

15-566

Form 3160-3
(August 2007)

OCD Hobbs

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

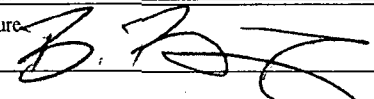
1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM 009022	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <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		8. Lease Name and Well No. Young 21 B2MD Fed Com #1H (316164)	
3b. Phone No. (include area code) 575-393-5905		9. API Well No. 30-024-43197-1	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1200' FNL & 180' FWL Sec. 28, T18S, R32E At proposed prod. zone 330' FNL & 330' FWL Sec. 21, T18S, R32E		10. Field and Pool, or Exploratory Young 21 B2MD Fed Com #1H (65330)	
11. Sec., T. R. M. or Bk. and Survey or Area Sec. 28, T18S, R32E		12. County or Parish Lea	
13. State NM		14. Distance in miles and direction from nearest town or post office* 11.2 miles south of Maljamar, NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 0'		16. No. of acres in lease 200	
17. Spacing Unit dedicated to this well 160		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 150' Young Unit 28-Yates Petroleum	
19. Proposed Depth 15,389.5'-MD 9,430.2'-TVD		20. BLM/BIA Bond No. on file NM-1693 nationwide, NMB-000919	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3730'		22. Approximate date work will start* 05/01/2015	
23. Estimated duration 60 Days		24. Attachments	

APR 29 2016


RECEIVED

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

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

25. Signature 	Name (Printed/Typed) BRADLEY BISHOP	Date 4-6-15
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Title

Approved by (Signature) 	Name (Printed/Typed) George MacDonell	Date APR 25 2016
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Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE
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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

K2
05/02/16

pm

See attached NMOC
Conditions of ApprovalApproval Subject to General Requirements
& Special Stipulations AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL

MAY 03 2016

Mewbourne Oil Co, Young 21 B2MD Fed Com 1H
 Sec 28, T18S, R32E
 SL: 1200' FNL & 180' FWL, Sec 28
 BHL: 330' FNL & 330' FWL, Sec 21

1. Geologic Formations

TVD of target	9430'	Pilot hole depth	NA
MD at TD:	15390'	Deepest expected fresh water:	375'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Rustler	1090	Water	
Top of Salt	1300		
Base Salt/Castile	2586		
Yates	2640	Oil	
Seven Rivers	3170		
Queen	3850		
Capitan	NP		
Grayburg			
San Andres			
Delaware	4652	Oil/Gas	
Bone Springs	6925	Oil/Gas	
1 st Bone Springs			
2 nd Bone Springs	9050	Target Zone	
3 rd Bone Springs			
Wolfcamp		Will Not Penetrate	
Fusselman			
Ellenburger			
Granite Wash			

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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'	1113' 1160'	13.375"	48	H40	STC	1.28	2.98	6.02
12.25"	0'	2690' 2620'	9.625"	36	J55	LTC	1.44	2.52	4.68
8.75"	0'	8953'	7"	26	HCP110	LTC	1.68	2.14	2.75
8.75"	8953'	9692'	7"	26	HCP110	BTC	1.59	2.03	43.20
6.125"	8953'	15390'	4.5"	13.5	P110	LTC	2.18	2.53	3.88
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?	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?	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?	

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3. Cementing Program

Casing	# Sk	Wt. lb/ gal	Yld ft ³ / sack	H ₂ O gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf	605	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.	375	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.	415	12	2.12	11	10	Lead: Class C (60:40:0)+3% Sodium Chloride+5#/sk LCM+0.7% Sodium Metasilicate+0.3% FL52A+6%MPA5
	400	15.6	1.18	5.2	12	Tail: Class H+0.1%R3+0.3%FL52A
Liner	255	11.2	2.97	18	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

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%
Production	2490'	25%
Liner	8953'	25%

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4. Pressure Control Equipment

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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*		
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.
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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	1115 <i>1160</i>	FW Gel	8.6-8.8	28-34	N/C
<i>See COA</i> 1115	<i>2690 2620</i>	Saturated Brine	10.0-10.2	28-34	N/C
2690	8953	Cut Brine	8.5-9.3	28-34	N/C
8953	15390	FW/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.

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 (8953) to surface. 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	From KOP(8953) to TD
Density	
CBL	
Mud log	
PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4055 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.

	H ₂ S is present
	H ₂ S 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