Form 3160-3 FORM APPROVED OMB No. 1004-0137 (June 2015) Expires: January 31, 2018 **UNITED STATES** DEPARTMENT OF THE INTERIOR 5. Lease Serial No. NMNM131585 **BUREAU OF LAND MANAGEMENT** APPLICATION FOR PERMIT TO DRILL OR REENTER 6. If Indian, Allotee or Tribe Name 7. If Unit or CA Agreement, Name and No. **✓** DRILL REENTER 1a. Type of work: Oil Well 1b. Type of Well: Gas Well Other 8. Lease Name and Well No. 1c. Type of Completion: Hydraulic Fracturing ✓ Single Zone Multiple Zone BENNY HUEVOS 36/24 B3PA FED COM **1**H 2. Name of Operator 9. API Well No. MEWBOURNE OIL COMPANY 30-015-55447 3a. Address 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory **BILBREY BASIN/BONE SPRING** P O BOX 5270, HOBBS, NM 88241 (575) 393-5905 4. Location of Well (Report location clearly and in accordance with any State requirements.*) 11. Sec., T. R. M. or Blk. and Survey or Area SEC 36/T21S/R31E/NMP At surface NESE / 2390 FSL / 760 FEL / LAT 32.4343546 / LONG -103.7253876 At proposed prod. zone NENE / 10 FNL / 1210 FEL / LAT 32.4713167 / LONG -103.7268355 14. Distance in miles and direction from nearest town or post office* 12. County or Parish 13. State **EDDY** NM 20 miles 15. Distance from proposed* 16. No of acres in lease 17. Spacing Unit dedicated to this well 330 feet location to nearest property or lease line, ft. 320.0 (Also to nearest drig. unit line, if any) 18. Distance from proposed location* 19. Proposed Depth 20. BLM/BIA Bond No. in file to nearest well, drilling, completed, 20 feet 11406 feet / 24980 feet FED: NM 1693 applied for, on this lease, ft. 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start* 23. Estimated duration 3618 feet 06/24/2024 60 days 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable) 1. Well plat certified by a registered surveyor. 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 2. A Drilling Plan. 3. A Surface Use Plan (if the location is on National Forest System Lands, the 5. Operator certification. SUPO must be filed with the appropriate Forest Service Office). 6. Such other site specific information and/or plans as may be requested by the Name (Printed/Typed) Date 25. Signature BRADLEY BISHOP / Ph: (575) 393-5905 03/30/2022 (Electronic Submission) Title Regulatory Approved by (Signature) Date Name (Printed/Typed) (Electronic Submission) CODY LAYTON / Ph: (575) 234-5959 09/06/2024 Title Office Assistant Field Manager Lands & Minerals Carlsbad Field Office Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

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.



Conditions of approval, if any, are attached.

<u>C-10</u>		11/2024 3:3		eray Mir	State of New	w Mexico al Resources Departm	uent .		I	Page 2 Revised July 9, 2024
Submit	Electronicall	v	En			ii Resources Departm TION DIVISION	ieni		T	
	D Permitting	7						Submittal		
								Type:	☐ Amended	
					*******	TON THOMAS A TROOP			☐ As Drille	d
ADIAL			D 10 1			TION INFORMATION				
API Nu	0-015-5	5447	Pool Code	5695		Pool Name Bilbrev	Basin; E	one Sp	ring	
	y Code 36281		Property Na	Ber	nny Huevos	36/24 B3PA Fe			Well Numbe	1H
OGRIE		'44	Operator N	ame		E OIL COMPAN			Ground Lev	el Elevation 618
Surface	Owner: 🗆 S	State ☐ Fee ☐	⊥ Tribal □ Fed			Mineral Owner:		☐ Tribal 🗹 F		010
						l .				
UL	Section	Township	Danca	Lot	Surfa Ft. from N/S	Ft. from E/W	Latitude	L	maituda	County
UL		•	Range	Lot			32.4343		ongitude 03.7253876	County Eddy
	36	21S	31E		2390 FSI		32.4343	340 -1	03.7233070	Eddy
UL	Section	Township	Range	Lot	Ft. from N/S	Hole Location Ft. from E/W	Latitude	Lo	ongitude	County
	24	21S	31E		10 FNL	1210 FEL	32.4713		03.7268355	Eddy
		210	O I L		TOTIVE	IZIOTEL				Luuy
Dedica	ted Acres	Infill or Defi	ning Well	Defining	Well API	Overlapping Spacing	Unit (Y/N)	Consolidation	on Code	
3	20									
Order 1	Numbers.					Well setbacks are und	ler Common C	wnership:]Yes □No	
					Kick O	ff Point (KOP)				
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Lo	ongitude	County
	36	21S	31E		2167 FSL	- 1210 FEL	32.43374	127 -10	03.7268461	Eddy
					First Ta	nke Point (FTP)				
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Lo	ongitude	County
	36	21S	31E		2540 FNL	1210 FEL	32.43532	230 -1	03.7268451	Eddy
	T	1	T	T		ike Point (LTP)	1			
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude		ongitude	County
	24	21S	31E		10 FNL	1210 FEL	32.4713	3167 -1	03.7268355	Eddy
Limiting	.d A	aa af I Inifama I	[mtamaat	G : 1		.107 1	Сиоли	d Floor Elev	ations	
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OPERA	ATOR CERT	TIFICATIONS				SURVEYOR CERTIFIC	CATIONS			
I hereby my know organize includin location interest,	certify that the wledge and beli ation either ow g the proposed pursuant to a	e information consief, and, if the well ns a working inter bottom hole loca contract with an c ary pooling agree	l is a vertical or rest or unleased tion or has a rig owner of a work	directional w mineral inter tht to drill thi ing interest of	est in the land	SURVEYOR CERTIFIC I hereby certify that the we surveys made by me or und my belief.	ell location show			
I hereby my know organize includin location interest, entered If this w consent in each	certify that the voledge and beli ution either ow g the proposed pursuant to a or to a volunte by the division. ell is a horizon of at least one tract (in the tar	e information comi ef, and, if the wel ns a working inter bottom hole loca contract with an c ary pooling agrees tal well, I further lessee or owner o	I is a vertical or rest or unleased tion or has a rig wher of a work ment or a compu certify that this f a working inte ution) in which a	directional wimineral intership to drill this interest or unleast or unleast or part of the my part of the my part of the mineral was a my part of the mineral interest or unleast or unleast or unleast or the my part of the mineral interest or unleast of the my part of the mineral interest or unleast of the my part of the mineral interest or unleast or unleast or unleast of the my part of the mineral interest or unleast or unl	well, that this rest in the land s well at this r unleased mineral g order heretofore has received the sed mineral interest well's completed	I hereby certify that the we surveys made by me or und	ell location show			
I hereby my know organizatincludin location interest, entered If this we consent in each interval	certify that the veledge and belitation either ow g the proposed pursuant to a or to a volunte by the division. ell is a horizon of at least one tract (in the tar will be located	e information come ef, and, if the wel, ns a working inter l bottom hole loca contract with an c ary pooling agreed tal well, I further lessee or owner of get pool or forma	I is a vertical or rest or unleased tion or has a rig owner of a work ment or a compucertify that this of a working intention) in which a mpulsory poolin	directional wimineral intership to drill this interest or unleast or unleast or part of the my part of the my part of the mineral was a my part of the mineral interest or unleast or unleast or unleast or the my part of the mineral interest or unleast of the my part of the mineral interest or unleast of the my part of the mineral interest or unleast or unleast or unleast of the my part of the mineral interest or unleast or unl	well, that this rest in the land s well at this r unleased mineral g order heretofore has received the seed mineral interest e well's completed the division.	I hereby certify that the we surveys made by me or und	ell location show			

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

Certificate Number

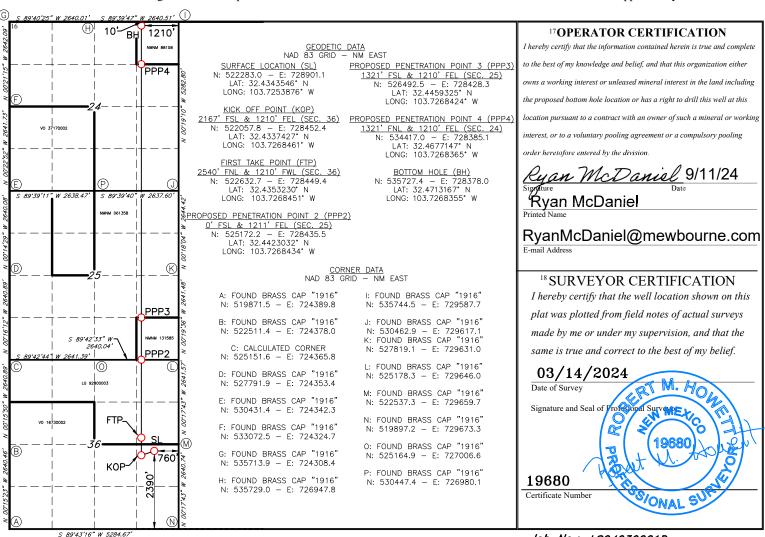
Date of Survey

RyanMcDaniel@mewbourne.com
Email Address

Ryan McDaniel

Printed Name

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.: LS24030221D

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 Mar	nagement Plan n				Orill (APD) for a	new or recompleted well.
			1 – Plan D ffective May 25			
I. Operator: Me	ewbourne	Oil Co.	OGRID:	14744	Date:	4/2/24
II. Type: X Original	☐ Amendmen	t due to □ 19.15.27	.9.D(6)(a) NMA	C □ 19.15.27.9.D((6)(b) NMAC □	Other.
If Other, please descri	ibe:					
III. Well(s): Provide be recompleted from a					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
BENNY HUEVOS 36/24 B2PA F	ED COM 1H	I 36 21S 31E	2390' FSL x 760' F	EL 2000	3500	3500
proposed to be recom	- lule: Provide th		tion for each nev	w or recompleted w	vell or set of wells	9.15.27.9(D)(1) NMAC] s proposed to be drilled or
Well Name	API	Spud Date	TD Reached Date	Completion Commencement		
BENNY HUEVOS 36/24 B2PA F	ED COM 1H	7/2/24	8/2/24	9/2/24	9/17/2	4 9/17/24
VII. Operational ProSubsection A through	actices: Actia F of 19.15.27.8	ch a complete described NMAC.	ription of the ac	tions Operator wil	l take to comply	nt to optimize gas capture. with the requirements of tices to minimize venting

Section 2 – Enhanced Plan EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

X Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

We	ell	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF
. Natural Gas Gat	hering System (NG	GS):		
Operator	System	ULSTR of Tie-in	Anticipated Gathering	Available Maximum Daily Capacity

Operator System ULSTR of Tie-in Anticipated Gathering Start Date Of System Segment Tie-in

- **XI.** Map. \Box Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.
- XII. Line Capacity. The natural gas gathering system \square will \square will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.
- **XIII.** Line Pressure. Operator \square does \square does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).
- ☐ Attach Operator's plan to manage production in response to the increased line pressure.
- **XIV. Confidentiality:**

 Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

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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: power generation on lease; (a) (b) power generation for grid; compression on lease; (c) liquids removal on lease; (d) reinjection for underground storage; (e) reinjection for temporary storage; **(f)** reinjection for enhanced oil recovery;

- **(g)**
- fuel cell production; and (h)
- 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:
- 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
- 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.

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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:	5 -26-2 /24
Phone:	575-393-5905
	OIL CONSERVATION DIVISION
	(Only applicable when submitted as a standalone form)
Approved By:	
Title:	
Approval Date:	
Conditions of Ap	pproval:

Mewbourne Oil Company

Natural Gas Management Plan – Attachment

- VI. Separation equipment will be sized by construction engineering staff based on stated manufacturer daily throughput capacities and anticipated daily production rates to ensure adequate capacity. Closed vent system piping, compression needs, and VRUs will be sized utilizing ProMax modelling software to ensure adequate capacity for anticipated production volumes and conditions.
- VII. Mewbourne Oil Company (MOC) will take following actions to comply with the regulations listed in 19.15.27.8:
 - A. MOC will maximize the recovery of natural gas by minimizing the waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. MOC will ensure that well(s) will be connected to a natural gas gathering system with sufficient capacity to transport natural gas. If there is no adequate takeaway for the gas, well(s) will be shut in until the natural gas gathering system is available.
 - B. All drilling operations will be equipped with a rig flare located at least 100 ft from the nearest surface hole. Rig flare will be utilized to combust any natural gas that is brought to surface during normal drilling operations. In the case of emergency venting or flaring the volumes will be estimated and reported appropriately.
 - C. During completion operations any natural gas brought to surface will be flared. Immediately following the finish of completion operations, all well flow will be directed to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. It is not anticipated that gas will not meet pipeline standards. However, if natural gas does not meet gathering pipeline quality specifications, MOC will flare the natural gas for 60 days or until the natural gas meets the pipeline quality specifications, whichever is sooner. MOC will ensure that the flare is sized properly and is equipped with automatic igniter or continuous pilot. The gas sample will analyzed twice per week and the gas will be routed into a gathering system as soon as pipeline specifications are met.
 - D. Natural gas will not be flared with the exceptions and provisions listed in the 19.15.27.8 D.(1) through (4). If there is no adequate takeaway for the separator gas, well(s) will be shut in until the natural gas gathering system is available with exception of emergency or malfunction situations. Venting and/or flaring volumes will be estimated and reported appropriately.
 - E. MOC will comply with the performance standards requirements and provisions listed in 19.15.27.8 E.(1) through (8). All equipment will be designed and sized to handle maximum anticipated pressures and throughputs in order to minimize the waste. Production storage tanks constructed after May 25, 2021 will be equipped with automatic gauging system. Flares constructed after May 25, 2021 will be equipped with automatic igniter or continuous pilot. Flares will be located at least 100' from the well and storage tanks unless otherwise approved by the division. MOC will conduct AVO inspections as described in 19.15.27.8 E (5) (a) with frequencies specified in 19.15.27.8 E (5) (b) and (c). All emergencies will be resolved as quickly and safely as feasible to minimize waste.
 - F. The volume of natural gas that is vented or flared as the result of malfunction or emergency during drilling and completions operations will be estimated. The volume of natural gas that is vented, flared or beneficially used during production operations, will be measured or estimated. MOC will install equipment to measure

the volume of natural gas flared from existing process piping or a flowline piped from equipment such as high pressure separators, heater treaters, or vapor recovery units associated with a well or facility associated with a well authorized by an APD issued after May 25, 2021 that has an average daily production greater than 60 Mcf/day. If metering is not practicable due to circumstances such as low flow rate or low pressure venting and flaring, MOC will estimate the volume of vented or flared natural gas. Measuring equipment will conform to industry standards and will not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

VIII. For maintenance activities involving production equipment and compression, venting will be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production and compression equipment the associated producing wells will be shut in to eliminate venting. For maintenance of VRUs all gas normally routed to the VRU will be routed to flare to eliminate venting.



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

Drilling Plan Data Report 09/11/2024

APD ID: 10400083658

Submission Date: 03/30/2022

Highlighted data reflects the most recent changes

Well Type: OIL WELL

Operator Name: MEWBOURNE OIL COMPANY

Well Number: 1H

Well Name: BENNY HUEVOS 36/24 B3PA FED COM

Well Work Type: Drill

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
14083751	UNKNOWN	3585	27	27	OTHER : Topsoil	NONE	N
14083765	RUSTLER	2945	640	640	ANHYDRITE, DOLOMITE	USEABLE WATER	N
14083752	TOP SALT	2640	945	945	SALT	NONE	N
14083754	BASE OF SALT	-585	4170	4170	SALT	NONE	N
14083755	LAMAR	-915	4500	4500	DOLOMITE, LIMESTONE	NATURAL GAS, OIL	N
14083756	BELL CANYON	-995	4580	4580	SANDSTONE	NATURAL GAS, OIL	N
14083758	MANZANITA	-2065	5650	5650	LIMESTONE	NATURAL GAS, OIL	N
14083766	BRUSHY CANYON	-4575	8160	8160	SANDSTONE	NATURAL GAS, OIL	N
14083760	BONE SPRING	-4845	8430	8430	LIMESTONE, SHALE	NATURAL GAS, OIL	N
14083761	BONE SPRING 1ST	-6005	9590	9590	SANDSTONE	NATURAL GAS, OIL	N
14083762	BONE SPRING 2ND	-6585	10170	10170	SANDSTONE	NATURAL GAS, OIL	N
14083763	BONE SPRING 3RD	-6995	10580	10580	SANDSTONE	NATURAL GAS, OIL	Y
14083767	WOLFCAMP	-8135	11720	11720	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N

Section 2 - Blowout Prevention

Well Name: BENNY HUEVOS 36/24 B3PA FED COM Well Number: 1H

Pressure Rating (PSI): 10M Rating Depth: 24980

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 variable choke line from the BOP to the choke manifold. See attached for hydrostatic test chart. Anchors are not required by manufacturer. Variance is requested to use a multi bowl wellhead. Variance is requested to perform break testing according to attached procedure. If a breaktesting variance is approved & incorporated, API Standard 53 will be incorporated and testing annular BOP to 70% of RWP or 100% of MASP, whichever is greater, will be performed.

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR Part 3172 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.

Choke Diagram Attachment:

Flex Line Specs API 20240425072541.pdf

Flex_Line_Specs_20240425072545.pdf

10M_BOPE_Choke_Diagram_20240522144405.pdf

BOP Diagram Attachment:

10M Annular BOP Variance 20240522144358.pdf

10M BOPE Schematic w 5M Annular 20240522144358.pdf

Mewbourne_Offline_Cementing_Variance_20240522144359.pdf

10M_Multi_Bowl_WH_Running_Proc_20240522144400.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	715	0	715	3618	2903	715	H-40	48	ST&C	2.41	5.41	DRY	9.38	DRY	15.7 6
2	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	4390	0	4390	3585	-772	4390	J-55	40	LT&C	1.13	1.73	DRY	2.96	DRY	3.59
3	PRODUCTI ON	8.75	7.0	NEW	API	N	0	10982	0	10982	-8529	-7364	10982	HCP -110	26	LT&C	1.34	1.71	DRY	2.43	DRY	2.91
4	LINER	6.12 5	4.5	NEW	API	N	10782	24998 0	10782	11406	-7164	-7788	23919 8	P- 110	13.5	LT&C	1.48	1.72	BUOY	1.76	BUOY	2.2

Well Name: BENNY HUEVOS 36/24 B3PA FED COM Well Number: 1H

Casing ID: 1

String

SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Benny_Huevos_36_24_B3PA_Fed_Com_1H_CsgAssumptions_20240425073448.pdf

Casing ID: 2

String

INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Benny_Huevos_36_24_B3PA_Fed_Com_1H_CsgAssumptions_20240425073414.pdf

Casing ID: 3

String

PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Benny_Huevos_36_24_B3PA_Fed_Com_1H_CsgAssumptions_20240425073611.pdf

Well Name: BENNY HUEVOS 36/24 B3PA FED COM Well Number: 1H

Casing Attachments

Casing ID: 4

String

LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

 $Benny_Huevos_36_24_B3PA_Fed_Com_1H_CsgAssumptions_20240425073702.pdf$

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	527	350	2.12	12.5	750	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail	0	527	715	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead	2000	0	1662	310	2.12	12.5	660	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		1662	2000	100	1.34	14.8	134	25	Class C	Retarder
INTERMEDIATE	Lead	2000	2000	3714	320	2.12	12.5	680	25	Class C	Salt Gel Extender LCM
INTERMEDIATE	Tail		3714	4390	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead		8160	8693	50	2.12	12.5	110	0	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		8693	1098 2	400	1.18	15.6	472	0	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		1078 2	2498 0	910	1.85	13.5	1690	25	Class H	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

Well Name: BENNY HUEVOS 36/24 B3PA 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: Formation integrity test will be performed per 43 CFR Part 3172. 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 43 CFR Part 3172.

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

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (Ibs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	НА	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	715	SPUD MUD	8.4	8.6		V					
715	4390	SALT SATURATED	8.6	10	ρ.						
4390	1098 2	WATER-BASED MUD	9	10							
1098 2	2498 0	OIL-BASED MUD	10	12							

Well Name: BENNY HUEVOS 36/24 B3PA FED COM Well Number: 1H

Section 6 - Test, Logging, Coring

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

No logs are planned based on well control or offset log information. Offset Well: Benny Huevos 36/24 W0PA Fed Com #1H

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

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

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7198 Anticipated Surface Pressure: 4660

Anticipated Bottom Hole Temperature(F): 140

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

Benny Huevos 36 24 B3PA Fed Com 1H H2S Plan 20240425080000.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Benny_Huevos_36_24_B3PA_Fed_Com_1H_MOC_Dir_Plan_20240425080018.pdf Benny Huevos 36 24 B3PA Fed Com 1H MOC Dir Plot 20240425080024.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Benny_Huevos_36_24_B3PA_Fed_Com_1H_AddInfo_20240508090921.pdf
Benny_Huevos_36_24_B3PA_Fed_Com_1H_Drlg_Program_20240522144619.pdf

Other Variance attachment:

Benny_Huevos_36_24_B3PA_Fed_Com_1H_R_111Q_Variance_20240508090930.pdf
3_String_Open_Annulus_Variance_Request_20240508090939.pdf
Mewbourne_Offline_Cementing_Variance_20240522144648.pdf
Mewbourne_Break_Testing_Variance_20240522144648.pdf





GATES ENGINEERING & SERVICES NORTH AMERICA 7603 Prairie Oak Dr. Houston, TX 77086 PHONE: (281) 602 - 4119

FAX:

EMAIL: Troy.Schmidt@gates.com

WEB: www.gates.com

10K CHOKE & KILL ASSEMBLY PRESSURE TEST CERTIFICATE

Test Date: 8/20/2018 A-7 AUSTIN INC DBA AUSTIN HOSE Customer: Hose Serial No.: H-082018-10 Customer Ref .: 4101901 Created By: Moosa Nagvi 511956 Invoice No.: 10KF3.035.0CK41/1610KFLGFXDxFLT_L/E Product Description: End Fitting 2: 4 1/16 in. Float Flange End Fitting 1: 4 1/16 in. Fixed Flange Assembly Code: L40695052218H-082018-10 Gates Part No.: 68503010-9721632 Test Pressure: 15,000 psi. Working Pressure: 10,000 psi.

Gates Engineering & Services North America certifies that the following hose assembly has successfully passed all pressure testing requirements set forth in Gates specifications: GTS-04-052 (for 5K assemblies) or GTS-04-053 (10K assemblies), which include reference to Specification API 16C (2nd Edition); sections 7.5.4, 7.5.9, and 10.8.7. A test graph will accompany this test certificate to illustrate conformity to test requirements.

Quality:

Date : Signature : QUALITY

8/20/2018

Production: Date:

Signature:

1

Form PTC - 01 Rev.0 2



PRODUCTION

8/20/2018



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

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

EMAIL: Tim.Cantu@gates.com

www.gates.com WEB:

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: 4773-6290

4 1/16 10K FLG 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:

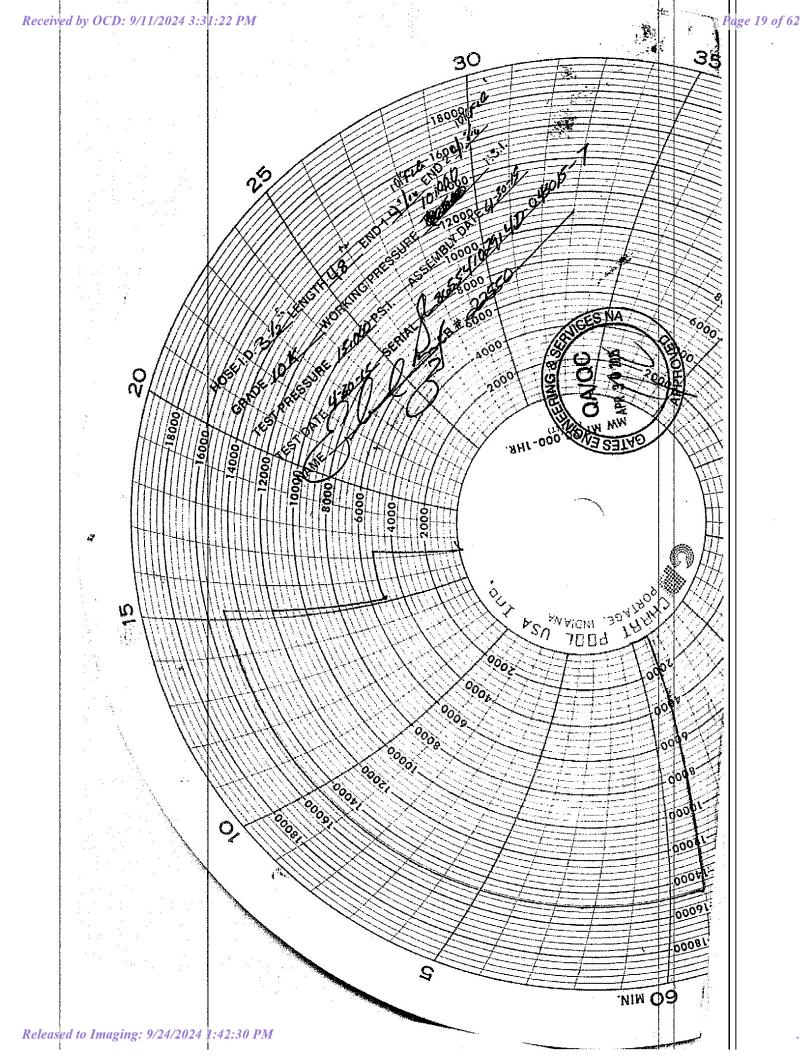
Signature :

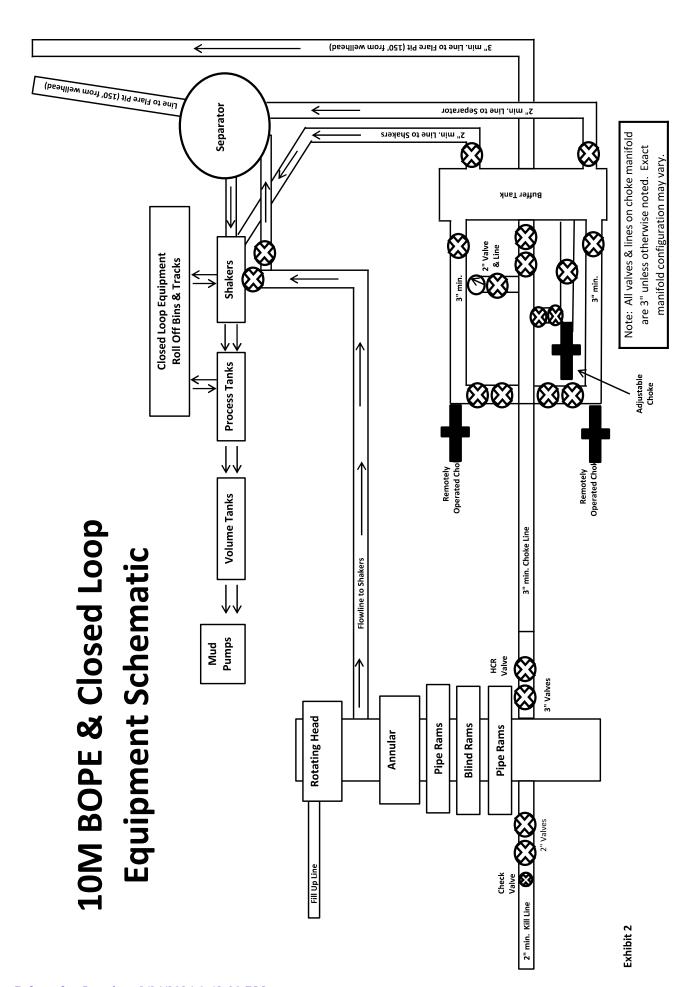
PRODUCTION

4/30/2015

Forn PTC - 01 Rev.0 2







10,000 PSI Annular BOP Variance Request

Mewbourne Oil Company request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOP).

1. Component and Preventer Compatibility Tables

The tables below outline the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

12-1/4" Intermediate Hole Section 10M psi Requirement										
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP					
Drillpipe	5.000" or	Annular	5M	Upper 3.5"-5.5" VBR	10M					
	4.500"			Lower 3.5"-5.5" VBR	10M					
HWDP	5.000" or	Annular	5M	Upper 3.5"-5.5" VBR	10M					
	4.500"			Lower 3.5"-5.5" VBR	10M					
Jars	6.500"	Annular	5M	-	-					
DCs and MWD tools	6.500"-8.000"	Annular	5M	-	-					
Mud Motor	8.000"-9.625"	Annular	5M	-	-					
Intermediate Casing	9.625"	Annular	5M	-	-					
Open-Hole	-	Blind Rams	10M	-	-					

	8-	-3/4" Production Hole Se								
10M psi Requirement										
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP					
Drillpipe	5.000" or	Annular	5M	Upper 3.5"-5.5" VBR	10M					
	4.500"			Lower 3.5"-5.5" VBR	10M					
HWDP	5.000" or	Annular	5M	Upper 3.5"-5.5" VBR	10M					
	4.500"			Lower 3.5"-5.5" VBR	10M					
Jars	6.500"	Annular	5M	-	-					
DCs and MWD tools	6.500"-8.000"	Annular	5M	-	-					
Mud Motor	6.750"-8.000"	Annular	5M	-	-					
Production Casing	7"	Annular	5M	-	-					
Open-Hole	-	Blind Rams	10M	-	-					

	6-1/8" Lateral Hole Section 10M psi Requirement										
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP						
Drillpipe	4.500"	Annular	5M	Upper 3.5"-5.5" VBR	10M						
				Lower 3.5"-5.5" VBR	10M						
HWDP	4.500"	Annular	5M	Upper 3.5"-5.5" VBR	10M						
				Lower 3.5"-5.5" VBR	10M						
DCs and MWD tools	4.750"-5.500"	Annular	5M	Upper 3.5"-5.5" VBR	10M						
				Lower 3.5"-5.5" VBR	10M						
Mud Motor	4.750"-5.500"	Annular	5M	Upper 3.5"-5.5" VBR	10M						
				Lower 3.5"-5.5" VBR	10M						
Production Casing	4.500"	Annular	5M	Upper 3.5"-5.5" VBR	10M						
				Upper 3.5"-5.5" VBR	10M						
Open-Hole	-	Blind Rams	10M	-	-						

VBR = Variable Bore Ram

2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the Mewbourne Oil Company drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

General Procedure While Drilling

- 1. Sound alarm (alert crew)
- 2. Space out drill string
- 3. Shut down pumps (stop pumps and rotary)
- 4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
 - a. SIDPP & SICP
 - b. Pit gain
 - c. Time
- 8. Regroup and identify forward plan

9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

- 1. Sound alarm (alert crew)
- 2. Stab full-opening safety valve & close
- 3. Space out drill string
- 4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
 - a. SIDPP & SICP
 - b. Pit gain
 - c. Time
- 8. Regroup and identify forward plan
- 9. If pressure has built or is anticipated during the kill to reach 70% of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

- 1. Sound alarm (alert crew)
- 2. Stab crossover and full-opening safety valve and close
- 3. Space out string
- 4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
 - a. SIDPP & SICP
 - b. Pit gain
 - c. Time
- 8. Regroup and identify forward plan
- 9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

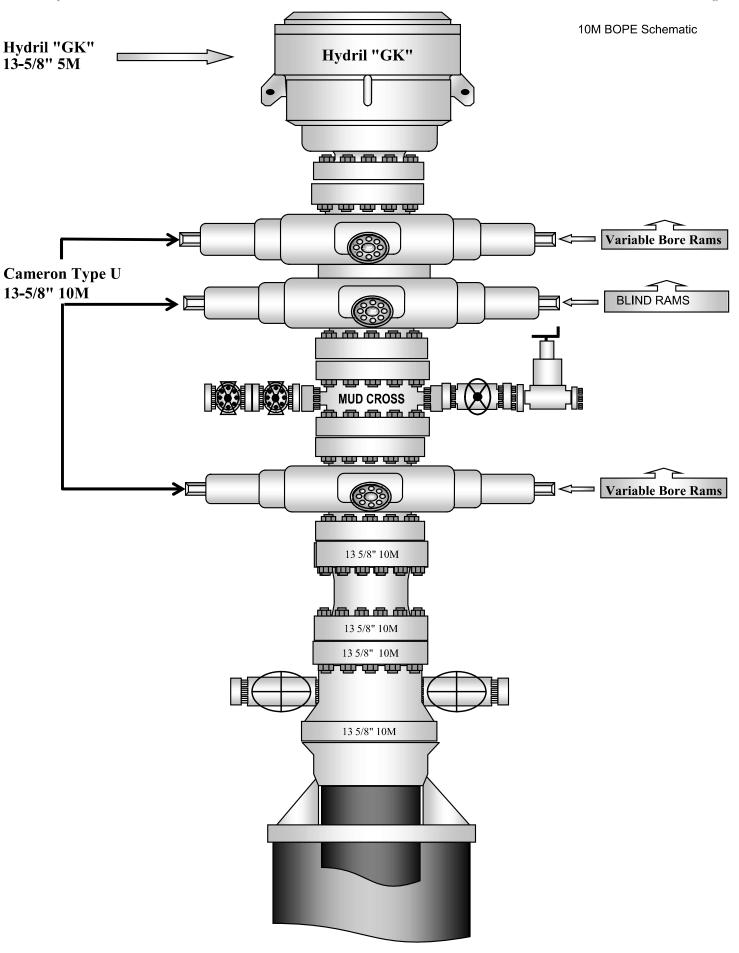
General Procedure With No Pipe In Hole (Open Hole)

- 1. Sound alarm (alert crew)
- 2. Shut-in with blind rams (HCR & choke will already be in the closed position)
- 3. Confirm shut-in
- 4. Notify toolpusher/company representative
- 5. Read and record the following:
 - a. SICP
 - b. Pit gain
 - c. Time
- 6. Regroup and identify forward plan

General Procedures While Pulling BHA Through Stack

- 1. PRIOR to pulling last joint of drillpipe through stack:
 - a. Perform flow check. If flowing, continue to (b).
 - b. Sound alarm (alert crew)
 - c. Stab full-opening safety valve and close
 - d. Space out drill string with tool joint just beneath the upper variable bore rams
 - e. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
 - f. Confirm shut-in
 - g. Notify toolpusher/company representative
 - h. Read and record the following:
 - i. SIDPP & SICP
 - ii. Pit gain
 - iii. Time
 - i. Regroup and identify forward plan
- 2. With BHA in the stack and compatible ram preventer and pipe combination immediately available:
 - a. Sound alarm (alert crew)
 - b. Stab crossover and full-opening safety valve and close
 - c. Space out drill string with upset just beneath the upper variable bore rams
 - d. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
 - e. Confirm shut-in
 - f. Notify toolpusher/company representative
 - g. Read and record the following:
 - i. SIDPP & SICP

- ii. Pit gain
- iii. Time
- h. Regroup and identify forward plan
- 3. With BHA in the stack and NO compatible ram preventer and pipe combination immediately available:
 - a. Sound alarm (alert crew)
 - b. If possible, pull string clear of the stack and follow "Open Hole" procedure.
 - c. If impossible to pull string clear of the stack:
 - d. Stab crossover, make up one joint/stand of drillpipe and full-opening safety valve and close
 - e. Space out drill string with tooljoint just beneath the upper variable bore ram
 - f. Shut-in using upper variable bore ram (HCR & choke will already be in the closed position)
 - g. Confirm shut-in
 - h. Notify toolpusher/company representative
 - i. Read and record the following:
 - i. SIDPP & SICP
 - ii. Pit gain
 - iii. Time
 - j. Regroup and identify forward plan





Mewbourne Oil Co.

Surface & Intermediate Offline Cementing Variance

Mewbourne Oil Company requests a variance to perform offline cementing for surface and intermediate casing strings with the following conditions:

- Offline cementing will not be performed on production casing.
- Offline cementing will not be performed on a hole section with MASP > 5000 psi.
- Offline cementing will not be performed concurrently with offset drilling.

Surface Casing Order of Operations:

- 1. Run 13 3/8" surface casing as per normal operations (TPGS and float collar).
- 2. Perform negative pressure test to confirm integrity of float equipment while running casing.
- 3. Confirm well is static.
- 4. Make up 13 %" wellhead or wellhead landing ring assembly and land on 20" conductor.
- 5. Fill pipe, circulate casing capacity and confirm float(s) are still holding.
- 6. Confirm well is static.
- 7. Back out landing joint and pull to rig floor. Lay down landing joint.
- 8. Walk rig to next well on pad with cement crew standing by to rig up.
- 9. Make up offline cement tool with forklift per wellhead manufacturer (Fig. 1 & 2).
- 10. Make up cement head on top of offline cement tool with forklift.
- 11. Commence cement operations.
- 12. If cement circulates, confirm well is static and proceed to step 16.
- 13. If cement does not circulate, notify the appropriate BLM office, wait a minimum of six hours, and run a temperature survey to determine the top of cement.
- 14. Use 1" pipe for remedial cement job until the surface casing is cemented to surface.
- 15. Confirm well is static.
- 16. Once cement job is complete, the cement head and offline cementing tool are removed. The wellhead technician returns to cellar to install wellhead/valves.
- 17. Install wellhead capping flange.

Barriers

Before Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus



After Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Offline cementing tool tested to 5000 psi and cement head
- Capping flange after cementing

20" Surface Casing Order of Operations (4 string area):

- 1. Run 20" surface casing as per normal operations (TPGS and float collar).
- 2. Perform negative pressure test to confirm integrity of float equipment while running casing.
- 3. Fill pipe, circulate casing capacity and confirm float(s) are still holding.
- 4. Confirm well is static.
- 5. Back out landing joint and pull to rig floor. Lay down landing joint.
- 6. Make up cement head.
- 7. Walk rig to next well on pad with cement crew standing by to rig up.
- 8. Commence cement operations.
- 9. If cement circulates, confirm well is static and proceed to step 13.
- 10. If cement does not circulate, notify the appropriate BLM office, wait a minimum of six hours, and run a temperature survey to determine the top of cement.
- 11. Use 1" pipe for remedial cement job until the surface casing is cemented to surface.
- 12. Confirm well is static.
- 13. Once cement job is complete, remove cement head and install cap.

Barriers

Before Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Cement Head

After Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Cement head
- Capping flange after cementing



Intermediate Casing Order of Operations:

- 1. Run casing as per normal operations (float shoe and float collar).
- 2. Perform negative pressure test to confirm integrity of float equipment while running casing.
- 3. Confirm well is static (if running SBM).
- 4. Land casing.
- 5. Fill pipe, circulate casing capacity and confirm floats are still holding.
- 6. Confirm well is static.
- 7. Back out landing joint and pull to rig floor. Lay down landing joint. Install packoff & test.
- 8. Nipple down BOP.
- 9. Walk rig to next well on pad with cement crew standing by to rig up.
- 10. Make up offline cement tool using forklift per wellhead manufacturer (Fig. 3 8).
- 11. Make up cement head on top of offline cement tool.
- 12. Commence cement operations.
- 13. If cement circulates, confirm well is static and proceed to step 16.
- 14. If cement does not circulate (when required), notify the appropriate BLM office, wait a minimum of six hours, and run a temperature survey to determine the top of cement.
- 15. Pump remedial cement job if required.
- 16. Confirm well is static.
- 17. Remove cement head and offline cementing tool.
- 18. Install wellhead capping flange and test.

Barriers

Before Nipple Down:

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff

After Nipple Down:

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff
- Offline cementing tool tested to 5000 psi and cement head
- Capping flange after cementing

SHL: 2390' FSL 760' FEL (Sec 36) BHL: 10' FNL 1210' FEL (Sec 24)

	Casing Program Design A						1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	715'	715'	13.375" 48# H40 STC	2.41	5.41	9.38	15.76
Int	12.25"	0'	0'	4390'	4390'	9.625" 40# J55 LTC	1.13	1.73	2.96	3.59
Production	8.75"	0'	0'	10982'	10948'	7" 26# HCP110 LTC	1.34	1.71	2.43	2.91
Liner	6.125"	10782'	10759'	24980'	11406'	4.5" 13.5# P110 LTC	1.48	1.72	1.76	2.20

Cement Program

CENTENT I TOGTAIN										
Casing		# Sacks	Wt. lb/gal	Yield ft ³ /sack	тос/вос	Volume ft ³	% Excess	Slurry Description		
13.375 in	LEAD	350	12.5	2.12	0' - 527'	750	100%	Class C: Salt, Gel, Extender, LCM		
13.375 III	TAIL	200	14.8	1.34	527' - 715'	268	100%	Class C: Retarder		
1st Stg 9.625 in	LEAD	320	12.5	2.12	2000' - 3714'	680	25%	Class C: Salt, Gel, Extender, LCM		
18t Stg 9.025 III	TAIL	200	14.8	1.34	3714' - 4390'	268	2370	Class C: Retarder		
	9 5/8" DV Tool @ 2000'									
2nd Stg 9.625 in	LEAD	310	12.5	2.12	0' - 1662'	660	25%	Class C: Salt, Gel, Extender, LCM		
21td Stg 9.023 III	TAIL	100	14.8	1.34	1662' - 2000'	134	2370	Class C: Retarder		
7 in	LEAD	50	12.5	2.12	8160' - 8693'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer		
/	TAIL	400	15.6	1.18	8693' - 10982'	472	0%	Class H: Retarder, Fluid Loss, Defoamer		
4.5 in	LEAD	910	13.5	1.85	10782' - 24980'	1690	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti- settling Agent		

Design A - Mud Program

Depth	Mud Wt	Mud Type	
0' - 715'	8.4 - 8.6	Fresh Water	
715' - 4390'	8.6 - 10.0	Brine	
4390' - 10982'	9.0 - 10.0	Cut-Brine	
10982' - 24980'	10.0 - 12.0	OBM	

Geology

Geology					
Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	640'	Usable Water	Yeso		
Castile			Delaware (Lamar)	4500'	Oil/Natural Gas
Salt Top	945'	None	Bell Canyon	4580'	Oil/Natural Gas
Salt Base	4170'	None	Cherry Canyon		
Yates			Manzanita Marker	5650'	Oil/Natural Gas
Seven Rivers			Basal Brushy Canyon	8160'	Oil/Natural Gas
Queen			Bone Spring	8430'	Oil/Natural Gas
Capitan			1st Bone Spring	9590'	Oil/Natural Gas
Grayburg			2nd Bone Spring	10170'	Oil/Natural Gas
San Andres			3rd Bone Spring	10580'	Oil/Natural Gas
Glorieta			Wolfcamp	11720'	Oil/Natural Gas

		<u> </u>
		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 (loadi	ng 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 c	asing?	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.		N
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-Q and SOPA?		Y
If yes, are the first three strings cemented to surface?		N
Is 2 nd string set 100' to 600' below the base of salt?		Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	7" TOC @ 8160', BHS TOC @ 3890'	Y
Is an engineered weak point used to satisfy R-111-Q?		
If yes, at what depth is the weak point planned?		
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?		

SHL: 2390' FSL 760' FEL (Sec 36) BHL: 10' FNL 1210' FEL (Sec 24)

	Casing Program Design B						1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	715'	715'	13.375" 48# H40 STC	2.41	5.41	9.38	15.76
Int	12.25"	0'	0'	4390'	4390'	9.625" 40# J55 LTC	1.13	1.73	2.96	3.59
Production	8.75"	0'	0'	11884'	11536'	7" 26# HCP110 LTC	1.27	1.63	2.24	2.69
Liner	6.125"	10982'	10948'	24980'	11406'	4.5" 13.5# P110 LTC	1.48	1.72	1.79	2.23

Design B - Cement Program

Design B. Centent Tregram										
Casing		# Sacks	Wt. lb/gal	Yield ft ³ /sack	TOC/BOC	Volume ft ³	% Excess	Slurry Description		
13,375 in	LEAD	350	12.5	2.12	0' - 527'	750	100%	Class C: Salt, Gel, Extender, LCM		
13.375 III	TAIL	200	14.8	1.34	527' - 715'	268	100%	Class C: Retarder		
1st Stg 9.625 in	LEAD	320	12.5	2.12	2000' - 3714'	680	25%	Class C: Salt, Gel, Extender, LCM		
18t Stg 9.025 III	TAIL	200	14.8	1.34	3714' - 4390'	268	2370	Class C: Retarder		
	9 5/8" DV Tool @ 2000'									
2nd Stg 9.625 in	LEAD	310	12.5	2.12	0' - 1662'	660	25%	Class C: Salt, Gel, Extender, LCM		
211d Stg 9.025 III	TAIL	100	14.8	1.34	1662' - 2000'	134	2370	Class C: Retarder		
7 in	LEAD	50	12.5	2.12	8160' - 8864'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer		
/ III	TAIL	400	15.6	1.18	8864' - 11884'	472	070	Class H: Retarder, Fluid Loss, Defoamer		
4.5 in	LEAD	890	13.5	1.85	10982' - 24980'	1650	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti- settling Agent		

Design B - Mud Program

Depth	Mud Wt	Mud Type
0' - 715'	8.4 - 8.6	Fresh Water
715' - 4390'	8.6 - 10.0	Brine
4390' - 11884'	9.0 - 10.0	Cut-Brine
11884' - 24980'	10.0 - 12.0	OBM

Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	640'	Usable Water	Yeso		
Castile			Delaware (Lamar)	4500'	Oil/Natural Gas
Salt Top	945'	None	Bell Canyon	4580'	Oil/Natural Gas
Salt Base	4170'	None	Cherry Canyon		
Yates			Manzanita Marker	5650'	Oil/Natural Gas
Seven Rivers			Basal Brushy Canyon	8160'	Oil/Natural Gas
Queen			Bone Spring	8430'	Oil/Natural Gas
Capitan			1st Bone Spring	9590'	Oil/Natural Gas
Grayburg			2nd Bone Spring	10170'	Oil/Natural Gas
San Andres	1		3rd Bone Spring	10580'	Oil/Natural Gas
Glorieta	1		Wolfcamp	11720'	Oil/Natural Gas

		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 (loa		Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the	e 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.		N
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 cas	ing?	
Is well located in R-111-Q and SOPA?		Y
If yes, are the first three strings cemented to surface?		N
Is 2 nd string set 100' to 600' below the base of salt?		Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	7" TOC @ 8160', BHS TOC @ 3890'	Y
Is an engineered weak point used to satisfy R-111-Q?		
If yes, at what depth is the weak point planned?		
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?		- 1
, y,		

SHL: 2390' FSL 760' FEL (Sec 36) BHL: 10' FNL 1210' FEL (Sec 24)

	Casing Program Design A						1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	715'	715'	13.375" 48# H40 STC	2.41	5.41	9.38	15.76
Int	12.25"	0'	0'	4390'	4390'	9.625" 40# J55 LTC	1.13	1.73	2.96	3.59
Production	8.75"	0'	0'	10982'	10948'	7" 26# HCP110 LTC	1.34	1.71	2.43	2.91
Liner	6.125"	10782'	10759'	24980'	11406'	4.5" 13.5# P110 LTC	1.48	1.72	1.76	2.20

Cement Program

centent riogram										
Casing		# Sacks	Wt. lb/gal	Yield ft ³ /sack	тос/вос	Volume ft ³	% Excess	Slurry Description		
13.375 in	LEAD	350	12.5	2.12	0' - 527'	750	100%	Class C: Salt, Gel, Extender, LCM		
13.375 III	TAIL	200	14.8	1.34	527' - 715'	268	100%	Class C: Retarder		
1st Stg 9.625 in	LEAD	320	12.5	2.12	2000' - 3714'	680	25%	Class C: Salt, Gel, Extender, LCM		
18t Stg 9.025 III	TAIL	200	14.8	1.34	3714' - 4390'	268	2370	Class C: Retarder		
	9 5/8" DV Tool @ 2000'									
2nd Stg 9.625 in	LEAD	310	12.5	2.12	0' - 1662'	660	25%	Class C: Salt, Gel, Extender, LCM		
21td Stg 9.023 III	TAIL	100	14.8	1.34	1662' - 2000'	134	2370	Class C: Retarder		
7 in	LEAD	50	12.5	2.12	8160' - 8693'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer		
/	TAIL	400	15.6	1.18	8693' - 10982'	472	0%	Class H: Retarder, Fluid Loss, Defoamer		
4.5 in	LEAD	910	13.5	1.85	10782' - 24980'	1690	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti- settling Agent		

Design A - Mud Program

Depth	Mud Wt	Mud Type
0' - 715'	8.4 - 8.6	Fresh Water
715' - 4390'	8.6 - 10.0	Brine
4390' - 10982'	9.0 - 10.0	Cut-Brine
10982' - 24980'	10.0 - 12.0	OBM

Geology

Geology					
Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	640'	Usable Water	Yeso		
Castile			Delaware (Lamar)	4500'	Oil/Natural Gas
Salt Top	945'	None	Bell Canyon	4580'	Oil/Natural Gas
Salt Base	4170'	None	Cherry Canyon		
Yates			Manzanita Marker	5650'	Oil/Natural Gas
Seven Rivers			Basal Brushy Canyon	8160'	Oil/Natural Gas
Queen			Bone Spring	8430'	Oil/Natural Gas
Capitan			1st Bone Spring	9590'	Oil/Natural Gas
Grayburg			2nd Bone Spring	10170'	Oil/Natural Gas
San Andres			3rd Bone Spring	10580'	Oil/Natural Gas
Glorieta			Wolfcamp	11720'	Oil/Natural Gas

		Y or N
Is casing new? If used, attach certification as required in Onshore Order #1		V
Is casing API approved? If no, attach casing specification sheet.		Ÿ
Is premium or uncommon casing planned? If yes attach casing specification sheet.		Ň
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading ass	amptions, 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.		N
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-Q and SOPA?		Y
If yes, are the first three strings cemented to surface?		N
Is 2 nd string set 100' to 600' below the base of salt?		Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	7" TOC @ 8160', BHS TOC @ 3890'	Y
Is an engineered weak point used to satisfy R-111-Q?		
If yes, at what depth is the weak point planned?		
Is well located in high Cave/Karst?		N
If yes, are there two strings cemented to surface?	-	N
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?		
(For 2 string wens) if yes, is there a contingency casing if lost circulation occurs:		
Is well located in critical Cave/Karst?		N
If yes, are there three strings cemented to surface?		

SHL: 2390' FSL 760' FEL (Sec 36) BHL: 10' FNL 1210' FEL (Sec 24)

	Casing Program Design B						1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
Coli Hile: T. MD. T. TVD. D. MD. D. (TVD.				Bot TVD	Factors Csg. Size	SE Callana	SF Burst	SF Jt Tension	SF Body	
String	Hole Size	Top MD	Top TVD	Bot MD	BOLIVD	Csg. Size	SF Collapse	or buist	Sr Ji Tension	Tension
Surface	17.5"	0'	0'	715'	715'	13.375" 48# H40 STC	2.41	5.41	9.38	15.76
Int	12.25"	0'	0'	4390'	4390'	9.625" 40# J55 LTC	1.13	1.73	2.96	3.59
Production	8.75"	0'	0'	11884'	11536'	7" 26# HCP110 LTC	1.27	1.63	2.24	2.69
Liner	6.125"	10982'	10948'	24980'	11406'	4.5" 13.5# P110 LTC	1.48	1.72	1.79	2.23

Design B - Cement Program

Design D Center 1105.4m									
Casing		# Sacks	Wt. lb/gal	Yield ft ³ /sack	TOC/BOC	Volume ft ³	% Excess	Slurry Description	
13,375 in	LEAD	350	12.5	2.12	0' - 527'	750	100%	Class C: Salt, Gel, Extender, LCM	
13.375 III	TAIL	200	14.8	1.34	527' - 715'	268	100%	Class C: Retarder	
1st Stg 9.625 in	LEAD	320	12.5	2.12	2000' - 3714'	680	25%	Class C: Salt, Gel, Extender, LCM	
18t Stg 7.025 III	TAIL	200	14.8	1.34	3714' - 4390'	268	2570	Class C: Retarder	
					9 5/8'' Г	V Tool @ 2000'			
2nd Stg 9.625 in	LEAD	310	12.5	2.12	0' - 1662'	660	25%	Class C: Salt, Gel, Extender, LCM	
2110 Stg 9.025 III	TAIL	100	14.8	1.34	1662' - 2000'	134	2370	Class C: Retarder	
7 in	LEAD	50	12.5	2.12	8160' - 8864'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer	
/ III	TAIL	400	15.6	1.18	8864' - 11884'	472	070	Class H: Retarder, Fluid Loss, Defoamer	
4.5 in	LEAD	890	13.5	1.85	10982' - 24980'	1650	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti- settling Agent	

Design B - Mud Program

Depth	Mud Wt	Mud Type
0' - 715'	8.4 - 8.6	Fresh Water
715' - 4390'	8.6 - 10.0	Brine
4390' - 11884'	9.0 - 10.0	Cut-Brine
11884' - 24980'	10.0 - 12.0	OBM

Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	640'	Usable Water	Yeso		
Castile			Delaware (Lamar)	4500'	Oil/Natural Gas
Salt Top	945'	None	Bell Canyon	4580'	Oil/Natural Gas
Salt Base	4170'	None	Cherry Canyon		
Yates			Manzanita Marker	5650'	Oil/Natural Gas
Seven Rivers			Basal Brushy Canyon	8160'	Oil/Natural Gas
Queen			Bone Spring	8430'	Oil/Natural Gas
Capitan			1st Bone Spring	9590'	Oil/Natural Gas
Grayburg			2nd Bone Spring	10170'	Oil/Natural Gas
San Andres			3rd Bone Spring	10580'	Oil/Natural Gas
Glorieta	1		Wolfcamp	11720'	Oil/Natural Gas

		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).				
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the 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?					
Is well within the designated 4 string boundary.		N			
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 car	sing?				
Is well located in R-111-Q and SOPA?		Y			
If yes, are the first three strings cemented to surface?		N			
Is 2 nd string set 100' to 600' below the base of salt?		Y			
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	7" TOC @ 8160', BHS TOC @ 3890'	Y			
Is an engineered weak point used to satisfy R-111-Q?					
If yes, at what depth is the weak point planned?					
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?					

SHL: 2390' FSL 760' FEL (Sec 36) BHL: 10' FNL 1210' FEL (Sec 24)

Casing Program Design A						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	715'	715'	13.375" 48# H40 STC	2.41	5.41	9.38	15.76
Int	12.25"	0'	0'	4390'	4390'	9.625" 40# J55 LTC	1.13	1.73	2.96	3.59
Production	8.75"	0'	0'	10982'	10948'	7" 26# HCP110 LTC	1.34	1.71	2.43	2.91
Liner	6.125"	10782'	10759'	24980'	11406'	4.5" 13.5# P110 LTC	1.48	1.72	1.76	2.20

Cement Program

etinent i rogram	centent 11 ograni									
Casing		# Sacks	Wt. lb/gal	Yield ft ³ /sack	тос/вос	Volume ft ³	% Excess	Slurry Description		
13.375 in	LEAD	350	12.5	2.12	0' - 527'	750	100%	Class C: Salt, Gel, Extender, LCM		
13.375 III	TAIL	200	14.8	1.34	527' - 715'	268	100%	Class C: Retarder		
1st Stg 9.625 in	LEAD	320	12.5	2.12	2000' - 3714'	680	25%	Class C: Salt, Gel, Extender, LCM		
18t Stg 9.025 III	TAIL	200	14.8	1.34	3714' - 4390'	268	2370	Class C: Retarder		
					9 5/8'' D	OV Tool @ 2000'				
2nd Stg 9.625 in	LEAD	310	12.5	2.12	0' - 1662'	660	25%	Class C: Salt, Gel, Extender, LCM		
21td Stg 9.023 III	TAIL	100	14.8	1.34	1662' - 2000'	134	2370	Class C: Retarder		
7 in	LEAD	50	12.5	2.12	8160' - 8693'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer		
/	TAIL	400	15.6	1.18	8693' - 10982'	472	070	Class H: Retarder, Fluid Loss, Defoamer		
4.5 in	LEAD	910	13.5	1.85	10782' - 24980'	1690	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti- settling Agent		

Design A - Mud Program

Depth	Mud Wt	Mud Type
0' - 715'	8.4 - 8.6	Fresh Water
715' - 4390'	8.6 - 10.0	Brine
4390' - 10982'	9.0 - 10.0	Cut-Brine
10982' - 24980'	10.0 - 12.0	OBM

Geology

Geology					
Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	640'	Usable Water	Yeso		
Castile			Delaware (Lamar)	4500'	Oil/Natural Gas
Salt Top	945'	None	Bell Canyon	4580'	Oil/Natural Gas
Salt Base	4170'	None	Cherry Canyon		
Yates			Manzanita Marker	5650'	Oil/Natural Gas
Seven Rivers			Basal Brushy Canyon	8160'	Oil/Natural Gas
Queen			Bone Spring	8430'	Oil/Natural Gas
Capitan			1st Bone Spring	9590'	Oil/Natural Gas
Grayburg			2nd Bone Spring	10170'	Oil/Natural Gas
San Andres			3rd Bone Spring	10580'	Oil/Natural Gas
Glorieta			Wolfcamp	11720'	Oil/Natural Gas

		·
		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 a	ssumptions, 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 casir	g?	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.		N
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-Q and SOPA?		Y
If yes, are the first three strings cemented to surface?		N
Is 2 nd string set 100' to 600' below the base of salt?		Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	7" TOC @ 8160', BHS TOC @ 3890'	Y
Is an engineered weak point used to satisfy R-111-Q?		
If yes, at what depth is the weak point planned?		
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?		

SHL: 2390' FSL 760' FEL (Sec 36) BHL: 10' FNL 1210' FEL (Sec 24)

Casing Program Design B						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	715'	715'	13.375" 48# H40 STC	2.41	5.41	9.38	15.76
Int	12.25"	0'	0'	4390'	4390'	9.625" 40# J55 LTC	1.13	1.73	2.96	3.59
Production	8.75"	0'	0'	11884'	11536'	7" 26# HCP110 LTC	1.27	1.63	2.24	2.69
Liner	6.125"	10982'	10948'	24980'	11406'	4.5" 13.5# P110 LTC	1.48	1.72	1.79	2.23

Design B - Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft ³ /sack	TOC/BOC	Volume ft ³	% Excess	Slurry Description
13,375 in	LEAD	350	12.5	2.12	0' - 527'	750	100%	Class C: Salt, Gel, Extender, LCM
13,3/5 III	TAIL	200	14.8	1.34	527' - 715'	268	100%	Class C: Retarder
1st Stg 9.625 in	LEAD	320	12.5	2.12	2000' - 3714'	680	25%	Class C: Salt, Gel, Extender, LCM
18t Stg 9.025 III	TAIL	200	14.8	1.34	3714' - 4390'	268	2370	Class C: Retarder
					9 5/8'' D	V Tool @ 2000'		
2nd Stg 9.625 in	LEAD	310	12.5	2.12	0' - 1662'	660	25%	Class C: Salt, Gel, Extender, LCM
2110 Stg 9.025 III	TAIL	100	14.8	1.34	1662' - 2000'	134	2370	Class C: Retarder
7 in	LEAD	50	12.5	2.12	8160' - 8864'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
/ III	TAIL	400	15.6	1.18	8864' - 11884'	472	070	Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	890	13.5	1.85	10982' - 24980'	1650	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti- settling Agent

Design B - Mud Program

Depth	Mud Wt	Mud Type
0' - 715'	8.4 - 8.6	Fresh Water
715' - 4390'	8.6 - 10.0	Brine
4390' - 11884'	9.0 - 10.0	Cut-Brine
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Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
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Salt Base	4170'	None	Cherry Canyon		
Yates			Manzanita Marker	5650'	Oil/Natural Gas
Seven Rivers			Basal Brushy Canyon	8160'	Oil/Natural Gas
Queen			Bone Spring	8430'	Oil/Natural Gas
Capitan			1st Bone Spring	9590'	Oil/Natural Gas
Grayburg			2nd Bone Spring	10170'	Oil/Natural Gas
San Andres			3rd Bone Spring	10580'	Oil/Natural Gas
Glorieta	1		Wolfcamp	11720'	Oil/Natural Gas

		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 (le	pading 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	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.		N
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 ca	sing?	
Is well located in R-111-Q and SOPA?		Y
If yes, are the first three strings cemented to surface?		N
Is 2 nd string set 100' to 600' below the base of salt?		Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	7" TOC @ 8160', BHS TOC @ 3890'	Y
Is an engineered weak point used to satisfy R-111-Q?		
If yes, at what depth is the weak point planned?		
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?		

SHL: 2390' FSL 760' FEL (Sec 36) BHL: 10' FNL 1210' FEL (Sec 24)

Casing Program Design A					BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet	
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
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Int	12.25"	0'	0'	4390'	4390'	9.625" 40# J55 LTC	1.13	1.73	2.96	3.59
Production	8.75"	0'	0'	10982'	10948'	7" 26# HCP110 LTC	1.34	1.71	2.43	2.91
Liner	6.125"	10782'	10759'	24980'	11406'	4.5" 13.5# P110 LTC	1.48	1.72	1.76	2.20

Cement Program

Cement Frogram								
Casing		# Sacks	Wt. lb/gal	Yield ft ³ /sack	тос/вос	Volume ft ³	% Excess	Slurry Description
13.375 in	LEAD	350	12.5	2.12	0' - 527'	750	100%	Class C: Salt, Gel, Extender, LCM
13.375 III	TAIL	200	14.8	1.34	527' - 715'	268	100%	Class C: Retarder
1st Stg 9.625 in	LEAD	320	12.5	2.12	2000' - 3714'	680	25%	Class C: Salt, Gel, Extender, LCM
18t Stg 9.025 III	TAIL	200	14.8	1.34	3714' - 4390'	268	2370	Class C: Retarder
					9 5/8'' D	OV Tool @ 2000'		
2nd Stg 9.625 in	LEAD	310	12.5	2.12	0' - 1662'	660	25%	Class C: Salt, Gel, Extender, LCM
21td Stg 9.023 III	TAIL	100	14.8	1.34	1662' - 2000'	134	2370	Class C: Retarder
7 in	LEAD	50	12.5	2.12	8160' - 8693'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
/	TAIL	400	15.6	1.18	8693' - 10982'	472	070	Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	910	13.5	1.85	10782' - 24980'	1690	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti- settling Agent

Design A - Mud Program

Depth	Mud Wt	Mud Type
0' - 715'	8.4 - 8.6	Fresh Water
715' - 4390'	8.6 - 10.0	Brine
4390' - 10982'	9.0 - 10.0	Cut-Brine
10982' - 24980'	10.0 - 12.0	OBM

Geology

Geology					
Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	640'	Usable Water	Yeso		
Castile			Delaware (Lamar)	4500'	Oil/Natural Gas
Salt Top	945'	None	Bell Canyon	4580'	Oil/Natural Gas
Salt Base	4170'	None	Cherry Canyon		
Yates			Manzanita Marker	5650'	Oil/Natural Gas
Seven Rivers			Basal Brushy Canyon	8160'	Oil/Natural Gas
Queen			Bone Spring	8430'	Oil/Natural Gas
Capitan			1st Bone Spring	9590'	Oil/Natural Gas
Grayburg			2nd Bone Spring	10170'	Oil/Natural Gas
San Andres			3rd Bone Spring	10580'	Oil/Natural Gas
Glorieta			Wolfcamp	11720'	Oil/Natural Gas

		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 ass	umptions, 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		Ÿ
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.		N
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-Q and SOPA?		Y
If yes, are the first three strings cemented to surface?		N
Is 2 nd string set 100' to 600' below the base of salt?		Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	7" TOC @ 8160', BHS TOC @ 3890'	Y
Is an engineered weak point used to satisfy R-111-Q?		
If yes, at what depth is the weak point planned?		
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?		

Mewbourne Oil Company, Benny Huevos 36/24 B3PA Fed Com 1H Sec 36, T21S, R31E

SHL: 2390' FSL 760' FEL (Sec 36) BHL: 10' FNL 1210' FEL (Sec 24)

		Casing Prog	gram Design B			BLM Minimum Safety Factors	1.125	1.0	1.6 Drv 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	715'	715'	13.375" 48# H40 STC	2.41	5.41	9.38	15.76
Int	12.25"	0'	0'	4390'	4390'	9.625" 40# J55 LTC	1.13	1.73	2.96	3.59
Production	8.75"	0'	0'	11884'	11536'	7" 26# HCP110 LTC	1.27	1.63	2.24	2.69
Liner	6.125"	10982'	10948'	24980'	11406'	4.5" 13.5# P110 LTC	1.48	1.72	1.79	2.23

Design B - Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft ³ /sack	TOC/BOC	Volume ft ³	% Excess	Slurry Description
13,375 in	LEAD	350	12.5	2.12	0' - 527'	750	100%	Class C: Salt, Gel, Extender, LCM
13.375 111	TAIL	200	14.8	1.34	527' - 715'	268	100%	Class C: Retarder
1st Stg 9.625 in	LEAD	320	12.5	2.12	2000' - 3714'	680	25%	Class C: Salt, Gel, Extender, LCM
18t Stg 9.025 III	TAIL	200	14.8	1.34	3714' - 4390'	268	2370	Class C: Retarder
					9 5/8'' D	V Tool @ 2000'		
2nd Stg 9.625 in	LEAD	310	12.5	2.12	0' - 1662'	660	25%	Class C: Salt, Gel, Extender, LCM
211d Stg 9.025 III	TAIL	100	14.8	1.34	1662' - 2000'	134	2370	Class C: Retarder
7 in	LEAD	50	12.5	2.12	8160' - 8864'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
/ III	TAIL	400	15.6	1.18	8864' - 11884'	472	070	Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	890	13.5	1.85	10982' - 24980'	1650	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti- settling Agent

Design B - Mud Program

De	epth	Mud Wt	Mud Type
0' -	- 715'	8.4 - 8.6	Fresh Water
715'	- 4390'	8.6 - 10.0	Brine
4390'	- 11884'	9.0 - 10.0	Cut-Brine
11884'	- 24980'	10.0 - 12.0	OBM

Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	640'	Usable Water	Yeso		
Castile			Delaware (Lamar)	4500'	Oil/Natural Gas
Salt Top	945'	None	Bell Canyon	4580'	Oil/Natural Gas
Salt Base	4170'	None	Cherry Canyon		
Yates			Manzanita Marker	5650'	Oil/Natural Gas
Seven Rivers			Basal Brushy Canyon	8160'	Oil/Natural Gas
Queen			Bone Spring	8430'	Oil/Natural Gas
Capitan			1st Bone Spring	9590'	Oil/Natural Gas
Grayburg			2nd Bone Spring	10170'	Oil/Natural Gas
San Andres			3rd Bone Spring	10580'	Oil/Natural Gas
Glorieta	1		Wolfcamp	11720'	Oil/Natural Gas

All casing strings will be tested in accordance with 43 CFR Part 3170 Subpart 3172. 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 easing 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 assur	nptions, 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.		N
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-Q and SOPA?		Y
If yes, are the first three strings cemented to surface?		N
Is 2 nd string set 100' to 600' below the base of salt?		Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	7" TOC @ 8160', BHS TOC @ 3890'	Y
Is an engineered weak point used to satisfy R-111-Q?		
If yes, at what depth is the weak point planned?		
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?		- IN

Mewbourne Oil Company

Eddy County, New Mexico NAD 83 Benny Huevos 36/24 B3PA Fed Com #1H

Sec 36, T21S, R31E

SHL: 2390' FSL & 760' FEL (Sec 36) BHL: 10' FNL & 1210' FEL (Sec 24)

Plan: Design #1

Standard Planning Report

19 April, 2024

Database: Hobbs

Company: Mewbourne Oil Company

Local Co-ordinate Reference: Site Ber

Site Benny Huevos 36/24 B3PA Fed Com

#11

Project: Eddy County, New Mexico NAD 83
Site: Benny Huevos 36/24 B3PA Fed Com #1H

TVD Reference:
MD Reference:

WELL @ 3646.0usft (Original Well Elev) WELL @ 3646.0usft (Original Well Elev)

North Reference:

Grid
Minimum Curvature

Site: Well:

Sec 36, T21S, R31E BHL: 10' FNL & 1210' FEL (Sec 24)

Wellbore: BHL: 10' F
Design: Design #1

Survey Calculation Method:

Eddy County, New Mexico NAD 83

Map System: Geo Datum:

Project

US State Plane 1983 North American Datum 1983

System Datum:

Ground Level

Geo Datum: North American Datum 1983

Map Zone: New Mexico Eastern Zone

Site Benny Huevos 36/24 B3PA Fed Com #1H

 Site Position:
 Northing:
 522,283.00 usft
 Latitude:
 32.4343546

 From:
 Map
 Easting:
 728,901.10 usft
 Longitude:
 -103.7253876

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

Well Sec 36, T21S, R31E

 Well Position
 +N/-S
 0.0 usft
 Northing:
 522,283.00 usft
 Latitude:
 32.4343546

 +E/-W
 0.0 usft
 Easting:
 728,901.10 usft
 Longitude:
 -103.7253876

Position Uncertainty

0.0 usft

Wellhead Elevation:

3,646.0 usft

Ground Level:

3,618.0 usft

3,618.0 usft

Grid Convergence: 0.33 °

Wellbore BHL: 10' FNL & 1210' FEL (Sec 24)

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

 IGRF2010
 12/31/2014
 7.23
 60.27
 48,345.08238190

Design #1

Audit Notes:

Version:Phase:PROTOTYPETie On Depth:0.0

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

 0.0
 0.0
 0.0
 357.77

Plan Survey Tool Program Date 4/19/2024

Depth From Depth To

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

1 0.0 24,979.8 Design #1 (BHL: 10' FNL & 1210'

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	
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,522.9	4.46	243.35	4,522.7	-3.9	-7.7	2.00	2.00	0.00	243.35	
10,759.4	4.46	243.35	10,740.3	-221.3	-441.0	0.00	0.00	0.00	0.00	
10,982.3	0.00	0.01	10,963.0	-225.2	-448.7	2.00	-2.00	0.00	180.00	KOP: 2167' FSL & 12
11,888.1	90.57	359.69	11,536.0	353.5	-451.8	10.00	10.00	0.00	-0.31	
24,979.8	90.57	359.69	11,406.0	13,444.4	-523.1	0.00	0.00	0.00	0.00	BHL: 10' FNL & 1210

Database: Hobbs

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

Site: Benny Huevos 36/24 B3PA Fed Com #1H

Well: Sec 36, T21S, R31E

Wellbore: BHL: 10' FNL & 1210' FEL (Sec 24)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Benny Huevos 36/24 B3PA Fed Com

#1F

WELL @ 3646.0usft (Original Well Elev) WELL @ 3646.0usft (Original Well Elev)

Grid

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	SL & 760' FEL (•							
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 1.300.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
-,	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	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
·			•	0.0					0.00
3,000.0	0.00 0.00	0.00	3,000.0		0.0	0.0	0.00	0.00 0.00	
3,100.0 3,200.0	0.00	0.00 0.00	3,100.0 3,200.0	0.0 0.0	0.0 0.0	0.0 0.0	0.00 0.00	0.00	0.00 0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	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
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	2.00	243.35	4,400.0	-0.8	-1.6	-0.7	2.00	2.00	0.00
4,500.0	4.00	243.35	4,499.8	-3.1	-6.2	-2.9	2.00	2.00	0.00
4,522.9	4.46	243.35	4,522.7	-3.1 -3.9	-0.2 -7.7	-2.9 -3.6	2.00	2.00	0.00
4,600.0	4.46	243.35	4,599.5	-6.6	-13.1	-5.0 -6.1	0.00	0.00	0.00
4,700.0	4.46	243.35	4,699.2	-10.1	-20.0	-9.3	0.00	0.00	0.00
4,800.0	4.46	243.35	4,798.9	-13.5	-27.0	-12.5	0.00	0.00	0.00
4,900.0 5,000.0	4.46 4.46	243.35 243.35	4,898.6 4,998.3	-17.0 -20.5	-33.9 -40.9	-15.7 -18.9	0.00 0.00	0.00 0.00	0.00 0.00

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Eddy County, New Mexico NAD 83
Benny Huevos 36/24 B3PA Fed Com #1H

Well: Sec 36, T21S, R31E

Wellbore: BHL: 10' FNL & 1210' FEL (Sec 24)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Benny Huevos 36/24 B3PA Fed Com

#1H

WELL @ 3646.0usft (Original Well Elev)
WELL @ 3646.0usft (Original Well Elev)

Grid

anned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.0	4.46	243.35	5,098.0	-24.0	-47.8	-22.1	0.00	0.00	0.00
5,200.0		243.35	5,197.7	-27.5	-54.8	-25.3	0.00	0.00	0.00
5,300.0	4.46	243.35	5,297.4	-31.0	-61.7	-28.6	0.00	0.00	0.00
5,400.0	4.46	243.35	5,397.1	-34.5	-68.7	-31.8	0.00	0.00	0.00
5,500.0	4.46	243.35	5,496.8	-38.0	-75.6	-35.0	0.00	0.00	0.00
5,600.0	4.46	243.35	5,596.5	-41.4	-82.6	-38.2	0.00	0.00	0.00
5,700.0	4.46	243.35	5,696.2	-44.9	-89.5	-41.4	0.00	0.00	0.00
5,800.0	4.46	243.35	5,795.9	-48.4	-96.5	-44.6	0.00	0.00	0.00
5,900.0	4.46	243.35	5,895.6	-51.9	-103.4	-47.8	0.00	0.00	0.00
6,000.0	4.46	243.35	5,995.3	-55.4	-110.4	-51.1	0.00	0.00	0.00
6,100.0	4.46	243.35	6,095.0	-58.9	-117.3	-54.3	0.00	0.00	0.00
6,200.0	4.46	243.35	6,194.7	-62.4	-124.2	-57.5	0.00	0.00	0.00
6,300.0	4.46	243.35	6,294.4	-65.8	-131.2	-60.7	0.00	0.00	0.00
6,400.0	4.46	243.35	6,394.1	-69.3	-138.1	-63.9	0.00	0.00	0.00
6,500.0	4.46	243.35	6,493.8	-72.8	-145.1	-67.1	0.00	0.00	0.00
6,600.0	4.46	243.35	6,593.5	-76.3	-152.0	-70.3	0.00	0.00	0.00
6,700.0	4.46	243.35	6,693.2	-79.8	-159.0	-73.5	0.00	0.00	0.00
6,800.0	4.46	243.35	6,792.9	-83.3	-165.9	-76.8	0.00	0.00	0.00
C 000 0	4.46	242.25	6 000 6	-86.8	170.0	-80.0	0.00	0.00	0.00
6,900.0	4.46	243.35	6,892.6		-172.9 -179.8				0.00
7,000.0		243.35 243.35	6,992.3	-90.2		-83.2	0.00	0.00	0.00
7,100.0			7,092.0	-93.7	-186.8	-86.4	0.00	0.00	0.00
7,200.0 7,300.0		243.35 243.35	7,191.7 7,291.4	-97.2 -100.7	-193.7 -200.7	-89.6 -92.8	0.00 0.00	0.00 0.00	0.00 0.00
7,300.0	4.46	243.33	7,291.4	-100.7	-200.7	-92.0		0.00	
7,400.0	4.46	243.35	7,391.1	-104.2	-207.6	-96.0	0.00	0.00	0.00
7,500.0	4.46	243.35	7,490.8	-107.7	-214.5	-99.3	0.00	0.00	0.00
7,600.0	4.46	243.35	7,590.5	-111.2	-221.5	-102.5	0.00	0.00	0.00
7,700.0	4.46	243.35	7,690.2	-114.7	-228.4	-105.7	0.00	0.00	0.00
7,800.0	4.46	243.35	7,789.9	-118.1	-235.4	-108.9	0.00	0.00	0.00
7,900.0	4.46	243.35	7,889.6	-121.6	-242.3	-112.1	0.00	0.00	0.00
8,000.0	4.46	243.35	7,989.3	-125.1	-249.3	-115.3	0.00	0.00	0.00
8,100.0	4.46	243.35	8,089.0	-128.6	-256.2	-118.5	0.00	0.00	0.00
8,200.0	4.46	243.35	8,188.7	-132.1	-263.2	-121.8	0.00	0.00	0.00
8,300.0		243.35	8,288.3	-135.6	-270.1	-125.0	0.00	0.00	0.00
8,400.0	4.46	243.35	8,388.0	-139.1	-277.1	-128.2	0.00	0.00	0.00
8,500.0	4.46	243.35 243.35	8,487.7	-142.5	-284.0 201.0	-131.4	0.00	0.00 0.00	0.00
8,600.0 8,700.0	4.46 4.46	243.35 243.35	8,587.4 8,687.1	-146.0 -149.5	-291.0 -297.9	-134.6 -137.8	0.00 0.00	0.00	0.00 0.00
8,700.0 8,800.0	4.46	243.35 243.35	8,087.1 8,786.8	-149.5 -153.0	-297.9 -304.8	-137.8 -141.0	0.00	0.00	0.00
8,900.0		243.35	8,886.5	-156.5	-311.8	-144.2	0.00	0.00	0.00
9,000.0		243.35	8,986.2	-160.0	-318.7	-147.5	0.00	0.00	0.00
9,100.0		243.35	9,085.9	-163.5	-325.7	-150.7	0.00	0.00	0.00
9,200.0		243.35	9,185.6	-166.9	-332.6	-153.9	0.00	0.00	0.00
9,300.0	4.46	243.35	9,285.3	-170.4	-339.6	-157.1	0.00	0.00	0.00
9,400.0	4.46	243.35	9,385.0	-173.9	-346.5	-160.3	0.00	0.00	0.00
9,500.0	4.46	243.35	9,484.7	-177.4	-353.5	-163.5	0.00	0.00	0.00
9,600.0	4.46	243.35	9,584.4	-180.9	-360.4	-166.7	0.00	0.00	0.00
9,700.0	4.46	243.35	9,684.1	-184.4	-367.4	-170.0	0.00	0.00	0.00
9,800.0	4.46	243.35	9,783.8	-187.9	-374.3	-173.2	0.00	0.00	0.00
9,900.0	4.46	243.35 243.35	9,883.5	-191.4	-381.3	-176.4	0.00	0.00	0.00
10,000.0 10,100.0	4.46		9,983.2	-194.8	-388.2 -395.1	-179.6	0.00	0.00	0.00
10,100.0	4.46 4.46	243.35 243.35	10,082.9 10,182.6	-198.3 -201.8	-395.1 -402.1	-182.8 -186.0	0.00 0.00	0.00 0.00	0.00 0.00
10,200.0		243.35 243.35			-402.1 -409.0		0.00		
10,300.0	4.46	∠43.33	10,282.3	-205.3	-409.0	-189.2	0.00	0.00	0.00

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Benny Huevos 36/24 B3PA Fed Com #1H

Well: Sec 36, T21S, R31E

Wellbore: BHL: 10' FNL & 1210' FEL (Sec 24)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Benny Huevos 36/24 B3PA Fed Com

#1F

WELL @ 3646.0usft (Original Well Elev) WELL @ 3646.0usft (Original Well Elev)

Grid

esigii.	Design #1								
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)
10,400.0	4.46	243.35	10,382.0	-208.8	-416.0	-192.5	0.00	0.00	0.00
10,500.0	4.46	243.35	10,481.7	-212.3	-422.9	-195.7	0.00	0.00	0.00
10,600.0		243.35	10,581.4	-215.8	-429.9	-198.9	0.00	0.00	0.00
10,700.0		243.35	10,681.1	-219.2	-436.8	-202.1	0.00	0.00	0.00
10,759.4		243.35	10,740.3	-221.3	-441.0	-204.0	0.00	0.00	0.00
10,759.4	4.40	243.33	10,740.3	-221.3	-441.0	-204.0	0.00	0.00	0.00
10,800.0	3.65	243.35	10,780.8	-222.6	-443.5	-205.2	2.00	-2.00	0.00
10,900.0	1.65	243.35	10,880.7	-224.7	-447.6	-207.1	2.00	-2.00	0.00
10,982.3		0.01	10,963.0	-225.2	-448.7	-207.6	2.00	-2.00	0.00
	' FSL & 1210' FEL		,						
			10 000 7	224.0	440.7	207.2	10.00	10.00	0.00
11,000.0		359.69	10,980.7	-224.9	-448.7	-207.3	10.00		
11,050.0	6.77	359.69	11,030.5	-221.2	-448.7	-203.6	10.00	10.00	0.00
11,100.0	11.77	359.69	11,079.9	-213.2	-448.8	-195.5	10.00	10.00	0.00
11,150.0		359.69	11,128.3	-200.8	- 448.8	-183.2	10.00	10.00	0.00
11,200.0		359.69	11,175.5	-184.3	-448.9	-166.8	10.00	10.00	0.00
11,200.0		359.69	11,175.5	-164.3 -163.8	-446.9 -449.0	-146.2	10.00	10.00	0.00
11,250.0			11,221.1					10.00	
11,300.0	31.76	359.69	11,204.7	-139.4	-449.2	-121.8	10.00	10.00	0.00
11,350.0	36.76	359.69	11,306.0	-111.2	-449.3	-93.7	10.00	10.00	0.00
11,400.0		359.69	11,344.7	-79.6	-449.5	-62.1	10.00	10.00	0.00
11,450.0		359.69	11,380.5	-44.7	-449.7	-27.2	10.00	10.00	0.00
11,500.0		359.69	11,413.1	-6.8	-449.9	10.7	10.00	10.00	0.00
11,550.0		359.69	11,442.3		-450.1			10.00	
11,330.0	56.76	339.69	11,442.3	33.7	-430.1	51.2	10.00	10.00	0.00
11,600.0	61.76	359.69	11,467.8	76.7	-450.3	94.1	10.00	10.00	0.00
11,650.0	66.76	359.69	11,489.5	121.7	-450.6	139.1	10.00	10.00	0.00
11,700.0		359.69	11,507.2	168.5	-450.8	185.9	10.00	10.00	0.00
11,750.0		359.69	11,520.8	216.6	-451.1	233.9	10.00	10.00	0.00
11,800.0		359.69	11,530.1	265.7	-451.4	283.0	10.00	10.00	0.00
11,000.0	01.70	339.09	11,550.1	203.7	-431.4	203.0	10.00	10.00	0.00
11,850.0	86.76	359.69	11,535.1	315.4	-451.6	332.7	10.00	10.00	0.00
11,884.3	90.19	359.69	11,536.0	349.7	-451.8	367.0	10.00	10.00	0.00
FTP/LP: 25	40' FNL & 1210' F	EL (Sec 36)							
11,888.1	90.57	359.69	11,536.0	353.5	-451.8	370.8	10.00	10.00	0.00
11,900.0		359.69	11,535.9	365.4	-451.9	382.7	0.00	0.00	0.00
					-451.9 -452.5				
12,000.0	90.57	359.69	11,534.9	465.4	-45∠.5	482.6	0.00	0.00	0.00
12,100.0	90.57	359.69	11,533.9	565.4	-453.0	582.6	0.00	0.00	0.00
12,200.0		359.69	11,532.9	665.4	-453.5	682.5	0.00	0.00	0.00
12,300.0		359.69	11,531.9	765.4	-454.1	782.4	0.00	0.00	0.00
12,400.0		359.69	11,530.9	865.4	-454.6	882.4	0.00	0.00	0.00
12,500.0		359.69	11,529.9	965.4	- 455.2	982.3	0.00	0.00	0.00
12,600.0		359.69	11,528.9	1,065.3	-455.7	1,082.3	0.00	0.00	0.00
12,700.0	90.57	359.69	11,527.9	1,165.3	-456.3	1,182.2	0.00	0.00	0.00
12,800.0		359.69	11,526.9	1,265.3	-456.8	1,282.1	0.00	0.00	0.00
12,900.0		359.69	11,526.0	1,365.3	-457.4	1,382.1	0.00	0.00	0.00
13,000.0		359.69	11,525.0	1,465.3	-457.9	1,482.0	0.00	0.00	0.00
13,100.0		359.69	11,524.0	1,565.3	-458.4	1,582.0	0.00	0.00	0.00
13,200.0	90.57	359.69	11,523.0	1,665.3	-459.0	1,681.9	0.00	0.00	0.00
13,300.0	90.57	359.69	11,522.0	1,765.3	-459.5	1,781.8	0.00	0.00	0.00
13,400.0	90.57	359.69	11,521.0	1,865.3	-460.1	1,881.8	0.00	0.00	0.00
13,500.0		359.69	11,520.0	1,965.3	-460.6	1,981.7	0.00	0.00	0.00
13,600.0		359.69	11,519.0	2,065.3	-461.2	2,081.7	0.00	0.00	0.00
13,700.0		359.69	11,518.0	2,165.3	-461.7	2,181.6	0.00	0.00	0.00
13,800.0	90.57	359.69	11,517.0	2,265.3	-462.3	2,281.5	0.00	0.00	0.00
13,900.0	90.57	359.69	11,516.0	2,365.3	-462.8	2,381.5	0.00	0.00	0.00
14,000.0		359.69	11,515.0	2,465.3	-463.3	2,481.4	0.00	0.00	0.00
•									
14,100.0	90.57	359.69	11,514.0	2,565.3	-463.9	2,581.3	0.00	0.00	0.00

Database:

Hobbs

Local Co-ordinate Reference:

Site Benny Huevos 36/24 B3PA Fed Com

#1

Grid

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

TVD Reference: MD Reference:

WELL @ 3646.0usft (Original Well Elev)
WELL @ 3646.0usft (Original Well Elev)

 Site:
 Benny Huevos 36/24 B3PA Fed Com #1H

 Well:
 Sec 36, T21S, R31E

North Reference: Survey Calculation Method:

Minimum Curvature

Wellbore:

BHL: 10' FNL & 1210' FEL (Sec 24)

Design: Design #1

ned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,200.0		359.69	11,513.0	2,665.2	-464.4	2,681.3	0.00	0.00	0.00
14,300.0		359.69	11,512.0	2,765.2	-465.0	2,781.2	0.00	0.00	0.00
14,400.0		359.69	11,511.1 11,510.8	2,865.2 2,889.2	-465.5	2,881.2 2,905.1	0.00	0.00 0.00	0.00 0.00
14,424.0	90.57 FSL & 1211' FEL (S	359.69 ec 25)	11,510.6	2,009.2	-465.7	2,905.1	0.00	0.00	0.00
	•	•	44 540 4	0.005.0	400.4	0.004.4	0.00	0.00	0.00
14,500.0 14,600.0		359.69 359.69	11,510.1 11,509.1	2,965.2 3,065.2	-466.1 -466.6	2,981.1 3,081.0	0.00 0.00	0.00 0.00	0.00 0.00
14,700.0		359.69	11,509.1	3,165.2	-467.2	3,181.0	0.00	0.00	0.00
14,700.0		359.69	11,507.1	3,265.2	-467.7	3,280.9	0.00	0.00	0.00
14,900.0		359.69	11,506.1	3,365.2	-467.7 -468.2	3,380.9	0.00	0.00	0.00
15,000.0		359.69	11,505.1	3,465.2	-468.8	3,480.8	0.00	0.00	0.00
15,100.0		359.69	11,504.1	3,565.2	-469.3	3,580.7	0.00	0.00	0.00
15,200.0		359.69	11,503.1	3,665.2	-469.9	3,680.7	0.00	0.00	0.00
15,300.0		359.69	11,502.1	3,765.2	-470.4	3,780.6	0.00	0.00	0.00
15,400.0	90.57	359.69	11,501.1	3,865.2	-471.0	3,880.6	0.00	0.00	0.00
15,500.0		359.69	11,500.1	3,965.2	-471.5	3,980.5	0.00	0.00	0.00
15,600.0	90.57	359.69	11,499.1	4,065.2	-472.1	4,080.4	0.00	0.00	0.00
15,700.0	90.57	359.69	11,498.1	4,165.2	-472.6	4,180.4	0.00	0.00	0.00
15,744.4	4 90.57	359.69	11,497.7	4,209.5	-472.8	4,224.7	0.00	0.00	0.00
	21' FSL & 1210' FEI	, ,							
15,800.0	90.57	359.69	11,497.2	4,265.1	-473.1	4,280.3	0.00	0.00	0.00
15,900.0	90.57	359.69	11,496.2	4,365.1	-473.7	4,380.3	0.00	0.00	0.00
16,000.0	90.57	359.69	11,495.2	4,465.1	-474.2	4,480.2	0.00	0.00	0.00
16,100.0	90.57	359.69	11,494.2	4,565.1	-474.8	4,580.1	0.00	0.00	0.00
16,200.0	90.57	359.69	11,493.2	4,665.1	-475.3	4,680.1	0.00	0.00	0.00
16,300.0	90.57	359.69	11,492.2	4,765.1	-475.9	4,780.0	0.00	0.00	0.00
16,400.0	90.57	359.69	11,491.2	4,865.1	-476.4	4,879.9	0.00	0.00	0.00
16,500.0	90.57	359.69	11,490.2	4,965.1	-476.9	4,979.9	0.00	0.00	0.00
16,600.0	90.57	359.69	11,489.2	5,065.1	-477.5	5,079.8	0.00	0.00	0.00
16,700.0	90.57	359.69	11,488.2	5,165.1	-478.0	5,179.8	0.00	0.00	0.00
16,800.0	90.57	359.69	11,487.2	5,265.1	-478.6	5,279.7	0.00	0.00	0.00
16,900.0	90.57	359.69	11,486.2	5,365.1	-479.1	5,379.6	0.00	0.00	0.00
17,000.0	90.57	359.69	11,485.2	5,465.1	-479.7	5,479.6	0.00	0.00	0.00
17,100.0		359.69	11,484.2	5,565.1	-480.2	5,579.5	0.00	0.00	0.00
17,200.0		359.69	11,483.3	5,665.1	-480.8	5,679.5	0.00	0.00	0.00
17,300.0	90.57	359.69	11,482.3	5,765.0	-481.3	5,779.4	0.00	0.00	0.00
17,400.0		359.69	11,481.3	5,865.0	-481.8	5,879.3	0.00	0.00	0.00
17,500.0		359.69	11,480.3	5,965.0	-482.4	5,979.3	0.00	0.00	0.00
17,600.0		359.69	11,479.3	6,065.0	-482.9	6,079.2	0.00	0.00	0.00
17,700.0		359.69	11,478.3	6,165.0	-483.5	6,179.2	0.00	0.00	0.00
17,800.0	90.57	359.69	11,477.3	6,265.0	-484.0	6,279.1	0.00	0.00	0.00
17,900.0		359.69	11,476.3	6,365.0	-484.6	6,379.0	0.00	0.00	0.00
18,000.0		359.69	11,475.3	6,465.0	-485.1	6,479.0	0.00	0.00	0.00
18,100.0		359.69	11,474.3	6,565.0	-485.7	6,578.9	0.00	0.00	0.00
18,200.0		359.69	11,473.3	6,665.0	-486.2	6,678.9	0.00	0.00	0.00
18,300.0	90.57	359.69	11,472.3	6,765.0	-486.7	6,778.8	0.00	0.00	0.00
18,400.0		359.69	11,471.3	6,865.0	-487.3	6,878.7	0.00	0.00	0.00
18,500.0		359.69	11,470.3	6,965.0	-487.8	6,978.7	0.00	0.00	0.00
18,600.0		359.69	11,469.4	7,065.0	-488.4	7,078.6	0.00	0.00	0.00
18,700.0		359.69	11,468.4	7,165.0	-488.9	7,178.5	0.00	0.00	0.00
18,800.0	90.57	359.69	11,467.4	7,265.0	-489.5	7,278.5	0.00	0.00	0.00
18,900.0	90.57	359.69	11,466.4	7,364.9	-490.0	7,378.4	0.00	0.00	0.00
19,000.0		359.69	11,465.4	7,464.9	-490.6	7,478.4	0.00	0.00	0.00

Database:

Company:

Hobbs

Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Benny Huevos 36/24 B3PA Fed Com #1H

Well: Sec 36, T21S, R31E

Wellbore: BHL: 10' FNL & 1210' FEL (Sec 24)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Benny Huevos 36/24 B3PA Fed Com

#1H

WELL @ 3646.0usft (Original Well Elev) WELL @ 3646.0usft (Original Well Elev)

Grid

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,100.0	90.57	359.69	11,464.4	7,564.9	-491.1	7,578.3	0.00	0.00	0.00
19,200.0	90.57	359.69	11,463.4	7,664.9	-491.6	7,678.2	0.00	0.00	0.00
19,300.0	90.57	359.69	11,462.4	7,764.9	-492.2	7,778.2	0.00	0.00	0.00
19,400.0	90.57	359.69	11,461.4	7,864.9	-492.7	7,878.1	0.00	0.00	0.00
19,500.0	90.57	359.69	11,461.4	7,064.9 7,964.9	-492.7 -493.3	7,070.1	0.00	0.00	0.00
19,600.0	90.57	359.69	11,459.4	8,064.9	-493.8	8,078.0	0.00	0.00	0.00
19,700.0	90.57	359.69	11,458.4	8,164.9	-494.4	8,177.9	0.00	0.00	0.00
19,800.0	90.57	359.69	11,457.4	8,264.9	-494.9	8,277.9	0.00	0.00	0.00
19,900.0	90.57	359.69	11,456.4	8,364.9	-495.5	8,377.8	0.00	0.00	0.00
20,000.0	90.57	359.69	11,455.4	8,464.9	-496.0	8,477.8	0.00	0.00	0.00
20,100.0	90.57	359.69	11,454.5 11,453.5	8,564.9	-496.5	8,577.7 8,677.6	0.00	0.00	0.00
20,200.0 20,300.0	90.57 90.57	359.69 359.69	11,453.5	8,664.9 8,764.9	-497.1 -497.6	8,777.6	0.00 0.00	0.00 0.00	0.00 0.00
20,400.0	90.57	359.69	11,451.5	8,864.8	-498.2	8,877.5	0.00	0.00	0.00
20,500.0	90.57	359.69	11,450.5	8,964.8	-498.7	8,977.5	0.00	0.00	0.00
20,600.0	90.57	359.69	11,449.5	9,064.8	-499.3	9,077.4	0.00	0.00	0.00
20,700.0	90.57	359.69	11,448.5	9,164.8	-499.8	9,177.3	0.00	0.00	0.00
20,800.0	90.57	359.69	11,447.5	9,264.8	-500.4	9,277.3	0.00	0.00	0.00
20,900.0	90.57	359.69	11,446.5	9,364.8	-500.9	9,377.2	0.00	0.00	0.00
21,000.0	90.57	359.69	11,445.5	9,464.8	-501.4	9,477.1	0.00	0.00	0.00
21,100.0	90.57	359.69	11,444.5	9,564.8	-502.0	9,577.1	0.00	0.00	0.00
21,200.0	90.57	359.69	11,443.5	9,664.8	-502.5	9,677.0	0.00	0.00	0.00
21,300.0	90.57	359.69	11,442.5	9,764.8	-503.1	9,777.0	0.00	0.00	0.00
21,400.0	90.57	359.69	11,441.5	9,864.8	-503.6	9,876.9	0.00	0.00	0.00
21,500.0	90.57	359.69	11,440.6	9,964.8	-504.2	9,976.8	0.00	0.00	0.00
21,600.0	90.57	359.69	11,439.6	10,064.8	-504.7	10,076.8	0.00	0.00	0.00
21,700.0	90.57	359.69	11,438.6	10,164.8	-505.2	10,176.7	0.00	0.00	0.00
21,800.0	90.57	359.69	11,437.6	10,264.8	-505.8	10,276.7	0.00	0.00	0.00
21,900.0	90.57	359.69	11,436.6	10,364.8	-506.3	10,376.6	0.00	0.00	0.00
22,000.0	90.57	359.69	11,435.6	10,464.7	-506.9	10,476.5	0.00	0.00	0.00
22,100.0	90.57	359.69	11,434.6	10,564.7	-507.4	10,576.5	0.00	0.00	0.00
22,200.0	90.57	359.69	11,433.6	10,664.7	-508.0	10,676.4	0.00	0.00	0.00
22,300.0	90.57	359.69	11,432.6	10,764.7	-508.5	10,776.4	0.00	0.00	0.00
22,400.0	90.57	359.69	11,431.6	10,864.7	-509.1	10,876.3	0.00	0.00	0.00
22,500.0	90.57	359.69	11,431.6	10,064.7	-509.1	10,676.3	0.00	0.00	0.00
22,600.0	90.57	359.69	11,430.6	11,064.7	-509.0 -510.1	11,076.2	0.00	0.00	0.00
22,700.0	90.57	359.69	11,428.6	11,164.7	-510.7	11,176.1	0.00	0.00	0.00
22,800.0	90.57	359.69	11,427.6	11,264.7	-511.2	11,276.1	0.00	0.00	0.00
•									
22,900.0	90.57	359.69	11,426.7	11,364.7	-511.8	11,376.0	0.00	0.00	0.00
23,000.0 23,100.0	90.57 90.57	359.69 359.69	11,425.7 11,424.7	11,464.7 11,564.7	-512.3 -512.9	11,475.9 11,575.9	0.00 0.00	0.00 0.00	0.00 0.00
23,100.0	90.57	359.69	11,424.7	11,564.7	-512.9 -513.4	11,675.8	0.00	0.00	0.00
23,300.0	90.57	359.69 359.69	11,423.7	11,764.7	-513.4 -514.0	11,675.8	0.00	0.00	0.00
				,					
23,400.0	90.57	359.69	11,421.7	11,864.7	-514.5	11,875.7	0.00	0.00	0.00
23,500.0	90.57	359.69	11,420.7	11,964.7	-515.0	11,975.6	0.00	0.00	0.00
23,600.0	90.57	359.69	11,419.7	12,064.6	-515.6	12,075.6	0.00	0.00	0.00
23,669.4	90.57	359.69	11,419.0	12,134.0	-516.0	12,144.9	0.00	0.00	0.00
	' FNL & 1210' FE								
23,700.0	90.57	359.69	11,418.7	12,164.6	-516.1	12,175.5	0.00	0.00	0.00
23,800.0	90.57	359.69	11,417.7	12,264.6	-516.7	12,275.4	0.00	0.00	0.00
23,900.0	90.57	359.69	11,416.7	12,364.6	-517.2	12,375.4	0.00	0.00	0.00
24,000.0	90.57	359.69	11,415.7	12,464.6	-517.8	12,475.3	0.00	0.00	0.00
24,100.0	90.57	359.69	11,414.7	12,564.6	-518.3	12,575.3	0.00	0.00	0.00

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Benny Huevos 36/24 B3PA Fed Com #1H

Well: Sec 36, T21S, R31E

Wellbore: BHL: 10' FNL & 1210' FEL (Sec 24)

Design: Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Benny Huevos 36/24 B3PA Fed Com

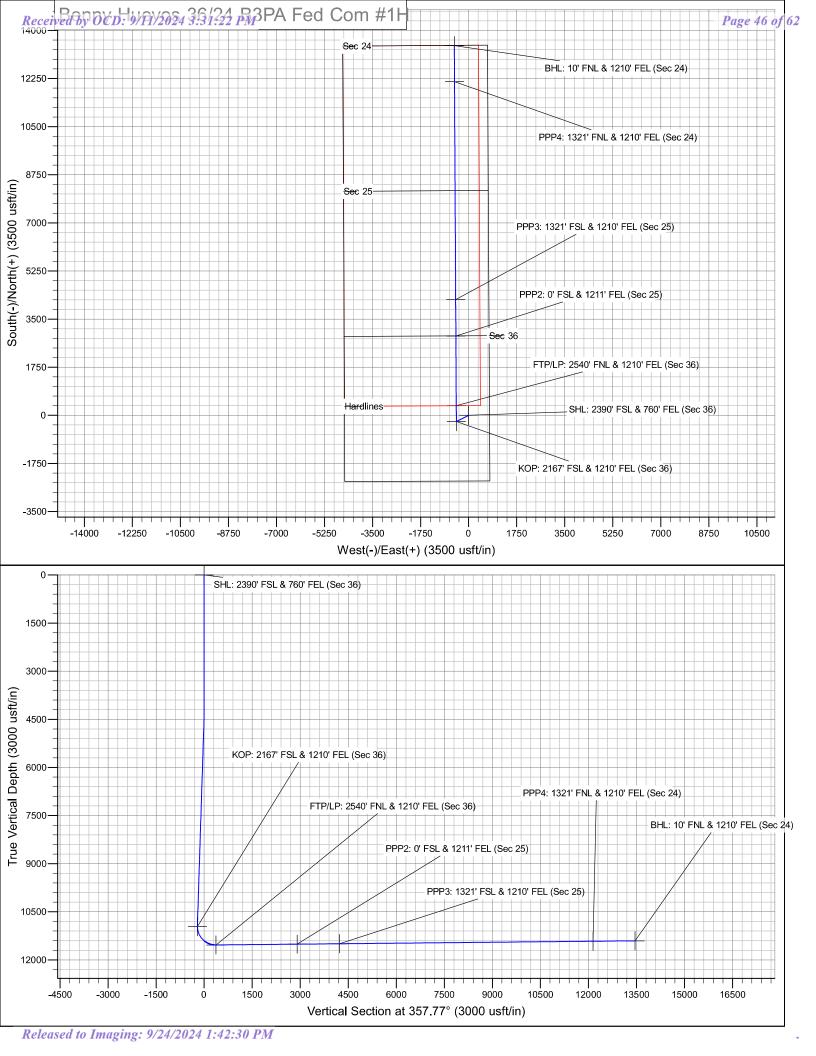
#1H

WELL @ 3646.0usft (Original Well Elev) WELL @ 3646.0usft (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)
24,200.0	90.57	359.69	11,413.7	12,664.6	-518.9	12,675.2	0.00	0.00	0.00
24,300.0	90.57	359.69	11,412.8	12,764.6	-519.4	12,775.1	0.00	0.00	0.00
24,400.0	90.57	359.69	11,411.8	12,864.6	-519.9	12,875.1	0.00	0.00	0.00
24,500.0	90.57	359.69	11,410.8	12,964.6	-520.5	12,975.0	0.00	0.00	0.00
24,600.0	90.57	359.69	11,409.8	13,064.6	-521.0	13,075.0	0.00	0.00	0.00
24,700.0	90.57	359.69	11,408.8	13,164.6	-521.6	13,174.9	0.00	0.00	0.00
24,800.0	90.57	359.69	11,407.8	13,264.6	-522.1	13,274.8	0.00	0.00	0.00
24,900.0	90.57	359.69	11,406.8	13,364.6	-522.7	13,374.8	0.00	0.00	0.00
24,979.8	90.57	359.69	11,406.0	13,444.4	-523.1	13,454.6	0.00	0.00	0.00
BHL: 10' FN	L & 1210' FEL (S	ec 24)							

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: 2390' FSL & 760' F - plan hits target cent - Point	0.00 ter	0.00	0.0	0.0	0.0	522,283.00	728,901.10	32.4343546	-103.7253876
KOP: 2167' FSL & 1210' - plan hits target cent - Point	0.00 ter	0.01	10,963.0	-225.2	-448.7	522,057.80	728,452.40	32.4337426	-103.7268460
BHL: 10' FNL & 1210' FE - plan hits target cent - Point	0.00 ter	0.00	11,406.0	13,444.4	-523.1	535,727.40	728,378.00	32.4713168	- 103.7268355
PPP4: 1321' FNL & 121(- plan hits target cent - Point	0.00 ter	0.00	11,419.0	12,134.0	-516.0	534,417.00	728,385.13	32.4677148	-103.7268365
PPP3: 1321' FSL & 121(- plan hits target cent - Point	0.00 ter	0.00	11,497.7	4,209.5	-472.8	526,492.50	728,428.26	32.4459325	-103.7268426
PPP2: 0' FSL & 1211' FE - plan hits target cent - Point	0.00 ter	0.00	11,510.8	2,889.2	-465.7	525,172.20	728,435.45	32.4423033	-103.7268436
FTP/LP: 2540' FNL & 12 - plan hits target cent - Point	0.00 ter	0.00	11,536.0	349.7	-4 51.8	522,632.70	728,449.27	32.4353229	-103.7268456



Mewbourne Oil Company, Benny Huevos 36/24 B3PA Fed Com 1H Sec 36, T21S, R31E

SHL: 2390' FSL 760' FEL (Sec 36) BHL: 10' FNL 1210' FEL (Sec 24)

Operator Name:	Property Name:	Well Number
Mewbourne Oil Company	Benny Huevos 36/24 B3PA Fed Com	1H

Off Point	

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
I	36	21	31	-	2167'	FSL	1210'	FEL	Eddy
	Latitude Longitude					NAD			
32.4337427	7				-103.72684	61			83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Н	36	21	31	-	2540'	FNL	1210'	FEL	Eddy
Latitude					NAD				
32.435323					-103.72684	51			83

Last Take Point (LTP)

	Lubt Tuke I	Ome (EII	,							
	UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	A	24	21	31	_	10'	FNL	1210'	FEL	Eddy
ı	Latitude					NAĎ				
ı	32.4713167	7				-103.72683	355			83

32.4713167	-103.7268355	83
Is this well the defining well for the Horizontal Sp. Is this well an infill well?	vacing Unit?	
If infill is yes please provide API if available, Ope Spacing Unit.	erator Name and well number for Defining well for Horizontal	
API#		
Operator Name:	roperty Name:	Well Number

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: MEWBOURNE OIL COMPANY

WELL NAME & NO.: BENNY HUEVOS 36/24 B3PA FED COM 1H

APD ID: 10400083658

LOCATION: Section 36, T.21 S., R.31 E. NMP

COUNTY: Eddy County, New Mexico

COA

H ₂ S	C	No	•	Yes
Potash /	None	 Secretary 	⊙ R-111-Q	Open Annulus
WIPP	3-String D	esign: Open Production C	Casing Annulus	■ WIPP
Cave / Karst	Low	Medium	High	Critical
Wellhead	Conventional	Multibowl	C Both	Diverter
Cementing	Primary Squeeze	Cont. Squeeze	EchoMeter	✓ DV Tool
Special Req	Capitan Reef	Water Disposal	✓ COM	Unit
Waste Prev.	Self-Certification	C Waste Man. Plan	• APD Submitted p	rior to 06/10/2024
Additional	Flex Hose	Casing Clearance	Pilot Hole	Break Testing
Language	Four-String	Offline Cementing	Fluid-Filled	

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated **at spud**. As a result, the Hydrogen Sulfide area must meet all requirements from 43 CFR 3176, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

APD is within the R-111-Q defined boundary. Operator must follow all procedures and requirements listed within the Order No. R-111-Q.

B. CASING

Primary Casing Program

- 1. The 13-3/8 inch surface casing shall be set at approximately 715 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. If salt is encountered, set the casing at least 25 ft. above the salt.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic-type temperature survey with surface

- log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **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 in. intermediate casing shall be set in a competent bed at approximately 4,390 ft. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

Option 1 (Single Stage): 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 Potash.

Option 2 (Two-Stage): The operator has proposed utilize a DV tool. Operator may adjust depth of DV tool if cement volumes are adjusted accordingly. The DV tool may be cancelled if cement circulates to surface on the first stage.

- **a. First stage to DV tool:** Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- **b.** Second stage above DV tool: Cement to surface. If cement does not circulate, contact the appropriate BLM office. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash.

Note: Excess cement for the 2nd stage is below the BLM's recommendation of 25%. More cement might be needed.

Note: The intermediate casing must be kept fluid-filled to meet the minimum requirements for collapse design safety factor.

- **3.** Operator has proposed to set **7-inch HCP-110** production casing at approximately **10,982 ft.** (10,948 ft. TVD). The minimum required fill of cement behind the **7** inch production casing is:
 - Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage within 180 days after well completion in accordance with the R-111-Q guidelines.
 - a. First stage: Operator will cement production casing with intent to bring cement to top of Brushy Canyon formation. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and Potash.
 - b. Second stage: Operator will perform bradenhead squeeze within 180 days after completion per R-111-Q requirements. Cement shall be tie-back at least 500 ft. into

intermediate casing and below the Marker Bed 126. If cement does not circulate, the appropriate BLM office shall be notified.

- Operator must run a cement evaluation tool (fluid shot tool, Temperature log or CBL, etc.) to verify TOC after the second stage bradenhead. Submit the results to the BLM. If cement does not tie-back at least 500 ft. into the previous casing shoe, the appropriate BLM office shall be notified.
- ❖ A monitored open annulus will be incorporated during completion by leaving the Intermediate Casing x Production Casing annulus un-cemented and monitored inside the Intermediate String. Operator must follow monitoring requirements listed within R-111-Q. Tieback requirements shall be met within 180 days.
- 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.

Alternate Casing Program

- 1. The 13-3/8 inch surface casing shall be set at approximately 715 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. If salt is encountered, set the casing at least 25 ft. above the salt.
 - e. 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.
 - f. 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)
 - g. 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.
 - h. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The 9-5/8 in. intermediate casing shall be set in a competent bed at approximately 4,390 ft. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
 - Option 1 (Single Stage): 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 Potash.
 - Option 2 (Two-Stage): The operator has proposed utilize a DV tool. Operator may adjust depth of DV tool if cement volumes are adjusted accordingly. The DV tool may be cancelled if cement circulates to surface on the first stage.

- **c. First stage to DV tool:** Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- **d.** Second stage above DV tool: Cement to surface. If cement does not circulate, contact the appropriate BLM office. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash.

Note: Excess cement for the 2nd stage is below the BLM's recommendation of 25%. More cement might be needed.

Note: The intermediate casing must be kept fluid-filled to meet the minimum requirements for collapse design safety factor.

- **3.** Operator has proposed to set **7-inch HCP-110** production casing at approximately **11,884 ft.** (11,536 ft. TVD). The minimum required fill of cement behind the **7** inch production casing is:
 - Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage within 180 days after well completion in accordance with the R-111-Q guidelines.
 - c. First stage: Operator will cement production casing with intent to bring cement to top of Brushy Canyon formation. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and Potash.
 - d. Second stage: Operator will perform bradenhead squeeze within 180 days after completion per R-111-Q requirements. Cement shall be tie-back at least 500 ft. into intermediate casing and below the Marker Bed 126. If cement does not circulate, the appropriate BLM office shall be notified.
 - ❖ Operator must run a cement evaluation tool (fluid shot tool, Temperature log or CBL, etc.) to verify TOC after the second stage bradenhead. Submit the results to the BLM. If cement does not tie-back at least 500 ft. into the previous casing shoe, the appropriate BLM office shall be notified.
 - ❖ A monitored open annulus will be incorporated during completion by leaving the Intermediate Casing x Production Casing annulus un-cemented and monitored inside the Intermediate String. Operator must follow monitoring requirements listed within R-111-Q. Tieback requirements shall be met within 180 days.
- 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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 10,000 (10M) psi. Variance is approved to use a 5M annular preventer with a 10M BOP stack. Before drilling out surface casing shoe, BOP/ BOPE and annular preventer must be pressure tested in accordance with title 43 CFR 3172 and API Standard 53.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for intervals utilizing a 5M BOPE or less. (Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.)
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (575-706-2779) prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 43 CFR 3172.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Offline Cementing

Operator has been (Approved) to pump the proposed cement program offline in the Surface and intermediate(s) intervals. Offline cementing should commence within 24 hours of landing the casing for the interval. Notify the BLM 4hrs prior to the commencement of any offline cementing procedure at Eddy County: 575-361-2822.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, 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.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- 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)

Contact Eddy County Petroleum Engineering Inspection Staff:

Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220; BLM NM CFO DrillingNotifications@BLM.GOV; (575) 361-2822.

- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).

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- b. When the operator proposes to set surface casing with Spudder Rig
 - i. Notify the BLM when moving in and removing the Spudder Rig.
 - ii. 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.
 - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the doghouse or stairway area.
- 3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

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 of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 8. Whenever a casing string is cemented in the R-111-Q 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 43 CFR 3172.
- 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:
 - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - ii. 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.
 - iii. Manufacturer representative shall install the test plug for the initial BOP test.

- iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
- v. 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.
 - i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (Only applies to single stage cement jobs, prior to the cement setting up.)
 - iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - iv. 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.
 - v. The results of the test shall be reported to the appropriate BLM office.

- vi. 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.
- vii. 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.
- viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per 43 CFR 3172.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

SA 06/27/2024

Hydrogen Sulfide Drilling Operations Plan Mewbourne Oil Company

1. General Requirements

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

2. Hydrogen Sulfide Training

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

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

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

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

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

3. Hydrogen Sulfide Safety Equipment and Systems

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

1. Well Control Equipment

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

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

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

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

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

4. Visual Warning Systems

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

4. Mud Program

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

5. Metallurgy

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

6. Communications

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

7. Well Testing

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

8. Emergency Phone Numbers

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

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

Operator Name: MEWBOURNE OIL COMPANY

Well Name: BENNY HUEVOS 36/24 B3PA FED COM Well Number: 1H

Section 7 - Methods for Handling

Waste type: DRILLING

Waste content description: Drill Cuttings

Amount of waste: 3240 barrels

Waste disposal frequency: One Time Only

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

Safe containment attachment:

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

FACILITY

Disposal type description:

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

HWY 62/180, Sec 27 T20S R32E.

Waste type: SEWAGE

Waste content description: Human waste & Grey water

Amount of waste: 1500 gallons

Waste disposal frequency: Weekly

Safe containment description: 2000 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, NM

Reserve Pit

Reserve Pit being used? NO

Operator Name: MEWBOURNE OIL COMPANY

Well Name: BENNY HUEVOS 36/24 B3PA FED COM Well Number: 1H

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.) Reserve pit width (ft.)

Reserve pit depth (ft.) Reserve pit volume (cu. yd.)

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? N

Description of cuttings location

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

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

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

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

Benny_Huevos_36_24_B3PA_Fed_Com_1H_WellSiteLayout_20240425081124.pdf

Comments: None

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 382756

CONDITIONS

Operator:	OGRID:
MEWBOURNE OIL CO	14744
P.O. Box 5270	Action Number:
Hobbs, NM 88241	382756
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	9/24/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	9/24/2024
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	9/24/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	9/24/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	9/24/2024
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	9/24/2024
ward.rikala	Operator must comply with all R-111-Q requirements.	9/24/2024
ward.rikala	This well can not be produced until the well name is changed per proper naming convention.	9/24/2024