

OCD Hobbs
SECRETARY'S POTASH

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

AT5-15-394

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

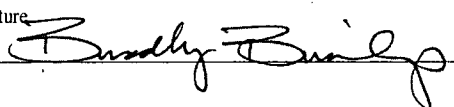
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM 012413, NMNM 014790 SHL
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Mewbourne Oil Company (14744)		7. If Unit or CA Agreement, Name and No.
3a. Address PO Box 5270 Hobbs, NM 88241	3b. Phone No. (include area code) 575-393-5905	8. Lease Name and Well No. McKamey 25 B2MD Fed Com #1H (316193)
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 210' FSL & 660' FWL Sec. 25, T19S, R32E At proposed prod. zone 330' FNL & 330' FWL Sec. 25, T19S, R32E		9. API Well No. 30-025-43215
14. Distance in miles and direction from nearest town or post office* 23 miles south of Maljamar, NM		10. Field and Pool, or Exploratory Lusk East Bone Spring (41442) <input checked="" type="checkbox"/>
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 NMNM 012413 (480 acres) NMNM 014790 (160 acres)	11. Sec., T. R. M. or Blk. and Survey or Area Sec. 25, T19S, R32E
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 850' Cimarex State HH #003H	19. Proposed Depth 14,424.6'-MD 9,823.0'-TVD	12. County or Parish Lea
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3578'	22. Approximate date work will start* 04/01/2015	13. State NM
17. Spacing Unit dedicated to this well 320		
20. BLM/BIA Bond No. on file NM-1693 nationwide, NMB-000919		
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 2-10-15
Title		
Approved by (Signature) /s/George MacDonell	Name (Printed/Typed)	Date APR 29 2016
Title		
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)

Capitan Controlled Water Basin

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

**Approval Subject to General Requirements
& Special Stipulations Attached**

MAY 10 2016

Mewbourne Oil Company, McKamey 25 B2MD Fed Com #1H

Sec 25, T19S, R32E

SL: 210' FSL & 660' FWL

BHL: 330' FNL & 330' FWL

1. Geologic Formations

TVD of target	9878'	Pilot hole depth	NA
MD at TD:	14425'	Deepest expected fresh water:	250'

Reef

Formation	Depth (TVD) from KB)	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Alluvium	Surface	Water	
Rustler	1180	Water	
Top of Salt	1460	Salt	
Castile (Base of Salt)	2704		
Yates	2970		
Seven Rivers			
Capitan Reef	3200		
Delaware Group	4920	Oil/Gas	
Bone Spring	7810	Oil/Gas	
2 nd Bone Spring	9420	Target Zone	
Wolfcamp		Will Not Penetrate	
Cisco			
Canyon			
Strawn			
Atoka			
Morrow			
Barnett Shale			
Woodford Shale			
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

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

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2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
26"	0	875	20"	94	J55	BTC	1.14	4.64	6.21
	875	1205	20"	133	J55	BTC	8.74	17.83	27.16
17.5"	0	1200	13.375"	48	H40	STC	1.19	2.77	1.93
	1200	1900	13.375"	54.5	J55	STC	1.14	2.76	4.71
	1900	2632	13.375"	61	J55	STC	1.13	2.26	8.38
	2632	3020 3250	13.375"	68	J55	STC	1.24	2.20	25.58
12.25"	0	3400	9.625"	36	J55	LTC	1.14	1.99	2.53
	3400	4350	9.625"	40	J55	LTC	1.14	1.75	9.15
	4350	4820	9.625"	40	N80	LTC	1.23	2.29	38.67
8.75"	0	1425	5.5"	17	P110	BTC	10.09	14.36	2.23
	1425	9401	5.5"	17	P110	LTC	1.53	2.18	2.01
	9401	10157	5.5"	17	P110	BTC	1.46	2.07	6.39
	10157	14425	5.5"	17	P110	LTC	1.46	2.07	6.12
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
Does casing meet API specifications? 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 intermediate 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?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	Y
Is well located in SOPA but not in R-111-P?	Y
If yes, are the first 2 strings cemented to surface and 3 rd 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 2 nd string set 100' to 600' below the base of salt?	

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Sec 25, T19S, R32E

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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 ft ³ / sack	H ₂ O gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	1575	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	5	Tail: Class C + 0.005pps Static Free + 1% CaCl ₂ + 0.25 pps CelloFlake + 0.005 gps FP-6L
Inter.	1040	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	5	Tail: Class C + 0.005pps Static Free + 1% CaCl ₂ + 0.25 pps CelloFlake + 0.005 gps FP-6L
2 nd Inter. <i>See COA</i>	185	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	5	Tail: Class C + 0.005pps Static Free + 1% CaCl ₂ + 0.25 pps CelloFlake + 0.005 gps FP-6L
	DV/ECP Tool 3150'					
	455	12.5	2.12	11	10	2 nd Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 5% Sodium Chloride + 0.25lb/sk Cello-Flake
	200	14.8	1.32	8	6	2 nd Tail: Class C + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
Prod.	1195	11.2	2.97	17	16	Class C (60:40:0) + 4% MPA5 + 1.2%BA10A + 10#/skBA90 + 5%A10 + 0.65%ASA301 + 1.5%SMS + 1.2%R21

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
2 nd Intermediate	0'	25%
Production	3150'	25%

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4. Pressure Control Equipment

Y	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12-1/4"	13-5/8"	2M	Annular	X	1250#
			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*		
			Annular		
			Blind Ram		
			Pipe Ram		
			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

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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.
N	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.
Y /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

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	1205	FW Gel	8.6-8.8	28-34	N/C
1205	3020	Saturated Brine	10.0-10.2	29-34	N/C
3020	4820	FW*	8.5-9.3	28-34	N/C
4820	14425	FW w/polymer	8.5-9.3	28-34	N/C

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

*Aerated fluid w/fresh water will be used to drill 12 1/4" hole if circulation is lost. Water samples will be taken every 100' through the Capitan Reef formation.

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 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 GR	KOP(9401') to TD
Density	
CBL	
Mud log	
PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4248 psi
Abnormal Temperature	No

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

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
	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