

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101
August 1, 2011

Permit 274913

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240		2. OGRID Number 228937
		3. API Number 30-015-46476
4. Property Code 326434	5. Property Name RAY STATE COM	6. Well No. 223H

7. Surface Location

UL - Lot O	Section 36	Township 23S	Range 28E	Lot Idn	Feet From 130	N/S Line S	Feet From 2606	E/W Line E	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot B	Section 25	Township 23S	Range 28E	Lot Idn B	Feet From 240	N/S Line N	Feet From 2296	E/W Line E	County Eddy
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9. Pool Information

PURPLE SAGE;WOLFCAMP (GAS)	98220
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Additional Well Information

11. Work Type New Well	12. Well Type GAS	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 2961
16. Multiple N	17. Proposed Depth 21045	18. Formation Wolfcamp	19. Contractor	20. Spud Date 12/20/2019
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	350	300	0
Int1	12.25	9.625	40	2750	700	0
Int2	8.75	7.625	29.7	10670	450	2550
Prod	6.75	5.5	20	20945	1355	9800

Casing/Cement Program: Additional Comments

Option to drill surface hole with surface setting rig

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	5000	3000	Cameron
Double Ram	10000	5000	Cameron
Pipe	10000	5000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.	OIL CONSERVATION DIVISION	
Signature:		
Printed Name: Electronically filed by Ava Monroe	Approved By: Raymond Podany	
Title: Sr. Regulatory Analyst	Title: Geologist	
Email Address: amonroe@matadorresources.com	Approved Date: 12/9/2019	Expiration Date: 12/9/2021
Date: 11/21/2019	Phone: 972-371-5218	Conditions of Approval Attached

☐ **AMENDED REPORT**

S:\SURVEYMATADOR RESOURCES\RAY STATE COM 36-23S-28E\FINAL PRODUCTS\LO RAY STATE COM 223H REV5.DWG 10/25/2019 2:03:21 PM richardson

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GAS CAPTURE PLAN

Date: 12/9/2019

☒ Original

Operator & OGRID No.: [228937] MATADOR PRODUCTION COMPANY

☐ Amended - Reason for
Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
RAY STATE COM #223H	30-015-46476	O-36-23S-28E	0130S 2606E	9000	Flared	+/- 9000 MCF/D

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to LONGWOOD RB PIPELINE, LLC and will be connected to LONGWOOD RB PIPELINE, LLC High Pressure gathering system located in Eddy County, New Mexico. It will require 5280' of pipeline to connect the facility to High Pressure gathering system. MATADOR PRODUCTION COMPANY provides (periodically) to LONGWOOD RB PIPELINE, LLC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, MATADOR PRODUCTION COMPANY and LONGWOOD RB PIPELINE, LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at LONGWOOD RB PIPELINE, LLC Processing Plant located in Sec. 31, Twn. 23S, Rng. 28E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on LONGWOOD RB PIPELINE, LLC system at that time. Based on current information, it is MATADOR PRODUCTION COMPANY's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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Form APD Comments

Permit 274913

PERMIT COMMENTS

Operator Name and Address: MATADOR PRODUCTION COMPANY [228937] One Lincoln Centre Dallas, TX 75240		API Number: 30-015-46476
		Well: RAY STATE COM #223H
Created By	Comment	Comment Date
nfitzgerald	Option to drill surface hole with surface setting rig	11/20/2019

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Form APD Conditions

Permit 274913

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: MATADOR PRODUCTION COMPANY [228937] One Lincoln Centre Dallas, TX 75240		API Number: 30-015-46476
		Well: RAY STATE COM #223H

OCD Reviewer	Condition
rpodany	Will require a directional survey with the C-104
rpodany	Cement is required to circulate on both surface and intermediate1 strings of casing

Matador Production Company

Rustler Breaks

Ray State

Ray State Com #223H

Wellbore #1

Plan: State Plan #1

Standard Planning Report

28 October, 2019

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Ray State Com #223H
Company:	Matador Production Company	TVD Reference:	KB @ 2989.5usft
Project:	Rustler Breaks	MD Reference:	KB @ 2989.5usft
Site:	Ray State	North Reference:	Grid
Well:	Ray State Com #223H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	State Plan #1		

Project	Rustler Breaks		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		Using geodetic scale factor

Site		Ray State			
Site Position:		Northing:	455,431.16 usft	Latitude:	32° 15' 6.263 N
From:	Lat/Long	Easting:	592,908.03 usft	Longitude:	104° 1' 58.085 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.16 °

Well	Ray State Com #223H					
Well Position	+N/-S	1,011.8 usft	Northing:	456,442.90 usft	Latitude:	32° 15' 16.339 N
	+E/-W	-2,316.9 usft	Easting:	590,591.32 usft	Longitude:	104° 2' 25.031 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	2,961.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	7.96	60.19	48,761.90579104

Design	State Plan #1			
Audit Notes:				
Version:	1	Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	359.93

Plan Survey Tool Program	Date	10/28/2019			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	20,938.1	State Plan #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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,800.0	8.00	111.76	5,797.4	-20.7	51.8	1.00	1.00	0.00	111.76	
6,661.7	8.00	111.76	6,650.7	-65.1	163.2	0.00	0.00	0.00	0.00	
7,195.0	0.00	0.00	7,182.3	-78.9	197.7	1.50	-1.50	0.00	180.00	
10,204.7	0.00	0.00	10,192.0	-78.9	197.7	0.00	0.00	0.00	0.00	VP - Ray State Con
11,104.7	90.00	9.00	10,765.0	487.0	287.3	10.00	10.00	0.00	9.00	
11,558.1	90.00	359.93	10,765.0	938.5	322.6	2.00	0.00	-2.00	-90.00	
20,938.1	90.00	359.93	10,765.0	10,318.6	311.6	0.00	0.00	0.00	0.00	BHL - Ray State Cc

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Ray State Com #223H
Company:	Matador Production Company	TVD Reference:	KB @ 2989.5usft
Project:	Rustler Breaks	MD Reference:	KB @ 2989.5usft
Site:	Ray State	North Reference:	Grid
Well:	Ray State Com #223H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	State Plan #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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
21.0	0.00	0.00	21.0	0.0	0.0	0.0	0.00	0.00	0.00
Rustler									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
425.0	0.00	0.00	425.0	0.0	0.0	0.0	0.00	0.00	0.00
Top Salt									
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,675.0	0.00	0.00	2,675.0	0.0	0.0	0.0	0.00	0.00	0.00
Lamar (Base Salt)									
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00

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Site:	Ray State	North Reference:	Grid
Well:	Ray State Com #223H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	State Plan #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)
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 1.00									
5,100.0	1.00	111.76	5,100.0	-0.3	0.8	-0.3	1.00	1.00	0.00
5,200.0	2.00	111.76	5,200.0	-1.3	3.2	-1.3	1.00	1.00	0.00
5,300.0	3.00	111.76	5,299.9	-2.9	7.3	-2.9	1.00	1.00	0.00
5,400.0	4.00	111.76	5,399.7	-5.2	13.0	-5.2	1.00	1.00	0.00
5,500.0	5.00	111.76	5,499.4	-8.1	20.2	-8.1	1.00	1.00	0.00
5,600.0	6.00	111.76	5,598.9	-11.6	29.2	-11.7	1.00	1.00	0.00
5,700.0	7.00	111.76	5,698.3	-15.8	39.7	-15.9	1.00	1.00	0.00
5,800.0	8.00	111.76	5,797.4	-20.7	51.8	-20.7	1.00	1.00	0.00
Start 1776.8 hold at 5800.0 MD									
5,900.0	8.00	111.76	5,896.4	-25.8	64.7	-25.9	0.00	0.00	0.00
6,000.0	8.00	111.76	5,995.5	-31.0	77.6	-31.1	0.00	0.00	0.00
6,100.0	8.00	111.76	6,094.5	-36.1	90.6	-36.3	0.00	0.00	0.00
6,200.0	8.00	111.76	6,193.5	-41.3	103.5	-41.4	0.00	0.00	0.00
6,300.0	8.00	111.76	6,292.5	-46.5	116.4	-46.6	0.00	0.00	0.00
6,400.0	8.00	111.76	6,391.6	-51.6	129.3	-51.8	0.00	0.00	0.00
6,400.7	8.00	111.76	6,392.2	-51.7	129.4	-51.8	0.00	0.00	0.00
BSGL									
6,500.0	8.00	111.76	6,490.6	-56.8	142.3	-57.0	0.00	0.00	0.00
6,600.0	8.00	111.76	6,589.6	-61.9	155.2	-62.1	0.00	0.00	0.00
6,661.7	8.00	111.76	6,650.7	-65.1	163.2	-65.3	0.00	0.00	0.00
6,700.0	7.42	111.76	6,688.7	-67.0	167.9	-67.2	1.50	-1.50	0.00
6,800.0	5.92	111.76	6,788.0	-71.3	178.7	-71.6	1.50	-1.50	0.00
6,900.0	4.42	111.76	6,887.6	-74.7	187.1	-74.9	1.50	-1.50	0.00
7,000.0	2.92	111.76	6,987.4	-77.1	193.1	-77.3	1.50	-1.50	0.00
7,100.0	1.42	111.76	7,087.3	-78.5	196.6	-78.7	1.50	-1.50	0.00
7,195.0	0.00	0.00	7,182.3	-78.9	197.7	-79.1	1.50	-1.50	0.00
7,200.0	0.00	0.00	7,187.3	-78.9	197.7	-79.1	0.00	0.00	0.00
7,300.0	0.00	0.00	7,287.3	-78.9	197.7	-79.1	0.00	0.00	0.00
7,400.0	0.00	0.00	7,387.3	-78.9	197.7	-79.1	0.00	0.00	0.00
7,406.1	0.00	0.00	7,393.4	-78.9	197.7	-79.1	0.00	0.00	0.00
FBSG									
7,500.0	0.00	0.00	7,487.3	-78.9	197.7	-79.1	0.00	0.00	0.00
7,576.8	0.00	0.00	7,564.1	-78.9	197.7	-79.1	0.00	0.00	0.00
Start Drop -1.50									
7,600.0	0.00	0.00	7,587.3	-78.9	197.7	-79.1	0.00	0.00	0.00
7,623.4	0.00	0.00	7,610.7	-78.9	197.7	-79.1	0.00	0.00	0.00
SBSC									
7,700.0	0.00	0.00	7,687.3	-78.9	197.7	-79.1	0.00	0.00	0.00
7,800.0	0.00	0.00	7,787.3	-78.9	197.7	-79.1	0.00	0.00	0.00
7,900.0	0.00	0.00	7,887.3	-78.9	197.7	-79.1	0.00	0.00	0.00
8,000.0	0.00	0.00	7,987.3	-78.9	197.7	-79.1	0.00	0.00	0.00
8,100.0	0.00	0.00	8,087.3	-78.9	197.7	-79.1	0.00	0.00	0.00
8,110.1	0.00	0.00	8,097.4	-78.9	197.7	-79.1	0.00	0.00	0.00
Start 2103.5 hold at 8110.1 MD									
8,157.7	0.00	0.00	8,144.9	-78.9	197.7	-79.1	0.00	0.00	0.00
SBSG									
8,200.0	0.00	0.00	8,187.3	-78.9	197.7	-79.1	0.00	0.00	0.00
8,300.0	0.00	0.00	8,287.3	-78.9	197.7	-79.1	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Ray State Com #223H
Company:	Matador Production Company	TVD Reference:	KB @ 2989.5usft
Project:	Rustler Breaks	MD Reference:	KB @ 2989.5usft
Site:	Ray State	North Reference:	Grid
Well:	Ray State Com #223H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	State Plan #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)
8,400.0	0.00	0.00	8,387.3	-78.9	197.7	-79.1	0.00	0.00	0.00
8,427.5	0.00	0.00	8,414.8	-78.9	197.7	-79.1	0.00	0.00	0.00
SBSG Target (120 Series)									
8,500.0	0.00	0.00	8,487.3	-78.9	197.7	-79.1	0.00	0.00	0.00
8,527.5	0.00	0.00	8,514.8	-78.9	197.7	-79.1	0.00	0.00	0.00
TBSC									
8,600.0	0.00	0.00	8,587.3	-78.9	197.7	-79.1	0.00	0.00	0.00
8,700.0	0.00	0.00	8,687.3	-78.9	197.7	-79.1	0.00	0.00	0.00
8,800.0	0.00	0.00	8,787.3	-78.9	197.7	-79.1	0.00	0.00	0.00
8,900.0	0.00	0.00	8,887.3	-78.9	197.7	-79.1	0.00	0.00	0.00
9,000.0	0.00	0.00	8,987.3	-78.9	197.7	-79.1	0.00	0.00	0.00
9,100.0	0.00	0.00	9,087.3	-78.9	197.7	-79.1	0.00	0.00	0.00
9,200.0	0.00	0.00	9,187.3	-78.9	197.7	-79.1	0.00	0.00	0.00
9,267.8	0.00	0.00	9,255.0	-78.9	197.7	-79.1	0.00	0.00	0.00
TBSG									
9,300.0	0.00	0.00	9,287.3	-78.9	197.7	-79.1	0.00	0.00	0.00
9,400.0	0.00	0.00	9,387.3	-78.9	197.7	-79.1	0.00	0.00	0.00
9,500.0	0.00	0.00	9,487.3	-78.9	197.7	-79.1	0.00	0.00	0.00
9,600.0	0.00	0.00	9,587.3	-78.9	197.7	-79.1	0.00	0.00	0.00
9,627.7	0.00	0.00	9,615.0	-78.9	197.7	-79.1	0.00	0.00	0.00
WFMP									
9,700.0	0.00	0.00	9,687.3	-78.9	197.7	-79.1	0.00	0.00	0.00
9,727.7	0.00	0.00	9,715.0	-78.9	197.7	-79.1	0.00	0.00	0.00
Y Sand Top (200 Series)									
9,800.0	0.00	0.00	9,787.3	-78.9	197.7	-79.1	0.00	0.00	0.00
9,900.0	0.00	0.00	9,887.3	-78.9	197.7	-79.1	0.00	0.00	0.00
9,977.7	0.00	0.00	9,965.0	-78.9	197.7	-79.1	0.00	0.00	0.00
WFMP A Fat									
10,000.0	0.00	0.00	9,987.3	-78.9	197.7	-79.1	0.00	0.00	0.00
10,046.1	0.00	0.00	10,033.4	-78.9	197.7	-79.1	0.00	0.00	0.00
WFMP B									
10,100.0	0.00	0.00	10,087.3	-78.9	197.7	-79.1	0.00	0.00	0.00
10,200.0	0.00	0.00	10,187.3	-78.9	197.7	-79.1	0.00	0.00	0.00
10,204.7	0.00	0.00	10,192.0	-78.9	197.7	-79.1	0.00	0.00	0.00
VP - Ray State Com #223H									
10,213.6	0.89	9.00	10,200.9	-78.8	197.7	-79.1	10.00	10.00	0.00
Start Build 10.00									
10,300.0	9.53	9.00	10,286.8	-71.1	198.9	-71.3	10.00	10.00	0.00
10,400.0	19.53	9.00	10,383.5	-46.3	202.8	-46.6	10.00	10.00	0.00
10,500.0	29.53	9.00	10,474.4	-5.4	209.3	-5.6	10.00	10.00	0.00
10,600.0	39.53	9.00	10,556.7	50.5	218.2	50.3	10.00	10.00	0.00
10,700.0	49.53	9.00	10,627.9	119.7	229.1	119.4	10.00	10.00	0.00
10,800.0	59.53	9.00	10,685.8	200.0	241.9	199.7	10.00	10.00	0.00
10,900.0	69.53	9.00	10,728.8	289.1	256.0	288.8	10.00	10.00	0.00
11,000.0	79.53	9.00	10,755.4	384.2	271.0	383.8	10.00	10.00	0.00
11,100.0	89.53	9.00	10,764.9	482.4	286.6	482.0	10.00	10.00	0.00
11,104.7	90.00	9.00	10,765.0	487.0	287.3	486.7	10.00	10.00	0.00
BLAIR Shale (220 Series)									
11,113.6	90.00	8.82	10,765.0	495.8	288.7	495.5	2.00	0.00	-2.00
Start DLS 2.00 TFO 90.00									
11,200.0	90.00	7.09	10,765.0	581.3	300.7	581.0	2.00	0.00	-2.00
11,300.0	90.00	5.09	10,765.0	680.8	311.3	680.4	2.00	0.00	-2.00
11,400.0	90.00	3.09	10,765.0	780.5	318.4	780.1	2.00	0.00	-2.00

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Ray State Com #223H
Company:	Matador Production Company	TVD Reference:	KB @ 2989.5usft
Project:	Rustler Breaks	MD Reference:	KB @ 2989.5usft
Site:	Ray State	North Reference:	Grid
Well:	Ray State Com #223H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	State Plan #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)
11,485.1	90.00	1.39	10,765.0	865.5	321.7	865.1	2.00	0.00	-2.00
Start 9459.0 hold at 11485.1 MD									
11,500.0	90.00	1.09	10,765.0	880.4	322.1	880.1	2.00	0.00	-2.00
11,558.1	90.00	359.93	10,765.0	938.5	322.6	938.1	2.00	0.00	-2.00
11,600.0	90.00	359.93	10,765.0	980.4	322.5	980.0	0.00	0.00	0.00
11,700.0	90.00	359.93	10,765.0	1,080.4	322.4	1,080.0	0.00	0.00	0.00
11,800.0	90.00	359.93	10,765.0	1,180.4	322.3	1,180.0	0.00	0.00	0.00
11,900.0	90.00	359.93	10,765.0	1,280.4	322.2	1,280.0	0.00	0.00	0.00
12,000.0	90.00	359.93	10,765.0	1,380.4	322.1	1,380.0	0.00	0.00	0.00
12,100.0	90.00	359.93	10,765.0	1,480.4	322.0	1,480.0	0.00	0.00	0.00
12,200.0	90.00	359.93	10,765.0	1,580.4	321.8	1,580.0	0.00	0.00	0.00
12,300.0	90.00	359.93	10,765.0	1,680.4	321.7	1,680.0	0.00	0.00	0.00
12,400.0	90.00	359.93	10,765.0	1,780.4	321.6	1,780.0	0.00	0.00	0.00
12,500.0	90.00	359.93	10,765.0	1,880.4	321.5	1,880.0	0.00	0.00	0.00
12,600.0	90.00	359.93	10,765.0	1,980.4	321.4	1,980.0	0.00	0.00	0.00
12,700.0	90.00	359.93	10,765.0	2,080.4	321.3	2,080.0	0.00	0.00	0.00
12,800.0	90.00	359.93	10,765.0	2,180.4	321.1	2,180.0	0.00	0.00	0.00
12,900.0	90.00	359.93	10,765.0	2,280.4	321.0	2,280.0	0.00	0.00	0.00
13,000.0	90.00	359.93	10,765.0	2,380.4	320.9	2,380.0	0.00	0.00	0.00
13,100.0	90.00	359.93	10,765.0	2,480.4	320.8	2,480.0	0.00	0.00	0.00
13,200.0	90.00	359.93	10,765.0	2,580.4	320.7	2,580.0	0.00	0.00	0.00
13,300.0	90.00	359.93	10,765.0	2,680.4	320.6	2,680.0	0.00	0.00	0.00
13,400.0	90.00	359.93	10,765.0	2,780.4	320.4	2,780.0	0.00	0.00	0.00
13,500.0	90.00	359.93	10,765.0	2,880.4	320.3	2,880.0	0.00	0.00	0.00
13,600.0	90.00	359.93	10,765.0	2,980.4	320.2	2,980.0	0.00	0.00	0.00
13,700.0	90.00	359.93	10,765.0	3,080.4	320.1	3,080.0	0.00	0.00	0.00
13,800.0	90.00	359.93	10,765.0	3,180.4	320.0	3,180.0	0.00	0.00	0.00
13,900.0	90.00	359.93	10,765.0	3,280.4	319.8	3,280.0	0.00	0.00	0.00
14,000.0	90.00	359.93	10,765.0	3,380.4	319.7	3,380.0	0.00	0.00	0.00
14,100.0	90.00	359.93	10,765.0	3,480.4	319.6	3,480.0	0.00	0.00	0.00
14,200.0	90.00	359.93	10,765.0	3,580.4	319.5	3,580.0	0.00	0.00	0.00
14,300.0	90.00	359.93	10,765.0	3,680.4	319.4	3,680.0	0.00	0.00	0.00
14,400.0	90.00	359.93	10,765.0	3,780.4	319.3	3,780.0	0.00	0.00	0.00
14,500.0	90.00	359.93	10,765.0	3,880.4	319.1	3,880.0	0.00	0.00	0.00
14,600.0	90.00	359.93	10,765.0	3,980.4	319.0	3,980.0	0.00	0.00	0.00
14,700.0	90.00	359.93	10,765.0	4,080.4	318.9	4,080.0	0.00	0.00	0.00
14,800.0	90.00	359.93	10,765.0	4,180.4	318.8	4,180.0	0.00	0.00	0.00
14,900.0	90.00	359.93	10,765.0	4,280.4	318.7	4,280.0	0.00	0.00	0.00
15,000.0	90.00	359.93	10,765.0	4,380.4	318.6	4,380.0	0.00	0.00	0.00
15,100.0	90.00	359.93	10,765.0	4,480.4	318.4	4,480.0	0.00	0.00	0.00
15,200.0	90.00	359.93	10,765.0	4,580.4	318.3	4,580.0	0.00	0.00	0.00
15,300.0	90.00	359.93	10,765.0	4,680.4	318.2	4,680.0	0.00	0.00	0.00
15,400.0	90.00	359.93	10,765.0	4,780.4	318.1	4,780.0	0.00	0.00	0.00
15,500.0	90.00	359.93	10,765.0	4,880.4	318.0	4,880.0	0.00	0.00	0.00
15,600.0	90.00	359.93	10,765.0	4,980.4	317.9	4,980.0	0.00	0.00	0.00
15,700.0	90.00	359.93	10,765.0	5,080.4	317.7	5,080.0	0.00	0.00	0.00
15,800.0	90.00	359.93	10,765.0	5,180.4	317.6	5,180.0	0.00	0.00	0.00
15,900.0	90.00	359.93	10,765.0	5,280.4	317.5	5,280.0	0.00	0.00	0.00
16,000.0	90.00	359.93	10,765.0	5,380.4	317.4	5,380.0	0.00	0.00	0.00
16,100.0	90.00	359.93	10,765.0	5,480.4	317.3	5,480.0	0.00	0.00	0.00
16,200.0	90.00	359.93	10,765.0	5,580.4	317.2	5,580.0	0.00	0.00	0.00
16,300.0	90.00	359.93	10,765.0	5,680.4	317.0	5,680.0	0.00	0.00	0.00
16,400.0	90.00	359.93	10,765.0	5,780.4	316.9	5,780.0	0.00	0.00	0.00
16,500.0	90.00	359.93	10,765.0	5,880.4	316.8	5,880.0	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Ray State Com #223H
Company:	Matador Production Company	TVD Reference:	KB @ 2989.5usft
Project:	Rustler Breaks	MD Reference:	KB @ 2989.5usft
Site:	Ray State	North Reference:	Grid
Well:	Ray State Com #223H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	State Plan #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)
16,600.0	90.00	359.93	10,765.0	5,980.4	316.7	5,980.0	0.00	0.00	0.00
16,700.0	90.00	359.93	10,765.0	6,080.4	316.6	6,080.0	0.00	0.00	0.00
16,800.0	90.00	359.93	10,765.0	6,180.4	316.5	6,180.0	0.00	0.00	0.00
16,900.0	90.00	359.93	10,765.0	6,280.4	316.3	6,280.0	0.00	0.00	0.00
17,000.0	90.00	359.93	10,765.0	6,380.4	316.2	6,380.0	0.00	0.00	0.00
17,100.0	90.00	359.93	10,765.0	6,480.4	316.1	6,480.0	0.00	0.00	0.00
17,200.0	90.00	359.93	10,765.0	6,580.4	316.0	6,580.0	0.00	0.00	0.00
17,300.0	90.00	359.93	10,765.0	6,680.4	315.9	6,680.0	0.00	0.00	0.00
17,400.0	90.00	359.93	10,765.0	6,780.4	315.8	6,780.0	0.00	0.00	0.00
17,500.0	90.00	359.93	10,765.0	6,880.4	315.6	6,880.0	0.00	0.00	0.00
17,600.0	90.00	359.93	10,765.0	6,980.4	315.5	6,980.0	0.00	0.00	0.00
17,700.0	90.00	359.93	10,765.0	7,080.4	315.4	7,080.0	0.00	0.00	0.00
17,800.0	90.00	359.93	10,765.0	7,180.4	315.3	7,180.0	0.00	0.00	0.00
17,900.0	90.00	359.93	10,765.0	7,280.4	315.2	7,280.0	0.00	0.00	0.00
18,000.0	90.00	359.93	10,765.0	7,380.4	315.0	7,380.0	0.00	0.00	0.00
18,100.0	90.00	359.93	10,765.0	7,480.4	314.9	7,480.0	0.00	0.00	0.00
18,200.0	90.00	359.93	10,765.0	7,580.4	314.8	7,580.0	0.00	0.00	0.00
18,300.0	90.00	359.93	10,765.0	7,680.4	314.7	7,680.0	0.00	0.00	0.00
18,400.0	90.00	359.93	10,765.0	7,780.4	314.6	7,780.0	0.00	0.00	0.00
18,500.0	90.00	359.93	10,765.0	7,880.4	314.5	7,880.0	0.00	0.00	0.00
18,600.0	90.00	359.93	10,765.0	7,980.4	314.3	7,980.0	0.00	0.00	0.00
18,700.0	90.00	359.93	10,765.0	8,080.4	314.2	8,080.0	0.00	0.00	0.00
18,800.0	90.00	359.93	10,765.0	8,180.4	314.1	8,180.0	0.00	0.00	0.00
18,900.0	90.00	359.93	10,765.0	8,280.4	314.0	8,280.0	0.00	0.00	0.00
19,000.0	90.00	359.93	10,765.0	8,380.4	313.9	8,380.0	0.00	0.00	0.00
19,100.0	90.00	359.93	10,765.0	8,480.4	313.8	8,480.0	0.00	0.00	0.00
19,200.0	90.00	359.93	10,765.0	8,580.4	313.6	8,580.0	0.00	0.00	0.00
19,300.0	90.00	359.93	10,765.0	8,680.4	313.5	8,680.0	0.00	0.00	0.00
19,400.0	90.00	359.93	10,765.0	8,780.4	313.4	8,780.0	0.00	0.00	0.00
19,500.0	90.00	359.93	10,765.0	8,880.4	313.3	8,880.0	0.00	0.00	0.00
19,600.0	90.00	359.93	10,765.0	8,980.4	313.2	8,980.0	0.00	0.00	0.00
19,700.0	90.00	359.93	10,765.0	9,080.4	313.1	9,080.0	0.00	0.00	0.00
19,800.0	90.00	359.93	10,765.0	9,180.4	312.9	9,180.0	0.00	0.00	0.00
19,900.0	90.00	359.93	10,765.0	9,280.4	312.8	9,280.0	0.00	0.00	0.00
20,000.0	90.00	359.93	10,765.0	9,380.4	312.7	9,380.0	0.00	0.00	0.00
20,100.0	90.00	359.93	10,765.0	9,480.4	312.6	9,480.0	0.00	0.00	0.00
20,200.0	90.00	359.93	10,765.0	9,580.4	312.5	9,580.0	0.00	0.00	0.00
20,300.0	90.00	359.93	10,765.0	9,680.4	312.4	9,680.0	0.00	0.00	0.00
20,400.0	90.00	359.93	10,765.0	9,780.4	312.2	9,780.0	0.00	0.00	0.00
20,500.0	90.00	359.93	10,765.0	9,880.4	312.1	9,880.0	0.00	0.00	0.00
20,600.0	90.00	359.93	10,765.0	9,980.4	312.0	9,980.0	0.00	0.00	0.00
20,700.0	90.00	359.93	10,765.0	10,080.4	311.9	10,080.0	0.00	0.00	0.00
20,800.0	90.00	359.93	10,765.0	10,180.4	311.8	10,180.0	0.00	0.00	0.00
20,900.0	90.00	359.93	10,765.0	10,280.4	311.7	10,280.0	0.00	0.00	0.00
20,938.1	90.00	359.93	10,765.0	10,318.6	311.6	10,318.2	0.00	0.00	0.00
BHL - Ray State Com #223H									

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Ray State Com #223H
Company:	Matador Production Company	TVD Reference:	KB @ 2989.5usft
Project:	Rustler Breaks	MD Reference:	KB @ 2989.5usft
Site:	Ray State	North Reference:	Grid
Well:	Ray State Com #223H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	State Plan #1		

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
VP - Ray State Com # - plan hits target center - Point	0.00	0.00	10,192.0	-78.9	197.7	456,364.00	590,789.00	32° 15' 15.553 N	104° 2' 22.731 W
BHL - Ray State Com - plan hits target center - Point	0.00	0.00	10,765.0	10,318.6	311.6	466,762.60	590,902.96	32° 16' 58.456 N	104° 2' 21.072 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
21.0	21.0	Rustler			
425.0	425.0	Top Salt			
2,675.0	2,675.0	Lamar (Base Salt)			
6,400.7	6,392.2	BSGL			
7,406.1	7,393.4	FBSG			
7,623.4	7,610.7	SBSC			
8,157.7	8,144.9	SBSG			
8,427.5	8,414.8	SBSG Target (120 Series)			
8,527.5	8,514.8	TBSC			
9,267.8	9,255.0	TBSG			
9,627.7	9,615.0	WFMP			
9,727.7	9,715.0	Y Sand Top (200 Series)			
9,977.7	9,965.0	WFMP A Fat			
10,046.1	10,033.4	WFMP B			
11,104.7	10,765.0	BLAIR Shale (220 Series)			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,000.0	5,000.0	0.0	0.0	Start Build 1.00
5,800.0	5,797.4	-20.7	51.8	Start 1776.8 hold at 5800.0 MD
7,576.8	7,564.1	-78.9	197.7	Start Drop -1.50
8,110.1	8,097.4	-78.9	197.7	Start 2103.5 hold at 8110.1 MD
10,213.6	10,200.9	-78.8	197.7	Start Build 10.00
11,113.6	10,765.0	495.8	288.7	Start DLS 2.00 TFO 90.00
11,485.1	10,765.0	865.5	321.7	Start 9459.0 hold at 11485.1 MD
20,944.1				TD at 20944.1