



# **GMT Exploration Company, LLC**

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

**Ruby-Crystal Pad**

**CRYSTAL 6-65 22-10 8HN**

**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 8HN  
 Wellbore: Wellbore #1  
 Design: Design #1

# GMT Exploration Company, LLC

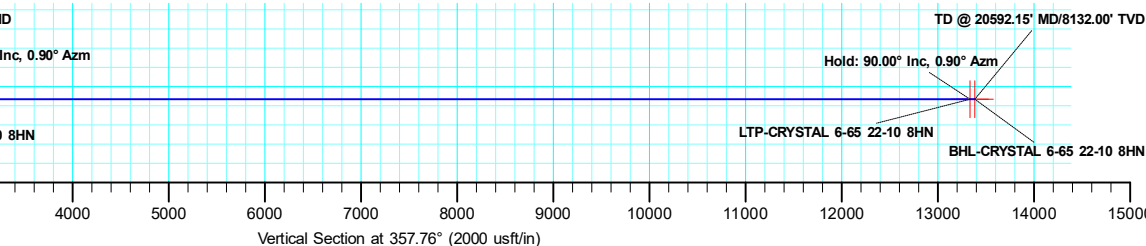
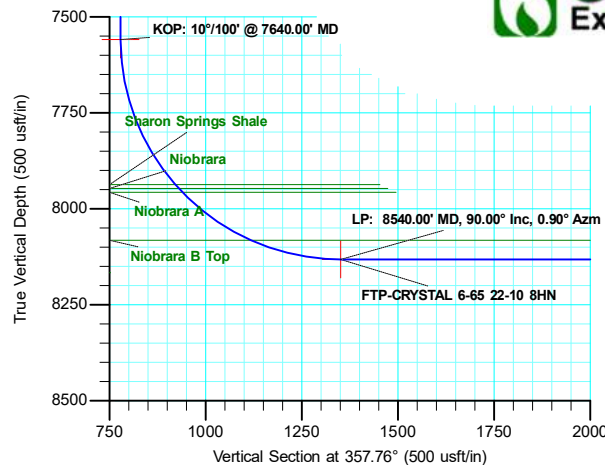
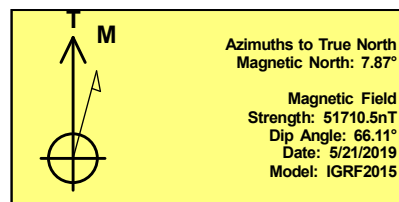
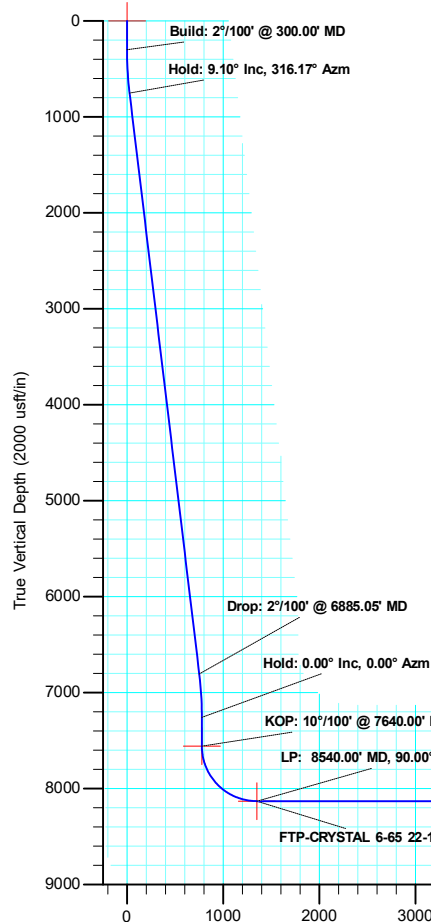
Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: Colorado Central Zone  
 System Datum: Mean Sea Level

## WELL DETAILS: CRYSTAL 6-65 22-10 8HN

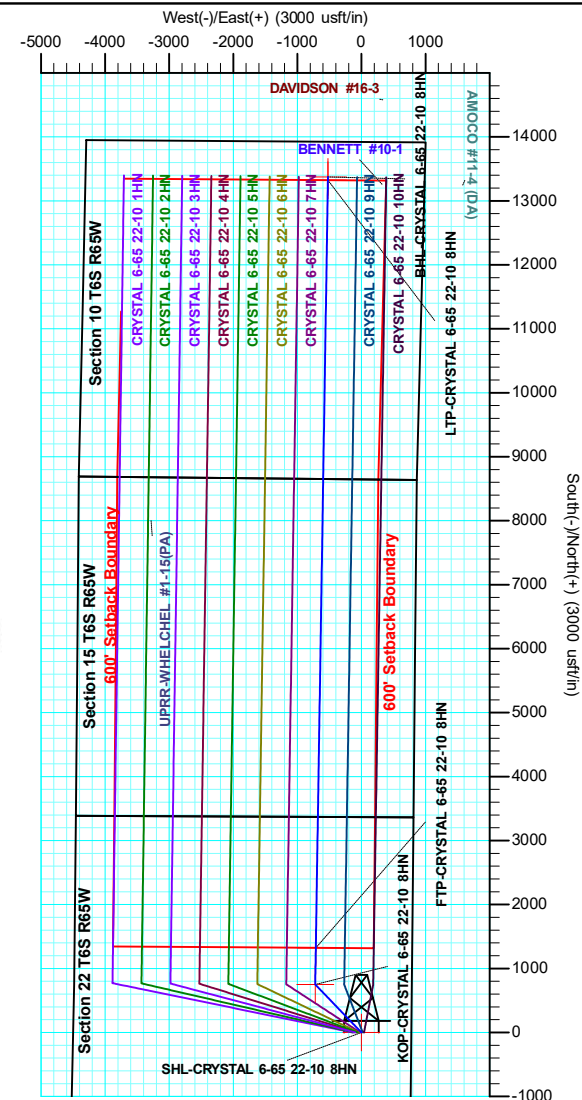
+N/-S	+E/-W	Northing	Ground Level: Easting	6177.00 Latitude	Longitude
0.00	0.00	1612583.88	3241070.14	39.512207	-104.645539

## 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	
754.94	9.10	316.17	753.03	26.01	-24.96	2.00	316.17	26.96	
6885.05	9.10	316.17	6806.01	725.37	-696.26	0.00	0.00	752.00	
7340.00	0.00	0.00	7259.04	751.37	-721.22	2.00	180.00	778.96	
7640.00	0.00	0.00	7559.04	751.37	-721.22	0.00	0.00	778.96	
8540.00	90.00	0.90	8132.00	1324.26	-712.21	10.00	0.00	1351.06	FTP-CRYSTAL 6-65 22-10 8HN
20542.15	90.00	0.90	8132.00	13324.93	-523.42	0.00	0.00	13335.20	LTP-CRYSTAL 6-65 22-10 8HN
20592.15	90.00	0.90	8132.00	13374.92	-522.63	0.00	0.00	13385.13	BHL-CRYSTAL 6-65 22-10 8HN



SHL: 1931 FSL/ 778 FEL Sec. 22  
 FTP: 2046 FNL/ 1504 FEL Sec. 22  
 LTP: 600 FNL/ 1509 FEL Sec. 10  
 BHL: 550 FNL/ 1509 FEL Sec. 10



<b>Database:</b>	Local	<b>Local Co-ordinate Reference:</b>	Well CRYSTAL6-65 22-10 8HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6197.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6197.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 8HN	<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		

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

Well	CRYSTAL 6-65 22-10 8HN					
Well Position	+N-S	-700.28 usft	Northing:	1,612,583.88 usft	Latitude:	39.512207
	+E-W	1,861.73 usft	Easting:	3,241,070.14 usft	Longitude:	-104.645540
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	6,177.00 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	51,710.45257243

<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	357.76

<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	20,592.15	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	
754.94	9.10	316.17	753.03	26.01	-24.96	2.00	2.00	0.00	316.17	
6,885.05	9.10	316.17	6,806.01	725.37	-696.26	0.00	0.00	0.00	0.00	
7,340.00	0.00	0.00	7,259.04	751.37	-721.22	2.00	-2.00	0.00	180.00	
7,640.00	0.00	0.00	7,559.04	751.37	-721.22	0.00	0.00	0.00	0.00	
8,540.00	90.00	0.90	8,132.00	1,324.26	-712.21	10.00	10.00	0.00	0.00	FTP-CRYSTAL 6-65
20,542.15	90.00	0.90	8,132.00	13,324.93	-523.42	0.00	0.00	0.00	0.00	LTP-CRYSTAL 6-65
20,592.15	90.00	0.90	8,132.00	13,374.92	-522.63	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 8HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6197.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6197.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 8HN	<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 8HN</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	316.17	399.98	1.26	-1.21	1.31	2.00	2.00	0.00
500.00	4.00	316.17	499.84	5.03	-4.83	5.22	2.00	2.00	0.00
600.00	6.00	316.17	599.45	11.32	-10.87	11.74	2.00	2.00	0.00
700.00	8.00	316.17	698.70	20.11	-19.31	20.85	2.00	2.00	0.00
754.94	9.10	316.17	753.03	26.01	-24.96	26.96	2.00	2.00	0.00
<b>Hold: 9.10° Inc, 316.17° Azm</b>									
800.00	9.10	316.17	797.52	31.15	-29.90	32.29	0.00	0.00	0.00
900.00	9.10	316.17	896.26	42.55	-40.85	44.12	0.00	0.00	0.00
1,000.00	9.10	316.17	995.01	53.96	-51.80	55.94	0.00	0.00	0.00
1,100.00	9.10	316.17	1,093.75	65.37	-62.75	67.77	0.00	0.00	0.00
1,200.00	9.10	316.17	1,192.49	76.78	-73.70	79.60	0.00	0.00	0.00
1,300.00	9.10	316.17	1,291.23	88.19	-84.65	91.43	0.00	0.00	0.00
1,400.00	9.10	316.17	1,389.97	99.60	-95.60	103.25	0.00	0.00	0.00
1,500.00	9.10	316.17	1,488.72	111.01	-106.55	115.08	0.00	0.00	0.00
1,600.00	9.10	316.17	1,587.46	122.42	-117.50	126.91	0.00	0.00	0.00
1,700.00	9.10	316.17	1,686.20	133.82	-128.45	138.74	0.00	0.00	0.00
1,800.00	9.10	316.17	1,784.94	145.23	-139.41	150.56	0.00	0.00	0.00
1,900.00	9.10	316.17	1,883.68	156.64	-150.36	162.39	0.00	0.00	0.00
2,000.00	9.10	316.17	1,982.42	168.05	-161.31	174.22	0.00	0.00	0.00
2,100.00	9.10	316.17	2,081.17	179.46	-172.26	186.05	0.00	0.00	0.00
2,200.00	9.10	316.17	2,179.91	190.87	-183.21	197.87	0.00	0.00	0.00
2,300.00	9.10	316.17	2,278.65	202.28	-194.16	209.70	0.00	0.00	0.00
2,400.00	9.10	316.17	2,377.39	213.68	-205.11	221.53	0.00	0.00	0.00
2,500.00	9.10	316.17	2,476.13	225.09	-216.06	233.36	0.00	0.00	0.00
2,600.00	9.10	316.17	2,574.87	236.50	-227.01	245.18	0.00	0.00	0.00
2,700.00	9.10	316.17	2,673.62	247.91	-237.96	257.01	0.00	0.00	0.00
2,800.00	9.10	316.17	2,772.36	259.32	-248.91	268.84	0.00	0.00	0.00
2,900.00	9.10	316.17	2,871.10	270.73	-259.86	280.67	0.00	0.00	0.00
3,000.00	9.10	316.17	2,969.84	282.14	-270.82	292.49	0.00	0.00	0.00
3,100.00	9.10	316.17	3,068.58	293.54	-281.77	304.32	0.00	0.00	0.00
3,200.00	9.10	316.17	3,167.32	304.95	-292.72	316.15	0.00	0.00	0.00
3,300.00	9.10	316.17	3,266.07	316.36	-303.67	327.98	0.00	0.00	0.00
3,400.00	9.10	316.17	3,364.81	327.77	-314.62	339.80	0.00	0.00	0.00
3,500.00	9.10	316.17	3,463.55	339.18	-325.57	351.63	0.00	0.00	0.00
3,600.00	9.10	316.17	3,562.29	350.59	-336.52	363.46	0.00	0.00	0.00
3,700.00	9.10	316.17	3,661.03	362.00	-347.47	375.29	0.00	0.00	0.00
3,800.00	9.10	316.17	3,759.77	373.40	-358.42	387.11	0.00	0.00	0.00
3,900.00	9.10	316.17	3,858.52	384.81	-369.37	398.94	0.00	0.00	0.00
4,000.00	9.10	316.17	3,957.26	396.22	-380.32	410.77	0.00	0.00	0.00
4,100.00	9.10	316.17	4,056.00	407.63	-391.27	422.60	0.00	0.00	0.00
4,200.00	9.10	316.17	4,154.74	419.04	-402.23	434.42	0.00	0.00	0.00
4,300.00	9.10	316.17	4,253.48	430.45	-413.18	446.25	0.00	0.00	0.00
4,400.00	9.10	316.17	4,352.22	441.86	-424.13	458.08	0.00	0.00	0.00
4,500.00	9.10	316.17	4,450.97	453.26	-435.08	469.91	0.00	0.00	0.00
4,600.00	9.10	316.17	4,549.71	464.67	-446.03	481.73	0.00	0.00	0.00
4,700.00	9.10	316.17	4,648.45	476.08	-456.98	493.56	0.00	0.00	0.00
4,800.00	9.10	316.17	4,747.19	487.49	-467.93	505.39	0.00	0.00	0.00

<b>Database:</b>	Local	<b>Local Co-ordinate Reference:</b>	Well CRYSTAL6-65 22-10 8HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6197.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6197.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 8HN	<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	9.10	316.17	4,845.93	498.90	-478.88	517.22	0.00	0.00	0.00
5,000.00	9.10	316.17	4,944.67	510.31	-489.83	529.04	0.00	0.00	0.00
5,100.00	9.10	316.17	5,043.42	521.72	-500.78	540.87	0.00	0.00	0.00
5,200.00	9.10	316.17	5,142.16	533.12	-511.73	552.70	0.00	0.00	0.00
5,300.00	9.10	316.17	5,240.90	544.53	-522.68	564.53	0.00	0.00	0.00
5,400.00	9.10	316.17	5,339.64	555.94	-533.64	576.35	0.00	0.00	0.00
5,500.00	9.10	316.17	5,438.38	567.35	-544.59	588.18	0.00	0.00	0.00
5,600.00	9.10	316.17	5,537.12	578.76	-555.54	600.01	0.00	0.00	0.00
5,700.00	9.10	316.17	5,635.87	590.17	-566.49	611.84	0.00	0.00	0.00
5,800.00	9.10	316.17	5,734.61	601.58	-577.44	623.66	0.00	0.00	0.00
5,900.00	9.10	316.17	5,833.35	612.98	-588.39	635.49	0.00	0.00	0.00
6,000.00	9.10	316.17	5,932.09	624.39	-599.34	647.32	0.00	0.00	0.00
6,100.00	9.10	316.17	6,030.83	635.80	-610.29	659.15	0.00	0.00	0.00
6,200.00	9.10	316.17	6,129.58	647.21	-621.24	670.97	0.00	0.00	0.00
6,300.00	9.10	316.17	6,228.32	658.62	-632.19	682.80	0.00	0.00	0.00
6,400.00	9.10	316.17	6,327.06	670.03	-643.14	694.63	0.00	0.00	0.00
6,500.00	9.10	316.17	6,425.80	681.44	-654.10	706.46	0.00	0.00	0.00
6,600.00	9.10	316.17	6,524.54	692.84	-665.05	718.28	0.00	0.00	0.00
6,700.00	9.10	316.17	6,623.28	704.25	-676.00	730.11	0.00	0.00	0.00
6,800.00	9.10	316.17	6,722.03	715.66	-686.95	741.94	0.00	0.00	0.00
6,885.05	9.10	316.17	6,806.01	725.37	-696.26	752.00	0.00	0.00	0.00
<b>Drop: 2°/100' @ 6885.05' MD</b>									
6,900.00	8.80	316.17	6,820.77	727.04	-697.87	753.74	2.00	-2.00	0.00
7,000.00	6.80	316.17	6,919.84	736.83	-707.27	763.89	2.00	-2.00	0.00
7,100.00	4.80	316.17	7,019.33	744.12	-714.27	771.44	2.00	-2.00	0.00
7,200.00	2.80	316.17	7,119.10	748.90	-718.86	776.40	2.00	-2.00	0.00
7,300.00	0.80	316.17	7,219.05	751.17	-721.03	778.75	2.00	-2.00	0.00
7,340.00	0.00	0.00	7,259.04	751.37	-721.22	778.96	2.00	-2.00	0.00
<b>Hold: 0.00° Inc, 0.00° Azm</b>									
7,400.00	0.00	0.00	7,319.05	751.37	-721.22	778.96	0.00	0.00	0.00
7,500.00	0.00	0.00	7,419.05	751.37	-721.22	778.96	0.00	0.00	0.00
7,600.00	0.00	0.00	7,519.05	751.37	-721.22	778.96	0.00	0.00	0.00
7,640.00	0.00	0.00	7,559.04	751.37	-721.22	778.96	0.00	0.00	0.00
<b>KOP: 10°/100' @ 7640.00' MD - KOP-CRYSTAL 6-65 22-10 8HN</b>									
7,650.00	1.00	0.90	7,569.04	751.46	-721.22	779.05	10.00	10.00	0.00
7,700.00	6.00	0.90	7,618.94	754.51	-721.18	782.09	10.00	10.00	0.00
7,750.00	11.00	0.90	7,668.37	761.90	-721.06	789.47	10.00	10.00	0.00
7,800.00	16.00	0.90	7,716.97	773.56	-720.88	801.12	10.00	10.00	0.00
7,850.00	21.00	0.90	7,764.37	789.42	-720.63	816.96	10.00	10.00	0.00
7,900.00	26.00	0.90	7,810.21	809.35	-720.31	836.86	10.00	10.00	0.00
7,950.00	31.00	0.90	7,854.14	833.20	-719.94	860.67	10.00	10.00	0.00
8,000.00	36.00	0.90	7,895.82	860.78	-719.50	888.22	10.00	10.00	0.00
8,050.00	41.00	0.90	7,934.94	891.90	-719.01	919.29	10.00	10.00	0.00
8,100.00	46.00	0.90	7,971.20	926.30	-718.47	953.65	10.00	10.00	0.00
8,150.00	51.00	0.90	8,004.32	963.73	-717.88	991.03	10.00	10.00	0.00
8,200.00	56.00	0.90	8,034.05	1,003.91	-717.25	1,031.15	10.00	10.00	0.00
8,250.00	61.00	0.90	8,060.16	1,046.52	-716.58	1,073.70	10.00	10.00	0.00
8,300.00	66.00	0.90	8,082.47	1,091.25	-715.88	1,118.37	10.00	10.00	0.00
8,350.00	71.00	0.90	8,100.79	1,137.75	-715.15	1,164.80	10.00	10.00	0.00
8,400.00	76.00	0.90	8,114.98	1,185.67	-714.39	1,212.66	10.00	10.00	0.00
8,450.00	81.00	0.90	8,124.95	1,234.64	-713.62	1,261.56	10.00	10.00	0.00
8,500.00	86.00	0.90	8,130.60	1,284.30	-712.84	1,311.15	10.00	10.00	0.00
8,540.00	90.00	0.90	8,132.00	1,324.26	-712.21	1,351.06	10.00	10.00	0.00
<b>LP: 8540.00' MD, 90.00° Inc, 0.90° Azm - FTP-CRYSTAL 6-65 22-10 8HN</b>									

<b>Database:</b>	Local	<b>Local Co-ordinate Reference:</b>	Well CRYSTAL6-65 22-10 8HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6197.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6197.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 8HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,600.00	90.00	0.90	8,132.00	1,384.25	-711.27	1,410.97	0.00	0.00	0.00
8,700.00	90.00	0.90	8,132.00	1,484.24	-709.70	1,510.82	0.00	0.00	0.00
8,800.00	90.00	0.90	8,132.00	1,584.23	-708.12	1,610.67	0.00	0.00	0.00
8,900.00	90.00	0.90	8,132.00	1,684.22	-706.55	1,710.52	0.00	0.00	0.00
9,000.00	90.00	0.90	8,132.00	1,784.20	-704.98	1,810.37	0.00	0.00	0.00
9,100.00	90.00	0.90	8,132.00	1,884.19	-703.40	1,910.22	0.00	0.00	0.00
9,200.00	90.00	0.90	8,132.00	1,984.18	-701.83	2,010.07	0.00	0.00	0.00
9,300.00	90.00	0.90	8,132.00	2,084.17	-700.26	2,109.92	0.00	0.00	0.00
9,400.00	90.00	0.90	8,132.00	2,184.15	-698.68	2,209.77	0.00	0.00	0.00
9,500.00	90.00	0.90	8,132.00	2,284.14	-697.11	2,309.62	0.00	0.00	0.00
9,600.00	90.00	0.90	8,132.00	2,384.13	-695.54	2,409.47	0.00	0.00	0.00
9,700.00	90.00	0.90	8,132.00	2,484.12	-693.97	2,509.32	0.00	0.00	0.00
9,800.00	90.00	0.90	8,132.00	2,584.11	-692.39	2,609.17	0.00	0.00	0.00
9,900.00	90.00	0.90	8,132.00	2,684.09	-690.82	2,709.02	0.00	0.00	0.00
10,000.00	90.00	0.90	8,132.00	2,784.08	-689.25	2,808.87	0.00	0.00	0.00
10,100.00	90.00	0.90	8,132.00	2,884.07	-687.67	2,908.72	0.00	0.00	0.00
10,200.00	90.00	0.90	8,132.00	2,984.06	-686.10	3,008.57	0.00	0.00	0.00
10,300.00	90.00	0.90	8,132.00	3,084.04	-684.53	3,108.42	0.00	0.00	0.00
10,400.00	90.00	0.90	8,132.00	3,184.03	-682.95	3,208.27	0.00	0.00	0.00
10,500.00	90.00	0.90	8,132.00	3,284.02	-681.38	3,308.12	0.00	0.00	0.00
10,600.00	90.00	0.90	8,132.00	3,384.01	-679.81	3,407.97	0.00	0.00	0.00
10,700.00	90.00	0.90	8,132.00	3,483.99	-678.24	3,507.82	0.00	0.00	0.00
10,800.00	90.00	0.90	8,132.00	3,583.98	-676.66	3,607.67	0.00	0.00	0.00
10,900.00	90.00	0.90	8,132.00	3,683.97	-675.09	3,707.52	0.00	0.00	0.00
11,000.00	90.00	0.90	8,132.00	3,783.96	-673.52	3,807.37	0.00	0.00	0.00
11,100.00	90.00	0.90	8,132.00	3,883.94	-671.94	3,907.22	0.00	0.00	0.00
11,200.00	90.00	0.90	8,132.00	3,983.93	-670.37	4,007.07	0.00	0.00	0.00
11,300.00	90.00	0.90	8,132.00	4,083.92	-668.80	4,106.92	0.00	0.00	0.00
11,400.00	90.00	0.90	8,132.00	4,183.91	-667.22	4,206.77	0.00	0.00	0.00
11,500.00	90.00	0.90	8,132.00	4,283.89	-665.65	4,306.62	0.00	0.00	0.00
11,600.00	90.00	0.90	8,132.00	4,383.88	-664.08	4,406.47	0.00	0.00	0.00
11,700.00	90.00	0.90	8,132.00	4,483.87	-662.51	4,506.32	0.00	0.00	0.00
11,800.00	90.00	0.90	8,132.00	4,583.86	-660.93	4,606.17	0.00	0.00	0.00
11,900.00	90.00	0.90	8,132.00	4,683.85	-659.36	4,706.02	0.00	0.00	0.00
12,000.00	90.00	0.90	8,132.00	4,783.83	-657.79	4,805.87	0.00	0.00	0.00
12,100.00	90.00	0.90	8,132.00	4,883.82	-656.21	4,905.72	0.00	0.00	0.00
12,200.00	90.00	0.90	8,132.00	4,983.81	-654.64	5,005.57	0.00	0.00	0.00
12,300.00	90.00	0.90	8,132.00	5,083.80	-653.07	5,105.42	0.00	0.00	0.00
12,400.00	90.00	0.90	8,132.00	5,183.78	-651.49	5,205.27	0.00	0.00	0.00
12,500.00	90.00	0.90	8,132.00	5,283.77	-649.92	5,305.12	0.00	0.00	0.00
12,600.00	90.00	0.90	8,132.00	5,383.76	-648.35	5,404.97	0.00	0.00	0.00
12,700.00	90.00	0.90	8,132.00	5,483.75	-646.78	5,504.82	0.00	0.00	0.00
12,800.00	90.00	0.90	8,132.00	5,583.73	-645.20	5,604.67	0.00	0.00	0.00
12,900.00	90.00	0.90	8,132.00	5,683.72	-643.63	5,704.52	0.00	0.00	0.00
13,000.00	90.00	0.90	8,132.00	5,783.71	-642.06	5,804.37	0.00	0.00	0.00
13,100.00	90.00	0.90	8,132.00	5,883.70	-640.48	5,904.22	0.00	0.00	0.00
13,200.00	90.00	0.90	8,132.00	5,983.68	-638.91	6,004.07	0.00	0.00	0.00
13,300.00	90.00	0.90	8,132.00	6,083.67	-637.34	6,103.92	0.00	0.00	0.00
13,400.00	90.00	0.90	8,132.00	6,183.66	-635.76	6,203.77	0.00	0.00	0.00
13,500.00	90.00	0.90	8,132.00	6,283.65	-634.19	6,303.62	0.00	0.00	0.00
13,600.00	90.00	0.90	8,132.00	6,383.64	-632.62	6,403.47	0.00	0.00	0.00
13,700.00	90.00	0.90	8,132.00	6,483.62	-631.05	6,503.32	0.00	0.00	0.00
13,800.00	90.00	0.90	8,132.00	6,583.61	-629.47	6,603.17	0.00	0.00	0.00
13,900.00	90.00	0.90	8,132.00	6,683.60	-627.90	6,703.02	0.00	0.00	0.00

<b>Database:</b>	Local	<b>Local Co-ordinate Reference:</b>	Well CRYSTAL6-65 22-10 8HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6197.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6197.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 8HN	<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)
14,000.00	90.00	0.90	8,132.00	6,783.59	-626.33	6,802.87	0.00	0.00	0.00
14,100.00	90.00	0.90	8,132.00	6,883.57	-624.75	6,902.72	0.00	0.00	0.00
14,200.00	90.00	0.90	8,132.00	6,983.56	-623.18	7,002.57	0.00	0.00	0.00
14,300.00	90.00	0.90	8,132.00	7,083.55	-621.61	7,102.42	0.00	0.00	0.00
14,400.00	90.00	0.90	8,132.00	7,183.54	-620.03	7,202.27	0.00	0.00	0.00
14,500.00	90.00	0.90	8,132.00	7,283.52	-618.46	7,302.12	0.00	0.00	0.00
14,600.00	90.00	0.90	8,132.00	7,383.51	-616.89	7,401.97	0.00	0.00	0.00
14,700.00	90.00	0.90	8,132.00	7,483.50	-615.32	7,501.82	0.00	0.00	0.00
14,800.00	90.00	0.90	8,132.00	7,583.49	-613.74	7,601.67	0.00	0.00	0.00
14,900.00	90.00	0.90	8,132.00	7,683.47	-612.17	7,701.52	0.00	0.00	0.00
15,000.00	90.00	0.90	8,132.00	7,783.46	-610.60	7,801.37	0.00	0.00	0.00
15,100.00	90.00	0.90	8,132.00	7,883.45	-609.02	7,901.22	0.00	0.00	0.00
15,200.00	90.00	0.90	8,132.00	7,983.44	-607.45	8,001.07	0.00	0.00	0.00
15,300.00	90.00	0.90	8,132.00	8,083.42	-605.88	8,100.92	0.00	0.00	0.00
15,400.00	90.00	0.90	8,132.00	8,183.41	-604.30	8,200.77	0.00	0.00	0.00
15,500.00	90.00	0.90	8,132.00	8,283.40	-602.73	8,300.62	0.00	0.00	0.00
15,600.00	90.00	0.90	8,132.00	8,383.39	-601.16	8,400.47	0.00	0.00	0.00
15,700.00	90.00	0.90	8,132.00	8,483.38	-599.59	8,500.32	0.00	0.00	0.00
15,800.00	90.00	0.90	8,132.00	8,583.36	-598.01	8,600.17	0.00	0.00	0.00
15,900.00	90.00	0.90	8,132.00	8,683.35	-596.44	8,700.02	0.00	0.00	0.00
16,000.00	90.00	0.90	8,132.00	8,783.34	-594.87	8,799.87	0.00	0.00	0.00
16,100.00	90.00	0.90	8,132.00	8,883.33	-593.29	8,899.72	0.00	0.00	0.00
16,200.00	90.00	0.90	8,132.00	8,983.31	-591.72	8,999.57	0.00	0.00	0.00
16,300.00	90.00	0.90	8,132.00	9,083.30	-590.15	9,099.42	0.00	0.00	0.00
16,400.00	90.00	0.90	8,132.00	9,183.29	-588.57	9,199.27	0.00	0.00	0.00
16,500.00	90.00	0.90	8,132.00	9,283.28	-587.00	9,299.12	0.00	0.00	0.00
16,600.00	90.00	0.90	8,132.00	9,383.26	-585.43	9,398.97	0.00	0.00	0.00
16,700.00	90.00	0.90	8,132.00	9,483.25	-583.86	9,498.82	0.00	0.00	0.00
16,800.00	90.00	0.90	8,132.00	9,583.24	-582.28	9,598.67	0.00	0.00	0.00
16,900.00	90.00	0.90	8,132.00	9,683.23	-580.71	9,698.52	0.00	0.00	0.00
17,000.00	90.00	0.90	8,132.00	9,783.21	-579.14	9,798.37	0.00	0.00	0.00
17,100.00	90.00	0.90	8,132.00	9,883.20	-577.56	9,898.22	0.00	0.00	0.00
17,200.00	90.00	0.90	8,132.00	9,983.19	-575.99	9,998.07	0.00	0.00	0.00
17,300.00	90.00	0.90	8,132.00	10,083.18	-574.42	10,097.92	0.00	0.00	0.00
17,400.00	90.00	0.90	8,132.00	10,183.17	-572.84	10,197.77	0.00	0.00	0.00
17,500.00	90.00	0.90	8,132.00	10,283.15	-571.27	10,297.62	0.00	0.00	0.00
17,600.00	90.00	0.90	8,132.00	10,383.14	-569.70	10,397.47	0.00	0.00	0.00
17,700.00	90.00	0.90	8,132.00	10,483.13	-568.13	10,497.32	0.00	0.00	0.00
17,800.00	90.00	0.90	8,132.00	10,583.12	-566.55	10,597.17	0.00	0.00	0.00
17,900.00	90.00	0.90	8,132.00	10,683.10	-564.98	10,697.02	0.00	0.00	0.00
18,000.00	90.00	0.90	8,132.00	10,783.09	-563.41	10,796.87	0.00	0.00	0.00
18,100.00	90.00	0.90	8,132.00	10,883.08	-561.83	10,896.72	0.00	0.00	0.00
18,200.00	90.00	0.90	8,132.00	10,983.07	-560.26	10,996.57	0.00	0.00	0.00
18,300.00	90.00	0.90	8,132.00	11,083.05	-558.69	11,096.42	0.00	0.00	0.00
18,400.00	90.00	0.90	8,132.00	11,183.04	-557.12	11,196.27	0.00	0.00	0.00
18,500.00	90.00	0.90	8,132.00	11,283.03	-555.54	11,296.12	0.00	0.00	0.00
18,600.00	90.00	0.90	8,132.00	11,383.02	-553.97	11,395.97	0.00	0.00	0.00
18,700.00	90.00	0.90	8,132.00	11,483.00	-552.40	11,495.82	0.00	0.00	0.00
18,800.00	90.00	0.90	8,132.00	11,582.99	-550.82	11,595.67	0.00	0.00	0.00
18,900.00	90.00	0.90	8,132.00	11,682.98	-549.25	11,695.52	0.00	0.00	0.00
19,000.00	90.00	0.90	8,132.00	11,782.97	-547.68	11,795.37	0.00	0.00	0.00
19,100.00	90.00	0.90	8,132.00	11,882.95	-546.10	11,895.22	0.00	0.00	0.00
19,200.00	90.00	0.90	8,132.00	11,982.94	-544.53	11,995.07	0.00	0.00	0.00
19,300.00	90.00	0.90	8,132.00	12,082.93	-542.96	12,094.92	0.00	0.00	0.00



<b>Database:</b>	Local	<b>Local Co-ordinate Reference:</b>	Well CRYSTAL6-65 22-10 8HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6197.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6197.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 8HN	<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)	
19,400.00	90.00	0.90	8,132.00	12,182.92	-541.39	12,194.77	0.00	0.00	0.00	
19,500.00	90.00	0.90	8,132.00	12,282.91	-539.81	12,294.62	0.00	0.00	0.00	
19,600.00	90.00	0.90	8,132.00	12,382.89	-538.24	12,394.47	0.00	0.00	0.00	
19,700.00	90.00	0.90	8,132.00	12,482.88	-536.67	12,494.32	0.00	0.00	0.00	
19,800.00	90.00	0.90	8,132.00	12,582.87	-535.09	12,594.17	0.00	0.00	0.00	
19,900.00	90.00	0.90	8,132.00	12,682.86	-533.52	12,694.02	0.00	0.00	0.00	
20,000.00	90.00	0.90	8,132.00	12,782.84	-531.95	12,793.87	0.00	0.00	0.00	
20,100.00	90.00	0.90	8,132.00	12,882.83	-530.37	12,893.72	0.00	0.00	0.00	
20,200.00	90.00	0.90	8,132.00	12,982.82	-528.80	12,993.57	0.00	0.00	0.00	
20,300.00	90.00	0.90	8,132.00	13,082.81	-527.23	13,093.42	0.00	0.00	0.00	
20,400.00	90.00	0.90	8,132.00	13,182.79	-525.66	13,193.27	0.00	0.00	0.00	
20,500.00	90.00	0.90	8,132.00	13,282.78	-524.08	13,293.12	0.00	0.00	0.00	
20,542.15	90.00	0.90	8,132.00	13,324.93	-523.42	13,335.20	0.00	0.00	0.00	
<b>Hold: 90.00° Inc, 0.90° Azm - LTP-CRYSTAL 6-65 22-10 8HN</b>										
20,592.15	90.00	0.90	8,132.00	13,374.92	-522.63	13,385.13	0.00	0.00	0.00	
<b>TD @ 20592.15' MD/8132.00' TVD - BHL-CRYSTAL 6-65 22-10 8HN</b>										

Design Targets										
Target Name	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	3,241,070.14	39.512207	-104.645540	
KOP-CRYSTAL 6-65 1 - plan hits target center - Point	0.00	0.00	7,559.04	751.37	-721.22	1,613,328.43	3,240,341.88	39.514270	-104.648096	
BHL-CRYSTAL 6-65 2 - plan hits target center - Point	0.00	0.00	8,132.00	13,374.92	-522.63	1,625,953.29	3,240,421.74	39.548927	-104.647393	
LTP-CRYSTAL 6-65 2 - plan hits target center - Point	0.00	0.00	8,132.00	13,324.93	-523.42	1,625,903.29	3,240,421.42	39.548790	-104.647396	
FTP-CRYSTAL 6-65 2 - plan hits target center - Point	0.00	0.00	8,132.00	1,324.26	-712.21	1,613,901.38	3,240,345.51	39.515843	-104.648064	



<b>Database:</b>	Local	<b>Local Co-ordinate Reference:</b>	Well CRYSTAL6-65 22-10 8HN
<b>Company:</b>	GMT Exploration Company, LLC	<b>TVD Reference:</b>	KB @ 6197.00usft
<b>Project:</b>	Elbert County, CO (NAD 83)	<b>MD Reference:</b>	KB @ 6197.00usft
<b>Site:</b>	Ruby-Crystal Pad	<b>North Reference:</b>	True
<b>Well:</b>	CRYSTAL 6-65 22-10 8HN	<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 (°)	
457.08	457.00	Denver				
1,543.84	1,532.00	Upper Arapahoe				
2,252.76	2,232.00	Laramie - Fox Hills				
2,424.92	2,402.00	Pierre Shale (Base of Fox Hills)				
5,691.02	5,627.00	Sussex Sandstone				
8,052.74	7,937.00	Sharon Springs Shale				
8,066.18	7,947.00	Niobrara				
8,079.92	7,957.00	Niobrara A				
8,298.86	8,082.00	Niobrara B Top				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
300.00	300.00	0.00	0.00	Build: 2°/100' @ 300.00' MD	
754.94	753.03	26.01	-24.96	Hold: 9.10° Inc, 316.17° Azm	
6,885.05	6,806.01	725.37	-696.26	Drop: 2°/100' @ 6885.05' MD	
7,340.00	7,259.04	751.37	-721.22	Hold: 0.00° Inc, 0.00° Azm	
7,640.00	7,559.04	751.37	-721.22	KOP: 10°/100' @ 7640.00' MD	
8,540.00	8,132.00	1,324.26	-712.21	LP: 8540.00' MD, 90.00° Inc, 0.90° Azm	
20,542.15	8,132.00	13,324.93	-523.42	Hold: 90.00° Inc, 0.90° Azm	
20,592.15	8,132.00	13,374.92	-522.63	TD @ 20592.15' MD/8132.00' TVD	