

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 342022

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
4. Property Code 333258		3. API Number 30-025-51606
5. Property Name MARLAN DOWNEY STATE COM		6. Well No. 123H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
I	4	23S	35E	I	2376	S	1083	E	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
O	16	23S	35E	O	110	S	1980	E	Lea

9. Pool Information

ROCK LAKE;BONE SPRING, SOUTH	52769
WC-025 G-06 S233516M;MIDDLE BONE SP	98246

Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3542
16. Multiple Y	17. Proposed Depth 23203	18. Formation 2nd Bone Spring Sand	19. Contractor	20. Spud Date 9/2/2023
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	2000	1340	0
Int1	9.875	7.625	29.7	9750	1470	0
Prod	6.75	5.5	23	23203	990	9550

Casing/Cement Program: Additional Comments

Option for DV Tool/Packer

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 <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable. Signature:	OIL CONSERVATION DIVISION
Printed Name: Electronically filed by Brett A Jennings	Approved By: Paul F Kautz
Title: Regulatory Analyst	Title: Geologist
Email Address: brett.jennings@matadorresources.com	Approved Date: 6/14/2023 Expiration Date: 6/14/2025
Date: 6/13/2023 Phone: 972-629-2160	Conditions of Approval Attached

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

FORM C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-	² Pool Code 52769	³ Pool Name Rock Lake; Bone Spring, South
⁴ Property Code 333258	⁵ Property Name MARLAN DOWNEY STATE COM	
⁶ Well Number 123H	⁷ Operator Name MATADOR PRODUCTION COMPANY	
⁸ OGRID No. 228937-7877	⁹ Elevation 3542'	

¹⁰Surface Location

UL or lot no. I	Section 4	Township 23-S	Range 35-E	Lot Idn -	Feet from the 2376'	North/South line SOUTH	Feet from the 1083'	East/West line EAST	County LEA
---------------------------	---------------------	-------------------------	----------------------	---------------------	-------------------------------	----------------------------------	-------------------------------	-------------------------------	----------------------

¹¹Bottom Hole Location If Different From Surface

UL or lot no. 0	Section 16	Township 23-S	Range 35-E	Lot Idn -	Feet from the 110'	North/South line SOUTH	Feet from the 1980'	East/West line EAST	County LEA
---------------------------	----------------------	-------------------------	----------------------	---------------------	------------------------------	----------------------------------	-------------------------------	-------------------------------	----------------------

¹² Dedicated Acres 240	¹³ Joint or Infill	¹⁴ Consolidation Code C	¹⁵ Order No.
---	-------------------------------	--	-------------------------

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

	<p>NEW MEXICO EAST NAD 1983</p> <p><u>SURFACE LOCATION (SHL)</u></p> <p>2376' FSL - SEC. 4 1083' FEL - SEC. 4 X=839655 Y=486201 LAT.: N 32.3329427 LONG.: W 103.3674945</p> <p><u>KICK OFF POINT (KOP)</u></p> <p>2590' FSL - SEC. 4 1980' FEL - SEC. 4 X=838757 Y=486406 LAT.: N 32.3335280 LONG.: W 103.3703976</p> <p><u>FIRST PERF. POINT (FPP)</u></p> <p>2540' FSL - SEC. 4 1980' FEL - SEC. 4 X=838757 Y=486356 LAT.: N 32.3333906 LONG.: W 103.3703977</p> <p><u>LAST PERF. POINT/BOTTOM HOLE LOCATION (LPP/BHL)</u></p> <p>110' FSL - SEC. 16 1980' FEL - SEC. 16 X=838863 Y=473365 LAT.: N 32.2976823 LONG.: W 103.3704326</p>	<p>¹⁷OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>D.W.D.</i> 05/30/23 Signature Date David W. Johns Printed Name djohns@matadorresources.com E-mail Address</p> <p>¹⁸SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief.</p> <p>05/20/2023 Date of Survey Signature and Seal of Professional Surveyor</p> <p>ANGEL M. BAEZA NEW MEXICO PROFESSIONAL SURVEYOR 28416</p> <p>Certificate Number</p> <p>NEW MEXICO EAST NAD 1927</p> <p><u>SURFACE LOCATION (SHL)</u> X=839655 Y=486201 LAT.: N 32.3329427 LONG.: W 103.3674945</p> <p><u>KICK OFF POINT (KOP)</u> X=838757 Y=486406 LAT.: N 32.3335280 LONG.: W 103.3703976</p> <p><u>FIRST PERF. POINT (FPP)</u> X=838757 Y=486356 LAT.: N 32.3333906 LONG.: W 103.3703977</p> <p><u>LAST PERF. POINT/BOTTOM HOLE LOCATION (LPP/BHL)</u> X=838863 Y=473365 LAT.: N 32.2976823 LONG.: W 103.3704326</p>
--	--	--

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

FORM C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-	² Pool Code 98246	³ Pool Name WC-025 G-06 S233516M; Mid Bone Springs
⁴ Property Code 333258	⁵ Property Name MARLAN DOWNEY STATE COM	
⁶ GRID No. 228 937-7877	⁸ Operator Name MATADOR PRODUCTION COMPANY	⁷ Well Number 123H
		⁹ Elevation 3542'

¹⁰Surface Location

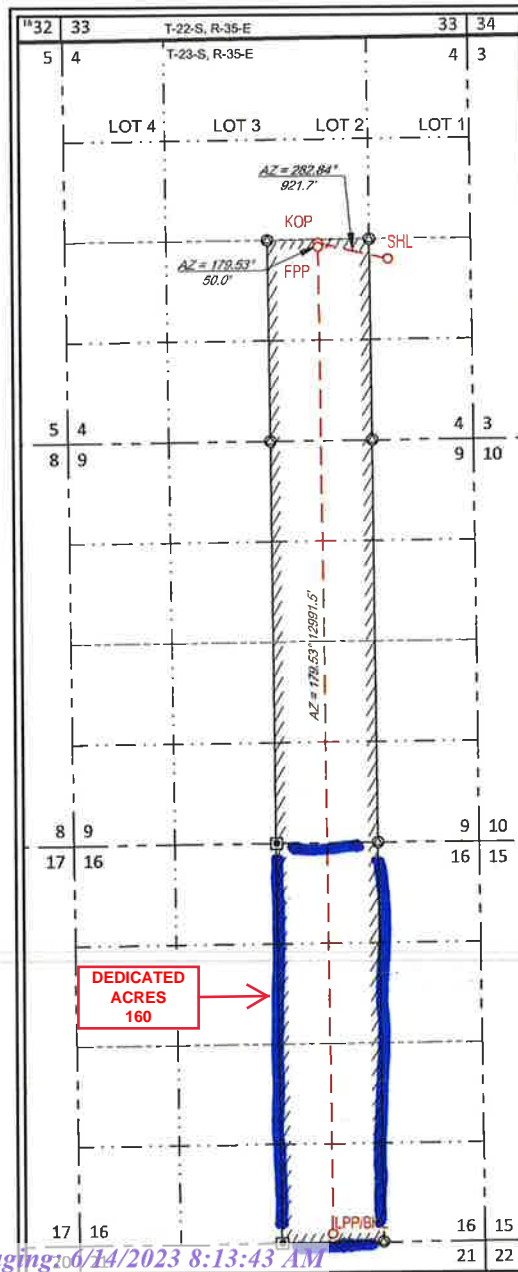
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	4	23-S	35-E	-	2376'	SOUTH	1083'	EAST	LEA

¹¹Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	16	23-S	35-E	-	110'	SOUTH	1980'	EAST	LEA

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code C	¹⁵ Order No.
--------------------------------------	-------------------------------	---------------------------------------	-------------------------

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



NEW MEXICO EAST
NAD 1983

SURFACE LOCATION (SHL)

2376' FSL - SEC. 4
1083' FEL - SEC. 4
X=839655 Y=486201
LAT.: N 32.3329427
LONG.: W 103.3674945

KICK OFF POINT (KOP)

2590' FSL - SEC. 4
1980' FEL - SEC. 4
X=838757 Y=486406
LAT.: N 32.3335280
LONG.: W 103.3703976

FIRST PERF. POINT (FPP)

2540' FSL - SEC. 4
1980' FEL - SEC. 4
X=838757 Y=486356
LAT.: N 32.3333906
LONG.: W 103.3703977

LAST PERF. POINT/BOTTOM HOLE

LOCATION (LPP/BHL)

110' FSL - SEC. 16
1980' FEL - SEC. 16
X=838863 Y=473365
LAT.: N 32.2976823
LONG.: W 103.3704326

¹⁷OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *D.W.J.* Date: 05/30/23

Printed Name: David W. Johns

E-mail Address: djohns@matadorresources.com

¹⁸SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief.

05/20/2023

Date of Survey
Signature and Seal of Professional Surveyor



Certificate Number

NEW MEXICO EAST
NAD 1927

SURFACE LOCATION (SHL)

X=798471 Y=483141
LAT.: N 32.3329178
LONG.: W 103.3670007

KICK OFF POINT (KOP)

X=797572 Y=486346
LAT.: N 32.3340229
LONG.: W 103.3660237

FIRST PERF. POINT (FPP)

X=797572 Y=486206
LAT.: N 32.3332585
LONG.: W 103.3699238

BOTTOM HOLE LOCATION (BHL)

X=797673 Y=473305
LAT.: N 32.2976870
LONG.: W 103.3699595

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 APD Conditions

Permit 342022

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: MATADOR PRODUCTION COMPANY [228937] One Lincoln Centre Dallas, TX 75240	API Number: 30-025-51606
	Well: MARLAN DOWNEY STATE COM #123H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud

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

Submit Electronically
Via E-permitting

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: Matador Production Company **OGRID:** 228937 **Date:** 8-31-22

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Marlan Downey State Com #121H	TBD	UL-K Sec 4 T23S R35E	2,316' FSL 1,566' FWL	1,000	2,000	4,000
Marlan Downey State Com #122H	TBD	UL-K Sec 4 T23S R35E	2,316' FSL 1,596' FWL	1,000	2,000	4,000
Marlan Downey State Com #123H	TBD	UL-I Sec 4 T23S R35E	2,406' FSL 1,063' FEL	1,000	2,000	4,000
Marlan Downey State Com #124H	TBD	UL-I Sec 4 T23S R35E	2,406' FSL 1,093' FEL	1,000	2,000	4,000

IV. Central Delivery Point Name: Marlan East TB [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Marlan Downey State Com #121H	TBD	9/14/2022	10/20/2022	12/20/2022	1/25/2023	1/25/2023
Marlan Downey State Com #122H	TBD	10/20/2022	11/5/2022	12/20/2022	1/25/2023	1/25/2023
Marlan Downey State Com #123H	TBD	11/5/2022	11/25/2022	12/20/2022	1/25/2023	1/25/2023
Marlan Downey State Com #124H	TBD	11/25/2022	12/10/2022	12/20/2022	1/25/2023	1/25/2023

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications**Effective May 25, 2021**

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: 
Printed Name: Ryan Hernandez
Title: Production Engineer
E-mail Address: rhernandez@matadorresources.com
Date: 8-31-22
Phone: (972) 619-1276
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

Addendum to Natural Gas Management Plan for Matador's
Marlan Downey State Com 123H, 124H

VI. Separation Equipment

Flow from the wells will be routed via a flowline to a 48"x15' three phase separator dedicated to the well. The first stage separators are sized with input from BRE ProMax and API 12J. Anticipated production rates can be seen in the below table. Liquid retention times at expected maximum rates will be >3 minutes. Gas will be routed from the first stage separator to sales. Hydrocarbon liquids are dumped from the first stage separator and commingled to one or more heater treaters. The flash gas from the heater treater(s) could either be sent to sales or routed to a compressor if the sales line pressure is higher than the MAWP of the heater treater (125 psi). From the heater treaters, hydrocarbon liquid will be routed to the tanks where vapor is compressed by a VRU if technically feasible to either sales or a compressor if the sales line pressure is higher than the VRU's maximum discharge pressure (~150 psi). Therefore, Matador has sized our separation equipment to optimize gas capture and our separation equipment is of sufficient size to handle the expected volumes of gas.

Well Name	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Marlan Downey State Com #123H	1,000	2,000	4,000
Marlan Downey State Com #124H	1,000	2,000	4,000

VII. Operation Practices

Although not a complete recitation of all our efforts to comply with a subsection A through F of 19.15.27.8 NMAC, a summary is as follows. During drilling, Matador will have a properly sized flare stack at least 100 feet from the nearest surface hole. During initial flowback we will route the flowback fluids into completion or storage tanks and, to the extent possible, flare rather than vent any gas. We will commence operation of a separator as soon as technically feasible, and have instructed our team that we want to connect the gas to sales as soon as possible but not later than 30 days after initial flowback.

Regarding production operations, we have designed our production facilities to be compliant with the requirements of Part E of 19.15.27.8 NMAC. We will instruct our team to perform the AVOs on the frequency required under the rules. While the well is producing, we will take steps to minimize flaring during maintenance, as set forth below, and we have a process in place for the measuring of any flared gas and the reporting of any reportable flaring events.

VII. Best Management Practices

Steps are taken to minimize venting during active or planned maintenance when technically feasible including:

- Isolating the affected component and reducing pressure through process piping
- Blowing down the equipment being maintained to a control device
- Performing preventative maintenance and minimizing the duration of maintenance activities
- Shutting in sources of supply as possible
- Other steps that are available depending on the maintenance being performed

Matador Production Company

Antelope Ridge

Marlan Downey State

Marlan Downey State Com #123H

Wellbore #1

Plan: State Plan #1

Standard Planning Report

25 May, 2023

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Marlan Downey State Com #123H
Company:	Matador Production Company	TVD Reference:	KB @ 3573.5usft
Project:	Antelope Ridge	MD Reference:	KB @ 3573.5usft
Site:	Marlan Downey State	North Reference:	Grid
Well:	Marlan Downey State Com #123H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	State Plan #1		

Project	Antelope Ridge		
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		Marlan Downey State				
Site Position:		Northing:	486,142.35 usft	Latitude:	32° 19' 58.144 N	
From:	Lat/Long	Easting:	798,580.83 usft	Longitude:	103° 21' 59.993 W	
Position Uncertainty:		0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.52 °

Well	Marlan Downey State Com #123H					
Well Position	+N/-S	-1.0 usft	Northing:	486,141.32 usft	Latitude:	32° 19' 58.144 N
	+E/-W	-109.9 usft	Easting:	798,470.94 usft	Longitude:	103° 22' 1.273 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,545.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/25/2023	6.21	60.11	47,411.06290181

Design	State Plan #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.53

Plan Survey Tool Program		Date	5/25/2023		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	23,202.7	State Plan #1 (Wellbore #1)	MWD	
			OWSG MWD - Standard		

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Marlan Downey State Com #123H
Company:	Matador Production Company	TVD Reference:	KB @ 3573.5usft
Project:	Antelope Ridge	MD Reference:	KB @ 3573.5usft
Site:	Marlan Downey State	North Reference:	Grid
Well:	Marlan Downey State Com #123H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	State Plan #1		

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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	10.00	272.58	1,994.9	3.9	-87.0	1.00	1.00	0.00	272.58	
4,615.2	10.00	272.58	4,570.4	24.4	-540.6	0.00	0.00	0.00	0.00	
5,281.9	0.00	0.00	5,233.7	27.0	-598.6	1.50	-1.50	0.00	180.00	
5,348.2	0.00	0.00	5,300.0	27.0	-598.6	0.00	0.00	0.00	0.00	
5,839.0	4.91	300.66	5,790.2	37.7	-616.7	1.00	1.00	0.00	300.66	
9,507.4	4.91	300.66	9,445.2	197.8	-886.7	0.00	0.00	0.00	0.00	
9,834.6	0.00	0.00	9,772.0	204.9	-898.7	1.50	-1.50	0.00	180.00	VP - Marlan Downey
10,734.6	90.00	179.53	10,345.0	-368.0	-894.0	10.00	10.00	0.00	179.53	
10,734.8	90.00	179.53	10,345.0	-368.2	-894.0	0.00	0.00	0.00	0.00	
23,202.7	90.00	179.53	10,345.0	-12,835.7	-792.5	0.00	0.00	0.00	0.00	BHL - Marlan Downey

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Marlan Downey State Com #123H
Company:	Matador Production Company	TVD Reference:	KB @ 3573.5usft
Project:	Antelope Ridge	MD Reference:	KB @ 3573.5usft
Site:	Marlan Downey State	North Reference:	Grid
Well:	Marlan Downey State Com #123H	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
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
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
Start Build 1.00									
1,100.0	1.00	272.58	1,100.0	0.0	-0.9	0.0	1.00	1.00	0.00
1,200.0	2.00	272.58	1,200.0	0.2	-3.5	-0.2	1.00	1.00	0.00
1,300.0	3.00	272.58	1,299.9	0.4	-7.8	-0.4	1.00	1.00	0.00
1,400.0	4.00	272.58	1,399.7	0.6	-13.9	-0.7	1.00	1.00	0.00
1,500.0	5.00	272.58	1,499.4	1.0	-21.8	-1.2	1.00	1.00	0.00
1,600.0	6.00	272.58	1,598.9	1.4	-31.4	-1.7	1.00	1.00	0.00
1,700.0	7.00	272.58	1,698.3	1.9	-42.7	-2.3	1.00	1.00	0.00
1,800.0	8.00	272.58	1,797.4	2.5	-55.7	-3.0	1.00	1.00	0.00
1,900.0	9.00	272.58	1,896.3	3.2	-70.5	-3.8	1.00	1.00	0.00
1,989.9	9.90	272.58	1,985.0	3.8	-85.2	-4.5	1.00	1.00	0.00
Rustler									
2,000.0	10.00	272.58	1,994.9	3.9	-87.0	-4.6	1.00	1.00	0.00
Start 2615.2 hold at 2000.0 MD									
2,100.0	10.00	272.58	2,093.4	4.7	-104.3	-5.6	0.00	0.00	0.00
2,200.0	10.00	272.58	2,191.9	5.5	-121.7	-6.5	0.00	0.00	0.00
2,300.0	10.00	272.58	2,290.4	6.3	-139.0	-7.4	0.00	0.00	0.00
2,400.0	10.00	272.58	2,388.9	7.1	-156.3	-8.3	0.00	0.00	0.00
2,500.0	10.00	272.58	2,487.3	7.8	-173.7	-9.3	0.00	0.00	0.00
2,555.5	10.00	272.58	2,542.0	8.3	-183.3	-9.8	0.00	0.00	0.00
Salado (TOP SALT)									
2,600.0	10.00	272.58	2,585.8	8.6	-191.0	-10.2	0.00	0.00	0.00
2,700.0	10.00	272.58	2,684.3	9.4	-208.4	-11.1	0.00	0.00	0.00
2,800.0	10.00	272.58	2,782.8	10.2	-225.7	-12.0	0.00	0.00	0.00
2,900.0	10.00	272.58	2,881.3	11.0	-243.1	-13.0	0.00	0.00	0.00
3,000.0	10.00	272.58	2,979.7	11.7	-260.4	-13.9	0.00	0.00	0.00
3,100.0	10.00	272.58	3,078.2	12.5	-277.8	-14.8	0.00	0.00	0.00
3,200.0	10.00	272.58	3,176.7	13.3	-295.1	-15.7	0.00	0.00	0.00
3,300.0	10.00	272.58	3,275.2	14.1	-312.5	-16.7	0.00	0.00	0.00
3,400.0	10.00	272.58	3,373.7	14.9	-329.8	-17.6	0.00	0.00	0.00
3,500.0	10.00	272.58	3,472.1	15.7	-347.2	-18.5	0.00	0.00	0.00
3,600.0	10.00	272.58	3,570.6	16.4	-364.5	-19.4	0.00	0.00	0.00
3,700.0	10.00	272.58	3,669.1	17.2	-381.9	-20.4	0.00	0.00	0.00
3,800.0	10.00	272.58	3,767.6	18.0	-399.2	-21.3	0.00	0.00	0.00
3,900.0	10.00	272.58	3,866.1	18.8	-416.6	-22.2	0.00	0.00	0.00
4,000.0	10.00	272.58	3,964.5	19.6	-433.9	-23.1	0.00	0.00	0.00
4,100.0	10.00	272.58	4,063.0	20.4	-451.2	-24.1	0.00	0.00	0.00
4,200.0	10.00	272.58	4,161.5	21.1	-468.6	-25.0	0.00	0.00	0.00
4,300.0	10.00	272.58	4,260.0	21.9	-485.9	-25.9	0.00	0.00	0.00
4,349.8	10.00	272.58	4,309.0	22.3	-494.6	-26.4	0.00	0.00	0.00
G30:CS14-CSB (BASE SALT)									
4,400.0	10.00	272.58	4,358.5	22.7	-503.3	-26.8	0.00	0.00	0.00
4,466.5	10.00	272.58	4,424.0	23.2	-514.8	-27.4	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Marlan Downey State Com #123H
Company:	Matador Production Company	TVD Reference:	KB @ 3573.5usft
Project:	Antelope Ridge	MD Reference:	KB @ 3573.5usft
Site:	Marlan Downey State	North Reference:	Grid
Well:	Marlan Downey State Com #123H	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)
YATES									
4,500.0	10.00	272.58	4,457.0	23.5	-520.6	-27.8	0.00	0.00	0.00
4,600.0	10.00	272.58	4,555.4	24.3	-538.0	-28.7	0.00	0.00	0.00
4,615.2	10.00	272.58	4,570.4	24.4	-540.6	-28.8	0.00	0.00	0.00
Start Drop -1.50									
4,700.0	8.73	272.58	4,654.1	25.0	-554.4	-29.6	1.50	-1.50	0.00
4,727.2	8.32	272.58	4,681.0	25.2	-558.4	-29.8	1.50	-1.50	0.00
CAPITAN									
4,800.0	7.23	272.58	4,753.1	25.6	-568.3	-30.3	1.50	-1.50	0.00
4,900.0	5.73	272.58	4,852.5	26.1	-579.5	-30.9	1.50	-1.50	0.00
5,000.0	4.23	272.58	4,952.1	26.5	-588.2	-31.4	1.50	-1.50	0.00
5,100.0	2.73	272.58	5,051.9	26.8	-594.3	-31.7	1.50	-1.50	0.00
5,200.0	1.23	272.58	5,151.8	27.0	-597.7	-31.9	1.50	-1.50	0.00
5,281.9	0.00	0.00	5,233.7	27.0	-598.6	-31.9	1.50	-1.50	0.00
Start 66.3 hold at 5281.9 MD									
5,300.0	0.00	0.00	5,251.8	27.0	-598.6	-31.9	0.00	0.00	0.00
5,348.2	0.00	0.00	5,300.0	27.0	-598.6	-31.9	0.00	0.00	0.00
Start Build 1.00									
5,400.0	0.52	300.66	5,351.8	27.1	-598.8	-32.0	1.00	1.00	0.00
5,500.0	1.52	300.66	5,451.8	28.0	-600.3	-32.9	1.00	1.00	0.00
5,600.0	2.52	300.66	5,551.7	29.8	-603.4	-34.8	1.00	1.00	0.00
5,700.0	3.52	300.66	5,651.6	32.5	-607.9	-37.5	1.00	1.00	0.00
5,800.0	4.52	300.66	5,751.4	36.1	-613.9	-41.1	1.00	1.00	0.00
5,839.0	4.91	300.66	5,790.2	37.7	-616.7	-42.8	1.00	1.00	0.00
Start 3668.5 hold at 5839.0 MD									
5,900.0	4.91	300.66	5,851.0	40.4	-621.2	-45.5	0.00	0.00	0.00
6,000.0	4.91	300.66	5,950.6	44.7	-628.5	-49.9	0.00	0.00	0.00
6,072.6	4.91	300.66	6,023.0	47.9	-633.9	-53.1	0.00	0.00	0.00
G26: Bell Cyn.									
6,100.0	4.91	300.66	6,050.3	49.1	-635.9	-54.3	0.00	0.00	0.00
6,200.0	4.91	300.66	6,149.9	53.5	-643.2	-58.7	0.00	0.00	0.00
6,300.0	4.91	300.66	6,249.5	57.8	-650.6	-63.2	0.00	0.00	0.00
6,373.7	4.91	300.66	6,323.0	61.0	-656.0	-66.4	0.00	0.00	0.00
G13: Cherry Cyn.									
6,400.0	4.91	300.66	6,349.2	62.2	-658.0	-67.6	0.00	0.00	0.00
6,500.0	4.91	300.66	6,448.8	66.5	-665.3	-72.0	0.00	0.00	0.00
6,600.0	4.91	300.66	6,548.4	70.9	-672.7	-76.4	0.00	0.00	0.00
6,700.0	4.91	300.66	6,648.1	75.3	-680.0	-80.9	0.00	0.00	0.00
6,800.0	4.91	300.66	6,747.7	79.6	-687.4	-85.3	0.00	0.00	0.00
6,900.0	4.91	300.66	6,847.3	84.0	-694.8	-89.7	0.00	0.00	0.00
7,000.0	4.91	300.66	6,947.0	88.4	-702.1	-94.1	0.00	0.00	0.00
7,100.0	4.91	300.66	7,046.6	92.7	-709.5	-98.5	0.00	0.00	0.00
7,200.0	4.91	300.66	7,146.2	97.1	-716.8	-103.0	0.00	0.00	0.00
7,300.0	4.91	300.66	7,245.9	101.5	-724.2	-107.4	0.00	0.00	0.00
7,400.0	4.91	300.66	7,345.5	105.8	-731.6	-111.8	0.00	0.00	0.00
7,500.0	4.91	300.66	7,445.1	110.2	-738.9	-116.2	0.00	0.00	0.00
7,547.0	4.91	300.66	7,492.0	112.2	-742.4	-118.3	0.00	0.00	0.00
G7: Brushy Cyn.									
7,600.0	4.91	300.66	7,544.8	114.5	-746.3	-120.7	0.00	0.00	0.00
7,700.0	4.91	300.66	7,644.4	118.9	-753.6	-125.1	0.00	0.00	0.00
7,800.0	4.91	300.66	7,744.0	123.3	-761.0	-129.5	0.00	0.00	0.00
7,900.0	4.91	300.66	7,843.7	127.6	-768.4	-133.9	0.00	0.00	0.00
8,000.0	4.91	300.66	7,943.3	132.0	-775.7	-138.3	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Marlan Downey State Com #123H
Company:	Matador Production Company	TVD Reference:	KB @ 3573.5usft
Project:	Antelope Ridge	MD Reference:	KB @ 3573.5usft
Site:	Marlan Downey State	North Reference:	Grid
Well:	Marlan Downey State Com #123H	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)
8,100.0	4.91	300.66	8,042.9	136.4	-783.1	-142.8	0.00	0.00	0.00
8,200.0	4.91	300.66	8,142.6	140.7	-790.4	-147.2	0.00	0.00	0.00
8,300.0	4.91	300.66	8,242.2	145.1	-797.8	-151.6	0.00	0.00	0.00
8,400.0	4.91	300.66	8,341.8	149.4	-805.2	-156.0	0.00	0.00	0.00
8,500.0	4.91	300.66	8,441.5	153.8	-812.5	-160.5	0.00	0.00	0.00
8,600.0	4.91	300.66	8,541.1	158.2	-819.9	-164.9	0.00	0.00	0.00
8,700.0	4.91	300.66	8,640.7	162.5	-827.2	-169.3	0.00	0.00	0.00
8,800.0	4.91	300.66	8,740.4	166.9	-834.6	-173.7	0.00	0.00	0.00
8,877.9	4.91	300.66	8,818.0	170.3	-840.3	-177.2	0.00	0.00	0.00
G4: BSGL (CS9)									
8,900.0	4.91	300.66	8,840.0	171.3	-842.0	-178.2	0.00	0.00	0.00
9,000.0	4.91	300.66	8,939.6	175.6	-849.3	-182.6	0.00	0.00	0.00
9,045.5	4.91	300.66	8,985.0	177.6	-852.7	-184.6	0.00	0.00	0.00
L8.2: U. Avalon Shale									
9,100.0	4.91	300.66	9,039.3	180.0	-856.7	-187.0	0.00	0.00	0.00
9,174.0	4.91	300.66	9,113.0	183.2	-862.1	-190.3	0.00	0.00	0.00
L6.3: Avalon Carb									
9,200.0	4.91	300.66	9,138.9	184.3	-864.0	-191.4	0.00	0.00	0.00
9,300.0	4.91	300.66	9,238.5	188.7	-871.4	-195.8	0.00	0.00	0.00
9,400.0	4.91	300.66	9,338.2	193.1	-878.8	-200.3	0.00	0.00	0.00
9,507.4	4.91	300.66	9,445.2	197.8	-886.7	-205.0	0.00	0.00	0.00
Start Drop -1.50									
9,600.0	3.52	300.66	9,537.5	201.2	-892.5	-208.5	1.50	-1.50	0.00
9,647.6	2.81	300.66	9,585.0	202.6	-894.8	-209.9	1.50	-1.50	0.00
L5.3: FBSC									
9,700.0	2.02	300.66	9,637.4	203.7	-896.7	-211.0	1.50	-1.50	0.00
9,800.0	0.52	300.66	9,737.4	204.8	-898.6	-212.2	1.50	-1.50	0.00
9,834.6	0.00	0.00	9,772.0	204.9	-898.7	-212.3	1.50	-1.50	0.00
Start Build 10.00 - VP - Marlan Downey State Com #123H									
9,850.0	1.54	179.53	9,787.4	204.7	-898.7	-212.1	10.00	10.00	0.00
9,867.6	3.30	179.53	9,805.0	203.9	-898.7	-211.3	10.00	10.00	0.00
L5.1: FBSC									
9,900.0	6.54	179.53	9,837.2	201.2	-898.7	-208.5	10.00	10.00	0.00
9,948.4	11.37	179.53	9,885.0	193.6	-898.6	-201.0	10.00	10.00	0.00
M. FBSC									
9,950.0	11.54	179.53	9,886.6	193.3	-898.6	-200.7	10.00	10.00	0.00
10,000.0	16.54	179.53	9,935.1	181.2	-898.5	-188.6	10.00	10.00	0.00
10,034.7	20.00	179.53	9,968.0	170.3	-898.4	-177.7	10.00	10.00	0.00
L. FBSC									
10,050.0	21.54	179.53	9,982.3	164.9	-898.4	-172.3	10.00	10.00	0.00
10,100.0	26.54	179.53	10,028.0	144.5	-898.2	-151.9	10.00	10.00	0.00
10,118.0	28.34	179.53	10,044.0	136.2	-898.1	-143.6	10.00	10.00	0.00
L4.3: SBSC									
10,150.0	31.54	179.53	10,071.7	120.3	-898.0	-127.6	10.00	10.00	0.00
10,200.0	36.54	179.53	10,113.1	92.3	-897.8	-99.7	10.00	10.00	0.00
10,250.0	41.54	179.53	10,151.9	60.8	-897.5	-68.2	10.00	10.00	0.00
10,300.0	46.54	179.53	10,187.9	26.1	-897.2	-33.4	10.00	10.00	0.00
10,350.0	51.54	179.53	10,220.6	-11.7	-896.9	4.3	10.00	10.00	0.00
10,400.0	56.54	179.53	10,250.0	-52.1	-896.6	44.8	10.00	10.00	0.00
10,450.0	61.54	179.53	10,275.7	-95.0	-896.2	87.6	10.00	10.00	0.00
10,500.0	66.54	179.53	10,297.6	-139.9	-895.9	132.6	10.00	10.00	0.00
10,550.0	71.54	179.53	10,315.5	-186.6	-895.5	179.2	10.00	10.00	0.00

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Marlan Downey State Com #123H
Company:	Matador Production Company	TVD Reference:	KB @ 3573.5usft
Project:	Antelope Ridge	MD Reference:	KB @ 3573.5usft
Site:	Marlan Downey State	North Reference:	Grid
Well:	Marlan Downey State Com #123H	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)
10,554.9	72.03	179.53	10,317.0	-191.3	-895.5	183.9	10.00	10.00	0.00
L4.1: SBSG									
10,600.0	76.54	179.53	10,329.2	-234.7	-895.1	227.3	10.00	10.00	0.00
10,650.0	81.54	179.53	10,338.7	-283.7	-894.7	276.4	10.00	10.00	0.00
10,700.0	86.54	179.53	10,343.9	-333.4	-894.3	326.1	10.00	10.00	0.00
10,734.6	90.00	179.53	10,345.0	-368.0	-894.0	360.7	10.00	10.00	0.00
10,734.8	90.00	179.53	10,345.0	-368.2	-894.0	360.9	0.00	0.00	0.00
Start 12467.8 hold at 10734.8 MD									
10,800.0	90.00	179.53	10,345.0	-433.4	-893.5	426.1	0.00	0.00	0.00
10,900.0	90.00	179.53	10,345.0	-533.4	-892.7	526.1	0.00	0.00	0.00
11,000.0	90.00	179.53	10,345.0	-633.4	-891.8	626.1	0.00	0.00	0.00
11,100.0	90.00	179.53	10,345.0	-733.4	-891.0	726.1	0.00	0.00	0.00
11,200.0	90.00	179.53	10,345.0	-833.4	-890.2	826.1	0.00	0.00	0.00
11,300.0	90.00	179.53	10,345.0	-933.4	-889.4	926.1	0.00	0.00	0.00
11,400.0	90.00	179.53	10,345.0	-1,033.4	-888.5	1,026.1	0.00	0.00	0.00
11,500.0	90.00	179.53	10,345.0	-1,133.4	-887.7	1,126.1	0.00	0.00	0.00
11,600.0	90.00	179.53	10,345.0	-1,233.4	-886.9	1,226.1	0.00	0.00	0.00
11,700.0	90.00	179.53	10,345.0	-1,333.4	-886.1	1,326.1	0.00	0.00	0.00
11,800.0	90.00	179.53	10,345.0	-1,433.4	-885.3	1,426.1	0.00	0.00	0.00
11,900.0	90.00	179.53	10,345.0	-1,533.4	-884.4	1,526.1	0.00	0.00	0.00
12,000.0	90.00	179.53	10,345.0	-1,633.4	-883.6	1,626.1	0.00	0.00	0.00
12,100.0	90.00	179.53	10,345.0	-1,733.4	-882.8	1,726.1	0.00	0.00	0.00
12,200.0	90.00	179.53	10,345.0	-1,833.4	-882.0	1,826.1	0.00	0.00	0.00
12,300.0	90.00	179.53	10,345.0	-1,933.4	-881.2	1,926.1	0.00	0.00	0.00
12,400.0	90.00	179.53	10,345.0	-2,033.4	-880.3	2,026.1	0.00	0.00	0.00
12,500.0	90.00	179.53	10,345.0	-2,133.4	-879.5	2,126.1	0.00	0.00	0.00
12,600.0	90.00	179.53	10,345.0	-2,233.4	-878.7	2,226.1	0.00	0.00	0.00
12,700.0	90.00	179.53	10,345.0	-2,333.3	-877.9	2,326.1	0.00	0.00	0.00
12,800.0	90.00	179.53	10,345.0	-2,433.3	-877.1	2,426.1	0.00	0.00	0.00
12,900.0	90.00	179.53	10,345.0	-2,533.3	-876.2	2,526.1	0.00	0.00	0.00
13,000.0	90.00	179.53	10,345.0	-2,633.3	-875.4	2,626.1	0.00	0.00	0.00
13,100.0	90.00	179.53	10,345.0	-2,733.3	-874.6	2,726.1	0.00	0.00	0.00
13,200.0	90.00	179.53	10,345.0	-2,833.3	-873.8	2,826.1	0.00	0.00	0.00
13,300.0	90.00	179.53	10,345.0	-2,933.3	-873.0	2,926.1	0.00	0.00	0.00
13,400.0	90.00	179.53	10,345.0	-3,033.3	-872.1	3,026.1	0.00	0.00	0.00
13,500.0	90.00	179.53	10,345.0	-3,133.3	-871.3	3,126.1	0.00	0.00	0.00
13,600.0	90.00	179.53	10,345.0	-3,233.3	-870.5	3,226.1	0.00	0.00	0.00
13,700.0	90.00	179.53	10,345.0	-3,333.3	-869.7	3,326.1	0.00	0.00	0.00
13,800.0	90.00	179.53	10,345.0	-3,433.3	-868.9	3,426.1	0.00	0.00	0.00
13,900.0	90.00	179.53	10,345.0	-3,533.3	-868.0	3,526.1	0.00	0.00	0.00
14,000.0	90.00	179.53	10,345.0	-3,633.3	-867.2	3,626.1	0.00	0.00	0.00
14,100.0	90.00	179.53	10,345.0	-3,733.3	-866.4	3,726.1	0.00	0.00	0.00
14,200.0	90.00	179.53	10,345.0	-3,833.3	-865.6	3,826.1	0.00	0.00	0.00
14,300.0	90.00	179.53	10,345.0	-3,933.3	-864.8	3,926.1	0.00	0.00	0.00
14,400.0	90.00	179.53	10,345.0	-4,033.3	-863.9	4,026.1	0.00	0.00	0.00
14,500.0	90.00	179.53	10,345.0	-4,133.3	-863.1	4,126.1	0.00	0.00	0.00
14,600.0	90.00	179.53	10,345.0	-4,233.3	-862.3	4,226.1	0.00	0.00	0.00
14,700.0	90.00	179.53	10,345.0	-4,333.3	-861.5	4,326.1	0.00	0.00	0.00
14,800.0	90.00	179.53	10,345.0	-4,433.3	-860.7	4,426.1	0.00	0.00	0.00
14,900.0	90.00	179.53	10,345.0	-4,533.3	-859.8	4,526.1	0.00	0.00	0.00
15,000.0	90.00	179.53	10,345.0	-4,633.3	-859.0	4,626.1	0.00	0.00	0.00
15,100.0	90.00	179.53	10,345.0	-4,733.3	-858.2	4,726.1	0.00	0.00	0.00
15,200.0	90.00	179.53	10,345.0	-4,833.3	-857.4	4,826.1	0.00	0.00	0.00
15,300.0	90.00	179.53	10,345.0	-4,933.3	-856.6	4,926.1	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Marlan Downey State Com #123H
Company:	Matador Production Company	TVD Reference:	KB @ 3573.5usft
Project:	Antelope Ridge	MD Reference:	KB @ 3573.5usft
Site:	Marlan Downey State	North Reference:	Grid
Well:	Marlan Downey State Com #123H	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)
15,400.0	90.00	179.53	10,345.0	-5,033.3	-855.7	5,026.1	0.00	0.00	0.00
15,500.0	90.00	179.53	10,345.0	-5,133.3	-854.9	5,126.1	0.00	0.00	0.00
15,600.0	90.00	179.53	10,345.0	-5,233.3	-854.1	5,226.1	0.00	0.00	0.00
15,700.0	90.00	179.53	10,345.0	-5,333.2	-853.3	5,326.1	0.00	0.00	0.00
15,800.0	90.00	179.53	10,345.0	-5,433.2	-852.5	5,426.1	0.00	0.00	0.00
15,900.0	90.00	179.53	10,345.0	-5,533.2	-851.6	5,526.1	0.00	0.00	0.00
16,000.0	90.00	179.53	10,345.0	-5,633.2	-850.8	5,626.1	0.00	0.00	0.00
16,100.0	90.00	179.53	10,345.0	-5,733.2	-850.0	5,726.1	0.00	0.00	0.00
16,200.0	90.00	179.53	10,345.0	-5,833.2	-849.2	5,826.1	0.00	0.00	0.00
16,300.0	90.00	179.53	10,345.0	-5,933.2	-848.4	5,926.1	0.00	0.00	0.00
16,400.0	90.00	179.53	10,345.0	-6,033.2	-847.5	6,026.1	0.00	0.00	0.00
16,500.0	90.00	179.53	10,345.0	-6,133.2	-846.7	6,126.1	0.00	0.00	0.00
16,600.0	90.00	179.53	10,345.0	-6,233.2	-845.9	6,226.1	0.00	0.00	0.00
16,700.0	90.00	179.53	10,345.0	-6,333.2	-845.1	6,326.1	0.00	0.00	0.00
16,800.0	90.00	179.53	10,345.0	-6,433.2	-844.3	6,426.1	0.00	0.00	0.00
16,900.0	90.00	179.53	10,345.0	-6,533.2	-843.4	6,526.1	0.00	0.00	0.00
17,000.0	90.00	179.53	10,345.0	-6,633.2	-842.6	6,626.1	0.00	0.00	0.00
17,100.0	90.00	179.53	10,345.0	-6,733.2	-841.8	6,726.1	0.00	0.00	0.00
17,200.0	90.00	179.53	10,345.0	-6,833.2	-841.0	6,826.1	0.00	0.00	0.00
17,300.0	90.00	179.53	10,345.0	-6,933.2	-840.2	6,926.1	0.00	0.00	0.00
17,400.0	90.00	179.53	10,345.0	-7,033.2	-839.3	7,026.1	0.00	0.00	0.00
17,500.0	90.00	179.53	10,345.0	-7,133.2	-838.5	7,126.1	0.00	0.00	0.00
17,600.0	90.00	179.53	10,345.0	-7,233.2	-837.7	7,226.1	0.00	0.00	0.00
17,700.0	90.00	179.53	10,345.0	-7,333.2	-836.9	7,326.1	0.00	0.00	0.00
17,800.0	90.00	179.53	10,345.0	-7,433.2	-836.0	7,426.1	0.00	0.00	0.00
17,900.0	90.00	179.53	10,345.0	-7,533.2	-835.2	7,526.1	0.00	0.00	0.00
18,000.0	90.00	179.53	10,345.0	-7,633.2	-834.4	7,626.1	0.00	0.00	0.00
18,100.0	90.00	179.53	10,345.0	-7,733.2	-833.6	7,726.1	0.00	0.00	0.00
18,200.0	90.00	179.53	10,345.0	-7,833.2	-832.8	7,826.1	0.00	0.00	0.00
18,300.0	90.00	179.53	10,345.0	-7,933.2	-831.9	7,926.1	0.00	0.00	0.00
18,400.0	90.00	179.53	10,345.0	-8,033.2	-831.1	8,026.1	0.00	0.00	0.00
18,500.0	90.00	179.53	10,345.0	-8,133.2	-830.3	8,126.1	0.00	0.00	0.00
18,600.0	90.00	179.53	10,345.0	-8,233.2	-829.5	8,226.1	0.00	0.00	0.00
18,700.0	90.00	179.53	10,345.0	-8,333.1	-828.7	8,326.1	0.00	0.00	0.00
18,800.0	90.00	179.53	10,345.0	-8,433.1	-827.8	8,426.1	0.00	0.00	0.00
18,900.0	90.00	179.53	10,345.0	-8,533.1	-827.0	8,526.1	0.00	0.00	0.00
19,000.0	90.00	179.53	10,345.0	-8,633.1	-826.2	8,626.1	0.00	0.00	0.00
19,100.0	90.00	179.53	10,345.0	-8,733.1	-825.4	8,726.1	0.00	0.00	0.00
19,200.0	90.00	179.53	10,345.0	-8,833.1	-824.6	8,826.1	0.00	0.00	0.00
19,300.0	90.00	179.53	10,345.0	-8,933.1	-823.7	8,926.1	0.00	0.00	0.00
19,400.0	90.00	179.53	10,345.0	-9,033.1	-822.9	9,026.1	0.00	0.00	0.00
19,500.0	90.00	179.53	10,345.0	-9,133.1	-822.1	9,126.1	0.00	0.00	0.00
19,600.0	90.00	179.53	10,345.0	-9,233.1	-821.3	9,226.1	0.00	0.00	0.00
19,700.0	90.00	179.53	10,345.0	-9,333.1	-820.5	9,326.1	0.00	0.00	0.00
19,800.0	90.00	179.53	10,345.0	-9,433.1	-819.6	9,426.1	0.00	0.00	0.00
19,900.0	90.00	179.53	10,345.0	-9,533.1	-818.8	9,526.1	0.00	0.00	0.00
20,000.0	90.00	179.53	10,345.0	-9,633.1	-818.0	9,626.1	0.00	0.00	0.00
20,100.0	90.00	179.53	10,345.0	-9,733.1	-817.2	9,726.1	0.00	0.00	0.00
20,200.0	90.00	179.53	10,345.0	-9,833.1	-816.4	9,826.1	0.00	0.00	0.00
20,300.0	90.00	179.53	10,345.0	-9,933.1	-815.5	9,926.1	0.00	0.00	0.00
20,400.0	90.00	179.53	10,345.0	-10,033.1	-814.7	10,026.1	0.00	0.00	0.00
20,500.0	90.00	179.53	10,345.0	-10,133.1	-813.9	10,126.1	0.00	0.00	0.00
20,600.0	90.00	179.53	10,345.0	-10,233.1	-813.1	10,226.1	0.00	0.00	0.00
20,700.0	90.00	179.53	10,345.0	-10,333.1	-812.3	10,326.1	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Marlan Downey State Com #123H
Company:	Matador Production Company	TVD Reference:	KB @ 3573.5usft
Project:	Antelope Ridge	MD Reference:	KB @ 3573.5usft
Site:	Marlan Downey State	North Reference:	Grid
Well:	Marlan Downey State Com #123H	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)	
20,800.0	90.00	179.53	10,345.0	-10,433.1	-811.4	10,426.1	0.00	0.00	0.00	
20,900.0	90.00	179.53	10,345.0	-10,533.1	-810.6	10,526.1	0.00	0.00	0.00	
21,000.0	90.00	179.53	10,345.0	-10,633.1	-809.8	10,626.1	0.00	0.00	0.00	
21,100.0	90.00	179.53	10,345.0	-10,733.1	-809.0	10,726.1	0.00	0.00	0.00	
21,200.0	90.00	179.53	10,345.0	-10,833.1	-808.2	10,826.1	0.00	0.00	0.00	
21,300.0	90.00	179.53	10,345.0	-10,933.1	-807.3	10,926.1	0.00	0.00	0.00	
21,400.0	90.00	179.53	10,345.0	-11,033.1	-806.5	11,026.1	0.00	0.00	0.00	
21,500.0	90.00	179.53	10,345.0	-11,133.1	-805.7	11,126.1	0.00	0.00	0.00	
21,600.0	90.00	179.53	10,345.0	-11,233.1	-804.9	11,226.1	0.00	0.00	0.00	
21,700.0	90.00	179.53	10,345.0	-11,333.0	-804.1	11,326.1	0.00	0.00	0.00	
21,800.0	90.00	179.53	10,345.0	-11,433.0	-803.2	11,426.1	0.00	0.00	0.00	
21,900.0	90.00	179.53	10,345.0	-11,533.0	-802.4	11,526.1	0.00	0.00	0.00	
22,000.0	90.00	179.53	10,345.0	-11,633.0	-801.6	11,626.1	0.00	0.00	0.00	
22,100.0	90.00	179.53	10,345.0	-11,733.0	-800.8	11,726.1	0.00	0.00	0.00	
22,200.0	90.00	179.53	10,345.0	-11,833.0	-800.0	11,826.1	0.00	0.00	0.00	
22,300.0	90.00	179.53	10,345.0	-11,933.0	-799.1	11,926.1	0.00	0.00	0.00	
22,400.0	90.00	179.53	10,345.0	-12,033.0	-798.3	12,026.1	0.00	0.00	0.00	
22,500.0	90.00	179.53	10,345.0	-12,133.0	-797.5	12,126.1	0.00	0.00	0.00	
22,600.0	90.00	179.53	10,345.0	-12,233.0	-796.7	12,226.1	0.00	0.00	0.00	
22,700.0	90.00	179.53	10,345.0	-12,333.0	-795.9	12,326.1	0.00	0.00	0.00	
22,800.0	90.00	179.53	10,345.0	-12,433.0	-795.0	12,426.1	0.00	0.00	0.00	
22,900.0	90.00	179.53	10,345.0	-12,533.0	-794.2	12,526.1	0.00	0.00	0.00	
23,000.0	90.00	179.53	10,345.0	-12,633.0	-793.4	12,626.1	0.00	0.00	0.00	
23,100.0	90.00	179.53	10,345.0	-12,733.0	-792.6	12,726.1	0.00	0.00	0.00	
23,202.7	90.00	179.53	10,345.0	-12,835.7	-792.5	12,828.7	0.00	0.00	0.00	
TD at 23202.7 - BHL - Marlan Downey State Com #123H										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
VP - Marlan Downey Sta - hit/miss target - Shape - Point	0.00	0.00	9,772.0	204.9	-898.7	486,346.19	797,572.33	32° 20' 0.251 N	103° 22' 11.724 W	
BHL - Marlan Downey Si - plan hits target center - Point	0.00	0.01	10,345.0	-12,835.7	-792.5	473,305.40	797,678.39	32° 17' 51.205 N	103° 22' 11.854 W	

Planning Report

Database:	EDM 5000.14 Server	Local Co-ordinate Reference:	Well Marlan Downey State Com #123H
Company:	Matador Production Company	TVD Reference:	KB @ 3573.5usft
Project:	Antelope Ridge	MD Reference:	KB @ 3573.5usft
Site:	Marlan Downey State	North Reference:	Grid
Well:	Marlan Downey State Com #123H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	State Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,989.9	1,985.0	Rustler			179.53	
2,555.5	2,542.0	Salado (TOP SALT)			179.53	
4,349.8	4,309.0	G30:CS14-CSB (BASE SALT)			179.53	
4,466.5	4,424.0	YATES			179.53	
4,727.2	4,681.0	CAPITAN			179.53	
6,072.6	6,023.0	G26: Bell Cyn.			179.53	
6,373.7	6,323.0	G13: Cherry Cyn.			179.53	
7,547.0	7,492.0	G7: Brushy Cyn.			179.53	
8,877.9	8,818.0	G4: BSG (CS9)			179.53	
9,045.5	8,985.0	L8.2: U. Avalon Shale			179.53	
9,174.0	9,113.0	L6.3: Avalon Carb			179.53	
9,647.6	9,585.0	L5.3: FBSC			179.53	
9,867.6	9,805.0	L5.1: FBSG			179.53	
9,948.4	9,885.0	M. FBSG			179.53	
10,034.7	9,968.0	L. FBSG			179.53	
10,118.0	10,044.0	L4.3: SBSC			179.53	
10,554.9	10,317.0	L4.1: SBSC			179.53	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,000.0	1,000.0	0.0	0.0	Start Build 1.00	
2,000.0	1,994.9	3.9	-87.0	Start 2615.2 hold at 2000.0 MD	
4,615.2	4,570.4	24.4	-540.6	Start Drop -1.50	
5,281.9	5,233.7	27.0	-598.6	Start 66.3 hold at 5281.9 MD	
5,348.2	5,300.0	27.0	-598.6	Start Build 1.00	
5,839.0	5,790.2	37.7	-616.7	Start 3668.5 hold at 5839.0 MD	
9,507.4	9,445.2	197.8	-886.7	Start Drop -1.50	
9,834.6	9,772.0	204.9	-898.7	Start Build 10.00	
10,734.8	10,345.0	-368.2	-894.0	Start 12467.8 hold at 10734.8 MD	
23,202.7	10,345.0	-12,835.7	-792.5	TD at 23202.7	