Form 3160-3 (June 2015)

#### LIMITED STATES DEP RHP

FORM APPROVED OMB No. 1004-0137 Expires: January 31, 2018

UNITED STATES	
PARTMENT OF THE INTERIOR	5. Le
EAU OF LAND MANAGEMENT	NMN

5. Lease Serial No.	
NMNM056428	

BUREAU OF EARD MAIN	AULI	ILIT			111111111111111111111111111111111111111		
APPLICATION FOR PERMIT TO D	RILL	OR F	REENTER		6. If Indian, Allotee	or Tribe	Name
1a. Type of work:	EENTE	ER			7. If Unit or CA Agr	eement,	Name and No.
1b. Type of Well: ✓ Oil Well Gas Well O	ther						
	ingle Z	one L	Multiple Zone		8. Lease Name and V PAVO FRIO 29/30		
10. Type of completion.	mgie z	JIIC [V			FAVO I RIO 29/30	DONL	ED COIVI
					1H		
2. Name of Operator					9. API Well No.		
MEWBOURNE OIL COMPANY					30 015 47611		
3a. Address	3b. P.	hone No	o. (include area cod	(e)	10. Field and Pool, o	-	-
PO Box 5270, Hobbs, NM 88240	(575)	393-59	905		PALMILLO BONE	SPRING	G EAST/BONE
4. Location of Well (Report location clearly and in accordance to	with an	v State 1	requirements.*)		11. Sec., T. R. M. or		d Survey or Area
At surface SESW / 850 FSL / 2445 FWL / LAT 32.713	5134 /	LONG	-104.0975471		SEC 29/T18S/R29I	E/NMP	
At proposed prod. zone LOT 3 / 1980 FSL / 100 FWL / L	AT 32.	716584	46 / LONG -104.1	21505			
14. Distance in miles and direction from nearest town or post off	îce*				12. County or Parish		13. State
10 miles					EDDY		NM
15. Distance from proposed* location to nearest 210 feet	16. N	o of acr	es in lease	17. Spaci	ng Unit dedicated to th	nis well	
property or lease line, ft.	440			640.0			
(Also to nearest drig. unit line, if any)  18. Distance from proposed location*	10 P	roposed	Denth	20 BLM	BIA Bond No. in file		
to nearest well, drilling, completed, applied for, on this lease, ft.			16350 feet				
				FED: NN	11093		
21. Elevations (Show whether DF, KDB, RT, GL, etc.)		-	nate date work will	start*	23. Estimated duration	on	
3451 feet		3/2020			60 days		
	24.	Attach	nments				
The following, completed in accordance with the requirements o	f Onsho	ore Oil a	and Gas Order No. 1	l, and the H	Hydraulic Fracturing ru	ıle per 4	3 CFR 3162.3 <b>-</b> 3
(as applicable)							
1. Well plat certified by a registered surveyor.		Ĭ	4. Bond to cover th	e operation	is unless covered by an	existing	g bond on file (see
2. A Drilling Plan.			Item 20 above).	•			
<ol> <li>A Surface Use Plan (if the location is on National Forest Syste SUPO must be filed with the appropriate Forest Service Office</li> </ol>		ls, the	5. Operator certific		mation and/or plans as	may he i	requested by the
Sol o must be med with the appropriate I ofest service office	-),-		BLM.	seeme mioi	mation and/or plans as		requested by the
25. Signature		,	(Printed/Typed)			Date	
(Electronic Submission)		BRADI	_EY BISHOP / Pt	n: (575) 39	93-5905	03/06/2	2020
Title Regulatory							
regulatory							

Approved by (Signature) Name (Printed/Typed) Date (Electronic Submission) Cody Layton / Ph: (575) 234-5959 09/09/2020 Title Office

Assistant Field Manager Lands & Minerals Carlsbad Field Office

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the

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

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**Approval Date: 09/09/2020** 

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.

Will require a directional survey with the C-104

Surface casing must be set 25' below top of Salt or

Anhydrite in order to seal off protectable water

(Continued on page 2)

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

KP 10/27/2020 GEO Review

\*(Instructions on page 2)

Entered - KMS NMOCD

<u>District 1</u>
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
<u>District II</u>
811 S. Firsl St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

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

District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

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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

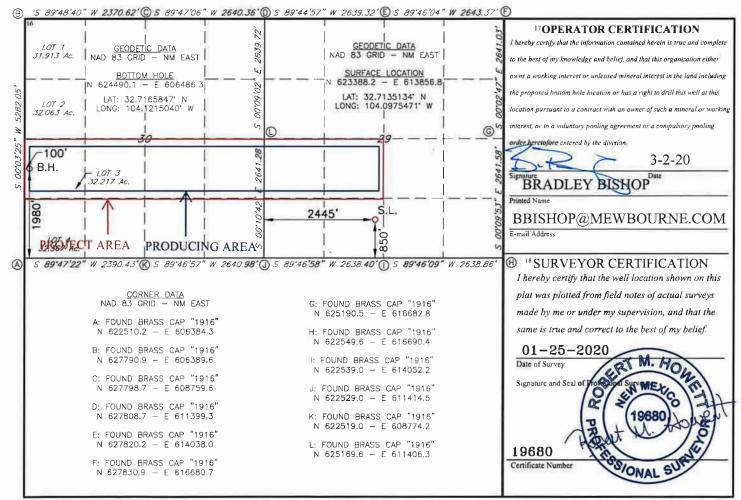
☐ AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

30 015 47611	<sup>2</sup> Pool Code 49553	PALMILLO EAST - BON				
4Property Code 329768	5 Pro	operty Name  /30 B3KL FED COM	6 Well Number 1 H			
<sup>7</sup> OGRID NO. 14744		erator Name E OIL COMPANY	<sup>9</sup> Elevation <b>3451</b>			
14744		face Location	346			

					Surface	Location					
UL or lot no.	Section	Township	Range	Lot Idn	ot Idn Feet from the North/South line Feet From the East/West line						
N	29	18S	29E		850	WEST	EDDY				
			11	Bottom H	lole Location	If Different Fro	om Surface				
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County		
3	30	18S	29E		1980	SOUTH	100	WEST	EDDY		
12 Dedicated Acres	13 Joint	or Infill 14	Consolidation	Code 15 (	Order No.						

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.



Job No.: LS20010051

Inten	t X	As Dril	led										
API#													
-	rator Na vbourne	me: e Oil Co.					perty N o Fric		30 B3KL	Fed	Com		Well Number 1H
Viol. (	Off Doint	(KOD)											I
UL	Section 30	Township	Range	Lot	Feet		From N	N/S	Feet		n E/W	County	
J Latitu	29 <sup>Ide</sup> 716623	18S 	29E		1980 Longitu -104		5 6785		2456	E		Eddy NAD 83	
<u> </u>	110020				101	.000	70100	<u> </u>					
First 7	Section	nt (FTP)	Range	Lot	Feet		From N	1/S	Feet	Fror	n E/W	County	
K Latitu	29	18S	29E		1980 Longitu	ıde	S		2544	W		Eddy NAD	
32.7	716621	12			-104	.097	2454	•				83	
Last T	āke Poin	it (LTP)											
UL <b>L</b>	Section 30	Township 18S	Range 29E	Lot	Feet 1980	Fro S	m N/S	Feet	_	E/W	Coun		
Latitu 32.	rde 716584	16			Longitu		5050	)	<b>'</b>		NAD <b>83</b>		
					•						•		
Is this	s well the	e defining v	vell for th	ie Horiz	zontal Sı	pacin	g Unit?	· [·	Y				
								_					
ls this	well an	infill well?		N									
	ll is yes p ng Unit.	lease prov	ide API if	availab	ole, Opei	rator	Name	and v	vell numbe	r for	Definii	ng well fo	r Horizontal
API#													
Ope	rator Na	me:				Pro	perty N	lame	:				Well Number

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

**OPERATOR'S NAME:** | Mewbourne Oil Company

**LEASE NO.: | NMNM056428** 

WELL NAME & NO.: | PAVO FRIO 29-30 B3KL FED COM 1H

**SURFACE HOLE FOOTAGE:** 850'/S & 2445'/W **BOTTOM HOLE FOOTAGE** 1980'/S & 100'/W

LOCATION: Section 29, T.18 S., R.29 E., NMP COUNTY: EDDY County, New Mexico

COA

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

#### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the Queen, Grayburg, Seven Rivers and San Andres formations. 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 300 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after

- completing the cement job.
- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8** hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The 9-5/8 inch intermediate casing shall be set at approximately 1200 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.
     Excess cement calculates to 22%, additional cement might be required.
- 3. The minimum required fill of cement behind the 7 inch production casing is:

Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Excess cement calculates to 24%, additional cement might be required.

- 4. The minimum required fill of cement behind the 4-1/2 inch production liner is:
  - Cement should tie-back **100 feet** into the previous casing. Operator shall provide method of verification.

## C. PRESSURE CONTROL

- 1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2. 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)

- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per 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. <u>Wait on cement (WOC) for Potash Areas:</u> 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 <u>24</u>

- <u>hours</u>. 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.

Well Name: PAVO FRIO 29/30 B3KL FED COM Well Number: 1H

Is the proposed well in an area containing other mineral resources? POTASH

Is the proposed well in a Helium production area? N Use Existing Well Pad? N New surface disturbance?

Type of Well Pad: MULTIPLE WELL Multiple Well Pad Name: Pavo Number: 3

Well Class: HORIZONTAL Frio 29/30 NM/KL & 29/28 OP

Fed Com wells

Number of Legs: 1

Well Work Type: Drill
Well Type: OIL WELL

**Describe Well Type:** 

Well sub-Type: APPRAISAL

Describe sub-type:

Distance to town: 10 Miles Distance to nearest well: 330 FT Distance to lease line: 210 FT

Reservoir well spacing assigned acres Measurement: 640 Acres

Well plat: PavoFrio29 30B3KLFedCom1H wellplat 20200303143323.pdf

Well work start Date: 05/03/2020 Duration: 60 DAYS

## **Section 3 - Well Location Table**

Survey Type: RECTANGULAR

**Describe Survey Type:** 

Datum: NAD83 Vertical Datum: NAVD88

Survey number: Reference Datum: GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL	850	FSL	244 5	FW L	18S	29E	29	Aliquot SESW	32.71351 34	- 104.0975	EDD Y	NEW MEXI	—	F	NMNM 056428	345 1	0	0	Υ
#1								OLOW		471		CO	СО						
KOP	198	FSL	225	FEL	18S	29E	29	Aliquot	32.71662		EDD	NEW		F	NMNM	l	813	802	Υ
Leg	0		6					NWSE	35	104.0956 785	Υ	MEXI CO	MEXI CO		056428	457	4	4	
#1										1,00						٦			

Well Name: PAVO FRIO 29/30 B3KL FED COM Well Number: 1H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-1	198 0	FSL	254 4	FW L	18S	29E	29	Aliquot NESW	32.71662 12	- 104.0972 454	EDD Y	NEW MEXI CO	—	F	NMNM 056428	- 505 0	888 8	850 1	Y
PPP Leg #1-2	198 0	FSL	132 0	FW L	18S	29E	29	Aliquot NWS W	32.71665 6	- 104.1012 255	EDD Y	NEW MEXI CO		F	NMNM 137447	- 503 7	101 12	848 8	Y
PPP Leg #1-3	198 0	FSL	0	FEL	18S	29E	30	Aliquot NESE	32.71660 93	- 104.1055 175	EDD Y	NEW MEXI CO		F		- 502 4	114 32	847 5	Υ
EXIT Leg #1	198 0	FSL	100	FW L	18S	29E	30	Lot 3	32.71658 46	- 104.1215 05	EDD Y	NEW MEXI CO	—	F	NMNM 056426	- 497 3	163 50	842 4	Y
BHL Leg #1	198 0	FSL	100	FW L	18S	29E	30	Lot 3	32.71658 46	- 104.1215 05	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 056426	- 497 3	163 50	842 4	Υ



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

## **Drilling Plan Data Report**

09/14/2020

APD ID: 10400054797

**Submission Date:** 03/06/2020

Highlighted data reflects the most recent changes

**Operator Name: MEWBOURNE OIL COMPANY** 

Well Name: PAVO FRIO 29/30 B3KL FED COM

Well Number: 1H

**Show Final Text** 

Well Type: OIL WELL

Well Work Type: Drill

## **Section 1 - Geologic Formations**

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
678852	UNKNOWN	3451	28	28	OTHER : Topsoil	NONE	N
678863	TOP SALT	3021	430	430	SALT	NONE	N
678864	BASE OF SALT	2671	780	780	SALT	NONE	N
678856	YATES	2486	965	965	SANDSTONE	NATURAL GAS, OIL	N
678865	SEVEN RIVERS	2136	1315	1315	DOLOMITE	NATURAL GAS, OIL	N
678857	QUEEN	1546	1905	1905	DOLOMITE	NATURAL GAS, OIL	N
678858	GRAYBURG	1201	2250	2250	DOLOMITE, SANDSTONE	NATURAL GAS, OIL	N
678866	SAN ANDRES	721	2730	2730	LIMESTONE	NATURAL GAS, OIL	N
678860	BONE SPRING	-139	3590	3590	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
678861	BONE SPRING 1ST	-3134	6585	6585	SANDSTONE	NATURAL GAS, OIL	N
678862	BONE SPRING 2ND	-3834	7285	7285	SANDSTONE	NATURAL GAS, OIL	Y
679838	BONE SPRING 3RD	-4909	8360	8360	SANDSTONE	NATURAL GAS, OIL	Y

## **Section 2 - Blowout Prevention**

Pressure Rating (PSI): 5M Rating Depth: 16350

Equipment: Annular Pipe Rams Blind Rams 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.

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart. Anchors are not required by manufacturer. A variance is requested to use a multi-bowl

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

Page 1 of 6

Well Name: PAVO FRIO 29/30 B3KL FED COM Well Number: 1H

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.

### **Choke Diagram Attachment:**

Pavo Frio 29 30 B3KL Fed Com 1H 5M BOPE Choke Diagram 20200304095901.pdf

Pavo Frio 29 30 B3KL Fed Com 1H Flex Line Specs 20200304095901.pdf

Pavo\_Frio\_29\_30\_B3KL\_Fed\_Com\_1H\_Flex\_Line\_Specs\_API\_16C\_20200304095902.pdf

## **BOP Diagram Attachment:**

Pavo\_Frio\_29\_30\_B3KL\_Fed\_Com\_1H\_Multi\_Bowl\_WH\_20200304095920.pdf

Pavo\_Frio\_29\_30\_B3KL\_Fed\_Com\_1H\_5M\_BOPE\_Schematic\_20200304095920.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	300	0	300	3451	3151	300	H-40	48	ST&C	5.61	12.6	DRY	22.3 6	DRY	37.5 7
	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	1200	0	1200	3451	2251	1200	J-55	36	LT&C	3.24	5.64	DRY	10.4 9	DRY	13.0 6
	PRODUCTI ON	8.75	7.0	NEW	API	N	0	8600	0	8419		-4968	8600	P- 110	26	LT&C	1.5	2.39	DRY	3.1	DRY	3.71
4	LINER	6.12 5	4.5	NEW	API	N	8134	16350	8024	8424	-4573	-4973	8216	P- 110	13.5	LT&C	2.42	2.81	DRY	3.05	DRY	3.8

## **Casing Attachments**

**Operator Name: MEWBOURNE OIL COMPANY** Well Name: PAVO FRIO 29/30 B3KL FED COM Well Number: 1H **Casing Attachments** Casing ID: 1 String Type: SURFACE **Inspection Document: Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): Pavo\_Frio\_29\_30\_B3KL\_Fed\_Com\_1H\_Csg\_assumptions\_20200304100806.pdf Casing ID: 2 String Type: INTERMEDIATE **Inspection Document: Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): Pavo\_Frio\_29\_30\_B3KL\_Fed\_Com\_1H\_Csg\_assumptions\_20200304100939.pdf Casing ID: 3 String Type: PRODUCTION **Inspection Document: Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s):

Pavo\_Frio\_29\_30\_B3KL\_Fed\_Com\_1H\_Csg\_assumptions\_20200304101028.pdf

Well Name: PAVO FRIO 29/30 B3KL FED COM Well Number: 1H

## **Casing Attachments**

Casing ID: 4 String Type:LINER

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

 $Pavo\_Frio\_29\_30\_B3KL\_Fed\_Com\_1H\_Csg\_assumptions\_20200304101123.pdf$ 

## Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	116	80	2.12	12.5	170	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		116	300	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead		0	530	100	2.12	12.5	212	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		530	1200	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	1	1000	6088	450	2.12	12.5	954	25	Class C	Salt, Gel, Extender, LCM, Defoamer
PRODUCTION	Tail		6088	8600	400	1.18	15.6	472	25	Class H	Retarder, Fluid loss, defoamer
LINER	Lead		8134	1635 0	330	2.97	11.2	980	25	Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent

Well Name: PAVO FRIO 29/30 B3KL FED COM Well Number: 1H

## **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

Describe the mud monitoring system utilized: Pason/PVT/visual monitoring

## **Circulating Medium Table**

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	ЬН	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	300	SPUD MUD	8.6	8.8		7					
300	1200	SALT SATURATED	10	10							
1200	8419	WATER-BASED MUD	8.6	9.5							
8419	8501	OIL-BASED MUD	9.5	10							

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

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

Will run GR/CNL from KOP (8134') to surface (horizontal well - vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.

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

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

Coring operation description for the well:

None

Well Name: PAVO FRIO 29/30 B3KL FED COM Well Number: 1H

## **Section 7 - Pressure**

Anticipated Bottom Hole Pressure: 4420 Anticipated Surface Pressure: 2549

**Anticipated Bottom Hole Temperature(F):** 150

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:

Pavo Frio 29 30 B3KL Fed Com 1H H2S Plan 20200304101756.pdf

## **Section 8 - Other Information**

Proposed horizontal/directional/multi-lateral plan submission:

Pavo\_Frio\_29\_30\_B3KL\_Fed\_Com\_1H\_Dir\_plot\_20200304101834.pdf Pavo\_Frio\_29\_30\_B3KL\_Fed\_Com\_1H\_Dir\_plan\_20200304101834.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Pavo\_Frio\_29\_30\_B3KL\_Fed\_Com\_1H\_Add\_Info\_20200304101847.pdf

Other Variance attachment:

SL: 850' FSL & 2445' FWL (Sec 29) BHL: 1980' FSL & 100' FWL (Sec 30)

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'	300'	13.375"	48	H40	STC	5.61	12.60	22.36	37.57
12.25"	0'	1200'	9.625"	36	J55	LTC	3.24	5.64	10.49	13.06
8.75"	0'	8600'	7"	26	P110	LTC	1.50	2.39	3.10	3.71
6.125"	8134'	16350'	4.5"	13.5	P110	LTC	2.42	2.81	3.05	3.80
				BLM Min	imum Safet	y 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

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide	Y
justification (loading assumptions, casing design criteria).	
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the	Y
collapse pressure rating of the casing?	
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	1
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 <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?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

SL: 850' FSL & 2445' FWL (Sec 29) BHL: 1980' FSL & 100' FWL (Sec 30)

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
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Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide	Y
justification (loading assumptions, casing design criteria).	
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the	Y
collapse pressure rating of the casing?	
Is well located within Capitan Reef?	Y
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				BLM Min	imum Safet	y Factor	1.125	1	1.6 Dry	1.6 Dry
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	Y or N
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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?	
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(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?	

## Hydrogen Sulfide Drilling Operations Plan Mewbourne Oil Company

#### 1. General Requirements

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

## 2. Hydrogen Sulfide Training

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

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

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

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

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

#### 3. Hydrogen Sulfide Safety Equipment and Systems

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

#### 1. Well Control Equipment

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

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

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

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

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

## 4. <u>Visual Warning Systems</u>

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

## 4. Mud Program

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

### 5. Metallurgy

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

#### 6. Communications

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

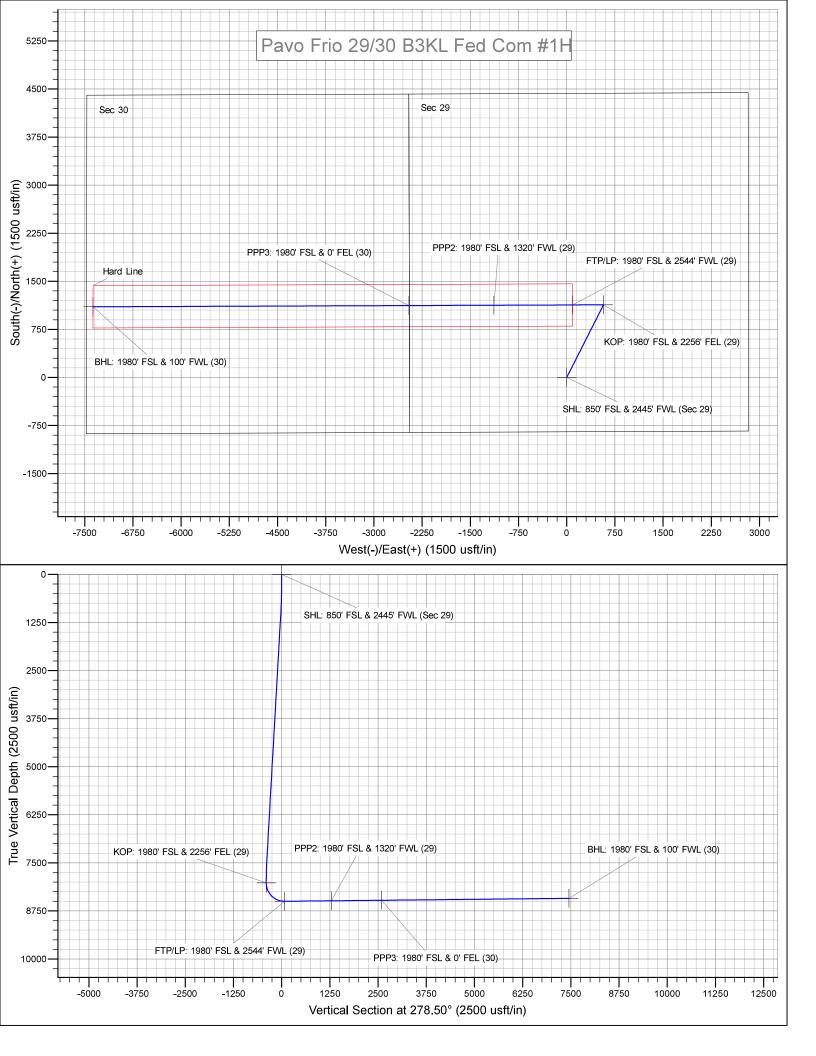
#### 7. Well Testing

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

#### 8. Emergency Phone Numbers

<b>Eddy County Sheriff's Office</b>	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
<b>Closest Medical Facility - Columbia Medical Center</b>	of Carlsbad 575-492-5000

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



## **Mewbourne Oil Company**

Eddy County, New Mexico NAD 83 Pavo Frio 29/30 B3KL Fed Com #1H

Sec 29, T18S, R29E

SHL: 850' FSL & 2445' FWL, Sec 29 BHL: 1980' FSL & 100' FWL, Sec 30

Plan: Design #1

## **Standard Planning Report**

27 February, 2020

Database: Company:

Hobbs

Mewbourne Oil Company

Eddy County, New Mexico NAD 83

BHL: 1980' FSL & 100' FWL, Sec 30

0.0

Pavo Frio 29/30 B3KL Fed Com #1H Site:

Well: Sec 29, T18S, R29E

Design: Design #1 Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Pavo Frio 29/30 B3KL Fed Com #1H WELL @ 3479.0usft (Original Well Elev) WELL @ 3479.0usft (Original Well Elev)

278.50

Minimum Curvature

Project Eddy County, New Mexico NAD 83

Map System: Geo Datum:

Map Zone:

Project:

Wellbore:

US State Plane 1983 North American Datum 1983 New Mexico Eastern Zone

System Datum:

Ground Level

Pavo Frio 29/30 B3KL Fed Com #1H Site

Northing: 623,388.00 usft 32.7135128 Site Position: Latitude: From: Мар Easting: 613,857.00 usft Longitude: -104.0975465 0.13

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

Well Sec 29, T18S, R29E

**Well Position** +N/-S 0.0 usft Northing: 623,388.00 usft Latitude: 32.7135128 +E/-W 0.0 usft Easting: 613,857.00 usft Longitude: -104.0975465

**Position Uncertainty** 0.0 usft Wellhead Elevation: 3,479.0 usft **Ground Level:** 3,451.0 usft

BHL: 1980' FSL & 100' FWL, Sec 30 Wellbore Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength

(nT) (°) (°) **I**GRF2010 12/31/2014 7.43 60.46 48,473

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

0.0

0.0

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

2/27/2020 11:57:34AM Page 2 COMPASS 5000.1 Build 72

Database: Company: Hobbs

Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Pavo Frio 29/30 B3KL Fed Com #1H

Well: Sec 29, T18S, R29E

**Wellbore:** BHL: 1980' FSL & 100' FWL, Sec 30

Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Site Pavo Frio 29/30 B3KL Fed Com #1H WELL @ 3479.0usft (Original Well Elev) WELL @ 3479.0usft (Original Well Elev)

Grid

ed Survey									
•									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
, ,			, ,	, ,	` '	, ,	,	,	,
0.0		0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	FSL & 2445' FWL		1000						
100.0		0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0		0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0		0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	1.50	26.79	400.0	1.2	0.6	-0.4	1.50	1.50	0.00
500.0	3.00	26.79	499.9	4.7	2.4	-1.6	1.50	1.50	0.00
600.0		26.79	599.7	10.5	5.3	-3.7	1.50	1.50	0.00
700.0		26.79	699.3	18.7	9.4	-6.6	1.50	1.50	0.00
800.0		26.79	798.6	29.2	14.7	-10.3	1.50	1.50	0.00
		26.79							
900.0	9.00	20.79	897.5	42.0	21.2	-14.8	1.50	1.50	0.00
981.2	10.22	26.79	977.6	54.1	27.3	-19.0	1.50	1.50	0.00
1,000.0	10.22	26.79	996.1	57.1	28.8	-20.1	0.00	0.00	0.00
1,100.0		26.79	1,094.5	72.9	36.8	-25.6	0.00	0.00	0.00
1,200.0		26.79	1,192.9	88.7	44.8	-31.2	0.00	0.00	0.00
1,300.0		26.79	1,291.3	104.6	52.8	-36.7	0.00	0.00	0.00
1,400.0		26.79	1,389.8	120.4	60.8	-42.3	0.00	0.00	0.00
1,500.0		26.79	1,488.2	136.2	68.8	-47.9	0.00	0.00	0.00
1,600.0		26.79	1,586.6	152.1	76.8	-53.4	0.00	0.00	0.00
1,700.0	10.22	26.79	1,685.0	167.9	84.8	-59.0	0.00	0.00	0.00
1,800.0	10.22	26.79	1,783.4	183.7	92.8	-64.6	0.00	0.00	0.00
1,900.0	10.22	26.79	1,881.8	199.6	100.8	-70.1	0.00	0.00	0.00
							0.00	0.00	0.00
2,000.0		26.79	1,980.2	215.4	108.8	-75.7			
2,100.0		26.79	2,078.6	231.3	116.8	-81.3	0.00	0.00	0.00
2,200.0		26.79	2,177.1	247.1	124.7	-86.8	0.00	0.00	0.00
2,300.0	10.22	26.79	2,275.5	262.9	132.7	-92.4	0.00	0.00	0.00
2,400.0	10.22	26.79	2,373.9	278.8	140.7	-98.0	0.00	0.00	0.00
2,500.0	10.22	26.79	2,472.3	294.6	148.7	-103.5	0.00	0.00	0.00
2,600.0	10.22	26.79	2,570.7	310.4	156.7	-109.1	0.00	0.00	0.00
2,700.0		26.79	2,669.1	326.3	164.7	-114.7	0.00	0.00	0.00
2,800.0		26.79	2,767.5	342.1	172.7	-120.2	0.00	0.00	0.00
2,900.0		26.79	2,866.0	357.9	180.7	-125.8	0.00	0.00	0.00
3,000.0		26.79	2,964.4	373.8	188.7	-131.4	0.00	0.00	0.00
3,100.0		26.79	3,062.8	389.6	196.7	-136.9	0.00	0.00	0.00
3,200.0		26.79	3,161.2	405.5	204.7	-142.5	0.00	0.00	0.00
3,300.0	10.22	26.79	3,259.6	421.3	212.7	-148.1	0.00	0.00	0.00
3,400.0	10.22	26.79	3,358.0	437.1	220.7	-153.6	0.00	0.00	0.00
3,500.0		26.79	3,456.4	453.0	228.7	-159.2	0.00	0.00	0.00
3,600.0		26.79	3,554.9	468.8	236.7	-164.8	0.00	0.00	0.00
3,700.0		26.79	3,653.3	484.6	244.7	-170.3	0.00	0.00	0.00
3,700.0		26.79	3,751.7	500.5	252.7	-170.3 -175.9	0.00	0.00	0.00
3,900.0	10.22	26.79	3,850.1	516.3	260.7	-181.5	0.00	0.00	0.00
4,000.0	10.22	26.79	3,948.5	532.1	268.7	-187.0	0.00	0.00	0.00
4,100.0	10.22	26.79	4,046.9	548.0	276.7	-192.6	0.00	0.00	0.00
4,200.0	10.22	26.79	4,145.3	563.8	284.6	-198.2	0.00	0.00	0.00
4,300.0		26.79	4,243.8	579.7	292.6	-203.7	0.00	0.00	0.00
4,400.0		26.79	4,342.2	595.5	300.6	-209.3	0.00	0.00	0.00
4,500.0		26.79	4,440.6	611.3	308.6	-214.8	0.00	0.00	0.00
4,600.0		26.79	4,539.0	627.2	316.6	-220.4	0.00	0.00	0.00
4,700.0		26.79	4,637.4	643.0	324.6	-226.0	0.00	0.00	0.00
4,800.0	10.22	26.79	4,735.8	658.8	332.6	-231.5	0.00	0.00	0.00
4,900.0	10.22	26.79	4,834.2	674.7	340.6	-237.1	0.00	0.00	0.00
5,000.0		26.79	4,932.7	690.5	348.6	-242.7	0.00	0.00	0.00
5,000.0		26.79	5,031.1	706.3	356.6	-242.7 -248.2	0.00	0.00	0.00

Database: Company: Hobbs

Mewbourne Oil Company

Project: Site: Eddy County, New Mexico NAD 83 Pavo Frio 29/30 B3KL Fed Com #1H

Well: Sec 29, T18S, R29E

Wellbore:

BHL: 1980' FSL & 100' FWL, Sec 30

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Pavo Frio 29/30 B3KL Fed Com #1H WELL @ 3479.0usft (Original Well Elev) WELL @ 3479.0usft (Original Well Elev)

Grid

lanned Su	ırvey									
[	easured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
	5,200.0 5,300.0	10.22 10.22	26.79 26.79	5,129.5 5,227.9	722.2 738.0	364.6 372.6	-253.8 -259.4	0.00 0.00	0.00 0.00	0.00 0.00
	5,400.0 5,500.0	10.22 10.22	26.79 26.79	5,326.3 5,424.7	753.9 769.7	380.6 388.6	-264.9 -270.5	0.00 0.00	0.00 0.00	0.00 0.00
	5,600.0	10.22	26.79	5,523.1	785.5	396.6	-276.1	0.00	0.00	0.00
	5,700.0 5,800.0	10.22 10.22	26.79 26.79	5,621.5 5,720.0	801.4 817.2	404.6 412.6	-281.6 -287.2	0.00 0.00	0.00 0.00	0.00 0.00
	5,900.0	10.22	26.79	5,818.4	833.0	420.6	-292.8	0.00	0.00	0.00
	6,000.0	10.22	26.79	5,916.8	848.9	428.6	-298.3	0.00	0.00	0.00
	6,100.0	10.22	26.79	6,015.2	864.7	436.6	-303.9	0.00	0.00	0.00
	6,200.0	10.22	26.79	6,113.6	880.5	444.5	-309.5	0.00	0.00	0.00
	6,300.0	10.22	26.79	6,212.0	896.4	452.5	-315.0	0.00	0.00	0.00
	6,400.0	10.22	26.79	6,310.4	912.2	460.5	-320.6	0.00	0.00	0.00
	6,500.0	10.22	26.79 26.70	6,408.9	928.1	468.5 476.5	-326.2	0.00	0.00	0.00
	6,600.0 6,700.0	10.22 10.22	26.79 26.79	6,507.3 6,605.7	943.9 959.7	476.5 484.5	-331.7 -337.3	0.00 0.00	0.00 0.00	0.00 0.00
	6,800.0	10.22	26.79	6,803.7 6,704.1	959.7 975.6	492.5	-337.3 -342.9	0.00	0.00	0.00
	6,900.0	10.22	26.79	6,802.5	991.4	500.5	-348.4	0.00	0.00	0.00
	7,000.0	10.22	26.79	6,900.9	1,007.2	508.5	-354.0	0.00	0.00	0.00
	7,100.0	10.22	26.79	6,999.3	1,023.1	516.5	-359.6	0.00	0.00	0.00
	7,200.0	10.22	26.79	7,097.8	1,038.9	524.5	-365.1	0.00	0.00	0.00
	7,300.0	10.22	26.79	7,196.2	1,054.7	532.5	-370.7	0.00	0.00	0.00
	7,400.0	10.22	26.79	7,294.6	1,070.6	540.5	-376.2	0.00	0.00	0.00
	7,452.6	10.22	26.79	7,346.4	1,078.9	544.7	-379.2	0.00	0.00	0.00
	7,500.0	9.51	26.79	7,393.0	1,086.2	548.4	-381.7	1.50	-1.50	0.00
	7,600.0	8.01	26.79	7,491.9	1,099.8	555.2	-386.5	1.50	-1.50	0.00
	7,700.0	6.51	26.79	7,591.1	1,111.0	560.9	-390.5	1.50	-1.50	0.00
	7,800.0	5.01	26.79	7,690.6	1,120.0	565.4	-393.6	1.50	-1.50	0.00
	7,900.0	3.51	26.79	7,790.3	1,126.6	568.8	-395.9	1.50	-1.50	0.00
	8,000.0	2.01	26.79	7,890.2	1,130.9	570.9	-397.4	1.50	-1.50	0.00
	8,100.0	0.51 0.00	26.79	7,990.1	1,132.9	571.9	-398.1	1.50	-1.50	0.00
K	8,133.9	0.00 SL & 2256' FEL	0.00	8,024.0	1,133.0	572.0	-398.2	1.50	-1.50	0.00
K			. ,		4 400 0	507.4	222 7	10.01	40.04	0.00
	8,200.0 8,300.0	7.94	269.78 269.78	8,089.9 8,186.8	1,133.0 1,132.9	567.4 543.4	-393.7 -369.9	12.01 12.01	12.01 12.01	0.00 0.00
	8,400.0	19.96 31.97	269.78	8,276.5	1,132.9	499.7	-369.9 -326.7	12.01	12.01	0.00
	8,500.0	43.98	269.78	8,355.2	1,132.7	438.2	-266.0	12.01	12.01	0.00
	8,600.0	55.99	269.78	8,419.4	1,132.2	361.8	-190.4	12.01	12.01	0.00
	8.700.0	68.00	269.78	8,466.3	1,131.8	273.7	-103.3	12.01	12.01	0.00
	8,800.0	80.01	269.78	8,493.8	1,131.5	177.7	-8.5	12.01	12.01	0.00
	8,888.0	90.59	269.78	8,501.0	1,131.1	90.1	78.1	12.01	12.01	0.00
F		0' FSL & 2544' F								
	8,900.0	90.59	269.78	8,500.9	1,131.1	78.1	90.0	0.04	0.04	0.00
	9,000.0	90.59	269.78	8,499.8	1,130.7	-21.8	188.8	0.00	0.00	0.00
	9,100.0	90.59	269.78	8,498.8	1,130.3	-121.8	287.6	0.00	0.00	0.00
	9,200.0	90.59	269.78	8,497.8	1,129.9	-221.8	386.5	0.00	0.00	0.00
	9,300.0	90.59	269.78	8,496.7	1,129.5	-321.8	485.3	0.00	0.00	0.00
	9,400.0 9,500.0	90.59 90.59	269.78 269.78	8,495.7 8,494.7	1,129.1 1,128.7	-421.8 -521.8	584.1 683.0	0.00 0.00	0.00 0.00	0.00 0.00
	9,600.0	90.59	269.78	8,493.7	1,128.3	-621.8	781.8	0.00	0.00	0.00
	9,700.0 9,800.0	90.59 90.59	269.78 269.78	8,492.6 8,491.6	1,128.0 1,127.6	-721.8 -821.8	880.7 979.5	0.00 0.00	0.00 0.00	0.00 0.00
	9,800.0	90.59	269.76	8,490.6	1,127.6 1,127.2	-021.6 -921.8	979.5 1,078.3	0.00	0.00	0.00
	10,000.0	90.59	269.78	8,489.5	1,126.8	-1,021.8	1,177.2	0.00	0.00	0.00

Database: Company: Hobbs

Mewbourne Oil Company

Project: Site: Eddy County, New Mexico NAD 83 Pavo Frio 29/30 B3KL Fed Com #1H

Well:

Sec 29, T18S, R29E

Wellbore:

BHL: 1980' FSL & 100' FWL, Sec 30

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Pavo Frio 29/30 B3KL Fed Com #1H WELL @ 3479.0usft (Original Well Elev) WELL @ 3479.0usft (Original Well Elev)

Grid

anned Survey									
Measured			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)
10,100.0	90.59	269.78	8,488.5	1,126.4	-1,121.8	1,276.0	0.00	0.00	0.00
10,112.2		269.78	8,488.4	1,126.3	-1,134.0	1,288.1	0.00	0.00	0.00
	0' FSL & 1320' FW	· ·	0.407.5	4 400 0					
10,200.0		269.78	8,487.5	1,126.0	-1,221.8	1,374.8	0.00	0.00	0.00
10,300.0		269.78	8,486.4	1,125.6	-1,321.8	1,473.7	0.00	0.00	0.00
10,400.0	90.59	269.78	8,485.4	1,125.2	-1,421.8	1,572.5	0.00	0.00	0.00
10,500.0	90.59	269.78	8,484.4	1,124.8	-1,521.8	1,671.3	0.00	0.00	0.00
10,600.0	90.59	269.78	8,483.3	1,124.4	-1,621.8	1,770.2	0.00	0.00	0.00
10,700.0	90.59	269.78	8,482.3	1,124.0	-1,721.7	1,869.0	0.00	0.00	0.00
10,800.0		269.78	8,481.3	1,123.7	-1,821.7	1,967.9	0.00	0.00	0.00
10,900.0		269.78	8,480.2	1,123.3	-1,921.7	2,066.7	0.00	0.00	0.00
11,000.0		269.78	8,479.2	1,122.9	-2,021.7	2,165.5	0.00	0.00	0.00
11,100.0		269.78	8,478.2	1,122.5	-2,121.7	2,264.4	0.00	0.00	0.00
11,200.0		269.78	8,477.1	1,122.1	-2,221.7	2,363.2	0.00	0.00	0.00
11,300.0		269.78	8,476.1	1,121.7	-2,321.7	2,462.0	0.00	0.00	0.00
11,400.0	90.59	269.78	8,475.1	1,121.3	-2,421.7	2,560.9	0.00	0.00	0.00
11,432.3	90.59	269.78	8,474.7	1,121.2	-2,454.0	2,592.8	0.00	0.00	0.00
PPP3: 1980	0' FSL & 0' FEL (30	0)							
11,500.0	•	, 269.78	8,474.0	1,120.9	-2,521.7	2,659.7	0.00	0.00	0.00
11,600.0		269.78	8,473.0	1,120.5	-2,621.7	2,758.6	0.00	0.00	0.00
11,700.0		269.78	8,472.0	1,120.1	-2,721.7	2,857.4	0.00	0.00	0.00
11,800.0		269.78	8,471.0	1,119.8	-2,721.7 -2,821.7	2,956.2	0.00	0.00	0.00
11,900.0		269.78	8,469.9	1,119.4	-2,921.7	3,055.1	0.00	0.00	0.00
12,000.0		269.78	8,468.9	1,119.0	-3,021.7	3,153.9	0.00	0.00	0.00
12,100.0		269.78	8,467.9	1,118.6	-3,121.7	3,252.7	0.00	0.00	0.00
12,200.0		269.78	8,466.8	1,118.2	-3,221.7	3,351.6	0.00	0.00	0.00
12,300.0	90.59	269.78	8,465.8	1,117.8	-3,321.6	3,450.4	0.00	0.00	0.00
12,400.0	90.59	269.78	8,464.8	1,117.4	-3,421.6	3,549.3	0.00	0.00	0.00
12,500.0	90.59	269.78	8,463.7	1,117.0	-3,521.6	3,648.1	0.00	0.00	0.00
12,600.0	90.59	269.78	8,462.7	1,116.6	-3,621.6	3,746.9	0.00	0.00	0.00
12,700.0	90.59	269.78	8,461.7	1,116.2	-3,721.6	3,845.8	0.00	0.00	0.00
12,800.0	90.59	269.78	8,460.6	1,115.9	-3,821.6	3,944.6	0.00	0.00	0.00
12,900.0	90.59	269.78	8,459.6	1,115.5	-3,921.6	4,043.4	0.00	0.00	0.00
13,000.0		269.78	8,458.6	1,115.1	-4,021.6	4,142.3	0.00	0.00	0.00
13,100.0		269.78	8,457.5	1,114.7	-4,121.6	4,241.1	0.00	0.00	0.00
13,200.0		269.78	8,456.5	1,114.3	-4,221.6	4,340.0	0.00	0.00	0.00
13,300.0		269.78	8,455.5	1,113.9	-4,321.6	4,438.8	0.00	0.00	0.00
13,400.0		269.78	8,454.4	1,113.5	-4,421.6	4,537.6	0.00	0.00	0.00
13,400.0		269.78 269.78	8,454.4 8,453.4		-4,421.6 -4,521.6	4,537.6 4,636.5	0.00	0.00	0.00
13,500.0		269.76 269.78	8,452.4	1,113.1 1,113.7		4,636.3	0.00	0.00	0.00
13,700.0		269.76 269.78	8,452.4 8,451.3	1,112.7 1,112.3	-4,621.6 -4,721.6	4,735.3 4,834.1	0.00	0.00	0.00
13,700.0		269.78	8,450.3	1,112.3	-4,721.6 -4,821.6	4,933.0	0.00	0.00	0.00
13,900.0		269.78	8,449.3	1,111.6	-4,921.6	5,031.8	0.00	0.00	0.00
14,000.0		269.78	8,448.2	1,111.2	-5,021.5	5,130.6	0.00	0.00	0.00
14,100.0		269.78	8,447.2	1,110.8	-5,121.5	5,229.5	0.00	0.00	0.00
14,200.0		269.78	8,446.2	1,110.4	-5,221.5	5,328.3	0.00	0.00	0.00
14,300.0	90.59	269.78	8,445.2	1,110.0	-5,321.5	5,427.2	0.00	0.00	0.00
14,400.0	90.59	269.78	8,444.1	1,109.6	-5,421.5	5,526.0	0.00	0.00	0.00
14,500.0	90.59	269.78	8,443.1	1,109.2	-5,521.5	5,624.8	0.00	0.00	0.00
14,600.0	90.59	269.78	8,442.1	1,108.8	-5,621.5	5,723.7	0.00	0.00	0.00
14,700.0		269.78	8,441.0	1,108.4	-5,721.5	5,822.5	0.00	0.00	0.00
14,800.0		269.78	8,440.0	1,108.0	-5,821.5	5,921.3	0.00	0.00	0.00
44.000.0	00.50	200.70	0.400.0	4 407 7			0.00	0.00	0.00
14,900.0	90.59	269.78	8,439.0	1,107.7	-5,921.5	6,020.2	0.00	0.00	0.00

Database: Company:

Project:

Hobbs

Mewbourne Oil Company

Eddy County, New Mexico NAD 83
Pavo Frio 29/30 B3KL Fed Com #1H

 Site:
 Pavo Frio 29/30 B3KL

 Well:
 Sec 29, T18S, R29E

Wellbore:

Design: Design #1

BHL: 1980' FSL & 100' FWL, Sec 30

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Pavo Frio 29/30 B3KL Fed Com #1H WELL @ 3479.0usft (Original Well Elev) WELL @ 3479.0usft (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)
15,000.0	90.59	269.78	8,437.9	1,107.3	-6,021.5	6,119.0	0.00	0.00	0.00
15,100.0	90.59	269.78	8,436.9	1,106.9	-6,121.5	6,217.9	0.00	0.00	0.00
15,200.0	90.59	269.78	8,435.9	1,106.5	-6,221.5	6,316.7	0.00	0.00	0.00
15,300.0	90.59	269.78	8,434.8	1,106.1	-6,321.5	6,415.5	0.00	0.00	0.00
15,400.0	90.59	269.78	8,433.8	1,105.7	-6,421.5	6,514.4	0.00	0.00	0.00
15,500.0	90.59	269.78	8,432.8	1,105.3	-6,521.5	6,613.2	0.00	0.00	0.00
15,600.0	90.59	269.78	8,431.7	1,104.9	-6,621.4	6,712.0	0.00	0.00	0.00
15,700.0	90.59	269.78	8,430.7	1,104.5	-6,721.4	6,810.9	0.00	0.00	0.00
15,800.0	90.59	269.78	8,429.7	1,104.1	-6,821.4	6,909.7	0.00	0.00	0.00
15,900.0	90.59	269.78	8,428.6	1,103.8	-6,921.4	7,008.6	0.00	0.00	0.00
16,000.0	90.59	269.78	8,427.6	1,103.4	-7,021.4	7,107.4	0.00	0.00	0.00
16,100.0	90.59	269.78	8,426.6	1,103.0	-7,121.4	7,206.2	0.00	0.00	0.00
16,200.0	90.59	269.78	8,425.5	1,102.6	-7,221.4	7,305.1	0.00	0.00	0.00
16,300.0	90.59	269.78	8,424.5	1,102.2	-7,321.4	7,403.9	0.00	0.00	0.00
16,349.6	90.59	269.78	8,424.0	1,102.0	-7,371.0	7,452.9	0.00	0.00	0.00
BHL: 1980' F	SL & 100' FWL (	(30)							

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL: 850' FSL & 2445' F - plan hits target cent - Point	0.00 er	0.00	0.0	0.0	0.0	623,388.00	613,857.00	32.7135128	-104.0975465
KOP: 1980' FSL & 2256' - plan hits target cent - Point	0.00 er	0.00	8,024.0	1,133.0	572.0	624,521.00	614,429.00	32.7166235	-104.0956785
BHL: 1980' FSL & 100' F - plan hits target cent - Point	0.00 er	0.00	8,424.0	1,102.0	-7,371.0	624,490.00	606,486.00	32.7165846	-104.1215050
PPP3: 1980' FSL & 0' FE - plan hits target cent - Point	0.00 er	0.00	8,474.7	1,121.2	-2,454.0	624,509.19	611,403.00	32.7166093	-104.1055175
PPP2: 1980' FSL & 1320 - plan hits target cent - Point	0.00 er	0.00	8,488.4	1,126.3	-1,134.0	624,514.35	612,723.00	32.7166156	-104.1012255
FTP/LP: 1980' FSL & 25 - plan hits target cent - Point	0.00 er	0.00	8,501.0	1,131.1	90.1	624,519.10	613,947.10	32.7166212	-104.0972454

District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410

1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Submit Original to Appropriate District Office

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

#### CAC CADTIDE DI AN

Date	e: <u>3-2-20</u>		GAS CA	PIUKE PL	AN			
	Original Amended - Reason for A	Amendment:_	Operator	· & OGRID N	No.: <u>Mewbo</u>	urne Oil Con	npany - 14744	
new <i>Note</i>	Gas Capture Plan outle completion (new drill, Form C-129 must be sub	recomplete to	o new zone, re-fra	ac) activity.		•	facility flaring/venting	fo
					41 4-1.1 - 11			
Ine	well(s) that will be loca Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments	
	PAVO FRIO 29/30 B3KL FED COM#1H		N - 29-18S-29E	850 FSL & 2445 FWI	0	NA	ONLINE AFTER FRAC	
Well plac We  3,400 (peri be d conf	e. The gas produced  stern low/hi  ' of pipeline to co  iodically) to Western  drilled in the foreseeable	o a production from production from production gh pressure connect the far and a definition of the future. In changes to Processing P	n facility after flotion facility is degathering system cility to low/high drilling, completion addition, Mewbord drilling and complant located in Sec	edicated to _n located in pressure gas on and estimate ourne Oil Completion scheme. 36 _, Blk	thering system ted first production and dules. Gas  58 T1S  Mestern  Continue to the production of the	County, Newern. Mewboruction date for Western from these	gas transporter system is and will be connected Mexico. It will requere Oil Company provider wells that are scheduled have periowells will be processed unty, Texas. The actual floor	ire des d to dio
Flov Afte	wback Strategy or the fracture treatment	/completion o	operations, well(s)	) will be prod	duced to tem	porary produ	action tanks and gas will	

flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Western system at that time. Based on current information, it is Operator's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

### **Alternatives to Reduce Flaring**

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas On lease
  - o Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal On lease
  - o Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines