



GMT Exploration Company, LLC

Elbert County, CO (NAD 83)

Ruby-Crystal Pad

CRYSTAL 6-65 22-10 5HN

Wellbore #1

Plan: Design #1

Standard Planning Report

24 May, 2019



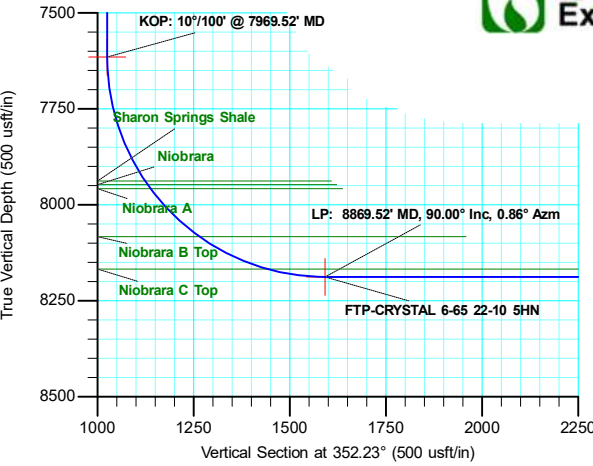
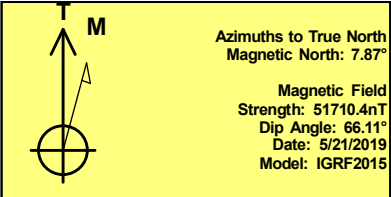
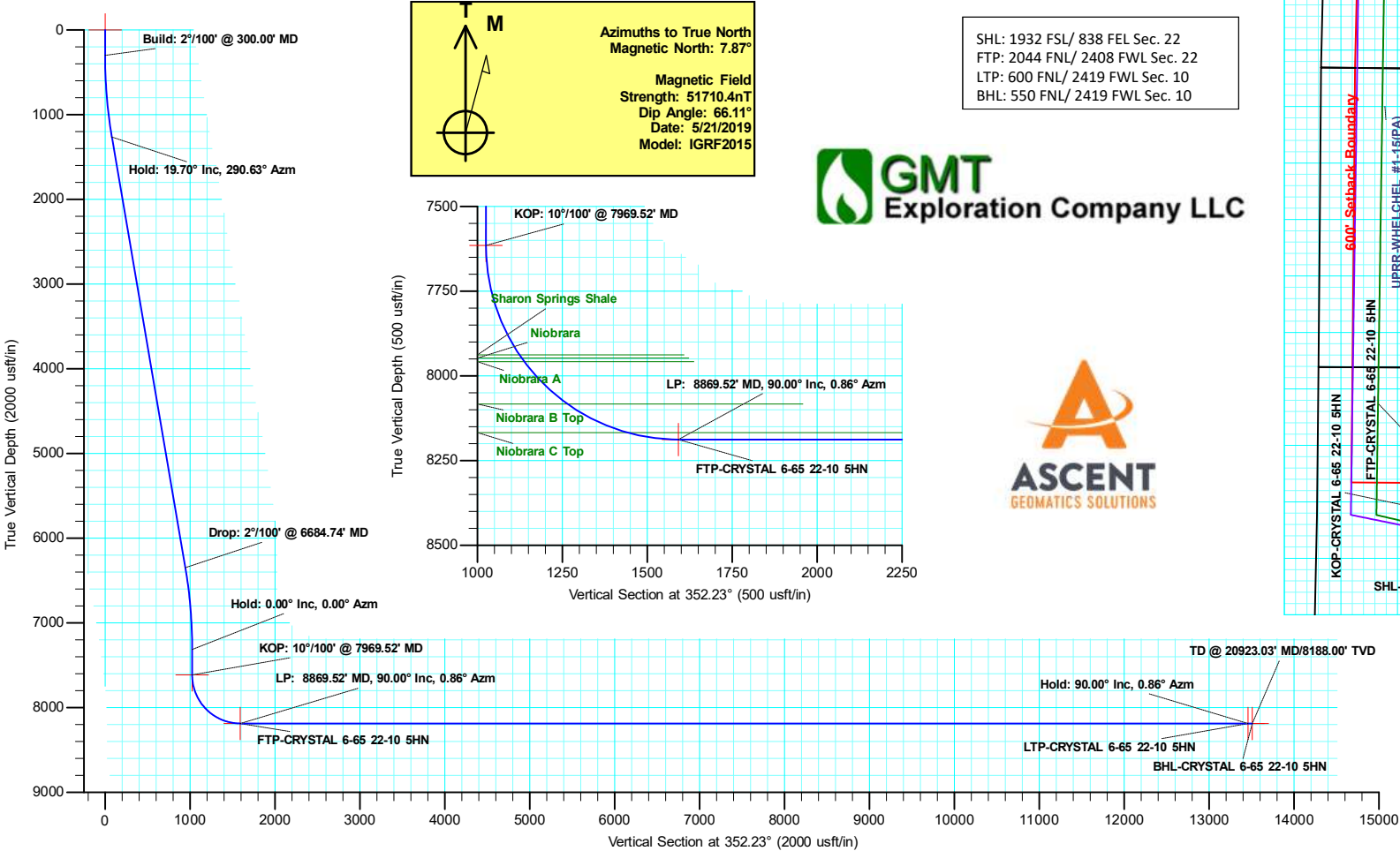
Project: Elbert County, CO (NAD 83)
Site: Ruby-Crystal Pad
Well: CRYSTAL 6-65 22-10 5HN
Wellbore: Wellbore #1
Design: Design #1

GMT Exploration Company, LLC

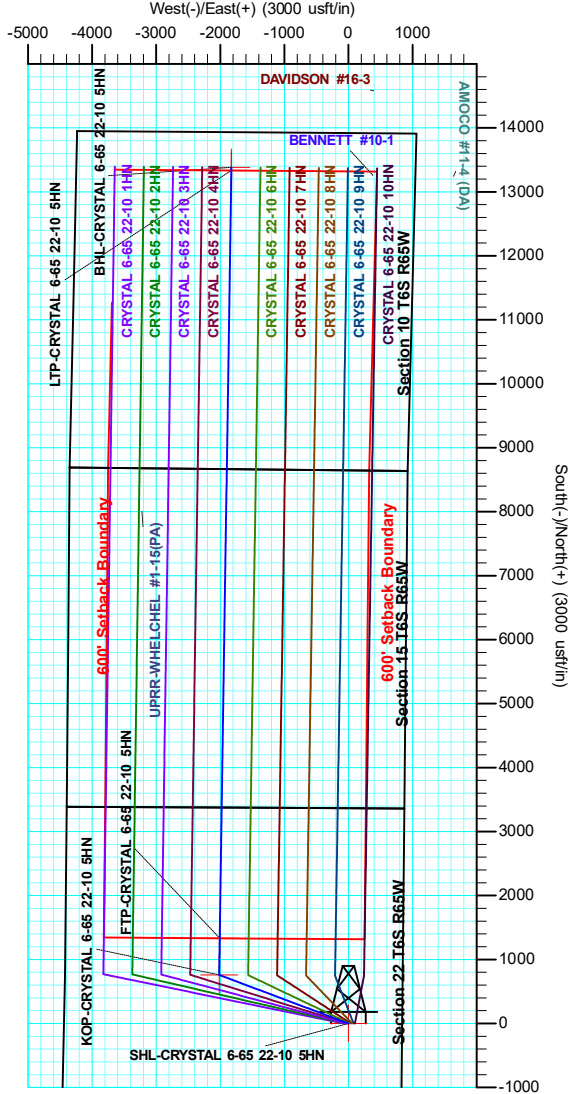
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone
System Datum: Mean Sea Level

WELL DETAILS: CRYSTAL 6-65 22-10 5HN					
+N/-S	+E/-W	Northing	Ground Level: Easting	6178.00 Latitude	Longitude
0.00	0.00	1612583.88	3241010.14	39.512209	-104.645752

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	
1284.78	19.70	290.63	1265.50	59.06	-156.85	2.00	290.63	79.73	
6684.74	19.70	290.63	6349.55	700.37	-1860.01	0.00	0.00	945.49	
7669.52	0.00	0.00	7315.04	759.43	-2016.86	2.00	180.00	1025.22	
7969.52	0.00	0.00	7615.04	759.43	-2016.86	0.00	0.00	1025.22	
8869.52	90.00	0.86	8188.00	1332.33	-2008.24	10.00	0.00	1591.69	FTP-CRYSTAL 6-65 22-10 5HN
20873.02	90.00	0.86	8188.00	13334.48	-1827.70	0.00	0.00	13459.15	LTP-CRYSTAL 6-65 22-10 5HN
20923.03	90.00	0.86	8188.00	13384.47	-1826.95	0.00	0.00	13508.58	BHL-CRYSTAL 6-65 22-10 5HN



SHL: 1932 FSL/ 838 FEL Sec. 22
FTP: 2044 FNL/ 2408 FWL Sec. 22
LTP: 600 FNL/ 2419 FWL Sec. 10
BHL: 550 FNL/ 2419 FWL Sec. 10



Database:	Local	Local Co-ordinate Reference:	Well CRYSTAL6-65 22-10 5HN
Company:	GMT Exploration Company, LLC	TVD Reference:	KB @ 6198.00usft
Project:	Elbert County, CO (NAD 83)	MD Reference:	KB @ 6198.00usft
Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 5HN	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 5HN					
Well Position	+N-S	-699.72 usft	Northing:	1,612,583.88 usft	Latitude:	39.512209
	+E-W	1,801.74 usft	Easting:	3,241,010.14 usft	Longitude:	-104.645752
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	6,178.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/21/2019	7.87	66.11	51,710.42302153

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	352.23

Plan Survey Tool Program	Date	5/24/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,923.03	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	
1,284.78	19.70	290.63	1,265.50	59.06	-156.85	2.00	2.00	0.00	290.63	
6,684.74	19.70	290.63	6,349.55	700.37	-1,860.01	0.00	0.00	0.00	0.00	
7,669.52	0.00	0.00	7,315.04	759.43	-2,016.86	2.00	-2.00	0.00	180.00	
7,969.52	0.00	0.00	7,615.04	759.43	-2,016.86	0.00	0.00	0.00	0.00	
8,869.52	90.00	0.86	8,188.00	1,332.33	-2,008.24	10.00	10.00	0.00	0.00	FTP-CRYSTAL 6-65
20,873.03	90.00	0.86	8,188.00	13,334.48	-1,827.70	0.00	0.00	0.00	0.00	LTP-CRYSTAL 6-65
20,923.03	90.00	0.86	8,188.00	13,384.47	-1,826.95	0.00	0.00	0.00	0.00	BHL-CRYSTAL 6-65

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Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 5HN	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 5HN									
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	290.63	399.98	0.61	-1.63	0.83	2.00	2.00	0.00
500.00	4.00	290.63	499.84	2.46	-6.53	3.32	2.00	2.00	0.00
600.00	6.00	290.63	599.45	5.53	-14.69	7.47	2.00	2.00	0.00
700.00	8.00	290.63	698.70	9.82	-26.09	13.26	2.00	2.00	0.00
800.00	10.00	290.63	797.47	15.34	-40.73	20.70	2.00	2.00	0.00
900.00	12.00	290.63	895.62	22.06	-58.59	29.78	2.00	2.00	0.00
1,000.00	14.00	290.63	993.06	29.99	-79.64	40.48	2.00	2.00	0.00
1,100.00	16.00	290.63	1,089.64	39.11	-103.86	52.79	2.00	2.00	0.00
1,200.00	18.00	290.63	1,185.27	49.41	-131.22	66.70	2.00	2.00	0.00
1,284.78	19.70	290.63	1,265.50	59.06	-156.85	79.73	2.00	2.00	0.00
Hold: 19.70° Inc, 290.63° Azm									
1,300.00	19.70	290.63	1,279.83	60.87	-161.65	82.17	0.00	0.00	0.00
1,400.00	19.70	290.63	1,373.98	72.74	-193.19	98.20	0.00	0.00	0.00
1,500.00	19.70	290.63	1,468.13	84.62	-224.73	114.24	0.00	0.00	0.00
1,600.00	19.70	290.63	1,562.28	96.50	-256.27	130.27	0.00	0.00	0.00
1,700.00	19.70	290.63	1,656.43	108.37	-287.81	146.30	0.00	0.00	0.00
1,800.00	19.70	290.63	1,750.58	120.25	-319.35	162.33	0.00	0.00	0.00
1,900.00	19.70	290.63	1,844.73	132.13	-350.89	178.37	0.00	0.00	0.00
2,000.00	19.70	290.63	1,938.88	144.00	-382.43	194.40	0.00	0.00	0.00
2,100.00	19.70	290.63	2,033.03	155.88	-413.97	210.43	0.00	0.00	0.00
2,200.00	19.70	290.63	2,127.18	167.75	-445.51	226.47	0.00	0.00	0.00
2,300.00	19.70	290.63	2,221.33	179.63	-477.05	242.50	0.00	0.00	0.00
2,400.00	19.70	290.63	2,315.48	191.51	-508.59	258.53	0.00	0.00	0.00
2,500.00	19.70	290.63	2,409.63	203.38	-540.13	274.56	0.00	0.00	0.00
2,600.00	19.70	290.63	2,503.78	215.26	-571.67	290.60	0.00	0.00	0.00
2,700.00	19.70	290.63	2,597.93	227.14	-603.21	306.63	0.00	0.00	0.00
2,800.00	19.70	290.63	2,692.07	239.01	-634.75	322.66	0.00	0.00	0.00
2,900.00	19.70	290.63	2,786.22	250.89	-666.29	338.70	0.00	0.00	0.00
3,000.00	19.70	290.63	2,880.37	262.76	-697.83	354.73	0.00	0.00	0.00
3,100.00	19.70	290.63	2,974.52	274.64	-729.37	370.76	0.00	0.00	0.00
3,200.00	19.70	290.63	3,068.67	286.52	-760.92	386.79	0.00	0.00	0.00
3,300.00	19.70	290.63	3,162.82	298.39	-792.46	402.83	0.00	0.00	0.00
3,400.00	19.70	290.63	3,256.97	310.27	-824.00	418.86	0.00	0.00	0.00
3,500.00	19.70	290.63	3,351.12	322.15	-855.54	434.89	0.00	0.00	0.00
3,600.00	19.70	290.63	3,445.27	334.02	-887.08	450.92	0.00	0.00	0.00
3,700.00	19.70	290.63	3,539.42	345.90	-918.62	466.96	0.00	0.00	0.00
3,800.00	19.70	290.63	3,633.57	357.77	-950.16	482.99	0.00	0.00	0.00
3,900.00	19.70	290.63	3,727.72	369.65	-981.70	499.02	0.00	0.00	0.00
4,000.00	19.70	290.63	3,821.87	381.53	-1,013.24	515.06	0.00	0.00	0.00
4,100.00	19.70	290.63	3,916.02	393.40	-1,044.78	531.09	0.00	0.00	0.00
4,200.00	19.70	290.63	4,010.17	405.28	-1,076.32	547.12	0.00	0.00	0.00
4,300.00	19.70	290.63	4,104.32	417.16	-1,107.86	563.15	0.00	0.00	0.00
4,400.00	19.70	290.63	4,198.47	429.03	-1,139.40	579.19	0.00	0.00	0.00
4,500.00	19.70	290.63	4,292.62	440.91	-1,170.94	595.22	0.00	0.00	0.00
4,600.00	19.70	290.63	4,386.77	452.78	-1,202.48	611.25	0.00	0.00	0.00
4,700.00	19.70	290.63	4,480.92	464.66	-1,234.02	627.28	0.00	0.00	0.00
4,800.00	19.70	290.63	4,575.07	476.54	-1,265.56	643.32	0.00	0.00	0.00

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Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 5HN	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	19.70	290.63	4,669.22	488.41	-1,297.10	659.35	0.00	0.00	0.00	
5,000.00	19.70	290.63	4,763.37	500.29	-1,328.64	675.38	0.00	0.00	0.00	
5,100.00	19.70	290.63	4,857.52	512.17	-1,360.18	691.42	0.00	0.00	0.00	
5,200.00	19.70	290.63	4,951.67	524.04	-1,391.72	707.45	0.00	0.00	0.00	
5,300.00	19.70	290.63	5,045.82	535.92	-1,423.26	723.48	0.00	0.00	0.00	
5,400.00	19.70	290.63	5,139.97	547.79	-1,454.80	739.51	0.00	0.00	0.00	
5,500.00	19.70	290.63	5,234.12	559.67	-1,486.34	755.55	0.00	0.00	0.00	
5,600.00	19.70	290.63	5,328.27	571.55	-1,517.88	771.58	0.00	0.00	0.00	
5,700.00	19.70	290.63	5,422.42	583.42	-1,549.42	787.61	0.00	0.00	0.00	
5,800.00	19.70	290.63	5,516.57	595.30	-1,580.96	803.65	0.00	0.00	0.00	
5,900.00	19.70	290.63	5,610.72	607.18	-1,612.50	819.68	0.00	0.00	0.00	
6,000.00	19.70	290.63	5,704.87	619.05	-1,644.04	835.71	0.00	0.00	0.00	
6,100.00	19.70	290.63	5,799.01	630.93	-1,675.58	851.74	0.00	0.00	0.00	
6,200.00	19.70	290.63	5,893.16	642.80	-1,707.12	867.78	0.00	0.00	0.00	
6,300.00	19.70	290.63	5,987.31	654.68	-1,738.66	883.81	0.00	0.00	0.00	
6,400.00	19.70	290.63	6,081.46	666.56	-1,770.20	899.84	0.00	0.00	0.00	
6,500.00	19.70	290.63	6,175.61	678.43	-1,801.74	915.87	0.00	0.00	0.00	
6,600.00	19.70	290.63	6,269.76	690.31	-1,833.28	931.91	0.00	0.00	0.00	
6,684.74	19.70	290.63	6,349.55	700.37	-1,860.01	945.49	0.00	0.00	0.00	
Drop: 2°/100' @ 6684.74' MD										
6,700.00	19.39	290.63	6,363.93	702.17	-1,864.79	947.92	2.00	-2.00	0.00	
6,800.00	17.39	290.63	6,458.81	713.29	-1,894.31	962.93	2.00	-2.00	0.00	
6,900.00	15.39	290.63	6,554.75	723.23	-1,920.72	976.35	2.00	-2.00	0.00	
7,000.00	13.39	290.63	6,651.60	731.99	-1,943.98	988.17	2.00	-2.00	0.00	
7,100.00	11.39	290.63	6,749.27	739.55	-1,964.06	998.38	2.00	-2.00	0.00	
7,200.00	9.39	290.63	6,847.62	745.91	-1,980.93	1,006.96	2.00	-2.00	0.00	
7,300.00	7.39	290.63	6,946.55	751.05	-1,994.59	1,013.90	2.00	-2.00	0.00	
7,400.00	5.39	290.63	7,045.92	754.97	-2,005.00	1,019.20	2.00	-2.00	0.00	
7,500.00	3.39	290.63	7,145.62	757.67	-2,012.17	1,022.84	2.00	-2.00	0.00	
7,600.00	1.39	290.63	7,245.53	759.14	-2,016.07	1,024.82	2.00	-2.00	0.00	
7,669.52	0.00	0.00	7,315.04	759.43	-2,016.86	1,025.22	2.00	-2.00	0.00	
Hold: 0.00° Inc, 0.00° Azm										
7,700.00	0.00	0.00	7,345.53	759.43	-2,016.86	1,025.22	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,445.53	759.43	-2,016.86	1,025.22	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,545.53	759.43	-2,016.86	1,025.22	0.00	0.00	0.00	
7,969.52	0.00	0.00	7,615.04	759.43	-2,016.86	1,025.22	0.00	0.00	0.00	
KOP: 10°/100' @ 7969.52' MD - KOP-CRYSTAL 6-65 22-10 5HN										
8,000.00	3.05	0.86	7,645.51	760.24	-2,016.85	1,026.03	10.00	10.00	0.00	
8,050.00	8.05	0.86	7,695.26	765.08	-2,016.78	1,030.80	10.00	10.00	0.00	
8,100.00	13.05	0.86	7,744.40	774.23	-2,016.64	1,039.85	10.00	10.00	0.00	
8,150.00	18.05	0.86	7,792.56	787.62	-2,016.44	1,053.10	10.00	10.00	0.00	
8,200.00	23.05	0.86	7,839.36	805.16	-2,016.17	1,070.44	10.00	10.00	0.00	
8,250.00	28.05	0.86	7,884.46	826.72	-2,015.85	1,091.75	10.00	10.00	0.00	
8,300.00	33.05	0.86	7,927.50	852.12	-2,015.47	1,116.87	10.00	10.00	0.00	
8,350.00	38.05	0.86	7,968.17	881.18	-2,015.03	1,145.60	10.00	10.00	0.00	
8,400.00	43.05	0.86	8,006.15	913.67	-2,014.54	1,177.73	10.00	10.00	0.00	
8,450.00	48.05	0.86	8,041.16	949.35	-2,014.00	1,213.00	10.00	10.00	0.00	
8,500.00	53.05	0.86	8,072.92	987.94	-2,013.42	1,251.16	10.00	10.00	0.00	
8,550.00	58.05	0.86	8,101.19	1,029.15	-2,012.80	1,291.91	10.00	10.00	0.00	
8,600.00	63.05	0.86	8,125.77	1,072.67	-2,012.15	1,334.94	10.00	10.00	0.00	
8,650.00	68.05	0.86	8,146.46	1,118.17	-2,011.46	1,379.93	10.00	10.00	0.00	
8,700.00	73.05	0.86	8,163.11	1,165.29	-2,010.76	1,426.53	10.00	10.00	0.00	
8,750.00	78.05	0.86	8,175.58	1,213.69	-2,010.03	1,474.38	10.00	10.00	0.00	

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Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 5HN	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)
8,800.00	83.05	0.86	8,183.79	1,262.99	-2,009.29	1,523.13	10.00	10.00	0.00
8,850.00	88.05	0.86	8,187.67	1,312.82	-2,008.54	1,572.40	10.00	10.00	0.00
8,869.52	90.00	0.86	8,188.00	1,332.33	-2,008.24	1,591.69	10.00	10.00	0.00
LP: 8869.52' MD, 90.00° Inc, 0.86° Azm - FTP-CRYSTAL 6-65 22-10 5HN									
8,900.00	90.00	0.86	8,188.00	1,362.81	-2,007.78	1,621.83	0.00	0.00	0.00
9,000.00	90.00	0.86	8,188.00	1,462.79	-2,006.28	1,720.69	0.00	0.00	0.00
9,100.00	90.00	0.86	8,188.00	1,562.78	-2,004.78	1,819.56	0.00	0.00	0.00
9,200.00	90.00	0.86	8,188.00	1,662.77	-2,003.27	1,918.43	0.00	0.00	0.00
9,300.00	90.00	0.86	8,188.00	1,762.76	-2,001.77	2,017.29	0.00	0.00	0.00
9,400.00	90.00	0.86	8,188.00	1,862.75	-2,000.26	2,116.16	0.00	0.00	0.00
9,500.00	90.00	0.86	8,188.00	1,962.74	-1,998.76	2,215.03	0.00	0.00	0.00
9,600.00	90.00	0.86	8,188.00	2,062.73	-1,997.26	2,313.89	0.00	0.00	0.00
9,700.00	90.00	0.86	8,188.00	2,162.72	-1,995.75	2,412.76	0.00	0.00	0.00
9,800.00	90.00	0.86	8,188.00	2,262.70	-1,994.25	2,511.62	0.00	0.00	0.00
9,900.00	90.00	0.86	8,188.00	2,362.69	-1,992.74	2,610.49	0.00	0.00	0.00
10,000.00	90.00	0.86	8,188.00	2,462.68	-1,991.24	2,709.36	0.00	0.00	0.00
10,100.00	90.00	0.86	8,188.00	2,562.67	-1,989.74	2,808.22	0.00	0.00	0.00
10,200.00	90.00	0.86	8,188.00	2,662.66	-1,988.23	2,907.09	0.00	0.00	0.00
10,300.00	90.00	0.86	8,188.00	2,762.65	-1,986.73	3,005.96	0.00	0.00	0.00
10,400.00	90.00	0.86	8,188.00	2,862.64	-1,985.22	3,104.82	0.00	0.00	0.00
10,500.00	90.00	0.86	8,188.00	2,962.63	-1,983.72	3,203.69	0.00	0.00	0.00
10,600.00	90.00	0.86	8,188.00	3,062.61	-1,982.22	3,302.56	0.00	0.00	0.00
10,700.00	90.00	0.86	8,188.00	3,162.60	-1,980.71	3,401.42	0.00	0.00	0.00
10,800.00	90.00	0.86	8,188.00	3,262.59	-1,979.21	3,500.29	0.00	0.00	0.00
10,900.00	90.00	0.86	8,188.00	3,362.58	-1,977.70	3,599.16	0.00	0.00	0.00
11,000.00	90.00	0.86	8,188.00	3,462.57	-1,976.20	3,698.02	0.00	0.00	0.00
11,100.00	90.00	0.86	8,188.00	3,562.56	-1,974.70	3,796.89	0.00	0.00	0.00
11,200.00	90.00	0.86	8,188.00	3,662.55	-1,973.19	3,895.76	0.00	0.00	0.00
11,300.00	90.00	0.86	8,188.00	3,762.53	-1,971.69	3,994.62	0.00	0.00	0.00
11,400.00	90.00	0.86	8,188.00	3,862.52	-1,970.18	4,093.49	0.00	0.00	0.00
11,500.00	90.00	0.86	8,188.00	3,962.51	-1,968.68	4,192.36	0.00	0.00	0.00
11,600.00	90.00	0.86	8,188.00	4,062.50	-1,967.17	4,291.22	0.00	0.00	0.00
11,700.00	90.00	0.86	8,188.00	4,162.49	-1,965.67	4,390.09	0.00	0.00	0.00
11,800.00	90.00	0.86	8,188.00	4,262.48	-1,964.17	4,488.96	0.00	0.00	0.00
11,900.00	90.00	0.86	8,188.00	4,362.47	-1,962.66	4,587.82	0.00	0.00	0.00
12,000.00	90.00	0.86	8,188.00	4,462.46	-1,961.16	4,686.69	0.00	0.00	0.00
12,100.00	90.00	0.86	8,188.00	4,562.44	-1,959.65	4,785.56	0.00	0.00	0.00
12,200.00	90.00	0.86	8,188.00	4,662.43	-1,958.15	4,884.42	0.00	0.00	0.00
12,300.00	90.00	0.86	8,188.00	4,762.42	-1,956.65	4,983.29	0.00	0.00	0.00
12,400.00	90.00	0.86	8,188.00	4,862.41	-1,955.14	5,082.16	0.00	0.00	0.00
12,500.00	90.00	0.86	8,188.00	4,962.40	-1,953.64	5,181.02	0.00	0.00	0.00
12,600.00	90.00	0.86	8,188.00	5,062.39	-1,952.13	5,279.89	0.00	0.00	0.00
12,700.00	90.00	0.86	8,188.00	5,162.38	-1,950.63	5,378.76	0.00	0.00	0.00
12,800.00	90.00	0.86	8,188.00	5,262.37	-1,949.13	5,477.62	0.00	0.00	0.00
12,900.00	90.00	0.86	8,188.00	5,362.35	-1,947.62	5,576.49	0.00	0.00	0.00
13,000.00	90.00	0.86	8,188.00	5,462.34	-1,946.12	5,675.36	0.00	0.00	0.00
13,100.00	90.00	0.86	8,188.00	5,562.33	-1,944.61	5,774.22	0.00	0.00	0.00
13,200.00	90.00	0.86	8,188.00	5,662.32	-1,943.11	5,873.09	0.00	0.00	0.00
13,300.00	90.00	0.86	8,188.00	5,762.31	-1,941.61	5,971.96	0.00	0.00	0.00
13,400.00	90.00	0.86	8,188.00	5,862.30	-1,940.10	6,070.82	0.00	0.00	0.00
13,500.00	90.00	0.86	8,188.00	5,962.29	-1,938.60	6,169.69	0.00	0.00	0.00
13,600.00	90.00	0.86	8,188.00	6,062.27	-1,937.09	6,268.56	0.00	0.00	0.00
13,700.00	90.00	0.86	8,188.00	6,162.26	-1,935.59	6,367.42	0.00	0.00	0.00
13,800.00	90.00	0.86	8,188.00	6,262.25	-1,934.09	6,466.29	0.00	0.00	0.00

Database:	Local	Local Co-ordinate Reference:	Well CRYSTAL6-65 22-10 5HN
Company:	GMT Exploration Company, LLC	TVD Reference:	KB @ 6198.00usft
Project:	Elbert County, CO (NAD 83)	MD Reference:	KB @ 6198.00usft
Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 5HN	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	0.86	8,188.00	6,362.24	-1,932.58	6,565.16	0.00	0.00	0.00
14,000.00	90.00	0.86	8,188.00	6,462.23	-1,931.08	6,664.02	0.00	0.00	0.00
14,100.00	90.00	0.86	8,188.00	6,562.22	-1,929.57	6,762.89	0.00	0.00	0.00
14,200.00	90.00	0.86	8,188.00	6,662.21	-1,928.07	6,861.76	0.00	0.00	0.00
14,300.00	90.00	0.86	8,188.00	6,762.20	-1,926.57	6,960.62	0.00	0.00	0.00
14,400.00	90.00	0.86	8,188.00	6,862.18	-1,925.06	7,059.49	0.00	0.00	0.00
14,500.00	90.00	0.86	8,188.00	6,962.17	-1,923.56	7,158.36	0.00	0.00	0.00
14,600.00	90.00	0.86	8,188.00	7,062.16	-1,922.05	7,257.22	0.00	0.00	0.00
14,700.00	90.00	0.86	8,188.00	7,162.15	-1,920.55	7,356.09	0.00	0.00	0.00
14,800.00	90.00	0.86	8,188.00	7,262.14	-1,919.04	7,454.96	0.00	0.00	0.00
14,900.00	90.00	0.86	8,188.00	7,362.13	-1,917.54	7,553.82	0.00	0.00	0.00
15,000.00	90.00	0.86	8,188.00	7,462.12	-1,916.04	7,652.69	0.00	0.00	0.00
15,100.00	90.00	0.86	8,188.00	7,562.11	-1,914.53	7,751.56	0.00	0.00	0.00
15,200.00	90.00	0.86	8,188.00	7,662.09	-1,913.03	7,850.42	0.00	0.00	0.00
15,300.00	90.00	0.86	8,188.00	7,762.08	-1,911.52	7,949.29	0.00	0.00	0.00
15,400.00	90.00	0.86	8,188.00	7,862.07	-1,910.02	8,048.16	0.00	0.00	0.00
15,500.00	90.00	0.86	8,188.00	7,962.06	-1,908.52	8,147.02	0.00	0.00	0.00
15,600.00	90.00	0.86	8,188.00	8,062.05	-1,907.01	8,245.89	0.00	0.00	0.00
15,700.00	90.00	0.86	8,188.00	8,162.04	-1,905.51	8,344.76	0.00	0.00	0.00
15,800.00	90.00	0.86	8,188.00	8,262.03	-1,904.00	8,443.62	0.00	0.00	0.00
15,900.00	90.00	0.86	8,188.00	8,362.01	-1,902.50	8,542.49	0.00	0.00	0.00
16,000.00	90.00	0.86	8,188.00	8,462.00	-1,901.00	8,641.36	0.00	0.00	0.00
16,100.00	90.00	0.86	8,188.00	8,561.99	-1,899.49	8,740.22	0.00	0.00	0.00
16,200.00	90.00	0.86	8,188.00	8,661.98	-1,897.99	8,839.09	0.00	0.00	0.00
16,300.00	90.00	0.86	8,188.00	8,761.97	-1,896.48	8,937.96	0.00	0.00	0.00
16,400.00	90.00	0.86	8,188.00	8,861.96	-1,894.98	9,036.82	0.00	0.00	0.00
16,500.00	90.00	0.86	8,188.00	8,961.95	-1,893.48	9,135.69	0.00	0.00	0.00
16,600.00	90.00	0.86	8,188.00	9,061.94	-1,891.97	9,234.55	0.00	0.00	0.00
16,700.00	90.00	0.86	8,188.00	9,161.92	-1,890.47	9,333.42	0.00	0.00	0.00
16,800.00	90.00	0.86	8,188.00	9,261.91	-1,888.96	9,432.29	0.00	0.00	0.00
16,900.00	90.00	0.86	8,188.00	9,361.90	-1,887.46	9,531.15	0.00	0.00	0.00
17,000.00	90.00	0.86	8,188.00	9,461.89	-1,885.96	9,630.02	0.00	0.00	0.00
17,100.00	90.00	0.86	8,188.00	9,561.88	-1,884.45	9,728.89	0.00	0.00	0.00
17,200.00	90.00	0.86	8,188.00	9,661.87	-1,882.95	9,827.75	0.00	0.00	0.00
17,300.00	90.00	0.86	8,188.00	9,761.86	-1,881.44	9,926.62	0.00	0.00	0.00
17,400.00	90.00	0.86	8,188.00	9,861.84	-1,879.94	10,025.49	0.00	0.00	0.00
17,500.00	90.00	0.86	8,188.00	9,961.83	-1,878.44	10,124.35	0.00	0.00	0.00
17,600.00	90.00	0.86	8,188.00	10,061.82	-1,876.93	10,223.22	0.00	0.00	0.00
17,700.00	90.00	0.86	8,188.00	10,161.81	-1,875.43	10,322.09	0.00	0.00	0.00
17,800.00	90.00	0.86	8,188.00	10,261.80	-1,873.92	10,420.95	0.00	0.00	0.00
17,900.00	90.00	0.86	8,188.00	10,361.79	-1,872.42	10,519.82	0.00	0.00	0.00
18,000.00	90.00	0.86	8,188.00	10,461.78	-1,870.92	10,618.69	0.00	0.00	0.00
18,100.00	90.00	0.86	8,188.00	10,561.77	-1,869.41	10,717.55	0.00	0.00	0.00
18,200.00	90.00	0.86	8,188.00	10,661.75	-1,867.91	10,816.42	0.00	0.00	0.00
18,300.00	90.00	0.86	8,188.00	10,761.74	-1,866.40	10,915.29	0.00	0.00	0.00
18,400.00	90.00	0.86	8,188.00	10,861.73	-1,864.90	11,014.15	0.00	0.00	0.00
18,500.00	90.00	0.86	8,188.00	10,961.72	-1,863.39	11,113.02	0.00	0.00	0.00
18,600.00	90.00	0.86	8,188.00	11,061.71	-1,861.89	11,211.89	0.00	0.00	0.00
18,700.00	90.00	0.86	8,188.00	11,161.70	-1,860.39	11,310.75	0.00	0.00	0.00
18,800.00	90.00	0.86	8,188.00	11,261.69	-1,858.88	11,409.62	0.00	0.00	0.00
18,900.00	90.00	0.86	8,188.00	11,361.68	-1,857.38	11,508.49	0.00	0.00	0.00
19,000.00	90.00	0.86	8,188.00	11,461.66	-1,855.87	11,607.35	0.00	0.00	0.00
19,100.00	90.00	0.86	8,188.00	11,561.65	-1,854.37	11,706.22	0.00	0.00	0.00
19,200.00	90.00	0.86	8,188.00	11,661.64	-1,852.87	11,805.09	0.00	0.00	0.00

Database:	Local	Local Co-ordinate Reference:	Well CRYSTAL6-65 22-10 5HN
Company:	GMT Exploration Company, LLC	TVD Reference:	KB @ 6198.00usft
Project:	Elbert County, CO (NAD 83)	MD Reference:	KB @ 6198.00usft
Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 5HN	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	0.86	8,188.00	11,761.63	-1,851.36	11,903.95	0.00	0.00	0.00	
19,400.00	90.00	0.86	8,188.00	11,861.62	-1,849.86	12,002.82	0.00	0.00	0.00	
19,500.00	90.00	0.86	8,188.00	11,961.61	-1,848.35	12,101.69	0.00	0.00	0.00	
19,600.00	90.00	0.86	8,188.00	12,061.60	-1,846.85	12,200.55	0.00	0.00	0.00	
19,700.00	90.00	0.86	8,188.00	12,161.58	-1,845.35	12,299.42	0.00	0.00	0.00	
19,800.00	90.00	0.86	8,188.00	12,261.57	-1,843.84	12,398.29	0.00	0.00	0.00	
19,900.00	90.00	0.86	8,188.00	12,361.56	-1,842.34	12,497.15	0.00	0.00	0.00	
20,000.00	90.00	0.86	8,188.00	12,461.55	-1,840.83	12,596.02	0.00	0.00	0.00	
20,100.00	90.00	0.86	8,188.00	12,561.54	-1,839.33	12,694.89	0.00	0.00	0.00	
20,200.00	90.00	0.86	8,188.00	12,661.53	-1,837.83	12,793.75	0.00	0.00	0.00	
20,300.00	90.00	0.86	8,188.00	12,761.52	-1,836.32	12,892.62	0.00	0.00	0.00	
20,400.00	90.00	0.86	8,188.00	12,861.51	-1,834.82	12,991.49	0.00	0.00	0.00	
20,500.00	90.00	0.86	8,188.00	12,961.49	-1,833.31	13,090.35	0.00	0.00	0.00	
20,600.00	90.00	0.86	8,188.00	13,061.48	-1,831.81	13,189.22	0.00	0.00	0.00	
20,700.00	90.00	0.86	8,188.00	13,161.47	-1,830.31	13,288.09	0.00	0.00	0.00	
20,800.00	90.00	0.86	8,188.00	13,261.46	-1,828.80	13,386.95	0.00	0.00	0.00	
20,873.03	90.00	0.86	8,188.00	13,334.48	-1,827.70	13,459.15	0.00	0.00	0.00	
Hold: 90.00° Inc, 0.86° Azm - LTP-CRYSTAL 6-65 22-10 5HN										
20,900.00	90.00	0.86	8,188.00	13,361.45	-1,827.30	13,485.82	0.00	0.00	0.00	
20,923.03	90.00	0.86	8,188.00	13,384.47	-1,826.95	13,508.59	0.00	0.00	0.00	
TD @ 20923.03' MD/8188.00' TVD - BHL-CRYSTAL 6-65 22-10 5HN										

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	3,241,010.14	39.512209	-104.645752	
KOP-CRYSTAL 6-65 1 - plan hits target center - Point	0.00	0.00	7,615.04	759.43	-2,016.86	1,613,324.31	3,238,986.23	39.514294	-104.652901	
BHL-CRYSTAL 6-65 2 - plan hits target center - Point	0.00	0.00	8,188.00	13,384.47	-1,826.95	1,625,950.58	3,239,057.42	39.548955	-104.652231	
LTP-CRYSTAL 6-65 2 - plan hits target center - Point	0.00	0.00	8,188.00	13,334.48	-1,827.70	1,625,900.58	3,239,057.13	39.548817	-104.652234	
FTP-CRYSTAL 6-65 2 - plan hits target center - Point	0.00	0.00	8,188.00	1,332.33	-2,008.24	1,613,897.26	3,238,989.46	39.515866	-104.652871	

Database:	Local	Local Co-ordinate Reference:	Well CRYSTAL6-65 22-10 5HN
Company:	GMT Exploration Company, LLC	TVD Reference:	KB @ 6198.00usft
Project:	Elbert County, CO (NAD 83)	MD Reference:	KB @ 6198.00usft
Site:	Ruby-Crystal Pad	North Reference:	True
Well:	CRYSTAL 6-65 22-10 5HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
458.08	458.00	Denver				
1,568.90	1,533.00	Upper Arapahoe				
2,312.40	2,233.00	Laramie - Fox Hills				
2,492.96	2,403.00	Pierre Shale (Base of Fox Hills)				
5,918.36	5,628.00	Sussex Sandstone				
8,312.62	7,938.00	Sharon Springs Shale				
8,324.81	7,948.00	Niobrara				
8,337.20	7,958.00	Niobrara A				
8,517.12	8,083.00	Niobrara B Top				
8,717.69	8,168.00	Niobrara C 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	
1,284.78	1,265.50	59.06	-156.85	Hold: 19.70° Inc, 290.63° Azm	
6,684.74	6,349.55	700.37	-1,860.01	Drop: 2°/100' @ 6684.74' MD	
7,669.52	7,315.04	759.43	-2,016.86	Hold: 0.00° Inc, 0.00° Azm	
7,969.52	7,615.04	759.43	-2,016.86	KOP: 10°/100' @ 7969.52' MD	
8,869.52	8,188.00	1,332.33	-2,008.24	LP: 8869.52' MD, 90.00° Inc, 0.86° Azm	
20,873.03	8,188.00	13,334.48	-1,827.70	Hold: 90.00° Inc, 0.86° Azm	
20,923.03	8,188.00	13,384.47	-1,826.95	TD @ 20923.03' MD/8188.00' TVD	