

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 341102

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 30-025-51640
4. Property Code 334167	5. Property Name BARBARA 29 17S 37E	6. Well No. 001

7. Surface Location

UL - Lot G	Section 29	Township 17S	Range 37E	Lot Idn G	Feet From 2160	N/S Line N	Feet From 1915	E/W Line E	County Lea
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8. Proposed Bottom Hole Location

UL - Lot G	Section 29	Township 17S	Range 37E	Lot Idn G	Feet From 1902	N/S Line N	Feet From 1874	E/W Line E	County Lea
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9. Pool Information

MIDWAY;STRAWN, SOUTH	96346
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type Private	15. Ground Level Elevation 3764
16. Multiple N	17. Proposed Depth 11218	18. Formation Atoka	19. Contractor	20. Spud Date 10/5/2023
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	14.75	9.625	36	2132	1700	0
Prod	8.75	5.5	17	11218	1810	0

Casing/Cement Program: Additional Comments

Optional DV/Packer placed at least 50' outside surface shoe

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 Brett A Jennings	Approved By:	Paul F Kautz			
Title:	Regulatory Analyst	Title:	Geologist			
Email Address:	brett.jennings@matadorresources.com		Approved Date:	6/22/2023	Expiration Date:	6/22/2025
Date:	6/21/2023	Phone:	972-629-2160		Conditions of Approval Attached	

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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) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 96346	Pool Name Midway; Strawn, South
Property Code	Property Name BARBARA 29-17S-37E	Well Number 1
OGRID No. 228937	Operator Name MATADOR PRODUCTION COMPANY	Elevation 3764.6'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	29	17-S	37-E		2160	NORTH	1915	EAST	LEA

Bottom 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
G	29	17-S	37-E		1902	NORTH	1874	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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>POINT LEGEND NAD 83</p> <table border="1"> <tr><td>1</td><td>Y=659849.9 N</td></tr> <tr><td></td><td>X=868899.0 E</td></tr> <tr><td>2</td><td>Y=659856.9 N</td></tr> <tr><td></td><td>X=868221.3 E</td></tr> <tr><td>3</td><td>Y=658535.0 N</td></tr> <tr><td></td><td>X=868232.7 E</td></tr> <tr><td>4</td><td>Y=658527.3 N</td></tr> <tr><td></td><td>X=866911.6 E</td></tr> </table>	1	Y=659849.9 N		X=868899.0 E	2	Y=659856.9 N		X=868221.3 E	3	Y=658535.0 N		X=868232.7 E	4	Y=658527.3 N		X=866911.6 E	<p>POINT LEGEND NAD 27</p> <table border="1"> <tr><td>1</td><td>Y=659787.1 N</td></tr> <tr><td></td><td>X=825719.9 E</td></tr> <tr><td>2</td><td>Y=659794.2 N</td></tr> <tr><td></td><td>X=827042.2 E</td></tr> <tr><td>3</td><td>Y=658472.4 N</td></tr> <tr><td></td><td>X=827053.6 E</td></tr> <tr><td>4</td><td>Y=658464.6 N</td></tr> <tr><td></td><td>X=825732.4 E</td></tr> </table>	1	Y=659787.1 N		X=825719.9 E	2	Y=659794.2 N		X=827042.2 E	3	Y=658472.4 N		X=827053.6 E	4	Y=658464.6 N		X=825732.4 E		<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Reece Clark</i> 6/20/23 Signature Date Printed Name reece.clark@matadorresources.com E-mail Address</p>
1	Y=659849.9 N																																		
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	X=825732.4 E																																		
<p>NAD 83 NME GRID AZ. - 08°22'19" HORZ. DIST. - 261.0' NAD 27 NME GRID AZ. - 08°22'26" HORZ. DIST. - 261.0'</p>	<p>NAD 83 NME SURFACE LOCATION Y=659014.7 N X=867643.6 E LAT.=32.807156° N LONG.=103.271309° W</p>	<p>NAD 27 NME SURFACE LOCATION Y=658952.0 N X=826464.4 E LAT.=32.807039° N LONG.=103.270818° W</p>	<p>SURVEYOR 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 and correct to the best of my belief.</p> <p>JUNE 7, 2023 Date of Survey</p> <p>Signature & Seal of Professional Surveyor</p> <p><i>Chad L. Harcrow</i> 6/12/23 Certificate No. CHAD HARCROW 17777 W.O. # 23-425 DRAWN BY: WN</p>																																
<p>NAD 83 NME PROPOSED BOTTOM HOLE LOCATION Y=659272.9 N X=867681.6 E LAT.=32.807865° N LONG.=103.271177° W</p>	<p>NAD 27 NME PROPOSED BOTTOM HOLE LOCATION Y=659210.2 N X=826502.4 E LAT.=32.807747° N LONG.=103.270686° W</p>																																		

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Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Conditions

Permit 341102

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: MATADOR PRODUCTION COMPANY [228937] One Lincoln Centre Dallas, TX 75240	API Number: 30-025-51640
	Well: BARBARA 29 17S 37E #001

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	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
pkautz	Cement is required to circulate on both surface and production strings of casing

Addendum to Natural Gas Management Plan for Matador's

Barbara 29-17S-37E #1

VI. Separation Equipment

Flow from the well will be routed via a flowline to a 48"x20' three phase heater treater dedicated to the well. The heater treater is sized with input from BRE ProMax and API 12J. Expected production from the Monika 14-17S-37E #1 well is approximately 600 mcf/d, 300 bopd, and 50 bwpd. Liquid retention times at expected maximum rates will be >3 minutes. Gas will be routed from the heater treater to sales. The 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 treater, hydrocarbon liquid and water 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.

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 the heater treater 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

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:** 6-7-23

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
Barbara 29-17S-37E #1	TBD	UL-G Sec 29 T17S R37E	2,060' FNL 1,914' FEL	300	600	50

IV. Central Delivery Point Name: Barbara 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
Tim Parker 18-16S-37E #1	TBD	10/15/2023	11/1/2023	12/1/2023	12/15/2023	12/15/2023

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

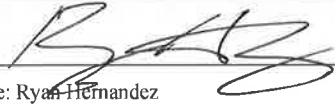
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(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: Senior Facilities Engineer
E-mail Address: rhernandez@matadorresources.com
Date: 6-7-23
Phone: (972) 371-5427
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

Matador Production Company

Twin Lakes

Barbara State #1

Barbara State #1

Well Bore

Plan: State Plan #2

Standard Planning Report

13 June, 2023

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Barbara State #1
Company:	Matador Production Company	TVD Reference:	KB @ 3793.6usft
Project:	Twin Lakes	MD Reference:	KB @ 3793.6usft
Site:	Barbara State #1	North Reference:	Grid
Well:	Barbara State #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Well Bore		
Design:	State Plan #2		

Project	Twin Lakes		
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		Barbara State #1			
Site Position:		Northing:	659,051.60 usft	Latitude:	32° 48' 26.326 N
From:	Map	Easting:	826,464.80 usft	Longitude:	103° 16' 14.928 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.58 °

Well		Barbara State #1				
Well Position	+N-S	-99.6 usft	Northing:	658,952.00 usft	Latitude:	32° 48' 25.340 N
	+E-W	-0.4 usft	Easting:	826,464.40 usft	Longitude:	103° 16' 14.945 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,765.1 usft

Wellbore	Well Bore				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/9/2023	6.21	60.55	47,699.70667132

Design	State Plan #2			
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	8.37

Plan Survey Tool Program	Date	6/13/2023		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	11,218.5	State Plan #2 (Well Bore)	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	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,500.0	2.00	8.37	2,500.0	3.5	0.5	1.00	1.00	0.00	8.37	
9,779.2	2.00	8.37	9,774.7	254.8	37.5	0.00	0.00	0.00	0.00	
9,979.2	0.00	0.00	9,974.7	258.2	38.0	1.00	-1.00	0.00	180.00	
10,218.5	0.00	0.00	10,214.0	258.2	38.0	0.00	0.00	0.00	0.00	VP - Barbara State
11,218.5	0.00	0.00	11,214.0	258.2	38.0	0.00	0.00	0.00	0.00	BHL - Barbara State

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Barbara State #1
Company:	Matador Production Company	TVD Reference:	KB @ 3793.6usft
Project:	Twin Lakes	MD Reference:	KB @ 3793.6usft
Site:	Barbara State #1	North Reference:	Grid
Well:	Barbara State #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Well Bore		
Design:	State Plan #2		

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
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
2,082.0	0.00	0.00	2,082.0	0.0	0.0	0.0	0.00	0.00	0.00
Rustler									
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	1.00	8.37	2,400.0	0.9	0.1	0.9	1.00	1.00	0.00
2,500.0	2.00	8.37	2,500.0	3.5	0.5	3.5	1.00	1.00	0.00
2,600.0	2.00	8.37	2,599.9	6.9	1.0	7.0	0.00	0.00	0.00
2,700.0	2.00	8.37	2,699.8	10.4	1.5	10.5	0.00	0.00	0.00
2,800.0	2.00	8.37	2,799.8	13.8	2.0	14.0	0.00	0.00	0.00
2,900.0	2.00	8.37	2,899.7	17.3	2.5	17.5	0.00	0.00	0.00
3,000.0	2.00	8.37	2,999.7	20.7	3.0	20.9	0.00	0.00	0.00
3,100.0	2.00	8.37	3,099.6	24.2	3.6	24.4	0.00	0.00	0.00
3,200.0	2.00	8.37	3,199.5	27.6	4.1	27.9	0.00	0.00	0.00
3,205.5	2.00	8.37	3,205.0	27.8	4.1	28.1	0.00	0.00	0.00
Base salt/Top Artesia group									
3,300.0	2.00	8.37	3,299.5	31.1	4.6	31.4	0.00	0.00	0.00
3,400.0	2.00	8.37	3,399.4	34.5	5.1	34.9	0.00	0.00	0.00
3,500.0	2.00	8.37	3,499.4	38.0	5.6	38.4	0.00	0.00	0.00
3,600.0	2.00	8.37	3,599.3	41.4	6.1	41.9	0.00	0.00	0.00
3,700.0	2.00	8.37	3,699.2	44.9	6.6	45.4	0.00	0.00	0.00
3,800.0	2.00	8.37	3,799.2	48.3	7.1	48.9	0.00	0.00	0.00
3,900.0	2.00	8.37	3,899.1	51.8	7.6	52.3	0.00	0.00	0.00
4,000.0	2.00	8.37	3,999.0	55.2	8.1	55.8	0.00	0.00	0.00
4,100.0	2.00	8.37	4,099.0	58.7	8.6	59.3	0.00	0.00	0.00
4,200.0	2.00	8.37	4,198.9	62.1	9.1	62.8	0.00	0.00	0.00
4,300.0	2.00	8.37	4,298.9	65.6	9.7	66.3	0.00	0.00	0.00
4,400.0	2.00	8.37	4,398.8	69.1	10.2	69.8	0.00	0.00	0.00
4,500.0	2.00	8.37	4,498.7	72.5	10.7	73.3	0.00	0.00	0.00
4,600.0	2.00	8.37	4,598.7	76.0	11.2	76.8	0.00	0.00	0.00
4,700.0	2.00	8.37	4,698.6	79.4	11.7	80.3	0.00	0.00	0.00
4,800.0	2.00	8.37	4,798.6	82.9	12.2	83.8	0.00	0.00	0.00

Planning Report

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Project:	Twin Lakes	MD Reference:	KB @ 3793.6usft
Site:	Barbara State #1	North Reference:	Grid
Well:	Barbara State #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Well Bore		
Design:	State Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,900.0	2.00	8.37	4,898.5	86.3	12.7	87.2	0.00	0.00	0.00
5,000.0	2.00	8.37	4,998.4	89.8	13.2	90.7	0.00	0.00	0.00
5,100.0	2.00	8.37	5,098.4	93.2	13.7	94.2	0.00	0.00	0.00
5,200.0	2.00	8.37	5,198.3	96.7	14.2	97.7	0.00	0.00	0.00
5,300.0	2.00	8.37	5,298.3	100.1	14.7	101.2	0.00	0.00	0.00
5,400.0	2.00	8.37	5,398.2	103.6	15.2	104.7	0.00	0.00	0.00
5,417.8	2.00	8.37	5,416.0	104.2	15.3	105.3	0.00	0.00	0.00
San Andres									
5,500.0	2.00	8.37	5,498.1	107.0	15.8	108.2	0.00	0.00	0.00
5,600.0	2.00	8.37	5,598.1	110.5	16.3	111.7	0.00	0.00	0.00
5,700.0	2.00	8.37	5,698.0	113.9	16.8	115.2	0.00	0.00	0.00
5,800.0	2.00	8.37	5,797.9	117.4	17.3	118.7	0.00	0.00	0.00
5,900.0	2.00	8.37	5,897.9	120.8	17.8	122.1	0.00	0.00	0.00
6,000.0	2.00	8.37	5,997.8	124.3	18.3	125.6	0.00	0.00	0.00
6,100.0	2.00	8.37	6,097.8	127.8	18.8	129.1	0.00	0.00	0.00
6,200.0	2.00	8.37	6,197.7	131.2	19.3	132.6	0.00	0.00	0.00
6,300.0	2.00	8.37	6,297.6	134.7	19.8	136.1	0.00	0.00	0.00
6,400.0	2.00	8.37	6,397.6	138.1	20.3	139.6	0.00	0.00	0.00
6,500.0	2.00	8.37	6,497.5	141.6	20.8	143.1	0.00	0.00	0.00
6,600.0	2.00	8.37	6,597.5	145.0	21.3	146.6	0.00	0.00	0.00
6,700.0	2.00	8.37	6,697.4	148.5	21.9	150.1	0.00	0.00	0.00
6,800.0	2.00	8.37	6,797.3	151.9	22.4	153.6	0.00	0.00	0.00
6,900.0	2.00	8.37	6,897.3	155.4	22.9	157.0	0.00	0.00	0.00
7,000.0	2.00	8.37	6,997.2	158.8	23.4	160.5	0.00	0.00	0.00
7,100.0	2.00	8.37	7,097.2	162.3	23.9	164.0	0.00	0.00	0.00
7,200.0	2.00	8.37	7,197.1	165.7	24.4	167.5	0.00	0.00	0.00
7,300.0	2.00	8.37	7,297.0	169.2	24.9	171.0	0.00	0.00	0.00
7,400.0	2.00	8.37	7,397.0	172.6	25.4	174.5	0.00	0.00	0.00
7,500.0	2.00	8.37	7,496.9	176.1	25.9	178.0	0.00	0.00	0.00
7,600.0	2.00	8.37	7,596.9	179.5	26.4	181.5	0.00	0.00	0.00
7,640.2	2.00	8.37	7,637.0	180.9	26.6	182.9	0.00	0.00	0.00
First Bone Spring									
7,700.0	2.00	8.37	7,696.8	183.0	26.9	185.0	0.00	0.00	0.00
7,800.0	2.00	8.37	7,796.7	186.4	27.4	188.5	0.00	0.00	0.00
7,900.0	2.00	8.37	7,896.7	189.9	27.9	191.9	0.00	0.00	0.00
8,000.0	2.00	8.37	7,996.6	193.4	28.5	195.4	0.00	0.00	0.00
8,100.0	2.00	8.37	8,096.5	196.8	29.0	198.9	0.00	0.00	0.00
8,200.0	2.00	8.37	8,196.5	200.3	29.5	202.4	0.00	0.00	0.00
8,300.0	2.00	8.37	8,296.4	203.7	30.0	205.9	0.00	0.00	0.00
8,400.0	2.00	8.37	8,396.4	207.2	30.5	209.4	0.00	0.00	0.00
8,400.6	2.00	8.37	8,397.0	207.2	30.5	209.4	0.00	0.00	0.00
Second Bone Spring									
8,500.0	2.00	8.37	8,496.3	210.6	31.0	212.9	0.00	0.00	0.00
8,600.0	2.00	8.37	8,596.2	214.1	31.5	216.4	0.00	0.00	0.00
8,700.0	2.00	8.37	8,696.2	217.5	32.0	219.9	0.00	0.00	0.00
8,800.0	2.00	8.37	8,796.1	221.0	32.5	223.4	0.00	0.00	0.00
8,900.0	2.00	8.37	8,896.1	224.4	33.0	226.8	0.00	0.00	0.00
9,000.0	2.00	8.37	8,996.0	227.9	33.5	230.3	0.00	0.00	0.00
9,100.0	2.00	8.37	9,095.9	231.3	34.0	233.8	0.00	0.00	0.00
9,200.0	2.00	8.37	9,195.9	234.8	34.6	237.3	0.00	0.00	0.00
9,211.1	2.00	8.37	9,207.0	235.2	34.6	237.7	0.00	0.00	0.00
Third Bone Carb									
9,300.0	2.00	8.37	9,295.8	238.2	35.1	240.8	0.00	0.00	0.00

Planning Report

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Site:	Barbara State #1	North Reference:	Grid
Well:	Barbara State #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Well Bore		
Design:	State Plan #2		

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)	
9,400.0	2.00	8.37	9,395.8	241.7	35.6	244.3	0.00	0.00	0.00	
9,500.0	2.00	8.37	9,495.7	245.1	36.1	247.8	0.00	0.00	0.00	
9,549.3	2.00	8.37	9,545.0	246.8	36.3	249.5	0.00	0.00	0.00	
Third Bone Spring										
9,600.0	2.00	8.37	9,595.6	248.6	36.6	251.3	0.00	0.00	0.00	
9,700.0	2.00	8.37	9,695.6	252.1	37.1	254.8	0.00	0.00	0.00	
9,759.5	2.00	8.37	9,755.0	254.1	37.4	256.8	0.00	0.00	0.00	
Wolfcamp A										
9,779.2	2.00	8.37	9,774.7	254.8	37.5	257.5	0.00	0.00	0.00	
9,800.0	1.79	8.37	9,795.5	255.5	37.6	258.2	1.00	-1.00	0.00	
9,900.0	0.79	8.37	9,895.5	257.7	37.9	260.5	1.00	-1.00	0.00	
9,979.2	0.00	0.00	9,974.7	258.2	38.0	261.0	1.00	-1.00	0.00	
10,000.0	0.00	0.00	9,995.5	258.2	38.0	261.0	0.00	0.00	0.00	
10,100.0	0.00	0.00	10,095.5	258.2	38.0	261.0	0.00	0.00	0.00	
10,200.0	0.00	0.00	10,195.5	258.2	38.0	261.0	0.00	0.00	0.00	
10,218.5	0.00	0.00	10,214.0	258.2	38.0	261.0	0.00	0.00	0.00	
10,300.0	0.00	0.00	10,295.5	258.2	38.0	261.0	0.00	0.00	0.00	
10,400.0	0.00	0.00	10,395.5	258.2	38.0	261.0	0.00	0.00	0.00	
10,500.0	0.00	0.00	10,495.5	258.2	38.0	261.0	0.00	0.00	0.00	
10,529.5	0.00	0.00	10,525.0	258.2	38.0	261.0	0.00	0.00	0.00	
Penn Shale										
10,600.0	0.00	0.00	10,595.5	258.2	38.0	261.0	0.00	0.00	0.00	
10,674.5	0.00	0.00	10,670.0	258.2	38.0	261.0	0.00	0.00	0.00	
Strawn										
10,700.0	0.00	0.00	10,695.5	258.2	38.0	261.0	0.00	0.00	0.00	
10,800.0	0.00	0.00	10,795.5	258.2	38.0	261.0	0.00	0.00	0.00	
10,900.0	0.00	0.00	10,895.5	258.2	38.0	261.0	0.00	0.00	0.00	
10,918.5	0.00	0.00	10,914.0	258.2	38.0	261.0	0.00	0.00	0.00	
Atoka										
11,000.0	0.00	0.00	10,995.5	258.2	38.0	261.0	0.00	0.00	0.00	
11,100.0	0.00	0.00	11,095.5	258.2	38.0	261.0	0.00	0.00	0.00	
11,200.0	0.00	0.00	11,195.5	258.2	38.0	261.0	0.00	0.00	0.00	
11,218.5	0.00	0.00	11,214.0	258.2	38.0	261.0	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
VP - Barbara State #1 - hit/miss target - Shape - Point	0.00	0.00	10,214.0	258.2	38.0	659,210.20	826,502.40	32° 48' 27.891 N	103° 16' 14.469 W	
BHL - Barbara State # - plan hits target center - Point	0.00	0.00	11,214.0	258.2	38.0	659,210.20	826,502.40	32° 48' 27.891 N	103° 16' 14.469 W	

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Site:	Barbara State #1	North Reference:	Grid
Well:	Barbara State #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Well Bore		
Design:	State Plan #2		

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	2,082.0	2,082.0	Rustler			
	3,205.5	3,205.0	Base salt/Top Artesia group			
	5,417.8	5,416.0	San Andres			
	7,640.2	7,637.0	First Bone Spring			
	8,400.6	8,397.0	Second Bone Spring			
	9,211.1	9,207.0	Third Bone Carb			
	9,549.3	9,545.0	Third Bone Spring			
	9,759.5	9,755.0	Wolfcamp A			
	10,529.5	10,525.0	Penn Shale			
	10,674.5	10,670.0	Strawn			
	10,918.5	10,914.0	Atoka			