Form 3160-3 (June 2015)				FORM A OMB No.	1004-0	0137		
UNITED STATES				Expires: Jan	uary 5	, 2018		
DEPARTMENT OF THE IN BUREAU OF LAND MANA				5 Lease Serial No. NMNM114971				
APPLICATION FOR PERMIT TO D				6. If Indian, Allotee or Tribe Name				
1a. Type of work: ✓ DRILL RI	EENTER			7. If Unit or CA Agree	ement,	Name and No.		
1b. Type of Well:	ther			O Lease News and W	tell Nte			
1c Type of Completion: Hydraulic Fracturing	ngle Zone	Multiple Zone		8. Lease Name and W OWL DRAW 27/22 \	lin.	EED COM		
				2H	WINC	PED COM		
2. Name of Operator MEWBOURNE OIL COMPANY				9. API Well No. 30-015-49376		D 1 C		
3a, Address		No (include area cod	le)	10. Field and Pool, or	Exploi			
PO Box 5270 Hobbs NM 88240	(575)393-5			Jal / WC 015S26272	-			
4. Location of Well (Report location clearly and in accordance w	-			11. Sec., T. R. M. or B SEC 27 / T26S / R27				
At surface SESW / 155 FSL / 2410 FWL / LAT 32.0062 At proposed prod, zone NENW / 330 FNL / 2200 FWL / L			703041	3EC 211 12031 R21	/ E / NI	VIE		
14. Distance in miles and direction from nearest town or post office 7 miles		0007 20110 - 104.	1755541	12. County or Parish EDDY		13 State		
15. Distance from proposed*	16. No of ac	cres in lease	17. Spaci	ng Unit dedicated to this	s well	INIVI		
location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any)			160					
18. Distance from proposed location*	19. Propose	d Depth	20. BLM	/BIA Bond No. in file				
to nearest well, drilling, completed, 50 feet applied for, on this lease, ft.	9168 feet /	19166 feet	FED: NN	M1693				
21. Elevations (Show whether DF, KDB, RT, GL. etc.)	000000	mate date work will	start*	23. Estimated duration	n			
3181 feet	11/17/2018 24. Attac	100		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 6. Such other site sp	e operation	Hydraulic Fracturing rule is unless covered by an e mation and/or plans as m	existing	bond on file (see		
25, Signature	Name	(Printed/Typed)		D	ate			
(Electronic Submission)				0	8/29/2	018		
Title								
Approved by (Signature) (Electronic Submission)		(Printed/Typed) Layton / Ph: (575)2	34-5959		ate 3/09/2	022		
Title Assistant Field Manager Lands & Minerals	Office CARL			•				
Application approval does not warrant or certify that the applicant applicant to conduct operations thereon. Conditions of approval, if any, are attached.	holds legal o	or equitable title to th	ose rights	in the subject lease whic	ch wou	d entitle the		
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, moof the United States any false, fictitious or fraudulent statements of					y depar	tment or agency		
	vn Wľ	rh condit	IONS					
(Continued on page 2)	val Date	: 03/09/2022		*(Insti	ructio	ns 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

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

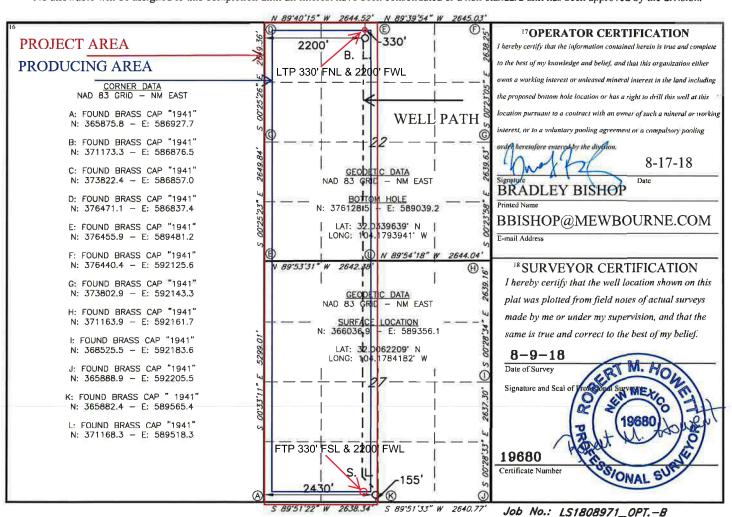
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT Purple Sage;

30-015-49376	ег	² Pool Code 98017 98220	LFCAMP	
⁴ Property Code 332694		OWL DRAW 27/22	perty Name **WINC FED COM**	⁶ Well Number 2H
70GRID NO. 14744		•	erator Name E OIL COMPANY	⁹ Elevation 3181

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 27 27E 155 SOUTH N **26S** 2430 WEST **EDDY** "Bottom Hole Location If Different From Surface UL or lot no. Lot Idn Feet from the North/South line Section Township Range Feet from the East/West line County 22 **26S** 27E 330 NORTH 2200 WEST **EDDY** 12 Dedicated Acres 13 Joint or Infill 14 Consolidation Code 15 Order No. 640

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



State of New Mexico Energy, Minerals and Natural Resources Department

Submit Electronically Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 - Plan Description

			fective May 25,						
I. Operator:Mev	vbourne (Oil Co.	OGRID:	14744	Date: _	2/5/22			
II. Type: X Original	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 be recompleted from a s	e following inf ingle well pad	formation for each to or connected to a c	new or recomple entral delivery p	ted well or set of voint.	wells proposed to	be drilled or proposed to			
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D			
Owl Draw 27/22 W1NC Fed Com 2F		N 27 26S 27E	155' FSL x 2430' F\	L 2000	5000	5500			
IV. Central Delivery Po V. Anticipated Schedul proposed to be recomple	e: Provide the	following information	w 27/22 W1NC F tion for each nev nected to a centr	or recompleted w		9.15.27.9(D)(1) NMAC] proposed to be drilled or			
Well Name	API	Spud Date	TD Reached Date	Completion Commencement					
Owl Draw 27/22 W1NC Fed Com 2h		4/5/22	5/5/22	6/5/22	6/20/2	2 6/20/22			
VII. Operational Prac Subsection A through F	tices: Attaction of 19.15.27.8	ch a complete descr NMAC.	ription of the act	ions Operator wil	l take to comply	t to optimize gas capture. with the requirements of			

	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 eporting area must complete this section.													
☐ Operator certifie capture requirement	s that it is not require for the applicable rep	ed to complete this sec orting area.	tion because Operator is in	compl	iance with its statewide natural gas								
IX. Anticipated Na	tural Gas Production	n:											
W	ell	API	Anticipated Average Natural Gas Rate MCF/D)	Anticipated Volume of Natural Gas for the First Year MCF								
X. Natural Gas Ga	thering System (NGC	GS):											
Operator	Operator System ULSTR of Tie-in Anticipated Gathering Start Date Available Maximum Daily Capacity of System Segment Tie-in												
production operation	ns to the existing or pl	anned interconnect of t	ocation of the well(s), the and the natural gas gathering system which the well(s) will be con	em(s),	ted pipeline route(s) connecting the and the maximum daily capacity of l.								
XII. Line Capacity production volume	The natural gas gath from the well prior to	nering system \square will \square the date of first produc	☐ will not have capacity to g tion.	ather	100% of the anticipated natural gas								
XIII. Line Pressure natural gas gathering	e. Operator □ does □ g system(s) described	does not anticipate the above will continue to	at its existing well(s) connect meet anticipated increases in	ted to to	the same segment, or portion, of the pressure caused by the new well(s).								
☐ Attach Operator'	s plan to manage prod	luction in response to t	he increased line pressure.										
Section 2 as provide	ed in Paragraph (2) of	rts confidentiality purs Subsection D of 19.15. he basis for such assert	27.9 NMAC, and attaches a t	SA 19 full de	78 for the information provided in scription 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:

☑ 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:	2/5/22
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

03/10/2022

APD ID: 10400033204

Submission Date: 08/29/2018

Highlighted data reflects the most recent changes

Operator Name: MEWBOURNE OIL COMPANY
Well Name: OWL DRAW 27/22 W1NC FED COM

Well Number: 2H

Show Final Text

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Geologic Formations

Formation	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
287667	UNKNOWN	3181	27	27		NONE	N
287675	RUSTLER	2831	350	350	ANHYDRITE, DOLOMITE	USEABLE WATER	N
287669	TOP SALT	2706	475	475	SALT	NONE	N
287670	TANSILL	1081	2100	2100	DOLOMITE	NATURAL GAS, OIL	N
287671	LAMAR	1001	2180	2180	LIMESTONE	NATURAL GAS, OIL	N
292602	BELL CANYON	966	2215	2215	SANDSTONE	NATURAL GAS, OIL	N
287665	BONE SPRING	-2579	5760	5760	LIMESTONE, SHALE	NATURAL GAS, OIL	N
292603	WOLFCAMP	-5624	8805	8805	SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M Rating Depth: 19166

Equipment: Annular, Pipe Ram, Blind Ram

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP to the choke manifold. Anchors are not required by manufacturer. A variance is also requested for the use of a multi-bowl wellhead. See attached schematics.

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

Choke Diagram Attachment:

Owl_Draw_27_22_W1NC_Fed_Com_2H_5M_BOPE_Choke_Diagram_20180828153758.pdf
Owl_Draw_27_22_W1NC_Fed_Com_2H_Flex_Line_Specs_20180828153759.pdf

Well Name: OWL DRAW 27/22 W1NC FED COM Well Number: 2H

Owl_Draw_27_22_W1NC_Fed_Com_2H_5M_BOPE_Choke_Diagram_20180828153758.pdf

Owl_Draw_27_22_W1NC_Fed_Com_2H_Flex_Line_Specs_20180828153759.pdf

BOP Diagram Attachment:

 $Owl_Draw_27_22_W1NC_Fed_Com_2H_5M_BOPE_Schematic_20180828153812.pdf$

Owl_Draw_27_22_W1NC_Fed_Com_2H_Multi_Bowl_WH_20180828153813.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	425	0	425	3208		425	H-40	48	ST&C	3.96	8.9	DRY	15.7 8	DRY	26.5 2
2	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	2105	0	2105	3208		2105	J-55	36	LT&C	1.85	3.22	DRY	5.98	DRY	7.44
3	PRODUCTI ON	8.75	7.0	NEW	API	N	0	9300	0	9133	3208		9300	P- 110	26	LT&C	1.64	2.23	DRY	2.67	DRY	3.43
4	LINER	6.12 5	4.5	NEW	API	N	8601	19166	8595	9168			10565	P- 110	13.5	LT&C	1.72	2	DRY	2.37	DRY	2.96

Casing Attachments

Casing ID: 1 String Type: SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Owl_Draw_27_22_W1NC_Fed_Com_2H_Csg_Assumptions_20180828154532.pdf

Well Name: OWL DRAW 27/22 W1NC FED COM Well Number: 2H

Casing ID: 2 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Owl_Draw_27_22_W1NC_Fed_Com_2H_Csg_Assumptions_20180828154544.pdf

Casing ID: 3 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Owl_Draw_27_22_W1NC_Fed_Com_2H_Csg_Assumptions_20180828154551.pdf

Casing ID: 4 String Type:LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Owl_Draw_27_22_W1NC_Fed_Com_2H_Csg_Assumptions_20180828154601.pdf

Section 4 - Cement

Well Name: OWL DRAW 27/22 W1NC FED COM Well Number: 2H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	234	155	2.12	12.5	329	100	Class C	Gel, Salt, LCM, Extender
SURFACE	Tail		234	425	200	1.34	14.8	268	100	Class C	Salt, LCM
INTERMEDIATE	Lead		0	1450	280	2.12	12.5	594	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		1450	2105	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	3155	1905	2539	65	2.12	12.5	138	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		2539	3155	100	1.34	14.8	134	25	Class C	Retarder
PRODUCTION	Lead	3155	3155	6802	325	2.12	12.5	689	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		6802	9300	400	1.18	15.6	472	25	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		8601	1916 6	425	2.97	11.2	1262	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: Lost circulation material Sweeps Mud scavengers in surface hole

Describe the mud monitoring system utilized: Visual monitoring

Circulating Medium Table

Well Name: OWL DRAW 27/22 W1NC FED COM

Well Number: 2H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	НА	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	425	SPUD MUD	8.6	8.8							
425	2105	SALT SATURATED	10	10							
2105	9133	WATER-BASED MUD	8.6	9.7							
9133	9168	OIL-BASED MUD	10	12							MW up to 13.0 ppg may be required for shale control. The highest mud weight needed to balance formation is expected to be 12.0 ppg.

Section 6 - Test, Logging, Coring

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

Will run GR/CNL from KOP (8601') to surface

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

CNL,DS,GR,MWD,MUDLOG

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5721 Anticipated Surface Pressure: 3938.78

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:

Owl_Draw_27_22_W1NC_Fed_Com_2H_H2S_Plan_20180828155459.pdf

Well Name: OWL DRAW 27/22 W1NC FED COM Well Number: 2H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

 $Owl_Draw_27_22_W1NC_Fed_Com_2H_Dir_Plot_20180828155527.pdf$

Owl_Draw_27_22_W1NC_Fed_Com_2H_Dir_Plan_20180828155529.pdf

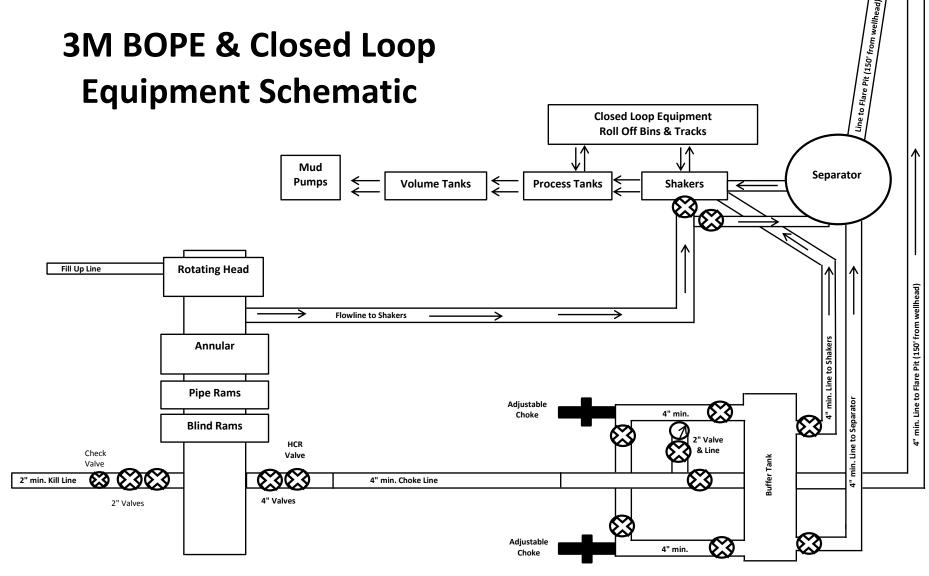
Other proposed operations facets description:

Other proposed operations facets attachment:

Owl_Draw_27_22_W1NC_Fed_Com_2H_Drlg_Program_20180828155555.doc

Owl_Draw_27_22_W1NC_Fed_Com_2H_C_101_20180828155935.pdf

Other Variance attachment:



Drawing not to scale



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:

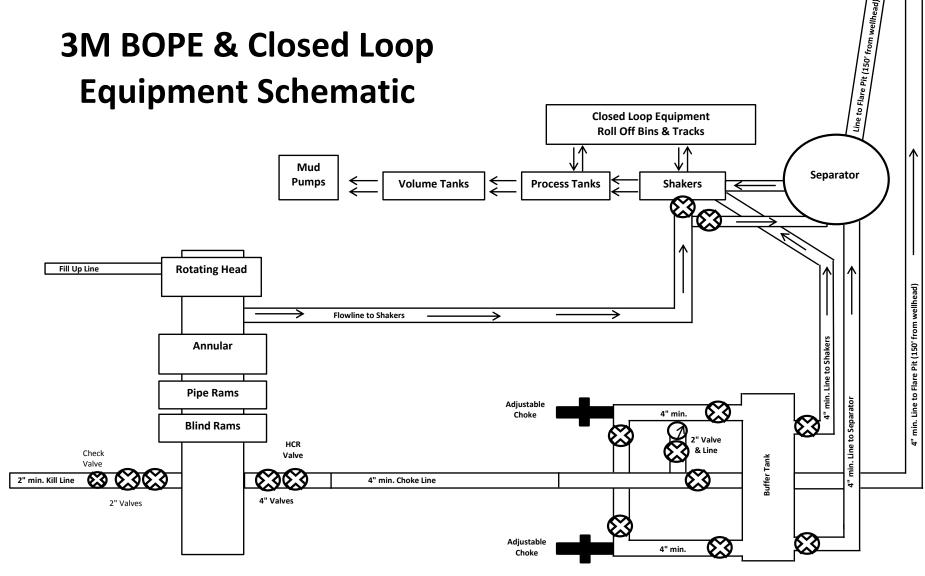
Signature :

PRODUCTION

4/30/2015

Forn PTC - 01 Rev.0 2





Drawing not to scale



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 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:

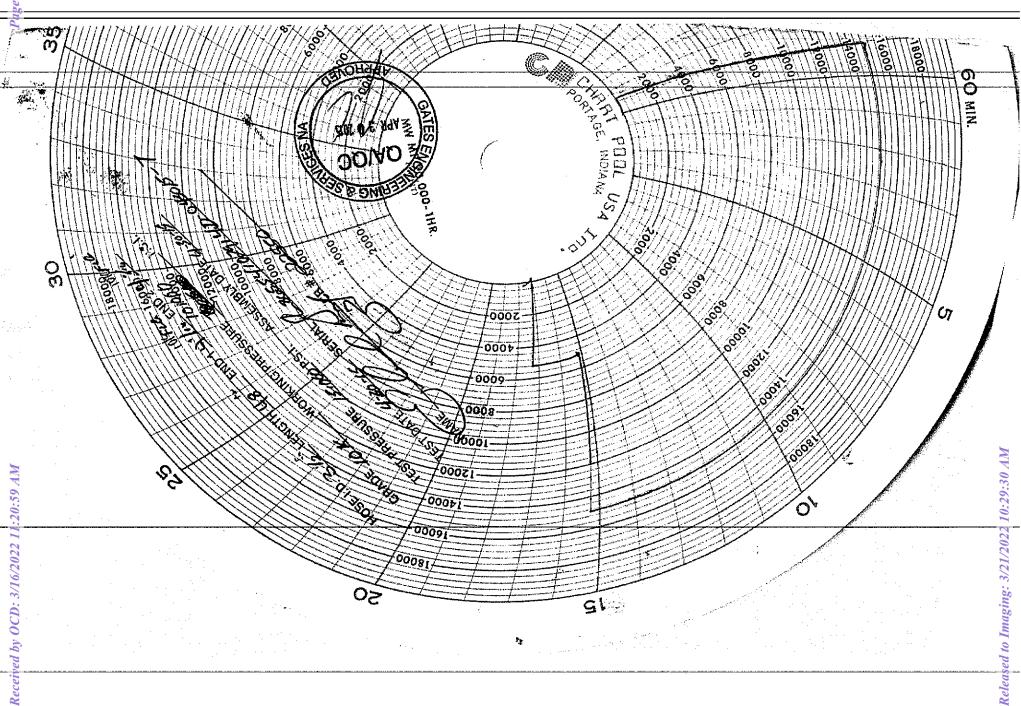
Signature :

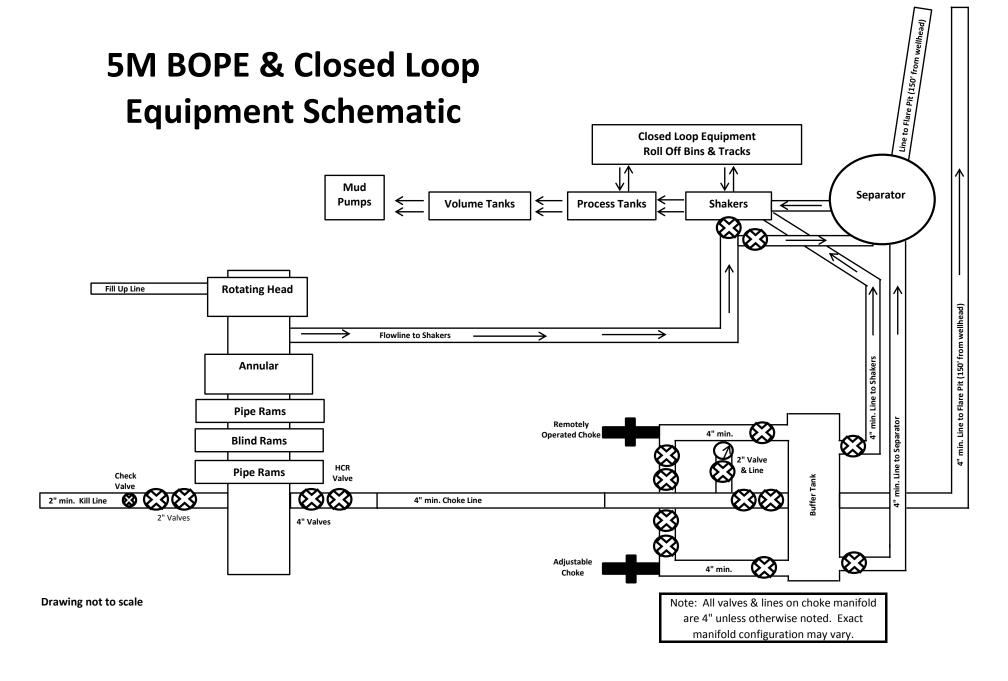
PRODUCTION

4/30/2015

Forn PTC - 01 Rev.0 2









GATES 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 :

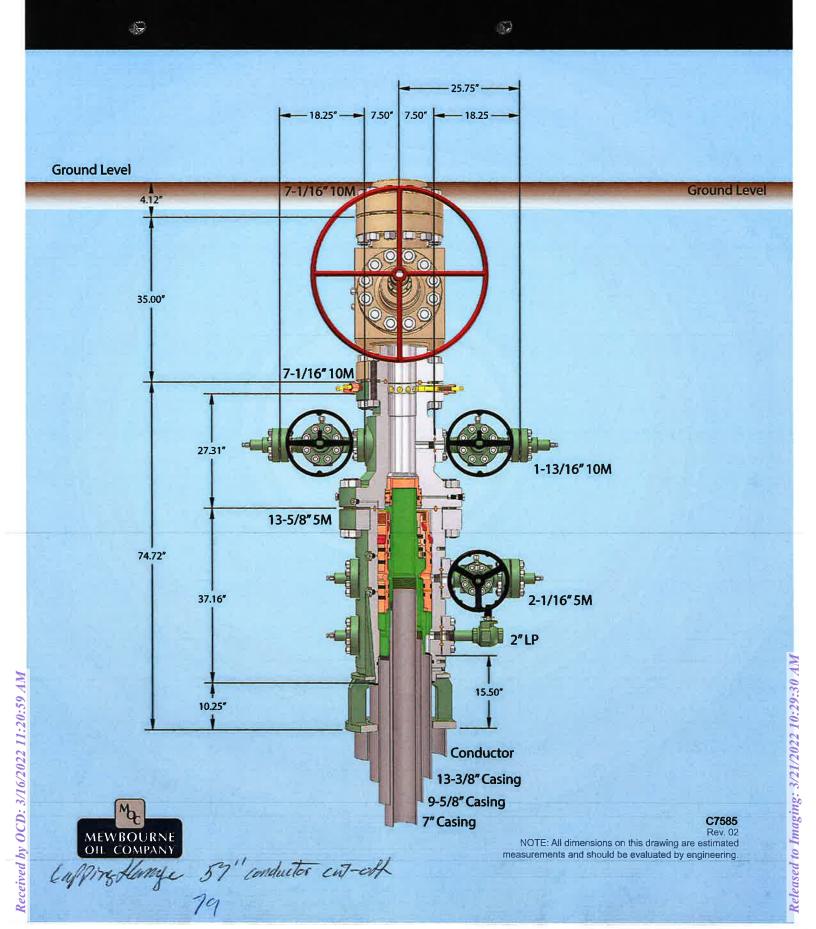
PRODUCTION

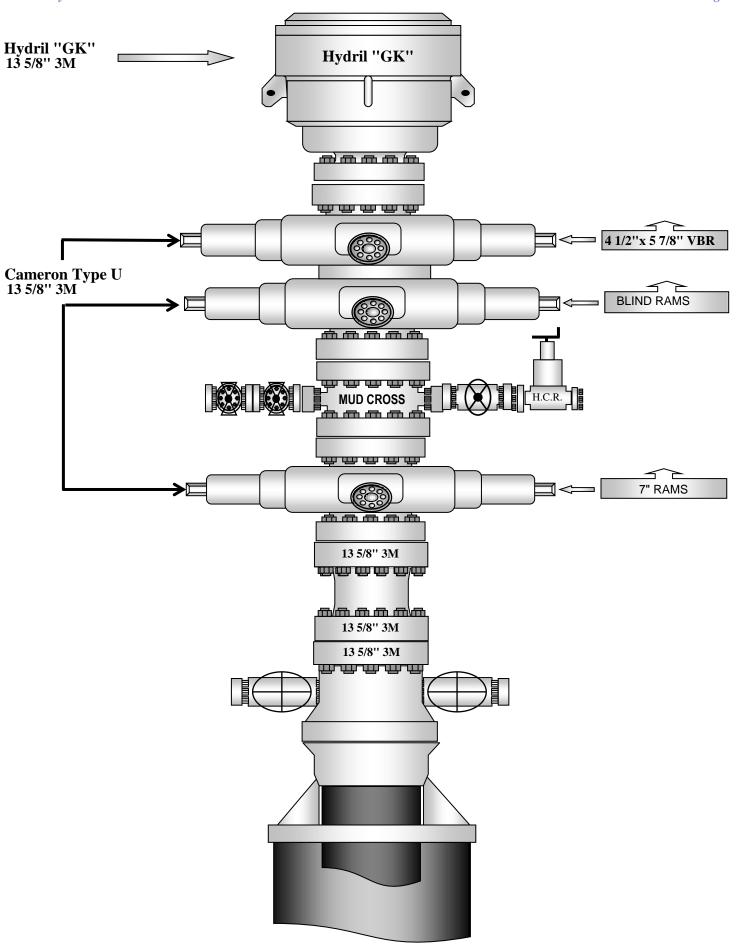
4/30/2015

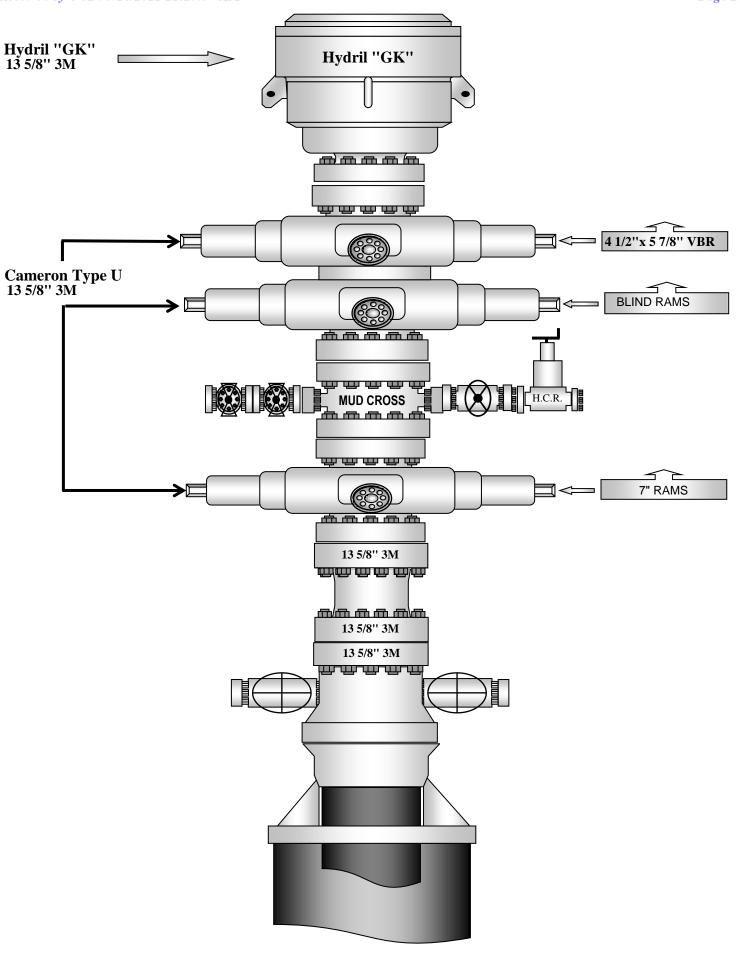
Forn PTC - 01 Rev.0 2



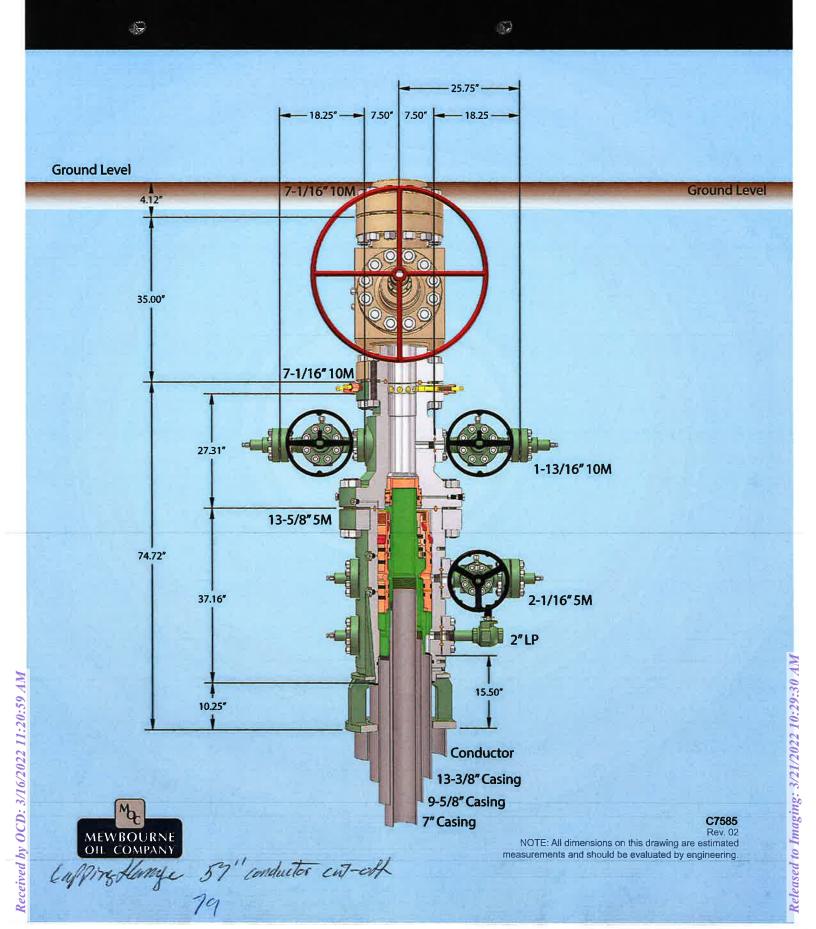
13-5/8" MN-DS Wellhead System

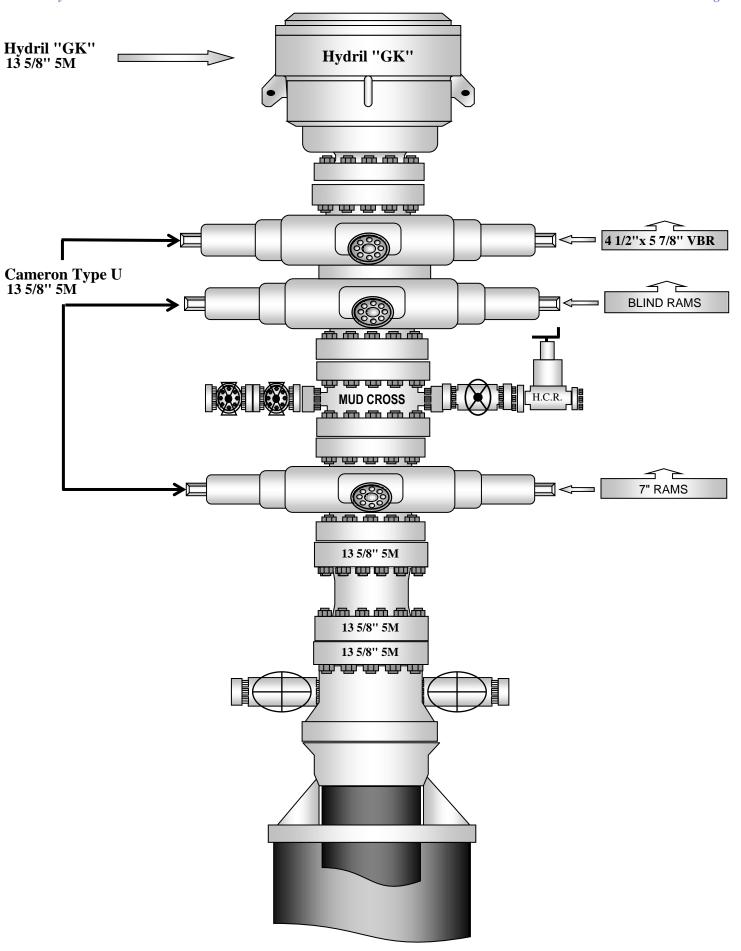




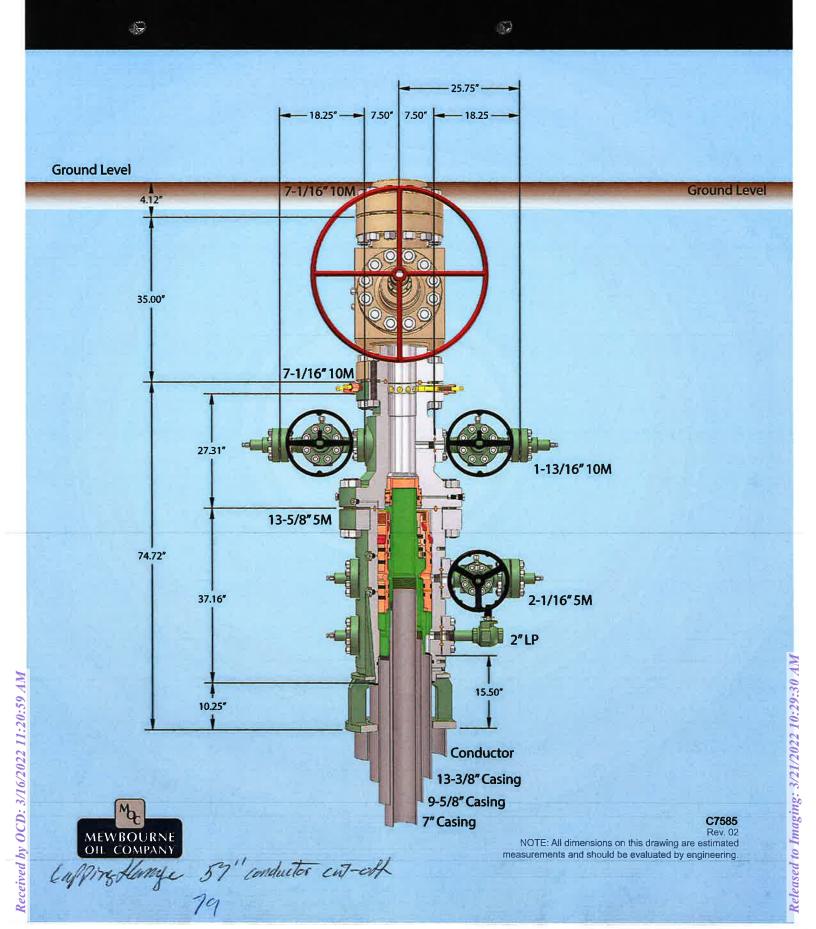


13-5/8" MN-DS Wellhead System





13-5/8" MN-DS Wellhead System



SL: 155' FSL & 2430' FWL, Sec 27 BHL: 330' FNL & 2200' FWL, Sec 22

Casing Program

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'	425'	13.375"	48	H40	STC	3.96	8.90	15.78	26.52
12.25"	0'	2105'	9.625"	36	J55	LTC	1.85	3.22	5.98	7.44
8.75"	0'	9300'	7"	26	HCP110	LTC	1.64	2.23	2.67	3.43
6.125"	8601'	19,166'	4.5"	13.5	P110	LTC	1.72	2.00	2.37	2.96
				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?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back	
500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	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: 155' FSL & 2430' FWL, Sec 27 BHL: 330' FNL & 2200' FWL, Sec 22

Casing Program

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'	425'	13.375"	48	H40	STC	3.96	8.90	15.78	26.52
12.25"	0'	2105'	9.625"	36	J55	LTC	1.85	3.22	5.98	7.44
8.75"	0'	9300'	7"	26	HCP110	LTC	1.64	2.23	2.67	3.43
6.125"	8601'	19,166'	4.5"	13.5	P110	LTC	1.72	2.00	2.37	2.96
				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?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	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: 155' FSL & 2430' FWL, Sec 27 BHL: 330' FNL & 2200' FWL, Sec 22

Casing Program

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'	425'	13.375"	48	H40	STC	3.96	8.90	15.78	26.52
12.25"	0'	2105'	9.625"	36	J55	LTC	1.85	3.22	5.98	7.44
8.75"	0'	9300'	7"	26	HCP110	LTC	1.64	2.23	2.67	3.43
6.125"	8601'	19,166'	4.5"	13.5	P110	LTC	1.72	2.00	2.37	2.96
				BLM Minimum Safety			1.125	1	1.6 Dry	1.6 Dry
				Factor			1.8 Wet	1.8 Wet		

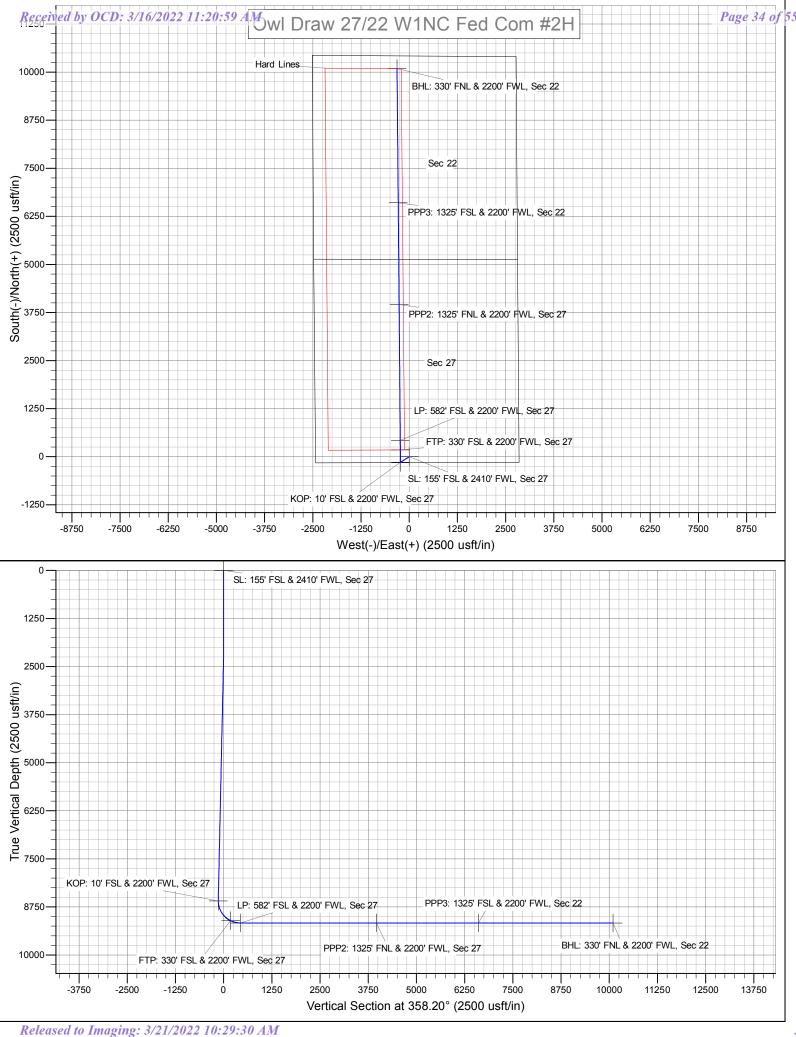
	Y or N					
Is casing new? If used, attach certification as required in Onshore Order #1	Y					
Is casing API approved? If no, attach casing specification sheet.						
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N					
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y					
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y					
Is well located within Capitan Reef?	N					
If yes, does production casing cement tie back a minimum of 50' above the Reef?						
Is well within the designated 4 string boundary.						
Is well located in SOPA but not in R-111-P?	N					
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?						
Is well located in R-111-P and SOPA?	N					
If yes, are the first three strings cemented to surface?						
Is 2 nd string set 100' to 600' below the base of salt?						
Is well located in high Cave/Karst?	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: 155' FSL & 2430' FWL, Sec 27 BHL: 330' FNL & 2200' FWL, Sec 22

Casing Program

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'	425'	13.375"	48	H40	STC	3.96	8.90	15.78	26.52
12.25"	0'	2105'	9.625"	36	J55	LTC	1.85	3.22	5.98	7.44
8.75"	0'	9300'	7"	26	HCP110	LTC	1.64	2.23	2.67	3.43
6.125"	8601'	19,166'	4.5"	13.5	P110	LTC	1.72	2.00	2.37	2.96
				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 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?	11
Is 2 nd string set 100' to 600' below the base of salt?	
	X 7
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

Eddy County, New Mexico NAD 83 Owl Draw 27/22 W1NC Fed Com #2H

Sec 27, T26S, R27E

SL: 155' FSL & 2430' FWL, Sec 27 BHL: 330' FNL & 2200' FWL, Sec 22

Plan: Design #1

Standard Planning Report

24 August, 2018

Planning Report

Hobbs Database:

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83 Owl Draw 27/22 W1NC Fed Com #2H Site:

Well: Sec 27, T26S, R27E

BHL: 330' FNL & 2200' FWL, Sec 22 Wellbore:

Design: Design #1

Site

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Owl Draw 27/22 W1NC Fed Com #2H WELL @ 3208.0usft (Original Well Elev) WELL @ 3208.0usft (Original Well Elev)

Minimum Curvature

Project Eddy County, New Mexico NAD 83

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

North American Datum 1983 New Mexico Eastern Zone

System Datum: Mean Sea Level

Owl Draw 27/22 W1NC Fed Com #2H

Northing: 366,037.00 usft Site Position: Latitude: 32.0062212 From: Мар Easting: 589,356.00 usft Longitude: -104.1784186 **Position Uncertainty:** 0.0 usft Slot Radius: 13-3/16 " **Grid Convergence:** 0.08

Well Sec 27, T26S, R27E

Well Position +N/-S 0.0 usft Northing: 366,037.00 usft Latitude: 32.0062212 +E/-W 0.0 usft Easting: 589,356.00 usft Longitude: -104.1784186

Position Uncertainty 0.0 usft Wellhead Elevation: 3,208.0 usft **Ground Level:** 3,181.0 usft

Wellbore BHL: 330' FNL & 2200' FWL, Sec 22 Field Strength Magnetics **Model Name** Sample Date Declination **Dip Angle** (nT) (°) (°) IGRF2010 8/24/2018 6.96 59.71 47,707

Design Design #1 **Audit Notes:** Version: Phase: **PROTOTYPE** Tie On Depth: 0.0 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (usft) (usft) (usft) (°) 358.20 0.0 0.0 0.0

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	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,263.2	2.45	237.37	2,263.2	-1.9	-2.9	1.50	1.50	0.00	237.37	
8,437.5	2.45	237.37	8,431.9	-144.1	-225.1	0.00	0.00	0.00	0.00	
8,600.8	0.00	0.00	8,595.0	-146.0	-228.0	1.50	-1.50	0.00	180.00	KOP: 10' FSL & 2200'
9,500.8	90.00	359.50	9,168.0	426.9	-233.0	10.00	10.00	0.00	-0.50	
19,166.2	90.00	359.50	9,168.0	10,092.0	-317.0	0.00	0.00	0.00	0.00	BHL: 330' FNL & 2200

Hobbs Database:

Company: Mewbourne Oil Company

Eddy County, New Mexico NAD 83 Project:

Owl Draw 27/22 W1NC Fed Com #2H Site:

Well: Sec 27, T26S, R27E

Design: Design #1

BHL: 330' FNL & 2200' FWL, Sec 22 Wellbore:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Owl Draw 27/22 W1NC Fed Com #2H WELL @ 3208.0usft (Original Well Elev) WELL @ 3208.0usft (Original Well Elev)

nned S	urvey									
м	leasured			Vertical			Vertical	Dogleg	Build	Turn
	Depth (usft)	Inclination (°)	Azimuth (°)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Section (usft)	Rate (°/100usft)	Rate (°/100usft)	Rate (°/100usft)
	` '				, ,	, ,	, ,	, ,	, ,	
	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
8		& 2410' FWL, S		100.0	2.0	0.0		0.00	2.22	2.22
	100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
	200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
	300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
	400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
	500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
	600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
	700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
	800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
	900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
	4 000 0	0.00	0.00	4 000 0	0.0	0.0	0.0	0.00	0.00	0.00
	1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
	1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
	1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
	1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
	1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
	1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
	1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
	1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
	1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
	1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
	2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
	2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
	2,200.0	1.50	237.37	2,200.0	-0.7	-1.1	-0.7	1.50	1.50	0.00
	2,263.2	2.45	237.37	2,263.2	-1.9	-2.9	-1.8	1.50	1.50	0.00
	2,300.0	2.45	237.37	2,299.9	-2.7	-4.3	-2.6	0.00	0.00	0.00
	2,400.0	2.45	237.37	2,399.8	-5.0	-7.9	-4.8	0.00	0.00	0.00
	2,500.0	2.45	237.37	2,499.7	-7.3	-11.5	- 7 .0	0.00	0.00	0.00
	2,600.0	2.45	237.37	2,599.6	-7.5 -9.6	-15.1	-9.2	0.00	0.00	0.00
	2,700.0	2.45	237.37	2,699.6	-11.9	-18.6	-9.2 -11.4	0.00	0.00	0.00
	2,700.0	2.45	237.37	2,799.5	-14.2	-22.2	-11.4	0.00	0.00	0.00
	2,000.0	2.40	231.31	2,799.5	-14.2	-22.2	-13.5	0.00	0.00	0.00
	2,900.0	2.45	237.37	2,899.4	-16.5	-25.8	-15.7	0.00	0.00	0.00
	3,000.0	2.45	237.37	2,999.3	-18.9	-29.4	-17.9	0.00	0.00	0.00
	3,100.0	2.45	237.37	3,099.2	-21.2	-33.0	-20.1	0.00	0.00	0.00
	3,200.0	2.45	237.37	3,199.1	-23.5	-36.6	-22.3	0.00	0.00	0.00
	3,300.0	2.45	237.37	3,299.0	-25.8	-40.2	-24.5	0.00	0.00	0.00
	2 400 0	2.45	227.27	2 200 0	20.4	42.0	26.7	0.00	0.00	0.00
	3,400.0	2.45	237.37	3,398.9	-28.1	-43.8	-26.7	0.00	0.00	0.00
	3,500.0	2.45	237.37	3,498.8	-30.4	-47.4	-28.9	0.00	0.00	0.00
	3,600.0	2.45	237.37	3,598.7	-32.7	-51.0	-31.1	0.00	0.00	0.00
	3,700.0	2.45	237.37	3,698.6	-35.0	-54.6	-33.2	0.00	0.00	0.00
	3,800.0	2.45	237.37	3,798.5	-37.3	-58.2	-35.4	0.00	0.00	0.00
	3,900.0	2.45	237.37	3,898.5	-39.6	-61.8	-37.6	0.00	0.00	0.00
	4,000.0	2.45	237.37	3,998.4	-41.9	-65.4	-39.8	0.00	0.00	0.00
	4,100.0	2.45	237.37	4,098.3	-44.2	-69.0	-42.0	0.00	0.00	0.00
	4,200.0	2.45	237.37	4,198.2	-46.5	-72.6	-44.2	0.00	0.00	0.00
	4,300.0	2.45	237.37	4,298.1	-48.8	-76.2	-46.4	0.00	0.00	0.00
	4,400.0	2.45	237.37	4,398.0	-51.1	-79.8	-48.6	0.00	0.00	0.00
	4,500.0	2.45	237.37	4,497.9	-53.4	-83.4	-50.8	0.00	0.00	0.00
	4,600.0	2.45	237.37	4,597.8	-55.7	-87.0	-53.0	0.00	0.00	0.00
	4,700.0	2.45	237.37	4,697.7	-58.0	-90.6	-55.1	0.00	0.00	0.00
	4,800.0	2.45	237.37	4,797.6	-60.3	-94.2	-57.3	0.00	0.00	0.00
	4.900.0	2.45	237.37	4,897.5	-62.6	-97.8	-59.5	0.00	0.00	0.00
	5,000.0	2.45	237.37	4,997.5	-64.9	-101.4	-59.5 -61.7	0.00	0.00	0.00
	5,100.0	2.45	237.37	5,097.4	-67.2	-101.4	-63.9	0.00	0.00	0.00

Hobbs Database: Company:

Project:

Site:

Mewbourne Oil Company

Eddy County, New Mexico NAD 83

Owl Draw 27/22 W1NC Fed Com #2H

Well: Sec 27, T26S, R27E

BHL: 330' FNL & 2200' FWL, Sec 22 Wellbore:

Design: Design #1 Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Owl Draw 27/22 W1NC Fed Com #2H WELL @ 3208.0usft (Original Well Elev) WELL @ 3208.0usft (Original Well Elev)

ssigii.										
nned Surve	у									
Meası Dep (usf	th I	nclination	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
(usi	•,	(°)	()	(usit)	(usit)	(usit)	(usit)	(/ loousit)	(71000311)	(/ loousity
5,	200.0	2.45	237.37	5,197.3	-69.5	-108.6	-66.1	0.00	0.00	0.00
5,	300.0	2.45	237.37	5,297.2	-71.8	-112.2	-68.3	0.00	0.00	0.00
5	400.0	2.45	237.37	5,397.1	-74.1	-115.8	-70.5	0.00	0.00	0.00
,	4 00.0 500.0	2.45	237.37	5,397.1	-74.1 -76.4	-119.4	-70.5 -72.7	0.00	0.00	0.00
	600.0	2.45	237.37	5,596.9	-76. 4 -78.8	-119.4	-72.7 -74.9	0.00	0.00	0.00
	700.0		237.37		-70.0 -81.1	-123.0 -126.6	-74.9 -77.0	0.00	0.00	
		2.45		5,696.8						0.00
5,	0.008	2.45	237.37	5,796.7	-83.4	-130.2	-79.2	0.00	0.00	0.00
5,	900.0	2.45	237.37	5,896.6	-85.7	-133.8	-81.4	0.00	0.00	0.00
6,	0.000	2.45	237.37	5,996.5	-88.0	-137.4	-83.6	0.00	0.00	0.00
	100.0	2.45	237.37	6,096.4	-90.3	-141.0	-85.8	0.00	0.00	0.00
	200.0	2.45	237.37	6,196.4	-92.6	-144.6	-88.0	0.00	0.00	0.00
	300.0	2.45	237.37	6,296.3	-94.9	-148.2	-90.2	0.00	0.00	0.00
	400.0	2.45	237.37	6,396.2	-97.2	-151.8	-92.4	0.00	0.00	0.00
	500.0	2.45	237.37	6,496.1	-99.5	-155.4	-94.6	0.00	0.00	0.00
	600.0	2.45	237.37	6,596.0	-101.8	-159.0	-96.7	0.00	0.00	0.00
6,	700.0	2.45	237.37	6,695.9	-104.1	-162.6	-98.9	0.00	0.00	0.00
6,	0.008	2.45	237.37	6,795.8	-106.4	-166.2	-101.1	0.00	0.00	0.00
0	000 0	0.45	007.07	0.005.7	400.7	400.7	400.0	0.00	0.00	0.00
	900.0	2.45	237.37	6,895.7	-108.7	-169.7	-103.3	0.00	0.00	0.00
	0.000	2.45	237.37	6,995.6	-111.0	-173.3	-105.5	0.00	0.00	0.00
	100.0	2.45	237.37	7,095.5	-113.3	-176.9	-107.7	0.00	0.00	0.00
	200.0	2.45	237.37	7,195.4	-115.6	-180.5	-109.9	0.00	0.00	0.00
7,	300.0	2.45	237.37	7,295.4	-117.9	-184.1	-112.1	0.00	0.00	0.00
7	400.0	2.45	237.37	7,395.3	-120.2	-187.7	-114.3	0.00	0.00	0.00
	500.0	2.45	237.37	7,495.2	-120.2	-191.3	-114.5	0.00	0.00	0.00
	600.0		237.37	,	-124.8	-191.3	-118.6		0.00	
		2.45		7,595.1				0.00		0.00
	700.0	2.45	237.37	7,695.0	-127.1	-198.5	-120.8	0.00	0.00	0.00
7,	0.008	2.45	237.37	7,794.9	-129.4	-202.1	-123.0	0.00	0.00	0.00
7.	900.0	2.45	237.37	7,894.8	-131.7	-205.7	-125.2	0.00	0.00	0.00
8.	0.000	2.45	237.37	7,994.7	-134.0	-209.3	-127.4	0.00	0.00	0.00
	100.0	2.45	237.37	8,094.6	-136.3	-212.9	-129.6	0.00	0.00	0.00
	200.0	2.45	237.37	8,194.5	-138.6	-216.5	-131.8	0.00	0.00	0.00
	300.0	2.45	237.37	8,294.4	-141.0	-220.1	-134.0	0.00	0.00	0.00
	400.0	2.45	237.37	8,394.3	-143.3	-223.7	-136.2	0.00	0.00	0.00
	437.5	2.45	237.37	8,431.9	-144.1	-225.1	-137.0	0.00	0.00	0.00
	500.0	1.51	237.37	8,494.3	-145.3	-226.9	-138.1	1.50	-1.50	0.00
	600.0	0.01	237.37	8,594.3	-146.0	-228.0	-138.8	1.50	-1.50	0.00
8,	8.006	0.00	0.00	8,595.0	-146.0	-228.0	-138.8	1.50	-1.50	0.00
KOP:	10' FSL 8	k 2200' FWL, S	Sec 27							
		,								
	700.0	9.92	359.50	8,693.8	-137.4	-228.1	-130.2	10.00	10.00	0.00
	0.008	19.92	359.50	8,790.3	-111.7	-228.3	-104.5	10.00	10.00	0.00
	900.0	29.92	359.50	8,880.8	-69.6	-228.7	-62.4	10.00	10.00	0.00
	0.000	39.92	359.50	8,962.7	-12.5	-229.2	-5.3	10.00	10.00	0.00
9,	100.0	49.92	359.50	9,033.5	58.1	-229.8	65.3	10.00	10.00	0.00
0	200.0	E0.00	250.50	9,090.8	139.8	-230.5	147.0	10.00	10.00	0.00
	200.0	59.92	359.50							
	239.9	63.91	359.50	9,109.6	175.0	-230.8	182.1	10.00	10.00	0.00
		& 2200' FWL,								
	300.0	69.92	359.50	9,133.2	230.3	-231.3	237.4	10.00	10.00	0.00
9,	400.0	79.92	359.50	9,159.2	326.7	-232.1	333.8	10.00	10.00	0.00
	500.0	89.92	359.50	9,168.0	426.2	-233.0	433.3	10.00	10.00	0.00
	500.7	90.00	359.50	9,168.0	426.9	-233.0	434.0	10.00	10.00	0.00
LP: 5	82' FSL &	2200' FWL, S	ec 27							
	600.0	90.00	359.50	9,168.0	526.2	-233.8	533.2	0.00	0.00	0.00
0	700.0	90.00	359.50	9,168.0	626.2	-234.7	633.2	0.00	0.00	0.00

Database: Company:

Wellbore:

Hobbs

Mewbourne Oil Company

BHL: 330' FNL & 2200' FWL, Sec 22

Project: Eddy County, New Mexico NAD 83
Site: Owl Draw 27/22 W1NC Fed Com #2H

Well: Sec 27, T26S, R27E

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Owl Draw 27/22 W1NC Fed Com #2H WELL @ 3208.0usft (Original Well Elev) WELL @ 3208.0usft (Original Well Elev)

Grid

lanned 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)
9,800.0 9,900.0	90.00 90.00	359.50 359.50	9,168.0 9,168.0	726.1 826.1	-235.6 -236.5	733.2 833.2	0.00 0.00	0.00 0.00	0.00 0.00
10,000.0	90.00	359.50	9,168.0	926.1	-237.3	933.1	0.00	0.00	0.00
10,100.0	90.00	359.50	9,168.0	1,026.1	-238.2	1,033.1	0.00	0.00	0.00
10,200.0	90.00	359.50	9,168.0	1,126.1	-239.1	1,133.1	0.00	0.00	0.00
10,300.0	90.00	359.50	9,168.0	1,226.1	-239.9	1,233.1	0.00	0.00	0.00
10,400.0	90.00	359.50	9,168.0	1,326.1	-240.8	1,333.0	0.00	0.00	0.00
10,500.0	90.00	359.50	9,168.0	1,426.1	-241.7	1,433.0	0.00	0.00	0.00
10,600.0	90.00	359.50	9,168.0	1,526.1	-242.5	1,533.0	0.00	0.00	0.00
10,700.0	90.00	359.50	9,168.0	1,626.1	-243.4	1,633.0	0.00	0.00	0.00
10,800.0	90.00	359.50	9,168.0	1,726.1	-244.3	1,732.9	0.00	0.00	0.00
10,900.0	90.00	359.50	9,168.0	1,826.1	-245.1	1,832.9	0.00	0.00	0.00
11,000.0	90.00	359.50	9,168.0	1,926.1	-246.0	1,932.9	0.00	0.00	0.00
11,100.0	90.00 90.00	359.50	9,168.0 9,168.0	2,026.1	-246.9	2,032.9 2,132.8	0.00 0.00	0.00 0.00	0.00 0.00
11,200.0		359.50		2,126.1	-247.8				
11,300.0 11,400.0	90.00 90.00	359.50 359.50	9,168.0 9,168.0	2,226.1 2,326.1	-248.6 -249.5	2,232.8 2,332.8	0.00 0.00	0.00 0.00	0.00 0.00
11,500.0	90.00	359.50	9,168.0	2,426.1	-250.4	2,432.7	0.00	0.00	0.00
11,600.0	90.00	359.50	9,168.0	2,526.1	-251.2	2,532.7	0.00	0.00	0.00
11,700.0	90.00	359.50	9,168.0	2,626.1	-251.2	2,632.7	0.00	0.00	0.00
11,800.0	90.00	359.50	9,168.0	2,726.1	-253.0	2,732.7	0.00	0.00	0.00
11,900.0	90.00	359.50	9,168.0	2,720.1	-253.8	2,732.7	0.00	0.00	0.00
12,000.0	90.00	359.50	9,168.0	2,926.1	-254.7	2,932.6	0.00	0.00	0.00
12,100.0	90.00	359.50	9,168.0	3,026.1	-255.6	3,032.6	0.00	0.00	0.00
12,200.0	90.00	359.50	9,168.0	3,126.1	-256.4	3,132.6	0.00	0.00	0.00
12,300.0	90.00	359.50	9,168.0	3,226.1	-257.3	3,232.5	0.00	0.00	0.00
12,400.0	90.00	359.50	9,168.0	3,326.0	-258.2	3,332.5	0.00	0.00	0.00
12,500.0	90.00	359.50	9,168.0	3,426.0	-259.1	3,432.5	0.00	0.00	0.00
12,600.0	90.00	359.50	9,168.0	3,526.0	-259.9	3,532.5	0.00	0.00	0.00
12,700.0	90.00	359.50	9,168.0	3,626.0	-260.8	3,632.4	0.00	0.00	0.00
12,800.0	90.00	359.50	9,168.0	3,726.0	-261.7	3,732.4	0.00	0.00	0.00
12,900.0	90.00	359.50	9,168.0	3,826.0	-262.5	3,832.4	0.00	0.00	0.00
13,000.0	90.00	359.50	9,168.0	3,926.0	-263.4	3,932.4	0.00	0.00	0.00
13,027.0	90.00	359.50	9,168.0	3,953.0	-263.6	3,959.3	0.00	0.00	0.00
	FNL & 2200' FW	•							
13,100.0	90.00	359.50	9,168.0	4,026.0	-264.3	4,032.3	0.00	0.00	0.00
13,200.0	90.00	359.50	9,168.0	4,126.0	-265.1	4,132.3	0.00	0.00	0.00
13,300.0	90.00	359.50	9,168.0	4,226.0	-266.0	4,232.3	0.00	0.00	0.00
13,400.0	90.00	359.50	9,168.0	4,326.0	-266.9	4,332.3	0.00	0.00	0.00
13,500.0	90.00	359.50	9,168.0	4,426.0	-267.7	4,432.2	0.00	0.00	0.00
13,600.0	90.00	359.50	9,168.0	4,526.0	-268.6	4,532.2	0.00	0.00	0.00
13,700.0	90.00	359.50	9,168.0	4,626.0	-269.5	4,632.2	0.00	0.00	0.00
13,800.0	90.00	359.50	9,168.0	4,726.0	-270.4	4,732.2	0.00	0.00	0.00
13,900.0	90.00	359.50	9,168.0	4,826.0	-271.2	4,832.1	0.00	0.00	0.00
14,000.0 14,100.0	90.00 90.00	359.50 359.50	9,168.0 9,168.0	4,926.0 5,026.0	-272.1 -273.0	4,932.1 5,032.1	0.00	0.00 0.00	0.00 0.00
							0.00		
14,200.0 14,300.0	90.00 90.00	359.50 359.50	9,168.0 9,168.0	5,126.0 5,226.0	-273.8 -274.7	5,132.1 5,232.0	0.00 0.00	0.00 0.00	0.00 0.00
14,400.0	90.00	359.50	9,168.0	5,326.0	-275.6	5,332.0	0.00	0.00	0.00
14,500.0	90.00	359.50	9,168.0	5,426.0	-276.4	5,432.0	0.00	0.00	0.00
14,600.0	90.00	359.50	9,168.0	5,526.0	-270.4	5,432.0	0.00	0.00	0.00
	90.00	359.50	9,168.0	5,626.0	-277.3	5,631.9	0.00	0.00	0.00
14,700.0									

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Owl Draw 27/22 W1NC Fed Com #2H

Well: Sec 27, T26S, R27E

Wellbore: BHL: 330' FNL & 2200' FWL, Sec 22

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Owl Draw 27/22 W1NC Fed Com #2H WELL @ 3208.0usft (Original Well Elev) WELL @ 3208.0usft (Original Well Elev)

Grid

nned 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	90.00	359.50	9,168.0	5,826.0	-279.9	5,831.9	0.00	0.00	0.00
15,000.0	90.00	359.50	9,168.0	5,926.0	-280.8	5,931.8	0.00	0.00	0.00
15,100.0	90.00	359.50	9,168.0	6,025.9	-281.7	6,031.8	0.00	0.00	0.00
15,200.0	90.00	359.50	9,168.0	6,125.9	-282.5	6,131.8	0.00	0.00	0.00
15,300.0	90.00	359.50	9,168.0	6,225.9	-283.4	6,231.8	0.00	0.00	0.00
15,400.0	90.00	359.50	9,168.0	6,325.9	-284.3	6,331.7	0.00	0.00	0.00
15,500.0	90.00	359.50	9,168.0	6,425.9	-285.1	6,431.7	0.00	0.00	0.00
15,600.0	90.00	359.50	9,168.0	6,525.9	-286.0	6,531.7	0.00	0.00	0.00
15,676.1	90.00	359.50	9,168.0	6,602.0	-286.7	6,607.7	0.00	0.00	0.00
PPP3: 1325'	FSL & 2200' FW	L, Sec 22							
15,700.0	90.00	359.50	9,168.0	6,625.9	-286.9	6,631.7	0.00	0.00	0.00
15,800.0	90.00	359.50	9,168.0	6,725.9	-287.7	6,731.6	0.00	0.00	0.00
15,900.0	90.00	359.50	9,168.0	6,825.9	-288.6	6,831.6	0.00	0.00	0.00
16,000.0	90.00	359.50	9,168.0	6,925.9	-289.5	6,931.6	0.00	0.00	0.00
16,100.0	90.00	359.50	9,168.0	7,025.9	-290.3	7,031.6	0.00	0.00	0.00
16,200.0	90.00	359.50	9,168.0	7,125.9	-291.2	7,131.5	0.00	0.00	0.00
16,300.0	90.00	359.50	9,168.0	7,225.9	-292.1	7,231.5	0.00	0.00	0.00
16,400.0	90.00	359.50	9,168.0	7,325.9	-293.0	7,331.5	0.00	0.00	0.00
16,500.0	90.00	359.50	9,168.0	7,425.9	-293.8	7,431.5	0.00	0.00	0.00
16,600.0	90.00	359.50	9,168.0	7,525.9	-294.7	7,531.4	0.00	0.00	0.00
16,700.0	90.00	359.50	9,168.0	7,625.9	-295.6	7,631.4	0.00	0.00	0.00
16,800.0	90.00	359.50	9,168.0	7,725.9	-296.4	7,731.4	0.00	0.00	0.00
16,900.0	90.00	359.50	9,168.0	7,825.9	-297.3	7,831.4	0.00	0.00	0.00
17,000.0	90.00	359.50	9,168.0	7,925.9	-298.2	7,931.3	0.00	0.00	0.00
17,100.0	90.00	359.50	9,168.0	8,025.9	-299.0	8,031.3	0.00	0.00	0.00
17,200.0	90.00	359.50	9,168.0	8,125.9	-299.9	8,131.3	0.00	0.00	0.00
17,300.0	90.00	359.50	9,168.0	8,225.9	-300.8	8,231.3	0.00	0.00	0.00
17,400.0	90.00	359.50	9,168.0	8,325.9	-301.6	8,331.2	0.00	0.00	0.00
17,500.0	90.00	359.50	9,168.0	8,425.9	-302.5	8,431.2	0.00	0.00	0.00
17,600.0	90.00	359.50	9,168.0	8,525.9	-303.4	8,531.2	0.00	0.00	0.00
17,700.0	90.00	359.50	9,168.0	8,625.8	-304.3	8,631.1	0.00	0.00	0.00
17,800.0	90.00	359.50	9,168.0	8,725.8	-305.1	8,731.1	0.00	0.00	0.00
17,900.0	90.00	359.50	9,168.0	8,825.8	-306.0	8,831.1	0.00	0.00	0.00
18,000.0	90.00	359.50	9,168.0	8,925.8	-306.9	8,931.1	0.00	0.00	0.00
18,100.0	90.00	359.50	9,168.0	9,025.8	-307.7	9,031.0	0.00	0.00	0.00
18,200.0	90.00	359.50	9,168.0	9,125.8	-308.6	9,131.0	0.00	0.00	0.00
18,300.0	90.00	359.50	9,168.0	9,225.8	-309.5	9,231.0	0.00	0.00	0.00
18,400.0	90.00	359.50	9,168.0	9,325.8	-310.3	9,331.0	0.00	0.00	0.00
18,500.0	90.00	359.50	9,168.0	9,425.8	-311.2	9,430.9	0.00	0.00	0.00
18,600.0	90.00	359.50	9,168.0	9,525.8	-312.1	9,530.9	0.00	0.00	0.00
18,700.0	90.00	359.50	9,168.0	9,625.8	-312.1	9,630.9	0.00	0.00	0.00
18,800.0	90.00	359.50	9,168.0	9,725.8	-313.8	9,730.9	0.00	0.00	0.00
18,900.0	90.00	359.50	9,168.0	9,825.8	-314.7	9,830.8	0.00	0.00	0.00
19,000.0	90.00	359.50	9,168.0	9,925.8	-314.7	9,930.8	0.00	0.00	0.00
19,100.0	90.00	359.50	9,168.0	10,025.8	-316.4	10,030.8	0.00	0.00	0.00
19,166.2									
19 Inn 2	90.00	359.50	9,168.0	10,092.0	-317.0	10,097.0	0.00	0.00	0.00

Hobbs Database:

Company: Mewbourne Oil Company

Eddy County, New Mexico NAD 83 Project: Owl Draw 27/22 W1NC Fed Com #2H

Site:

Well: Sec 27, T26S, R27E BHL: 330' FNL & 2200' FWL, Sec 22

Design: Design #1

Wellbore:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Owl Draw 27/22 W1NC Fed Com #2H WELL @ 3208.0usft (Original Well Elev) WELL @ 3208.0usft (Original Well Elev)

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SL: 155' FSL & 2410' FV - plan hits target cent - Point	0.00 er	0.00	0.0	0.0	0.0	366,037.00	589,356.00	32.0062212	-104.1784186
KOP: 10' FSL & 2200' F\ - plan hits target cent - Point	0.00 er	0.00	8,595.0	-146.0	-228.0	365,891.00	589,128.00	32.0058207	-104.1791548
FTP: 330' FSL & 2200' F - plan hits target cent - Point	0.00 er	0.00	9,109.6	175.0	-230.8	366,212.00	589,125.21	32.0067032	-104.1791623
BHL: 330' FNL & 2200' F - plan hits target cent - Point	0.00 er	0.00	9,168.0	10,092.0	-317.0	376,129.00	589,039.00	32.0339652	-104.1793949
PPP2: 1325' FNL & 220(- plan hits target cent - Point	0.00 er	0.00	9,168.0	3,953.0	-263.6	369,990.00	589,092.37	32.0170890	-104.1792509
LP: 582' FSL & 2200' FV - plan hits target cent - Point	0.00 er	0.00	9,168.0	426.9	-233.0	366,463.90	589,123.00	32.0073957	-104.1791683
PPP3: 1325' FSL & 220(- plan hits target cent - Point	0.00 er	0.01	9,168.0	6,602.0	-286.7	372,639.00	589,069.34	32.0243711	-104.1793130

Operator Name:	Property Name:	Well Number
Mewbourne Oil Co.	Owl Draw 27/22 W1NC Fed Com	2H

Kick Off Point (KOP)

UL N	Section 27	Township 26S	Range 27E	Lot	Feet 10	From N/S S	Feet 2200	From E/W W	County Eddy
Latitude					Longitude		NAD		
32.0058207					-104.179	1548	83		

First Take Point (FTP)

UL N	Section 27	Township 26S	Range 27E	Lot	Feet 330	From N/S S	Feet 2200	From E/W	County Eddy
Latitu	Latitude						NAD		
32.0067032				-104.179	1623	83			

Last Take Point (LTP)

Is this well an infill well?

UL C	Section 22	Township 26S	Range 27E	Lot	Feet 330	From N/S	Feet 2200	From E/W W	County Eddy
Latitu	Latitude					le		NAD	
32.0339652					-104.	1793949)	83	

Is this well the defining well for the Horizontal Spacing Unit?	N	

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

API#		
30-015-43684		
Operator Name:	Property Name:	Well Number
Mewbourne Oil Co.	Owl Draw 27/22 W2NC Fed Com	2H

KZ 06/27/2018

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: | Mewbourne Oil Company

LEASE NO.: NMNM114971

WELL NAME & NO.: OWL DRAW 27-22 W1NC FED COM 2H

SURFACE HOLE FOOTAGE: 155'/S & 2430'/W **BOTTOM HOLE FOOTAGE** 330'/N & 2200'/W

LOCATION: | Section 27, T.26 S., R.27 E., NMP

COUNTY: Eddy County, New Mexico

COA

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

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, 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 425 feet (a minimum of 70 feet (Eddy 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 minimum required fill of cement behind the 9-5/8 inch intermediate casing which shall be set at approximately 2,105 feet is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.
 Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
 - ❖ In <u>High 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.
- 3. The minimum required fill of cement behind the 7 inch production casing is:

Option 1 (Single Stage):

Cement should tie-back at least 200 feet into previous casing string.
 Operator shall provide method of verification.
 Excess cement calculates to 4%, additional cement might be required.

Option 2:

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

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
- 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. 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.
 - 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
 - Lea County
 Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)
 393-3612
- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 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.

OTA12232021

<u>Hydrogen Sulfide Drilling Operations Plan</u> **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. 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 Cente	er 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
2	Bradley Bishop	575-390-6838
Drilling Foreman	Wesley Noseff	575-441-0729

Operator Name: MEWBOURNE OIL COMPANY

Well Name: OWL DRAW 27/22 W1NC FED COM Well Number: 2H

Waste type: SEWAGE

Waste content description: Human waste & grey water

Amount of waste: 1500 gallons

Waste disposal frequency: Weekly

Safe containment description: 2,000 gallon plastic container

Safe containment attachment:

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

FACILITY

Disposal type description:

Disposal location description: City of Carlsbad Water Treatment facility

Waste type: GARBAGE

Waste content description: Garbage & trash

Amount of waste: 1500 pounds

Waste disposal frequency: One Time Only

Safe containment description: Enclosed trash trailer

Safe containment attachment:

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

FACILITY

Disposal type description:

Disposal location description: Waste Management facility in Carlsbad.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

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? NO

Operator Name: MEWBOURNE OIL COMPANY

Well Number: 2H Well Name: OWL DRAW 27/22 W1NC FED COM

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?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

OwlDraw27 22W1NCFedCom2H wellsitelayout 20180817142640.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:**

Multiple Well Pad Number:

Recontouring attachment:

Drainage/Erosion control construction: None

Drainage/Erosion control reclamation: None

Well pad proposed disturbance

(acres): 4.146

Road proposed disturbance (acres):

0.515

Powerline proposed disturbance

(acres): 0

Pipeline proposed disturbance

(acres): 0

Other proposed disturbance (acres): 0

Total proposed disturbance: 4.661

Well pad interim reclamation (acres):

Road interim reclamation (acres): 0

Road long term disturbance (acres): 0

Powerline interim reclamation (acres): Powerline long term disturbance

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

Other interim reclamation (acres): 0

Total interim reclamation: 0.792

Well pad long term disturbance

(acres): 3.354

(acres): 0

(acres): 0

Other long term disturbance (acres): 0

Total long term disturbance: 3.354

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 90765

CONDITIONS

Operator:	OGRID:
MEWBOURNE OIL CO	14744
P.O. Box 5270	Action Number:
Hobbs, NM 88241	90765
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Notify OCD 24 hours prior to casing & cement	3/21/2022
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	3/21/2022
kpickford	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	3/21/2022
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	3/21/2022
kpickford	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	3/21/2022