



# **GMT Exploration Company, LLC**

**Elbert County, CO (NAD 83)**

**Ruby-Crystal Pad**

**CRYSTAL 6-65 22-10 2HN**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**24 May, 2019**



Project: Elbert County, CO (NAD 83)  
 Site: Ruby-Crystal Pad  
 Well: CRYSTAL 6-65 22-10 2HN  
 Wellbore: Wellbore #1  
 Design: Design #1

# GMT Exploration Company, LLC

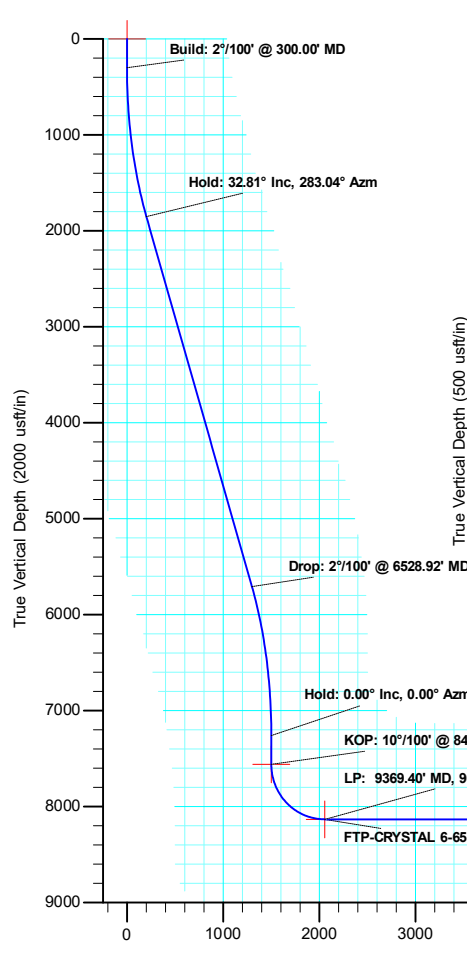
Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: Colorado Central Zone  
 System Datum: Mean Sea Level

### WELL DETAILS: CRYSTAL 6-65 22-10 2HN

+N/-S	+E/-W	Northing	Ground Level: Easting	6179.00 Latitude	6179.00 Longitude
0.00	0.00	1612583.88	3240950.14	39.512210	-104.645965

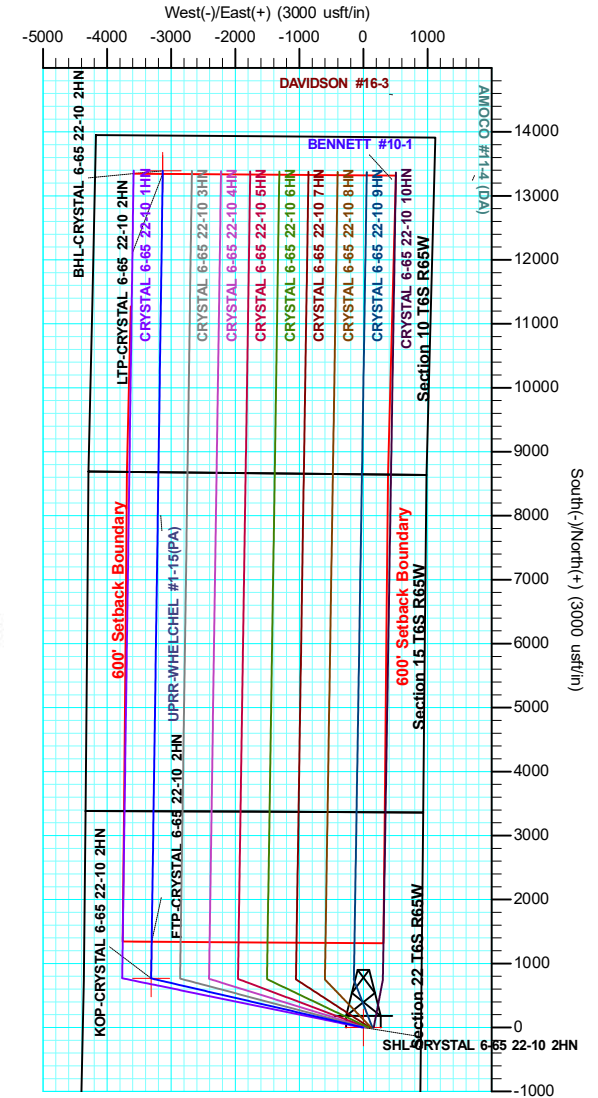
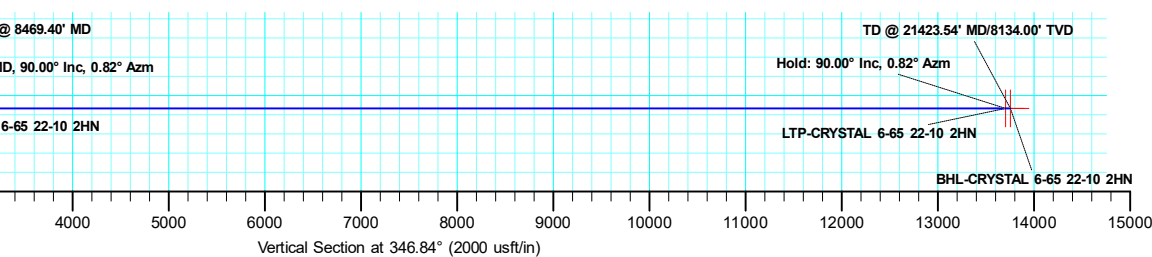
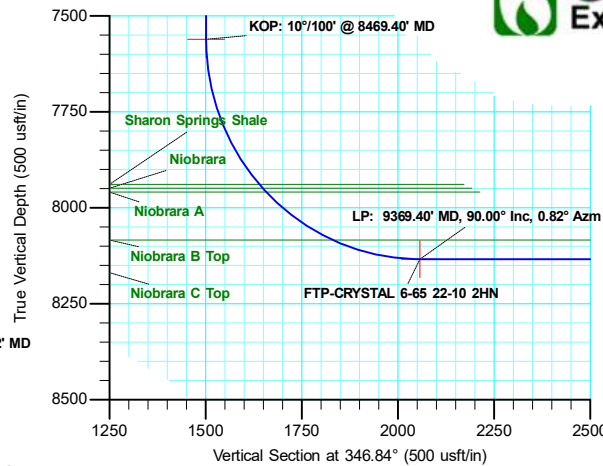
### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
0.00	0.00	0.00	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	
1940.48	32.81	283.04	1852.28	103.15	-445.21	2.00	283.04	201.80	
6528.92	32.81	283.04	5708.76	664.33	-2867.29	0.00	0.00	1299.65	
8169.40	0.00	0.00	7261.04	767.49	-3312.50	2.00	180.00	1501.44	
8469.40	0.00	0.00	7561.04	767.49	-3312.50	0.00	0.00	1501.44	
9369.40	90.00	0.82	8134.00	1340.39	-3304.27	10.00	0.00	2057.43	FTP-CRYSTAL 6-65 22-10 2HN
21373.54	90.00	0.82	8134.00	13343.29	-3132.00	0.00	0.00	13705.93	LTP-CRYSTAL 6-65 22-10 2HN
21423.54	90.00	0.82	8134.00	13393.28	-3131.28	0.00	0.00	13754.45	BHL-CRYSTAL 6-65 22-10 2HN



Azimuths to True North  
 Magnetic North: 7.87°  
 Magnetic Field  
 Strength: 51710.4nT  
 Dip Angle: 66.11°  
 Date: 5/21/2019  
 Model: IGRF2015

SHL: 1932 FSL/ 898 FEL Sec. 22  
 FTP: 2041 FNL/ 1052 FWL Sec. 22  
 LTP: 600 FNL/ 1055 FWL Sec. 10  
 BHL: 550 FNL/ 1055 FWL Sec. 10





<b>Database:</b>	Local	<b>Local Co-ordinate Reference:</b>	Well CRYSTAL6-65 22-10 2HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6199.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6199.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 2HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	Elbert 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 Central Zone		

<b>Site</b>	Ruby-Crystal Pad				
<b>Site Position:</b>		<b>Northing:</b>	1,613,266.75 usft	<b>Latitude:</b>	39.514130
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,239,201.95 usft	<b>Longitude:</b>	-104.652138
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.53 °

<b>Well</b>	CRYSTAL 6-65 22-10 2HN					
<b>Well Position</b>	<b>+N/-S</b>	-699.16 usft	<b>Northing:</b>	1,612,583.88 usft	<b>Latitude:</b>	39.512210
	<b>+E/-W</b>	1,741.74 usft	<b>Easting:</b>	3,240,950.14 usft	<b>Longitude:</b>	-104.645965
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	6,179.00 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	5/21/2019	7.87	66.11	51,710.39347014

<b>Design</b>	Design #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) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	346.84

<b>Plan Survey Tool Program</b>	<b>Date</b>	5/24/2019			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	21,423.38	Design #1 (Wellbore #1)	MWD	
				OWSG MWD - Standard	

<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>
0.00	0.00	0.00	0.00	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	
1,940.48	32.81	283.04	1,852.28	103.15	-445.21	2.00	2.00	0.00	283.04	
6,528.92	32.81	283.04	5,708.76	664.33	-2,867.29	0.00	0.00	0.00	0.00	
8,169.40	0.00	0.00	7,261.04	767.49	-3,312.50	2.00	-2.00	0.00	180.00	
8,469.40	0.00	0.00	7,561.04	767.49	-3,312.50	0.00	0.00	0.00	0.00	
9,369.40	90.00	0.82	8,134.00	1,340.39	-3,304.27	10.00	10.00	0.00	0.00	FTP-CRYSTAL 6-65
21,373.54	90.00	0.82	8,134.00	13,343.29	-3,132.00	0.00	0.00	0.00	0.00	LTP-CRYSTAL 6-65
21,423.54	90.00	0.82	8,134.00	13,393.28	-3,131.29	0.00	0.00	0.00	0.00	BHL-CRYSTAL 6-65



<b>Database:</b>	Local	<b>Local Co-ordinate Reference:</b>	Well CRYSTAL6-65 22-10 2HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6199.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6199.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 2HN	<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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>SHL-CRYSTAL 6-65 22-10 2HN</b>									
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
<b>Build: 2°/100' @ 300.00' MD</b>									
400.00	2.00	283.04	399.98	0.39	-1.70	0.77	2.00	2.00	0.00
500.00	4.00	283.04	499.84	1.58	-6.80	3.08	2.00	2.00	0.00
600.00	6.00	283.04	599.45	3.54	-15.29	6.93	2.00	2.00	0.00
700.00	8.00	283.04	698.70	6.29	-27.16	12.31	2.00	2.00	0.00
800.00	10.00	283.04	797.47	9.82	-42.40	19.22	2.00	2.00	0.00
900.00	12.00	283.04	895.62	14.13	-60.99	27.64	2.00	2.00	0.00
1,000.00	14.00	283.04	993.06	19.21	-82.90	37.58	2.00	2.00	0.00
1,100.00	16.00	283.04	1,089.64	25.05	-108.11	49.00	2.00	2.00	0.00
1,200.00	18.00	283.04	1,185.27	31.65	-136.59	61.91	2.00	2.00	0.00
1,300.00	20.00	283.04	1,279.82	39.00	-168.31	76.29	2.00	2.00	0.00
1,400.00	22.00	283.04	1,373.17	47.08	-203.22	92.11	2.00	2.00	0.00
1,500.00	24.00	283.04	1,465.21	55.90	-241.28	109.37	2.00	2.00	0.00
1,600.00	26.00	283.04	1,555.84	65.44	-282.45	128.03	2.00	2.00	0.00
1,700.00	28.00	283.04	1,644.94	75.69	-326.68	148.07	2.00	2.00	0.00
1,800.00	30.00	283.04	1,732.39	86.63	-373.90	169.48	2.00	2.00	0.00
1,900.00	32.00	283.04	1,818.11	98.26	-424.08	192.22	2.00	2.00	0.00
1,940.48	32.81	283.04	1,852.28	103.15	-445.21	201.80	2.00	2.00	0.00
<b>Hold: 32.81° Inc, 283.04° Azm</b>									
2,000.00	32.81	283.04	1,902.31	110.43	-476.63	216.04	0.00	0.00	0.00
2,100.00	32.81	283.04	1,986.36	122.66	-529.41	239.97	0.00	0.00	0.00
2,200.00	32.81	283.04	2,070.40	134.89	-582.20	263.89	0.00	0.00	0.00
2,300.00	32.81	283.04	2,154.45	147.12	-634.99	287.82	0.00	0.00	0.00
2,400.00	32.81	283.04	2,238.50	159.35	-687.77	311.74	0.00	0.00	0.00
2,500.00	32.81	283.04	2,322.55	171.58	-740.56	335.67	0.00	0.00	0.00
2,600.00	32.81	283.04	2,406.59	183.81	-793.35	359.60	0.00	0.00	0.00
2,700.00	32.81	283.04	2,490.64	196.04	-846.13	383.52	0.00	0.00	0.00
2,800.00	32.81	283.04	2,574.69	208.27	-898.92	407.45	0.00	0.00	0.00
2,900.00	32.81	283.04	2,658.74	220.51	-951.71	431.38	0.00	0.00	0.00
3,000.00	32.81	283.04	2,742.78	232.74	-1,004.49	455.30	0.00	0.00	0.00
3,100.00	32.81	283.04	2,826.83	244.97	-1,057.28	479.23	0.00	0.00	0.00
3,200.00	32.81	283.04	2,910.88	257.20	-1,110.07	503.16	0.00	0.00	0.00
3,300.00	32.81	283.04	2,994.93	269.43	-1,162.85	527.08	0.00	0.00	0.00
3,400.00	32.81	283.04	3,078.98	281.66	-1,215.64	551.01	0.00	0.00	0.00
3,500.00	32.81	283.04	3,163.02	293.89	-1,268.43	574.93	0.00	0.00	0.00
3,600.00	32.81	283.04	3,247.07	306.12	-1,321.21	598.86	0.00	0.00	0.00
3,700.00	32.81	283.04	3,331.12	318.35	-1,374.00	622.79	0.00	0.00	0.00
3,800.00	32.81	283.04	3,415.17	330.58	-1,426.78	646.71	0.00	0.00	0.00
3,900.00	32.81	283.04	3,499.21	342.81	-1,479.57	670.64	0.00	0.00	0.00
4,000.00	32.81	283.04	3,583.26	355.04	-1,532.36	694.57	0.00	0.00	0.00
4,100.00	32.81	283.04	3,667.31	367.27	-1,585.14	718.49	0.00	0.00	0.00
4,200.00	32.81	283.04	3,751.36	379.50	-1,637.93	742.42	0.00	0.00	0.00
4,300.00	32.81	283.04	3,835.40	391.73	-1,690.72	766.35	0.00	0.00	0.00
4,400.00	32.81	283.04	3,919.45	403.96	-1,743.50	790.27	0.00	0.00	0.00
4,500.00	32.81	283.04	4,003.50	416.19	-1,796.29	814.20	0.00	0.00	0.00
4,600.00	32.81	283.04	4,087.55	428.42	-1,849.08	838.12	0.00	0.00	0.00
4,700.00	32.81	283.04	4,171.59	440.65	-1,901.86	862.05	0.00	0.00	0.00
4,800.00	32.81	283.04	4,255.64	452.88	-1,954.65	885.98	0.00	0.00	0.00



<b>Database:</b>	Local	<b>Local Co-ordinate Reference:</b>	Well CRYSTAL6-65 22-10 2HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6199.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6199.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 2HN	<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)
4,900.00	32.81	283.04	4,339.69	465.11	-2,007.44	909.90	0.00	0.00	0.00
5,000.00	32.81	283.04	4,423.74	477.34	-2,060.22	933.83	0.00	0.00	0.00
5,100.00	32.81	283.04	4,507.78	489.57	-2,113.01	957.76	0.00	0.00	0.00
5,200.00	32.81	283.04	4,591.83	501.80	-2,165.80	981.68	0.00	0.00	0.00
5,300.00	32.81	283.04	4,675.88	514.03	-2,218.58	1,005.61	0.00	0.00	0.00
5,400.00	32.81	283.04	4,759.93	526.26	-2,271.37	1,029.54	0.00	0.00	0.00
5,500.00	32.81	283.04	4,843.98	538.49	-2,324.16	1,053.46	0.00	0.00	0.00
5,600.00	32.81	283.04	4,928.02	550.72	-2,376.94	1,077.39	0.00	0.00	0.00
5,700.00	32.81	283.04	5,012.07	562.95	-2,429.73	1,101.31	0.00	0.00	0.00
5,800.00	32.81	283.04	5,096.12	575.18	-2,482.52	1,125.24	0.00	0.00	0.00
5,900.00	32.81	283.04	5,180.17	587.42	-2,535.30	1,149.17	0.00	0.00	0.00
6,000.00	32.81	283.04	5,264.21	599.65	-2,588.09	1,173.09	0.00	0.00	0.00
6,100.00	32.81	283.04	5,348.26	611.88	-2,640.87	1,197.02	0.00	0.00	0.00
6,200.00	32.81	283.04	5,432.31	624.11	-2,693.66	1,220.95	0.00	0.00	0.00
6,300.00	32.81	283.04	5,516.36	636.34	-2,746.45	1,244.87	0.00	0.00	0.00
6,400.00	32.81	283.04	5,600.40	648.57	-2,799.23	1,268.80	0.00	0.00	0.00
6,500.00	32.81	283.04	5,684.45	660.80	-2,852.02	1,292.73	0.00	0.00	0.00
6,528.92	32.81	283.04	5,708.76	664.33	-2,867.29	1,299.65	0.00	0.00	0.00
<b>Drop: 2°/100' @ 6528.92' MD</b>									
6,600.00	31.39	283.04	5,768.97	672.86	-2,904.08	1,316.32	2.00	-2.00	0.00
6,700.00	29.39	283.04	5,855.23	684.28	-2,953.36	1,338.66	2.00	-2.00	0.00
6,800.00	27.39	283.04	5,943.20	695.01	-2,999.67	1,359.65	2.00	-2.00	0.00
6,900.00	25.39	283.04	6,032.77	705.04	-3,042.97	1,379.28	2.00	-2.00	0.00
7,000.00	23.39	283.04	6,123.85	714.36	-3,083.19	1,397.51	2.00	-2.00	0.00
7,100.00	21.39	283.04	6,216.31	722.96	-3,120.30	1,414.33	2.00	-2.00	0.00
7,200.00	19.39	283.04	6,310.04	730.82	-3,154.23	1,429.71	2.00	-2.00	0.00
7,300.00	17.39	283.04	6,404.93	737.94	-3,184.96	1,443.64	2.00	-2.00	0.00
7,400.00	15.39	283.04	6,500.86	744.31	-3,212.45	1,456.09	2.00	-2.00	0.00
7,500.00	13.39	283.04	6,597.72	749.91	-3,236.65	1,467.07	2.00	-2.00	0.00
7,600.00	11.39	283.04	6,695.38	754.76	-3,257.55	1,476.54	2.00	-2.00	0.00
7,700.00	9.39	283.04	6,793.74	758.83	-3,275.12	1,484.50	2.00	-2.00	0.00
7,800.00	7.39	283.04	6,892.66	762.12	-3,289.33	1,490.94	2.00	-2.00	0.00
7,900.00	5.39	283.04	6,992.04	764.63	-3,300.17	1,495.85	2.00	-2.00	0.00
8,000.00	3.39	283.04	7,091.74	766.36	-3,307.62	1,499.23	2.00	-2.00	0.00
8,100.00	1.39	283.04	7,191.65	767.30	-3,311.68	1,501.07	2.00	-2.00	0.00
8,169.40	0.00	0.00	7,261.04	767.49	-3,312.50	1,501.44	2.00	-2.00	0.00
<b>Hold: 0.00° Inc, 0.00° Azm</b>									
8,200.00	0.00	0.00	7,291.64	767.49	-3,312.50	1,501.44	0.00	0.00	0.00
8,300.00	0.00	0.00	7,391.64	767.49	-3,312.50	1,501.44	0.00	0.00	0.00
8,400.00	0.00	0.00	7,491.64	767.49	-3,312.50	1,501.44	0.00	0.00	0.00
8,469.40	0.00	0.00	7,561.04	767.49	-3,312.50	1,501.44	0.00	0.00	0.00
<b>KOP: 10°/100' @ 8469.40' MD - KOP-CRYSTAL 6-65 22-10 2HN</b>									
8,500.00	3.06	0.82	7,591.63	768.30	-3,312.48	1,502.24	10.00	10.00	0.00
8,550.00	8.06	0.82	7,641.38	773.15	-3,312.42	1,506.94	10.00	10.00	0.00
8,600.00	13.06	0.82	7,690.51	782.31	-3,312.28	1,515.82	10.00	10.00	0.00
8,650.00	18.06	0.82	7,738.67	795.71	-3,312.09	1,528.84	10.00	10.00	0.00
8,700.00	23.06	0.82	7,785.47	813.26	-3,311.84	1,545.87	10.00	10.00	0.00
8,750.00	28.06	0.82	7,830.56	834.83	-3,311.53	1,566.80	10.00	10.00	0.00
8,800.00	33.06	0.82	7,873.60	860.24	-3,311.17	1,591.46	10.00	10.00	0.00
8,850.00	38.06	0.82	7,914.26	889.30	-3,310.75	1,619.66	10.00	10.00	0.00
8,900.00	43.06	0.82	7,952.24	921.80	-3,310.28	1,651.20	10.00	10.00	0.00
8,950.00	48.06	0.82	7,987.23	957.49	-3,309.77	1,685.83	10.00	10.00	0.00
9,000.00	53.06	0.82	8,018.99	996.09	-3,309.22	1,723.29	10.00	10.00	0.00



<b>Database:</b>	Local	<b>Local Co-ordinate Reference:</b>	Well CRYSTAL6-65 22-10 2HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6199.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6199.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 2HN	<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)
9,050.00	58.06	0.82	8,047.26	1,037.30	-3,308.62	1,763.29	10.00	10.00	0.00
9,100.00	63.06	0.82	8,071.82	1,080.83	-3,308.00	1,805.53	10.00	10.00	0.00
9,150.00	68.06	0.82	8,092.50	1,126.33	-3,307.35	1,849.69	10.00	10.00	0.00
9,200.00	73.06	0.82	8,109.14	1,173.46	-3,306.67	1,895.43	10.00	10.00	0.00
9,250.00	78.06	0.82	8,121.60	1,221.86	-3,305.98	1,942.40	10.00	10.00	0.00
9,300.00	83.06	0.82	8,129.80	1,271.16	-3,305.27	1,990.25	10.00	10.00	0.00
9,350.00	88.06	0.82	8,133.67	1,320.99	-3,304.55	2,038.60	10.00	10.00	0.00
9,369.40	90.00	0.82	8,134.00	1,340.39	-3,304.27	2,057.43	10.00	10.00	0.00
<b>LP: 9369.40' MD, 90.00° Inc, 0.82° Azm - FTP-CRYSTAL 6-65 22-10 2HN</b>									
9,400.00	90.00	0.82	8,134.00	1,370.98	-3,303.83	2,087.12	0.00	0.00	0.00
9,500.00	90.00	0.82	8,134.00	1,470.97	-3,302.40	2,184.16	0.00	0.00	0.00
9,600.00	90.00	0.82	8,134.00	1,570.96	-3,300.96	2,281.19	0.00	0.00	0.00
9,700.00	90.00	0.82	8,134.00	1,670.95	-3,299.53	2,378.23	0.00	0.00	0.00
9,800.00	90.00	0.82	8,134.00	1,770.94	-3,298.09	2,475.27	0.00	0.00	0.00
9,900.00	90.00	0.82	8,134.00	1,870.93	-3,296.66	2,572.31	0.00	0.00	0.00
10,000.00	90.00	0.82	8,134.00	1,970.92	-3,295.22	2,669.34	0.00	0.00	0.00
10,100.00	90.00	0.82	8,134.00	2,070.91	-3,293.79	2,766.38	0.00	0.00	0.00
10,200.00	90.00	0.82	8,134.00	2,170.90	-3,292.35	2,863.42	0.00	0.00	0.00
10,300.00	90.00	0.82	8,134.00	2,270.89	-3,290.92	2,960.46	0.00	0.00	0.00
10,400.00	90.00	0.82	8,134.00	2,370.88	-3,289.48	3,057.49	0.00	0.00	0.00
10,500.00	90.00	0.82	8,134.00	2,470.87	-3,288.05	3,154.53	0.00	0.00	0.00
10,600.00	90.00	0.82	8,134.00	2,570.86	-3,286.61	3,251.57	0.00	0.00	0.00
10,700.00	90.00	0.82	8,134.00	2,670.85	-3,285.18	3,348.61	0.00	0.00	0.00
10,800.00	90.00	0.82	8,134.00	2,770.84	-3,283.74	3,445.64	0.00	0.00	0.00
10,900.00	90.00	0.82	8,134.00	2,870.83	-3,282.31	3,542.68	0.00	0.00	0.00
11,000.00	90.00	0.82	8,134.00	2,970.82	-3,280.87	3,639.72	0.00	0.00	0.00
11,100.00	90.00	0.82	8,134.00	3,070.81	-3,279.44	3,736.76	0.00	0.00	0.00
11,200.00	90.00	0.82	8,134.00	3,170.80	-3,278.00	3,833.79	0.00	0.00	0.00
11,300.00	90.00	0.82	8,134.00	3,270.79	-3,276.57	3,930.83	0.00	0.00	0.00
11,400.00	90.00	0.82	8,134.00	3,370.78	-3,275.13	4,027.87	0.00	0.00	0.00
11,500.00	90.00	0.82	8,134.00	3,470.77	-3,273.70	4,124.91	0.00	0.00	0.00
11,600.00	90.00	0.82	8,134.00	3,570.75	-3,272.26	4,221.94	0.00	0.00	0.00
11,700.00	90.00	0.82	8,134.00	3,670.74	-3,270.83	4,318.98	0.00	0.00	0.00
11,800.00	90.00	0.82	8,134.00	3,770.73	-3,269.39	4,416.02	0.00	0.00	0.00
11,900.00	90.00	0.82	8,134.00	3,870.72	-3,267.96	4,513.06	0.00	0.00	0.00
12,000.00	90.00	0.82	8,134.00	3,970.71	-3,266.52	4,610.09	0.00	0.00	0.00
12,100.00	90.00	0.82	8,134.00	4,070.70	-3,265.09	4,707.13	0.00	0.00	0.00
12,200.00	90.00	0.82	8,134.00	4,170.69	-3,263.65	4,804.17	0.00	0.00	0.00
12,300.00	90.00	0.82	8,134.00	4,270.68	-3,262.22	4,901.21	0.00	0.00	0.00
12,400.00	90.00	0.82	8,134.00	4,370.67	-3,260.78	4,998.24	0.00	0.00	0.00
12,500.00	90.00	0.82	8,134.00	4,470.66	-3,259.35	5,095.28	0.00	0.00	0.00
12,600.00	90.00	0.82	8,134.00	4,570.65	-3,257.91	5,192.32	0.00	0.00	0.00
12,700.00	90.00	0.82	8,134.00	4,670.64	-3,256.48	5,289.35	0.00	0.00	0.00
12,800.00	90.00	0.82	8,134.00	4,770.63	-3,255.04	5,386.39	0.00	0.00	0.00
12,900.00	90.00	0.82	8,134.00	4,870.62	-3,253.61	5,483.43	0.00	0.00	0.00
13,000.00	90.00	0.82	8,134.00	4,970.61	-3,252.17	5,580.47	0.00	0.00	0.00
13,100.00	90.00	0.82	8,134.00	5,070.60	-3,250.74	5,677.50	0.00	0.00	0.00
13,200.00	90.00	0.82	8,134.00	5,170.59	-3,249.30	5,774.54	0.00	0.00	0.00
13,300.00	90.00	0.82	8,134.00	5,270.58	-3,247.87	5,871.58	0.00	0.00	0.00
13,400.00	90.00	0.82	8,134.00	5,370.57	-3,246.43	5,968.62	0.00	0.00	0.00
13,500.00	90.00	0.82	8,134.00	5,470.56	-3,245.00	6,065.65	0.00	0.00	0.00
13,600.00	90.00	0.82	8,134.00	5,570.55	-3,243.56	6,162.69	0.00	0.00	0.00
13,700.00	90.00	0.82	8,134.00	5,670.54	-3,242.13	6,259.73	0.00	0.00	0.00
13,800.00	90.00	0.82	8,134.00	5,770.53	-3,240.69	6,356.77	0.00	0.00	0.00



<b>Database:</b>	Local	<b>Local Co-ordinate Reference:</b>	Well CRYSTAL6-65 22-10 2HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6199.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6199.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 2HN	<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)
13,900.00	90.00	0.82	8,134.00	5,870.52	-3,239.26	6,453.80	0.00	0.00	0.00
14,000.00	90.00	0.82	8,134.00	5,970.51	-3,237.82	6,550.84	0.00	0.00	0.00
14,100.00	90.00	0.82	8,134.00	6,070.50	-3,236.39	6,647.88	0.00	0.00	0.00
14,200.00	90.00	0.82	8,134.00	6,170.49	-3,234.95	6,744.92	0.00	0.00	0.00
14,300.00	90.00	0.82	8,134.00	6,270.48	-3,233.51	6,841.95	0.00	0.00	0.00
14,400.00	90.00	0.82	8,134.00	6,370.47	-3,232.08	6,938.99	0.00	0.00	0.00
14,500.00	90.00	0.82	8,134.00	6,470.46	-3,230.64	7,036.03	0.00	0.00	0.00
14,600.00	90.00	0.82	8,134.00	6,570.45	-3,229.21	7,133.07	0.00	0.00	0.00
14,700.00	90.00	0.82	8,134.00	6,670.44	-3,227.77	7,230.10	0.00	0.00	0.00
14,800.00	90.00	0.82	8,134.00	6,770.43	-3,226.34	7,327.14	0.00	0.00	0.00
14,900.00	90.00	0.82	8,134.00	6,870.42	-3,224.90	7,424.18	0.00	0.00	0.00
15,000.00	90.00	0.82	8,134.00	6,970.40	-3,223.47	7,521.22	0.00	0.00	0.00
15,100.00	90.00	0.82	8,134.00	7,070.39	-3,222.03	7,618.25	0.00	0.00	0.00
15,200.00	90.00	0.82	8,134.00	7,170.38	-3,220.60	7,715.29	0.00	0.00	0.00
15,300.00	90.00	0.82	8,134.00	7,270.37	-3,219.16	7,812.33	0.00	0.00	0.00
15,400.00	90.00	0.82	8,134.00	7,370.36	-3,217.73	7,909.37	0.00	0.00	0.00
15,500.00	90.00	0.82	8,134.00	7,470.35	-3,216.29	8,006.40	0.00	0.00	0.00
15,600.00	90.00	0.82	8,134.00	7,570.34	-3,214.86	8,103.44	0.00	0.00	0.00
15,700.00	90.00	0.82	8,134.00	7,670.33	-3,213.42	8,200.48	0.00	0.00	0.00
15,800.00	90.00	0.82	8,134.00	7,770.32	-3,211.99	8,297.52	0.00	0.00	0.00
15,900.00	90.00	0.82	8,134.00	7,870.31	-3,210.55	8,394.55	0.00	0.00	0.00
16,000.00	90.00	0.82	8,134.00	7,970.30	-3,209.12	8,491.59	0.00	0.00	0.00
16,100.00	90.00	0.82	8,134.00	8,070.29	-3,207.68	8,588.63	0.00	0.00	0.00
16,200.00	90.00	0.82	8,134.00	8,170.28	-3,206.25	8,685.66	0.00	0.00	0.00
16,300.00	90.00	0.82	8,134.00	8,270.27	-3,204.81	8,782.70	0.00	0.00	0.00
16,400.00	90.00	0.82	8,134.00	8,370.26	-3,203.38	8,879.74	0.00	0.00	0.00
16,500.00	90.00	0.82	8,134.00	8,470.25	-3,201.94	8,976.78	0.00	0.00	0.00
16,600.00	90.00	0.82	8,134.00	8,570.24	-3,200.51	9,073.81	0.00	0.00	0.00
16,700.00	90.00	0.82	8,134.00	8,670.23	-3,199.07	9,170.85	0.00	0.00	0.00
16,800.00	90.00	0.82	8,134.00	8,770.22	-3,197.64	9,267.89	0.00	0.00	0.00
16,900.00	90.00	0.82	8,134.00	8,870.21	-3,196.20	9,364.93	0.00	0.00	0.00
17,000.00	90.00	0.82	8,134.00	8,970.20	-3,194.77	9,461.96	0.00	0.00	0.00
17,100.00	90.00	0.82	8,134.00	9,070.19	-3,193.33	9,559.00	0.00	0.00	0.00
17,200.00	90.00	0.82	8,134.00	9,170.18	-3,191.90	9,656.04	0.00	0.00	0.00
17,300.00	90.00	0.82	8,134.00	9,270.17	-3,190.46	9,753.08	0.00	0.00	0.00
17,400.00	90.00	0.82	8,134.00	9,370.16	-3,189.03	9,850.11	0.00	0.00	0.00
17,500.00	90.00	0.82	8,134.00	9,470.15	-3,187.59	9,947.15	0.00	0.00	0.00
17,600.00	90.00	0.82	8,134.00	9,570.14	-3,186.16	10,044.19	0.00	0.00	0.00
17,700.00	90.00	0.82	8,134.00	9,670.13	-3,184.72	10,141.23	0.00	0.00	0.00
17,800.00	90.00	0.82	8,134.00	9,770.12	-3,183.29	10,238.26	0.00	0.00	0.00
17,900.00	90.00	0.82	8,134.00	9,870.11	-3,181.85	10,335.30	0.00	0.00	0.00
18,000.00	90.00	0.82	8,134.00	9,970.10	-3,180.42	10,432.34	0.00	0.00	0.00
18,100.00	90.00	0.82	8,134.00	10,070.09	-3,178.98	10,529.38	0.00	0.00	0.00
18,200.00	90.00	0.82	8,134.00	10,170.08	-3,177.55	10,626.41	0.00	0.00	0.00
18,300.00	90.00	0.82	8,134.00	10,270.07	-3,176.11	10,723.45	0.00	0.00	0.00
18,400.00	90.00	0.82	8,134.00	10,370.05	-3,174.68	10,820.49	0.00	0.00	0.00
18,500.00	90.00	0.82	8,134.00	10,470.04	-3,173.24	10,917.53	0.00	0.00	0.00
18,600.00	90.00	0.82	8,134.00	10,570.03	-3,171.81	11,014.56	0.00	0.00	0.00
18,700.00	90.00	0.82	8,134.00	10,670.02	-3,170.37	11,111.60	0.00	0.00	0.00
18,800.00	90.00	0.82	8,134.00	10,770.01	-3,168.94	11,208.64	0.00	0.00	0.00
18,900.00	90.00	0.82	8,134.00	10,870.00	-3,167.50	11,305.68	0.00	0.00	0.00
19,000.00	90.00	0.82	8,134.00	10,969.99	-3,166.07	11,402.71	0.00	0.00	0.00
19,100.00	90.00	0.82	8,134.00	11,069.98	-3,164.63	11,499.75	0.00	0.00	0.00
19,200.00	90.00	0.82	8,134.00	11,169.97	-3,163.20	11,596.79	0.00	0.00	0.00

<b>Database:</b>	Local	<b>Local Co-ordinate Reference:</b>	Well CRYSTAL6-65 22-10 2HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6199.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6199.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 2HN	<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)	
19,300.00	90.00	0.82	8,134.00	11,269.96	-3,161.76	11,693.82	0.00	0.00	0.00	
19,400.00	90.00	0.82	8,134.00	11,369.95	-3,160.32	11,790.86	0.00	0.00	0.00	
19,500.00	90.00	0.82	8,134.00	11,469.94	-3,158.89	11,887.90	0.00	0.00	0.00	
19,600.00	90.00	0.82	8,134.00	11,569.93	-3,157.45	11,984.94	0.00	0.00	0.00	
19,700.00	90.00	0.82	8,134.00	11,669.92	-3,156.02	12,081.97	0.00	0.00	0.00	
19,800.00	90.00	0.82	8,134.00	11,769.91	-3,154.58	12,179.01	0.00	0.00	0.00	
19,900.00	90.00	0.82	8,134.00	11,869.90	-3,153.15	12,276.05	0.00	0.00	0.00	
20,000.00	90.00	0.82	8,134.00	11,969.89	-3,151.71	12,373.09	0.00	0.00	0.00	
20,100.00	90.00	0.82	8,134.00	12,069.88	-3,150.28	12,470.12	0.00	0.00	0.00	
20,200.00	90.00	0.82	8,134.00	12,169.87	-3,148.84	12,567.16	0.00	0.00	0.00	
20,300.00	90.00	0.82	8,134.00	12,269.86	-3,147.41	12,664.20	0.00	0.00	0.00	
20,400.00	90.00	0.82	8,134.00	12,369.85	-3,145.97	12,761.24	0.00	0.00	0.00	
20,500.00	90.00	0.82	8,134.00	12,469.84	-3,144.54	12,858.27	0.00	0.00	0.00	
20,600.00	90.00	0.82	8,134.00	12,569.83	-3,143.10	12,955.31	0.00	0.00	0.00	
20,700.00	90.00	0.82	8,134.00	12,669.82	-3,141.67	13,052.35	0.00	0.00	0.00	
20,800.00	90.00	0.82	8,134.00	12,769.81	-3,140.23	13,149.39	0.00	0.00	0.00	
20,900.00	90.00	0.82	8,134.00	12,869.80	-3,138.80	13,246.42	0.00	0.00	0.00	
21,000.00	90.00	0.82	8,134.00	12,969.79	-3,137.36	13,343.46	0.00	0.00	0.00	
21,100.00	90.00	0.82	8,134.00	13,069.78	-3,135.93	13,440.50	0.00	0.00	0.00	
21,200.00	90.00	0.82	8,134.00	13,169.77	-3,134.49	13,537.54	0.00	0.00	0.00	
21,300.00	90.00	0.82	8,134.00	13,269.76	-3,133.06	13,634.57	0.00	0.00	0.00	
21,373.54	90.00	0.82	8,134.00	13,343.29	-3,132.00	13,705.93	0.00	0.00	0.00	
<b>Hold: 90.00° Inc, 0.82° Azm - LTP-CRYSTAL 6-65 22-10 2HN</b>										
21,400.00	90.00	0.82	8,134.00	13,369.75	-3,131.62	13,731.61	0.00	0.00	0.00	
21,423.54	90.00	0.82	8,134.00	13,393.28	-3,131.28	13,754.45	0.00	0.00	0.00	
<b>TD @ 21423.54' MD/8134.00' TVD - BHL-CRYSTAL 6-65 22-10 2HN</b>										

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	
SHL-CRYSTAL 6-65 2 - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,612,583.88	3,240,950.14	39.512210	-104.645965	
KOP-CRYSTAL 6-65 1 - plan hits target center - Point	0.00	0.00	7,561.04	767.49	-3,312.50	1,613,320.19	3,237,630.58	39.514317	-104.657706	
LTP-CRYSTAL 6-65 2 - plan hits target center - Point	0.00	0.00	8,134.00	13,343.29	-3,132.00	1,625,897.13	3,237,692.84	39.548843	-104.657072	
FTP-CRYSTAL 6-65 2 - plan hits target center - Point	0.00	0.00	8,134.00	1,340.39	-3,304.27	1,613,893.14	3,237,633.41	39.515890	-104.657677	
BHL-CRYSTAL 6-65 2 - plan hits target center - Point	0.00	0.00	8,134.00	13,393.28	-3,131.29	1,625,947.13	3,237,693.09	39.548980	-104.657069	

<b>Database:</b>	Local	<b>Local Co-ordinate Reference:</b>	Well CRYSTAL6-65 22-10 2HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6199.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6199.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 2HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

**Formations**

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
459.08	459.00	Denver			
1,575.75	1,534.00	Upper Arapahoe			
2,394.65	2,234.00	Laramie - Fox Hills			
2,596.91	2,404.00	Pierre Shale (Base of Fox Hills)			
6,434.02	5,629.00	Sussex Sandstone			
8,882.14	7,939.00	Sharon Springs Shale			
8,895.59	7,949.00	Niobrara			
8,909.33	7,959.00	Niobrara A			
9,128.26	8,084.00	Niobrara B Top			

**Plan Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
300.00	300.00	0.00	0.00	Build: 2°/100' @ 300.00' MD
1,940.48	1,852.28	103.15	-445.21	Hold: 32.81° Inc, 283.04° Azm
6,528.92	5,708.76	664.33	-2,867.29	Drop: 2°/100' @ 6528.92' MD
8,169.40	7,261.04	767.49	-3,312.50	Hold: 0.00° Inc, 0.00° Azm
8,469.40	7,561.04	767.49	-3,312.50	KOP: 10°/100' @ 8469.40' MD
9,369.40	8,134.00	1,340.39	-3,304.27	LP: 9369.40' MD, 90.00° Inc, 0.82° Azm
21,373.54	8,134.00	13,343.29	-3,132.00	Hold: 90.00° Inc, 0.82° Azm
21,423.54	8,134.00	13,393.28	-3,131.29	TD @ 21423.54' MD/8134.00' TVD