Form 3160-5 (June 2015)	•	FORM OMB N Expires: Ja	APPROVED O. 1004-0137 anuary 31, 2018			
		ncD	5. Lease Serial No.			
Do not use th abandoned we	is form for proposals to II. Use form 3160-3 (AP	-02N	6. If Indian, Allottee of	or Tribe Name		
SUBMIT IN	TULU ED	7. If Unit or CA/Agre	ement, Name and/or No.			
1. Type of Well			- CC	ENER	8. Well Name and No.	
🔀 Oil Well 📋 Gas Well 📋 Ot	her		REU	-	HEREFORD 20/2	0 W1OB FED COM 1H
2. Name of Operator MEWBOURNE OIL COMPAN	Contact: IY E-Mail: jlathan@m	JACKIE LAT	ำ เ		9. API Well No. 30-025-46768-0	0-X1
3a. Address P O BOX 5270 HOBBS, NM 88241		3b. Phone N Ph: 575-3	o. (include area code) 93-5905	)	10. Field and Pool or I SCHARB WOLF	Exploratory Area FCAMP (55640)
4. Location of Well (Footage, Sec., 7	C., R., M., or Survey Description	n)			11. County or Parish,	State
Sec 29 T19S R35E SWSE 20 32.624722 N Lat, 103.475174	5FSL 1330FEL W Lon				LEA COUNTY,	NM
12. CHECK THE AJ	PPROPRIATE BOX(ES)	TO INDICA	TE NATURE O	F NOTICE,	REPORT, OR OTH	IER DATA
TYPE OF SUBMISSION			TYPE OF	ACTION		
Notice of Intent	□ Acidize	🗖 Dea	pen	Producti	ion (Start/Resume)	U Water Shut-Off
	Alter Casing	🗖 Нус	Iraulic Fracturing	🗖 Reclama	ation	Well Integrity
Subsequent Report	Casing Repair	🗖 Nev	v Construction	🗖 Recomp	lete	Other Change to Original A
Final Abandonment Notice	Change Plans	🖸 Pluj	g and Abandon	Tempora	arily Abandon	PD
	Convert to Injection		д Васк	U Water D	risposal	
determined that the site is ready for fi Mewbourne Oil Company requ 1) Change well name to Heref 2) Change target zone to Wolf 3) Change casing & cement do See attachments for C-102, dr Please contact Andy Taylor with APProved With See attachments for C-102, dr Please contact Andy Taylor with	inal inspection. Jests approval to make the ord 20/20 W10B Fed Col camp & pool to Scharb W esign as detailed in attack illing program & direction th any questions. M. Co A.	the following c m #1H Volfcamp (55 hed drilling pr hal plan	hanges to the ap ogram. <b>Ca</b>	risba Oper	d Field O ator Cop	ffice y
14. I hereby certify that the foregoing is	true and correct.	36000	1 A L m	· · · · · · · · · · · · · · · · · · ·		
Com	## Electronic Submission For MEWBOL mitted to AFMSS for proce	501396 verifie JRNE OIL CO essing by PRI	d by the BLM Well /PANY, sent to th SCILLA PEREZ on	Information le Hobbs l 02/03/2020 (	System 20PP1181SE)	
Name(Printed/Typed) ANDY TA	/LOR		Title ENGINE	ER		· · · · · · ·
Signature (Electronic S	ubmission)		Date 01/29/20	20		
	THIS SPACE FO		L OR STATE (	OFFICE US	SE	
Approved By_OLABODE AJBOLA			TitlePETROLE	JM ENGINE	ER	Date 02/07/2020
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.						
itle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.						
Instructions on page 2) ** BLM REVI	SED ** BLM REVISED	) ** BLM RE	VISED ** BLM	REVISED	** BLM REVISED	· +46
						•

#### Revisions to Operator-Submitted EC Data for Sundry Notice #501396

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	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lesso:	NMLC070397	NMLC070397
Agreement:		
Operator:	MEWBOURNE OIL COMPANY PO BOX 5270 HOBBS, NM 88241 Ph: 575-393-5905	MEWBOURNE OIL COMPANY P O BOX 5270 HOBBS, NM 88241 Ph: 575.393.5905
Admin Contact:	JACKIE LATHAN AUTHORIZED REPRESENTATIVE E-Mail: jlathan@mewbourne.com	JACKIE LATHAN REGULATORY E-Mail: jlathan@mewbourne.com
	Ph: 575-393-5905	Ph: 575-393-5905
Tech Contact:	ANDY TAYLOR ENGINEER E-Mail: ataylor@mewbourne.com	ANDY TAYLOR ENGINEER E-Mail: ataylor@mewbourne.com
	Ph: 575-393-5905	Ph: 575.393.5905
Location: State: County:	NM LEA	NM LEA
Field/Pool:	PEARL SOUTH; BONE SPRING	SCHARB WOLFCAMP (55640)
Well/Facility:	HEREFORD 29/20 B2OB FED COM 1H Sec 29 T19S R35E Mer NMP SWSE 205FSL 1330FEL	HEREFORD 20/20 W10B FED COM 1H Sec 29 T19S R35E SWSE 205FSL 1330FEL 32.624722 N Lat, 103.475174 W Lon

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Mewbourne Oil Company
LEASE NO.:	NMLC0070397
WELL NAME & NO.:	Hereford 20/20 W1OB Fed Com #1H
SURFACE HOLE FOOTAGE:	205'/S & 1330'/E
<b>BOTTOM HOLE FOOTAGE</b>	100'/N & 1980'/E
LOCATION:	Section 29, T.19 S., R.35 E., NMPM
COUNTY:	Lea County, New Mexico

## COA

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

#### All Previous COAs Still Apply.

#### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the Queen formation. 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 1900 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 <u>8</u>
  <u>hours</u> 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 3450 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.
- 3. The minimum required fill of cement behind the 7-5/8 inch production casing is:
  - 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, submitdocumentation 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.

#### OTA02062020

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# Schlumberger

at. 87758

## **Mewbourne Oil Company**

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PBHL | 100" FNL, 1980" FEL) 21358 MD 10952 TVD 90.78 \* incl 359,54 \* ez 10312 veec

9000

8000

Vertical Section (ft) Azim = 355,92" Scale = 1:2900.00(ft) Origin = 0NI-5, 0EI-W

10000 11000



### 1. Geologic Formations

TVD of target	11,087'	Pilot hole depth	NA
MD at TD:	21,358'	Deepest expected fresh water:	50'

#### Basin

Formation	Depth (TVD)	Water/Mineral Bearing/	Hazards*
	from KB	Target Zone?	
Quaternary Fill	Surface		
Rustler	1819		
Top of Salt	2102		
Castile			
Base of Salt	3228		
Yates	3397		
Seven Rivers	3887		
Queen	4607		
Lamar	5852	Oil/Gas	
Bell Canyon			
Cherry Canyon			
Manzanita Marker			
Brushy Canyon			
Bone Spring	7802	Oil/Gas	
·1 <sup>st</sup> Bone Spring Sand	9350		
2 <sup>nd</sup> Bone Spring Sand	9672		
3rd Bone Spring Sand	10,950		
Abo			
Wolfcamp	11,057	Target Zone	
Devonian			
Ellenburger			
Granite Wash			

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

#### 2. Casing Program

Hole	Casing	g Interval	Csg.	Weight	t Grad	e Conn	. SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	1900'	13.375	" 54.5	J55	STC	1.27	3.07	4.96	8.24
12.25"	0'	3450'	9.625"	36	J55	LTC	1.13	1.96	3.65	4.54
8.75"	0'	11,294'	7.625"	39	P110	FJ	1.60	1.83	1.70	1.97
6.125"	10,544'	21,358'	4.5"	13.5	P110	LTC	1.42	1.66	2.32	2.89
	BLM Mini	mum Safety	Factor 1	.125	1	1.6 Dry	1.6 Dry			
						1.8 Wet	1.8 Wet			

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

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

2

Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

### 3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H <sub>2</sub> 0 gal/ sk	500# Comp. Strength	Slurry Description	
					(hours)		
Surf.	1125	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM	
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder	
Inter.	585	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM	
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder	
Prod.	495	12.5	2.12	11	9	Lead: Class H + Gel + Retarder + Defoamer +	
						Extender	
	400	15.6	1.18	5.2	10	Tail: Class H + Retarder + Fluid Loss + Defoamer	
Liner	440	11.2	2.97	18	16	Class H + Salt + Gel + Fluid Loss + Retarder +	
						Dispersant + Defoamer + Anti-Settling Agent	

A copy of cement test will be available on location at time of cement job providing pump times & compressive strengths.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
Production	3250'	25%
Liner	10,544'	25%

TET-ROMAN MC DOM

#### 4. Pressure Control Equipment

N Variance: N	one						
BOP installed and tested before drilling which hole?	Size?	System Rated WP	ļ	Гуре	~	Tested to:	
	ł		A	nnular	X	2500#	
			Blind Ram X				
12-1/4"	13-5/8"	5M	Pip	e Ram	X	5000#	
			Dou	ble Ram		5000#	
			Other*				

\*Specify if additional ram is utilized.

Drilling Plan

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.

X Formation integrity test will be performed per Onshore Order #2.
 On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.

4

_		
Y	A vari Manif	ance is requested for the use of a flexible choke line from the BOP to Choke old. See attached for specs and hydrostatic test chart.
	Ν	Are anchors required by manufacturer?
Y	A mul installa 30 day	tibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after ation on the surface casing which will cover testing requirements for a maximum of rs. If any seal subject to test pressure is broken the system must be tested.
	•	Provide description here: See attached schematic.

#### 5. Mud Program

TVD		Туре	Weight (ppg) Vis	Viscosity	cosity Water Loss	
From	То					
0	1900'	FW Gel	8.6-8.8	28-34	N/C	
1900'	3450'	Saturated Brine	10.0	28-34	N/C	
3450'	11,068'	Cut Brine	8.6-9.5	28-34	N/C	
11,068 '	11,087'	OBM	10.0-12.0	30-40	<10cc	

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

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

#### 6. Logging and Testing Procedures

Logg	Logging, Coring and Testing.		
X	Will run GR/CNL from KOP (10,544') to surface (horizontal well - vertical portion of		
	hole). Stated logs run will be in the Completion Report and submitted to the BLM.		
	No Logs are planned based on well control or offset log information.		
	Drill stem test? If yes, explain		
	Coring? If yes, explain		

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Addi	tional logs planned	Interval
Х	Gamma Ray	10,544' (KOP) to TD

Der	isity	
CB		
Mu	d log	-
PEZ	C	

#### 7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	6919 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers in surface hole. Weighted mud for possible over-pressure in Wolfcamp formation.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

	H2S is present	•	
X	H2S Plan attached		

#### 8. Other facets of operation

Is this a walking operation? If yes, describe. Will be pre-setting casing? If yes, describe.

#### Attachments

Drilling Plan

6

e analiste

\_\_\_\_ Directional Plan \_\_\_\_ Other, describe





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•'



1/21/2020 11.41 25 AM



## **U. S. Steel Tubular Products**

## 7.625" 39.00lbs/ft (0.500" Wall) P110 HC USS-LIBERTY FJM<sup>®</sup>

	-		
MECHANICAL PROPERTIES	Pipe	USS-LIBERTY FJM®	
Minimum Yield Strength	110,000		psi
Maximum Yield Strength	140,000		psi
Minimum Tensile Strength	125,000	-	psi
DIMENSIONS	Pipe	USS-LIBERTY FJM <sup>®</sup>	
Outside Diameter	7.625	7.625	in.
Wall Thickness	0.500		in.
Inside Diameter	6.625	6.539	in.
Standard Drift	6.500	6.500	in.
Alternate Drift	-	-	in.
Nominal Linear Weight, T&C	39.00	-	lbs/ft
Plain End Weight	38.08	-	lbs/ft
SECTION AREA	Pipe	USS-LIBERTY FJM®	
Critical Area	11.192	6.665	sq. in.
Joint Efficiency	-	59.5	%
PERFORMANCE	Pipe	USS-LIBERTY FJM®	
Minimum Collapse Pressure	12,180	12,180	psi
Minimum Internal Yield Pressure	12,640	12,640	psi
Minimum Pipe Body Yield Strength	1,231,000	-	lbs
Joint Strength	-	733,000	lbs
Compression Rating	-	733,000	lbs
Reference Length	-	12,843	ft
Maximum Uniaxial Bend Rating	-	39.4	deg/100 fi
MAKE-UP DATA	Pipe	USS-LIBERTY FJM®	
Make-Up Loss	-	4.75	in.
Minimum Make-Up Torque	-	14,700	ft-Ibs
Maximum Make-Up Torque	-	20,750	ft-lbs

1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness and Specified Minimum Yield Strength (SMYS).

2. Compressive & Tensile Connection Efficiencies are calculated by dividing the connection critical area by the pipe body area

3. Uniaxial bending rating shown is structural only, and equal to compression efficiency,

4. USS-LIBERTY FJM<sup>TM</sup> connections are optimized for each combination of OD and wall thickness and cannot be interchanged.

5. Torques have been calculated assuming a thread compound factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual tield conditions (e.g. make-up speed, temperature, triread compound, etc.).

6. Reference length is calculated by joint strength divided by nominal plain end weight with 1.5 safety factor.

7. Connection external pressure leak resistance has been verified to 100% API pipe body collapse pressure following the guidelines of API 5C5 Cal III.

#### Legal Notice

USS-LIBERTY FJM® is a trademark of U. S. Steet Corporation, All material contained in this publication is for general information only. This material should not therefore be used or relied upon for any specific application without independent competent professional examination and verification of accuracy, suitability and applicability. Anyone making use of this material does so at their own risk and assumes any and all liability resulting from such use. U.S. Steel disclaims any and all expressed or implied warranties of fitness for any general or particular application.



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) 334-6) 78 Fax: (505) 334-6170 District IV

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



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.

