0.00	0.00	0.00
12,400.00	90.00	0.14	8,367.00	4,407.70	30.44	4,407.79	0.00	0.00	0.00
12,500.00	90.00	0.14	8,367.00	4,507.70	30.68	4,507.79	0.00	0.00	0.00
12,600.00	90.00	0.14	8,367.00	4,607.70	30.93	4,607.79	0.00	0.00	0.00
12,700.00	90.00	0.14	8,367.00	4,707.70	31.18	4,707.79	0.00	0.00	0.00
12,800.00	90.00	0.14	8,367.00	4,807.70	31.42	4,807.79	0.00	0.00	0.00
12,900.00	90.00	0.14	8,367.00	4,907.70	31.67	4,907.79	0.00	0.00	0.00
13,000.00	90.00	0.14	8,367.00	5,007.70	31.92	5,007.79	0.00	0.00	0.00
13,100.00	90.00	0.14	8,367.00	5,107.70	32.16	5,107.79	0.00	0.00	0.00
13,200.00	90.00	0.14	8,367.00	5,207.69	32.41	5,207.79	0.00	0.00	0.00
13,300.00	90.00	0.14	8,367.00	5,307.69	32.66	5,307.79	0.00	0.00	0.00
13,400.00	90.00	0.14	8,367.00	5,407.69	32.90	5,407.79	0.00	0.00	0.00
13,500.00	90.00	0.14	8,367.00	5,507.69	33.15	5,507.79	0.00	0.00	0.00
13,600.00	90.00	0.14	8,367.00	5,607.69	33.40	5,607.79	0.00	0.00	0.00

Integrity Directional Services, LLC

Survey Report



Company:	Longs Peak Resources	Local Co-ordinate Reference:	Well Jaco East 1807-11NH
Project:	Weld County, Co (NAD 83)	TVD Reference:	KB=25' @ 5624.00ft
Site:	Jaco East Pad	MD Reference:	KB=25' @ 5624.00ft
Well:	Jaco East 1807-11NH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	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)
13,700.00	90.00	0.14	8,367.00	5,707.69	33.64	5,707.79	0.00	0.00	0.00
13,800.00	90.00	0.14	8,367.00	5,807.69	33.89	5,807.79	0.00	0.00	0.00
13,900.00	90.00	0.14	8,367.00	5,907.69	34.14	5,907.78	0.00	0.00	0.00
14,000.00	90.00	0.14	8,367.00	6,007.69	34.38	6,007.78	0.00	0.00	0.00
14,100.00	90.00	0.14	8,367.00	6,107.69	34.63	6,107.78	0.00	0.00	0.00
14,200.00	90.00	0.14	8,367.00	6,207.69	34.88	6,207.78	0.00	0.00	0.00
14,300.00	90.00	0.14	8,367.00	6,307.69	35.12	6,307.78	0.00	0.00	0.00
14,400.00	90.00	0.14	8,367.00	6,407.69	35.37	6,407.78	0.00	0.00	0.00
14,500.00	90.00	0.14	8,367.00	6,507.69	35.62	6,507.78	0.00	0.00	0.00
14,600.00	90.00	0.14	8,367.00	6,607.69	35.86	6,607.78	0.00	0.00	0.00
14,700.00	90.00	0.14	8,367.00	6,707.69	36.11	6,707.78	0.00	0.00	0.00
14,800.00	90.00	0.14	8,367.00	6,807.69	36.36	6,807.78	0.00	0.00	0.00
14,900.00	90.00	0.14	8,367.00	6,907.69	36.60	6,907.78	0.00	0.00	0.00
15,000.00	90.00	0.14	8,367.00	7,007.69	36.85	7,007.78	0.00	0.00	0.00
15,100.00	90.00	0.14	8,367.00	7,107.69	37.10	7,107.78	0.00	0.00	0.00
15,200.00	90.00	0.14	8,367.00	7,207.69	37.34	7,207.78	0.00	0.00	0.00
15,300.00	90.00	0.14	8,367.00	7,307.69	37.59	7,307.78	0.00	0.00	0.00
15,400.00	90.00	0.14	8,367.00	7,407.69	37.84	7,407.78	0.00	0.00	0.00
15,500.00	90.00	0.14	8,367.00	7,507.69	38.08	7,507.78	0.00	0.00	0.00
15,600.00	90.00	0.14	8,367.00	7,607.69	38.33	7,607.78	0.00	0.00	0.00
15,700.00	90.00	0.14	8,367.00	7,707.69	38.58	7,707.78	0.00	0.00	0.00
15,800.00	90.00	0.14	8,367.00	7,807.69	38.82	7,807.78	0.00	0.00	0.00
15,900.00	90.00	0.14	8,367.00	7,907.69	39.07	7,907.78	0.00	0.00	0.00
16,000.00	90.00	0.14	8,367.00	8,007.69	39.32	8,007.78	0.00	0.00	0.00
16,100.00	90.00	0.14	8,367.00	8,107.69	39.57	8,107.78	0.00	0.00	0.00
16,200.00	90.00	0.14	8,367.00	8,207.69	39.81	8,207.78	0.00	0.00	0.00
16,300.00	90.00	0.14	8,367.00	8,307.69	40.06	8,307.78	0.00	0.00	0.00
16,400.00	90.00	0.14	8,367.00	8,407.69	40.31	8,407.78	0.00	0.00	0.00
16,500.00	90.00	0.14	8,367.00	8,507.68	40.55	8,507.78	0.00	0.00	0.00
16,600.00	90.00	0.14	8,367.00	8,607.68	40.80	8,607.78	0.00	0.00	0.00
16,700.00	90.00	0.14	8,367.00	8,707.68	41.05	8,707.78	0.00	0.00	0.00
16,800.00	90.00	0.14	8,367.00	8,807.68	41.29	8,807.78	0.00	0.00	0.00
16,900.00	90.00	0.14	8,367.00	8,907.68	41.54	8,907.78	0.00	0.00	0.00
17,000.00	90.00	0.14	8,367.00	9,007.68	41.79	9,007.78	0.00	0.00	0.00
17,100.00	90.00	0.14	8,367.00	9,107.68	42.03	9,107.78	0.00	0.00	0.00
17,200.00	90.00	0.14	8,367.00	9,207.68	42.28	9,207.78	0.00	0.00	0.00
17,300.00	90.00	0.14	8,367.00	9,307.68	42.53	9,307.78	0.00	0.00	0.00
17,400.00	90.00	0.14	8,367.00	9,407.68	42.77	9,407.78	0.00	0.00	0.00
17,500.00	90.00	0.14	8,367.00	9,507.68	43.02	9,507.78	0.00	0.00	0.00
17,600.00	90.00	0.14	8,367.00	9,607.68	43.27	9,607.78	0.00	0.00	0.00
17,700.00	90.00	0.14	8,367.00	9,707.68	43.51	9,707.78	0.00	0.00	0.00
17,800.00	90.00	0.14	8,367.00	9,807.68	43.76	9,807.78	0.00	0.00	0.00
17,900.00	90.00	0.14	8,367.00	9,907.68	44.01	9,907.78	0.00	0.00	0.00
18,000.00	90.00	0.14	8,367.00	10,007.68	44.25	10,007.78	0.00	0.00	0.00

Integrity Directional Services, LLC

Survey Report



Company:	Longs Peak Resources	Local Co-ordinate Reference:	Well Jaco East 1807-11NH
Project:	Weld County, Co (NAD 83)	TVD Reference:	KB=25' @ 5624.00ft
Site:	Jaco East Pad	MD Reference:	KB=25' @ 5624.00ft
Well:	Jaco East 1807-11NH	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	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)
18,100.00	90.00	0.14	8,367.00	10,107.68	44.50	10,107.78	0.00	0.00	0.00
18,200.00	90.00	0.14	8,367.00	10,207.68	44.75	10,207.78	0.00	0.00	0.00
18,300.00	90.00	0.14	8,367.00	10,307.68	44.99	10,307.78	0.00	0.00	0.00
18,400.00	90.00	0.14	8,367.00	10,407.68	45.24	10,407.78	0.00	0.00	0.00
18,500.00	90.00	0.14	8,367.00	10,507.68	45.49	10,507.78	0.00	0.00	0.00
18,555.83	90.00	0.14	8,367.00	10,563.50	45.62	10,563.60	0.00	0.00	0.00

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									
1807-11NH LP (330' f	0.00	0.01	8,367.00	703.43	21.30	1,577,005.1858	3,221,103.1309	40° 54' 52.236 N	104° 42' 0.144 W
- plan hits target center									
- Point									
1807-11NH BHL (330	0.00	0.00	8,367.00	10,563.50	45.62	1,586,865.2402	3,221,127.4598	40° 56' 29.652 N	104° 41' 58.668 W
- plan hits target center									
- Point									

Checked By: _____ Approved By: _____ Date: _____