

**UNORTHODOX
LOCATION**

HOBBS CCD

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APR 18 2016

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM-20905-A & Fee
02965A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.
[316105]

8. Lease Name and Well No.
Pepper Ridge 15 A3CN Fed Com #1H

9. API Well No.
30-025-43140
(97900)

10. Field and Pool, or Exploratory
Red Hills Upper Bone Spring Shale

11. Sec., T. R. M. or Blk. and Survey or Area
Sec 15 T26S R33E

12. County or Parish
Lea

13. State
NM

1a. Type of work: DRILL REENTER

1b. Type of Well: Oil Well Gas Well Other Single Zone Multiple Zone

2. Name of Operator Mewbourne Oil Company *[14744]*

3a. Address PO Box 5270
Hobbs, NM 88241

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

4. Location of Well (Report location clearly and in accordance with any State requirements.)*
At surface 185' FNL & 2250' FWL, Sec 15 T26S R33E
At proposed prod. zone 330' FSL & 2250' FWL, Sec 15 T26S R33E

14. Distance in miles and direction from nearest town or post office*
22 miles SW of Jal, NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
185'

16. No. of acres in lease
2,174.12

17. Spacing Unit dedicated to this well
160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
50' - Pepper Ridge 15 B2CN Fed Com #3H

19. Proposed Depth
10,038' - TVD
14,510' - MD

20. BLM/BIA Bond No. on file
NM-1693 Nationwide, NMB-000919

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3301' - GL

22. Approximate date work will start*
02/28/2016

23. Estimated duration
60 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- 1. Well plat certified by a registered surveyor.
- 2. A Drilling Plan.
- 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- 5. Operator certification
- 6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature *[Signature]* Name (Printed/Typed) Bradley Bishop Date 12/31/2015

Title

Approved by (Signature) *[Signature]* /S/ STEPHEN J. CAFFEY Name (Printed/Typed) Date APR 13 2016

Title FOR FIELD MANAGER Office BLM-CARLSBAD FIELD OFFICE

Application approval does not constitute a certification that the applicant has met the requirements of the subject lease which would entitle the applicant to conduct operations thereon. Conditions of approval, if any, shall be stated on the permit. Title 18 U.S.C. Section 1001 and 1002 prohibit the use of false statements to make to any department or agency of the United States any false, fictitious or fraudulent statements or claims.

The NMOCD Gas Capture Plan notice has been posted on the web site under Announcements/Notice to Operators. A copy of the GCP form is included with the notice and is also in the Forms section under Unnumbered forms. Please submit accordingly in a timely manner.

APPROVAL FOR TWO YEARS

to make to any department or agency of the United States any false, fictitious or fraudulent statements or claims.

*(Instructions on page 2)

Witness Surface & Intermediate Casing

Carlsbad Controlled Water Basin

K2
04/18/16

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Mewbourne Oil Company, Pepper Ridge 15 A3CN Fed Com #1H

Sec 15, T26S, R33E

SL: 185' FNL & 2250' FWL

BHL: 330' FSL & 2250' FWL

1. Geologic Formations

TVD of target	10038'	Pilot hole depth	NA
MD at TD:	14510'	Deepest expected fresh water:	125'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Rustler	920	Water	
Top of Salt	1289	Salt	
Castile	3188		
Base Salt	4738		
Lamar	4974	Oil	
Bell Canyon	5016	Oil	
Cherry Canyon	6090		
Manzanita Marker	6288		
Brushy Canyon	7678		
Bone Spring	9128	Target Zone	
1 st Bone Spring Sand			
2 nd Bone Spring Sand			
3 rd Bone Spring Sand			
Abo			
Wolfcamp		Will Not Penetrate	
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

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

Mewbourne Oil Company, Pepper Ridge 15 A3CN Fed Com #1H
Sec 15, T26S, R33E
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2. Casing Program

See COA

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
17.5"	0'	945' 990'	13.375	48	H40	STC	1.51	3.52	7.10
12.25"	0'	3453'	9.625"	36	J55	LTC	1.13	1.96	2.49
12.25"	3453'	4393'	9.625"	40	J55	LTC	1.13	1.73	8.98
12.25"	4393'	4900'	9.625"	40	N80	LTC	1.21	2.26	36.35
8.75"	0'	9415'	7"	26	HCP110	LTC	1.59	2.03	2.59
8.75"	9415'	10309'	7"	26	HCP110	BTC	1.50	1.92	35.71
6.125"	9415'	14510'	4.5"	13.5	P110	LTC	2.05	2.38	4.90
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?	N
If yes, are the first 2 strings cemented to surface and 3 rd 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 2 nd 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?	

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3. Cementing Program

Casing	# Sks	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	500	12.5	2.12	11	10	Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 5% Sodium Chloride + 0.25lb/sk Cello-Flake
	200	14.8	1.34	6.3	8	Class C + 0.005pps Static Free + 1% CaCl ₂ + 0.25 pps CelloFlake + 0.005 gps FP-6L
Inter.	820	12.5	2.12	11	10	Lead: Class C (35:65:4) + 5% Sodium Chloride + 5#/sk LCM + 0.25lb/sk Cello-Flake
	200	14.8	1.34	6.3	8	Tail: Class C + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
Prod.	280	12.5	2.12	11	9	Lead: 60:40:0 Class C + 15.00 lb/sk BA-90 + 4.00% MPS-5 + 3.00% SMS + 5.00% A-10 + 1.00% BA-10A + 0.80% ASA-301 + 2.90% R-21 + 8.00 lb/sk LCM-1 + 0.005 lb/sk Static Free
	400	15.6	1.18	5.2	10	Tail: Class H + 0.65% FL-52 + 0.10% R-3 + 0.005 lb/sk Static Free
Liner	210	11.2	2.97	17	16	Class C (60:40:0) + 4% MPA5 + 1.2% BA10A + 10#/sk BA90 + 5%A10 + 0.65%ASA301 + 1.5% SMS + 1.2%R21

See COA

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

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
Production	4700'	25%
Liner	9415'	25%

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Sec 15, T26S, R33E

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4. Pressure Control Equipment

Variance: None

See COA

See COA

BOP installed and tested before drilling which hole?	Size?	System Rated WP	Type	✓	Tested to:
12-1/4"	13-5/8"	2m 3M	Annular	X	1250# must test to 2,000psi
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		
8-3/4"	11"	5M	Annular	X	2500# 5000#
			Blind Ram	X	
			Pipe Ram	X	
			Double Ram		
			Other*		
6-1/8"	11"	5M	Annular	X	2500# 5000#
			Blind Ram	X	
			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.
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See
COA

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. <ul style="list-style-type: none"> • Provide description here See attached schematic.

5. Mud Program

See
COA

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0'	945' <i>990'</i>	FW Gel	8.6-8.8	28-34	N/C
945'	4900'	Saturated Brine	10.0	28-34	N/C
4900'	9415'	Cut Brine	8.6-9.5	28-34	N/C
9415'	14510'	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
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6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from KOP (9415') 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
	Density
	CBL
	Mud log
	PEX

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7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4349 psi
Abnormal Temperature	No

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

*See
COA*

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. **No**

Will be pre-setting casing? If yes, describe. **No**

Attachments

Directional Plan

Other, describe

Pepper Ridge 15 A3CN Fed Com #1H

