Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

HOBBS OCD
SEP 28 2016
RECEIVED

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 reverse side.

Carlsbad Field Office
OCD Hobbs

5. Lease Serial No.
NMNM85933

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.
BILBREY 34 B2NC FEDERAL COM 1H

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

9. API Well No.
30-025-43276-00-X1

3a. Address
HOBBS, NM 88241

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

10. Field and Pool, or Exploratory
RED TANK

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 34 T21S R32E SESW 185FSL 2030FWL
32.254260 N Lat, 103.395264 W Lon

11. County or Parish, and State
LEA COUNTY, NM

12. CHECK 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	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ 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 shall 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 shall be filed once testing has been completed. Final Abandonment Notices shall 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 Co. requests approval to make the following changes to the approved APD:

Change 7" x 5 1/2" production casing to 7" production casing w/ 4 1/2" liner.

See attachment for casing & cementing details.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #350271 verified by the BLM Well Information System
For MEWBOURNE OIL COMPANY, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 09/08/2016 (16PP1094SE)

Name *(Printed/Typed)* ANDREW TAYLOR — Title ENGINEER

Signature (Electronic Submission) — Date 09/07/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

APPROVED

Approved By Teungku Muchlis Krueng — Title PETROLEUM ENGINEER — Date SEP 16 2016

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

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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.

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

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17.5"	0'	922'	13 3/8"	48	H40	STC	1.61	3.61	7.28
12.25"	0'	3453'	9.625"	36	J55	LTC	1.13	1.96	2.55
12.25"	3453'	4393'	9.625"	40	J55	LTC	1.13	1.73	9.76
12.25"	4393'	4785'	9.625"	40	N80	LTC	1.24	2.31	47.02
8.75"	0'	11035'	7"	26	P110	LTC	1.46	1.86	2.26
6.125"	10283'	20615'	4.5"	13.5	P110	LTC	1.91	2.22	2.42
			BLM Minimum Safety Factor				1.125	1	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?	Y
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	Y
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?	N
If yes, are there two strings cemented to surface?	
(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_20 gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	450	14.8	2.12	6.3	8	Lead: Class C + Salt + Gel + Extender + LCM
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder
Inter.	800	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.	380	12.5	2.12	11	10	Lead: Class C + Gel + Retarder + Defoamer + Extender
	400	15.6	1.18	5.2	10	Tail: Class H + Retarder + Fluid Loss + Defoamer
Liner	415	11.2	2.97	17	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	4285'	25%
Liner	10283'	25%

4. Pressure Control Equipment

	Variance: None

BOP installed and tested before drilling which hole?	Size?	System Rated WP	Type	✓	Tested to:
12-1/4"	13-5/8"	3M	Annular	X	1500#
			Blind Ram	X	
			Pipe Ram	X	
			Double Ram		
			Other*		
8-3/4"	13-5/8"	5M	Annular	X	2500#
			Blind Ram	X	5000#
			Pipe Ram	X	
			Double Ram		
			Other*		
6-1/8"	13-5/8"	5M	Annular	X	2500#
			Blind Ram	X	5000#
			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?

N	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	865	FW Gel	8.6-8.8	28-34	N/C
865	4785	Saturated Brine	10.0	28-34	N/C
4785	10283	Cut Brine	8.6-9.5	28-34	N/C
10283	20615	FW w/ Polymer	8.6-9.5	30-40	<20cc

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?	Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from KOP (10283') 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	10283' (KOP) to TD
	Density	
	CBL	
	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	5316 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

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Mewbourne Oil Company**
LEASE NO.:	**NMNM-85933**
WELL NAME & NO.:	**Bilbrey 34 B2NC Federal Com 1H**
SURFACE HOLE FOOTAGE:	**0185' FSL & 2030' FWL**
BOTTOM HOLE FOOTAGE	**0330' FNL & 2100' FWL**
LOCATION:	**Section 34, T. 21 S., R 32 E., NMPM**
COUNTY:	**Lea County, New Mexico**

ALL PREVIOUS COA STILL APPLY EXCEPT THE FOLLOWING:

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

   ☒ **Cement should tie-back at least 500 feet into previous casing string.** Operator shall provide method of verification. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

   Centralizers required through the curve and a minimum of one every other joint.

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

   ☒ Cement should tie-back to the top of the liner. Operator shall provide method of verification.

TMAK 09162016

R-111-P Section: 3 strings circ, a casing seal test of 600psi(hydrl) for the surface and 1000 for intermediate, <100psi drop in 30min. In a Lesser Prairie-Chicken section.

13 3/8 surface csg in a 17 1/2 inch hole. **Design Factors** SURFACE

Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length
"A"	48.00	H 40	ST&C	7.28	1.83	0.7	922
"B"							0

w/8.4#/g mud, 30min Sfc Csg Test psig: 809 Tail Cmt does not circ to sfc. Totals: 922

Comparison of Proposed to Minimum Required Cement Volumes

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE
17 1/2	0.6946	650	1222	695	76	8.80	1433	2M

Setting Depth for D V TooL: DV Tool 1st Stg 2nd Stg sum of sx Σ CuFt

% Excess Cmt:

Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.

9 5/8 casing inside the 13 3/8 **Design Factors** ITERMEDIA

Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length
"A"	36.00	J 55	LT&C	2.55	1.13	0.66	3,453
"B"	40.00	J 55	LT&C	9.76	1.13	0.74	940
"C"	40.00	N 80	LT&C	47.00	1.24	1.08	392
"D"							0

w/8.4#/g mud, 30min Sfc Csg Test psig: 848 Totals: 4,785

The cement volume(s) are intended to achieve a top of 0 ft from surface or a 922

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE
12 1/4	0.3132	1000	1964	1576	25	10.00	2943	3M

Burst Frac Gradient(s) for Segment(s): A, B, C, D = 1.02, 0.9, c, d All > 0.70, OK.

7 casing inside the 9 5/8 **Design Factors** PRODUCTIOI

Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length
"A"	26.00	P 110	LT&C	2.53	1.22	1.88	10,283
"B"							0

w/8.4#/g mud, 30min Sfc Csg Test psig: 2,262 Totals: 10,283

Segment Design Factors would be: if it were a vertical we

	MTD	Max VTD	Csg VD	Curve KOP	Dogleg°	Severity°
No Pilot Hole Planned	11305	10760	10760	10283	90	12

The cement volume(s) are intended to achieve a top of 4285 ft from surface or a 500

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE
8 3/4	0.1503	780	1278	918	39	9.50	2943	3M

$4\frac{1}{2} \times 7 \rightarrow .1044\ ft^3/ft$

$\times 753 = 78.6\ ft^3$

$4\frac{1}{2} \times 6\frac{1}{8} \rightarrow .0942\ ft^3/ft$

$\times 9579 = 902.3418$

$\approx 980\ ft^3$

Tail cmt proposed for the csg below could overlap the previous csg shoe.

4 1/2 In tandem @ 10283 **Design Factors** Tandem

Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length
"A"	13.50	P 110	LT&C	1.86	1.78	2.34	753
"B"	13.50	P 110	LT&C	2.50	2.01	2.34	9,579

w/8.4#/g mud, 30min Sfc Csg Test psig: 2,367 Totals: 10,332

A Segment Design Factors would be: 2.33 2.01 if it were a vertical wellb

	MTD	Max VTD	Csg VD	Curve KOP	Dogleg°	Severity°
No Pilot Hole Planned	20615	10760	10760	10283	90	12

Cmt vol calc includes previous csg (tandem conn) TOC 10283 ft from surface or a

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE
6 1/8	0.0942	425	1262	977	~~Ck R-178~~	9.50		

Class 'H' tail cmt yld > 1.20 Capitan Reef est top XXXX.

$415\ sx \times 2.97\ ft^3/sx = 1232.55$

$\approx 25.8\%$ excess