Form 3160-3 (June 2015)					APPRO o. 1004- inuary 3	0137	
DEPARTMENT OF THE IN	NTERIOR	_		5. Lease Serial No. NMNM0105562			
BUREAU OF LAND MANA APPLICATION FOR PERMIT TO D				6. If Indian, Allotee	or Tribe	Name	
AT LIGATION TO THE PARTY OF THE					0.		
Ia. Type of work:	EENTER			7. If Unit or CA Ag	reement,	Name and No.	
1b. Type of Well: Oil Well ✓ Gas Well Ott	ther			8. Lease Name and	Well No		
1c _∗ , Type of Completion: ☐ Hydraulic Fracturing ✓ Si	ngle Zone	Multiple Zone		RED HILLS WEST	Office .	BO FED COM	
2 No. 15 October				4H	4		
2. Name of Operator MEWBOURNE OIL COMPANY [14744]			h.	1	The said	5-49214	
3a. Address PO Box 5270, Hobbs, NM 88240	3b. Phone N (575) 393-5	o. (include area cod 905	e)	10 Field and Pool, WC-025 G-08 S26		[] 0 0 0 0]	
4. Location of Well (Report location clearly and in accordance w	vith any State	requirements.*)	-	11 Sec , T R M or		d Survey of Area	
At surface NENW / 150 FNL / 2210 FWL / LAT 32.035			A PORT	SEC 22/T26S/R32	E/NMP		
At proposed prod, zone SWSE / 100 FSL / 2610 FEL / L4		19 / LONG -103.66	62611			1	
14. Distance in miles and direction from nearest town or post offi- 30 miles	ce*		The same	12. County or Parisl LEA	1	13. State NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any)	16. No of ac	res in lease	17. Spaci 160.0	ng Unit dedicated to t	his well		
18 Distance from proposed location*	19. Proposed	i Depth	20. BLM/	/BIA Bond No. in file			
to nearest well, drilling, completed, 50 feet applied for, on this lease, ft.	nearest well, drilling, completed, 50 feet 11977 feet / 16975 feet FED:						
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3150 feet	22. Approxii 01/10/2021	nate date work will	start*	23. Estimated durati	ion		
3150 leet	24. Attacl	nments		60 days			
The following, completed in accordance with the requirements of (as applicable) 1. Well plat certified by a registered surveyor. 2. A Drilling Plan. 3. A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office)	n Lands, the	4. Bond to cover th Item 20 above). 5. Operator certific	e operation	Hydraulic Fracturing r is unless covered by ar	n existing	g bond on file (see	
SOFO must be fried with the appropriate Forest Service Office) ⁷ .	BLM.	beenie intoi	mation and/or plans as	may be	requested by the	
25. Signature (Electronic Submission)		(Printed/Typed) LEY BISHOP / Ph	: (575) 39	93-5905	Date 11/10/2	2020	
Title Regulatory							
Approved by (Signature)		(Printed/Typed)	224 5050		Date 07/19/2	2021	
(Electronic Submission) Title	Office	_ayton / Ph: (575)	234-5959		07/19/	2021	
Assistant Field Manager Lands & Minerals		ad Field Office					
Application approval does not warrant or certify that the applicant applicant to conduct operations thereon. Conditions of approval, if any, are attached.	t holds legal o	r equitable title to th	iose rights	in the subject lease w	hich wo	uld entitle the	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, m of the United States any false, fictitious or fraudulent statements of					ıny depa	rtment or agency	
NGMP Rec 07/21/2021				149	<u> </u>		
	The state of	am III	IONS	67/21	_		
NSL	WI'	TH CONDIT	IOM	REQUII			
(Continued on page 2)	ARD MI					ons on page 2)	
(Continued on page 2)	val Date:	07/19/2021		.(10)	ou ucii(ms on page 2)	

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

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

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

☐ AMENDED REPORT

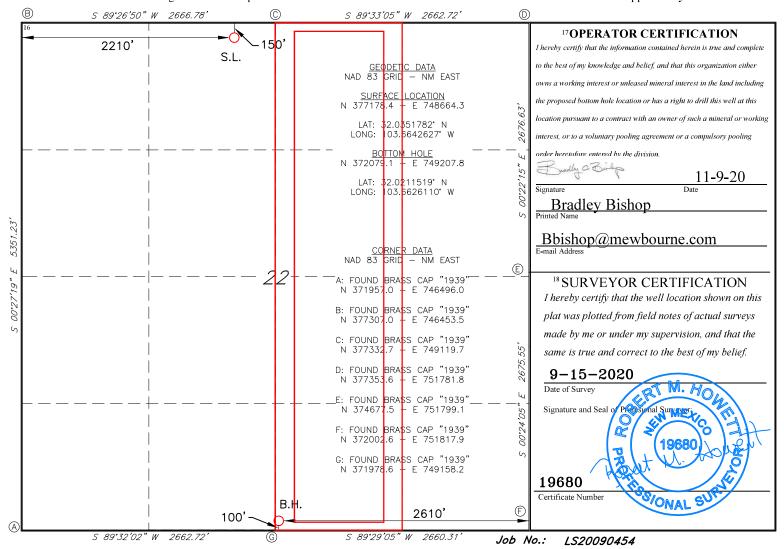
WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Numbe	er	² Pool Code						
30-025-4921	4	98065	WC-025 G-08 S263205N; Upper Wolfcamp					
⁴ Property Code 331212			pperty Name C 22 WOBO FED COM	⁶ Well Number 4H				
⁷ OGRID NO. 14744			erator Name E OIL COMPANY	⁹ Elevation 3150'				

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
C	22	26S	32E		150	NORTH	2210	WEST	LEA
			11 J	Bottom F	Hole Location	If Different Fr	om Surface		
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	22	26S	32E		100	SOUTH	2610	EAST	LEA
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 Mana	gement Plan m	ust be submitted w	ith each Applica	tion for Permit to I	Orill (APD) for a	new or	r recompleted well.		
Section 1 – Plan Description Effective May 25, 2021									
I. Operator: Mewbourne Oil Co. OGRID: 14744 Date: 7/20/21									
II. Type: X Original	☐ Amendment	due to □ 19.15.27.	9.D(6)(a) NMA	C □ 19.15.27.9.D(6)(b) NMAC 🗆	Other.			
If Other, please describe	8=========	formation for each			valls proposed to	ha dri	lled or proposed to		
be recompleted from a s					wens proposed to	be un	ned or proposed to		
Well Name	API	ULSTR	ULSTR Footages Anticipated Anticipated Anticipated Oil BBL/D Gas MCF/D Produced Wa BBL/D						
Red Hills West 22 W0BO Fed Com	4H	C 22 26\$ 32E	150' FNL x 2210' F	√/L 1200	4100		3600		
	30-025-49	214							
IV. Central Delivery P V. Anticipated Schedu proposed to be recomple	le: Provide the		tion for each nev	v or recompleted w			7.9(D)(1) NMAC] used to be drilled or		
Well Name	API	Spud Date	TD Reached Date	Completion Commencement			First Production Date		
Red Hills West 22 W0BO Fed Com	44H	9/20/21	10/20/21	11/20/21	11/5/2	1	11/5/21		
	30-025-49								
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, reporting area must	2022, an operator that complete this section.	t is not in compliance	with its statewide natural g	as cap	oture requirement for the applicable						
	es that it is not require for the applicable rep		ction because Operator is in	comp	liance with its statewide natural gas						
IX. Anticipated Natural Gas Production:											
W	'ell	API	Anticipated Average Natural Gas Rate MCF/D)	Anticipated Volume of Natural 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 Available Maximum Daily Capacity Start Date of System Segment Tie-in										
production operation the segment or portion the segment or portion with the segment or portion with the segment or volume to the segment of t	ns to the existing or plate on of the natural gas gath from the well prior to the operator does gasystem(s) described as plan to manage producty:	ering system will I the date of first product does not anticipate the above will continue to uction in response to the confidentiality pure Subsection D of 19.15.	the natural gas gathering systemhich the well(s) will be con will not have capacity to getion. That its existing well(s) connected meet anticipated increases in the increased line pressure. Suant to Section 71-2-8 NMS 27.9 NMAC, and attaches a second which we well a second	em(s), nected gather ted to n line	atted pipeline route(s) connecting the and the maximum daily capacity of d. 100% of the anticipated natural gas the same segment, or portion, of the pressure caused by the new well(s). 278 for the information provided in escription of the specific information						

Section 3 - Certifications Effective May 25, 2021

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

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

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

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

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

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

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

Section 4 - Notices

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

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

Signature:	Bradley Bishop
Printed Name:	BRADLEY BISHOP
Title:	REGULATORY MANAGER
E-mail Address:	BBISHOP@MEWBOURNE.COM
Date:	7/20/21
Phone:	575-393-5905
	OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:	
Title:	
Approval Date:	
Conditions of A	pproval:

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 07/20/2021

APD ID: 10400063926

Operator Name: MEWBOURNE OIL COMPANY

Well Name: RED HILLS WEST 22 W0BO FED COM

Well Type: CONVENTIONAL GAS WELL

Submission Date: 11/10/2020

Highlighted data reflects the most recent changes

Show Final Text

Well Work Type: Drill

Well Number: 4H

Section 1 - Geologic Formations

Formation			True Vertical	Measured			Producing
ID	Formation Name	Elevation	Depth	Depth	Lithologies	Mineral Resources	Formation
948163	UNKNOWN	3150	28	28	OTHER : Top Soil	NONE	N
948174	RUSTLER	2620	530	530	ANHYDRITE, DOLOMITE	USEABLE WATER	N
948175	TOP SALT	2257	893	893	SALT	NONE	N
948164	BOTTOM SALT	-1080	4230	4230	SALT	NONE	N
948171	LAMAR	-1302	4452	4452	LIMESTONE	NATURAL GAS, OIL	N
948167	BELL CANYON	-1330	4480	4480	SANDSTONE	NATURAL GAS, OIL	N
948168	CHERRY CANYON	-2366	5516	5516	SANDSTONE	NATURAL GAS, OIL	N
948169	MANZANITA	-2526	5676	5676	LIMESTONE	NATURAL GAS, OIL	N
948162	BRUSHY CANYON	-5081	8231	8231	SANDSTONE	NATURAL GAS, OIL	N
1139058	BONE SPRING	-5433	8583	8583	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
948165	BONE SPRING 1ST	-6420	9570	9570	SANDSTONE	NATURAL GAS, OIL	N
948166	BONE SPRING 2ND	-7027	10177	10177	SANDSTONE	NATURAL GAS, OIL	N
948173	BONE SPRING 3RD	-8118	11268	11268	SANDSTONE	NATURAL GAS, OIL	N
948170	WOLFCAMP	-8570	11720	11720	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Well Name: RED HILLS WEST 22 W0BO FED COM Well Number: 4H

Pressure Rating (PSI): 10M Rating Depth: 16975

Equipment: Annular, Pipe Rams, Blind Rams

Requesting Variance? YES

Variance request: Request variance for the use of a flexible choke line from the BOP to Choke Manifold. Anchors not required by manufacturer. A multi-bowl wellhead will be 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:

Red_Hills_West_22_W0BO_Fed_Com_4H_10M_BOPE_Choke_Diagram_20201109154117.pdf
Red_Hills_West_22_W0BO_Fed_Com_4H_Flex_Line_Specs_20201109154117.pdf
Red_Hills_West_22_W0BO_Fed_Com_4H_Flex_Line_Specs_API_16C_20201109154119.pdf

BOP Diagram Attachment:

Red_Hills_West_22_W0BO_Fed_Com_4H_10M_Annular_BOP_Variance_20201109154200.doc

Red_Hills_West_22_W0BO_Fed_Com_4H_10M_BOPE_Schematic_w_5M_Annular_20201109154200.pdf

Red_Hills_West_22_W0BO_Fed_Com_4H_10M_Multi_Bowl_WH_20201109154226.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	650	0	650	3150	2500	650	H-40	48	ST&C	2.59	5.82	DRY	10.3 2	DRY	17.3 4
2	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	4375	0	4375	3326	-1225	4375	L-80	40	LT&C	1.36	2.53	DRY	4.15	DRY	5.23
3	PRODUCTI ON	8.75	7.0	NEW	API	N	0	11900	0	11826	3326	-8676	11900	HCP -110	29	LT&C	1.57	1.92	DRY	2.31	DRY	2.69
4	LINER	6.12 5	4.5	NEW	API	N	11458	16975	11445	11977	-8295	-8827		P- 110	13.5	LT&C	1.32	1.53	DRY	4.54	DRY	5.67

Casing Attachments

Operator Name: MEWBOURNE OIL COMPANY Well Name: RED HILLS WEST 22 W0BO FED COM Well Number: 4H **Casing Attachments** Casing ID: 1 String Type: SURFACE **Inspection Document: Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): Red_Hills_West_22_W0BO_Fed_Com_4H_Csg_assumptions_20201109154309.pdf Casing ID: 2 String Type: INTERMEDIATE **Inspection Document: Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): Red_Hills_West_22_W0BO_Fed_Com_4H_Csg_assumptions_20201109154348.pdf Casing ID: 3 String Type: PRODUCTION **Inspection Document: Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s):

Red_Hills_West_22_W0BO_Fed_Com_4H_Csg_assumptions_20201109154422.pdf

Well Name: RED HILLS WEST 22 W0BO FED COM Well Number: 4H

Casing Attachments

Casing ID: 4 String Type:LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Red_Hills_West_22_W0BO_Fed_Com_4H_Csg_assumptions_20201109154458.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	457	300	2.12	12.5	636	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail	0	457	650	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead		0	3689	680	2.12	12.5	1442	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		3689	4375	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	1	4175	9388	460	2.12	12.5	975	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		9388	1190 0	400	1.18	15.6	472	25	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		1145 8	1697 5	220	2.97	11.2	653	25	Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

Well Name: RED HILLS WEST 22 W0BO FED COM Well Number: 4H

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

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

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

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (Ibs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	НА	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	650	SPUD MUD	8.6	8.8		7					
650	4375	SALT SATURATED	10	10	1	1					
4375	1182 6	WATER-BASED MUD	8.6	9.7							
1182 6	1197 7	OIL-BASED MUD	10	13							

Section 6 - Test, Logging, Coring

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

Will run GR/CNL from KOP (11458') to surface (horizontal well - vertical portion of hole). Stated logs run will be in the Completion Report submitted to the BLM.

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

COMPENSATED NEUTRON LOG, DIRECTIONAL SURVEY, GAMMA RAY LOG, MEASUREMENT WHILE DRILLING, MUD LOG/GEOLOGIC LITHOLOGY LOG, MUD LOG/GEOLOGICAL LITHOLOGY LOG,

Coring operation description for the well:

None

Page 5 of 6

Well Name: RED HILLS WEST 22 W0BO FED COM Well Number: 4H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 8096 Anticipated Surface Pressure: 5461

Anticipated Bottom Hole Temperature(F): 165

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Red Hills West 22 W0BO Fed Com 4H H2S Plan 20201109154904.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Red_Hills_West_22_W0BO_Fed_Com_4H_Dir_plot_20201109154923.pdf Red_Hills_West_22_W0BO_Fed_Com_4H_Dir_plan_20201109154923.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

 $Red_Hills_West_22_W0BO_Fed_Com_4H_Add_Info_20201110094207.pdf$

Other Variance attachment:

SL: 150' FNL & 2210' FWL BHL: 100' FSL & 2610' FEL

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	650'	13.375"	48	H40	STC	2.59	5.82	10.32	17.34
12.25"	0'	4375'	9.625"	40	L80	LTC	1.36	2.53	4.15	5.23
8.75"	0'	11900'	7"	29	HCP110	LTC	1.57	1.92	2.31	2.69
6.125"	11458'	16975'	4.5"	13.5	P110	LTC	1.32	1.53	4.54	5.67
				BLM Minimum 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?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	11
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?	

SL: 150' FNL & 2210' FWL BHL: 100' FSL & 2610' FEL

Hole	Casing Interval		Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	650'	13.375"	48	H40	STC	2.59	5.82	10.32	17.34
12.25"	0'	4375'	9.625"	40	L80	LTC	1.36	2.53	4.15	5.23
8.75"	0'	11900'	7"	29	HCP110	LTC	1.57	1.92	2.31	2.69
6.125"	11458'	16975'	4.5"	13.5	P110	LTC	1.32	1.53	4.54	5.67
				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?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	11
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?	

SL: 150' FNL & 2210' FWL BHL: 100' FSL & 2610' FEL

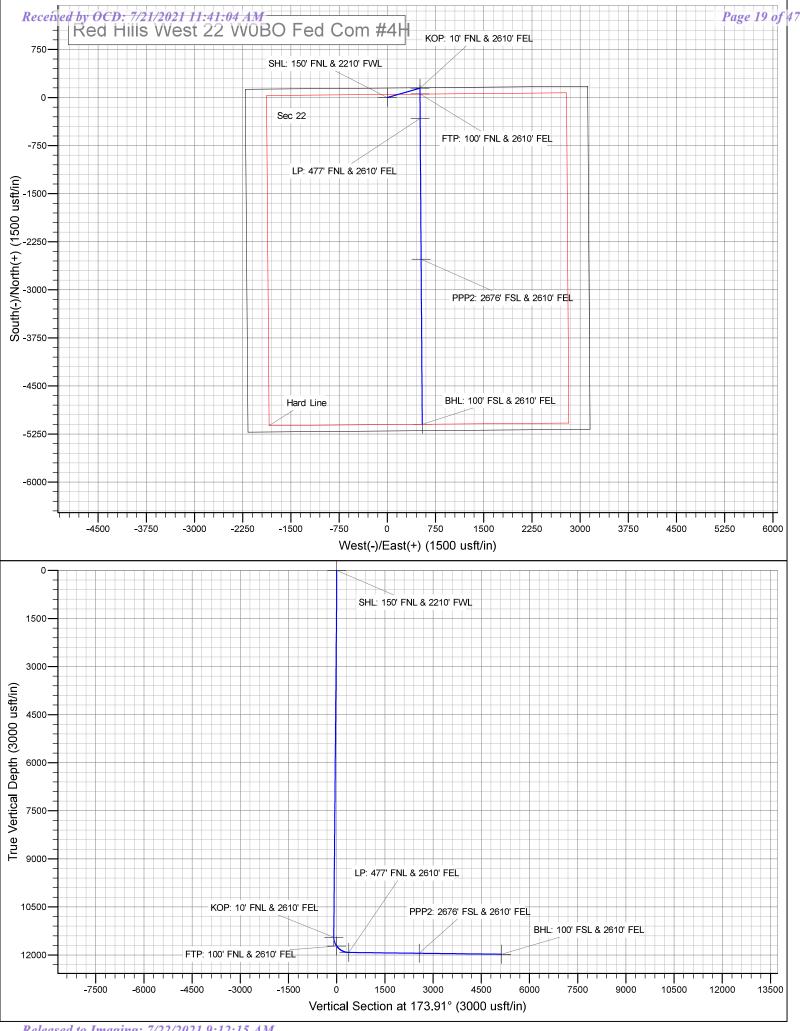
Hole	Casing Interval		Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	650'	13.375"	48	H40	STC	2.59	5.82	10.32	17.34
12.25"	0'	4375'	9.625"	40	L80	LTC	1.36	2.53	4.15	5.23
8.75"	0'	11900'	7"	29	HCP110	LTC	1.57	1.92	2.31	2.69
6.125"	11458'	16975'	4.5"	13.5	P110	LTC	1.32	1.53	4.54	5.67
				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?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	11
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?	

SL: 150' FNL & 2210' FWL BHL: 100' FSL & 2610' FEL

Hole	Casing Interval		Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	650'	13.375"	48	H40	STC	2.59	5.82	10.32	17.34
12.25"	0'	4375'	9.625"	40	L80	LTC	1.36	2.53	4.15	5.23
8.75"	0'	11900'	7"	29	HCP110	LTC	1.57	1.92	2.31	2.69
6.125"	11458'	16975'	4.5"	13.5	P110	LTC	1.32	1.53	4.54	5.67
				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?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	11
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?	



Mewbourne Oil Company

Lea County, New Mexico NAD 83 Red Hills West 22 W0BO Fed Com #4H

Sec 22, T26S, R32E

SHL: 150' FNL & 2210' FWL BHL: 100' FSL & 2610' FEL

Plan: Design #1

Standard Planning Report

09 November, 2020

Database: Hobbs

Company: Mewbourne Oil Company

Project: Lea County, New Mexico NAD 83
Site: Red Hills West 22 W0BO Fed Com #4H

 Site:
 Red Hills West 22 W0BO F

 Well:
 Sec 22, T26S, R32E

Wellbore: BHL: 100' FSL & 2610' FEL

Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Red Hills West 22 W0BO Fed Com #4H

WELL @ 3178.0usft (Original Well Elev) WELL @ 3178.0usft (Original Well Elev)

Grid

Minimum Curvature

59.91

48,140

Project Lea 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:

Mean Sea Level

Site Red Hills West 22 W0BO Fed Com #4H

IGRF2010

 Site Position:
 Northing:
 377,178.00 usft
 Latitude:
 32.0351771

 From:
 Map
 Easting:
 748,664.00 usft
 Longitude:
 -103.6642635

Position Uncertainty:0.0 usftSlot Radius:13-3/16 "Grid Convergence:0.35 °

Well Sec 22, T26S, R32E

 Well Position
 +N/-S
 0.0 usft
 Northing:
 377,178.00 usft
 Latitude:
 32.0351771

 +E/-W
 0.0 usft
 Easting:
 748,664.00 usft
 Longitude:
 -103.6642635

Position Uncertainty0.0 usftWellhead Elevation:3,178.0 usftGround Level:3,150.0 usft

Wellbore BHL: 100' FSL & 2610' FEL

Magnetics Model Name Sample Date Declination Dip Angle Field Strength

(°) (°) (nT)

7.18

12/31/2014

Design #1 Design Audit Notes: Version: Phase: **PROTOTYPE** Tie On Depth: 0.0 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (usft) (usft) (usft) (°) 0.0 0.0 0.0 173.91

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	

Database: Hobbs

Company: Mewbourne Oil Company
Project: Lea County, New Mexico NAD 83

Site: Red Hills West 22 W0BO Fed Com #4H

 Well:
 Sec 22, T26S, R32E

 Wellbore:
 BHL: 100' FSL & 2610' FEL

Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Red Hills West 22 W0BO Fed Com #4H WELL @ 3178.0usft (Original Well Elev) WELL @ 3178.0usft (Original Well Elev)

Grid

ned Survey									
eu Suivey									
Measured Depth (usft)	Inclination	Azimuth	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
, ,	(°)	(°)	, ,	, ,	• •	, ,	,	, ,	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	L & 2210' FWL	0.00	400.0	0.0	0.0	0.0	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
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
650.0	0.00	0.00	650.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.75	74.07	700.0	0.1	0.3	-0.1	1.50	1.50	0.00
800.0	2.25	74.07	800.0	8.0	2.8	-0.5	1.50	1.50	0.00
840.1	2.85	74.07	840.0	1.3	4.5	-0.8	1.50	1.50	0.00
900.0	2.85	74.07 74.07	899.8	2.1	7.4	-0.6 -1.3	0.00	0.00	0.00
1,000.0	2.85	74.07	999.7	3.5	12.2	-1.3 -2.2	0.00	0.00	0.00
1,100.0	2.85	74.07 74.07	1,099.6	4.8	17.0	-2.2 -3.0	0.00	0.00	0.00
1,200.0	2.85	74.07 74.07	1,199.5	6.2	21.8	-3.0 -3.9	0.00	0.00	0.00
1,300.0	2.85	74.07	1,299.4	7.6	26.6	-4.7	0.00	0.00	0.00
1,400.0	2.85	74.07	1,399.2	8.9	31.3	-5.6	0.00	0.00	0.00
1,500.0	2.85	74.07	1,499.1	10.3	36.1	-6.4	0.00	0.00	0.00
1,600.0	2.85	74.07	1,599.0	11.7	40.9	-7.3	0.00	0.00	0.00
1,700.0	2.85	74.07	1,698.9	13.0	45.7	-8.1	0.00	0.00	0.00
1,800.0	2.85	74.07	1,798.7	14.4	50.5	-9.0	0.00	0.00	0.00
1,900.0	2.85	74.07	1,898.6	15.8	55.3	-9.8	0.00	0.00	0.00
2,000.0	2.85	74.07	1,998.5	17.1	60.0	-10.7	0.00	0.00	0.00
2,100.0	2.85	74.07	2,098.4	18.5	64.8	-11.5	0.00	0.00	0.00
2,200.0	2.85	74.07	2,198.2	19.9	69.6	-12.4	0.00	0.00	0.00
2,300.0	2.85	74.07	2,298.1	21.2	74.4	-13.2	0.00	0.00	0.00
2,400.0	2.85	74.07	2,398.0	22.6	79.2	-14.1	0.00	0.00	0.00
2,500.0	2.85	74.07	2,497.9	24.0	84.0	-14.9	0.00	0.00	0.00
2,600.0	2.85	74.07	2,597.7	25.3	88.7	-15.8 40.0	0.00	0.00	0.00
2,700.0	2.85	74.07	2,697.6	26.7	93.5	-16.6	0.00	0.00	0.00
2,800.0	2.85	74.07	2,797.5	28.1	98.3	-17.5	0.00	0.00	0.00
2,900.0	2.85	74.07	2,897.4	29.4	103.1	-18.3	0.00	0.00	0.00
3,000.0	2.85	74.07	2,997.2	30.8	107.9	-19.2	0.00	0.00	0.00
3,100.0	2.85	74.07	3,097.1	32.2	112.7	-20.0	0.00	0.00	0.00
3,200.0	2.85	74.07	3,197.0	33.5	117.5	-20.9	0.00	0.00	0.00
3,300.0	2.85	74.07	3,296.9	34.9	122.2	-21.7	0.00	0.00	0.00
3,400.0	2.85	74.07	3,396.8	36.3	127.0	-21.7 -22.6	0.00	0.00	0.00
3,500.0	2.85	74.07	3,496.6	37.6	131.8	-23.4	0.00	0.00	0.00
3,600.0	2.85	74.07	3,596.5	39.0	136.6	-23.4 -24.3	0.00	0.00	0.00
3,700.0	2.85	74.07	3,696.4	40.4	141.4	-24.3 -25.1	0.00	0.00	0.00
3,800.0	2.85	74.07	3,796.3	41.7	146.2	-26.0	0.00	0.00	0.00
3,900.0	2.85	74.07	3,896.1	43.1	150.9	-26.8	0.00	0.00	0.00
4,000.0	2.85	74.07	3,996.0	44.4	155.7	-27.7	0.00	0.00	0.00
4,100.0	2.85	74.07	4,095.9	45.8	160.5	-28.5	0.00	0.00	0.00
4,200.0	2.85	74.07	4,195.8	47.2	165.3	-29.4	0.00	0.00	0.00
4,300.0	2.85	74.07	4,295.6	48.5	170.1	-30.2	0.00	0.00	0.00
4,400.0	2.85	74.07	4,395.5	49.9	174.9	-31.1	0.00	0.00	0.00
4,500.0	2.85	74.07	4,495.4	51.3	179.6	-31.9	0.00	0.00	0.00
4,600.0	2.85	74.07	4,595.3	52.6	184.4	-32.8	0.00	0.00	0.00
4,700.0	2.85	74.07	4,695.1	54.0	189.2	-33.6	0.00	0.00	0.00
4,800.0	2.85	74.07 74.07	4,795.0 4,894.9	55.4 56.7	194.0 198.8	-34.5 -35.3	0.00 0.00	0.00 0.00	0.00 0.00
4,900.0	2.85								

Hobbs Database:

Company: Mewbourne Oil Company Lea County, New Mexico NAD 83 Project: Site: Red Hills West 22 W0BO Fed Com #4H

Well: Sec 22, T26S, R32E

Wellbore: BHL: 100' FSL & 2610' FEL

Design: Design #1 Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Red Hills West 22 W0BO Fed Com #4H WELL @ 3178.0usft (Original Well Elev) WELL @ 3178.0usft (Original Well Elev)

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.0 5,200.0	2.85 2.85	74.07 74.07	5,094.6 5,194.5	59.5 60.8	208.4 213.1	-37.0 -37.9	0.00 0.00	0.00 0.00	0.00 0.00
5,300.0	2.85	74.07	5,294.4	62.2	217.9	-38.7	0.00	0.00	0.00
5,400.0 5,500.0	2.85 2.85	74.07 74.07	5,394.3 5,494.2	63.6	222.7 227.5	-39.6 -40.4	0.00 0.00	0.00 0.00	0.00
5,600.0 5,600.0	2.85 2.85	74.07 74.07	5,494.2 5,594.0	64.9 66.3	232.3	-40.4 -41.3	0.00	0.00	0.00 0.00
5,700.0	2.85	74.07	5,693.9	67.7	237.1	-42.1	0.00	0.00	0.00
5,800.0	2.85	74.07	5,793.8	69.0	241.8	-43.0	0.00	0.00	0.00
5,900.0	2.85	74.07	5,893.7	70.4	246.6	-43.8	0.00	0.00	0.00
6,000.0	2.85	74.07	5,993.5	71.8	251.4	-44.7	0.00	0.00	0.00
6,100.0 6,200.0	2.85 2.85	74.07 74.07	6,093.4 6,193.3	73.1 74.5	256.2 261.0	-45.5 -46.4	0.00 0.00	0.00 0.00	0.00 0.00
6,300.0 6,400.0	2.85 2.85	74.07 74.07	6,293.2 6,393.0	75.9 77.2	265.8 270.6	-47.2 -48.1	0.00 0.00	0.00 0.00	0.00 0.00
6,500.0	2.85	74.07 74.07	6,492.9	77.2 78.6	275.3	-48.1 -48.9	0.00	0.00	0.00
6,600.0	2.85	74.07	6,592.8	80.0	280.1	-49.8	0.00	0.00	0.00
6,700.0	2.85	74.07	6,692.7	81.3	284.9	-50.6	0.00	0.00	0.00
6,800.0	2.85	74.07	6,792.5	82.7	289.7	-51.5	0.00	0.00	0.00
6,900.0	2.85	74.07	6,892.4	84.1	294.5	-52.3	0.00	0.00	0.00
7,000.0	2.85	74.07	6,992.3	85.4	299.3	-53.2	0.00	0.00	0.00
7,100.0	2.85 2.85	74.07 74.07	7,092.2	86.8	304.0	-54.0 -54.9	0.00	0.00	0.00
7,200.0			7,192.0	88.1	308.8		0.00	0.00	0.00
7,300.0	2.85	74.07	7,291.9	89.5	313.6	-55.7	0.00	0.00	0.00
7,400.0 7,500.0	2.85 2.85	74.07 74.07	7,391.8 7,491.7	90.9 92.2	318.4 323.2	-56.6 -57.4	0.00	0.00 0.00	0.00
7,500.0 7,600.0	2.85	74.07 74.07	7,491.7 7,591.5	93.6	323.2 328.0	-57.4 -58.3	0.00 0.00	0.00	0.00 0.00
7,700.0	2.85	74.07	7,691.4	95.0	332.7	-59.1	0.00	0.00	0.00
7,800.0	2.85	74.07	7,791.3	96.3	337.5	-60.0	0.00	0.00	0.00
7,900.0	2.85	74.07	7,891.2	97.7	342.3	-60.8	0.00	0.00	0.00
8,000.0	2.85	74.07	7,991.1	99.1	347.1	-61.7	0.00	0.00	0.00
8,100.0	2.85	74.07	8,090.9	100.4	351.9	-62.5	0.00	0.00	0.00
8,200.0	2.85	74.07	8,190.8	101.8	356.7	-63.4	0.00	0.00	0.00
8,300.0	2.85	74.07	8,290.7	103.2	361.5	-64.2	0.00	0.00	0.00
8,400.0 8,500.0	2.85 2.85	74.07 74.07	8,390.6 8,490.4	104.5 105.9	366.2 371.0	-65.1 -65.9	0.00 0.00	0.00 0.00	0.00 0.00
8,600.0	2.85 2.85	74.07 74.07	8,490.4 8,590.3	105.9	371.0 375.8	-65.9 -66.8	0.00	0.00	0.00
8,700.0	2.85	74.07	8,690.2	108.6	380.6	-67.6	0.00	0.00	0.00
8,800.0	2.85	74.07	8,790.1	110.0	385.4	-68.5	0.00	0.00	0.00
8,900.0	2.85	74.07	8,889.9	111.4	390.2	-69.3	0.00	0.00	0.00
9,000.0	2.85	74.07	8,989.8	112.7	394.9	-70.2	0.00	0.00	0.00
9,100.0	2.85	74.07	9,089.7	114.1	399.7	-71.0	0.00	0.00	0.00
9,200.0	2.85	74.07	9,189.6	115.5	404.5	-71.9 	0.00	0.00	0.00
9,300.0	2.85	74.07	9,289.4	116.8	409.3	-72.7	0.00	0.00	0.00
9,400.0 9,500.0	2.85 2.85	74.07 74.07	9,389.3 9,489.2	118.2 119.6	414.1 418.9	-73.6 -74.4	0.00 0.00	0.00 0.00	0.00
9,500.0 9,600.0	2.85 2.85	74.07 74.07	9,489.2 9,589.1	120.9	418.9	-74.4 -75.3	0.00	0.00	0.00 0.00
9,700.0	2.85	74.07	9,688.9	122.3	428.4	-76.1	0.00	0.00	0.00
9,800.0	2.85	74.07	9,788.8	123.7	433.2	-77.0	0.00	0.00	0.00
9,900.0	2.85	74.07	9,888.7	125.0	438.0	-77.8	0.00	0.00	0.00
10,000.0	2.85	74.07	9,988.6	126.4	442.8	-78.7 70.0	0.00	0.00	0.00
10,100.0 10,200.0	2.85 2.85	74.07 74.07	10,088.5 10,188.3	127.8 129.1	447.6 452.4	-79.6 -80.4	0.00 0.00	0.00 0.00	0.00 0.00
10,300.0	2.85	74.07	10,288.2	130.5	457.1	-81.3	0.00	0.00	0.00
10,400.0	2.85	74.07	10,388.1	131.8	461.9	-82.1	0.00	0.00	0.00

Database: Hobbs

Company: Mewbourne Oil Company
Project: Lea County, New Mexico NAD 83
Site: Red Hills West 22 W0BO Fed Com #4H

Well: Sec 22, T26S, R32E
Wellbore: BHL: 100' FSL & 2610' FEL

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Red Hills West 22 W0BO Fed Com #4H WELL @ 3178.0usft (Original Well Elev) WELL @ 3178.0usft (Original Well Elev)

Grid

anned Survey									
Measure Depth (usft)	d Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,500	0.0 2.85	74.07	10.488.0	133.2	466.7	-83.0	0.00	0.00	0.00
10,600		74.07	10,587.8	134.6	471.5	-83.8	0.00	0.00	0.00
10,700		74.07	10,687.7	135.9	476.3	-84.7	0.00	0.00	0.00
,									
10,800		74.07	10,787.6	137.3	481.1	-85.5	0.00	0.00	0.00
10,900		74.07	10,887.5	138.7	485.8	-86.4	0.00	0.00	0.00
11,000		74.07	10,987.3	140.0	490.6	-87.2	0.00	0.00	0.00
11,100		74.07	11,087.2	141.4	495.4	-88.1	0.00	0.00	0.00
11,200	0.0 2.85	74.07	11,187.1	142.8	500.2	-88.9	0.00	0.00	0.00
11,267	7.9 2.85	74.07	11,255.0	143.7	503.5	-89.5	0.00	0.00	0.00
11,300		74.07	11,287.0	144.1	504.9	-89.7	1.50	-1.50	0.00
11,400		74.07	11,386.9	144.9	507.6	-90.2	1.50	-1.50	0.00
11,458		0.00	11,445.0	145.0	508.0	-90.3	1.50	-1.50	0.00
		0.00	11,440.0	145.0	300.0	-50.5	1.50	-1.50	0.00
	0' FNL & 2610' FEL	170.04	44 400 0	140.0	500.0	00.5	40.04	40.04	0.00
11,500	0.0 5.04	179.61	11,486.9	143.2	508.0	-88.5	12.01	12.01	0.00
11,600	0.0 17.05	179.61	11,584.8	124.0	508.1	-69.4	12.01	12.01	0.00
11,700		179.61	11,676.7	85.0	508.4	-30.5	12.01	12.01	0.00
11,75		179.61	11,723.9	55.0	508.6	-0.7	12.01	12.01	0.00
	0' FNL & 2610' FEL		,						
11,800		179.61	11,758.4	27.6	508.8	26.5	12.01	12.01	0.00
11,900		179.61	11,826.4	-45.5	509.3	99.2	12.01	12.01	0.00
11,900		179.01	11,020.4	-40.0	509.5	99.2	12.01	12.01	0.00
12,000	0.0 65.09	179.61	11,877.7	-131.1	509.9	184.5	12.01	12.01	0.00
12,100	0.0 77.10	179.61	11,910.0	-225.5	510.5	278.4	12.01	12.01	0.00
12,200	0.0 89.11	179.61	11,922.0	-324.6	511.2	377.0	12.01	12.01	0.00
12,20	1.9 89.34	179.61	11,922.0	-326.5	511.2	378.9	12.01	12.01	0.00
LP: 477'	'FNL & 2610' FEL								
12,300	0.0 89.34	179.61	11,923.1	-424.6	511.9	476.5	0.00	0.00	0.00
12,400	0.0 89.34	179.61	11,924.3	-524.6	512.6	576.0	0.00	0.00	0.00
12,500		179.61	11,925.4	-624.6	513.3	675.5	0.00	0.00	0.00
12,600		179.61	11,926.6	-724.6	514.0	775.0	0.00	0.00	0.00
12,700		179.61	11,927.7	-724.6 -824.6	514.7	874.5	0.00	0.00	0.00
12,700		179.61	11,928.9	-024.6 -924.6	514.7	974.0	0.00	0.00	0.00
12,000	0.0 09.34	179.01	11,920.9	-924.6	515.5	974.0	0.00	0.00	0.00
12,900	0.0 89.34	179.61	11,930.0	-1,024.6	516.0	1,073.5	0.00	0.00	0.00
13,000	0.0 89.34	179.61	11,931.2	-1,124.6	516.7	1,173.0	0.00	0.00	0.00
13,100	0.0 89.34	179.61	11,932.3	-1,224.5	517.4	1,272.5	0.00	0.00	0.00
13,200		179.61	11,933.5	-1,324.5	518.1	1,372.0	0.00	0.00	0.00
13,300		179.61	11,934.7	-1,424.5	518.8	1,471.5	0.00	0.00	0.00
40.40	0.0	170.04					0.00	0.00	0.00
13,400		179.61	11,935.8	-1,524.5	519.5	1,571.0	0.00	0.00	0.00
13,500		179.61	11,937.0	-1,624.5	520.1	1,670.5	0.00	0.00	0.00
13,600		179.61	11,938.1	-1,724.5	520.8	1,770.0	0.00	0.00	0.00
13,700		179.61	11,939.3	-1,824.5	521.5	1,869.5	0.00	0.00	0.00
13,800	0.0 89.34	179.61	11,940.4	-1,924.5	522.2	1,969.0	0.00	0.00	0.00
13,900	0.0 89.34	179.61	11,941.6	-2,024.5	522.9	2,068.5	0.00	0.00	0.00
14,000		179.61	11,942.7	-2,124.5	523.6	2,168.0	0.00	0.00	0.00
14,100		179.61	11,943.9	-2,224.5	524.3	2,267.5	0.00	0.00	0.00
14,200		179.61	11,945.0	-2,324.4	525.0	2,367.0	0.00	0.00	0.00
14,300		179.61	11,946.2	-2,424.4	525.6	2,466.5	0.00	0.00	0.00
14,398		179.61	11,947.3	-2,523.0	526.3	2,564.6	0.00	0.00	0.00
	676' FSL & 2610' FEI		11,047.0	2,320.0	020.0	2,554.5	0.00	0.00	0.00
			11 047 3	2 524 4	E06.0	2 566 0	0.00	0.00	0.00
14,400		179.61	11,947.3	-2,524.4	526.3	2,566.0	0.00	0.00	0.00
14,500		179.61	11,948.5	-2,624.4	527.0	2,665.5	0.00	0.00	0.00
14,600		179.61	11,949.6	-2,724.4	527.7	2,765.0	0.00	0.00	0.00
14,700	0.0 89.34	179.61	11,950.8	-2,824.4	528.4	2,864.5	0.00	0.00	0.00
14,800	0.0 89.34	179.61	11,951.9	-2,924.4	529.1	2,964.0	0.00	0.00	0.00

Database: Hobbs

Company: Mewbourne Oil Company
Project: Lea County, New Mexico NAD 83

Site: Red Hills West 22 W0BO Fed Com #4H

 Well:
 Sec 22, T26S, R32E

 Wellbore:
 BHL: 100' FSL & 2610' FEL

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Red Hills West 22 W0BO Fed Com #4H WELL @ 3178.0usft (Original Well Elev) WELL @ 3178.0usft (Original Well Elev)

Grid

ed 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)
14,900.0	89.34	179.61	11,953.1	-3,024.4	529.8	3,063.5	0.00	0.00	0.00
15,000.0	89.34	179.61	11,954.2	-3,124.4	530.4	3,163.0	0.00	0.00	0.00
15,100.0	89.34	179.61	11,955.4	-3,224.4	531.1	3,262.5	0.00	0.00	0.00
15,200.0	89.34	179.61	11,956.5	-3,324.4	531.8	3,362.0	0.00	0.00	0.00
15,300.0	89.34	179.61	11,957.7	-3,424.4	532.5	3,461.5	0.00	0.00	0.00
15,400.0	89.34	179.61	11,958.9	-3,524.3	533.2	3,561.0	0.00	0.00	0.00
15,500.0	89.34	179.61	11,960.0	-3,624.3	533.9	3,660.5	0.00	0.00	0.00
15,600.0	89.34	179.61	11,961.2	-3,724.3	534.6	3,760.0	0.00	0.00	0.00
15,700.0	89.34	179.61	11,962.3	-3,824.3	535.2	3,859.5	0.00	0.00	0.00
15,800.0	89.34	179.61	11,963.5	-3,924.3	535.9	3,959.0	0.00	0.00	0.00
15,900.0	89.34	179.61	11,964.6	-4,024.3	536.6	4,058.5	0.00	0.00	0.00
16,000.0	89.34	179.61	11,965.8	-4,124.3	537.3	4,158.0	0.00	0.00	0.00
16,100.0	89.34	179.61	11,966.9	-4,224.3	538.0	4,257.5	0.00	0.00	0.00
16,200.0	89.34	179.61	11,968.1	-4,324.3	538.7	4,357.0	0.00	0.00	0.00
16,300.0	89.34	179.61	11,969.2	-4,424.3	539.4	4,456.5	0.00	0.00	0.00
16,400.0	89.34	179.61	11,970.4	-4,524.3	540.1	4,556.0	0.00	0.00	0.00
16,500.0	89.34	179.61	11,971.5	-4,624.2	540.7	4,655.5	0.00	0.00	0.00
16,600.0	89.34	179.61	11,972.7	-4,724.2	541.4	4,755.0	0.00	0.00	0.00
16,700.0	89.34	179.61	11,973.8	-4,824.2	542.1	4,854.5	0.00	0.00	0.00
16,800.0	89.34	179.61	11,975.0	-4,924.2	542.8	4,954.0	0.00	0.00	0.00
16,900.0	89.34	179.61	11,976.1	-5,024.2	543.5	5,053.5	0.00	0.00	0.00
16,974.8	89.34	179.61	11,977.0	-5,099.0	544.0	5,127.9	0.00	0.00	0.00
BHL: 100' FS	SL & 2610' FEL								

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: 150' FNL & 2210' F - plan hits target cen - Point	0.00 ter	0.00	0.0	0.0	0.0	377,178.00	748,664.00	32.0351771	-103.6642635
KOP: 10' FNL & 2610' FI - plan hits target cen - Point	0.00 ter	0.00	11,445.0	145.0	508.0	377,323.00	749,172.00	32.0355670	-103.6626213
FTP: 100' FNL & 2610' F - plan hits target cen - Point	0.00 ter	0.00	11,723.9	55.0	508.6	377,233.00	749,172.61	32.0353196	-103.6626212
LP: 477' FNL & 2610' FE - plan hits target cen - Point	0.00 ter	0.00	11,922.0	-326.5	511.2	376,851.50	749,175.20	32.0342709	-103.6626205
PPP2: 2676' FSL & 2610 - plan hits target cen - Point	0.00 ter	0.00	11,947.3	-2,523.0	526.3	374,655.00	749,190.31	32.0282329	-103.6626157
BHL: 100' FSL & 2610' F - plan hits target cen - Point	0.00 ter	0.00	11,977.0	-5,099.0	544.0	372,079.00	749,208.00	32.0211517	-103.6626102

Intent		As Dril	led											
API#														
1	Operator Name: Mewbourne Oil Co. Property Name: Red Hills West 22 W0BO Fed Com						Well Number 4H							
Kick C	Off Point	(KOP)												
UL B	Section 22	Township 26S	Range 32E	Lot	Feet 10		From N	I/S	Feet 261		Fron	n E/W	County	
Latitu			022		Longitu	ıde			120.				NAD 83	
					1 0 0									
First 7	Гake Poir	nt (FTP)												
UL B	Section 22	Township 26S	Range 32E	Lot	Feet 100		From N N	I/S	Feet 261		Fron E	n E/W	County Lea	
132.0	^{ide} 035319	96			Longitu -103	itude NAD 3.6626212 83								
Last T	ake Poin	t (LTP)												
UL O	Section 22	Township 26S	Range 32E	Lot	Feet 100	Fron	n N/S	Feet 261		From	E/W	Count Lea	y	
Latitu		└─── 9		1 1	Longitu	ongitude NAD NAD 83								
Ic thic	wall tha	defining v	wall far th	o Horis	ontal C	aacino	t	Ī,		7				
15 (1115	well the	denning v	ven ioi tii	E 110112	.ontai 5	Jacine	g Office	L	<u> </u>	_				
Is this	well an	infill well?		N]									
	l is yes p ng Unit.	lease prov	ide API if	availab	ile, Opei	rator I	Name a	and v	vell n	umbe	r for I	Definir	ng well fo	r Horizontal
API#														
Ope	rator Nai	me:				Property Name:						Well Number		

KZ 06/29/2018

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: | Mewbourne Oil Company

LEASE NO.: | NMNM0105562

WELL NAME & NO.: | Red Hills West 22 W0BO Fed Com 4H

SURFACE HOLE FOOTAGE: 150'/N & 2210'/W **BOTTOM HOLE FOOTAGE** 100'/S & 2610'/E

LOCATION: | Section 22, T.26 S., R.32 E., NMP

COUNTY: Lea County, New Mexico

COA

H2S	© Yes	© No	
Potash	None	© Secretary	© R-111-P
Cave/Karst Potential	C Low	Medium	○ High
Cave/Karst Potential	© Critical		
Variance	© None	Flex Hose	Other
Wellhead	© Conventional	• Multibowl	© Both
Other	4 String Area	Capitan Reef	□WIPP
Other	Fluid Filled	Cement Squeeze	Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the East Mason Pool. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 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

Casing Design:

- 1. The 13-3/8 inch surface casing shall be set at approximately 650 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after

- completing the cement job.
- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8** hours or 500 pounds 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 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The 9-5/8 inch intermediate casing shall be set at approximately 4375 feet. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.
 Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
 Excess cement calculates to 21%, additional cement might be required.
 - ❖ In Medium Cave/Karst Areas 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 minimum required fill of cement behind the 7 inch production casing is:
 - Cement should tie-back at least 200 feet into previous casing string.
 Operator shall provide method of verification.
 Excess cement calculates to 24%, additional cement might be required.
- 4. The minimum required fill of cement behind the 4-1/2 inch production liner is:
 - Cement should tie-back **100 feet** into the previous casing. 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.

Option 1:

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be 10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.

Option 2:

- 1. 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 10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.
- a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

• The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will

include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

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

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)
 - Eddy County
 Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822
- 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 Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

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

- 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

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

- e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
 - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 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 Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

OTA07092021

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. Protective Equipment for Essential Personnel

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. <u>Visual Warning Systems</u>

- 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 Center	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

Received by OCD: 7/21/2021 11:41:04 AM

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Operator Name: MEWBOURNE OIL COMPANY

Well Name: RED HILLS WEST 22 W0BO FED COM Well Number: 4H

Waste type: SEWAGE

Waste content description: Human waste & grey water

Amount of waste: 1500 gallons

Waste disposal frequency: Weekly

Safe containment description: 2,000 gallon plastic container

Safe containment attachment:

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

FACILITY

Disposal type description:

Disposal location description: City of Carlsbad Water Treatment facility

Waste type: DRILLING

Waste content description: Drill cuttings

Amount of waste: 940 barrels

Waste disposal frequency: One Time Only

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

Safe containment attachment:

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

FACILITY

Disposal type description:

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

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

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? N

Well Name: RED HILLS WEST 22 W0BO FED COM Well Number: 4H

Description of cuttings location

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

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

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

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

RedHillsWest 22 W0BOFedCom4H wellsitelayout 20201021111036.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance Multiple Well Pad Name: Red Hills West 22 AP & BO Fed Com wells

Multiple Well Pad Number: 4

Recontouring attachment:

Drainage/Erosion control construction: None

Drainage/Erosion control reclamation: None

Well pad proposed disturbance

(acres): 5.12

Road proposed disturbance (acres):

0.15

Powerline proposed disturbance

(acres): 0

Pipeline proposed disturbance

(acres): 0

Other proposed disturbance (acres):

3.673

Total proposed disturbance:

8.943000000000001

Well pad interim reclamation (acres): Well pad long term disturbance

1.47

Road interim reclamation (acres): 0

(acres): 3.65

Road long term disturbance (acres): 0

Powerline interim reclamation (acres): Powerline long term disturbance

•

Other interim reclamation (acres): 0

(acres): 0

Pipeline interim reclamation (acres): 0 Pipeline long term disturbance

(acres): 0

Total interim reclamation: 1.47

Total long term disturbance: 3.65

Other long term disturbance (acres): 0

Page 5 of 9



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

Drilling Plan Data Report

07/20/2021

APD ID: 10400063926

Operator Name: MEWBOURNE OIL COMPANY

Well Name: RED HILLS WEST 22 W0BO FED COM

Well Type: CONVENTIONAL GAS WELL

Submission Date: 11/10/2020

reflects the most recent changes Well Number: 4H

Show Final Text

Highlighted data

Well Work Type: Drill

Section 1 - Geologic Formations

Formation			True Vertical	Measured			Producing
ID	Formation Name	Elevation	Depth	Depth	Lithologies	Mineral Resources	Formation
948163	UNKNOWN	3150	28	28	OTHER : Top Soil	NONE	N
948174	RUSTLER	2620	530	530	ANHYDRITE, DOLOMITE	USEABLE WATER	N
948175	TOP SALT	2257	893	893	SALT	NONE	N
948164	BOTTOM SALT	-1080	4230	4230	SALT	NONE	N
948171	LAMAR	-1302	4452	4452	LIMESTONE	NATURAL GAS, OIL	N
948167	BELL CANYON	-1330	4480	4480	SANDSTONE	NATURAL GAS, OIL	N
948168	CHERRY CANYON	-2366	5516	5516	SANDSTONE	NATURAL GAS, OIL	N
948169	MANZANITA	-2526	5676	5676	LIMESTONE	NATURAL GAS, OIL	N
948162	BRUSHY CANYON	-5081	8231	8231	SANDSTONE	NATURAL GAS, OIL	N
1139058	BONE SPRING	-5433	8583	8583	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
948165	BONE SPRING 1ST	-6420	9570	9570	SANDSTONE	NATURAL GAS, OIL	N
948166	BONE SPRING 2ND	-7027	10177	10177	SANDSTONE	NATURAL GAS, OIL	N
948173	BONE SPRING 3RD	-8118	11268	11268	SANDSTONE	NATURAL GAS, OIL	N
948170	WOLFCAMP	-8570	11720	11720	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention



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

Drilling Plan Data Report

07/20/2021

APD ID: 10400063926

Operator Name: MEWBOURNE OIL COMPANY

Well Name: RED HILLS WEST 22 W0BO FED COM

Well Type: CONVENTIONAL GAS WELL

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Well Number: 4H

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Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation			True Vertical	Measured			Producing
ID	Formation Name	Elevation	Depth	Depth	Lithologies	Mineral Resources	Formation
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948167	BELL CANYON	-1330	4480	4480	SANDSTONE	NATURAL GAS, OIL	N
948168	CHERRY CANYON	-2366	5516	5516	SANDSTONE	NATURAL GAS, OIL	N
948169	MANZANITA	-2526	5676	5676	LIMESTONE	NATURAL GAS, OIL	N
948162	BRUSHY CANYON	-5081	8231	8231	SANDSTONE	NATURAL GAS, OIL	N
1139058	BONE SPRING	-5433	8583	8583	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
948165	BONE SPRING 1ST	-6420	9570	9570	SANDSTONE	NATURAL GAS, OIL	N
948166	BONE SPRING 2ND	-7027	10177	10177	SANDSTONE	NATURAL GAS, OIL	N
948173	BONE SPRING 3RD	-8118	11268	11268	SANDSTONE	NATURAL GAS, OIL	N
948170	WOLFCAMP	-8570	11720	11720	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Well Name: RED HILLS WEST 22 W0BO FED COM Well Number: 4H

Pressure Rating (PSI): 10M Rating Depth: 16975

Equipment: Annular, Pipe Rams, Blind Rams

Requesting Variance? YES

Variance request: Request variance for the use of a flexible choke line from the BOP to Choke Manifold. Anchors not required by manufacturer. A multi-bowl wellhead will be 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:

Red_Hills_West_22_W0BO_Fed_Com_4H_10M_BOPE_Choke_Diagram_20201109154117.pdf
Red_Hills_West_22_W0BO_Fed_Com_4H_Flex_Line_Specs_20201109154117.pdf
Red_Hills_West_22_W0BO_Fed_Com_4H_Flex_Line_Specs_API_16C_20201109154119.pdf

BOP Diagram Attachment:

Red_Hills_West_22_W0BO_Fed_Com_4H_10M_Annular_BOP_Variance_20201109154200.doc

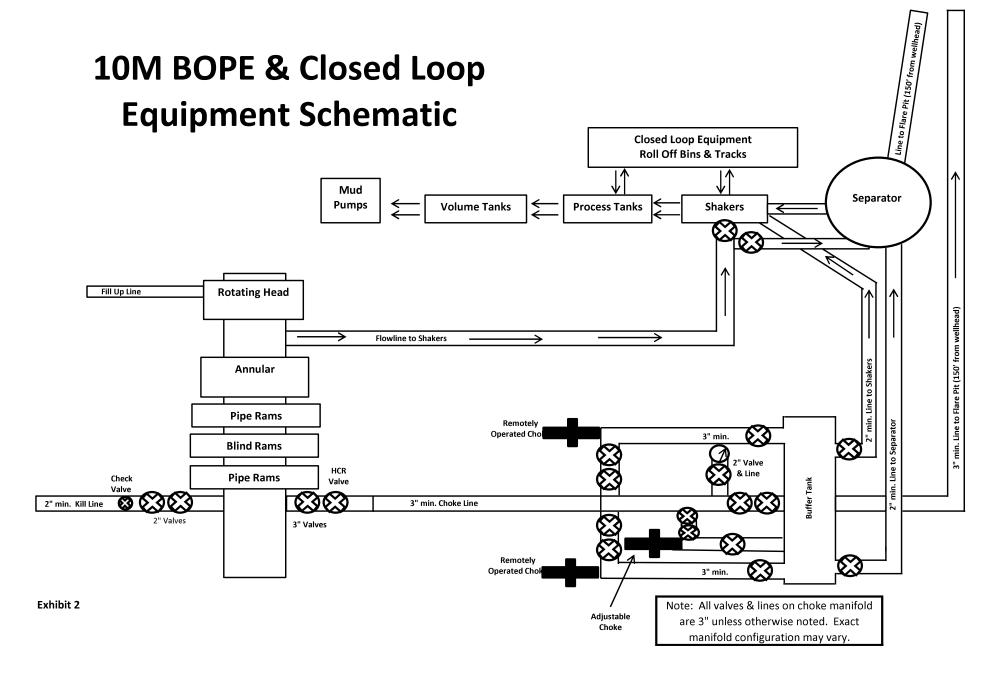
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Red_Hills_West_22_W0BO_Fed_Com_4H_10M_Multi_Bowl_WH_20201109154226.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	650	0	650	3150	2500	650	H-40	48	ST&C	2.59	5.82	DRY	10.3 2	DRY	17.3 4
	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	4375	0	4375	3326	-1225	4375	L-80	40	LT&C	1.36	2.53	DRY	4.15	DRY	5.23
	PRODUCTI ON	8.75	7.0	NEW	API	N	0	11900	0	11826	3326	-8676	11900	HCP -110	29	LT&C	1.57	1.92	DRY	2.31	DRY	2.69
4	LINER	6.12 5	4.5	NEW	API	N	11458	16975	11445	11977	-8295	-8827	5517	P- 110	13.5	LT&C	1.32	1.53	DRY	4.54	DRY	5.67

Casing Attachments





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

WEB: www.gates.com

10K CEMENTING ASSEMBLY PRESSURE TEST CERTIFICATE

Customer : Customer Ref. :

Invoice No.:

AUSTIN DISTRIBUTING

4060578 500506 Test Date:

Hose Serial No.: Created By: 4/30/2015

D-043015-7

JUSTIN CROPPER

Product Description:

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

End Fitting 1:

Gates Part No.:

Working Pressure :

4 1/16 10K FLG

4773-6290 10,000 PSI End Fitting 2:

Assembly Code:

Test Pressure:

4 1/16 10K FLG

L36554102914D-043015-7

15,000 PSI

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

Quality Manager:

Date:

Signature:

QUALITY

4/30/2015

Produciton:

Date:

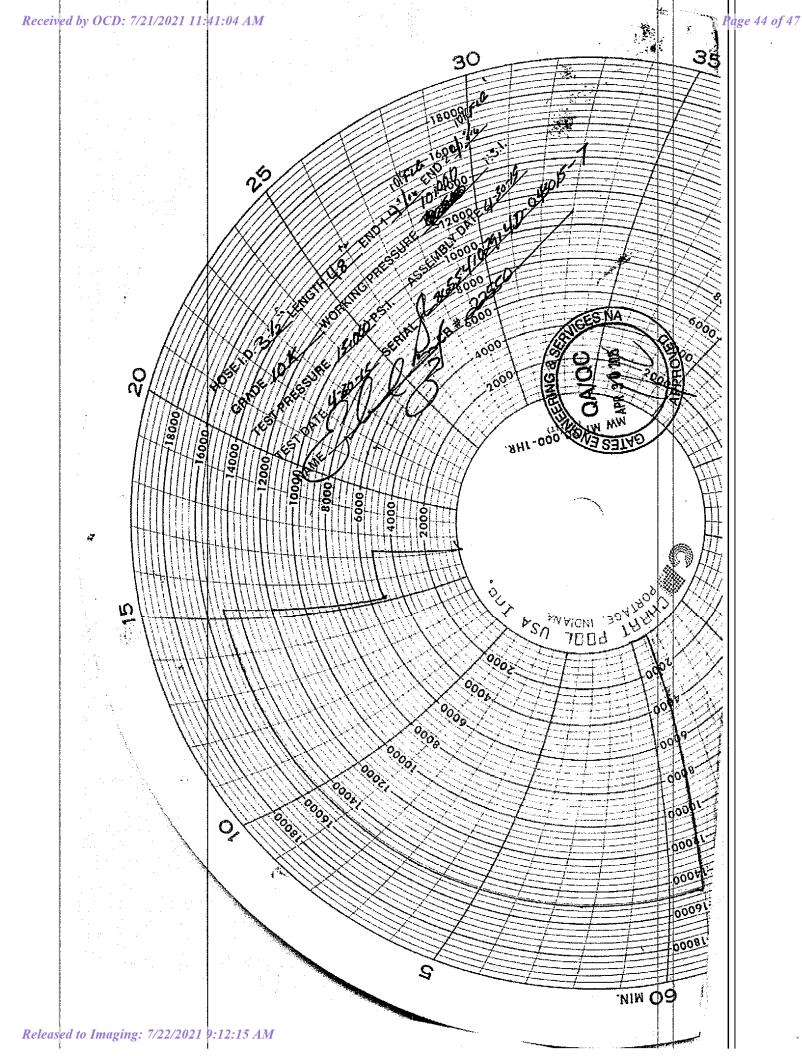
Signature :

PRODUCTION

4/30/2015

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

A-7 AUSTIN INC DBA AUSTIN HOSE Test Date: 8/20/2018 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: End Fitting 1: 4 1/16 in. Fixed Flange 4 1/16 in. Float 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:

QUALITY

8/20/2018

Signature:

Production:

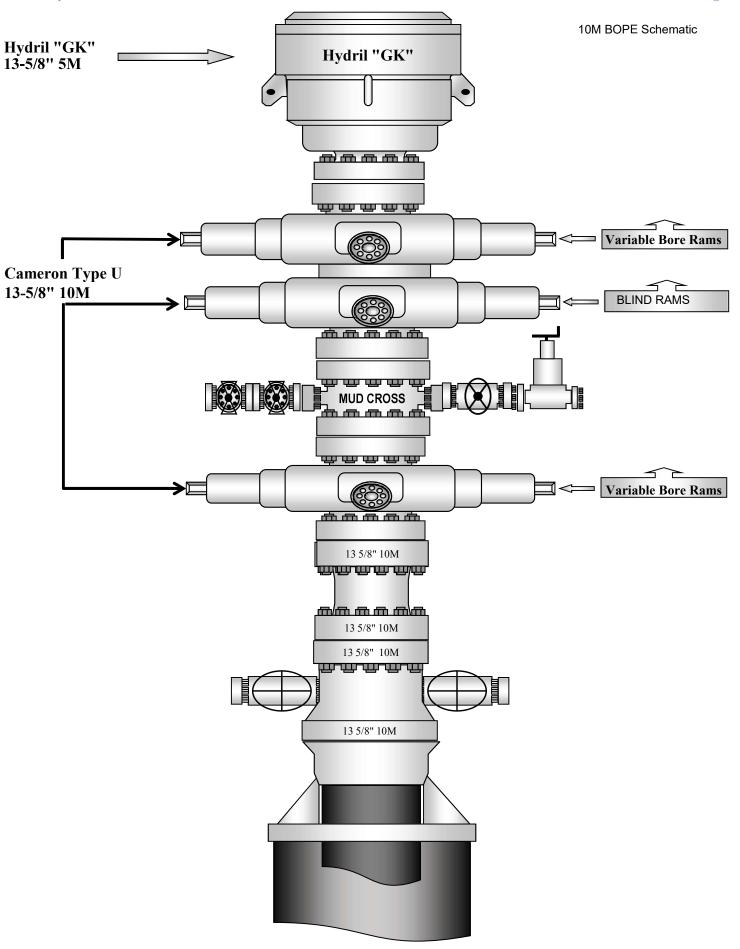
Date :

Signature:

8/20/2018

Form PTC - 01 Rev.0 2





District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

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

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

CONDITIONS

Action 37258

CONDITIONS

Operator:	OGRID:
MEWBOURNE OIL CO	14744
P.O. Box 5270	Action Number:
Hobbs, NM 88241	37258
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created	Condition	Condition
Ву		Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	7/22/2021
pkautz	Will require a administrative order for non-standard location prior to placing the well on production	7/22/2021
pkautz	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	7/22/2021
	zones and shall immediately set in cement the water protection string	