

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 353294

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

1. Operator Name and Address Permian Resources Operating, LLC 1001 17th Street, Suite 1800 Denver, CO 80202		2. OGRID Number 372165
		3. API Number 30-025-52195
4. Property Code 334831	5. Property Name BUTTERS STOTCH 8 STATE COM	6. Well No. 124H

7. Surface Location

UL - Lot I	Section 8	Township 22S	Range 35E	Lot Idn I	Feet From 2452	N/S Line S	Feet From 1058	E/W Line E	County Lea
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8. Proposed Bottom Hole Location

UL - Lot P	Section 17	Township 22S	Range 35E	Lot Idn P	Feet From 100	N/S Line S	Feet From 990	E/W Line E	County Lea
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9. Pool Information

WC-025 G-07 S223505N;BONE SPRING	98136
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3573
16. Multiple N	17. Proposed Depth 17718	18. Formation 2nd Bone Spring Sand	19. Contractor	20. Spud Date 3/1/2024
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	1722	1300	0
Int1	12.25	9.625	40	5615	1480	0
Prod	8.75	5.5	20	10427	660	5115
Prod	7.875	5.5	20	17718	1060	9677

Casing/Cement Program: Additional Comments

Drilling 8.75 hole size for the curve and 7.875 hole size for the lateral for the 5.5 production casing string. Will use DV Tool on Intermediate cement, set at 3785.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
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 Kanicia Schlichting	Approved By: Paul F Kautz	
Title: Regulatory Specialist	Title: Geologist	
Email Address: Kanicia.Schlichting@permianres.com	Approved Date: 11/14/2023	Expiration Date: 11/14/2025
Date: 11/2/2023	Phone: 432-232-2875	Conditions of Approval Attached

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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	² Pool Code	³ Pool Name
	98136	WC-025 G-07 S223505N; Bone Spring
⁴ Property Code	⁵ Property Name	⁶ Well Number
	BUTTERS STOTCH 8 STATE COM	#124H
⁷ OGRID No.	⁸ Operator Name	⁹ Elevation
372165	PERMIAN RESOURCES OPERATING, LLC	3,573'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	8	22 S	35 E		2,452'	SOUTH	1,058'	EAST	LEA

¹¹ 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
P	17	22 S	35 E		100'	SOUTH	990'	EAST	LEA

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

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.

	¹⁷ OPERATOR 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. <i>K. Schlichting</i> 10/31/23 Signature Date Kanicia Schlichting 10/31/23 Printed Name Date kanicia.schlichting@permianres.com 10/31/23 Email Address Date															
	¹⁸ SURVEYOR 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 and correct to the best of my belief. Date: 9/12/2023 MARK J. MURRAY P.L.S. NO. 12177															
	SURFACE HOLE LOCATION & KICK-OFF POINT 2,452' FSL & 1,058' FEL NM EAST-NAD 83 NORTH: 512,639.04 EAST: 834,161.64 LAT: 32.40574025 LONG: -103.38451945 NM EAST-NAD 27 NORTH: 512,578.10 EAST: 792,978.00 LAT: 32.40561555 LONG: -103.38404272 FIRST TAKE POINT & PENETRATION POINT 1 2,540' FSL & 990' FEL NM EAST-NAD 83 NORTH: 512,727.75 EAST: 834,228.62 LAT: 32.4058241 LONG: -103.38429990 NM EAST-NAD 27 NORTH: 512,666.80 EAST: 793,044.98 LAT: 32.40585771 LONG: -103.38382317 PENETRATION POINT 2 0' FNL & 990' FEL NM EAST-NAD 83 NORTH: 510,187.83 EAST: 834,251.08 LAT: 32.39900103 LONG: -103.38430017 NM EAST-NAD 27 NORTH: 510,126.95 EAST: 793,067.39 LAT: 32.39887629 LONG: -103.38382364 LAST TAKE POINT & BOTTOM HOLE LOCATION 100' FSL & 990' FEL NM EAST-NAD 83 NORTH: 505,009.21 EAST: 834,296.68 LAT: 32.38476672 LONG: -103.38430134 NM EAST-NAD 27 NORTH: 504,948.48 EAST: 793,112.88 LAT: 32.38464192 LONG: -103.38382520 CORNER COORDINATES NEW MEXICO EAST - NAD 83 <table border="1"> <tr><td>A-CALCULATED CORNER</td><td>N: 515,397.31' E: 829,901.27'</td></tr> <tr><td>B-FOUND 1" IRON PIPE</td><td>N: 515,449.12' E: 832,548.57'</td></tr> <tr><td>C-FOUND NAIL</td><td>N: 515,485.49' E: 835,194.28'</td></tr> <tr><td>D-FOUND 2" IRON PIPE</td><td>N: 510,200.16' E: 835,241.00'</td></tr> <tr><td>E-FOUND 2" IRON PIPE</td><td>N: 504,920.36' E: 835,287.50'</td></tr> <tr><td>F-FOUND IRON ROD</td><td>N: 504,860.89' E: 830,002.73'</td></tr> <tr><td>G-FOUND 2" IRON PIPE</td><td>N: 510,134.32' E: 829,952.96'</td></tr> <tr><td>H-FOUND IRON PIPE</td><td>N: 512,773.96' E: 829,929.62'</td></tr> </table>	A-CALCULATED CORNER	N: 515,397.31' E: 829,901.27'	B-FOUND 1" IRON PIPE	N: 515,449.12' E: 832,548.57'	C-FOUND NAIL	N: 515,485.49' E: 835,194.28'	D-FOUND 2" IRON PIPE	N: 510,200.16' E: 835,241.00'	E-FOUND 2" IRON PIPE	N: 504,920.36' E: 835,287.50'	F-FOUND IRON ROD	N: 504,860.89' E: 830,002.73'	G-FOUND 2" IRON PIPE	N: 510,134.32' E: 829,952.96'	H-FOUND IRON PIPE
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Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Conditions

Permit 353294

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: Permian Resources Operating, LLC [372165] 1001 17th Street, Suite 1800 Denver, CO 80202	API Number: 30-025-52195
	Well: BUTTERS STOTCH 8 STATE COM #124H

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	If cement does not circulate on any string , a CBL is required for that string 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

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: Permian Resources Operating, LLC **OGRID:** 372165 **Date:** 10/12/2023

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	Anticipated Gas	Anticipated Prod Water
Casa Bonita 8 State Com 113H		H-8-T22S-R35E	2422' FNL – 1191' FEL	1600 BOPD	1900 MCFD	11600 BWPD
Casa Bonita 8 State Com 114H		H-8-T22S-R35E	2423' FNL – 1026' FEL	1600 BOPD	1900 MCFD	11600 BWPD
Casa Bonita 8 State Com 123H		H-8-T22S-R35E	2423' FNL – 1158' FEL	2000 BOPD	2400 MCFD	12500 BWPD
Casa Bonita 8 State Com 124H		H-8-T22S-R35E	2423' FNL – 1059' FEL	2000 BOPD	2400 MCFD	12500 BWPD
Casa Bonita 8 State Com 133H		H-8-T22S-R35E	2423' FNL – 1125' FEL	1400 BOPD	1650 MCFD	7800 BWPD
Casa Bonita 8 State Com 134H		H-8-T22S-R35E	2423' FNL – 1092' FEL	1400 BOPD	1650 MCFD	7800 BWPD
Casa Bonita 32 State Com 111H		N-32-T21S-R35E	316' FSL – 1393' FWL	1600 BOPD	1900 MCFD	11600 BWPD
Casa Bonita 32 State Com 112H		N-32-T21S-R35E	316' FSL – 1426' FWL	1600 BOPD	1900 MCFD	11600 BWPD
Casa Bonita 32 State Com 121H		N-32-T21S-R35E	316' FSL – 1360' FWL	2000 BOPD	2400 MCFD	12500 BWPD
Casa Bonita 32 State Com 131H		N-32-T21S-R35E	316' FSL – 1459' FWL	1400 BOPD	1650 MCFD	7800 BWPD
Casa Bonita 32 State Com 132H		N-32-T21S-R35E	316' FSL – 1492' FWL	1400 BOPD	1650 MCFD	7800 BWPD
Butters Stotch 8 State Com 113H		I-8-T22S-R35E	2452' FSL – 1190' FEL	1600 BOPD	1900 MCFD	11600 BWPD
Butters Stotch 8 State Com 114H		I-8-T22S-R35E	2452' FSL – 1025' FEL	1600 BOPD	1900 MCFD	11600 BWPD
Butters Stotch 8 State Com 123H		I-8-T22S-R35E	2452' FSL – 1157' FEL	2000 BOPD	2400 MCFD	12500 BWPD
Butters Stotch 8 State Com 124H		I-8-T22S-R35E	2452' FSL – 1058' FEL	2000 BOPD	2400 MCFD	12500 BWPD
Butters Stotch 8 State Com 133H		I-8-T22S-R35E	2452' FSL – 1124' FEL	1400 BOPD	1650 MCFD	7800 BWPD
Butters Stotch 8 State Com 134H		I-8-T22S-R35E	2452' FSL – 1091' FEL	1400 BOPD	1650 MCFD	7800 BWPD
Butters Stotch 17 State Com 111H		N-17-T22S-R35E	209' FSL – 1983' FWL	1600 BOPD	1900 MCFD	11600 BWPD
Butters Stotch 17 State Com 122H		N-17-T22S-R35E	210' FSL – 1950' FWL	2000 BOPD	2400 MCFD	12500 BWPD
Butters Stotch 17 State Com 131H		N-17-T22S-R35E	209' FSL – 2016' FWL	1400 BOPD	1650 MCFD	7800 BWPD
Butters Stotch 17 State Com 132H		N-17-T22S-R35E	209' FSL – 2049' FWL	1400 BOPD	1650 MCFD	7800 BWPD

IV. Central Delivery Point Name: Butters Stotch/Casa Bonita CTB [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 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
Casa Bonita 8 State Com 113H		TBD	TBD	TBD	TBD	TBD
Casa Bonita 8 State Com 114H		TBD	TBD	TBD	TBD	TBD
Casa Bonita 8 State Com 123H		3/11/2024	3/24/2024	5/17/2024	6/12/2024	6/12/2024
Casa Bonita 8 State Com 124H		3/22/2024	4/6/2024	5/23/2024	6/12/2024	6/12/2024
Casa Bonita 8 State Com 133H		TBD	TBD	TBD	TBD	TBD
Casa Bonita 8 State Com 134H		TBD	TBD	TBD	TBD	TBD
Casa Bonita 32 State Com 111H		TBD	TBD	TBD	TBD	TBD
Casa Bonita 32 State Com 112H		TBD	TBD	TBD	TBD	TBD
Casa Bonita 32 State Com 121H		2/26/2024	3/11/2024	5/17/2024	6/2/2024	6/2/2024
Casa Bonita 32 State Com 131H		TBD	TBD	TBD	TBD	TBD
Casa Bonita 32 State Com 132H		TBD	TBD	TBD	TBD	TBD
Butters Stotch 8 State Com 113H		TBD	TBD	TBD	TBD	TBD
Butters Stotch 8 State Com 114H		TBD	TBD	TBD	TBD	TBD
Butters Stotch 8 State Com 123H		3/24/2024	4/7/2024	5/17/2024	6/2/2024	6/2/2024
Butters Stotch 8 State Com 124H		3/3/2024	3/19/2024	5/14/2024	6/2/2024	6/2/2024
Butters Stotch 8 State Com 133H		TBD	TBD	TBD	TBD	TBD
Butters Stotch 8 State Com 134H		TBD	TBD	TBD	TBD	TBD
Butters Stotch 17 State Com 111H		TBD	TBD	TBD	TBD	TBD
Butters Stotch 17 State Com 122H		2/13/2024	2/26/2024	5/17/2024	6/2/2024	6/2/2024
Butters Stotch 17 State Com 131H		TBD	TBD	TBD	TBD	TBD
Butters Stotch 17 State Com 132H		TBD	TBD	TBD	TBD	TBD

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

VII. Operations 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 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, not 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 and update for each Natural Gas Management Plan until the Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.
- (c) OCD may deny or conditionally approve and 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, 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: Tinlee Via

Title: Contract Drilling Engineer

E-mail Address: tinlee.via@permianres.com

Date: 10/24/2023

Phone: 512-755-6018

OIL CONSERVATION DIVISION**(Only applicable when submitted as a standalone form)**

Approved By:

Title:

Approval Date:

Conditions of Approval:

Permian Resources Operating, LLC (372165)

Natural Gas Management Plan Descriptions**VI. Separation Equipment:**

Permian Resources Operating, LLC (Permian) utilizes a production forecast from our Reservoir Engineering team to appropriately size each permanent, 3-phase separator and heater treater utilized for production operations. Our goal is to maintain 5 minutes of retention time in the test vessel and 20 minutes in the heater treater at peak production rates. The gas produced is routed from the separator to the gas sales line.

VII. Operational Practices:*Drilling*

During Permian's drilling operations it is uncommon for venting or flaring to occur. If flaring is needed due to safety concerns, gas will be routed to a flare and volumes will be estimated.

Flowback

During completion/recompletion flowback operations, after separation flowback begins and as soon as it is technically feasible, Permian routes gas through a permanent separator and the controlled facility where the gas is either sold or flared through a high-pressure flare if needed.

Production

Per 19.15.27.8.D, Permian's facilities are designed to minimize waste. Our produced gas will only be vented or flared in an emergency or malfunction situation, except as allowed for normal operations noted in 19.15.27.8.D(2) & (4). All gas that is flared is metered. All gas that may be vented will be estimated.

Performance Standards

Permian utilizes a production forecast from our Reservoir Engineering team to appropriately size each permanent, 3-phase separator and heater treater utilized for production operations.

All of Permian's permanent storage tanks associated with production operations which are routed to a flare or control device are equipped with an automatic gauging system.

All of Permian's flare stacks, both currently installed and for future installation, are:

- 1) Appropriately sized and designed to ensure proper combustion efficiency.
- 2) Equipped with an automatic ignitor or continuous pilot.
- 3) Anchored and located at least 100 feet from the well and storage tanks.

Permian's field operations and HSE teams have implemented an AVO inspection schedule that adheres to the requirements of 19.15.27.8.E(5).

All of our operations and facilities are designed to minimize waste. We routinely employ the following methods and practices:

- Closed-loop systems
- Enclosed and properly sized tanks

Permian Resources Operating, LLC (372165)

- Vapor recovery units to maximize recovery of low-pressure gas streams and potential unauthorized emissions
- Low-emitting or electric engines whenever practical
- Combustors and flare stacks in the event of a malfunction or emergency
- Routine facility inspections to identify leaking components, functioning control devices, such as flares and combustors, and repair / replacement of malfunctioning components where applicable

Measurement or estimation

Permian measures or estimates the volumes of natural gas vented, flared and/or beneficially used for all of our drilling, completing and producing wells. We utilize accepted industry standards and methodology which can be independently verified. Annual GOR testing is completed on our wells and will be submitted as required by the OCD. None of our equipment is designed to allow diversion around metering elements except during inspection, maintenance and repair operations.

VIII. Best Management Practices:

Permian Resources utilizes the following BMPs to minimize venting during active and planned maintenance activities:

- Use a closed-loop process wherever possible during planned maintenance activities, such as blowdowns, liquid removal, and work over operations.
- Employ low-emitting or electric engines for equipment, such as compressors
- Adhere to a strict preventative maintenance program which includes routine facility inspections, identification of component malfunctions, and repairing or replacing components such as hatches, seals, valves, etc. where applicable
- Utilize vapor recovery units (VRU's) to maximize recovery of volumes of low-pressure gas streams and potential unauthorized emissions
- Route low pressure gas and emissions streams to a combustion device to prevent venting where necessary

Enhanced Natural Gas Management Plan

Operator's Plan to Manage Production in Response to Increased Line Pressure

Permian Resources Operating, LLC (Permian) anticipates that its existing wells connected to the same portion of the natural gas gathering system will continue to meet anticipated increases in line pressure caused by the new wells. Permian will actively monitor line pressure throughout the field and will make necessary adjustments to existing production separators' pressures to send gas to sales. Permian also plans to implement automated alarms on all flare meters to alert of flaring events as they occur. The alarms will send notifications to field operations and engineering staff via text message and email at every occurrence of flaring. In addition, Permian plans to implement automated alarms on all flare meters to alert of any continuous flaring event that has continued for at least 4 hours. The alarms will send notifications to field operations and engineering management. Permian personnel will promptly respond to these alarms, communicate with midstream partners, and take the appropriate action to reduce flaring caused by high line pressure from new well production.

NEW MEXICO

(SP) LEA

BUTTERS STOTCH PROJECT

BUTTERS STOTCH 8 ST COM #124H

OWB

Plan: PWP0

Survey Report - Geographic

17 October, 2023

Permian Resources

Survey Report - Geographic

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well BUTTERS STOTCH 8 ST COM #124H
Project:	(SP) LEA	TVD Reference:	KB @ 3603.0usft
Site:	BUTTERS STOTCH PROJECT	MD Reference:	KB @ 3603.0usft
Well:	BUTTERS STOTCH 8 ST COM #124H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP0	Database:	Compass

Project	(SP) LEA		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		BUTTERS STOTCH PROJECT			
Site Position:		Northing:	512,637.76 usft	Latitude:	32° 24' 20.661 N
From:	Map	Easting:	834,062.65 usft	Longitude:	103° 23' 5.425 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.51 °

Well		BUTTERS STOTCH 8 ST COM #124H				
Well Position	+N/-S	0.0 usft	Northing:	512,639.04 usft	Latitude:	32° 24' 20.665 N
	+E/-W	0.0 usft	Easting:	834,161.64 usft	Longitude:	103° 23' 4.270 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,573.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	7.68	60.44	48,922.64612283

Design	PWP0				
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	178.99	

Survey Tool Program	Date	10/17/2023			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	17,717.8	PWP0 (OWB)	MWD	OWSG_Rev2_ MWD - Standard	

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W	
100.0	0.00	0.00	100.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W	
200.0	0.00	0.00	200.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W	
300.0	0.00	0.00	300.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W	
400.0	0.00	0.00	400.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W	
500.0	0.00	0.00	500.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W	
600.0	0.00	0.00	600.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W	
700.0	0.00	0.00	700.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W	
800.0	0.00	0.00	800.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W	
900.0	0.00	0.00	900.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W	

Permian Resources

Survey Report - Geographic

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well BUTTERS STOTCH 8 ST COM #124H
Project:	(SP) LEA	TVD Reference:	KB @ 3603.0usft
Site:	BUTTERS STOTCH PROJECT	MD Reference:	KB @ 3603.0usft
Well:	BUTTERS STOTCH 8 ST COM #124H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWPO	Database:	Compass

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,200.0	0.00	0.00	1,200.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W
1,697.0	0.00	0.00	1,697.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W
RUSTLER									
1,700.0	0.00	0.00	1,700.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W
1,900.0	0.00	0.00	1,900.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W
2,000.0	0.00	0.00	2,000.0	0.0	0.0	512,639.04	834,161.64	32° 24' 20.665 N	103° 23' 4.270 W
2,100.0	2.00	25.45	2,100.0	1.6	0.7	512,640.62	834,162.39	32° 24' 20.680 N	103° 23' 4.261 W
2,200.0	4.00	25.45	2,199.8	6.3	3.0	512,645.34	834,164.64	32° 24' 20.727 N	103° 23' 4.234 W
2,206.2	4.12	25.45	2,206.0	6.7	3.2	512,645.74	834,164.83	32° 24' 20.731 N	103° 23' 4.232 W
SALADO									
2,250.0	5.00	25.45	2,249.7	9.8	4.7	512,648.89	834,166.32	32° 24' 20.762 N	103° 23' 4.214 W
2,300.0	5.00	25.45	2,299.5	13.8	6.6	512,652.82	834,168.20	32° 24' 20.801 N	103° 23' 4.192 W
2,400.0	5.00	25.45	2,399.1	21.6	10.3	512,660.69	834,171.94	32° 24' 20.878 N	103° 23' 4.148 W
2,500.0	5.00	25.45	2,498.7	29.5	14.0	512,668.56	834,175.69	32° 24' 20.956 N	103° 23' 4.103 W
2,600.0	5.00	25.45	2,598.4	37.4	17.8	512,676.43	834,179.43	32° 24' 21.033 N	103° 23' 4.059 W
2,700.0	5.00	25.45	2,698.0	45.3	21.5	512,684.30	834,183.17	32° 24' 21.111 N	103° 23' 4.014 W
2,800.0	5.00	25.45	2,797.6	53.1	25.3	512,692.17	834,186.92	32° 24' 21.188 N	103° 23' 3.970 W
2,900.0	5.00	25.45	2,897.2	61.0	29.0	512,700.04	834,190.66	32° 24' 21.266 N	103° 23' 3.925 W
3,000.0	5.00	25.45	2,996.8	68.9	32.8	512,707.91	834,194.41	32° 24' 21.343 N	103° 23' 3.881 W
3,100.0	5.00	25.45	3,096.4	76.7	36.5	512,715.78	834,198.15	32° 24' 21.421 N	103° 23' 3.836 W
3,200.0	5.00	25.45	3,196.1	84.6	40.3	512,723.65	834,201.90	32° 24' 21.498 N	103° 23' 3.792 W
3,300.0	5.00	25.45	3,295.7	92.5	44.0	512,731.52	834,205.64	32° 24' 21.576 N	103° 23' 3.747 W
3,400.0	5.00	25.45	3,395.3	100.3	47.8	512,739.39	834,209.39	32° 24' 21.654 N	103° 23' 3.703 W
3,500.0	5.00	25.45	3,494.9	108.2	51.5	512,747.26	834,213.13	32° 24' 21.731 N	103° 23' 3.658 W
3,600.0	5.00	25.45	3,594.5	116.1	55.2	512,755.13	834,216.88	32° 24' 21.809 N	103° 23' 3.614 W
3,700.0	5.00	25.45	3,694.2	124.0	59.0	512,763.00	834,220.62	32° 24' 21.886 N	103° 23' 3.569 W
3,762.2	5.00	25.45	3,756.2	128.9	61.3	512,767.90	834,222.95	32° 24' 21.934 N	103° 23' 3.542 W
3,800.0	4.24	25.45	3,793.8	131.6	62.6	512,770.65	834,224.26	32° 24' 21.962 N	103° 23' 3.526 W
3,900.0	2.24	25.45	3,893.6	136.7	65.1	512,775.76	834,226.69	32° 24' 22.012 N	103° 23' 3.497 W
4,000.0	0.24	25.45	3,993.6	138.7	66.0	512,777.72	834,227.63	32° 24' 22.031 N	103° 23' 3.486 W
4,012.2	0.00	0.00	4,005.8	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
4,100.0	0.00	0.00	4,093.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
4,200.0	0.00	0.00	4,193.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
4,200.4	0.00	0.00	4,194.0	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
CAPITAN									
4,300.0	0.00	0.00	4,293.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
4,400.0	0.00	0.00	4,393.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
4,500.0	0.00	0.00	4,493.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
4,600.0	0.00	0.00	4,593.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
4,700.0	0.00	0.00	4,693.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
4,800.0	0.00	0.00	4,793.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
4,900.0	0.00	0.00	4,893.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
5,000.0	0.00	0.00	4,993.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
5,100.0	0.00	0.00	5,093.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
5,200.0	0.00	0.00	5,193.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
5,300.0	0.00	0.00	5,293.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
5,400.0	0.00	0.00	5,393.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
5,500.0	0.00	0.00	5,493.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
5,600.0	0.00	0.00	5,593.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W

Permian Resources

Survey Report - Geographic

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well BUTTERS STOTCH 8 ST COM #124H
Project:	(SP) LEA	TVD Reference:	KB @ 3603.0usft
Site:	BUTTERS STOTCH PROJECT	MD Reference:	KB @ 3603.0usft
Well:	BUTTERS STOTCH 8 ST COM #124H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWPO	Database:	Compass

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,671.4	0.00	0.00	5,665.0	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
CHERRY CANYON									
5,700.0	0.00	0.00	5,693.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
5,800.0	0.00	0.00	5,793.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
5,900.0	0.00	0.00	5,893.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
5,981.4	0.00	0.00	5,975.0	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
MANZANITA LIME									
6,000.0	0.00	0.00	5,993.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
6,100.0	0.00	0.00	6,093.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
6,200.0	0.00	0.00	6,193.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
6,300.0	0.00	0.00	6,293.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
6,400.0	0.00	0.00	6,393.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
6,500.0	0.00	0.00	6,493.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
6,600.0	0.00	0.00	6,593.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
6,700.0	0.00	0.00	6,693.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
6,800.0	0.00	0.00	6,793.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
6,900.0	0.00	0.00	6,893.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
6,974.4	0.00	0.00	6,968.0	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
BRUSHY CANYON									
7,000.0	0.00	0.00	6,993.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
7,100.0	0.00	0.00	7,093.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
7,200.0	0.00	0.00	7,193.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
7,300.0	0.00	0.00	7,293.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
7,400.0	0.00	0.00	7,393.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
7,500.0	0.00	0.00	7,493.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
7,600.0	0.00	0.00	7,593.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
7,700.0	0.00	0.00	7,693.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
7,800.0	0.00	0.00	7,793.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
7,900.0	0.00	0.00	7,893.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
8,000.0	0.00	0.00	7,993.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
8,100.0	0.00	0.00	8,093.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
8,200.0	0.00	0.00	8,193.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
8,288.4	0.00	0.00	8,282.0	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
BONE SPRING LIME									
8,300.0	0.00	0.00	8,293.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
8,400.0	0.00	0.00	8,393.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
8,425.4	0.00	0.00	8,419.0	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
AVALON									
8,500.0	0.00	0.00	8,493.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
8,600.0	0.00	0.00	8,593.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
8,700.0	0.00	0.00	8,693.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
8,800.0	0.00	0.00	8,793.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
8,900.0	0.00	0.00	8,893.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
9,000.0	0.00	0.00	8,993.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
9,100.0	0.00	0.00	9,093.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
9,200.0	0.00	0.00	9,193.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
9,300.0	0.00	0.00	9,293.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
9,335.4	0.00	0.00	9,329.0	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
1ST BONE SPRING SAND									
9,400.0	0.00	0.00	9,393.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
9,500.0	0.00	0.00	9,493.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
9,561.4	0.00	0.00	9,555.0	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
2ND BONE SPRING SHALE									
9,600.0	0.00	0.00	9,593.6	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W

Permian Resources

Survey Report - Geographic

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well BUTTERS STOTCH 8 ST COM #124H
Project:	(SP) LEA	TVD Reference:	KB @ 3603.0usft
Site:	BUTTERS STOTCH PROJECT	MD Reference:	KB @ 3603.0usft
Well:	BUTTERS STOTCH 8 ST COM #124H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP0	Database:	Compass

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,676.9	0.00	0.00	9,670.5	138.7	66.0	512,777.74	834,227.64	32° 24' 22.031 N	103° 23' 3.486 W
9,700.0	2.77	179.49	9,693.6	138.1	66.0	512,777.18	834,227.64	32° 24' 22.026 N	103° 23' 3.486 W
9,725.0	5.77	179.49	9,718.5	136.3	66.0	512,775.32	834,227.66	32° 24' 22.007 N	103° 23' 3.486 W
9,750.0	8.77	179.49	9,743.3	133.1	66.0	512,772.16	834,227.69	32° 24' 21.976 N	103° 23' 3.486 W
9,775.0	11.77	179.49	9,767.9	128.7	66.1	512,767.70	834,227.73	32° 24' 21.932 N	103° 23' 3.486 W
9,800.0	14.77	179.49	9,792.3	122.9	66.1	512,761.96	834,227.78	32° 24' 21.875 N	103° 23' 3.486 W
9,825.0	17.77	179.49	9,816.2	115.9	66.2	512,754.95	834,227.84	32° 24' 21.806 N	103° 23' 3.486 W
9,850.0	20.77	179.49	9,839.8	107.7	66.3	512,746.70	834,227.91	32° 24' 21.724 N	103° 23' 3.486 W
9,875.0	23.77	179.49	9,863.0	98.2	66.4	512,737.23	834,228.00	32° 24' 21.631 N	103° 23' 3.486 W
9,900.0	26.77	179.49	9,885.6	87.5	66.5	512,726.56	834,228.09	32° 24' 21.525 N	103° 23' 3.486 W
9,920.9	29.28	179.49	9,904.0	77.7	66.5	512,716.75	834,228.18	32° 24' 21.428 N	103° 23' 3.486 W
2ND BONE SPRING SAND									
9,925.0	29.77	179.49	9,907.6	75.7	66.6	512,714.72	834,228.20	32° 24' 21.408 N	103° 23' 3.486 W
9,950.0	32.77	179.49	9,929.0	62.7	66.7	512,701.74	834,228.31	32° 24' 21.279 N	103° 23' 3.486 W
9,975.0	35.77	179.49	9,949.6	48.6	66.8	512,687.66	834,228.44	32° 24' 21.140 N	103° 23' 3.486 W
10,000.0	38.77	179.49	9,969.5	33.5	66.9	512,672.53	834,228.57	32° 24' 20.990 N	103° 23' 3.486 W
10,025.0	41.77	179.49	9,988.6	17.3	67.1	512,656.37	834,228.72	32° 24' 20.830 N	103° 23' 3.486 W
10,050.0	44.77	179.49	10,006.8	0.2	67.2	512,639.23	834,228.87	32° 24' 20.661 N	103° 23' 3.486 W
10,075.0	47.77	179.49	10,024.1	-17.9	67.4	512,621.17	834,229.03	32° 24' 20.482 N	103° 23' 3.486 W
10,100.0	50.77	179.49	10,040.4	-36.8	67.6	512,602.23	834,229.20	32° 24' 20.295 N	103° 23' 3.486 W
10,125.0	53.77	179.49	10,055.7	-56.6	67.7	512,582.46	834,229.37	32° 24' 20.099 N	103° 23' 3.486 W
10,150.0	56.77	179.49	10,069.9	-77.1	67.9	512,561.91	834,229.56	32° 24' 19.896 N	103° 23' 3.486 W
10,175.0	59.77	179.49	10,083.0	-98.4	68.1	512,540.65	834,229.75	32° 24' 19.685 N	103° 23' 3.486 W
10,200.0	62.77	179.49	10,095.1	-120.3	68.3	512,518.73	834,229.94	32° 24' 19.468 N	103° 23' 3.486 W
10,225.0	65.77	179.49	10,105.9	-142.8	68.5	512,496.21	834,230.14	32° 24' 19.246 N	103° 23' 3.486 W
10,250.0	68.77	179.49	10,115.6	-165.9	68.7	512,473.16	834,230.35	32° 24' 19.018 N	103° 23' 3.486 W
10,275.0	71.77	179.49	10,124.0	-189.4	68.9	512,449.63	834,230.55	32° 24' 18.785 N	103° 23' 3.486 W
10,300.0	74.77	179.49	10,131.2	-213.4	69.1	512,425.69	834,230.77	32° 24' 18.548 N	103° 23' 3.486 W
10,325.0	77.77	179.49	10,137.1	-237.6	69.3	512,401.41	834,230.98	32° 24' 18.308 N	103° 23' 3.486 W
10,350.0	80.77	179.49	10,141.8	-262.2	69.6	512,376.85	834,231.20	32° 24' 18.065 N	103° 23' 3.486 W
10,375.0	83.77	179.49	10,145.1	-287.0	69.8	512,352.08	834,231.42	32° 24' 17.819 N	103° 23' 3.486 W
10,400.0	86.77	179.49	10,147.2	-311.9	70.0	512,327.17	834,231.64	32° 24' 17.573 N	103° 23' 3.486 W
10,426.9	90.00	179.49	10,148.0	-338.7	70.2	512,300.30	834,231.88	32° 24' 17.307 N	103° 23' 3.486 W
10,500.0	90.00	179.49	10,148.0	-411.9	70.9	512,227.19	834,232.53	32° 24' 16.584 N	103° 23' 3.486 W
10,600.0	90.00	179.49	10,148.0	-511.9	71.8	512,127.19	834,233.42	32° 24' 15.594 N	103° 23' 3.486 W
10,700.0	90.00	179.49	10,148.0	-611.8	72.7	512,027.20	834,234.31	32° 24' 14.605 N	103° 23' 3.486 W
10,800.0	90.00	179.49	10,148.0	-711.8	73.6	511,927.20	834,235.20	32° 24' 13.615 N	103° 23' 3.486 W
10,900.0	90.00	179.49	10,148.0	-811.8	74.4	511,827.20	834,236.09	32° 24' 12.626 N	103° 23' 3.486 W
11,000.0	90.00	179.49	10,148.0	-911.8	75.3	511,727.21	834,236.97	32° 24' 11.636 N	103° 23' 3.486 W
11,100.0	90.00	179.49	10,148.0	-1,011.8	76.2	511,627.21	834,237.86	32° 24' 10.647 N	103° 23' 3.486 W
11,200.0	90.00	179.49	10,148.0	-1,111.8	77.1	511,527.21	834,238.75	32° 24' 9.657 N	103° 23' 3.486 W
11,300.0	90.00	179.49	10,148.0	-1,211.8	78.0	511,427.22	834,239.64	32° 24' 8.668 N	103° 23' 3.486 W
11,400.0	90.00	179.49	10,148.0	-1,311.8	78.9	511,327.22	834,240.53	32° 24' 7.678 N	103° 23' 3.486 W
11,500.0	90.00	179.49	10,148.0	-1,411.8	79.8	511,227.23	834,241.42	32° 24' 6.689 N	103° 23' 3.486 W
11,600.0	90.00	179.49	10,148.0	-1,511.8	80.7	511,127.23	834,242.31	32° 24' 5.699 N	103° 23' 3.486 W
11,700.0	90.00	179.49	10,148.0	-1,611.8	81.6	511,027.23	834,243.20	32° 24' 4.710 N	103° 23' 3.486 W
11,800.0	90.00	179.49	10,148.0	-1,711.8	82.4	510,927.24	834,244.08	32° 24' 3.720 N	103° 23' 3.486 W
11,900.0	90.00	179.49	10,148.0	-1,811.8	83.3	510,827.24	834,244.97	32° 24' 2.731 N	103° 23' 3.486 W
12,000.0	90.00	179.49	10,148.0	-1,911.8	84.2	510,727.25	834,245.86	32° 24' 1.741 N	103° 23' 3.486 W
12,100.0	90.00	179.49	10,148.0	-2,011.8	85.1	510,627.25	834,246.75	32° 24' 0.752 N	103° 23' 3.486 W
12,200.0	90.00	179.49	10,148.0	-2,111.8	86.0	510,527.25	834,247.64	32° 23' 59.762 N	103° 23' 3.486 W
12,300.0	90.00	179.49	10,148.0	-2,211.8	86.9	510,427.26	834,248.53	32° 23' 58.773 N	103° 23' 3.486 W
12,400.0	90.00	179.49	10,148.0	-2,311.8	87.8	510,327.26	834,249.42	32° 23' 57.783 N	103° 23' 3.486 W
12,500.0	90.00	179.49	10,148.0	-2,411.8	88.7	510,227.27	834,250.31	32° 23' 56.794 N	103° 23' 3.486 W
12,600.0	90.00	179.49	10,148.0	-2,511.8	89.6	510,127.27	834,251.19	32° 23' 55.804 N	103° 23' 3.486 W

Permian Resources

Survey Report - Geographic

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well BUTTERS STOTCH 8 ST COM #124H
Project:	(SP) LEA	TVD Reference:	KB @ 3603.0usft
Site:	BUTTERS STOTCH PROJECT	MD Reference:	KB @ 3603.0usft
Well:	BUTTERS STOTCH 8 ST COM #124H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWPO	Database:	Compass

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
12,700.0	90.00	179.49	10,148.0	-2,611.8	90.4	510,027.27	834,252.08	32° 23' 54.815 N	103° 23' 3.486 W
12,800.0	90.00	179.49	10,148.0	-2,711.8	91.3	509,927.28	834,252.97	32° 23' 53.826 N	103° 23' 3.486 W
12,900.0	90.00	179.49	10,148.0	-2,811.8	92.2	509,827.28	834,253.86	32° 23' 52.836 N	103° 23' 3.486 W
13,000.0	90.00	179.49	10,148.0	-2,911.8	93.1	509,727.29	834,254.75	32° 23' 51.847 N	103° 23' 3.486 W
13,100.0	90.00	179.49	10,148.0	-3,011.8	94.0	509,627.29	834,255.64	32° 23' 50.857 N	103° 23' 3.485 W
13,200.0	90.00	179.49	10,148.0	-3,111.7	94.9	509,527.29	834,256.53	32° 23' 49.868 N	103° 23' 3.485 W
13,300.0	90.00	179.49	10,148.0	-3,211.7	95.8	509,427.30	834,257.41	32° 23' 48.878 N	103° 23' 3.485 W
13,400.0	90.00	179.49	10,148.0	-3,311.7	96.7	509,327.30	834,258.30	32° 23' 47.889 N	103° 23' 3.485 W
13,500.0	90.00	179.49	10,148.0	-3,411.7	97.6	509,227.31	834,259.19	32° 23' 46.899 N	103° 23' 3.485 W
13,600.0	90.00	179.49	10,148.0	-3,511.7	98.4	509,127.31	834,260.08	32° 23' 45.910 N	103° 23' 3.485 W
13,700.0	90.00	179.49	10,148.0	-3,611.7	99.3	509,027.31	834,260.97	32° 23' 44.920 N	103° 23' 3.485 W
13,800.0	90.00	179.49	10,148.0	-3,711.7	100.2	508,927.32	834,261.86	32° 23' 43.931 N	103° 23' 3.485 W
13,900.0	90.00	179.49	10,148.0	-3,811.7	101.1	508,827.32	834,262.75	32° 23' 42.941 N	103° 23' 3.485 W
14,000.0	90.00	179.49	10,148.0	-3,911.7	102.0	508,727.33	834,263.64	32° 23' 41.952 N	103° 23' 3.485 W
14,100.0	90.00	179.49	10,148.0	-4,011.7	102.9	508,627.33	834,264.52	32° 23' 40.962 N	103° 23' 3.485 W
14,200.0	90.00	179.49	10,148.0	-4,111.7	103.8	508,527.33	834,265.41	32° 23' 39.973 N	103° 23' 3.485 W
14,300.0	90.00	179.49	10,148.0	-4,211.7	104.7	508,427.34	834,266.30	32° 23' 38.983 N	103° 23' 3.485 W
14,400.0	90.00	179.49	10,148.0	-4,311.7	105.6	508,327.34	834,267.19	32° 23' 37.994 N	103° 23' 3.485 W
14,500.0	90.00	179.49	10,148.0	-4,411.7	106.4	508,227.35	834,268.08	32° 23' 37.004 N	103° 23' 3.485 W
14,600.0	90.00	179.49	10,148.0	-4,511.7	107.3	508,127.35	834,268.97	32° 23' 36.015 N	103° 23' 3.485 W
14,700.0	90.00	179.49	10,148.0	-4,611.7	108.2	508,027.35	834,269.86	32° 23' 35.025 N	103° 23' 3.485 W
14,800.0	90.00	179.49	10,148.0	-4,711.7	109.1	507,927.36	834,270.74	32° 23' 34.036 N	103° 23' 3.485 W
14,900.0	90.00	179.49	10,148.0	-4,811.7	110.0	507,827.36	834,271.63	32° 23' 33.046 N	103° 23' 3.485 W
15,000.0	90.00	179.49	10,148.0	-4,911.7	110.9	507,727.36	834,272.52	32° 23' 32.057 N	103° 23' 3.485 W
15,100.0	90.00	179.49	10,148.0	-5,011.7	111.8	507,627.37	834,273.41	32° 23' 31.067 N	103° 23' 3.485 W
15,200.0	90.00	179.49	10,148.0	-5,111.7	112.7	507,527.37	834,274.30	32° 23' 30.078 N	103° 23' 3.485 W
15,300.0	90.00	179.49	10,148.0	-5,211.7	113.5	507,427.38	834,275.19	32° 23' 29.088 N	103° 23' 3.485 W
15,400.0	90.00	179.49	10,148.0	-5,311.7	114.4	507,327.38	834,276.08	32° 23' 28.099 N	103° 23' 3.485 W
15,500.0	90.00	179.49	10,148.0	-5,411.7	115.3	507,227.38	834,276.97	32° 23' 27.109 N	103° 23' 3.485 W
15,600.0	90.00	179.49	10,148.0	-5,511.7	116.2	507,127.39	834,277.85	32° 23' 26.120 N	103° 23' 3.485 W
15,700.0	90.00	179.49	10,148.0	-5,611.6	117.1	507,027.39	834,278.74	32° 23' 25.131 N	103° 23' 3.485 W
15,800.0	90.00	179.49	10,148.0	-5,711.6	118.0	506,927.40	834,279.63	32° 23' 24.141 N	103° 23' 3.485 W
15,900.0	90.00	179.49	10,148.0	-5,811.6	118.9	506,827.40	834,280.52	32° 23' 23.152 N	103° 23' 3.485 W
16,000.0	90.00	179.49	10,148.0	-5,911.6	119.8	506,727.40	834,281.41	32° 23' 22.162 N	103° 23' 3.485 W
16,100.0	90.00	179.49	10,148.0	-6,011.6	120.7	506,627.41	834,282.30	32° 23' 21.173 N	103° 23' 3.485 W
16,200.0	90.00	179.49	10,148.0	-6,111.6	121.5	506,527.41	834,283.19	32° 23' 20.183 N	103° 23' 3.485 W
16,300.0	90.00	179.49	10,148.0	-6,211.6	122.4	506,427.42	834,284.07	32° 23' 19.194 N	103° 23' 3.485 W
16,400.0	90.00	179.49	10,148.0	-6,311.6	123.3	506,327.42	834,284.96	32° 23' 18.204 N	103° 23' 3.485 W
16,500.0	90.00	179.49	10,148.0	-6,411.6	124.2	506,227.42	834,285.85	32° 23' 17.215 N	103° 23' 3.485 W
16,600.0	90.00	179.49	10,148.0	-6,511.6	125.1	506,127.43	834,286.74	32° 23' 16.225 N	103° 23' 3.485 W
16,700.0	90.00	179.49	10,148.0	-6,611.6	126.0	506,027.43	834,287.63	32° 23' 15.236 N	103° 23' 3.485 W
16,800.0	90.00	179.49	10,148.0	-6,711.6	126.9	505,927.44	834,288.52	32° 23' 14.246 N	103° 23' 3.485 W
16,900.0	90.00	179.49	10,148.0	-6,811.6	127.8	505,827.44	834,289.41	32° 23' 13.257 N	103° 23' 3.485 W
17,000.0	90.00	179.49	10,148.0	-6,911.6	128.7	505,727.44	834,290.30	32° 23' 12.267 N	103° 23' 3.485 W
17,100.0	90.00	179.49	10,148.0	-7,011.6	129.5	505,627.45	834,291.18	32° 23' 11.278 N	103° 23' 3.485 W
17,200.0	90.00	179.49	10,148.0	-7,111.6	130.4	505,527.45	834,292.07	32° 23' 10.288 N	103° 23' 3.485 W
17,300.0	90.00	179.49	10,148.0	-7,211.6	131.3	505,427.46	834,292.96	32° 23' 9.299 N	103° 23' 3.485 W
17,400.0	90.00	179.49	10,148.0	-7,311.6	132.2	505,327.46	834,293.85	32° 23' 8.309 N	103° 23' 3.485 W
17,500.0	90.00	179.49	10,148.0	-7,411.6	133.1	505,227.46	834,294.74	32° 23' 7.320 N	103° 23' 3.485 W
17,600.0	90.00	179.49	10,148.0	-7,511.6	134.0	505,127.47	834,295.63	32° 23' 6.330 N	103° 23' 3.485 W
17,700.0	90.00	179.49	10,148.0	-7,611.6	134.9	505,027.47	834,296.52	32° 23' 5.341 N	103° 23' 3.485 W
17,718.3	90.00	179.49	10,148.0	-7,629.8	135.0	505,009.21	834,296.68	32° 23' 5.160 N	103° 23' 3.485 W

Permian Resources

Survey Report - Geographic

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well BUTTERS STOTCH 8 ST COM #124H
Project:	(SP) LEA	TVD Reference:	KB @ 3603.0usft
Site:	BUTTERS STOTCH PROJECT	MD Reference:	KB @ 3603.0usft
Well:	BUTTERS STOTCH 8 ST COM #124H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP0	Database:	Compass

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
BHL-BUTTERS STOT - plan hits target center - Point	0.00	0.00	10,148.0	-7,629.8	135.0	505,009.21	834,296.68	32° 23' 5.160 N	103° 23' 3.485 W
FTP-BUTTERS STOT - plan misses target center by 163.5usft at 10075.1usft MD (10024.1 TVD, -17.9 N, 67.4 E) - Point	0.00	0.00	10,148.0	88.7	67.0	512,727.75	834,228.62	32° 24' 21.537 N	103° 23' 3.480 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,697.0	1,697.0	RUSTLER		0.00	
2,206.2	2,206.0	SALADO		0.00	
4,200.4	4,194.0	CAPITAN		0.00	
5,671.4	5,665.0	CHERRY CANYON		0.00	
5,981.4	5,975.0	MANZANITA LIME		0.00	
6,974.4	6,968.0	BRUSHY CANYON		0.00	
8,288.4	8,282.0	BONE SPRING LIME		0.00	
8,425.4	8,419.0	AVALON		0.00	
9,335.4	9,329.0	1ST BONE SPRING SAND		0.00	
9,561.4	9,555.0	2ND BONE SPRING SHALE		0.00	
9,920.9	9,904.0	2ND BONE SPRING SAND		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2000	2000	0	0	Start Build 2.00
2250	2250	10	5	Start 1512.2 hold at 2250.0 MD
3762	3756	129	61	Start Drop -2.00
4012	4006	139	66	Start 5664.7 hold at 4012.2 MD
9677	9671	139	66	Start DLS 12.00 TFO 179.49
10,427	10,148	-339	70	Start 7291.4 hold at 10426.9 MD
17,718	10,148	-7630	135	TD at 17718.3

Checked By: _____ Approved By: _____ Date: _____

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018