Form 3160-3 (March 2012)

UNITED STATES

FORM APPROVED OMB No. 1004-0137 Expires October 31, 2014

5. Lease Serial No. NMNM0359292

DEPARTMENT OF THE BUREAU OF LAND MAN	INTERIO	OR	REO-	17	Lease Serial No. NMNM0359292	2	
APPLICATION FOR PERMIT TO	DRILL	OR	REENTER	D	6. If Indian, Allotee	or Tribe Na	ne
la. Type of work:	ER				7 If Unit or CA Agree	ement, Name	and No.
lb. Type of Well: Oil Well Gas Well Other	√	Sing	le Zone Multip	le Zone	8. Lease Name and V Calm Breeze 2		703H
2. Name of Operator EOG Resources, Inc (7377)					9. API Well No. 4	3647	/
3a. Address P.O. Box 2267 Midland, TX 79702	3b. Phone 432-68		include area code) 9		10. Field and Pool, or F WC-025 G-09 S253		9809 per WC
4. Location of Well (Report location clearly and in accordance with an At surface 2102' FSL & 481' FWL, NWSW (L), Sec 2, 26	S, 33E	uiremeni	ts.*)		11. Sec., T. R. M. or Bl Section 2, T26S, R		y or Area
At proposed prod. zone 230' FSL & 991' FWL, SWSW (M), 14. Distance in miles and direction from nearest town or post office* Approximately +/- 35 miles Southwest from Jal, New Mexican Section 1.					12. County or Parish Lea		3. State
15. Distance from proposed* 230', 330' PP location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 18. Distance from proposed location*	16. No.	ac.	es in lease	240 8	g Unit dedicated to this wac. BIA Bond No. on file	vell	
to nearest well, drilling, completed, applied for, on this lease, ft. 661' from 704H			12409' TVD	NM 230	8		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3318' GL	22. App 01/01/		te date work will star	t*	23. Estimated duration 25 days	1	
	24. A						-
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office). 		e	4. Bond to cover th Item 20 above).5. Operator certification	ne operation	is form: ns unless covered by an ormation and/or plans as		
25. Signature Lan Wagner		ame (P	Printed/Typed) agner			Date 8/17	1/16
Title Regulatory Specialist							
Approved by (Signature)	Na 	Iame (F	Printed/Typed) Cody	Layto	11.	Date 82/2.	2/17
ASSISTANT FIELD MANAGER Application approval does not warrant or certify that the applicant hold					FIELD OFFIC		licantto
conduct operations thereon. Conditions of approval, if any, are attached.		API	PROVAL FO	RTW	O YEARS,		
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cristates any false, fictitious or fraudulent statements or representations as				illfully to m	nake to any départment o	r agency of	the United
(Continued on page 2)				P1	*(Instr	ructions o	on page 2)
Approval Subject & Special Sub	t to Ge Stipulat	neral tions	Requirements Attached	1	Witness Comfo	200 8	

Carlsbad Controlled Water Basin

CONDITIONS OF APPROVAL

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	749'
Top of Salt	1,207
Base of Salt / Top Anhydrite	4,797
Base Anhydrite	5,006'
Lamar	5,006'
Bell Canyon	5,040'
Cherry Canyon	6,082
Brushy Canyon	7,706
Bone Spring Lime	9,206'
1 st Bone Spring Sand	10,145
2 nd Bone Spring Shale	10,399'
2 nd Bone Spring Sand	10,694'
3 rd Bone Spring Carb	11,186'
3 rd Bone Spring Sand	11,775
Wolfcamp	12,240'
TD	12,409°

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

Upper Permian Sands	0-400'	Fresh Water
Cherry Canyon	6,082'	Oil
Brushy Canyon	7,706	Oil
1 st Bone Spring Sand	10,145	Oil
2 nd Bone Spring Shale	10,399'	Oil
2 nd Bone Spring Sand	11,694'	Oil
3 rd Bone Spring Carb	11,186'	Oil
3 rd Bone Spring Sand	11,775	Oil
Wolfcamp	12,240'	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 775' and circulating cement back to surface.

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
14.75"	0 – 775'	10.75"	40.5#	J55	STC	1.125	1.25	1.60
8.75"	0'-11,300'	7.625"	29.7#	HCP-110	FlushMax III	1.125	1.25	1.60
6.75"	0'-10,800'	5.5"	23#	HCP-110	VAM Top HT	1.125	1.25	1.60
6.75"	10,800'-19,904'	5.5"	23#	HCP-110	VAM SG	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.

Cementing Program:

Depth	No. Sacks	Wt.	Yld Ft³/ft	Mix Water	Slurry Description
				Gal/sk	
10-3/4"	325	13.5	1.73	9.13	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25
775'			E		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"	250	14.8	1.38	6.48	Class C + 5% Gypsum + 3% CaCl2
11,300'	2000	14.8	1.38	6.48	Class C + 5% Gypsum + 3% CaCl2
	550	14.4	1.20	4.81	50:50 Class H:Poz + 0.25% CPT20A + 0.40% CPT49 +
3					0.20% CPT35 + 0.80% CPT16A + 0.25% CPT503P
5-1/2"	725	14.1	1.26	5.80	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 +
19,904'					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 (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	Type	Weight (ppg)	Viscosity	Water Loss
0 – 775'	Fresh - Gel	8.6-8.8	28-34	N/c
775' – 11,300'	Brine	8.8-10.0	28-34	N/c
11,300' – 19,904'	Oil Base	10.0-11.5	58-68	3 - 6
Lateral				

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.

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 7420 psig. 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.

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. Prior to running the intermediate casing, the rams will be changed out to accommodate the 7-5/8" casing. The bonnet seals will be tested to 1500 psi. After installing the intermediate casing the casing rams will be removed and replaced with variable bore rams. The remaining BOPE will not be retested after installing the intermediate casing.

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.

Wellhead drawing Attached.

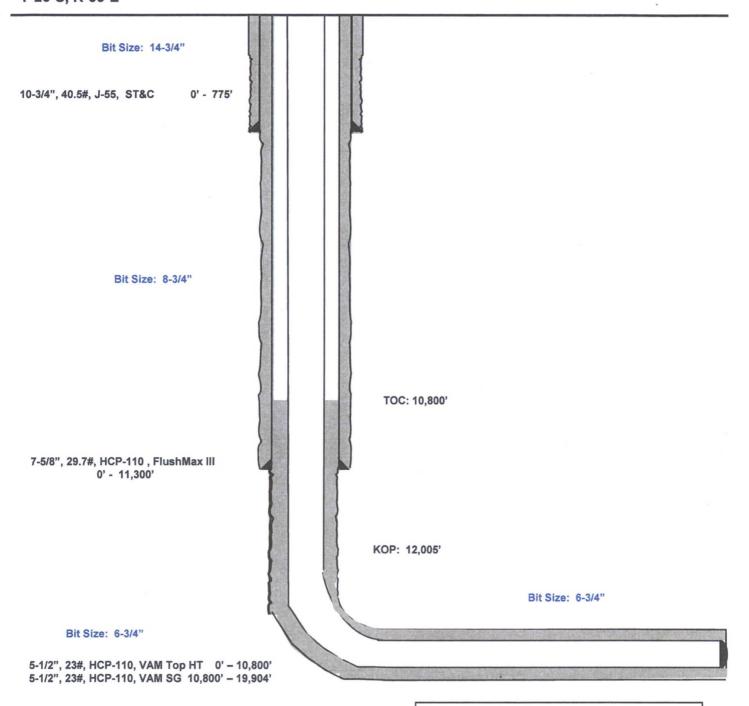
Calm Breeze 2 Fed Com #703H

2102' FSL 481' FWL Section 2 T-26-S, R-33-E

Lea County, New Mexico Proposed Wellbore

API: 30-025-****

KB: 3,343' GL: 3,318'



Lateral: 19,904' MD, 12,409' TVD
Upper Most Perf:
2309' FSL & 991' FWL Sec. 2
Lower Most Perf:
330' FSL & 991' FWL Sec. 11
BH Location: 230' FSL & 991' FWL
Section 11

Section 11 T-26-S, R-33-E

Exhibit 1 EOG Resources 5M BOPE

Rig Floor

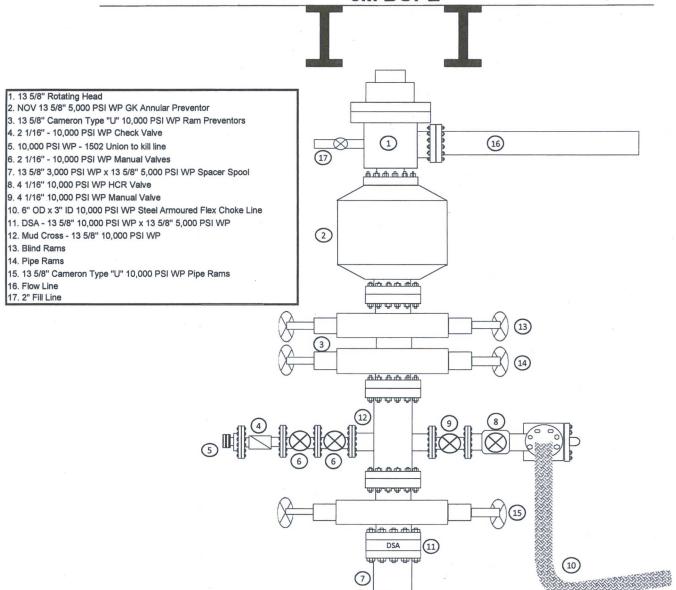
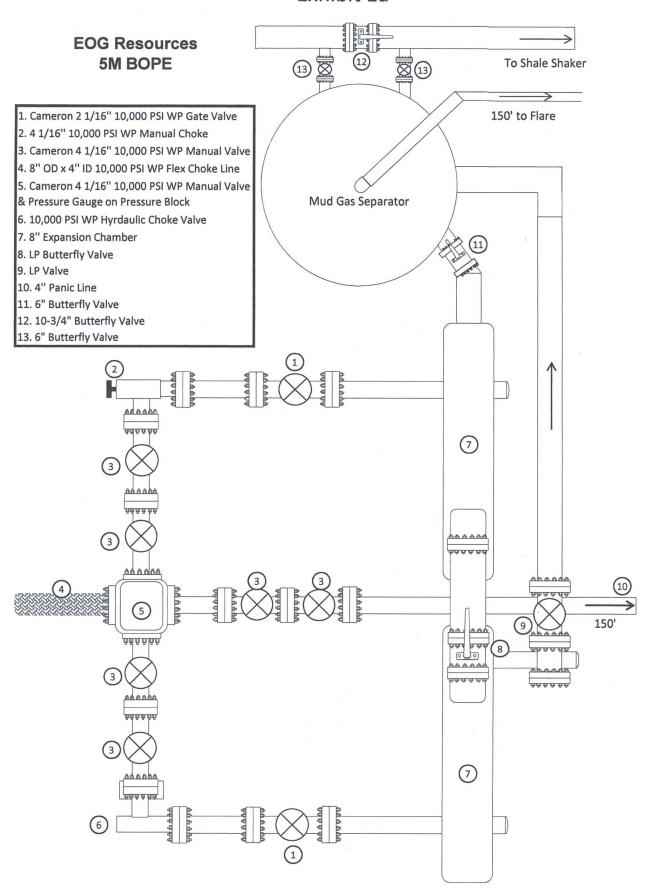


Exhibit 1a



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:				P.O. Numb	er:	
CACTUS				RIG #123		
				Asset # N	110761	
		HOSE SPECIF	FICATIONS			
Туре: С	HOKE LIN	E		Length:	35'	
I.D.	4"	INCHES	O.D.	8"	INCHES	
WORKING PR	ESSURE	TEST PRESSUR	E	BURST PRES	SURE	
10,000	PSI	15,000	PSI		PSI	
		COUP	LINGS			
	Type of End Fitting 4 1/16 10K FLANGE					
Type of Co S	upling: WEDGED	RED BY SE & SPECIA	LTY			
	PROCEDURE					
	ose secomble	v pressure tested w	ith water at ambier	of tamparatura		
		TEST PRESSURE	•	BURST PRESSU		
	1			O PSI		
COMMENTS	:					
S	N#90067	M10761				
		ered with staini				
		fire resistant v				
THE RESERVE OF THE PARTY OF THE	sulation r	sted for 1500 de	grees complete	The residence of the last of t	eyes	
Date: Tested By: BOBBY FINK				Approved: MENDI J	ACKSON	



Internal Hydrostatic Test Graph

Customer: CACTUS

SALES ORDER# 90067

Hose Specifications

Hose Type C&K I.D. 4"

Working Pressure 10000 PSI

Length 35' 0.D.

Burst Pressure Standard Safety Multiplier Applies

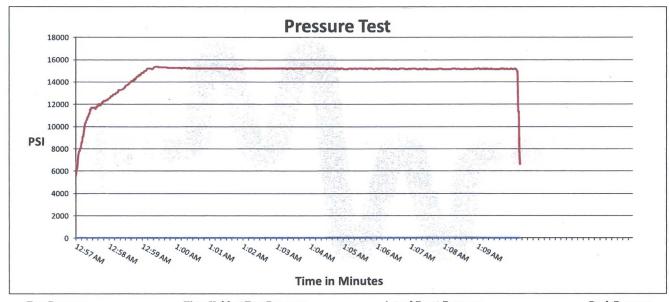
Verification

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

Hose Serial #

Coupling Method Swage Final O.D. 6.68"

Hose Assembly Serial # 90067



Test Pressure 15000 PSI

Time Held at Test Pressure 11 1/4 Minutes

Actual Burst Pressure

Peak Pressure 15439 PSI

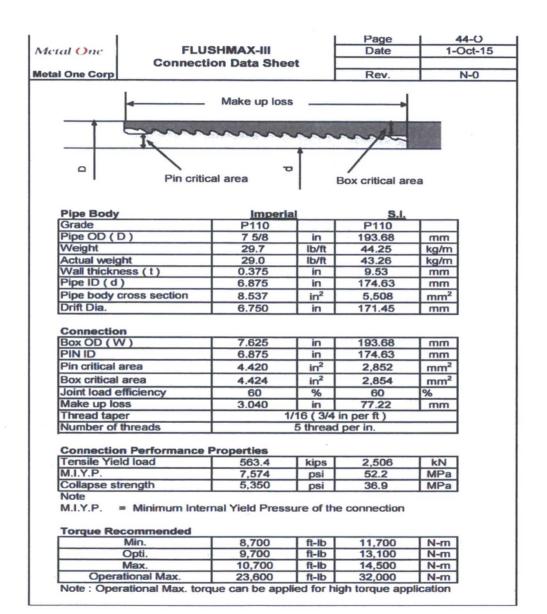
Comments: Hose assembly pressure tested with water at ambient temperature.

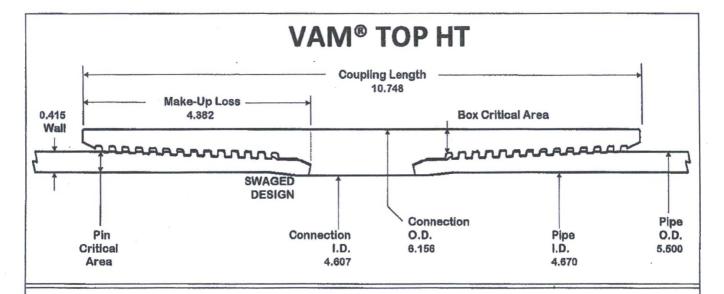
Tested By: Bobby Fink

Approved By: Mendi Jackson

Billy IC

x Mendi Jackson





O.D. 5.500 WEIGHT 23.00

WALL 0.415

GRADE NSSMC P110HC

Connection OD

DRIFT 4.545

6.156 in

30 °/100 ft

PIPE BODY PROPERTIES

Material Grade	NSSMC P110HC
Min. Yield Strength	125 ksi
Min. Tensile Strength	125 ksi

Outside Diameter	5.500 in
Inside Diameter	4.670 In
Nominal Area	6,630 sq.in.

Yield Strength	829	kips
Ultimate Strength	829	kips
Min Internal Yield	16,510	psi
*High Collapse	16,220	psi

Contact: tech.support@vam-usa.com Ref. Drawing: SI-PD 100526 Rev.B

Date:

30-Apr-15

Time:

10:24 AM

CONNECTION PROPERTIES

	01100111
Connection ID	4.607 in
Make up Loss	4.382 in
Coupling Length	10.748 in
Box Critical Area	6.757 sq.in.
%PB Section Area	101.9%
Pin Critical Area	6.630 sq.in.
%PB Section Area	100.0%
Yield Strength	829 klps
Parting Load	829 kips
Min Internal Yield	16,510 psi
*High Collapse	16,220 psi
Wk Compression	663 kips

TORQUE DATA ff-lb

min	opt	max	
13,700	15,200	16,700	

Max. Liner Torque: 20,000 ft-lb

Max Pure Bending



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PIPE PROPERTIES		
Material Grade	VST P110EC	Ax effect
Min. Yield Strength	125 ks	i
Min. Tensile Strength	135 ks	i
Nominal OD	5.500 in	
Nominal ID	4.670 in	
Nominal Area	6.630 sq	i. in
Yield Strength	829 kij	ps
Ultimate Strength	895 ki	ps
Min Internal Yield	16,510 ps	i
*High Collapse	16,220 ps	si

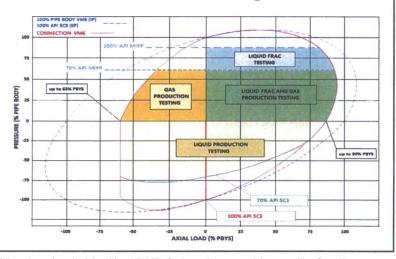
CONNECTION PRO	PERTIES	
Connection OD	5.720	in
Connection ID	4.603	in
Make up Loss	6.503	in
Connection Critical Area	5.967	sq. in
%PB Section Area	90.0%	
Yield Strength	746	kips
Parting Load	805	kips
Min Internal Yield	16,510	psi
*High Collapse	11,350	psi
Working Compression	522	kips
Max. Bending w/ Sealability	40	°/100 ft

DOCUMENTATION		
Ref. Drawing	SI-PD 100835 Rev.A	
Date	11-Aug-14	
Time	1:21 PM	
Email	tech.support@vam-usa.com	

TORQUE VAI	LUES
Min Make Up Torque	9,100 ft-lb
Opt Make Up Torque	11,200 ft-lb
Max Make Up Torque	13,300 ft-lb
Max Torque w/ Sealability	14,500 ft-lb

The single solution for Shale Play needs

VAM® SG brings VAM® premium sealing performance to a semi-flush connection with extremely high Tension performance and increased Torque capacity, validated to the specific Shale drilling requirements, while remaining highly competitive in North American Shale play economics.

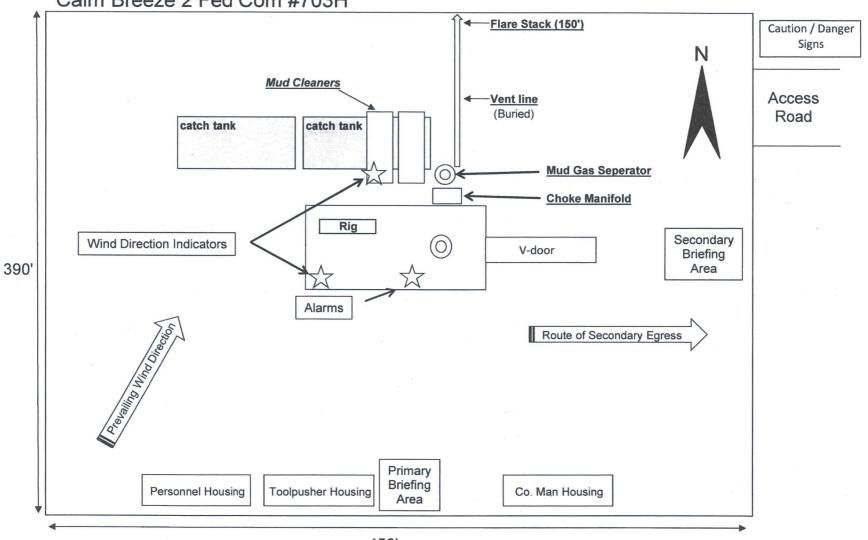




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Exhibit 4
EOG Resources
Calm Breeze 2 Fed Com #703H

Well Site Diagram



OPERATOR CERTIFICATION

I certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal Laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true, and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this 17 day of August, 2016.

Name: Stan Wagner

Position: Regulatory Specialist

Address: P.O. Box 2267, Midland, TX 79702

Telephone: (432) 686-3689

Email: stan wagner@eogresources.com

Field Representative (if not above signatory): James Barwis

Address: P.O. Box 2267, Midland, TX 79702

Telephone: (432) 686-3791 office; (432) 425-1204 cell

Signed Stam Wagner