Form 3160-3 (June 2015)				FORM A OMB No Expires: Ja	b. 1004-0	137
UNITED STATES DEPARTMENT OF THE II BUREAU OF LAND MANA	5. Lease Serial No. NMNM94115					
APPLICATION FOR PERMIT TO D				6. If Indian, Allotee	or Tribe	Name
1a. Type of work: Image: Constraint of the second seco	EENTER			7. If Unit or CA Agr NMNM142951	eement,	Name and No.
1b. Type of Well: ✓ Oil Well Gas Well Oil		8. Lease Name and V	Well No.			
1c. Type of Completion: Hydraulic Fracturing Si	ngle Zone	✔ Multiple Zone		LAKEWOOD 28 FI		Л
				746H		
2. Name of Operator EOG RESOURCES INCORPORATED				9. API Well No. 30-025-54837		
3a. Address 1111 BAGBY SKY LOBBY 2, HOUSTON, TX 77002	3b. Phone N (713) 651-7	o. (include area cod '000	le)	10. Field and Pool, of BOBCAT DRAW/U	1	2
4. Location of Well (Report location clearly and in accordance w	with any State	requirements.*)		11. Sec., T. R. M. or		Survey or Area
At surface TR N / 260 FSL / 1585 FWL / LAT 32.09495	529 / LONG -	103.4783063		SEC 28/T25S/R34I	E/NMP	
At proposed prod. zone TR D / 100 FNL / 1312 FWL / LA	T 32.122980	08 / LONG -103.47	92037			
14. Distance in miles and direction from nearest town or post offi	ice*			12. County or Parish LEA	l	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of ac	eres in lease	17. Spacin 640.0	pacing Unit dedicated to this well		<u> </u>
 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 15 feet 	19. Proposed 13201 feet	d Depth / 23412 feet		BLM/BIA Bond No. in file D: NM2308		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3317 feet	22. Approxi 08/14/2023	roximate date work will start* 23. Estimated duration 223 25 days				
	24. Attac	hments				
The following, completed in accordance with the requirements of (as applicable)	f Onshore Oil	and Gas Order No.	l, and the H	Iydraulic Fracturing ru	ale per 4	3 CFR 3162.3-3
 Well plat certified by a registered surveyor. A Drilling Plan. 		4. Bond to cover the Item 20 above).	e operation	is unless covered by an	existing	bond on file (see
3. A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office		5. Operator certific6. Such other site sp BLM.		mation and/or plans as	may be r	equested by the
25. Signature (Electronic Submission)		(Printed/Typed) G RICHARDSON	/ Ph: (713)) 651-7000	Date 02/24/2	2023
Title Regulatory Specialist						
Approved by (Signature) (Electronic Submission)		Name (Printed/Typed) CHRISTOPHER WALLS / Ph: (575) 234-2			Date 03/25/2025	
Title Petroleum Engineer	Office Carlsb	ad Field Office				
Application approval does not warrant or certify that the applicant applicant to conduct operations thereon. Conditions of approval, if any, are attached.	it holds legal of	or equitable title to the	hose rights	in the subject lease wl	nich wou	ld entitle the
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, m of the United States any false, fictitious or fraudulent statements of					ny depar	tment or agency



(Continued on page 2)

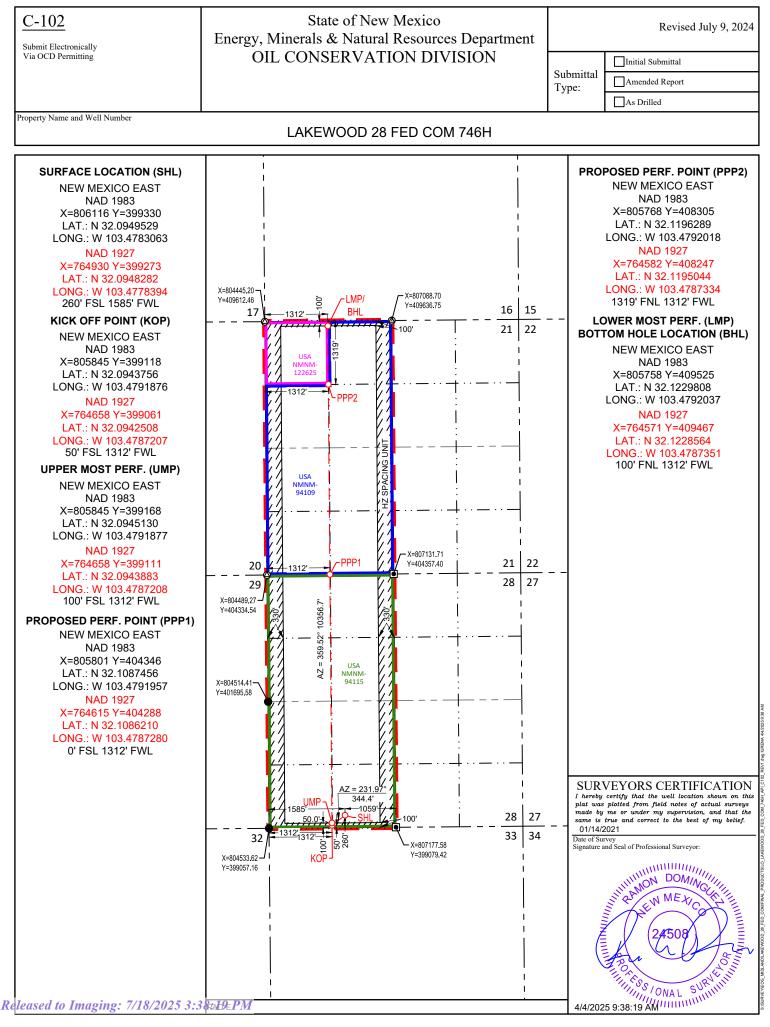
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Page 2 of 40

eceived by O	<i>CD: //3/2</i>	023 0:44:2						1		Page 2 d
C-102 Submit Electronic	cally		State of New Mexico Energy, Minerals & Natural Resources Departm						Revis	ed July 9, 2024
Via OCD Permitt			OIL CONSERVATION DIVISION						Initial Submittal	
								Submittal Type:	Amended Report	
									As Drilled	
		W		CATIO	N AND AC	REAGE DI	EDICATION	PLAT		
API Number 30-025- 5	54837			3094	Pool N		Draw; Upper W	olfcamp		
Property Code 326767			Property Name		LAKEWOOD	28 FED CC	M		Well Number	746H
OGRID No.	7377		Operator Name		EOG RESO	URCES, INC) .		Ground Level Elev	^{ation} 3317'
Surface Owner:	State Fee	Tribal 🔽 Federal	-			Mineral Owner:	State Fee Tribal	Federal		
					Surface	Location				
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude		Longitude	County
Ν	28	25-S	34-E	-	260' S	1585' W	N 32.09495	29 W 1	03.4783063	LEA
					Bottom Ho	le Location				
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude		Longitude	County
D	21	25-S	34-E	-	100' N	1312' W	N 32.12298	08 W 1	03.4792037	LEA
Dedicated Acres	Lufill Def	ining Well Defin	wa Wall ADI			O		Consolidat	-10-1-	
640.00	Infil	-	-025-4685	<u>.</u>		Overlapping Spacing		Consolidat		
				13 ⁻		N Well Setbacks are under Common Ownership: Yes No			С	
Order Numbers		Com P	ending			Well Setbacks are un	nder Common Ownership	: Yes No)	
						oint (KOP)				
UL or lot no. M	Section 28	Township 25-S	Range 34-E	Lot Idn	Feet from the N/S 50' S	Feet from the E/W 1312' W	Latitude N 32.09437	56 W 1	Longitude 03.4791876	County
	20	200	0.5				11 02.00 101			
UL or lot no.	Section	Township	Range	Lot Idn		Point (FTP) Feet from the E/W	Latitude		Longitude	County
М	28	25-S	34-E	-	100' S	1312' W	N 32.09451	30 W 1	03.4791877	LEA
				ļ	Last Take	Point (LTP)		!		
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude		Longitude	County
D	21	25-S	34-E	-	100' N	1312' W	N 32.12298	08 W 1	03.4792037	LEA
Unitized Area or A	CI . C I			a : 11 :	T			loor Elevation		
Unitized Area of A		nitized		Spacing Unity	Horizont	al Vertical	Giouna P	loor Elevation	3342'	
I hereby certi best of my kn that this orga in the land in well at this lu or unleased m	fy that the ir cowledge and nization eithe ncluding the ocation pursu ineral interes	belief; and, if er owns a wori proposed botton ant to a contro st, or to a volu	the well is a king interest n hole location uct with an o untary pooling	i vertical or o or unleased r i or has a ri wner of a wo	complete to the directional well, nineral interest ght to drill this rking interest r a compulsory	I hereby certify notes of actual	RS CERTIFICAT 1 that the well locate surveys made by m rect to the best of 1	ion shown on e or under m	this what was objective	hat the same
pooling order If this well is received The c unleased mine	heretofore ent s a horizontal consent of at eral interest i he well's com	ered by the di well, I furthe least one lessee in each tract (pleted interval	vision. r certify that e or owner of in the target	this organiz a working is pool or forma	ation has			THAT IN THE REAL PROPERTY OF	24508 24508 2015 2015 2015 2015 2015 2015 2015 2015	Ren Alter Al
Star L	- Har	rell	7/1/25					4/4/2025 9	000 L 5	IIIII.
Signature Star L Ha	arrell		Date			Signature and Seal	of Professional Surveyor	Date	;	
Print Name	al@cc-					Certificate Number	Date of	Survey		
star_harr	en@eog	liesource	s.com					01/14/2021		
E-mail Address										

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Page 3 of 40



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	E	Stat Energy, Minerals a	e of New Mex nd Natural Res		ent	Sub Via	mit Electronically E-permitting	
		1220 \$	onservation Di South St. Franc ta Fe, NM 87:	cis Dr.				
	N	ATURAL GA	AS MANA(GEMENT P	LAN			
This Natural Gas Ma	nagement Plan n	nust be submitted wi	ith each Applicat	ion for Permit to	Drill (APD)	for a new o	or recompleted well.	
			<u>1 – Plan De</u> ffective May 25,					
I. Operator:EO	G Resources, In	cOGRII	D: 7377		Date:	7/2/2025		
II. Type: ⊠ Orig	inal 🗆 Amendn	the neutrino to \Box 19.15	.27.9.D(6)(a) NN	ИАС 🗆 19.15.27.	9.D(6)(b) N	MAC 🗆 O	ther.	
If Other, please descr								
III. Well(s): Provide be recompleted from	the following in	formation for each	new or recomple	ted well or set of		sed to be di	illed or proposed to	
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D		Anticipated Produced Water BBL/D	
LAKEWOOD 28 FED COM 746H		N-28-258-34E	260' FSL & 1585' FWL	+/- 1000	+/- 3500	+/- 3	3000	
 IV. Central Delivery V. Anticipated Schoor proposed to be rec 	edule: Provide tl	he following inform	ation for each ne	w or recompleted	well or set			
Well Name	API	Spud Date	TD Reached Date	Completion Commencement		nitial Flow Back Date	First Production Date	
LAKEWOOD 28 FED COM 746H		8/1/25	8/15/25	10/01/25	11	/01/25	1/01/26	
VI. Separation Equi VII. Operational Pr Subsection A through VIII. Best Managen during active and place	actices: ⊠ Atta a F of 19.15.27.8 aent Practices:	ch a complete desc NMAC. ⊠ Attach a comple	ription of the act	ions Operator wi	ll take to co	omply with	the requirements of	

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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.

 \overline{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:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF		

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity 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 \Box will \Box 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 \Box does \Box 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: \Box 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.

<u>Section 3 - Certifications</u> <u>Effective May 25, 2021</u>

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

 \boxtimes 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

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

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

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

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

Signature: Star L Harrell Printed Name: Star L Harrell Title: Regulatory Advisor E-mail Address: Star_Harrell@eogresources.com Date: 7/2/2025 Phone: (432) 848-9161 **OIL CONSERVATION DIVISION** (Only applicable when submitted as a standalone form) Approved By: Title: Approval Date: Conditions of Approval:

Natural Gas Management Plan Items VI-VIII

VI. Separation Equipment: Attach a complete description of how Operator will size separation equipment to optimize gas capture.

- Separation equipment will be sized to provide adequate separation for anticipated rates.
- Adequate separation relates to retention time for Liquid Liquid separation and velocity for Gas-Liquid separation.
- Collection systems are appropriately sized to handle facility production rates on all (3) phases.
- Ancillary equipment and metering is selected to be serviced without flow interruptions or the need to release gas from the well.

VII. Operational Practices: Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F 19.15.27.8 NMAC.

Drilling Operations

- All flare stacks will be properly sized. The flare stacks will be located at a minimum 100' from the nearest surface hole location on the pad.
- All natural gas produced during drilling operations will be flared, unless there is an equipment malfunction and/or to avoid risk of an immediate and substantial adverse impact on safety and the environment, at which point the gas will be vented.

Completions/Recompletions Operations

- New wells will not be flowed back until they are connected to a properly sized gathering system.
- The facility will be built/sized for maximum anticipated flowrates and pressures to minimize waste.
- For flowback operations, multiple stages of separation will be used as well as excess VRU and blowers to make sure waste is minimized off the storage tanks and facility.
- During initial flowback, the well stream will be routed to separation equipment.
- At an existing facility, when necessary, post separation natural gas will be flared until it meets pipeline specifications, at which point it will be turned into a collection system.
- At a new facility, post separation natural gas will be vented until storage tanks can safely function, at which point it will be flared until it meets pipeline spec.

Production Operations

- Weekly AVOs will be performed on all facilities.
- All flares will be equipped with auto-ignition systems and continuous pilot operations.
- After a well is stabilized from liquid unloading, the well will be turned back into the collection system.
- All plunger lift systems will be optimized to limit the amount of waste.
- All tanks will have automatic gauging equipment installed.
- Leaking thief hatches found during AVOs will be cleaned and properly re-sealed.

Performance Standards

- Production equipment will be designed to handle maximum anticipated rates and pressure.
- All flared gas will be combusted in a flare stack that is properly sized and designed to ensure proper combustion.
- Weekly AVOs will be performed on all wells and facilities that produce more than 60 Mcfd.

Measurement & Estimation

- All volume that is flared and vented that is not measured will be estimated.
- All measurement equipment for flared volumes will conform to API 14.10.
- No meter bypasses with be installed.

• When metering is not practical due to low pressure/low rate, the vented or flared volume will be estimated.

<u>VIII. Best Management Practices: Attach a complete description of Operator's best management practices to minimize</u> venting during active and planned maintenance.

- During downhole well maintenance, EOG will use best management practices to vent as minimally as possible.
- Prior to the commencement of any maintenance, the tank or vessel will be isolated from the rest of the facilities.
 All valves upstream of the equipment will be closed and isolated.
- After equipment has been isolated, the equipment will be blown down to as low a pressure as possible into the collection system.
- If the equipment being maintained cannot be relieved into the collection system, it shall be released to a tank where the vapor can either be captured or combusted if possible.
- After downhole well maintenance, natural gas will be flared until it reaches pipeline specification.

Seog resources

Lakewood 28 Fed Com 746H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

823'
905'
1,171'
5,028'
5,279'
5,312'
6,323'
7,855'
9,439'
9,458'
10,418'
10,983'
11,453'
12,031'
12,031'
12,493'
13,201'

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Upper Permian Sands	0-400'	Fresh Water
Bell Canyon	5,312'	Oil
Cherry Canyon	6,323'	Oil
Brushy Canyon	7,855'	Oil
Leonard (Avalon) Shale	9,458'	Oil
1 st Bone Spring Sand	10,418'	Oil
2 nd Bone Spring Shale	10,983'	Oil
2 nd Bone Spring Sand	11,453'	Oil
3 rd Bone Spring Carb	12,031'	Oil
3 rd Bone Spring Sand	12,031'	Oil
Wolfcamp	12,493'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 9-5/8" or 10-3/4" casing at 930' and circulating cement back to surface.

Hole	Interval MD		Interval MD Interval TVD		Csg			
Size	From (ft)	To (ft)	From (ft)	To (ft)	OD	Weight	Grade	Conn
12-1/4"	0	930	0	930	9-5/8"	36#	J-55	LTC
8-3/4"	0	12,139	0	12,130	7-5/8"	29.7#	HCP-110	FXL
6-3/4"	0	11,639	0	11,630	5-1/2"	20#	P110-EC	DWC/C IS MS
6-3/4"	11,639	12,139	11,630	12,130	5-1/2"	20#	P110-EC	Vam Sprint SF
6-3/4"	12,139	23,412	12,130	13,201	5-1/2"	20#	P110-EC	DWC/C IS MS

4. CASING PROGRAM - Design A

Variance is requested to waive the centralizer requirements for the 7-5/8" casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4 hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive any centralizer requirements for the 5-1/2" casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive the annular clearance requirements for the 5-1/2" casing by 7-5/8" casing annulus to the proposed top of cement.

EOG requests permission to allow deviation from the 0.422'' annulus clearance requirement from Onshore Order #2 under the following conditions:

- Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.
- Annular clearance less than 0.422" is acceptable for the production open hole section.

	Cementing 110gram.									
	No.	Wt.	Yld	Slurry Description						
Depth	Sacks	ppg	Ft3/sk	Shurry Deberription						
930'	270	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-						
9-5/8"				Flake (TOC @ Surface)						
	80	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium						
				Metasilicate (TOC @ 730')						
12,130'	530	14.2	1.11	1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3%						
7-5/8"				Microbond (TOC @ 7,660')						
	1310	14.8	1.5	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M +						
				6% Bentonite Gel (TOC @ surface)						
23,412'	1000	14.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond						
5-1/2"				(TOC @ 11,630')						

<u>Cementing Program</u>:

Additive	Purpose		
Bentonite Gel	Lightweight/Lost circulation prevention		
Calcium Chloride	Accelerator		
Cello-flake	Lost circulation prevention		
Sodium Metasilicate	Accelerator		
MagOx	Expansive agent		
Pre-Mag-M	Expansive agent		
Sodium Chloride	Accelerator		
FL-62	Fluid loss control		
Halad-344	Fluid loss control		
Halad-9	Fluid loss control		
HR-601	Retarder		
Microbond	Expansive Agent		

EOG requests variance from minimum standards to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (7,855') and the second stage performed as a 1000 sack bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 310 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. Top will be verified by Echo-meter.

EOG will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

Cement integrity tests will be performed immediately following plug bump.

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (5,000 psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top.



EOG will utilize wing unions on BOPE connections that can be isolated from wellbore pressure through means of a choke. All wing unions will be rated to a pressure that meets or exceeds the pressure rating of the BOPE system.

Variance is requested to use a 5,000 psi annular BOP with the 10,000 psi BOP stack.

Pipe rams and blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.

Depth	Туре	Weight (ppg)	Viscosity	Water Loss
0 – 930'	Fresh - Gel	8.6-8.8	28-34	N/c
930' - 12,130'	Brine	10.0-10.2	28-34	N/c
12,130' – 12,732'	Oil Base	8.7-9.4	58-68	N/c - 6
12,732' – 23,412'	Oil Base	10.0-14.0	58-68	4 - 6
Lateral				

The applicable depths and properties of the drilling fluid systems are as follows:

The highest mud weight needed to balance formation is expected to be 11.5 ppg. In order to maintain hole stability, mud weights up to 14.0 ppg may be utilized.

An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

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

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

- (A) A kelly cock will be kept in the drill string at all times.
- (B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- (C) H2S monitoring and detection equipment will be utilized from surface casing point to TD.



8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well.

GR-CCL Will be run in cased hole during completions phase of operations.

9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:

The estimated bottom-hole temperature (BHT) at TD is 202 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 9,610 psig and a maximum anticipated surface pressure of 6,706 psig (based on 14.0 ppg MW). No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. Severe loss circulation is expected from 7,855' to intermediate casing point.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

The drilling operation should be finished in approximately one month. If the well is productive, an additional 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and Cement on the subject well. After WOC 8 hours or 500 psi compressive strength (whichever is greater), the Surface Rig will move off so the wellhead can be installed. A welder will cut the casing to the proper height and weld on the wellhead (both "A" and "B" sections). The weld will be tested to 1,500 psi. All valves will be closed and a wellhead cap will be installed (diagram attached). If the timing between rigs is such that EOG Resources would not be able to preset the surface, the Primary Rig will MIRU and drill the well in its entirety per the APD.

11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 9-5/8" surface casing, a 9-5/8" BOP/BOPE system with a minimum working pressure of 10,000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 10,000 psi pressure test. This pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 10,000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Cactus Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

Seog resources

The wellhead will be installed by a third party welder while being monitored by WH vendor's representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. EOG Resources reserves the option to conduct BOPE testing during wait on cement periods provided a test plug is utilized.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5,000 psi.

Casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1,500 psi, whichever is greater.

EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards for well control equipment testing of Onshore Order No. 2 (item III.A.2.a.i) to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) along with Batch Drilling & Offline cement operations to include the following:

- Full BOPE test at first installation on the pad.
- Full BOPE test every 21 days per Onshore Order No. 2.
- Function test BOP elements per Onshore Order No. 2.
- Break testing BOP and BOPE coupled with batch drilling operations and option to offline cement and/or remediate (if needed) any surface or intermediate sections, according to attached offline cementing support documentation.
- After the well section is secured, the BOP will be disconnected from the wellhead and walked with the rig to another well on the pad.
- TA cap will also be installed per Wellhead vendor procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.
- See attached "EOG BLM Variance 3a -Offline Cement Intermediate Operational Procedure"

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Lakewood 28 Fed Com 746H

260' FSL 1585' FWL Section 28	Proposed Wellbore	KB: 3342' GL: 3317'
T-25-S, R-34-E	API: 30-025-****	
Bit Size: 12-1/4" 9-5/8", 36#, J-55, LTC, 0' - 930'		
Bit Size: 8-3/4'' 7-5/8'', 29.7#, HCP-110, FXL, 0' - 1	12,130'	
Bit Size: 6-3/4" 5-1/2", 20.#, P110-EC, DWC/C IS N @ 0' - 11,630' 5-1/2", 20.#, P110-EC, Vam Sprint @ 11,630' - 12,130' 5-1/2", 20.#, P110-EC, DWC/C IS N @ 12,130' - 23,412'	SF	TOC: 11,639' MD, 11,630' TVD Lateral: 23,412' MD, 13,201' TVD Upper Most Perf: 100' FSL & 1312' FWL Sec. 28 Lower Most Perf: 100' FNL & 1312' FWL Sec. 21 BH Location: 100' FNL & 1312' FWL, Sec. 21, T-25-S R-34-E
KOP: 12,732' MD, 12,724' EOC: 13,482' MD, 13,201'		



Design B 4. CASING PROGRAM

Hole	Interv	al MD	Interval TVD		Csg			
Size	From (ft)	To (ft)	From (ft)	To (ft)	OD	Weight	Grade	Conn
13"	0	930	0	930	10-3/4"	40.5#	J-55	STC
9-7/8"	0	12,139	0	12,130	8-3/4"	38.5#	P110-EC	SLIJ II NA
7-7/8"	0	23,412	0	13,201	6"	22.3#	P110-EC	DWC/C IS

Variance is requested to waive the centralizer requirements for the 8-3/4" casing in the 9-7/8" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 9-7/8" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive any centralizer requirements for the 6" casing in the 7-7/8" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 7-7/8" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive the annular clearance requirements for the 6" casing by 8-3/4" casing annulus to the proposed top of cement.

EOG requests permission to allow deviation from the 0.422'' annulus clearance requirement from Onshore Order #2 under the following conditions:

- Annular clearance to meet or exceed 0.422'' between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.
- Annular clearance less than 0.422" is acceptable for the production open hole section.

	ting 110			
Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
930' 10-3/4"	250	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello- Flake (TOC @ Surface)
	70	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 730')
12,130' 8-3/4"	600	14.2	1.11	1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 7,660')
	1480	14.8	1.5	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
23,412' _{6"}	1640	14.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 11,630')

Cementing Program:



EOG requests variance from minimum standards to pump a two stage cement job on the 8-3/4" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (7,855') and the second stage performed as a 1000 sack bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 480 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. Top will be verified by Echo-meter.

EOG will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

Cement integrity tests will be performed immediately following plug bump.

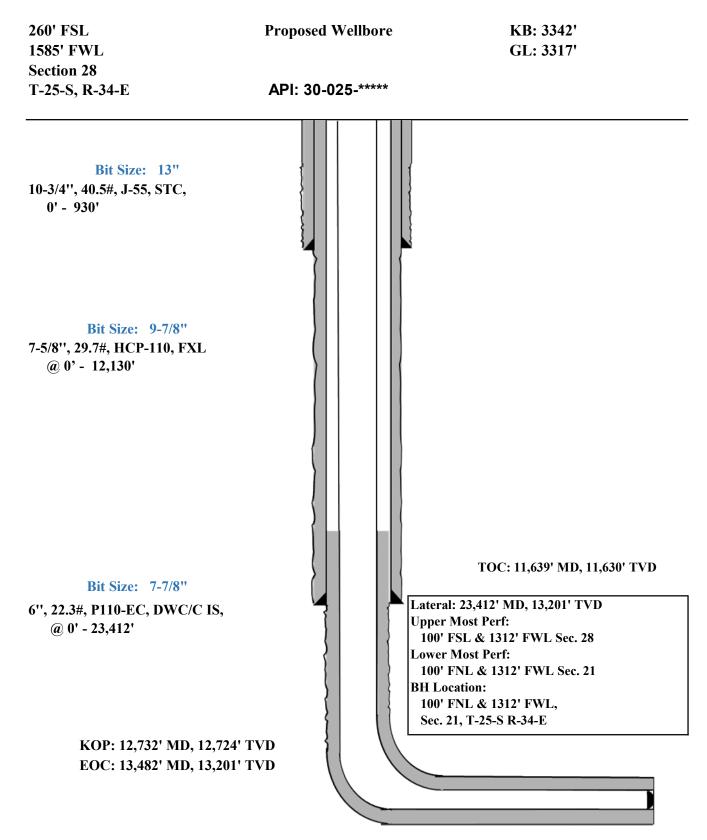
Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

Wellhead:

EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards for well control equipment testing of Onshore Order No. 2 (item III.A.2.a.i) to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) along with Batch Drilling & Offline cement operations to include the following:

- Full BOPE test at first installation on the pad.
- Full BOPE test every 20 days per Onshore Order No. 2.
- Function test BOP elements per Onshore Order No. 2.
- Break testing BOP and BOPE coupled with batch drilling operations and option to offline cement and/or remediate (if needed) any surface or intermediate sections, according to attached offline cementing support documentation.
- After the well section is secured, the BOP will be disconnected from the wellhead and walked with the rig to another well on the pad.
- TA cap will also be installed per Wellhead vendor procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.
- See attached "EOG BLM Variance 3a -Offline Cement Intermediate Operational Procedure"

Page 18 of 40





Midland

Lea County, NM (NAD 83 NME) Lakewood 28 Fed Com #746H

OH

Plan: Plan #0.1 RT

Standard Planning Report

02 February, 2023



Ceogre							
Database: Company: Project: Site: Well: Wellbore: Design:	PEDM Midland Lea County, NN Lakewood 28 F #746H OH Plan #0.1 RT	•	ME)	TVD Referen MD Referen North Referen	e:	Well #746H kb = 26' @ 334 kb = 26' @ 334 Grid Minimum Curva	3.0usft
Project	Lea County, NM	(NAD 83 NM	1E)				
Geo Datum:	US State Plane 19 North American D New Mexico Easte	atum 1983		System Datur	n:	Mean Sea Level	
Site	Lakewood 28 Fe	ed Com					
Site Position: From: Position Uncertainty:	Мар	0.0 usft	Northing: Easting: Slot Radius:	809,330	7.00 usft Latitud 6.00 usft Longitu 8/16 "		32° 5' 41.246 N 103° 28' 4.482 W
Well	#746H						
Well Position	+N/-S +E/-W	0.0 usft 0.0 usft	Northing: Easting:		399,330.00 usft 806,116.00 usft	Latitude: Longitude:	32° 5' 41.827 N 103° 28' 41.908 W
Position Uncertainty Grid Convergence:		0.0 usft 0.45 °	Wellhead Elev	ation:	usft	Ground Level:	3,317.0 usft
Wellbore	ОН						
Magnetics	Model Name	9	Sample Date	Declinatio (°)	n	Dip Angle (°)	Field Strength (nT)
	IGRF	2020	1/23/2023		6.30	59.74	47,259.98106074
Design	Plan #0.1 RT						
Audit Notes: Version:			Phase:	PLAN	Tie On Dep	oth:	0.0
Vertical Section:		(L	rom (TVD) Isft)	+N/-S (usft)	+E/-W (usft)		rection (°)
		(0.0	0.0	0.0	3	57.99
Plan Survey Tool Pro	gram l	Date 1/23/2	2023				
Depth From (usft)	Depth To (usft) Si	urvey (Wellb	ore)	Tool Name	Rema	arks	
1 0.0	23,412.3 PI	an #0.1 RT (OH)	EOG MWD+IFR MWD + IFR1	I		



Database:	PEDM	Local Co-ordinate Reference:	Well #746H
Company:	Midland	TVD Reference:	kb = 26' @ 3343.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 26' @ 3343.0usft
Site:	Lakewood 28 Fed Com	North Reference:	Grid
Well:	#746H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ОН		
Design:	Plan #0.1 RT		

Plan Sections

easured 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	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,249.1	2.98	231.96	1,249.0	-2.4	-3.1	2.00	2.00	0.00	231.96	
7,714.8	2.98	231.96	7,706.0	-209.6	-267.9	0.00	0.00	0.00	0.00	
7,863.9	0.00	0.00	7,855.0	-212.0	-271.0	2.00	-2.00	0.00	180.00	
12,732.4	0.00	0.00	12,723.5	-212.0	-271.0	0.00	0.00	0.00	0.00	KOP(Lakewood 28 F
12,952.8	26.46	0.00	12,936.2	-162.0	-271.0	12.00	12.00	0.00	0.00	FTP(Lakewood 28 F
13,482.4	90.00	359.50	13,200.9	265.5	-273.6	12.00	12.00	-0.09	-0.56	
18,233.1	90.00	359.50	13,201.0	5,016.0	-315.0	0.00	0.00	0.00	0.00	Fed Perf 1(Lakewoo
22,194.2	90.00	359.54	13,201.0	8,977.0	-348.0	0.00	0.00	0.00	88.36	Fed Perf 2(Lakewoo
23,412.3	90.00	359.51	13,201.0	10,195.0	-358.0	0.00	0.00	0.00	-92.38	PBHL(Lakewood 28



Database:	PEDM	Local Co-ordinate Reference:	Well #746H
Company:	Midland	TVD Reference:	kb = 26' @ 3343.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 26' @ 3343.0usft
Site:	Lakewood 28 Fed Com	North Reference:	Grid
Well:	#746H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ОН		
Design:	Plan #0.1 RT		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
	0.00		700.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	800.0	0.0	0.0		0.00	0.00	0.00
800.0 900.0	0.00	0.00	900.0		0.0	0.0 0.0	0.00	0.00	0.00
		0.00		0.0					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	2.00	231.96	1,200.0	-1.1	-1.4	-1.0	2.00	2.00	0.00
1,249.1	2.98	231.96	1,249.0	-2.4	-3.1	-2.3	2.00	2.00	0.00
1,300.0	2.98	231.96	1,299.9	-4.0	-5.1	-3.8	0.00	0.00	0.00
1,400.0	2.98	231.96	1,399.7	-7.2	-9.2	-6.9	0.00	0.00	0.00
1,500.0	2.98	231.96	1,499.6	-10.4	-13.3	-10.0	0.00	0.00	0.00
1,600.0	2.98	231.96	1,599.5	-13.6	-17.4	-13.0	0.00	0.00	0.00
1,700.0	2.98	231.96	1,699.3	-16.8	-21.5	-16.1	0.00	0.00	0.00
1,800.0	2.98	231.96	1,799.2	-20.0	-25.6	-19.1	0.00	0.00	0.00
1,900.0	2.98	231.96	1,899.1	-23.3	-29.7	-22.2	0.00	0.00	0.00
2,000.0	2.98	231.96	1,998.9	-26.5	-33.8	-25.3	0.00	0.00	0.00
2,100.0	2.98	231.96	2,098.8	-29.7	-37.9	-28.3	0.00	0.00	0.00
2,200.0	2.98	231.96	2,198.6	-32.9	-42.0	-31.4	0.00	0.00	0.00
2,300.0	2.98	231.96	2,298.5	-36.1	-46.1	-34.4	0.00	0.00	0.00
2,400.0	2.98	231.96	2,398.4	-39.3	-50.2	-37.5	0.00	0.00	0.00
2,500.0	2.98	231.96	2,498.2	-42.5	-54.3	-40.5	0.00	0.00	0.00
2,600.0	2.98	231.96	2,598.1	-45.7	-58.4	-43.6	0.00	0.00	0.00
2,700.0	2.98	231.96	2,698.0	-48.9	-62.5	-46.7	0.00	0.00	0.00
2,800.0	2.98	231.96	2,797.8	-52.1	-66.6	-49.7	0.00	0.00	0.00
2,900.0	2.98	231.96	2,897.7	-55.3	-70.7	-52.8	0.00	0.00	0.00
3,000.0	2.98	231.96	2,997.6	-58.5	-74.8	-55.8	0.00	0.00	0.00
3,100.0	2.98	231.96	3,097.4	-61.7	-78.9	-58.9	0.00	0.00	0.00
3,200.0	2.98	231.96	3,197.3	-64.9	-83.0	-62.0	0.00	0.00	0.00
3,300.0	2.98	231.96	3,297.2	-68.1	-87.1	-65.0	0.00	0.00	0.00
3,400.0	2.98	231.96	3,397.0	-71.3	-91.2	-68.1	0.00	0.00	0.00
3,500.0	2.98	231.96	3,496.9	-74.5	-95.3	-71.1	0.00	0.00	0.00
3,600.0	2.98	231.96	3,596.8	-77.7	-99.4	-74.2	0.00	0.00	0.00
3,700.0	2.98	231.96	3,696.6	-80.9	-103.5	-77.3	0.00	0.00	0.00
3,800.0	2.98	231.96	3,796.5	-84.1	-107.6	-80.3	0.00	0.00	0.00
3,900.0	2.98	231.96	3,896.3	-87.3	-111.7	-83.4	0.00	0.00	0.00
4,000.0	2.98	231.96	3,996.2	-90.6	-115.8	-86.4	0.00	0.00	0.00
4,100.0	2.98	231.96	4,096.1	-93.8	-119.9	-89.5	0.00	0.00	0.00
4,200.0	2.98	231.96	4,195.9	-97.0	-123.9	-92.6	0.00	0.00	0.00
4,300.0	2.98	231.96	4,295.8	-100.2	-128.0	-95.6	0.00	0.00	0.00
4,400.0	2.98	231.96	4,395.7	-103.4	-132.1	-98.7	0.00	0.00	0.00
4,500.0	2.98	231.96	4,495.5	-106.6	-136.2	-101.7	0.00	0.00	0.00
4,600.0	2.98	231.96	4,595.4	-109.8	-140.3	-104.8	0.00	0.00	0.00
4,700.0	2.98	231.96	4,695.3	-113.0	-144.4	-107.9	0.00	0.00	0.00
4,800.0	2.98	231.96	4,795.1	-116.2	-148.5	-110.9	0.00	0.00	0.00
4,900.0	2.98	231.96	4,895.0	-119.4	-152.6	-114.0	0.00	0.00	0.00
4,900.0 5,000.0	2.96	231.96	4,895.0	-119.4	-152.6	-114.0	0.00	0.00	0.00
		231.96	4,994.9 5,094.7						
5,100.0 5,200.0	2.98 2.98	231.96	5,094.7 5,194.6	-125.8 -129.0	-160.8 -164.9	-120.1 -123.1	0.00 0.00	0.00 0.00	0.00 0.00
5,200.0	2.98	231.90	0,194.0	-129.0	-104.9	-123.1	0.00	0.00	0.00

2/2/2023 10:58:13AM



Database:	PEDM	Local Co-ordinate Reference:	Well #746H
Company:	Midland	TVD Reference:	kb = 26' @ 3343.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 26' @ 3343.0usft
Site:	Lakewood 28 Fed Com	North Reference:	Grid
Well:	#746H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ОН		
Design:	Plan #0.1 RT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	2.98	231.96	5,294.4	-132.2	-169.0	-126.2	0.00	0.00	0.00
5.400.0	2.98	231.96	5,394.3	-135.4	-173.1	-129.3	0.00	0.00	0.00
5,500.0	2.98	231.96	5,394.3 5,494.2	-135.4	-173.1	-129.3	0.00	0.00	0.00
5,600.0	2.98	231.90	5,594.0	-141.8	-181.3	-135.4	0.00	0.00	0.00
5,700.0	2.98	231.96	5,693.9	-141.8	-185.4	-135.4	0.00	0.00	0.00
5,800.0	2.98	231.96	5,793.8	-145.0	-189.5	-130.4	0.00	0.00	0.00
5,600.0	2.90	231.90	5,795.0	-140.2	-109.5	-141.5	0.00	0.00	0.00
5,900.0	2.98	231.96	5,893.6	-151.4	-193.6	-144.6	0.00	0.00	0.00
6,000.0	2.98	231.96	5,993.5	-154.7	-197.7	-147.6	0.00	0.00	0.00
6,100.0	2.98	231.96	6,093.4	-157.9	-201.8	-150.7	0.00	0.00	0.00
6,200.0	2.98	231.96	6,193.2	-161.1	-205.9	-153.7	0.00	0.00	0.00
6,300.0	2.98	231.96	6,293.1	-164.3	-210.0	-156.8	0.00	0.00	0.00
6,400.0	2.98	231.96	6,393.0	-167.5	-214.1	-159.9	0.00	0.00	0.00
6,500.0	2.98	231.96	6,492.8	-170.7	-218.2	-162.9	0.00	0.00	0.00
6,600.0	2.98	231.96	6,592.7	-173.9	-222.3	-166.0	0.00	0.00	0.00
6,700.0	2.98	231.96	6,692.6	-177.1	-226.4	-169.0	0.00	0.00	0.00
6,800.0	2.98	231.96	6,792.4	-180.3	-230.5	-172.1	0.00	0.00	0.00
6,900.0	2.98	231.96	6,892.3	-183.5	-234.6	-175.2	0.00	0.00	0.00
7,000.0	2.98	231.96	6,992.1	-186.7	-238.7	-178.2	0.00	0.00	0.00
7,100.0	2.98	231.96	7,092.0	-189.9	-242.8	-181.3	0.00	0.00	0.00
7,200.0	2.98	231.96	7,191.9	-193.1	-246.9	-184.3	0.00	0.00	0.00
7,300.0	2.98	231.96	7,291.7	-196.3	-251.0	-187.4	0.00	0.00	0.00
7,400.0	2.98	231.96	7,391.6	-199.5	-255.0	-190.4	0.00	0.00	0.00
7,500.0	2.98	231.96	7,491.5	-202.7	-259.1	-193.5	0.00	0.00	0.00
7,600.0	2.98	231.96	7,591.3	-205.9	-263.2	-196.6	0.00	0.00	0.00
7,700.0	2.98	231.96	7,691.2	-209.1	-267.3	-199.6	0.00	0.00	0.00
7,714.8	2.98	231.96	7,706.0	-209.6	-267.9	-200.1	0.00	0.00	0.00
7,800.0	1.28	231.96	7,791.1	-211.6	-270.4	-201.9	2.00	-2.00	0.00
7,863.9	0.00	0.00	7,855.0	-212.0	-271.0	-201.3	2.00	-2.00	0.00
7,900.0	0.00	0.00	7,891.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
8,000.0	0.00	0.00	7,991.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
8,100.0	0.00	0.00	8,091.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
8,200.0	0.00	0.00	8,191.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
8,300.0	0.00	0.00	8,291.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
8,400.0	0.00	0.00	8,391.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
8,500.0	0.00	0.00	8,491.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
8,600.0	0.00	0.00	8,591.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
8,700.0	0.00	0.00	8,691.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
8,800.0	0.00	0.00	8,791.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
8,900.0	0.00	0.00	8,891.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
9,000.0	0.00	0.00	8,991.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
9,100.0	0.00	0.00	9,091.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
9,200.0	0.00	0.00	9,191.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
9,300.0	0.00	0.00	9,291.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
9,400.0	0.00	0.00	9,391.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
9,500.0	0.00	0.00	9,491.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
9,600.0	0.00	0.00	9,591.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
9,700.0 9.800.0	0.00	0.00	9,691.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
-,	0.00	0.00	9,791.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
9,900.0	0.00	0.00	9,891.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
10,000.0 10,100.0	0.00	0.00	9,991.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
,	0.00	0.00	10,091.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
10,200.0	0.00	0.00	10,191.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
10,300.0	0.00	0.00	10,291.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
10,400.0	0.00	0.00	10,391.1	-212.0	-271.0	-202.4	0.00	0.00	0.00

2/2/2023 10:58:13AM

Page 5

COMPASS 5000.16 Build 100



Database:	PEDM	Local Co-ordinate Reference:	Well #746H
Company:	Midland	TVD Reference:	kb = 26' @ 3343.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 26' @ 3343.0usft
Site:	Lakewood 28 Fed Com	North Reference:	Grid
Well:	#746H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1 RT		

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)
10,500.0	0.00	0.00	10,491.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
10,600.0	0.00	0.00	10,591.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
	0.00								
10,700.0	0.00	0.00	10,691.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
10,800.0	0.00	0.00	10,791.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
10,900.0	0.00	0.00	10,891.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
11,000.0	0.00	0.00	10,991.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
11,100.0	0.00	0.00	11,091.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
11,200.0	0.00	0.00	11,191.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
11,300.0	0.00	0.00	11,291.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
11,400.0	0.00	0.00	11,391.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
11,500.0	0.00	0.00	11,491.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
11,600.0	0.00	0.00	11,591.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
11,000.0		0.00							
11,700.0	0.00	0.00	11,691.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
11,800.0	0.00	0.00	11,791.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
11,900.0	0.00	0.00	11,891.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
12,000.0	0.00	0.00	11,991.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
12,100.0	0.00	0.00	12,091.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
12,200.0	0.00	0.00	12,191.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
12,300.0	0.00	0.00	12,291.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
12,400.0	0.00	0.00	12,391.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
12,500.0	0.00	0.00	12,491.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
12,600.0	0.00	0.00	12,591.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
12,700.0	0.00	0.00	12,691.1	-212.0	-271.0	-202.4	0.00	0.00	0.00
12,732.4	0.00	0.00	12,723.5	-212.0	-271.0	-202.4	0.00	0.00	0.00
12,750.0	2.11	0.00	12,741.1	-211.7	-271.0	-202.0	12.00	12.00	0.00
12,775.0	5.11	0.00	12,766.1	-210.1	-271.0	-200.5	12.00	12.00	0.00
12,800.0	8.11	0.00	12,790.9	-207.2	-271.0	-197.6	12.00	12.00	0.00
12,825.0	11.11	0.00	12,815.5	-203.0	-271.0	-193.4	12.00	12.00	0.00
12,850.0	14.12	0.00	12,839.9	-197.6	-271.0	-188.0	12.00	12.00	0.00
12,875.0	17.12	0.00	12,864.0	-190.9	-271.0	-181.2	12.00	12.00	0.00
12,900.0	20.12	0.00	12,887.7	-182.9	-271.0	-173.3	12.00	12.00	0.00
12,925.0	23.12	0.00	12,910.9	-173.7	-271.0	-164.1	12.00	12.00	0.00
12,950.0	26.12	0.00	12,933.7	-163.3	-271.0	-153.6	12.00	12.00	0.00
12,952.8	26.46	0.00	12,936.2	-162.0	-271.0	-152.4	12.00	12.00	0.00
12,975.0	29.12	359.95	12,955.8	-151.7	-271.0	-142.1	12.00	12.00	-0.24
13,000.0	32.12	359.90	12,977.3	-138.9	-271.0	-129.3	12.00	12.00	-0.20
13,025.0	35.12	359.85	12,998.1	-125.1	-271.1	-115.5	12.00	12.00	-0.17
13,050.0	38.12	359.82	13,018.2	-110.2	-271.1	-100.6	12.00	12.00	-0.15
13,075.0	41.12	359.79	13,037.5	-94.3	-271.2	-84.7	12.00	12.00	-0.13
13,100.0	44.12	359.76	13,055.8	-77.3	-271.2	-67.8	12.00	12.00	-0.11
13,125.0	47.12	359.73	13,073.3	-59.5	-271.3	-49.9	12.00	12.00	-0.10
13,150.0	50.12	359.71	13,089.9	-40.7	-271.4	-31.2	12.00	12.00	-0.09
13,175.0	53.12	359.69	13,105.4	-21.1	-271.5	-11.6	12.00	12.00	-0.08
13,200.0	56.12	359.67	13,119.9	-0.7	-271.6	8.8	12.00	12.00	-0.08
13,225.0	59.12	359.65	13,133.2	20.4	-271.7	29.9	12.00	12.00	-0.07
13,250.0	62.12	359.63	13,145.5	42.2	-271.9	51.7	12.00	12.00	-0.07
13,275.0	65.12	359.62	13,156.6	64.5	-272.0	74.1	12.00	12.00	-0.06
13,300.0	68.12	359.60	13,166.5	87.5	-272.2	97.0	12.00	12.00	-0.06
13,325.0	71.12	359.59	13,175.2	110.9	-272.3	120.4	12.00	12.00	-0.06
13,350.0	74.12	359.57	13,182.7	134.8	-272.5	144.3	12.00	12.00	-0.06
13,375.0	77.12	359.56	13,188.9	159.0	-272.7	168.5	12.00	12.00	-0.06
13,400.0	80.12	359.54	13,193.9	183.5	-272.9	193.0	12.00	12.00	-0.05
13,425.0 13,450.0	83.12	359.53	13,197.5	208.2	-273.1	217.7	12.00	12.00	-0.05
134500	86.12	359.52	13,199.9	233.1	-273.3	242.6	12.00	12.00	-0.05

2/2/2023 10:58:13AM

Page 6

COMPASS 5000.16 Build 100



Database:	PEDM	Local Co-ordinate Reference:	Well #746H
Company:	Midland	TVD Reference:	kb = 26' @ 3343.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 26' @ 3343.0usft
Site:	Lakewood 28 Fed Com	North Reference:	Grid
Well:	#746H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1 RT		

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)
13,475.0	89.12	359.50	13,200.9	258.1	-273.5	267.5	12.00	12.00	-0.05
13,482.4	90.00	359.50	13,200.9	265.5	-273.6	274.9	12.00	12.00	-0.05
13,500.0	90.00	359.50	13,200.9	283.1	-273.7	292.5	0.00	0.00	0.00
13,600.0	90.00	359.50	13,200.9	383.1	-274.6	392.5	0.00	0.00	0.00
13,700.0	90.00	359.50	13,200.9	483.1	-275.5	492.4	0.00	0.00	0.00
13,800.0	90.00	359.50	13,201.0	583.1	-276.3	592.4	0.00	0.00	0.00
13,900.0	90.00	359.50	13,201.0	683.1	-277.2	692.4	0.00	0.00	0.00
14,000.0	90.00	359.50	13,201.0	783.1	-278.1	792.3	0.00	0.00	0.00
14,100.0	90.00	359.50	13,201.0	883.1	-279.0	892.3	0.00	0.00	0.00
14,200.0	90.00	359.50	13,201.0	983.1	-279.8	992.3	0.00	0.00	0.00
14,300.0	90.00	359.50	13,201.0	1,083.1	-280.7	1,092.2	0.00	0.00	0.00
14,400.0	90.00	359.50	13,201.0	1,183.0	-281.6	1,192.2	0.00	0.00	0.00
14,500.0	90.00	359.50	13,201.0	1,283.0	-282.5	1,292.2	0.00	0.00	0.00
14,600.0	90.00	359.50	13,201.0	1,383.0	-283.3	1,392.1	0.00	0.00	0.00
14,700.0	90.00	359.50	13,201.0	1,483.0	-284.2	1,492.1	0.00	0.00	0.00
14,800.0	90.00	359.50	13,201.0	1,583.0	-285.1	1,592.1	0.00	0.00	0.00
14,900.0	90.00	359.50	13,201.0	1,683.0	-285.9	1,692.0	0.00	0.00	0.00
15,000.0	90.00	359.50	13,201.0	1,783.0	-286.8	1,792.0	0.00	0.00	0.00
15,100.0	90.00	359.50	13,201.0	1,883.0	-287.7	1,892.0	0.00	0.00	0.00
15,200.0	90.00	359.50	13,201.0	1,983.0	-288.6	1,991.9	0.00	0.00	0.00
15,300.0	90.00	359.50	13,201.0	2,083.0	-289.4	2,091.9	0.00	0.00	0.00
15,400.0	90.00	359.50	13,201.0	2,183.0	-290.3	2,191.9	0.00	0.00	0.00
15,500.0	90.00	359.50	13,201.0	2,283.0	-291.2	2,291.8	0.00	0.00	0.00
15,600.0	90.00	359.50	13,201.0	2,383.0	-292.0	2,391.8	0.00	0.00	0.00
15,700.0	90.00	359.50	13,201.0	2,483.0	-292.9	2,491.8	0.00	0.00	0.00
15,800.0	90.00	359.50	13,201.0	2,583.0	-293.8	2,591.7	0.00	0.00	0.00
15,900.0	90.00	359.50	13,201.0	2,683.0	-294.7	2,691.7	0.00	0.00	0.00
16,000.0	90.00	359.50	13,201.0	2,783.0	-295.5	2,791.6	0.00	0.00	0.00
16,100.0	90.00	359.50	13,201.0	2,883.0	-296.4	2,891.6	0.00	0.00	0.00
16,200.0	90.00	359.50	13,201.0	2,983.0	-297.3	2,991.6	0.00	0.00	0.00
16,300.0	90.00	359.50	13,201.0	3,083.0	-298.1	3,091.5	0.00	0.00	0.00
16,400.0	90.00	359.50	13,201.0	3,183.0	-299.0	3,191.5	0.00	0.00	0.00
16,500.0	90.00	359.50	13,201.0	3,283.0	-299.9	3,291.5	0.00	0.00	0.00
16,600.0	90.00	359.50	13,201.0	3,383.0	-300.8	3,391.4	0.00	0.00	0.00
16,700.0	90.00	359.50	13,201.0	3,483.0	-301.6	3,491.4	0.00	0.00	0.00
16,800.0	90.00	359.50	13,201.0	3,583.0	-302.5	3,591.4	0.00	0.00	0.00
16,900.0	90.00	359.50	13,201.0	3,683.0	-303.4	3,691.3	0.00	0.00	0.00
17,000.0	90.00	359.50	13,201.0	3,783.0	-304.2	3,791.3	0.00	0.00	0.00
17,100.0	90.00	359.50	13,201.0	3,882.9	-305.1	3,891.3	0.00	0.00	0.00
17,200.0	90.00	359.50	13,201.0	3,982.9	-306.0	3,991.2	0.00	0.00	0.00
17,300.0	90.00	359.50	13,201.0	4,082.9	-306.9	4,091.2	0.00	0.00	0.00
17,400.0	90.00	359.50	13,201.0	4,182.9	-307.7	4,191.2	0.00	0.00	0.00
17,500.0	90.00	359.50	13,201.0	4,282.9	-308.6	4,291.1	0.00	0.00	0.00
17,600.0	90.00	359.50	13,201.0	4,382.9	-309.5	4,391.1	0.00	0.00	0.00
17,700.0	90.00	359.50	13,201.0	4,482.9	-310.4	4,491.1	0.00	0.00	0.00
17,800.0	90.00	359.50	13,201.0	4,582.9	-311.2	4,591.0	0.00	0.00	0.00
17,900.0	90.00	359.50	13,201.0	4,682.9	-312.1	4,691.0	0.00	0.00	0.00
18,000.0	90.00	359.50	13,201.0	4,782.9	-313.0	4,791.0	0.00	0.00	0.00
18,100.0	90.00	359.50	13,201.0	4,882.9	-313.8	4,890.9	0.00	0.00	0.00
18,200.0	90.00	359.50	13,201.0	4,982.9	-314.7	4,990.9	0.00	0.00	0.00
18,233.1	90.00	359.50	13,201.0	5,016.0	-315.0	5,024.0	0.00	0.00	0.00
18,300.0	90.00	359.50	13,201.0	5,082.9	-315.6	5,090.8	0.00	0.00	0.00
18,400.0	90.00	359.50	13,201.0	5,182.9	-316.5	5,190.8	0.00	0.00	0.00



Database:	PEDM	Local Co-ordinate Reference:	Well #746H
Company:	Midland	TVD Reference:	kb = 26' @ 3343.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 26' @ 3343.0usft
Site:	Lakewood 28 Fed Com	North Reference:	Grid
Well:	#746H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ОН		
Design:	Plan #0.1 RT		

Planned Survey

Measured Depth (usft)	l Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,600	0.0 90.00	0 359.50	13,201.0	5,382.9	-318.2	5,390.7	0.00	0.00	0.00
18,700			13,201.0	5,482.9	-319.0	5,490.7	0.00	0.00	0.00
18,800	.0 90.00	0 359.51	13,201.0	5,582.9	-319.9	5,590.7	0.00	0.00	0.00
18,900	.0 90.00	0 359.51	13,201.0	5,682.9	-320.8	5,690.6	0.00	0.00	0.00
19,000	.0 90.00	0 359.51	13,201.0	5,782.9	-321.6	5,790.6	0.00	0.00	0.00
19,100			13,201.0	5,882.9	-322.5	5,890.6	0.00	0.00	0.00
19,200			13,201.0	5,982.9	-323.3	5,990.5	0.00	0.00	0.00
19,300			13,201.0	6,082.9	-324.2	6,090.5	0.00	0.00	0.00
19,400			13,201.0	6,182.9	-325.0	6,190.5	0.00	0.00	0.00
			,						
19,500 19,600			13,201.0 13,201.0	6,282.9 6,382.9	-325.9 -326.7	6,290.4 6,390.4	0.00 0.00	0.00 0.00	0.00 0.00
19,000			13,201.0	6,482.9	-320.7	6,490.4	0.00	0.00	0.00
19,700			13,201.0	6,582.8	-328.4	6,590.3	0.00	0.00	0.00
19,800			13,201.0	6,682.8	-328.4	6,690.3	0.00	0.00	0.00
20,000			13,201.0	6,782.8	-330.1	6,790.2	0.00	0.00	0.00
20,100			13,201.0	6,882.8	-330.9	6,890.2	0.00	0.00	0.00
20,200			13,201.0	6,982.8	-331.8	6,990.2	0.00	0.00	0.00
20,300			13,201.0	7,082.8	-332.6	7,090.1	0.00	0.00	0.00
20,400	90.00	359.52	13,201.0	7,182.8	-333.4	7,190.1	0.00	0.00	0.00
20,500			13,201.0	7,282.8	-334.3	7,290.1	0.00	0.00	0.00
20,600	.0 90.00		13,201.0	7,382.8	-335.1	7,390.0	0.00	0.00	0.00
20,700			13,201.0	7,482.8	-335.9	7,490.0	0.00	0.00	0.00
20,800		0 359.53	13,201.0	7,582.8	-336.7	7,590.0	0.00	0.00	0.00
20,900	.0 90.00	0 359.53	13,201.0	7,682.8	-337.6	7,689.9	0.00	0.00	0.00
21,000	.0 90.00	0 359.53	13,201.0	7,782.8	-338.4	7,789.9	0.00	0.00	0.00
21,100	.0 90.00	0 359.53	13,201.0	7,882.8	-339.2	7,889.8	0.00	0.00	0.00
21,200	.0 90.00	0 359.53	13,201.0	7,982.8	-340.0	7,989.8	0.00	0.00	0.00
21,300	.0 90.00	0 359.53	13,201.0	8,082.8	-340.8	8,089.8	0.00	0.00	0.00
21,400	.0 90.00	0 359.54	13,201.0	8,182.8	-341.6	8,189.7	0.00	0.00	0.00
21,500	.0 90.00	0 359.54	13,201.0	8,282.8	-342.4	8,289.7	0.00	0.00	0.00
21,600			13,201.0	8,382.8	-343.2	8,389.7	0.00	0.00	0.00
21,700			13,201.0	8,482.8	-344.1	8,489.6	0.00	0.00	0.00
21,800	.0 90.00	0 359.54	13,201.0	8,582.8	-344.9	8,589.6	0.00	0.00	0.00
21,900			13,201.0	8,682.8	-345.7	8,689.6	0.00	0.00	0.00
22,000	.0 90.00	0 359.54	13,201.0	8,782.8	-346.5	8,789.5	0.00	0.00	0.00
22,100			13,201.0	8,882.8	-347.3	8,889.5	0.00	0.00	0.00
22,194			13,201.0	8,977.0	-348.0	8,983.7	0.00	0.00	0.00
22,200			13,201.0	8,982.8	-348.0	8,989.4	0.00	0.00	0.00
22,300			13,201.0	9,082.8	-348.8	9,089.4	0.00	0.00	0.00
22.400			13,201.0	9,182.8	-349.6	9,189.4	0.00	0.00	0.00
22,400			13,201.0	9,182.8 9,282.8	-349.6 -350.4	9,189.4 9,289.3	0.00	0.00	0.00
22,500			13,201.0	9,282.8	-351.3	9,289.3 9,389.3	0.00	0.00	0.00
22,000			13,201.0	9,382.8 9,482.8	-352.1	9,389.3 9,489.3	0.00	0.00	0.00
22,700			13,201.0	9,582.7	-352.9	9,589.2	0.00	0.00	0.00
				,					
22,900			13,201.0	9,682.7	-353.7	9,689.2	0.00	0.00	0.00
23,000			13,201.0	9,782.7	-354.5	9,789.2	0.00	0.00	0.00
23,100			13,201.0	9,882.7	-355.4	9,889.1	0.00	0.00	0.00
23,200			13,201.0	9,982.7	-356.2	9,989.1	0.00	0.00	0.00
23,300			13,201.0	10,082.7	-357.1	10,089.0	0.00	0.00	0.00
23,400			13,201.0	10,182.7	-357.9	10,189.0	0.00	0.00	0.00
23,412	.3 90.00	0 359.51	13,201.0	10,195.0	-358.0	10,201.3	0.00	0.00	0.00

2/2/2023 10:58:13AM

Database: Company: Project: Site: Well: Wellbore: Design:	PEDM Midland Lea County, NM (NAD 83 NME) Lakewood 28 Fed Com #746H OH Plan #0.1 RT			TVD Reference: MD Reference: North Reference:		kb = 26' (kb = 26' (Grid	Well #746H kb = 26' @ 3343.0usft kb = 26' @ 3343.0usft Grid Minimum Curvature		
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
KOP(Lakewood 28 Fed - plan hits target ce - Point		0.00	12,723.5	-212.0	-271.0	399,118.00	805,845.00	32° 5' 39.750 N	103° 28' 45.078 W
FTP(Lakewood 28 Fed - plan hits target ce - Point		0.00	12,936.2	-162.0	-271.0	399,168.00	805,845.00	32° 5' 40.245 N	103° 28' 45.073 W
Fed Perf 2(Lakewood 2 - plan hits target ce - Point		0.00	13,201.0	8,977.0	-348.0	408,307.00	805,768.00	32° 7' 10.683 N	103° 28' 45.127 W
PBHL(Lakewood 28 Fe - plan hits target ce - Point		0.00	13,201.0	10,195.0	-358.0	409,525.00	805,758.00	32° 7' 22.736 N	103° 28' 45.131 W
Fed Perf 1(Lakewood 2 - plan hits target ce - Point		0.00	13,201.0	5,016.0	-315.0	404,346.00	805,801.00	32° 6' 31.485 N	103° 28' 45.108 W

Deogresources

Lea County, NM (NAD 83 NME) Lakewood 28 Fed Com #746H Plan #0.1 RT 9800 9450 9100

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: New Mexico Eastern Zone System Datum: Mean Sea Level

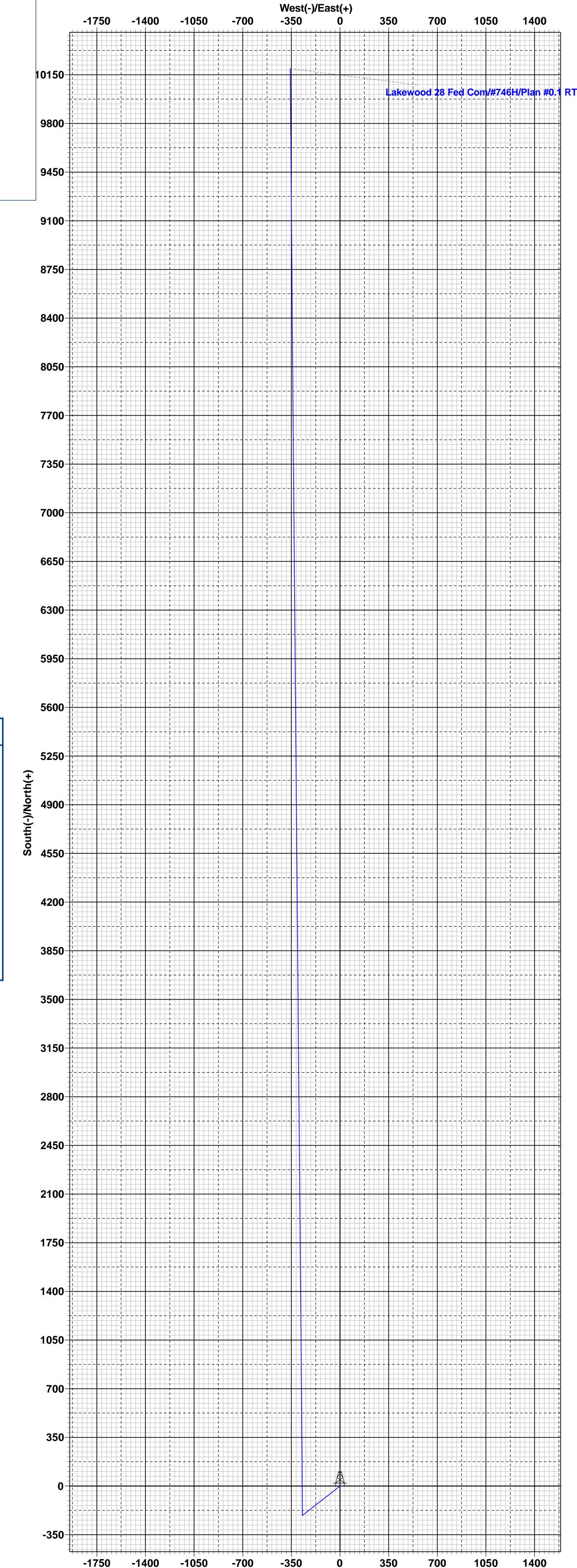
KOP(Lakewood 28 Fed Com #746H)

FTP(Lakewood 28 Fed Com #746H)

Fed Perf 1(Lakewood 28 Fed Com #746H)

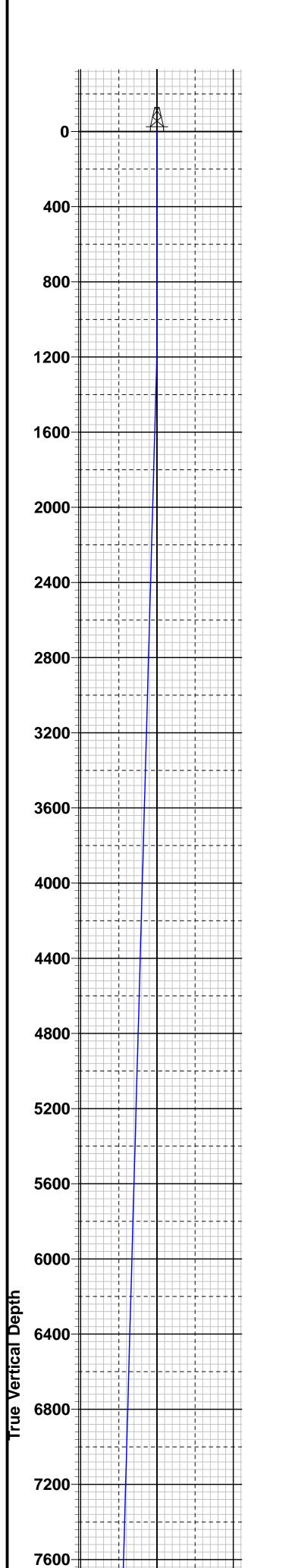
Fed Perf 2(Lakewood 28 Fed Com #746H) PBHL(Lakewood 28 Fed Com #746H)

Target





To convert a Magnetic Direction to a Grid Direction, Add 5.85° To convert a Magnetic Direction to a True Direction, Add 6.30° East To convert a True Direction to a Grid Direction, Subtract 0.45°



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8000

8400-

8800-

9200-

9600-

10000

10400

10800-

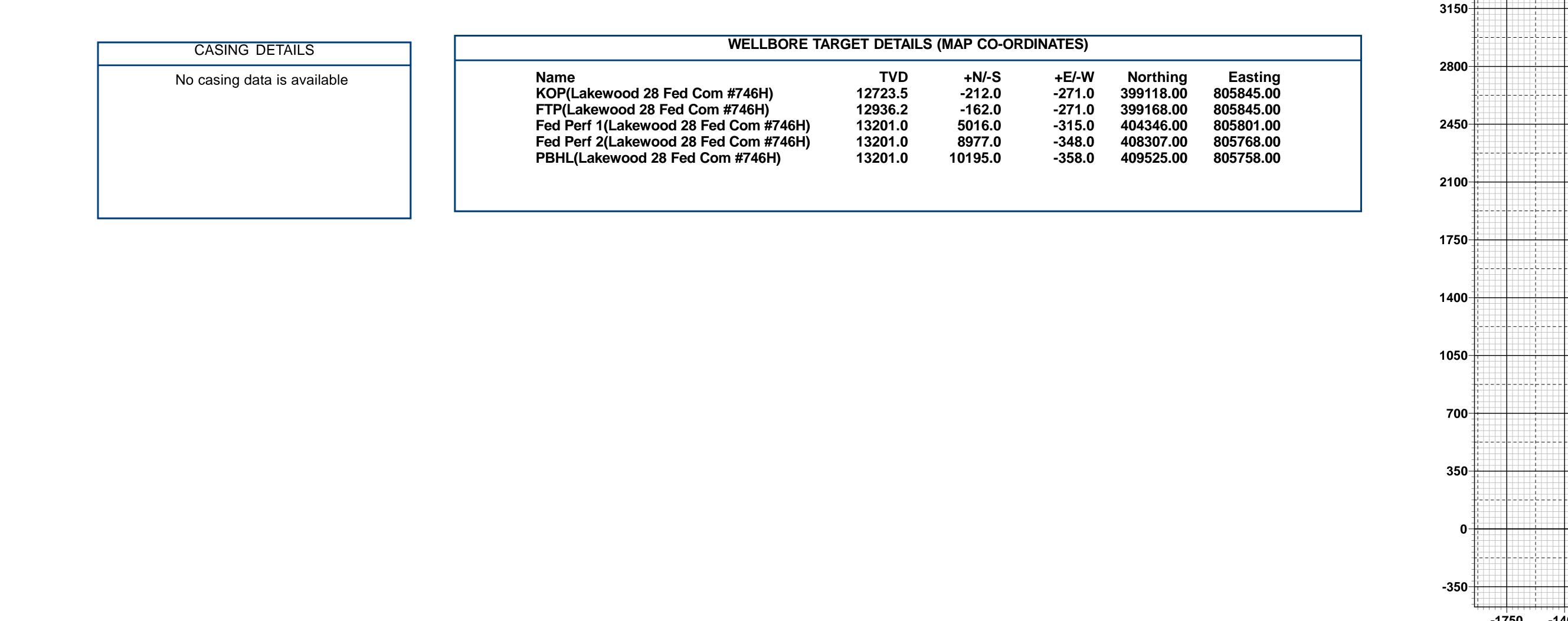
11200

11600

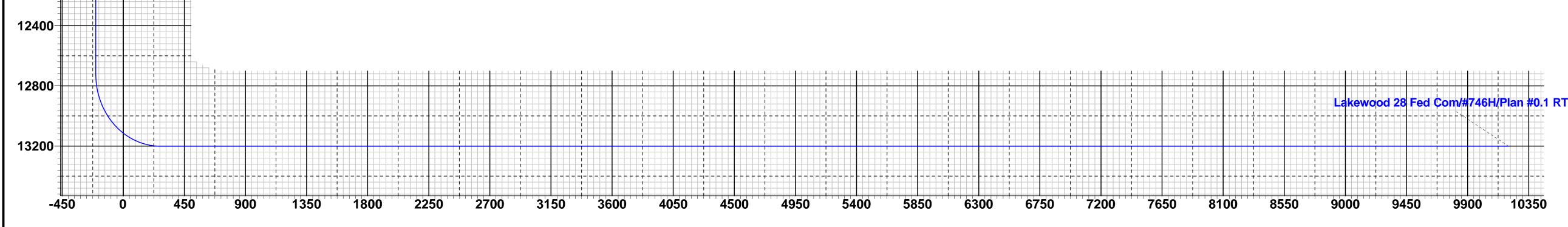
12000-

	WELL DETAILS	: #746H	
		3317.	0
	kb = 26' @	2 3343.0usft	
Northing	Easting	Latittude	Longitude
399330.00	806116.00	32° 5' 41.827 N	103° 28' 41.908 W

				SECTION DETAILS								
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect			
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0			
2	1100.0	0.00	0.00	1100.0	0.0	0.0	0.00	0.00	0.0			
3	1249.1	2.98	231.96	1249.0	-2.4	-3.1	2.00	231.96	-2.3			
4	7714.8	2.98	231.96	7706.0	-209.6	-267.9	0.00	0.00	-200.1			
5	7863.9	0.00	0.00	7855.0	-212.0	-271.0	2.00	180.00	-202.4			
6	12732.4	0.00	0.00	12723.5	-212.0	-271.0	0.00	0.00	-202.4			
7	12952.8	26.46	0.00	12936.2	-162.0	-271.0	12.00	0.00	-152.4			
8	13482.4	90.00	359.50	13200.9	265.5	-273.6	12.00	-0.56	274.9			
9	18233.1	90.00	359.50	13201.0	5016.0	-315.0	0.00	0.00	5024.0			
10	22194.2	90.00	359.54	13201.0	8977.0	-348.0	0.00	88.36	8983.7			
11	23412.3	90.00	359.51	13201.0	10195.0	-358.0	0.00	-92.38	10201.3			



West(-)/East(+)



Lea County, NM (NAD 83 NME) Lakewood 28 Fed Com #746H OH Plan #0.1 RT 10:57, February 02 2023

Vertical Section at 357.99°

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:EOG Resources IncorporatedWELL NAME & NO.:Lakewood 28 Fed Com 746HLOCATION:Sec 28-25S-34E-NMPCOUNTY:Lea County, New Mexico

COA

H ₂ S	\odot	No	C Yes			
Potash / WIPP	• None	C Secretary	C R-111-Q	Open Annulus WIPP		
Cave / Karst	Low	C Medium	🔘 High	C Critical		
Wellhead	Conventional	Multibowl	🔘 Both	C Diverter		
Cementing	Primary Squeeze	Cont. Squeeze	EchoMeter	DV Tool		
Special Req	🗆 Capitan Reef	Water Disposal	COM	🗖 Unit		
Waste Prev.	C Self-Certification	C Waste Min. Plan	• APD Submitted p	prior to 06/10/2024		
Additional Language	Flex HoseFour-String	Casing ClearanceOffline Cementing	Pilot HoleFluid-Filled	□ Break Testing		

Operator has elected to have a primary & secondary casing design. Design A is 9.625" Surface > 7.625" Intermediate > 5.5" Prod. Design B is 10.75" Surface > 8.75" Intermediate > 6" Prod.

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

- 1. The A: 9-5/8 / B: 10-3/4 inch surface casing shall be set at approximately 930 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of <u>8 hours</u> or <u>500</u>

Page 1 of 7

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.

If utilizing Design B: Intermediate casing must be kept fluid filled to meet BLM's minimum collapse requirements.

2. The minimum required fill of cement behind the A: 7-5/8 / B: 8-3/4 inch intermediate 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, contingent upon no returns to surface.

- a. First stage: Operator will cement with intent to reach the top of the Brushy Canyon.
- b. **Second stage:** Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified.

Operator has proposed to pump down Surface X Intermediate 1 annulus after primary cementing stage. <u>Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus OR</u> <u>operator shall run a CBL from TD of the Intermediate 1 casing to tieback requirements listed</u> <u>above after the second stage BH to verify TOC.</u> Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

If cement does not reach surface, the next casing string must come to surface.

If utilizing Design B: Production casing must be kept fluid filled to meet BLM's minimum collapse requirements.

- 3. The minimum required fill of cement behind the A: 5-1/2 / B: 6 inch production casing is:
 - **DESIGN A:** Cement should tie-back at least **300 feet** into previous casing string (additional tieback due to not meeting 0.422" clearance requirement per 43 CFR 3172.) Operator shall provide method of verification.
 - **DESIGN B:** Cement should tie-back at least **200 feet** into previous casing string. 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).
- 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 5000 (5M) Annular which shall be tested to 5000 (5M) psi.

- a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

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. <u>When the</u> <u>Communitization Agreement number is known, it shall also be on the sign.</u>

Offline Cementing

Contact the BLM prior to the commencement of any offline cementing procedure.

Approval Date: 03/25/2025

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 Lea County Petroleum Engineering Inspection Staff:

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - i. Notify the BLM when moving in and removing the Spudder Rig.
 - ii. Notify the BLM when moving in the 2^{nd} 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 dog house 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. <u>Wait on cement (WOC) for Potash Areas:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following

conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least <u>8 hours</u>. 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. <u>Wait on cement (WOC) for Water Basin:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least <u>8 hours</u>. 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.

Approval Date: 03/25/2025

seog resources

Lakewood 28 Fed Com #746H

Hydrogen Sulfide Plan Summary

- A. All personnel shall receive proper H2S training in accordance with Onshore Order III.C.3.a.
- **B.** Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment:

Well control equipment

- a. Flare line 150' from wellhead to be ignited by flare gun.
- b. Choke manifold with a remotely operated choke.
- c. Mud/gas separator

Protective equipment for essential personnel:

- a. Breathing Apparatus:
 - i. Rescue Packs (SCBA) 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
 - ii. Work/Escape packs —4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
 - iii. Emergency Escape Packs —4 packs shall be stored in the doghouse for emergency evacuation.
- b. Auxiliary Rescue Equipment:
 - i. Stretcher
 - ii. Two OSHA full body harness
 - iii. 100 ft 5/8 inch OSHA approved rope
 - iv. 1-20# class ABC fire extinguisher

H2S Detection and Monitoring Equipment:

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged. (Gas sample tubes will be stored in the safety trailer)

Visual Warning System:

- a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
- b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
- c. Two wind socks will be placed in strategic locations, visible from all angles.



Mud Program:

The mud program has been designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.

Metallurgy:

All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

Communication:

Communication will be via cell phones and land lines where available.

Emergency Assistance Telephone List

PUBLIC SAFETY:	911 or
Lea County Sheriff's Department	(575) 396-3611
Corey Helton	
Fire Department	
Carlsbad	(575) 885-3125
Artesia	(575) 746-5050
Hospitals	
Carlsbad	(575) 887-4121
Artesia	(575) 748-3333
Hobbs	(575) 392-1979
Dept. of Public Safety/Carlsbad	(575) 748-9718
Highway Department	(575) 885-3281
U.S. Department of Labor	(575) 887-1174
Bureau of Land Management - Hobbs (Lea Co)	(575) 393-3612
PET On Call - Hobbs	(575) 706-2779
Bureau of Land Management - Carlsbad (Eddy Co)	(575) 234-5972
PET On Call - Carlsbad	(575) 706-2779
New Mexico Oil Conservation Division - Artesia	(575) 748-1283
Inspection Group South - Gilbert Gordero	(575) 626-0830
EOG Resources, Inc.	
EOG Midland	(432) 686-3600
Company Drilling Consultants:	
Jett Dueitt	(432) 230-4840
Blake Burney	
Drilling Engineers	
Stephen Davis	(432) 235-9789
Matt Day	(210) 296-4456
Drilling Managers	
Branden Keener	(210) 294-3729
Drilling Superintendents	
Lance Hardy	(432) 215-8152
Ryan Reynolds	(432) 215-5978
Steve Kelly	(210) 416-7894
H&P Drilling	
H&P Drilling	(432) 563-5757
Nabors Drilling	
Nabors Drilling	(432) 363-8180
Patterson UTI	
Patterson UTI	(432) 561-9382
EOG Safety	
Brian Chandler (HSE Manager)	(817) 239-0251

Sante Fe Main Office Phone: (505) 476-3441

General Information Phone: (505) 629-6116

Online Phone Directory https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Operator:	OGRID:
EOG RESOURCES INC	7377
5509 Champions Drive	Action Number:
Midland, TX 79706	481356
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
sharrell1	Cement is required to circulate on both surface and intermediate1 strings of casing.	7/3/2025
sharrell1	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	7/3/2025
matthew.gomez	Notify the OCD 24 hours prior to casing & cement.	7/18/2025
matthew.gomez	A [C-103] Sub. Drilling (C-103N) is required within (10) days of spud.	7/18/2025
matthew.gomez	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.	7/18/2025
matthew.gomez	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.	7/18/2025
matthew.gomez	File As Drilled C-102 and a directional Survey with C-104 completion packet.	7/18/2025
matthew.gomez	Administrative order required for non-standard spacing unit prior to production.	7/18/2025

Page 40 of 40

Action 481356