

CRESTONE PEAK RESOURCES

ARAPAHOE COUNTY

SEC 19-T4S-R64W

GRIMM MOTOCROSS 4-65 24 2A3AUH

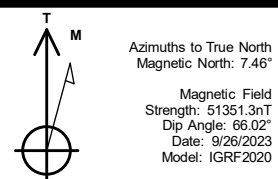
OWB

Plan: PROPOSAL 2

Standard Planning Report

15 November, 2023

Project: ARAPAHOE COUNTY
Site: SEC 19-T4S-R64W
Well: GRIMM MOTOCROSS 4-65 2A 2A3AUH
Wellbore: OWB
Design: PROPOSAL 2



WELL DETAILS: GRIMM MOTOCROSS 4-65 2A 2A3AUH

5696.00						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1678326.63	3252960.66	39.692371°N	104.601091°W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	400.69	4.01	236.00	400.52	-3.93	-5.83	2.00	236.00	6.41	
4	7298.28	4.01	236.00	7281.20	-273.92	-406.08	0.00	0.00	446.62	
5	8163.06	89.75	271.36	7821.00	-282.26	-975.96	10.00	35.43	753.60	LP-GM 4-65 2A3AUH (REV2)
6	10917.50	89.75	271.36	7833.00	-217.09	-3729.61	0.00	0.00	2147.23	CURVE ENTRY-GM 4-65 2A3AUH
7	11118.68	90.33	251.25	7832.85	-247.36	-3927.45	10.00	-88.35	2277.08	
8	11613.00	90.33	251.25	7829.98	-406.28	-4395.52	0.00	0.00	2658.53	LP-GM 4-65 2A3AUH (REV2)
9	13213.90	90.04	91.15	7809.00	-1521.45	-4222.83	10.00	-88.98	3515.93	CURVE EXIT-GM 4-65 2A3AUH (REV2)
10	16455.46	90.04	91.15	7807.00	-1586.70	-981.92	0.00	0.00	1865.95	PBHL-GM 4-65 2A3AUH (REV2)

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	Start Build 2.00
400.69	4.01	236.00	400.52	-3.93	-5.83	6.41	7.03	Start 6897.59 hold at 400.69 MD
7298.28	4.01	236.00	7281.20	-273.92	-406.08	446.62	489.83	Start DLS 10.00 TFO 35.43
8163.06	89.75	271.36	7821.00	-282.26	-975.96	753.60	1060.59	Start 2754.45 hold at 8163.06 MD
10917.50	89.75	271.36	7833.00	-217.09	-3729.61	2147.23	3815.01	Start DLS 10.00 TFO -88.35
11118.68	90.33	251.25	7832.85	-247.36	-3927.45	2277.08	4016.18	Start 494.32 hold at 11118.68 MD
11613.00	90.33	251.25	7829.98	-406.28	-4395.52	2658.53	4510.49	Start DLS 10.00 TFO -88.98
13213.90	90.04	91.15	7809.00	-1521.45	-4222.83	3515.93	6111.23	Start 3241.57 hold at 13213.90 MD
16455.46	90.04	91.15	7807.00	-1586.70	-981.92	1865.95	9352.80	TD at 16455.46

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL-GM 4-65 2A3AUH (REV2)	7807.00	-1586.70	-981.92	1676730.31	3251994.49	39.688015°N	104.604580°W	Point
CURVE EXIT-GM 4-65 2A3AUH (REV2)	7809.00	-1521.45	-4222.83	1676763.49	3248753.13	39.688193°N	104.616096°W	Point
- plan hits target center								
LP-GM 4-65 2A3AUH (REV2)	7821.00	-282.26	-975.96	1678034.73	3251987.54	39.691596°N	104.604559°W	Point
- plan hits target center								
CURVE ENTRY-GM 4-65 2A3AUH (REV2)	7833.00	-217.09	-3729.61	1678072.65	3249233.42	39.691774°N	104.614344°W	Point
- plan hits target center								

PROJECT DETAILS: ARAPAHOE COUNTY

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

System Datum: Mean Sea Level

SHL:

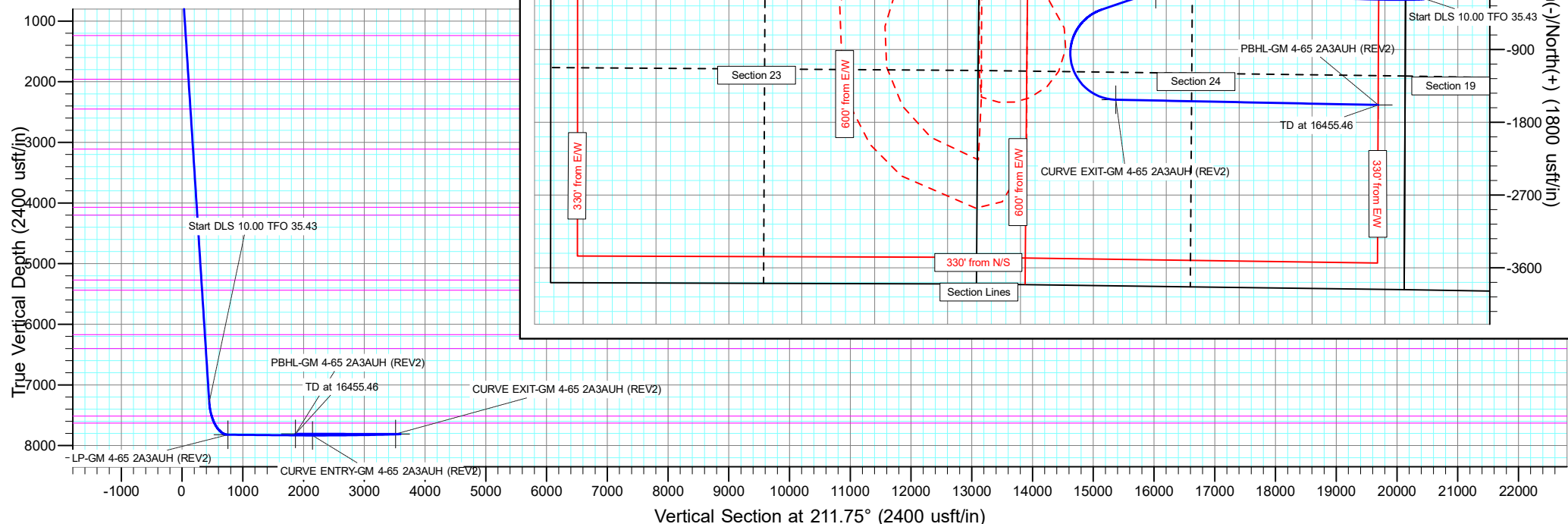
1401' FNL, 645' FWL
Sec 19-T4S-R64W

LP:

1700' FNL, 330' FEL
Sec 24-T4S-R65W

BHL:

2280' FSL, 330' FEL
Sec 24-T4S-R65W



Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 24 2A3AUH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5721.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 24 2A3AUH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 2		

Project	ARAPAHOE COUNTY		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site		SEC 19-T4S-R64W			
Site Position:		Northing:	1,679,733.25 usft	Latitude:	39.696250°N
From:	Lat/Long	Easting:	3,252,308.22 usft	Longitude:	104.603360°W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.57 °

Well	GRIMM MOTOCROSS 4-65 24 2A3AUH					
Well Position	+N/-S	-1,413.01 usft	Northing:	1,678,326.63 usft	Latitude:	39.692371°N
	+E/-W	638.53 usft	Easting:	3,252,960.66 usft	Longitude:	104.601091°W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,696.00 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	9/26/2023	7.46	66.02	51,351.30042160

Design	PROPOSAL 2				
Audit Notes:					
Version:		Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	211.75	

Plan Survey Tool Program	Date	11/15/2023			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	16,455.46	PROPOSAL 2 (OWB)	MWD OWSG	
				OWSG MWD - Standard	

Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 24 2A3AUH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5721.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 24 2A3AUH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 2		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	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	
400.69	4.01	236.00	400.52	-3.93	-5.83	2.00	2.00	0.00	236.00	
7,298.28	4.01	236.00	7,281.20	-273.92	-406.08	0.00	0.00	0.00	0.00	
8,163.06	89.75	271.36	7,821.00	-282.26	-975.96	10.00	9.91	4.09	35.43	LP-GM 4-65 2A3AUH
10,917.50	89.75	271.36	7,833.00	-217.09	-3,729.61	0.00	0.00	0.00	0.00	CURVE ENTRY-GM 4
11,118.68	90.33	251.25	7,832.85	-247.36	-3,927.45	10.00	0.29	-10.00	-88.35	
11,613.00	90.33	251.25	7,829.98	-406.28	-4,395.52	0.00	0.00	0.00	0.00	
13,213.90	90.04	91.15	7,809.00	-1,521.45	-4,222.83	10.00	-0.02	-10.00	-88.98	CURVE EXIT-GM 4-6
16,455.46	90.04	91.15	7,807.00	-1,586.70	-981.92	0.00	0.00	0.00	0.00	PBHL-GM 4-65 2A3A

Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 24 2A3AUH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5721.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 24 2A3AUH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24.00	0.00	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00
Denver									
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
Start Build 2.00									
300.00	2.00	236.00	299.98	-0.98	-1.45	1.59	2.00	2.00	0.00
400.69	4.01	236.00	400.52	-3.93	-5.83	6.41	2.00	2.00	0.00
Start 6897.59 hold at 400.69 MD									
500.00	4.01	236.00	499.59	-7.82	-11.59	12.74	0.00	0.00	0.00
600.00	4.01	236.00	599.35	-11.73	-17.39	19.13	0.00	0.00	0.00
639.75	4.01	236.00	639.00	-13.29	-19.70	21.66	0.00	0.00	0.00
Arapahoe									
700.00	4.01	236.00	699.10	-15.65	-23.19	25.51	0.00	0.00	0.00
800.00	4.01	236.00	798.86	-19.56	-29.00	31.89	0.00	0.00	0.00
900.00	4.01	236.00	898.61	-23.47	-34.80	38.27	0.00	0.00	0.00
1,000.00	4.01	236.00	998.37	-27.39	-40.60	44.66	0.00	0.00	0.00
1,100.00	4.01	236.00	1,098.12	-31.30	-46.40	51.04	0.00	0.00	0.00
1,200.00	4.01	236.00	1,197.88	-35.22	-52.21	57.42	0.00	0.00	0.00
1,241.23	4.01	236.00	1,239.00	-36.83	-54.60	60.05	0.00	0.00	0.00
Laramie-Fox Hills Formation									
1,300.00	4.01	236.00	1,297.63	-39.13	-58.01	63.80	0.00	0.00	0.00
1,400.00	4.01	236.00	1,397.38	-43.05	-63.81	70.18	0.00	0.00	0.00
1,500.00	4.01	236.00	1,497.14	-46.96	-69.62	76.57	0.00	0.00	0.00
1,600.00	4.01	236.00	1,596.89	-50.87	-75.42	82.95	0.00	0.00	0.00
1,700.00	4.01	236.00	1,696.65	-54.79	-81.22	89.33	0.00	0.00	0.00
1,800.00	4.01	236.00	1,796.40	-58.70	-87.02	95.71	0.00	0.00	0.00
1,900.00	4.01	236.00	1,896.16	-62.62	-92.83	102.09	0.00	0.00	0.00
1,963.00	4.01	236.00	1,959.00	-65.08	-96.48	106.11	0.00	0.00	0.00
Pierre Formation									
2,000.00	4.01	236.00	1,995.91	-66.53	-98.63	108.48	0.00	0.00	0.00
2,100.00	4.01	236.00	2,095.67	-70.45	-104.43	114.86	0.00	0.00	0.00
2,200.00	4.01	236.00	2,195.42	-74.36	-110.24	121.24	0.00	0.00	0.00
2,300.00	4.01	236.00	2,295.18	-78.27	-116.04	127.62	0.00	0.00	0.00
2,400.00	4.01	236.00	2,394.93	-82.19	-121.84	134.00	0.00	0.00	0.00
2,454.20	4.01	236.00	2,449.00	-84.31	-124.99	137.46	0.00	0.00	0.00
Upper Pierre aquifer									
2,500.00	4.01	236.00	2,494.69	-86.10	-127.64	140.39	0.00	0.00	0.00
2,600.00	4.01	236.00	2,594.44	-90.02	-133.45	146.77	0.00	0.00	0.00
2,700.00	4.01	236.00	2,694.20	-93.93	-139.25	153.15	0.00	0.00	0.00
2,800.00	4.01	236.00	2,793.95	-97.85	-145.05	159.53	0.00	0.00	0.00
2,900.00	4.01	236.00	2,893.71	-101.76	-150.85	165.91	0.00	0.00	0.00
3,000.00	4.01	236.00	2,993.46	-105.67	-156.66	172.30	0.00	0.00	0.00
3,100.00	4.01	236.00	3,093.22	-109.59	-162.46	178.68	0.00	0.00	0.00
3,115.82	4.01	236.00	3,109.00	-110.21	-163.38	179.69	0.00	0.00	0.00
Base of Upper Pierre aquifer									
3,200.00	4.01	236.00	3,192.97	-113.50	-168.26	185.06	0.00	0.00	0.00
3,300.00	4.01	236.00	3,292.72	-117.42	-174.07	191.44	0.00	0.00	0.00
3,400.00	4.01	236.00	3,392.48	-121.33	-179.87	197.83	0.00	0.00	0.00
3,500.00	4.01	236.00	3,492.23	-125.25	-185.67	204.21	0.00	0.00	0.00
3,600.00	4.01	236.00	3,591.99	-129.16	-191.47	210.59	0.00	0.00	0.00
3,700.00	4.01	236.00	3,691.74	-133.07	-197.28	216.97	0.00	0.00	0.00
3,800.00	4.01	236.00	3,791.50	-136.99	-203.08	223.35	0.00	0.00	0.00

Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 24 2A3AUH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5721.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 24 2A3AUH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
3,900.00	4.01	236.00	3,891.25	-140.90	-208.88	229.74	0.00	0.00	0.00	
4,000.00	4.01	236.00	3,991.01	-144.82	-214.69	236.12	0.00	0.00	0.00	
4,078.18	4.01	236.00	4,069.00	-147.88	-219.22	241.11	0.00	0.00	0.00	
Larimer ("Parkman") sandstone										
4,100.00	4.01	236.00	4,090.76	-148.73	-220.49	242.50	0.00	0.00	0.00	
4,200.00	4.01	236.00	4,190.52	-152.65	-226.29	248.88	0.00	0.00	0.00	
4,208.50	4.01	236.00	4,199.00	-152.98	-226.78	249.42	0.00	0.00	0.00	
Pierre Formation										
4,300.00	4.01	236.00	4,290.27	-156.56	-232.09	255.26	0.00	0.00	0.00	
4,400.00	4.01	236.00	4,390.03	-160.47	-237.90	261.65	0.00	0.00	0.00	
4,500.00	4.01	236.00	4,489.78	-164.39	-243.70	268.03	0.00	0.00	0.00	
4,600.00	4.01	236.00	4,589.54	-168.30	-249.50	274.41	0.00	0.00	0.00	
4,700.00	4.01	236.00	4,689.29	-172.22	-255.30	280.79	0.00	0.00	0.00	
4,800.00	4.01	236.00	4,789.05	-176.13	-261.11	287.17	0.00	0.00	0.00	
4,900.00	4.01	236.00	4,888.80	-180.05	-266.91	293.56	0.00	0.00	0.00	
5,000.00	4.01	236.00	4,988.56	-183.96	-272.71	299.94	0.00	0.00	0.00	
5,100.00	4.01	236.00	5,088.31	-187.87	-278.52	306.32	0.00	0.00	0.00	
5,200.00	4.01	236.00	5,188.06	-191.79	-284.32	312.70	0.00	0.00	0.00	
5,281.13	4.01	236.00	5,269.00	-194.96	-289.03	317.88	0.00	0.00	0.00	
Terry ("Sussex") sandstone										
5,300.00	4.01	236.00	5,287.82	-195.70	-290.12	319.08	0.00	0.00	0.00	
5,400.00	4.01	236.00	5,387.57	-199.62	-295.92	325.47	0.00	0.00	0.00	
5,451.55	4.01	236.00	5,439.00	-201.63	-298.92	328.76	0.00	0.00	0.00	
Pierre Formation										
5,500.00	4.01	236.00	5,487.33	-203.53	-301.73	331.85	0.00	0.00	0.00	
5,600.00	4.01	236.00	5,587.08	-207.45	-307.53	338.23	0.00	0.00	0.00	
5,700.00	4.01	236.00	5,686.84	-211.36	-313.33	344.61	0.00	0.00	0.00	
5,800.00	4.01	236.00	5,786.59	-215.27	-319.14	350.99	0.00	0.00	0.00	
5,900.00	4.01	236.00	5,886.35	-219.19	-324.94	357.38	0.00	0.00	0.00	
6,000.00	4.01	236.00	5,986.10	-223.10	-330.74	363.76	0.00	0.00	0.00	
6,100.00	4.01	236.00	6,085.86	-227.02	-336.54	370.14	0.00	0.00	0.00	
6,183.35	4.01	236.00	6,169.00	-230.28	-341.38	375.46	0.00	0.00	0.00	
Hygiene ("Shannon") sandstone										
6,200.00	4.01	236.00	6,185.61	-230.93	-342.35	376.52	0.00	0.00	0.00	
6,300.00	4.01	236.00	6,285.37	-234.85	-348.15	382.91	0.00	0.00	0.00	
6,400.00	4.01	236.00	6,385.12	-238.76	-353.95	389.29	0.00	0.00	0.00	
6,413.91	4.01	236.00	6,399.00	-239.30	-354.76	390.18	0.00	0.00	0.00	
Pierre Formation										
6,500.00	4.01	236.00	6,484.88	-242.67	-359.75	395.67	0.00	0.00	0.00	
6,600.00	4.01	236.00	6,584.63	-246.59	-365.56	402.05	0.00	0.00	0.00	
6,700.00	4.01	236.00	6,684.39	-250.50	-371.36	408.43	0.00	0.00	0.00	
6,800.00	4.01	236.00	6,784.14	-254.42	-377.16	414.82	0.00	0.00	0.00	
6,900.00	4.01	236.00	6,883.90	-258.33	-382.97	421.20	0.00	0.00	0.00	
7,000.00	4.01	236.00	6,983.65	-262.25	-388.77	427.58	0.00	0.00	0.00	
7,100.00	4.01	236.00	7,083.40	-266.16	-394.57	433.96	0.00	0.00	0.00	
7,200.00	4.01	236.00	7,183.16	-270.07	-400.37	440.34	0.00	0.00	0.00	
7,298.28	4.01	236.00	7,281.20	-273.92	-406.08	446.62	0.00	0.00	0.00	
Start DLS 10.00 TFO 35.43										
7,300.00	4.16	237.38	7,282.91	-273.99	-406.18	446.73	10.00	8.22	80.02	
7,350.00	8.76	256.08	7,332.59	-275.88	-411.40	451.09	10.00	9.20	37.40	
7,400.00	13.64	261.73	7,381.62	-277.65	-420.94	457.60	10.00	9.77	11.31	
7,450.00	18.59	264.43	7,429.64	-279.27	-434.71	466.23	10.00	9.89	5.39	
7,500.00	23.55	266.02	7,476.29	-280.74	-452.62	476.90	10.00	9.94	3.18	

Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 24 2A3AUH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5721.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 24 2A3AUH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
7,541.84	27.72	266.93	7,514.00	-281.84	-470.68	487.35	10.00	9.96	2.18	
Sharon Springs Member										
7,550.00	28.53	267.08	7,521.20	-282.04	-474.52	489.54	10.00	9.96	1.83	
7,600.00	33.52	267.85	7,564.03	-283.17	-500.26	504.04	10.00	9.97	1.54	
7,650.00	38.50	268.44	7,604.47	-284.11	-529.63	520.30	10.00	9.98	1.18	
7,682.08	41.71	268.75	7,629.00	-284.61	-550.29	531.60	10.00	9.98	0.98	
Niobrara Formation										
7,700.00	43.49	268.91	7,642.19	-284.86	-562.41	538.19	10.00	9.98	0.89	
7,750.00	48.49	269.31	7,676.92	-285.41	-598.36	557.57	10.00	9.98	0.79	
7,800.00	53.48	269.64	7,708.39	-285.76	-637.19	578.31	10.00	9.99	0.67	
7,850.00	58.47	269.94	7,736.35	-285.91	-678.62	600.23	10.00	9.99	0.59	
7,900.00	63.47	270.20	7,760.61	-285.86	-722.32	623.18	10.00	9.99	0.53	
7,950.00	68.46	270.45	7,780.97	-285.60	-767.97	646.98	10.00	9.99	0.49	
8,000.00	73.46	270.67	7,797.27	-285.13	-815.22	671.45	10.00	9.99	0.45	
8,050.00	78.45	270.89	7,809.40	-284.47	-863.71	696.40	10.00	9.99	0.43	
8,100.00	83.45	271.10	7,817.26	-283.61	-913.06	721.65	10.00	9.99	0.42	
8,150.00	88.45	271.30	7,820.79	-282.56	-962.91	746.99	10.00	9.99	0.41	
8,163.06	89.75	271.36	7,821.00	-282.26	-975.96	753.60	10.00	9.99	0.41	
Start 2754.45 hold at 8163.06 MD										
8,200.00	89.75	271.36	7,821.16	-281.39	-1,012.89	772.29	0.00	0.00	0.00	
8,300.00	89.75	271.36	7,821.60	-279.02	-1,112.86	822.89	0.00	0.00	0.00	
8,400.00	89.75	271.36	7,822.03	-276.66	-1,212.84	873.48	0.00	0.00	0.00	
8,500.00	89.75	271.36	7,822.47	-274.29	-1,312.81	924.08	0.00	0.00	0.00	
8,600.00	89.75	271.36	7,822.90	-271.92	-1,412.78	974.67	0.00	0.00	0.00	
8,700.00	89.75	271.36	7,823.34	-269.56	-1,512.75	1,025.27	0.00	0.00	0.00	
8,800.00	89.75	271.36	7,823.78	-267.19	-1,612.72	1,075.87	0.00	0.00	0.00	
8,900.00	89.75	271.36	7,824.21	-264.83	-1,712.69	1,126.46	0.00	0.00	0.00	
9,000.00	89.75	271.36	7,824.65	-262.46	-1,812.66	1,177.06	0.00	0.00	0.00	
9,100.00	89.75	271.36	7,825.08	-260.09	-1,912.63	1,227.65	0.00	0.00	0.00	
9,200.00	89.75	271.36	7,825.52	-257.73	-2,012.60	1,278.25	0.00	0.00	0.00	
9,300.00	89.75	271.36	7,825.95	-255.36	-2,112.58	1,328.85	0.00	0.00	0.00	
9,400.00	89.75	271.36	7,826.39	-253.00	-2,212.55	1,379.44	0.00	0.00	0.00	
9,500.00	89.75	271.36	7,826.82	-250.63	-2,312.52	1,430.04	0.00	0.00	0.00	
9,600.00	89.75	271.36	7,827.26	-248.26	-2,412.49	1,480.63	0.00	0.00	0.00	
9,700.00	89.75	271.36	7,827.70	-245.90	-2,512.46	1,531.23	0.00	0.00	0.00	
9,800.00	89.75	271.36	7,828.13	-243.53	-2,612.43	1,581.82	0.00	0.00	0.00	
9,900.00	89.75	271.36	7,828.57	-241.16	-2,712.40	1,632.42	0.00	0.00	0.00	
10,000.00	89.75	271.36	7,829.00	-238.80	-2,812.37	1,683.02	0.00	0.00	0.00	
10,100.00	89.75	271.36	7,829.44	-236.43	-2,912.34	1,733.61	0.00	0.00	0.00	
10,200.00	89.75	271.36	7,829.87	-234.07	-3,012.31	1,784.21	0.00	0.00	0.00	
10,300.00	89.75	271.36	7,830.31	-231.70	-3,112.29	1,834.80	0.00	0.00	0.00	
10,400.00	89.75	271.36	7,830.75	-229.33	-3,212.26	1,885.40	0.00	0.00	0.00	
10,500.00	89.75	271.36	7,831.18	-226.97	-3,312.23	1,936.00	0.00	0.00	0.00	
10,600.00	89.75	271.36	7,831.62	-224.60	-3,412.20	1,986.59	0.00	0.00	0.00	
10,700.00	89.75	271.36	7,832.05	-222.24	-3,512.17	2,037.19	0.00	0.00	0.00	
10,800.00	89.75	271.36	7,832.49	-219.87	-3,612.14	2,087.78	0.00	0.00	0.00	
10,900.00	89.75	271.36	7,832.92	-217.50	-3,712.11	2,138.38	0.00	0.00	0.00	
10,917.50	89.75	271.36	7,833.00	-217.09	-3,729.61	2,147.23	0.00	0.00	0.00	
Start DLS 10.00 TFO -88.35										
10,950.00	89.84	268.11	7,833.12	-217.24	-3,762.10	2,164.46	10.00	0.29	-10.00	
11,000.00	89.99	263.11	7,833.19	-221.07	-3,811.94	2,193.94	10.00	0.29	-10.00	
11,050.00	90.14	258.11	7,833.13	-229.22	-3,861.25	2,226.83	10.00	0.29	-10.00	
11,100.00	90.28	253.11	7,832.95	-241.64	-3,909.67	2,262.87	10.00	0.29	-10.00	

Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 24 2A3AUH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5721.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 24 2A3AUH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,118.68	90.33	251.25	7,832.85	-247.36	-3,927.45	2,277.08	10.00	0.29	-10.00
Start 494.32 hold at 11118.68 MD									
11,200.00	90.33	251.25	7,832.38	-273.50	-4,004.45	2,339.84	0.00	0.00	0.00
11,300.00	90.33	251.25	7,831.80	-305.65	-4,099.14	2,417.00	0.00	0.00	0.00
11,400.00	90.33	251.25	7,831.22	-337.80	-4,193.83	2,494.17	0.00	0.00	0.00
11,500.00	90.33	251.25	7,830.64	-369.95	-4,288.52	2,571.33	0.00	0.00	0.00
11,600.00	90.33	251.25	7,830.06	-402.10	-4,383.21	2,648.50	0.00	0.00	0.00
11,613.00	90.33	251.25	7,829.98	-406.28	-4,395.52	2,658.53	0.00	0.00	0.00
Start DLS 10.00 TFO -88.98									
11,650.00	90.40	247.55	7,829.74	-419.29	-4,430.15	2,687.82	10.00	0.18	-10.00
11,700.00	90.48	242.55	7,829.36	-440.38	-4,475.47	2,729.60	10.00	0.17	-10.00
11,750.00	90.57	237.55	7,828.90	-465.34	-4,518.77	2,773.61	10.00	0.16	-10.00
11,800.00	90.64	232.55	7,828.37	-493.97	-4,559.74	2,819.52	10.00	0.16	-10.00
11,850.00	90.72	227.55	7,827.78	-526.06	-4,598.05	2,866.97	10.00	0.15	-10.00
11,900.00	90.78	222.55	7,827.13	-561.38	-4,633.43	2,915.61	10.00	0.13	-10.00
11,950.00	90.84	217.55	7,826.41	-599.63	-4,665.58	2,965.07	10.00	0.12	-10.00
12,000.00	90.90	212.55	7,825.65	-640.55	-4,694.28	3,014.96	10.00	0.11	-10.00
12,050.00	90.95	207.55	7,824.85	-683.81	-4,719.31	3,064.92	10.00	0.10	-10.00
12,100.00	90.99	202.55	7,824.00	-729.09	-4,740.47	3,114.55	10.00	0.08	-10.00
12,150.00	91.02	197.55	7,823.12	-776.04	-4,757.60	3,163.49	10.00	0.07	-10.00
12,200.00	91.05	192.55	7,822.22	-824.30	-4,770.57	3,211.36	10.00	0.05	-10.00
12,250.00	91.06	187.54	7,821.30	-873.51	-4,779.29	3,257.79	10.00	0.04	-10.00
12,300.00	91.07	182.54	7,820.37	-923.29	-4,783.68	3,302.43	10.00	0.02	-10.00
12,350.00	91.08	177.54	7,819.43	-973.27	-4,783.72	3,344.95	10.00	0.00	-10.00
12,400.00	91.07	172.54	7,818.49	-1,023.05	-4,779.40	3,385.01	10.00	-0.01	-10.00
12,450.00	91.05	167.54	7,817.57	-1,072.28	-4,770.76	3,422.32	10.00	-0.03	-10.00
12,500.00	91.03	162.54	7,816.66	-1,120.56	-4,757.86	3,456.59	10.00	-0.05	-10.00
12,550.00	91.00	157.54	7,815.77	-1,167.53	-4,740.80	3,487.56	10.00	-0.06	-10.00
12,600.00	90.96	152.54	7,814.91	-1,212.84	-4,719.71	3,514.99	10.00	-0.08	-10.00
12,650.00	90.91	147.54	7,814.09	-1,256.14	-4,694.75	3,538.67	10.00	-0.09	-10.00
12,700.00	90.86	142.54	7,813.32	-1,297.10	-4,666.11	3,558.43	10.00	-0.11	-10.00
12,750.00	90.80	137.54	7,812.59	-1,335.41	-4,634.01	3,574.11	10.00	-0.12	-10.00
12,800.00	90.74	132.54	7,811.92	-1,370.77	-4,598.70	3,585.60	10.00	-0.13	-10.00
12,850.00	90.67	127.54	7,811.31	-1,402.92	-4,560.43	3,592.80	10.00	-0.14	-10.00
12,900.00	90.59	122.54	7,810.76	-1,431.62	-4,519.51	3,595.67	10.00	-0.15	-10.00
12,950.00	90.51	117.54	7,810.28	-1,456.64	-4,476.24	3,594.18	10.00	-0.16	-10.00
13,000.00	90.43	112.54	7,809.87	-1,477.79	-4,430.95	3,588.33	10.00	-0.17	-10.00
13,050.00	90.34	107.54	7,809.54	-1,494.92	-4,384.00	3,578.19	10.00	-0.18	-10.00
13,100.00	90.25	102.54	7,809.28	-1,507.89	-4,335.73	3,563.82	10.00	-0.18	-10.00
13,150.00	90.15	97.54	7,809.11	-1,516.61	-4,286.51	3,545.33	10.00	-0.18	-10.00
13,200.00	90.06	92.54	7,809.01	-1,521.00	-4,236.72	3,522.86	10.00	-0.19	-10.00
13,213.90	90.04	91.15	7,809.00	-1,521.45	-4,222.83	3,515.93	10.00	-0.19	-10.00
Start 3241.57 hold at 13213.90 MD									
13,300.00	90.04	91.15	7,808.95	-1,523.18	-4,136.74	3,472.11	0.00	0.00	0.00
13,400.00	90.04	91.15	7,808.89	-1,525.20	-4,036.76	3,421.21	0.00	0.00	0.00
13,500.00	90.04	91.15	7,808.82	-1,527.21	-3,936.78	3,370.30	0.00	0.00	0.00
13,600.00	90.04	91.15	7,808.76	-1,529.22	-3,836.80	3,319.40	0.00	0.00	0.00
13,700.00	90.04	91.15	7,808.70	-1,531.23	-3,736.82	3,268.50	0.00	0.00	0.00
13,800.00	90.04	91.15	7,808.64	-1,533.25	-3,636.84	3,217.60	0.00	0.00	0.00
13,900.00	90.04	91.15	7,808.58	-1,535.26	-3,536.86	3,166.70	0.00	0.00	0.00
14,000.00	90.04	91.15	7,808.52	-1,537.27	-3,436.88	3,115.80	0.00	0.00	0.00
14,100.00	90.04	91.15	7,808.45	-1,539.29	-3,336.91	3,064.90	0.00	0.00	0.00
14,200.00	90.04	91.15	7,808.39	-1,541.30	-3,236.93	3,014.00	0.00	0.00	0.00

Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 24 2A3AUH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5721.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 24 2A3AUH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
14,300.00	90.04	91.15	7,808.33	-1,543.31	-3,136.95	2,963.10	0.00	0.00	0.00	
14,400.00	90.04	91.15	7,808.27	-1,545.33	-3,036.97	2,912.20	0.00	0.00	0.00	
14,500.00	90.04	91.15	7,808.21	-1,547.34	-2,936.99	2,861.30	0.00	0.00	0.00	
14,600.00	90.04	91.15	7,808.14	-1,549.35	-2,837.01	2,810.40	0.00	0.00	0.00	
14,700.00	90.04	91.15	7,808.08	-1,551.36	-2,737.03	2,759.50	0.00	0.00	0.00	
14,800.00	90.04	91.15	7,808.02	-1,553.38	-2,637.05	2,708.60	0.00	0.00	0.00	
14,900.00	90.04	91.15	7,807.96	-1,555.39	-2,537.07	2,657.70	0.00	0.00	0.00	
15,000.00	90.04	91.15	7,807.90	-1,557.40	-2,437.09	2,606.79	0.00	0.00	0.00	
15,100.00	90.04	91.15	7,807.84	-1,559.42	-2,337.11	2,555.89	0.00	0.00	0.00	
15,200.00	90.04	91.15	7,807.77	-1,561.43	-2,237.13	2,504.99	0.00	0.00	0.00	
15,300.00	90.04	91.15	7,807.71	-1,563.44	-2,137.15	2,454.09	0.00	0.00	0.00	
15,400.00	90.04	91.15	7,807.65	-1,565.45	-2,037.17	2,403.19	0.00	0.00	0.00	
15,500.00	90.04	91.15	7,807.59	-1,567.47	-1,937.19	2,352.29	0.00	0.00	0.00	
15,600.00	90.04	91.15	7,807.53	-1,569.48	-1,837.21	2,301.39	0.00	0.00	0.00	
15,700.00	90.04	91.15	7,807.47	-1,571.49	-1,737.23	2,250.49	0.00	0.00	0.00	
15,800.00	90.04	91.15	7,807.40	-1,573.51	-1,637.25	2,199.59	0.00	0.00	0.00	
15,900.00	90.04	91.15	7,807.34	-1,575.52	-1,537.27	2,148.69	0.00	0.00	0.00	
16,000.00	90.04	91.15	7,807.28	-1,577.53	-1,437.29	2,097.79	0.00	0.00	0.00	
16,100.00	90.04	91.15	7,807.22	-1,579.54	-1,337.31	2,046.89	0.00	0.00	0.00	
16,200.00	90.04	91.15	7,807.16	-1,581.56	-1,237.33	1,995.99	0.00	0.00	0.00	
16,300.00	90.04	91.15	7,807.10	-1,583.57	-1,137.35	1,945.09	0.00	0.00	0.00	
16,400.00	90.04	91.15	7,807.03	-1,585.58	-1,037.37	1,894.18	0.00	0.00	0.00	
16,455.46	90.04	91.15	7,807.00	-1,586.70	-981.92	1,865.95	0.00	0.00	0.00	
TD at 16455.46										

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	
PBHL-GM 4-65 2A3AUH - plan hits target center - Point	0.00	0.00	7,807.00	-1,586.70	-981.92	1,676,730.31	3,251,994.49	39.688015°N	104.604580°W	
CURVE EXIT-GM 4-65 2 - plan hits target center - Point	0.00	0.00	7,809.00	-1,521.45	-4,222.83	1,676,763.49	3,248,753.13	39.688193°N	104.616096°W	
LP-GM 4-65 2A3AUH (R - plan hits target center - Point	0.00	0.00	7,821.00	-282.26	-975.96	1,678,034.73	3,251,987.55	39.691596°N	104.604559°W	
CURVE ENTRY-GM 4-6 - plan hits target center - Point	0.00	0.00	7,833.00	-217.09	-3,729.61	1,678,072.65	3,249,233.42	39.691774°N	104.614344°W	

Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 24 2A3AUH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5721.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5721.00usft
Site:	SEC 19-T4S-R64W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 24 2A3AUH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 2		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
24.00	24.00	Denver				
639.75	639.00	Arapahoe				
1,241.23	1,239.00	Laramie-Fox Hills Formation				
1,963.00	1,959.00	Pierre Formation				
2,454.20	2,449.00	Upper Pierre aquifer				
3,115.82	3,109.00	Base of Upper Pierre aquifer				
4,078.18	4,069.00	Larimer ("Parkman") sandstone				
4,208.50	4,199.00	Pierre Formation				
5,281.13	5,269.00	Terry ("Sussex") sandstone				
5,451.55	5,439.00	Pierre Formation				
6,183.35	6,169.00	Hygiene ("Shannon") sandstone				
6,413.91	6,399.00	Pierre Formation				
7,541.84	7,514.00	Sharon Springs Member				
7,682.08	7,629.00	Niobrara Formation				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
200.00	200.00	0.00	0.00	Start Build 2.00	
400.69	400.52	-3.93	-5.83	Start 6897.59 hold at 400.69 MD	
7,298.28	7,281.20	-273.92	-406.08	Start DLS 10.00 TFO 35.43	
8,163.06	7,821.00	-282.26	-975.96	Start 2754.45 hold at 8163.06 MD	
10,917.50	7,833.00	-217.09	-3,729.61	Start DLS 10.00 TFO -88.35	
11,118.68	7,832.85	-247.36	-3,927.45	Start 494.32 hold at 11118.68 MD	
11,613.00	7,829.98	-406.28	-4,395.52	Start DLS 10.00 TFO -88.98	
13,213.90	7,809.00	-1,521.45	-4,222.83	Start 3241.57 hold at 13213.90 MD	
16,455.46	7,807.00	-1,586.70	-981.92	TD at 16455.46	