

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

MIR F  
SURF P

HOBBS OCD  
MAY 31 2018  
RECEIVED

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNMO19452
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator EOG RESOURCES INCORPORATED (7377)		7. If Unit or CA Agreement, Name and No. (321477)
3a. Address 1111 Bagby Sky Lobby2 Houston TX 77002	3b. Phone No. (include area code) (713)651-7000	8. Lease Name and Well No. STONEWALL 28 FED COM 705H
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface NENW / 200 FNL / 1799 FWL / LAT 32.1952491 / LONG -103.4776031 At proposed prod. zone SESW / 230 FSL / 1651 FWL / LAT 32.1674111 / LONG -103.4780557		9. API Well No. 30-025-44870
14. Distance in miles and direction from nearest town or post office* 17 miles		10. Field and Pool, or Exploratory RED HILLS / WC-025 S243336I UPPER
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 200 feet		11. Sec., T. R. M. or Blk. and Survey or Area SEC 28 / T24S / R34E / NMP
16. No. of acres in lease 280	17. Spacing Unit dedicated to this well 320	12. County or Parish LEA
18. Distance from proposed location* to nearest well, drilling, completed, 380 feet applied for, on this lease, ft.	19. Proposed Depth 12216 feet / 22298 feet	13. State NM
20. BLM/BIA Bond No. on file FED: NM2308	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3498 feet	22. Approximate date work will start* 06/01/2018
23. Estimated duration 25 days		

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- |  |   |
|--|---|
| 1. Well plat certified by a registered surveyor.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification   |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM.             |

25. Signature (Electronic Submission)	Name (Printed/Typed) Stan Wagner / Ph: (432)686-3689	Date 01/30/2018
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Title  
Regulatory Specialist

Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Christopher Walls / Ph: (575)234-2234	Date 05/07/2018
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Title  
Petroleum Engineer

Office  
CARLSBAD

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

\*(Instructions on page 2)

**APPROVED WITH CONDITIONS**  
Approval Date: 05/07/2018

KW

D-S

## INSTRUCTIONS

**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.

## **Additional Operator Remarks**

### **Location of Well**

- I. SHL: NENW / 200 FNL / 1799 FWL / TWSP: 24S / RANGE: 34E / SECTION: 28 / LAT: 32.1952491 / LONG: -103.4776031 ( TVD: 0 feet, MD: 0 feet )
- PPP: NESW / 2540 FSL / 1650 FWL / TWSP: 24S / RANGE: 34E / SECTION: 28 / LAT: 32.1883 / LONG: -103.4871 ( TVD: 12216 feet, MD: 14705 feet )
- PPP: NENW / 330 FNL / 1648 FWL / TWSP: 24S / RANGE: 34E / SECTION: 28 / LAT: 32.1948922 / LONG: -103.4780902 ( TVD: 12176 feet, MD: 12295 feet )
- BHL: SESW / 230 FSL / 1651 FWL / TWSP: 24S / RANGE: 34E / SECTION: 33 / LAT: 32.1674111 / LONG: -103.4780557 ( TVD: 12216 feet, MD: 22298 feet )

## **BLM Point of Contact**

Name: Judith Yeager

Title: Legal Instruments Examiner

Phone: 5752345936

Email: [jyeager@blm.gov](mailto:jyeager@blm.gov)

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

(Form 3160-3, page 3)

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

(Form 3160-3, page 4)



**APD ID:** 10400026402

**Submission Date:** 01/30/2018

Highlighted data reflects the most recent changes

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

[Show Final Text](#)

**Well Type:** OIL WELL

**Well Work Type:** Drill

**Section 1 - General**

**APD ID:** 10400026402

**Tie to previous NOS?**

**Submission Date:** 01/30/2018

**BLM Office:** CARLSBAD

**User:** Stan Wagner

**Title:** Regulatory Specialist

**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

**Zip:** 77002

**Operator PO Box:**

**Operator City:** Houston

**State:** TX

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

**Operator Internet Address:**

**Section 2 - Well Information**

**Well in Master Development Plan?** NO

**Master 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:** 705H

**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

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

**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:**

**Number:** 704H/705H/706H

**Well Class:** HORIZONTAL

STONEWALL 28 FED COM

**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:** Stonewall28FC705H\_signed\_C\_102\_20180130104452.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	1799	FWL	24S	34E	28	Aliquot NENW	32.1952491	-103.4776031	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 019452	3498	0	0
KOP Leg #1	43	FNL	1655	FWL	24S	34E	28	Aliquot NENW	32.1956815	-103.4780642	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 019452	-8231	11732	11729
PPP Leg #1	330	FNL	1648	FWL	24S	34E	28	Aliquot NENW	32.1948922	-103.4780902	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 019452	-8678	12295	12176



APD ID: 10400026402

Submission Date: 01/30/2018

Highlighted data reflects the most recent changes

Operator Name: EOG RESOURCES INCORPORATED

Well Name: STONEWALL 28 FED COM

Well Number: 705H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

**Section 1 - Geologic Formations**

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	PERMIAN	3498	0	0	ALLUVIUM	NONE	No
2	RUSTLER	2377	1121	1121	ANHYDRITE	NONE	No
3	TOP OF SALT	2130	1368	1368	SALT	NONE	No
4	BASE OF SALT	-1570	5068	5068	SALT	NONE	No
5	LAMAR	-1838	5336	5336	LIMESTONE	NONE	No
6	BELL CANYON	-1880	5378	5378	SANDSTONE	NATURAL GAS,OIL	Yes
7	CHERRY CANYON	-2813	6311	6311	SANDSTONE	NATURAL GAS,OIL	Yes
8	BRUSHY CANYON	-4306	7804	7804	SANDSTONE	NATURAL GAS,OIL	Yes
9	BONE SPRING LIME	-5668	9166	9166	LIMESTONE	NONE	No
10	BONE SPRING 1ST	-6678	10176	10176	SANDSTONE	NATURAL GAS,OIL	Yes
11	BONE SPRING 2ND	-7158	10656	10656	SANDSTONE	NATURAL GAS,OIL	Yes
12	BONE SPRING 3RD	-8195	11693	11693	SANDSTONE	NATURAL GAS,OIL	No
13	WOLFCAMP	-8607	12105	12105		NATURAL GAS,OIL	Yes

**Section 2 - Blowout Prevention**

Operator Name: EOG RESOURCES INCORPORATED

Well Name: STONEWALL 28 FED COM

Well Number: 705H

Pressure Rating (PSI): 10M

Rating Depth: 12216

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 & 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 waive 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 waive 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\_705H\_10\_M\_Choke\_Manifold\_20180130101604.pdf

Stonewall\_28\_Fed\_Com\_705H\_Co\_Flex\_Hose\_Certification\_20180130101604.PDF

Stonewall\_28\_Fed\_Com\_705H\_Co\_Flex\_Hose\_Test\_Chart\_20180130101605.pdf

BOP Diagram Attachment:

Stonewall\_28\_Fed\_Com\_705H\_10\_M\_BOP\_Diagram\_20180130101621.pdf

Stonewall\_28\_Fed\_Com\_705H\_EOG\_BLM\_10M\_Annular\_Variance\_\_4\_String\_20180130101622.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	3498	2348	1150	J-55	54.5	STC	1.125	1.25	BUOY	1.6	BUOY	1.6
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4000	0	4000	3498	-502	4000	J-55	40	LTC	1.125	1.25	BUOY	1.6	BUOY	1.6
3	INTERMEDIATE	12.25	9.625	NEW	API	N	4000	5100	4000	5100	-502	-1602	1100	HCK-55	40	LTC	1.125	1.25	BUOY	1.6	BUOY	1.6

Operator Name: EOG RESOURCES INCORPORATED

Well Name: STONEWALL 28 FED COM

Well Number: 705H

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
4	PRODUCTI ON	6.75	5.5	NEW	API	N	0	10800	0	10800	3498	-7302	10800	OTHE R	20	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	3498	-7802	11300	HCP -110	29.7	OTHER - FXL	1.12 5	1.25	BUOY	1.6	BUOY	1.6
6	PRODUCTI ON	6.75	5.5	NEW	API	N	10800	22278	10800	12216	-7302	-8718	11478	OTHE R	20	OTHER - VAM SFC	1.12 5	1.25	BUOY	1.6	BUOY	1.6

**Casing Attachments**

**Casing ID:** 1      **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Stonewall\_28\_Fed\_Com\_705H\_BLM\_Plan\_20180130102018.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\_20180130102038.pdf

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

**Casing Attachments**

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**Casing ID:** 3                    **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

See\_previously\_attached\_Drill\_Plan\_20180130102104.pdf

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**Casing ID:** 4                    **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

See\_previously\_attached\_Drill\_Plan\_20180130102132.pdf

Stonewall\_28\_Fed\_Com\_705H\_5.500in\_20.00\_VST\_P110EC\_DWC\_C\_IS\_MS\_20180130102132.pdf

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**Casing ID:** 5                    **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

See\_previously\_attached\_Drill\_Plan\_20180130102146.pdf

Stonewall\_28\_Fed\_Com\_705H\_7.625in\_29.70\_P110HC\_FXL\_20180130102146.pdf

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Operator Name: EOG RESOURCES INCORPORATED

Well Name: STONEWALL 28 FED COM

Well Number: 705H

**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\_20180130102200.pdf

Stonewall\_28\_Fed\_Com\_705H\_5.500in\_20.00\_VST\_P110EC\_VAM\_SFC\_20180130102201.pdf

**Section 4 - Cement**

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

INTERMEDIATE	Lead		0	0	0	0	0	0	0		0
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SURFACE	Lead		0	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		1150	1150	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		0	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		5100	5100	200	1.12	16	224	25	Class C	Tail: Class C + 0.13% C-20

Operator Name: EOG RESOURCES INCORPORATED

Well Name: STONEWALL 28 FED COM

Well Number: 705H

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	2229 9	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 (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1130 0	1221 6	OIL-BASED MUD	10	14							
1150	5100	SALT SATURATED	10	10.2							

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	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:** 8893

**Anticipated Surface Pressure:** 6205.48

**Anticipated Bottom Hole Temperature(F):** 181

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

Stonewall\_28\_Fed\_Com\_705H\_H2S\_Plan\_Summary\_20180130102417.pdf

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

## Section 8 - Other Information

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

Stonewall\_28\_Fed\_Com\_705H\_Planning\_Report\_20180130102449.pdf

Stonewall\_28\_Fed\_Com\_705H\_Wall\_Plot\_20180130102449.pdf

**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

Stonewall\_28\_Fed\_Com\_705H\_Rig\_Layout\_20180130102513.pdf

Stonewall\_28\_Fed\_Com\_705H\_Proposed\_Wellbore\_20180130102513.pdf

Stonewall\_28\_Fed\_Com\_705H\_Wellhead\_Cap\_20180130102514.pdf

**Other Variance attachment:**

Stonewall\_28\_Fed\_Com\_705H\_EOG\_BLM\_10M\_Annular\_Variance\_\_\_4\_String\_20180130102525.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 manufacturer: No**

**M I D W E S T**  
**HOSE AND SPECIALTY INC.**

<b>INTERNAL HYDROSTATIC TEST REPORT</b>		
<b>Customer:</b> CACTUS		<b>P.O. Number:</b> RIG #123 Asset # M10761
<b>HOSE SPECIFICATIONS</b>		
<b>Type:</b> CHOKE LINE		<b>Length:</b> 35'
<b>I.D.</b> 4" INCHES		<b>O.D.</b> 8" INCHES
<b>WORKING PRESSURE</b> 10,000 PSI	<b>TEST PRESSURE</b> 15,000 PSI	<b>BURST PRESSURE</b> PSI
<b>COUPLINGS</b>		
<b>Type of End Fitting</b> 4 1/16 10K FLANGE		
<b>Type of Coupling:</b> SWEDGED		<b>MANUFACTURED BY</b> MIDWEST HOSE & SPECIALTY
<b>PROCEDURE</b>		
<i>Hose assembly pressure tested with water at ambient temperature.</i>		
<b>TIME HELD AT TEST PRESSURE</b> 1 MIN.		<b>ACTUAL BURST PRESSURE:</b> 0 PSI
<b>COMMENTS:</b> SN#90067 M10761 Hose is covered with stainless steel armour cover and wrapped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes		
<b>Date:</b> 6/6/2011	<b>Tested By:</b> BOBBY FINK	<b>Approved:</b> MENDI JACKSON



Midwest Hose & Specialty, Inc.

# Internal Hydrostatic Test Graph

Supplement to Data

Customer: CACTUS

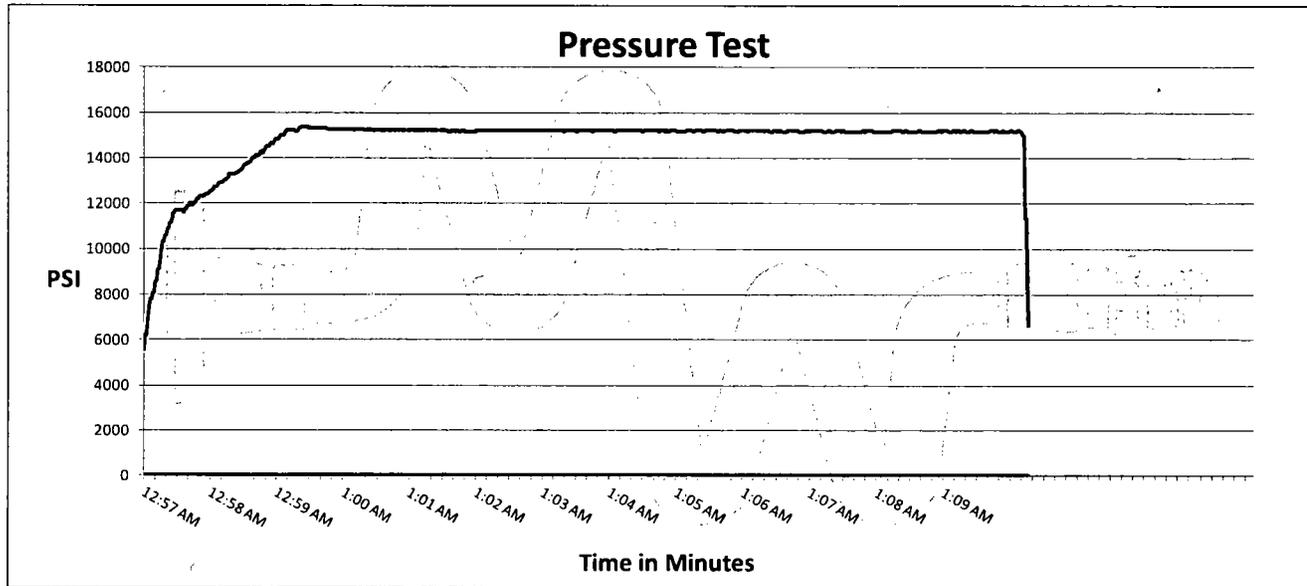
SALES ORDER# 90067

### Hose Specifications

<u>Hose Type</u> C & K	<u>Length</u> 35'
<u>I.D.</u> 4"	<u>O.D.</u> 8"
<u>Working Pressure</u> 10000 PSI	<u>Burst Pressure</u> Standard Safety Multiplier Applies

### Verification

<u>Type of Fitting</u> 4 1/16 10K	<u>Coupling Method</u> Swage
<u>Die Size</u> 6.62"	<u>Final O.D.</u> 6.68"
<u>Hose Serial #</u>	<u>Hose Assembly Serial #</u> 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

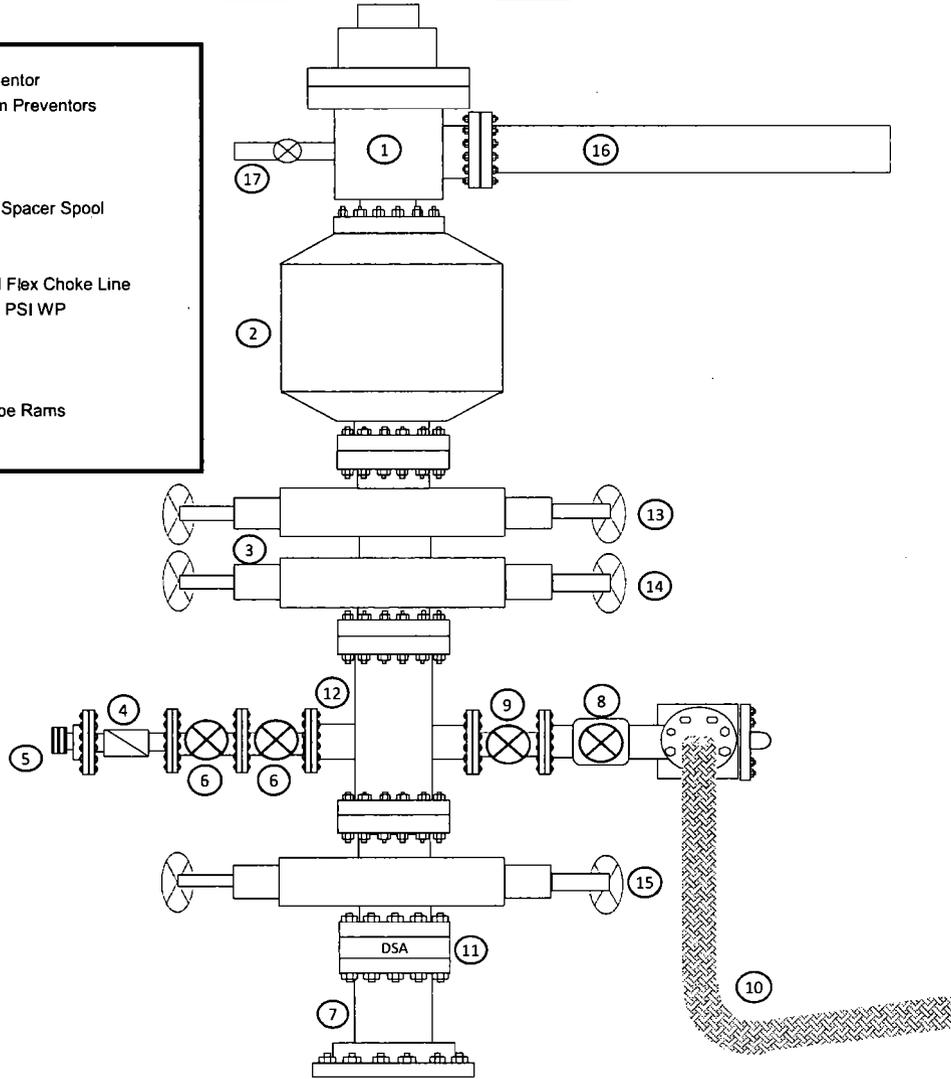
**Approved By:** Mendi Jackson

# Exhibit 1 EOG Resources 10M BOPE

Rig Floor



- |  |
|--|
| 1. 13 5/8" Rotating Head                                       |
| 2. Hydril 13 5/8" 10,000 PSI WP GK Annular Preventor           |
| 3. 13 5/8" Cameron Type "U" 10,000 PSI WP Ram Preventors       |
| 4. 2 1/16" - 10,000 PSI WP Check Valve                         |
| 5. 10,000 PSI WP - 1502 Union to kill line                     |
| 6. 2 1/16" - 10,000 PSI WP Manual Valves                       |
| 7. 13 5/8" 3,000 PSI WP x 13 5/8" 5,000 PSI WP Spacer Spool    |
| 8. 4 1/16" 10,000 PSI WP HCR Valve                             |
| 9. 4 1/16" 10,000 PSI WP Manual Valve                          |
| 10. 6" OD x 3" ID 10,000 PSI WP Steel Armoured Flex Choke Line |
| 11. DSA - 13 5/8" 10,000 PSI WP x 13 5/8" 5,000 PSI WP         |
| 12. Mud Cross - 13 5/8" 10,000 PSI WP                          |
| 13. Blind Rams   |
| 14. Pipe Rams  |
| 15. 13 5/8" Cameron Type "U" 10,000 PSI WP Pipe Rams           |
| 16. Flow Line  |
| 17. 2" Fill Line   |



## 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.

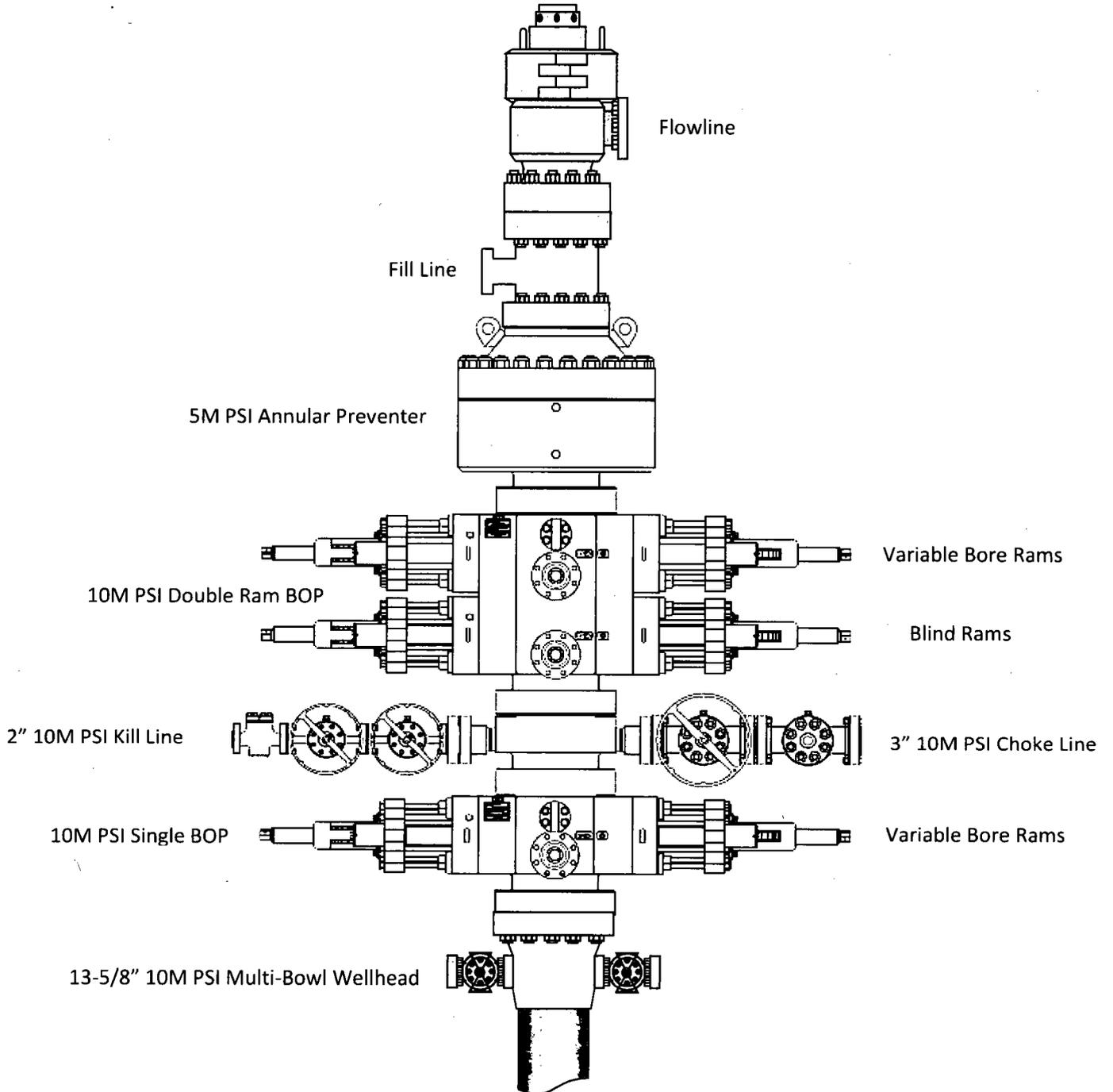
<b>12-1/4" Intermediate Hole Section 10M psi requirement</b>					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Jars	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	-	-

<b>8-3/4" Intermediate Hole Section 10M psi requirement</b>					
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	-	-

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

See previously attached Drill Plan

See previously attached Drill Plan

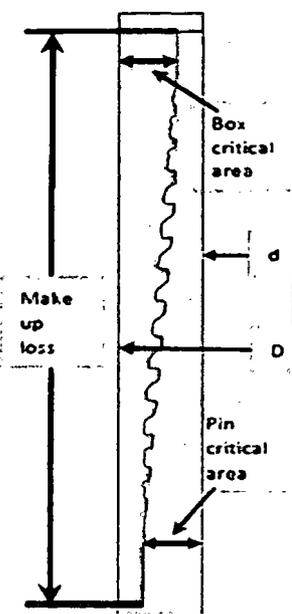
Metal One Corp.  <i>Metal One</i>	<b>MO-FXL</b>  <b>Connection Data Sheet</b>	Page	MCTP
		Date	3-Nov-16
		Rev.	0

**Geometry** Imperial S.I.

MO-FXL

Pipe Body				
Grade	P110HC *1		P110HC *1	
Pipe OD ( D )	7 5/8	in	193.68	mm
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	mm <sup>2</sup>
Drift Dia.	6.750	in	171.45	mm

Connection				
Box OD ( W )	7.625	in	193.68	mm
PIN ID	6.875	in	174.63	mm
Make up Loss	4.219	in	107.16	mm
Box Critical Area	5.714	in <sup>2</sup>	3686	mm <sup>2</sup>
Joint load efficiency	70	%	70	%
Thread Taper	1 / 10 ( 1.2" per ft )			
Number of Threads	5 TPI			



**Performance**

Performance Properties for Pipe Body				
S.M.Y.S. *1	1,067	kips	4,747	kN
M.I.Y.P. *1	10,760	psi	74.21	MPa
Collapse Strength *1	7,360	psi	50.76	MPa

Note S.M.Y.S. = Specified Minimum YIELD Strength of Pipe body  
M.I.Y.P. = Minimum Internal Yield Pressure of Pipe body  
\*1 Based on VSB P110HC (YS=125-140ksi)

Performance Properties for Connection				
Tensile Yield load	747 kips ( 70% of S.M.Y.S. )			
Min. Compression Yield	747 kips ( 70% of S.M.Y.S. )			
Internal Pressure	8,610 psi ( 80% of M.I.Y.P. )			
External Pressure	100% of Collapse Strength			
Max. DLS ( deg. /100ft)	40			

**Recommended Torque**

Min.	15,500	ft-lb	21,000	N-m
Opti.	17,200	ft-lb	23,300	N-m
Max.	18,900	ft-lb	25,600	N-m
Operational Max.	23,600	ft-lb	32,000	N-m

Note : Operational Max. torque can be applied for high torque application

See previously attached Drill Plan

**EOG RESOURCES, INC.**  
**STONEWALL 28 FED COM NO. 705H**

**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	12,216'

**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
1 <sup>st</sup> 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.

**EOG RESOURCES, INC.  
STONEWALL 28 FED COM NO. 705H**

**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'-22,299'	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. ppg	Yld Ft <sup>3</sup> /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" 22,299'	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.

**EOG RESOURCES, INC.**  
**STONEWALL 28 FED COM NO. 705H**

**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' - 22,299' Lateral	Oil Base	10.0-14.0	58-68	3 - 6

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.

**EOG RESOURCES, INC.**  
**STONEWALL 28 FED COM NO. 705H**

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 8,893 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:**

**EOG RESOURCES, INC.**  
**STONEWALL 28 FED COM NO. 705H**

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.



## **EOG Resources - Midland**

**Lea County, NM (NAD 83 NME)**

**Stonewall 28 Fed Com**

**#705H**

**OH**

**Plan: Plan #0.1**

## **Standard Planning Report**

**18 January, 2018**



<b>Database:</b>	EDM 5000.14	<b>Local Co-ordinate Reference:</b>	Well #705H
<b>Company:</b>	EOG Resources - Midland	<b>TVD Reference:</b>	KB = 25' @ 3523.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	KB = 25' @ 3523.0usft
<b>Site:</b>	Stonewall 28 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#705H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1		

<b>Project</b>	Lea County, NM (NAD 83 NME)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Stonewall 28 Fed Com				
<b>Site Position:</b>	<b>Northing:</b>	435,811.00 usft	<b>Latitude:</b>	32° 11' 42.907 N	
<b>From:</b>	Map	<b>Easting:</b>	804,872.00 usft	<b>Longitude:</b>	103° 28' 53.013 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.45 °

<b>Well</b>	#705H					
<b>Well Position</b>	<b>+N/-S</b>	8.0 usft	<b>Northing:</b>	435,819.00 usft	<b>Latitude:</b>	32° 11' 42.894 N
	<b>+E/-W</b>	1,172.0 usft	<b>Easting:</b>	806,044.00 usft	<b>Longitude:</b>	103° 28' 39.374 W
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	3,498.0 usft	

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	1/15/2018	6.84	60.04	47,806.79864024

<b>Design</b>	Plan #0.1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	180.33

<b>Plan Survey Tool Program</b>	<b>Date</b>	1/18/2018			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.0	22,298.6	Plan #0.1 (OH)	MWD	
				MWD - Standard	

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,140.5	1.40	317.45	3,140.5	1.3	-1.2	1.00	1.00	0.00	317.45	
11,732.5	1.40	317.45	11,729.9	156.4	-143.6	0.00	0.00	0.00	0.00	
12,491.2	90.00	179.48	12,216.0	-321.0	-147.3	12.00	11.68	-18.18	-137.96	
22,298.6	90.00	179.48	12,216.0	-10,128.0	-59.0	0.00	0.00	0.00	0.00	0.00 PBHL(SW 28 FC #70)

<b>Database:</b>	EDM 5000.14	<b>Local Co-ordinate Reference:</b>	Well #705H
<b>Company:</b>	EOG Resources - Midland	<b>TVD Reference:</b>	KB = 25' @ 3523.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	KB = 25' @ 3523.0usft
<b>Site:</b>	Stonewall 28 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#705H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
3,100.0	1.00	317.45	3,100.0	0.6	-0.6	-0.6	1.00	1.00	0.00	0.00
3,140.5	1.40	317.45	3,140.5	1.3	-1.2	-1.3	1.00	1.00	0.00	0.00
3,200.0	1.40	317.45	3,200.0	2.3	-2.2	-2.3	0.00	0.00	0.00	0.00
3,300.0	1.40	317.45	3,299.9	4.1	-3.8	-4.1	0.00	0.00	0.00	0.00
3,400.0	1.40	317.45	3,399.9	6.0	-5.5	-5.9	0.00	0.00	0.00	0.00
3,500.0	1.40	317.45	3,499.9	7.8	-7.1	-7.7	0.00	0.00	0.00	0.00
3,600.0	1.40	317.45	3,599.8	9.6	-8.8	-9.5	0.00	0.00	0.00	0.00
3,700.0	1.40	317.45	3,699.8	11.4	-10.4	-11.3	0.00	0.00	0.00	0.00
3,800.0	1.40	317.45	3,799.8	13.2	-12.1	-13.1	0.00	0.00	0.00	0.00
3,900.0	1.40	317.45	3,899.8	15.0	-13.8	-14.9	0.00	0.00	0.00	0.00
4,000.0	1.40	317.45	3,999.7	16.8	-15.4	-16.7	0.00	0.00	0.00	0.00
4,100.0	1.40	317.45	4,099.7	18.6	-17.1	-18.5	0.00	0.00	0.00	0.00
4,200.0	1.40	317.45	4,199.7	20.4	-18.7	-20.3	0.00	0.00	0.00	0.00
4,300.0	1.40	317.45	4,299.6	22.2	-20.4	-22.1	0.00	0.00	0.00	0.00
4,400.0	1.40	317.45	4,399.6	24.0	-22.0	-23.9	0.00	0.00	0.00	0.00
4,500.0	1.40	317.45	4,499.6	25.8	-23.7	-25.7	0.00	0.00	0.00	0.00
4,600.0	1.40	317.45	4,599.5	27.6	-25.4	-27.5	0.00	0.00	0.00	0.00
4,700.0	1.40	317.45	4,699.5	29.4	-27.0	-29.3	0.00	0.00	0.00	0.00
4,800.0	1.40	317.45	4,799.5	31.2	-28.7	-31.1	0.00	0.00	0.00	0.00
4,900.0	1.40	317.45	4,899.5	33.0	-30.3	-32.9	0.00	0.00	0.00	0.00
5,000.0	1.40	317.45	4,999.4	34.9	-32.0	-34.7	0.00	0.00	0.00	0.00
5,100.0	1.40	317.45	5,099.4	36.7	-33.7	-36.5	0.00	0.00	0.00	0.00
5,200.0	1.40	317.45	5,199.4	38.5	-35.3	-38.3	0.00	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.14	<b>Local Co-ordinate Reference:</b>	Well #705H
<b>Company:</b>	EOG Resources - Midland	<b>TVD Reference:</b>	KB = 25' @ 3523.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	KB = 25' @ 3523.0usft
<b>Site:</b>	Stonewall 28 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#705H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1		

**Planned Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	1.40	317.45	5,299.3	40.3	-37.0	-40.1	0.00	0.00	0.00
5,400.0	1.40	317.45	5,399.3	42.1	-38.6	-41.8	0.00	0.00	0.00
5,500.0	1.40	317.45	5,499.3	43.9	-40.3	-43.6	0.00	0.00	0.00
5,600.0	1.40	317.45	5,599.2	45.7	-41.9	-45.4	0.00	0.00	0.00
5,700.0	1.40	317.45	5,699.2	47.5	-43.6	-47.2	0.00	0.00	0.00
5,800.0	1.40	317.45	5,799.2	49.3	-45.3	-49.0	0.00	0.00	0.00
5,900.0	1.40	317.45	5,899.2	51.1	-46.9	-50.8	0.00	0.00	0.00
6,000.0	1.40	317.45	5,999.1	52.9	-48.6	-52.6	0.00	0.00	0.00
6,100.0	1.40	317.45	6,099.1	54.7	-50.2	-54.4	0.00	0.00	0.00
6,200.0	1.40	317.45	6,199.1	56.5	-51.9	-56.2	0.00	0.00	0.00
6,300.0	1.40	317.45	6,299.0	58.3	-53.5	-58.0	0.00	0.00	0.00
6,400.0	1.40	317.45	6,399.0	60.1	-55.2	-59.8	0.00	0.00	0.00
6,500.0	1.40	317.45	6,499.0	61.9	-56.9	-61.6	0.00	0.00	0.00
6,600.0	1.40	317.45	6,598.9	63.7	-58.5	-63.4	0.00	0.00	0.00
6,700.0	1.40	317.45	6,698.9	65.6	-60.2	-65.2	0.00	0.00	0.00
6,800.0	1.40	317.45	6,798.9	67.4	-61.8	-67.0	0.00	0.00	0.00
6,900.0	1.40	317.45	6,898.9	69.2	-63.5	-68.8	0.00	0.00	0.00
7,000.0	1.40	317.45	6,998.8	71.0	-65.1	-70.6	0.00	0.00	0.00
7,100.0	1.40	317.45	7,098.8	72.8	-66.8	-72.4	0.00	0.00	0.00
7,200.0	1.40	317.45	7,198.8	74.6	-68.5	-74.2	0.00	0.00	0.00
7,300.0	1.40	317.45	7,298.7	76.4	-70.1	-76.0	0.00	0.00	0.00
7,400.0	1.40	317.45	7,398.7	78.2	-71.8	-77.8	0.00	0.00	0.00
7,500.0	1.40	317.45	7,498.7	80.0	-73.4	-79.6	0.00	0.00	0.00
7,600.0	1.40	317.45	7,598.6	81.8	-75.1	-81.4	0.00	0.00	0.00
7,700.0	1.40	317.45	7,698.6	83.6	-76.8	-83.2	0.00	0.00	0.00
7,800.0	1.40	317.45	7,798.6	85.4	-78.4	-85.0	0.00	0.00	0.00
7,900.0	1.40	317.45	7,898.6	87.2	-80.1	-86.8	0.00	0.00	0.00
8,000.0	1.40	317.45	7,998.5	89.0	-81.7	-88.6	0.00	0.00	0.00
8,100.0	1.40	317.45	8,098.5	90.8	-83.4	-90.4	0.00	0.00	0.00
8,200.0	1.40	317.45	8,198.5	92.6	-85.0	-92.1	0.00	0.00	0.00
8,300.0	1.40	317.45	8,298.4	94.4	-86.7	-93.9	0.00	0.00	0.00
8,400.0	1.40	317.45	8,398.4	96.3	-88.4	-95.7	0.00	0.00	0.00
8,500.0	1.40	317.45	8,498.4	98.1	-90.0	-97.5	0.00	0.00	0.00
8,600.0	1.40	317.45	8,598.3	99.9	-91.7	-99.3	0.00	0.00	0.00
8,700.0	1.40	317.45	8,698.3	101.7	-93.3	-101.1	0.00	0.00	0.00
8,800.0	1.40	317.45	8,798.3	103.5	-95.0	-102.9	0.00	0.00	0.00
8,900.0	1.40	317.45	8,898.3	105.3	-96.6	-104.7	0.00	0.00	0.00
9,000.0	1.40	317.45	8,998.2	107.1	-98.3	-106.5	0.00	0.00	0.00
9,100.0	1.40	317.45	9,098.2	108.9	-100.0	-108.3	0.00	0.00	0.00
9,200.0	1.40	317.45	9,198.2	110.7	-101.6	-110.1	0.00	0.00	0.00
9,300.0	1.40	317.45	9,298.1	112.5	-103.3	-111.9	0.00	0.00	0.00
9,400.0	1.40	317.45	9,398.1	114.3	-104.9	-113.7	0.00	0.00	0.00
9,500.0	1.40	317.45	9,498.1	116.1	-106.6	-115.5	0.00	0.00	0.00
9,600.0	1.40	317.45	9,598.0	117.9	-108.3	-117.3	0.00	0.00	0.00
9,700.0	1.40	317.45	9,698.0	119.7	-109.9	-119.1	0.00	0.00	0.00
9,800.0	1.40	317.45	9,798.0	121.5	-111.6	-120.9	0.00	0.00	0.00
9,900.0	1.40	317.45	9,898.0	123.3	-113.2	-122.7	0.00	0.00	0.00
10,000.0	1.40	317.45	9,997.9	125.2	-114.9	-124.5	0.00	0.00	0.00
10,100.0	1.40	317.45	10,097.9	127.0	-116.5	-126.3	0.00	0.00	0.00
10,200.0	1.40	317.45	10,197.9	128.8	-118.2	-128.1	0.00	0.00	0.00
10,300.0	1.40	317.45	10,297.8	130.6	-119.9	-129.9	0.00	0.00	0.00
10,400.0	1.40	317.45	10,397.8	132.4	-121.5	-131.7	0.00	0.00	0.00
10,500.0	1.40	317.45	10,497.8	134.2	-123.2	-133.5	0.00	0.00	0.00
10,600.0	1.40	317.45	10,597.7	136.0	-124.8	-135.3	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.14	<b>Local Co-ordinate Reference:</b>	Well #705H
<b>Company:</b>	EOG Resources - Midland	<b>TVD Reference:</b>	KB = 25' @ 3523.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	KB = 25' @ 3523.0usft
<b>Site:</b>	Stonewall 28 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#705H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,700.0	1.40	317.45	10,697.7	137.8	-126.5	-137.1	0.00	0.00	0.00	
10,800.0	1.40	317.45	10,797.7	139.6	-128.1	-138.9	0.00	0.00	0.00	
10,900.0	1.40	317.45	10,897.7	141.4	-129.8	-140.6	0.00	0.00	0.00	
11,000.0	1.40	317.45	10,997.6	143.2	-131.5	-142.4	0.00	0.00	0.00	
11,100.0	1.40	317.45	11,097.6	145.0	-133.1	-144.2	0.00	0.00	0.00	
11,200.0	1.40	317.45	11,197.6	146.8	-134.8	-146.0	0.00	0.00	0.00	
11,300.0	1.40	317.45	11,297.5	148.6	-136.4	-147.8	0.00	0.00	0.00	
11,400.0	1.40	317.45	11,397.5	150.4	-138.1	-149.6	0.00	0.00	0.00	
11,500.0	1.40	317.45	11,497.5	152.2	-139.8	-151.4	0.00	0.00	0.00	
11,600.0	1.40	317.45	11,597.4	154.0	-141.4	-153.2	0.00	0.00	0.00	
11,700.0	1.40	317.45	11,697.4	155.9	-143.1	-155.0	0.00	0.00	0.00	
11,732.5	1.40	317.45	11,729.9	156.4	-143.6	-155.6	0.00	0.00	0.00	
11,750.0	1.41	221.17	11,747.4	156.4	-143.9	-155.6	12.00	0.06	-550.28	
11,775.0	4.16	192.52	11,772.4	155.3	-144.3	-154.5	12.00	11.00	-114.59	
11,800.0	7.12	187.04	11,797.2	152.9	-144.7	-152.0	12.00	11.82	-21.92	
11,825.0	10.10	184.77	11,822.0	149.2	-145.1	-148.3	12.00	11.93	-9.06	
11,850.0	13.09	183.53	11,846.4	144.2	-145.4	-143.3	12.00	11.96	-4.96	
11,875.0	16.08	182.75	11,870.6	137.9	-145.7	-137.0	12.00	11.97	-3.14	
11,900.0	19.08	182.21	11,894.5	130.3	-146.1	-129.5	12.00	11.98	-2.17	
11,925.0	22.08	181.80	11,917.9	121.6	-146.4	-120.7	12.00	11.99	-1.60	
11,950.0	25.07	181.50	11,940.8	111.6	-146.7	-110.7	12.00	11.99	-1.24	
11,975.0	28.07	181.25	11,963.1	100.4	-146.9	-99.5	12.00	11.99	-0.99	
12,000.0	31.07	181.05	11,984.9	88.0	-147.2	-87.2	12.00	11.99	-0.81	
12,025.0	34.07	180.88	12,005.9	74.6	-147.4	-73.7	12.00	11.99	-0.68	
12,050.0	37.07	180.73	12,026.3	60.1	-147.6	-59.2	12.00	12.00	-0.58	
12,075.0	40.07	180.60	12,045.8	44.5	-147.8	-43.6	12.00	12.00	-0.51	
12,100.0	43.06	180.49	12,064.5	27.9	-147.9	-27.0	12.00	12.00	-0.45	
12,125.0	46.06	180.39	12,082.3	10.3	-148.1	-9.5	12.00	12.00	-0.40	
12,150.0	49.06	180.30	12,099.2	-8.1	-148.2	9.0	12.00	12.00	-0.36	
12,175.0	52.06	180.22	12,115.1	-27.4	-148.3	28.3	12.00	12.00	-0.33	
12,200.0	55.06	180.14	12,129.9	-47.5	-148.3	48.4	12.00	12.00	-0.30	
12,225.0	58.06	180.07	12,143.7	-68.4	-148.4	69.2	12.00	12.00	-0.28	
12,250.0	61.06	180.00	12,156.4	-89.9	-148.4	90.8	12.00	12.00	-0.27	
12,275.0	64.06	179.94	12,167.9	-112.1	-148.4	113.0	12.00	12.00	-0.25	
12,300.0	67.06	179.88	12,178.2	-134.9	-148.3	135.7	12.00	12.00	-0.24	
12,325.0	70.06	179.83	12,187.4	-158.1	-148.3	159.0	12.00	12.00	-0.23	
12,350.0	73.06	179.77	12,195.3	-181.9	-148.2	182.7	12.00	12.00	-0.22	
12,375.0	76.06	179.72	12,201.9	-205.9	-148.1	206.8	12.00	12.00	-0.21	
12,400.0	79.06	179.67	12,207.3	-230.4	-148.0	231.2	12.00	12.00	-0.21	
12,425.0	82.06	179.62	12,211.4	-255.0	-147.8	255.9	12.00	12.00	-0.20	
12,450.0	85.06	179.57	12,214.2	-279.9	-147.6	280.7	12.00	12.00	-0.20	
12,475.0	88.06	179.52	12,215.7	-304.8	-147.4	305.7	12.00	12.00	-0.20	
12,491.2	90.00	179.48	12,216.0	-321.0	-147.3	321.8	12.00	12.00	-0.20	
12,500.0	90.00	179.48	12,216.0	-329.8	-147.2	330.7	0.00	0.00	0.00	
12,600.0	90.00	179.48	12,216.0	-429.8	-146.3	430.6	0.00	0.00	0.00	
12,700.0	90.00	179.48	12,216.0	-529.8	-145.4	530.6	0.00	0.00	0.00	
12,800.0	90.00	179.48	12,216.0	-629.8	-144.5	630.6	0.00	0.00	0.00	
12,900.0	90.00	179.48	12,216.0	-729.8	-143.6	730.6	0.00	0.00	0.00	
13,000.0	90.00	179.48	12,216.0	-829.8	-142.7	830.6	0.00	0.00	0.00	
13,100.0	90.00	179.48	12,216.0	-929.8	-141.8	930.6	0.00	0.00	0.00	
13,200.0	90.00	179.48	12,216.0	-1,029.8	-140.9	1,030.6	0.00	0.00	0.00	
13,300.0	90.00	179.48	12,216.0	-1,129.8	-140.0	1,130.6	0.00	0.00	0.00	
13,400.0	90.00	179.48	12,216.0	-1,229.8	-139.1	1,230.6	0.00	0.00	0.00	
13,500.0	90.00	179.48	12,216.0	-1,329.8	-138.2	1,330.5	0.00	0.00	0.00	

<b>Database:</b>	EDM 5000.14	<b>Local Co-ordinate Reference:</b>	Well #705H
<b>Company:</b>	EOG Resources - Midland	<b>TVD Reference:</b>	KB = 25' @ 3523.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	KB = 25' @ 3523.0usft
<b>Site:</b>	Stonewall 28 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#705H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,600.0	90.00	179.48	12,216.0	-1,429.8	-137.3	1,430.5	0.00	0.00	0.00	
13,700.0	90.00	179.48	12,216.0	-1,529.8	-136.4	1,530.5	0.00	0.00	0.00	
13,800.0	90.00	179.48	12,216.0	-1,629.7	-135.5	1,630.5	0.00	0.00	0.00	
13,900.0	90.00	179.48	12,216.0	-1,729.7	-134.6	1,730.5	0.00	0.00	0.00	
14,000.0	90.00	179.48	12,216.0	-1,829.7	-133.7	1,830.5	0.00	0.00	0.00	
14,100.0	90.00	179.48	12,216.0	-1,929.7	-132.8	1,930.5	0.00	0.00	0.00	
14,200.0	90.00	179.48	12,216.0	-2,029.7	-131.9	2,030.5	0.00	0.00	0.00	
14,300.0	90.00	179.48	12,216.0	-2,129.7	-131.0	2,130.5	0.00	0.00	0.00	
14,400.0	90.00	179.48	12,216.0	-2,229.7	-130.1	2,230.4	0.00	0.00	0.00	
14,500.0	90.00	179.48	12,216.0	-2,329.7	-129.2	2,330.4	0.00	0.00	0.00	
14,600.0	90.00	179.48	12,216.0	-2,429.7	-128.3	2,430.4	0.00	0.00	0.00	
14,700.0	90.00	179.48	12,216.0	-2,529.7	-127.4	2,530.4	0.00	0.00	0.00	
14,800.0	90.00	179.48	12,216.0	-2,629.7	-126.5	2,630.4	0.00	0.00	0.00	
14,900.0	90.00	179.48	12,216.0	-2,729.7	-125.6	2,730.4	0.00	0.00	0.00	
15,000.0	90.00	179.48	12,216.0	-2,829.7	-124.7	2,830.4	0.00	0.00	0.00	
15,100.0	90.00	179.48	12,216.0	-2,929.7	-123.8	2,930.4	0.00	0.00	0.00	
15,200.0	90.00	179.48	12,216.0	-3,029.7	-122.9	3,030.4	0.00	0.00	0.00	
15,300.0	90.00	179.48	12,216.0	-3,129.7	-122.0	3,130.3	0.00	0.00	0.00	
15,400.0	90.00	179.48	12,216.0	-3,229.7	-121.1	3,230.3	0.00	0.00	0.00	
15,500.0	90.00	179.48	12,216.0	-3,329.7	-120.2	3,330.3	0.00	0.00	0.00	
15,600.0	90.00	179.48	12,216.0	-3,429.7	-119.3	3,430.3	0.00	0.00	0.00	
15,700.0	90.00	179.48	12,216.0	-3,529.7	-118.4	3,530.3	0.00	0.00	0.00	
15,800.0	90.00	179.48	12,216.0	-3,629.7	-117.5	3,630.3	0.00	0.00	0.00	
15,900.0	90.00	179.48	12,216.0	-3,729.7	-116.6	3,730.3	0.00	0.00	0.00	
16,000.0	90.00	179.48	12,216.0	-3,829.7	-115.7	3,830.3	0.00	0.00	0.00	
16,100.0	90.00	179.48	12,216.0	-3,929.7	-114.8	3,930.3	0.00	0.00	0.00	
16,200.0	90.00	179.48	12,216.0	-4,029.6	-113.9	4,030.2	0.00	0.00	0.00	
16,300.0	90.00	179.48	12,216.0	-4,129.6	-113.0	4,130.2	0.00	0.00	0.00	
16,400.0	90.00	179.48	12,216.0	-4,229.6	-112.1	4,230.2	0.00	0.00	0.00	
16,500.0	90.00	179.48	12,216.0	-4,329.6	-111.2	4,330.2	0.00	0.00	0.00	
16,600.0	90.00	179.48	12,216.0	-4,429.6	-110.3	4,430.2	0.00	0.00	0.00	
16,700.0	90.00	179.48	12,216.0	-4,529.6	-109.4	4,530.2	0.00	0.00	0.00	
16,800.0	90.00	179.48	12,216.0	-4,629.6	-108.5	4,630.2	0.00	0.00	0.00	
16,900.0	90.00	179.48	12,216.0	-4,729.6	-107.6	4,730.2	0.00	0.00	0.00	
17,000.0	90.00	179.48	12,216.0	-4,829.6	-106.7	4,830.2	0.00	0.00	0.00	
17,100.0	90.00	179.48	12,216.0	-4,929.6	-105.8	4,930.1	0.00	0.00	0.00	
17,200.0	90.00	179.48	12,216.0	-5,029.6	-104.9	5,030.1	0.00	0.00	0.00	
17,300.0	90.00	179.48	12,216.0	-5,129.6	-104.0	5,130.1	0.00	0.00	0.00	
17,400.0	90.00	179.48	12,216.0	-5,229.6	-103.1	5,230.1	0.00	0.00	0.00	
17,500.0	90.00	179.48	12,216.0	-5,329.6	-102.2	5,330.1	0.00	0.00	0.00	
17,600.0	90.00	179.48	12,216.0	-5,429.6	-101.3	5,430.1	0.00	0.00	0.00	
17,700.0	90.00	179.48	12,216.0	-5,529.6	-100.4	5,530.1	0.00	0.00	0.00	
17,800.0	90.00	179.48	12,216.0	-5,629.6	-99.5	5,630.1	0.00	0.00	0.00	
17,900.0	90.00	179.48	12,216.0	-5,729.6	-98.6	5,730.1	0.00	0.00	0.00	
18,000.0	90.00	179.48	12,216.0	-5,829.6	-97.7	5,830.0	0.00	0.00	0.00	
18,100.0	90.00	179.48	12,216.0	-5,929.6	-96.8	5,930.0	0.00	0.00	0.00	
18,200.0	90.00	179.48	12,216.0	-6,029.6	-95.9	6,030.0	0.00	0.00	0.00	
18,300.0	90.00	179.48	12,216.0	-6,129.6	-95.0	6,130.0	0.00	0.00	0.00	
18,400.0	90.00	179.48	12,216.0	-6,229.6	-94.1	6,230.0	0.00	0.00	0.00	
18,500.0	90.00	179.48	12,216.0	-6,329.6	-93.2	6,330.0	0.00	0.00	0.00	
18,600.0	90.00	179.48	12,216.0	-6,429.6	-92.3	6,430.0	0.00	0.00	0.00	
18,700.0	90.00	179.48	12,216.0	-6,529.5	-91.4	6,530.0	0.00	0.00	0.00	
18,800.0	90.00	179.48	12,216.0	-6,629.5	-90.5	6,630.0	0.00	0.00	0.00	
18,900.0	90.00	179.48	12,216.0	-6,729.5	-89.6	6,729.9	0.00	0.00	0.00	

<b>Database:</b>	EDM 5000.14	<b>Local Co-ordinate Reference:</b>	Well #705H
<b>Company:</b>	EOG Resources - Midland	<b>TVD Reference:</b>	KB = 25' @ 3523.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	KB = 25' @ 3523.0usft
<b>Site:</b>	Stonewall 28 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#705H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
19,000.0	90.00	179.48	12,216.0	-6,829.5	-88.7	6,829.9	0.00	0.00	0.00	
19,100.0	90.00	179.48	12,216.0	-6,929.5	-87.8	6,929.9	0.00	0.00	0.00	
19,200.0	90.00	179.48	12,216.0	-7,029.5	-86.9	7,029.9	0.00	0.00	0.00	
19,300.0	90.00	179.48	12,216.0	-7,129.5	-86.0	7,129.9	0.00	0.00	0.00	
19,400.0	90.00	179.48	12,216.0	-7,229.5	-85.1	7,229.9	0.00	0.00	0.00	
19,500.0	90.00	179.48	12,216.0	-7,329.5	-84.2	7,329.9	0.00	0.00	0.00	
19,600.0	90.00	179.48	12,216.0	-7,429.5	-83.3	7,429.9	0.00	0.00	0.00	
19,700.0	90.00	179.48	12,216.0	-7,529.5	-82.4	7,529.9	0.00	0.00	0.00	
19,800.0	90.00	179.48	12,216.0	-7,629.5	-81.5	7,629.8	0.00	0.00	0.00	
19,900.0	90.00	179.48	12,216.0	-7,729.5	-80.6	7,729.8	0.00	0.00	0.00	
20,000.0	90.00	179.48	12,216.0	-7,829.5	-79.7	7,829.8	0.00	0.00	0.00	
20,100.0	90.00	179.48	12,216.0	-7,929.5	-78.8	7,929.8	0.00	0.00	0.00	
20,200.0	90.00	179.48	12,216.0	-8,029.5	-77.9	8,029.8	0.00	0.00	0.00	
20,300.0	90.00	179.48	12,216.0	-8,129.5	-77.0	8,129.8	0.00	0.00	0.00	
20,400.0	90.00	179.48	12,216.0	-8,229.5	-76.1	8,229.8	0.00	0.00	0.00	
20,500.0	90.00	179.48	12,216.0	-8,329.5	-75.2	8,329.8	0.00	0.00	0.00	
20,600.0	90.00	179.48	12,216.0	-8,429.5	-74.3	8,429.8	0.00	0.00	0.00	
20,700.0	90.00	179.48	12,216.0	-8,529.5	-73.4	8,529.7	0.00	0.00	0.00	
20,800.0	90.00	179.48	12,216.0	-8,629.5	-72.5	8,629.7	0.00	0.00	0.00	
20,900.0	90.00	179.48	12,216.0	-8,729.5	-71.6	8,729.7	0.00	0.00	0.00	
21,000.0	90.00	179.48	12,216.0	-8,829.5	-70.7	8,829.7	0.00	0.00	0.00	
21,100.0	90.00	179.48	12,216.0	-8,929.5	-69.8	8,929.7	0.00	0.00	0.00	
21,200.0	90.00	179.48	12,216.0	-9,029.4	-68.9	9,029.7	0.00	0.00	0.00	
21,300.0	90.00	179.48	12,216.0	-9,129.4	-68.0	9,129.7	0.00	0.00	0.00	
21,400.0	90.00	179.48	12,216.0	-9,229.4	-67.1	9,229.7	0.00	0.00	0.00	
21,500.0	90.00	179.48	12,216.0	-9,329.4	-66.2	9,329.7	0.00	0.00	0.00	
21,600.0	90.00	179.48	12,216.0	-9,429.4	-65.3	9,429.7	0.00	0.00	0.00	
21,700.0	90.00	179.48	12,216.0	-9,529.4	-64.4	9,529.6	0.00	0.00	0.00	
21,800.0	90.00	179.48	12,216.0	-9,629.4	-63.5	9,629.6	0.00	0.00	0.00	
21,900.0	90.00	179.48	12,216.0	-9,729.4	-62.6	9,729.6	0.00	0.00	0.00	
22,000.0	90.00	179.48	12,216.0	-9,829.4	-61.7	9,829.6	0.00	0.00	0.00	
22,100.0	90.00	179.48	12,216.0	-9,929.4	-60.8	9,929.6	0.00	0.00	0.00	
22,200.0	90.00	179.48	12,216.0	-10,029.4	-59.9	10,029.6	0.00	0.00	0.00	
22,298.6	90.00	179.48	12,216.0	-10,128.0	-59.0	10,128.2	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
FTP(SW 28 FC #705H)	0.00	0.00	12,216.0	-131.0	-149.0	435,688.00	805,895.00	32° 11' 41.609 N	103° 28' 41.120 W	
- hit/miss target										
- Shape										
- plan misses target center by 36.4usft at 12310.2usft MD (12182.1 TVD, -144.3 N, -148.3 E)										
- Point										
PBHL(SW 28 FC #705H)	0.00	0.00	12,216.0	-10,128.0	-59.0	425,691.00	805,985.00	32° 10' 2.682 N	103° 28' 40.998 W	
- plan hits target center										
- Point										



Lea County, NM (NAD 83 NME)

Stonewall 28 Fed Com #705H

Plan #0.1

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

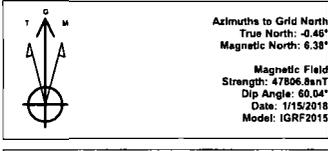
Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Eastern Zone  
 System Datum: Mean Sea Level

WELL DETAILS: #705H

KB = 25' @ 3523.0ust 3498.0  
 Northing 435819.00 Easting 808044.00 Latitude 32° 11' 42.894 N Longitude 103° 28' 59.374 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3140.5	1.40	317.45	3140.5	1.3	-1.2	1.00	317.45	-1.3	
4	11732.5	1.40	317.45	11729.9	156.4	-143.6	0.00	0.00	-155.6	
5	12491.2	90.00	179.48	12216.0	-321.0	-147.3	12.00	-137.96	321.8	
6	22296.6	90.00	179.48	12216.0	-10128.0	-59.0	0.00	0.00	10128.2	PBHL(SW 28 FC #705H)



To convert a Magnetic Direction to a Grid Direction, Add 6.38°  
 To convert a Magnetic Direction to a True Direction, Add 6.84° East  
 To convert a True Direction to a Grid Direction, Subtract 0.46°

CASING DETAILS  
 No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
FTP(SW 28 FC #705H)	12216.0	-131.0	-149.0	435888.00	805895.00
PBHL(SW 28 FC #705H)	12216.0	-10128.0	-59.0	435891.00	805983.00

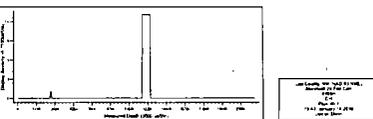
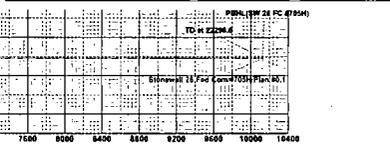
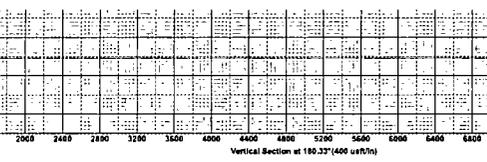
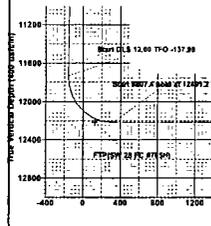
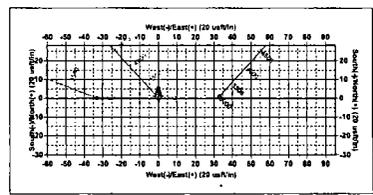
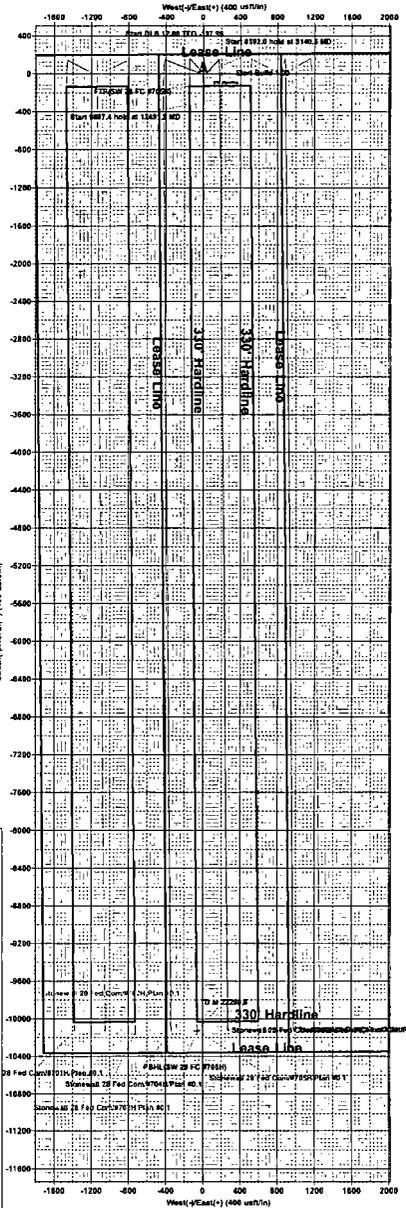
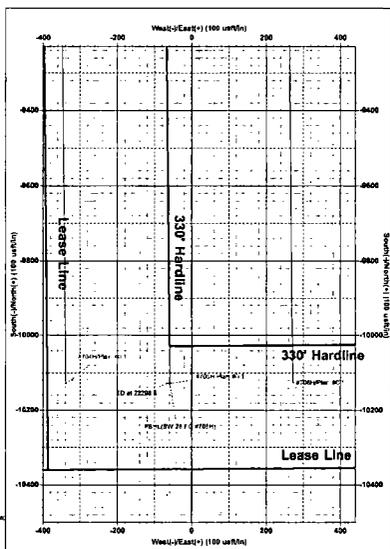
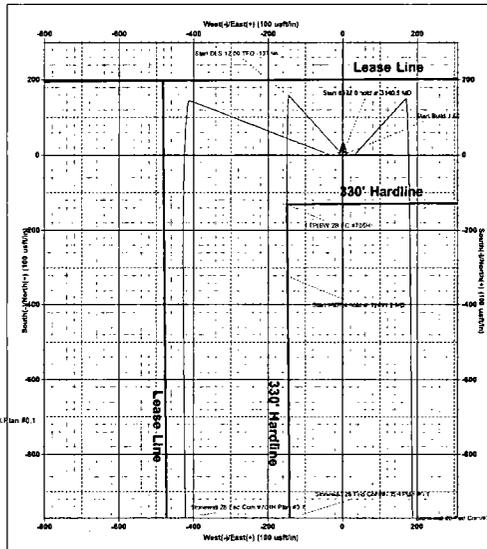
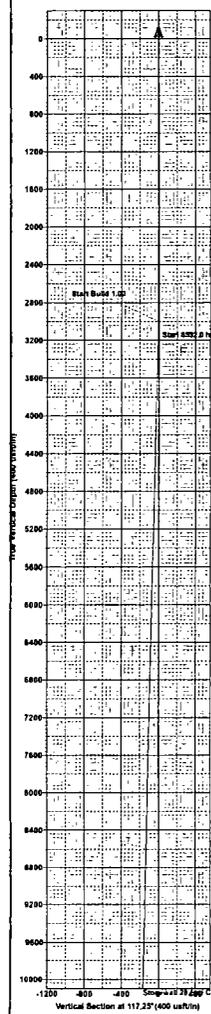
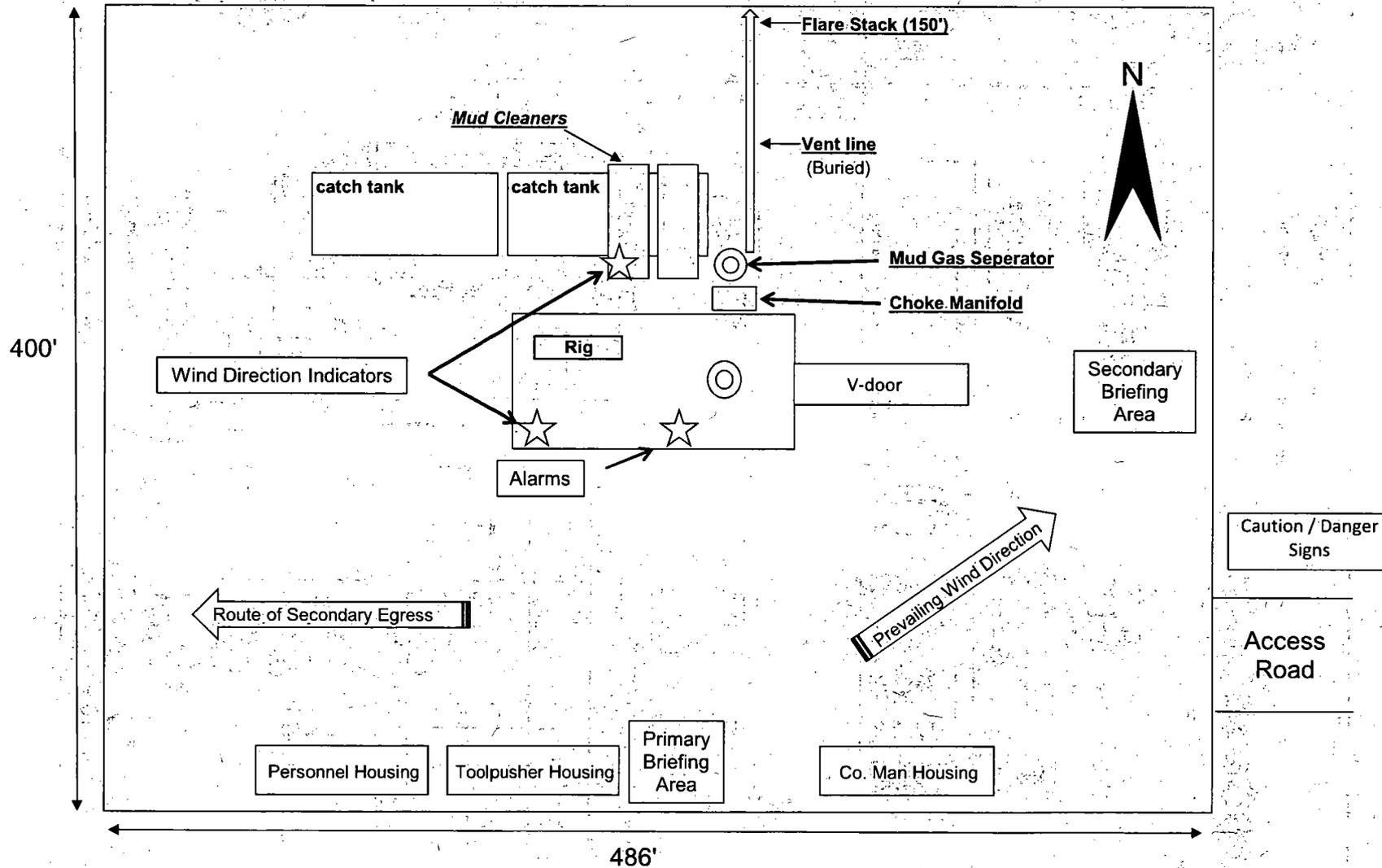


Exhibit 4  
EOG Resources  
Stonewall 28 Fed Com #705H

Well Site Diagram



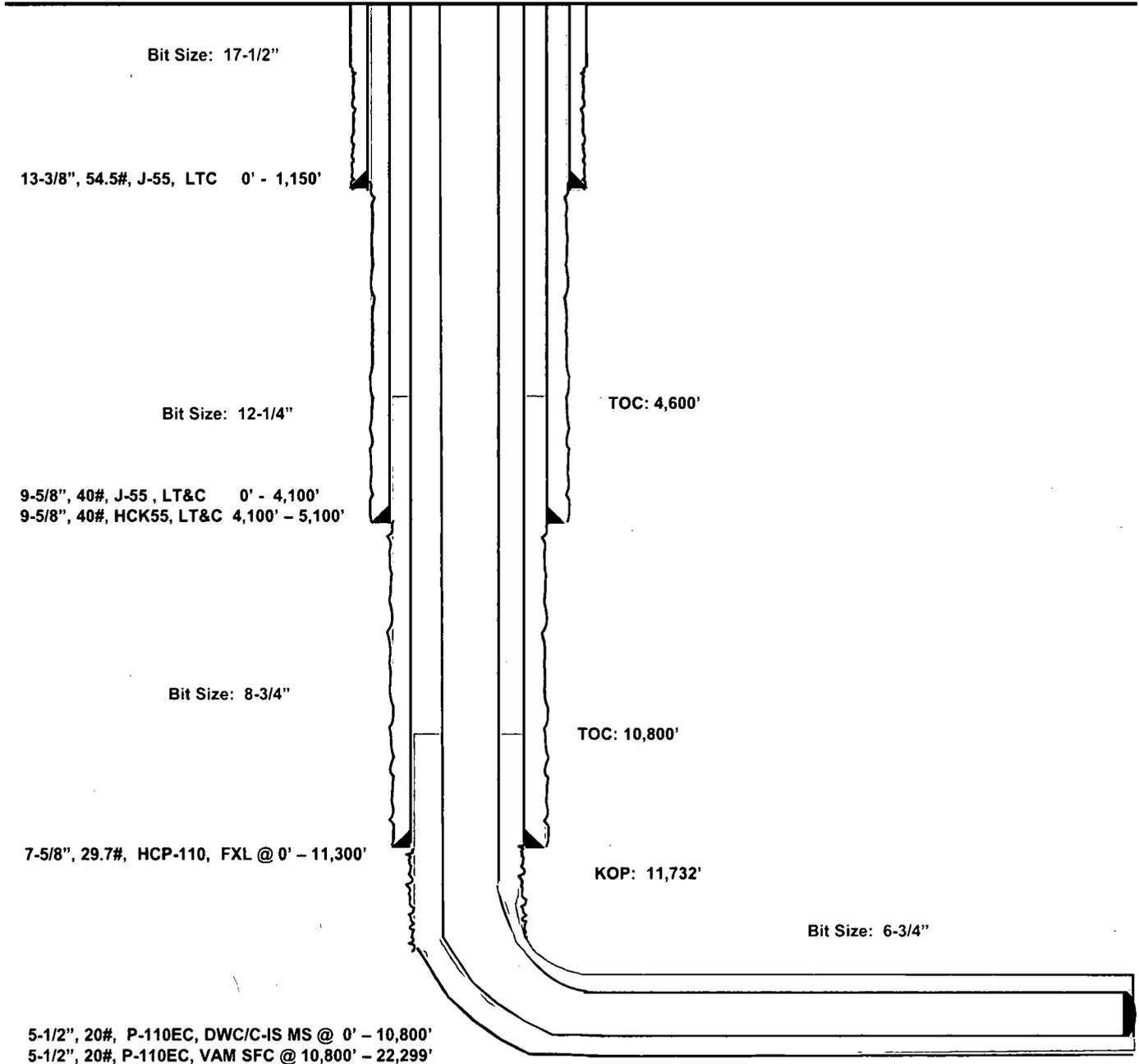
Stonewall 28 Fed Com #705H  
Lea County, New Mexico

200' FNL  
1799' FWL  
Section 28  
T-24-S, R-34-E

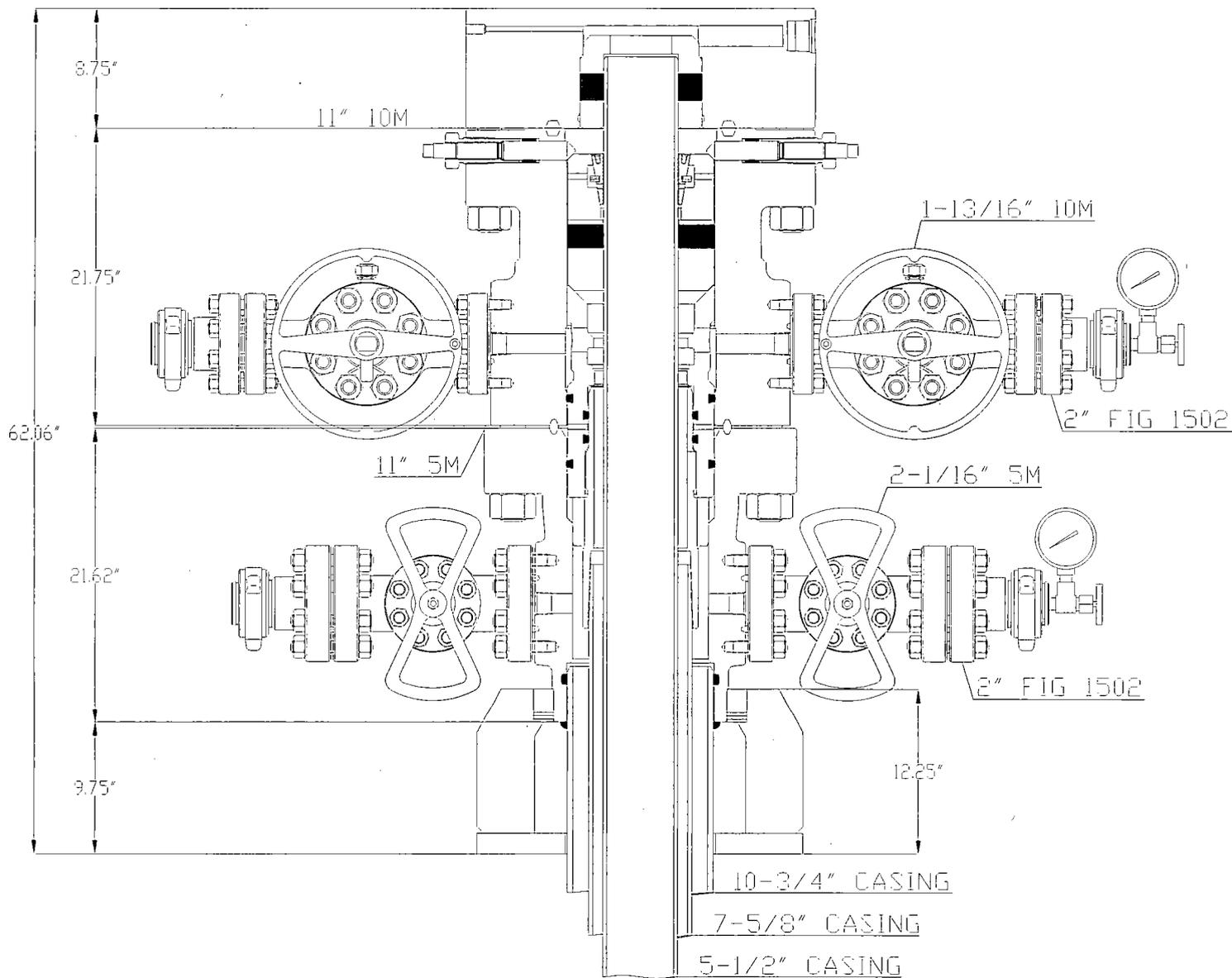
Proposed Wellbore

API: 30-025-\*\*\*\*\*

KB: 3,523'  
GL: 3,498'



Lateral: 22,299' MD, 12,216' TVD  
Upper Most Perf:  
330' FNL & 1648' FWL Sec. 28  
Lower Most Perf:  
330' FSL & 1650' FWL Sec. 33  
BH Location: 230' FSL & 1651' FWL  
Section 33  
T-24-S, R-34-E



※CONCEPT QUOTE DRAWING  
 ※DIMENSIONS ARE APPROXIMATE

# EOG RESOURCES

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

DWN	BAY	2/22/17
CHK		
APP		
	BY	DATE



Worldwide Expertise - Global Strength

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.

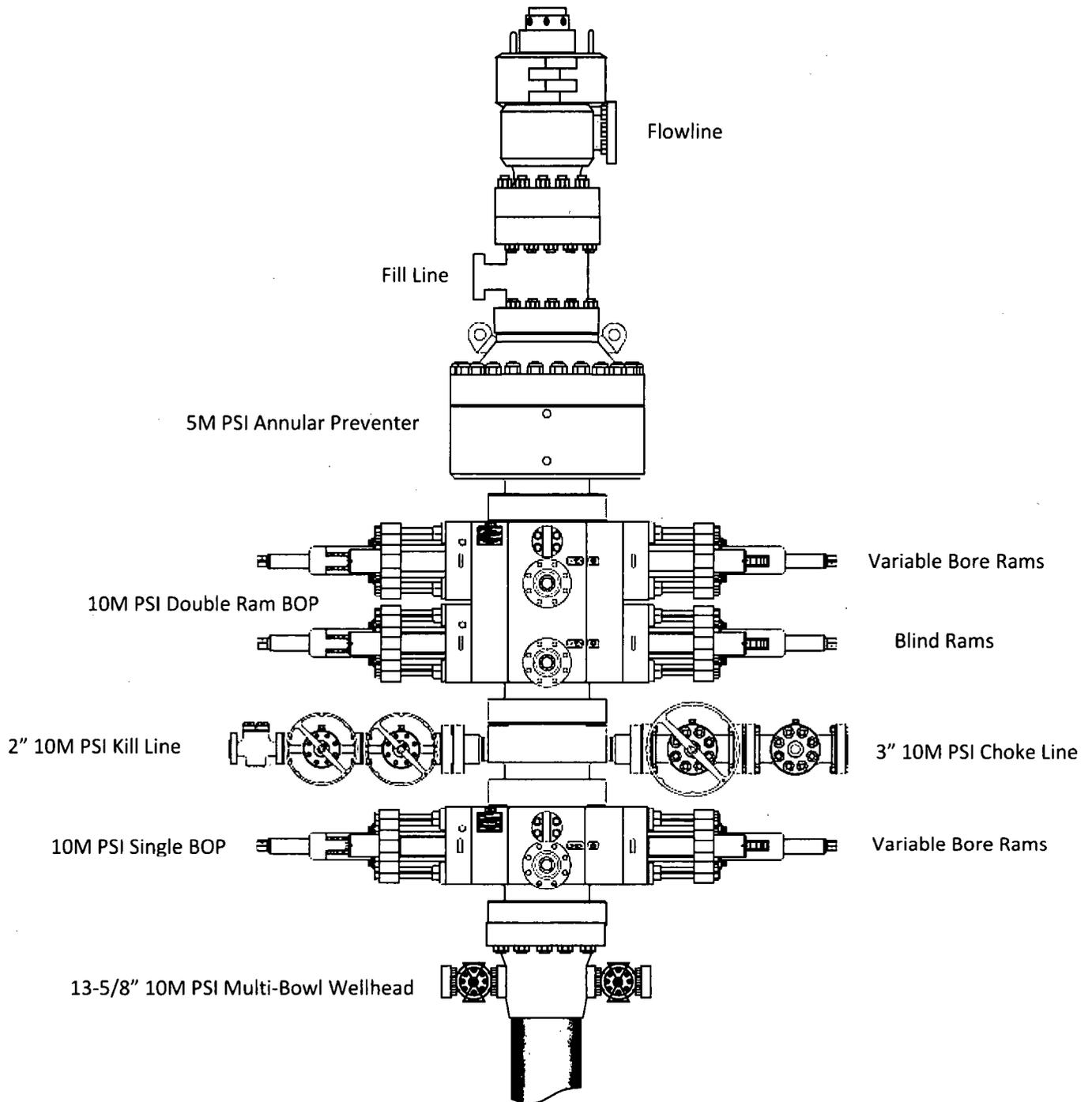
<b>12-1/4" Intermediate Hole Section 10M psi requirement</b>					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Jars	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	-	-

<b>8-3/4" Intermediate Hole Section 10M psi requirement</b>					
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	-	-

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



APD ID: 10400026402

Submission Date: 01/30/2018

Highlighted data reflects the most recent changes

Operator Name: EOG RESOURCES INCORPORATED

Well Name: STONEWALL 28 FED COM

Well Number: 705H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

STONEWALL28FC705H\_vicinity\_20180130102554.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\_20180130102628.pdf

STONEWALL28FC705H\_padsite\_20180130102628.pdf

STONEWALL28FC705H\_wellsite\_20180130102629.pdf

New road type: RESOURCE

Length: 2674 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

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

**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 well location 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:**

STONEWALL28FC705H\_radius\_20180130102647.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 NE/4 of section 28-24S-34E

**Production Facilities map:**

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

Stonewall28FC\_infrastructure\_20180130102658.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\_20180130102810.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:**

**Aquifer 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:**

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

**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\_20180130102827.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 containmant attachment:**

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

**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

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

**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:**

STONEWALL28FC705H\_padsite\_20180130102854.pdf

STONEWALL28FC705H\_wellsite\_20180130102855.pdf

Stonewall\_28\_Fed\_Com\_705H\_Rig\_Layout\_20180130103035.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:** 704H/705H/706H

**Recontouring attachment:**

STONEWALL28FC705H\_reclamation\_20180130103124.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.

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

<b>Well pad proposed disturbance (acres):</b> 4.46281	<b>Well pad interim reclamation (acres):</b> 1.732323	<b>Well pad long term disturbance (acres):</b> 2.730487
<b>Road proposed disturbance (acres):</b> 1.473278	<b>Road interim reclamation (acres):</b> 0	<b>Road long term disturbance (acres):</b> 1.473278
<b>Powerline proposed disturbance (acres):</b> 0	<b>Powerline interim reclamation (acres):</b> 0	<b>Powerline long term disturbance (acres):</b> 0
<b>Pipeline proposed disturbance (acres):</b> 2.493113	<b>Pipeline interim reclamation (acres):</b> 0.997245	<b>Pipeline long term disturbance (acres):</b> 1.495868
<b>Other proposed disturbance (acres):</b> 0	<b>Other interim reclamation (acres):</b> 0	<b>Other long term disturbance (acres):</b> 0
<b>Total proposed disturbance:</b> 8.429201	<b>Total interim reclamation:</b> 2.729568	<b>Total long term disturbance:</b> 5.699633

**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:**

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** NO

**Seed harvest description:**

**Seed harvest description attachment:**

**Seed Management**

**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 Summary**

**Total pounds/Acre:**

<b>Seed Type</b>	<b>Pounds/Acre</b>
------------------	--------------------

**Seed reclamation attachment:**

**Operator Contact/Responsible Official 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

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

**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:**

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

**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\_20180130103435.pdf

STONEWALL28FC705H\_location\_20180130103436.pdf

SUPO\_Stonewall\_28\_Fed\_Com\_705H\_20180130103524.pdf



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

## Operator Certification Data Report

05/23/2018

### Operator Certification

*I hereby 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 which currently 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.*

**NAME:** Stan Wagner

**Signed on:** 01/30/2018

**Title:** Regulatory Specialsit

**Street Address:** 5509 Champions Drive

**City:** Midland

**State:** TX

**Zip:** 79702

**Phone:** (432)686-3689

**Email address:** Stan\_Wagner@eogresources.com

### Field Representative

**Representative Name:** James Barwis

**Street Address:** 5509 Champions Drive

**City:** Midland

**State:** TX

**Zip:** 79706

**Phone:** (432)425-1204

**Email address:** james\_barwis@eogresources.com

“EXHIBIT A-1”  
R/W BLM SERIAL #: NM-xxxxxx  
Project name: Stonewall 28 Fed Com

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

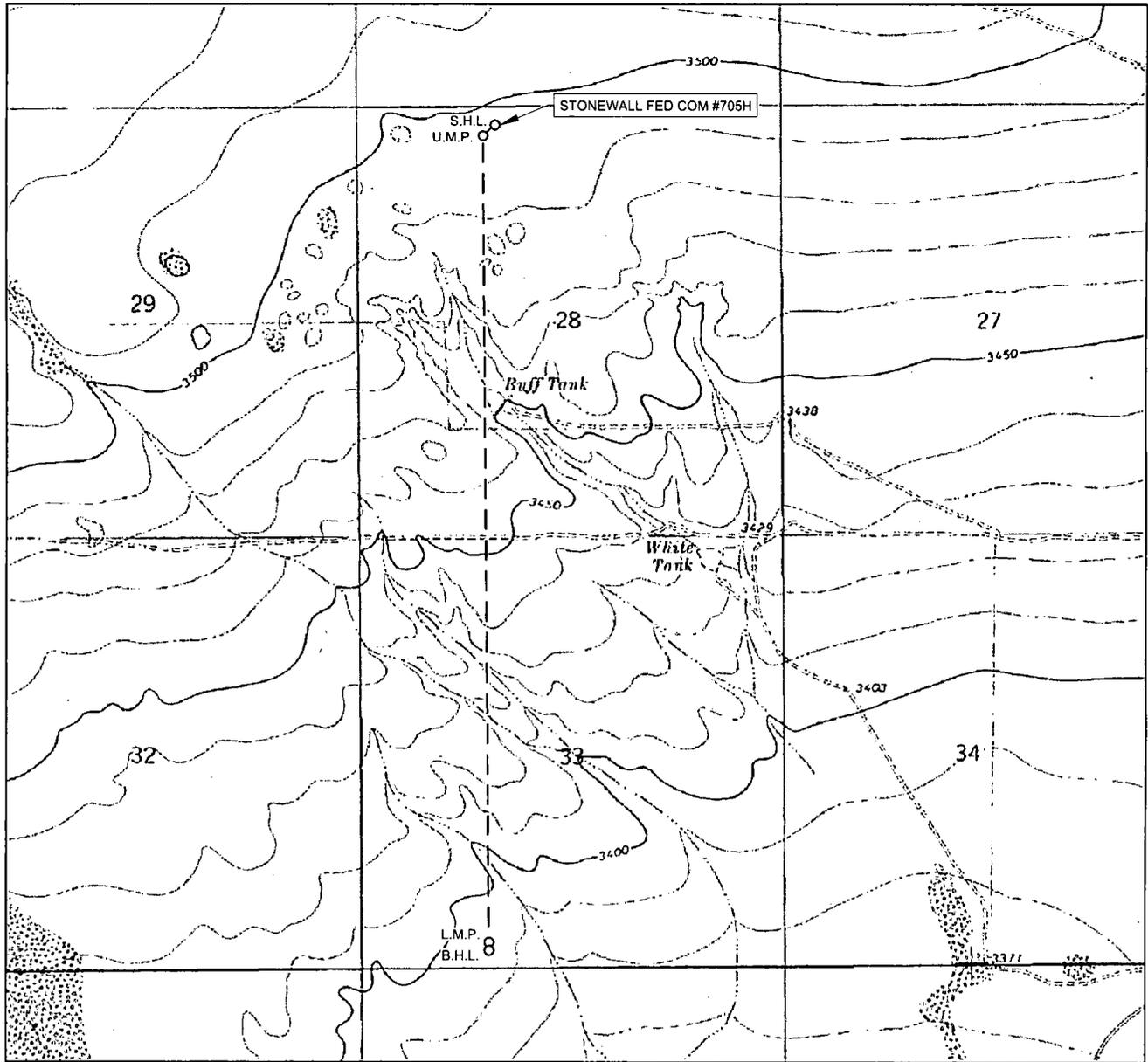
Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

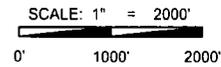
# LOCATION & ELEVATION VERIFICATION MAP



LEASE NAME & WELL NO.: STONEWALL 28 FED COM #705H

SECTION 28 TWP 24-S RGE 34-E SURVEY N.M.P.M.  
 COUNTY LEA STATE NM ELEVATION 3498'  
 DESCRIPTION 200' FNL & 1799' FWL

LATITUDE N 32.1952491 LONGITUDE W 103.4776031



THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.



**TOPOGRAPHIC**  
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 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743  
 WWW.TOPOGRAPHIC.COM

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 705H vicinity - Existing Road

Stonewall 28 FC 705H 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 705H rig layout - Well Site Diagram

Stonewall 28 FC 705H reclamation - Interim Reclamation



**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:

Describe 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**

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:

Describe 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 Solids (TDS) concentration equal to or less than that of the existing water to be protected?

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 disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

**Injection well type:**

**Injection well number:**

**Assigned injection well API number?**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection attachment:**

**Underground Injection Control (UIC) Permit?**

**UIC Permit attachment:**

**Injection well name:**

**Injection well API number:**

### **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:**



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

## Bond Info Data Report

05/23/2018

### 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:

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** STONEWALL 28 FED COM

**Well Number:** 705H

	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
PPP Leg #1	254 0	FSL	165 0	FWL	24S	34E	28	Aliquot NESW	32.1883	- 103.4871	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 015684	- 871 8	147 05	122 16
EXIT Leg #1	330	FSL	165 0	FWL	24S	34E	33	Aliquot SESW	32.16768 52	- 103.4780 56	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 120363	- 871 8	221 98	122 16
BHL Leg #1	230	FSL	165 1	FWL	24S	34E	33	Aliquot SESW	32.16741 11	- 103.4780 557	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 120363	- 871 8	222 98	122 16



Processing Plant located in Lea 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
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines