

Form 3160-3  
(June 2015)FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No.
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address	3b. Phone No. (include area code)	9. API Well No. <b>30-025-52552</b>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		10. Field and Pool, or Exploratory
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)		12. County or Parish
16. No of acres in lease		13. State
17. Spacing Unit dedicated to this well		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.		
19. Proposed Depth		
20. BLM/BIA Bond No. in file		
21. Elevations (Show whether DF, KDB, RT, GL, etc.)		
22. Approximate date work will start*		23. Estimated duration
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- |  |   |
|--|---|
| 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 requested by the BLM.            |

25. Signature	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		
Office		

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)



Approval Date: 02/16/2024

## 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 I:** 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.

**ITEM 24:** If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## 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 connects this information to an 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 Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## Additional Operator Remarks

### Location of Well

0. SHL: TR C / 836 FNL / 2298 FWL / TWSP: 25S / RANGE: 34E / SECTION: 15 / LAT: 32.1354741 / LONG: -103.4589149 ( TVD: 0 feet, MD: 0 feet )

PPP: TR C / 100 FNL / 2311 FWL / TWSP: 25S / RANGE: 34E / SECTION: 15 / LAT: 32.1374975 / LONG: -103.4588853 ( TVD: 10075 feet, MD: 10128 feet )

BHL: TR N / 100 FSL / 2311 FWL / TWSP: 25S / RANGE: 34E / SECTION: 15 / LAT: 32.1235364 / LONG: -103.4588981 ( TVD: 10340 feet, MD: 15309 feet )

### BLM Point of Contact

Name: MARIAH HUGHES

Title: Land Law Examiner

Phone: (575) 234-5972

Email: mhughes@blm.gov

### **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.



District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources  
Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

FORM C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office  
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

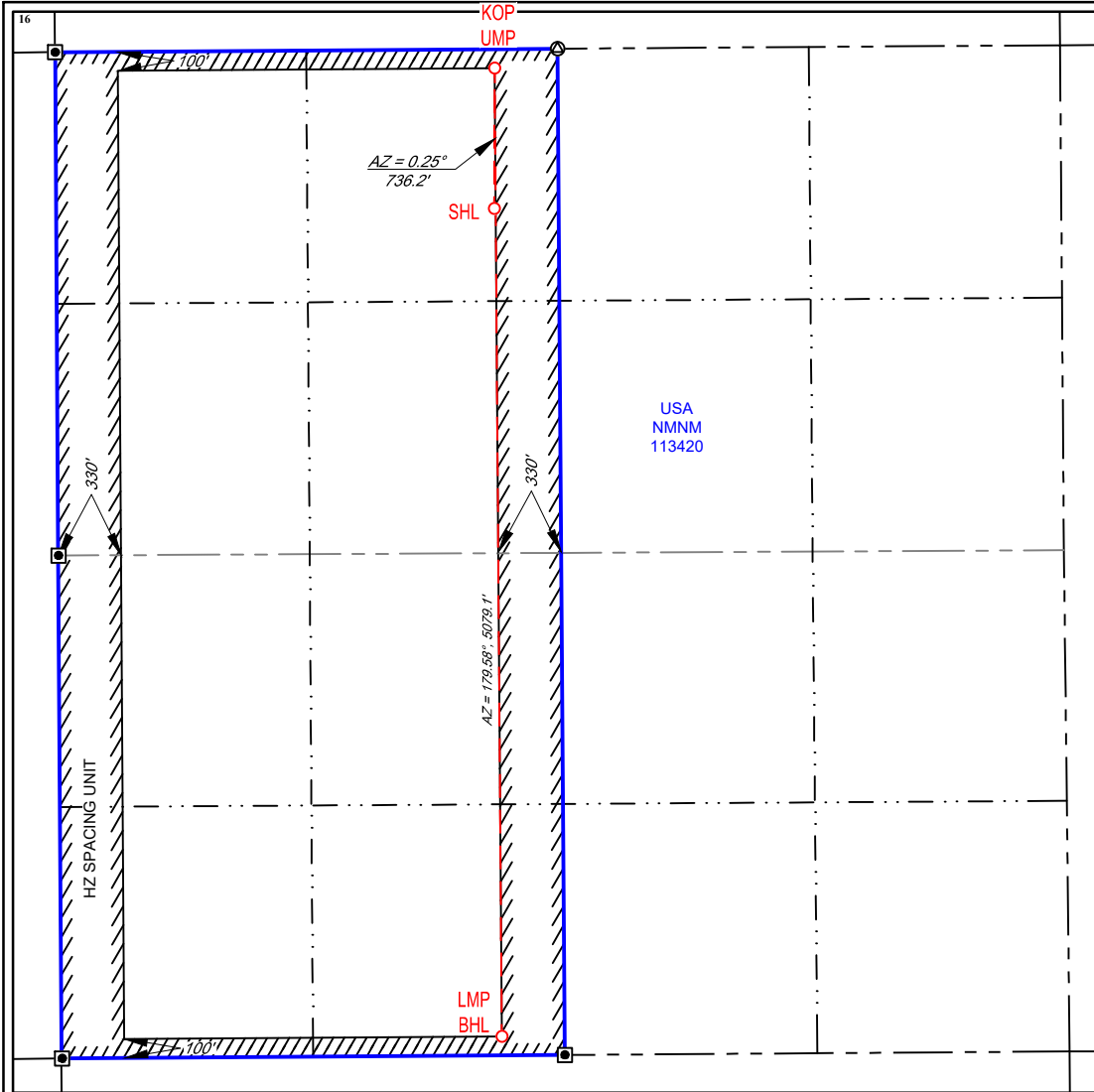
<sup>1</sup> API Number 30-025-30-025-52552		<sup>2</sup> Pool Code 51020	<sup>3</sup> Pool Name RED HILLS;LOWER BONE SPRING
<sup>4</sup> Property Code 317615	<sup>5</sup> Property Name PISTOLERO 15 FED		<sup>6</sup> Well Number 304H
<sup>7</sup> OGRID No. 7377	<sup>8</sup> Operator Name EOG RESOURCES, INC.		<sup>9</sup> Elevation 3334'

<sup>10</sup> Surface Location									
UL or lot no. C	Section 15	Township 25-S	Range 34-E	Lot Idn -	Feet from the 836'	North/South line NORTH	Feet from the 2298'	East/West line WEST	County LEA

<sup>11</sup> Bottom Hole Location If Different From Surface									
UL or lot no. N	Section 15	Township 25-S	Range 34-E	Lot Idn -	Feet from the 100'	North/South line SOUTH	Feet from the 2311'	East/West line WEST	County LEA

<sup>12</sup> Dedicated Acres 320.00	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



<sup>17</sup> OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> <i>Shea Keithley</i> 3/9/23 Signature Date Shea Keithley Printed Name shea.keithley@eogresources.com E-mail Address	
<sup>18</sup> SURVEYOR CERTIFICATION <i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief.</i> 01/22/2023 Date of Survey Signature and Seal of Professional Surveyor 	
Certificate Number	
NEW MEXICO EAST NAD 1927	
<u>SURFACE LOCATION (SHL)</u> 836' FNL - SEC. 15 2298' FWL - SEC. 15 X=812002 Y=414120 LAT.: N 32.1354741 LONG.: W 103.4589149	<u>KICK OFF POINT (KOP)</u> 100' FNL - SEC. 15 2306' FWL - SEC. 15 X=812005 Y=414856 LAT.: N 32.1374975 LONG.: W 103.4588853
<u>LOWER MOST PERF. (LMP)</u> 100' FSL - SEC. 15 2311' FWL - SEC. 15 X=812043 Y=409777 LAT.: N 32.1235364 LONG.: W 103.4588981	<u>BOTTOM HOLE LOCATION (BHL)</u> 100' FSL - SEC. 15 2311' FWL - SEC. 15 X=812043 Y=409777 LAT.: N 32.1235364 LONG.: W 103.4588981

State of New Mexico  
Energy, Minerals and Natural Resources Department

Submit Electronically  
Via E-permitting

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

### **Section 1 – Plan Description** **Effective May 25, 2021**

**I. Operator:** EOG Resources, Inc. **OGRID:** 7377 **Date:** 1/10/2024

**II. Type:** ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: \_\_\_\_\_

**III. Well(s):** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
PISTOLERO 15 FED 304H		C-15-25S-34E	836' FNL & 2298' FWL	+/- 1000	+/- 3500	+/- 3000

**IV. Central Delivery Point Name:** PISTOLERO 15 FED CTB [See 19.15.27.9(D)(1) NMAC]

**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
PISTOLERO 15 FED 304H		2/1/24	2/15/24	4/08/24	5/08/24	6/08/24

**VI. Separation Equipment:** ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

**VII. Operational Practices:** ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

**VIII. Best Management Practices:** ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

## **Section 2 – Enhanced Plan**

### **EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

#### **IX. Anticipated Natural Gas Production:**

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

#### **X. Natural Gas Gathering System (NGGS):**

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

**XI. Map.** ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII. Line Pressure.** Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:** ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

**Section 3 - Certifications****Effective May 25, 2021**

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

***If Operator checks this box, Operator will select one of the following:***

**Well Shut-In.** ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

**Venting and Flaring Plan.** ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

**Section 4 - Notices**

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: <i>Star L Harrell</i>
Printed Name: Star L Harrell
Title: Sr Regulatory Specialist
E-mail Address: Star_Harrell@eogresources.com
Date: 2/10/2024
Phone: (432) 848-9161
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>
Approved By:
Title:
Approval Date:
Conditions of Approval:

**Natural Gas Management Plan****Items VI-VIII****VI. Separation Equipment: Attach a complete description of how Operator will size separation equipment to optimize gas capture.**

- Separation equipment will be sized to provide adequate separation for anticipated rates.
- Adequate separation relates to retention time for Liquid – Liquid separation and velocity for Gas-Liquid separation.
- Collection systems are appropriately sized to handle facility production rates on all (3) phases.
- Ancillary equipment and metering is selected to be serviced without flow interruptions or the need to release gas from the well.

**VII. Operational Practices: Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F 19.15.27.8 NMAC.****Drilling Operations**

- All flare stacks will be properly sized. The flare stacks will be located at a minimum 100' from the nearest surface hole location on the pad.
- All natural gas produced during drilling operations will be flared, unless there is an equipment malfunction and/or to avoid risk of an immediate and substantial adverse impact on safety and the environment, at which point the gas will be vented.

**Completions/Recompletions Operations**

- New wells will not be flowed back until they are connected to a properly sized gathering system.
- The facility will be built/sized for maximum anticipated flowrates and pressures to minimize waste.
- For flowback operations, multiple stages of separation will be used as well as excess VRU and blowers to make sure waste is minimized off the storage tanks and facility.
- During initial flowback, the well stream will be routed to separation equipment.
- At an existing facility, when necessary, post separation natural gas will be flared until it meets pipeline specifications, at which point it will be turned into a collection system.
- At a new facility, post separation natural gas will be vented until storage tanks can safely function, at which point it will be flared until it meets pipeline spec.

**Production Operations**

- Weekly AVOs will be performed on all facilities.
- All flares will be equipped with auto-ignition systems and continuous pilot operations.
- After a well is stabilized from liquid unloading, the well will be turned back into the collection system.
- All plunger lift systems will be optimized to limit the amount of waste.
- All tanks will have automatic gauging equipment installed.
- Leaking thief hatches found during AVOs will be cleaned and properly re-sealed.

**Performance Standards**

- Production equipment will be designed to handle maximum anticipated rates and pressure.
- All flared gas will be combusted in a flare stack that is properly sized and designed to ensure proper combustion.
- Weekly AVOs will be performed on all wells and facilities that produce more than 60 Mcfd.

**Measurement & Estimation**

- All volume that is flared and vented that is not measured will be estimated.
- All measurement equipment for flared volumes will conform to API 14.10.
- No meter bypasses will be installed.

- When metering is not practical due to low pressure/low rate, the vented or flared volume will be estimated.

**VIII. Best Management Practices: Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.**

- During downhole well maintenance, EOG will use best management practices to vent as minimally as possible.
- Prior to the commencement of any maintenance, the tank or vessel will be isolated from the rest of the facilities.
- All valves upstream of the equipment will be closed and isolated.
- After equipment has been isolated, the equipment will be blown down to as low a pressure as possible into the collection system.
- If the equipment being maintained cannot be relieved into the collection system, it shall be released to a tank where the vapor can either be captured or combusted if possible.
- After downhole well maintenance, natural gas will be flared until it reaches pipeline specification.



## **Midland**

**Lea County, NM (NAD 83 NME)  
Pistolero 15 Fed  
#304H**

**OH**

**Plan: Plan #0.1 RT**

## **Standard Planning Report**

**03 March, 2023**





## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #304H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3360.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3360.0usft
<b>Site:</b>	Pistolero 15 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#304H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1 RT		

<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		

Site	Pistolero 15 Fed				
Site Position:		Northing:	414,055.00 usft	Latitude:	32° 8' 7.059 N
From:	Map	Easting:	812,078.00 usft	Longitude:	103° 27' 31.217 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "		

Well	#304H					
Well Position	+N/-S	0.0 usft	Northing:	414,120.00 usft	Latitude:	32° 8' 7.708 N
	+E/-W	0.0 usft	Easting:	812,002.00 usft	Longitude:	103° 27' 32.094 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,334.0 usft
Grid Convergence:		0.47 °				

<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>
	IGRF2020	2/21/2023	6.29	59.78	47,277.48106914

<b>Design</b>	Plan #0.1 RT				
<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	179.46	

<b>Plan Survey Tool Program</b>	<b>Date</b>	3/3/2023			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.0	15,309.2	Plan #0.1 RT (OH)	EOG MWD+IFR1	
				MWD + IFR1	



Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well #304H
Company:	Midland	TVD Reference:	kb = 26' @ 3360.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 26' @ 3360.0usft
Site:	Pistolero 15 Fed	North Reference:	Grid
Well:	#304H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1 RT		

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	
1,268.0	0.00	0.00	1,268.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,601.2	6.66	0.22	1,600.4	19.4	0.1	2.00	2.00	0.00	0.22	
8,040.8	6.66	0.22	7,996.6	766.6	2.9	0.00	0.00	0.00	0.00	
8,374.0	0.00	0.00	8,329.0	786.0	3.0	2.00	-2.00	0.00	180.00	
9,907.5	0.00	0.00	9,862.5	786.0	3.0	0.00	0.00	0.00	0.00	KOP(Pistolero 15 Fed
10,128.0	26.46	180.00	10,075.2	736.0	3.0	12.00	12.00	81.65	180.00	FTP(Pistolero 15 Fed
10,657.5	90.00	179.56	10,339.9	308.5	5.3	12.00	12.00	-0.08	-0.49	
15,309.2	90.00	179.56	10,340.0	-4,343.0	41.0	0.00	0.00	0.00	0.00	PBHL(Pistolero 15 Fe



## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #304H
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<b>Site:</b>	Pistolero 15 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#304H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1 RT		

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
1,268.0	0.00	0.00	1,268.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.64	0.22	1,300.0	0.2	0.0	-0.2	2.00	2.00	0.00
1,400.0	2.64	0.22	1,400.0	3.0	0.0	-3.0	2.00	2.00	0.00
1,500.0	4.64	0.22	1,499.7	9.4	0.0	-9.4	2.00	2.00	0.00
1,601.2	6.66	0.22	1,600.4	19.4	0.1	-19.4	2.00	2.00	0.00
1,700.0	6.66	0.22	1,698.6	30.8	0.1	-30.8	0.00	0.00	0.00
1,800.0	6.66	0.22	1,797.9	42.4	0.2	-42.4	0.00	0.00	0.00
1,900.0	6.66	0.22	1,897.2	54.0	0.2	-54.0	0.00	0.00	0.00
2,000.0	6.66	0.22	1,996.6	65.6	0.3	-65.6	0.00	0.00	0.00
2,100.0	6.66	0.22	2,095.9	77.2	0.3	-77.2	0.00	0.00	0.00
2,200.0	6.66	0.22	2,195.2	88.8	0.3	-88.8	0.00	0.00	0.00
2,300.0	6.66	0.22	2,294.5	100.4	0.4	-100.4	0.00	0.00	0.00
2,400.0	6.66	0.22	2,393.9	112.1	0.4	-112.0	0.00	0.00	0.00
2,500.0	6.66	0.22	2,493.2	123.7	0.5	-123.6	0.00	0.00	0.00
2,600.0	6.66	0.22	2,592.5	135.3	0.5	-135.3	0.00	0.00	0.00
2,700.0	6.66	0.22	2,691.8	146.9	0.6	-146.9	0.00	0.00	0.00
2,800.0	6.66	0.22	2,791.1	158.5	0.6	-158.5	0.00	0.00	0.00
2,900.0	6.66	0.22	2,890.5	170.1	0.6	-170.1	0.00	0.00	0.00
3,000.0	6.66	0.22	2,989.8	181.7	0.7	-181.7	0.00	0.00	0.00
3,100.0	6.66	0.22	3,089.1	193.3	0.7	-193.3	0.00	0.00	0.00
3,200.0	6.66	0.22	3,188.4	204.9	0.8	-204.9	0.00	0.00	0.00
3,300.0	6.66	0.22	3,287.8	216.5	0.8	-216.5	0.00	0.00	0.00
3,400.0	6.66	0.22	3,387.1	228.1	0.9	-228.1	0.00	0.00	0.00
3,500.0	6.66	0.22	3,486.4	239.7	0.9	-239.7	0.00	0.00	0.00
3,600.0	6.66	0.22	3,585.7	251.3	1.0	-251.3	0.00	0.00	0.00
3,700.0	6.66	0.22	3,685.1	262.9	1.0	-262.9	0.00	0.00	0.00
3,800.0	6.66	0.22	3,784.4	274.5	1.0	-274.5	0.00	0.00	0.00
3,900.0	6.66	0.22	3,883.7	286.1	1.1	-286.1	0.00	0.00	0.00
4,000.0	6.66	0.22	3,983.0	297.7	1.1	-297.7	0.00	0.00	0.00
4,100.0	6.66	0.22	4,082.4	309.3	1.2	-309.3	0.00	0.00	0.00
4,200.0	6.66	0.22	4,181.7	320.9	1.2	-320.9	0.00	0.00	0.00
4,300.0	6.66	0.22	4,281.0	332.5	1.3	-332.5	0.00	0.00	0.00
4,400.0	6.66	0.22	4,380.3	344.1	1.3	-344.1	0.00	0.00	0.00
4,500.0	6.66	0.22	4,479.7	355.7	1.4	-355.7	0.00	0.00	0.00
4,600.0	6.66	0.22	4,579.0	367.4	1.4	-367.3	0.00	0.00	0.00
4,700.0	6.66	0.22	4,678.3	379.0	1.4	-378.9	0.00	0.00	0.00
4,800.0	6.66	0.22	4,777.6	390.6	1.5	-390.5	0.00	0.00	0.00
4,900.0	6.66	0.22	4,877.0	402.2	1.5	-402.1	0.00	0.00	0.00
5,000.0	6.66	0.22	4,976.3	413.8	1.6	-413.7	0.00	0.00	0.00
5,100.0	6.66	0.22	5,075.6	425.4	1.6	-425.3	0.00	0.00	0.00
5,200.0	6.66	0.22	5,174.9	437.0	1.7	-436.9	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #304H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3360.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3360.0usft
<b>Site:</b>	Pistolero 15 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#304H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1 RT		

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	6.66	0.22	5,274.3	448.6	1.7	-448.5	0.00	0.00	0.00	
5,400.0	6.66	0.22	5,373.6	460.2	1.8	-460.2	0.00	0.00	0.00	
5,500.0	6.66	0.22	5,472.9	471.8	1.8	-471.8	0.00	0.00	0.00	
5,600.0	6.66	0.22	5,572.2	483.4	1.8	-483.4	0.00	0.00	0.00	
5,700.0	6.66	0.22	5,671.6	495.0	1.9	-495.0	0.00	0.00	0.00	
5,800.0	6.66	0.22	5,770.9	506.6	1.9	-506.6	0.00	0.00	0.00	
5,900.0	6.66	0.22	5,870.2	518.2	2.0	-518.2	0.00	0.00	0.00	
6,000.0	6.66	0.22	5,969.5	529.8	2.0	-529.8	0.00	0.00	0.00	
6,100.0	6.66	0.22	6,068.9	541.4	2.1	-541.4	0.00	0.00	0.00	
6,200.0	6.66	0.22	6,168.2	553.0	2.1	-553.0	0.00	0.00	0.00	
6,300.0	6.66	0.22	6,267.5	564.6	2.2	-564.6	0.00	0.00	0.00	
6,400.0	6.66	0.22	6,366.8	576.2	2.2	-576.2	0.00	0.00	0.00	
6,500.0	6.66	0.22	6,466.2	587.8	2.2	-587.8	0.00	0.00	0.00	
6,600.0	6.66	0.22	6,565.5	599.4	2.3	-599.4	0.00	0.00	0.00	
6,700.0	6.66	0.22	6,664.8	611.0	2.3	-611.0	0.00	0.00	0.00	
6,800.0	6.66	0.22	6,764.1	622.7	2.4	-622.6	0.00	0.00	0.00	
6,900.0	6.66	0.22	6,863.4	634.3	2.4	-634.2	0.00	0.00	0.00	
7,000.0	6.66	0.22	6,962.8	645.9	2.5	-645.8	0.00	0.00	0.00	
7,100.0	6.66	0.22	7,062.1	657.5	2.5	-657.4	0.00	0.00	0.00	
7,200.0	6.66	0.22	7,161.4	669.1	2.6	-669.0	0.00	0.00	0.00	
7,300.0	6.66	0.22	7,260.7	680.7	2.6	-680.6	0.00	0.00	0.00	
7,400.0	6.66	0.22	7,360.1	692.3	2.6	-692.2	0.00	0.00	0.00	
7,500.0	6.66	0.22	7,459.4	703.9	2.7	-703.8	0.00	0.00	0.00	
7,600.0	6.66	0.22	7,558.7	715.5	2.7	-715.4	0.00	0.00	0.00	
7,700.0	6.66	0.22	7,658.0	727.1	2.8	-727.0	0.00	0.00	0.00	
7,800.0	6.66	0.22	7,757.4	738.7	2.8	-738.6	0.00	0.00	0.00	
7,900.0	6.66	0.22	7,856.7	750.3	2.9	-750.2	0.00	0.00	0.00	
8,000.0	6.66	0.22	7,956.0	761.9	2.9	-761.8	0.00	0.00	0.00	
8,040.8	6.66	0.22	7,996.6	766.6	2.9	-766.6	0.00	0.00	0.00	
8,100.0	5.48	0.22	8,055.4	772.9	3.0	-772.8	2.00	-2.00	0.00	
8,200.0	3.48	0.22	8,155.1	780.7	3.0	-780.7	2.00	-2.00	0.00	
8,300.0	1.48	0.22	8,255.0	785.0	3.0	-785.0	2.00	-2.00	0.00	
8,374.0	0.00	0.00	8,329.0	786.0	3.0	-785.9	2.00	-2.00	0.00	
8,400.0	0.00	0.00	8,355.0	786.0	3.0	-785.9	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,455.0	786.0	3.0	-785.9	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,555.0	786.0	3.0	-785.9	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,655.0	786.0	3.0	-785.9	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,755.0	786.0	3.0	-785.9	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,855.0	786.0	3.0	-785.9	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,955.0	786.0	3.0	-785.9	0.00	0.00	0.00	
9,100.0	0.00	0.00	9,055.0	786.0	3.0	-785.9	0.00	0.00	0.00	
9,200.0	0.00	0.00	9,155.0	786.0	3.0	-785.9	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,255.0	786.0	3.0	-785.9	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,355.0	786.0	3.0	-785.9	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,455.0	786.0	3.0	-785.9	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,555.0	786.0	3.0	-785.9	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,655.0	786.0	3.0	-785.9	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,755.0	786.0	3.0	-785.9	0.00	0.00	0.00	
9,907.5	0.00	0.00	9,862.5	786.0	3.0	-785.9	0.00	0.00	0.00	
9,925.0	2.10	180.00	9,880.0	785.7	3.0	-785.6	12.00	12.00	0.00	
9,950.0	5.10	180.00	9,904.9	784.1	3.0	-784.0	12.00	12.00	0.00	
9,975.0	8.10	180.00	9,929.8	781.2	3.0	-781.2	12.00	12.00	0.00	
10,000.0	11.10	180.00	9,954.4	777.1	3.0	-777.0	12.00	12.00	0.00	
10,025.0	14.10	180.00	9,978.8	771.6	3.0	-771.6	12.00	12.00	0.00	



## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #304H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3360.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3360.0usft
<b>Site:</b>	Pistolero 15 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#304H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1 RT		

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)	
10,050.0	17.10	180.00	10,002.9	764.9	3.0	-764.8	12.00	12.00	0.00	
10,075.0	20.10	180.00	10,026.6	756.9	3.0	-756.9	12.00	12.00	0.00	
10,100.0	23.10	180.00	10,049.8	747.7	3.0	-747.7	12.00	12.00	0.00	
10,125.0	26.10	180.00	10,072.5	737.3	3.0	-737.2	12.00	12.00	0.00	
10,128.0	26.46	180.00	10,075.2	736.0	3.0	-735.9	12.00	12.00	0.00	
10,150.0	29.10	179.95	10,094.7	725.7	3.0	-725.7	12.00	12.00	-0.21	
10,175.0	32.10	179.91	10,116.2	713.0	3.0	-712.9	12.00	12.00	-0.18	
10,200.0	35.10	179.87	10,137.0	699.2	3.0	-699.1	12.00	12.00	-0.15	
10,225.0	38.10	179.84	10,157.1	684.3	3.1	-684.2	12.00	12.00	-0.13	
10,250.0	41.10	179.81	10,176.4	668.3	3.1	-668.3	12.00	12.00	-0.11	
10,275.0	44.10	179.79	10,194.8	651.4	3.2	-651.4	12.00	12.00	-0.10	
10,300.0	47.10	179.76	10,212.3	633.6	3.3	-633.5	12.00	12.00	-0.09	
10,325.0	50.10	179.74	10,228.8	614.8	3.3	-614.7	12.00	12.00	-0.08	
10,350.0	53.10	179.72	10,244.3	595.2	3.4	-595.2	12.00	12.00	-0.07	
10,375.0	56.10	179.71	10,258.8	574.8	3.5	-574.8	12.00	12.00	-0.07	
10,400.0	59.10	179.69	10,272.2	553.7	3.6	-553.7	12.00	12.00	-0.06	
10,425.0	62.10	179.68	10,284.5	532.0	3.8	-531.9	12.00	12.00	-0.06	
10,450.0	65.10	179.66	10,295.6	509.6	3.9	-509.5	12.00	12.00	-0.06	
10,475.0	68.10	179.65	10,305.5	486.6	4.0	-486.6	12.00	12.00	-0.05	
10,500.0	71.10	179.63	10,314.2	463.2	4.2	-463.1	12.00	12.00	-0.05	
10,525.0	74.10	179.62	10,321.7	439.3	4.3	-439.3	12.00	12.00	-0.05	
10,550.0	77.10	179.61	10,327.9	415.1	4.5	-415.1	12.00	12.00	-0.05	
10,575.0	80.10	179.60	10,332.8	390.6	4.7	-390.6	12.00	12.00	-0.05	
10,600.0	83.10	179.59	10,336.5	365.9	4.8	-365.8	12.00	12.00	-0.05	
10,625.0	86.10	179.57	10,338.8	341.0	5.0	-340.9	12.00	12.00	-0.05	
10,650.0	89.10	179.56	10,339.9	316.0	5.2	-316.0	12.00	12.00	-0.05	
10,657.5	90.00	179.56	10,339.9	308.5	5.3	-308.5	12.00	12.00	-0.05	
10,700.0	90.00	179.56	10,339.9	266.0	5.6	-266.0	0.00	0.00	0.00	
10,800.0	90.00	179.56	10,339.9	166.0	6.4	-166.0	0.00	0.00	0.00	
10,900.0	90.00	179.56	10,339.9	66.0	7.1	-66.0	0.00	0.00	0.00	
11,000.0	90.00	179.56	10,339.9	-34.0	7.9	34.0	0.00	0.00	0.00	
11,100.0	90.00	179.56	10,340.0	-134.0	8.7	134.0	0.00	0.00	0.00	
11,200.0	90.00	179.56	10,340.0	-233.9	9.4	234.0	0.00	0.00	0.00	
11,300.0	90.00	179.56	10,340.0	-333.9	10.2	334.0	0.00	0.00	0.00	
11,400.0	90.00	179.56	10,340.0	-433.9	11.0	434.0	0.00	0.00	0.00	
11,500.0	90.00	179.56	10,340.0	-533.9	11.7	534.0	0.00	0.00	0.00	
11,600.0	90.00	179.56	10,340.0	-633.9	12.5	634.0	0.00	0.00	0.00	
11,700.0	90.00	179.56	10,340.0	-733.9	13.3	734.0	0.00	0.00	0.00	
11,800.0	90.00	179.56	10,340.0	-833.9	14.0	834.0	0.00	0.00	0.00	
11,900.0	90.00	179.56	10,340.0	-933.9	14.8	934.0	0.00	0.00	0.00	
12,000.0	90.00	179.56	10,340.0	-1,033.9	15.6	1,034.0	0.00	0.00	0.00	
12,100.0	90.00	179.56	10,340.0	-1,133.9	16.4	1,134.0	0.00	0.00	0.00	
12,200.0	90.00	179.56	10,340.0	-1,233.9	17.1	1,234.0	0.00	0.00	0.00	
12,300.0	90.00	179.56	10,340.0	-1,333.9	17.9	1,334.0	0.00	0.00	0.00	
12,400.0	90.00	179.56	10,340.0	-1,433.9	18.7	1,434.0	0.00	0.00	0.00	
12,500.0	90.00	179.56	10,340.0	-1,533.9	19.4	1,534.0	0.00	0.00	0.00	
12,600.0	90.00	179.56	10,340.0	-1,633.9	20.2	1,634.0	0.00	0.00	0.00	
12,700.0	90.00	179.56	10,340.0	-1,733.9	21.0	1,734.0	0.00	0.00	0.00	
12,800.0	90.00	179.56	10,340.0	-1,833.9	21.7	1,834.0	0.00	0.00	0.00	
12,900.0	90.00	179.56	10,340.0	-1,933.9	22.5	1,934.0	0.00	0.00	0.00	
13,000.0	90.00	179.56	10,340.0	-2,033.9	23.3	2,034.0	0.00	0.00	0.00	
13,100.0	90.00	179.56	10,340.0	-2,133.9	24.0	2,134.0	0.00	0.00	0.00	
13,200.0	90.00	179.56	10,340.0	-2,233.9	24.8	2,234.0	0.00	0.00	0.00	
13,300.0	90.00	179.56	10,340.0	-2,333.9	25.6	2,334.0	0.00	0.00	0.00	



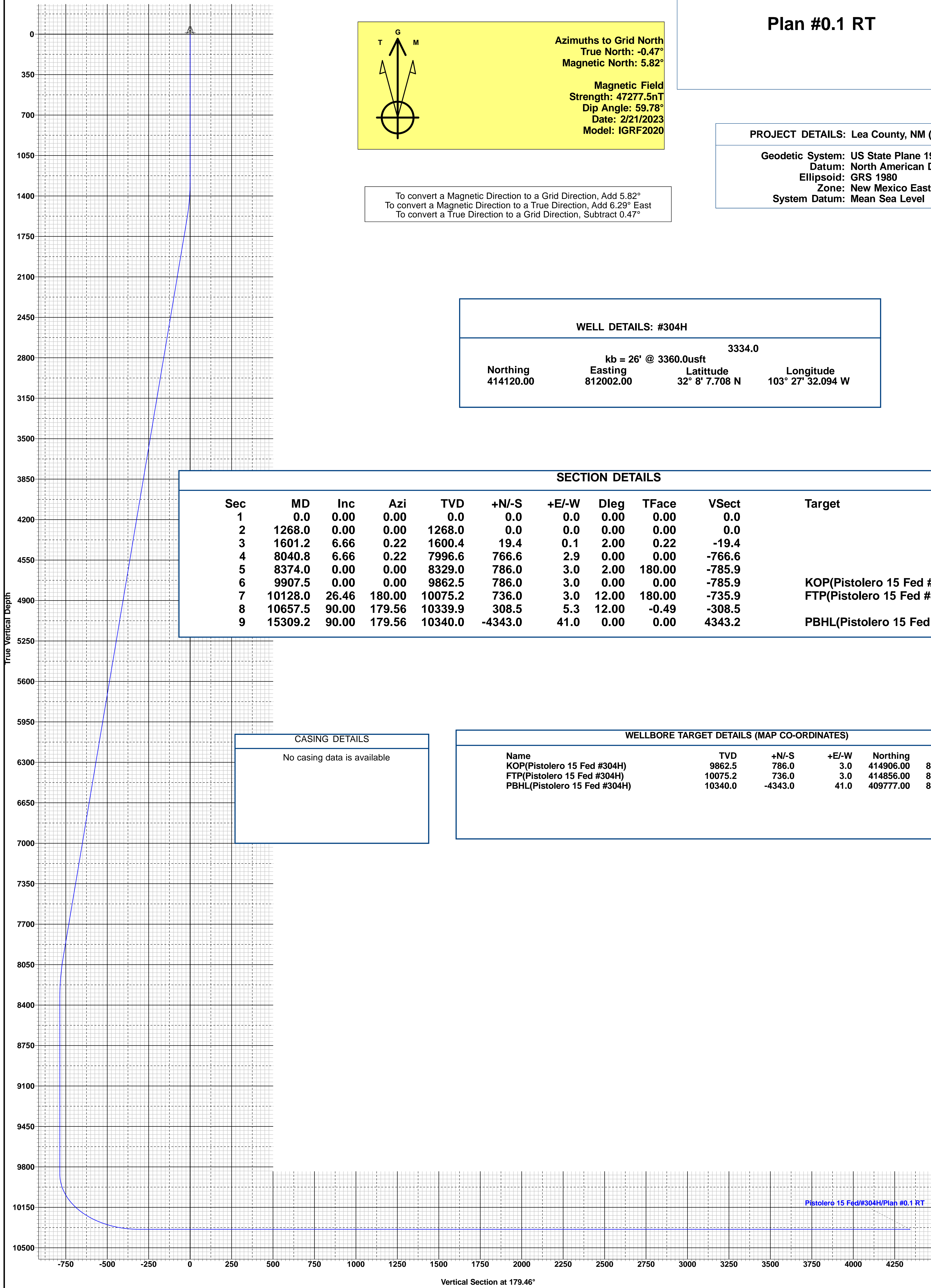
## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #304H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3360.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3360.0usft
<b>Site:</b>	Pistolero 15 Fed	<b>North Reference:</b>	Grid
<b>Well:</b>	#304H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #0.1 RT		

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)	
13,400.0	90.00	179.56	10,340.0	-2,433.9	26.3	2,434.0	0.00	0.00	0.00	
13,500.0	90.00	179.56	10,340.0	-2,533.9	27.1	2,534.0	0.00	0.00	0.00	
13,600.0	90.00	179.56	10,340.0	-2,633.9	27.9	2,634.0	0.00	0.00	0.00	
13,700.0	90.00	179.56	10,340.0	-2,733.9	28.6	2,734.0	0.00	0.00	0.00	
13,800.0	90.00	179.56	10,340.0	-2,833.9	29.4	2,834.0	0.00	0.00	0.00	
13,900.0	90.00	179.56	10,340.0	-2,933.9	30.2	2,934.0	0.00	0.00	0.00	
14,000.0	90.00	179.56	10,340.0	-3,033.9	30.9	3,034.0	0.00	0.00	0.00	
14,100.0	90.00	179.56	10,340.0	-3,133.9	31.7	3,134.0	0.00	0.00	0.00	
14,200.0	90.00	179.56	10,340.0	-3,233.9	32.5	3,234.0	0.00	0.00	0.00	
14,300.0	90.00	179.56	10,340.0	-3,333.9	33.2	3,334.0	0.00	0.00	0.00	
14,400.0	90.00	179.56	10,340.0	-3,433.9	34.0	3,434.0	0.00	0.00	0.00	
14,500.0	90.00	179.56	10,340.0	-3,533.9	34.8	3,534.0	0.00	0.00	0.00	
14,600.0	90.00	179.56	10,340.0	-3,633.8	35.6	3,634.0	0.00	0.00	0.00	
14,700.0	90.00	179.56	10,340.0	-3,733.8	36.3	3,734.0	0.00	0.00	0.00	
14,800.0	90.00	179.56	10,340.0	-3,833.8	37.1	3,834.0	0.00	0.00	0.00	
14,900.0	90.00	179.56	10,340.0	-3,933.8	37.9	3,934.0	0.00	0.00	0.00	
15,000.0	90.00	179.56	10,340.0	-4,033.8	38.6	4,034.0	0.00	0.00	0.00	
15,100.0	90.00	179.56	10,340.0	-4,133.8	39.4	4,134.0	0.00	0.00	0.00	
15,200.0	90.00	179.56	10,340.0	-4,233.8	40.2	4,234.0	0.00	0.00	0.00	
15,309.2	90.00	179.56	10,340.0	-4,343.0	41.0	4,343.2	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	
- hit/miss target									
- Shape									
KOP(Pistolero 15 Fed #1 - plan hits target center - Point	0.00	0.00	9,862.5	786.0	3.0	414,906.00	812,005.00	32° 8' 15.485 N 103° 27' 31.985 W	
FTP(Pistolero 15 Fed #3 - plan hits target center - Point	0.00	0.00	10,075.2	736.0	3.0	414,856.00	812,005.00	32° 8' 14.990 N 103° 27' 31.990 W	
PBHL(Pistolero 15 Fed # - plan hits target center - Point	0.00	0.00	10,340.0	-4,343.0	41.0	409,777.00	812,043.00	32° 7' 24.730 N 103° 27' 32.028 W	





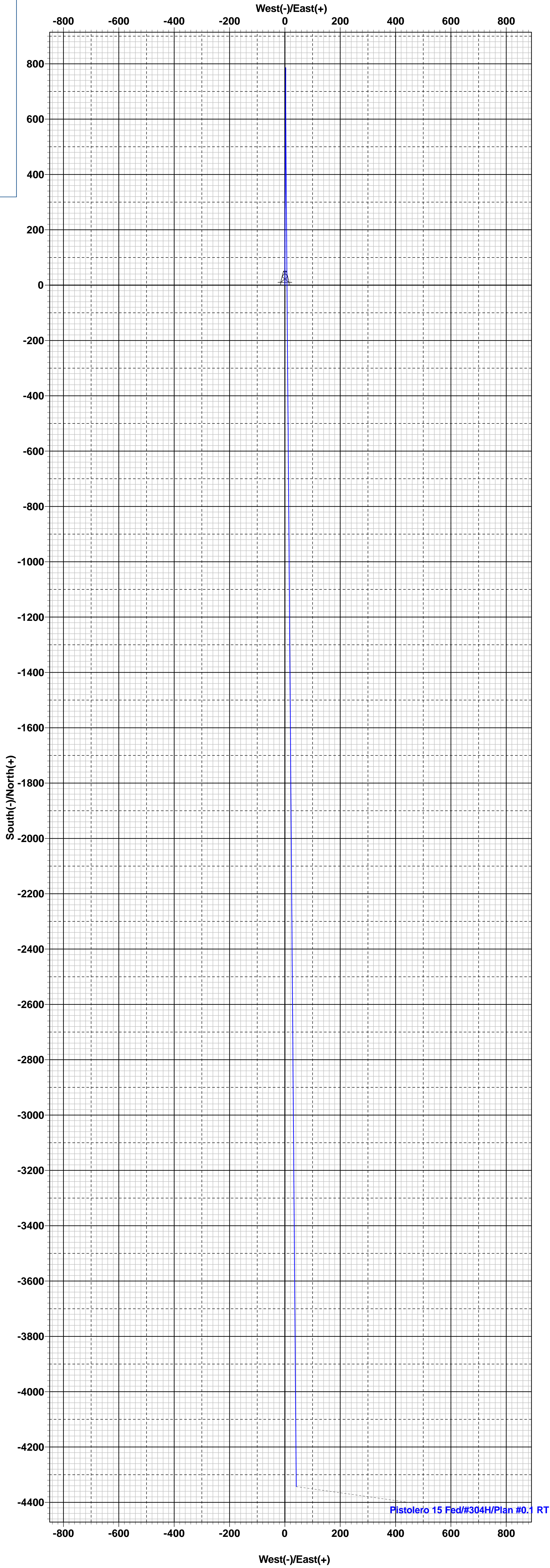
To convert a Magnetic Direction to a Grid Direction, Add 5.82°  
To convert a Magnetic Direction to a True Direction, Add 6.29° East  
To convert a True Direction to a Grid Direction, Subtract 0.47°

WELL DETAILS: #304H				
kb = 26' @ 3360.0usft				
3334.0				
Northing	Easting	Latitude	Longitude	
414120.00	812002.00	32° 8' 7.708 N	103° 27' 32.094 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	1268.0	0.00	0.00	1268.0	0.0	0.0	0.00	0.00	0.0	
3	1601.2	6.66	0.22	1600.4	19.4	0.1	2.00	0.22	-19.4	
4	8040.8	6.66	0.22	7996.6	766.6	2.9	0.00	0.00	-766.6	
5	8374.0	0.00	0.00	8329.0	786.0	3.0	2.00	180.00	-785.9	
6	9907.5	0.00	0.00	9862.5	786.0	3.0	0.00	0.00	-785.9	KOP(Pistolero 15 Fed #304H)
7	10128.0	26.46	180.00	10075.2	736.0	3.0	12.00	180.00	-735.9	FTP(Pistolero 15 Fed #304H)
8	10657.5	90.00	179.56	10339.9	308.5	5.3	12.00	-0.49	-308.5	
9	15309.2	90.00	179.56	10340.0	-4343.0	41.0	0.00	0.00	4343.2	PBHL(Pistolero 15 Fed #304H)

CASING DETAILS
No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)					
Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP(Pistolero 15 Fed #304H)	9862.5	786.0	3.0	414906.00	812005.00
FTP(Pistolero 15 Fed #304H)	10075.2	736.0	3.0	414856.00	812005.00
PBHL(Pistolero 15 Fed #304H)	10340.0	-4343.0	41.0	409777.00	812043.00



## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	EOG RESOURCES INCORPORATED
WELL NAME & NO.:	PISTOLERO 15 FED 304H
SURFACE HOLE FOOTAGE:	819'/N & 2425'/W
BOTTOM HOLE FOOTAGE:	100'/S & 2311'/W
LOCATION:	Section 15, T.25 S., R.34 E.
COUNTY:	Lea County, New Mexico

COA

H2S	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Wellhead Variance	<input type="radio"/> Diverter		
Other	<input type="checkbox"/> 4 String	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input type="checkbox"/> Fluid Filled	<input type="checkbox"/> Pilot Hole	<input type="checkbox"/> Open Annulus
Cementing	<input type="checkbox"/> Contingency Cement Squeeze	<input type="checkbox"/> EchoMeter	<input type="checkbox"/> Primary Cement Squeeze
Special Requirements	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input type="checkbox"/> Unit
Special Requirements	<input type="checkbox"/> Batch Sundry		
Special Requirements Variance	<input checked="" type="checkbox"/> Break Testing	<input checked="" type="checkbox"/> Offline Cementing	<input checked="" type="checkbox"/> Casing Clearance

### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated AT SPUD. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

### B. CASING

#### Primary Casing Design:

- The 13-3/8 inch surface casing shall be set at approximately **990** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.



- a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The **9-5/8** inch intermediate casing shall be set at approximately **5,190** feet **TVD**.
    - **Mud weight could brine up to 10.2ppg. Reviewed and OK**
    - **Keep casing full during run for collapse SF**

The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

**Option 1 (Single Stage):**

- Cement to surface. If cement does not circulate see B.1.a, c-d above.
3. The **5-1/2** inch production casing shall be set at approximately **15,309** feet. The minimum required fill of cement behind the **5-1/2** inch production casing is:

**Option 1 (Single Stage):**

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

**Alternative Design:**

1. The **10-3/4** inch surface casing shall be set at approximately **990** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8**

- hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The **8-5/8** inch intermediate casing shall be set at approximately **5,190** feet **TVD**. **Mud weight could brine up to 10.2ppg. Reviewed and is OK.** The minimum required fill of cement behind the **8-5/8** inch intermediate casing is:

**Option 1 (Single Stage):**

- Cement to surface. If cement does not circulate see B.1.a, c-d above.
3. The **5-1/2** inch production casing shall be set at approximately **15,309** feet. The minimum required fill of cement behind the **5-1/2** inch production casing is:

**Option 1 (Single Stage):**

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

**C. PRESSURE CONTROL**

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 3500 (70% Working Pressure) psi.**
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

- e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

#### **D. SPECIAL REQUIREMENT (S)**

**(Note: For a minimum 5M BOPE or less (Utilizing a 10M BOPE system)**

##### **BOPE Break Testing Variance**

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. (**Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP**)
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (**575-706-2779**) prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-689-5981 Lea County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 43 CFR part 3170 Subpart 3172.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

##### **Offline Cementing**

Offline cementing OK for surface and intermediate intervals. Notify the BLM prior to the commencement of any offline cementing procedure.

##### **Casing Clearance:**

- Overlap OK
- Salt annular variance reviewed and OK.

Operator shall clean up cycles until wellbore is clear of cuttings and any large debris, ensure cutting sizes are adequate "coffee ground or less" before cementing.

## **GENERAL REQUIREMENTS**

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)

## c. BOPE tests (minimum of 4 hours)

☒ Eddy County

**EMAIL** or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

[BLM\\_NM\\_CFO\\_DrillingNotifications@BLM.GOV](mailto:BLM_NM_CFO_DrillingNotifications@BLM.GOV)

(575) 361-2822

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,

(575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

## A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e.

changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172** and **API STD 53 Sec. 5.3**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-

off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.

C. DRILLING MUD



Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

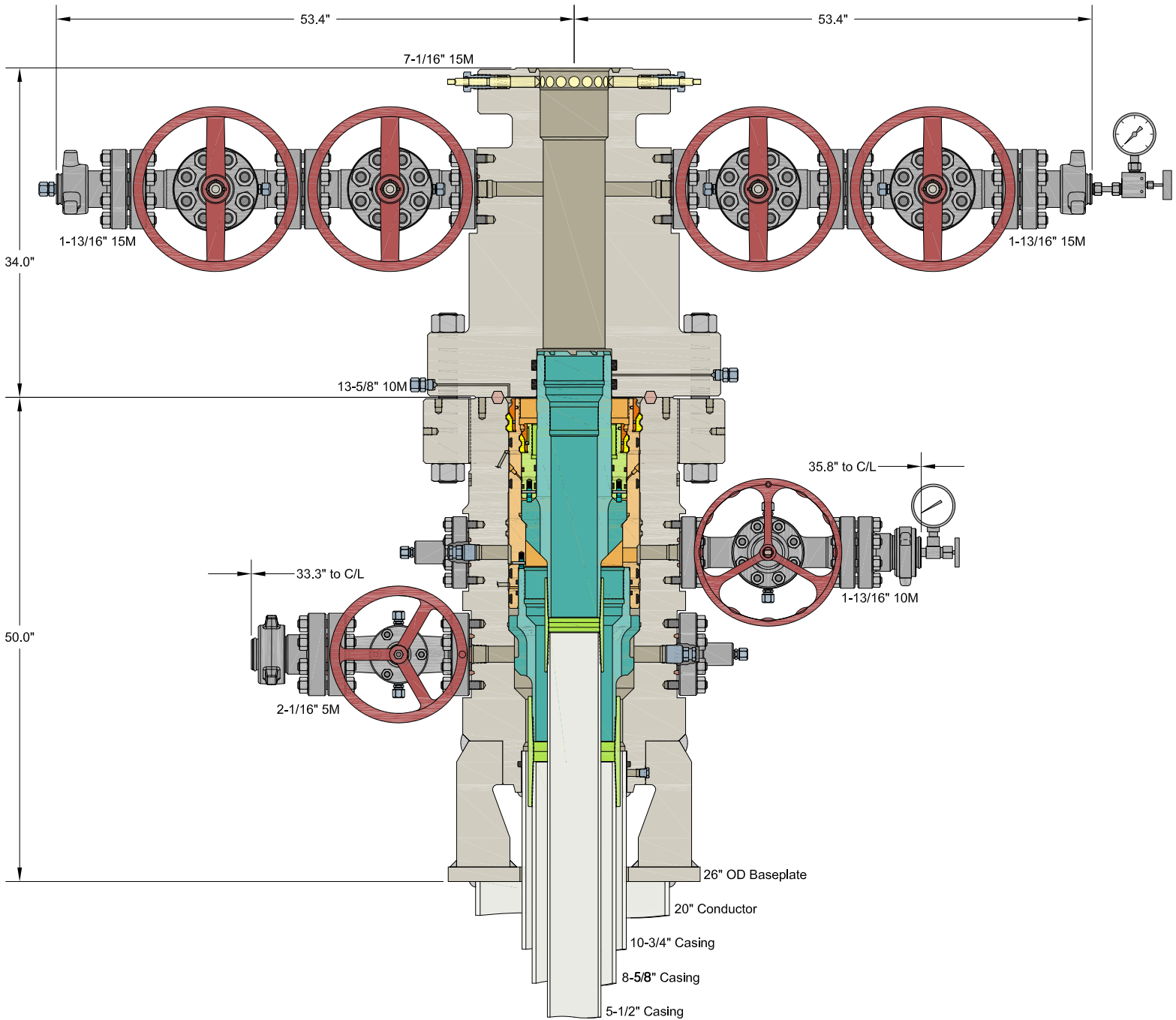
**D. WASTE MATERIAL AND FLUIDS**

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**KPI 1/30/2024**





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ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC

EOG RESOURCES

10-3/4" x 8-5/8" x 5-1/2" MBU-3T-SF-SOW Wellhead System  
With 8-5/8" & 5-1/2" Pin Bottom Mandrel Casing Hangers  
And 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head

DRAWN	DLE	14APR21
APPRV		
DRAWING NO.	SDT-3141	



API 5CT, 10th Ed. Connection Data Sheet

O.D. (in)	WEIGHT (lb/ft)	WALL (in)	GRADE	*API DRIFT (in)	RBW %
8.625	Nominal: 32.00 Plain End: 31.13	0.352	J55	7.796	87.5

Material Properties (PE)	
Pipe	
Minimum Yield Strength:	55 ksi
Maximum Yield Strength:	80 ksi
Minimum Tensile Strength:	75 ksi
Coupling	
Minimum Yield Strength:	55 ksi
Maximum Yield Strength:	80 ksi
Minimum Tensile Strength:	75 ksi

Pipe Body Data (PE)	
Geometry	
Nominal ID:	7.92 inch
Nominal Area:	9.149 in <sup>2</sup>
*Special/Alt. Drift:	7.875 inch
Performance	
Pipe Body Yield Strength:	503 kips
Collapse Resistance:	2,530 psi
Internal Yield Pressure: (API Historical)	3,930 psi

API Connection Data	
Coupling OD: 9.625"	
STC Performance	
STC Internal Pressure:	3,930 psi
STC Joint Strength:	372 kips
LTC Performance	
LTC Internal Pressure:	3,930 psi
LTC Joint Strength:	417 kips
SC-BTC Performance - Cplg OD = 9.125"	
BTC Internal Pressure:	3,930 psi
BTC Joint Strength:	503 kips

API Connection Torque			
STC Torque (ft-lbs)			
Min:	2,793	Opti:	3,724    Max: 4,655
LTC Torque (ft-lbs)			
Min:	3,130	Opti:	4,174    Max: 5,217
BTC Torque (ft-lbs)			
follow API guidelines regarding positional make up			

\*Alt. Drift will be used unless API Drift is specified on order.

\*\*If above API connections do not suit your needs, VAM® premium connections are available up to 100% of pipe body ratings.

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VALLOUREC STAR 8.625 32# P110EC S S2L2 DA 7.875 W/O# SLN # PO# MADE IN USA FT LB



API 5CT, 10th Ed. Connection Data Sheet

O.D. (in)	WEIGHT (lb/ft)	WALL (in)	GRADE	*API DRIFT (in)	RBW %
8.625	Nominal: 32.00 Plain End: 31.13	0.352	P110EC	7.796	87.5

Material Properties (PE)	
Pipe	
Minimum Yield Strength:	125 ksi
Maximum Yield Strength:	140 ksi
Minimum Tensile Strength:	135 ksi
Coupling	
Minimum Yield Strength:	125 ksi
Maximum Yield Strength:	140 ksi
Minimum Tensile Strength:	135 ksi

Pipe Body Data (PE)	
Geometry	
Nominal ID:	7.92 inch
Nominal Area:	9.149 in <sup>2</sup>
*Special/Alt. Drift:	7.875 inch
Performance	
Pipe Body Yield Strength:	1,144 kips
Collapse Resistance:	4,000 psi
Internal Yield Pressure: (API Historical)	8,930 psi

THIS SIZE/GRADE IS NOT VALIDATED BY API TO HAVE AN API CONNECTION

API Connection Data	
Coupling OD: 9.625"	
STC Performance	
STC Internal Pressure:	8,930 psi
STC Joint Strength:	793 kips
LTC Performance	
LTC Internal Pressure:	8,930 psi
LTC Joint Strength:	887 kips
SC-BTC Performance - Cplg OD = 9.125"	
BTC Internal Pressure:	6,340 psi
BTC Joint Strength:	1,120 kips

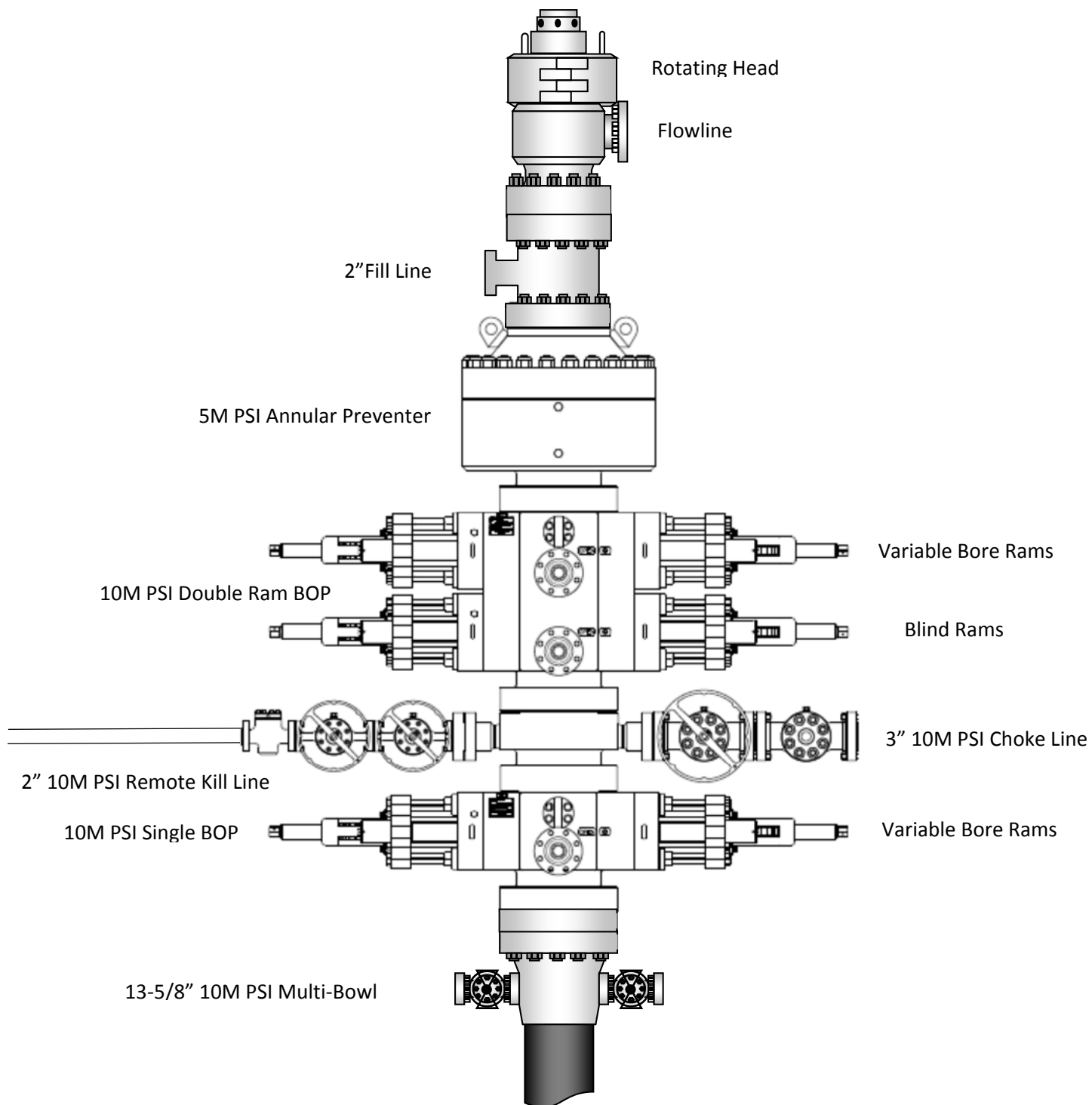
API Connection Torque			
STC Torque (ft-lbs)			
Min:	5,948	Opti:	7,930
Max:	9,913		
LTC Torque (ft-lbs)			
Min:	6,653	Opti:	8,870
Max:	11,088		
BTC Torque (ft-lbs)			
follow API guidelines regarding positional make up			

\*Alt. Drift will be used unless API Drift is specified on order.

\*\*If above API connections do not suit your needs, VAM® premium connections are available up to 100% of pipe body ratings.

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Exhibit 1  
EOG Resources  
13-5/8" 10M PSI BOP Stack



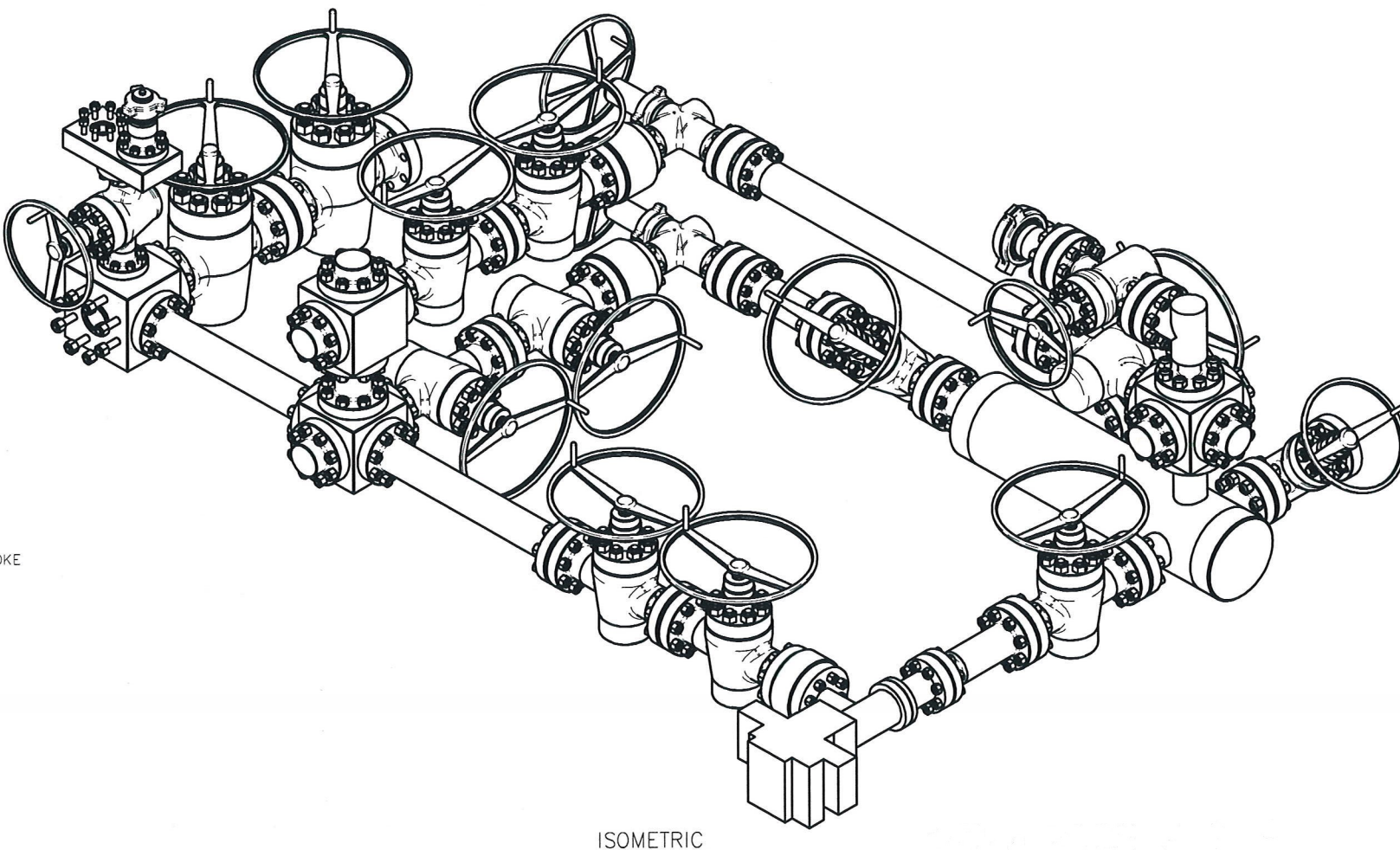




**PROPRIETARY**

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**ISSUED FOR FABRICATION**  
February-10-2014  
DRAFTSMAN *MWL*  
ENGINEER *[Signature]*



STANDARD TOLERANCES (UNLESS NOTED)			
1. FABRICATION DIMENSIONS:	A-0" TO 24"	± 1/16"	
	B-24" TO 120"	± 1/8"	
	C-OVER 120"	± 1/4"	
2. MACHINED DIMENSIONS:	A-ANGULAR	± .30"	
	B-LINEAR (EXPRESSED AS FRACTION)	± .015	
	C-LINEAR (EXPRESSED TO ONE DECIMAL)	± .1	
	D-LINEAR (EXPRESSED TO TWO DECIMALS)	± .015	
	E-LINEAR (EXPRESSED TO THREE DECIMALS)	± .005	

REV		DATE	DESCRIPTION	BY

TITLE:		HELMERICH & PAYNE INTERNATIONAL DRILLING CO.	
CUSTOMER:		H&P	
PROJECT:		3 CHOKE, 3 LEVEL, 10M CHOKE MANIFOLD G.A.	
DRAWN:	MWL	DATE:	2/10/2014
SCALE:	3/4"=1'-0"	SHEET:	1 OF 1
DWG. NO.:	HP-D1254	REV:	



New Search »

« Back to Previous List

USC ☒ Metric

6/8/2015 10:14:05 AM

Mechanical Properties	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi
Dimenstons	Pipe	BTC	LTC	STC	
Outside Diameter	10.750	11.750	--	11.750	in.
Wall Thickness	0.350	--	--	--	in.
Inside Diameter	10.050	10.050	--	10.050	in.
Standard Drift	9.894	9.894	--	9.894	in.
Alternate Drift	--	--	--	--	in.
Nominal Linear Weight, T&C	40.50	--	--	--	lbs/ft
Plain End Weight	38.91	--	--	--	lbs/ft
Performance	Pipe	BTC	LTC	STC	
Minimum Collapse Pressure	1,580	1,580	--	1,580	psi
Minimum Internal Yield Pressure	3,130	3,130	--	3,130	psi
Minimum Pipe Body Yield Strength	629.00	--	--	--	1000 lbs
Joint Strength	--	700	--	420	1000 lbs
Reference Length	--	11,522	--	6,915	ft
Make-Up Data	Pipe	BTC	LTC	STC	
Make-Up Loss	--	4.81	--	3.50	in.
Minimum Make-Up Torque	--	--	--	3,150	ft-lbs
Maximum Make-Up Torque	--	--	--	5,250	ft-lbs

## Hose Inspection Report

ContiTech Oil &amp; Marine

Customer	Customer Reference #	CBC Reference #	CBC Inspector	Date of Inspection
H&P Drilling	740021604	COM906112	A. Jaimes	10/17/2016

<b>Hose Manufacturer</b>	Contitech Rubber Industrial
--------------------------	-----------------------------

<b>Hose Serial #</b>	62429	<b>Date of Manufacture</b>	05/2012
<b>Hose I.D.</b>	3"	<b>Working Pressure</b>	10000PSI
<b>Hose Type</b>	Choke and Kill	<b>Test Pressure</b>	15000PSI
<b>Manufacturing Standard</b>	API 16C		

## Connections

<b>End A:</b> 3.1/16" 10Kpsi API Spec 6A Type 6BX Flange	<b>End B:</b> 3.1/16" 10Kpsi API Spec 6A Type 6BX Flange
• No damage	• No damage
<b>Material:</b> Carbon Steel	<b>Material:</b> Carbon Steel
<b>Seal Face:</b> BX154	<b>Seal Face:</b> BX154
<b>Length Before Hydro Test:</b> 16'	<b>Length After Hydro test:</b> 16'

**Conclusion:** Hose #62429 passed the external inspection with no notable damages to the hose armor. Internal borescope of the hose showed no damage to the hose liner. Hose #62429 passed the hydrostatic pressure test by holding a pressure of 15,000PSI for 60 minutes. Hose #62429 is suitable for continued service.

**Recommendations:** In general the hose should be inspected on a regular on-going basis. The frequency and degree of the inspection should as a minimum follow these guidelines:

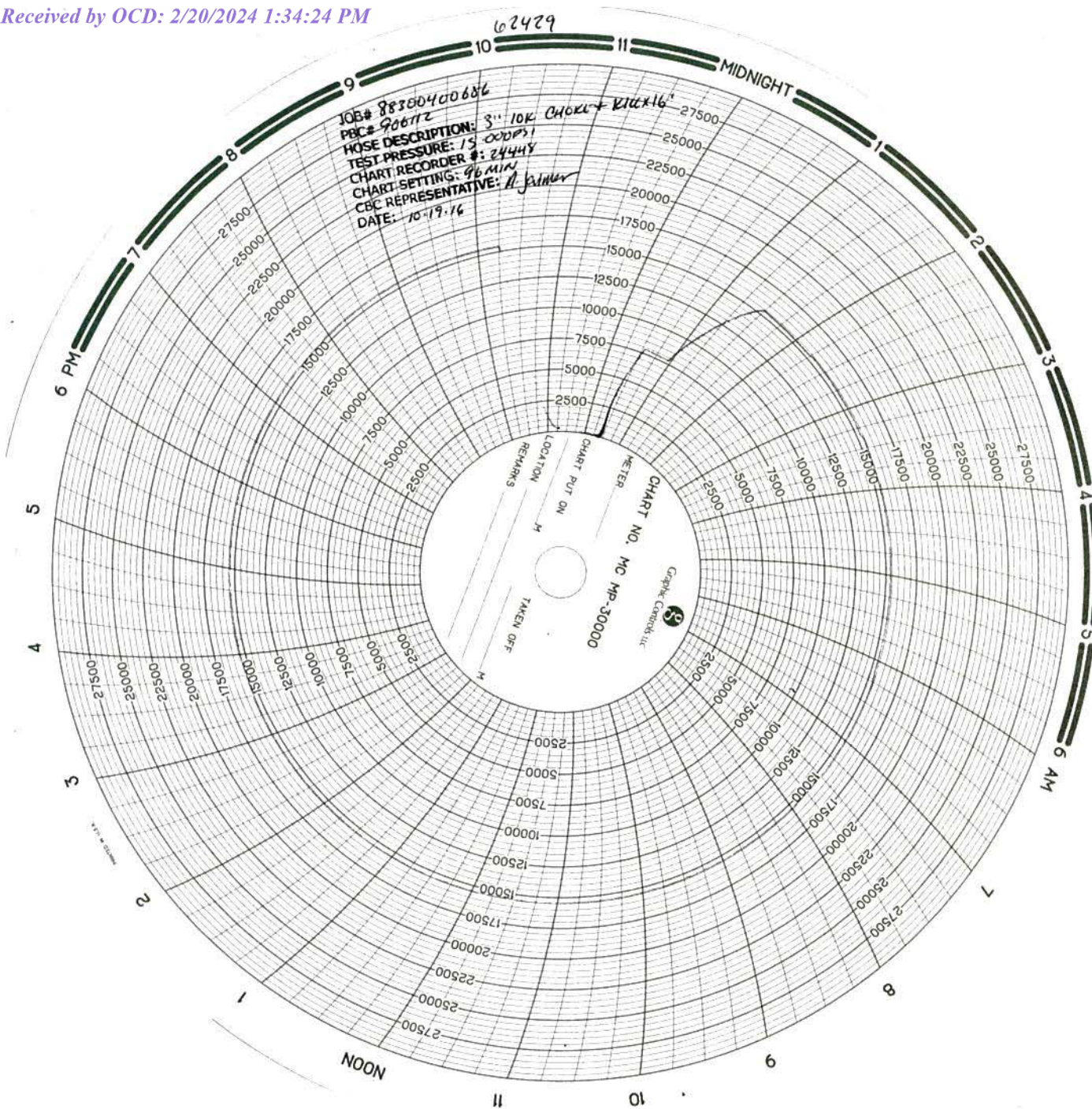
Visual inspection: Every 3 months (or during installation/removal)  
 Annual: In-situ pressure test  
 Initial 5 years service: Major inspection  
 2<sup>nd</sup> Major inspection: 8 / 10 years of service  
 (Detailed description of test regime available upon request, ISS-059 Rev 04)

**\*\*NOTE:** There are a number of critical elements in the hose that cannot be thoroughly checked through standard inspection techniques. Away from dissecting the hose body, the best way to evaluate the condition of the hose is through review of the operating conditions recorded during the hose service life, in particular maximums and peak conditions.

**Issued By:** Alejandro Jaimes  
**Date:** 10/25/2016

**Checked By:** Jeremy Mckay  
**Date:** 10/25/2016  
 QF97

Page 1 of 1





## 10,000 PSI BOP Annular Variance Request (EOG Variance 1c)

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

### 1. Component and Preventer Compatibility Tables

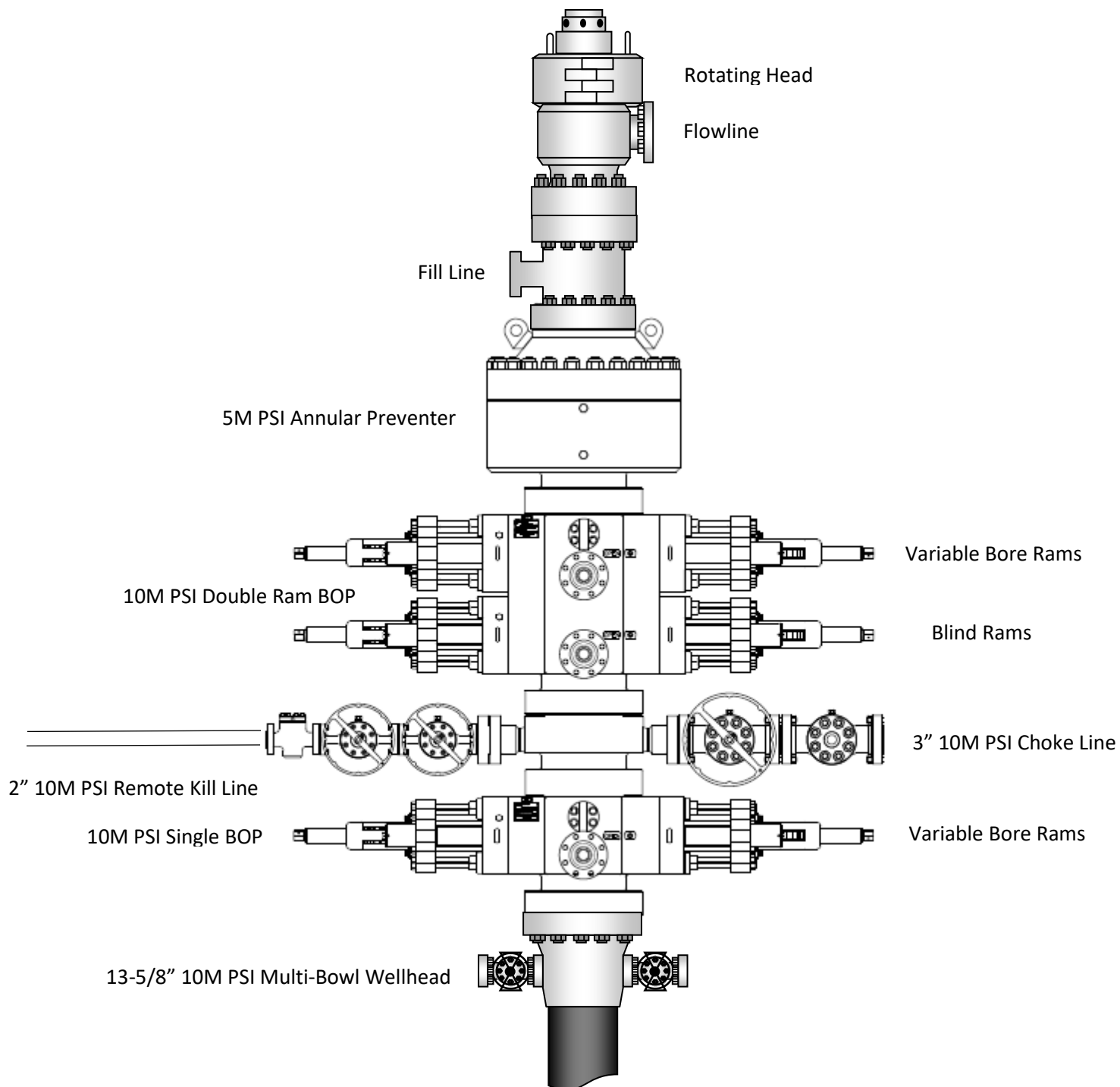
The tables below outlines the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

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

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

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 100% 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



## Offline Intermediate Cementing Procedure

2/24/2022

**Cement Program**

1. No changes to the cement program will take place for offline cementing.

**Summarized Operational Procedure for Intermediate Casing**

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment back pressure valves.
  - a. Float equipment is equipped with two back pressure valves rated to a minimum of 5,000 psi.
2. Land production casing on mandrel hanger through BOP.
  - a. If casing is unable to be landed with a mandrel hanger, then the **casing will be cemented online**.
3. Break circulation and confirm no restrictions.
  - a. Ensure no blockage of float equipment and appropriate annular returns.
  - b. Perform flow check to confirm well is static.
4. Set pack-off
  - a. If utilizing a fluted/ported mandrel hanger, ensure well is static on the annulus and inside the casing by filling the pipe with kill weight fluid, remove landing joint, and set annular packoff through BOP. Pressure test to 5,000 psi for 10 min.
  - b. If utilizing a solid mandrel hanger, ensure well is static on the annulus and inside the casing by filling the pipe with kill weight fluid. Pressure test seals to 5,000 psi for 10 min. Remove landing joint through BOP.
5. After confirmation of both annular barriers and the two casing barriers, install TA plug and pressure test to 5,000 psi for 10 min. Notify the BLM with intent to proceed with nipple down and offline cementing.
  - a. Minimum 4 hrs notice.
6. With the well secured and BLM notified, nipple down BOP and secure on hydraulic carrier or cradle.
  - a. **Note, if any of the barriers fail to test, the BOP stack will not be nipped down until after the cement job has concluded and both lead and tail slurry have reached 500 psi.**
7. Skid/Walk rig off current well.
8. Confirm well is static before removing TA Plug.
  - a. Cementing operations will not proceed until well is under control. (If well is not static, notify BLM and proceed to kill)
  - b. Casing outlet valves will provide access to both the casing ID and annulus. Rig or third party pump truck will kill well prior to cementing.
  - c. Well control plan can be seen in Section B, Well Control Procedures.
  - d. If need be, rig can be moved back over well and BOP nipped back up for any further remediation.



## Offline Intermediate Cementing Procedure

2/24/2022

- e. Diagram for rig positioning relative to offline cementing can be seen in Figure 4.
9. Rig up return lines to take returns from wellhead to pits and rig choke.
  - a. Test all connections and lines from wellhead to choke manifold to 5,000 psi high for 10 min.
  - b. If either test fails, perform corrections and retest before proceeding.
  - c. Return line schematics can be seen in Figure 3.
10. Remove TA Plug from the casing.
11. Install offline cement tool.
  - a. Current offline cement tool schematics can be seen in Figure 1 (Cameron) and Figure 2 (Cactus).
12. Rig up cement head and cementing lines.
  - a. Pressure test cement lines against cement head to 80% of casing burst for 10 min.
13. Break circulation on well to confirm no restrictions.
  - a. If gas is present on circulation, well will be shut in and returns rerouted through gas buster.
  - b. Max anticipated time before circulating with cement truck is 6 hrs.
14. Pump cement job as per plan.
  - a. At plug bump, test casing to 0.22 psi/ft or 1500 psi, whichever is greater.
  - b. If plug does not bump on calculated, shut down and wait 8 hrs or 500 psi compressive strength, whichever is greater before testing casing.
15. Confirm well is static and floats are holding after cement job.
  - a. With floats holding and backside static:
    - i. Remove cement head.
  - b. If floats are leaking:
    - i. Shut-in well and WOC (Wait on Cement) until tail slurry reaches 500 psi compressive strength and the casing is static prior to removing cement head.
  - c. If there is flow on the backside:
    - i. Shut in well and WOC until tail slurry reaches 500 psi compressive strength. Ensure that the casing is static prior to removing cement head.
16. Remove offline cement tool.
17. Install night cap with pressure gauge for monitoring.
18. Test night cap to 5,000 psi for 10 min.



Offline Intermediate Cementing Procedure

2/24/2022

## Example Well Control Plan Content

### A. Well Control Component Table

The table below, which covers the cementing of the **5M MASP (Maximum Allowable Surface Pressure) portion of the well**, outlines the well control component rating in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the BOP nipped up to the wellhead.

Intermediate hole section, 5M requirement

Component	RWP
Pack-off	10M
Casing Wellhead Valves	10M
Annular Wellhead Valves	5M
TA Plug	10M
Float Valves	5M
2" 1502 Lo-Torque Valves	15M

### B. Well Control Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are the minimal high-level tasks prescribed to assure a proper shut-in while circulating and cementing through the Offline Cement Adapter.

#### General Procedure While Circulating

1. Sound alarm (alert crew).
2. Shut down pumps.
3. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
4. Confirm shut-in.
5. Notify tool pusher/company representative.





## Offline Intermediate Cementing Procedure

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6. Read and record the following:
  - a. SICP (Shut in Casing Pressure) and AP (Annular Pressure)
  - b. Pit gain
  - c. Time
  - d. Regroup and identify forward plan to continue circulating out kick via rig choke and mud/gas separator. Circulate and adjust mud density as needed to control well.

### General Procedure While Cementing

1. Sound alarm (alert crew).
2. Shut down pumps.
3. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
4. Confirm shut-in.
5. Notify tool pusher/company representative.
6. Open rig choke and begin pumping again taking returns through choke manifold and mud/gas separator.
7. Continue to place cement until plug bumps.
8. At plug bump close rig choke and cement head.
9. Read and record the following
  - a. SICP and AP
  - b. Pit gain
  - c. Time
  - d. Shut-in annulus valves on wellhead

### General Procedure After Cementing

1. Sound alarm (alert crew).
2. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
3. Confirm shut-in.
4. Notify tool pusher/company representative.
5. Read and record the following:
  - a. SICP and AP
  - b. Pit gain
  - c. Time
  - d. Shut-in annulus valves on wellhead



## Offline Intermediate Cementing Procedure

2/24/2022

Figure 1: Cameron TA Plug and Offline Adapter Schematic





## Offline Intermediate Cementing Procedure

2/24/2022

Figure 2: Cactus TA Plug and Offline Adapter Schematic





## Offline Intermediate Cementing Procedure

2/24/2022

Figure 3: Back Yard Rig Up



\*\*\* All Lines 10M rated working pressure



Offline Intermediate Cementing Procedure

2/24/2022

Figure 4: Rig Placement Diagram





# Salt Section Annular Clearance Variance Request

---

---

Daniel Moose

# Current Design (Salt Strings)

## 0.422" Annular clearance requirement

- Casing collars shall have a minimum clearance of 0.422 inches on all sides in the hole/casing annulus, with recognition that variances can be granted for justified exceptions.

- 12.25" Hole x 9.625" 40# J55/HCK55 LTC Casing
  - 1.3125" Clearance to casing OD
  - 0.8125" Clearance to coupling OD
- 9.875" Hole x 8.75" 38.5# P110 Sprint-SF Casing
  - 0.5625" Clearance to casing OD
  - 0.433" Clearance to coupling OD

# Annular Clearance Variance Request

**EOG request permission to allow deviation from the 0.422" annulus clearance requirement for the intermediate (salt) section from Onshore Order #2 under the following conditions:**

- The variance is not applicable within the Potash Boundaries or Capitan Reef areas.
- Operator takes responsibility to get casing to set point in the event that the clearance causes stuck pipe issues



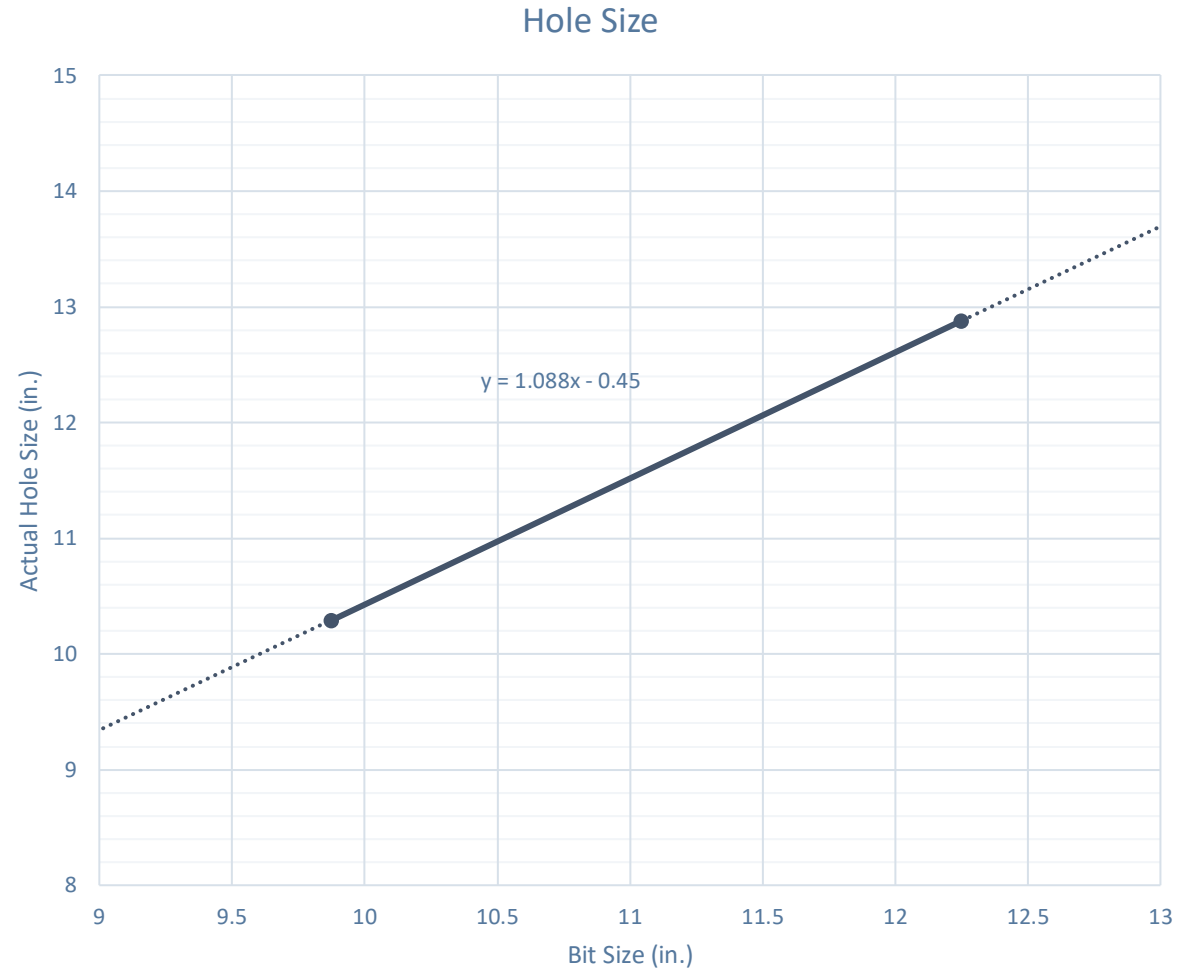
# Volumetric Hole Size Calculation

## Hole Size Calculations Off Cement Volumes

- Known volume of cement pumped
- Known volume of cement returned to surface
- Must not have had any losses
- Must have bumped plug

## Average Hole Size

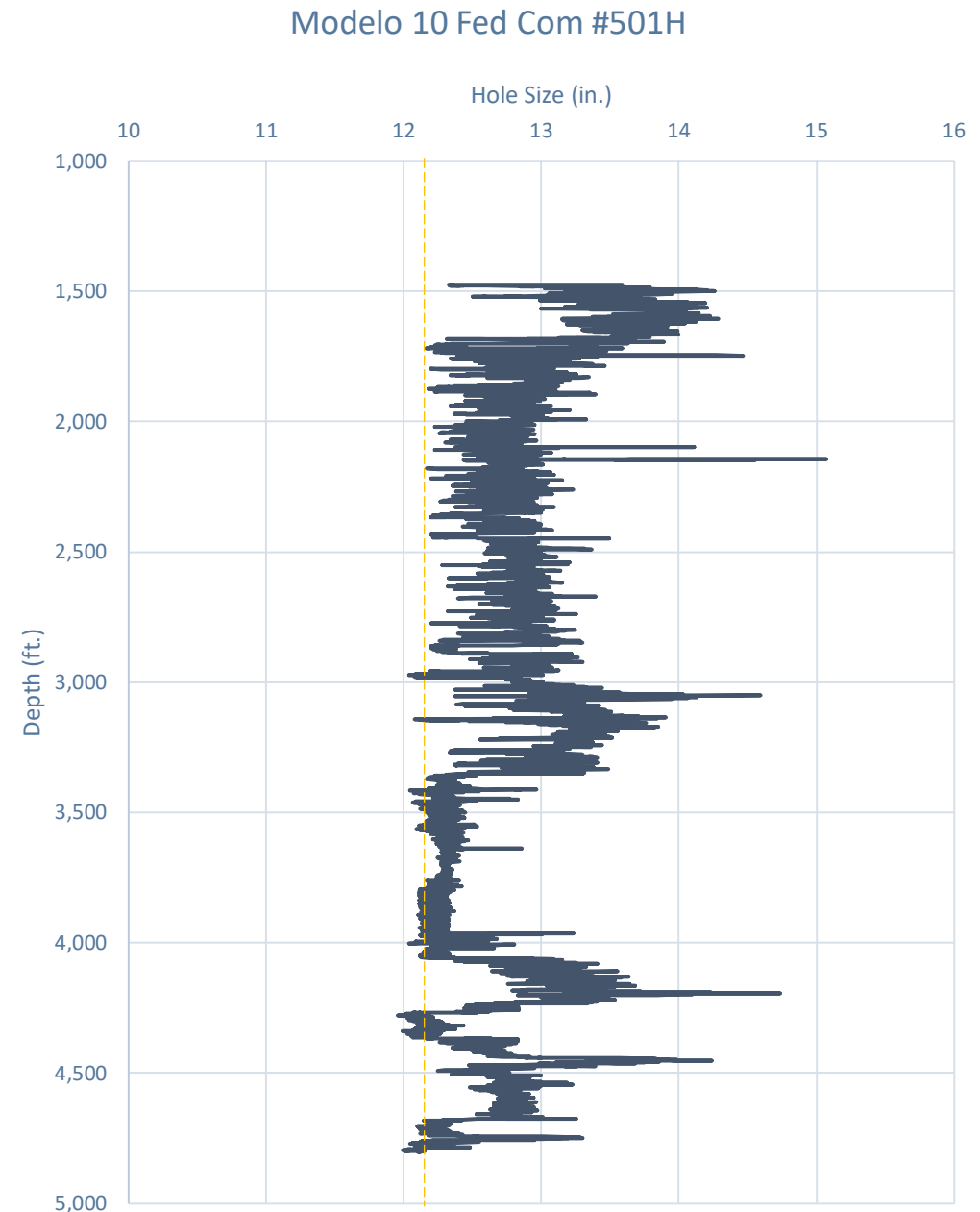
- 12.25" Hole
  - 12.88" Hole
    - 5.13% diameter increase
    - 10.52% area increase
  - 0.63" Average enlargement
  - 0.58" Median enlargement
  - 179 Well Count
- 9.875" Hole
  - 10.30" Hole
    - 4.24% diameter increase
    - 9.64% area increase
  - 0.42" Average enlargement
  - 0.46" Median enlargement
  - 11 Well Count



# Caliper Hole Size (12.25")

## Average Hole Size

- 12.25" Bit
  - 12.76" Hole
    - 4.14% diameter increase
    - 8.44% area increase
  - 0.51" Average enlargement
  - 0.52" Median enlargement
  - Brine



# Caliper Hole Size (9.875")

## Average Hole Size

- 9.875" Hole
  - 11.21" Hole
    - 13.54% diameter increase
    - 28.92% area increase
  - 1.33" Average enlargement
  - 1.30" Median enlargement
  - EnerLite

Whirling Wind 11 Fed Com #744H



# Design A

## Proposed 11" Hole with 9.625" 40# J55/HCK55 LTC Casing

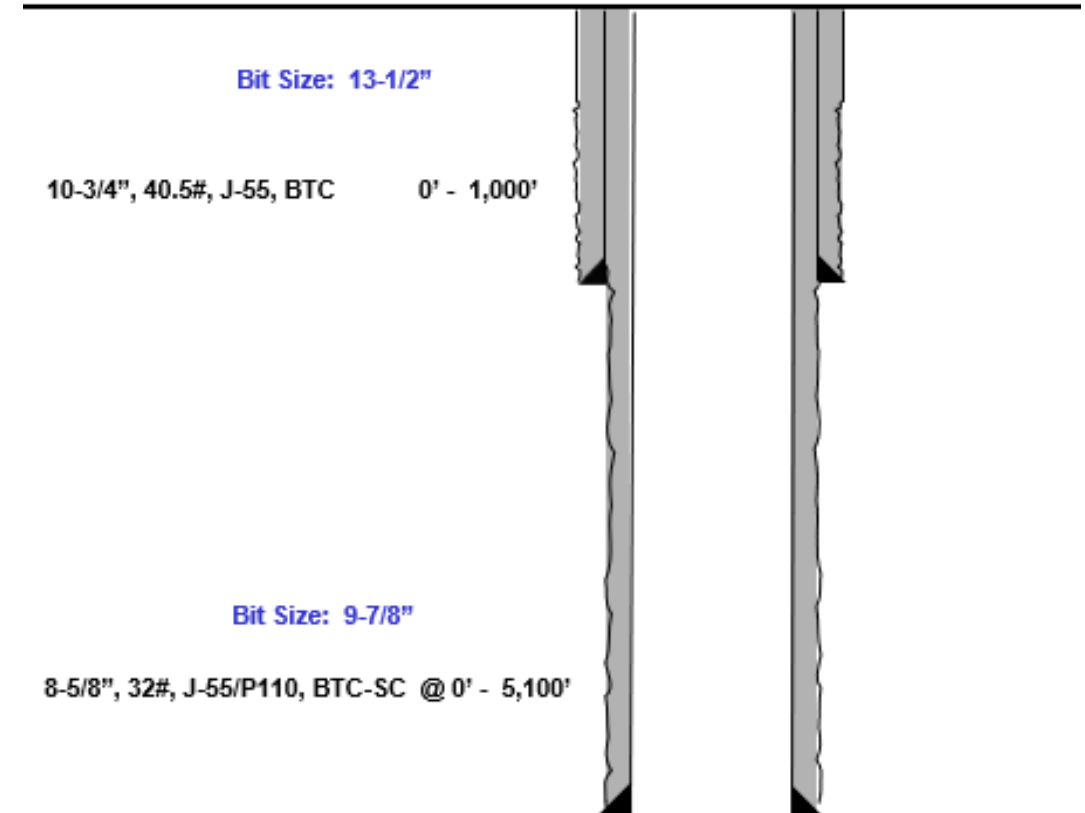
- 11" Bit + 0.52" Average hole enlargement = 11.52" Hole Size
  - 0.9475" Clearance to casing OD
 
$$= \frac{11.52 - 9.625}{2}$$
  - 0.4475" Clearance to coupling OD
 
$$= \frac{11.52 - 10.625}{2}$$
- Previous Shoe – 13.375" 54.5# J55 STC
  - 0.995" Clearance to coupling OD (~1,200' overlap)
 
$$= \frac{12.615 - 10.625}{2}$$



# Design B

## Proposed 9.875" Hole with 8.625" 32# J55/P110 BTC-SC Casing

- 9.875" Bit + 0.42" Average hole enlargement = 10.295" Hole Size
  - 0.835" Clearance to casing OD
 
$$= \frac{10.295 - 8.625}{2}$$
  - 0.585" Clearance to coupling OD
 
$$= \frac{10.295 - 9.125}{2}$$
- Previous Shoe – 10.75" 40.5# J55 STC
  - 0.4625" Clearance to coupling OD (~1,200' overlap)
 
$$= \frac{10.05 - 9.125}{2}$$





# Index

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# Casing Spec Sheets

## PERFORMANCE DATA

API LTC

Technical Data Sheet

9.625 in

40.00 lbs/ft

K55 HC

### Tubular Parameters

Size	9.625	in	Minimum Yield	55	ksi
Nominal Weight	40.00	lbs/ft	Minimum Tensile	95	ksi
Grade	K55 HC		Yield Load	629	kips
PE Weight	38.94	lbs/ft	Tensile Load	1088	kips
Wall Thickness	0.395	in	Min. Internal Yield Pressure	3,950	psi
Nominal ID	8.835	in	Collapse Pressure	3600	psi
Drift Diameter	8.750	in			
Nom. Pipe Body Area	11.454	in²			

### Connection Parameters

Connection OD	10.625	in
Coupling Length	10.500	in
Threads Per Inch	8	tpi
Standoff Thread Turns	3.50	turns
Make-Up Loss	4.750	in
Min. Internal Yield Pressure	3,950	psi

### Pipe Body and API Connections Performance Data

13.375 54.50/0.380 J55

PDF

New Search »

« Back to Previous List

USC ☒ Metric

6/8/2015 10:04:37 AM

Mechanical Properties	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi
Dimensions	Pipe	BTC	LTC	STC	
Outside Diameter	13.375	14.375	--	14.375	in.
Wall Thickness	0.380	--	--	--	in.
Inside Diameter	12.615	12.615	--	12.615	in.
Standard Drift	12.459	12.459	--	12.459	in.
Alternate Drift	--	--	--	--	in.
Nominal Linear Weight, T&C	54.50	--	--	--	lbs/ft
Plain End Weight	52.79	--	--	--	lbs/ft
Performance	Pipe	BTC	LTC	STC	
Minimum Collapse Pressure	1,130	1,130	--	1,130	psi
Minimum Internal Yield Pressure	2,740	2,740	--	2,740	psi
Minimum Pipe Body Yield Strength	853.00	--	--	--	1000 lbs
Joint Strength	--	909	--	514	1000 lbs
Reference Length	--	11,125	--	6,290	ft
Make-Up Data	Pipe	BTC	LTC	STC	
Make-Up Loss	--	4.81	--	3.50	in.
Minimum Make-Up Torque	--	--	--	3,860	ft-lbs
Maximum Make-Up Torque	--	--	--	6,430	ft-lbs



# Casing Spec Sheets

## Pipe Body and API Connections Performance Data

10.750 40.50/0.350 J55

PDF

New Search »

« Back to Previous List

USC ☒ Metric

6/8/2015 10:14:05 AM

Mechanical Properties	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi
Dimensions	Pipe	BTC	LTC	STC	
Outside Diameter	10.750	11.750	--	11.750	in.
Wall Thickness	0.350	--	--	--	in.
Inside Diameter	10.050	10.050	--	10.050	in.
Standard Drift	9.894	9.894	--	9.894	in.
Alternate Drift	--	--	--	--	in.
Nominal Linear Weight, T&C	40.50	--	--	--	lbs/ft
Plain End Weight	38.91	--	--	--	lbs/ft
Performance	Pipe	BTC	LTC	STC	
Minimum Collapse Pressure	1,580	1,580	--	1,580	psi
Minimum Internal Yield Pressure	3,130	3,130	--	3,130	psi
Minimum Pipe Body Yield Strength	629.00	--	--	--	1000 lbs
Joint Strength	--	700	--	420	1000 lbs
Reference Length	--	11,522	--	6,915	ft
Make-Up Data	Pipe	BTC	LTC	STC	
Make-Up Loss	--	4.81	--	3.50	in.
Minimum Make-Up Torque	--	--	--	3,150	ft-lbs
Maximum Make-Up Torque	--	--	--	5,250	ft-lbs



### API 5CT, 10th Ed. Connection Data Sheet

O.D. (in)	WEIGHT (lb/ft)	WALL (in)	GRADE	*API DRIFT (in)	RBW %
8.625	Nominal: 32.00 Plain End: 31.13	0.352	J55	7.796	87.5

Material Properties (PE)		Pipe Body Data (PE)	
Pipe		Geometry	
Minimum Yield Strength:	55 ksi	Nominal ID:	7.92 inch
Maximum Yield Strength:	80 ksi	Nominal Area:	9.149 in <sup>2</sup>
Minimum Tensile Strength:	75 ksi	*Special/Alt. Drift:	7.875 inch
Coupling		Performance	
Minimum Yield Strength:	55 ksi	Pipe Body Yield Strength:	503 kips
Maximum Yield Strength:	80 ksi	Collapse Resistance:	2,530 psi
Minimum Tensile Strength:	75 ksi	Internal Yield Pressure: (API Historical)	3,930 psi

API Connection Data		API Connection Torque	
Coupling OD: 9.625"		STC Torque (ft-lbs)	
STC Performance		Min: 2,793 Opti: 3,724 Max: 4,655	
STC Internal Pressure: 3,930 psi		LTC Torque (ft-lbs)	
STC Joint Strength: 372 kips		Min: 3,130 Opti: 4,174 Max: 5,217	
LTC Performance		BTC Torque (ft-lbs)	
LTC Internal Pressure: 3,930 psi		follow API guidelines regarding positional make up	
LTC Joint Strength: 417 kips			
SC-BTC Performance - Cplg OD = 9.125"			
BTC Internal Pressure: 3,930 psi			
BTC Joint Strength: 503 kips			

\*Alt. Drift will be used unless API Drift is specified on order.

\*\*If above API connections do not suit your needs, VAM® premium connections are available up to 100% of pipe body ratings.

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Rev 3, 7/30/2021

10/21/2022 15:24



Annular Clearance Variance





CONFIDENTIAL												
 THIRD ANGLE	DESIGNED IN INCHES		MACHINING TOLERANCES UNLESS OTHERWISE SPECIFIED		SURFACE TREATMENT		DO NOT SCALE		 <b>CAMERON</b> A Schlumberger Company	SURFACE SYSTEMS		
	DIMENSIONAL UNITS				DRAWN BY: <b>KEN REED</b>		DATE <b>6 Nov 18</b>					
	INCHES [MILLIMETERS]		X [D.] ± = [ ]		MATERIAL & HEAT TREAT		CHECKED BY: <b>PA</b>				DATE <b>6 Nov 18</b>	
	ANGLES ± °		RA ON ALL MACHINED SURFACES		APPROVED BY: <b>APPROVER NAME</b>		DATE <b>6 Nov 18</b>					
	XXX [D.XX] ± = [ ]		ESTIMATED WEIGHT: <b>8147.2 LBS</b> [3695.5 KG]		INITIAL USE BIM: <b>EWR:650353762</b>		SHEET <b>1 OF 1</b>				REV: <b>01</b>	
MACHINED FILLET RADII .015-.050 [0.38-1.27] BREAK ALL SHARP EDGES .01-.03 [0.2-0.8] RADII OR 45°. SURFACE FINISH IN MICRO (μ) INCHES (Ra) INTERPRET DRAWING PER ASME Y14.5, ASME Y14.36, AND AWS A2.4 STANDARDS. SEE BIM FOR MATERIAL AND SPECIAL REQUIREMENTS. ITEM NUMBERS NOT APPEARING ON BIM DO NOT APPLY.					EOG RESOURCES, INC 13-5/8" 10K MN-DS WELLHEAD 13-3/8" X 9-5/8" X 5-1/2" <b>SD-052491-19-07</b>							
										INVENTOR: <b>01</b>		





Pistolero 15 Fed #304H

## Hydrogen Sulfide Plan Summary

- A. All personnel shall receive proper H2S training in accordance with Onshore Order III.C.3.a.**
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.**
- C. Required Emergency Equipment:**
  - **Well control equipment**
    - a. Flare line 150' from wellhead to be ignited by flare gun.
    - b. Choke manifold with a remotely operated choke.
    - c. Mud/gas separator
  - **Protective equipment for essential personnel:**
    - a. Breathing Apparatus:
      - i. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
      - ii. Work/Escapes packs — 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
      - iii. Emergency Escape Packs — 4 packs shall be stored in the doghouse for emergency evacuation.
    - b. Auxiliary Rescue Equipment:
      - i. Stretcher
      - ii. Two OSHA full body harness
      - iii. 100 ft 5/8 inch OSHA approved rope
      - iv. 1-20# class ABC fire extinguisher
  - **H2S Detection and Monitoring Equipment:**

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged. (Gas sample tubes will be stored in the safety trailer)
  - **Visual Warning System:**
    - a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
    - b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
    - c. Two wind socks will be placed in strategic locations, visible from all angles.



Pistolero 15 Fed #304H

■ **Mud Program:**

The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H<sub>2</sub>S bearing zones.

■ **Metallurgy:**

All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H<sub>2</sub>S service.

■ **Communication:**

Communication will be via cell phones and land lines where available.



Pistolero 15 Fed #304H

## Emergency Assistance Telephone List

<b>PUBLIC SAFETY:</b>	<b>911 or</b>
<b>Lea County Sheriff's Department</b>	(575) 396-3611
Corey Helton	
<b>Fire Department</b>	
Carlsbad	(575) 885-3125
Artesia	(575) 746-5050
<b>Hospitals</b>	
Carlsbad	(575) 887-4121
Artesia	(575) 748-3333
Hobbs	(575) 392-1979
<b>Dept. of Public Safety/Carlsbad</b>	(575) 748-9718
<b>Highway Department</b>	(575) 885-3281
<b>U.S. Department of Labor</b>	(575) 887-1174
<b>Bureau of Land Management - Hobbs (Lea Co)</b>	(575) 393-3612
PET On Call - Hobbs	(575) 706-2779
<b>Bureau of Land Management - Carlsbad (Eddy Co)</b>	(575) 234-5972
PET On Call - Carlsbad	(575) 706-2779
<b>New Mexico Oil Conservation Division - Artesia</b>	(575) 748-1283
Inspection Group South - Gilbert Gordero	(575) 626-0830
<b>EOG Resources, Inc.</b>	
EOG Midland	(432) 686-3600
<b>Company Drilling Consultants:</b>	
Jett Dueitt	(432) 230-4840
Blake Burney	
<b>Drilling Engineers</b>	
Stephen Davis	(432) 235-9789
Matt Day	(210) 296-4456
<b>Drilling Managers</b>	
Branden Keener	(210) 294-3729
<b>Drilling Superintendents</b>	
Lance Hardy	(432) 215-8152
Ryan Reynolds	(432) 215-5978
Steve Kelly	(210) 416-7894
<b>H&amp;P Drilling</b>	
H&P Drilling	(432) 563-5757
<b>Nabors Drilling</b>	
Nabors Drilling	(432) 363-8180
<b>Patterson UTI</b>	
Patterson UTI	(432) 561-9382
<b>EOG Safety</b>	
Brian Chandler (HSE Manager)	(817) 239-0251

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 316051

CONDITIONS

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID:
	7377
	Action Number: 316051
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	2/21/2024
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	2/21/2024
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	2/21/2024
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	2/21/2024
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing	2/21/2024