

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0137  
Expires: January 31, 2018

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*

5. Lease Serial No.  
NMNM27919

6. If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

**Carlsbad Field Office**  
**OCD Artesia**

7. Unit or CA/Agreement, Name and/or No. **317320**

8. Well Name and No.  
JOURNEY 12 W2AP FED COM 1H

9. API Well No.  
30-015-44048-00-X1

10. Field and Pool or Exploratory Area  
**CULEBRA BLUFF**  
*Purple Seaf WC (gas) 98220*

11. County or Parish, State  
EDDY COUNTY, NM

1. Type of Well  
 Oil Well  Gas Well  Other

2. Name of Operator  
MEWBOURNE OIL COMPANY  
Contact: JACKIE LATHAN  
E-Mail: jlathan@mewbourne.com

3a. Address  
P O BOX 5270  
HOBBS, NM 88241  
3b. Phone No. (include area code)  
Ph: 575-393-5905

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Sec 12 T24S R28E NENE 185FNL 950FEL

**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Change to Original A PD
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Mewbourne Oil Company has an approved APD for the above well. Mewbourne requests approval to make the following changes:

- 1) Change well name to **Pecos Valley 7 W2DA Federal Com #1H** - 321380
- 2) Change BHL to 330' FNL & 330' FEL, Sec 7, T24S, R29E
- 3) Add DV tool to 7" production csg at 3790'
- 4) Variance for use of a multi-bowl wellhead.

Please see attachments for new directional plan and drilling program.

Please contact Andy Taylor with any questions.

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

RECEIVED

MAY 07 2018

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #377733 verified by the BLM Well Information System  
For MEWBOURNE OIL COMPANY, sent to the Carlsbad  
Committed to AFMSS for processing by DEBORAH MCKINNEY on 06/02/2017 (17DLM1898SE)

DISTRICT II-ARTESIA O.G.D.

Name (Printed/Typed) ANDREW TAYLOR

Title ENGINEER

Signature (Electronic Submission)

Date 06/01/2017

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By ZOTA STEVENS

Title PETROLEUM ENGINEER

Date 04/26/2018

Conditions of approval, if any, are attached. Approval of this notice 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.

Office Carlsbad

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.

(Instructions on page 2)

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

*RW 5-14-18*

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

RECEIVED  
MAY 07 2018

DISTRICT II-ARTESIA O.C.D. AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-015-44048</b>	<sup>2</sup> Pool Code <b>98220</b>	<sup>3</sup> Pool Name <b>PURPLE SAGE WOLFCAMP GAS</b>
<sup>4</sup> Property Code <b>317320</b>	<sup>5</sup> Property Name <b>PECOS VALLEY 7 W2DA FEDERAL COM</b>	
<sup>7</sup> OGRID NO. <b>14744</b>	<sup>8</sup> Operator Name <b>MEWBOURNE OIL COMPANY</b>	<sup>6</sup> Well Number <b>1H</b>
		<sup>9</sup> Elevation <b>2980'</b>

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
<b>A</b>	<b>12</b>	<b>24S</b>	<b>28E</b>		<b>185</b>	<b>NORTH</b>	<b>950</b>	<b>EAST</b>	<b>EDDY</b>

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>A</b>	<b>7</b>	<b>24S</b>	<b>29E</b>		<b>330</b>	<b>NORTH</b>	<b>330</b>	<b>EAST</b>	<b>EDDY</b>

<sup>12</sup> Dedicated Acres <b>319.36</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

<sup>16</sup>

**GEODETIC DATA**  
NAD 83 GRID - NM EAST

**SURFACE LOCATION**  
N: 450864.6 - E: 633459.8  
LAT: 32.239151° N  
LONG: 104.0353777° W

**BOTTOM HOLE**  
N: 450707.0 - E: 639372.7  
LAT: 32.2386717° N  
LONG: 104.0162549° W

**DETAIL "A"**

**CORNER DATA**  
NAD 83 GRID - NM EAST

A: FOUND 1/2" REBAR  
N: 445707.6 - E: 629112.1

B: FOUND BRASS CAP "1942"  
N: 451029.8 - E: 629073.5

C: FOUND BRASS CAP "1942"  
N: 451041.6 - E: 631739.8

D: FOUND BRASS CAP "1942"  
N: 451054.0 - E: 634408.7

E: FOUND BRASS CAP "1942"  
N: 451044.9 - E: 637049.1

F: FOUND BRASS CAP "1942"  
N: 451035.8 - E: 639701.3

G: FOUND BRASS CAP "1942"  
N: 448380.2 - E: 639712.3

H: FOUND BRASS CAP "1942"  
N: 445724.2 - E: 639723.3

I: CALCULATED CORNER  
N: 445724.4 - E: 634438.4

J: FOUND BRASS CAP "1942"  
N: 448388.8 - E: 634422.6

**<sup>17</sup> OPERATOR CERTIFICATION**

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: \_\_\_\_\_ Date: **06-01-17**

Printed Name: **BRADLEY BISHOP**

E-mail Address: **BBISHOP@MEWBOURNE.COM**

**<sup>18</sup> SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

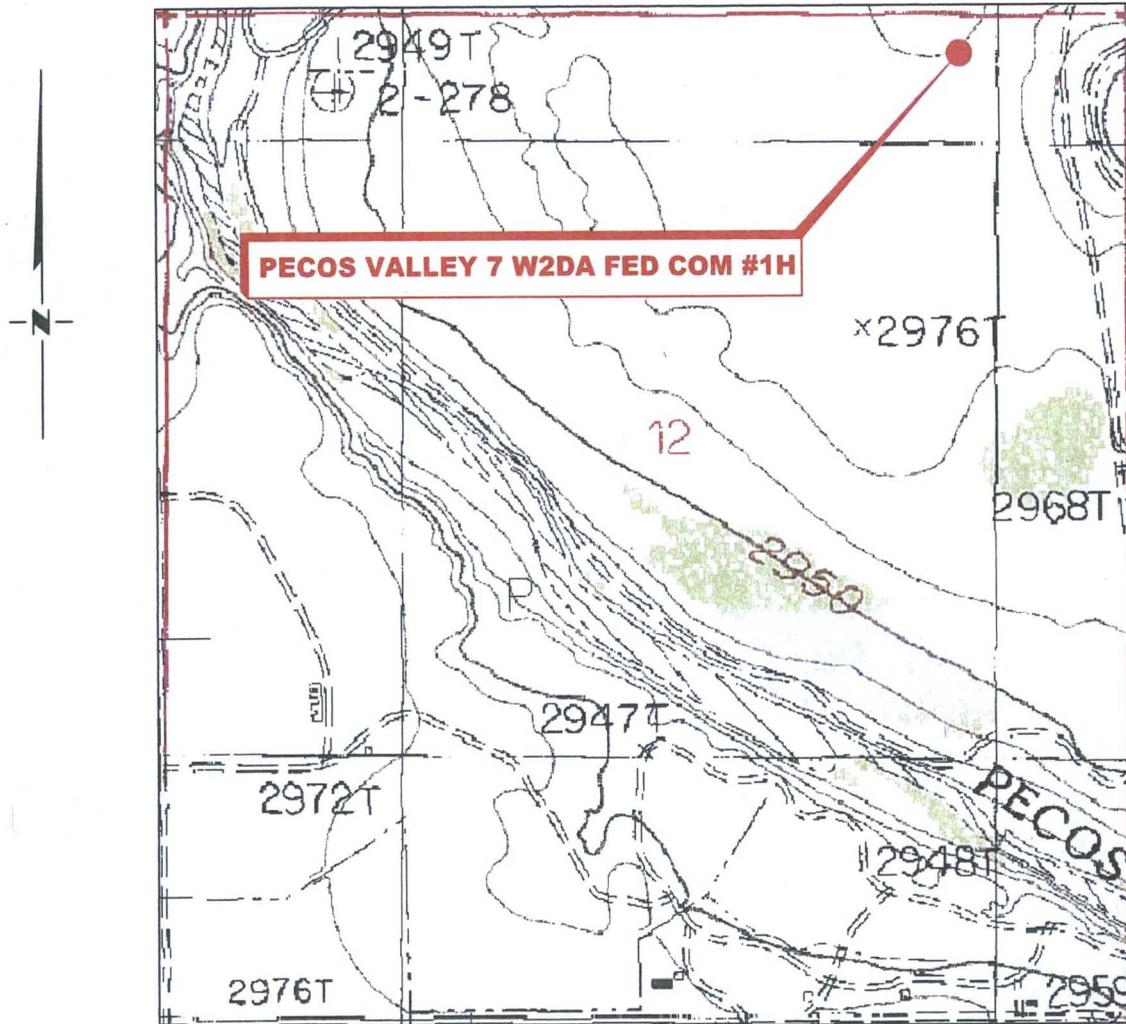
Date of Survey: **11-03-2016**

Signature and Seal of Professional Surveyor: \_\_\_\_\_

**19680**  
Certificate Number

**5/31/17 NAME CHG**

# LOCATION VERIFICATION MAP



SECTION 12, TWP. 24 SOUTH, RGE. 28 EAST,  
N. M. P. M., EDDY COUNTY, NEW MEXICO

OPERATOR: Mewbourne Oil Company  
LEASE: Pecos Valley W2DA Fed Com  
WELL NO.: 1H  
ELEVATION: 2980'

LOCATION: 185' FNL & 950' FEL  
CONTOUR INTERVAL: 10'  
USGS TOPO. SOURCE MAP:  
Malaga, NM (P. E. 1985)

Firm No.: TX 10193838 NM 4655451

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NO.	REVISION	DATE
JOB NO.: LS1705325		
DWG. NO.: 1705325LVM		

# RRC



308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 4-24-2015
SURVEYED BY: BK/ER
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

# VICINITY MAP

NOT TO SCALE



*SECTION 12, TWP. 24 SOUTH, RGE. 28 EAST,  
N. M. P. M., EDDY COUNTY, NEW MEXICO*

OPERATOR: Mewbourne Oil Company  
 LEASE: Pecos Valley 7 W2DA Fed Com  
 WELL NO.: 1H

LOCATION: 185' FNL & 950' FEL  
 ELEVATION: 2980'

Firm No.: TX 10193838 NM 4655451

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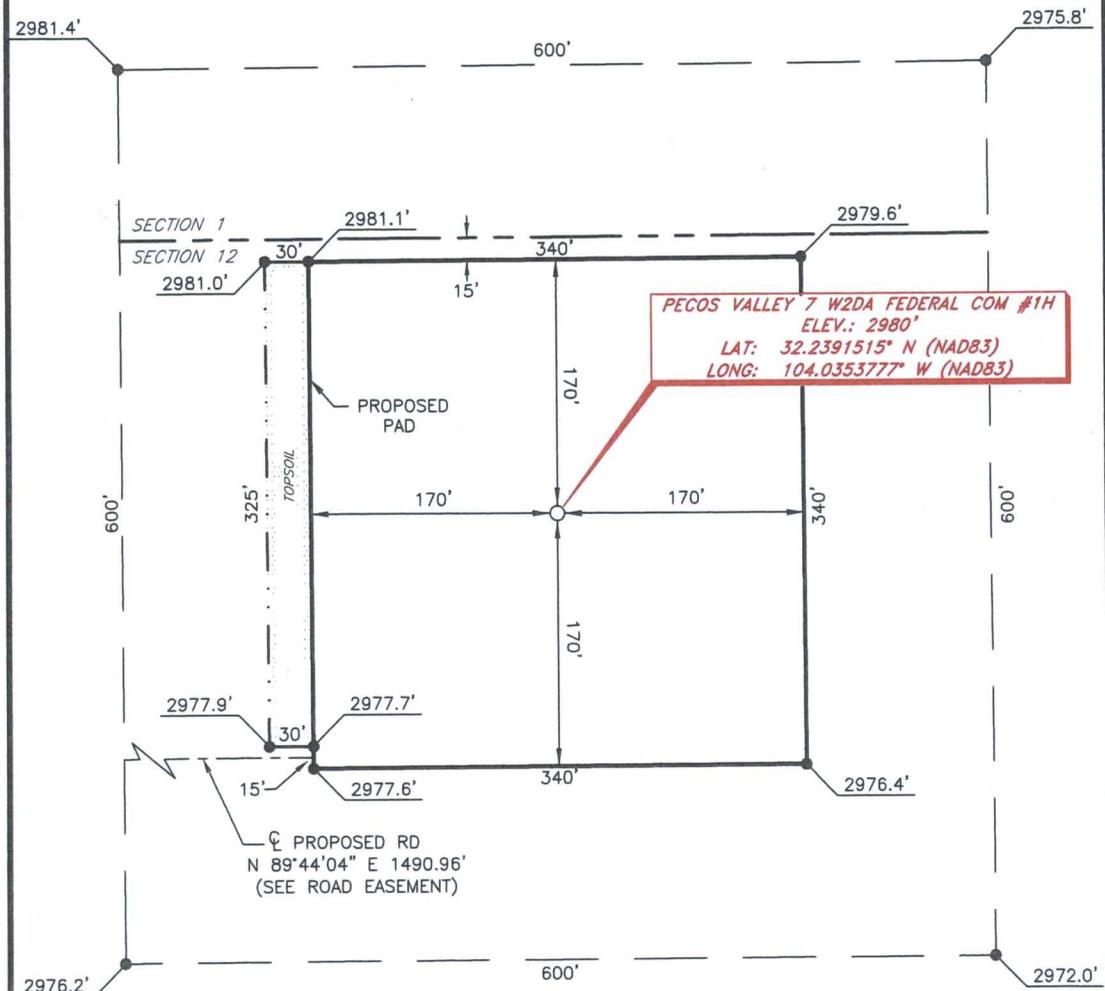
NO.	REVISION	DATE
JOB NO.: LS1705325		
DWG. NO.: 1705325VM		



308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 4-24-2015
SURVEYED BY: BK/ER
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

**MEWBOURNE OIL COMPANY  
 PECOS VALLEY 7 W2DA FEDERAL COM #1H  
 (185' FNL & 950' FEL)  
 SECTION 12, T24S, R28E  
 N. M. P. M., EDDY CO., NEW MEXICO**



DIRECTIONS TO LOCATION

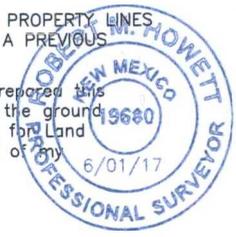
From the intersection of CR-745 (Harrison Road) and CR-788 (Dogtown Road);  
 Go Southwest approx. 0.1 miles on CR-745 to a lease road on the left, turn left;  
 Go South on lease road approx. 0.2 miles to Proposed Road on the left turn left;  
 Go East approx. 0.4 miles to Proposed Pad well is on the left.



THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA IS SHOWN FROM A PREVIOUS SURVEY REFERENCED HEREON.

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this unclassified survey of a well location from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

*Robert M. Howett*  
 Robert M. Howett NM PS 19680



SCALE: 1" = 100'  
 0 50 100  
 BEARINGS ARE  
 NAD 83 GRID - NM EAST  
 DISTANCES ARE  
 GROUND.

Firm No.: TX 10193838 NM 4655451

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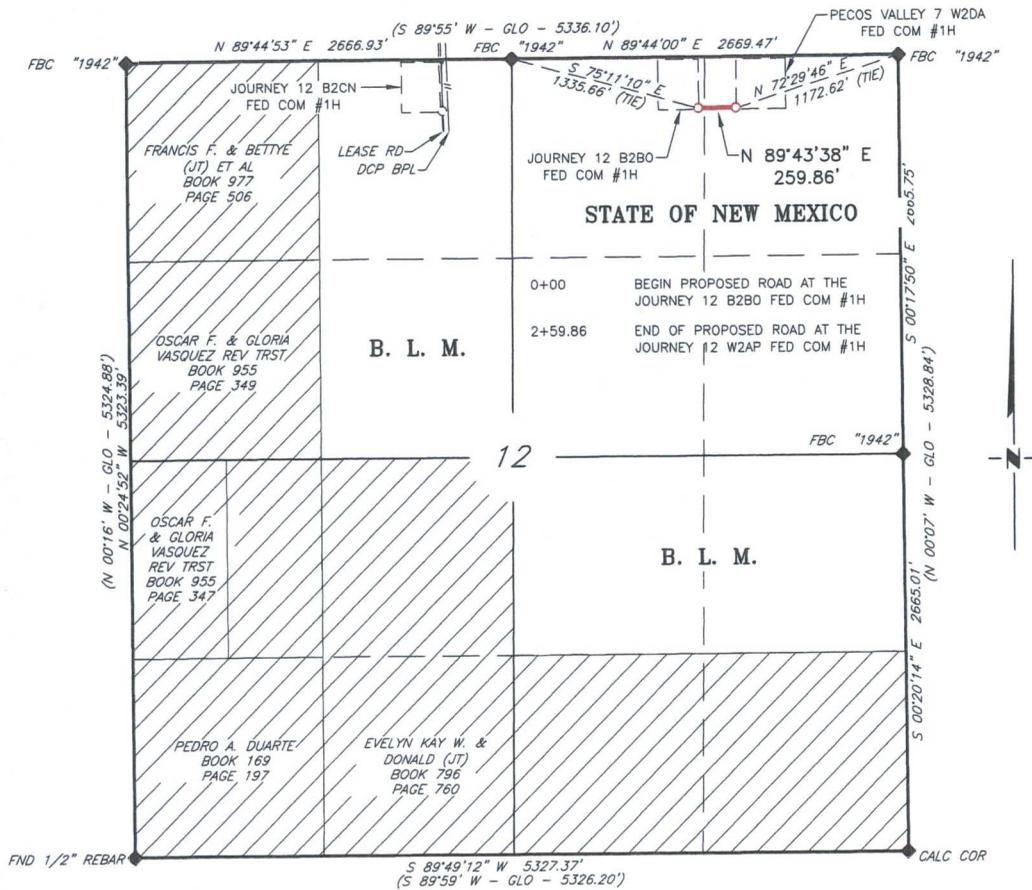
NO.	REVISION	DATE
JOB NO.: LS1705325		
DWG. NO.: 1705325PAD		



308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 3-23-2017
SURVEYED BY: ML/AB
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

**MEWBOURNE OIL COMPANY**  
**PROPOSED ROAD FOR THE JOURNEY 12 B2B0 FED COM #1H**  
**TO PECOS VALLEY 7 W2DA FEDERAL COM #1H**  
**SECTION. 12, T24S, R28E, N. M. P. M., EDDY CO., NEW MEXICO**



**DESCRIPTION**

A strip of land 20 feet wide, being 259.56 feet or 15.749 rods in length lying in Section 12, Township 24 South, Range 28 East, N. M. P. M., Eddy County, New Mexico, being 10 feet left and 10 feet right of the following described survey of a centerline across State of New Mexico land:

BEGINNING at Engr. Sta. 0+00, a point on the north line of the Northeast quarter of Section 12, which bears S 75°11'10" E, 1335.66 feet from a brass cap, stamped "1942", found for the North quarter corner of Section 12;

Thence N 89°43'38" E, 259.86 feet to Engr. Sta. 2+59.86, the End of Survey, a point which bears N 72°29'46" E, 1172.62 feet from a brass cap, stamped "1942", found for the Northeast corner of Section 12.

Said strip of land contains 0.119 acres, more or less, and is allocated by forties as follows::

NW 1/4 NE 1/4	02.433 Rods	0.018 Acres
NE 1/4 NE 1/4	13.316 Rods	0.101 Acres

SCALE: 1" = 1000'  
 0 500 1000  
 BEARINGS ARE GRID NAD 27  
 NM EAST  
 DISTANCES ARE HORIZ. GROUND.  
 LEGEND  
 ( ) RECORD DATA - GLO  
 ◆ FOUND MONUMENT AS NOTED  
 — PROPOSED ROAD  
 —||— EXISTING BPL

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

*Robert M. Howett*  
 Robert M. Howett NM PS 19680



Firm No.: TX 10193838 NM 4655451

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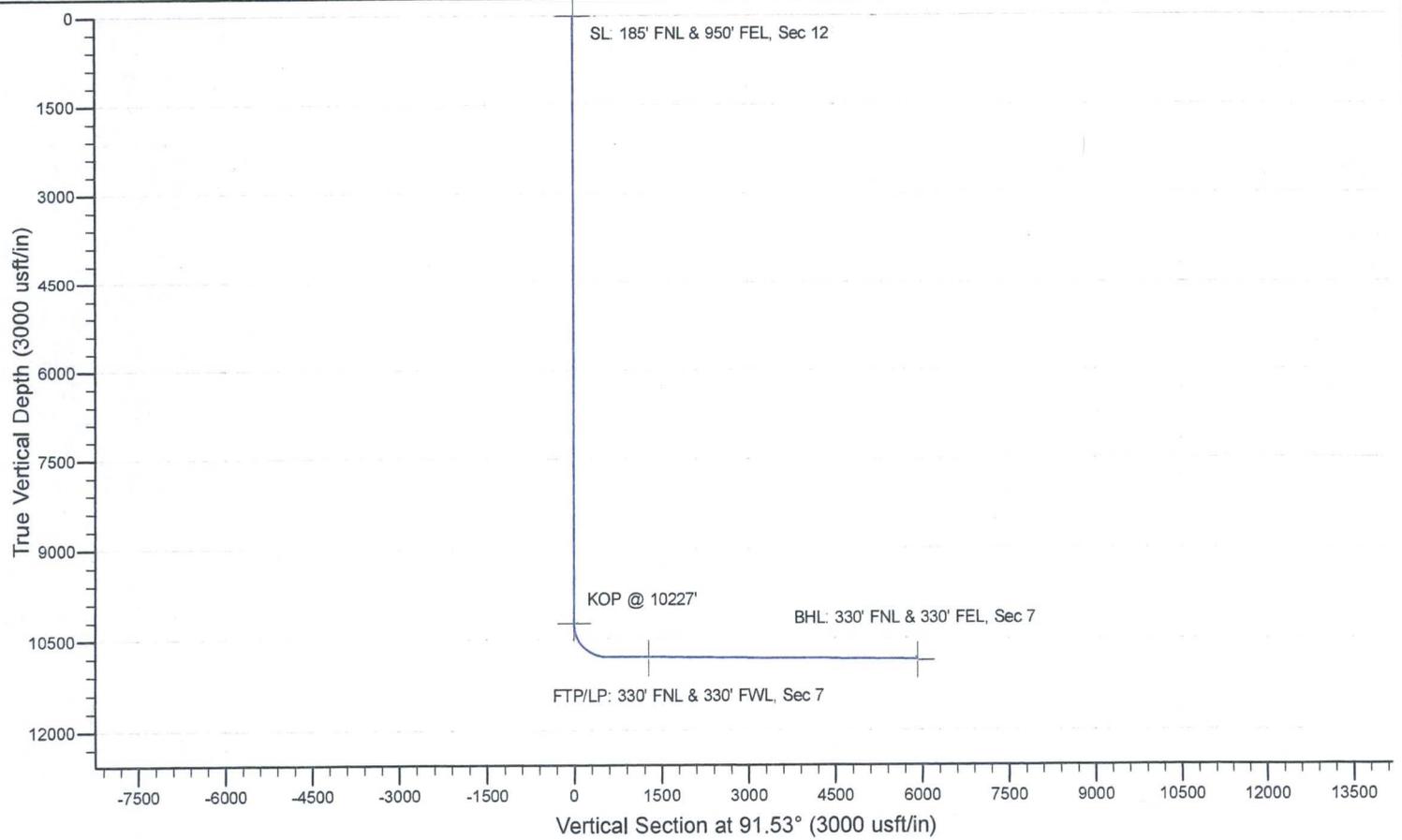
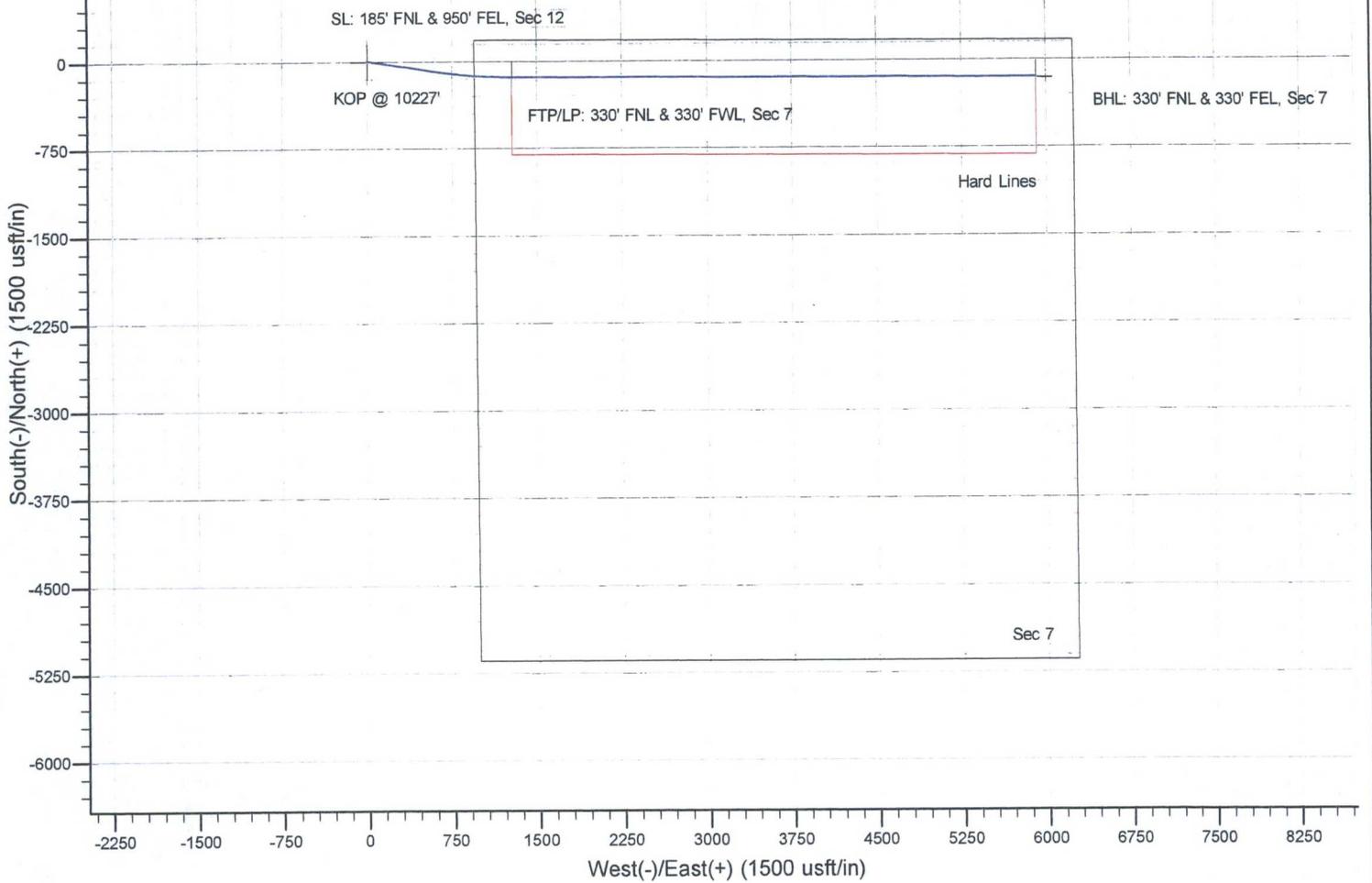
NO.	REVISION	DATE
JOB NO.: LS1705325		
DWG. NO.: 1705325RD		



308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 4-25-15
SURVEYED BY: BK/ER
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

# Pecos Valley 7 W2DA Fed Com #1H



# **Mewbourne Oil Company**

**Eddy County, New Mexico NAD 83**

**Pecos Valley 7 W2DA Fed Com #1H**

**Sec 12, T24S, R28E**

**SL: 185' FNL & 950' FEL, Sec 12**

**BHL: 330' FNL & 330' FEL, Sec 7**

**Plan: Design #1**

## **Standard Planning Report**

**01 June, 2017**

Planning Report

<b>Database:</b>	Hobbs	<b>Local Co-ordinate Reference:</b>	Site Pecos Valley 7 W2DA Fed Com #1H
<b>Company:</b>	Mewbourne Oil Company	<b>TVD Reference:</b>	WELL @ 3007.0usft (Original Well Elev)
<b>Project:</b>	Eddy County, New Mexico NAD 83	<b>MD Reference:</b>	WELL @ 3007.0usft (Original Well Elev)
<b>Site:</b>	Pecos Valley 7 W2DA Fed Com #1H	<b>North Reference:</b>	Grid
<b>Well:</b>	Sec 12, T24S, R28E	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BHL: 330' FNL & 330' FEL, Sec 7		
<b>Design:</b>	Design #1		

<b>Project</b>	Eddy County, New Mexico NAD 83		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Pecos Valley 7 W2DA Fed Com #1H		
<b>Site Position:</b>		<b>Northing:</b>	450,865.00 usft
<b>From:</b>	Map	<b>Easting:</b>	633,460.00 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	32° 14' 20.949 N
		<b>Longitude:</b>	104° 2' 7.358 W
		<b>Grid Convergence:</b>	0.16 °

<b>Well</b>	Sec 12, T24S, R28E		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b> 450,865.00 usft
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b> 633,460.00 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	3,007.0 usft
		<b>Latitude:</b>	32° 14' 20.949 N
		<b>Longitude:</b>	104° 2' 7.358 W
		<b>Ground Level:</b>	2,980.0 usft

<b>Wellbore</b>	BHL: 330' FNL & 330' FEL, Sec 7				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF2010	6/1/2017	7.07	59.97	47,984

<b>Design</b>	Design #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	91.53

<b>Plan Sections</b>										
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	
10,227.0	0.00	0.00	10,227.0	0.0	0.0	0.00	0.00	0.00	0.00	
11,133.2	90.61	98.66	10,800.0	-87.1	572.5	10.00	10.00	0.00	98.66	
11,844.5	89.38	90.20	10,800.0	-142.0	1,281.0	1.20	-0.17	-1.19	-98.27	FTP/LP: 330' FNL & 3
16,476.8	89.38	90.20	10,850.0	-158.0	5,913.0	0.00	0.00	0.00	0.00	BHL: 330' FNL & 330'

Planning Report

Database: Hobbs  
 Company: Mewbourne Oil Company  
 Project: Eddy County, New Mexico NAD 83  
 Site: Pecos Valley 7 W2DA Fed Com #1H  
 Well: Sec 12, T24S, R28E  
 Wellbore: BHL: 330' FNL & 330' FEL, Sec 7  
 Design: Design #1

Local Co-ordinate Reference: Site Pecos Valley 7 W2DA Fed Com #1H  
 TVD Reference: WELL @ 3007.0usft (Original Well Elev)  
 MD Reference: WELL @ 3007.0usft (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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>SL: 185' FNL &amp; 950' FEL, Sec 12</b>									
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

Database: Hobbs  
 Company: Mewbourne Oil Company  
 Project: Eddy County, New Mexico NAD 83  
 Site: Pecos Valley 7 W2DA Fed Com #1H  
 Well: Sec 12, T24S, R28E  
 Wellbore: BHL: 330' FNL & 330' FEL, Sec 7  
 Design: Design #1

Local Co-ordinate Reference: Site Pecos Valley 7 W2DA Fed Com #1H  
 TVD Reference: WELL @ 3007.0usft (Original Well Elev)  
 MD Reference: WELL @ 3007.0usft (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)
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
10,227.0	0.00	0.00	10,227.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP @ 10227'</b>									
10,300.0	7.30	98.66	10,299.8	-0.7	4.6	4.6	10.00	10.00	0.00

Planning Report

<b>Database:</b>	Hobbs	<b>Local Co-ordinate Reference:</b>	Site Pecos Valley 7 W2DA Fed Com #1H
<b>Company:</b>	Mewbourne Oil Company	<b>TVD Reference:</b>	WELL @ 3007.0usft (Original Well Elev)
<b>Project:</b>	Eddy County, New Mexico NAD 83	<b>MD Reference:</b>	WELL @ 3007.0usft (Original Well Elev)
<b>Site:</b>	Pecos Valley 7 W2DA Fed Com #1H	<b>North Reference:</b>	Grid
<b>Well:</b>	Sec 12, T24S, R28E	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BHL: 330' FNL & 330' FEL, Sec 7		
<b>Design:</b>	Design #1		

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)
10,400.0	17.30	98.66	10,397.4	-3.9	25.6	25.7	10.00	10.00	0.00
10,500.0	27.30	98.66	10,489.8	-9.6	63.1	63.3	10.00	10.00	0.00
10,600.0	37.30	98.66	10,574.2	-17.6	115.8	116.3	10.00	10.00	0.00
10,700.0	47.30	98.66	10,648.1	-27.7	182.3	182.9	10.00	10.00	0.00
10,800.0	57.30	98.66	10,709.2	-39.6	260.4	261.4	10.00	10.00	0.00
10,900.0	67.30	98.66	10,755.6	-52.9	347.8	349.1	10.00	10.00	0.00
11,000.0	77.30	98.66	10,786.0	-67.3	441.9	443.5	10.00	10.00	0.00
11,100.0	87.30	98.66	10,799.4	-82.2	539.7	541.7	10.00	10.00	0.00
11,133.2	90.61	98.66	10,800.0	-87.1	572.5	574.6	10.00	10.00	0.00
11,200.0	90.50	97.86	10,799.3	-96.7	638.6	641.0	1.20	-0.17	-1.19
11,300.0	90.32	96.67	10,798.6	-109.4	737.8	740.5	1.20	-0.17	-1.19
11,400.0	90.15	95.48	10,798.2	-120.0	837.3	840.2	1.20	-0.17	-1.19
11,500.0	89.98	94.29	10,798.1	-128.5	936.9	940.0	1.20	-0.17	-1.19
11,600.0	89.80	93.10	10,798.3	-135.0	1,036.7	1,039.9	1.20	-0.17	-1.19
11,700.0	89.63	91.92	10,798.8	-139.3	1,136.6	1,139.9	1.20	-0.17	-1.19
11,800.0	89.46	90.73	10,799.5	-141.6	1,236.5	1,239.9	1.20	-0.17	-1.19
11,844.5	89.38	90.20	10,800.0	-142.0	1,281.0	1,284.3	1.20	-0.17	-1.19
<b>FTP/LP: 330' FNL &amp; 330' FWL, Sec 7</b>									
11,900.0	89.38	90.20	10,800.6	-142.2	1,336.5	1,339.9	0.00	0.00	0.00
12,000.0	89.38	90.20	10,801.7	-142.5	1,436.5	1,439.8	0.00	0.00	0.00
12,100.0	89.38	90.20	10,802.8	-142.9	1,536.5	1,539.8	0.00	0.00	0.00
12,200.0	89.38	90.20	10,803.8	-143.2	1,636.5	1,639.8	0.00	0.00	0.00
12,300.0	89.38	90.20	10,804.9	-143.6	1,736.5	1,739.7	0.00	0.00	0.00
12,400.0	89.38	90.20	10,806.0	-143.9	1,836.5	1,839.7	0.00	0.00	0.00
12,500.0	89.38	90.20	10,807.1	-144.3	1,936.5	1,939.7	0.00	0.00	0.00
12,600.0	89.38	90.20	10,808.2	-144.6	2,036.5	2,039.6	0.00	0.00	0.00
12,700.0	89.38	90.20	10,809.2	-145.0	2,136.5	2,139.6	0.00	0.00	0.00
12,800.0	89.38	90.20	10,810.3	-145.3	2,236.5	2,239.6	0.00	0.00	0.00
12,900.0	89.38	90.20	10,811.4	-145.6	2,336.5	2,339.5	0.00	0.00	0.00
13,000.0	89.38	90.20	10,812.5	-146.0	2,436.5	2,439.5	0.00	0.00	0.00
13,100.0	89.38	90.20	10,813.6	-146.3	2,536.5	2,539.5	0.00	0.00	0.00
13,200.0	89.38	90.20	10,814.6	-146.7	2,636.5	2,639.4	0.00	0.00	0.00
13,300.0	89.38	90.20	10,815.7	-147.0	2,736.4	2,739.4	0.00	0.00	0.00
13,400.0	89.38	90.20	10,816.8	-147.4	2,836.4	2,839.4	0.00	0.00	0.00
13,500.0	89.38	90.20	10,817.9	-147.7	2,936.4	2,939.3	0.00	0.00	0.00
13,600.0	89.38	90.20	10,818.9	-148.1	3,036.4	3,039.3	0.00	0.00	0.00
13,700.0	89.38	90.20	10,820.0	-148.4	3,136.4	3,139.3	0.00	0.00	0.00
13,800.0	89.38	90.20	10,821.1	-148.8	3,236.4	3,239.2	0.00	0.00	0.00
13,900.0	89.38	90.20	10,822.2	-149.1	3,336.4	3,339.2	0.00	0.00	0.00
14,000.0	89.38	90.20	10,823.3	-149.4	3,436.4	3,439.2	0.00	0.00	0.00
14,100.0	89.38	90.20	10,824.3	-149.8	3,536.4	3,539.1	0.00	0.00	0.00
14,200.0	89.38	90.20	10,825.4	-150.1	3,636.4	3,639.1	0.00	0.00	0.00
14,300.0	89.38	90.20	10,826.5	-150.5	3,736.4	3,739.1	0.00	0.00	0.00
14,400.0	89.38	90.20	10,827.6	-150.8	3,836.4	3,839.0	0.00	0.00	0.00
14,500.0	89.38	90.20	10,828.7	-151.2	3,936.4	3,939.0	0.00	0.00	0.00
14,600.0	89.38	90.20	10,829.7	-151.5	4,036.4	4,039.0	0.00	0.00	0.00
14,700.0	89.38	90.20	10,830.8	-151.9	4,136.4	4,138.9	0.00	0.00	0.00
14,800.0	89.38	90.20	10,831.9	-152.2	4,236.4	4,238.9	0.00	0.00	0.00
14,900.0	89.38	90.20	10,833.0	-152.6	4,336.3	4,338.9	0.00	0.00	0.00
15,000.0	89.38	90.20	10,834.1	-152.9	4,436.3	4,438.8	0.00	0.00	0.00
15,100.0	89.38	90.20	10,835.1	-153.2	4,536.3	4,538.8	0.00	0.00	0.00
15,200.0	89.38	90.20	10,836.2	-153.6	4,636.3	4,638.8	0.00	0.00	0.00
15,300.0	89.38	90.20	10,837.3	-153.9	4,736.3	4,738.7	0.00	0.00	0.00
15,400.0	89.38	90.20	10,838.4	-154.3	4,836.3	4,838.7	0.00	0.00	0.00

Planning Report

<b>Database:</b>	Hobbs	<b>Local Co-ordinate Reference:</b>	Site Pecos Valley 7 W2DA Fed Com #1H
<b>Company:</b>	Mewbourne Oil Company	<b>TVD Reference:</b>	WELL @ 3007.0usft (Original Well Elev)
<b>Project:</b>	Eddy County, New Mexico NAD 83	<b>MD Reference:</b>	WELL @ 3007.0usft (Original Well Elev)
<b>Site:</b>	Pecos Valley 7 W2DA Fed Com #1H	<b>North Reference:</b>	Grid
<b>Well:</b>	Sec 12, T24S, R28E	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BHL: 330' FNL & 330' FEL, Sec 7		
<b>Design:</b>	Design #1		

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)	
15,500.0	89.38	90.20	10,839.5	-154.6	4,936.3	4,938.7	0.00	0.00	0.00	
15,600.0	89.38	90.20	10,840.5	-155.0	5,036.3	5,038.6	0.00	0.00	0.00	
15,700.0	89.38	90.20	10,841.6	-155.3	5,136.3	5,138.6	0.00	0.00	0.00	
15,800.0	89.38	90.20	10,842.7	-155.7	5,236.3	5,238.6	0.00	0.00	0.00	
15,900.0	89.38	90.20	10,843.8	-156.0	5,336.3	5,338.5	0.00	0.00	0.00	
16,000.0	89.38	90.20	10,844.9	-156.4	5,436.3	5,438.5	0.00	0.00	0.00	
16,100.0	89.38	90.20	10,845.9	-156.7	5,536.3	5,538.5	0.00	0.00	0.00	
16,200.0	89.38	90.20	10,847.0	-157.0	5,636.3	5,638.4	0.00	0.00	0.00	
16,300.0	89.38	90.20	10,848.1	-157.4	5,736.3	5,738.4	0.00	0.00	0.00	
16,400.0	89.38	90.20	10,849.2	-157.7	5,836.3	5,838.4	0.00	0.00	0.00	
16,476.8	89.38	90.20	10,850.0	-158.0	5,913.0	5,915.1	0.00	0.00	0.00	

BHL: 330' FNL & 330' FEL, Sec 7

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SL: 185' FNL & 950' FEL - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	450,865.00	633,460.00	32° 14' 20.949 N	104° 2' 7.358 W
KOP @ 10227' - plan hits target center - Point	0.00	0.00	10,227.0	0.0	0.0	450,865.00	633,460.00	32° 14' 20.949 N	104° 2' 7.358 W
FTP/LP: 330' FNL & 330' - plan hits target center - Point	0.00	0.00	10,800.0	-142.0	1,281.0	450,723.00	634,741.00	32° 14' 19.508 N	104° 1' 52.447 W
BHL: 330' FNL & 330' FE - plan hits target center - Point	0.00	0.00	10,850.0	-158.0	5,913.0	450,707.00	639,373.00	32° 14' 19.218 N	104° 0' 58.515 W

**Mewbourne Oil Company, Pecos Valley 7 W2DA Fed Com #1H**  
**Sec 12, T24S, R28E**  
**SL: 185' FNL & 950' FEL, Sec 12**  
**BHL: 330' FNL & 330' FEL, Sec 7**

**1. Geologic Formations**

TVD of target	10850'	Pilot hole depth	NA
MD at TD:	16480'	Deepest expected fresh water:	50'

**Basin**

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Rustler		Water	
Salado			
Castile	1100		
Base Salt			
Lamar	2735	Oil/Gas	
Bell Canyon	2765	Oil/Gas	
Cherry Canyon	3640	Oil/Gas	
Manzanita Marker	3790		
Brushy Canyon	4965	Oil/Gas	
Bone Spring	6425	Oil/Gas	
1 <sup>st</sup> Bone Spring Sand	7390		
2 <sup>nd</sup> Bone Spring Sand	8170		
3 <sup>rd</sup> Bone Spring Sand	9290		
Abo			
Wolfcamp	9635	Target Zone	
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

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

**Mewbourne Oil Company, Pecos Valley 7 W2DA Fed Com #1H**

**Sec 12, T24S, R28E**

**SL: 185' FNL & 950' FEL, Sec 12**

**BHL: 330' FNL & 330' FEL, Sec 7**

**2. Casing Program**

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
	From	To								
17.5"	0'	375'	13.375"	48	H40	STC	3.95	8.87	17.89	30.06
12.25"	0'	2680'	9.625"	36	J55	LTC	1.45	2.53	4.70	5.85
8.75"	0'	10930'	7"	26	HCP110	LTC	1.47	1.87	2.29	2.92
6.125"	10227'	16480'	4.5"	13.5	P110	LTC	1.45	1.69	4.00	5.00
BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet	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 <sup>rd</sup> 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 <sup>nd</sup> 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, Pecos Valley 7 W2DA Fed Com #1H

Sec 12, T24S, R28E

SL: 185' FNL & 950' FEL, Sec 12

BHL: 330' FNL & 330' FEL, Sec 7

3. Cementing Program

Casing	# Sks	Wt. lb/gal	Yld ft <sup>3</sup> /sack	H <sub>2</sub> O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	125	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder
Inter.	390	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder
Prod. Stg 1	415	12.5	2.12	11	9	Lead: Class C + Gel + Retarder + Defoamer + Extender
	400	15.6	1.18	5.2	10	Tail: Class H + Retarder + Fluid Loss + Defoamer
ECP/DV Tool @ 3790'						
Prod. Stg 2	65	12.5	2.12	11	9	Lead: Class C + Gel + Retarder + Defoamer + Extender
	100	14.8	1.34	6.3	8	Tail: Class C + Retarder
Liner	260	11.2	2.97	17	16	Class C + Salt + Gel + Fluid Loss + Retarder + Dispersant + Defoamer + Anti-Settling Agent

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	2480'	25%
Liner	10227'	25%

**Mewbourne Oil Company, Pecos Valley 7 W2DA Fed Com #1H**  
**Sec 12, T24S, R28E**  
**SL: 185' FNL & 950' FEL, Sec 12**  
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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"	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.

<b>X</b>	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.
<b>Y</b>	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.
<b>N</b>	Are anchors required by manufacturer?
<b>Y</b>	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"> <li>• Provide description here: See attached schematic.</li> </ul>

**Mewbourne Oil Company, Pecos Valley 7 W2DA Fed Com #1H**  
**Sec 12, T24S, R28E**  
**SL: 185' FNL & 950' FEL, Sec 12**  
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**5. Mud Program**

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0'	375'	Spud Mud	8.6-8.8	28-34	N/C
375'	2680'	BW	10.0	28-34	N/C
2680'	10227'	FW w/ Polymer	8.6-9.7	28-34	N/C
10227'	16480'	OBM	10.0-13.0	30-40	<10cc

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. MW up to 13.0 ppg may be required for shale control. The highest MW needed to balance formation pressure is expected to be 12.0 ppg.

What will be used to monitor the loss or gain of fluid?	Pason/PVT/Visual Monitoring
---	-----------------------------

**6. Logging and Testing Procedures**

Logging, Coring and Testing.	
X	Will run GR/CNL from KOP (10227') 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	10227' (KOP) to TD
Density	
CBL	
Mud log	
PEX	

**Mewbourne Oil Company, Pecos Valley 7 W2DA Fed Com #1H**  
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**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	6771 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.
--

<input type="checkbox"/>	H2S is present
<input checked="" type="checkbox"/>	H2S Plan attached

**8. Water & Waste Volume Estimates**

Fresh Water Required: 2915 bbl

Waste Water: 2915 bbl

Waste Solids: 1915 bbl

**9. 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

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>MEWBOUNE OIL COMPANY</b>
<b>LEASE NO.:</b>	<b>NMNM27919</b>
<b>WELL NAME &amp; NO.:</b>	<b>PECOS VALLEY 7 W2DA FEDERAL COM 1H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>185' FNL &amp; 950' FEL</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>330' FNL &amp; 330' FEL</b>
<b>LOCATION:</b>	<b>Section 12, T. 24 S., R 28 E., NMPM</b>
<b>COUNTY:</b>	<b>Eddy County, New Mexico</b>

### COA

**All pervious COA still apply expect the following:**

H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input type="radio"/> Low	<input checked="" type="radio"/> Medium	<input type="radio"/> High
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP

1. The minimum required fill of cement behind the 7 inch production casing is:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
  - b. Second stage above DV tool: Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.
2. The minimum required fill of cement behind the 4-1/2 inch production liner is:
    - Cement should tie-back 100' into the previous casing. Operator shall provide method of verification.

#### **A. PRESSURE CONTROL**

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

## GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Chaves and Roosevelt Counties

Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.  
During office hours call (575) 627-0272.  
After office hours call (575)

Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)  
393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on

which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

#### A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. 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. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the

formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

## B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
  - c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be reported to the appropriate BLM office.
  - d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
  - e. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
  - f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes. This test shall be performed prior to the test at full stack pressure.
  - g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

### C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

### D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

#### **Waste Minimization Plan (WMP)**

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

**ZS 042618**

13 3/8	surface csg in a	17 1/2	inch hole.	Design Factors				SURFACE	
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight	
"A"	48.00	H 40	ST&C	17.89	4.49	1.24	375	18,000	
"B"							0	0	
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,047				Tail Cmt	does	circ to sfc.	Totals:	375	18,000
<b>Comparison of Proposed to Minimum Required Cement Volumes</b>									
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
17 1/2	0.6946	325	533	315	69	8.80	803	2M	1.56

9 5/8	casing inside the	13 3/8	inch hole.	Design Factors				INTERMEDIATE	
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight	
"A"	36.00	J 55	LT&C	4.70	1.45	0.64	2,680	96,480	
"B"							0	0	
w/8.4#/g mud, 30min Sfc Csg Test psig:				Totals:			2,680	96,480	
The cement volume(s) are intended to achieve a top of				0	ft from surface or a		375	overlap.	
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
12 1/4	0.3132	590	1095	882	24	10.00	3080	5M	0.81

Burst Frac Gradient(s) for Segment(s): A, B, C, D = 1.31, b, c, d All > 0.70, OK.

7	casing inside the	9 5/8	inch hole.	Design Factors				PRODUCTION		
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight		
"A"	26.00	HCP 110	LT&C	2.46	1.51	1.82	10,227	265,902		
"B"	26.00	HCP 110	BUTT	6.35	1.32	1.82	703	18,278		
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,250				Totals:			10,930	284,180		
B would be:				51.27	1.43 if it were a vertical wellbore.					
No Pilot Hole Planned				MTD	Max VTD	Csg VD	Curve KOP	Dogleg°	Severity°	MEOC
				10930	10850	10850	10227	91	10	11133.2
The cement volume(s) are intended to achieve a top of				2480	ft from surface or a		2480	overlap.		
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg	
8 3/4	0.1503	look	0	1283		9.70	4940	5M	0.55	
Setting Depths for D V Tool(s):				3790			sum of sx	Σ CuFt	Σ%excess	
% excess cmt by stage:				25	36		980	1624	27	

MASP is within 10% of 5000psig, need exrta equip?

4 1/2	Liner w/top @	10227	inch hole.	Design Factors				LINER		
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight		
"A"	13.50	P 110	LT&C	3.67	1.4	1.69	1,618	21,843		
"B"	13.50	P 110	LT&C	2.71	1.46	1.69	4,635	62,573		
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,387				Totals:			6,253	84,416		
A Segment Design Factors would be:				2.31	1.46 if it were a vertical wellbore.					
No Pilot Hole Planned				MTD	Max VTD	Csg VD	Curve KOP	Dogleg°	Severity°	MEOC
				16480	10850	10850	10227	89	6	11845
The cement volume(s) are intended to achieve a top of				10227	ft from surface or a		703	overlap.		
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg	
6 1/8	0.0942	260	772	600	29	13.00			0.56	

Class 'H' tail cmt yld > 1.20

Capitan Reef est top XXXX.

MASP is within 10% of 5000psig, need exrta equip?