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. NMNM001165 **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 HENRY 8 WOIL FED 4Н 2. Name of Operator 9. API Well No. MEWBOURNE OIL COMPANY 3a. Address 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory P O BOX 5270, HOBBS, NM 88241 (575) 393-5905 BURTON FLAT; WOLCAMP, EAST (GAS 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 8/T20S/R29E/NMP At surface SESE / 1050 FSL / 210 FEL / LAT 32.5836118 / LONG -104.0892961 At proposed prod. zone NWSW / 2200 FSL / 100 FWL / LAT 32.5868118 / LONG -104.1054658 14. Distance in miles and direction from nearest town or post office* 12. County or Parish 13. State **EDDY** NM 8.5 miles 15. Distance from proposed* 16. No of acres in lease 17. Spacing Unit dedicated to this well 330 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, 50 feet 9262 feet / 14308 feet FED: NM 1693 applied for, on this lease, ft. 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start* 23. Estimated duration 3275 feet 02/01/2022 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 12/07/2021 (Electronic Submission) Title Regulatory Approved by (Signature) Date Name (Printed/Typed) (Electronic Submission) CODY LAYTON / Ph: (575) 234-5959 10/18/2024 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 applicant to conduct operations thereon.

of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



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

(Continued on page 2)

Conditions of approval, if any, are attached.

<u>C-10</u>	<u>2</u>	/21/2024 11		ergy, Miı		v Mexico Il Resources Departi TION DIVISION	Page 2 Revised July 9, 2024								
	Electronicall Permitting	У		OIL (CONSERVAI	ION DIVISION			☐X Initial Su	bmittal					
								Submittal Type:	☐ Amended	l Report					
								Type.	☐ As Drille	d					
			•		WELL LOCAT	TION INFORMATION		•	1						
	0-015-5	5734	Pool Code	7348	0	Pool Name BURTON FLAT; WOLFCAMP									
Property 33	y Code 8 <mark>6498</mark>		Property Na	HE	NRY 8 W0	IL FED COM			Well Numbe	1H					
OGRID	No. 147	744	Operator N	ame MI	FWBOURN	E OIL COMPA	NY		Ground Level 3275	el Elevation					
Surface		State □ Fee □	Tribal 🛚 Fed			Mineral Owner:		□ Tribal 🛚							
					Surfa	ace Location									
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude		Longitude	County					
Р	8	20S	29E		1050 FSL	210 FEL	32.5836	5118 1	04.0892961	EDDY					
	1			1	Bottom	Hole Location		<u> </u>							
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude		Longitude	County					
L	8	20S	29E		2200 FSL	100 FWL	32.5868	3118 1	04.1054658	EDDY					
			1		1	100:11			0 11 100 1000						
Dedicat	ed Acres	Infill or Defi	ning Well	Defining	; Well API	Overlapping Spacin	g Unit (Y/N)	Consolida	tion Code						
16	60	DEFINI	NG												
Order N	lumbers.					Well setbacks are un	nder Common	Ownership:	□Yes □No						
					Kick O	ff Point (KOP)									
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude		Longitude	County					
I	8	20S	29E		2200 FSL	10 FEL	32.586	7720 -	104.0886445	EDDY					
	ı		1	I	First Ta	ike Point (FTP)	-	<u> </u>							
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude		Longitude	County					
1	8	20S	29E		2200 FSL	100 FEL	32.5867	7726 -	104.0889305	EDDY					
					Last Ta	ke Point (LTP)									
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude		Longitude	County					
L	8	20S	29E		2200 FSL	100 FWL	32.5868		104.1054658						
					1]5=:555								
Unitize	d Area or Ar	ea of Uniform I	nterest	Spacing	Unit Type 🛚 Horiz	contal Vertical	Grou	nd Floor Ele	evation: 32	275					
ODEDA	TOD CERT	IFICATIONS		1		SURVEYOR CERTIF	ICATIONS								
						SURVETOR CERTIF	ICATIONS								
my know organiza including location	eledge and beli tion either own g the proposed pursuant to a	ef, and, if the well ns a working inter bottom hole loca contract with an o	l is a vertical or rest or unleased tion or has a rig owner of a work	directional v mineral inter tht to drill thi ing interest o	rest in the land is well at this or unleased mineral	I hereby certify that the v surveys made by me or un my belief.									
	or to a volunta by the division.		ment or a compt	usory poolin	g order heretofore										
consent of in each t	of at least one ract (in the tar		f a working inte ttion) in which a	rest or unlea ny part of the	sed mineral interest e well's completed										
					10/21/24										
Signature		_	Date	_		Signature and Seal of Profe	ssional Surveyor	_							
R	YAN M	CDANIEL													
Printed N	lame					Certificate Number	Date of Surve	ey							
-		DANIEL@	MEWB	OURN	E.COM										
Email Ac	iuress						1								

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

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

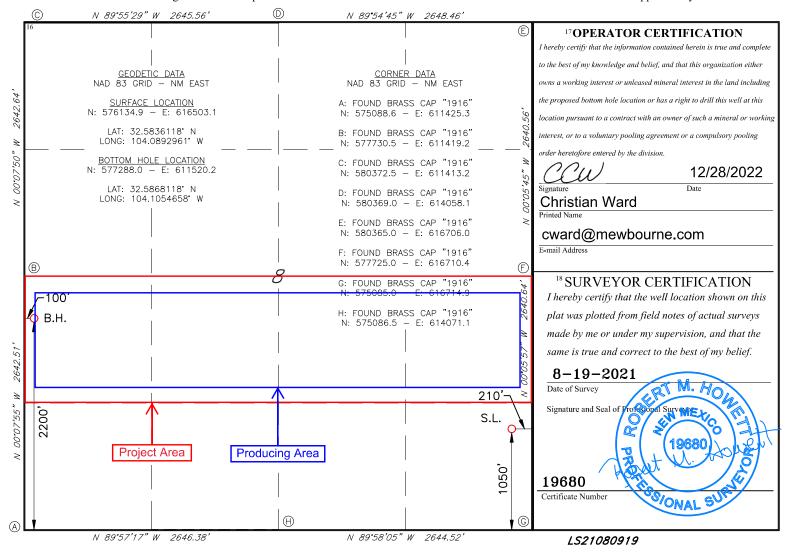
WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Numbe	er	² Pool Code 73480	BURTON FLAT; WOLFCAME	P EAST (EAST)		
⁴ Property Code			woil FED COM	⁶ Well Number 1 H		
70GRID NO. 11474			erator Name E OIL COMPANY	⁹ Elevation 3275		

	Surface Location												
UL or lot no.	Section	East/West line	County										
P	8	20S	29E		1050	SOUTH	210	EAST	EDDY				
	11 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				
Т Т	T D DOG DOE DOG DOGEN						100	WEGE	EDDS				

20S 29E 2200 SOUTH 100 WEST EDDY 12 Dedicated Acres 13 Joint or Infill 14 Consolidation Code 15 Order No. 160

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 Manag	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												
I. Operator:Mewbourne Oil CoOGRID:14744Date:10/6/21												
II. Type: X Original □ Amendment due to □ 19.15.27.9.D(6)(a) NMAC □ 19.15.27.9.D(6)(b) NMAC □ Other.												
If Other, please describe:												
III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.												
Well Name API ULSTR Footages Anticipated Oil BBL/D Gas MCF/D Produced Water BBL/D												
Henry 8 W0IL Fed #1H P 8 20S 29E 1050' FSL x 210' FE 1500 5000 1000												
IV. Central Delivery P	oint Name: _	Henry 8 W0IL Fed	#1H		[See	19.15.2	7.9(D)(1) NMAC]					
V. Anticipated Schedu proposed to be recomple	le: Provide the eted from a sin	following informating the second seco	tion for each new nected to a centr	v or recompleted wal delivery point.	rell or set of wel	ls prope	osed to be drilled or					
Well Name	API	Spud Date	TD Reached Date	Completion Commencement			First Production Date					
Henry 8 WOIL Fed #1H		12/6/21	1/6/21	2/6/22	2/21/	22	2/21/22					
VI. Separation Equipment: Attach a complete description of how Operator will size separation equipment to optimize gas capture. VII. Operational Practices: Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC. VIII. Best Management Practices: Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.												

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.													
☐ 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 Anticipated Volume of Natural Natural Gas Rate MCF/D Gas for the First Year MCF													
X. Natural Gas Ga	X. Natural Gas Gathering System (NGGS):												
Operator	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 will 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 does 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 pro	duction in response to t	he increased line pressure.										
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.													
	for which confidentiality is asserted and the basis for such assertion.												

Section 3 - Certifications Effective May 25, 2021

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

⚠ 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:	10/6/21
Phone:	575-393-5905
	OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:	
Title:	
Approval Date:	
Conditions of Ap	proval:

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

APD ID: 10400081122 **Submission Date:** 12/07/2021

Operator Name: MEWBOURNE OIL COMPANY

Well Name: HENRY 8 WOIL FED Well Number: 1H

Well Type: CONVENTIONAL GAS WELL Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
14338956	4338956 UNKNOWN		28	28	OTHER : Top Soil	NONE	N
14338947	TOP SALT	2730	545	545	SALT	NONE	N
14338948	BASE OF SALT	2328	947	947	SALT	NONE	N
14338957	YATES	2155	1120	1120	SANDSTONE	NATURAL GAS, OIL	N
14338950	CAPITAN REEF	1907	1368	1368	DOLOMITE, LIMESTONE	USEABLE WATER	N
14338949	LAMAR	129	3146	3146	LIMESTONE	NATURAL GAS, OIL	N
14338945	CHERRY CANYON	-107	3382	3382	SANDSTONE	NATURAL GAS, OIL	N
14338946	BRUSHY CANYON	-1268	4543	4543	SANDSTONE	NATURAL GAS, OIL	N
14338951	BONE SPRING	-2534	5809	5809	LIMESTONE, SHALE	NATURAL GAS, OIL	N
14338952	BONE SPRING 1ST	-3675	6950	6950	SANDSTONE	NATURAL GAS, OIL	N
14338953	BONE SPRING 2ND	-4275	7550	7550	SANDSTONE	NATURAL GAS, OIL	N
14338954	BONE SPRING 3RD	-5525	8800	8800	SANDSTONE	NATURAL GAS, OIL	N
14338955	WOLFCAMP	-5929	9204	9204	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Well Name: HENRY 8 WOIL FED Well Number: 1H

Pressure Rating (PSI): 5M Rating Depth: 14308

Equipment: Annular, Blind Ram, Pipe 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 are not 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. See attached schematics.

Choke Diagram Attachment:

Henry_8_W0IL_Fed_1H_5M_BOPE_Choke_Diagram_20211020095712.pdf

Henry_8_W0IL_Fed_1H_Flex_Line_Specs_20211020095712.pdf

Henry_8_W0IL_Fed_1H_Flex_Line_Specs_API_16C_20211020095713.pdf

BOP Diagram Attachment:

Henry_8_W0IL_Fed_1H_5M_BOPE_Schematic_20211020095734.pdf

Henry_8_W0IL_Fed_1H_5M_Mutli_Bowl_WH_20211020095734.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	26	20.0	NEW	API	N	0	330	0	330	3275	2945	330	J-55	94	BUTT	3.44	13.9 7	DRY	45.2	DRY	47.7 1
	INTERMED IATE	17.5	13.375	NEW	API	N	0	1200	0	1200	3308	2075	1200	H-40	48	ST&C	1.4	3.15	DRY	5.59	DRY	9.39
	INTERMED IATE	12 . 2 5	9.625	NEW	API	N	0	3100	0	3100	2982	175	3100	J-55	36	LT&C	1.25	2.18	DRY	4.06	DRY	5.05
4	PRODUCTI ON	8.75	7.0	NEW	API	N	0	9698	0	9289	2982	-6014		P- 110	26	LT&C	1.66	2.12	DRY	2.75	DRY	3.38
5	LINER	6.12 5	4.5	NEW	API	N	8800	14308	8716	9262	-5441	-5987		P- 110	13.5	LT&C	2.21	2.57	DRY	4.55	DRY	5.68

Well Name: HENRY 8 WOIL FED Well Number: 1H

Casing ID: 1

String

SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Henry_8_W0IL_Fed_1H_Csg_Assumptions_20211020095918.pdf

Casing ID: 2

String

INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Henry_8_W0IL_Fed_1H_Csg_Assumptions_20211020100048.pdf

Casing ID: 3

String

INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Henry_8_W0IL_Fed_1H_Csg_Assumptions_20211020100023.pdf

Well Name: HENRY 8 WOIL FED Well Number: 1H

Casing Attachments

Casing ID: 4

String

PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

 $Henry_8_W0IL_Fed_1H_Csg_Assumptions_20211020100000.pdf$

Casing ID: 5

String

LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Henry_8_W0IL_Fed_1H_Csg_Assumptions_20211020100132.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	242	345	2.12	12.5	731	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		242	330	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead	1250	0	677	150	2.12	12.5	318	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		677	1250	200	1.34	14.8	268	25	Class H	Retarder, Fluid Loss, Defoamer
INTERMEDIATE	Lead		0	928	430	2.12	12.5	912	25	Class C	Salt, Gel, Extender, LCM

Well Name: HENRY 8 WOIL FED Well Number: 1H

String Type	Lead/Tail	Stage Tool Depth	Тор МD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Tail		928	1200	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	3150	1283	2365	50	2.12	12.5	106	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		2365	3150	200	1.34	15.6	268	25	Class H	Retarder, Fluid Loss, Defoamer
INTERMEDIATE	Lead	1250	1250	2416	220	2.12	12.5	467	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		2416	3100	200	1.34	14.8	268	25	Class H	Retarder, Fluid Loss, Defoamer
PRODUCTION	Lead	3150	3150	7880	360	2.12	12.5	764	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		7880	9698	400	1.18	12.5	472	25	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		8800	1430 8	225	2.97	11.2	669	25	Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

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

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

Circulating Medium Table

Well Name: HENRY 8 WOIL FED Well Number: 1H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	ЬН	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1200	SPUD MUD	8.6	8.8							
1200	3100	SALT SATURATED	10	10						9	
3100	9698	WATER-BASED MUD	8.6	9.7					1		
9698	1430 8	OIL-BASED MUD	10	12						1	

Section 6 - Test, Logging, Coring

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

Please refer to Perazzi 9/10 W0LI Fed Com #1H (API# 30-015-48166). CNL/GR will be attached with this report.

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

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

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4831 Anticipated Surface Pressure: 2793

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

Henry_8_W0IL_Fed_1H_H2S_Plan_20211020101136.pdf

Well Name: HENRY 8 WOIL FED Well Number: 1H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

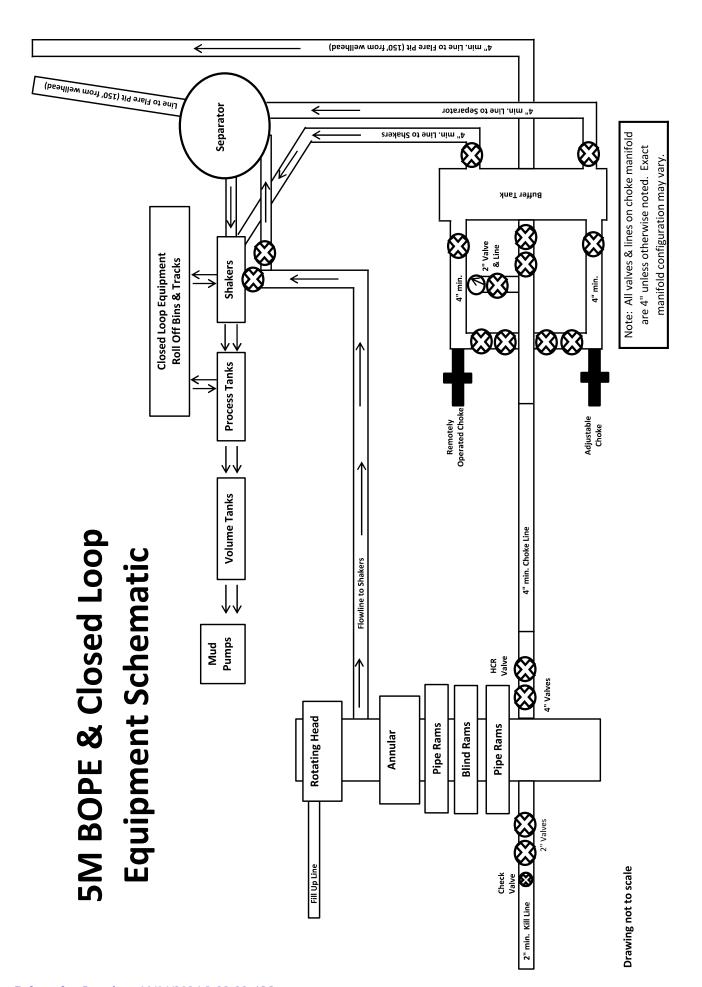
Henry_8_W0IL_Fed_1H_Dir_Plan_20211020101207.pdf Henry_8_W0IL_Fed_1H_Dir_Plot_20211020101207.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Henry_8_W0IL_Fed_1H_Add_Info_20211020101216.pdf

Other Variance attachment:





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

PHONE: 361-887-9807 FAX: 361-887-0812

EMAIL: Tim.Cantu@gates.com

www.gates.com

10K CEMENTING ASSEMBLY PRESSURE TEST CERTIFICATE

Customer: Customer Ref. :

Invoice No.:

AUSTIN DISTRIBUTING

4060578 500506

10,000 PSI

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:

4 1/16 10K FLG 4773-6290 Gates Part No.:

Working Pressure:

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:

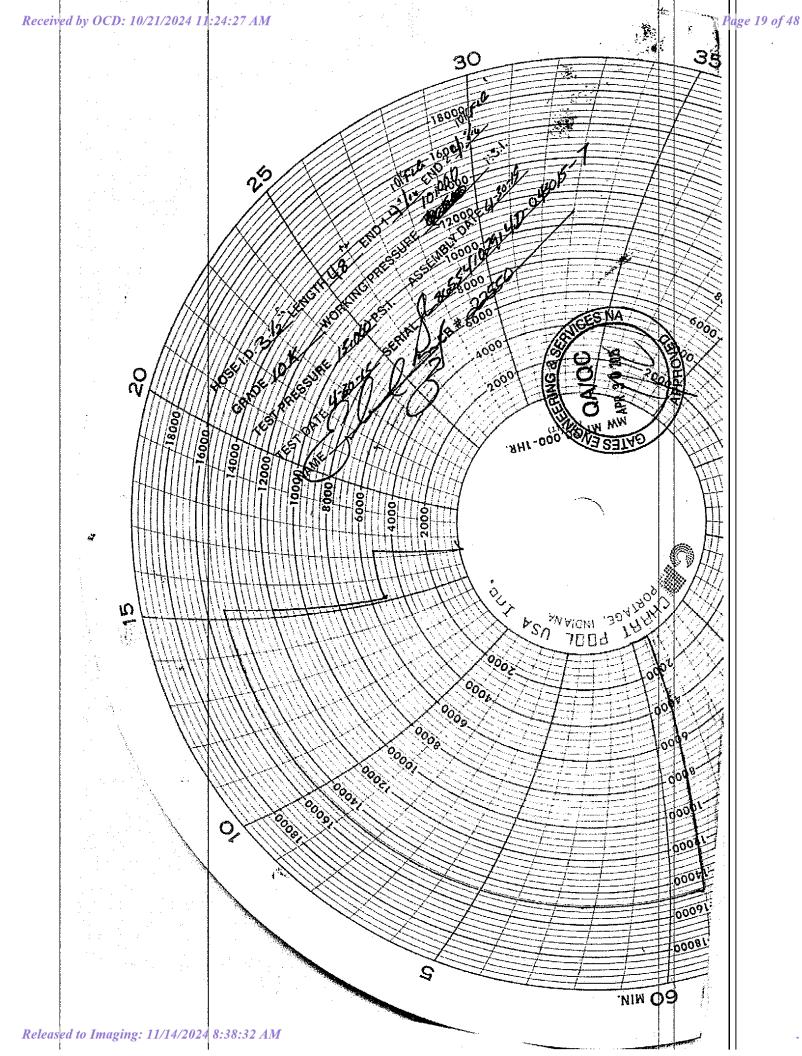
Signature :

PRODUCTION

4/30/20**1**5

Forn PTC - 01 Rev.0 2







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 :

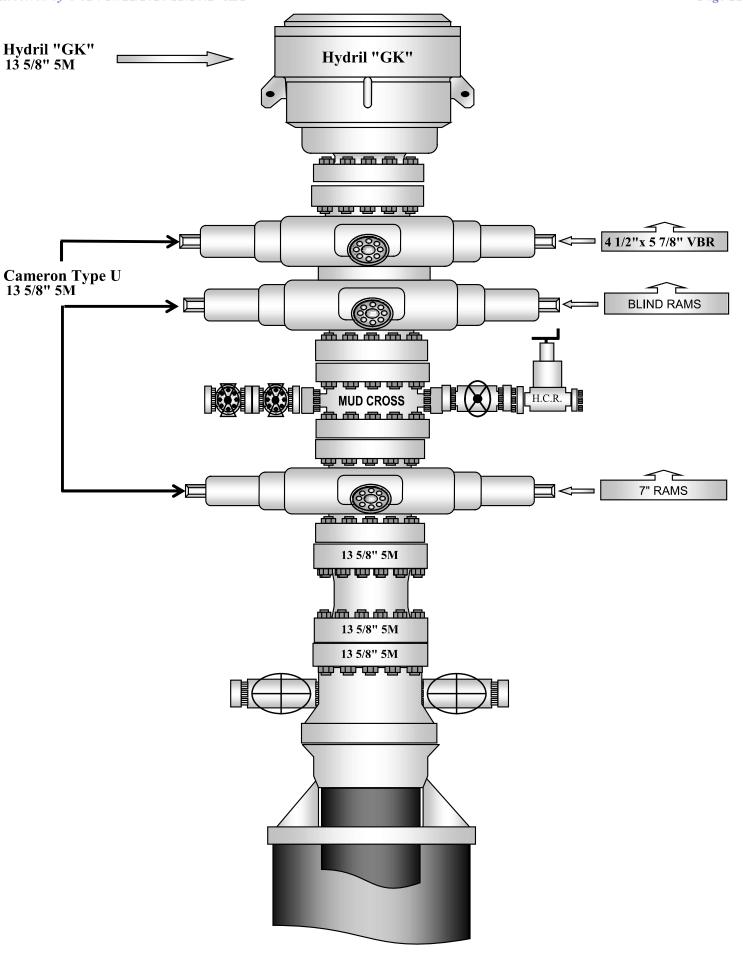
Signature:

8/20/2018

Form PTC - 01 Rev.0 2

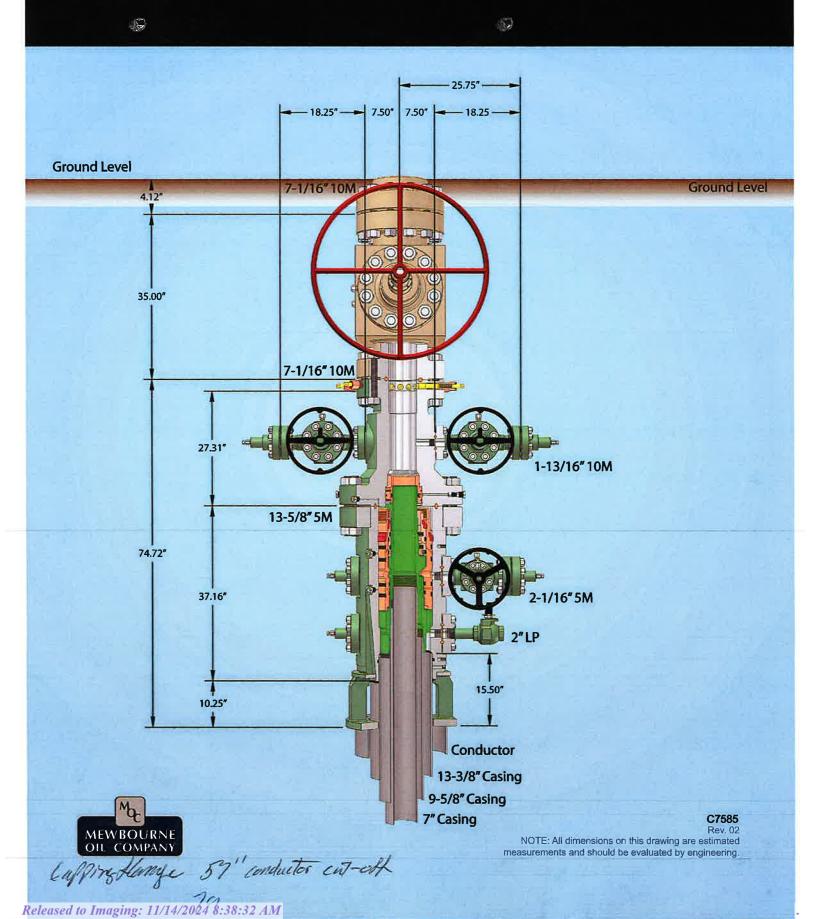


PRODUCTION





13-5/8" MN-DS Wellhead System



SHL: 1050' FSL & 210' FEL, Sec 8 BHL: 2200' FSL & 100' FWL, Sec 8

Casing Program

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
26"	0'	330'	20"	94	J55	BTC	3.44	13.97	45.20	47.71
17.5"	0'	1200'	13.375"	48	H40	STC	1.40	3.15	5.59	9.39
12.25"	0'	3100'	9.625"	36	J55	LTC	1.25	2.18	4.06	5.05
8.75"	0'	9698'	7"	26	HCP110	LTC	1.66	2.12	2.75	3.38
6.125"	8800'	14,308'	4.5"	13.5	P110	LTC	2.21	2.57	4.55	5.68
				BL	M Minimu	m Safety	1.125	1	1.6 Dry	1.6 Dry
						Factor			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 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	Y
justification (loading assumptions, casing design criteria).	
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the	Y
collapse pressure rating of the casing?	
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	
	3.7
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back	
500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	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?	

SHL: 1050' FSL & 210' FEL, Sec 8 BHL: 2200' FSL & 100' FWL, Sec 8

Casing Program

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
26"	0'	330'	20"	94	J55	BTC	3.44	13.97	45.20	47.71
17.5"	0'	1200'	13.375"	48	H40	STC	1.40	3.15	5.59	9.39
12.25"	0'	3100'	9.625"	36	J55	LTC	1.25	2.18	4.06	5.05
8.75"	0'	9698'	7"	26	HCP110	LTC	1.66	2.12	2.75	3.38
6.125"	8800'	14,308'	4.5"	13.5	P110	LTC	2.21	2.57	4.55	5.68
	•			BL	M Minimu	m Safety	1.125	1	1.6 Dry	1.6 Dry
						Factor			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 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	Y
justification (loading assumptions, casing design criteria).	
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the	Y
collapse pressure rating of the casing?	
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	_
	2.7
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back	
500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	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?	
	N
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

SHL: 1050' FSL & 210' FEL, Sec 8 BHL: 2200' FSL & 100' FWL, Sec 8

Casing Program

Hole	Casing Interval		Csg.	Weight	Weight Grade		SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
26"	0'	330'	20"	94	J55	BTC	3.44	13.97	45.20	47.71
17.5"	0'	1200'	13.375"	48	H40	STC	1.40	3.15	5.59	9.39
12.25"	0'	3100'	9.625"	36	J55	LTC	1.25	2.18	4.06	5.05
8.75"	0'	9698'	7"	26	HCP110	LTC	1.66	2.12	2.75	3.38
6.125"	8800'	14,308'	4.5"	13.5	P110	LTC	2.21	2.57	4.55	5.68
				BL	M Minimu	m Safety	1.125	1	1.6 Dry	1.6 Dry
						Factor			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 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	Y
justification (loading assumptions, casing design criteria).	
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the	Y
collapse pressure rating of the casing?	
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	_
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back	
500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	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?	

SHL: 1050' FSL & 210' FEL, Sec 8 BHL: 2200' FSL & 100' FWL, Sec 8

Casing Program

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
26"	0'	330'	20"	94	J55	BTC	3.44	13.97	45.20	47.71
17.5"	0'	1200'	13.375"	48	H40	STC	1.40	3.15	5.59	9.39
12.25"	0'	3100'	9.625"	36	J55	LTC	1.25	2.18	4.06	5.05
8.75"	0'	9698'	7"	26	HCP110	LTC	1.66	2.12	2.75	3.38
6.125"	8800'	14,308'	4.5"	13.5	P110	LTC	2.21	2.57	4.55	5.68
	•			BL	M Minimu	m Safety	1.125	1	1.6 Dry	1.6 Dry
						Factor			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 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	Y
justification (loading assumptions, casing design criteria).	
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the	Y
collapse pressure rating of the casing?	
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back	
500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	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?	

SHL: 1050' FSL & 210' FEL, Sec 8 BHL: 2200' FSL & 100' FWL, Sec 8

Casing Program

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
26"	0'	330'	20"	94	J55	BTC	3.44	13.97	45.20	47.71
17.5"	0'	1200'	13.375"	48	H40	STC	1.40	3.15	5.59	9.39
12.25"	0'	3100'	9.625"	36	J55	LTC	1.25	2.18	4.06	5.05
8.75"	0'	9698'	7"	26	HCP110	LTC	1.66	2.12	2.75	3.38
6.125"	8800'	14,308'	4.5"	13.5	P110	LTC	2.21	2.57	4.55	5.68
				BL	M Minimu	m Safety	1.125	1	1.6 Dry	1.6 Dry
						Factor			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 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?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	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 strings cemented to surface?	

Mewbourne Oil Company

Eddy County, New Mexico NAD 83 Henry 8 W0IL Fed #1H Sec 8, T20S, R29E

SHL: 1050' FSL & 210' FEL BHL: 2200' FSL & 100' FWL

Plan: Design #1

Standard Planning Report

19 October, 2021

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Henry 8 W0IL Fed #1H

 Well:
 Sec 8, T20S, R29E

 Wellbore:
 BHL: 2200' FSL & 100' FWL

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Henry 8 W0IL Fed #1H

WELL @ 3302.0usft (Original Well Elev) WELL @ 3302.0usft (Original Well Elev)

Grid

Minimum Curvature

Project Eddy County, New Mexico NAD 83

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

System Datum:

Ground Level

Site Henry 8 W0IL Fed #1H

 Site Position:
 Northing:
 576,134.90 usft
 Latitude:
 32.5836119

 From:
 Map
 Easting:
 616,503.10 usft
 Longitude:
 -104.0892962

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

Well Sec 8, T20S, R29E

Well Position +N/-S 0.0 usft 576,134.90 usft Latitude: 32.5836119 Northing: +E/-W 0.0 usft Easting: 616,503.10 usft Longitude: -104.0892962 0.0 usft Wellhead Elevation: 3,302.0 usft Ground Level: 3,275.0 usft **Position Uncertainty**

Grid Convergence: 0.13 °

Wellbore BHL: 2200' FSL & 100' FWL

 Magnetics
 Model Name
 Sample Date (°)
 Declination (°)
 Dip Angle (°)
 Field Strength (nT)

 IGRF2010
 12/31/2014
 7.41
 60.34
 48,397.76373947

Design #1

Audit Notes:

Version:Phase:PROTOTYPETie On Depth:0.0

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

 0.0
 0.0
 0.0
 283.03

Plan Survey Tool Program Date 10/19/2021

Depth From Depth To

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

1 0.0 14,307.7 Design #1 (BHL: 2200' FSL & 100

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
330.0	0.00	0.00	330.0	0.0	0.0	0.00	0.00	0.00	0.00	
746.6	8.33	9.77	745.1	29.8	5.1	2.00	2.00	0.00	9.77	
8,383.0	8.33	9.77	8,300.9	1,120.3	193.0	0.00	0.00	0.00	0.00	
8,799.6	0.00	0.00	8,716.0	1,150.1	198.1	2.00	-2.00	0.00	180.00	KOP: 2200' FSL & 10'
9,703.0	90.34	270.03	9,289.0	1,150.4	-378.2	10.00	10.00	0.00	-89.97	
14,307.7	90.34	270.03	9,262.0	1,153.1	-4,982.9	0.00	0.00	0.00	0.00	BHL: 2200' FSL & 100

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83

 Site:
 Henry 8 W0IL Fed #1H

 Well:
 Sec 8, T20S, R29E

 Wellbore:
 BHL: 2200' FSL & 100' FWL

Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Henry 8 W0IL Fed #1H

WELL @ 3302.0usft (Original Well Elev) WELL @ 3302.0usft (Original Well Elev)

Grid

ed Survey									
ea Survey									
Measured Depth (usft)	Inclination	Azimuth	Vertical Depth (usft)	+N/-S	+E/-W	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
	(°)	(°)		(usft)	(usft)		(/ loousit)	•	· · · · · ·
0.0 0.00 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0									
		0.00	100.0				0.00	0.00	0.00
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
330.0	0.00	0.00	330.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	1.40	9.77	400.0	8.0	0.1	0.0	2.00	2.00	0.00
500.0	3.40	9.77	499.9	5.0	0.9	0.3	2.00	2.00	0.00
600.0	5.40	9.77	599.6	12.5	2.2	0.7	2.00	2.00	0.00
700.0	7.40	9.77	699.0	23.5	4.1	1.4	2.00	2.00	0.00
746.6	8.33	9.77	745.1	29.8	5.1	1.7	2.00	2.00	0.00
800.0	8.33	9.77	798.0	37.4	6.4	2.2	0.00	0.00	0.00
900.0	8.33	9.77	896.9	51.7	8.9	3.0	0.00	0.00	0.00
1,000.0	8.33	9.77	995.9	66.0	11.4	3.8	0.00	0.00	0.00
1,100.0	8.33	9.77	1,094.8	80.3	13.8	4.6	0.00	0.00	0.00
1,200.0	8.33	9.77	1,193.7	94.5	16.3	5.5	0.00	0.00	0.00
1,300.0	8.33	9.77	1,292.7	108.8	18.7	6.3	0.00	0.00	0.00
1,400.0	8.33	9.77	1,391.6	123.1	21.2	7.1	0.00	0.00	0.00
1,500.0	8.33	9.77	1,490.6	137.4	23.7	7.9	0.00	0.00	0.00
1,600.0	8.33	9.77	1,589.5	151.7	26.1	8.7	0.00	0.00	0.00
1,700.0	8.33	9.77	1,688.5	165.9	28.6	9.6	0.00	0.00	0.00
1,800.0	8.33	9.77	1,787.4	180.2	31.0	10.4	0.00	0.00	0.00
1,900.0	8.33	9.77	1,886.4	194.5	33.5	11.2	0.00	0.00	0.00
2,000.0	8.33	9.77	1,985.3	208.8	36.0	12.0	0.00	0.00	0.00
2,100.0	8.33	9.77	2,084.2	223.1	38.4	12.9	0.00	0.00	0.00
2,200.0	8.33	9.77	2,183.2	237.4	40.9	13.7	0.00	0.00	0.00
2,300.0	8.33	9.77	2,282.1	251.6	43.3	14.5	0.00	0.00	0.00
2,400.0	8.33	9.77	2,381.1	265.9	45.8	15.3	0.00	0.00	0.00
2,500.0	8.33	9.77	2,480.0	280.2	48.3	16.2	0.00	0.00	0.00
2,600.0	8.33	9.77	2,579.0	294.5	50.7	17.0	0.00	0.00	0.00
2,700.0	8.33	9.77	2,677.9	308.8	53.2	17.8	0.00	0.00	0.00
2,800.0	8.33	9.77	2.776.0	323.0	55.6	18.6	0.00	0.00	0.00
2,800.0	8.33	9.77 9.77	2,776.9 2,875.8	337.3	58.1	19.4	0.00	0.00	0.00
3,000.0	8.33	9.77	2,873.8	351.6	60.6	20.3	0.00	0.00	0.00
3,100.0	8.33	9.77	3,073.7	365.9	63.0	21.1	0.00	0.00	0.00
3,200.0	8.33	9.77	3,172.6	380.2	65.5	21.9	0.00	0.00	0.00
3,300.0	8.33	9.77	3,271.6	394.4	67.9	22.7	0.00	0.00	0.00
3,400.0	8.33	9.77	3,370.5	408.7	70.4	23.6	0.00	0.00	0.00
3,500.0	8.33	9.77	3,469.5	423.0	72.9	24.4	0.00	0.00	0.00
3,600.0	8.33	9.77 0.77	3,568.4	437.3	75.3	25.2	0.00	0.00	0.00
3,700.0	8.33	9.77	3,667.4	451.6	77.8	26.0	0.00	0.00	0.00
3,800.0	8.33	9.77	3,766.3	465.8	80.2	26.9	0.00	0.00	0.00
3,900.0	8.33	9.77	3,865.2	480.1	82.7	27.7	0.00	0.00	0.00
4,000.0	8.33	9.77	3,964.2	494.4	85.2	28.5	0.00	0.00	0.00
4,100.0	8.33	9.77	4,063.1	508.7	87.6	29.3	0.00	0.00	0.00
4,200.0	8.33	9.77	4,162.1	523.0	90.1	30.1	0.00	0.00	0.00
4,300.0	8.33	9.77	4,261.0	537.2	92.5	31.0	0.00	0.00	0.00
4,400.0	8.33	9.77	4,360.0	551.5	95.0	31.8	0.00	0.00	0.00
4,500.0	8.33	9.77	4,458.9	565.8	97.5	32.6	0.00	0.00	0.00
4,600.0	8.33	9.77	4,557.9	580.1	99.9	33.4	0.00	0.00	0.00
4,700.0	8.33	9.77	4,656.8	594.4	102.4	34.3	0.00	0.00	0.00
4,800.0	8.33	9.77	4,755.8	608.6	104.8	35.1	0.00	0.00	0.00
4,900.0	8.33	9.77	4,854.7	622.9	107.3	35.9	0.00	0.00	0.00
5,000.0	8.33	9.77	4,953.6	637.2	109.8	36.7	0.00	0.00	0.00

Database: Company:

Hobbs

Mewbourne Oil Company

Project:

Eddy County, New Mexico NAD 83

Site: Well: Henry 8 W0IL Fed #1H

Wellbore:

Sec 8, T20S, R29E BHL: 2200' FSL & 100' FWL

Design: Design #1 Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference: **Survey Calculation Method:** Site Henry 8 W0IL Fed #1H

WELL @ 3302.0usft (Original Well Elev) WELL @ 3302.0usft (Original Well Elev)

\$\begin{array}{cccccccccccccccccccccccccccccccccccc	aigii.								
	anned Survey								
5,200.0 8,33 9,77 5,151.5 665.8 114.7 38.4 0,00 0,00 0.00 5,300.0 8,33 9,77 5,349.4 694.3 119.6 40.0 0,00 0,00 0.00 <th>Depth</th> <th></th> <th>nuth Depth</th> <th></th> <th></th> <th>Section</th> <th>Rate</th> <th>Rate</th> <th></th>	Depth		nuth Depth			Section	Rate	Rate	
5,300.0 8,33 9,77 5,280.5 680.0 117.1 39.2 0,00 0,00 0,00 5,400.0 8,33 9,77 5,448.4 708.6 122.0 40.9 0,00 <td>· ·</td> <td></td> <td>·</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.00</td>	· ·		·						0.00
5,400,0 8,33 9,77 5,349,4 694,3 119,6 40,0 0,00 0,00 0,00 5,500,0 8,33 9,77 5,5448,4 708,6 122,0 40,9 0,00 0,00 0,00 0,00 5,500,0 8,33 9,77 5,546,3 732,2 127,0 42,5 0,00 0,00 0,00 0,00 5,700,0 8,33 9,77 5,745,2 751,4 129,4 43,3 0,00 0,00 0,00 5,500,0 8,33 9,77 5,745,2 751,4 129,4 43,3 0,00 0,00 0,00 0,00 5,500,0 8,33 9,77 5,944,1 765,7 131,9 44,1 0,00 0,00 0,00 6,000,0 8,33 9,77 5,944,1 765,7 131,9 44,1 0,00 0,00 0,00 6,000 8,33 9,77 6,042,0 794,3 1780,0 134,3 45,0 0,00 0,00 0,00 6,000 8,33 9,77 6,042,0 794,3 136,8 45,8 0,00 0,00 0,00 0,00 6,000 8,33 9,77 6,042,0 794,3 136,8 45,8 0,00 0,00 0,00 0,00 6,000 8,33 9,77 6,410,0 80,6 139,3 46,6 0,00 0,00 0,00 0,00 6,000 8,33 9,77 6,239,9 822,9 141,7 47,4 0,00 0,00 0,00 0,00 6,000 8,33 9,77 6,438,9 837,1 144,2 48,3 0,00 0,00 0,00 0,00 6,000 8,33 9,77 6,438,9 837,1 144,2 48,3 0,00 0,00 0,00 0,00 6,000 8,33 9,77 6,538,8 851,4 146,6 49,1 0,00 0,00 0,00 0,00 6,000 8,33 9,77 6,538,8 865,7 149,1 49,9 0,00 0,00 0,00 0,00 6,000 8,33 9,77 6,538,8 865,7 149,1 49,9 0,00 0,00 0,00 0,00 6,000 8,33 9,77 6,538,8 865,7 149,1 49,9 0,00 0,00 0,00 0,00 0,00 0,00 0,00	•		•						0.00
5,500.0 8.33 9.77 5,448.4 708.6 122.0 40.9 0.00 0.00 0.00 5,600.0 8.33 9.77 5,545.3 722.9 124.5 41.7 0.00 0.00 0.00 5,700.0 8.33 9.77 5,646.3 737.2 127.0 42.5 0.00 0.00 0.00 5,500.0 8.33 9.77 5,745.2 751.4 129.4 43.3 0.00 0.00 0.00 5,500.0 8.33 9.77 5,745.2 751.4 129.4 43.3 0.00 0.00 0.00 0.00 6,000 0.00 8.33 9.77 5,943.1 780.0 134.3 45.0 0.00 0.00 0.00 0.00 6,100.0 8.33 9.77 6,442.0 794.3 136.8 45.8 0.00 0.00 0.00 0.00 6,200.0 8.33 9.77 6,141.0 808.6 139.3 46.6 0.00 0.00 0.00 0.00 6,200.0 8.33 9.77 6,141.0 808.6 139.3 46.6 0.00 0.00 0.00 0.00 6,000 0.00 8.33 9.77 6,437.8 851.1 144.2 48.3 0.00 0.00 0.00 0.00 6,600.0 8.33 9.77 6,338.9 837.1 144.2 48.3 0.00 0.00 0.00 0.00 6,600.0 8.33 9.77 6,437.8 851.4 146.6 49.1 0.00 0.00 0.00 6,600.0 8.33 9.77 6,638.8 865.7 149.1 49.9 0.00 0.00 0.00 6,700.0 8.33 9.77 6,638.8 865.7 149.1 49.9 0.00 0.00 0.00 0.00 6,700.0 8.33 9.77 6,638.8 865.7 149.1 49.9 0.00 0.00 0.00 0.00 6,600.0 8.33 9.77 6,638.8 865.7 149.1 49.9 0.00 0.00 0.00 0.00 6,600.0 8.33 9.77 6,638.5 880.5 156.5 52.4 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	· ·		·						0.00
5,600.0 8,33 9,77 5,547.3 722.9 124.5 41.7 0.00 0.00 0.00 5,700.0 8,33 9,77 5,546.3 737.2 127.0 42.5 0.00 0.00 0.00 0.0 5,700.0 8,33 9,77 5,546.3 737.2 127.0 42.5 0.00 0.00 0.00 0.0 5,800.0 8,33 9,77 5,844.1 765.7 131.9 44.1 0.00 0.00 0.00 0.00 6,000.0 8,33 9,77 5,844.1 765.7 131.9 44.1 0.00 0.00 0.00 0.00 6,000.0 8,33 9,77 6,042.0 794.3 136.8 45.8 0.00 0.00 0.00 0.00 6,200.0 8,33 9,77 6,042.0 794.3 136.8 45.8 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	· ·								0.00 0.00
5,700.0 8.33 9.77 5,646.3 737.2 127.0 42.5 0.00 0.00 0.0 5,600.0 8.33 9.77 5,745.2 751.4 129.4 43.3 0.00 0.00 0.0 0.0 5,600.0 8.33 9.77 5,844.1 765.7 131.9 44.1 0.00 0.00 0.0 0.0 6,100.0 8.33 9.77 5,844.1 760.0 134.3 45.0 0.00 0.00 0.0 6,100.0 8.33 9.77 6,844.1 760.0 134.3 45.0 0.00 0.00 0.0 6,200.0 8.33 9.77 6,441.0 808.6 139.3 46.6 0.00 0.00 0.0 0.0 6,200.0 8.33 9.77 6,338.9 822.9 141.7 47.4 0.00 0.00 0.0 0.0 6,400.0 8.33 9.77 6,338.9 822.9 141.7 47.4 0.00 0.00 0.0 0.0 6,600.0 8.33 9.77 6,338.9 822.9 141.7 47.4 0.00 0.00 0.0 0.0 6,600.0 8.33 9.77 6,338.9 837.1 144.2 48.3 0.00 0.00 0.00 0.0 6,600.0 8.33 9.77 6,338.9 885.7 144.2 48.3 0.00 0.00 0.00 0.0 6,600.0 8.33 9.77 6,538.8 851.7 149.1 49.9 0.00 0.00 0.0 0.0 6,700.0 8.33 9.77 6,635.8 851.7 149.1 49.9 0.00 0.00 0.0 0.0 6,600.0 8.33 9.77 6,635.7 880.0 151.6 50.7 0.00 0.00 0.0 6,600.0 8.33 9.77 6,835.9 880.0 151.6 50.7 0.00 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.	· ·								0.00
5,900.0 8.33 9.77 5,844.1 765.7 131.9 44.1 0.00 0.00 0.00 6,000.0 8.33 9.77 6,042.0 794.3 136.8 45.8 0.00 0.00 0.00 6,200.0 8.33 9.77 6,042.0 794.3 136.8 45.8 0.00 0.00 0.00 6,300.0 8.33 9.77 6,239.9 837.1 144.2 48.3 0.00 0.00 0.00 6,500.0 8.33 9.77 6,338.9 837.1 144.2 48.3 0.00 0.00 0.00 6,500.0 8.33 9.77 6,536.8 865.7 149.1 49.9 0.00 0.00 0.00 6,700.0 8.33 9.77 6,536.8 865.7 149.1 49.9 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00<	· ·								0.00
5,900.0 8.33 9.77 5,844.1 765.7 131.9 44.1 0.00 0.00 0.00 6,000.0 8.33 9.77 6,042.0 794.3 136.8 45.8 0.00 0.00 0.00 6,200.0 8.33 9.77 6,042.0 794.3 136.8 45.8 0.00 0.00 0.00 6,300.0 8.33 9.77 6,239.9 837.1 144.2 48.3 0.00 0.00 0.00 6,500.0 8.33 9.77 6,338.9 837.1 144.2 48.3 0.00 0.00 0.00 6,500.0 8.33 9.77 6,536.8 865.7 149.1 49.9 0.00 0.00 0.00 6,700.0 8.33 9.77 6,536.8 865.7 149.1 49.9 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00<	5.800.0	8.33	9.77 5.745.2	751.4	129.4	43.3	0.00	0.00	0.00
6,000.0 8.33 9.77 5,943.1 780.0 134.3 45.8 0.00 0.00 0.00 0.0 6,100.0 8.33 9.77 6,141.0 808.6 139.3 46.6 0.00 0.00 0.0 0.0 6,200.0 8.33 9.77 6,141.0 808.6 139.3 46.6 0.00 0.00 0.0 0.0 0.0 6,300.0 8.33 9.77 6,239.9 822.9 141.7 47.4 0.00 0.00 0.0 0.0 0.0 6,600.0 8.33 9.77 6,338.9 837.1 144.2 48.3 0.00 0.00 0.0 0.0 6,600.0 8.33 9.77 6,538.9 8851.4 146.6 49.1 0.00 0.00 0.0 0.0 6,600.0 8.33 9.77 6,538.8 885.7 149.1 49.9 0.00 0.00 0.0 0.0 6,700.0 8.33 9.77 6,538.8 885.7 149.1 49.9 0.00 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.	•								0.00
6,200.0 8.33 9.77 6,141.0 808.6 139.3 46.6 0.00 0.00 0.00 0.00 6,300.0 8.33 9.77 6,239.9 822.9 141.7 47.4 0.00 0.00 0.00 0.00 6,600.0 8.33 9.77 6,338.9 837.1 144.2 48.3 0.00 0.00 0.00 0.6,600.0 8.33 9.77 6,536.8 865.7 149.1 49.9 0.00 0.00 0.00 0.6,600.0 8.33 9.77 6,536.8 865.7 149.1 49.9 0.00 0.00 0.00 0.00 0.00 0.00 0.00	6,000.0	8.33	9.77 5,943.1		134.3	45.0	0.00	0.00	0.00
6,300.0 8.33 9.77 6,239.9 822.9 141.7 47.4 0.00 0.00 0.00 6,400.0 8.33 9.77 6,338.9 837.1 144.2 48.3 0.00 0.00 0.00 0.06 6,500.0 8.33 9.77 6,538.8 851.4 146.6 49.1 0.00 0.00 0.00 0.00 6,600.0 8.33 9.77 6,536.8 865.7 149.1 49.9 0.00 0.00 0.00 0.00 6,700.0 8.33 9.77 6,635.7 880.0 151.6 50.7 0.00 0.00 0.00 0.00 6,600.0 8.33 9.77 6,635.7 880.0 151.6 50.7 0.00 0.00 0.00 0.00 0.00 0.00 0.00						45.8			0.00
6,400.0 8.33 9.77 6,338.9 837.1 144.2 48.3 0.00 0.00 0.00 0.6,500.0 8.33 9.77 6,536.8 851.4 146.6 49.1 0.00 0.00 0.00 0.6,600.0 8.33 9.77 6,536.8 865.7 149.1 49.9 0.00 0.00 0.00 0.00 6,700.0 8.33 9.77 6,536.8 865.7 149.1 49.9 0.00 0.00 0.00 0.00 0.00 6,700.0 8.33 9.77 6,635.7 880.0 151.6 50.7 0.00 0.00 0.00 0.00 6,900.0 8.33 9.77 6,833.6 908.5 156.5 52.4 0.00 0.00 0.00 0.00 7,000.0 8.33 9.77 6,833.6 908.5 156.5 52.4 0.00 0.00 0.00 0.00 7,000.0 8.33 9.77 7,031.5 937.1 161.4 54.0 0.00 0.00 0.00 0.00 7,200.0 8.33 9.77 7,130.4 951.4 163.9 54.8 0.00 0.00 0.00 0.00 7,200.0 8.33 9.77 7,130.4 951.4 163.9 54.8 0.00 0.00 0.00 0.00 7,200.0 8.33 9.77 7,229.4 965.7 166.3 55.7 0.00 0.00 0.00 0.00 7,400.0 8.33 9.77 7,228.3 979.9 168.8 56.5 0.00 0.00 0.00 0.00 7,500.0 8.33 9.77 7,228.3 979.9 168.8 56.5 0.00 0.00 0.00 0.00 7,500.0 8.33 9.77 7,228.3 979.9 168.8 56.5 0.00 0.00 0.00 0.00 7,500.0 8.33 9.77 7,526.2 1,008.5 173.7 58.1 0.00 0.00 0.00 0.00 7,600.0 8.33 9.77 7,526.2 1,008.5 173.7 58.1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	6,200.0	8.33	9.77 6,141.0	808.6	139.3	46.6	0.00	0.00	0.00
6,500.0 8,33 9,77 6,437.8 851.4 146.6 49.1 0.00 0.00 0.00 6,600.0 8,33 9,77 6,536.8 865.7 149.1 49.9 0.00 0.00 0.00 0.00 6,700.0 8,33 9,77 6,536.8 865.7 149.1 49.9 0.00 0.00 0.00 0.00 0.00 6,700.0 8,33 9,77 6,535.7 880.0 151.6 50.7 0.00 0.00 0.00 0.00 6,800.0 8,33 9,77 6,832.5 922.8 158.9 52.4 0.00 0.00 0.00 0.00 0.00 7,700.0 8,33 9,77 7,6932.5 922.8 158.9 53.2 0.00 0.00 0.00 0.00 7,700.0 8,33 9,77 7,031.5 937.1 161.4 64.0 0.00 0.00 0.00 0.00 7,200.0 8,33 9,77 7,130.4 951.4 163.9 54.8 0.00 0.00 0.00 0.00 0.00 7,200.0 8,33 9,77 7,328.3 979.9 168.8 56.5 0.00 0.00 0.00 0.00 7,500.0 8,33 9,77 7,328.3 979.9 168.8 56.5 0.00 0.00 0.00 0.00 7,500.0 8,33 9,77 7,427.3 994.2 171.2 57.3 0.00 0.00 0.00 0.00 7,700.0 8,33 9,77 7,625.1 1,002.8 173.7 58.1 0.00 0.00 0.00 0.00 7,700.0 8,33 9,77 7,625.1 1,002.8 176.2 59.0 0.00 0.00 0.00 0.00 0.00 0.00 0.00	·		·						0.00
6,600.0 8,33 9,77 6,536.8 865.7 149.1 49.9 0.00 0.00 0.00 6,700.0 8,33 9,77 6,635.7 880.0 151.6 50.7 0.00 0.00 0.00 0.00 6,800.0 8,33 9,77 6,833.6 908.5 156.5 52.4 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0									0.00
6,700.0 8.33 9.77 6,635.7 880.0 151.6 50.7 0.00 0.00 0.0 6,800.0 8.33 9.77 6,734.6 884.3 154.0 51.6 0.00 0.00 0.00 6,900.0 8.33 9.77 6,833.6 908.5 156.5 52.4 0.00 0.00 0.0 7,000.0 8.33 9.77 6,832.5 922.8 158.9 53.2 0.00 0.00 0.0 7,100.0 8.33 9.77 7,031.5 937.1 161.4 54.0 0.00 0.00 0.0 7,200.0 8.33 9.77 7,731.5 937.1 161.4 54.0 0.00 0.00 0.0 7,200.0 8.33 9.77 7,329.4 965.7 166.3 55.7 0.00 0.00 0.0 7,300.0 8.33 9.77 7,229.4 965.7 166.3 55.7 0.00 0.00 0.0 7,500.0 8.33 9.77 7,229.4 995.7 166.3 55.7 0.00 0.00 0.00 7,500.0 8.33 9.77 7,229.4 995.7 166.3 55.7 0.00 0.00 0.00 7,500.0 8.33 9.77 7,229.4 171.2 57.3 0.00 0.00 0.00 7,500.0 8.33 9.77 7,266.2 1,008.5 173.7 58.1 0.00 0.00 0.00 7,700.0 8.33 9.77 7,625.1 1,022.8 176.2 59.0 0.00 0.00 0.00 7,700.0 8.33 9.77 7,625.1 1,022.8 176.2 59.0 0.00 0.00 0.00 7,800.0 8.33 9.77 7,224.1 1,037.1 178.6 59.8 0.00 0.00 0.00 7,900.0 8.33 9.77 7,823.0 1,051.3 181.1 60.6 0.00 0.00 0.00 8,000.0 8.33 9.77 7,822.0 1,065.6 183.5 61.4 0.00 0.00 0.00 8,000.0 8.33 9.77 8,020.9 1,079.9 186.0 62.3 0.00 0.00 0.00 8,200.0 8.33 9.77 8,020.9 1,079.9 186.0 62.3 0.00 0.00 0.00 8,200.0 8.33 9.77 8,119.9 1,094.2 188.5 63.1 0.00 0.00 0.00 8,383.0 8.33 9.77 8,199.9 1,094.2 188.5 63.1 0.00 0.00 0.00 8,200.0 5.99 9.77 8,417.0 1,134.7 195.4 65.4 2.00 -2.00 0.00 8,800.0 5.99 9.77 8,417.0 1,134.7 195.4 65.4 2.00 -2.00 0.00 8,800.0 5.99 9.77 8,417.0 1,134.7 195.4 65.4 2.00 -2.00 0.00 8,800.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0.00 8,900.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0.00 8,900.0 1.99 9.77 8,616.6 1,143.3 196.9 68.5 10.00 10.00 0.00 8,900.0 10.04 270.03 8,864.7 1,150.1 198.1 66.3 2.00 -2.00 0.00 8,900.0 10.04 270.03 8,864.7 1,150.1 198.9 3 74.9 10.00 10.00 0.00 9,000.0 20.04 270.03 8,864.7 1,150.1 198.9 3 74.9 10.00 10.00 0.00 9,050.0 25.04 270.03 8,864.7 1,150.1 178.5 85.4 10.00 10.00 0.00									0.00
6,800.0 8.33 9.77 6,734.6 894.3 154.0 51.6 0.00 0.00 0.00 6,900.0 8.33 9.77 6,833.6 908.5 156.5 52.4 0.00 0.00 0.00 0.7,000.0 8.33 9.77 6,932.5 922.8 158.9 53.2 0.00 0.00 0.00 0.7,100.0 8.33 9.77 7,031.5 937.1 161.4 54.0 0.00 0.00 0.00 0.7,200.0 8.33 9.77 7,130.4 951.4 163.9 54.8 0.00 0.00 0.00 0.7,200.0 8.33 9.77 7,130.4 951.4 163.9 54.8 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	· ·		*						0.00 0.00
6,900.0 8.33 9.77 6,833.6 908.5 156.5 52.4 0.00 0.00 0.0 7,000.0 8.33 9.77 6,932.5 922.8 158.9 53.2 0.00 0.00 0.0 7,100.0 8.33 9.77 7,031.5 937.1 161.4 54.0 0.00 0.00 0.0 7,200.0 8.33 9.77 7,130.4 951.4 163.9 54.8 0.00 0.00 0.00 7,300.0 8.33 9.77 7,229.4 965.7 166.3 55.7 0.00 0.00 0.0 7,400.0 8.33 9.77 7,229.3 979.9 168.8 56.5 0.00 0.00 0.0 7,500.0 8.33 9.77 7,328.3 979.9 168.8 56.5 0.00 0.00 0.0 7,500.0 8.33 9.77 7,427.3 994.2 171.2 57.3 0.00 0.00 0.0 7,600.0 8.33 9.77 7,526.2 1,008.5 173.7 58.1 0.00 0.00 0.0 7,700.0 8.33 9.77 7,625.1 1,022.8 176.2 59.0 0.00 0.00 0.0 7,800.0 8.33 9.77 7,724.1 1,037.1 178.6 59.8 0.00 0.00 0.0 7,900.0 8.33 9.77 7,823.0 1,051.3 181.1 60.6 0.00 0.00 0.0 8,000.0 8.33 9.77 8,220.0 1,065.6 183.5 61.4 0.00 0.00 0.0 8,000.0 8.33 9.77 8,020.9 1,079.9 186.0 62.3 0.00 0.00 0.0 8,100.0 8.33 9.77 8,020.9 1,079.9 186.0 62.3 0.00 0.00 0.0 8,200.0 8.33 9.77 8,020.9 1,079.9 186.0 62.3 0.00 0.00 0.0 8,300.0 8.33 9.77 8,020.9 1,079.9 186.0 62.3 0.00 0.00 0.0 8,200.0 8,33 9.77 8,119.9 1,094.2 188.5 63.1 0.00 0.00 0.0 8,300.0 8,33 9.77 8,000.9 1,179.9 186.0 62.3 0.00 0.00 0.0 8,200.0 8,33 9.77 8,119.9 1,094.2 188.5 63.1 0.00 0.00 0.0 8,300.0 8,33 9.77 8,119.9 1,094.2 188.5 63.1 0.00 0.00 0.0 8,300.0 8,33 9.77 8,000.9 1,120.3 193.0 64.6 0.00 0.00 0.0 8,300.0 8,33 9.77 8,300.9 1,120.3 193.0 64.6 0.00 0.00 0.0 8,400.0 7.99 9.77 8,411.0 1,134.7 195.4 65.4 2.00 -2.00 0.0 8,500.0 5.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0.0 8,700.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0.0 8,700.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0.0 8,700.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0.0 8,900.0 10.04 270.03 8,766.4 1,150.1 195.9 68.5 10.00 10.00 10.00 0.0 8,950.0 15.04 270.03 8,864.7 1,150.1 195.9 68.5 10.00 10.00 10.00 0.0 9,050.0 25.04 270.03 8,864.7 1,150.1 176.5 85.4 10.00 10.00 10.00 0.0 9,050.0 25.04 270.03 8,864.7 1,150.1 176.5 85.4 10.00 10.00 10.00 0.0	•								
7,000.0 8.33 9.77 7,031.5 937.1 161.4 54.0 0.00 0.00 0.00 7,100.0 8.33 9.77 7,130.4 951.4 163.9 54.8 0.00 0.00 0.00 0.00 7,300.0 8.33 9.77 7,130.4 951.4 163.9 54.8 0.00 0.00 0.00 0.00 7,300.0 8.33 9.77 7,229.4 965.7 166.3 55.7 0.00 0.00 0.00 0.00 7,400.0 8.33 9.77 7,328.3 979.9 168.8 56.5 0.00 0.00 0.00 0.00 7,500.0 8.33 9.77 7,427.3 994.2 171.2 57.3 0.00 0.00 0.00 0.00 7,500.0 8.33 9.77 7,526.2 1,008.5 173.7 58.1 0.00 0.00 0.00 0.00 7,700.0 8.33 9.77 7,526.2 1,008.5 173.7 58.1 0.00 0.00 0.00 0.00 7,700.0 8.33 9.77 7,625.1 1,022.8 176.2 59.0 0.00 0.00 0.00 0.00 0.00 0.00 0.00	•								0.00 0.00
7,100.0 8.33 9.77 7,031.5 937.1 161.4 54.0 0.00 0.00 0.00 0.7,200.0 8.33 9.77 7,130.4 951.4 163.9 54.8 0.00 0.00 0.00 0.7,300.0 8.33 9.77 7,229.4 965.7 166.3 55.7 0.00 0.00 0.00 0.00 7,400.0 8.33 9.77 7,328.3 979.9 168.8 56.5 0.00 0.00 0.00 0.7,500.0 8.33 9.77 7,328.3 979.9 168.8 56.5 0.00 0.00 0.00 0.7,500.0 8.33 9.77 7,427.3 994.2 171.2 57.3 0.00 0.00 0.00 0.7,600.0 8.33 9.77 7,526.2 1,008.5 173.7 58.1 0.00 0.00 0.00 0.7,700.0 8.33 9.77 7,625.1 1,022.8 176.2 59.0 0.00 0.00 0.00 0.00 0.00 0.00 0.00	•								0.00
7,200.0 8.33 9.77 7,130.4 951.4 163.9 54.8 0.00 0.00 0.0 7,300.0 8.33 9.77 7,229.4 965.7 166.3 55.7 0.00 0.00 0.0 7,500.0 8.33 9.77 7,328.3 979.9 168.8 56.5 0.00 0.00 0.00 7,500.0 8.33 9.77 7,427.3 994.2 171.2 57.3 0.00 0.00 0.00 7,600.0 8.33 9.77 7,526.2 1,008.5 173.7 58.1 0.00 0.00 0.00 7,700.0 8.33 9.77 7,625.1 1,022.8 176.2 59.0 0.00 0.00 0.00 7,800.0 8.33 9.77 7,724.1 1,037.1 178.6 59.8 0.00 0.00 0.00 0.00 8,000.0 8.33 9.77 7,823.0 1,065.6 183.5 61.4 0.00 0.00 0.00 0.00 0.00	•								0.00
7,300.0 8.33 9.77 7,229.4 965.7 166.3 55.7 0.00 0.00 0.00 7,400.0 8.33 9.77 7,328.3 979.9 168.8 56.5 0.00 0.00 0.00 0.00 7,500.0 8.33 9.77 7,427.3 994.2 171.2 57.3 0.00 0.00 0.00 0.00 7,600.0 8.33 9.77 7,526.2 1,008.5 173.7 58.1 0.00 0.00 0.00 0.00 7,700.0 8.33 9.77 7,526.2 1,008.5 173.7 58.1 0.00 0.00 0.00 0.00 7,700.0 8.33 9.77 7,526.2 1,008.5 173.7 58.1 0.00 0.00 0.00 0.00 7,700.0 8.33 9.77 7,625.1 1,022.8 176.2 59.0 0.00 0.00 0.00 0.00 0.00 7,900.0 8.33 9.77 7,724.1 1,037.1 178.6 59.8 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0									0.00
7,400.0 8.33 9.77 7,328.3 979.9 168.8 56.5 0.00 0.00 0.0 7,500.0 8.33 9.77 7,427.3 994.2 171.2 57.3 0.00 0.00 0.0 7,600.0 8.33 9.77 7,526.2 1,008.5 173.7 58.1 0.00 0.00 0.0 7,700.0 8.33 9.77 7,625.1 1,022.8 176.2 59.0 0.00 0.00 0.0 7,800.0 8.33 9.77 7,724.1 1,037.1 178.6 59.8 0.00 0.00 0.0 8,000.0 8.33 9.77 7,823.0 1,051.3 181.1 60.6 0.00 0.00 0.0 8,000.0 8.33 9.77 7,922.0 1,065.6 183.5 61.4 0.00 0.00 0.0 8,100.0 8.33 9.77 8,119.9 1,079.9 186.0 62.3 0.00 0.00 0.0 8,200.0 8.33								0.00	0.00
7,500.0 8.33 9.77 7,427.3 994.2 171.2 57.3 0.00 0.00 0.00 7,600.0 8.33 9.77 7,526.2 1,008.5 173.7 58.1 0.00 0.00 0.00 7,700.0 8.33 9.77 7,625.1 1,022.8 176.2 59.0 0.00 0.00 0.0 7,800.0 8.33 9.77 7,724.1 1,037.1 178.6 59.8 0.00 0.00 0.00 7,900.0 8.33 9.77 7,823.0 1,051.3 181.1 60.6 0.00 0.00 0.00 8,000.0 8.33 9.77 7,922.0 1,065.6 183.5 61.4 0.00 0.00 0.00 8,100.0 8.33 9.77 8,020.9 1,079.9 186.0 62.3 0.00 0.00 0.00 8,200.0 8.33 9.77 8,218.8 1,109.2 188.5 63.1 0.00 0.00 0.00 0.00 0.00 0.00									0.00
7,700.0 8.33 9.77 7,625.1 1,022.8 176.2 59.0 0.00 0.00 0.00 7,800.0 8.33 9.77 7,724.1 1,037.1 178.6 59.8 0.00 0.00 0.00 7,900.0 8.33 9.77 7,823.0 1,051.3 181.1 60.6 0.00 0.00 0.00 8,000.0 8.33 9.77 7,922.0 1,065.6 183.5 61.4 0.00 0.00 0.00 8,100.0 8.33 9.77 8,020.9 1,079.9 186.0 62.3 0.00 0.00 0.00 8,200.0 8.33 9.77 8,119.9 1,094.2 188.5 63.1 0.00 0.00 0.00 8,300.0 8.33 9.77 8,218.8 1,108.5 190.9 63.9 0.00 0.00 0.00 8,383.0 8.33 9.77 8,317.8 1,122.3 193.0 64.6 0.00 0.00 0.00 0.00 0.00 0.00 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.00</td>									0.00
7,800.0 8.33 9.77 7,724.1 1,037.1 178.6 59.8 0.00 0.00 0.00 0.00 7,900.0 8.33 9.77 7,823.0 1,051.3 181.1 60.6 0.00 0.00 0.00 0.00 8,000.0 8.33 9.77 7,922.0 1,065.6 183.5 61.4 0.00 0.00 0.00 0.00 8,100.0 8.33 9.77 8,020.9 1,079.9 186.0 62.3 0.00 0.00 0.00 0.00 0.00 8,200.0 8.33 9.77 8,119.9 1,094.2 188.5 63.1 0.00 0.00 0.00 0.00 0.00 8,300.0 8.33 9.77 8,119.9 1,094.2 188.5 63.1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0		8.33	9.77 7,526.2	1,008.5		58.1	0.00	0.00	0.00
7,900.0 8.33 9.77 7,823.0 1,051.3 181.1 60.6 0.00 0.00 0.00 8,000.0 8.33 9.77 7,922.0 1,065.6 183.5 61.4 0.00 0.00 0.00 8,100.0 8.33 9.77 8,020.9 1,079.9 186.0 62.3 0.00 0.00 0.00 8,200.0 8.33 9.77 8,119.9 1,094.2 188.5 63.1 0.00 0.00 0.00 8,300.0 8.33 9.77 8,218.8 1,108.5 190.9 63.9 0.00 0.00 0.00 8,383.0 8.33 9.77 8,317.8 1,122.7 193.4 64.6 0.00 0.00 0.00 8,400.0 7.99 9.77 8,317.8 1,122.7 193.4 64.7 2.00 -2.00 0.00 8,500.0 5.99 9.77 8,417.0 1,134.7 195.4 65.4 2.00 -2.00 0.00 8,700.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00	7,700.0	8.33	9.77 7,625.1	1,022.8	176.2	59.0	0.00	0.00	0.00
8,000.0 8.33 9.77 7,922.0 1,065.6 183.5 61.4 0.00 0.00 0.00 8,100.0 8.33 9.77 8,020.9 1,079.9 186.0 62.3 0.00 0.00 0.00 8,200.0 8.33 9.77 8,119.9 1,094.2 188.5 63.1 0.00 0.00 0.00 8,300.0 8.33 9.77 8,218.8 1,108.5 190.9 63.9 0.00 0.00 0.00 8,383.0 8.33 9.77 8,300.9 1,120.3 193.0 64.6 0.00 0.00 0.0 8,400.0 7.99 9.77 8,317.8 1,122.7 193.4 64.7 2.00 -2.00 0. 8,500.0 5.99 9.77 8,417.0 1,134.7 195.4 65.4 2.00 -2.00 0. 8,700.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0. 8,799.6 0.00 0.00 8,716.0 1,150.1 198.1 66.3 2.00 -2.00									0.00
8,100.0 8.33 9.77 8,020.9 1,079.9 186.0 62.3 0.00 0.00 0.0 8,200.0 8.33 9.77 8,119.9 1,094.2 188.5 63.1 0.00 0.00 0.0 8,300.0 8.33 9.77 8,218.8 1,108.5 190.9 63.9 0.00 0.00 0.0 8,383.0 8.33 9.77 8,300.9 1,120.3 193.0 64.6 0.00 0.00 0.0 8,400.0 7.99 9.77 8,317.8 1,122.7 193.4 64.7 2.00 -2.00 0. 8,500.0 5.99 9.77 8,417.0 1,134.7 195.4 65.4 2.00 -2.00 0. 8,600.0 3.99 9.77 8,516.6 1,143.3 196.9 65.9 2.00 -2.00 0. 8,799.6 0.00 0.00 8,716.0 1,150.1 198.1 66.3 2.00 -2.00 0. KOP: 2200' FSL & 10' FEL 8,850.0 5.04 270.03 8,766.4 1,150.1 195.9 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.00</td>									0.00
8,200.0 8.33 9.77 8,119.9 1,094.2 188.5 63.1 0.00 0.00 0.0 8,300.0 8.33 9.77 8,218.8 1,108.5 190.9 63.9 0.00 0.00 0.0 8,383.0 8.33 9.77 8,300.9 1,120.3 193.0 64.6 0.00 0.00 0.0 8,400.0 7.99 9.77 8,317.8 1,122.7 193.4 64.7 2.00 -2.00 0.0 8,500.0 5.99 9.77 8,417.0 1,134.7 195.4 65.4 2.00 -2.00 0.0 8,600.0 3.99 9.77 8,516.6 1,143.3 196.9 65.9 2.00 -2.00 0.0 8,700.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0.0 8,799.6 0.00 0.00 8,716.0 1,150.1 198.1 66.3 2.00 -2.00 0.0 KOP: 2200' FSL & 10' FEL 8,850.0 5.04 270.03 8,816.0 1,150.1 195.									0.00
8,300.0 8.33 9.77 8,218.8 1,108.5 190.9 63.9 0.00 0.00 0.00 8,383.0 8.33 9.77 8,300.9 1,120.3 193.0 64.6 0.00 0.00 0.00 8,400.0 7.99 9.77 8,317.8 1,122.7 193.4 64.7 2.00 -2.00 0.0 8,500.0 5.99 9.77 8,417.0 1,134.7 195.4 65.4 2.00 -2.00 0.0 8,600.0 3.99 9.77 8,516.6 1,143.3 196.9 65.9 2.00 -2.00 0.0 8,700.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0.0 8,799.6 0.00 0.00 8,716.0 1,150.1 198.1 66.3 2.00 -2.00 0.0 KOP: 2200' FSL & 10' FEL 8,850.0 5.04 270.03 8,766.4 1,150.1 195.9 68.5 10.00 10.00 0.0 8,950.0 15.04 270.03 8,864.7 1,150.1 <									0.00 0.00
8,383.0 8.33 9.77 8,300.9 1,120.3 193.0 64.6 0.00 0.00 0.0 8,400.0 7.99 9.77 8,317.8 1,122.7 193.4 64.7 2.00 -2.00 0.0 8,500.0 5.99 9.77 8,417.0 1,134.7 195.4 65.4 2.00 -2.00 0.0 8,600.0 3.99 9.77 8,516.6 1,143.3 196.9 65.9 2.00 -2.00 0.0 8,700.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0.0 8,799.6 0.00 0.00 8,716.0 1,150.1 198.1 66.3 2.00 -2.00 0.0 KOP: 2200' FSL & 10' FEL 8,850.0 5.04 270.03 8,766.4 1,150.1 195.9 68.5 10.00 10.00 0.0 8,900.0 10.04 270.03 8,816.0 1,150.1 189.3 74.9 10.00 10.00 0.0 9,000.0 20.04 270.03 8,864.7 1,150.1									
8,400.0 7.99 9.77 8,317.8 1,122.7 193.4 64.7 2.00 -2.00 0.0 8,500.0 5.99 9.77 8,417.0 1,134.7 195.4 65.4 2.00 -2.00 0.0 8,600.0 3.99 9.77 8,516.6 1,143.3 196.9 65.9 2.00 -2.00 0.0 8,700.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0.0 8,799.6 0.00 0.00 8,716.0 1,150.1 198.1 66.3 2.00 -2.00 0.0 KOP: 2200' FSL & 10' FEL 8,850.0 5.04 270.03 8,766.4 1,150.1 195.9 68.5 10.00 10.00 0.0 8,900.0 10.04 270.03 8,816.0 1,150.1 189.3 74.9 10.00 10.00 0.0 8,950.0 15.04 270.03 8,864.7 1,150.1 178.5 85.4 10.00 10.00 0.0 9,000.0 20.04 270.03 8,912.4 1,150.1									0.00
8,500.0 5.99 9.77 8,417.0 1,134.7 195.4 65.4 2.00 -2.00 0.0 8,600.0 3.99 9.77 8,516.6 1,143.3 196.9 65.9 2.00 -2.00 0.0 8,700.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0.0 8,799.6 0.00 0.00 8,716.0 1,150.1 198.1 66.3 2.00 -2.00 0.0 KOP: 2200' FSL & 10' FEL 8,850.0 5.04 270.03 8,766.4 1,150.1 195.9 68.5 10.00 10.00 0.0 8,900.0 10.04 270.03 8,816.0 1,150.1 189.3 74.9 10.00 10.00 0.0 8,950.0 15.04 270.03 8,864.7 1,150.1 178.5 85.4 10.00 10.00 0.0 9,000.0 20.04 270.03 8,912.4 1,150.1 163.4 100.1 10.00 10.00 0.0 9,050.0 25.04 270.03 8,958.6 1,150.1									0.00
8,600.0 3.99 9.77 8,516.6 1,143.3 196.9 65.9 2.00 -2.00 0. 8,700.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0. 8,799.6 0.00 0.00 8,716.0 1,150.1 198.1 66.3 2.00 -2.00 0. KOP: 2200' FSL & 10' FEL 8,850.0 5.04 270.03 8,766.4 1,150.1 195.9 68.5 10.00 10.00 0. 8,900.0 10.04 270.03 8,816.0 1,150.1 189.3 74.9 10.00 10.00 0. 8,950.0 15.04 270.03 8,864.7 1,150.1 178.5 85.4 10.00 10.00 0. 9,000.0 20.04 270.03 8,912.4 1,150.1 163.4 100.1 10.00 10.00 0. 9,050.0 25.04 270.03 8,958.6 1,150.1 144.2 118.8 10.00 10.00 0.									0.00 0.00
8,700.0 1.99 9.77 8,616.5 1,148.4 197.8 66.2 2.00 -2.00 0.8,799.6 0.00 0.00 8,716.0 1,150.1 198.1 66.3 2.00 -2.00 0.00 KOP: 2200' FSL & 10' FEL 8,850.0 5.04 270.03 8,766.4 1,150.1 195.9 68.5 10.00 10.00 0.8,900.0 10.04 270.03 8,816.0 1,150.1 189.3 74.9 10.00 10.00 0.8,950.0 15.04 270.03 8,864.7 1,150.1 178.5 85.4 10.00 10.00 0.9,000.0 20.04 270.03 8,912.4 1,150.1 163.4 100.1 10.00 10.00 0.9,050.0 25.04 270.03 8,958.6 1,150.1 144.2 118.8 10.00 10.00 0.00									0.00
8,799.6 0.00 0.00 8,716.0 1,150.1 198.1 66.3 2.00 -2.00 0.0 KOP: 2200' FSL & 10' FEL 8,850.0 5.04 270.03 8,766.4 1,150.1 195.9 68.5 10.00 10.00 0.0 8,900.0 10.04 270.03 8,816.0 1,150.1 189.3 74.9 10.00 10.00 0.0 8,950.0 15.04 270.03 8,864.7 1,150.1 178.5 85.4 10.00 10.00 0.0 9,000.0 20.04 270.03 8,912.4 1,150.1 163.4 100.1 10.00 10.00 0.0 9,050.0 25.04 270.03 8,958.6 1,150.1 144.2 118.8 10.00 10.00 0.0									0.00
KOP: 2200' FSL & 10' FEL 8,850.0 5.04 270.03 8,766.4 1,150.1 195.9 68.5 10.00 10.00 0.0 8,900.0 10.04 270.03 8,816.0 1,150.1 189.3 74.9 10.00 10.00 0.0 8,950.0 15.04 270.03 8,864.7 1,150.1 178.5 85.4 10.00 10.00 0.0 9,000.0 20.04 270.03 8,912.4 1,150.1 163.4 100.1 10.00 10.00 0.0 9,050.0 25.04 270.03 8,958.6 1,150.1 144.2 118.8 10.00 10.00 0.0									0.00
8,850.0 5.04 270.03 8,766.4 1,150.1 195.9 68.5 10.00 10.00 0.0 8,900.0 10.04 270.03 8,816.0 1,150.1 189.3 74.9 10.00 10.00 0.0 8,950.0 15.04 270.03 8,864.7 1,150.1 178.5 85.4 10.00 10.00 0.0 9,000.0 20.04 270.03 8,912.4 1,150.1 163.4 100.1 10.00 10.00 0.0 9,050.0 25.04 270.03 8,958.6 1,150.1 144.2 118.8 10.00 10.00 0.0			5.00	., 700.1	700.1	00.0	2.00	2.00	0.00
8,900.0 10.04 270.03 8,816.0 1,150.1 189.3 74.9 10.00 10.00 0.0 8,950.0 15.04 270.03 8,864.7 1,150.1 178.5 85.4 10.00 10.00 0.0 9,000.0 20.04 270.03 8,912.4 1,150.1 163.4 100.1 10.00 10.00 0.0 9,050.0 25.04 270.03 8,958.6 1,150.1 144.2 118.8 10.00 10.00 0.0			270.03 8,766.4	1,150.1	195.9	68.5	10.00	10.00	0.00
9,000.0 20.04 270.03 8,912.4 1,150.1 163.4 100.1 10.00 10.00 0.9,050.0 25.04 270.03 8,958.6 1,150.1 144.2 118.8 10.00 10.00 0.00	·								0.00
9,050.0 25.04 270.03 8,958.6 1,150.1 144.2 118.8 10.00 10.00 0.	8,950.0	15.04 2	270.03 8,864.7	1,150.1	178.5	85.4	10.00	10.00	0.00
9,050.0 25.04 270.03 8,958.6 1,150.1 144.2 118.8 10.00 10.00 0.	9,000.0	20.04 2	270.03 8,912.4	1,150.1	163.4	100.1	10.00	10.00	0.00
						118.8	10.00		0.00
									0.00
			270.03 9,021.3	1,150.2	110.0	152.1	10.00	10.00	0.00
FTP: 2200' FSL & 100' FEL			270.00	4.450.0	04.0	407.5	40.00	40.00	0.00
9,150.0 35.04 270.03 9,045.0 1,150.2 94.2 167.5 10.00 10.00 0.0	9,150.0	35.04 2	270.03 9,045.0	1,150.2	94.2	167.5	10.00	10.00	0.00
			,						0.00
									0.00
									0.00
									0.00 0.00

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Henry 8 WOIL Fed #1H
Well: Sec 8, T20S, R29E
Wellbore: BHL: 2200' FSL & 100' FWL

Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Henry 8 W0IL Fed #1H

WELL @ 3302.0usft (Original Well Elev) WELL @ 3302.0usft (Original Well Elev)

Grid

ned 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)
9,450.0	65.04	270.03	9,235.5	1,150.3	-133.1	389.0	10.00	10.00	0.00
9,500.0	70.04	270.03	9,254.6	1,150.3	-179.3	434.0	10.00	10.00	0.00
9,550.0	75.04	270.03	9,269.6	1,150.4	-227.0	480.5	10.00	10.00	0.00
9,600.0	80.04	270.03	9,280.4	1,150.4	-275.8	528.0	10.00	10.00	0.00
9,650.0	85.04	270.03	9,286.9	1,150.4	-325.3	576.3	10.00	10.00	0.00
9,697.7	89.81	270.03	9,289.0	1,150.4	-373.0	622.8	10.00	10.00	0.00
•	L & 583' FEL	270.00	3,203.0	1,100.4	-070.0	022.0	10.00	10.00	0.00
9,703.0	90.34	270.03	9,289.0	1,150.4	-378.2	627.9	10.00	10.00	0.00
9,800.0	90.34	270.03	9,288.4	1,150.5	-475.3	722.4	0.00	0.00	0.00
9,900.0	90.34	270.03	9,287.8	1,150.6	-575.3	819.9	0.00	0.00	0.00
10,000.0	90.34	270.03	9,287.3	1,150.6	-675.3	917.3	0.00	0.00	0.00
10,100.0	90.34	270.03	9,286.7	1,150.7	-775.3	1,014.7	0.00	0.00	0.00
10,200.0	90.34	270.03	9,286.1	1,150.7	-875.3	1,112.2	0.00	0.00	0.00
10,300.0	90.34	270.03	9,285.5	1,150.8	-975.3	1,209.6	0.00	0.00	0.00
10,400.0	90.34	270.03	9,284.9	1,150.8	-1,075.3	1,307.1	0.00	0.00	0.00
10,500.0	90.34	270.03	9,284.3	1,150.9	-1,175.3	1,404.5	0.00	0.00	0.00
10,600.0	90.34	270.03	9,283.7	1,151.0	-1,275.3	1,501.9	0.00	0.00	0.00
10,700.0	90.34	270.03	9,283.2	1,151.0	-1,375.3	1,599.4	0.00	0.00	0.00
10,700.0	90.34	270.03	9,282.6	1,151.0	-1,375.3 -1,475.3	1,696.8	0.00	0.00	0.00
10,900.0	90.34	270.03	9,282.0	1,151.1	-1,475.3	1,794.2	0.00	0.00	0.00
11,000.0	90.34	270.03	9,282.0 9,281.4	1,151.1	-1,575.3 -1,675.3	1,794.2	0.00	0.00	0.00
11,000.0				1,101.2	-1,075.3	1,091.7		0.00	
11,100.0	90.34	270.03	9,280.8	1,151.2	-1,775.3	1,989.1	0.00	0.00	0.00
11,200.0	90.34	270.03	9,280.2	1,151.3	-1,875.3	2,086.5	0.00	0.00	0.00
11,300.0	90.34	270.03	9,279.6	1,151.4	-1,975.3	2,184.0	0.00	0.00	0.00
11,400.0	90.34	270.03	9,279.0	1,151.4	-2,075.3	2,281.4	0.00	0.00	0.00
11,500.0	90.34	270.03	9,278.5	1,151.5	-2,175.3	2,378.9	0.00	0.00	0.00
11,600.0	90.34	270.03	9,277.9	1,151.5	-2,275.3	2,476.3	0.00	0.00	0.00
11,700.0	90.34	270.03	9,277.3	1,151.6	-2,375.3	2,573.7	0.00	0.00	0.00
11,800.0	90.34	270.03	9,276.7	1,151.7	-2,475.2	2,671.2	0.00	0.00	0.00
11,900.0	90.34	270.03	9,276.1	1,151.7	-2,575.2	2,768.6	0.00	0.00	0.00
12,000.0	90.34	270.03	9,275.5	1,151.8	-2,675.2	2,866.0	0.00	0.00	0.00
				•					
12,100.0	90.34	270.03	9,274.9	1,151.8	-2,775.2	2,963.5	0.00	0.00	0.00
12,200.0	90.34	270.03	9,274.4	1,151.9	-2,875.2	3,060.9	0.00	0.00	0.00
12,300.0	90.34	270.03	9,273.8	1,151.9	-2,975.2	3,158.3	0.00	0.00	0.00
12,400.0	90.34	270.03	9,273.2	1,152.0	-3,075.2	3,255.8	0.00	0.00	0.00
12,500.0	90.34	270.03	9,272.6	1,152.1	-3,175.2	3,353.2	0.00	0.00	0.00
12,600.0	90.34	270.03	9,272.0	1,152.1	-3,275.2	3,450.7	0.00	0.00	0.00
12,700.0	90.34	270.03	9,271.4	1,152.2	-3,375.2	3,548.1	0.00	0.00	0.00
12,800.0	90.34	270.03	9,270.8	1,152.2	-3,475.2	3,645.5	0.00	0.00	0.00
12,900.0	90.34	270.03	9,270.3	1,152.3	-3,575.2	3,743.0	0.00	0.00	0.00
13,000.0	90.34	270.03	9,269.7	1,152.3	-3,675.2	3,840.4	0.00	0.00	0.00
13,100.0	90.34	270.03	9,269.1	1,152.4	-3,775.2	3,937.8	0.00	0.00	0.00
13,100.0	90.34	270.03	9,269.1 9,268.5	1,152.4 1,152.5	-3,775.2 -3,875.2	3,937.8 4,035.3	0.00	0.00	0.00
13,300.0	90.34	270.03	9,268.5 9,267.9	1,152.5 1,152.5	-3,875.2 -3,975.2	4,035.3 4,132.7	0.00	0.00	0.00
13,400.0	90.34	270.03	9,267.9 9,267.3			4,132.7	0.00	0.00	
13,500.0	90.34			1,152.6 1,152.6	-4,075.2 4.175.2				0.00
13,500.0	90.34	270.03	9,266.7		-4,175.2	4,327.6	0.00	0.00	0.00
13,600.0	90.34	270.03	9,266.1	1,152.7	-4,275.2	4,425.0	0.00	0.00	0.00
13,700.0	90.34	270.03	9,265.6	1,152.7	-4,375.2	4,522.5	0.00	0.00	0.00
13,800.0	90.34	270.03	9,265.0	1,152.8	-4,475.2	4,619.9	0.00	0.00	0.00
13,900.0	90.34	270.03	9,264.4	1,152.9	-4,575.2	4,717.3	0.00	0.00	0.00
14,000.0	90.34	270.03	9,263.8	1,152.9	-4,675.2	4,814.8	0.00	0.00	0.00
14,100.0	90.34	270.03	9,263.2	1,153.0	-4,775.2	4,912.2	0.00	0.00	0.00
14,100.0	90.34 90.34	270.03 270.03	9,263.2 9,262.6	1,153.0 1,153.0	-4,775.2 -4,875.2	4,912.2 5,009.6	0.00	0.00	0.00 0.00

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83

Site: Well: Henry 8 W0IL Fed #1H Sec 8, T20S, R29E

Wellbore: BHL: 2200' FSL & 100' FWL Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

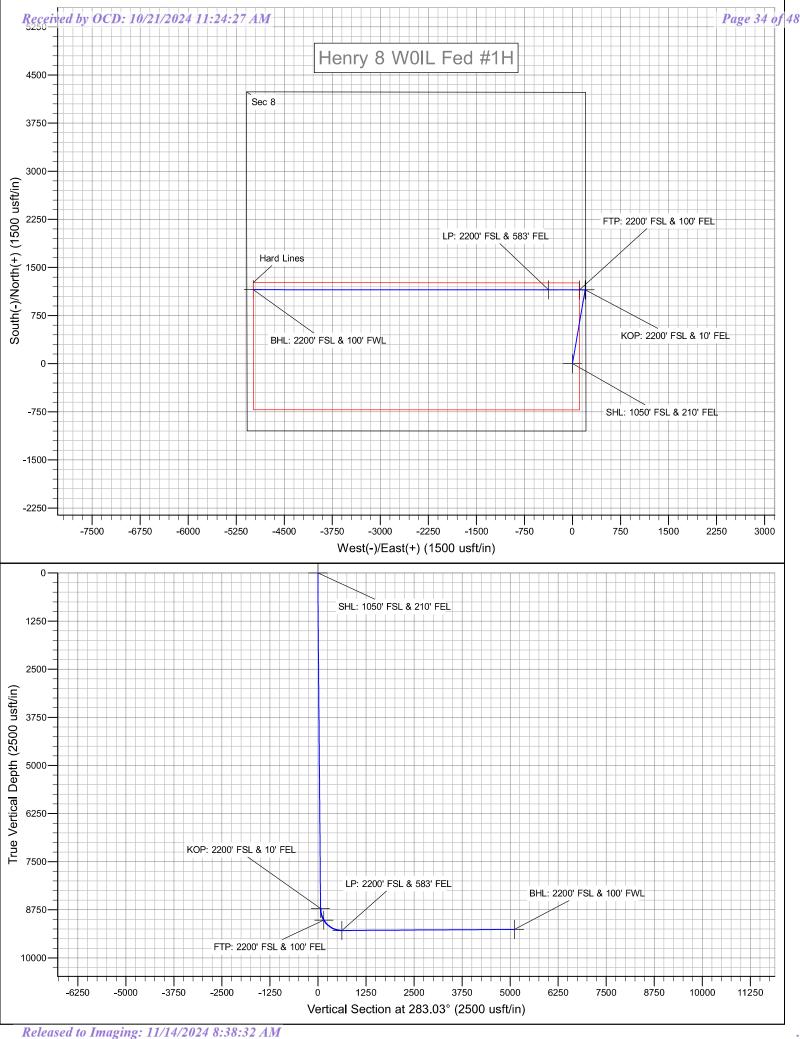
Site Henry 8 W0IL Fed #1H

WELL @ 3302.0usft (Original Well Elev) WELL @ 3302.0usft (Original Well Elev)

Grid

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)
14,307.7	90.34	270.03	9,262.0	1,153.1	-4,982.9	5,114.6	0.00	0.00	0.00
BHI · 2200' F	SL & 100' FWL								

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: 1050' FSL & 210' F - plan hits target cent - Point	0.00 er	0.00	0.0	0.0	0.0	576,134.90	616,503.10	32.5836119	-104.0892962
KOP: 2200' FSL & 10' Ff - plan hits target cent - Point	0.00 er	0.00	8,716.0	1,150.1	198.1	577,285.01	616,701.20	32.5867720	-104.0886445
FTP: 2200' FSL & 100' F - plan hits target cent - Point	0.00 er	0.00	9,021.3	1,150.2	110.0	577,285.06	616,613.10	32.5867726	-104.0889305
BHL: 2200' FSL & 100' F - plan hits target cent - Point	0.00 er	0.00	9,262.0	1,153.1	-4,982.9	577,288.00	611,520.20	32.5868118	-104.1054658
LP: 2200' FSL & 583' FE - plan hits target cent - Point	0.00 er	0.00	9,289.0	1,150.4	-373.0	577,285.34	616,130.10	32.5867765	-104.0904987



Operator Nat Mewbourne		Property Name: Henry 8 W0IL Fed								Well Number			
Kick Off Point	(KOP)												
UL Section Township Range Lot Fee I 8 20S 29E 220						From N	I/S	Feet 10		From	n E/W	County Eddy	
Latitude					ide .088	36445	,					NAD 83	
UL Section	Township 20S	Range 29E	Lot	Feet 2200		From N	I/S	Feet 100		From	n E/W	County Eddy	
Latitude 32.586772	26			Longitu -104		39305)					NAD 83	
ast Take Poin UL Section L 8	t (LTP) Township 20S	Range 29E	Lot	Feet 2200	Fro	om N/S	Feet		From W	E/W	Count Eddy		
Latitude 32.58681	1			Longitu	ide	54658			1		NAD 83	,	
s this well the	e defining v	vell for th	e Hori:	zontal S _l	oacin	g Unit?	E	Y					
s this well an	infill well?		N	7									

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

API#		
Operator Name:	Property Name:	Well Number

KZ 06/27/2018

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: MEWBOURNE OIL COMPANY
WELL NAME & NO.: HENRY 8 WOIL FED 1H
APD ID: 10400081122
SURFACE HOLE FOOTAGE: 1050'/S & 210'/E
BOTTOM HOLE FOOTAGE 2200'/S & 100'/W
SURFACE LOCATION: Section 8, T.20 S., R.29 E. NMP.
COUNTY: Eddy County, New Mexico

COA

H_2S	• Yes	O No	
Potash	None	O Secretary	O R-111-P
Cave/Karst Potential	O Low	O Medium	• High
Cave/Karst Potential	O Critical		
Variance	O None	• Flex Hose	Other
Wellhead	Conventional	Multibowl	OBoth
Other	✓ 4 String	☑ Capitan Reef	□WIPP
Other	☐ Fluid Filled	☐ Pilot Hole	☐ Open Annulus
Special Requirements	☐ Water Disposal	□ СОМ	□ Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H₂S) Drilling Plan shall be activated **AT SPUD**. As a result, the Hydrogen Sulfide area must meet **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 DESIGN

- 1. The 20 inch surface casing shall be set at approximately 330 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 ft. 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 <u>8</u> 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 13-3/8 inch intermediate casing shall be set in a competent bed at approximately 1,000 ft. Note: the 1st intermediate set depth has been adjusted based on BLM geologist recommendation. The operator proposes to set the first intermediate casing at 1200'. BLM recommends the operator set the first intermediate casing within the Fletcher Anhydrite Member at 1000'. The minimum required fill of cement behind the 13-3/8 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 and Capitan Reef.
 - ❖ In High <u>Cave/Karst Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
 - ❖ In <u>Capitan Reef Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- 3. The 9-5/8 inch intermediate casing shall be set in a competent bed at approximately 3,000 ft. Note: the 2nd intermediate set depth has been adjusted based on BLM geologist recommendation. *The operator proposes to set the second intermediate casing at 3100'. BLM accepts 3,000' the base of the Capitan Reef.* The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
 - <u>Option 1 (Single Stage)</u>: 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 and Capitan Reef.
 - <u>Option 2 (Two-stage):</u> 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 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 and Capitan Reef.
 - ❖ Special Capitan Reef requirements. If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:

(Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the Capitan interval)

- Switch to freshwater mud to protect the Capitan Reef and use freshwater mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
- Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.
- **4.** Operator has proposed to set **7 in.** production casing at approximately **9,698 ft.** The minimum required fill of cement behind the **7 in.** production casing is:

<u>Option 1 (Single Stage):</u> Cement should tie-back at least 50 feet above Capitan reef top. Estimated Capitan reef top is 1368 ft. 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 and Capitan reef.

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.

- c. **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.
- d. Second stage above DV tool: Cement should tie-back at least 50 feet above Capitan reef top. Estimated Capitan reef top is 1368 ft. 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 and Capitan reef.

Note: Excess cement volume for both stages is below the CFO's recommendation of 25%. More cement might be needed.

- 5. 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 the surface casing shoe out, the BOP/BOPE and annular preventer shall be pressure-tested in accordance with title 43 CFR 3172 and API Standard 53.
 - 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 the title 43 CFR 3172.6(b)(9) must be followed.

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)
 - ⊠ Eddy County

EMAIL or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

BLM_NM_CFO_DrillingNotifications@BLM.GOV (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 2nd 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 title 43 CFR 3172
 - 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 the **title 43 CFR 3172** and **API STD 53 Sec. 5.3**.
- 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
 - d. Whenever any seal subject to test pressure is broken, all the tests in the title 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.
 - 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, cutoff 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 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.
- e. 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.
- g. 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 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 crewintensive operations.

SA 12/26/2023

Hydrogen Sulfide Drilling Operations Plan Mewbourne Oil Company

1. General Requirements

Rule 118 does not apply to this well because MOC has researched this area and no high concentrations of H2S were found. MOC will have on location and working all H2S safety equipment before the Delaware formation for purposes of safety and insurance requirements.

2. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will have received training from a qualified instructor in the following areas prior to entering the drilling pad area of the well:

- 1. The hazards and characteristics of hydrogen sulfide gas.
- 2. The proper use of personal protective equipment and life support systems.
- 3. The proper use of hydrogen sulfide detectors, alarms, warning systems, briefing areas, evacuation procedures.
- 4. The proper techniques for first aid and rescue operations.

Additionally, supervisory personnel will be trained in the following areas:

- The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.
- 2 Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.
- The contents of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering a know hydrogen sulfide source. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan.

3. Hydrogen Sulfide Safety Equipment and Systems

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the 9 5/8" intermediate casing.

1. Well Control Equipment

- A. Choke manifold with minimum of one adjustable choke/remote choke.
- B. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- C. Auxiliary equipment including annular type blowout preventer.
- 2. <u>Protective Equipment for Essential Personnel</u>

Thirty minute self contained work unit located in the dog house and at briefing areas.

Additionally: If H2S is encountered in concentrations less than 10 ppm, fans will be placed in work areas to prevent the accumulation of hazardous amounts of poisonous gas. If higher concentrations of H2S are detected the well will be shut in and a rotating head, mud/gas separator, remote choke and flare line with igniter will be installed.

3. <u>Hydrogen Sulfide Protection and Monitoring Equipment</u>

Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 PPM.

4. Visual Warning Systems

- A. Wind direction indicators as indicated on the wellsite diagram.
- B. Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

4. Mud Program

The mud program has been designed to minimize the amount of hydrogen sulfide entrained in the mud system. Proper mud weight, safe drilling practices, and the use of hydrogen sulfide scavengers will minimize hazards while drilling the well.

5. Metallurgy

All tubular systems, wellheads, blowout preventers, drilling spools, kill lines, choke manifolds, and valves shall be suitable for service in a hydrogen sulfide environment when chemically treated.

6. Communications

State & County Officials phone numbers are posted on rig floor and supervisors trailer. Communications in company vehicles and toolpushers are either two way radios or cellular phones.

7. Well Testing

Drill stem testing is not an anticipated requirement for evaluation of this well. If a drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

8. Emergency Phone Numbers

Eddy County Sheriff's Office	911 or 575-887-7551
Ambulance Service	911 or 575-885-2111
Carlsbad Fire Dept	911 or 575-885-2111
Loco Hills Volunteer Fire Dept.	911 or 575-677-3266
Closest Medical Facility - Columbia Medical Cen	ter of Carlsbad 575-492-5000

Mewbourne Oil Company	Hobbs District Office Fax 2 nd Fax	575-393-5905 575-397-6252 575-393-7259
District Manager	Robin Terrell	575-390-4816
Drilling Superintendent	Frosty Lathan	575-390-4103
	Bradley Bishop	575-390-6838
Drilling Foreman	Wesley Noseff	575-441-0729

Operator Name: MEWBOURNE OIL COMPANY

Well Name: HENRY 8 WOIL FED Well Number: 1H

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 containmant 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 from all drilling & completion procedures

Amount of waste: 1500 pounds

Waste disposal frequency: One Time Only

Safe containment description: Enclosed trash trailers

Safe containment attachment:

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

FACILITY

Disposal type description:

Disposal location description: County of Eddy waste management

Reserve Pit

Reserve Pit being used? NO

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? Y

Operator Name: MEWBOURNE OIL COMPANY

Well Name: HENRY 8 WOIL FED Well Number: 1H

Description of cuttings location Drill cuttings will be properly contained in steel tanks (20 yard roll off bins.) and taken to an NMOCD approved disposal facility listed below. After drilling and completion operations, trash, chemicals, salts, frac sand and other waste material will be removed and disposed of properly at the said facilities. NMOCD approved waste disposal locations are CRI or Lea Land, both facilities are located on HWY 62/180, Sec. 27 T20S R32E.

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:

Henry_8_W0ILFed1H_wellsitelayout_20211201144450.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance Multiple Well Pad Name: Thompson 8 W0IL & W0PM & B3PM Fed

#IH

Multiple Well Pad Number: 3

Recontouring

Drainage/Erosion control construction: None required

Drainage/Erosion control reclamation: None required

Sante Fe Main Office Phone: (505) 476-3441

General Information Phone: (505) 629-6116

Online Phone Directory https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Action 394147

CONDITIONS

Operator:	OGRID:
MEWBOURNE OIL CO	14744
P.O. Box 5270	Action Number:
Hobbs, NM 88241	394147
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	11/14/2024
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	11/14/2024
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.	11/14/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing.	11/14/2024
ward.rikala	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	11/14/2024
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.	11/14/2024
ward.rikala	Prior to production of this well a change to the well name/number is required to comply with the OCD well naming convention.	11/14/2024
ward.rikala	This well is within the Capitan Reef. The 1st intermediate string shall be sat and cemented back to surface immediately above the top of the Capitan Reef. The 2nd intermediate string shall be sat and cemented back to surface immediately below the base of the Capitan Reef.	11/14/2024