Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM16348

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
ARMSTRONG 26/23 W0EE FED COM 4H

2. Name of Operator
MEWBOURNE OIL COMPANY
Contact: JACKIE LATHAN
E-Mail: jlathan@mewbourne.com

9. API Well No.
30-015-46304-00-X1

3a. Address
P O BOX 5270
HOBBS, NM 88241

3b. Phone No. (include area code)
Ph: 575-393-5905

10. Field and Pool or Exploratory Area
WOLFCAMP

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 26 T25S R31E SWNW 2500FNL 870FWL
32.101694 N Lat, 103.754581 W Lon

11. County or Parish, State
EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original A PD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Mewbourne Oil Company would like to make the following chages:

1. Change BHL from (330' FNL & 330' FWL, Sec 23) to (1420' FNL & 330' FWL, Sec 23)

2. Change well name from current to Armstrong 26/23 W0EE Fed Com 4H

Carlsbad Field Office
Operator Copy

The following are attached:

Direction plan
Direction plot
Casing Assumptions

All Previous COAs Still Apply. See Attached COA

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #493083 verified by the BLM Well Information System
For MEWBOURNE OIL COMPANY, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 01/13/2020 (20PP0860SE)

Name *(Printed/Typed)* JAKE MAXEY — Title ENGINEER

Signature (Electronic Submission) — Date 11/20/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By OLABODE AJIBOLA — Title PETROLEUM ENGINEER — Date 01/17/2020

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Carlsbad

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Accepted for Record 03/25/2020 - KMS NMOCD

Additional data for EC transaction #493083 that would not fit on the form

32. Additional remarks, continued

C-101
C-102
Drilling Program

Revisions to Operator-Submitted EC Data for Sundry Notice #493083

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM16348	NMNM16348
Agreement:		
Operator:	MEWBOURNE OIL COMPANY PO BOX 5270 HOBBS, NM 88241 Ph: 575-393-5905	MEWBOURNE OIL COMPANY P O BOX 5270 HOBBS, NM 88241 Ph: 575.393.5905
Admin Contact:	JACKIE LATHAN AUTHORIZED REPRESENTATIVE E-Mail: jlathan@mewbourne.com Ph: 575-393-5905	JACKIE LATHAN AUTHORIZED REPRESENTATIVE E-Mail: jlathan@mewbourne.com Ph: 575-393-5905
Tech Contact:	JAKE MAXEY ENGINEER E-Mail: jmaxey@mewbourne.com Ph: 575-393-5905 Ext: 5028	JAKE MAXEY ENGINEER E-Mail: jmaxey@mewbourne.com Ph: 575-393-5905 Ext: 5028
Location: State: County:	 NM EDDY	 NM EDDY
Field/Pool:	PURPLE SAGE; WOLFCAMP GAS	WOLFCAMP
Well/Facility:	ARMSTRONG 26/23 W0ED FED COM 4H Sec 26 T25S R31E Mer NMP SWNW 2500FNL 870FWL	ARMSTRONG 26/23 W0EE FED COM 4H Sec 26 T25S R31E SWNW 2500FNL 870FWL 32.101694 N Lat, 103.754581 W Lon

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Mewbourne Oil Company**
LEASE NO.:	**NMNM16348**
WELL NAME & NO.:	Armstrong 26-23 W0EE Fed Com 4H
SURFACE HOLE FOOTAGE:	2500'/N & 870'/W
BOTTOM HOLE FOOTAGE	1420'/N & 330'/W
LOCATION:	Section 26, T.25 S., R.31 E., NMP
COUNTY:	Eddy County, New Mexico

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	○ Low	◉ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

All Previous COAs Still Apply.

A. CASING

Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **1000** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength,

whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing shall be set at approximately **4218** feet is:

   - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

3. The minimum required fill of cement behind the **7** inch production casing is:

Option 1 (Single Stage):

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
  Excess cement calculates to 5%, additional cement might be required.

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

   - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

4. The minimum required fill of cement behind the **4-1/2** inch production liner is:

   - Cement should tie-back **100 feet** into the previous casing. Operator shall provide method of verification.

B. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

C. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

OTA01172020

Intent [X] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
Mewbourne Oil Co.	Armstrong 26/23 W0EE Fed Com	4H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
E	26	25S	31E		2400	S	330	W	Eddy

Latitude	Longitude	NAD
32.1006166	-103.7563312	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
E	26	25S	31E		2319	N	330	W	Eddy

Latitude	Longitude	NAD
32.1015677	-103.7563277	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
E	26	25S	31E		1420	N	330	W	Eddy

Latitude	Longitude	NAD
32.1192153	-103.7562626	83

Is this well the defining well for the Horizontal Spacing Unit? [N]

Is this well an infill well? [Y]

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
Mewbourne Oil Company	Armstrong 26/23 W1FF Fed Com	1H

KZ 06/29/2018

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-015-46304	98220	Purple Sage; Wolfcamp Gas

4 Property Code	5 Property Name	6 Well Number
	ARMSTRONG 26/23 WOEE FED COM	4H

7 OGRID NO.	8 Operator Name	9 Elevation
14744	MEWBOURNE OIL COMPANY	3330'

10 Surface Location

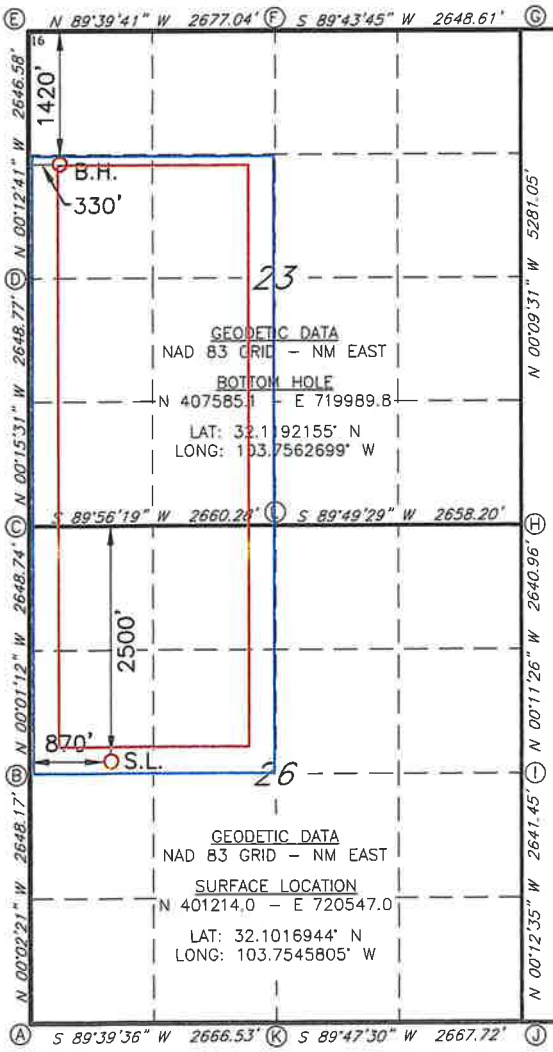
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
E	26	25S	31E		2500	NORTH	870	WEST	EDDY

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
E	23	25S	31E		1420	NORTH	330	WEST	EDDY

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

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.



CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1939"
N 398416.8 – E 719679.1

B: FOUND BRASS CAP "1939"
N 401064.4 – E 719677.2

C: CALCULATED CORNER
N 403712.6 – E 719676.3

D: FOUND BRASS CAP "1939"
N 406360.7 – E 719664.4

E: CALCULATED CORNER
N 409006.7 – E 719654.6

F: FOUND BRASS CAP "1939"
N 408990.9 – E 722331.0

G: FOUND 2" PIPE
N 409003.4 – E 724979.0

H: FOUND BRASS CAP "1939"
N 403723.6 – E 724993.6

I: FOUND BRASS CAP "1939"
N 401083.2 – E 725002.4

J: FOUND BRASS CAP "1939"
N 398442.3 – E 725012.1

K: FOUND BRASS CAP "1939"
N 398432.6 – E 722344.9

L: FOUND BRASS CAP "1939"
N 403715.4 – E 722336.0

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 — Date: 10-15-2019

Jake Maxey
Printed Name

jmaxey@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.

12-11-18
Date of Survey

Signature and Seal of Professional Surveyor:

ROBERT M. HOWETT
NEW MEXICO
19680
PROFESSIONAL SURVEYOR

19680
Certificate Number

REV. 9/16/19 NAME/BHL

LS18121326D

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	975'	13.375"	48	H40	STC	1.73	3.88	6.88	11.56
12.25"	0'	4218'	9.625"	40	L80	LTC	1.41	2.62	4.31	5.43
8.75"	0'	11950'	7"	26	HCP110	LTC	1.34	1.71	2.23	2.67
6.125"	11373'	18411'	4.5"	13.5	P110	LTC	1.34	1.55	3.56	4.44
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h
Must have table for contingency casing

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company

Eddy County, New Mexico NAD 83
Armstrong 26/23 W0EE Fed Com #4H
Sec 26, T25S, R31E
SHL: 2500' FNL & 870' FWL, Sec 26
BHL: 1420' FNL & 330' FWL, Sec 23

Plan: Design #1

Standard Planning Report

17 September, 2019

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Armstrong 26/23 W0EE Fed Com #4H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3357.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 3357.0usft (Original Well Elev)
Site:	Armstrong 26/23 W0EE Fed Com #4H	**North Reference:**	Grid
Well:	Sec 26, T25S, R31E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 1420' FNL & 330' FWL, Sec 23		
Design:	Design #1		

Project	Eddy County, New Mexico NAD 83		
Map System:	US State Plane 1983	**System Datum:**	Ground Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Armstrong 26/23 W0EE Fed Com #4H				
Site Position:		**Northing:**	401,214.00 usft	**Latitude:**	32.1016944
From:	Map	**Easting:**	720,547.00 usft	**Longitude:**	-103.7545805
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.31 °

Well	Sec 26, T25S, R31E					
Well Position	**+N/-S**	0.0 usft	**Northing:**	401,214.00 usft	**Latitude:**	32.1016944
	+E/-W	0.0 usft	**Easting:**	720,547.00 usft	**Longitude:**	-103.7545805
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	3,357.0 usft	**Ground Level:**	3,330.0 usft

Wellbore	BHL: 1420' FNL & 330' FWL, Sec 23			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	9/9/2019	6.64	59.83	47,678

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	355.02

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	
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,682.6	5.74	233.82	4,682.0	-11.3	-15.5	1.50	1.50	0.00	233.82	
10,990.3	5.74	233.82	10,958.0	-383.7	-524.5	0.00	0.00	0.00	0.00	
11,372.9	0.00	0.00	11,340.0	-395.0	-540.0	1.50	-1.50	0.00	180.00	KOP: 2400' FSL & 33
12,124.4	90.27	359.87	11,817.0	84.3	-541.1	12.01	12.01	0.00	-0.13	
18,411.3	90.27	359.87	11,787.0	6,371.0	-555.0	0.00	0.00	0.00	0.00	BHL: 1420' FNL & 33(

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Armstrong 26/23 W0EE Fed Com #4H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3357.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 3357.0usft (Original Well Elev)
Site:	Armstrong 26/23 W0EE Fed Com #4H	**North Reference:**	Grid
Well:	Sec 26, T25S, R31E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 1420' FNL & 330' FWL, Sec 23		
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: 2500' FNL & 870' FWL, Sec 26									
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
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	1.50	233.82	4,400.0	-0.8	-1.1	-0.7	1.50	1.50	0.00
4,500.0	3.00	233.82	4,499.9	-3.1	-4.2	-2.7	1.50	1.50	0.00
4,600.0	4.50	233.82	4,599.7	-7.0	-9.5	-6.1	1.50	1.50	0.00
4,682.6	5.74	233.82	4,682.0	-11.3	-15.5	-9.9	1.50	1.50	0.00
4,700.0	5.74	233.82	4,699.3	-12.3	-16.9	-10.8	0.00	0.00	0.00
4,800.0	5.74	233.82	4,798.8	-18.2	-24.9	-16.0	0.00	0.00	0.00
4,900.0	5.74	233.82	4,898.3	-24.1	-33.0	-21.2	0.00	0.00	0.00
5,000.0	5.74	233.82	4,997.8	-30.0	-41.1	-26.4	0.00	0.00	0.00
5,100.0	5.74	233.82	5,097.3	-35.9	-49.1	-31.5	0.00	0.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Armstrong 26/23 W0EE Fed Com #4H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3357.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 3357.0usft (Original Well Elev)
Site:	Armstrong 26/23 W0EE Fed Com #4H	**North Reference:**	Grid
Well:	Sec 26, T25S, R31E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 1420' FNL & 330' FWL, Sec 23		
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	5.74	233.82	5,196.8	-41.8	-57.2	-36.7	0.00	0.00	0.00
5,300.0	5.74	233.82	5,296.3	-47.8	-65.3	-41.9	0.00	0.00	0.00
5,400.0	5.74	233.82	5,395.8	-53.7	-73.4	-47.1	0.00	0.00	0.00
5,500.0	5.74	233.82	5,495.3	-59.6	-81.4	-52.3	0.00	0.00	0.00
5,600.0	5.74	233.82	5,594.8	-65.5	-89.5	-57.5	0.00	0.00	0.00
5,700.0	5.74	233.82	5,694.3	-71.4	-97.6	-62.6	0.00	0.00	0.00
5,800.0	5.74	233.82	5,793.8	-77.3	-105.6	-67.8	0.00	0.00	0.00
5,900.0	5.74	233.82	5,893.3	-83.2	-113.7	-73.0	0.00	0.00	0.00
6,000.0	5.74	233.82	5,992.8	-89.1	-121.8	-78.2	0.00	0.00	0.00
6,100.0	5.74	233.82	6,092.3	-95.0	-129.9	-83.4	0.00	0.00	0.00
6,200.0	5.74	233.82	6,191.8	-100.9	-137.9	-88.5	0.00	0.00	0.00
6,300.0	5.74	233.82	6,291.3	-106.8	-146.0	-93.7	0.00	0.00	0.00
6,400.0	5.74	233.82	6,390.8	-112.7	-154.1	-98.9	0.00	0.00	0.00
6,500.0	5.74	233.82	6,490.3	-118.6	-162.1	-104.1	0.00	0.00	0.00
6,600.0	5.74	233.82	6,589.7	-124.5	-170.2	-109.3	0.00	0.00	0.00
6,700.0	5.74	233.82	6,689.2	-130.4	-178.3	-114.4	0.00	0.00	0.00
6,800.0	5.74	233.82	6,788.7	-136.3	-186.3	-119.6	0.00	0.00	0.00
6,900.0	5.74	233.82	6,888.2	-142.2	-194.4	-124.8	0.00	0.00	0.00
7,000.0	5.74	233.82	6,987.7	-148.1	-202.5	-130.0	0.00	0.00	0.00
7,100.0	5.74	233.82	7,087.2	-154.0	-210.6	-135.2	0.00	0.00	0.00
7,200.0	5.74	233.82	7,186.7	-159.9	-218.6	-140.3	0.00	0.00	0.00
7,300.0	5.74	233.82	7,286.2	-165.8	-226.7	-145.5	0.00	0.00	0.00
7,400.0	5.74	233.82	7,385.7	-171.7	-234.8	-150.7	0.00	0.00	0.00
7,500.0	5.74	233.82	7,485.2	-177.6	-242.8	-155.9	0.00	0.00	0.00
7,600.0	5.74	233.82	7,584.7	-183.5	-250.9	-161.1	0.00	0.00	0.00
7,700.0	5.74	233.82	7,684.2	-189.4	-259.0	-166.3	0.00	0.00	0.00
7,800.0	5.74	233.82	7,783.7	-195.3	-267.1	-171.4	0.00	0.00	0.00
7,900.0	5.74	233.82	7,883.2	-201.3	-275.1	-176.6	0.00	0.00	0.00
8,000.0	5.74	233.82	7,982.7	-207.2	-283.2	-181.8	0.00	0.00	0.00
8,100.0	5.74	233.82	8,082.2	-213.1	-291.3	-187.0	0.00	0.00	0.00
8,200.0	5.74	233.82	8,181.7	-219.0	-299.3	-192.2	0.00	0.00	0.00
8,300.0	5.74	233.82	8,281.2	-224.9	-307.4	-197.3	0.00	0.00	0.00
8,400.0	5.74	233.82	8,380.7	-230.8	-315.5	-202.5	0.00	0.00	0.00
8,500.0	5.74	233.82	8,480.2	-236.7	-323.6	-207.7	0.00	0.00	0.00
8,600.0	5.74	233.82	8,579.7	-242.6	-331.6	-212.9	0.00	0.00	0.00
8,700.0	5.74	233.82	8,679.2	-248.5	-339.7	-218.1	0.00	0.00	0.00
8,800.0	5.74	233.82	8,778.7	-254.4	-347.8	-223.2	0.00	0.00	0.00
8,900.0	5.74	233.82	8,878.2	-260.3	-355.8	-228.4	0.00	0.00	0.00
9,000.0	5.74	233.82	8,977.7	-266.2	-363.9	-233.6	0.00	0.00	0.00
9,100.0	5.74	233.82	9,077.2	-272.1	-372.0	-238.8	0.00	0.00	0.00
9,200.0	5.74	233.82	9,176.7	-278.0	-380.1	-244.0	0.00	0.00	0.00
9,300.0	5.74	233.82	9,276.2	-283.9	-388.1	-249.2	0.00	0.00	0.00
9,400.0	5.74	233.82	9,375.7	-289.8	-396.2	-254.3	0.00	0.00	0.00
9,500.0	5.74	233.82	9,475.2	-295.7	-404.3	-259.5	0.00	0.00	0.00
9,600.0	5.74	233.82	9,574.7	-301.6	-412.3	-264.7	0.00	0.00	0.00
9,700.0	5.74	233.82	9,674.2	-307.5	-420.4	-269.9	0.00	0.00	0.00
9,800.0	5.74	233.82	9,773.7	-313.4	-428.5	-275.1	0.00	0.00	0.00
9,900.0	5.74	233.82	9,873.2	-319.3	-436.5	-280.2	0.00	0.00	0.00
10,000.0	5.74	233.82	9,972.7	-325.2	-444.6	-285.4	0.00	0.00	0.00
10,100.0	5.74	233.82	10,072.2	-331.1	-452.7	-290.6	0.00	0.00	0.00
10,200.0	5.74	233.82	10,171.7	-337.0	-460.8	-295.8	0.00	0.00	0.00
10,300.0	5.74	233.82	10,271.2	-342.9	-468.8	-301.0	0.00	0.00	0.00
10,400.0	5.74	233.82	10,370.7	-348.8	-476.9	-306.1	0.00	0.00	0.00
10,500.0	5.74	233.82	10,470.2	-354.8	-485.0	-311.3	0.00	0.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Armstrong 26/23 W0EE Fed Com #4H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3357.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 3357.0usft (Original Well Elev)
Site:	Armstrong 26/23 W0EE Fed Com #4H	**North Reference:**	Grid
Well:	Sec 26, T25S, R31E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 1420' FNL & 330' FWL, Sec 23		
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)
10,600.0	5.74	233.82	10,569.7	-360.7	-493.0	-316.5	0.00	0.00	0.00
10,700.0	5.74	233.82	10,669.2	-366.6	-501.1	-321.7	0.00	0.00	0.00
10,800.0	5.74	233.82	10,768.7	-372.5	-509.2	-326.9	0.00	0.00	0.00
10,900.0	5.74	233.82	10,868.2	-378.4	-517.3	-332.0	0.00	0.00	0.00
10,990.3	5.74	233.82	10,958.0	-383.7	-524.5	-336.7	0.00	0.00	0.00
11,000.0	5.59	233.82	10,967.7	-384.3	-525.3	-337.2	1.50	-1.50	0.00
11,100.0	4.09	233.82	11,067.3	-389.2	-532.1	-341.6	1.50	-1.50	0.00
11,200.0	2.59	233.82	11,167.2	-392.7	-536.8	-344.6	1.50	-1.50	0.00
11,300.0	1.09	233.82	11,267.1	-394.6	-539.4	-346.3	1.50	-1.50	0.00
11,372.9	0.00	0.00	11,340.0	-395.0	-540.0	-346.6	1.50	-1.50	0.00
KOP: 2400' FSL & 330' FWL, Sec 26									
11,375.0	0.25	359.87	11,342.1	-395.0	-540.0	-346.6	12.01	12.01	0.00
11,400.0	3.26	359.87	11,367.1	-394.2	-540.0	-345.9	12.01	12.01	0.00
11,425.0	6.26	359.87	11,392.0	-392.2	-540.0	-343.8	12.01	12.01	0.00
11,450.0	9.26	359.87	11,416.8	-388.8	-540.0	-340.5	12.01	12.01	0.00
11,475.0	12.26	359.87	11,441.3	-384.1	-540.0	-335.8	12.01	12.01	0.00
11,500.0	15.27	359.87	11,465.6	-378.2	-540.0	-329.9	12.01	12.01	0.00
11,525.0	18.27	359.87	11,489.5	-371.0	-540.1	-322.7	12.01	12.01	0.00
11,550.0	21.27	359.87	11,513.1	-362.5	-540.1	-314.3	12.01	12.01	0.00
11,575.0	24.28	359.87	11,536.1	-352.8	-540.1	-304.6	12.01	12.01	0.00
11,600.0	27.28	359.87	11,558.6	-342.0	-540.1	-293.8	12.01	12.01	0.00
11,625.0	30.28	359.87	11,580.5	-329.9	-540.1	-281.8	12.01	12.01	0.00
11,650.0	33.28	359.87	11,601.8	-316.7	-540.2	-268.7	12.01	12.01	0.00
11,675.0	36.29	359.87	11,622.3	-302.5	-540.2	-254.5	12.01	12.01	0.00
11,700.0	39.29	359.87	11,642.1	-287.2	-540.2	-239.2	12.01	12.01	0.00
11,725.0	42.29	359.87	11,661.0	-270.8	-540.3	-222.9	12.01	12.01	0.00
11,750.0	45.30	359.87	11,679.0	-253.5	-540.3	-205.7	12.01	12.01	0.00
11,775.0	48.30	359.87	11,696.1	-235.3	-540.4	-187.5	12.01	12.01	0.00
11,800.0	51.30	359.87	11,712.3	-216.2	-540.4	-168.5	12.01	12.01	0.00
11,825.0	54.30	359.87	11,727.4	-196.3	-540.4	-148.7	12.01	12.01	0.00
11,850.0	57.31	359.87	11,741.4	-175.6	-540.5	-128.1	12.01	12.01	0.00
11,875.0	60.31	359.87	11,754.4	-154.3	-540.5	-106.8	12.01	12.01	0.00
11,900.0	63.31	359.87	11,766.2	-132.2	-540.6	-84.8	12.01	12.01	0.00
11,925.0	66.32	359.87	11,776.8	-109.6	-540.6	-62.3	12.01	12.01	0.00
11,950.0	69.32	359.87	11,786.3	-86.5	-540.7	-39.2	12.01	12.01	0.00
11,975.0	72.32	359.87	11,794.5	-62.8	-540.7	-15.7	12.01	12.01	0.00
11,989.5	74.06	359.87	11,798.7	-49.0	-540.8	-1.9	12.01	12.01	0.00
FTP: 2549' FNL & 330' FWL (26)									
12,000.0	75.33	359.87	11,801.4	-38.8	-540.8	8.2	12.01	12.01	0.00
12,025.0	78.33	359.87	11,807.1	-14.5	-540.8	32.5	12.01	12.01	0.00
12,050.0	81.33	359.87	11,811.6	10.1	-540.9	57.0	12.01	12.01	0.00
12,075.0	84.33	359.87	11,814.7	34.9	-541.0	81.7	12.01	12.01	0.00
12,100.0	87.34	359.87	11,816.5	59.8	-541.0	106.6	12.01	12.01	0.00
12,124.4	90.27	359.87	11,817.0	84.3	-541.1	130.9	12.01	12.01	0.00
12,200.0	90.27	359.87	11,816.6	159.8	-541.2	206.2	0.00	0.00	0.00
12,300.0	90.27	359.87	11,816.2	259.8	-541.5	305.8	0.00	0.00	0.00
12,400.0	90.27	359.87	11,815.7	359.8	-541.7	405.5	0.00	0.00	0.00
12,500.0	90.27	359.87	11,815.2	459.8	-541.9	505.1	0.00	0.00	0.00
12,600.0	90.27	359.87	11,814.7	559.8	-542.1	604.8	0.00	0.00	0.00
12,700.0	90.27	359.87	11,814.3	659.8	-542.3	704.4	0.00	0.00	0.00
12,800.0	90.27	359.87	11,813.8	759.8	-542.6	804.0	0.00	0.00	0.00
12,900.0	90.27	359.87	11,813.3	859.8	-542.8	903.7	0.00	0.00	0.00
13,000.0	90.27	359.87	11,812.8	959.8	-543.0	1,003.3	0.00	0.00	0.00
13,100.0	90.27	359.87	11,812.3	1,059.8	-543.2	1,103.0	0.00	0.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Armstrong 26/23 W0EE Fed Com #4H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3357.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 3357.0usft (Original Well Elev)
Site:	Armstrong 26/23 W0EE Fed Com #4H	**North Reference:**	Grid
Well:	Sec 26, T25S, R31E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 1420' FNL & 330' FWL, Sec 23		
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)
13,200.0	90.27	359.87	11,811.9	1,159.8	-543.4	1,202.6	0.00	0.00	0.00
13,300.0	90.27	359.87	11,811.4	1,259.8	-543.7	1,302.2	0.00	0.00	0.00
13,400.0	90.27	359.87	11,810.9	1,359.8	-543.9	1,401.9	0.00	0.00	0.00
13,500.0	90.27	359.87	11,810.4	1,459.8	-544.1	1,501.5	0.00	0.00	0.00
13,600.0	90.27	359.87	11,810.0	1,559.8	-544.3	1,601.2	0.00	0.00	0.00
13,700.0	90.27	359.87	11,809.5	1,659.8	-544.6	1,700.8	0.00	0.00	0.00
13,800.0	90.27	359.87	11,809.0	1,759.8	-544.8	1,800.4	0.00	0.00	0.00
13,900.0	90.27	359.87	11,808.5	1,859.8	-545.0	1,900.1	0.00	0.00	0.00
14,000.0	90.27	359.87	11,808.0	1,959.8	-545.2	1,999.7	0.00	0.00	0.00
14,100.0	90.27	359.87	11,807.6	2,059.8	-545.4	2,099.4	0.00	0.00	0.00
14,200.0	90.27	359.87	11,807.1	2,159.8	-545.7	2,199.0	0.00	0.00	0.00
14,300.0	90.27	359.87	11,806.6	2,259.8	-545.9	2,298.6	0.00	0.00	0.00
14,400.0	90.27	359.87	11,806.1	2,359.8	-546.1	2,398.3	0.00	0.00	0.00
14,500.0	90.27	359.87	11,805.7	2,459.8	-546.3	2,497.9	0.00	0.00	0.00
14,600.0	90.27	359.87	11,805.2	2,559.8	-546.6	2,597.6	0.00	0.00	0.00
14,700.0	90.27	359.87	11,804.7	2,659.8	-546.8	2,697.2	0.00	0.00	0.00
14,800.0	90.27	359.87	11,804.2	2,759.8	-547.0	2,796.9	0.00	0.00	0.00
14,900.0	90.27	359.87	11,803.8	2,859.8	-547.2	2,896.5	0.00	0.00	0.00
15,000.0	90.27	359.87	11,803.3	2,959.8	-547.4	2,996.1	0.00	0.00	0.00
15,100.0	90.27	359.87	11,802.8	3,059.8	-547.7	3,095.8	0.00	0.00	0.00
15,200.0	90.27	359.87	11,802.3	3,159.8	-547.9	3,195.4	0.00	0.00	0.00
15,300.0	90.27	359.87	11,801.8	3,259.8	-548.1	3,295.1	0.00	0.00	0.00
15,400.0	90.27	359.87	11,801.4	3,359.8	-548.3	3,394.7	0.00	0.00	0.00
15,500.0	90.27	359.87	11,800.9	3,459.8	-548.5	3,494.3	0.00	0.00	0.00
15,600.0	90.27	359.87	11,800.4	3,559.8	-548.8	3,594.0	0.00	0.00	0.00
15,700.0	90.27	359.87	11,799.9	3,659.8	-549.0	3,693.6	0.00	0.00	0.00
15,800.0	90.27	359.87	11,799.5	3,759.8	-549.2	3,793.3	0.00	0.00	0.00
15,900.0	90.27	359.87	11,799.0	3,859.8	-549.4	3,892.9	0.00	0.00	0.00
16,000.0	90.27	359.87	11,798.5	3,959.8	-549.7	3,992.5	0.00	0.00	0.00
16,100.0	90.27	359.87	11,798.0	4,059.8	-549.9	4,092.2	0.00	0.00	0.00
16,200.0	90.27	359.87	11,797.6	4,159.8	-550.1	4,191.8	0.00	0.00	0.00
16,300.0	90.27	359.87	11,797.1	4,259.8	-550.3	4,291.5	0.00	0.00	0.00
16,400.0	90.27	359.87	11,796.6	4,359.8	-550.5	4,391.1	0.00	0.00	0.00
16,500.0	90.27	359.87	11,796.1	4,459.8	-550.8	4,490.7	0.00	0.00	0.00
16,600.0	90.27	359.87	11,795.6	4,559.8	-551.0	4,590.4	0.00	0.00	0.00
16,700.0	90.27	359.87	11,795.2	4,659.8	-551.2	4,690.0	0.00	0.00	0.00
16,800.0	90.27	359.87	11,794.7	4,759.8	-551.4	4,789.7	0.00	0.00	0.00
16,900.0	90.27	359.87	11,794.2	4,859.8	-551.6	4,889.3	0.00	0.00	0.00
17,000.0	90.27	359.87	11,793.7	4,959.8	-551.9	4,988.9	0.00	0.00	0.00
17,100.0	90.27	359.87	11,793.3	5,059.8	-552.1	5,088.6	0.00	0.00	0.00
17,189.2	90.27	359.87	11,792.8	5,149.0	-552.3	5,177.5	0.00	0.00	0.00
PPP2: 2649' FSL & 330' FWL (23)									
17,200.0	90.27	359.87	11,792.8	5,159.8	-552.3	5,188.2	0.00	0.00	0.00
17,300.0	90.27	359.87	11,792.3	5,259.8	-552.5	5,287.9	0.00	0.00	0.00
17,400.0	90.27	359.87	11,791.8	5,359.8	-552.8	5,387.5	0.00	0.00	0.00
17,500.0	90.27	359.87	11,791.3	5,459.8	-553.0	5,487.1	0.00	0.00	0.00
17,600.0	90.27	359.87	11,790.9	5,559.8	-553.2	5,586.8	0.00	0.00	0.00
17,700.0	90.27	359.87	11,790.4	5,659.8	-553.4	5,686.4	0.00	0.00	0.00
17,800.0	90.27	359.87	11,789.9	5,759.8	-553.6	5,786.1	0.00	0.00	0.00
17,900.0	90.27	359.87	11,789.4	5,859.8	-553.9	5,885.7	0.00	0.00	0.00
18,000.0	90.27	359.87	11,789.0	5,959.7	-554.1	5,985.3	0.00	0.00	0.00
18,100.0	90.27	359.87	11,788.5	6,059.7	-554.3	6,085.0	0.00	0.00	0.00
18,200.0	90.27	359.87	11,788.0	6,159.7	-554.5	6,184.6	0.00	0.00	0.00

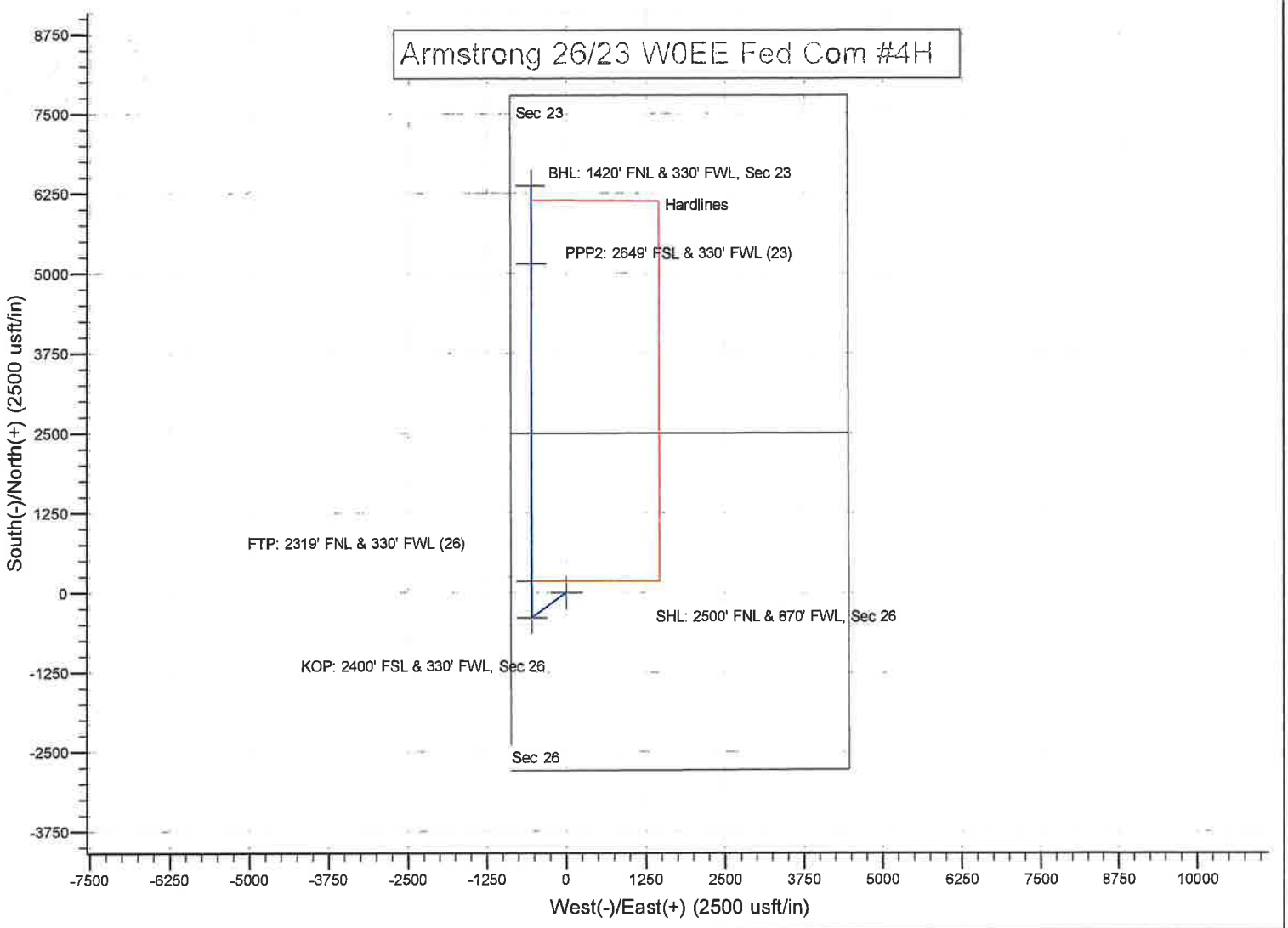
Database:	Hobbs	**Local Co-ordinate Reference:**	Site Armstrong 26/23 W0EE Fed Com #4H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3357.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 3357.0usft (Original Well Elev)
Site:	Armstrong 26/23 W0EE Fed Com #4H	**North Reference:**	Grid
Well:	Sec 26, T25S, R31E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 1420' FNL & 330' FWL, Sec 23		
Design:	Design #1		

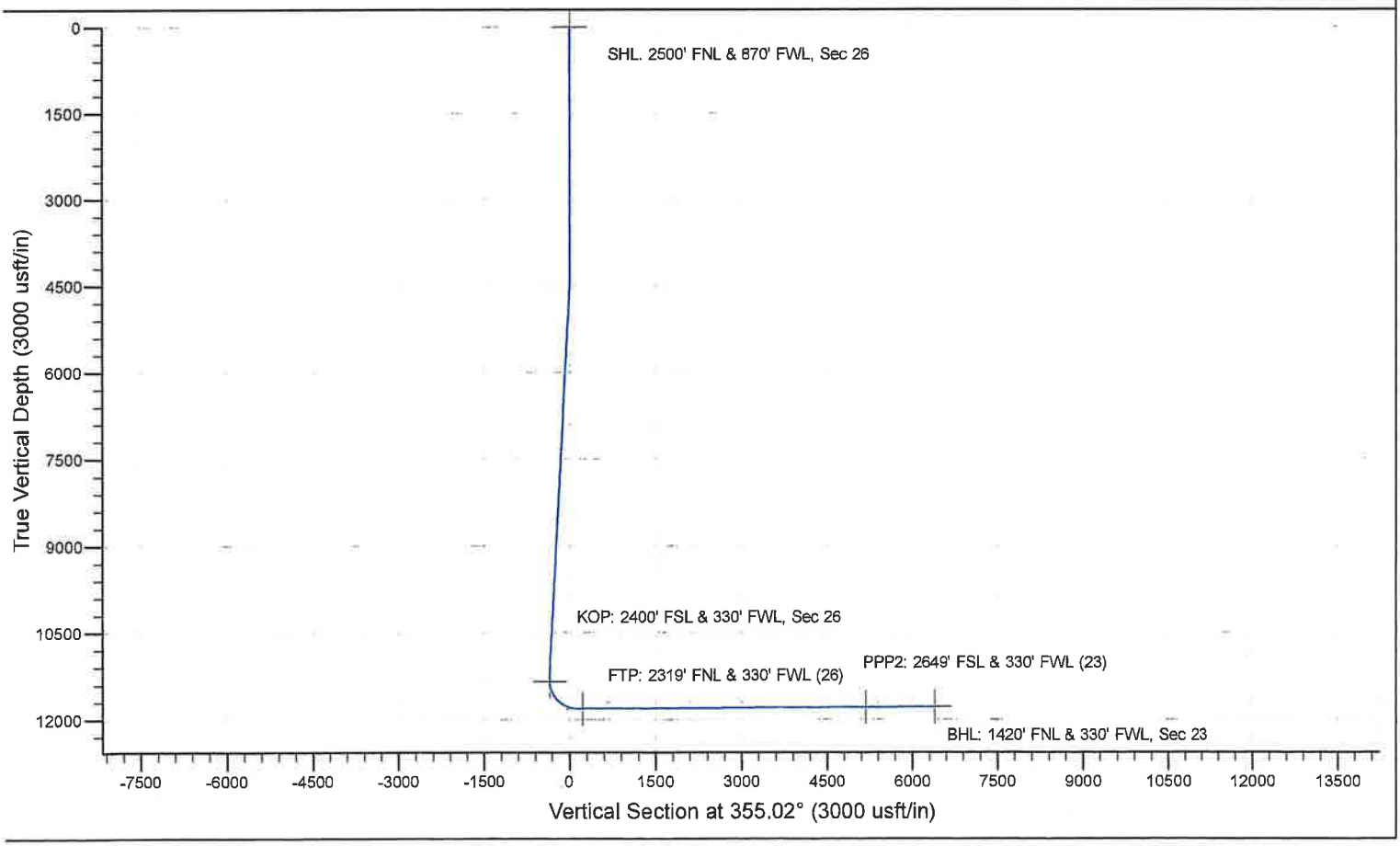
Planned Survey

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)
18,300.0	90.27	359.87	11,787.5	6,259.7	-554.8	6,284.3	0.00	0.00	0.00
18,400.0	90.27	359.87	11,787.1	6,359.7	-555.0	6,383.9	0.00	0.00	0.00
18,411.3	90.27	359.87	11,787.0	6,371.0	-555.0	6,395.1	0.00	0.00	0.00
BHL: 1420' FNL & 330' FWL, Sec 23									

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: 2500' FNL & 870' F - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	401,214.00	720,547.00	32.1016944	-103.7545805
KOP: 2400' FSL & 330' I - plan hits target center - Point	0.00	0.00	11,340.0	-395.0	-540.0	400,819.00	720,007.00	32.1006166	-103.7563312
BHL: 1420' FNL & 330' F - plan hits target center - Point	0.00	0.00	11,787.0	6,371.0	-555.0	407,585.00	719,992.00	32.1192153	-103.7562626
PPP2: 2649' FSL & 330' - plan hits target center - Point	0.00	0.00	11,792.8	5,149.0	-552.3	406,363.00	719,994.71	32.1158562	-103.7562750
FTP: 2549' FNL & 330' F - plan hits target center - Point	0.00	0.00	11,798.7	-49.0	-540.8	401,165.00	720,006.23	32.1015677	-103.7563277


Armstrong 26/23 W0EE Fed Com #4H
Sec 23
BHL: 1420' FNL & 330' FWL, Sec 23
Hardlines
PPP2: 2649' FSL & 330' FWL (23)
FTP: 2319' FNL & 330' FWL (26)
SHL: 2500' FNL & 870' FWL, Sec 26
KOP: 2400' FSL & 330' FWL, Sec 26
Sec 26
South(-)/North(+) (2500 usft/in)
West(-)/East(+) (2500 usft/in)


SHL: 2500' FNL & 870' FWL, Sec 26
KOP: 2400' FSL & 330' FWL, Sec 26
FTP: 2319' FNL & 330' FWL (26)
PPP2: 2649' FSL & 330' FWL (23)
BHL: 1420' FNL & 330' FWL, Sec 23
True Vertical Depth (3000 usft/in)
Vertical Section at 355.02° (3000 usft/in)

Mewbourne Oil Company, Armstrong 26/35 W0EE Fed Com #4H
Sec 26, T25S, R31E
SL: 2500' FNL & 870' FWL
BHL: 1654' FNL & 330' FWL

1. Geologic Formations

TVD of target	11787'	Pilot hole depth	NA
MD at TD:	18411'	Deepest expected fresh water:	325'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Rustler	899		
Top of Salt	1289		
Castile			
Base of Salt	4044		
Lamar	4293	Oil/Gas	
Bell Canyon	4332	Oil/Gas	
Cherry Canyon	5345	Oil/Gas	
Manzanita Marker	5486		
Brushy Canyon	6837	Oil/Gas	
Bone Spring	8269	Oil/Gas	
1st Bone Spring Sand	9310	Oil/Gas	
2nd Bone Spring Sand	9928	Oil/Gas	
3rd Bone Spring Sand	11194	Oil/Gas	
Abo			
Wolfcamp	11640	Target Zone	
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

*H2S, water flows, loss of circulation, abnormal pressures, etc.

Mewbourne Oil Company, Armstrong 26/35 W0EE Fed Com #4H
Sec 26, T25S, R31E
SL: 2500' FNL & 870' FWL
BHL: 1654' FNL & 330' FWL

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	975'	13.375"	48	H40	STC	1.73	3.88	6.88	11.56
12.25"	0'	4218'	9.625"	40	L80	LTC	1.41	2.62	4.31	5.43
8.75"	0'	11950'	7"	26	HCP110	LTC	1.34	1.71	2.23	2.67
6.125"	11373'	18411'	4.5"	13.5	P110	LTC	1.34	1.55	3.56	4.44
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h
Must have table for contingency casing

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_2O gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	520	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder
Inter.	695	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder
Prod. Stg 1	370	12.5	2.12	11	9	Lead: Class C + Gel + Retarder + Defoamer + Extender
	400	15.6	1.18	5.2	10	Tail: Class H + Retarder + Fluid Loss + Defoamer
ECP/DV Tool @ 5485'						
Prod. Stg 2	70	12.5	2.12	11	9	Lead: Class C + Gel + Retarder + Defoamer + Extender
	100	14.8	1.34	6.3	8	Tail: Class C + Retarder
Liner	270	11.2	2.97	18	16	Class C + Salt + Gel + Fluid Loss + Retarder + Dispersant + Defoamer + Anti-Settling Agent

A copy of cement test will be available on location at time of cement job providing pump times & compressive strengths.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
Production	4018'	25%
Liner	11373'	25%

4. Pressure Control Equipment

	Variance: A variance is requested to use a 5000 psi annular with a 10000 psi BOP stack. See attachment for description.

BOP installed and tested before drilling which hole?	Size?	System Rated WP	Type	✓	Tested to:
12-1/4"	13-5/8"	10M	Annular	X	5000#
			Blind Ram	X	10000#
			Pipe Ram	X	
			Double Ram		
			Other*		

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
	N Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. • Provide description here: See attached schematic.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	975	FW Gel	8.6-8.8	28-34	N/C
975	4218	Saturated Brine	10.0	28-34	N/C
4218	11786	Cut Brine	8.6-9.7	28-34	N/C
11786	11817	OBM	10.0-13.0	30-40	<10cc

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	Pason/PVT/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from KOP (11373') to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned		Interval
X	Gamma Ray	11373' (KOP) to TD
	Density	
	CBL	
	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	7988 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers in surface hole.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
	H2S is present
X	H2S Plan attached

8. Other facets of operation

Is this a walking operation? If yes, describe.
Will be pre-setting casing? If yes, describe.

Attachments
___ Directional Plan
___ Other, describe