

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

Form C-101

August 1, 2011

Permit 297035

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

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

1. Operator Name and Address MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241		2. OGRID Number 14744
		3. API Number 30-025-49155
4. Property Code 331178	5. Property Name SANTA VACA 19 18 B3NC STATE COM	6. Well No. 001H

7. Surface Location

UL - Lot N	Section 19	Township 19S	Range 35E	Lot Idn N	Feet From 205	N/S Line S	Feet From 1410	E/W Line W	County Lea
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8. Proposed Bottom Hole Location

UL - Lot C	Section 18	Township 19S	Range 35E	Lot Idn C	Feet From 100	N/S Line N	Feet From 1950	E/W Line W	County Lea
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9. Pool Information

SCHARB;BONE SPRING	55610
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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 3787
16. Multiple N	17. Proposed Depth 21231	18. Formation 3rd Bone Spring Sand	19. Contractor	20. Spud Date 7/11/2021
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	1900	1320	0
Int1	12.25	9.625	40	3500	795	0
Prod	8.75	7.625	39	11308	890	4750
Liner1	6.125	4.5	13.5	21231	435	9869

Casing/Cement Program: Additional Comments

MOC proposed to drill & test the Bone Springs formation. H2S rule 118 does not apply because MOC has researched the area & no high concentrations were found. Will have on location & working all H2S safety equipment before Yates formation for safety & insurance purposes. Will stimulate as needed for production.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	2000	1500	Schaffer
Double Ram	3000	3000	Schaffer
Annular	3000	1500	Schaffer

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 Monty Whetstone

Title: Vice President Operations

Email Address: prodmgr@mewbourne.com

Date: 6/17/2021

Phone: 903-561-2900

Approved By: Paul F Kautz

Title: Geologist

Approved Date: 7/8/2021

Expiration Date: 7/8/2023

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 30-025-49155		² Pool Code 55610	³ Pool Name SCHARB; BONE SPRING
⁴ Property Code 331178	⁵ Property Name SANTA VACA 19/18 B3NC STATE COM		⁶ Well Number 1H
⁷ OGRID NO. 14744	⁸ Operator Name MEWBOURNE OIL COMPANY		⁹ Elevation 3787'

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
N	19	19S	35E		205	SOUTH	1410	WEST	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
C	18	19S	35E		100	NORTH	1950	WEST	LEA

¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

© N 89°37'19" E 2638.39' (D) S 89°21'45" E 2634.50' (E)

16

1950' B.H. 00'

LOT 1 (39.40 Ac.)

LOT 2 (39.43 Ac.)

LOT 3 (39.47 Ac.)

LOT 4 (39.50 Ac.)

18

PROJECT AREA

PRODUCING AREA

GEODEIC DATA
NAD 83 GRID - NM EAST
N: 607629.2 - E: 798124.4
LAT: 32.6676437° N
LONG: 103.4988655° W

BOTTOM HOLE

19

LOT 1 (39.50 Ac.)

LOT 2 (39.47 Ac.)

LOT 3 (39.43 Ac.)

LOT 4 (39.40 Ac.)

GEODEIC DATA
NAD 83 GRID - NM EAST
N: 597315.5 - E: 797668.5
LAT: 32.6693071° N
LONG: 103.5006099° W

SURFACE LOCATION

1410' S.L. 205'

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.

Signature *Andrew W Taylor* Date 6-9-21
ANDY TAYLOR
Printed Name
ATAYLOR@MEWBOURNE.COM
E-mail Address

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.

05-21-2021
Date of Survey
Signature and Seal of Professional Surveyor
ROBERT M. HOWETT
19680
PROFESSIONAL SURVEYOR

Certificate Number

Job No: LS21050529

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
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GAS CAPTURE PLAN

Date: 7/8/2021

☒ Original

Operator & OGRID No.: [14744] MEWBOURNE OIL CO

☐ Amended - Reason for
Amendment:

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

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

Well(s)/Production Facility – Name of facility

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
SANTA VACA 19 18 B3NC STATE COM #001H	30-025-49155	N-19-19S-35E	0205S 1410W	10	None	ONLINE AFTER FRAC

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Enterprise Field Services, LLC and will be connected to Enterprise Field Services, LLC High Pressure gathering system located in Eddy County, New Mexico. It will require 3400' of pipeline to connect the facility to High Pressure gathering system. MEWBOURNE OIL CO provides (periodically) to Enterprise Field Services, LLC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, MEWBOURNE OIL CO and Enterprise Field Services, LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Enterprise Field Services, LLC Processing Plant located in Sec. 17, Twn. 19S, Rng. 31E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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

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

Form APD Conditions

Permit 297035

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: MEWBOURNE OIL CO [14744] P.O. Box 5270 Hobbs, NM 88241	API Number: 30-025-49155
	Well: SANTA VACA 19 18 B3NC STATE COM #001H

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	1) SURFACE & INTERMEDIATE CASING - Cement must circulate to surface -- 2) PRODUCTION CASING - Cement must tie back into intermediate casing -- 3) Liner - Cement must tie back into production casing
pkautz	If cement does not circulate to surface, must run temperature survey or other log to determine top of cement
pkautz	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water
pkautz	1)- The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days 4)- Deviation / Directional Drill Survey are to be filed with or prior to C-104
pkautz	It is the operator's responsibility to monitor cancellation dates of approved APDs. APD's are good for 2 years and may be extended for one year. Only one 1 year extension will be granted if submitted by C-103 before expiration date. After expiration date or after a 1 year extension must submit new APD. If an APD expires and if site construction has occurred, site remediation is required.

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State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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: Mewbourne Oil Co. **OGRID:** 14744 **Date:** 6/10/21

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
Santa Vaca 19/18 B3NC State Com #1H		N 19 19S 35E	205' FSL x 1410' FWL	2000	3400	7000

IV. Central Delivery Point Name: Santa Vaca 19/18 B3NC State Com #1H [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
Santa Vaca 19/18 B3NC State Com #1H		8/10/21	9/10/21	10/10/21	10/25/21	10/25/21

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.

Page 8

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:	<i>Bradley Bishop</i>
Printed Name:	BRADLEY BISHOP
Title:	REGULATORY MANAGER
E-mail Address:	BBISHOP@MEWBOURNE.COM
Date:	6-10-21
Phone:	575-393-5905
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)	
Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

Mewbourne Oil Company

Natural Gas Management Plan – Attachment

- VI. Separation equipment will be sized by construction engineering staff based on stated manufacturer daily throughput capacities and anticipated daily production rates to ensure adequate capacity. Closed vent system piping, compression needs, and VRUs will be sized utilizing ProMax modelling software to ensure adequate capacity for anticipated production volumes and conditions.
- VII. Mewbourne Oil Company (MOC) will take following actions to comply with the regulations listed in 19.15.27.8 :
- A. MOC will maximize the recovery of natural gas by minimizing the waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. MOC will ensure that well(s) will be connected to a natural gas gathering system with sufficient capacity to transport natural gas. If there is no adequate takeaway for the gas, well(s) will be shut in until the natural gas gathering system is available.
 - B. All drilling operations will be equipped with a rig flare located at least 100 ft from the nearest surface hole. Rig flare will be utilized to combust any natural gas that is brought to surface during normal drilling operations. In the case of emergency venting or flaring the volumes will be estimated and reported appropriately.
 - C. During completion operations any natural gas brought to surface will be flared. Immediately following the finish of completion operations, all well flow will be directed to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. It is not anticipated that gas will not meet pipeline standards. However, if natural gas does not meet gathering pipeline quality specifications, MOC will flare the natural gas for 60 days or until the natural gas meets the pipeline quality specifications, whichever is sooner. MOC will ensure that the flare is sized properly and is equipped with automatic igniter or continuous pilot. The gas sample will analyzed twice per week and the gas will be routed into a gathering system as soon as pipeline specifications are met.
 - D. Natural gas will not be flared with the exceptions and provisions listed in the 19.15.27.8 D.(1) through (4). If there is no adequate takeaway for the separator gas, well(s) will be shut in until the natural gas gathering system is available with exception of emergency or malfunction situations. Venting and/or flaring volumes will be estimated and reported appropriately.
 - E. MOC will comply with the performance standards requirements and provisions listed in 19.15.27.8 E.(1) through (8). All equipment will be designed and sized to handle maximum anticipated pressures and throughputs in order to minimize the waste. Production storage tanks constructed after May 25, 2021 will be equipped with automatic gauging system. Flares constructed after May 25, 2021 will be equipped with automatic igniter or continuous pilot. Flares will be located at least 100' from the well and storage tanks unless otherwise approved by the division. MOC will conduct AVO inspections as described in 19.15.27.8 E (5) (a) with frequencies specified in 19.15.27.8 E (5) (b) and (c). All emergencies will be resolved as quickly and safely as feasible to minimize waste.
 - F. The volume of natural gas that is vented or flared as the result of malfunction or emergency during drilling and completions operations will be estimated. The volume of natural gas that is vented, flared or beneficially used during production operations, will be measured or estimated. MOC will install equipment to measure

the volume of natural gas flared from existing process piping or a flowline piped from equipment such as high pressure separators, heater treaters, or vapor recovery units associated with a well or facility associated with a well authorized by an APD issued after May 25, 2021 that has an average daily production greater than 60 Mcf/day. If metering is not practicable due to circumstances such as low flow rate or low pressure venting and flaring, MOC will estimate the volume of vented or flared natural gas. Measuring equipment will conform to industry standards and will not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

- VIII. For maintenance activities involving production equipment and compression, venting will be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production and compression equipment the associated producing wells will be shut in to eliminate venting. For maintenance of VRUs all gas normally routed to the VRU will be routed to flare to eliminate venting.

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

Mewbourne Oil Company

Lea County, New Mexico NAD 83

Santa Vaca 19/18 B3NC State Com #1H

Sec 19, T19S, R35E

SHL: 205' FSL & 1410' FWL, Sec 19

BHL: 100' FNL & 1950' FWL, Sec 18

Plan: Design #1

Standard Planning Report

10 June, 2021

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Santa Vaca 19/18 B3NC State Com #1H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3815.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	MD Reference:	WELL @ 3815.0usft (Original Well Elev)
Site:	Santa Vaca 19/18 B3NC State Com #1H	North Reference:	Grid
Well:	Sec 19, T19S, R35E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 100' FNL & 1950' FWL, Sec 18		
Design:	Design #1		

Project	Lea County, New Mexico NAD 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Santa Vaca 19/18 B3NC State Com #1H		
Site Position:		Northing:	597,316.00 usft
From:	Map	Easting:	797,669.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32.6393084
		Longitude:	-103.5006082

Well	Sec 19, T19S, R35E					
Well Position	+N/-S	0.0 usft	Northing:	597,316.00 usft	Latitude:	32.6393084
	+E/-W	0.0 usft	Easting:	797,669.00 usft	Longitude:	-103.5006082
Position Uncertainty		0.0 usft	Wellhead Elevation:	3,815.0 usft	Ground Level:	3,787.0 usft
Grid Convergence:		0.45 °				

Wellbore	BHL: 100' FNL & 1950' FWL, Sec 18				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/31/2014	7.14	60.49	48,515.94701305

Design	Design #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	2.53	

Plan Survey Tool Program	Date	6/10/2021			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	21,231.1	Design #1 (BHL: 100' FNL & 1950		

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	
3,550.0	0.00	0.00	3,550.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,800.0	5.00	109.51	3,799.7	-3.6	10.3	2.00	2.00	0.00	109.51	
10,146.8	5.00	109.51	10,122.3	-188.4	531.7	0.00	0.00	0.00	0.00	
10,396.8	0.00	0.00	10,372.0	-192.0	542.0	2.00	-2.00	0.00	180.00	KOP: 10' FSL & 1950'
11,308.0	91.10	359.53	10,945.0	392.0	537.2	10.00	10.00	0.00	-0.47	
21,231.1	91.10	359.53	10,755.0	10,313.0	455.0	0.00	0.00	0.00	0.00	BHL: 100' FNL & 1950'

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Santa Vaca 19/18 B3NC State Com #1H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3815.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	MD Reference:	WELL @ 3815.0usft (Original Well Elev)
Site:	Santa Vaca 19/18 B3NC State Com #1H	North Reference:	Grid
Well:	Sec 19, T19S, R35E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 100' FNL & 1950' FWL, Sec 18		
Design:	Design #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
SHL: 205' FSL & 1410' FWL (19)									
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
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,550.0	0.00	0.00	3,550.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	1.00	109.51	3,600.0	-0.1	0.4	-0.1	2.00	2.00	0.00
3,700.0	3.00	109.51	3,699.9	-1.3	3.7	-1.1	2.00	2.00	0.00
3,800.0	5.00	109.51	3,799.7	-3.6	10.3	-3.2	2.00	2.00	0.00
3,900.0	5.00	109.51	3,899.3	-6.6	18.5	-5.7	0.00	0.00	0.00
4,000.0	5.00	109.51	3,998.9	-9.5	26.7	-8.3	0.00	0.00	0.00
4,100.0	5.00	109.51	4,098.5	-12.4	34.9	-10.8	0.00	0.00	0.00
4,200.0	5.00	109.51	4,198.2	-15.3	43.1	-13.4	0.00	0.00	0.00
4,300.0	5.00	109.51	4,297.8	-18.2	51.4	-15.9	0.00	0.00	0.00
4,400.0	5.00	109.51	4,397.4	-21.1	59.6	-18.5	0.00	0.00	0.00
4,500.0	5.00	109.51	4,497.0	-24.0	67.8	-21.0	0.00	0.00	0.00
4,600.0	5.00	109.51	4,596.6	-26.9	76.0	-23.5	0.00	0.00	0.00
4,700.0	5.00	109.51	4,696.3	-29.8	84.2	-26.1	0.00	0.00	0.00
4,800.0	5.00	109.51	4,795.9	-32.7	92.4	-28.6	0.00	0.00	0.00
4,900.0	5.00	109.51	4,895.5	-35.7	100.7	-31.2	0.00	0.00	0.00
5,000.0	5.00	109.51	4,995.1	-38.6	108.9	-33.7	0.00	0.00	0.00
5,100.0	5.00	109.51	5,094.7	-41.5	117.1	-36.3	0.00	0.00	0.00

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Santa Vaca 19/18 B3NC State Com #1H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3815.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	MD Reference:	WELL @ 3815.0usft (Original Well Elev)
Site:	Santa Vaca 19/18 B3NC State Com #1H	North Reference:	Grid
Well:	Sec 19, T19S, R35E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 100' FNL & 1950' FWL, Sec 18		
Design:	Design #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)	
5,200.0	5.00	109.51	5,194.4	-44.4	125.3	-38.8	0.00	0.00	0.00	
5,300.0	5.00	109.51	5,294.0	-47.3	133.5	-41.4	0.00	0.00	0.00	
5,400.0	5.00	109.51	5,393.6	-50.2	141.7	-43.9	0.00	0.00	0.00	
5,500.0	5.00	109.51	5,493.2	-53.1	149.9	-46.5	0.00	0.00	0.00	
5,600.0	5.00	109.51	5,592.8	-56.0	158.2	-49.0	0.00	0.00	0.00	
5,700.0	5.00	109.51	5,692.5	-58.9	166.4	-51.5	0.00	0.00	0.00	
5,800.0	5.00	109.51	5,792.1	-61.8	174.6	-54.1	0.00	0.00	0.00	
5,900.0	5.00	109.51	5,891.7	-64.8	182.8	-56.6	0.00	0.00	0.00	
6,000.0	5.00	109.51	5,991.3	-67.7	191.0	-59.2	0.00	0.00	0.00	
6,100.0	5.00	109.51	6,090.9	-70.6	199.2	-61.7	0.00	0.00	0.00	
6,200.0	5.00	109.51	6,190.5	-73.5	207.5	-64.3	0.00	0.00	0.00	
6,300.0	5.00	109.51	6,290.2	-76.4	215.7	-66.8	0.00	0.00	0.00	
6,400.0	5.00	109.51	6,389.8	-79.3	223.9	-69.4	0.00	0.00	0.00	
6,500.0	5.00	109.51	6,489.4	-82.2	232.1	-71.9	0.00	0.00	0.00	
6,600.0	5.00	109.51	6,589.0	-85.1	240.3	-74.5	0.00	0.00	0.00	
6,700.0	5.00	109.51	6,688.6	-88.0	248.5	-77.0	0.00	0.00	0.00	
6,800.0	5.00	109.51	6,788.3	-91.0	256.8	-79.5	0.00	0.00	0.00	
6,900.0	5.00	109.51	6,887.9	-93.9	265.0	-82.1	0.00	0.00	0.00	
7,000.0	5.00	109.51	6,987.5	-96.8	273.2	-84.6	0.00	0.00	0.00	
7,100.0	5.00	109.51	7,087.1	-99.7	281.4	-87.2	0.00	0.00	0.00	
7,200.0	5.00	109.51	7,186.7	-102.6	289.6	-89.7	0.00	0.00	0.00	
7,300.0	5.00	109.51	7,286.4	-105.5	297.8	-92.3	0.00	0.00	0.00	
7,400.0	5.00	109.51	7,386.0	-108.4	306.0	-94.8	0.00	0.00	0.00	
7,500.0	5.00	109.51	7,485.6	-111.3	314.3	-97.4	0.00	0.00	0.00	
7,600.0	5.00	109.51	7,585.2	-114.2	322.5	-99.9	0.00	0.00	0.00	
7,700.0	5.00	109.51	7,684.8	-117.1	330.7	-102.5	0.00	0.00	0.00	
7,800.0	5.00	109.51	7,784.5	-120.1	338.9	-105.0	0.00	0.00	0.00	
7,900.0	5.00	109.51	7,884.1	-123.0	347.1	-107.5	0.00	0.00	0.00	
8,000.0	5.00	109.51	7,983.7	-125.9	355.3	-110.1	0.00	0.00	0.00	
8,100.0	5.00	109.51	8,083.3	-128.8	363.6	-112.6	0.00	0.00	0.00	
8,200.0	5.00	109.51	8,182.9	-131.7	371.8	-115.2	0.00	0.00	0.00	
8,300.0	5.00	109.51	8,282.6	-134.6	380.0	-117.7	0.00	0.00	0.00	
8,400.0	5.00	109.51	8,382.2	-137.5	388.2	-120.3	0.00	0.00	0.00	
8,500.0	5.00	109.51	8,481.8	-140.4	396.4	-122.8	0.00	0.00	0.00	
8,600.0	5.00	109.51	8,581.4	-143.3	404.6	-125.4	0.00	0.00	0.00	
8,700.0	5.00	109.51	8,681.0	-146.3	412.9	-127.9	0.00	0.00	0.00	
8,800.0	5.00	109.51	8,780.7	-149.2	421.1	-130.5	0.00	0.00	0.00	
8,900.0	5.00	109.51	8,880.3	-152.1	429.3	-133.0	0.00	0.00	0.00	
9,000.0	5.00	109.51	8,979.9	-155.0	437.5	-135.5	0.00	0.00	0.00	
9,100.0	5.00	109.51	9,079.5	-157.9	445.7	-138.1	0.00	0.00	0.00	
9,200.0	5.00	109.51	9,179.1	-160.8	453.9	-140.6	0.00	0.00	0.00	
9,300.0	5.00	109.51	9,278.8	-163.7	462.1	-143.2	0.00	0.00	0.00	
9,400.0	5.00	109.51	9,378.4	-166.6	470.4	-145.7	0.00	0.00	0.00	
9,500.0	5.00	109.51	9,478.0	-169.5	478.6	-148.3	0.00	0.00	0.00	
9,600.0	5.00	109.51	9,577.6	-172.4	486.8	-150.8	0.00	0.00	0.00	
9,700.0	5.00	109.51	9,677.2	-175.4	495.0	-153.4	0.00	0.00	0.00	
9,800.0	5.00	109.51	9,776.8	-178.3	503.2	-155.9	0.00	0.00	0.00	
9,900.0	5.00	109.51	9,876.5	-181.2	511.4	-158.5	0.00	0.00	0.00	
10,000.0	5.00	109.51	9,976.1	-184.1	519.7	-161.0	0.00	0.00	0.00	
10,100.0	5.00	109.51	10,075.7	-187.0	527.9	-163.5	0.00	0.00	0.00	
10,146.8	5.00	109.51	10,122.3	-188.4	531.7	-164.7	0.00	0.00	0.00	
10,200.0	3.94	109.51	10,175.4	-189.7	535.6	-166.0	2.00	-2.00	0.00	
10,300.0	1.94	109.51	10,275.2	-191.5	540.5	-167.4	2.00	-2.00	0.00	
10,396.8	0.00	0.00	10,372.0	-192.0	542.0	-167.9	2.00	-2.00	0.00	

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Santa Vaca 19/18 B3NC State Com #1H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3815.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	MD Reference:	WELL @ 3815.0usft (Original Well Elev)
Site:	Santa Vaca 19/18 B3NC State Com #1H	North Reference:	Grid
Well:	Sec 19, T19S, R35E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 100' FNL & 1950' FWL, Sec 18		
Design:	Design #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)
KOP: 10' FSL & 1950' FWL (19)									
10,400.0	0.32	359.53	10,375.2	-192.0	542.0	-167.9	10.00	10.00	0.00
10,450.0	5.32	359.53	10,425.1	-189.5	542.0	-165.5	10.00	10.00	0.00
10,500.0	10.32	359.53	10,474.7	-182.7	541.9	-158.7	10.00	10.00	0.00
10,550.0	15.31	359.53	10,523.4	-171.7	541.8	-147.6	10.00	10.00	0.00
10,600.0	20.31	359.53	10,571.0	-156.4	541.7	-132.3	10.00	10.00	0.00
10,650.0	25.31	359.53	10,617.1	-137.0	541.5	-113.0	10.00	10.00	0.00
10,700.0	30.31	359.53	10,661.3	-113.7	541.4	-89.7	10.00	10.00	0.00
10,722.4	32.55	359.53	10,680.3	-102.0	541.3	-78.0	10.00	10.00	0.00
FTP: 100' FSL & 1950' FWL (19)									
10,750.0	35.31	359.53	10,703.3	-86.6	541.1	-62.6	10.00	10.00	0.00
10,800.0	40.31	359.53	10,742.8	-55.9	540.9	-32.0	10.00	10.00	0.00
10,850.0	45.31	359.53	10,779.4	-22.0	540.6	1.9	10.00	10.00	0.00
10,900.0	50.31	359.53	10,813.0	15.1	540.3	38.9	10.00	10.00	0.00
10,950.0	55.31	359.53	10,843.2	54.9	540.0	78.6	10.00	10.00	0.00
11,000.0	60.31	359.53	10,869.9	97.2	539.6	120.9	10.00	10.00	0.00
11,050.0	65.30	359.53	10,892.7	141.6	539.2	165.3	10.00	10.00	0.00
11,100.0	70.30	359.53	10,911.6	187.9	538.9	211.5	10.00	10.00	0.00
11,150.0	75.30	359.53	10,926.4	235.7	538.5	259.2	10.00	10.00	0.00
11,200.0	80.30	359.53	10,936.9	284.5	538.1	308.0	10.00	10.00	0.00
11,250.0	85.30	359.53	10,943.2	334.1	537.6	357.5	10.00	10.00	0.00
11,300.0	90.30	359.53	10,945.1	384.0	537.2	407.4	10.00	10.00	0.00
11,308.0	91.10	359.53	10,945.0	392.0	537.2	415.3	10.00	10.00	0.00
LP: 594' FSL & 1950' FWL (19)									
11,400.0	91.10	359.53	10,943.2	484.0	536.4	507.2	0.00	0.00	0.00
11,500.0	91.10	359.53	10,941.3	584.0	535.6	607.0	0.00	0.00	0.00
11,600.0	91.10	359.53	10,939.4	684.0	534.7	706.9	0.00	0.00	0.00
11,700.0	91.10	359.53	10,937.5	784.0	533.9	806.7	0.00	0.00	0.00
11,800.0	91.10	359.53	10,935.6	883.9	533.1	906.6	0.00	0.00	0.00
11,900.0	91.10	359.53	10,933.7	983.9	532.3	1,006.4	0.00	0.00	0.00
12,000.0	91.10	359.53	10,931.7	1,083.9	531.4	1,106.3	0.00	0.00	0.00
12,100.0	91.10	359.53	10,929.8	1,183.9	530.6	1,206.1	0.00	0.00	0.00
12,200.0	91.10	359.53	10,927.9	1,283.9	529.8	1,306.0	0.00	0.00	0.00
12,300.0	91.10	359.53	10,926.0	1,383.8	528.9	1,405.8	0.00	0.00	0.00
12,400.0	91.10	359.53	10,924.1	1,483.8	528.1	1,505.6	0.00	0.00	0.00
12,500.0	91.10	359.53	10,922.2	1,583.8	527.3	1,605.5	0.00	0.00	0.00
12,600.0	91.10	359.53	10,920.3	1,683.8	526.5	1,705.3	0.00	0.00	0.00
12,700.0	91.10	359.53	10,918.3	1,783.7	525.6	1,805.2	0.00	0.00	0.00
12,800.0	91.10	359.53	10,916.4	1,883.7	524.8	1,905.0	0.00	0.00	0.00
12,900.0	91.10	359.53	10,914.5	1,983.7	524.0	2,004.9	0.00	0.00	0.00
13,000.0	91.10	359.53	10,912.6	2,083.7	523.2	2,104.7	0.00	0.00	0.00
13,100.0	91.10	359.53	10,910.7	2,183.7	522.3	2,204.6	0.00	0.00	0.00
13,200.0	91.10	359.53	10,908.8	2,283.6	521.5	2,304.4	0.00	0.00	0.00
13,300.0	91.10	359.53	10,906.9	2,383.6	520.7	2,404.2	0.00	0.00	0.00
13,400.0	91.10	359.53	10,904.9	2,483.6	519.8	2,504.1	0.00	0.00	0.00
13,500.0	91.10	359.53	10,903.0	2,583.6	519.0	2,603.9	0.00	0.00	0.00
13,600.0	91.10	359.53	10,901.1	2,683.5	518.2	2,703.8	0.00	0.00	0.00
13,700.0	91.10	359.53	10,899.2	2,783.5	517.4	2,803.6	0.00	0.00	0.00
13,800.0	91.10	359.53	10,897.3	2,883.5	516.5	2,903.5	0.00	0.00	0.00
13,900.0	91.10	359.53	10,895.4	2,983.5	515.7	3,003.3	0.00	0.00	0.00
14,000.0	91.10	359.53	10,893.5	3,083.5	514.9	3,103.2	0.00	0.00	0.00
14,100.0	91.10	359.53	10,891.5	3,183.4	514.0	3,203.0	0.00	0.00	0.00
14,200.0	91.10	359.53	10,889.6	3,283.4	513.2	3,302.8	0.00	0.00	0.00

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Santa Vaca 19/18 B3NC State Com #1H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3815.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	MD Reference:	WELL @ 3815.0usft (Original Well Elev)
Site:	Santa Vaca 19/18 B3NC State Com #1H	North Reference:	Grid
Well:	Sec 19, T19S, R35E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 100' FNL & 1950' FWL, Sec 18		
Design:	Design #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)	
14,300.0	91.10	359.53	10,887.7	3,383.4	512.4	3,402.7	0.00	0.00	0.00	
14,400.0	91.10	359.53	10,885.8	3,483.4	511.6	3,502.5	0.00	0.00	0.00	
14,500.0	91.10	359.53	10,883.9	3,583.4	510.7	3,602.4	0.00	0.00	0.00	
14,600.0	91.10	359.53	10,882.0	3,683.3	509.9	3,702.2	0.00	0.00	0.00	
14,700.0	91.10	359.53	10,880.1	3,783.3	509.1	3,802.1	0.00	0.00	0.00	
14,800.0	91.10	359.53	10,878.1	3,883.3	508.2	3,901.9	0.00	0.00	0.00	
14,900.0	91.10	359.53	10,876.2	3,983.3	507.4	4,001.8	0.00	0.00	0.00	
15,000.0	91.10	359.53	10,874.3	4,083.2	506.6	4,101.6	0.00	0.00	0.00	
15,100.0	91.10	359.53	10,872.4	4,183.2	505.8	4,201.4	0.00	0.00	0.00	
15,200.0	91.10	359.53	10,870.5	4,283.2	504.9	4,301.3	0.00	0.00	0.00	
15,300.0	91.10	359.53	10,868.6	4,383.2	504.1	4,401.1	0.00	0.00	0.00	
15,400.0	91.10	359.53	10,866.6	4,483.2	503.3	4,501.0	0.00	0.00	0.00	
15,500.0	91.10	359.53	10,864.7	4,583.1	502.5	4,600.8	0.00	0.00	0.00	
15,600.0	91.10	359.53	10,862.8	4,683.1	501.6	4,700.7	0.00	0.00	0.00	
15,700.0	91.10	359.53	10,860.9	4,783.1	500.8	4,800.5	0.00	0.00	0.00	
15,800.0	91.10	359.53	10,859.0	4,883.1	500.0	4,900.4	0.00	0.00	0.00	
15,900.0	91.10	359.53	10,857.1	4,983.0	499.1	5,000.2	0.00	0.00	0.00	
16,000.0	91.10	359.53	10,855.2	5,083.0	498.3	5,100.0	0.00	0.00	0.00	
16,100.0	91.10	359.53	10,853.2	5,183.0	497.5	5,199.9	0.00	0.00	0.00	
16,200.0	91.10	359.53	10,851.3	5,283.0	496.7	5,299.7	0.00	0.00	0.00	
16,300.0	91.10	359.53	10,849.4	5,383.0	495.8	5,399.6	0.00	0.00	0.00	
16,400.0	91.10	359.53	10,847.5	5,482.9	495.0	5,499.4	0.00	0.00	0.00	
16,500.0	91.10	359.53	10,845.6	5,582.9	494.2	5,599.3	0.00	0.00	0.00	
16,600.0	91.10	359.53	10,843.7	5,682.9	493.3	5,699.1	0.00	0.00	0.00	
16,700.0	91.10	359.53	10,841.8	5,782.9	492.5	5,799.0	0.00	0.00	0.00	
16,800.0	91.10	359.53	10,839.8	5,882.9	491.7	5,898.8	0.00	0.00	0.00	
16,900.0	91.10	359.53	10,837.9	5,982.8	490.9	5,998.7	0.00	0.00	0.00	
17,000.0	91.10	359.53	10,836.0	6,082.8	490.0	6,098.5	0.00	0.00	0.00	
17,100.0	91.10	359.53	10,834.1	6,182.8	489.2	6,198.3	0.00	0.00	0.00	
17,200.0	91.10	359.53	10,832.2	6,282.8	488.4	6,298.2	0.00	0.00	0.00	
17,300.0	91.10	359.53	10,830.3	6,382.7	487.5	6,398.0	0.00	0.00	0.00	
17,400.0	91.10	359.53	10,828.4	6,482.7	486.7	6,497.9	0.00	0.00	0.00	
17,500.0	91.10	359.53	10,826.4	6,582.7	485.9	6,597.7	0.00	0.00	0.00	
17,600.0	91.10	359.53	10,824.5	6,682.7	485.1	6,697.6	0.00	0.00	0.00	
17,700.0	91.10	359.53	10,822.6	6,782.7	484.2	6,797.4	0.00	0.00	0.00	
17,800.0	91.10	359.53	10,820.7	6,882.6	483.4	6,897.3	0.00	0.00	0.00	
17,900.0	91.10	359.53	10,818.8	6,982.6	482.6	6,997.1	0.00	0.00	0.00	
18,000.0	91.10	359.53	10,816.9	7,082.6	481.8	7,096.9	0.00	0.00	0.00	
18,100.0	91.10	359.53	10,815.0	7,182.6	480.9	7,196.8	0.00	0.00	0.00	
18,200.0	91.10	359.53	10,813.0	7,282.5	480.1	7,296.6	0.00	0.00	0.00	
18,300.0	91.10	359.53	10,811.1	7,382.5	479.3	7,396.5	0.00	0.00	0.00	
18,400.0	91.10	359.53	10,809.2	7,482.5	478.4	7,496.3	0.00	0.00	0.00	
18,500.0	91.10	359.53	10,807.3	7,582.5	477.6	7,596.2	0.00	0.00	0.00	
18,600.0	91.10	359.53	10,805.4	7,682.5	476.8	7,696.0	0.00	0.00	0.00	
18,700.0	91.10	359.53	10,803.5	7,782.4	476.0	7,795.9	0.00	0.00	0.00	
18,800.0	91.10	359.53	10,801.5	7,882.4	475.1	7,895.7	0.00	0.00	0.00	
18,900.0	91.10	359.53	10,799.6	7,982.4	474.3	7,995.5	0.00	0.00	0.00	
19,000.0	91.10	359.53	10,797.7	8,082.4	473.5	8,095.4	0.00	0.00	0.00	
19,100.0	91.10	359.53	10,795.8	8,182.4	472.6	8,195.2	0.00	0.00	0.00	
19,200.0	91.10	359.53	10,793.9	8,282.3	471.8	8,295.1	0.00	0.00	0.00	
19,300.0	91.10	359.53	10,792.0	8,382.3	471.0	8,394.9	0.00	0.00	0.00	
19,400.0	91.10	359.53	10,790.1	8,482.3	470.2	8,494.8	0.00	0.00	0.00	
19,500.0	91.10	359.53	10,788.1	8,582.3	469.3	8,594.6	0.00	0.00	0.00	
19,600.0	91.10	359.53	10,786.2	8,682.2	468.5	8,694.5	0.00	0.00	0.00	

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Santa Vaca 19/18 B3NC State Com #1H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3815.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	MD Reference:	WELL @ 3815.0usft (Original Well Elev)
Site:	Santa Vaca 19/18 B3NC State Com #1H	North Reference:	Grid
Well:	Sec 19, T19S, R35E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 100' FNL & 1950' FWL, Sec 18		
Design:	Design #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)	
19,700.0	91.10	359.53	10,784.3	8,782.2	467.7	8,794.3	0.00	0.00	0.00	
19,800.0	91.10	359.53	10,782.4	8,882.2	466.8	8,894.1	0.00	0.00	0.00	
19,900.0	91.10	359.53	10,780.5	8,982.2	466.0	8,994.0	0.00	0.00	0.00	
20,000.0	91.10	359.53	10,778.6	9,082.2	465.2	9,093.8	0.00	0.00	0.00	
20,100.0	91.10	359.53	10,776.7	9,182.1	464.4	9,193.7	0.00	0.00	0.00	
20,200.0	91.10	359.53	10,774.7	9,282.1	463.5	9,293.5	0.00	0.00	0.00	
20,300.0	91.10	359.53	10,772.8	9,382.1	462.7	9,393.4	0.00	0.00	0.00	
20,400.0	91.10	359.53	10,770.9	9,482.1	461.9	9,493.2	0.00	0.00	0.00	
20,500.0	91.10	359.53	10,769.0	9,582.0	461.1	9,593.1	0.00	0.00	0.00	
20,600.0	91.10	359.53	10,767.1	9,682.0	460.2	9,692.9	0.00	0.00	0.00	
20,700.0	91.10	359.53	10,765.2	9,782.0	459.4	9,792.7	0.00	0.00	0.00	
20,800.0	91.10	359.53	10,763.3	9,882.0	458.6	9,892.6	0.00	0.00	0.00	
20,900.0	91.10	359.53	10,761.3	9,982.0	457.7	9,992.4	0.00	0.00	0.00	
21,000.0	91.10	359.53	10,759.4	10,081.9	456.9	10,092.3	0.00	0.00	0.00	
21,100.0	91.10	359.53	10,757.5	10,181.9	456.1	10,192.1	0.00	0.00	0.00	
21,200.0	91.10	359.53	10,755.6	10,281.9	455.3	10,292.0	0.00	0.00	0.00	
21,231.1	91.10	359.53	10,755.0	10,313.0	455.0	10,323.0	0.00	0.00	0.00	
BHL: 100' FNL & 1950' FWL (19)										

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	
SHL: 205' FSL & 1410' F - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	597,316.00	797,669.00	32.6393084	-103.5006082	
KOP: 10' FSL & 1950' F - plan hits target center - Point	0.00	0.00	10,372.0	-192.0	542.0	597,124.00	798,211.00	32.6387690	-103.4988525	
FTP: 100' FSL & 1950' F - plan hits target center - Point	0.00	0.00	10,680.3	-102.0	541.3	597,214.00	798,210.25	32.6390164	-103.4988526	
BHL: 100' FNL & 1950' F - plan hits target center - Point	0.00	0.00	10,755.0	10,313.0	455.0	607,629.00	798,124.00	32.6676431	-103.4988669	
LP: 594' FSL & 1950' FV - plan hits target center - Point	0.00	0.00	10,945.0	392.0	537.2	597,708.00	798,206.16	32.6403742	-103.4988533	