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OCD Hobbs

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DEC 21 2015

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Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM02965A

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

8. Lease Name and Well No. (315731)
El Mar 21 A1DM Fed Com #4H

2. Name of Operator Mewbourne Oil Company (14744)

9. API Well No.
30-025-42987

3a. Address
PO Box 5270
Hobbs, NM 88241

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

10. Field and Pool, or Exploratory (97900)
Red Hills Upper Bone Spring Shale

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 175' FNL & 450' FWL, Sec. 21 T26S R33E
At proposed prod. zone 330' FSL & 330' FWL, Sec. 21 T26S R28E

UNORTHODOX LOCATION

11. Sec., T. R. M. or Blk. and Survey or Area
Sec 21 T26S R33E

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

12. County or Parish
Lea

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
175'

16. No. of acres in lease
NMNM02965A - 2,174.12 acres

17. Spacing Unit dedicated to this well
160 acres

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
50' - El Mar 21 A3DM #1H

19. Proposed Depth
9355' - TVD
13,840' - MD

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3275' - GL

22. Approximate date work will start*
07/13/2015

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
Name *(Printed/Typed)*: Bradley Bishop
Date: 05/11/2015

Title

Approved by *(Signature)*: /S/ JEANETTE MARTINEZ
Name *(Printed/Typed)*:
Date: DEC 14 2015

Title: FIELD MANAGER
Office: CARLSBAD FIELD OFFICE

Application approval 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.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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.

(Continued on page 2)

*(Instructions on page 2)

Carlsbad Controlled Water Basin

12/21/15

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

DEC 21 2015

Mewbourne Oil Company, El Mar 21 A1DM Fed Com #4H
Sec 21, T26S, R33E
SL: 175' FNL & 450' FWL
BHL: 330' FSL & 330' FWL

1. Geologic Formations

TVD of target	9355'	Pilot hole depth	NA
MD at TD:	13840'	Deepest expected fresh water:	125'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Rustler	800	Water	
Top of Salt	1170	Salt	
Castile/Base Salt	4850		
Lamar	4930	Oil	
Bell Canyon	4935	Oil	
Cherry Canyon			
Manzanita Marker			
Brushy Canyon			
Bone Spring	9050	Target Zone	
1st Bone Spring Sand			
2nd Bone Spring Sand			
3rd Bone Spring Sand			
Abo			
Wolfcamp			
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

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

Mewbourne Oil Company, El Mar 21 A1DM Fed Com #4H
Sec 21, T26S, R33E
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2. Casing Program

See COA

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17.5"	0'	~~825'~~ 920'	13.375"	48	H40	STC	1.72	4.03	8.13
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'	4875'	9.625"	40	N80	LTC	1.22	2.27	38.24
8.75"	0'	8738'	7"	26	HCP110	LTC	1.72	2.19	2.77
8.75"	8738'	9632'	7"	26	HCP110	BTC	1.61	2.06	35.71
6.125"	8738'	13840'	4.5"	13.5	P110	LTC	2.20	2.55	4.89
				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 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, El Mar 21 A1DM Fed Com #4H
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3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	415	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% CaCl2 + 0.25 pps CelloFlake + 0.005 gps FP-6L
Inter.	775	12.5	2.12	11	10	Lead: Class C (35:65:4) + 5% Sodium Chloride +5#/sk LCM +0.25lb/sk Cello-Flake
See COA	200	14.8	1.34	6.3	8	Tail: Class C + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
Prod.	240	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	205	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	4675'	25%
Liner	8738'	25%

Mewbourne Oil Company, El Mar 21 A1DM Fed Com #4H
Sec 21, T26S, R33E
SL: 175' FNL & 450' FWL
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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	~~1250#~~ must test ~~to~~ 2000 psi
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		
8-3/4"	11"	3M	Annular	X	1500#
			Blind Ram	X	3000#
			Pipe Ram	X	
			Double Ram		
			Other*		
6-1/8"	11"	3M	Annular	X	1500#
			Blind Ram	X	3000#
			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.
	Variance: None
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'	~~825'~~ 920'	FW Gel	8.6-8.8	28-34	N/C
~~825'~~	4875'	Saturated Brine	10.0	28-34	N/C
4875'	8738'	Cut Brine	8.6-9.5	28-34	N/C
8738'	13840'	FW w/Polymer	8.6-9.5	30-40	<20cc

See COA

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 fromTD 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	8738'(KOP) to TD
	Density	
	CBL	
	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4022 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

See COA

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