

CRESTONE PEAK RESOURCES

ARAPAHOE COUNTY

SEC 26-T4S-R65W

GRIMM MOTOCROSS 4-65 23-24 4BH

OWB

Plan: PROPOSAL 1

Standard Planning Report

08 February, 2024

Project: ARAPAHOE COUNTY
Site: SEC 26-T4S-R65W
Well: GRIMM MOTOCROSS 4-65 23-24 4BH
Wellbore: OWB
Design: PROPOSAL 1



Azimuths to True North
Magnetic North: 7.44°
Magnetic Field
Strength: 51304.2nT
Dip Angle: 65.99°
Date: 1/22/2024
Model: IGRF2020

WELL DETAILS: GRIMM MOTOCROSS 4-65 23-24 4BH

5792.00						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1672474.68	3242335.17	39.676589°N	104.639044°W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	
3	1035.54	18.71	340.40	1019.00	142.63	-50.79	2.00	340.40	-17.31	
4	7618.43	18.71	340.40	7253.98	2131.98	-759.25	0.00	0.00	-258.71	
5	8581.55	90.00	90.44	7860.00	2320.39	-188.29	10.00	109.06	340.04	LP-GM 4-65 23-24 4BH
6	13511.67	90.00	90.44	7860.00	2282.22	4741.67	0.00	0.00	5134.30	MID PNT-GM 4-65 23-24 4BH
7	13511.89	90.00	90.44	7860.00	2282.21	4741.90	2.00	-90.00	5134.52	PBHL-GM 4-65 23-24 4BH
8	18461.78	90.00	90.44	7860.00	2244.27	9691.64	0.00	0.00	9948.10	PBHL-GM 4-65 23-24 4BH

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VFace	Departure	Annotation
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	Start Build 2.00
1035.54	18.71	340.40	1019.00	142.63	-50.79	-17.31	151.40	Start 6582.89 hold at 1035.54 MD
7618.43	18.71	340.40	7253.98	2131.98	-759.25	-258.71	2263.14	Start DLS 10.00 TFO 109.06
8581.55	90.00	90.44	7860.00	2320.39	-188.29	340.04	2912.21	Start 4930.12 hold at 8581.55 MD
13511.89	90.00	90.44	7860.00	2282.21	4741.90	5134.52	7842.55	Start 4949.89 hold at 13511.89 MD
18461.78	90.00	90.44	7860.00	2244.27	9691.64	9948.10	12792.44	TD at 18461.78

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
LP-GM 4-65 23-24 4BH	7860.00	2320.39	-188.29	1674793.14	3242124.89	39.682959°N	104.639713°W	Point
- plan hits target center								
MID PNT-GM 4-65 23-24 4BH	7860.00	2282.22	4741.67	1674801.69	3247054.93	39.682853°N	104.622197°W	Point
- plan hits target center								
PBHL-GM 4-65 23-24 4BH	7860.00	2244.27	9691.64	1674810.66	3252004.97	39.682745°N	104.604610°W	Point
- plan hits target center								

PROJECT DETAILS: ARAPAHOE COUNTY

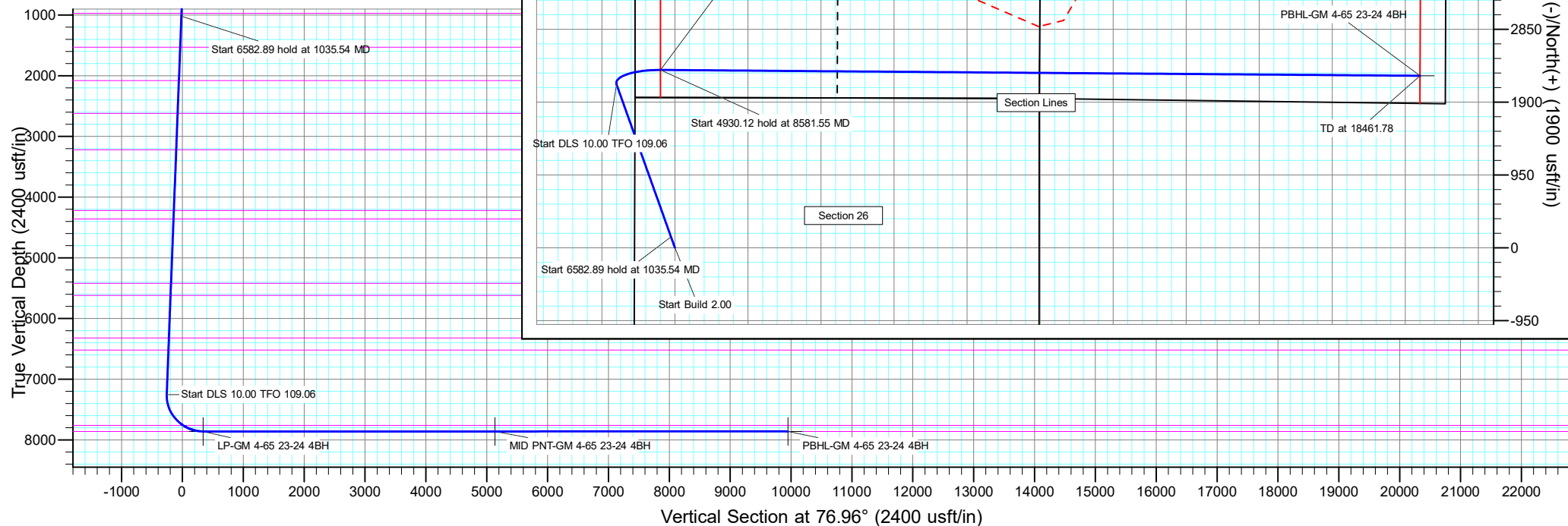
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone

System Datum: Mean Sea Level

SHL:
1960' FNL, 525' FWL
Sec 26-T4S-R64W

LP:
360' FSL, 330' FWL
Sec 23-T4S-R65W

BHL:
360' FSL, 330' FEL
Sec 24-T4S-R65W



Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 23-24 4BH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KBE 25' @ 5817.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KBE 25' @ 5817.00usft
Site:	SEC 26-T4S-R65W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 23-24 4BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

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 26-T4S-R65W			
Site Position:		Northing:	1,674,430.51 usft	Latitude:	39.681972°N
From:	Lat/Long	Easting:	3,241,798.17 usft	Longitude:	104.640886°W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.54 °

Well	GRIMM MOTOCROSS 4-65 23-24 4BH					
Well Position	+N/-S	-1,960.85 usft	Northing:	1,672,474.67 usft	Latitude:	39.676589°N
	+E/-W	518.49 usft	Easting:	3,242,335.17 usft	Longitude:	104.639044°W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,792.00 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	1/22/2024	7.44	65.99	51,304.16562826

Design	PROPOSAL 1			
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	76.96

Plan Survey Tool Program	Date	2/8/2024			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	18,461.78	PROPOSAL 1 (OWB)	MWD OWSG	
				OWSG MWD - Standard	

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	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,035.54	18.71	340.40	1,019.00	142.63	-50.79	2.00	2.00	0.00	340.40	
7,618.43	18.71	340.40	7,253.98	2,131.98	-759.25	0.00	0.00	0.00	0.00	
8,581.55	90.00	90.44	7,860.00	2,320.39	-188.29	10.00	7.40	11.43	109.06	LP-GM 4-65 23-24 4E
13,511.67	90.00	90.44	7,860.00	2,282.22	4,741.67	0.00	0.00	0.00	0.00	MID PNT-GM 4-65 23
13,511.89	90.00	90.44	7,860.00	2,282.21	4,741.90	2.00	0.00	-2.00	-90.00	PBHL-GM 4-65 23-24
18,461.78	90.00	90.44	7,860.00	2,244.27	9,691.64	0.00	0.00	0.00	0.00	PBHL-GM 4-65 23-24

Civitas Resources

Planning Report

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Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KBE 25' @ 5817.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KBE 25' @ 5817.00usft
Site:	SEC 26-T4S-R65W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 23-24 4BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

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
Start Build 2.00									
200.00	2.00	340.40	199.98	1.64	-0.59	-0.20	2.00	2.00	0.00
300.00	4.00	340.40	299.84	6.57	-2.34	-0.80	2.00	2.00	0.00
400.00	6.00	340.40	399.45	14.78	-5.26	-1.79	2.00	2.00	0.00
500.00	8.00	340.40	498.70	26.26	-9.35	-3.19	2.00	2.00	0.00
600.00	10.00	340.40	597.47	41.00	-14.60	-4.98	2.00	2.00	0.00
700.00	12.00	340.40	695.62	58.97	-21.00	-7.16	2.00	2.00	0.00
800.00	14.00	340.40	793.06	80.16	-28.55	-9.73	2.00	2.00	0.00
900.00	16.00	340.40	889.64	104.55	-37.23	-12.69	2.00	2.00	0.00
983.96	17.68	340.40	970.00	127.46	-45.39	-15.47	2.00	2.00	0.00
Arapahoe									
1,000.00	18.00	340.40	985.27	132.09	-47.04	-16.03	2.00	2.00	0.00
1,035.54	18.71	340.40	1,019.00	142.63	-50.79	-17.31	2.00	2.00	0.00
Start 6582.89 hold at 1035.54 MD									
1,100.00	18.71	340.40	1,080.05	162.11	-57.73	-19.67	0.00	0.00	0.00
1,200.00	18.71	340.40	1,174.77	192.33	-68.49	-23.34	0.00	0.00	0.00
1,300.00	18.71	340.40	1,269.48	222.55	-79.26	-27.01	0.00	0.00	0.00
1,400.00	18.71	340.40	1,364.20	252.77	-90.02	-30.67	0.00	0.00	0.00
1,500.00	18.71	340.40	1,458.91	282.99	-100.78	-34.34	0.00	0.00	0.00
1,575.05	18.71	340.40	1,530.00	305.67	-108.86	-37.09	0.00	0.00	0.00
Laramie-Fox Hills Formation									
1,600.00	18.71	340.40	1,553.63	313.21	-111.54	-38.01	0.00	0.00	0.00
1,700.00	18.71	340.40	1,648.34	343.43	-122.30	-41.67	0.00	0.00	0.00
1,800.00	18.71	340.40	1,743.06	373.65	-133.07	-45.34	0.00	0.00	0.00
1,900.00	18.71	340.40	1,837.77	403.87	-143.83	-49.01	0.00	0.00	0.00
2,000.00	18.71	340.40	1,932.49	434.09	-154.59	-52.68	0.00	0.00	0.00
2,100.00	18.71	340.40	2,027.20	464.31	-165.35	-56.34	0.00	0.00	0.00
2,155.74	18.71	340.40	2,080.00	481.16	-171.35	-58.39	0.00	0.00	0.00
Pierre Formation									
2,200.00	18.71	340.40	2,121.92	494.53	-176.11	-60.01	0.00	0.00	0.00
2,300.00	18.71	340.40	2,216.63	524.75	-186.88	-63.68	0.00	0.00	0.00
2,400.00	18.71	340.40	2,311.35	554.97	-197.64	-67.34	0.00	0.00	0.00
2,500.00	18.71	340.40	2,406.06	585.19	-208.40	-71.01	0.00	0.00	0.00
2,600.00	18.71	340.40	2,500.78	615.41	-219.16	-74.68	0.00	0.00	0.00
2,700.00	18.71	340.40	2,595.49	645.63	-229.93	-78.34	0.00	0.00	0.00
2,725.87	18.71	340.40	2,620.00	653.45	-232.71	-79.29	0.00	0.00	0.00
Upper Pierre aquifer									
2,800.00	18.71	340.40	2,690.21	675.85	-240.69	-82.01	0.00	0.00	0.00
2,900.00	18.71	340.40	2,784.92	706.07	-251.45	-85.68	0.00	0.00	0.00
3,000.00	18.71	340.40	2,879.64	736.29	-262.21	-89.35	0.00	0.00	0.00
3,100.00	18.71	340.40	2,974.35	766.51	-272.97	-93.01	0.00	0.00	0.00
3,200.00	18.71	340.40	3,069.07	796.73	-283.74	-96.68	0.00	0.00	0.00
3,300.00	18.71	340.40	3,163.78	826.95	-294.50	-100.35	0.00	0.00	0.00
3,359.35	18.71	340.40	3,220.00	844.89	-300.89	-102.52	0.00	0.00	0.00
Base of Upper Pierre aquifer									
3,400.00	18.71	340.40	3,258.50	857.17	-305.26	-104.01	0.00	0.00	0.00
3,500.00	18.71	340.40	3,353.21	887.39	-316.02	-107.68	0.00	0.00	0.00
3,600.00	18.71	340.40	3,447.93	917.61	-326.78	-111.35	0.00	0.00	0.00
3,700.00	18.71	340.40	3,542.64	947.83	-337.55	-115.02	0.00	0.00	0.00

Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 23-24 4BH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KBE 25' @ 5817.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KBE 25' @ 5817.00usft
Site:	SEC 26-T4S-R65W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 23-24 4BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

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)	
3,800.00	18.71	340.40	3,637.36	978.05	-348.31	-118.68	0.00	0.00	0.00	
3,900.00	18.71	340.40	3,732.07	1,008.27	-359.07	-122.35	0.00	0.00	0.00	
4,000.00	18.71	340.40	3,826.79	1,038.49	-369.83	-126.02	0.00	0.00	0.00	
4,100.00	18.71	340.40	3,921.50	1,068.71	-380.59	-129.68	0.00	0.00	0.00	
4,200.00	18.71	340.40	4,016.22	1,098.93	-391.36	-133.35	0.00	0.00	0.00	
4,300.00	18.71	340.40	4,110.93	1,129.15	-402.12	-137.02	0.00	0.00	0.00	
4,400.00	18.71	340.40	4,205.65	1,159.37	-412.88	-140.68	0.00	0.00	0.00	
4,415.15	18.71	340.40	4,220.00	1,163.95	-414.51	-141.24	0.00	0.00	0.00	
Larimer ("Parkman") sandstone										
4,500.00	18.71	340.40	4,300.36	1,189.59	-423.64	-144.35	0.00	0.00	0.00	
4,562.97	18.71	340.40	4,360.00	1,208.62	-430.42	-146.66	0.00	0.00	0.00	
Pierre Formation										
4,600.00	18.71	340.40	4,395.08	1,219.81	-434.41	-148.02	0.00	0.00	0.00	
4,700.00	18.71	340.40	4,489.79	1,250.03	-445.17	-151.69	0.00	0.00	0.00	
4,800.00	18.71	340.40	4,584.51	1,280.25	-455.93	-155.35	0.00	0.00	0.00	
4,900.00	18.71	340.40	4,679.22	1,310.47	-466.69	-159.02	0.00	0.00	0.00	
5,000.00	18.71	340.40	4,773.94	1,340.69	-477.45	-162.69	0.00	0.00	0.00	
5,100.00	18.71	340.40	4,868.65	1,370.91	-488.22	-166.35	0.00	0.00	0.00	
5,200.00	18.71	340.40	4,963.37	1,401.13	-498.98	-170.02	0.00	0.00	0.00	
5,300.00	18.71	340.40	5,058.08	1,431.35	-509.74	-173.69	0.00	0.00	0.00	
5,400.00	18.71	340.40	5,152.80	1,461.57	-520.50	-177.36	0.00	0.00	0.00	
5,500.00	18.71	340.40	5,247.51	1,491.79	-531.26	-181.02	0.00	0.00	0.00	
5,600.00	18.71	340.40	5,342.23	1,522.01	-542.03	-184.69	0.00	0.00	0.00	
5,682.11	18.71	340.40	5,420.00	1,546.83	-550.86	-187.70	0.00	0.00	0.00	
Terry ("Sussex") sandstone										
5,700.00	18.71	340.40	5,436.94	1,552.23	-552.79	-188.36	0.00	0.00	0.00	
5,800.00	18.71	340.40	5,531.66	1,582.45	-563.55	-192.02	0.00	0.00	0.00	
5,893.27	18.71	340.40	5,620.00	1,610.64	-573.59	-195.44	0.00	0.00	0.00	
Pierre Formation										
5,900.00	18.71	340.40	5,626.37	1,612.67	-574.31	-195.69	0.00	0.00	0.00	
6,000.00	18.71	340.40	5,721.09	1,642.89	-585.07	-199.36	0.00	0.00	0.00	
6,100.00	18.71	340.40	5,815.80	1,673.11	-595.84	-203.03	0.00	0.00	0.00	
6,200.00	18.71	340.40	5,910.52	1,703.33	-606.60	-206.69	0.00	0.00	0.00	
6,300.00	18.71	340.40	6,005.23	1,733.55	-617.36	-210.36	0.00	0.00	0.00	
6,400.00	18.71	340.40	6,099.95	1,763.77	-628.12	-214.03	0.00	0.00	0.00	
6,500.00	18.71	340.40	6,194.66	1,793.99	-638.89	-217.69	0.00	0.00	0.00	
6,600.00	18.71	340.40	6,289.38	1,824.21	-649.65	-221.36	0.00	0.00	0.00	
6,632.33	18.71	340.40	6,320.00	1,833.99	-653.13	-222.55	0.00	0.00	0.00	
Hygiene ("Shannon") sandstone										
6,700.00	18.71	340.40	6,384.09	1,854.43	-660.41	-225.03	0.00	0.00	0.00	
6,800.00	18.71	340.40	6,478.81	1,884.65	-671.17	-228.69	0.00	0.00	0.00	
6,843.49	18.71	340.40	6,520.00	1,897.80	-675.85	-230.29	0.00	0.00	0.00	
Pierre Formation										
6,900.00	18.71	340.40	6,573.52	1,914.87	-681.93	-232.36	0.00	0.00	0.00	
7,000.00	18.71	340.40	6,668.24	1,945.09	-692.70	-236.03	0.00	0.00	0.00	
7,100.00	18.71	340.40	6,762.95	1,975.32	-703.46	-239.70	0.00	0.00	0.00	
7,200.00	18.71	340.40	6,857.67	2,005.54	-714.22	-243.36	0.00	0.00	0.00	
7,300.00	18.71	340.40	6,952.38	2,035.76	-724.98	-247.03	0.00	0.00	0.00	
7,400.00	18.71	340.40	7,047.10	2,065.98	-735.74	-250.70	0.00	0.00	0.00	
7,500.00	18.71	340.40	7,141.81	2,096.20	-746.51	-254.36	0.00	0.00	0.00	
7,600.00	18.71	340.40	7,236.53	2,126.42	-757.27	-258.03	0.00	0.00	0.00	
7,618.43	18.71	340.40	7,253.98	2,131.98	-759.25	-258.71	0.00	0.00	0.00	
Start DLS 10.00 TFO 109.06										

Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 23-24 4BH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KBE 25' @ 5817.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KBE 25' @ 5817.00usft
Site:	SEC 26-T4S-R65W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 23-24 4BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

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)
7,650.00	17.92	350.14	7,283.96	2,141.54	-761.78	-259.02	10.00	-2.50	30.85
7,700.00	17.74	6.51	7,331.59	2,156.70	-762.24	-256.04	10.00	-0.36	32.74
7,750.00	18.89	22.04	7,379.08	2,171.78	-758.33	-248.83	10.00	2.30	31.07
7,800.00	21.15	35.12	7,426.08	2,186.67	-750.10	-237.46	10.00	4.52	26.15
7,850.00	24.21	45.40	7,472.23	2,201.26	-737.61	-221.99	10.00	6.12	20.58
7,900.00	27.81	53.34	7,517.17	2,215.43	-720.94	-202.56	10.00	7.20	15.88
7,950.00	31.76	59.52	7,560.57	2,229.08	-700.23	-179.30	10.00	7.91	12.35
8,000.00	35.95	64.42	7,602.09	2,242.10	-675.63	-152.40	10.00	8.38	9.81
8,050.00	40.31	68.41	7,641.41	2,254.39	-647.34	-122.06	10.00	8.71	7.98
8,100.00	44.77	71.74	7,678.25	2,265.87	-615.56	-88.51	10.00	8.93	6.65
8,150.00	49.32	74.57	7,712.31	2,276.43	-580.54	-52.01	10.00	9.10	5.67
8,200.00	53.93	77.04	7,743.34	2,286.01	-542.54	-12.83	10.00	9.22	4.94
8,229.26	56.65	78.36	7,760.00	2,291.13	-519.04	11.21	10.00	9.29	4.49
Sharon Springs Member									
8,250.00	58.59	79.24	7,771.11	2,294.53	-501.86	28.72	10.00	9.33	4.25
8,300.00	63.28	81.23	7,795.39	2,301.93	-458.80	72.34	10.00	9.38	3.97
8,350.00	67.99	83.06	7,816.02	2,308.14	-413.70	117.68	10.00	9.43	3.66
8,400.00	72.73	84.77	7,832.82	2,313.12	-366.89	164.41	10.00	9.47	3.42
8,450.00	77.47	86.39	7,845.67	2,316.84	-318.73	212.17	10.00	9.49	3.25
8,500.00	82.23	87.96	7,854.48	2,319.26	-269.58	260.59	10.00	9.51	3.13
8,550.00	86.99	89.49	7,859.17	2,320.37	-219.83	309.31	10.00	9.52	3.06
8,581.55	90.00	90.44	7,860.00	2,320.39	-188.29	340.04	10.00	9.53	3.03
Start 4930.12 hold at 8581.55 MD - Niobrara Formation									
8,600.00	90.00	90.44	7,860.00	2,320.25	-169.85	357.97	0.00	0.00	0.00
8,700.00	90.00	90.44	7,860.00	2,319.47	-69.85	455.22	0.00	0.00	0.00
8,800.00	90.00	90.44	7,860.00	2,318.70	30.15	552.46	0.00	0.00	0.00
8,900.00	90.00	90.44	7,860.00	2,317.92	130.14	649.71	0.00	0.00	0.00
9,000.00	90.00	90.44	7,860.00	2,317.15	230.14	746.95	0.00	0.00	0.00
9,100.00	90.00	90.44	7,860.00	2,316.37	330.14	844.20	0.00	0.00	0.00
9,200.00	90.00	90.44	7,860.00	2,315.60	430.13	941.44	0.00	0.00	0.00
9,300.00	90.00	90.44	7,860.00	2,314.83	530.13	1,038.69	0.00	0.00	0.00
9,400.00	90.00	90.44	7,860.00	2,314.05	630.13	1,135.93	0.00	0.00	0.00
9,500.00	90.00	90.44	7,860.00	2,313.28	730.13	1,233.17	0.00	0.00	0.00
9,600.00	90.00	90.44	7,860.00	2,312.50	830.12	1,330.42	0.00	0.00	0.00
9,700.00	90.00	90.44	7,860.00	2,311.73	930.12	1,427.66	0.00	0.00	0.00
9,800.00	90.00	90.44	7,860.00	2,310.95	1,030.12	1,524.91	0.00	0.00	0.00
9,900.00	90.00	90.44	7,860.00	2,310.18	1,130.11	1,622.15	0.00	0.00	0.00
10,000.00	90.00	90.44	7,860.00	2,309.41	1,230.11	1,719.40	0.00	0.00	0.00
10,100.00	90.00	90.44	7,860.00	2,308.63	1,330.11	1,816.64	0.00	0.00	0.00
10,200.00	90.00	90.44	7,860.00	2,307.86	1,430.11	1,913.89	0.00	0.00	0.00
10,300.00	90.00	90.44	7,860.00	2,307.08	1,530.10	2,011.13	0.00	0.00	0.00
10,400.00	90.00	90.44	7,860.00	2,306.31	1,630.10	2,108.37	0.00	0.00	0.00
10,500.00	90.00	90.44	7,860.00	2,305.53	1,730.10	2,205.62	0.00	0.00	0.00
10,600.00	90.00	90.44	7,860.00	2,304.76	1,830.09	2,302.86	0.00	0.00	0.00
10,700.00	90.00	90.44	7,860.00	2,303.99	1,930.09	2,400.11	0.00	0.00	0.00
10,800.00	90.00	90.44	7,860.00	2,303.21	2,030.09	2,497.35	0.00	0.00	0.00
10,900.00	90.00	90.44	7,860.00	2,302.44	2,130.08	2,594.60	0.00	0.00	0.00
11,000.00	90.00	90.44	7,860.00	2,301.66	2,230.08	2,691.84	0.00	0.00	0.00
11,100.00	90.00	90.44	7,860.00	2,300.89	2,330.08	2,789.09	0.00	0.00	0.00
11,200.00	90.00	90.44	7,860.00	2,300.11	2,430.08	2,886.33	0.00	0.00	0.00
11,300.00	90.00	90.44	7,860.00	2,299.34	2,530.07	2,983.57	0.00	0.00	0.00
11,400.00	90.00	90.44	7,860.00	2,298.57	2,630.07	3,080.82	0.00	0.00	0.00
11,500.00	90.00	90.44	7,860.00	2,297.79	2,730.07	3,178.06	0.00	0.00	0.00
11,600.00	90.00	90.44	7,860.00	2,297.02	2,830.06	3,275.31	0.00	0.00	0.00

Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 23-24 4BH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KBE 25' @ 5817.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KBE 25' @ 5817.00usft
Site:	SEC 26-T4S-R65W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 23-24 4BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

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)
11,700.00	90.00	90.44	7,860.00	2,296.24	2,930.06	3,372.55	0.00	0.00	0.00
11,800.00	90.00	90.44	7,860.00	2,295.47	3,030.06	3,469.80	0.00	0.00	0.00
11,900.00	90.00	90.44	7,860.00	2,294.69	3,130.05	3,567.04	0.00	0.00	0.00
12,000.00	90.00	90.44	7,860.00	2,293.92	3,230.05	3,664.29	0.00	0.00	0.00
12,100.00	90.00	90.44	7,860.00	2,293.15	3,330.05	3,761.53	0.00	0.00	0.00
12,200.00	90.00	90.44	7,860.00	2,292.37	3,430.05	3,858.77	0.00	0.00	0.00
12,300.00	90.00	90.44	7,860.00	2,291.60	3,530.04	3,956.02	0.00	0.00	0.00
12,400.00	90.00	90.44	7,860.00	2,290.82	3,630.04	4,053.26	0.00	0.00	0.00
12,500.00	90.00	90.44	7,860.00	2,290.05	3,730.04	4,150.51	0.00	0.00	0.00
12,600.00	90.00	90.44	7,860.00	2,289.27	3,830.03	4,247.75	0.00	0.00	0.00
12,700.00	90.00	90.44	7,860.00	2,288.50	3,930.03	4,345.00	0.00	0.00	0.00
12,800.00	90.00	90.44	7,860.00	2,287.73	4,030.03	4,442.24	0.00	0.00	0.00
12,900.00	90.00	90.44	7,860.00	2,286.95	4,130.02	4,539.49	0.00	0.00	0.00
13,000.00	90.00	90.44	7,860.00	2,286.18	4,230.02	4,636.73	0.00	0.00	0.00
13,100.00	90.00	90.44	7,860.00	2,285.40	4,330.02	4,733.97	0.00	0.00	0.00
13,200.00	90.00	90.44	7,860.00	2,284.63	4,430.02	4,831.22	0.00	0.00	0.00
13,300.00	90.00	90.44	7,860.00	2,283.85	4,530.01	4,928.46	0.00	0.00	0.00
13,400.00	90.00	90.44	7,860.00	2,283.08	4,630.01	5,025.71	0.00	0.00	0.00
13,500.00	90.00	90.44	7,860.00	2,282.31	4,730.01	5,122.95	0.00	0.00	0.00
13,511.67	90.00	90.44	7,860.00	2,282.22	4,741.67	5,134.30	0.00	0.00	0.00
13,511.89	90.00	90.44	7,860.00	2,282.21	4,741.90	5,134.52	2.00	0.00	-2.00
Start 4949.89 hold at 13511.89 MD									
13,600.00	90.00	90.44	7,860.00	2,281.54	4,830.00	5,220.20	0.00	0.00	0.00
13,700.00	90.00	90.44	7,860.00	2,280.77	4,930.00	5,317.45	0.00	0.00	0.00
13,800.00	90.00	90.44	7,860.00	2,280.01	5,030.00	5,414.69	0.00	0.00	0.00
13,900.00	90.00	90.44	7,860.00	2,279.24	5,129.99	5,511.94	0.00	0.00	0.00
14,000.00	90.00	90.44	7,860.00	2,278.47	5,229.99	5,609.18	0.00	0.00	0.00
14,100.00	90.00	90.44	7,860.00	2,277.71	5,329.99	5,706.43	0.00	0.00	0.00
14,200.00	90.00	90.44	7,860.00	2,276.94	5,429.99	5,803.68	0.00	0.00	0.00
14,300.00	90.00	90.44	7,860.00	2,276.17	5,529.98	5,900.92	0.00	0.00	0.00
14,400.00	90.00	90.44	7,860.00	2,275.41	5,629.98	5,998.17	0.00	0.00	0.00
14,500.00	90.00	90.44	7,860.00	2,274.64	5,729.98	6,095.42	0.00	0.00	0.00
14,600.00	90.00	90.44	7,860.00	2,273.87	5,829.97	6,192.66	0.00	0.00	0.00
14,700.00	90.00	90.44	7,860.00	2,273.11	5,929.97	6,289.91	0.00	0.00	0.00
14,800.00	90.00	90.44	7,860.00	2,272.34	6,029.97	6,387.15	0.00	0.00	0.00
14,900.00	90.00	90.44	7,860.00	2,271.57	6,129.97	6,484.40	0.00	0.00	0.00
15,000.00	90.00	90.44	7,860.00	2,270.81	6,229.96	6,581.65	0.00	0.00	0.00
15,100.00	90.00	90.44	7,860.00	2,270.04	6,329.96	6,678.89	0.00	0.00	0.00
15,200.00	90.00	90.44	7,860.00	2,269.27	6,429.96	6,776.14	0.00	0.00	0.00
15,300.00	90.00	90.44	7,860.00	2,268.51	6,529.95	6,873.39	0.00	0.00	0.00
15,400.00	90.00	90.44	7,860.00	2,267.74	6,629.95	6,970.63	0.00	0.00	0.00
15,500.00	90.00	90.44	7,860.00	2,266.97	6,729.95	7,067.88	0.00	0.00	0.00
15,600.00	90.00	90.44	7,860.00	2,266.21	6,829.94	7,165.12	0.00	0.00	0.00
15,700.00	90.00	90.44	7,860.00	2,265.44	6,929.94	7,262.37	0.00	0.00	0.00
15,800.00	90.00	90.44	7,860.00	2,264.68	7,029.94	7,359.62	0.00	0.00	0.00
15,900.00	90.00	90.44	7,860.00	2,263.91	7,129.94	7,456.86	0.00	0.00	0.00
16,000.00	90.00	90.44	7,860.00	2,263.14	7,229.93	7,554.11	0.00	0.00	0.00
16,100.00	90.00	90.44	7,860.00	2,262.38	7,329.93	7,651.36	0.00	0.00	0.00
16,200.00	90.00	90.44	7,860.00	2,261.61	7,429.93	7,748.60	0.00	0.00	0.00
16,300.00	90.00	90.44	7,860.00	2,260.84	7,529.92	7,845.85	0.00	0.00	0.00
16,400.00	90.00	90.44	7,860.00	2,260.08	7,629.92	7,943.09	0.00	0.00	0.00
16,500.00	90.00	90.44	7,860.00	2,259.31	7,729.92	8,040.34	0.00	0.00	0.00
16,600.00	90.00	90.44	7,860.00	2,258.54	7,829.92	8,137.59	0.00	0.00	0.00

Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 23-24 4BH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KBE 25' @ 5817.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KBE 25' @ 5817.00usft
Site:	SEC 26-T4S-R65W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 23-24 4BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

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)	
16,700.00	90.00	90.44	7,860.00	2,257.78	7,929.91	8,234.83	0.00	0.00	0.00	
16,800.00	90.00	90.44	7,860.00	2,257.01	8,029.91	8,332.08	0.00	0.00	0.00	
16,900.00	90.00	90.44	7,860.00	2,256.24	8,129.91	8,429.33	0.00	0.00	0.00	
17,000.00	90.00	90.44	7,860.00	2,255.48	8,229.90	8,526.57	0.00	0.00	0.00	
17,100.00	90.00	90.44	7,860.00	2,254.71	8,329.90	8,623.82	0.00	0.00	0.00	
17,200.00	90.00	90.44	7,860.00	2,253.94	8,429.90	8,721.06	0.00	0.00	0.00	
17,300.00	90.00	90.44	7,860.00	2,253.18	8,529.89	8,818.31	0.00	0.00	0.00	
17,400.00	90.00	90.44	7,860.00	2,252.41	8,629.89	8,915.56	0.00	0.00	0.00	
17,500.00	90.00	90.44	7,860.00	2,251.64	8,729.89	9,012.80	0.00	0.00	0.00	
17,600.00	90.00	90.44	7,860.00	2,250.88	8,829.89	9,110.05	0.00	0.00	0.00	
17,700.00	90.00	90.44	7,860.00	2,250.11	8,929.88	9,207.30	0.00	0.00	0.00	
17,800.00	90.00	90.44	7,860.00	2,249.34	9,029.88	9,304.54	0.00	0.00	0.00	
17,900.00	90.00	90.44	7,860.00	2,248.58	9,129.88	9,401.79	0.00	0.00	0.00	
18,000.00	90.00	90.44	7,860.00	2,247.81	9,229.87	9,499.03	0.00	0.00	0.00	
18,100.00	90.00	90.44	7,860.00	2,247.05	9,329.87	9,596.28	0.00	0.00	0.00	
18,200.00	90.00	90.44	7,860.00	2,246.28	9,429.87	9,693.53	0.00	0.00	0.00	
18,300.00	90.00	90.44	7,860.00	2,245.51	9,529.87	9,790.77	0.00	0.00	0.00	
18,400.00	90.00	90.44	7,860.00	2,244.75	9,629.86	9,888.02	0.00	0.00	0.00	
18,461.78	90.00	90.44	7,860.00	2,244.27	9,691.64	9,948.10	0.00	0.00	0.00	
TD at 18461.78										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
PBHL-GM 4-65 23-24 4BH	0.00	0.00	7,860.00	2,244.27	9,691.64	1,674,810.66	3,252,004.97	39.682745°N	104.604610°W	
- plan hits target center										
- Point										
LP-GM 4-65 23-24 4BH	0.00	0.00	7,860.00	2,320.39	-188.29	1,674,793.14	3,242,124.90	39.682959°N	104.639713°W	
- plan hits target center										
- Point										
MID PNT-GM 4-65 23-24	0.00	0.00	7,860.00	2,282.22	4,741.67	1,674,801.69	3,247,054.94	39.682853°N	104.622197°W	
- plan hits target center										
- Point										

Civitas Resources

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well GRIMM MOTOCROSS 4-65 23-24 4BH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KBE 25' @ 5817.00usft
Project:	ARAPAHOE COUNTY	MD Reference:	KBE 25' @ 5817.00usft
Site:	SEC 26-T4S-R65W	North Reference:	True
Well:	GRIMM MOTOCROSS 4-65 23-24 4BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
24.00	24.00	Denver				
983.96	970.00	Arapahoe				
1,575.05	1,530.00	Laramie-Fox Hills Formation				
2,155.74	2,080.00	Pierre Formation				
2,725.87	2,620.00	Upper Pierre aquifer				
3,359.35	3,220.00	Base of Upper Pierre aquifer				
4,415.15	4,220.00	Larimer ("Parkman") sandstone				
4,562.97	4,360.00	Pierre Formation				
5,682.11	5,420.00	Terry ("Sussex") sandstone				
5,893.27	5,620.00	Pierre Formation				
6,632.33	6,320.00	Hygiene ("Shannon") sandstone				
6,843.49	6,520.00	Pierre Formation				
8,229.26	7,760.00	Sharon Springs Member				
8,581.55	7,860.00	Niobrara Formation				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
100.00	100.00	0.00	0.00	Start Build 2.00	
1,035.54	1,019.00	142.63	-50.79	Start 6582.89 hold at 1035.54 MD	
7,618.43	7,253.98	2,131.98	-759.25	Start DLS 10.00 TFO 109.06	
8,581.55	7,860.00	2,320.39	-188.29	Start 4930.12 hold at 8581.55 MD	
13,511.89	7,860.00	2,282.21	4,741.90	Start 4949.89 hold at 13511.89 MD	
18,461.78	7,860.00	2,244.27	9,691.64	TD at 18461.78	