INIVII	NIVIU 1945Z	
6.	If Indian, Allotee	or Tribe Name

		OBBE 31 7018 TOR REENTER				
OCD Hobbs		Se Se				M
Form 3160 -3 (March 2012)	H	OBLE 312VI	JED	FORM OMB I Expires (	APPROVI No. 1004-01 October 31, 3	37
UNITED STATES  DEPARTMENT OF THE II	NTERIO	E WALLE		5. Lease Serial No. NMNM019452		
BUREAU OF LAND MANA APPLICATION FOR PERMIT TO D	ORILL C	R REENTER		6. If Indian, Allotee	or Tribe	Name
Ia. Type of work: DRILL REENTE	R			7. If Unit or CA Agre	eement, Na	ame and No.
lb. Type of Well: Oil Well Gas Well Other		Single Zone 🔽 Multip	ole Zone	8. Lease Name and STONEWALL 28 F		<b>√</b> 708H
2. Name of Operator EOG RESOURCES INCORPORATED	737	77)		9. API Well No.	- 4	14873
3a. Address 1111 Bagby Sky Lobby2 Houston TX 77002	3b. Phone (713)651	Ho. (include area code) -7000		10. Field and Pool, or RED HILLS / WC-		•
4. Location of Well (Report location clearly and in accordance with any At surface NWNE / 200 FNL / 2634 FEL / LAT 32.195245	•			11. Sec., T. R. M. or E		-
At proposed prod. zone SWSE / 230 FSL / 2589 FEL / LAT	32.16740	8 / LONG -103.47469	93	SEC 28 / T24S / R	.34E / INI	VIP
<ol> <li>Distance in miles and direction from nearest town or post office*</li> <li>miles</li> </ol>				12. County or Parish LEA		13. State NM
15. Distance from proposed* location to nearest 200 feet property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of 280	acres in lease	17. Spacing 320	g Unit dedicated to this	well	•
18. Distance from proposed location* to nearest well, drilling, completed, 380 feet applied for, on this lease, ft.	19. Propos 12233 fe	sed Depth eet / 22314 feet	20. BLM/F	BIA Bond No. on file		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3497 feet	22. Approx	ximate date work will star 118	rt*	23. Estimated duration 25 days	on	
	24. Att	achments				
The following, completed in accordance with the requirements of Onshore	e Oil and Ga	s Order No.1, must be at	tached to thi	s form:		
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> </ol>		Item 20 above).	•	ns unless covered by an	existing l	bond on file (see
3. A Surface Use Plan (if the location is on National Forest System L SUPO must be filed with the appropriate Forest Service Office).	ands, the	Operator certific     Such other site     BLM.		ormation and/or plans a	s may be r	equired by the
25. Signature (Electronic Submission)		e <i>(Printed/Typed)</i> n Wagner / Ph: (432)	686-3689		Date 01/30/	2018
Title Regulatory Specialsit	•					
Approved by (Signature) (Electronic Submission)		ne <i>(Printed/Typed)</i> stopher Walls / Ph: (	575)234-2	234	Date 05/07/	/2018
Title	Offic				1	
Petroleum Engineer  Application approval does not warrant or certify that the applicant holds conduct operations thereon.  Conditions of approval, if any, are attached.		RLSBAD uitable title to those righ	ts in the sub	ject lease which would	entitle the	applicant to
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cri States any false, fictitious or fraudulent statements or representations as to	me for any any matter	person knowingly and within its jurisdiction.	villfully to m	ake to any department	or agency	of the United

(Continued on page 2)



\*(Instructions on page 2)

#### **INSTRUCTIONS**

4

: 1884 - 17

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

#### **NOTICES**

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts. ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

(Form 3160-3, page 2)

**Approval Date: 05/07/2018** 

#### **Additional Operator Remarks**

#### Location of Well

1. SHL: NWNE / 200 FNL / 2634 FEL / TWSP: 24S / RANGE: 34E / SECTION: 28 / LAT: 32.1952459 / LONG: -103.4748851 ( TVD: 0 feet, MD: 0 feet )
PPP: SESW / 1220 FSL / 2589 FEL / TWSP: 24S / RANGE: 34E / SECTION: 28 / LAT: 32.1846 / LONG: -103.4747 ( TVD: 12233 feet, MD: 16041 feet )
PPP: NWNE / 330 FNL / 2587 FEL / TWSP: 24S / RANGE: 34E / SECTION: 28 / LAT: 32.1948889 / LONG: -103.4747338 ( TVD: 12193 feet, MD: 12311 feet )
BHL: SWSE / 230 FSL / 2589 FEL / TWSP: 24S / RANGE: 34E / SECTION: 33 / LAT: 32.167408 / LONG: -103.474693 ( TVD: 12233 feet, MD: 22314 feet )

#### **BLM Point of Contact**

Name: Judith Yeager

Title: Legal Instruments Examiner

Phone: 5752345936 Email: jyeager@blm.gov

(Form 3160-3, page 3)

**Approval Date: 05/07/2018** 

#### **Review and Appeal Rights**

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

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(Form 3160-3, page 4)

**Approval Date: 05/07/2018** 



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

# **Application Data Report**

APD ID: 10400026406

Submission Date: 01/30/2018

Highlighted data reflects the most

recent changes

Well Name: STONEWALL 28 FED COM

**Operator Name: EOG RESOURCES INCORPORATED** 

Well Number: 708H

**Show Final Text** 

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

APD ID:

10400026406

Tie to previous NOS?

Submission Date: 01/30/2018

**BLM Office: CARLSBAD** 

User: Stan Wagner

Title: Regulatory Specialsit

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM019452

Lease Acres: 280

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? NO

**Permitting Agent? NO** 

**APD Operator: EOG RESOURCES INCORPORATED** 

Operator letter of designation:

**Operator Info** 

**Operator Organization Name: EOG RESOURCES INCORPORATED** 

Operator Address: 1111 Bagby Sky Lobby2

**Operator PO Box:** 

**Zip:** 77002

**Operator City: Houston** 

State: TX

**Operator Phone:** (713)651-7000

**Operator Internet Address:** 

**Section 2 - Well Information** 

Well in Master Development Plan? NO

Mater Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: STONEWALL 28 FED COM

Well Number: 708H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: RED HILLS

Pool Name: WC-025 S2433361

**UPPER WOLFCAMP** 

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Well Name: STONEWALL 28 FED COM

Well Number: 708H

Describe other minerals:

Is the proposed well in a Helium production area? N Use Existing Well Pad? NO

New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name: STONEWALL 28 FED COM Number: 707H/708H/709H

Well Class: HORIZONTAL

Number of Legs: 1

Well Work Type: Drill

Well Type: OIL WELL

**Describe Well Type:** 

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 17 Miles

Distance to nearest well: 380 FT

Distance to lease line: 200 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat:

Stonewall28FC708H\_signed\_C\_102\_20180130154514.pdf

Well work start Date: 06/01/2018

**Duration: 25 DAYS** 

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

Survey Type: RECTANGULAR

**Describe Survey Type:** 

Datum: NAD83

Vertical Datum: NAVD88

#### Survey number:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	200	FNL	263 4	FEL	248	34E	28	Aliquot NWNE	32.19524 59	- 103.4748 851	LEA	NEW MEXI CO		F		349 7	0	0
KOP Leg #1	42	FNL	259 1	FEL	248	34E	28	Aliquot NWNE	32.19524 59	- 103.4748 851	LEA	NEW MEXI CO		F	NMNM 019452	- 825 0	117 48	117 47
PPP Leg #1	330	FNL	258 7	FEL	24\$	34E	28	Aliquot NWNE	32.19488 89	- 103.4747 338	LEA	NEW MEXI CO		F	NMNM 019452	- 869 6	123 11	121 93



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

# Drilling Plan Data Report 05/23/2018

Submission Date: 01/30/2018

Highlighted data reflects the most

recent changes

Operator Name: EOG RESOURCES INCORPORATED

Well Number: 708H

**Show Final Text** 

Well Name: STONEWALL 28 FED COM

Well Work Type: Drill

Well Type: OIL WELL

APD ID: 10400026406

### **Section 1 - Geologic Formations**

Formation	P. Barrell		True Vertical	Measured	The state of the s	122	Producing
IĎ 🐔	Formation Name	Elevation	Depth	∍ Depth	Lithologies	Mineral Resources	Formation
1	PERMIAN	3497	0	Ó	ALLUVIŬM	NONE	No
2	RUSTLER	2376	1121	1121	ANHYDRITE	NONE	No
3	TOP OF SALT	2129	1368	1368	SALT	NONE	No
4	BASE OF SALT	-1571	5068	5068	SALT	NONE	No
5	LAMAR	-1839	5336	5336	LIMESTONE	NONE	No
6	BELL CANYON	-1881	5378	5378	SANDSTONE	NATURAL GAS,OIL	Yes
Ż	CHERRY CANYON	-2814	6311	6311	SANDSTONE	NATURAL GAS,OIL	Yes
8	BRUSHY CANYON	-4307	7804	7804	SANDSTONE	NATURAL GAS,OIL	Yes
9	BONE SPRING LIME	-5669	9166	9166	LIMESTONE	NONE	No
10	BONE SPRING 1ST	-6679	10176	10176	SANDSTONE	NATURAL GAS,OIL	Yes
11	BONE SPRING 2ND	-7159	10656	10656	SANDSTONE	NATURAL GAS,OIL	Yes
12	BONE SPRING 3RD	-8196	11693	11693	SANDSTONE	NATURAL GAS,OIL	No
13	WOLFCAMP	-8608	12105	12105		NATURAL GAS,OIL	Yes

## **Section 2 - Blowout Prevention**

Well Name: STONEWALL 28 FED COM Well Number: 708H

Pressure Rating (PSI): 10M

Rating Depth: 12233

**Equipment:** 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 (10000-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 & amp; amp; Gas order No. 2.

#### Requesting Variance? YES

**Variance request:** Variance is requested to use a 5000 psi annular BOP with the 10000 psi BOP stack. Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line). 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. Centralizers will be placed in the 9-7/8" hole interval at least one every third joint. 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.

**Testing Procedure:** Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 10000/250 psig and the annular preventer to 5000/250 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 10000/250 psig and the annular preventer to 5000/250 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.

#### **Choke Diagram Attachment:**

Stonewall\_28\_Fed\_Com\_708H\_10\_M\_Choke\_Manifold\_20180130152541.pdf

Stonewall\_28\_Fed\_Com\_708H\_Co\_Flex\_Hose\_Certification\_20180130152541.PDF

Stonewall 28 Fed Com 708H Co Flex Hose Test Chart 20180130152542.pdf

#### **BOP Diagram Attachment:**

Stonewall\_28\_Fed\_Com\_708H\_10\_M\_BOP\_Diagram\_20180130152554.pdf
Stonewall\_28\_Fed\_Com\_708H\_EOG\_BLM\_10M\_Annular\_Variance\_\_\_4\_String\_20180130152555.pdf

#### Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	1150	0	1150	3497	2347	1150	J-55	54.5	STC	1.12 5	1.25	BUOY	1.6	BUOY	1.6
		12.2 5	9.625	NEW	API	N	0	4000	0	4000	3497	-503	4000	J-55	40	LTC	1.12 5	1.25	BUOY	1.6	BUOY	1.6
1 -	1	12.2 5	9.625	NEW	API	Ν	4000	5100	4000	5100	-503	-1603	1100	HCK -55	40	LTC	1.12 5	1.25	BUOY	1.6	BUOY	1.6

Well Name: STONEWALL 28 FED COM

Well Number: 708H

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	PRODUCTI ON	6.75	5.5	NEW	API	Z	0	10800	0	10800	3497	-7303	10800	OTH ER		OTHER - DWC/C-IS MS	1.12 5	1.25	BUOY	1.6	BUOY	1.6
5	INTERMED IATE	8.75	7.625	NEW	API	N	0	11300	0	11300	3497	-7803	11300	HCP -110		OTHER - FXL	1.12 5	1.25	BUOY	1.6	BUOY	1.6
1	PRODUCTI ON	6.75	5.5	NEW	API	N	10800	22278	10800	12233	-7303	-8736	11478	OTH ER		OTHER - VAM SFC	1.12 5	1.25	BUOY	1.6	BUOY	1.6

sing Attachments
Casing ID: 1 String Type: SURFACE
Inspection Document:
Spec Document:
·
Tapered String Spec:
Oncide Design Agency (Construction of AW), As heavily
Casing Design Assumptions and Worksheet(s):
Stonewall_28_Fed_Com_708H_BLM_Plan_20180130152926.pdf
Casing ID: 2 String Type: INTERMEDIATE
Inspection Document:
Spec Document: ~
Tapered String Spec:
Casing Design Assumptions and Worksheet(s):
See_previously_attached_Drill_Plan_20180130152937.pdf

**Casing Attachments** Casing ID: 3 String Type: INTERMEDIATE **Inspection Document: Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): See\_previously\_attached\_Drill\_Plan\_20180130152948.pdf Casing ID: 4 String Type:PRODUCTION **Inspection Document: Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): See\_previously\_attached\_Drill\_Plan\_20180130153003.pdf Stonewall\_28\_Fed\_Com\_708H\_5.500in\_20.00\_VST\_P110EC\_DWC\_C\_IS\_MS\_20180130153003.pdf Casing ID: 5 String Type: INTERMEDIATE **Inspection Document: Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): See\_previously\_attached\_Drill\_Plan\_20180130153019.pdf Stonewall\_28\_Fed\_Com\_708H\_7.625in\_29.70\_P110HC\_FXL\_20180130153020.pdf

Well Number: 708H

**Operator Name: EOG RESOURCES INCORPORATED** 

Well Name: STONEWALL 28 FED COM

Well Name: STONEWALL 28 FED COM

Well Number: 708H

#### **Casing Attachments**

Casing ID: 6

String Type: PRODUCTION

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

#### Casing Design Assumptions and Worksheet(s):

 $See\_previously\_attached\_Drill\_Plan\_20180130153033.pdf$ 

Stonewall\_28\_Fed\_Com\_708H\_5.500in\_20.00\_VST\_P110EC\_VAM\_SFC\_20180130153033.pdf

Se	ctio	n 4 -	Cem	ent

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	0	0	0	0	0	0	0	0

•										
INTERMEDIATE	Lead	0	0	0	0	0	0	0	0	0
	}									

SURFACE	Lead	C	1	1150	600	1.73	13.5	1038	25	Class C	Lead: Class C + 4.0% Bentonite + 0.6% CD- 32 + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
SURFACE	Tail	11:	50 1	150	200	1.34	14.8	268	25	Class C	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
INTERMEDIATE	Lead	C	5	5100	1780	2.2	12.7	3916	25	Class C	Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C- 41P (TOC @ Surface)
INTERMEDIATE	Tail	510	00 5	5100	200	1.12	16	224	25	Class C	Tail: Class C + 0.13% C-20

Well Name: STONEWALL 28 FED COM Well Number: 708H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Lead		4600	1130 0	340	2.72	11.5	924	25	Class C	Lead: Class C + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 4,600')
INTERMEDIATE	Tail		1130 0	1130 0	210	1.12	16	235	25	Class H	Tail: Class H + 94.0 pps D909 + 0.25% D065 + 0.30% D167 + 0.02% D208 + 0.15% D800
PRODUCTION	Lead		1080 0	2231 4	950	1.26	14.1	1197	25	Class H	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,800')

#### **Section 5 - Circulating Medium**

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

**Describe what will be on location to control well or mitigate other conditions:** (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. **Describe the mud monitoring system 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.

#### **Circulating Medium Table**

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (Ibs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	ЬН	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1130 0	1223 3	OIL-BASED MUD	10	14							
1150	5100	SALT SATURATED	10	10.2							

Well Name: STONEWALL 28 FED COM

Well Number: 708H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	ЬН	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
5100	1130 0	OIL-BASED MUD	8.7	9.4							
0	1150	WATER-BASED MUD	8.6	8.8							

### Section 6 - Test, Logging, Coring

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

Open-hole logs are not planned for this well.

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

DS

Coring operation description for the well:

None

### **Section 7 - Pressure**

**Anticipated Bottom Hole Pressure: 8905** 

**Anticipated Surface Pressure:** 6213.74

Anticipated Bottom Hole Temperature(F): 181

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

 $Stonewall\_28\_Fed\_Com\_708H\_H2S\_Plan\_Summary\_20180130153231.pdf$ 

Well Name: STONEWALL 28 FED COM Well Number: 708H

#### **Section 8 - Other Information**

#### Proposed horizontal/directional/multi-lateral plan submission:

 $Stonewall\_28\_Fed\_Com\_708H\_Planning\_Report\_20180130153306.pdf$ 

Stonewall\_28\_Fed\_Com\_708H\_Wall\_Plot\_20180130153307.pdf

#### Other proposed operations facets description:

#### Other proposed operations facets attachment:

Stonewall\_28\_Fed\_Com\_708H\_Proposed\_Wellbore\_20180130153328.pdf

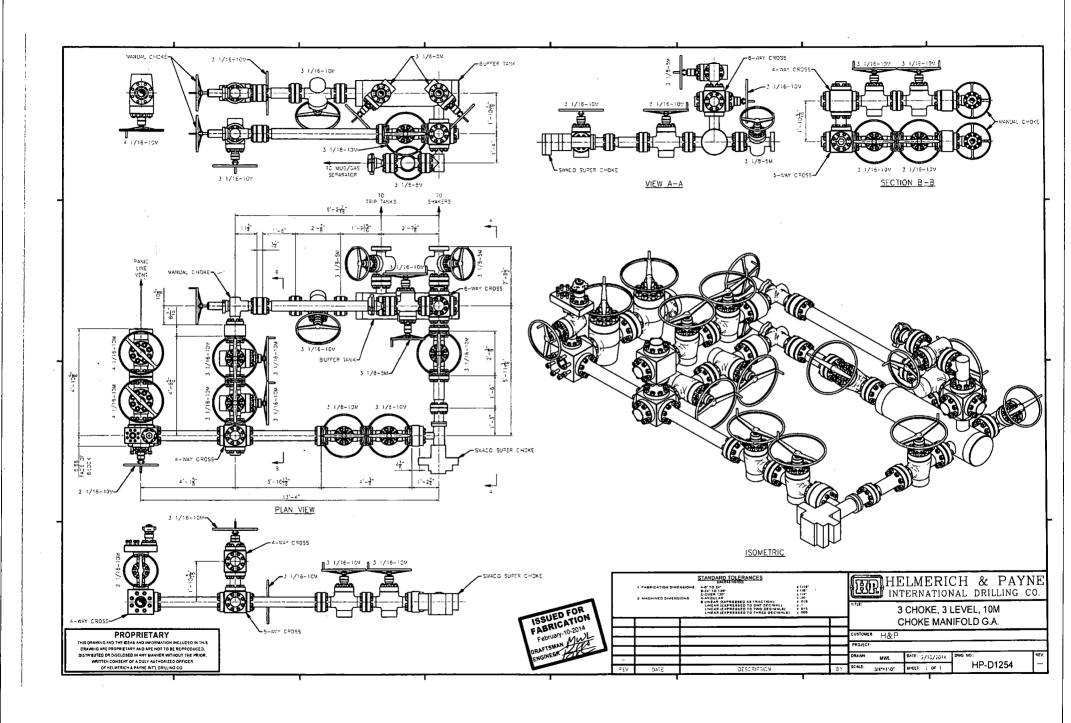
Stonewall\_28\_Fed\_Com\_708H\_Rig\_Layout\_20180130153328.pdf

Stonewall\_28\_Fed\_Com\_708H\_Wellhead\_Cap\_20180130153328.pdf

Stonewall28FC\_GCP\_20180130153432.pdf

#### Other Variance attachment:

Stonewall\_28\_Fed\_Com\_708H\_EOG\_BLM\_10M\_Annular\_Variance\_\_\_4\_String\_20180130153339.pdf



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.

INTERNA	AL HYDROST	ATIC TEST	REPOR	T				
Customer:			P.O. Numb					
CACTUS	CACTUS							
	HOSE SPECIF	FICATIONS	Asset # N	и10761				
Type: CHOKE LI	NE		Length:	35'				
	" INCHES	O.D.	8"	INCHES				
WORKING PRESSURE	TEST PRESSUR	E	BURST PRES	SURE				
10,000 PSI	15,000	<u>PSI</u>	<u></u>	PSI				
	COUP	LINGS		-				
Type of End Fitting 4 1/16 10K	J ,							
Type of Coupling: SWEDGET	)	MANUFACTU MIDWEST HO		ALTY				
	PROC	EDURE						
Hann noon	biv pressure tested w	ith water at emble	nt temperature					
	AT TEST PRESSURE	1	BURST PRESSU					
	1 MIN.			0 PSI				
COMMENTS:	- ·, · · · · · · · · · · · · · · · · · ·		<del></del>					
SN#90087								
	overed with stain!							
•	ith fire resistant v		_					
	rated for 1500 de	grees complet	<del></del>	eyes				
Date: 6/6/2011	Tested By: BOBBY FINK		Approved: MENDI	JACKSON				



### Internal Hydrostatic Test Graph

Customer: CACTUS

SALES ORDER# 90067

**Verification** 

#### **Hose Specifications**

Hose Type
C & K
I.D.
4"
Working Pressure

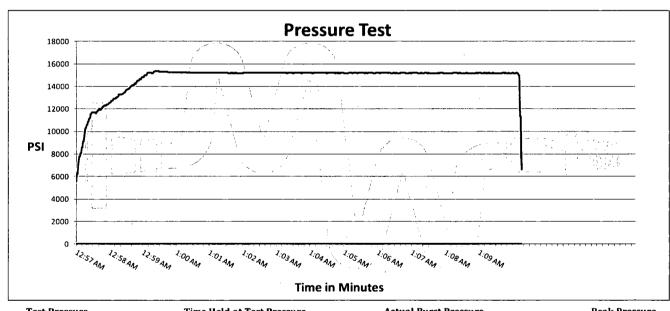
10000 PSI

Length
35'
O.D.
8"
Burst Pressure
Standard Safety Multiplier Applies

Type of Fitting
4 1/16 10K
Die Size
6.62"
Hose Serial #

Coupling Method
Swage
Final O.D.
6.68"
ose Assembly Serial

Hose Assembly Serial #



Test Pressure 15000 PSI Time Held at Test Pressure 11 1/4 Minutes Actual Burst Pressure

Peak Pressure 15439 PSI

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

Tested By: Bobby Fink

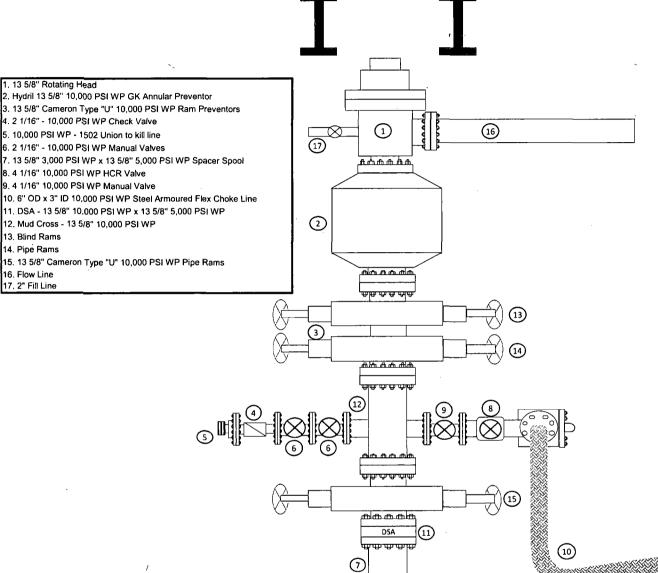
Approved By: Mendi Jackson

Buff LC

Mendi Jackson

## **Exhibit 1 EOG Resources** 10M BOPE

Rig Floor



## 10,000 PSI BOP Annular Variance Request

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

#### 1. Component and Preventer Compatibility Tables

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

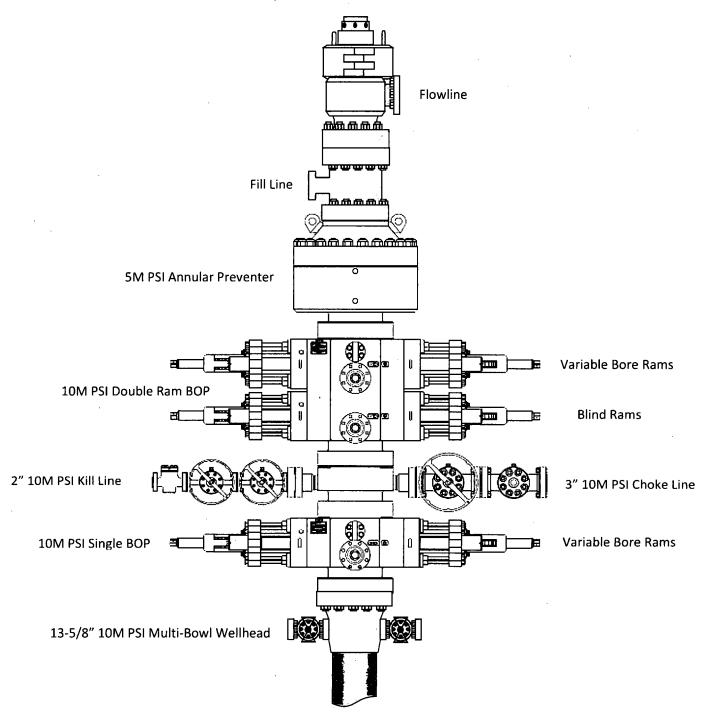
12-1/4" Intermediate Hole Section 10M psi requirement								
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP			
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M			
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M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

8-3/4" Intermediate Hole Section 10M psi requirement								
Component	OD	<b>Primary Preventer</b>	RWP	Alternate Preventer(s)	RWP			
Drillpipe	5.000" or	Annular	5M	Upper 3.5 - 5.5" VBR	10M			
	4.500"			Lower 3.5 - 5.5" VBR	10M			
HWDP	5.000" or	Annular	5M	Upper 3.5 - 5.5" VBR	10M			
	4.500"			Lower 3.5 - 5.5" VBR	10M			
Jars	6.500"	Annular	5M	Upper 3.5 - 5.5" VBR	10M			
				Lower 3.5 - 5.5" VBR	10M			
DCs and MWD tools	6.500" - 8.000"	Annular	5M	-	-			
Mud Motor	6.750" - 8.000"	Annular	5M	-	-			
2 <sup>nd</sup> Intermediate casing	7.625"	Annular	5M	<del>-</del> .	-			
Open-hole	-	Blind Rams	10M	-	-			

6-3/4" Production Hole Section 10M psi requirement								
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP			
Drillpipe	4.500"	Annular	5M	Upper 3.5 - 5.5" VBR	10M			
	,			Lower 3.5 - 5.5" VBR	10M			
HWDP	4.500"	Annular	5M	Upper 3.5 - 5.5" VBR	10M			
				Lower 3.5 - 5.5" VBR	10M			
DCs and MWD tools	4.750" - 5.500"	Annular	5M	Upper 3.5 - 5.5" VBR	10M			
				Lower 3.5 - 5.5" VBR	10M			
Mud Motor	4.750" – 5.500"	Annular	5M	Upper 3.5 - 5.5" VBR	10M			
W				Lower 3.5 - 5.5" VBR	10M			
Mud Motor	5.500" - 5.750"	Annular	5M	-	-			
Production casing	5.500"	Annular	5M	Upper 3.5 - 5.5" VBR	10M			
				Lower 3.5 - 5.5" VBR	10M			
Open-hole	-	Blind Rams	10M	-	-			

VBR = Variable Bore Ram

## EOG Resources 13-5/8" 10M PSI BOP Stack



#### 2. Well Control Procedures

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

#### General Procedure While Drilling

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

#### General Procedure While Tripping

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

#### General Procedure While Running Production Casing

- 1. Sound alarm (alert crew)
- 2. Stab crossover and full opening safety valve and close
- 3. Space out string

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

#### General Procedure With No Pipe In Hole (Open Hole)

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

#### General Procedures While Pulling BHA thru Stack

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

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

letal One Corp.	MO-FXL		Page	MCTP		
			Date	3-Nov-1	6	
Metal One	Connection Dat	a Sheet				
			Rev.	0		
	Geometry					
	deomeny	<u>Imperial</u>		<u>S.I.</u>		
	Pipe Body					
	Grade	P110HC 1		P110HC *1		
	Pipe OD ( D )	7 5/8	in	193.68	mm	
MO-FXL	Weight	29.70	lb/ft	44.25	kg/m	
	Actual weight	29.04		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 <sup>2</sup>	5,508	mm²	
	Drift Dia.	6.750	in	171.45	mm	
	Connection					
	Box OD (W)	7.625	in	193.68	mm	
1	PIN ID	6.875	in	174.63	mm	
	Make up Loss	4.219	in	107.16	mm	
Во	Box Critical Area	5.714	in <sup>2</sup>	3686	mm²	
1 1 1	Joint load efficiency	70	%	70	%	
are g	Thread Taper	1	/ 10 ( 1.	2" per ft )		
1   5   1	Number of Threads	Number of Threads 5 TPI				
1						
<u> </u>						
	Performance					
qı	s L	tar Dina Dado				
ip (	Performance Properties		Lkino	4 747	TLNI	
ip (	Performance Properties S.M.Y.S. *1	1,067	kips	4,747	kN	
poss Pin	Performance Properties S.M.Y.S. 1 M.I.Y.P. 1	1,067 10,760	psi	74.21	MPa	
ozs Pin	Performance Properties S.M.Y.S. *1 M.I.Y.P. *1 Collapse Strength *1	1,067 10,760 7,360	psi psi	74.21 50.76	MPa MPa	
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#### 1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

#### 2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,121'
Top of Salt	1,368'
Base of Salt	5,068'
Base Anhydrite	5,336'
Lamar	5,336'
Bell Canyon	5,378'
Cherry Canyon	6,311'
Brushy Canyon	7,804'
Bone Spring Lime	9,166'
1 <sup>st</sup> Bone Spring Sand	10,176'
2 <sup>nd</sup> Bone Spring Shale	10,394'
2 <sup>nd</sup> Bone Spring Sand	10,656'
3 <sup>rd</sup> Bone Spring Carb	11,188'
3 <sup>rd</sup> Bone Spring Sand	11,693'
Wolfcamp	12,105'
TD	12,233'

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

Upper Permian Sands	0-400'	Fresh Water
Cherry Canyon	6,311'	Oil
Brushy Canyon	7,804'	Oil
1st Bone Spring Sand	10,176'	Oil
2 <sup>nd</sup> Bone Spring Shale	10,394'	Oil
2 <sup>nd</sup> Bone Spring Sand	10,656'	Oil
3 <sup>rd</sup> Bone Spring Carb	11,188'	Oil
3 <sup>rd</sup> Bone Spring Sand	11,693'	Oil
Wolfcamp	12,105	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 13.375" casing at 1,150' and circulating cement back to surface.

#### 4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF <sub>min</sub> Collapse	DF <sub>min</sub> Burst	DF <sub>min</sub> Tension
17.5"	0 – 1,150'	13.375"	54.5#	J55	LTC	1.125	1.25	1.60
12.25"	0 – 4,000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4,000' – 5,100' .	9.625"	40#	HCK55	LTC	1.125	1.25	1.60
8.75"	0 – 11,300'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0'-10,800'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	10,800'-22,314'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60

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.

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.

#### **Cementing Program:**

Depth	No. Sacks	Wt.	Yld Ft³/ft	Mix Water Gal/sk	Slurry Description
13-3/8" 1,150'	600	13.5	1.73	9.13	Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	200	14.8	1.34	6.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
9-5/8" 5,100°	1780	12.7	2.20	11.64	Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C-41P (TOC @ Surface)
	200	16.0	1.12	4.75	Tail: Class C + 0.13% C-20
7-5/8" 11,300°	340	11.5	2.72	15.70	Lead: Class C + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 4,600')
	210	16.0	1.12	4.74	Tail: Class H + 94.0 pps D909 + 0.25% D065 + 0.30% D167 + 0.02% D208 + 0.15% D800
5-1/2" 22,314'	950	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 @ 10,800')

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 (10,000-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. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

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

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 10,000/250 psig and the annular preventer to 5,000/250 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 10,000/250 psig and the annular preventer to 5000/250 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	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,150'	Fresh - Gel	8.6-8.8	28-34	N/c
1,150' – 5,100'	Brine	10.0-10.2	28-34	N/c
5,100' – 11,300'	Oil Base	8.7-9.4	58-68	N/c - 6
11,300' - 22,314'	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) H<sub>2</sub>S 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 8,905 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 7,300' 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. 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 1000 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 13-3/8" surface casing, a 13-5/8" 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 Stream Flo FBD100 Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

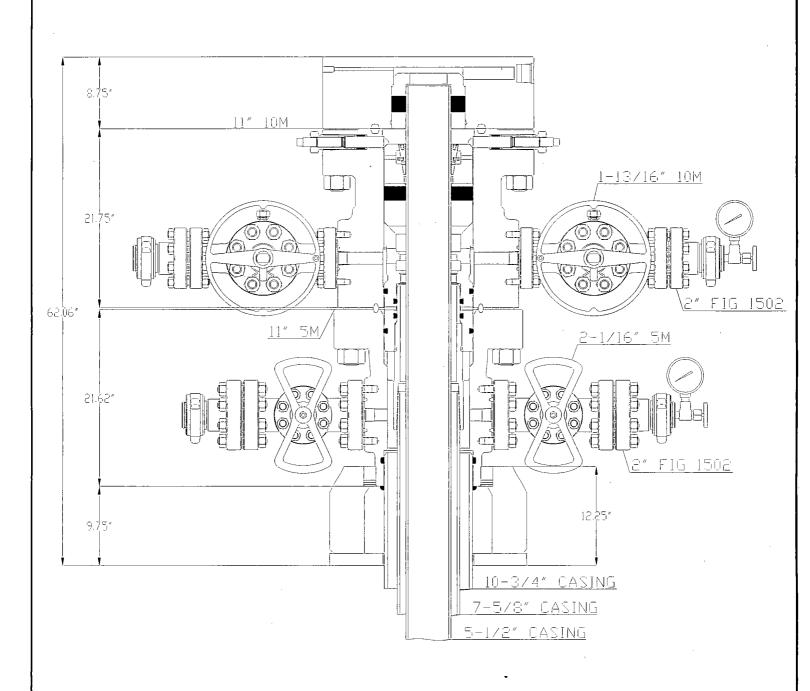
The wellhead will be installed by a third party welder while being monitored by WH vendor's representative.

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.

Exhibit 4 **EOG** Resources Well Site Diagram Stonewall 28 Fed Com #708H Flare Stack (150') **Mud Cleaners** -Vent line (Buried) catch tank catch tank Mud Gas Seperator **Choke Manifold** 400' Rig Secondary Wind Direction Indicators V-door Briefing Area Alarms Caution / Danger Signs Route of Secondary Egress Access Road Primary Briefing Personnel Housing **Toolpusher Housing** Co. Man Housing Area



#CONCEPT OUDTE DRAWING #DIMENSIONS ARE APPROXIMATE

EDG RESDURCES

10-3/4" X 7-5/8" X 5-1/2" FBD-100 WELLHEAD SYSTEM QUOTE: HOU - 102101

[WN	BAY	2/22/17
CHK		_
APP		
	ВҮ	DATE



DRAWING NO WH-16618

## 10,000 PSI BOP Annular Variance Request

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

#### 1. Component and Preventer Compatibility Tables

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

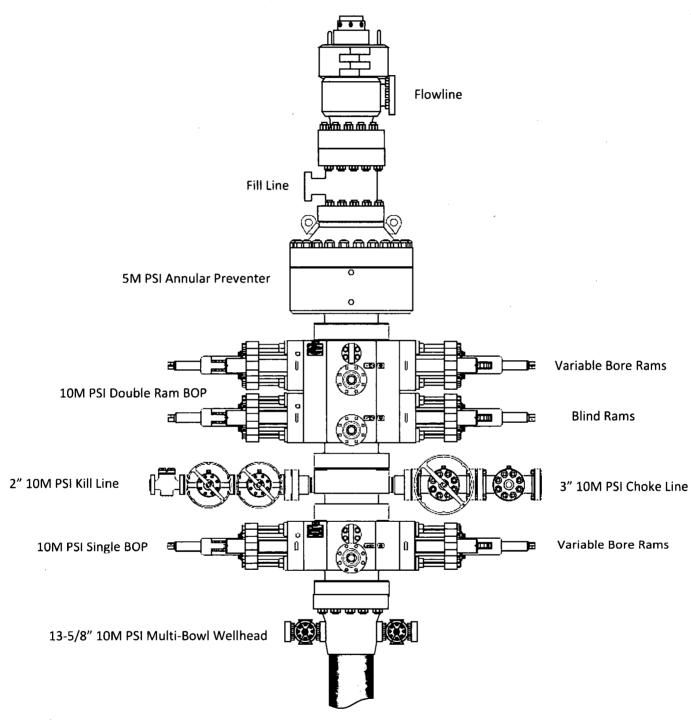
12-1/4" Intermediate Hole Section 10M psi requirement						
Component	OD	<b>Primary Preventer</b>	RWP	Alternate Preventer(s)	RWP	
Drillpipe	5.000" or	Annular	5M	Upper 3.5 - 5.5" VBR	10M	
	4.500"			Lower 3.5 - 5.5" VBR	10M	
HWDP	5.000" or	Annular	5M	Upper 3.5 - 5.5" VBR	10M	
	4.500"			Lower 3.5 - 5.5"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

8-3/4" Intermediate Hole Section 10M psi requirement						
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP	
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M	
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M	
Jars	6.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M	
DCs and MWD tools	6.500" - 8.000"	Annular	5M	-	-	
Mud Motor	6.750" - 8.000"	Annular	5M	-	-	
2 <sup>nd</sup> Intermediate casing	7.625"	Annular	5M	-	-	
Open-hole	-	Blind Rams	10M	-	-	

6-3/4" Production Hole Section  10M psi requirement							
Component	OD	<b>Primary Preventer</b>	RWP	Alternate Preventer(s)	RWP		
<b>Drillpipe</b>	4.500"	Annular 6	5M	Upper 3.5 - 5.5" VBR	10M		
The Mark Street		$\mathcal{Z}^{(n)} = \mathcal{Z}^{(n)} + \mathcal{Z}^{(n)} + \mathcal{Z}^{(n)} + \mathcal{Z}^{(n)} + \mathcal{Z}^{(n)}$	T IEN	Lower 3.5 - 5.5" VBR	10M		
HWDP A A A	4.500"	Annular 🗀 🖎	5M	Upper 3.5 - 5.5" VBR	10M		
			12 21 <u>5</u>	Lower 3.5 - 5.5" VBR	10M		
DCs and MWD tools	4.750" - 5.500"	Annular	5M	Upper 3.5 - 5.5" VBR	10M		
				Lower 3.5 - 5.5" VBR	10M		
Mud Motor	4.750" - 5.500"	Annular	5M	Upper 3.5 - 5.5" VBR	,10M		
			n. P	Lower 3.5 - 5.5" VBR	10M		
Mud Motor	5.500" - 5.750"	Annular	5M		1. 8 A. V.		
Production casing	5.500″	Annular	5M	Upper 3.5 - 5.5" VBR	.10M		
		and the state of t		Lower 3.5 - 5.5" VBR	10M		
Open-hole		Blind Rams	10M				

VBR = Variable Bore Ram

## EOG Resources 13-5/8" 10M PSI BOP Stack



#### 2. Well Control Procedures

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

#### General Procedure While Drilling

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

#### General Procedure While Tripping

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

#### General Procedure While Running Production Casing

- 1. Sound alarm (alert crew)
- 2. Stab crossover and full opening safety valve and close
- 3. Space out string

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

#### General Procedure With No Pipe In Hole (Open Hole)

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

#### General Procedures While Pulling BHA thru Stack

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

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



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

SUPO Data Report
05/23/2018

**APD ID:** 10400026406

Well Type: OIL WELL

Submission Date: 01/30/2018

Highlighted data reflects the most

Operator Name: EOG RESOURCES INCORPORATED

Well Number: 708H

recent changes

Well Name: STONEWALL 28 FED COM

Well Work Type: Drill

**Show Final Text** 

# Section 1 - Existing Roads

Will existing roads be used? YES

**Existing Road Map:** 

STONEWALL28FC708H\_vicinity\_20180130153450.pdf

**Existing Road Purpose: ACCESS, FLUID TRANSPORT** 

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

**Existing Road Improvement Description:** 

**Existing Road Improvement Attachment:** 

#### Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Stonewall28FC\_infrastructure\_20180130153529.pdf STONEWALL28FC708H\_padsite\_20180130153529.pdf STONEWALL28FC708H\_wellsite\_20180130153530.pdf

New road type: RESOURCE

Length: 1833

Feet

Width (ft.): 24

Max slope (%): 2

Max grade (%): 20

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 24

**New road access erosion control:** Newly constructed or reconstructed roads will be constructed as outlined in the BLM "Gold Book" and to meet the standards of the anticipated traffic flow and all anticipated weather requirements as needed. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well-constructed and safe road. We plan to grade and water twice a year.

New road access plan or profile prepared? NO

Well Name: STONEWALL 28 FED COM

Well Number: 708H

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: 6" of Compacted Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

**Onsite topsoil removal process:** An adequate amount of topsoil/root zone will be stripped by dozer from the proposed well location and stockpiled along the side of the welllocation as depicted on the well site diagram / survey plat.

Access other construction information:

Access miscellaneous information:

Number of access turnouts:

Access turnout map:

#### **Drainage Control**

New road drainage crossing: OTHER

**Drainage Control comments:** No drainage crossings

Road Drainage Control Structures (DCS) description: N/A

Road Drainage Control Structures (DCS) attachment:

#### **Access Additional Attachments**

Additional Attachment(s):

#### **Section 3 - Location of Existing Wells**

**Existing Wells Map?** YES

Attach Well map:

STONEWALL28FC708H\_radius\_20180130153542.pdf

**Existing Wells description:** 

# Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Stonewall 28 Fed Com central tank battery is located in the NEW/4 of section 28-24S-

34E

**Production Facilities map:** 

Well Name: STONEWALL 28 FED COM

Well Number: 708H

Stonewall28FC infrastructure 20180130153554.pdf

#### Section 5 - Location and Types of Water Supply

#### **Water Source Table**

Water source use type: OTHER

Water source type: RECYCLED

Describe type:

Source latitude:

Source longitude:

Source datum:

Water source permit type: WATER RIGHT

Source land ownership: STATE

Water source transport method: PIPELINE, TRUCKING

Source transportation land ownership: STATE

Water source volume (barrels): 720000

Source volume (acre-feet): 92.80303

Source volume (gal): 30240000

Water source and transportation map:

Stonewall 28 FC Caliche and Water Map 20180130153707.pdf

Water source comments:

New water well? NO

#### **New Water Well Info**

Well latitude:

Well Longitude:

Well datum:

Well target aquifer:

Est. depth to top of aquifer(ft):

Est thickness of aquifer:

Aguifer comments:

Aquifer documentation:

Well depth (ft):

Well casing type:

Well casing outside diameter (in.):

Well casing inside diameter (in.):

New water well casing?

Used casing source:

**Drilling method:** 

Drill material:

**Grout material:** 

Grout depth:

Casing length (ft.):

Casing top depth (ft.):

Well Production type:

**Completion Method:** 

Water well additional information:

Well Name: STONEWALL 28 FED COM

Well Number: 708H

State appropriation permit:

Additional information attachment:

#### **Section 6 - Construction Materials**

Construction Materials description: Caliche utilized for the drilling pad will be obtained either from an existing approved mineral pit, or by benching into a hill, which will allow the pad to be level with existing caliche from the cut, or extracted by "Flipping" the well location. A mineral material permit will be obtained from BLM prior to excavating any caliche on Federal Lands. Amount will vary for each pad.

**Construction Materials source location attachment:** 

Stonewall\_28\_FC\_Caliche\_and\_Water\_Map\_20180130153722.pdf

#### Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drill fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly. Human waste and grey water will be properly contained of and disposed of properly. After drilling and completion operations; trash, chemicals, salts, frac sand, and other waste material will be removed and disposed of properly at a state approved disposal facility.

Amount of waste: 0

barrels

Waste disposal frequency: Daily

Safe containment description: Steel Tanks

Safe containment attachment:

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

**FACILITY** 

Disposal type description:

Disposal location description: Trucked to NMOCD approved disposal facility

#### Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.)

Reserve pit width (ft.)

Reserve pit depth (ft.)

Reserve pit volume (cu. yd.)

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

Reserve pit liner

Reserve pit liner specifications and installation description

#### **Cuttings Area**

Well Name: STONEWALL 28 FED COM

Well Number: 708H

**Cuttings Area being used? NO** 

Are you storing cuttings on location? YES

Description of cuttings location Closed Loop System. Drill cuttings will be disposed of into steel tanks and taken to an NMOCD approved disposal facility.

Cuttings area length (ft.)

Cuttings area width (ft.)

Cuttings area depth (ft.)

Cuttings area volume (cu. yd.)

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

WCuttings area liner

Cuttings area liner specifications and installation description

# **Section 8 - Ancillary Facilities**

Are you requesting any Ancillary Facilities?: NO

**Ancillary Facilities attachment:** 

#### Comments:

#### Section 9 - Well Site Layout

#### Well Site Layout Diagram:

Stonewall\_28\_Fed\_Com\_708H\_Rig\_Layout\_20180130153400.pdf

STONEWALL28FC708H\_padsite\_20180130153746.pdf

STONEWALL28FC708H\_wellsite\_20180130153746.pdf Comments: Wellsite, Padsite, Rig Layout

# **Section 10 - Plans for Surface Reclamation**

Type of disturbance: New Surface Disturbance Multiple Well Pad Name: STONEWALL 28 FED COM

Multiple Well Pad Number: 707H/708H/709H

# Recontouring attachment:

STONEWALL28FC708H\_reclamation\_20180130153759.pdf

Drainage/Erosion control construction: Proper erosion control methods will be used on the area to control erosion, runoff, and siltation of the surrounding area.

Drainage/Erosion control reclamation: The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

Well Name: STONEWALL 28 FED COM Well Number: 708H

Well pad proposed disturbance

(acres): 4.46281

Road proposed disturbance (acres):

1.009917

Powerline proposed disturbance

(acres): 0

Pipeline proposed disturbance

(acres): 1.52663

Other proposed disturbance (acres): 0 Other interim reclamation (acres): 0

Total proposed disturbance: 6.999357 Total interim reclamation: 1.961892

Well pad interim reclamation (acres): Well pad long term disturbance

1.35124

Road interim reclamation (acres): 0

Powerline interim reclamation (acres):

Pipeline interim reclamation (acres):

0.610652

(acres): 3,11157

Road long term disturbance (acres):

1.009917

Powerline long term disturbance

(acres): 0

Pipeline long term disturbance

(acres): 0.915978

Other long term disturbance (acres): 0

Total long term disturbance: 5.037465

Disturbance Comments: All Interim and Final reclamation is planned to be completed within 6 months. Interim within 6 months of completion and final within 6 months of abandonment plugging. Dual pad operations may alter timing. Reconstruction method: In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads. Areas planned for interim reclamation will be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

Topsoil redistribution: Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts and fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites. Soil treatment: Re-seed according to BLM standards. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.

Existing Vegetation at the well pad: Grass, forbs, and small woody vegetation, such as mesquite will be excavated as the topsoil is removed. Large woody vegetation will be stripped and stored separately and respreads evenly on the site following topsoil respreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils.

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

**Existing Vegetation Community at the road attachment:** 

Existing Vegetation Community at the pipeline: All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

**Existing Vegetation Community at the pipeline attachment:** 

Existing Vegetation Community at other disturbances: All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

**Existing Vegetation Community at other disturbances attachment:** 

Well Name: STONEWALL 2	8 FED COM	Well Number: 708H
Non native seed used? NO		
Non native seed description Seedling transplant descrip		
Will seedlings be transplant		
Tim Joedings be transplant	ca for time project. No	
Seedling transplant descrip	tion attachment:	
Will seed be harvested for u	se in site reclamation?	NO
Seed harvest description:		
Seed harvest description at	tachment:	
Seed Managemen	nt .	
Seed Table		
Seed type:		Seed source:
Seed name:		
Source name:		Source address:
Source phone:		
Seed cultivar:		
Seed use location:		
PLS pounds per acre:		Proposed seeding season:
Seed S	ummary	Total pounds/Acre:
Seed Type	Pounds/Acre	j .
Seed reclamation attachmen	nt:	
Operator Contact/	Responsible Offic	ial Contact Info
First Name: Stan		Last Name: Wagner
Phone: (432)686-3689		Email: stan_wagner@eogresources.com
Seedbed prep:	•	
Seed BMP:		
Seed method:		

Existing invasive species? NO

Well Name: STONEWALL 28 FED COM Well Number: 708H

Existing invasive species treatment description:

**Existing invasive species treatment attachment:** 

**Weed treatment plan description:** All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, erosion is controlled, and free of noxious weeds. Weeds will be treated if found. **Weed treatment plan attachment:** 

**Monitoring plan description:** Reclamation will be completed within 6 months of well plugging. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, erosion is controlled, and free of noxious weeds.

Monitoring plan attachment:

Success standards: N/A

Pit closure description: NA

Pit closure attachment:

# Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

**BIA Local Office:** 

**BOR Local Office:** 

**COE Local Office:** 

**DOD Local Office:** 

**NPS Local Office:** 

State Local Office:

Military Local Office:

**USFWS Local Office:** 

Other Local Office:

**USFS** Region:

USFS Forest/Grassland:

**USFS Ranger District:** 

Well Name: STONEWALL 28 FED COM

Well Number: 708H

Fee Owner: Bert Madera

Fee Owner Address:

Phone: (575)631-4444

Email:

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: Agreement

**Surface Access Agreement Need description:** 

**Surface Access Bond BLM or Forest Service:** 

**BLM Surface Access Bond number:** 

**USFS Surface access bond number:** 

# **Section 12 - Other Information**

Right of Way needed? NO

Use APD as ROW?

ROW Type(s):

# **ROW Applications**

SUPO Additional Information: OnSite meeting conducted 11/14/17

Use a previously conducted onsite? NO

**Previous Onsite information:** 

# **Other SUPO Attachment**

Stonewall28FC\_GCP\_20180130154011.pdf STONEWALL28FC708H\_location\_20180130154012.pdf SUPO\_Stonewall\_28\_Fed\_Com\_708H\_20180130154039.pdf Processing Plant located in <u>Lea</u> County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

# **Alternatives to Reduce Flaring**

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

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

1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Submit Original

to Appropriate District Office

# GAS CAPTURE PLAN

Date: 01/29/2018		<b>/</b> *	
□ Original	Operator & OGRID No.:	EOG Resources, Inc. 7377	
☐ Amended - Reason for Amendment:			

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

# Well(s)/Production Facility - Name of facility

The

Well Name	API	Wall Location	Footages	Expected	Flared or	Comments
		(UL <b>S</b> TR)		MCF/D	Vented	
Stonewall 28 Fed Com 701H	30-025-***	D-28-24S-34E	200 FNL & 62/1 FWL	±3500	None Planned	APD Submission
Stonewall 28 Fed Com 702H	30-025-***	D-28-24S-34E	200 FNL & 660 FWL	±3500	None Planned	APD Submission
Stonewall 28 Fed Com 703H	30-025-***	D-28-24S-34E	200 FNL & 693 FWL	±3500	None Planned	APD Submission
Stonewall 28 Fed Com 704H	30-025-***	C-28-24S-34E	200 FNL & 1776 FWL	±3500	None Planned	APD Submission
Stonewall 28 Fed Com 705H	30-025-***	C-28-24S/34E	200 FNL & 1799 FWL	±3500	None Planned	APD Submission
Stonewall 28 Fed Com 706H	30-025-***	C-28-24S-34E	200 FNL & 1833 FWL	±3500	None Planned	APD Submission
Stonewall 28 Fed Com 707H	30-025-***	C-28-24S-34E	200 FNL & 2607 FWL	±3500	None Planned	APD Submission
Stonewall 28 Fed Com 708H	30-025-***	B-28-24S-34E	200 FNL & 2634 FEL	±3500	None Planned	APD Submission
Stonewall 28 Fed Com 709H	30-025-***	B/28-24S-34E	200 FNL &\ 2601 FEL	±3500	None Planned	APD Submission
Stonewall 28 Fed Com 710H	30-025-***	B-28-24S-34E	200 FNL & 1683 FEL	±3500	None Planned	APD Submission
Stonewall 28 Fed Com 711H	30-025-***	B-28-24S-34E	200 FNL & 1650 FEL	±3500	None Planned	APD Submission
Stonewall 28 Fed Com 712H	30-025-***	B-28-24S-34E	200 FNL & 1617 FEL	±3500	None Planned	APD Submission
Stonewall 28 Fed Com 71311	30-025-***	A-28-24S-34E	200 FNL & 693 FEL	±3500	None Rlanned	APD Submission
Stonewall 28 Fed Com 714H	30-025-***	A-28-24S-34E	200 FNL & 660 FEL	±3500	None Planned	APD Submission
Stonewall 28 Fed Com 715H	30-025-***	A-28-24S-34E	200 FNL & 627 FEL	±3500	None Planned	APD Submission

#### **Gathering System and Pipeline Notification**

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Enterprise Field Services and will be connected to EOG Resources low/high pressure gathering system located in Eddy/Lea County, New Mexico. EOG Resources provides (periodically) to Enterprise Field Services a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, EOG Resources and Enterprise Field Services have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Enterprise Field Services

SHL: 200 FNL & 2634 FEL, Section: 28, T.24S., R.34E.

BHL: 230 FSL & 2589 FEL, Section: 33, T.24S., R.34E.

surface owner.

#### 12. Other Information

a. An onsite meeting was conducted 11/14/17.

We plan to use 2, 12-inch lay flat hoses to transport water with an option to use 7, 4-inch poly lines for drilling and frac operations.

We are asking for 4 associated pipelines all depicted on the attached Stonewall 28 Fed Com infrastructure sketch:

One 3-inch flex steel gas lift line per well

One 4-inch flex steel production flowline per well

One 24-inch produced water disposal from the CTB to the existing disposal line.

One 20-inch gas sales line from the CTB to the gas sales tie-in.

The well is planned to be produced using gas lift as the artificial lift method.

Produced water will be transported via pipeline to the EOG produced water gathering system.

# 13. Maps and Diagrams

Stonewall 28 FC 708H vicinity - Existing Road

Stonewall 28 FC 708H radius - Wells Within One Mile

Stonewall 28 FC infrastructure - Production Facilities Diagram

Stonewall 28 FC infrastructure - Production Pipeline

Stonewall 28 FC infrastructure - gas lift gas Pipeline

Stonewall 28 FC infrastructure - gas sales Pipeline

Stonewall 28 FC infrastructure - produced water Pipeline

Stonewall 28 FC infrastructure - Electric Line

Stonewall 28 FC caliche and water map - Drilling Water Pipeline

Stonewall 28 FC 708H rig layout - Well Site Diagram

Stonewall 28 FC 708H reclamation - Interim Reclamation



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



#### Section 1 - General

Would you like to address long-term produced water disposal? NO

#### **Section 2 - Lined Pits**

Would you like to utilize Lined Pit PWD options? NO

**Produced Water Disposal (PWD) Location:** 

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

# Section 3 - Unlined Pits

Injection well mineral owner:

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:	
PWD surface owner:	PWD disturbance (acres):
Unlined pit PWD on or off channel:	
Unlined pit PWD discharge volume (bbl/day):	•
Unlined pit specifications:	
Precipitated solids disposal:	
Decribe precipitated solids disposal:	
Precipitated solids disposal permit:	•
Unlined pit precipitated solids disposal schedule:	
Unlined pit precipitated solids disposal schedule attachment:	
Unlined pit reclamation description:	
Unlined pit reclamation attachment:	
Unlined pit Monitor description:	
Unlined pit Monitor attachment:	
Do you propose to put the produced water to beneficial use?	
Beneficial use user confirmation:	
Estimated depth of the shallowest aquifer (feet):	
Does the produced water have an annual average Total Dissolved So that of the existing water to be protected?	lids (TDS) concentration equal to or less than
TDS lab results:	
Geologic and hydrologic evidence:	
State authorization:	
Unlined Produced Water Pit Estimated percolation:	
Unlined pit: do you have a reclamation bond for the pit?	
Is the reclamation bond a rider under the BLM bond?	
Unlined pit bond number:	
Unlined pit bond amount:	
Additional bond information attachment:	
Section 4 - Injection	
Would you like to utilize Injection PWD options? NO	
Produced Water Disposal (PWD) Location:	
PWD surface owner: PWD o	disturbance (acres):
Injection PWD discharge volume (bbl/day):	

Injection well type:	
Injection well number:	Injection well name:
Assigned injection well API number?	Injection well API number:
Injection well new surface disturbance (acres):	
Minerals protection information:	
Mineral protection attachment:	
Underground Injection Control (UIC) Permit?	
UIC Permit attachment:	
Section 5 - Surface Discharge	
Would you like to utilize Surface Discharge PWD options? NO	
Produced Water Disposal (PWD) Location:	
PWD surface owner:	PWD disturbance (acres):
Surface discharge PWD discharge volume (bbl/day):	•
Surface Discharge NPDES Permit?	
Surface Discharge NPDES Permit attachment:	
Surface Discharge site facilities information:	
Surface discharge site facilities map:	
Section 6 - Other	
Would you like to utilize Other PWD options? NO	
Produced Water Disposal (PWD) Location:	
PWD surface owner:	PWD disturbance (acres):
Other PWD discharge volume (bbl/day):	
Other PWD type description:	
Other PWD type attachment:	
Have other regulatory requirements been met?	
Other regulatory requirements attachment:	

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# Bond Info Data Report

# **Bond Information**

Federal/Indian APD: FED

**BLM Bond number: NM2308** 

**BIA Bond number:** 

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

**BLM** reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

**Reclamation bond amount:** 

Reclamation bond rider amount:

Additional reclamation bond information attachment: