

1. GEOLOGIC NAME OF SURFACE FORMATION: Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	934'
Top of Salt	1,264'
Base of Salt / Top Anhydrite	4,694'
Base Anhydrite	4,934'
Lamar	4,934'
Bell Canyon	4,969'
Cherry Canyon	6,044'
Brushy Canyon	7,594'
Bone Spring Lime	9,104'
1st Bone Spring Sand	10,049'
2 nd Bone Spring Shale	10,269'
2 nd Bone Spring Sand	10,544'
3 rd Bone Spring Carb	11,059'
3 rd Bone Spring Sand	11,731'
Wolfcamp	12,173'
TD	12,400'

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

Upper Permian Sands	0-400'	Fresh Water
Cherry Canyon	6,044'	Oil
Brushy Canyon	7,594'	Oil
1st Bone Spring Sand	10,049'	Oil
2 nd Bone Spring Shale	10,269'	Oil
2 nd Bone Spring Sand	10,544'	Oil
3rd Bone Spring Carb	11,059'	Oil
3 rd Bone Spring Sand	11,731'	Oil
Wolfcamp	12,173'	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 10.75" casing at 960' and circulating cement back to surface.

Hole		Csg				DFmin	DFmin	DFmin
Size	Interval	OD	Weight	Grade	Conn	Collapse	Burst	Tension
14.75"	0 - 960'	10.75"	40.5#	J55	STC	1.125	1.25	1.60
9.875"	0 - 1,000'	7.625"	29.7#	HCP-110	LTC	1.125	1.25	1.60
9.875"	1,000' -	7.625"	29.7#	P-110EC	SLIJ II	1.125	1.25	1.60
	3,000'							
8.75"	3,000' - 11,100'	7.625"	29.7#	HCP-110	FlushMax III	1.125	1.25	1.60
6.75"	0'-10,600'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	10,600'-19,853'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60

4. CASING PROGRAM - NEW

Variance is requested to wave the centralizer requirements for the 7-5/8" FJ 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 wave any centralizer requirements for the 5-1/2" FJ 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.

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /ft	Mix Water Gal/sk	Slurry Description
10-3/4" 960'	325	13.5	1.73	9.13	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	200	14.8	1.34	6.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
7-5/8" 11,100'	250	14.8	1.38	6.48	Class C + 5% Gypsum + 3% CaCl2 pumped via Bradenhead (TOC @ Surface)
	2000	14.8	1.38	6.48	Class C + 5% Gypsum + 3% CaCl2 pumped via Bradenhead
	550	14.4	1.20	4.81	50:50 Class H:Poz + 0.25% CPT20A + 0.40% CPT49 + 0.20% CPT35 + 0.80% CPT16A + 0.25% CPT503P pumped Conventionally
5-1/2" 19,853'	1000	14.1	1.26	5.80	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,600')

Cementing Program:

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 (5000-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. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The intermediate casing will be tested to 2000 psi for 30 minutes.

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.

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.

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

Depth	Туре	Weight (ppg)	Viscosity	Water Loss
0 - 960'	Fresh - Gel	8.6-8.8	28-34	N/c
960' - 11,100'	Brine	8.8-10.0	28-34	N/c
11,100' - 19,853'	Oil Base	10.0-14.0	58-68	3 - 6
Lateral				

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 181 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 7415 psig (based on 11.5 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 7,300' 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.

(A)EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and cement on the subject well. 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 10-3/4" surface casing, a 13-5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 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 5000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Stream Flo FBD100 Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

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.

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 5000 psi.

Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

Manufacturer: Midwest Hose & Specialty

Serial Number: SN#90067

Length: 35'

Size: OD = 8" ID = 4"

Ends: Flanges Size: 4-1/16"

WP Rating: 10,000 psi Anchors required by manfacturer: No

MIDWEST

HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT						
Customer	en ann an seacharain guladh, a chuinn an saolan I I			P.O. Numb	er:	
CACTUS				RIG #123		
			Asset # N	10761		
		HOSE SPECIF	ICATIONS			
Туре: (CHOKE LINI			Length:	35'	
I.D.	4''	INCHES	O.D.	8"	INC	HES
WORKING PI	RESSURE	lin Lin	BURST PRES	SURE		
10,000	PSI	15,000	PSI			PSI
		COUP	LINGS			
Type of Er	nd Fitting I 1/16 10K F	LANGE				
Type of Co	oupling:		MANUFACTU	RED BY		
	SWEDGED		MIDWEST HOS	SE & SPECIA	LTY	
		PROC	EDURE			
	lass secomb	(nencourse feated w	ith uniter at amplia	t tom pood 100		
1	IME HELD AT	TEST PRESSURE	ACTUAL E	URST PRESSU	IRE:	
	1	MIN.			0	PSI
COMMENTS: SN#90067 M10761 Hose is covered with stainless steel armour cover and wraped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting even						
Date:	6/2011	Tested By: BOBBY FINK		Approved: MENDI J	ACKSC	ON

Exhibit 4 EOG Resources Audacious BTL 19 Fed Com #5H





490'



Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Bobby Fink

Approved By: Mendi Jackson

Soph ZC

× Mendi Jackson





Connection	Data	Sheet
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OD	Weight	Wall Th.	Grade	API Drift	Connection
7 5/8 in.	29.70 lb/ft	0.375 in.	VM 110 HC	6.750 in.	VAM® SLIJ-II

	PIPE PROPERTIES	SAL PARTIES	
	Nominal OD	7.625 in.	Conne
ł	Nominal ID	6.875 in.	Conne
l	Nominal Cross Section Area	8.541 sqin.	Conne
	Grade Type	High Collapse	Make-
	Min. Yield Strength	110 ksi	Critica
	Max. Yield Strength	140 ksi	Tensio
	Min. Ultimate Tensile Strength	125 ksi	Comp
8			

CONNECTION	PROPERTIES
Connection Type	Premium integral semi-flush
Connection OD (nom)	7.711 in.
Connection ID (nom)	6.820 in.
Make-up Loss	4.822 in.
Critical Cross Section	5.912 sqin.
Tension Efficiency	69.2 % of pipe
Compression Efficiency	48.5 % of pipe
Internal Pressure Efficiency	100 % of pipe
External Pressure Efficiency	100 % of pipe

CONNECTION PERFORMANCES						
Tensile Yield Strength	651	klb				
Compression Resistance	455	klb				
Internal Yield Pressure	9470	psi				
Uniaxial Collapse Pressure	7890	psi				
Max. Bending Capacity	TDB					
Max Bending with Sealability	20	°/100 ft				

FIELD TORQUE VALUES	and the set
Min. Make-up torque	11300 ft.lb
Opti. Make-up torque	12600 ft.lb
Max. Make-up torque	13900 ft.lb

VAM® SLIJ-II is a semi-flush integral premium connection for all casing applications. It combines a near flush design with high performances in tension, compression and gas sealability.

VAM® SLIJ-II has been validated according to the most stringent tests protocols, and has an excellent performance history in the world's most prolific HPHT wells.



Do you need help on this product? - Remember no one knows VAM® like VAM canada@vamfieldservice.com uk@vamfieldservice.com china@vamfieldservice.com usa@vamfieldservice.com dubai@vamfieldservice.com baku@vamfieldservice.com mexico@vamfieldservice.com nigeria@vamfieldservice.com singapore@vamfieldservice.com brazil@vamfieldservice.com angola@vamfieldservice.com australia@vamfieldservice.com

Over 140 VAM® Specialists available worldwide 24/7 for Rig Site Assistance

Other Connection Data Sheets are available at www.vamservices.com



Vallourec Group

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1	Pin critic	al area Box critical area			
Pine Body		Imperial		SI	
Grade		P110		P110	
Pipe OD (D)		7 5/8	in	193.68	mm
Weight		29.7	lb/ft	44.25	kg/m
Actual weight		29.0	Ib/ft	43.26	kg/m
Wall thickness (t)		0.375	in	9.53	mm
Pipe ID (d)		6.875	in	174.63	mm
Pipe body cross section		8.537	in ²	5,508	mm ²
Drift Dia.		6.750	in	171.45	mm
Connection				100.00	
Box OD (W)		7.625	in	193.68	mm
PINID		6.875	in	174.63	mm
Pin critical area		4.420	in ²	2,852	mm ²
Box critical area		4.424	in ²	2,854	mm ²
Joint load efficiency		60	%	60	%
Make up loss		3.040	in	77.22	mm
Thread taper		1/16 (3/4 in per ft)			
Number of threads		5 thread per in.			
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Connection Pe	erformance	Properties	I to the I		KN
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Connection Pe	ad	563.4	kips	2,506	
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In Reply To: 3160 [NMNM110838]

United States Department of the Interior

BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE 620 E. GREENE ST. CARLSBAD, NM 88220 BLM_NM_CFO_APD@BLM.GOV



03/27/2017

Attn: STAN WAGNER EOG RESOURCES INC 1111 BAGBY SKY LOBBY2 HOUSTON, TX 77002

Re: Receipt and Acceptability of Application for Permit to Drill (APD)

FEDERAL - NMNM110838

Well Name / Number:AUILegal Description:T255County, State:LEADate APD Received:01/2

AUDACIOUS BTL 19 FED COM / 5H T25S, R33E, SEC 19, NESE LEA, NM 01/25/2017

Dear Operator:

The BLM received your Application for Permit to Drill (APD), for the referenced well, on 01/25/2017. The BLM reviewed the APD package pursuant to part III.B.2 of Onshore Oil and Gas Order No.1 and it is:

1. Incomplete/Deficient (*The BLM cannot process the APD until you submit the identified items within 45 calendar days of the date of this notice or the BLM will return your APD.*)

	Well Plat				
	Drilling Plan				
V	Surface Use Plan of Operations (SUPO)				
	Certification of Private Surface Owner Access Agreement				
	Bonding				
	Onsite (The BLM has scheduled the onsite to be on)				
	This requirement is exempt of the 45-day timeframe to submit deficiencies. This requirement will be satisfied on the date of the onsite.				
	Other				

[Please See Addendum for further clarification of deficiencies]

2. Missing Necessary Information (*The BLM can start, but cannot complete the analysis until you submit the identified items. This is an early notice and the BLM will restate this in a 30-day deferral letter, if you have not submitted the information at that time. You will have two (2) years from the date of the deferral to submit this information or the BLM will deny your APD.*)

[Please See Addendum for further clarification of deficiencies]

NOTE: The BLM will return your APD package to you, unless you correct all deficiencies identified above (item 1) within 45 calendar days.

• The BLM will not refund an APD processing fee or apply it to another APD for any returned APD.

Extension Requests:

- If you know you will not be able to meet the 45-day timeframe for reasons beyond your control, you must submit a written request through email/standard mail for extension prior to the 45th calendar day from this notice, **05/11/2017**.
- The BLM will consider the extension request if you can demonstrate your diligence (providing reasons and examples of why the delay is occurring beyond your control) in attempting to correct the deficiencies and can provide a date by which you will correct the deficiencies. If the BLM determines that the request does not warrant an extension, the BLM will return the APD as incomplete after the 45 calendar days have elapsed.
 - The BLM will determine whether to grant an extension beyond the required 45 calendar days and will document this request in the well file. If you fail to submit deficiencies by the date defined in the extension request, the BLM will return the APD.

APDs remaining Incomplete:

- If the APD is still not complete, the BLM will notify you and allow 10 additional business days to submit a written request to the BLM for an extension. The request must describe how you will address all outstanding deficiencies and the timeframe you request to complete the deficiencies.
 - The BLM will consider the extension request if you can prove your diligence (providing reasons and examples of why the delay is occurring) in attempting to correct the deficiencies and you can provide a date by which you will correct the deficiencies. If the BLM determines that the request does not warrant an additional extension, the BLM will return the APD as incomplete.

If you have any questions, please contact Melissa Agee at (575) 234-5937.

Sincerely,

Cody Layton Assistant Field Manager

cc: Official File