

UNORTHODOX CARLSBAD FIELD OFFICE
LOCATION

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

AT5-15-193

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

OCD Hobbs
SEP 08 2015

Lease Serial No.
NM02965-A, Fee

If Indian, Allottee or Tribe Name

APPLICATION FOR PERMIT TO DRILL OR REENTER

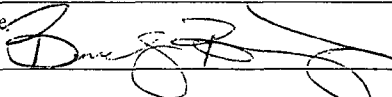
RECEIVED

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. 3H (315246) El Mar 21 W1DM Fed Com #111	
2. Name of Operator Mewbourne Oil Company 14744		9. API Well No. 30-025-42774 (98097)	
3a. Address PO Box 5270 Hobbs, NM 88241	3b. Phone No. (include area code) 575-393-5905	10. Field and Pool, or Exploratory WC-025 G-09 5263327 GUAR WC	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 200' FNL & 660' FWL, Sec 21 T26S R33E (D) At proposed prod. zone 330 300' FSL & 330' FWL, Sec 21 T26S R33E (M)		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* 28 miles northeast of Orla, TX.		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) 200'	16. No. of acres in lease 2,174.12	17. Spacing Unit dedicated to this well 320	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 160' - El Mar 21 W1DM Fed Com #1H	19. Proposed Depth 16,993.9' - MD 12,535' - TVD	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* 01/19/2015	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:

- 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 11/19/2014
Title		

Approved by (Signature) /S/ STEPHEN J. CAFFEY	Name (Printed/Typed)	Date 9/4/15
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

**APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED**

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

SEP 09 2015

Kz
09/08/15

PM

3H

Mewbourne Oil Company, El Mar 21 W1DM Fed Com 1H
 Sec 21, T26S, R33E
 SL: 200' FNL & 660' FWL
 BHL: 330' FSL & 330' FWL

HOBBS OCD

SEP 08 2015

1. Geologic Formations

RECEIVED

TVD of target	12535	Pilot hole depth	NA
MD at TD:	16994	Deepest expected fresh water:	115

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Rustler	800	Water	
Top of Salt	1170		
Tansill	4650		
Lamar	4890	Oil	
Bell Canyon	4935		
Cherry Canyon	6130		
Manzanita Marker	6220		
Brushy Canyon	7620		
Bone Spring	9050	Oil/Gas	
1 st Bone Spring Sand	10070	Oil/Gas	
2 nd Bone Spring Sand	10600	Oil/Gas	
3 rd Bone Spring Sand	11660	Oil/Gas	
Abo			
Wolfcamp	12100	Target Zone	
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

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

3H

Mewbourne Oil Company, El Mar 21 W1DM Fed Com 4H
 Sec 21, T26S, R33E
 SL: 200' FNL & 660' FWL
 BHL: 330' FSL & 330' FWL

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	825' 910'	13.375"	48	H40	STC	1.72	4.03	8.13
12.25"	0	3400	9.625"	36	J55	LTC	1.14	1.99	2.36
12.25"	3400	4350	9.625"	40	J55	LTC	1.14	1.75	9.29
12.25"	4350	4800	9.625"	40	N80	LTC	1.24	2.30	40.39
8.75"	0	11907	7"	26	HCP110	LTC	1.26	1.61	2.08
8.75"	11907	12800	7"	26	HCP110	BTC	1.20	1.53	35.75
6.125"	12600	16994	4.5"	13.5	P110	LTC	1.64	1.90	5.68
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?	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?	

Sec 21, T26S, R33E

SL: 200' FNL & 660' FWL

BHL: 330' FSL & 330' FWL

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	420	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. <i>see COA</i>	760	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. <i>see COA</i>	505	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	2.99	17	74	Class C (15:61:11) + 5#/sk LCM + 0.6% FL + 3% Sodium Metasilicate + 0.5% BA 10 + 9.2#/sk CSE2 + 0.15% R3

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	4600'	25%
Liner	12600'	25%

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Mewbourne Oil Company, El Mar 21 W1DM Fed Com HH
 Sec 21, T26S, R33E
 SL: 200' FNL & 660' FWL
 BHL: 330' FSL & 330' FWL

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#
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		
8-3/4"	11"	5M	Annular	X	2500#
			Blind Ram	X	5000#
			Pipe Ram	X	
			Double Ram		
			Other*		
6-1/8"	11"	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.
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Mewbourne Oil Company, El Mar 21 W1DM Fed Com 1H
Sec 21, T26S, R33E
SL: 200' FNL & 660' FWL
BHL: 330' FSL & 330' FWL

	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

see
CCA

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	825' 910'	FW Gel	8.6-8.8	28-34	N/C
825'	4800	Saturated Brine	10.0	28-34	N/C
4800	11907	Cut Brine	8.5-9.3	28-34	N/C
11907	16994	FW w/Polymer	8.5-13.0	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?	PVT/Pason/Visual Monitoring
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6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from TD 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	11907'(KOP) to TD
	Density	
	CBL	
	Mud log	
	PEX	

3H
Mewbourne Oil Company, El Mar 21 W1DM Fed Com 1H
Sec 21, T26S, R33E
SL: 200' FNL & 660' FWL
BHL: 330' FSL & 330' FWL

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	5400 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers in surface hole. Weighted mud for possible over-pressure in Wolfcamp formation.

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

Mewbourne Oil Company

Lea County, New Mexico ³⁴
El Mar 21 W1DM Fed Com ^{4H}

Sec 21, T26S, R33E

SL: 200' FNL & 660' FWL

BHL: 330' FSL & 330' FWL

Plan: Design #1

Standard Planning Report

18 November, 2014

Planning Report

Database: Hobbs
 Company: Mewbourne Oil Company
 Project: Lea County, New Mexico 34
 Site: El Mar 21 W1DM Fed Com 4H
 Well: Sec 21, T26S, R33E
 Wellbore: BHL: 330' FSL & 330' FWL
 Design: Design #1

Local Co-ordinate Reference: Site El Mar 21 W1DM Fed Com 4H
 TVD Reference: WELL @ 3295.0usft (Original Well Elev)
 MD Reference: WELL @ 3295.0usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Project:	Lea County, New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	El Mar 21 W1DM Fed Com 1H		
Site Position:	Northings:	377,481.10 usft	Latitude: 32° 2' 8.127 N
From: Map	Easting:	732,463.50 usft	Longitude: 103° 34' 59.368 W
Position Uncertainty:	0.0 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.40 °

Well:	Sec 21, T26S, R33E		
Well Position	+N/-S	0.0 usft	Northings: 377,481.10 usft
	+E/-W	0.0 usft	Easting: 732,463.50 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	3,295.0 usft
			Ground Level: 3,275.0 usft

Wellbore:	BHL: 330' FSL & 330' FWL		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	11/18/2014	7.16
			Dip Angle (°)
			59.92
			Field Strength (nT)
			48,160

Design:	Design #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction (°)
			183.55

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
11,907.0	0.00	0.00	11,907.0	0.0	0.0	0.00	0.00	0.00	0.00	
12,799.6	89.25	183.55	12,480.0	-564.5	-35.0	10.00	10.00	0.00	-176.45	
16,993.9	89.25	183.55	12,535.0	-4,750.3	-294.3	0.00	0.00	0.00	0.00	BHL: 330 FSL & 330 I

Planning Report

Database: Hobbs
 Company: Mewbourne Oil Company
 Project: Lea County, New Mexico
 Site: El Mar 21 W1DM Fed Com
 Well: Sec 21, T26S, R33E
 Wellbore: BHL 330' FSL & 330' FWL
 Design: Design #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Site El Mar 21 W1DM Fed Com
 WELL @ 3295.0usft (Original Well Elev)
 WELL @ 3295.0usft (Original Well Elev)
 Grid
 Minimum Curvature

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
SL: 200 FNL & 660 FWL									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00

Planning Report

3H

Database: Hobbs
 Company: Mewbourne Oil Company
 Project: Lea County, New Mexico
 Site: El Mar 21 W1DM Fed Com
 Well: Sec 21, T26S, R33E
 Wellbore: BHL 330' FSL & 330' FWL
 Design: Design #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Site El Mar 21 W1DM Fed Com
 WELL @ 3295.0usft (Original Well Elev)
 WELL @ 3295.0usft (Original Well Elev)
 Grid
 Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00
9,100.0	0.00	0.00	9,100.0	0.0	0.0	0.0	0.00	0.00	0.00
9,200.0	0.00	0.00	9,200.0	0.0	0.0	0.0	0.00	0.00	0.00
9,300.0	0.00	0.00	9,300.0	0.0	0.0	0.0	0.00	0.00	0.00
9,400.0	0.00	0.00	9,400.0	0.0	0.0	0.0	0.00	0.00	0.00
9,500.0	0.00	0.00	9,500.0	0.0	0.0	0.0	0.00	0.00	0.00
9,600.0	0.00	0.00	9,600.0	0.0	0.0	0.0	0.00	0.00	0.00
9,700.0	0.00	0.00	9,700.0	0.0	0.0	0.0	0.00	0.00	0.00
9,800.0	0.00	0.00	9,800.0	0.0	0.0	0.0	0.00	0.00	0.00
9,900.0	0.00	0.00	9,900.0	0.0	0.0	0.0	0.00	0.00	0.00
10,000.0	0.00	0.00	10,000.0	0.0	0.0	0.0	0.00	0.00	0.00
10,100.0	0.00	0.00	10,100.0	0.0	0.0	0.0	0.00	0.00	0.00
10,200.0	0.00	0.00	10,200.0	0.0	0.0	0.0	0.00	0.00	0.00
10,300.0	0.00	0.00	10,300.0	0.0	0.0	0.0	0.00	0.00	0.00
10,400.0	0.00	0.00	10,400.0	0.0	0.0	0.0	0.00	0.00	0.00
10,500.0	0.00	0.00	10,500.0	0.0	0.0	0.0	0.00	0.00	0.00
10,600.0	0.00	0.00	10,600.0	0.0	0.0	0.0	0.00	0.00	0.00

Planning Report

Database: Hobbs
 Company: Mewbourne Oil Company
 Project: Lea County, New Mexico
 Site: El Mar 21 W1DM Fed Com
 Well: Sec 21, T26S, R33E
 Wellbore: BHL: 330' FSL & 330' FWL
 Design: Design #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Site El Mar 21 W1DM Fed Com
 WELL @ 3295.0usft (Original Well Elev)
 WELL @ 3295.0usft (Original Well Elev)
 Grid
 Minimum Curvature

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,700.0	0.00	0.00	10,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,800.0	0.00	0.00	10,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,900.0	0.00	0.00	10,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
11,000.0	0.00	0.00	11,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
11,100.0	0.00	0.00	11,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
11,200.0	0.00	0.00	11,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
11,300.0	0.00	0.00	11,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
11,400.0	0.00	0.00	11,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
11,500.0	0.00	0.00	11,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
11,600.0	0.00	0.00	11,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
11,700.0	0.00	0.00	11,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
11,800.0	0.00	0.00	11,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
11,900.0	0.00	0.00	11,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
11,907.0	0.00	0.00	11,907.0	0.0	0.0	0.0	0.00	0.00	0.00	
KOP @ 11907										
12,000.0	9.30	183.55	11,999.6	-7.5	-0.5	7.5	10.00	10.00	0.00	
12,100.0	19.30	183.55	12,096.4	-32.1	-2.0	32.2	10.00	10.00	0.00	
12,200.0	29.30	183.55	12,187.4	-73.1	-4.5	73.3	10.00	10.00	0.00	
12,300.0	39.29	183.55	12,269.9	-129.3	-8.0	129.6	10.00	10.00	0.00	
12,307.8	40.07	183.55	12,275.9	-134.3	-8.3	134.5	10.00	10.00	0.00	
First Take Point: 330 FNL & 651 FWL										
12,400.0	49.29	183.55	12,341.4	-198.9	-12.3	199.3	10.00	10.00	0.00	
12,500.0	59.29	183.55	12,399.7	-279.9	-17.3	280.4	10.00	10.00	0.00	
12,600.0	69.29	183.55	12,443.0	-369.7	-22.9	370.4	10.00	10.00	0.00	
12,700.0	79.29	183.55	12,470.1	-465.6	-28.8	466.5	10.00	10.00	0.00	
12,799.7	89.25	183.55	12,480.0	-564.5	-35.0	565.6	9.99	9.99	0.00	
LP: 764 FNL & 619 FWL										
12,800.0	89.25	183.55	12,480.0	-564.8	-35.0	565.9	0.00	0.00	0.00	
12,900.0	89.25	183.55	12,481.3	-664.6	-41.2	665.9	0.00	0.00	0.00	
13,000.0	89.25	183.55	12,482.6	-764.4	-47.4	765.9	0.00	0.00	0.00	
13,100.0	89.25	183.55	12,483.9	-864.2	-53.5	865.9	0.00	0.00	0.00	
13,200.0	89.25	183.55	12,485.2	-964.0	-59.7	965.9	0.00	0.00	0.00	
13,300.0	89.25	183.55	12,486.6	-1,063.8	-65.9	1,065.9	0.00	0.00	0.00	
13,400.0	89.25	183.55	12,487.9	-1,163.6	-72.1	1,165.9	0.00	0.00	0.00	
13,500.0	89.25	183.55	12,489.2	-1,263.4	-78.3	1,265.8	0.00	0.00	0.00	
13,600.0	89.25	183.55	12,490.5	-1,363.2	-84.5	1,365.8	0.00	0.00	0.00	
13,700.0	89.25	183.55	12,491.8	-1,463.0	-90.6	1,465.8	0.00	0.00	0.00	
13,800.0	89.25	183.55	12,493.1	-1,562.8	-96.8	1,565.8	0.00	0.00	0.00	
13,900.0	89.25	183.55	12,494.4	-1,662.6	-103.0	1,665.8	0.00	0.00	0.00	
14,000.0	89.25	183.55	12,495.7	-1,762.4	-109.2	1,765.8	0.00	0.00	0.00	
14,100.0	89.25	183.55	12,497.1	-1,862.2	-115.4	1,865.8	0.00	0.00	0.00	
14,200.0	89.25	183.55	12,498.4	-1,962.0	-121.6	1,965.8	0.00	0.00	0.00	
14,300.0	89.25	183.55	12,499.7	-2,061.8	-127.7	2,065.8	0.00	0.00	0.00	
14,400.0	89.25	183.55	12,501.0	-2,161.6	-133.9	2,165.8	0.00	0.00	0.00	
14,500.0	89.25	183.55	12,502.3	-2,261.4	-140.1	2,265.8	0.00	0.00	0.00	
14,600.0	89.25	183.55	12,503.6	-2,361.2	-146.3	2,365.8	0.00	0.00	0.00	
14,700.0	89.25	183.55	12,504.9	-2,461.0	-152.5	2,465.7	0.00	0.00	0.00	
14,800.0	89.25	183.55	12,506.2	-2,560.8	-158.7	2,565.7	0.00	0.00	0.00	
14,900.0	89.25	183.55	12,507.5	-2,660.6	-164.8	2,665.7	0.00	0.00	0.00	
15,000.0	89.25	183.55	12,508.8	-2,760.4	-171.0	2,765.7	0.00	0.00	0.00	
15,100.0	89.25	183.55	12,510.2	-2,860.2	-177.2	2,865.7	0.00	0.00	0.00	
15,200.0	89.25	183.55	12,511.5	-2,960.0	-183.4	2,965.7	0.00	0.00	0.00	
15,300.0	89.25	183.55	12,512.8	-3,059.8	-189.6	3,065.7	0.00	0.00	0.00	

Planning Report

3H

Database: Hobbs
 Company: Mewbourne Oil Company
 Project: Lea County, New Mexico
 Site: El Mar 21 W1DM Fed Com
 Well: Sec 21, T26S, R33E
 Wellbore: BHL 330' FSL & 330' FWL
 Design: Design #1

Local Co-ordinate Reference: Site El Mar 21 W1DM Fed Com
 TVD Reference: WELL @ 3295.0usft (Original Well Elev)
 MD Reference: WELL @ 3295.0usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,400.0	89.25	183.55	12,514.1	-3,159.6	-195.8	3,165.7	0.00	0.00	0.00	
15,500.0	89.25	183.55	12,515.4	-3,259.4	-201.9	3,265.7	0.00	0.00	0.00	
15,600.0	89.25	183.55	12,516.7	-3,359.2	-208.1	3,365.7	0.00	0.00	0.00	
15,700.0	89.25	183.55	12,518.0	-3,459.0	-214.3	3,465.7	0.00	0.00	0.00	
15,800.0	89.25	183.55	12,519.3	-3,558.8	-220.5	3,565.6	0.00	0.00	0.00	
15,900.0	89.25	183.55	12,520.7	-3,658.6	-226.7	3,665.6	0.00	0.00	0.00	
16,000.0	89.25	183.55	12,522.0	-3,758.4	-232.8	3,765.6	0.00	0.00	0.00	
16,100.0	89.25	183.55	12,523.3	-3,858.2	-239.0	3,865.6	0.00	0.00	0.00	
16,200.0	89.25	183.55	12,524.6	-3,958.0	-245.2	3,965.6	0.00	0.00	0.00	
16,300.0	89.25	183.55	12,525.9	-4,057.8	-251.4	4,065.6	0.00	0.00	0.00	
16,400.0	89.25	183.55	12,527.2	-4,157.6	-257.6	4,165.6	0.00	0.00	0.00	
16,500.0	89.25	183.55	12,528.5	-4,257.4	-263.8	4,265.6	0.00	0.00	0.00	
16,600.0	89.25	183.55	12,529.8	-4,357.2	-269.9	4,365.6	0.00	0.00	0.00	
16,700.0	89.25	183.55	12,531.1	-4,457.0	-276.1	4,465.6	0.00	0.00	0.00	
16,800.0	89.25	183.55	12,532.5	-4,556.8	-282.3	4,565.6	0.00	0.00	0.00	
16,900.0	89.25	183.55	12,533.8	-4,656.6	-288.5	4,665.6	0.00	0.00	0.00	
16,993.9	89.25	183.55	12,535.0	-4,750.3	-294.3	4,759.4	0.00	0.00	0.00	
BHL: 330 FSL & 330 FWL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SL: 200 FNL & 660 FWL - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	377,481.10	732,463.50	32° 2' 8.127 N	103° 34' 59.368 W	
KOP @ 11907 - plan hits target center - Point	0.00	0.00	11,907.0	0.0	0.0	377,481.10	732,463.50	32° 2' 8.127 N	103° 34' 59.368 W	
First Take Point: 330 FN - plan misses target center by 5.9usft at 12307.8usft MD (12275.9 TVD, -134.3 N, -8.3 E) - Point	0.00	0.00	12,280.0	-130.1	-7.9	377,351.00	732,455.60	32° 2' 6.840 N	103° 34' 59.470 W	
LP: 764 FNL & 619 FWL - plan hits target center - Point	0.00	0.00	12,480.0	-564.5	-35.0	376,916.60	732,428.50	32° 2' 2.543 N	103° 34' 59.820 W	
BHL: 330 FSL & 330 FWL - plan hits target center - Point	0.00	0.00	12,535.0	-4,750.3	-294.3	372,730.80	732,169.20	32° 1' 21.139 N	103° 35' 3.169 W	

