

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*5. Lease Serial No.
NMNM66927

6. Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.
RUBY 2 FED COM 705H9. API Well No.
30-025-43933-00-X110. Field and Pool or Exploratory Area
HARDIN TANK11. County or Parish, State
LEA COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
EOG RESOURCES INCContact: STAN WAGNER
E-Mail: stan_wagner@eogresources.com3a. Address
1111 BAGBY SKY LOBBY2
HOUSTON, TX 770023b. Phone No. (include area code)
Ph: 432-686-3689

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 2 T26S R34E NENW 220FNL 2185FWL
32.079098 N Lat, 103.442215 W Lon

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

EOG Resources requests an amendment to our approved APD for this well to reflect changes in BHL and TVD.

Change BHL / TVD to: 230' FSL & 2316' FEL SWSE-11-26S-34E
22,899'MD / 12,785' TVD

Details attached.

- All previous COAs still apply.

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #381205 verified by the BLM Well Information System
For EOG RESOURCES INC, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 08/09/2017 (17PP0552SE)

Name (Printed/Typed) STAN WAGNER

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 07/13/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By MUSTAFA HAQUE

Title PETROLEUM ENGINEER

Date 08/29/2017

Conditions of approval, if any, are attached. Approval of this notice 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.

Office Hobbs

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.

(Instructions on page 2)

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

Kz

EOG RESOURCES, INC.
RUBY 2 FED COM NO. 705H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	834'
Top of Salt	1,378'
Base of Salt / Top Anhydrite	3,956'
Base Anhydrite	5,299'
Lamar	5,299'
Bell Canyon	5,331'
Cherry Canyon	6,303'
Brushy Canyon	7,810'
Bone Spring Lime	9,414'
1 st Bone Spring Sand	10,447'
2 nd Bone Spring Shale	10,629'
2 nd Bone Spring Sand	11,028'
3 rd Bone Spring Carb	11,560'
3 rd Bone Spring Sand	12,089'
Wolfcamp	12,529'
TD	12,785'

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

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	6,303'	Oil
Brushy Canyon	7,810'	Oil
1 st Bone Spring Sand	10,447'	Oil
2 nd Bone Spring Shale	10,629'	Oil
2 nd Bone Spring Sand	11,028'	Oil
3 rd Bone Spring Carb	11,560'	Oil
3 rd Bone Spring Sand	12,089'	Oil
Wolfcamp	12,529'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 10.75" casing at 860' and circulating cement back to surface.

EOG RESOURCES, INC.
RUBY 2 FED COM NO. 705H

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
14.75"	0 - 860' 905'	10.75"	40.5#	J55	STC	1.125	1.25	1.60
9.875"	0 - 1,000'	7.625"	29.7#	HCP-110	LTC	1.125	1.25	1.60
9.875"	1,000' - 3,000'	7.625"	29.7#	P-110EC	SLIJ II	1.125	1.25	1.60
8.75"	3,000' - 11,700'	7.625"	29.7#	HCP-110	FlushMax III	1.125	1.25	1.60
6.75"	0' - 11,200'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	11,200' - 22,899'	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.

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /ft	Mix Water Gal/sk	Slurry Description
10-3/4" 860' 905'	325	13.5	1.73	9.13	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	200	14.8	1.34	6.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
7-5/8" 11,700'	250	14.8	1.38	6.48	Class C + 5% Gypsum + 3% CaCl ₂ pumped via Bradenhead (TOC @ Surface)
	2200	14.8	1.38	6.48	Class C + 5% Gypsum + 3% CaCl ₂ pumped via Bradenhead
	550	14.4	1.20	4.81	50:50 Class H: Poz + 0.25% CPT20A + 0.40% CPT49 + 0.20% CPT35 + 0.80% CPT16A + 0.25% CPT503P pumped Conventionally
5-1/2" 22,899'	1000	14.1	1.26	5.80	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 11,200')

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.
RUBY 2 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.

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 5,000/ 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 - 860' 905'	Fresh - Gel	8.6-8.8	28-34	N/c
860' - 11,700'	Brine	8.8-10.0	28-34	N/c
11,700' - 22,899' 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.

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

EOG RESOURCES, INC.
RUBY 2 FED COM NO. 705H

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

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

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

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well.

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

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

The estimated bottom-hole temperature (BHT) at TD is 181 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 7645 psig (based on 11.5 ppg MW). No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. Severe loss circulation is expected from 7,300' to Intermediate casing point.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

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

- (A) EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and cement on the subject well. If the timing between rigs is such that EOG Resources would not be able to preset the surface, the Primary Rig will MIRU and drill the well in its entirety per the APD.

EOG RESOURCES, INC.
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11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 10-3/4" surface casing, a 13-5/8" BOP/BOPE system with a minimum working pressure of 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.

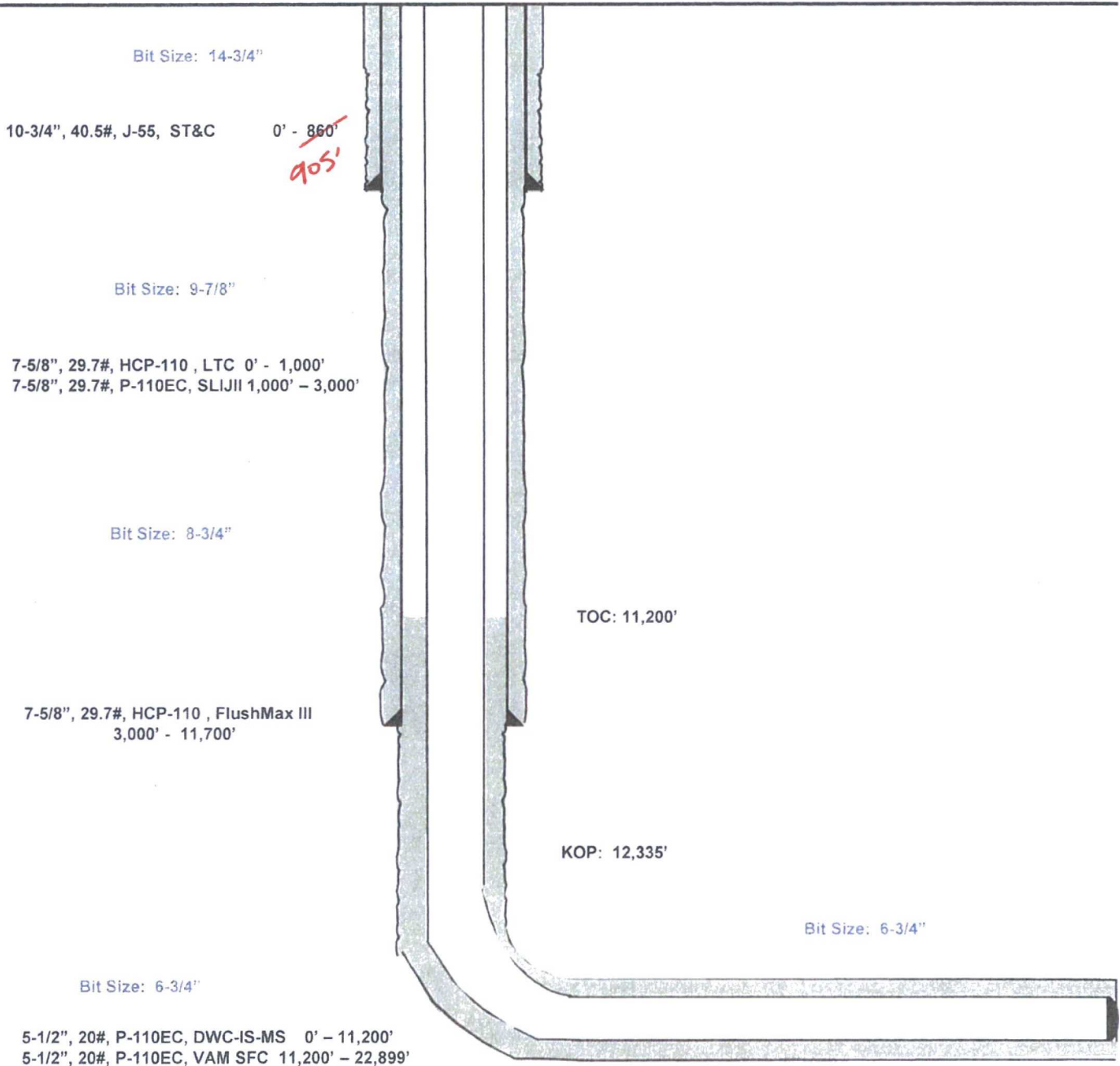
Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

Ruby 2 Fed Com #705H

220' FNL
2185' FWL
Section 2
T-26-S, R-34-E

Lea County, New Mexico
Proposed Wellbore
Revised 7/12/17
API: 30-025-*****

KB: 3,320'
GL: 3,295'



Lateral: 22,899' MD, 12,785' TVD
Upper Most Perf:
330' FNL & 2308' FEL Sec. 2
Lower Most Perf:
330' FSL & 2316' FEL Sec. 11
BH Location: 230' FSL & 2316' FEL
Section 11
T-26-S, R-34-E



Lea County, NM (NAD 83 NME)

Ruby 2 Fed Com #705H

Plan #0.2

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

Ground Level: 3285.0
KB = 25' @ 3320.0usft
Northing 393653.00 Easting 817342.00 Latitude 32° 4' 44.753 N Longitude 103° 28' 31.963 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	4000.0	0.00	0.00	4000.0	0.0	0.0	0.00	0.00	0.0	
3	4543.4	5.43	76.79	4542.6	5.9	25.1	1.00	76.79	-3.7	
4	12335.5	5.43	76.79	12299.7	174.6	743.4	0.00	0.00	-109.4	
5	13095.5	90.00	179.49	12785.0	-302.4	792.7	12.00	102.65	370.0	
6	22899.5	90.00	179.49	12785.0	-10106.0	880.0	0.00	0.00	10144.2	PBHL (Ruby 2 Fed Com #705H)



Azimuths to Grid North
True North: -0.47°
Magnetic North: 6.45°

Magnetic Field
Strength: 47907.3nT
Dip Angle: 59.96°
Date: 1/23/2017
Model: IGRF 2015

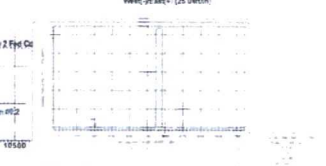
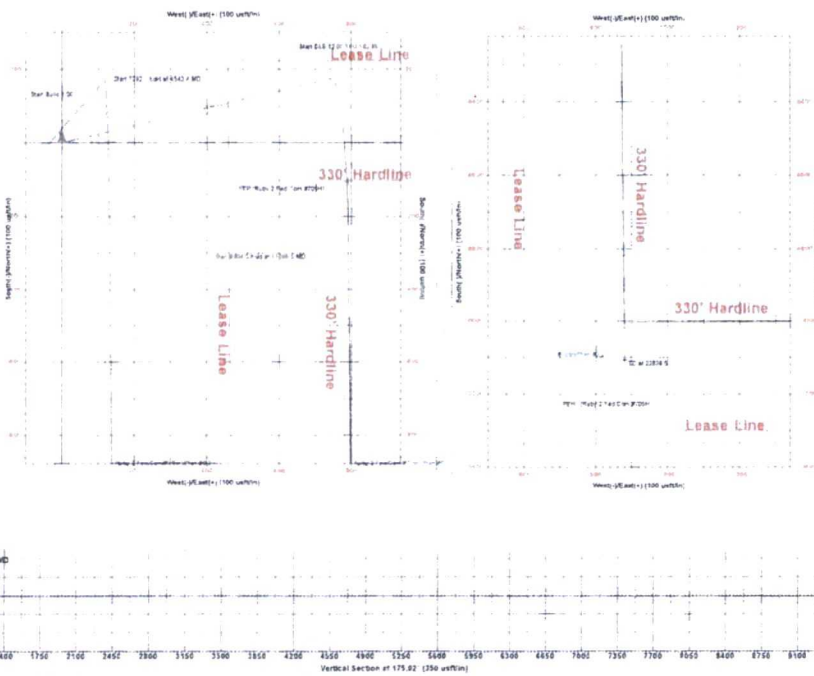
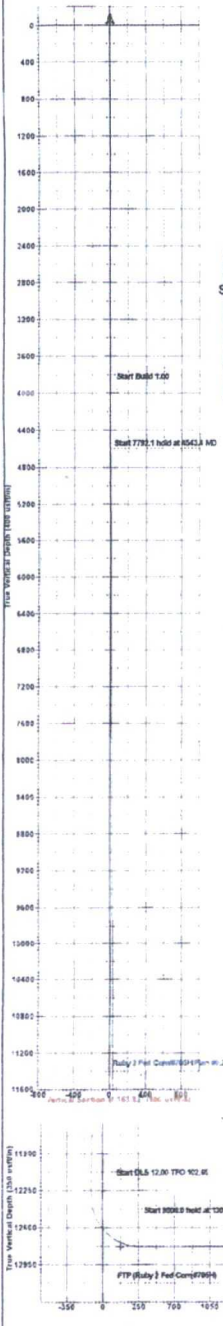
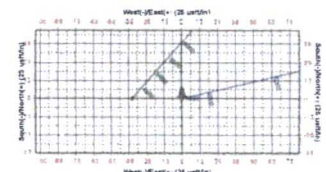
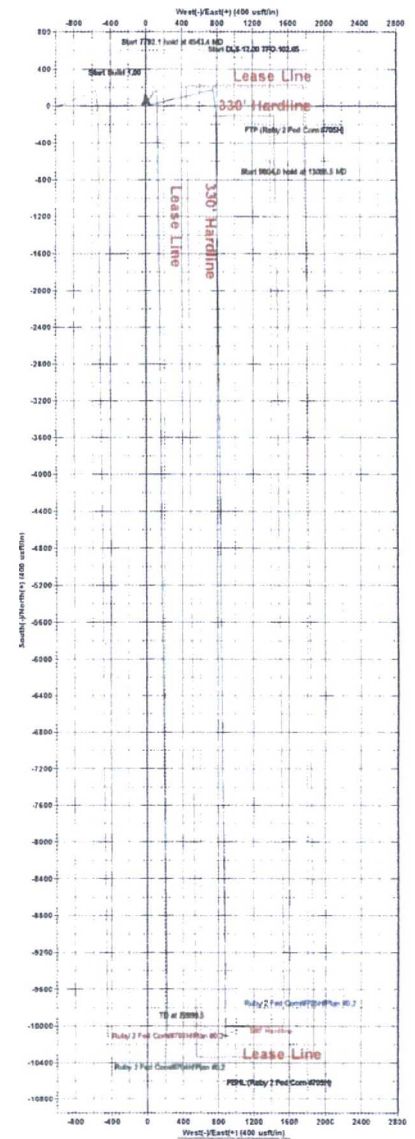
To convert a Magnetic Direction to a Grid Direction: Add 6.45°
To convert a Magnetic Direction to a True Direction: Add 6.92° East
To convert a True Direction to a Grid Direction: Subtract 0.47°

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL (Ruby 2 Fed Com #705H)	12785.0	-10106.0	880.0	393647.00	818222.00
FTP (Ruby 2 Fed Com #705H)	12785.0	-106.0	791.0	393647.00	818133.00





EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Ruby 2 Fed Com

#705H

OH

Plan: Plan #0.2

Standard Planning Report

12 July, 2017



EOG Resources, Inc.

Planning Report

Database: EDM 5000.14 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Ruby 2 Fed Com
Well: #705H
Wellbore: OH
Design: Plan #0.2

Local Co-ordinate Reference: Well #705H
TVD Reference: KB = 25' @ 3320.0usft
MD Reference: KB = 25' @ 3320.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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

Site	Ruby 2 Fed Com				
Site Position:		Northing:	393,589.99 usft	Latitude:	32° 4' 47.315 N
From:	Map	Easting:	775,148.00 usft	Longitude:	103° 34' 42.355 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.40

Well	#705H					
Well Position	+N/-S	63.0 usft	Northing:	393,653.00 usft	Latitude:	32° 4' 44.753 N
	+E/-W	42,194.0 usft	Easting:	817,342.00 usft	Longitude:	103° 26' 31.963 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,295.0 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/23/2017	6.93	59.96	47,907.30983649

Design	Plan #0.2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	175.02

Plan Survey Tool Program		Date	7/12/2017		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	22.899.5	Plan #0.2 (OH)	MWD	
			MWD - Standard		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,543.4	5.43	76.79	4,542.6	5.9	25.1	1.00	1.00	0.00	76.79	
12,335.5	5.43	76.79	12,299.7	174.6	743.4	0.00	0.00	0.00	0.00	
13,095.5	90.00	179.49	12,785.0	-302.4	792.7	12.00	11.13	13.51	102.65	
22,899.5	90.00	179.49	12,785.0	-10,106.0	880.0	0.00	0.00	0.00	0.00	PBHL (Ruby 2 Fed Co



EOG Resources, Inc.
Planning Report

Database: EDM 5000.14 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Ruby 2 Fed Com
Well: #705H
Wellbore: OH
Design: Plan #0.2

Local Co-ordinate Reference: Well #705H
TVD Reference: KB = 25' @ 3320.0usft
MD Reference: KB = 25' @ 3320.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	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
900.0	0.00	0.00	900.0	0.0	0.0	0.0	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
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	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
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	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
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	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
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	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
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	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
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	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
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	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
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	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
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	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
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	1.00	76.79	4,100.0	0.2	0.8	-0.1	1.00	1.00	0.00
4,200.0	2.00	76.79	4,200.0	0.8	3.4	-0.5	1.00	1.00	0.00
4,300.0	3.00	76.79	4,299.9	1.8	7.6	-1.1	1.00	1.00	0.00
4,400.0	4.00	76.79	4,399.7	3.2	13.6	-2.0	1.00	1.00	0.00
4,500.0	5.00	76.79	4,499.4	5.0	21.2	-3.1	1.00	1.00	0.00
4,543.4	5.43	76.79	4,542.6	5.9	25.1	-3.7	1.00	1.00	0.00
4,600.0	5.43	76.79	4,598.9	7.1	30.3	-4.5	0.00	0.00	0.00
4,700.0	5.43	76.79	4,698.5	9.3	39.5	-5.8	0.00	0.00	0.00
4,800.0	5.43	76.79	4,798.0	11.4	48.7	-7.2	0.00	0.00	0.00
4,900.0	5.43	76.79	4,897.6	13.6	57.9	-8.5	0.00	0.00	0.00
5,000.0	5.43	76.79	4,997.1	15.8	67.2	-9.9	0.00	0.00	0.00
5,100.0	5.43	76.79	5,096.7	17.9	76.4	-11.2	0.00	0.00	0.00
5,200.0	5.43	76.79	5,196.2	20.1	85.6	-12.6	0.00	0.00	0.00



EOG Resources, Inc.

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 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Ruby 2 Fed Com
 Well: #705H
 Wellbore: OH
 Design: Plan #0.2

Local Co-ordinate Reference: Well #705H
 TVD Reference: KB = 25' @ 3320.0usft
 MD Reference: KB = 25' @ 3320.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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	5.43	76.79	5,295.8	22.3	94.8	-14.0	0.00	0.00	0.00
5,400.0	5.43	76.79	5,395.3	24.4	104.0	-15.3	0.00	0.00	0.00
5,500.0	5.43	76.79	5,494.9	26.6	113.3	-16.7	0.00	0.00	0.00
5,600.0	5.43	76.79	5,594.4	28.8	122.5	-18.0	0.00	0.00	0.00
5,700.0	5.43	76.79	5,694.0	30.9	131.7	-19.4	0.00	0.00	0.00
5,800.0	5.43	76.79	5,793.5	33.1	140.9	-20.7	0.00	0.00	0.00
5,900.0	5.43	76.79	5,893.1	35.3	150.1	-22.1	0.00	0.00	0.00
6,000.0	5.43	76.79	5,992.6	37.4	159.4	-23.4	0.00	0.00	0.00
6,100.0	5.43	76.79	6,092.2	39.6	168.6	-24.8	0.00	0.00	0.00
6,200.0	5.43	76.79	6,191.7	41.7	177.8	-26.2	0.00	0.00	0.00
6,300.0	5.43	76.79	6,291.3	43.9	187.0	-27.5	0.00	0.00	0.00
6,400.0	5.43	76.79	6,390.8	46.1	196.2	-28.9	0.00	0.00	0.00
6,500.0	5.43	76.79	6,490.4	48.2	205.5	-30.2	0.00	0.00	0.00
6,600.0	5.43	76.79	6,589.9	50.4	214.7	-31.6	0.00	0.00	0.00
6,700.0	5.43	76.79	6,689.5	52.6	223.9	-32.9	0.00	0.00	0.00
6,800.0	5.43	76.79	6,789.0	54.7	233.1	-34.3	0.00	0.00	0.00
6,900.0	5.43	76.79	6,888.6	56.9	242.3	-35.7	0.00	0.00	0.00
7,000.0	5.43	76.79	6,988.1	59.1	251.5	-37.0	0.00	0.00	0.00
7,100.0	5.43	76.79	7,087.7	61.2	260.8	-38.4	0.00	0.00	0.00
7,200.0	5.43	76.79	7,187.2	63.4	270.0	-39.7	0.00	0.00	0.00
7,300.0	5.43	76.79	7,286.8	65.6	279.2	-41.1	0.00	0.00	0.00
7,400.0	5.43	76.79	7,386.3	67.7	288.4	-42.4	0.00	0.00	0.00
7,500.0	5.43	76.79	7,485.9	69.9	297.6	-43.8	0.00	0.00	0.00
7,600.0	5.43	76.79	7,585.4	72.0	306.9	-45.2	0.00	0.00	0.00
7,700.0	5.43	76.79	7,685.0	74.2	316.1	-46.5	0.00	0.00	0.00
7,800.0	5.43	76.79	7,784.5	76.4	325.3	-47.9	0.00	0.00	0.00
7,900.0	5.43	76.79	7,884.1	78.5	334.5	-49.2	0.00	0.00	0.00
8,000.0	5.43	76.79	7,983.7	80.7	343.7	-50.6	0.00	0.00	0.00
8,100.0	5.43	76.79	8,083.2	82.9	353.0	-51.9	0.00	0.00	0.00
8,200.0	5.43	76.79	8,182.8	85.0	362.2	-53.3	0.00	0.00	0.00
8,300.0	5.43	76.79	8,282.3	87.2	371.4	-54.7	0.00	0.00	0.00
8,400.0	5.43	76.79	8,381.9	89.4	380.6	-56.0	0.00	0.00	0.00
8,500.0	5.43	76.79	8,481.4	91.5	389.8	-57.4	0.00	0.00	0.00
8,600.0	5.43	76.79	8,581.0	93.7	399.1	-58.7	0.00	0.00	0.00
8,700.0	5.43	76.79	8,680.5	95.9	408.3	-60.1	0.00	0.00	0.00
8,800.0	5.43	76.79	8,780.1	98.0	417.5	-61.4	0.00	0.00	0.00
8,900.0	5.43	76.79	8,879.6	100.2	426.7	-62.8	0.00	0.00	0.00
9,000.0	5.43	76.79	8,979.2	102.4	435.9	-64.2	0.00	0.00	0.00
9,100.0	5.43	76.79	9,078.7	104.5	445.2	-65.5	0.00	0.00	0.00
9,200.0	5.43	76.79	9,178.3	106.7	454.4	-66.9	0.00	0.00	0.00
9,300.0	5.43	76.79	9,277.8	108.8	463.6	-68.2	0.00	0.00	0.00
9,400.0	5.43	76.79	9,377.4	111.0	472.8	-69.6	0.00	0.00	0.00
9,500.0	5.43	76.79	9,476.9	113.2	482.0	-70.9	0.00	0.00	0.00
9,600.0	5.43	76.79	9,576.5	115.3	491.3	-72.3	0.00	0.00	0.00
9,700.0	5.43	76.79	9,676.0	117.5	500.5	-73.6	0.00	0.00	0.00
9,800.0	5.43	76.79	9,775.6	119.7	509.7	-75.0	0.00	0.00	0.00
9,900.0	5.43	76.79	9,875.1	121.8	518.9	-76.4	0.00	0.00	0.00
10,000.0	5.43	76.79	9,974.7	124.0	528.1	-77.7	0.00	0.00	0.00
10,100.0	5.43	76.79	10,074.2	126.2	537.3	-79.1	0.00	0.00	0.00
10,200.0	5.43	76.79	10,173.8	128.3	546.6	-80.4	0.00	0.00	0.00
10,300.0	5.43	76.79	10,273.3	130.5	555.8	-81.8	0.00	0.00	0.00
10,400.0	5.43	76.79	10,372.9	132.7	565.0	-83.1	0.00	0.00	0.00
10,500.0	5.43	76.79	10,472.4	134.8	574.2	-84.5	0.00	0.00	0.00
10,600.0	5.43	76.79	10,572.0	137.0	583.4	-85.9	0.00	0.00	0.00



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 Design: Plan #0.2

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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	5.43	76.79	10,671.5	139.2	592.7	-87.2	0.00	0.00	0.00
10,800.0	5.43	76.79	10,771.1	141.3	601.9	-88.6	0.00	0.00	0.00
10,900.0	5.43	76.79	10,870.6	143.5	611.1	-89.9	0.00	0.00	0.00
11,000.0	5.43	76.79	10,970.2	145.6	620.3	-91.3	0.00	0.00	0.00
11,100.0	5.43	76.79	11,069.7	147.8	629.5	-92.6	0.00	0.00	0.00
11,200.0	5.43	76.79	11,169.3	150.0	638.8	-94.0	0.00	0.00	0.00
11,300.0	5.43	76.79	11,268.8	152.1	648.0	-95.4	0.00	0.00	0.00
11,400.0	5.43	76.79	11,368.4	154.3	657.2	-96.7	0.00	0.00	0.00
11,500.0	5.43	76.79	11,467.9	156.5	666.4	-98.1	0.00	0.00	0.00
11,600.0	5.43	76.79	11,567.5	158.6	675.6	-99.4	0.00	0.00	0.00
11,700.0	5.43	76.79	11,667.0	160.8	684.9	-100.8	0.00	0.00	0.00
11,800.0	5.43	76.79	11,766.6	163.0	694.1	-102.1	0.00	0.00	0.00
11,900.0	5.43	76.79	11,866.1	165.1	703.3	-103.5	0.00	0.00	0.00
12,000.0	5.43	76.79	11,965.7	167.3	712.5	-104.9	0.00	0.00	0.00
12,100.0	5.43	76.79	12,065.2	169.5	721.7	-106.2	0.00	0.00	0.00
12,200.0	5.43	76.79	12,164.8	171.6	731.0	-107.6	0.00	0.00	0.00
12,300.0	5.43	76.79	12,264.3	173.8	740.2	-108.9	0.00	0.00	0.00
12,335.5	5.43	76.79	12,299.7	174.6	743.4	-109.4	0.00	0.00	0.00
12,350.0	5.33	95.37	12,314.1	174.6	744.8	-109.4	12.00	-0.72	128.27
12,375.0	6.38	123.33	12,339.0	173.8	747.1	-108.3	12.00	4.18	111.84
12,400.0	8.42	140.64	12,363.8	171.6	749.4	-105.9	12.00	8.16	69.25
12,425.0	10.91	150.70	12,388.4	168.1	751.7	-102.3	12.00	9.96	40.23
12,450.0	13.60	156.94	12,412.8	163.4	754.1	-97.3	12.00	10.78	24.95
12,475.0	16.40	161.12	12,437.0	157.3	756.3	-91.1	12.00	11.20	16.70
12,500.0	19.26	164.09	12,460.8	150.0	758.6	-83.6	12.00	11.44	11.90
12,525.0	22.16	166.32	12,484.2	141.4	760.9	-74.9	12.00	11.58	8.91
12,550.0	25.08	168.05	12,507.1	131.7	763.1	-65.0	12.00	11.68	6.93
12,575.0	28.01	169.44	12,529.4	120.7	765.3	-53.9	12.00	11.74	5.57
12,600.0	30.96	170.59	12,551.2	108.6	767.4	-41.6	12.00	11.79	4.59
12,625.0	33.91	171.56	12,572.3	95.4	769.5	-28.3	12.00	11.82	3.86
12,650.0	36.87	172.38	12,592.7	81.0	771.5	-13.8	12.00	11.85	3.31
12,675.0	39.84	173.10	12,612.3	65.6	773.4	1.7	12.00	11.87	2.88
12,700.0	42.81	173.74	12,631.0	49.2	775.3	18.2	12.00	11.88	2.55
12,725.0	45.79	174.31	12,648.9	31.9	777.1	35.7	12.00	11.89	2.28
12,750.0	48.76	174.82	12,665.9	13.6	778.9	54.0	12.00	11.90	2.06
12,775.0	51.74	175.29	12,681.9	-5.6	780.5	73.2	12.00	11.91	1.88
12,800.0	54.72	175.73	12,696.8	-25.5	782.1	93.3	12.00	11.92	1.73
12,825.0	57.70	176.13	12,710.7	-46.2	783.6	114.0	12.00	11.93	1.61
12,850.0	60.68	176.50	12,723.5	-67.7	784.9	135.5	12.00	11.93	1.50
12,875.0	63.67	176.86	12,735.2	-89.7	786.2	157.6	12.00	11.93	1.42
12,900.0	66.65	177.19	12,745.7	-112.4	787.4	180.3	12.00	11.94	1.35
12,908.9	67.71	177.31	12,749.2	-120.5	787.8	188.4	12.00	11.94	1.31
FTP (Ruby 2 Fed Com #705H)									
12,925.0	69.64	177.52	12,755.0	-135.6	788.5	203.5	12.00	11.94	1.28
12,950.0	72.62	177.83	12,763.1	-159.2	789.4	227.1	12.00	11.94	1.24
12,975.0	75.61	178.13	12,770.0	-183.2	790.3	251.1	12.00	11.94	1.20
13,000.0	78.60	178.42	12,775.5	-207.6	791.0	275.4	12.00	11.95	1.17
13,025.0	81.58	178.70	12,779.8	-232.2	791.6	300.0	12.00	11.95	1.14
13,050.0	84.57	178.98	12,782.8	-257.0	792.1	324.8	12.00	11.95	1.13
13,075.0	87.56	179.26	12,784.6	-281.9	792.5	349.6	12.00	11.95	1.11
13,095.5	90.00	179.49	12,785.0	-302.4	792.7	370.0	12.00	11.95	1.11
13,100.0	90.00	179.49	12,785.0	-306.9	792.8	374.5	0.00	0.00	0.00
13,200.0	90.00	179.49	12,785.0	-406.9	793.7	474.2	0.00	0.00	0.00



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13,300.0	90.00	179.49	12,785.0	-506.9	794.6	573.9	0.00	0.00	0.00
13,400.0	90.00	179.49	12,785.0	-606.9	795.4	673.6	0.00	0.00	0.00
13,500.0	90.00	179.49	12,785.0	-706.9	796.3	773.3	0.00	0.00	0.00
13,600.0	90.00	179.49	12,785.0	-806.9	797.2	873.0	0.00	0.00	0.00
13,700.0	90.00	179.49	12,785.0	-906.9	798.1	972.7	0.00	0.00	0.00
13,800.0	90.00	179.49	12,785.0	-1,006.9	799.0	1,072.4	0.00	0.00	0.00
13,900.0	90.00	179.49	12,785.0	-1,106.9	799.9	1,172.1	0.00	0.00	0.00
14,000.0	90.00	179.49	12,785.0	-1,206.9	800.8	1,271.8	0.00	0.00	0.00
14,100.0	90.00	179.49	12,785.0	-1,306.9	801.7	1,371.5	0.00	0.00	0.00
14,200.0	90.00	179.49	12,785.0	-1,406.9	802.6	1,471.2	0.00	0.00	0.00
14,300.0	90.00	179.49	12,785.0	-1,506.9	803.5	1,570.9	0.00	0.00	0.00
14,400.0	90.00	179.49	12,785.0	-1,606.9	804.3	1,670.6	0.00	0.00	0.00
14,500.0	90.00	179.49	12,785.0	-1,706.9	805.2	1,770.3	0.00	0.00	0.00
14,600.0	90.00	179.49	12,785.0	-1,806.9	806.1	1,870.0	0.00	0.00	0.00
14,700.0	90.00	179.49	12,785.0	-1,906.9	807.0	1,969.7	0.00	0.00	0.00
14,800.0	90.00	179.49	12,785.0	-2,006.9	807.9	2,069.4	0.00	0.00	0.00
14,900.0	90.00	179.49	12,785.0	-2,106.9	808.8	2,169.1	0.00	0.00	0.00
15,000.0	90.00	179.49	12,785.0	-2,206.9	809.7	2,268.8	0.00	0.00	0.00
15,100.0	90.00	179.49	12,785.0	-2,306.9	810.6	2,368.5	0.00	0.00	0.00
15,200.0	90.00	179.49	12,785.0	-2,406.9	811.5	2,468.2	0.00	0.00	0.00
15,300.0	90.00	179.49	12,785.0	-2,506.8	812.4	2,567.9	0.00	0.00	0.00
15,400.0	90.00	179.49	12,785.0	-2,606.8	813.2	2,667.6	0.00	0.00	0.00
15,500.0	90.00	179.49	12,785.0	-2,706.8	814.1	2,767.3	0.00	0.00	0.00
15,600.0	90.00	179.49	12,785.0	-2,806.8	815.0	2,867.0	0.00	0.00	0.00
15,700.0	90.00	179.49	12,785.0	-2,906.8	815.9	2,966.7	0.00	0.00	0.00
15,800.0	90.00	179.49	12,785.0	-3,006.8	816.8	3,066.3	0.00	0.00	0.00
15,900.0	90.00	179.49	12,785.0	-3,106.8	817.7	3,166.0	0.00	0.00	0.00
16,000.0	90.00	179.49	12,785.0	-3,206.8	818.6	3,265.7	0.00	0.00	0.00
16,100.0	90.00	179.49	12,785.0	-3,306.8	819.5	3,365.4	0.00	0.00	0.00
16,200.0	90.00	179.49	12,785.0	-3,406.8	820.4	3,465.1	0.00	0.00	0.00
16,300.0	90.00	179.49	12,785.0	-3,506.8	821.3	3,564.8	0.00	0.00	0.00
16,400.0	90.00	179.49	12,785.0	-3,606.8	822.1	3,664.5	0.00	0.00	0.00
16,500.0	90.00	179.49	12,785.0	-3,706.8	823.0	3,764.2	0.00	0.00	0.00
16,600.0	90.00	179.49	12,785.0	-3,806.8	823.9	3,863.9	0.00	0.00	0.00
16,700.0	90.00	179.49	12,785.0	-3,906.8	824.8	3,963.6	0.00	0.00	0.00
16,800.0	90.00	179.49	12,785.0	-4,006.8	825.7	4,063.3	0.00	0.00	0.00
16,900.0	90.00	179.49	12,785.0	-4,106.8	826.6	4,163.0	0.00	0.00	0.00
17,000.0	90.00	179.49	12,785.0	-4,206.8	827.5	4,262.7	0.00	0.00	0.00
17,100.0	90.00	179.49	12,785.0	-4,306.8	828.4	4,362.4	0.00	0.00	0.00
17,200.0	90.00	179.49	12,785.0	-4,406.8	829.3	4,462.1	0.00	0.00	0.00
17,300.0	90.00	179.49	12,785.0	-4,506.8	830.2	4,561.8	0.00	0.00	0.00
17,400.0	90.00	179.49	12,785.0	-4,606.8	831.0	4,661.5	0.00	0.00	0.00
17,500.0	90.00	179.49	12,785.0	-4,706.8	831.9	4,761.2	0.00	0.00	0.00
17,600.0	90.00	179.49	12,785.0	-4,806.8	832.8	4,860.9	0.00	0.00	0.00
17,700.0	90.00	179.49	12,785.0	-4,906.8	833.7	4,960.6	0.00	0.00	0.00
17,800.0	90.00	179.49	12,785.0	-5,006.7	834.6	5,060.3	0.00	0.00	0.00
17,900.0	90.00	179.49	12,785.0	-5,106.7	835.5	5,160.0	0.00	0.00	0.00
18,000.0	90.00	179.49	12,785.0	-5,206.7	836.4	5,259.7	0.00	0.00	0.00
18,100.0	90.00	179.49	12,785.0	-5,306.7	837.3	5,359.4	0.00	0.00	0.00
18,200.0	90.00	179.49	12,785.0	-5,406.7	838.2	5,459.1	0.00	0.00	0.00
18,300.0	90.00	179.49	12,785.0	-5,506.7	839.1	5,558.8	0.00	0.00	0.00
18,400.0	90.00	179.49	12,785.0	-5,606.7	840.0	5,658.5	0.00	0.00	0.00
18,500.0	90.00	179.49	12,785.0	-5,706.7	840.8	5,758.1	0.00	0.00	0.00
18,600.0	90.00	179.49	12,785.0	-5,806.7	841.7	5,857.8	0.00	0.00	0.00



EOG Resources, Inc.
Planning Report

Database: EDM 5000.14 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Ruby 2 Fed Com
Well: #705H
Wellbore: OH
Design: Plan #0.2

Local Co-ordinate Reference: Well #705H
TVD Reference: KB = 25' @ 3320.0usft
MD Reference: KB = 25' @ 3320.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
18,700.0	90.00	179.49	12,785.0	-5,906.7	842.6	5,957.5	0.00	0.00	0.00
18,800.0	90.00	179.49	12,785.0	-6,006.7	843.5	6,057.2	0.00	0.00	0.00
18,900.0	90.00	179.49	12,785.0	-6,106.7	844.4	6,156.9	0.00	0.00	0.00
19,000.0	90.00	179.49	12,785.0	-6,206.7	845.3	6,256.6	0.00	0.00	0.00
19,100.0	90.00	179.49	12,785.0	-6,306.7	846.2	6,356.3	0.00	0.00	0.00
19,200.0	90.00	179.49	12,785.0	-6,406.7	847.1	6,456.0	0.00	0.00	0.00
19,300.0	90.00	179.49	12,785.0	-6,506.7	848.0	6,555.7	0.00	0.00	0.00
19,400.0	90.00	179.49	12,785.0	-6,606.7	848.9	6,655.4	0.00	0.00	0.00
19,500.0	90.00	179.49	12,785.0	-6,706.7	849.7	6,755.1	0.00	0.00	0.00
19,600.0	90.00	179.49	12,785.0	-6,806.7	850.6	6,854.8	0.00	0.00	0.00
19,700.0	90.00	179.49	12,785.0	-6,906.7	851.5	6,954.5	0.00	0.00	0.00
19,800.0	90.00	179.49	12,785.0	-7,006.7	852.4	7,054.2	0.00	0.00	0.00
19,900.0	90.00	179.49	12,785.0	-7,106.7	853.3	7,153.9	0.00	0.00	0.00
20,000.0	90.00	179.49	12,785.0	-7,206.7	854.2	7,253.6	0.00	0.00	0.00
20,100.0	90.00	179.49	12,785.0	-7,306.7	855.1	7,353.3	0.00	0.00	0.00
20,200.0	90.00	179.49	12,785.0	-7,406.7	856.0	7,453.0	0.00	0.00	0.00
20,300.0	90.00	179.49	12,785.0	-7,506.6	856.9	7,552.7	0.00	0.00	0.00
20,400.0	90.00	179.49	12,785.0	-7,606.6	857.8	7,652.4	0.00	0.00	0.00
20,500.0	90.00	179.49	12,785.0	-7,706.6	858.6	7,752.1	0.00	0.00	0.00
20,600.0	90.00	179.49	12,785.0	-7,806.6	859.5	7,851.8	0.00	0.00	0.00
20,700.0	90.00	179.49	12,785.0	-7,906.6	860.4	7,951.5	0.00	0.00	0.00
20,800.0	90.00	179.49	12,785.0	-8,006.6	861.3	8,051.2	0.00	0.00	0.00
20,900.0	90.00	179.49	12,785.0	-8,106.6	862.2	8,150.9	0.00	0.00	0.00
21,000.0	90.00	179.49	12,785.0	-8,206.6	863.1	8,250.6	0.00	0.00	0.00
21,100.0	90.00	179.49	12,785.0	-8,306.6	864.0	8,350.3	0.00	0.00	0.00
21,200.0	90.00	179.49	12,785.0	-8,406.6	864.9	8,449.9	0.00	0.00	0.00
21,300.0	90.00	179.49	12,785.0	-8,506.6	865.8	8,549.6	0.00	0.00	0.00
21,400.0	90.00	179.49	12,785.0	-8,606.6	866.7	8,649.3	0.00	0.00	0.00
21,500.0	90.00	179.49	12,785.0	-8,706.6	867.5	8,749.0	0.00	0.00	0.00
21,600.0	90.00	179.49	12,785.0	-8,806.6	868.4	8,848.7	0.00	0.00	0.00
21,700.0	90.00	179.49	12,785.0	-8,906.6	869.3	8,948.4	0.00	0.00	0.00
21,800.0	90.00	179.49	12,785.0	-9,006.6	870.2	9,048.1	0.00	0.00	0.00
21,900.0	90.00	179.49	12,785.0	-9,106.6	871.1	9,147.8	0.00	0.00	0.00
22,000.0	90.00	179.49	12,785.0	-9,206.6	872.0	9,247.5	0.00	0.00	0.00
22,100.0	90.00	179.49	12,785.0	-9,306.6	872.9	9,347.2	0.00	0.00	0.00
22,200.0	90.00	179.49	12,785.0	-9,406.6	873.8	9,446.9	0.00	0.00	0.00
22,300.0	90.00	179.49	12,785.0	-9,506.6	874.7	9,546.6	0.00	0.00	0.00
22,400.0	90.00	179.49	12,785.0	-9,606.6	875.6	9,646.3	0.00	0.00	0.00
22,500.0	90.00	179.49	12,785.0	-9,706.6	876.4	9,746.0	0.00	0.00	0.00
22,600.0	90.00	179.49	12,785.0	-9,806.6	877.3	9,845.7	0.00	0.00	0.00
22,700.0	90.00	179.49	12,785.0	-9,906.6	878.2	9,945.4	0.00	0.00	0.00
22,800.0	90.00	179.49	12,785.0	-10,006.5	879.1	10,045.1	0.00	0.00	0.00
22,899.5	90.00	179.49	12,785.0	-10,106.0	880.0	10,144.2	0.00	0.00	0.00

PBHL (Ruby 2 Fed Com #705H)



EOG Resources, Inc.
Planning Report

Database: EDM 5000.14 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Ruby 2 Fed Com
Well: #705H
Wellbore: OH
Design: Plan #0.2

Local Co-ordinate Reference: Well #705H
TVD Reference: KB = 25' @ 3320.0usft
MD Reference: KB = 25' @ 3320.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL (Ruby 2 Fed Com - plan hits target center - Point	0.00	0.07	12.785.0	-10,106.0	880.0	383,547.00	818,222.00	32° 3' 4.681 N	103° 26' 22.708 W
FTP (Ruby 2 Fed Com # - plan misses target center by 38.8usft at 12908.9usft MD (12749.2 TVD, -120.5 N, 787.8 E) - Point	0.00	0.07	12.785.0	-106.0	791.0	393,547.00	818,133.00	32° 4' 43.639 N	103° 26' 22.780 W

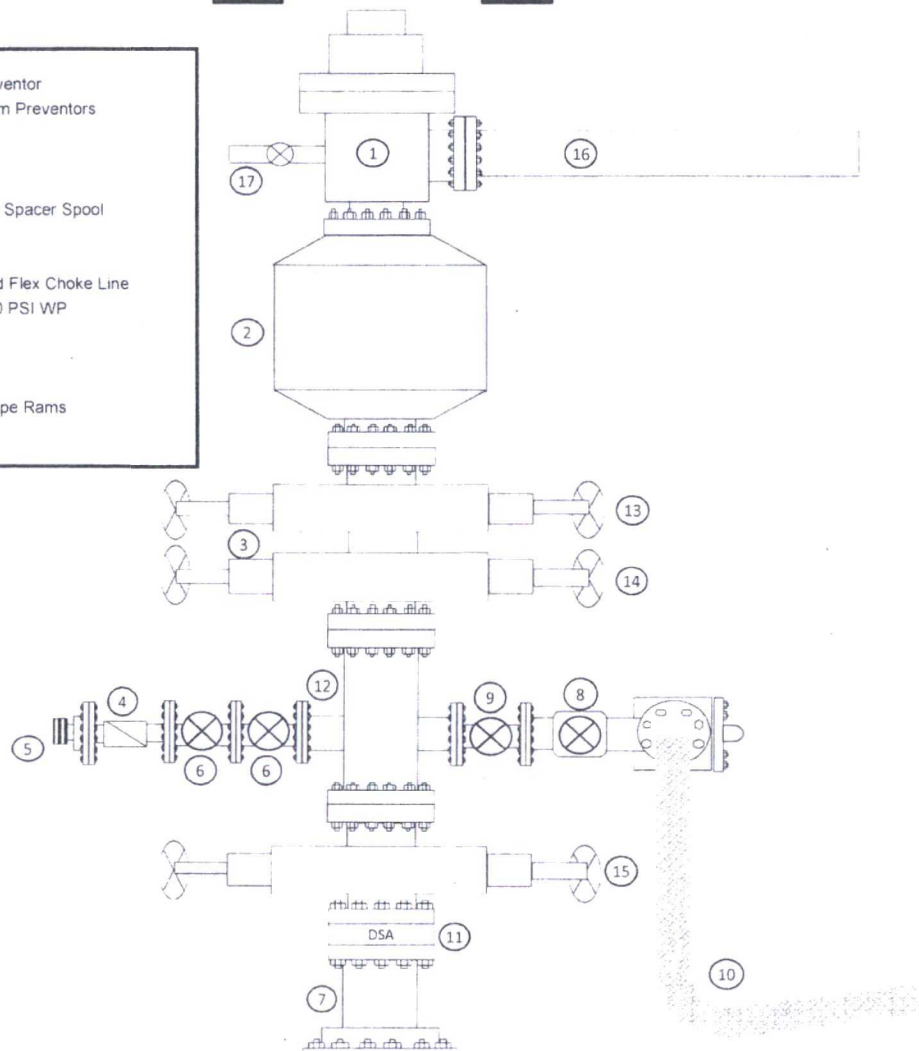
Exhibit 1

EOG Resources

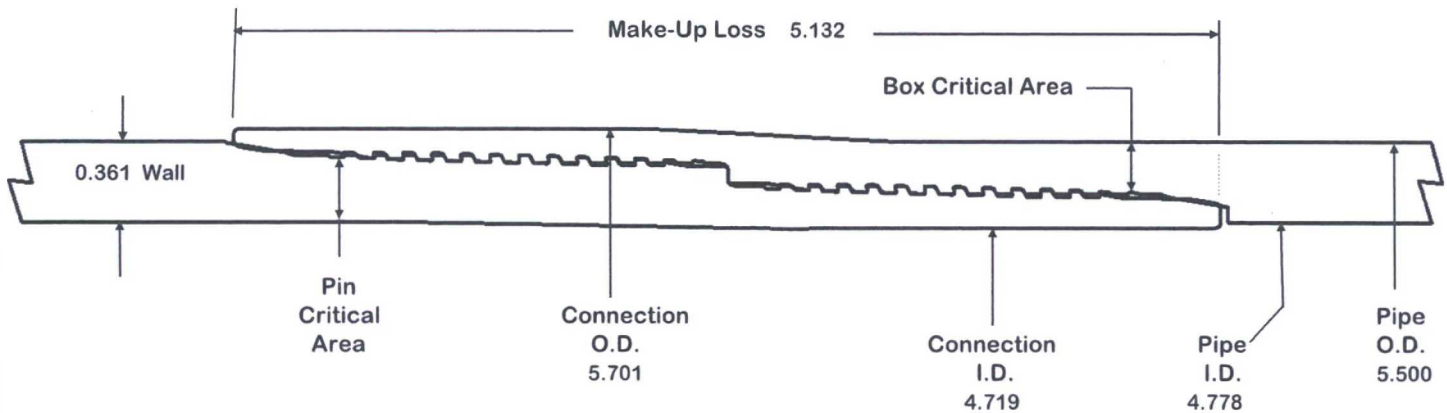
10M BOPE

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



VAM® SFC



O.D.
5.500

WEIGHT
20.00

WALL
0.361

GRADE
VST P110EC

DRIFT
4.653

PIPE BODY PROPERTIES

Material Grade	VST P110EC
Min. Yield Strength	125 ksi
Min. Tensile Strength	135 ksi
Outside Diameter	5.500 in
Inside Diameter	4.778 in
Nominal Area	5.828 sq.in.
Yield Strength	729 kips
Ultimate Strength	787 kips
Min Internal Yield	14,360 psi
*High Collapse	12,090 psi

Contact: tech.support@vam-usa.com
 Ref. Drawing: SI-PD 100414 Rev.B
 Date: 14-Jun-16
 Time: 2:31 PM

CONNECTION PROPERTIES

Connection OD	5.701 in
Connection ID	4.719 in
Make up Loss	5.132 in
Box Critical Area	4.083 sq.in.
%PB Section Area	70.1%
Pin Critical Area	4.123 sq.in.
%PB Section Area	70.7%
Yield Strength	510 kips
Parting Load	551 kips
Min Internal Yield	14,360 psi
*High Collapse	12,090 psi
Wk Compression	357 kips
Max Pure Bending	20 °/100 ft

TORQUE DATA ft-lb

min	opt	max
8,700	9,700	10,700



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TECHNICAL SPECIFICATIONS

These specifications are furnished for general information only and are not intended for design purposes. This information is preliminary and may change subject to a final design by VAM-USA Engineering. This is not a controlled document.

DWC/C-IS MS Casing 5.500" O.D. 20.00 lb./ft. VST P-110EC
standard

Material

VST P-110EC	Grade
125,000	Minimum Yield Strength (psi.)
135,000	Minimum Ultimate Strength (psi.)



Pipe Dimensions

5.500	Nominal Pipe Body OD (in.)
4.778	Nominal Pipe Body ID (in.)
0.361	Nominal Wall Thickness (in.)
20.00	Nominal Weight (lbs./ft.)
19.83	Plain End Weight (lbs./ft.)
5.828	Nominal Pipe Body Area (sq. in.)

VAM-USA
 4424 W. Sam Houston Pkwy, Suite 150
 Houston, TX 77041
 Phone: (713) 479-3200
 Fax: (713) 479-3234
 E-mail: VAMUSAsales@na.vallourec.com

Pipe Body Performance Properties

729,000	Minimum Pipe Body Yield Strength (lbs.)
12,090	Minimum Collapse Pressure (psi.)
14,360	Minimum Internal Yield Pressure (psi.)
13,100	Hydrostatic Test Pressure (psi.)

Connection Dimensions

6.115	Connection OD (in.)
4.778	Connection ID (in.)
4.653	Connection Drift Diameter (in.)
4.13	Make-up Loss (in.)
5.828	Critical Area (sq. in.)
100.0	Joint Efficiency (%)

Connection Performance Properties

729,000	(1)	Joint Strength (lbs.)
26,040	(2)	Reference String Length (ft.) 1.4 Design Factor
728,000	(3)	API Joint Strength (lbs.)
729,000		Compression Rating (lbs.)
12,090		API Collapse Pressure Rating (psi.)
14,360	(4)	API Internal Pressure Resistance (psi.)
104.2		Maximum Uniaxial Bend Rating (degrees/100 ft.)

Approximated Field End Torque Values

16,600	(5)	Minimum Final Torque (ft.-lbs.)
19,100	(5)	Maximum Final Torque (ft.-lbs.)
21,600	(6)	Connection Yield Torque (ft.-lbs.)

- (1) Joint Strength is the minimum pipe body yield strength multiplied by the connection critical area.
- (2) Reference String Length is the joint strength divided by both the weight in air and the design factor.
- (3) API Joint Strength is for reference only. It is calculated from Formulas 42 and 43 in the API Bulletin 5C3.
- (4) API Internal Pressure Resistance is calculated from Formulas 31, 32, and 35 in the API Bulletin 5C3.
- (5) Torque values are approximated and may be affected by field conditions.
- (6) Connection yield torque is not to be exceeded.

Connection specifications within the control of VAM-USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades are obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

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

PIPE PROPERTIES

Nominal OD	7.625 in.
Nominal ID	6.875 in.
Nominal Cross Section Area	8.541 sqin.
Grade Type	High Collapse
Min. Yield Strength	110 ksi
Max. Yield Strength	140 ksi
Min. Ultimate Tensile Strength	125 ksi

CONNECTION PROPERTIES

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

CONNECTION PERFORMANCES

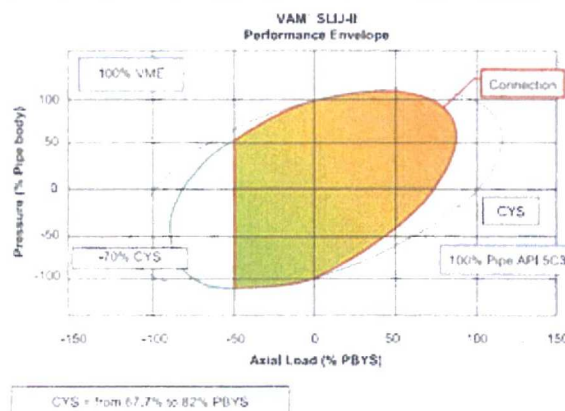
Tensile Yield Strength	651 klb
Compression Resistance	455 klb
Internal Yield Pressure	9470 psi
Uniaxial Collapse Pressure	7890 psi
Max. Bending Capacity	TDB
Max Bending with Sealability	20 °/100 ft

FIELD TORQUE VALUES

Min. Make-up torque	11300 ft.lb
Opti. Make-up torque	12600 ft.lb
Max. Make-up torque	13900 ft.lb

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

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



Do you need help on this product? - Remember no one knows VAM® like VAM

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 usa@vamfieldservice.com
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 australia@vamfieldservice.com

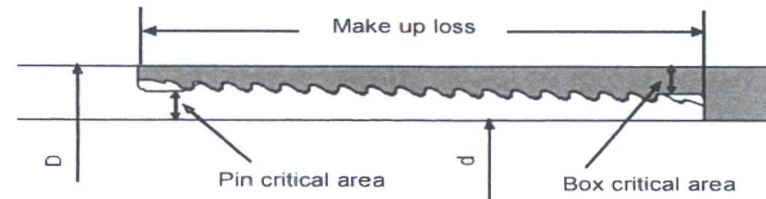
Over 140 VAM® Specialists available worldwide 24/7 for Rig Site Assistance

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

Vallourec Group



FLUSHMAX-III Connection Data Sheet



Pipe Body

	Imperial		S.I.	
Grade	P110		P110	
Pipe OD (D)	7 5/8	in	193.68	mm
Weight	29.7	lb/ft	44.25	kg/m
Actual weight	29.0	lb/ft	43.26	kg/m
Wall thickness (t)	0.375	in	9.53	mm
Pipe ID (d)	6.875	in	174.63	mm
Pipe body cross section	8.537	in ²	5,508	mm ²
Drift Dia.	6.750	in	171.45	mm

Connection

Box OD (W)	7.625	in	193.68	mm
PIN ID	6.875	in	174.63	mm
Pin critical area	4.420	in ²	2,852	mm ²
Box critical area	4.424	in ²	2,854	mm ²
Joint load efficiency	60	%	60	%
Make up loss	3.040	in	77.22	mm
Thread taper	1/16 (3/4 in per ft)			
Number of threads	5 thread per in.			

Connection Performance Properties

Tensile Yield load	563.4	kips	2,506	kN
M.I.Y.P.	7,574	psi	52.2	MPa
Collapse strength	5,350	psi	36.9	MPa

Note

M.I.Y.P. = Minimum Internal Yield Pressure of the connection

Torque Recommended

Min.	8,700	ft-lb	11,700	N-m
Opti.	9,700	ft-lb	13,100	N-m
Max.	10,700	ft-lb	14,500	N-m
Operational Max.	23,600	ft-lb	32,000	N-m

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

EOG Resources Surface Casing Option Request

1. Request for variance for the option to preset surface casing with surface rig:

- a) EOG Requests the option to contract a Surface Rig to drill, set surface casing, and cement on the following subject wells. After WOC 8 hours or 500 psi compressive strength (whichever is greater), the Surface Rig will move off so that 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. See attached wellhead diagram below. If the timing between rigs is such that EOG Resources would not be able to preset surface, the Primary Rig will MIRU and drill the well in its entirety per the APD.

BLM needs to be contacted and notified 24 hrs. prior to commencing the spider rig operation & before the larger rig moves back on the pre-set location. The larger rig needs to move back in within 90 days.

Wellname
ANTIETAM 9 FED COM #701H
ANTIETAM 9 FED COM #702H
ANTIETAM 9 FED COM #703H
ANTIETAM 9 FED COM #704H
COLGROVE FED COM #707H
COLGROVE FED COM #708H
ENDURANCE 36 STATE COM #707H
ENDURANCE 36 STATE COM #708H
HOUND 30 FED #701H
HOUND 30 FED #702H
HOUND 30 FED #703H
HOUND 30 FED #704H
LUCKY 13 FED COM #8H
LUCKY 13 FED COM #9H
TRIGG 5 FED #1