Form 3160-3 FORM APPROVED OMB No. 1004-0137 (June 2015) Expires: January 31, 2018 **UNITED STATES** DEPARTMENT OF THE INTERIOR 5. Lease Serial No. NMNM107374 **BUREAU OF LAND MANAGEMENT** APPLICATION FOR PERMIT TO DRILL OR REENTER 6. If Indian, Allotee or Tribe Name 7. If Unit or CA Agreement, Name and No. **✓** DRILL REENTER 1a. Type of work: 1b. Type of Well: Oil Well ✓ Gas Well Other 8. Lease Name and Well No. 1c. Type of Completion: Hydraulic Fracturing ✓ Single Zone Multiple Zone DELAWARE RANCH 11 14 FED COM 821H 2. Name of Operator 9. API Well No. MEWBOURNE OIL COMPANY 10. Field and Pool, or Exploratory 3a. Address 3b. Phone No. (include area code) PURPLE SAGE/Wolfcamp P O BOX 5270, HOBBS, NM 88241 (575) 393-5905 4. Location of Well (Report location clearly and in accordance with any State requirements.\*) 11. Sec., T. R. M. or Blk. and Survey or Area SEC 11/T26S/R28E/NMP At surface NWNW / 405 FNL / 490 FWL / LAT 32.0633463 / LONG -104.0647973 At proposed prod. zone SWSW / 330 FSL / 400 FWL / LAT 32.0360677 / LONG -104.06548 14. Distance in miles and direction from nearest town or post office\* 12. County or Parish 13. State **EDDY** NM 10 miles 15. Distance from proposed\* 16. No of acres in lease 17. Spacing Unit dedicated to this well 210 feet location to nearest property or lease line, ft. 640.0 (Also to nearest drig. unit line, if any) 18. Distance from proposed location\* 19. Proposed Depth 20. BLM/BIA Bond No. in file to nearest well, drilling, completed, 30 feet 10532 feet / 20704 feet FED: applied for, on this lease, ft. 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start\* 23. Estimated duration 2964 feet 06/27/2020 60 days 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable) 1. Well plat certified by a registered surveyor. 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 2. A Drilling Plan. 3. A Surface Use Plan (if the location is on National Forest System Lands, the 5. Operator certification. SUPO must be filed with the appropriate Forest Service Office). 6. Such other site specific information and/or plans as may be requested by the Name (Printed/Typed) Date 25. Signature BRADLEY BISHOP / Ph: (575) 393-5905 03/30/2023 (Electronic Submission) Title Regulatory Approved by (Signature) Date Name (Printed/Typed) (Electronic Submission) CODY LAYTON / Ph: (575) 234-5959 11/09/2023 Title Office Assistant Field Manager Lands & Minerals 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

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.



applicant to conduct operations thereon. Conditions of approval, if any, are attached. 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

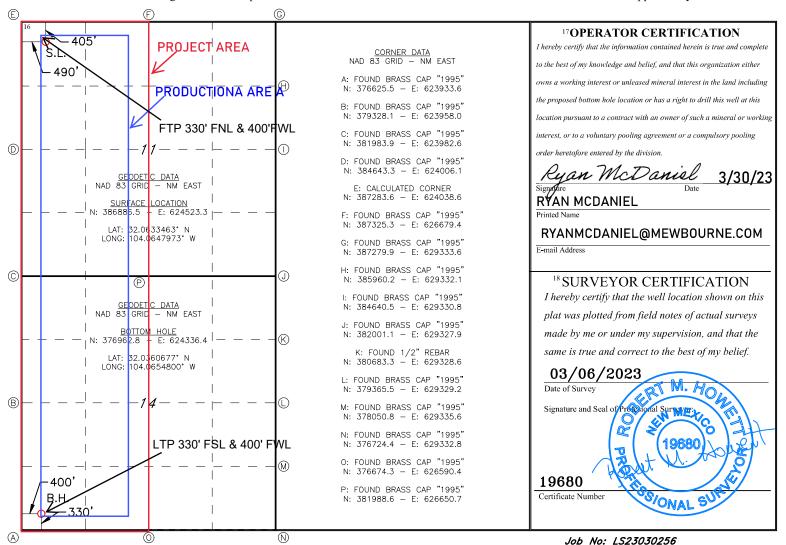
Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

☐ AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

1	API Number	r		<sup>2</sup> Pool Code			<sup>3</sup> Pool Na	me					
		9822 PURPLE SAGE; WOLFCAMP											
<sup>4</sup> Property Co	de	e DELAWARE RANCH 11/14 FED COM 6Well Number 821H											
70GRID			8 Operator Name  MEWBOURNE OIL COMPANY  9 Elevation 2964										
			<sup>10</sup> Surface Location										
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/We	est line	County			
D	11	26S	28E		405	NORTH	WE	ST	EDDY				
			11 <b>I</b>	Bottom H	ole Location	n If Different Fr	om Surface						
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/We	est line	County			
M	14	26S	28E		330	SOUTH	400	WE	ST	EDDY			
12 Dedicated Acre	s 13 Joint	or Infill 14 (	Consolidation	Code 15 O	order No.								
640													

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.



### State of New Mexico Energy, Minerals and Natural Resources Department

Submit Electronically Via E-permitting

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

## Section 1 - Plan Description Effective May 25, 2021

		Ef	fective May 25,	2021		
I. Operator:	Mewbourne C	Oil Co.	OGRID:	14744	Date:	5/2/22
II. Type: 🗶 Orig	ginal   Amendment	due to □ 19.15.27.	9.D(6)(a) NMAC	C □ 19.15.27.9.D(	(6)(b) NMAC 🗆 (	Other.
If Other, please d	escribe:					
III. Well(s): Provide recompleted fr	vide the following info om a single well pad	ormation for each or connected to a	new or recomplet central delivery po	ed well or set of oint.	wells proposed to	be drilled or proposed to
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Delaware Ranch 11/14 Fed	1 Com 821 H	D 11 26S 28E	405' FNL x 490' FW	1500	3500	4000
V. Anticipated S	chedule: Provide the completed from a sing	following informa gle well pad or con	nected to a centra	al delivery point.	vell or set of wells	9.15.27.9(D)(1) NMAC] s proposed to be drilled or
Well Name	API	Spud Date	TD Reached Date	Completion Commencement		
Delaware Ranch 11/14 Fe	d Com 821H	7/2/22	8/2/22	9/2/22	9/17/2	2 9/17/22
VII. Operationa Subsection A thro	l Practices: ☑ Attac ough F of 19.15.27.8	h a complete desc NMAC.	ription of the act	ions Operator wil	l take to comply	at to optimize gas capture.  with the requirements of tices to minimize venting

#### Section 2 – Enhanced Plan EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

M Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

#### IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

#### X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system  $\square$  will  $\square$  will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator  $\Box$  does  $\Box$  does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: 

Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Released to Imaging: 11/14/2023 1:18:31 PM

## Section 3 - Certifications Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

K Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

□ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

#### Section 4 - Notices

- 1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:
- (a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or
- (b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.
- 2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	Bradley Bishop
Printed Name:	BRADLEY BISHOP
Title:	REGULATORY MANAGER
E-mail Address:	BBISHOP@MEWBOURNE.COM
Date:	5-262/122
Phone:	575-393-5905
	OIL CONSERVATION DIVISION  (Only applicable when submitted as a standalone form)
Approved By:	
Title:	
Approval Date:	
Conditions of A	

#### Mewbourne Oil Company

### Natural Gas Management Plan - Attachment

- VI. Separation equipment will be sized by construction engineering staff based on stated manufacturer daily throughput capacities and anticipated daily production rates to ensure adequate capacity. Closed vent system piping, compression needs, and VRUs will be sized utilizing ProMax modelling software to ensure adequate capacity for anticipated production volumes and conditions.
- VII. Mewbourne Oil Company (MOC) will take following actions to comply with the regulations listed in 19.15.27.8:
  - A. MOC will maximize the recovery of natural gas by minimizing the waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. MOC will ensure that well(s) will be connected to a natural gas gathering system with sufficient capacity to transport natural gas. If there is no adequate takeaway for the gas, well(s) will be shut in until the natural gas gathering system is available.
  - B. All drilling operations will be equipped with a rig flare located at least 100 ft from the nearest surface hole. Rig flare will be utilized to combust any natural gas that is brought to surface during normal drilling operations. In the case of emergency venting or flaring the volumes will be estimated and reported appropriately.
  - C. During completion operations any natural gas brought to surface will be flared. Immediately following the finish of completion operations, all well flow will be directed to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. It is not anticipated that gas will not meet pipeline standards. However, if natural gas does not meet gathering pipeline quality specifications, MOC will flare the natural gas for 60 days or until the natural gas meets the pipeline quality specifications, whichever is sooner. MOC will ensure that the flare is sized properly and is equipped with automatic igniter or continuous pilot. The gas sample will analyzed twice per week and the gas will be routed into a gathering system as soon as pipeline specifications are met.
  - D. Natural gas will not be flared with the exceptions and provisions listed in the 19.15.27.8 D.(1) through (4). If there is no adequate takeaway for the separator gas, well(s) will be shut in until the natural gas gathering system is available with exception of emergency or malfunction situations. Venting and/or flaring volumes will be estimated and reported appropriately.
  - E. MOC will comply with the performance standards requirements and provisions listed in 19.15.27.8 E.(1) through (8). All equipment will be designed and sized to handle maximum anticipated pressures and throughputs in order to minimize the waste. Production storage tanks constructed after May 25, 2021 will be equipped with automatic gauging system. Flares constructed after May 25, 2021 will be equipped with automatic igniter or continuous pilot. Flares will be located at least 100' from the well and storage tanks unless otherwise approved by the division. MOC will conduct AVO inspections as described in 19.15.27.8 E (5) (a) with frequencies specified in 19.15.27.8 E (5) (b) and (c). All emergencies will be resolved as quickly and safely as feasible to minimize waste.
  - F. The volume of natural gas that is vented or flared as the result of malfunction or emergency during drilling and completions operations will be estimated. The volume of natural gas that is vented, flared or beneficially used during production operations, will be measured or estimated. MOC will install equipment to measure

the volume of natural gas flared from existing process piping or a flowline piped from equipment such as high pressure separators, heater treaters, or vapor recovery units associated with a well or facility associated with a well authorized by an APD issued after May 25, 2021 that has an average daily production greater than 60 Mcf/day. If metering is not practicable due to circumstances such as low flow rate or low pressure venting and flaring, MOC will estimate the volume of vented or flared natural gas. Measuring equipment will conform to industry standards and will not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

VIII. For maintenance activities involving production equipment and compression, venting will be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production and compression equipment the associated producing wells will be shut in to eliminate venting. For maintenance of VRUs all gas normally routed to the VRU will be routed to flare to eliminate venting.



#### U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

## **Drilling Plan Data Report** 11/09/2023

**APD ID:** 10400091410

**Operator Name: MEWBOURNE OIL COMPANY** 

Well Name: DELAWARE RANCH 11 14 FED COM

Well Type: CONVENTIONAL GAS WELL

**Submission Date:** 03/30/2023

Well Number: 821H

Well Work Type: Drill

Highlighted data reflects the most

recent changes

Show Final Text

## **Section 1 - Geologic Formations**

WN 2 ALT 2 SALT	2964 2489 564	28 475 2400	Measured Depth 28	Lithologies OTHER: Topsoil SALT	NONE NONE	Producing Formatio N
WN 2 ALT 2 SALT	2964 2489	475	28	OTHER : Topsoil		N
ALT 2	2489	475				
SALT			475	SALT	NONE	N
	564	2400				
			2400	SALT	NONE	N
R	374	2590	2590	LIMESTONE	NATURAL GAS, OIL	N
NYON	344	2620	2620	SANDSTONE	NATURAL GAS, OIL	N
ANYON -	-466	3430	3430	SANDSTONE	NATURAL GAS, OIL	N
NITA .	-646	3610	3610	LIMESTONE	NATURAL GAS, OIL	N
ANYON -	3086	6050	6050	SANDSTONE	NATURAL GAS, OIL	N
NG LIME -	3356	6320	6320	LIMESTONE, SHALE	NATURAL GAS, OIL	N
NG 1ST -	4256	7220	7220	SANDSTONE	NATURAL GAS, OIL	N
NG 2ND -	5016	7980	7980	SANDSTONE	NATURAL GAS, OIL	N
NG 3RD -	6076	9040	9040	SANDSTONE	NATURAL GAS, OIL	N
	6436	9400	9400	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y
<u> </u>	IG 3RD -	IG 3RD -6076	IG 3RD -6076 9040	IG 3RD -6076 9040 9040	IG 3RD -6076 9040 9040 SANDSTONE  MP -6436 9400 9400 LIMESTONE,	IG 3RD -6076 9040 9040 SANDSTONE NATURAL GAS, OIL  MP -6436 9400 9400 LIMESTONE, NATURAL GAS, OIL

## **Section 2 - Blowout Prevention**

Well Name: DELAWARE RANCH 11 14 FED COM Well Number: 821H

Pressure Rating (PSI): 5M Rating Depth: 20704

Equipment: Annular, Pipe Ram, Blind Ram

Requesting Variance? YES

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. Anchors aren't required by manufacturer. A multi-bowl wellhead is being used. See attached schematic

**Testing Procedure:** 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.

#### **Choke Diagram Attachment:**

Delaware\_Ranch\_11\_14\_Fed\_Com\_821H\_5M\_BOPE\_Choke\_Diagram\_20230330151853.pdf

Delaware Ranch 11 14 Fed Com 821H Flex Line Specs API 16C 20230330151853.pdf

Delaware\_Ranch\_11\_14\_Fed\_Com\_821H\_Flex\_Line\_Specs\_20230330151853.pdf

#### **BOP Diagram Attachment:**

Delaware\_Ranch\_11\_14\_Fed\_Com\_821H\_5M\_BOPE\_Schematic\_20230330151900.pdf

Delaware\_Ranch\_11\_14\_Fed\_Com\_821H\_5M\_Mutli\_Bowl\_WH\_20230330151901.pdf

#### Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	450	0	450	2964	2514	450	H-40	48	ST&C	3.74	8.4	DRY	14.9 1	DRY	25.0 5
2	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	2575	0	2575	2968	389	2575	J-55	36	LT&C	1.51	2.63	DRY	4.89	DRY	6.08
3	PRODUCTI ON	8.75	7.0	NEW	API	N	0	10060	0	10049	2968	-7085	10060	P- 110	26	LT&C	1.23	1.96	DRY	2.44	DRY	3.17
4	LINER	6.12 5	4.5	NEW	API	N	9900	20704	9889	10532	-6925	-7568	10804	P- 110	13.5	LT&C	1.61	1.87	DRY	2.32	DRY	2.89

#### **Casing Attachments**

Well Name: DELAWARE RANCH 11 14 FED COM Well Number: 821H

Casing	<b>Attachments</b>
--------	--------------------

Casing ID: 1

String

**SURFACE** 

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Delaware\_Ranch\_11\_14\_Fed\_Com\_821H\_Csg\_Info\_20230330151954.pdf

Casing ID: 2

String

**INTERMEDIATE** 

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Delaware\_Ranch\_11\_14\_Fed\_Com\_821H\_Csg\_Info\_20230330152022.pdf

Casing ID: 3

String

**PRODUCTION** 

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Delaware\_Ranch\_11\_14\_Fed\_Com\_821H\_Csg\_Info\_20230330152102.pdf

Well Name: DELAWARE RANCH 11 14 FED COM Well Number: 821H

#### **Casing Attachments**

Casing ID: 4

String

**LINER** 

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Delaware\_Ranch\_11\_14\_Fed\_Com\_821H\_Csg\_Info\_20230330152139.pdf

### **Section 4 - Cement**

String Type	Lead/Tail	Stage Tool Depth	Тор МD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	258	170	2.12	12.5	360	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail	6	258	450	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead		0	1892	350	2.12	12.5	742	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		1892	2575	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	3590	2375	2912	50	2.12	12.5	763	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		2912	3590	100	1.34	14.8	134	25	Class C	Retarder, Fluid Loss, Defoamer
PRODUCTION	Lead	3590	3590	7588	360	2.12	12.5	763	25	Class C	Gel, Retarder, LCM, Defoamer, Extender
PRODUCTION	Tail		7588	1006 0	400	1.18	15.6	472	25	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		9900	2070 4	690	1.85	13.5	1277	25	Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

Well Name: DELAWARE RANCH 11 14 FED COM Well Number: 821H

### **Section 5 - Circulating Medium**

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Lost circulation material Sweeps Mud scavengers in surface hole

Describe the mud monitoring system utilized: Pason/PVT/Visual Monitoring

### **Circulating Medium Table**

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	НА	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	450	SPUD MUD	8.6	8.8							
450	2575	SALT SATURATED	10	10	1						
2575	1006 0	WATER-BASED MUD	8.6	9.7							
1006 0	2070 4	OIL-BASED MUD	10	12							

## **Section 6 - Test, Logging, Coring**

List of production tests including testing procedures, equipment and safety measures:

Will use GR/CNL from offset well: Delaware Ranch 11/14 W1DM Fed Com #1H.

List of open and cased hole logs run in the well:

DIRECTIONAL SURVEY, MEASUREMENT WHILE DRILLING, MUD LOG/GEOLOGIC LITHOLOGY LOG,

Coring operation description for the well:

None

Well Name: DELAWARE RANCH 11 14 FED COM Well Number: 821H

#### **Section 7 - Pressure**

Anticipated Bottom Hole Pressure: 6628 Anticipated Surface Pressure: 4304

**Anticipated Bottom Hole Temperature(F): 165** 

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

Delaware\_Ranch\_11\_14\_Fed\_Com\_821H\_H2S\_Plan\_20230330152758.pdf

#### **Section 8 - Other Information**

Proposed horizontal/directional/multi-lateral plan submission:

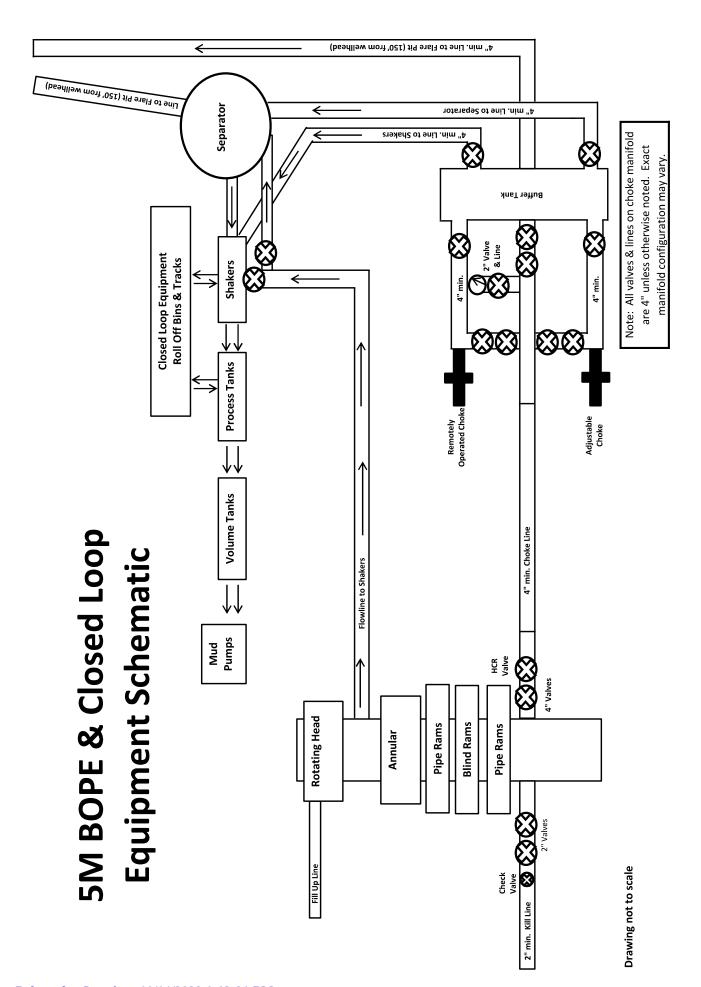
Delaware\_Ranch\_11\_14\_Fed\_Com\_821H\_MOC\_Dir\_Plan\_20230330152817.pdf Delaware\_Ranch\_11\_14\_Fed\_Com\_821H\_MOC\_Dir\_Plot\_20230330152817.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Delaware\_Ranch\_11\_14\_Fed\_Com\_821H\_Add\_Info\_20230330152824.pdf

Other Variance attachment:





GATES ENGINEERING & SERVICES NORTH AMERICA 7603 Prairie Oak Dr. Houston, TX 77086 PHONE: (281) 602 - 4119

FAX:

EMAIL: Troy.Schmidt@gates.com

WEB: www.gates.com

## **10K CHOKE & KILL ASSEMBLY PRESSURE TEST CERTIFICATE**

Test Date: 8/20/2018 A-7 AUSTIN INC DBA AUSTIN HOSE Customer: Hose Serial No.: H-082018-10 Customer Ref .: 4101901 Created By: Moosa Nagvi Invoice No.: 511956 10KF3.035.0CK41/1610KFLGFXDxFLT\_L/E Product Description: End Fitting 2: 4 1/16 in. Float Flange End Fitting 1: 4 1/16 in. Fixed Flange Assembly Code: L40695052218H-082018-10 Gates Part No.: 68503010-9721632 Test Pressure: 15,000 psi. Working Pressure: 10,000 psi.

Gates Engineering & Services North America certifies that the following hose assembly has successfully passed all pressure testing requirements set forth in Gates specifications: GTS-04-052 (for 5K assemblies) or GTS-04-053 (10K assemblies), which include reference to Specification API 16C (2nd Edition); sections 7.5.4, 7.5.9, and 10.8.7. A test graph will accompany this test certificate to illustrate conformity to test requirements.

Quality:

Date : Signature : QUALITY

8/20/2018

Production: Date :

Signature :

/

Form PTC - 01 Rev.0 2



PRODUCTION

8/20/2018



GATES E & S NORTH AMERICA, INC. 134 44TH STREET **CORPUS CHRISTI, TEXAS 78405** 

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### **10K CEMENTING ASSEMBLY PRESSURE TEST CERTIFICATE**

Customer:

AUSTIN DISTRIBUTING

4060578 Customer Ref. : 500506

Invoice No.:

Test Date:

Hose Serial No.:

Created By:

4/30/2015

D-043015-7 JUSTIN CROPPER

Product Description:

10K3.548.0CK4.1/1610KFLGE/E LE

End Fitting 1:

Gates Part No.:

Working Pressure:

4 1/16 10K FLG

4773-6290 10,000 PSI End Fitting 2:

Assembly Code:

Test Pressure:

4 1/16 10K FLG

L36554102914D-043015-7

15,000 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 15,000 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Quality Manager:

Date:

Signature:

QUALITY

4/30/2015

Produciton:

Date:

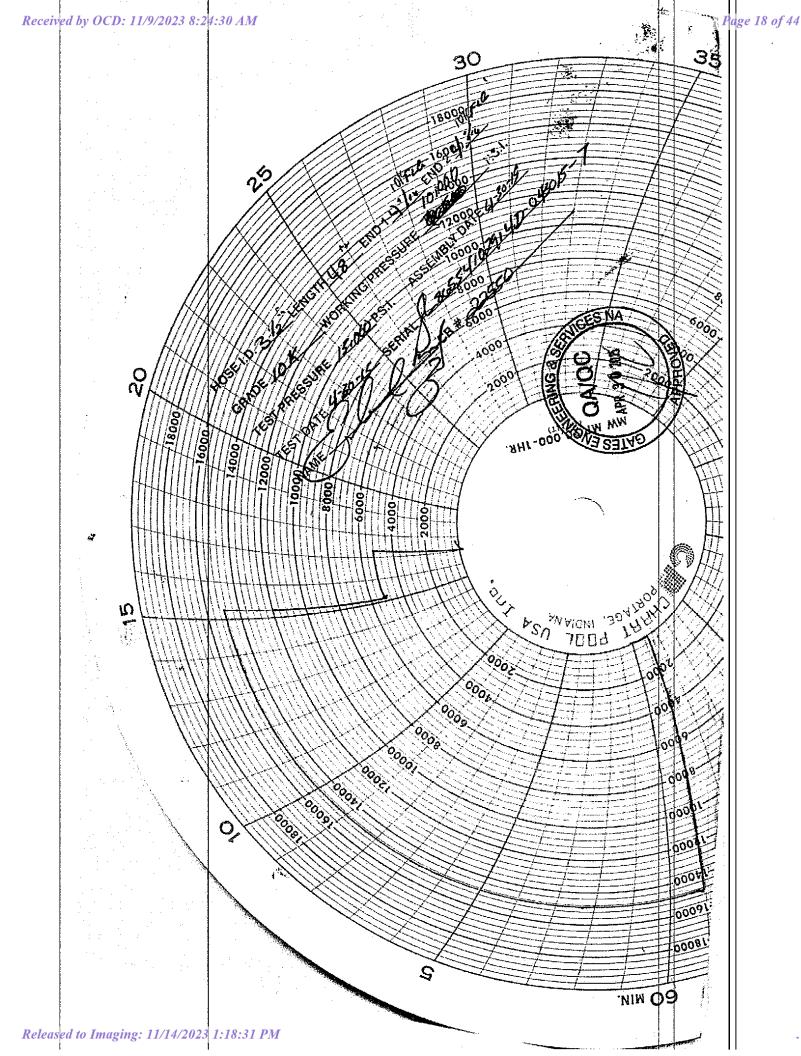
Signature :

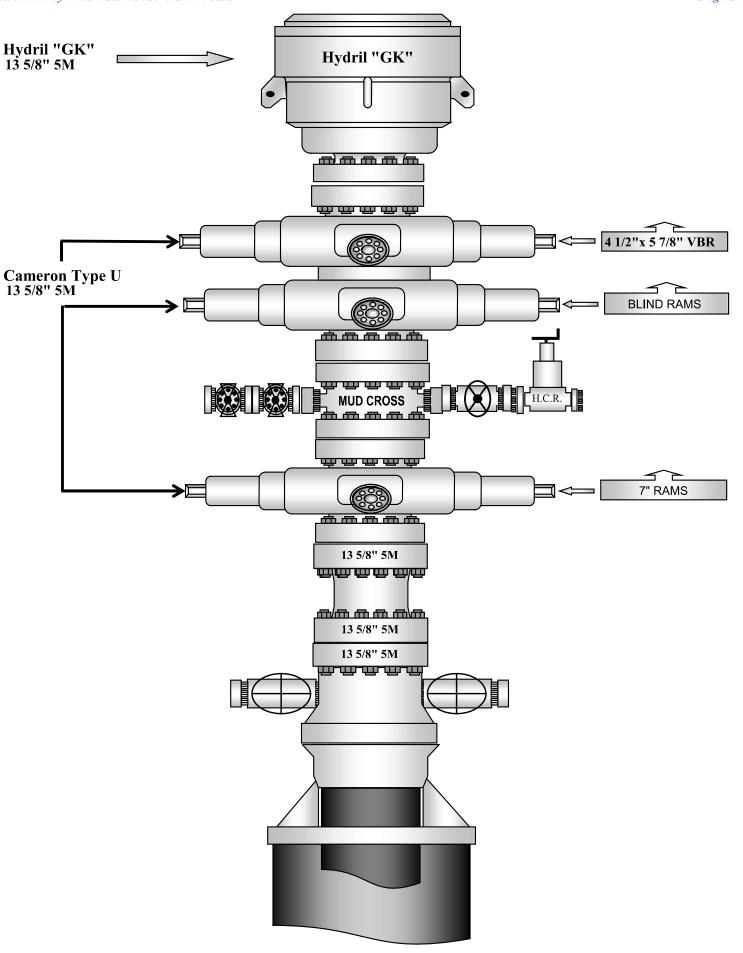
**PRODUCTION** 

4/30/20**1**5

Forn PTC - 01 Rev.0 2

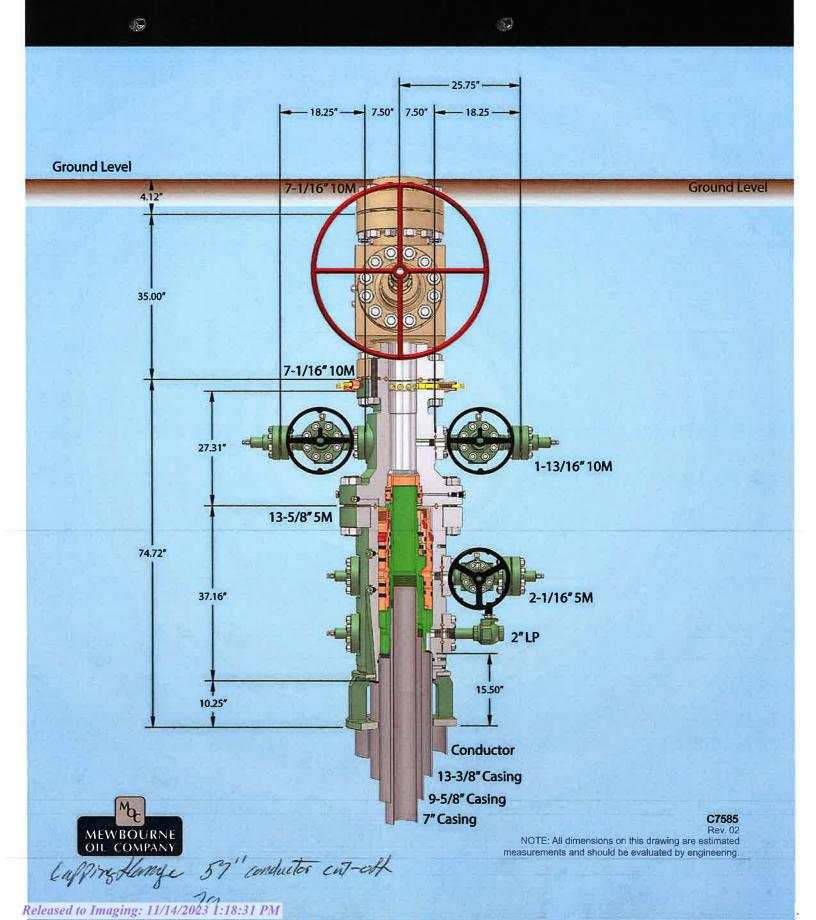








## 13-5/8" MN-DS Wellhead System



SHL: 405' FNL & 490' FWL (Sec 11) BHL: 330' FSL & 400' FWL (Sec 14)

#### **Casing Program**

Hole Size	From	To	Con Simo	Weight	Grade	Conn.	SF	SF Burst	SF Jt	SF Body
Hole Size	r rom	10	Csg. Size	(lbs)	Grade	Conn.	Collapse	SF Burst	Tension	Tension
17.50	0'	450'	13.375	48.0	H40	STC	3.74	8.40	14.91	25.05
12.25	0'	2575'	9.625	36.0	J55	LTC	1.51	2.63	4.89	6.08
8.75	0'	10060'	7.000	26.0	P110	LTC	1.23	1.96	2.44	3.17
6.13	9900'	20704'	4.500	13.5	P110	LTC	1.61	1.87	2.32	2.89
				DI M M	nimum Cafat	v Eastan	1.125	1.0	1.6 Dry	1.6 Dry
				BLM MI	nimum Safet	y Factor	1.125	1.0	1.8 Wet	1.8 Wet

			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 specific	ation sheet.		Y
Is premium or uncommon casing planned? If yes attac	ch casing specification sheet.		N
Does the above casing design meet or exceed BLM's	minimum standards? If not p	provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to a	void approaching the collaps	se pressure rating of the casing?	Y
Is well located within Capitan Reef?			N
If yes, does production casing cement tie back a n	ninimum of 50' above the Re	naf)	14
	illillillillilli of 50° above the Ke	Σ1:	N
Is well within the designated 4 string boundary.			N
Is well located in SOPA but not in R-111-P?			N
	ed		IN
If yes, are the first 2 strings cemented to surface a	nd 3 <sup>rd</sup> string cement tied bacl	k 500' into previous casing?	
Is well located in R-111-P and SOPA?			N
If yes, are the first three strings cemented to surface	ce?		
Is 2 <sup>nd</sup> string set 100' to 600' below the base of sal	t?		
Is an open annulus used to satisfy R-111-Q? If yes, so			
Is an engineered weak point used to satisfy R-111-Q?			
If yes, at what depth is the weak point planned?			-
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 c	asing if lost circulation occur	rs?	
Is well located in critical Cave/Karst?			N
If yes, are there three strings cemented to surface?			
Formation	Est. Top	Formation	Est. Top
Rustler		Delaware (Lamar)	2590'
Salt Top	475'	Bell Canyon	2620
Salt Base	2400'	Cherry Canyon	3430'
Yates		Manzanita Marker	3610'
Seven Rivers		Basal Brushy Canyon	6050'
Queen		Bone Spring	6320'
Capitan		1st Bone Spring Sand	7220'
Grayburg		2nd Bone Spring Sand	7980'
San Andres		3rd Bone Spring Sand	9040'
Glorieta		Abo	
Yeso		Wolfcamp	9400'

SHL: 405' FNL & 490' FWL (Sec 11) BHL: 330' FSL & 400' FWL (Sec 14)

#### Casing Program

Hole Size From	To	Csg. Size	Weight	Grade	Conn.	SF	SF Burst	SF Jt	SF Body	
note Size	FIOIII	10	Csg. Size	(lbs)	Grade	Com.	Collapse	SF Burst	Tension	Tension
17.50	0'	450'	13.375	48.0	H40	STC	3.74	8.40	14.91	25.05
12.25	0'	2575'	9.625	36.0	J55	LTC	1.51	2.63	4.89	6.08
8.75	0'	10060'	7.000	26.0	P110	LTC	1.23	1.96	2.44	3.17
6.13	9900'	20704'	4.500	13.5	P110	LTC	1.61	1.87	2.32	2.89
				DIMM:	nimum Cafat			1.0	1.6 Dry	1.6 Dry
				DEWI MI	nimum Safety Factor		1.125	1.0	1.8 Wet	1.8 Wet

				Y or N
Is casing new? If used, attach certification as requi	red in Onshore Order #1	1		Y
Is casing API approved? If no, attach casing spec	ification sheet.			Y
Is premium or uncommon casing planned? If yes a	attach casing specificatio	n sheet.		N
Does the above casing design meet or exceed BLM	A'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 t	o avoid approaching the	collapse press	sure 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	e the Reef?		- 11
		e the Reer.		***
Is well within the designated 4 string boundary.				N
Is well located in SOPA but not in R-111-P?				N
If yes, are the first 2 strings cemented to surface	e and 3 <sup>rd</sup> string cement t	ied back 500'	into previous casing?	
				1
Is well located in R-111-P and SOPA?				N
If yes, are the first three strings cemented to su	rface?			
Is 2 <sup>nd</sup> string set 100' to 600' below the base of	`salt?			
Is an open annulus used to satisfy R-111-Q? If yes	s, see cement design.			
Is an engineered weak point used to satisfy R-111-	·Q?			
If yes, at what depth is the weak point planned	?			-
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 contingence	y casing if lost circulatio	n occurs?		
Is well located in critical Cave/Karst?				N
If yes, are there three strings cemented to surfa	22			14
Formation	Est. Top		Formation	Est. Top
Rustler	Est. Top		Delaware (Lamar)	2590'
Salt Top	475'		Bell Canyon	2620
Salt Top Salt Base	2400'		Cherry Canyon	3430'
Yates	2400		Manzanita Marker	3610'
Seven Rivers			Basal Brushy Canyon	6050'
Queen			Bone Spring	6320'
Capitan			1st Bone Spring Sand	7220'
Grayburg			2nd Bone Spring Sand	7980'
San Andres			3rd Bone Spring Sand	9040'
Glorieta			Abo	70.0
Yeso			Wolfcamp	9400'

SHL: 405' FNL & 490' FWL (Sec 11) BHL: 330' FSL & 400' FWL (Sec 14)

#### **Casing Program**

Hole Size	From	To	Con Sino	Weight	Condo	Grade Conn. SF Collapse SF Bu	SE D	SF Jt	SF Body	
Hole Size	r rom	10	Csg. Size	(lbs)	Grade		Collapse	SF Burst	Tension	Tension
17.50	0'	450'	13.375	48.0	H40	STC	3.74	8.40	14.91	25.05
12.25	0'	2575'	9.625	36.0	J55	LTC	1.51	2.63	4.89	6.08
8.75	0'	10060'	7.000	26.0	P110	LTC	1.23	1.96	2.44	3.17
6.13	9900'	20704'	4.500	13.5	P110	LTC	1.61	1.87	2.32	2.89
				DI M M	nimum Cafat	v Eastan	1.125	1.0	1.6 Dry	1.6 Dry
				BLM Minimum Safety Factor			1.125	1.0	1.8 Wet	1.8 Wet

			Y or N
Is casing new? If used, attach certification as require	d in Onshore Order #1		Y
Is casing API approved? If no, attach casing specif	ication sheet.		Y
Is premium or uncommon casing planned? If yes att	ach casing specification sheet.		N
Does the above casing design meet or exceed BLM?	s minimum standards? If not p	rovide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to	avoid approaching the collapse	e 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 Pag	of)	14
	miniminum of 50° above the Rec	511	N
Is well within the designated 4 string boundary.			N
Is well located in SOPA but not in R-111-P?			N
	rel .		IN
If yes, are the first 2 strings cemented to surface	and 3 <sup>rd</sup> string cement fied back	500' into previous casing?	
Is well located in R-111-P and SOPA?			N
If yes, are the first three strings cemented to surfa	ace?		
Is 2 <sup>nd</sup> string set 100' to 600' below the base of s	alt?		
Is an open annulus used to satisfy R-111-Q? If yes,			
Is an engineered weak point used to satisfy R-111-Q	?		
If yes, at what depth is the weak point planned?			_
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	5?	
Is well located in critical Cave/Karst?			N
If yes, are there three strings cemented to surface	?		
Formation	Est. Top	Formation	Est. Top
Rustler		Delaware (Lamar)	2590'
Salt Top	475'	Bell Canyon	2620
Salt Base	2400'	Cherry Canyon	3430'
Yates		Manzanita Marker	3610'
Seven Rivers		Basal Brushy Canyon	6050'
Queen		Bone Spring	6320'
Capitan		1st Bone Spring Sand	7220'
Grayburg		2nd Bone Spring Sand	7980'
San Andres		3rd Bone Spring Sand	9040'
Glorieta		Abo	0.400!
Yeso		Wolfcamp	9400'

SHL: 405' FNL & 490' FWL (Sec 11) BHL: 330' FSL & 400' FWL (Sec 14)

#### **Casing Program**

Hole Size	From	To	Csg. Size Weight Grade Conn. SF SF Burg	SE D	SE B SF Jt					
Hole Size	r rom	10	Csg. Size	(lbs)	Grade	Com.	Collapse	SF Burst	Tension	Tension
17.50	0'	450'	13.375	48.0	H40	STC	3.74	8.40	14.91	25.05
12.25	0'	2575'	9.625	36.0	J55	LTC	1.51	2.63	4.89	6.08
8.75	0'	10060'	7.000	26.0	P110	LTC	1.23	1.96	2.44	3.17
6.13	9900'	20704'	4.500	13.5	P110	LTC	1.61	1.87	2.32	2.89
				DIMM's Control Control			1.125	1.0	1.6 Dry	1.6 Dry
				BLM Minimum Safety Factor			1.125	1.0	1.8 Wet	1.8 Wet

			Y or N
Is casing new? If used, attach certification as required	l in Onshore Order #1		Y
Is casing API approved? If no, attach casing specific	cation sheet.		Y
Is premium or uncommon casing planned? If yes atta	ch casing specification sheet.		N
Does the above casing design meet or exceed BLM's	minimum standards? If not p	provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to a	woid approaching the collaps	e pressure rating of the casing?	Y
Is well located within Capitan Reef?			N
If yes, does production casing cement tie back a r	ninimum of 50' above the Pe	af)	14
	illillillillilli of 50° above the Ke	er:	N
Is well within the designated 4 string boundary.			N
Is well located in SOPA but not in R-111-P?			N
	rel		IN
If yes, are the first 2 strings cemented to surface a	nd 3 <sup>rd</sup> string cement tied back	x 500' into previous casing?	
Is well located in R-111-P and SOPA?			N
If yes, are the first three strings cemented to surface	ce?		
Is 2 <sup>nd</sup> string set 100' to 600' below the base of sa	lt?		
Is an open annulus used to satisfy R-111-Q? If yes, s			
Is an engineered weak point used to satisfy R-111-Q?	,		
If yes, at what depth is the weak point planned?			-
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 of	asing if lost circulation occur	s?	
Is well located in critical Cave/Karst?			N
If yes, are there three strings cemented to surface?	•		
Formation	Est. Top	Formation	Est. Top
Rustler		Delaware (Lamar)	2590'
Salt Top	475'	Bell Canyon	2620
Salt Base	2400'	Cherry Canyon	3430'
Yates		Manzanita Marker	3610'
Seven Rivers		Basal Brushy Canyon	6050'
Queen		Bone Spring	6320'
Capitan		1st Bone Spring Sand	7220'
Grayburg		2nd Bone Spring Sand	7980'
San Andres		3rd Bone Spring Sand	9040'
Glorieta		Abo	
Yeso		Wolfcamp	9400'

## **Mewbourne Oil Company**

Eddy County, New Mexico NAD 83 Delaware Ranch 11/14 Fed Com #821H

Sec 11, T26S, R28E

SHL: 405' FNL & 490' FWL (Sec 11) BHL: 330' FSL & 400' FWL (Sec 14)

Plan: Design #1

## **Standard Planning Report**

29 March, 2023

Hobbs Database:

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83 Delaware Ranch 11/14 Fed Com #821H Site:

Well: Sec 11, T26S, R28E

Wellbore: BHL: 330' FSL & 400' FWL (Sec 14)

Design: Design #1 Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Site Delaware Ranch 11/14 Fed Com #821H

WELL @ 2992.0usft (Original Well Elev) WELL @ 2992.0usft (Original Well Elev)

Minimum Curvature

Project Eddy County, New Mexico NAD 83

Map System: US State Plane 1983 North American Datum 1983 Geo Datum: Map Zone:

New Mexico Eastern Zone

System Datum:

Ground Level

Delaware Ranch 11/14 Fed Com #821H Site

Site Position: Northing: 386,886.50 usft 32.0633463 Latitude: From: Мар Easting: 624,523.30 usft Longitude: -104.0647973

13-3/16 " **Position Uncertainty:** 0.0 usft Slot Radius:

Well Sec 11, T26S, R28E

**Well Position** +N/-S 0.0 usft 386,886.50 usft 32.0633463 Northing: Latitude: +E/-W 0.0 usft Easting: 624,523.30 usft Longitude: -104.0647973

0.0 usft Wellhead Elevation: Ground Level: 2,964.0 usft **Position Uncertainty** 2,992.0 usft

**Grid Convergence:** 0.14°

BHL: 330' FSL & 400' FWL (Sec 14) Wellbore

Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (°) (°) (nT) 7.36 IGRF2010 12/31/2014 59.87 48,090.49970505

Design Design #1 Audit Notes: PROTOTYPE Version: Phase: Tie On Depth: 0.0

+N/-S +E/-W Direction Vertical Section: Depth From (TVD) (usft) (usft) (usft) (°) 181.08 0.0 0.0 0.0

3/29/2023 **Plan Survey Tool Program** Date

**Depth From** Depth To

(usft) (usft) Survey (Wellbore) **Tool Name** Remarks

0.0 Design #1 (BHL: 330' FSL & 400'

Plan Sections Vertical Build Measured Dogleg Turn Inclination +N/-S Depth Azimuth Depth +E/-W Rate Rate Rate TFO (usft) (°) (°) (usft) (usft) (usft) (°/100usft) (°/100usft) (°/100usft) Target (°) 0.0 0.00 0.00 0.0 0.0 0.00 0.00 0.00 0.00

Hobbs Database: Company:

Project:

Site:

Mewbourne Oil Company

Eddy County, New Mexico NAD 83 Delaware Ranch 11/14 Fed Com #821H

Well: Sec 11, T26S, R28E

Wellbore: Design: Design #1

BHL: 330' FSL & 400' FWL (Sec 14)

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Site Delaware Ranch 11/14 Fed Com #821H

WELL @ 2992.0usft (Original Well Elev) WELL @ 2992.0usft (Original Well Elev)

Design:		Design #1								
Planned Su	ırvey									
Me C	easured 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
SI	HL: 405' FN	L & 490' FWL (S	Sec 11)							
	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	2.00	347.81	2,900.0	1.7	-0.4	-1.7	2.00	2.00	0.00
	2,962.0	3.24	347.81	2,961.9	4.5	-1.0	-4.5	2.00	2.00	0.00
	3,000.0	3.24	347.81	2,999.9	6.6	-1.4	-6.5	0.00	0.00	0.00
	3,100.0	3.24	347.81	3,099.7	12.1	-2.6	-12.0	0.00	0.00	0.00
	3,200.0	3.24	347.81	3,199.5	17.6	-3.8	-17.6	0.00	0.00	0.00
	3,300.0	3.24	347.81	3,299.4	23.2	-5.0	-23 1	0.00	0.00	0.00
	3,400.0	3.24	347.81	3,399.2	28.7	-6.2	-28.6	0.00	0.00	0.00
	3,500.0	3.24	347.81	3,499.1	34.2	-7.4	-34.1	0.00	0.00	0.00
	3,600.0	3.24	347.81	3,598.9	39.7	-8.6	-39.6	0.00	0.00	0.00
	3,700.0	3.24	347.81	3,698.7	45.3	-9.8	-45.1	0.00	0.00	0.00
	3,800.0	3.24	347.81	3,798.6	50.8	-11.0	-50.6	0.00	0.00	0.00
	3,900.0	3.24	347.81	3,898.4	56.3	-12.2	-56.1	0.00	0.00	0.00
	4,000.0	3.24	347.81	3,998.3	61.8	-13.4	-61.6	0.00	0.00	0.00
	4,100.0	3.24	347.81	4,098.1	67.4	-14.5	-67.1	0.00	0.00	0.00
	4,200.0	3.24	347.81	4,197.9	72.9	-15.7	-72.6	0.00	0.00	0.00
	4,300.0	3.24	347.81	4,297.8	78.4	-16.9	-78.1	0.00	0.00	0.00
	4,400.0	3.24	347.81	4,397.6	83.9	-18.1	-83.6	0.00	0.00	0.00
	4,500.0	3.24	347.81	4,497.5	89.5	-19.3	-89.1	0.00	0.00	0.00
	4,600.0	3.24	347.81	4,597.3	95.0	-20.5	-94.6	0.00	0.00	0.00
	4,700.0	3.24	347.81	4,697.1	100.5	-21.7	-100.1	0.00	0.00	0.00
	4,800.0	3.24	347.81	4,797.0	106.0	-22.9	-105.6	0.00	0.00	0.00
	4,900.0	3.24	347.81	4,896.8	111.6	-24.1	-111.1	0.00	0.00	0.00
	5,000.0	3.24	347.81	4,996.7	117.1	-25.3	-116.6	0.00	0.00	0.00
	5,100.0	3.24	347.81	5,096.5	122.6	-26.5	-122.1	0.00	0.00	0.00

Hobbs Database: Company:

Project:

Site:

Mewbourne Oil Company

Eddy County, New Mexico NAD 83 Delaware Ranch 11/14 Fed Com #821H

Well: Sec 11, T26S, R28E

Design: Design #1

BHL: 330' FSL & 400' FWL (Sec 14) Wellbore:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Site Delaware Ranch 11/14 Fed Com #821H

WELL @ 2992.0usft (Original Well Elev) WELL @ 2992.0usft (Original Well Elev)

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)
5,200.0 5,300.0	3.24 3.24	347.81 347.81	5,196.3 5,296.2	128.1 133.7	-27.7 -28.9	-127.6 -133.1	0.00 0.00	0.00 0.00	0.00 0.00
5,400.0	3.24	347.81	5,396.0	139.2	-30.1	-138.6	0.00	0.00	0.00
5,500.0	3.24	347.81	5,495.9	144.7	-31.3	-144.1	0.00	0.00	0.00
5,600.0	3.24	347.81	5,595.7	150.2	-32.4	-149.6	0.00	0.00	0.00
5,700.0	3.24	347.81	5,695.5	155.8	-33.6	-155.1	0.00	0.00	0.00
5,800.0	3.24	347.81	5,795.4	161.3	-34.8	-160.6	0.00	0.00	0.00
5,900.0	3.24	347.81	5,895.2	166.8	-36.0	-166.1	0.00	0.00	0.00
6,000.0	3.24	347.81	5,995.1	172.3	-37.2	-171.6	0.00	0.00	0.00
6,100.0	3.24	347.81	6,094.9	177.9	-38.4	-177.1	0.00	0.00	0.00
6,200.0	3.24	347.81	6,194.7	183.4	-39.6	-182.6	0.00	0.00	0.00
6,300.0	3.24	347.81	6,294.6	188.9	-40.8	-188.1	0.00	0.00	0.00
6,400.0	3.24	347.81	6,394.4	194.4	-42.0	-193.6	0.00	0.00	0.00
6,500.0	3.24	347.81	6,494.3	200.0	-43.2	-199.1	0.00	0.00	0.00
6,600.0	3.24	347.81	6,594.1	205.5	-44.4	-204.6	0.00	0.00	0.00
6,700.0 6,800.0	3.24 3.24	347.81 347.81	6,693.9 6,793.8	211.0 216.5	-45.6 -46.8	-210.1 -215.6	0.00 0.00	0.00 0.00	0.00 0.00
			•						
6,900.0	3.24	347.81	6,893.6	222.1	-48.0 40.1	-221.1	0.00	0.00	0.00
7,000.0 7,100.0	3.24 3.24	347.81 347.81	6,993.5 7.093.3	227.6 233.1	-49.1 -50.3	-226.6 -232.1	0.00 0.00	0.00 0.00	0.00 0.00
7,100.0	3.24 3.24	347.81	7,093.3 7,193.1	233.1	-50.3 -51.5	-232.1 -237.6	0.00	0.00	0.00
7,300.0	3.24	347.81	7,193.1	244.2	-51.5 -52.7	-237.0 -243.1	0.00	0.00	0.00
7.400.0	3.24	347.81	7,392.8	249.7	-53.9	-248.6	0.00	0.00	0.00
7,400.0 7,500.0	3.24 3.24	347.81	7,392.6 7,492.7	249.7 255.2	-55.9 -55.1	-246.6 -254.1	0.00	0.00	0.00
7,600.0	3.24	347.81	7,592.5	260.7	-56.3	-259.6	0.00	0.00	0.00
7,700.0	3.24	347.81	7,692.3	266.3	-57.5	-265.1	0.00	0.00	0.00
7,800.0	3.24	347.81	7,792.2	271.8	-58.7	-270.6	0.00	0.00	0.00
7,900.0	3.24	347.81	7,892.0	277.3	-59.9	-276.1	0.00	0.00	0.00
8,000.0	3.24	347.81	7,991.9	282.8	-61.1	-281.6	0.00	0.00	0.00
8,100.0	3.24	347.81	8,091.7	288.4	-62.3	-287.1	0.00	0.00	0.00
8,200.0	3.24	347.81	8,191.5	293.9	-63.5	-292.6	0.00	0.00	0.00
8,300.0	3.24	347.81	8,291.4	299.4	-64.7	-298.1	0.00	0.00	0.00
8,400.0	3.24	347.81	8,391.2	304.9	-65.9	-303.6	0.00	0.00	0.00
8,500.0	3.24	347.81	8,491.1	310.5	-67.0	-309.1	0.00	0.00	0.00
8,600.0 8.700.0	3.24	347.81	8,590.9	316.0	-68.2	-314.7	0.00	0.00	0.00
8,700.0 8,800.0	3.24 3.24	347.81 347.81	8,690.7 8,790.6	321.5 327.0	-69.4 -70.6	-320.2 -325.7	0.00 0.00	0.00 0.00	0.00 0.00
8,900.0	3.24	347.81	8,890.4	332.6	-71.8	-331.2	0.00	0.00	0.00
9,000.0 9,100.0	3.24 3.24	347.81 347.81	8,990.3 9,090.1	338.1 343.6	-73.0 -74.2	-336.7 -342.2	0.00 0.00	0.00 0.00	0.00 0.00
9,100.0	3.24 3.24	347.81 347.81	9,090.1	343.6 349.1	-74.2 -75.4	-342.2 -347.7	0.00	0.00	0.00
9,300.0	3.24	347.81	9,289.8	354.7	-76.6	-353.2	0.00	0.00	0.00
9,400.0	3.24	347.81	9,389.6	360.2	-77.8	-358.7	0.00	0.00	0.00
9,400.0	3.24 3.24	347.81	9,389.6 9,489.5	365.7	-77.8 -79.0	-364.2	0.00	0.00	0.00
9,600.0	3.24	347.81	9,589.3	371.2	-80.2	-369.7	0.00	0.00	0.00
9,700.0	3.24	347.81	9,689.1	376.8	-81.4	-375.2	0.00	0.00	0.00
9,800.0	3.24	347.81	9,789.0	382.3	-82.6	-380.7	0.00	0.00	0.00
9,898.2	3.24	347.81	9,887.1	387.7	-83.7	-386.1	0.00	0.00	0.00
9,900.0	3.21	347.81	9,888.8	387.8	-83.8	-386.2	2.00	-2.00	0.00
10,000.0	1.21	347.81	9,988.7	391.6	-84.6	-389.9	2.00	-2.00	0.00
10,060.3	0.00	0.01	10,049.0	392.2	-84.7	-390.5	2.00	<del>-</del> 2.00	0.00
KOP: 10' FN	L & 400' FWL (So	ec 11)							

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Delaware Ranch 11/14 Fed Com #821H

Well: Sec 11, T26S, R28E

Wellbore: BHL: 330' FSL & 400' FWL (Sec 14)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Delaware Ranch 11/14 Fed Com #821H

WELL @ 2992.0usft (Original Well Elev)
WELL @ 2992.0usft (Original Well Elev)

Grid

sign:	Design #1								
anned 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)
10,150.0	8.97	180.57	10,138.4	385.2	-84.8	-383.5	10.00	10.00	0.00
10,200.0	13.97	180.57	10,187.4	375.2	-84.9	-373.6	10.00	10.00	0.00
10,250.0	18.97	180.57	10,235.3	361.1	-85.0	-359.4	10.00	10.00	0.00
10,300.0	23.97	180.57	10,281.8	342.8	-85.2	-341.1	10.00	10.00	0.00
10,350.0	28.97	180.57	10,326.5	320.5	-85.4	-318.8	10.00	10.00	0.00
40.400.0	22.07	400.57			05.7		40.00		0.00
10,400.0	33.97	180.57	10,369.2	294.4	-85.7	-292.7	10.00	10.00	0.00
10,450.0	38.97	180.57	10,409.4	264.7	-86.0	-263.0	10.00	10.00	0.00
10,500.0	43.97	180.57	10,446.8	231.6	-86.3	-229.9	10.00	10.00	0.00
10,550.0	48.97	180.57	10,481.3	195.4	-86.7	-193.7	10.00	10.00	0.00
10,600.0	53.97	180.57	10,512.4	156.3	-87.0	-154.6	10.00	10.00	0.00
10,650.0	58.97	180.57	10,540.0	114.6	-87.5	-112.9	10.00	10.00	0.00
10,697.1	63.68	180.57	10,562.6	73.3	-87.9	-71.6	10.00	10.00	0.00
	IL & 400' FWL (S		10,002.0	70.0	07.0	71.0	10.00	10.00	0.00
		•	10 562 0	70.7	<b>-</b> 87.9	<b>-</b> 69.0	10.00	10.00	0.00
10,700.0	63.97	180.57	10,563.9				10.00		
10,750.0	68.97	180.57	10,583.8	24.9	-88.3	-23.2	10.00	10.00	0.00
10,800.0	73.97	180.57	10,599.7	-22.5	-88.8	24.2	10.00	10.00	0.00
10,850.0	78.96	180.57	10.611.4	-71.1	-89.3	72.8	10.00	10.00	0.00
10,900.0	83.96	180.57	10,618.8	-120.5	-89.8	122.2	10.00	10.00	0.00
10,950.0	88.96	180.57	10,621.9	-170.4	-90.3	172.1	10.00	10.00	0.00
10,959.4	89.90	180.57	10,622.0	-179.8	-90.4	181.5	10.00	10.00	0.00
			10,022.0	-179.0	-30.4	101.5	10.00	10.00	0.00
	_ & 400' FWL (Se	•	40,000,0	400.4	00.4	407.0	40.00	40.00	0.00
10,965.7	90.53	180.57	10,622.0	-186.1	-90.4	187.8	10.00	10.00	0.00
11,000.0	90.53	180.57	10,621.7	-220.4	-90.8	222.1	0.00	0.00	0.00
11,100.0	90.53	180.57	10,620.8	-320.4	-91.8	322.1	0.00	0.00	0.00
11,200.0	90.53	180.57	10,619.8	-420.4	-92.8	422.1	0.00	0.00	0.00
11,300.0	90.53	180.57	10,618.9	-520.4	-93.7	522.1	0.00	0.00	0.00
11,400.0	90.53	180.57	10,618.0	620.4	-94.7	622.1	0.00	0.00	0.00
11,500.0	90.53	180.57	10,617.1	-720.4	-95.7	722.1	0.00	0.00	0.00
11,600.0	90.53	180.57	10,616.1	-820.4	-96.7	822.0	0.00	0.00	0.00
11,700.0	90.53	180.57	10,615.2	-920.4 -920.4	-90.7 -97.7	922.0	0.00	0.00	0.00
			•						
11,800.0	90.53	180.57	10,614.3	-1,020.4	-98.7	1,022.0	0.00	0.00	0.00
11,900.0	90.53	180.57	10,613.4	-1,120.3	-99.7	1,122.0	0.00	0.00	0.00
12,000.0	90.53	180.57	10,612.4	-1,220.3	-100.7	1,222.0	0.00	0.00	0.00
12,100.0	90.53	180.57	10,611.5	-1,320.3	-101.7	1,322.0	0.00	0.00	0.00
12,200.0	90.53	180.57	10,610.6	-1,420.3	-102.7	1,422.0	0.00	0.00	0.00
12,300.0	90.53	180.57	10,609.7	-1,520.3	-103.6	1,522.0	0.00	0.00	0.00
12,400.0	90.53	180.57	10,608.7	-1,620.3	-104.6	1,622.0	0.00	0.00	0.00
			,						
12,500.0	90.53	180.57	10,607.8	-1,720.3	-105.6	1,722.0	0.00	0.00	0.00
12,600.0	90.53	180.57	10,606.9	-1,820.3	-106.6	1,822.0	0.00	0.00	0.00
12,700.0	90.53	180.57	10,606.0	-1,920.3	-107.6	1,922.0	0.00	0.00	0.00
12,800.0	90.53	180.57	10,605.0	-2,020.3	-108.6	2,021.9	0.00	0.00	0.00
12,900.0	90.53	180.57	10,604.1	-2,120.3	-109.6	2,121.9	0.00	0.00	0.00
13,000.0	90.53	180.57	10,603.2	-2,220.2	-110.6	2,221.9	0.00	0.00	0.00
13,100.0	90.53	180.57	10,603.2	-2,220.2 -2,320.2	-111.6	2,321.9	0.00	0.00	0.00
13,100.0			10,602.3		-111.6 -112.6		0.00		0.00
	90.53	180.57		-2,420.2		2,421.9		0.00	
13,300.0	90.53	180.57	10,600.4	-2,520.2	-113.6	2,521.9	0.00	0.00	0.00
13,400.0	90.53	180.57	10,599.5	-2,620.2	-114.5	2,621.9	0.00	0.00	0.00
13,500.0	90.53	180.57	10,598.6	-2,720.2	-115.5	2,721.9	0.00	0.00	0.00
13,600.0	90.53	180.57	10,597.7	-2,820.2	-116.5	2,821.9	0.00	0.00	0.00
13,700.0	90.53	180.57	10,596.7	-2,920.2	-117.5	2,921.9	0.00	0.00	0.00
13.800.0	90.53	180.57	10,595.8	-3,020.2	-118.5	3,021.9	0.00	0.00	0.00
13,900.0	90.53	180.57	10,594.9	-3,120.2	-119.5	3,121.9	0.00	0.00	0.00
14,000.0	90.53	180.57	10,594.0	-3,220.1	-120.5	3,221.8	0.00	0.00	0.00
14,100.0	90.53	180.57	10,593.0	-3,320.1	-121.5	3,321.8	0.00	0.00	0.00

Database: Company: Hobbs

Mewbourne Oil Company

Eddy County, New Mexico NAD 83

Delaware Ranch 11/14 Fed Com #821H

Well: Wellbore:

Project:

Site:

Sec 11, T26S, R28E BHL: 330' FSL & 400' FWL (Sec 14)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Delaware Ranch 11/14 Fed Com #821H

WELL @ 2992.0usft (Original Well Elev)
WELL @ 2992.0usft (Original Well Elev)

Grid

esign:	Design #1													
anned 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)					
14,200.0	90.53	180.57	10,592.1	-3,420.1	-122.5	3,421.8	0.00	0.00	0.00					
14,300.0	90.53	180.57	10,591.2	-3,520.1	-123.5	3,521.8	0.00	0.00	0.00					
14,400.0	90.53	180.57	10,590.3	-3,620.1	-124.5	3,621.8	0.00	0.00	0.00					
14,500.0	90.53	180.57	10,589.3	-3,720.1	-125.4	3,721.8	0.00	0.00	0.00					
14,600.0	90.53	180.57	10,588.4	-3,820.1	-126.4	3,821.8	0.00	0.00	0.00					
14,700.0	90.53	180.57	10,587.5	-3,920.1	-127.4	3,921.8	0.00	0.00	0.00					
14,800.0	90.53	180.57	10,586.6	-4,020.1	-128.4	4,021.8	0.00	0.00	0.00					
14,900.0	90.53	180.57	10,585.6	-4,120.1	-129.4	4,121.8	0.00	0.00	0.00					
15,000.0	90.53	180.57	10,584.7	-4,220.1	-130.4	4,221.8	0.00	0.00	0.00					
15,100.0	90.53	180.57	10,583.8	-4,320.0	-131.4	4,321.8	0.00	0.00	0.00					
15,200.0	90.53	180.57	10,582.9	-4,420.0	-132.4	4,421.7	0.00	0.00	0.00					
15,300.0	90.53	180.57	10,581.9	-4,520.0	-133.4	4,521.7	0.00	0.00	0.00					
15,400.0	90.53	180.57	10,581.0	-4,620.0	-134.4	4,621.7	0.00	0.00	0.00					
15,500.0	90.53	180.57	10,580.1	-4,720.0	-135.3	4.721.7	0.00	0.00	0.00					
15,600.0	90.53	180.57	10,579.2	<b>-4</b> ,820.0	-136.3	4,821.7	0.00	0.00	0.00					
15,700.0	90.53	180.57	10,578.2	-4,920.0	-137.3	4,921.7	0.00	0.00	0.00					
15,800.0	90.53	180.57	10,577.3	-5,020.0	-138.3	5,021.7	0.00	0.00	0.00					
15,900.0	90.53	180.57	10,576.4	-5,120.0	-139.3	5,121.7	0.00	0.00	0.00					
16,000.0	90.53	180.57	10,575.5	-5,220.0	-140.3	5,221.7	0.00	0.00	0.00					
16,100.0	90.53	180.57	10,573.5	-5,220.0 -5.320.0	-141.3 -141.3	5,321.7	0.00	0.00	0.00					
16,200.0	90.53	180.57	10,573.6	-5,419.9	-142.3	5,421.7	0.00	0.00	0.00					
16,300.0	90.53	180.57	10,573.7	-5,519.9	-143.3	5,521.7	0.00	0.00	0.00					
16,400.0	90.53	180.57	10,571.8	-5,619.9	-144.3	5,621.6	0.00	0.00	0.00					
16,500.0	90.53	180.57	10,570.9	-5,719.9	-145.3	5,721.6	0.00	0.00	0.00					
16,600.0	90.53	180.57	10,569.9	-5,819.9	-146.2	5,821.6	0.00	0.00	0.00					
16,700.0 16,800.0	90.53 90.53	180.57 180.57	10,569.0 10,568.1	-5,919.9 -6,019.9	-147.2 -148.2	5,921.6 6,021.6	0.00 0.00	0.00 0.00	0.00 0.00					
16,900.0	90.53	180.57	10,567.2	-6,119.9	-149.2	6,121.6	0.00	0.00	0.00					
17,000.0	90.53	180.57	10,566.2	-6,219.9	-150.2	6,221.6	0.00	0.00	0.00					
17,100.0	90.53	180.57	10,565.3	-6,319.9	-151.2	6,321.6	0.00	0.00	0.00					
17,200.0	90.53	180.57	10,564.4	-6,419.9	-152.2	6,421.6	0.00	0.00	0.00					
17,300.0	90.53	180.57	10,563.5	-6,519.8 6,610.8	-153.2	6,521.6	0.00	0.00	0.00 0.00					
17,400.0	90.53	180.57	10,562.5	-6,619.8	-154.2	6,621.6	0.00	0.00						
17,500.0	90.53	180.57	10,561.6	-6,719.8	-155.2	6,721.6	0.00	0.00	0.00					
17,600.0	90.53	180.57	10,560.7	-6,819.8	-156.1	6,821.6	0.00	0.00	0.00					
17,700.0	90.53	180.57	10,559.8	-6,919.8	-157.1	6,921.5	0.00	0.00	0.00					
17,800.0	90.53	180.57	10,558.8	-7,019.8	-158.1	7,021.5	0.00	0.00	0.00					
17,900.0	90.53	180.57	10,557.9	-7,119.8	-159.1	7,121.5	0.00	0.00	0.00					
18,000.0	90.53	180.57	10,557.0	-7,219.8	-160.1	7,221.5	0.00	0.00	0.00					
18,100.0	90.53	180.57	10,556.1	-7,319.8	-161.1	7,321.5	0.00	0.00	0.00					
18,200.0	90.53	180.57	10,555.1	-7,419.8	-162.1	7,421.5	0.00	0.00	0.00					
18,300.0	90.53	180.57	10,554.2	-7,519.8	-163.1	7,521.5	0.00	0.00	0.00					
18,400.0	90.53	180.57	10,553.3	-7,619.7	-164.1	7,621.5	0.00	0.00	0.00					
18,500.0	90.53	180.57	10,552.4	-7,719.7	-165.1	7,721.5	0.00	0.00	0.00					
18,600.0	90.53	180.57	10,551.4	-7,819.7	-166.1	7,821.5	0.00	0.00	0.00					
18,700.0	90.53	180.57	10,550.5	-7,919.7	-167.0	7,921.5	0.00	0.00	0.00					
18,800.0	90.53	180.57	10,549.6	-8,019.7	-168.0	8,021.5	0.00	0.00	0.00					
18,900.0	90.53	180.57	10,548.7	-8,119.7	-169.0	8,121.4	0.00	0.00	0.00					
19.000.0	90.53	180.57	10,547.7	-8,219.7	-170.0	8,221.4	0.00	0.00	0.00					
19,000.0	90.53	180.57	10,547.7	-8,319.7	-170.0 -171.0	8,321.4	0.00	0.00	0.00					
19,200.0	90.53	180.57	10,545.9	-8,419.7	-171.0	8,421.4	0.00	0.00	0.00					
19,300.0	90.53	180.57	10,545.0	-8,519.7	-173.0	8,521.4	0.00	0.00	0.00					
19,400.0	90.53	180.57	10,544.1	-8,619.7	-174.0	8,621.4	0.00	0.00	0.00					
,			10,543.1	,		,								

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Delaware Ranch 11/14 Fed Com #821H

Well: Sec 11, T26S, R28E

**Wellbore:** BHL: 330' FSL & 400' FWL (Sec 14)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

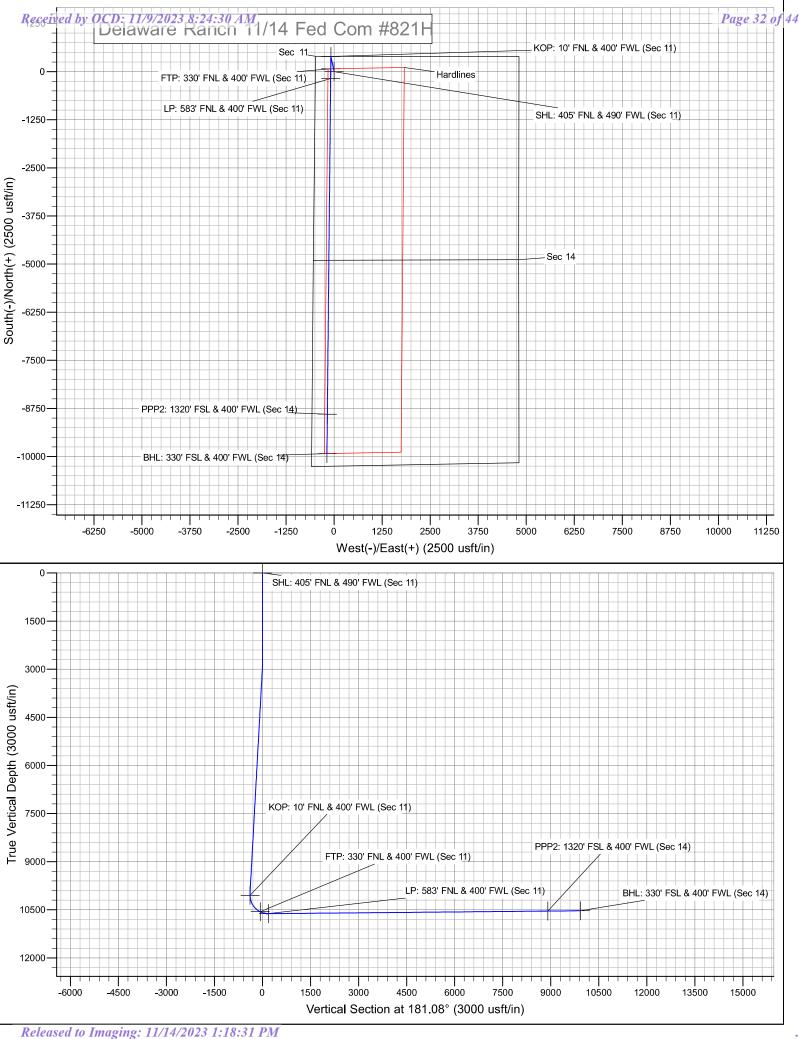
Site Delaware Ranch 11/14 Fed Com #821H

WELL @ 2992.0usft (Original Well Elev) WELL @ 2992.0usft (Original Well Elev)

Grid

Planned S	urvey									
	easured 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)
	19,600.0 19,684.6	90.53 90.53	180.57 180.57	10,542.2 10,541.4	-8,819.6 -8,904.2	-176.0 -176.8	8,821.4 8,906.0	0.00 0.00	0.00 0.00	0.00 0.00
F	PP2: 1320'	FSL & 400' FWL	(Sec 14)							
	19,700.0	90.53	180.57	10,541.3	-8,919.6	-177.0	8,921.4	0.00	0.00	0.00
	19,800.0	90.53	180.57	10,540.4	-9,019.6	-177.9	9,021.4	0.00	0.00	0.00
	19,900.0	90.53	180.57	10,539.4	-9,119.6	-178.9	9,121.4	0.00	0.00	0.00
	20,000.0	90.53	180.57	10,538.5	-9,219.6	-179.9	9,221.4	0.00	0.00	0.00
	20,100.0	90.53	180.57	10,537.6	-9,319.6	-180.9	9,321.3	0.00	0.00	0.00
	20,200.0	90.53	180.57	10,536.7	-9,419.6	-181.9	9,421.3	0.00	0.00	0.00
	20,300.0	90.53	180.57	10,535.7	-9,519.6	-182.9	9,521.3	0.00	0.00	0.00
	20,400.0	90.53	180.57	10,534.8	-9,619.6	-183.9	9,621.3	0.00	0.00	0.00
	20,500.0	90.53	180.57	10,533.9	-9,719.6	-184.9	9,721.3	0.00	0.00	0.00
	20,600.0	90.53	180.57	10,533.0	-9,819.5	-185.9	9,821.3	0.00	0.00	0.00
	20,704.2	90.53	180.57	10,532.0	<b>-</b> 9,923.7	<del>-</del> 186.9	9,925.5	0.00	0.00	0.00
E	330' FS	SL & 400' FWL (S	ec 14)							

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
SHL: 405' FNL & 490' F\ - plan hits target cent - Point	0.00 er	0.00	0.0	0.0	0.0	386,886.50	624,523.30	32.0633463	-104.0647973
KOP: 10' FNL & 400' FW - plan hits target cent - Point	0.00 er	0.01	10,049.0	392.2	-84.7	387,278.70	624,438.60	32.0644251	-104.0650676
BHL: 330' FSL & 400' FV - plan hits target cent - Point	0.00 er	0.00	10,532.0	-9,923.7	-186.9	376,962.80	624,336.40	32.0360678	-104.0654801
PPP2: 1320' FSL & 400' - plan hits target cent - Point	0.00 er	0.00	10,541.4	-8,904.2	-176.8	377,982.30	624,346.50	32.0388703	-104.0654394
FTP: 330' FNL & 400' FV - plan hits target cent - Point	0.00 er	0.00	10,562.6	73.3	-87.9	386,959.80	624,435.44	32.0635484	-104.0650804
LP: 583' FNL & 400' FWI - plan hits target cent - Point	0.00 er	0.00	10,622.0	-179.8	-90.4	386,706.70	624,432.94	32.0628527	-104.0650905



Operator Name:	Property Name:	Well Number
Mewbourne Oil Company	Delaware Ranch 11/14 Fed Com	#821H

#### Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
D	11	26S	28E	-	10'	FNL	400'	FWL	Eddy
Latitude					Longitude	NAD			
32.0644251	32.0644251								83

#### First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
D	11	26S	28E	-	330'	FNL	400'	FWL	Eddy
Latitude Longitude							NAD		
32.0635484					-104.0650804				83

#### Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
M	14	26S	28E	-	330'	FSL	400'	FWL	Eddy
Latitude Longitude							NAD		
32.0360677					-104.0654800				83

Is	this	well	the	defir	ning w	ell for the	Horizonta	l Spacing	Unit?

N

Is this well an infill well?

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API#		
	30-025-48626	

Operator Name:	Property Name:	Well Number
Mewbourne Oil Company	Delaware Ranch 11/14 W1DM Fed Com	#1H

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: MEWBOURNE OIL COMPANY
WELL NAME & NO.:
SURFACE HOLE FOOTAGE: 405'/N & 490'/W
BOTTOM HOLE FOOTAGE SURFACE LOCATION: UL D, Section 11, T.26 S., R.28 E. NMP.

COUNTY: Eddy County, New Mexico

COA

$H_2S$	• Yes	C No	
Potash	None	Secretary	○ R-111-P
Cave/Karst Potential	C Low	• Medium	○ High
Cave/Karst Potential	Critical		
Variance	○ None	Flex Hose	© Other
Wellhead	Conventional	<ul><li>Multibowl</li></ul>	© Both
Other	4 String	Capitan Reef	■WIPP
Other	Fluid Filled	Pilot Hole	Open Annulus
Special Requirements	Water Disposal	<b>▼</b> COM	Unit

#### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan shall be activated **AT SPUD**. As a result, the Hydrogen Sulfide area must meet **Title 43 CFR 3176** requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

#### **B. CASING**

#### **Primary Casing Design:**

- 1. The 13-3/8 inch surface casing shall be set at approximately 450 ft. (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface. If salt is encountered set casing at least 25' above the salt.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8** hours or **500** psi compressive strength, whichever is greater. (This is to include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The 9-5/8 inch intermediate casing shall be set at approximately 2,575 ft. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
  - ❖ In Medium <u>Cave/Karst Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3<sup>rd</sup> casing string must come to surface.

**Note:** Excess cement for the intermediate casing is below CFO's recommendation of %25. More cement might be needed.

3. The minimum required fill of cement behind the 7 in. production casing is:

Option 1 (Single Stage): Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.

**Option 2 (Two-stage):** 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. If cement does not circulate, contact the appropriate BLM office. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.
- 4. The minimum required fill of cement behind the 4-1/2 in. production liner is:
  - Cement should tie-back at least 100 feet into previous casing string. Operator shall provide method of verification.

#### C. 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. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. 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. Before drilling out surface casing shoe, BOP/ BOPE and annular preventer must be pressure tested in accordance with title 43 CFR 3172.
  - 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 43 CFR 3172 must be followed.

#### D. SPECIAL REQUIREMENT (S)

#### **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

## GENERAL REQUIREMENTS

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

Page 3 of 8

- 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)
  - Eddy County
    Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822
  - ✓ Lea CountyCall the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)689-5981
- 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 43 CFR part 3170 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 doghouse 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 43 CFR part 3170 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. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - e. 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.
- 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 cement), 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 cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to 43 CFR 3170 subpart 3172 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- 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.
- The results of the test shall be reported to the appropriate BLM office.
- f. 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.
- 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 if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. 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 43 CFR 3170 subpart 3172.

#### 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.

SA 09/11/2023

Well Name: DELAWARE RANCH 11 14 FED COM Well Number: 821H

#### **Section 7 - Methods for Handling**

Waste type: DRILLING

Waste content description: Drill cuttings

Amount of waste: 940 barrels

Waste disposal frequency: One Time Only

Safe containment description: Drill cuttings will be properly contained in steel tanks (20 yard roll off bins.)

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL Disposal location ownership: PRIVATE

**FACILITY** 

Disposal type description:

Disposal location description: NMOCD approved waste disposal locations are CRI or Lea Land, both facilities are located

on HWY 62/180, Sec. 27 T20S R32E.

Waste type: SEWAGE

Waste content description: Human waste & grey water

Amount of waste: 1500 gallons

Waste disposal frequency: Weekly

Safe containment description: 2,000 gallon plastic container

Safe containment attachment:

Waste disposal type: HAUL TO COMMERCIAL Disposal location ownership: PRIVATE

**FACILITY** 

Disposal type description:

Disposal location description: City of Carlsbad Water Treatment facility

Waste type: GARBAGE

Waste content description: Garbage & trash

Amount of waste: 1500 pounds

Waste disposal frequency: One Time Only

Safe containment description: Enclosed trash trailer

Safe containment attachment:

Waste disposal type: HAUL TO COMMERCIAL Disposal location ownership: PRIVATE

**FACILITY** 

Disposal type description:

**Disposal location description:** Waste Management facility in Carlsbad.

#### **Reserve Pit**

Reserve Pit being used? NO

Well Name: DELAWARE RANCH 11 14 FED COM Well Number: 821H

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.) Reserve pit width (ft.)

Reserve pit depth (ft.) Reserve pit volume (cu. yd.)

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

## **Cuttings Area**

Cuttings Area being used? NO

Are you storing cuttings on location? N

**Description of cuttings location** 

Cuttings area length (ft.) Cuttings area width (ft.)

Cuttings area depth (ft.) Cuttings area volume (cu. yd.)

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

#### **Section 8 - Ancillary**

Are you requesting any Ancillary Facilities?: N

**Ancillary Facilities** 

#### Comments:

#### **Section 9 - Well Site**

Well Site Layout Diagram:

Delaware\_Ranch\_11\_14\_Fed\_Com\_\_821H\_WellSiteLayout\_20230330091553.pdf

Comments: NONE

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 Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

## **State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505**

CONDITIONS

Action 284212

#### **CONDITIONS**

Operator:	OGRID:
MEWBOURNE OIL CO	14744
P.O. Box 5270	Action Number:
Hobbs, NM 88241	284212
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

#### CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	11/14/2023
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	11/14/2023
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	11/14/2023
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	11/14/2023
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	11/14/2023
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	11/14/2023