



GMT Exploration Company, LLC

Elbert County, CO (NAD 83)

Ruby-Crystal Pad

CRYSTAL 6-65 22-10 1HN

Wellbore #1

Plan: Design #1

Standard Planning Report

24 May, 2019



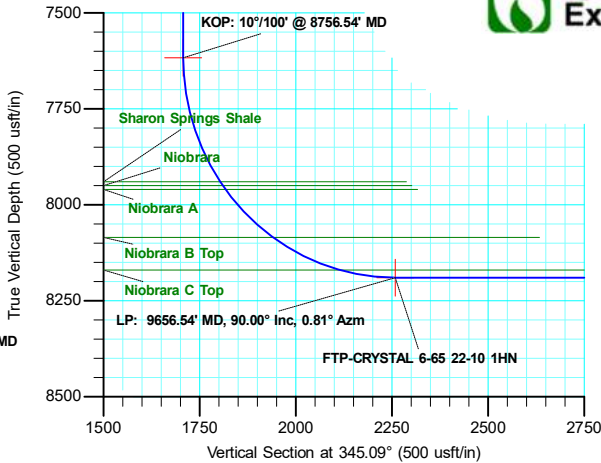
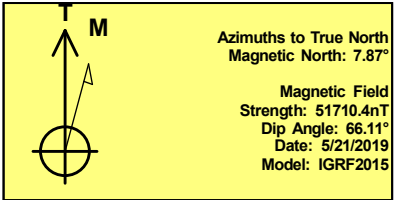
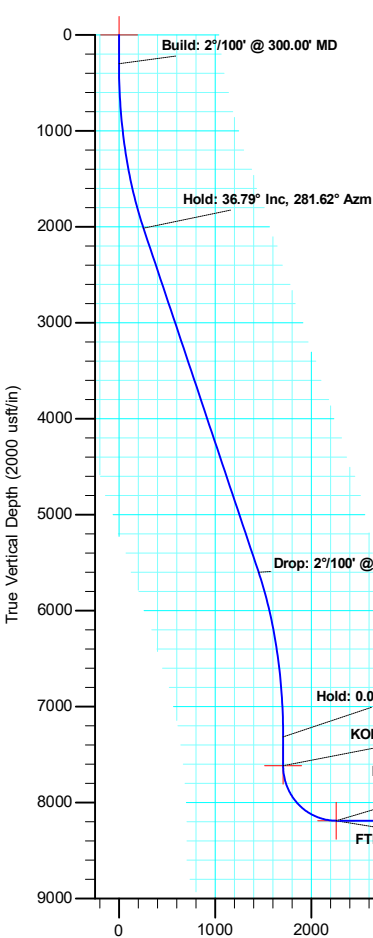
Project: Elbert County, CO (NAD 83)
Site: Ruby-Crystal Pad
Well: CRYSTAL 6-65 22-10 1HN
Wellbore: Wellbore #1
Design: Design #1

GMT Exploration Company, LLC

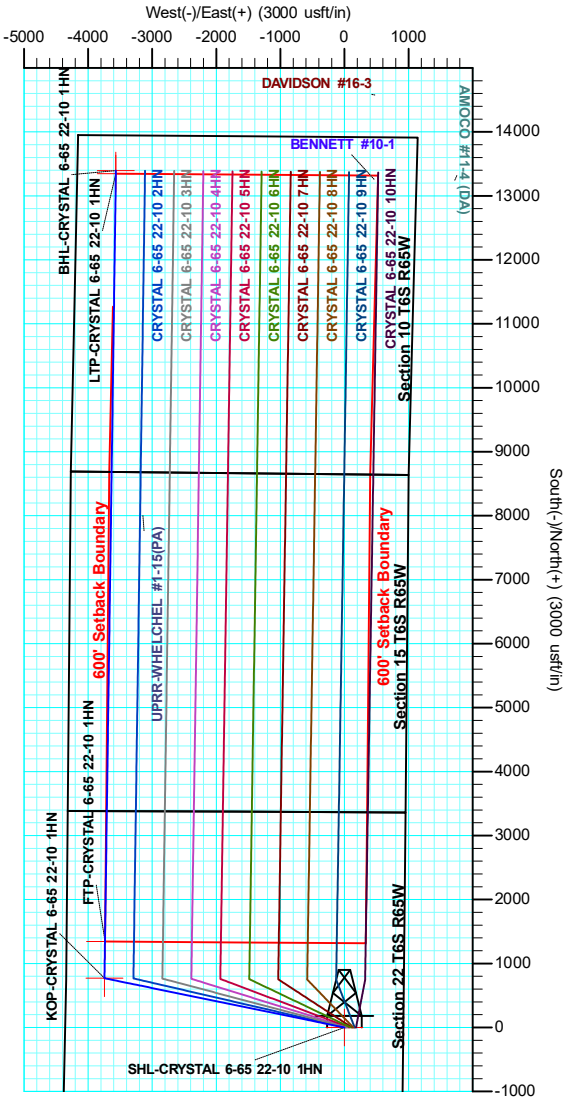
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone
System Datum: Mean Sea Level

WELL DETAILS: CRYSTAL 6-65 22-10 1HN					
+N/-S	+E/-W	Northing	Ground Level: Easting	6180.00 Latitude	Longitude
0.00	0.00	1612583.88	3240930.14	39.512211	-104.646035

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	
2139.59	36.79	281.62	2015.75	114.96	-558.92	2.00	281.62	254.87	
6616.95	36.79	281.62	5601.30	655.21	-3185.46	0.00	0.00	1452.59	
8456.54	0.00	0.00	7317.04	770.17	-3744.38	2.00	180.00	1707.46	
8756.54	0.00	0.00	7617.04	770.17	-3744.38	0.00	0.00	1707.46	
9656.54	90.00	0.81	8190.00	1343.07	-3736.28	10.00	0.00	2259.00	FTP-CRYSTAL 6-65 22-10 1HN
21660.89	90.00	0.81	8190.00	13346.22	-3566.77	0.00	0.00	13814.61	LTP-CRYSTAL 6-65 22-10 1HN
21710.89	90.00	0.81	8190.00	13396.22	-3566.06	0.00	0.00	13862.74	BHL-CRYSTAL 6-65 22-10 1HN



SHL: 1932 FSL/ 918 FEL Sec. 22
FTP: 2040 FNL/ 600 FWL Sec. 22
LTP: 600 FNL/ 600 FWL Sec. 10
BHL: 550 FNL/ 600 FWL Sec. 10



Database:	Local	Local Co-ordinate Reference:	Well CRYSTAL6-65 22-10 1HN
Company:	GMT Exploration Company, LLC	TVD Reference:	KB @ 6200.00usft
Project:	Elbert County, CO (NAD 83)	MD Reference:	KB @ 6200.00usft
Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 1HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Elbert County, CO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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 1HN				
Well Position	+N-S	-698.98 usft	Northing:	1,612,583.88 usft	Latitude:	39.512211
	+E-W	1,721.74 usft	Easting:	3,240,930.14 usft	Longitude:	-104.646036
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	6,180.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/21/2019	7.87	66.11	51,710.37831560

Design	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	345.09

Plan Survey Tool Program	Date	5/24/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	21,710.89	Design #1 (Wellbore #1)	MWD
				OWSG MWD - Standard

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
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	
2,139.59	36.79	281.62	2,015.75	114.96	-558.92	2.00	2.00	0.00	281.62	
6,616.95	36.79	281.62	5,601.30	655.21	-3,185.46	0.00	0.00	0.00	0.00	
8,456.54	0.00	0.00	7,317.04	770.17	-3,744.38	2.00	-2.00	0.00	180.00	
8,756.54	0.00	0.00	7,617.04	770.17	-3,744.38	0.00	0.00	0.00	0.00	
9,656.54	90.00	0.81	8,190.00	1,343.07	-3,736.28	10.00	10.00	0.00	0.00	FTP-CRYSTAL 6-65
21,660.89	90.00	0.81	8,190.00	13,346.22	-3,566.77	0.00	0.00	0.00	0.00	LTP-CRYSTAL 6-65
21,710.89	90.00	0.81	8,190.00	13,396.22	-3,566.06	0.00	0.00	0.00	0.00	BHL-CRYSTAL 6-65

Database:	Local	Local Co-ordinate Reference:	Well CRYSTAL6-65 22-10 1HN
Company:	GMT Exploration Company, LLC	TVD Reference:	KB @ 6200.00usft
Project:	Elbert County, CO (NAD 83)	MD Reference:	KB @ 6200.00usft
Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 1HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
SHL-CRYSTAL 6-65 22-10 1HN									
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
Build: 2°/100' @ 300.00' MD									
400.00	2.00	281.62	399.98	0.35	-1.71	0.78	2.00	2.00	0.00
500.00	4.00	281.62	499.84	1.41	-6.84	3.12	2.00	2.00	0.00
600.00	6.00	281.62	599.45	3.16	-15.37	7.01	2.00	2.00	0.00
700.00	8.00	281.62	698.70	5.62	-27.31	12.45	2.00	2.00	0.00
800.00	10.00	281.62	797.47	8.77	-42.63	19.44	2.00	2.00	0.00
900.00	12.00	281.62	895.62	12.61	-61.32	27.96	2.00	2.00	0.00
1,000.00	14.00	281.62	993.06	17.14	-83.35	38.01	2.00	2.00	0.00
1,100.00	16.00	281.62	1,089.64	22.36	-108.70	49.57	2.00	2.00	0.00
1,200.00	18.00	281.62	1,185.27	28.25	-137.34	62.63	2.00	2.00	0.00
1,300.00	20.00	281.62	1,279.82	34.81	-169.23	77.17	2.00	2.00	0.00
1,400.00	22.00	281.62	1,373.17	42.03	-204.33	93.17	2.00	2.00	0.00
1,500.00	24.00	281.62	1,465.21	49.90	-242.60	110.62	2.00	2.00	0.00
1,600.00	26.00	281.62	1,555.84	58.41	-283.99	129.50	2.00	2.00	0.00
1,700.00	28.00	281.62	1,644.94	67.56	-328.45	149.78	2.00	2.00	0.00
1,800.00	30.00	281.62	1,732.39	77.33	-375.94	171.43	2.00	2.00	0.00
1,900.00	32.00	281.62	1,818.11	87.70	-426.38	194.43	2.00	2.00	0.00
2,000.00	34.00	281.62	1,901.97	98.67	-479.73	218.76	2.00	2.00	0.00
2,100.00	36.00	281.62	1,983.88	110.23	-535.91	244.38	2.00	2.00	0.00
2,139.59	36.79	281.62	2,015.75	114.96	-558.92	254.87	2.00	2.00	0.00
Hold: 36.79° Inc, 281.62° Azm									
2,200.00	36.79	281.62	2,064.13	122.25	-594.35	271.03	0.00	0.00	0.00
2,300.00	36.79	281.62	2,144.21	134.32	-653.02	297.78	0.00	0.00	0.00
2,400.00	36.79	281.62	2,224.29	146.38	-711.68	324.53	0.00	0.00	0.00
2,500.00	36.79	281.62	2,304.37	158.45	-770.34	351.28	0.00	0.00	0.00
2,600.00	36.79	281.62	2,384.45	170.52	-829.01	378.03	0.00	0.00	0.00
2,700.00	36.79	281.62	2,464.53	182.58	-887.67	404.78	0.00	0.00	0.00
2,800.00	36.79	281.62	2,544.62	194.65	-946.33	431.53	0.00	0.00	0.00
2,900.00	36.79	281.62	2,624.70	206.71	-1,004.99	458.28	0.00	0.00	0.00
3,000.00	36.79	281.62	2,704.78	218.78	-1,063.66	485.03	0.00	0.00	0.00
3,100.00	36.79	281.62	2,784.86	230.85	-1,122.32	511.78	0.00	0.00	0.00
3,200.00	36.79	281.62	2,864.94	242.91	-1,180.98	538.54	0.00	0.00	0.00
3,300.00	36.79	281.62	2,945.02	254.98	-1,239.65	565.29	0.00	0.00	0.00
3,400.00	36.79	281.62	3,025.11	267.05	-1,298.31	592.04	0.00	0.00	0.00
3,500.00	36.79	281.62	3,105.19	279.11	-1,356.97	618.79	0.00	0.00	0.00
3,600.00	36.79	281.62	3,185.27	291.18	-1,415.63	645.54	0.00	0.00	0.00
3,700.00	36.79	281.62	3,265.35	303.24	-1,474.30	672.29	0.00	0.00	0.00
3,800.00	36.79	281.62	3,345.43	315.31	-1,532.96	699.04	0.00	0.00	0.00
3,900.00	36.79	281.62	3,425.52	327.38	-1,591.62	725.79	0.00	0.00	0.00
4,000.00	36.79	281.62	3,505.60	339.44	-1,650.28	752.54	0.00	0.00	0.00
4,100.00	36.79	281.62	3,585.68	351.51	-1,708.95	779.29	0.00	0.00	0.00
4,200.00	36.79	281.62	3,665.76	363.57	-1,767.61	806.04	0.00	0.00	0.00
4,300.00	36.79	281.62	3,745.84	375.64	-1,826.27	832.79	0.00	0.00	0.00
4,400.00	36.79	281.62	3,825.92	387.71	-1,884.94	859.54	0.00	0.00	0.00
4,500.00	36.79	281.62	3,906.01	399.77	-1,943.60	886.29	0.00	0.00	0.00
4,600.00	36.79	281.62	3,986.09	411.84	-2,002.26	913.04	0.00	0.00	0.00
4,700.00	36.79	281.62	4,066.17	423.91	-2,060.92	939.79	0.00	0.00	0.00
4,800.00	36.79	281.62	4,146.25	435.97	-2,119.59	966.54	0.00	0.00	0.00

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Company:	GMT Exploration Company, LLC	TVD Reference:	KB @ 6200.00usft
Project:	Elbert County, CO (NAD 83)	MD Reference:	KB @ 6200.00usft
Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 1HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	36.79	281.62	4,226.33	448.04	-2,178.25	993.30	0.00	0.00	0.00
5,000.00	36.79	281.62	4,306.41	460.10	-2,236.91	1,020.05	0.00	0.00	0.00
5,100.00	36.79	281.62	4,386.50	472.17	-2,295.58	1,046.80	0.00	0.00	0.00
5,200.00	36.79	281.62	4,466.58	484.24	-2,354.24	1,073.55	0.00	0.00	0.00
5,300.00	36.79	281.62	4,546.66	496.30	-2,412.90	1,100.30	0.00	0.00	0.00
5,400.00	36.79	281.62	4,626.74	508.37	-2,471.56	1,127.05	0.00	0.00	0.00
5,500.00	36.79	281.62	4,706.82	520.43	-2,530.23	1,153.80	0.00	0.00	0.00
5,600.00	36.79	281.62	4,786.90	532.50	-2,588.89	1,180.55	0.00	0.00	0.00
5,700.00	36.79	281.62	4,866.99	544.57	-2,647.55	1,207.30	0.00	0.00	0.00
5,800.00	36.79	281.62	4,947.07	556.63	-2,706.21	1,234.05	0.00	0.00	0.00
5,900.00	36.79	281.62	5,027.15	568.70	-2,764.88	1,260.80	0.00	0.00	0.00
6,000.00	36.79	281.62	5,107.23	580.77	-2,823.54	1,287.55	0.00	0.00	0.00
6,100.00	36.79	281.62	5,187.31	592.83	-2,882.20	1,314.30	0.00	0.00	0.00
6,200.00	36.79	281.62	5,267.40	604.90	-2,940.87	1,341.05	0.00	0.00	0.00
6,300.00	36.79	281.62	5,347.48	616.96	-2,999.53	1,367.80	0.00	0.00	0.00
6,400.00	36.79	281.62	5,427.56	629.03	-3,058.19	1,394.55	0.00	0.00	0.00
6,500.00	36.79	281.62	5,507.64	641.10	-3,116.85	1,421.30	0.00	0.00	0.00
6,600.00	36.79	281.62	5,587.72	653.16	-3,175.52	1,448.05	0.00	0.00	0.00
6,616.95	36.79	281.62	5,601.30	655.21	-3,185.46	1,452.59	0.00	0.00	0.00
Drop: 2°/100' @ 6616.95' MD									
6,700.00	35.13	281.62	5,668.52	665.03	-3,233.23	1,474.37	2.00	-2.00	0.00
6,800.00	33.13	281.62	5,751.29	676.34	-3,288.18	1,499.43	2.00	-2.00	0.00
6,900.00	31.13	281.62	5,835.97	687.05	-3,340.28	1,523.19	2.00	-2.00	0.00
7,000.00	29.13	281.62	5,922.45	697.16	-3,389.44	1,545.61	2.00	-2.00	0.00
7,100.00	27.13	281.62	6,010.63	706.66	-3,435.62	1,566.66	2.00	-2.00	0.00
7,200.00	25.13	281.62	6,100.41	715.54	-3,478.76	1,586.33	2.00	-2.00	0.00
7,300.00	23.13	281.62	6,191.66	723.77	-3,518.80	1,604.59	2.00	-2.00	0.00
7,400.00	21.13	281.62	6,284.29	731.36	-3,555.70	1,621.42	2.00	-2.00	0.00
7,500.00	19.13	281.62	6,378.18	738.29	-3,589.41	1,636.79	2.00	-2.00	0.00
7,600.00	17.13	281.62	6,473.21	744.56	-3,619.89	1,650.69	2.00	-2.00	0.00
7,700.00	15.13	281.62	6,569.27	750.16	-3,647.10	1,663.10	2.00	-2.00	0.00
7,800.00	13.13	281.62	6,666.24	755.08	-3,671.01	1,674.00	2.00	-2.00	0.00
7,900.00	11.13	281.62	6,764.00	759.31	-3,691.59	1,683.39	2.00	-2.00	0.00
8,000.00	9.13	281.62	6,862.43	762.86	-3,708.82	1,691.24	2.00	-2.00	0.00
8,100.00	7.13	281.62	6,961.42	765.71	-3,722.67	1,697.56	2.00	-2.00	0.00
8,200.00	5.13	281.62	7,060.85	767.86	-3,733.13	1,702.33	2.00	-2.00	0.00
8,300.00	3.13	281.62	7,160.58	769.31	-3,740.19	1,705.55	2.00	-2.00	0.00
8,400.00	1.13	281.62	7,260.51	770.06	-3,743.83	1,707.21	2.00	-2.00	0.00
8,456.54	0.00	0.00	7,317.04	770.17	-3,744.38	1,707.46	2.00	-2.00	0.00
Hold: 0.00° Inc, 0.00° Azm									
8,500.00	0.00	0.00	7,360.50	770.17	-3,744.38	1,707.46	0.00	0.00	0.00
8,600.00	0.00	0.00	7,460.50	770.17	-3,744.38	1,707.46	0.00	0.00	0.00
8,700.00	0.00	0.00	7,560.50	770.17	-3,744.38	1,707.46	0.00	0.00	0.00
8,756.54	0.00	0.00	7,617.04	770.17	-3,744.38	1,707.46	0.00	0.00	0.00
KOP: 10°/100' @ 8756.54' MD - KOP-CRYSTAL 6-65 22-10 1HN									
8,800.00	4.35	0.81	7,660.46	771.82	-3,744.35	1,709.04	10.00	10.00	0.00
8,850.00	9.35	0.81	7,710.09	777.77	-3,744.27	1,714.78	10.00	10.00	0.00
8,900.00	14.35	0.81	7,759.01	788.03	-3,744.12	1,724.66	10.00	10.00	0.00
8,950.00	19.35	0.81	7,806.85	802.52	-3,743.92	1,738.60	10.00	10.00	0.00
9,000.00	24.35	0.81	7,853.24	821.12	-3,743.66	1,756.51	10.00	10.00	0.00
9,050.00	29.35	0.81	7,897.84	843.69	-3,743.34	1,778.23	10.00	10.00	0.00
9,100.00	34.35	0.81	7,940.30	870.06	-3,742.96	1,803.62	10.00	10.00	0.00
9,150.00	39.35	0.81	7,980.30	900.03	-3,742.54	1,832.48	10.00	10.00	0.00

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Project:	Elbert County, CO (NAD 83)	MD Reference:	KB @ 6200.00usft
Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 1HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)	
9,200.00	44.35	0.81	8,017.54	933.37	-3,742.07	1,864.58	10.00	10.00	0.00	
9,250.00	49.35	0.81	8,051.72	969.83	-3,741.56	1,899.68	10.00	10.00	0.00	
9,300.00	54.35	0.81	8,082.60	1,009.13	-3,741.00	1,937.51	10.00	10.00	0.00	
9,350.00	59.35	0.81	8,109.94	1,050.98	-3,740.41	1,977.80	10.00	10.00	0.00	
9,400.00	64.35	0.81	8,133.52	1,095.04	-3,739.79	2,020.22	10.00	10.00	0.00	
9,450.00	69.35	0.81	8,153.18	1,141.00	-3,739.14	2,064.46	10.00	10.00	0.00	
9,500.00	74.35	0.81	8,168.75	1,188.49	-3,738.47	2,110.18	10.00	10.00	0.00	
9,550.00	79.35	0.81	8,180.12	1,237.16	-3,737.78	2,157.03	10.00	10.00	0.00	
9,600.00	84.35	0.81	8,187.21	1,286.63	-3,737.08	2,204.66	10.00	10.00	0.00	
9,650.00	89.35	0.81	8,189.96	1,336.53	-3,736.38	2,252.70	10.00	10.00	0.00	
9,656.54	90.00	0.81	8,190.00	1,343.07	-3,736.28	2,259.00	10.00	10.00	0.00	
LP: 9656.54' MD, 90.00° Inc, 0.81° Azm - FTP-CRYSTAL 6-65 22-10 1HN										
9,700.00	90.00	0.81	8,190.00	1,386.53	-3,735.67	2,300.84	0.00	0.00	0.00	
9,800.00	90.00	0.81	8,190.00	1,486.52	-3,734.26	2,397.10	0.00	0.00	0.00	
9,900.00	90.00	0.81	8,190.00	1,586.51	-3,732.85	2,493.36	0.00	0.00	0.00	
10,000.00	90.00	0.81	8,190.00	1,686.50	-3,731.43	2,589.62	0.00	0.00	0.00	
10,100.00	90.00	0.81	8,190.00	1,786.49	-3,730.02	2,685.88	0.00	0.00	0.00	
10,200.00	90.00	0.81	8,190.00	1,886.48	-3,728.61	2,782.14	0.00	0.00	0.00	
10,300.00	90.00	0.81	8,190.00	1,986.47	-3,727.20	2,878.41	0.00	0.00	0.00	
10,400.00	90.00	0.81	8,190.00	2,086.46	-3,725.79	2,974.67	0.00	0.00	0.00	
10,500.00	90.00	0.81	8,190.00	2,186.45	-3,724.37	3,070.93	0.00	0.00	0.00	
10,600.00	90.00	0.81	8,190.00	2,286.44	-3,722.96	3,167.19	0.00	0.00	0.00	
10,700.00	90.00	0.81	8,190.00	2,386.43	-3,721.55	3,263.45	0.00	0.00	0.00	
10,800.00	90.00	0.81	8,190.00	2,486.42	-3,720.14	3,359.72	0.00	0.00	0.00	
10,900.00	90.00	0.81	8,190.00	2,586.41	-3,718.73	3,455.98	0.00	0.00	0.00	
11,000.00	90.00	0.81	8,190.00	2,686.40	-3,717.31	3,552.24	0.00	0.00	0.00	
11,100.00	90.00	0.81	8,190.00	2,786.39	-3,715.90	3,648.50	0.00	0.00	0.00	
11,200.00	90.00	0.81	8,190.00	2,886.38	-3,714.49	3,744.76	0.00	0.00	0.00	
11,300.00	90.00	0.81	8,190.00	2,986.37	-3,713.08	3,841.02	0.00	0.00	0.00	
11,400.00	90.00	0.81	8,190.00	3,086.36	-3,711.66	3,937.29	0.00	0.00	0.00	
11,500.00	90.00	0.81	8,190.00	3,186.35	-3,710.25	4,033.55	0.00	0.00	0.00	
11,600.00	90.00	0.81	8,190.00	3,286.34	-3,708.84	4,129.81	0.00	0.00	0.00	
11,700.00	90.00	0.81	8,190.00	3,386.33	-3,707.43	4,226.07	0.00	0.00	0.00	
11,800.00	90.00	0.81	8,190.00	3,486.32	-3,706.02	4,322.33	0.00	0.00	0.00	
11,900.00	90.00	0.81	8,190.00	3,586.31	-3,704.60	4,418.60	0.00	0.00	0.00	
12,000.00	90.00	0.81	8,190.00	3,686.30	-3,703.19	4,514.86	0.00	0.00	0.00	
12,100.00	90.00	0.81	8,190.00	3,786.29	-3,701.78	4,611.12	0.00	0.00	0.00	
12,200.00	90.00	0.81	8,190.00	3,886.28	-3,700.37	4,707.38	0.00	0.00	0.00	
12,300.00	90.00	0.81	8,190.00	3,986.27	-3,698.96	4,803.64	0.00	0.00	0.00	
12,400.00	90.00	0.81	8,190.00	4,086.26	-3,697.54	4,899.90	0.00	0.00	0.00	
12,500.00	90.00	0.81	8,190.00	4,186.25	-3,696.13	4,996.17	0.00	0.00	0.00	
12,600.00	90.00	0.81	8,190.00	4,286.24	-3,694.72	5,092.43	0.00	0.00	0.00	
12,700.00	90.00	0.81	8,190.00	4,386.23	-3,693.31	5,188.69	0.00	0.00	0.00	
12,800.00	90.00	0.81	8,190.00	4,486.22	-3,691.90	5,284.95	0.00	0.00	0.00	
12,900.00	90.00	0.81	8,190.00	4,586.21	-3,690.48	5,381.21	0.00	0.00	0.00	
13,000.00	90.00	0.81	8,190.00	4,686.20	-3,689.07	5,477.48	0.00	0.00	0.00	
13,100.00	90.00	0.81	8,190.00	4,786.19	-3,687.66	5,573.74	0.00	0.00	0.00	
13,200.00	90.00	0.81	8,190.00	4,886.18	-3,686.25	5,670.00	0.00	0.00	0.00	
13,300.00	90.00	0.81	8,190.00	4,986.17	-3,684.83	5,766.26	0.00	0.00	0.00	
13,400.00	90.00	0.81	8,190.00	5,086.16	-3,683.42	5,862.52	0.00	0.00	0.00	
13,500.00	90.00	0.81	8,190.00	5,186.15	-3,682.01	5,958.79	0.00	0.00	0.00	
13,600.00	90.00	0.81	8,190.00	5,286.14	-3,680.60	6,055.05	0.00	0.00	0.00	
13,700.00	90.00	0.81	8,190.00	5,386.13	-3,679.19	6,151.31	0.00	0.00	0.00	
13,800.00	90.00	0.81	8,190.00	5,486.12	-3,677.77	6,247.57	0.00	0.00	0.00	

Database:	Local	Local Co-ordinate Reference:	Well CRYSTAL6-65 22-10 1HN
Company:	GMT Exploration Company, LLC	TVD Reference:	KB @ 6200.00usft
Project:	Elbert County, CO (NAD 83)	MD Reference:	KB @ 6200.00usft
Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 1HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	0.81	8,190.00	5,586.11	-3,676.36	6,343.83	0.00	0.00	0.00
14,000.00	90.00	0.81	8,190.00	5,686.10	-3,674.95	6,440.09	0.00	0.00	0.00
14,100.00	90.00	0.81	8,190.00	5,786.09	-3,673.54	6,536.36	0.00	0.00	0.00
14,200.00	90.00	0.81	8,190.00	5,886.08	-3,672.13	6,632.62	0.00	0.00	0.00
14,300.00	90.00	0.81	8,190.00	5,986.07	-3,670.71	6,728.88	0.00	0.00	0.00
14,400.00	90.00	0.81	8,190.00	6,086.06	-3,669.30	6,825.14	0.00	0.00	0.00
14,500.00	90.00	0.81	8,190.00	6,186.05	-3,667.89	6,921.40	0.00	0.00	0.00
14,600.00	90.00	0.81	8,190.00	6,286.04	-3,666.48	7,017.67	0.00	0.00	0.00
14,700.00	90.00	0.81	8,190.00	6,386.03	-3,665.06	7,113.93	0.00	0.00	0.00
14,800.00	90.00	0.81	8,190.00	6,486.02	-3,663.65	7,210.19	0.00	0.00	0.00
14,900.00	90.00	0.81	8,190.00	6,586.01	-3,662.24	7,306.45	0.00	0.00	0.00
15,000.00	90.00	0.81	8,190.00	6,686.00	-3,660.83	7,402.71	0.00	0.00	0.00
15,100.00	90.00	0.81	8,190.00	6,785.99	-3,659.42	7,498.97	0.00	0.00	0.00
15,200.00	90.00	0.81	8,190.00	6,885.98	-3,658.00	7,595.24	0.00	0.00	0.00
15,300.00	90.00	0.81	8,190.00	6,985.97	-3,656.59	7,691.50	0.00	0.00	0.00
15,400.00	90.00	0.81	8,190.00	7,085.96	-3,655.18	7,787.76	0.00	0.00	0.00
15,500.00	90.00	0.81	8,190.00	7,185.95	-3,653.77	7,884.02	0.00	0.00	0.00
15,600.00	90.00	0.81	8,190.00	7,285.94	-3,652.36	7,980.28	0.00	0.00	0.00
15,700.00	90.00	0.81	8,190.00	7,385.93	-3,650.94	8,076.55	0.00	0.00	0.00
15,800.00	90.00	0.81	8,190.00	7,485.92	-3,649.53	8,172.81	0.00	0.00	0.00
15,900.00	90.00	0.81	8,190.00	7,585.91	-3,648.12	8,269.07	0.00	0.00	0.00
16,000.00	90.00	0.81	8,190.00	7,685.90	-3,646.71	8,365.33	0.00	0.00	0.00
16,100.00	90.00	0.81	8,190.00	7,785.89	-3,645.30	8,461.59	0.00	0.00	0.00
16,200.00	90.00	0.81	8,190.00	7,885.88	-3,643.88	8,557.85	0.00	0.00	0.00
16,300.00	90.00	0.81	8,190.00	7,985.87	-3,642.47	8,654.12	0.00	0.00	0.00
16,400.00	90.00	0.81	8,190.00	8,085.86	-3,641.06	8,750.38	0.00	0.00	0.00
16,500.00	90.00	0.81	8,190.00	8,185.85	-3,639.65	8,846.64	0.00	0.00	0.00
16,600.00	90.00	0.81	8,190.00	8,285.84	-3,638.23	8,942.90	0.00	0.00	0.00
16,700.00	90.00	0.81	8,190.00	8,385.83	-3,636.82	9,039.16	0.00	0.00	0.00
16,800.00	90.00	0.81	8,190.00	8,485.82	-3,635.41	9,135.43	0.00	0.00	0.00
16,900.00	90.00	0.81	8,190.00	8,585.81	-3,634.00	9,231.69	0.00	0.00	0.00
17,000.00	90.00	0.81	8,190.00	8,685.80	-3,632.59	9,327.95	0.00	0.00	0.00
17,100.00	90.00	0.81	8,190.00	8,785.79	-3,631.17	9,424.21	0.00	0.00	0.00
17,200.00	90.00	0.81	8,190.00	8,885.78	-3,629.76	9,520.47	0.00	0.00	0.00
17,300.00	90.00	0.81	8,190.00	8,985.77	-3,628.35	9,616.74	0.00	0.00	0.00
17,400.00	90.00	0.81	8,190.00	9,085.76	-3,626.94	9,713.00	0.00	0.00	0.00
17,500.00	90.00	0.81	8,190.00	9,185.75	-3,625.53	9,809.26	0.00	0.00	0.00
17,600.00	90.00	0.81	8,190.00	9,285.74	-3,624.11	9,905.52	0.00	0.00	0.00
17,700.00	90.00	0.81	8,190.00	9,385.73	-3,622.70	10,001.78	0.00	0.00	0.00
17,800.00	90.00	0.81	8,190.00	9,485.72	-3,621.29	10,098.04	0.00	0.00	0.00
17,900.00	90.00	0.81	8,190.00	9,585.71	-3,619.88	10,194.31	0.00	0.00	0.00
18,000.00	90.00	0.81	8,190.00	9,685.70	-3,618.47	10,290.57	0.00	0.00	0.00
18,100.00	90.00	0.81	8,190.00	9,785.69	-3,617.05	10,386.83	0.00	0.00	0.00
18,200.00	90.00	0.81	8,190.00	9,885.68	-3,615.64	10,483.09	0.00	0.00	0.00
18,300.00	90.00	0.81	8,190.00	9,985.67	-3,614.23	10,579.35	0.00	0.00	0.00
18,400.00	90.00	0.81	8,190.00	10,085.66	-3,612.82	10,675.62	0.00	0.00	0.00
18,500.00	90.00	0.81	8,190.00	10,185.65	-3,611.40	10,771.88	0.00	0.00	0.00
18,600.00	90.00	0.81	8,190.00	10,285.64	-3,609.99	10,868.14	0.00	0.00	0.00
18,700.00	90.00	0.81	8,190.00	10,385.63	-3,608.58	10,964.40	0.00	0.00	0.00
18,800.00	90.00	0.81	8,190.00	10,485.62	-3,607.17	11,060.66	0.00	0.00	0.00
18,900.00	90.00	0.81	8,190.00	10,585.61	-3,605.76	11,156.92	0.00	0.00	0.00
19,000.00	90.00	0.81	8,190.00	10,685.60	-3,604.34	11,253.19	0.00	0.00	0.00
19,100.00	90.00	0.81	8,190.00	10,785.59	-3,602.93	11,349.45	0.00	0.00	0.00
19,200.00	90.00	0.81	8,190.00	10,885.58	-3,601.52	11,445.71	0.00	0.00	0.00

Database:	Local	Local Co-ordinate Reference:	Well CRYSTAL6-65 22-10 1HN
Company:	GMT Exploration Company, LLC	TVD Reference:	KB @ 6200.00usft
Project:	Elbert County, CO (NAD 83)	MD Reference:	KB @ 6200.00usft
Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 1HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	0.81	8,190.00	10,985.57	-3,600.11	11,541.97	0.00	0.00	0.00	
19,400.00	90.00	0.81	8,190.00	11,085.56	-3,598.70	11,638.23	0.00	0.00	0.00	
19,500.00	90.00	0.81	8,190.00	11,185.55	-3,597.28	11,734.50	0.00	0.00	0.00	
19,600.00	90.00	0.81	8,190.00	11,285.54	-3,595.87	11,830.76	0.00	0.00	0.00	
19,700.00	90.00	0.81	8,190.00	11,385.53	-3,594.46	11,927.02	0.00	0.00	0.00	
19,800.00	90.00	0.81	8,190.00	11,485.52	-3,593.05	12,023.28	0.00	0.00	0.00	
19,900.00	90.00	0.81	8,190.00	11,585.51	-3,591.64	12,119.54	0.00	0.00	0.00	
20,000.00	90.00	0.81	8,190.00	11,685.50	-3,590.22	12,215.80	0.00	0.00	0.00	
20,100.00	90.00	0.81	8,190.00	11,785.49	-3,588.81	12,312.07	0.00	0.00	0.00	
20,200.00	90.00	0.81	8,190.00	11,885.48	-3,587.40	12,408.33	0.00	0.00	0.00	
20,300.00	90.00	0.81	8,190.00	11,985.47	-3,585.99	12,504.59	0.00	0.00	0.00	
20,400.00	90.00	0.81	8,190.00	12,085.46	-3,584.57	12,600.85	0.00	0.00	0.00	
20,500.00	90.00	0.81	8,190.00	12,185.45	-3,583.16	12,697.11	0.00	0.00	0.00	
20,600.00	90.00	0.81	8,190.00	12,285.44	-3,581.75	12,793.38	0.00	0.00	0.00	
20,700.00	90.00	0.81	8,190.00	12,385.43	-3,580.34	12,889.64	0.00	0.00	0.00	
20,800.00	90.00	0.81	8,190.00	12,485.42	-3,578.93	12,985.90	0.00	0.00	0.00	
20,900.00	90.00	0.81	8,190.00	12,585.41	-3,577.51	13,082.16	0.00	0.00	0.00	
21,000.00	90.00	0.81	8,190.00	12,685.40	-3,576.10	13,178.42	0.00	0.00	0.00	
21,100.00	90.00	0.81	8,190.00	12,785.39	-3,574.69	13,274.69	0.00	0.00	0.00	
21,200.00	90.00	0.81	8,190.00	12,885.38	-3,573.28	13,370.95	0.00	0.00	0.00	
21,300.00	90.00	0.81	8,190.00	12,985.37	-3,571.87	13,467.21	0.00	0.00	0.00	
21,400.00	90.00	0.81	8,190.00	13,085.36	-3,570.45	13,563.47	0.00	0.00	0.00	
21,500.00	90.00	0.81	8,190.00	13,185.35	-3,569.04	13,659.73	0.00	0.00	0.00	
21,600.00	90.00	0.81	8,190.00	13,285.34	-3,567.63	13,755.99	0.00	0.00	0.00	
21,660.89	90.00	0.81	8,190.00	13,346.22	-3,566.77	13,814.61	0.00	0.00	0.00	
Hold: 90.00° Inc, 0.81° Azm - LTP-CRYSTAL 6-65 22-10 1HN										
21,700.00	90.00	0.81	8,190.00	13,385.33	-3,566.22	13,852.26	0.00	0.00	0.00	
21,710.89	90.00	0.81	8,190.00	13,396.22	-3,566.06	13,862.74	0.00	0.00	0.00	
TD @ 21710.89' MD/8190.00' TVD - BHL-CRYSTAL 6-65 22-10 1HN										

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 - hit/miss target - Shape - Point	0.00	0.00	0.00	0.00	0.00	1,612,583.88	3,240,930.14	39.512211	-104.646036	
KOP-CRYSTAL 6-65 1 - plan hits target center - Point	0.00	0.00	7,617.04	770.17	-3,744.38	1,613,318.81	3,237,178.69	39.514325	-104.659308	
LTP-CRYSTAL 6-65 2 - plan hits target center - Point	0.00	0.00	8,190.00	13,346.22	-3,566.77	1,625,895.98	3,237,238.08	39.548851	-104.658684	
BHL-CRYSTAL 6-65 2 - plan hits target center - Point	0.00	0.00	8,190.00	13,396.22	-3,566.06	1,625,945.98	3,237,238.31	39.548988	-104.658682	
FTP-CRYSTAL 6-65 2 - plan hits target center - Point	0.00	0.00	8,190.00	1,343.07	-3,736.28	1,613,891.77	3,237,181.40	39.515897	-104.659279	

Database:	Local	Local Co-ordinate Reference:	Well CRYSTAL6-65 22-10 1HN
Company:	GMT Exploration Company, LLC	TVD Reference:	KB @ 6200.00usft
Project:	Elbert County, CO (NAD 83)	MD Reference:	KB @ 6200.00usft
Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 1HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
460.08	460.00	Denver				
1,576.86	1,535.00	Upper Arapahoe				
2,413.38	2,235.00	Laramie - Fox Hills				
2,625.66	2,405.00	Pierre Shale (Base of Fox Hills)				
6,652.63	5,630.00	Sussex Sandstone				
9,099.64	7,940.00	Sharon Springs Shale				
9,111.83	7,950.00	Niobrara				
9,124.22	7,960.00	Niobrara A				
9,304.14	8,085.00	Niobrara B Top				
9,504.71	8,170.00	Niobrara C 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
2,139.59	2,015.75	114.96	-558.92	Hold: 36.79° Inc, 281.62° Azm
6,616.95	5,601.30	655.21	-3,185.46	Drop: 2°/100' @ 6616.95' MD
8,456.54	7,317.04	770.17	-3,744.38	Hold: 0.00° Inc, 0.00° Azm
8,756.54	7,617.04	770.17	-3,744.38	KOP: 10°/100' @ 8756.54' MD
9,656.54	8,190.00	1,343.07	-3,736.28	LP: 9656.54' MD, 90.00° Inc, 0.81° Azm
21,660.89	8,190.00	13,346.22	-3,566.77	Hold: 90.00° Inc, 0.81° Azm
21,710.89	8,190.00	13,396.22	-3,566.06	TD @ 21710.89' MD/8190.00' TVD