

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 checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>NMNM19859</b>
1b. Type of Well: <input checked="" 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 checked="" type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator <b>EOG RESOURCES INCORPORATED</b>		8. Lease Name and Well No. <b>LACEY SWISS 1 FED COM</b> <b>507H</b>
3a. Address <b>1111 BAGBY SKY LOBBY 2, HOUSTON, TX 77002</b>	3b. Phone No. (include area code) <b>(713) 651-7000</b>	9. API Well No. <b>30-025-53436</b>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface <b>LOT 1 / 916 FNL / 644 FEL / LAT 32.1642809 / LONG -103.5195864</b> At proposed prod. zone <b>TR P / 100 FSL / 330 FEL / LAT 32.1380463 / LONG -103.518575</b>		10. Field and Pool, or Exploratory <b>RED HILLS; LOWER BONE SPRING</b>
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area <b>SEC 1/T25S/R33E/NMP</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>100 feet</b>		12. County or Parish <b>LEA</b>
16. No of acres in lease		13. State <b>NM</b>
17. Spacing Unit dedicated to this well <b>640.0</b>		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>33 feet</b>		20. BLM/BIA Bond No. in file <b>FED:</b>
19. Proposed Depth <b>10950 feet / 21228 feet</b>		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>3463 feet</b>	22. Approximate date work will start* <b>04/14/2023</b>	23. Estimated duration <b>25 days</b>
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 (Electronic Submission)	Name (Printed/Typed) <b>CRAIG RICHARDSON / Ph: (713) 651-7000</b>	Date <b>06/21/2023</b>
Title <b>Regulatory Specialist</b>		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) <b>CODY LAYTON / Ph: (575) 234-5959</b>	Date <b>04/11/2024</b>
Title <b>Assistant Field Manager Lands &amp; Minerals</b>		
Office <b>Carlsbad Field Office</b>		

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: 04/11/2024

## 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.

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

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

Submit Electronically  
Via E-permitting

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: 08/21/2024

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
LACEY SWISS 1 FED COM 507H		A-1-25S-33E	916' FNL & 644' FEL	+/- 1000	+/- 3500	+/- 3000

IV. Central Delivery Point Name: LACEY SWISS 1 FED COM 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
LACEY SWISS 1 FED COM 507H		09/01/24	09/26/24	12/1/24	01/1/25	01/15/25

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: *Kayla McConnell*

Printed Name: KAYLA MCCONNELL

Title: Regulatory Specialist

E-mail Address: KAYLA\_MCCONNELL@EOGRESOURCES.COM

Date: 08/21/2024

Phone: (432) 265-6804

**OIL CONSERVATION DIVISION**  
**(Only applicable when submitted as a standalone form)**

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.





## Lacey Swiss 1 Fed Com 507H

### 1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

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

Rustler	1,090'
Tamarisk Anhydrite	1,277'
Top of Salt	1,653'
Base of Salt	4,943'
Lamar	5,199'
Bell Canyon	5,211'
Cherry Canyon	6,287'
Brushy Canyon	7,768'
Bone Spring Lime	9,273'
Leonard (Avalon) Shale	9,333'
1st Bone Spring Sand	10,270'
2nd Bone Spring Shale	10,545'
2nd Bone Spring Sand	10,854'
3rd Bone Spring Carb	11,366'
3rd Bone Spring Sand	11,890'
Wolfcamp	12,321'
TD	10,950'

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

Upper Permian Sands	0- 400'	Fresh Water
Bell Canyon	5,211'	Oil
Cherry Canyon	6,287'	Oil
Brushy Canyon	7,768'	Oil
Leonard (Avalon) Shale	9,333'	Oil
1st Bone Spring Sand	10,270'	Oil
2nd Bone Spring Shale	10,545'	Oil
2nd Bone Spring Sand	10,854'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 13-3/8" casing at 1,300' and circulating cement back to surface.



## Lacey Swiss 1 Fed Com 507H

## 4. CASING PROGRAM

Hole Size	Interval MD		Interval TVD		Csg OD	Weight	Grade	Conn
	From (ft)	To (ft)	From (ft)	To (ft)				
16"	0	1,301	0	1,300	13-3/8"	54.5#	J-55	STC
11"	0	4,088	0	4,000	9-5/8"	40#	J-55	LTC
11"	4,088	5,128	4,000	5,040	9-5/8"	40#	HCK-55	LTC
6-3/4"	0	21,228	0	10,950	5-1/2"	17#	HCP-110	LTC

Variance is requested to waive the centralizer requirements for the 9-5/8" casing in the 11" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 11" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive any centralizer requirements for the 5-1/2" casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

EOG requests 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.

**Cementing Program:**

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
1,300' 13-3/8"	390	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	100	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1100')
5,040' 9-5/8"	490	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	170	14.8	1.32	Tail: Class C + 10% NaCl + 3% MagOx (TOC @ 4032')
21,228' 5-1/2"	370	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 4540')
	750	13.2	1.52	Tail: Class H + 5% NEX-020 + 0.2% NAC-102 + 0.15% NAS-725 + 0.5% NFL-549 + 0.2% NFP-703 + 1% NBE-737 + 0.3% NRT-241 (TOC @ 10550')



### Lacey Swiss 1 Fed Com 507H

Additive	Purpose
Bentonite Gel	Lightweight/Lost circulation prevention
Calcium Chloride	Accelerator
Cello-flake	Lost circulation prevention
Sodium Metasilicate	Accelerator
MagOx	Expansive agent
Pre-Mag-M	Expansive agent
Sodium Chloride	Accelerator
FL-62	Fluid loss control
Halad-344	Fluid loss control
Halad-9	Fluid loss control
HR-601	Retarder
Microbond	Expansive Agent

Cement integrity tests will be performed immediately following plug bump.

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

#### 5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (5,000-psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

EOG will utilize wing unions on BOPE connections that can be isolated from wellbore pressure through means of a choke. All wing unions will be rated to a pressure that meets or exceeds the pressure rating of the BOPE system.

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

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 10,000/ 250 psig and the annular preventer to 5,000/ 250 psig.

Pipe rams and blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.



## Lacey Swiss 1 Fed Com 507H

### 6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.

The applicable depths and properties of the drilling fluid systems are as follows:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,300'	Fresh - Gel	8.6-8.8	28-34	N/c
1,300' – 5,050'	Brine	8.6-8.8	28-34	N/c
4,840' – 21,228' Lateral	Oil Base	8.8-9.5	58-68	N/c - 6

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

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

### 7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

- (A) A kelly cock will be kept in the drill string at all times.
- (B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- (C) H<sub>2</sub>S monitoring and detection equipment will be utilized from surface casing point to TD.

### 8. LOGGING, TESTING AND CORING PROGRAM:

- (A) Open-hole logs are not planned for this well.
- (B) GR–CCL will be run in cased hole during completions phase of operations.

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

The estimated bottom-hole temperature (BHT) at TD is 180 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 5,125 psig and a maximum anticipated surface pressure of 2,716 psig (based on 9.0 ppg MW). No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. Severe loss circulation is expected from 7,768' to intermediate casing point.

**Lacey Swiss 1 Fed Com 507H****10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:**

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

EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and Cement on the subject well. After WOC 8 hours or 500 psi compressive strength (whichever is greater), the Surface Rig will move off so the wellhead can be installed. A welder will cut the casing to the proper height and weld on the wellhead (both "A" and "B" sections). The weld will be tested to 1,500 psi. All valves will be closed and a wellhead cap will be installed (diagram attached). If the timing between rigs is such that EOG Resources would not be able to preset the surface, the Primary Rig will MIRU and drill the well in its entirety per the APD.

**11. WELLHEAD & Offline Cementing:**

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13-3/8" BOP/BOPE system with a minimum working pressure of 10,000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 10,000 psi pressure test. This pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 10,000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Cactus Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

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

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. EOG Resources reserves the option to conduct BOPE testing during wait on cement periods provided a test plug is utilized.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

Casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1,500 psi, whichever is greater.





### **Lacey Swiss 1 Fed Com 507H**

EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards for well control equipment testing of Onshore Order No. 2 (item III.A.2.a.i) to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) along with Batch Drilling & Offline cement operations to include the following:

- Full BOPE test at first installation on the pad.
- Full BOPE test every 20 days per Onshore Order No. 2.
- Function test BOP elements per Onshore Order No. 2.
- Break testing BOP and BOPE coupled with batch drilling operations and option to offline cement and/or remediate (if needed) any surface or intermediate sections, according to attached offline cementing support documentation.
- After the well section is secured, the BOP will be disconnected from the wellhead and walked with the rig to another well on the pad.
- TA cap will also be installed per Wellhead vendor procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.
- See attached "EOG BLM Variance 3a -Offline Cement Intermediate Operational Procedure"



## Lacey Swiss 1 Fed Com 507H

### 12. TUBING REQUIREMENTS

EOG respectively requests an exception to the following NMOCD rule:

- 19.15.16.10 Casing AND TUBING REQUIREMENTS:  
J (3): "The operator shall set tubing as near the bottom as practical and tubing perforations shall not be more than 250 feet above top of pay zone."

With horizontal flowing and gas lifted wells an end of tubing depth placed at or slightly above KOP is a conservative way to ensure the tubing stays clean from debris, plugging, and allows for fewer well interventions post offset completion. The deeper the tubulars are run into the curve, the higher the probability is that the tubing will become stuck in sand and or well debris as the well produces over time. An additional consideration for EOT placement during artificial lift installations is avoiding the high dog leg severity and inclinations found in the curve section of the wellbore to help improve reliability and performance. Dog leg severity and inclinations tend not to hamper gas lifted or flowing wells, but they do effect other forms of artificial lift like rod pump or ESP (electric submersible pump). Keeping the EOT above KOP is an industry best practice for those respective forms of artificial lift.

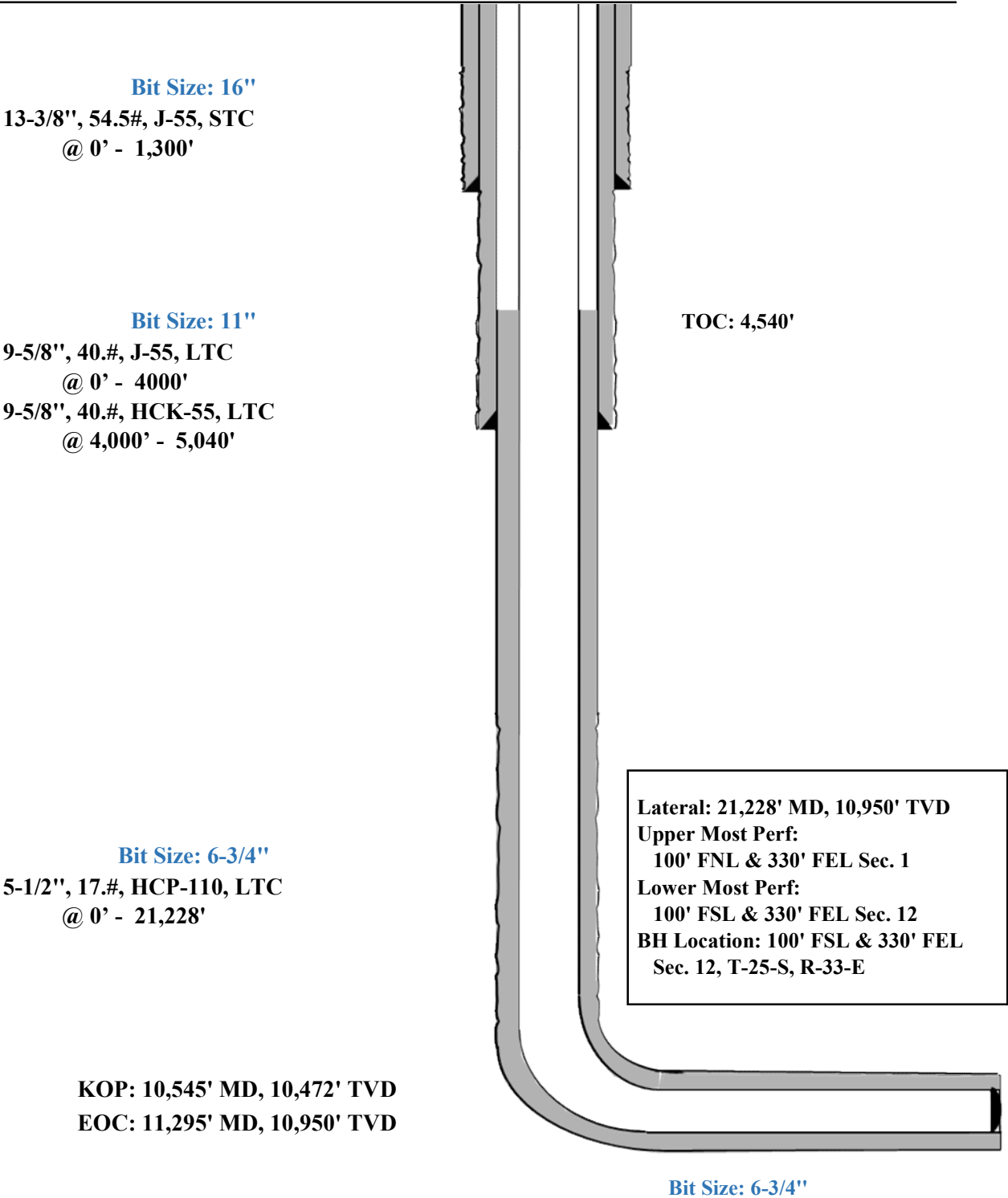


Lacey Swiss 1 Fed Com 507H

916' FNL  
644' FEL  
Section 1  
T-25-S, R-33-E

Proposed Wellbore A  
  
API: 30-025-\*\*\*\*\*

KB: 3488'  
GL: 3463'





### Lacey Swiss 1 Fed Com 507H

Well Name: Lacey Swiss 1 Fed Com 507H

Location: SHL: 916' FNL & 644' FEL, Section 1, T-25-S, R-33-E, Lea Co., N.M.

BHL: 100' FSL & 330' FEL, Section 12, T-25-S, R-33-E, Lea Co., N.M.

#### Casing Program B:

Hole Size	Interval MD		Interval TVD		Csg OD	Weight	Grade	Conn
	From (ft)	To (ft)	From (ft)	To (ft)				
13-1/2"	0	1,301	0	1,300	10-3/4"	40.5#	J-55	STC
9-7/8"	0	4,088	0	4,000	8-5/8"	32#	J-55	BTC-SC
9-7/8"	4,088	5,128	4,000	5,040	8-5/8"	32#	P110-EC	BTC-SC
6-3/4"	0	21,228	0	10,950	5-1/2"	17#	HCP-110	LTC

#### Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
1,300' 10-3/4"	420	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	110	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1,100')
5,040' 8-5/8"	340	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	160	14.8	1.32	Tail: Class C + 10% NaCl + 3% MagOx (TOC @ 4,030')
21,228' 5-1/2"	600	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 4,540')
	770	13.2	1.52	Tail: Class H + 5% NEX-020 + 0.2% NAC-102 + 0.15% NAS-725 + 0.5% NFL-549 + 0.2% NFP-703 + 1% NBE-737 + 0.3% NRT-241 (TOC @ 10550')



### **Lacey Swiss 1 Fed Com 507H**

Variance is requested to waive the centralizer requirements for the 8-5/8" casing in the 9-7/8" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 9-7/8" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive any centralizer requirements for the 5-1/2" casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

EOG requests 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.

### **Wellhead & Offline Cementing:**

EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards for well control equipment testing of Onshore Order No. 2 (item III.A.2.a.i) to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) along with Batch Drilling & Offline cement operations to include the following:

- Full BOPE test at first installation on the pad.
- Full BOPE test every 30 days per Onshore Order No. 2.
- Function test BOP elements per Onshore Order No. 2.
- Break testing BOP and BOPE coupled with batch drilling operations and option to offline cement and/or remediate (if needed) any surface or intermediate sections, according to attached offline cementing support documentation.
- After the well section is secured, the BOP will be disconnected from the wellhead and walked with the rig to another well on the pad.
- TA cap will also be installed per Wellhead vendor procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.
- See attached "EOG BLM Variance 3a -Offline Cement Intermediate Operational Procedure"



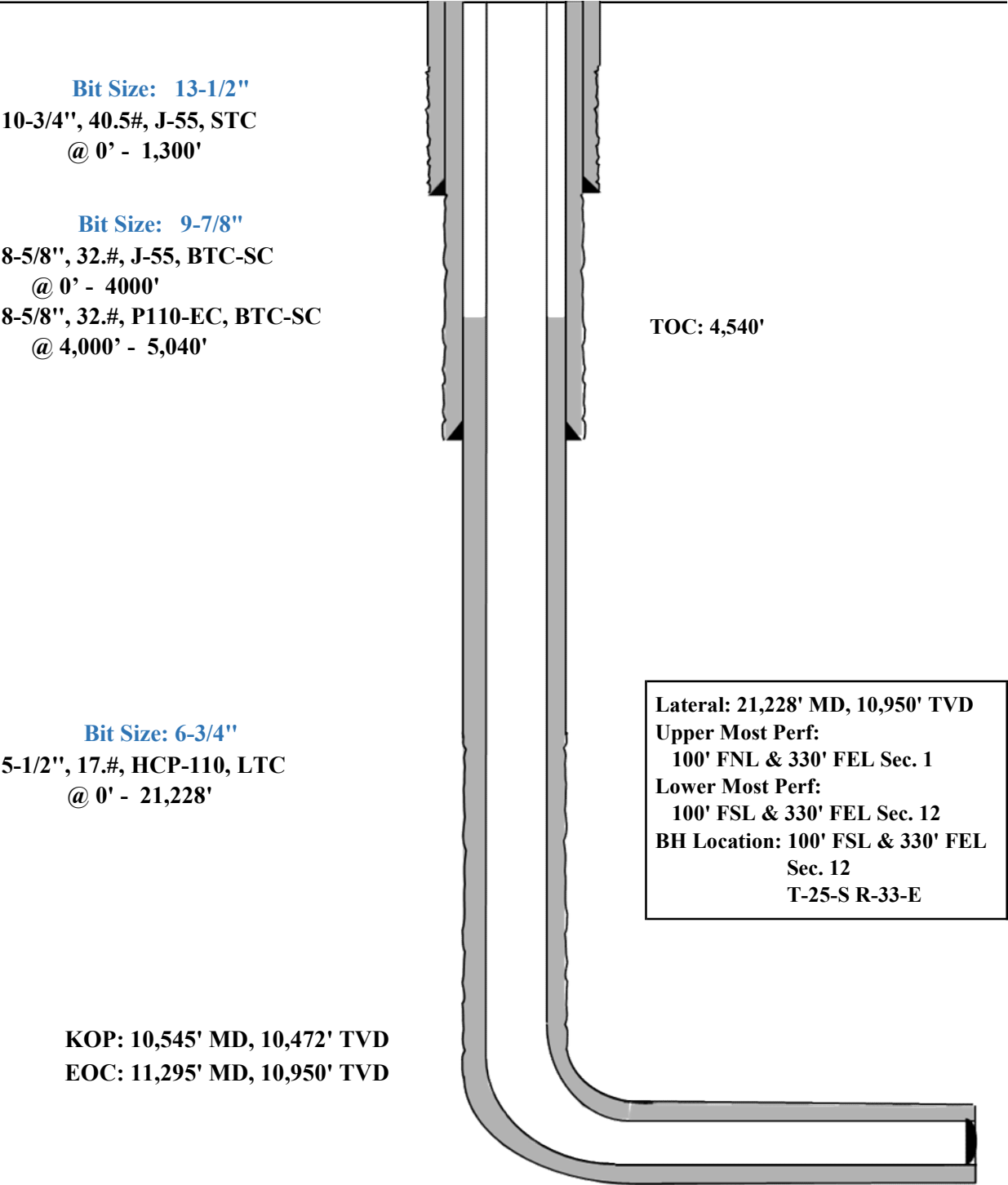


Lacey Swiss 1 Fed Com 507H

916'  
644'  
Section 1  
T-25-S, R-33-E

Proposed Wellbore B:  
  
  
API: 30-025-\*\*\*\*\*

KB: 3488'  
GL: 3463'





Lacey Swiss 1 Fed Com #507H

## 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/Escape 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.



Lacey Swiss 1 Fed Com #507H

■ **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.



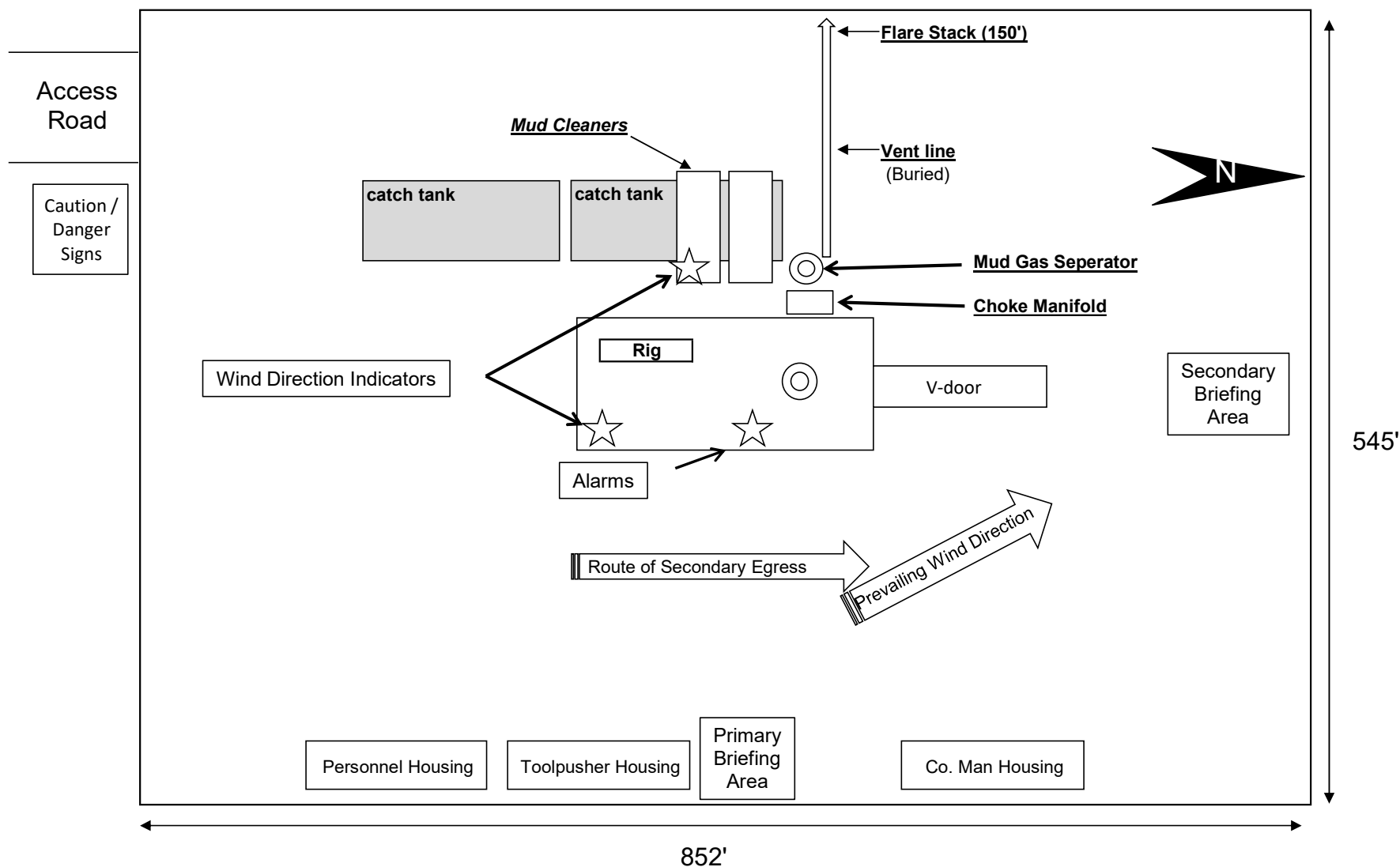
Lacey Swiss 1 Fed Com #507H

## 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

Exhibit 4  
EOG Resources  
Lacey Swiss 1 Fed Com #507H

Well Site Diagram







West(-)/East(+)



## Midland

Lea County, NM (NAD 83 NME)

Lacey Swiss 1 Fed Com

#507H

OH

Plan: Plan #0.1 RT

## Standard Planning Report

06 June, 2023





## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #507H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3489.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3489.0usft
<b>Site:</b>	Lacey Swiss 1 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#507H	<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	Lacey Swiss 1 Fed Com				
Site Position:		Northing:	425,128.00 usft	Latitude:	32° 9' 58.098 N
From:	Map	Easting:	793,117.00 usft	Longitude:	103° 31' 10.745 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "		

Well	#507H					
Well Position	+N/-S	0.0 usft	Northing:	424,452.00 usft	Latitude:	32° 9' 51.407 N
	+E/-W	0.0 usft	Easting:	793,142.00 usft	Longitude:	103° 31' 10.514 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,463.0 usft
Grid Convergence:		0.43 °				

<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	6/2/2023	6.29	59.79	47,258.70033799

<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	177.69	

<b>Plan Survey Tool Program</b>	<b>Date</b>	6/6/2023			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.0	21,228.0	Plan #0.1 RT (OH)	EOG MWD+IFR1	
			MWD + IFR1		



Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well #507H
Company:	Midland	TVD Reference:	kb = 26' @ 3489.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 26' @ 3489.0usft
Site:	Lacey Swiss 1 Fed Com	North Reference:	Grid
Well:	#507H	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	
1,653.0	0.00	0.00	1,653.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,116.3	9.27	19.52	2,114.3	35.2	12.5	2.00	2.00	0.00	19.52	
7,377.4	9.27	19.52	7,306.7	833.8	295.5	0.00	0.00	0.00	0.00	
7,840.7	0.00	0.00	7,768.0	869.0	308.0	2.00	-2.00	0.00	180.00	
10,545.2	0.00	0.00	10,472.5	869.0	308.0	0.00	0.00	0.00	0.00	KOP(Lacey Swiss 1 F
10,765.6	26.46	180.00	10,685.2	819.0	308.0	12.00	12.00	81.65	180.00	FTP(Lacey Swiss 1 F
11,295.2	90.00	179.55	10,949.9	391.6	310.3	12.00	12.00	-0.09	-0.50	
13,407.8	90.00	179.55	10,950.0	-1,721.0	327.0	0.00	0.00	0.00	0.00	Fed Perf 1(Lacey Swi
16,046.9	90.00	179.58	10,950.0	-4,360.0	347.0	0.00	0.00	0.00	85.32	Fed Perf 2(Lacey Swi
21,228.0	90.00	179.58	10,950.0	-9,541.0	385.0	0.00	0.00	0.00	-110.85	PBHL(Lacey Swiss 1



## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #507H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3489.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3489.0usft
<b>Site:</b>	Lacey Swiss 1 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#507H	<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
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,653.0	0.00	0.00	1,653.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.94	19.52	1,700.0	0.4	0.1	-0.4	2.00	2.00	0.00
1,800.0	2.94	19.52	1,799.9	3.6	1.3	-3.5	2.00	2.00	0.00
1,900.0	4.94	19.52	1,899.7	10.0	3.6	-9.9	2.00	2.00	0.00
2,000.0	6.94	19.52	1,999.2	19.8	7.0	-19.5	2.00	2.00	0.00
2,100.0	8.94	19.52	2,098.2	32.8	11.6	-32.3	2.00	2.00	0.00
2,116.3	9.27	19.52	2,114.3	35.2	12.5	-34.7	2.00	2.00	0.00
2,200.0	9.27	19.52	2,196.9	47.9	17.0	-47.2	0.00	0.00	0.00
2,300.0	9.27	19.52	2,295.6	63.1	22.4	-62.2	0.00	0.00	0.00
2,400.0	9.27	19.52	2,394.3	78.3	27.7	-77.1	0.00	0.00	0.00
2,500.0	9.27	19.52	2,493.0	93.5	33.1	-92.1	0.00	0.00	0.00
2,600.0	9.27	19.52	2,591.7	108.7	38.5	-107.0	0.00	0.00	0.00
2,700.0	9.27	19.52	2,690.4	123.8	43.9	-122.0	0.00	0.00	0.00
2,800.0	9.27	19.52	2,789.1	139.0	49.3	-136.9	0.00	0.00	0.00
2,900.0	9.27	19.52	2,887.8	154.2	54.6	-151.9	0.00	0.00	0.00
3,000.0	9.27	19.52	2,986.5	169.4	60.0	-166.8	0.00	0.00	0.00
3,100.0	9.27	19.52	3,085.1	184.5	65.4	-181.8	0.00	0.00	0.00
3,200.0	9.27	19.52	3,183.8	199.7	70.8	-196.7	0.00	0.00	0.00
3,300.0	9.27	19.52	3,282.5	214.9	76.2	-211.7	0.00	0.00	0.00
3,400.0	9.27	19.52	3,381.2	230.1	81.5	-226.6	0.00	0.00	0.00
3,500.0	9.27	19.52	3,479.9	245.3	86.9	-241.5	0.00	0.00	0.00
3,600.0	9.27	19.52	3,578.6	260.4	92.3	-256.5	0.00	0.00	0.00
3,700.0	9.27	19.52	3,677.3	275.6	97.7	-271.4	0.00	0.00	0.00
3,800.0	9.27	19.52	3,776.0	290.8	103.1	-286.4	0.00	0.00	0.00
3,900.0	9.27	19.52	3,874.7	306.0	108.4	-301.3	0.00	0.00	0.00
4,000.0	9.27	19.52	3,973.4	321.1	113.8	-316.3	0.00	0.00	0.00
4,100.0	9.27	19.52	4,072.1	336.3	119.2	-331.2	0.00	0.00	0.00
4,200.0	9.27	19.52	4,170.8	351.5	124.6	-346.2	0.00	0.00	0.00
4,300.0	9.27	19.52	4,269.5	366.7	130.0	-361.1	0.00	0.00	0.00
4,400.0	9.27	19.52	4,368.2	381.9	135.3	-376.1	0.00	0.00	0.00
4,500.0	9.27	19.52	4,466.9	397.0	140.7	-391.0	0.00	0.00	0.00
4,600.0	9.27	19.52	4,565.6	412.2	146.1	-406.0	0.00	0.00	0.00
4,700.0	9.27	19.52	4,664.3	427.4	151.5	-420.9	0.00	0.00	0.00
4,800.0	9.27	19.52	4,763.0	442.6	156.9	-435.9	0.00	0.00	0.00
4,900.0	9.27	19.52	4,861.7	457.7	162.2	-450.8	0.00	0.00	0.00
5,000.0	9.27	19.52	4,960.3	472.9	167.6	-465.8	0.00	0.00	0.00
5,100.0	9.27	19.52	5,059.0	488.1	173.0	-480.7	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #507H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3489.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3489.0usft
<b>Site:</b>	Lacey Swiss 1 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#507H	<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)
5,200.0	9.27	19.52	5,157.7	503.3	178.4	-495.7	0.00	0.00	0.00
5,300.0	9.27	19.52	5,256.4	518.5	183.8	-510.6	0.00	0.00	0.00
5,400.0	9.27	19.52	5,355.1	533.6	189.1	-525.6	0.00	0.00	0.00
5,500.0	9.27	19.52	5,453.8	548.8	194.5	-540.5	0.00	0.00	0.00
5,600.0	9.27	19.52	5,552.5	564.0	199.9	-555.5	0.00	0.00	0.00
5,700.0	9.27	19.52	5,651.2	579.2	205.3	-570.4	0.00	0.00	0.00
5,800.0	9.27	19.52	5,749.9	594.3	210.7	-585.4	0.00	0.00	0.00
5,900.0	9.27	19.52	5,848.6	609.5	216.0	-600.3	0.00	0.00	0.00
6,000.0	9.27	19.52	5,947.3	624.7	221.4	-615.3	0.00	0.00	0.00
6,100.0	9.27	19.52	6,046.0	639.9	226.8	-630.2	0.00	0.00	0.00
6,200.0	9.27	19.52	6,144.7	655.1	232.2	-645.2	0.00	0.00	0.00
6,300.0	9.27	19.52	6,243.4	670.2	237.6	-660.1	0.00	0.00	0.00
6,400.0	9.27	19.52	6,342.1	685.4	242.9	-675.1	0.00	0.00	0.00
6,500.0	9.27	19.52	6,440.8	700.6	248.3	-690.0	0.00	0.00	0.00
6,600.0	9.27	19.52	6,539.5	715.8	253.7	-705.0	0.00	0.00	0.00
6,700.0	9.27	19.52	6,638.2	731.0	259.1	-719.9	0.00	0.00	0.00
6,800.0	9.27	19.52	6,736.9	746.1	264.5	-734.9	0.00	0.00	0.00
6,900.0	9.27	19.52	6,835.6	761.3	269.8	-749.8	0.00	0.00	0.00
7,000.0	9.27	19.52	6,934.2	776.5	275.2	-764.8	0.00	0.00	0.00
7,100.0	9.27	19.52	7,032.9	791.7	280.6	-779.7	0.00	0.00	0.00
7,200.0	9.27	19.52	7,131.6	806.8	286.0	-794.7	0.00	0.00	0.00
7,300.0	9.27	19.52	7,230.3	822.0	291.3	-809.6	0.00	0.00	0.00
7,377.4	9.27	19.52	7,306.7	833.8	295.5	-821.2	0.00	0.00	0.00
7,400.0	8.81	19.52	7,329.0	837.1	296.7	-824.5	2.00	-2.00	0.00
7,500.0	6.81	19.52	7,428.1	849.9	301.2	-837.1	2.00	-2.00	0.00
7,600.0	4.81	19.52	7,527.6	859.5	304.6	-846.5	2.00	-2.00	0.00
7,700.0	2.81	19.52	7,627.4	865.7	306.8	-852.7	2.00	-2.00	0.00
7,800.0	0.81	19.52	7,727.3	868.7	307.9	-855.6	2.00	-2.00	0.00
7,840.7	0.00	0.00	7,768.0	869.0	308.0	-855.9	2.00	-2.00	0.00
7,900.0	0.00	0.00	7,827.3	869.0	308.0	-855.9	0.00	0.00	0.00
8,000.0	0.00	0.00	7,927.3	869.0	308.0	-855.9	0.00	0.00	0.00
8,100.0	0.00	0.00	8,027.3	869.0	308.0	-855.9	0.00	0.00	0.00
8,200.0	0.00	0.00	8,127.3	869.0	308.0	-855.9	0.00	0.00	0.00
8,300.0	0.00	0.00	8,227.3	869.0	308.0	-855.9	0.00	0.00	0.00
8,400.0	0.00	0.00	8,327.3	869.0	308.0	-855.9	0.00	0.00	0.00
8,500.0	0.00	0.00	8,427.3	869.0	308.0	-855.9	0.00	0.00	0.00
8,600.0	0.00	0.00	8,527.3	869.0	308.0	-855.9	0.00	0.00	0.00
8,700.0	0.00	0.00	8,627.3	869.0	308.0	-855.9	0.00	0.00	0.00
8,800.0	0.00	0.00	8,727.3	869.0	308.0	-855.9	0.00	0.00	0.00
8,900.0	0.00	0.00	8,827.3	869.0	308.0	-855.9	0.00	0.00	0.00
9,000.0	0.00	0.00	8,927.3	869.0	308.0	-855.9	0.00	0.00	0.00
9,100.0	0.00	0.00	9,027.3	869.0	308.0	-855.9	0.00	0.00	0.00
9,200.0	0.00	0.00	9,127.3	869.0	308.0	-855.9	0.00	0.00	0.00
9,300.0	0.00	0.00	9,227.3	869.0	308.0	-855.9	0.00	0.00	0.00
9,400.0	0.00	0.00	9,327.3	869.0	308.0	-855.9	0.00	0.00	0.00
9,500.0	0.00	0.00	9,427.3	869.0	308.0	-855.9	0.00	0.00	0.00
9,600.0	0.00	0.00	9,527.3	869.0	308.0	-855.9	0.00	0.00	0.00
9,700.0	0.00	0.00	9,627.3	869.0	308.0	-855.9	0.00	0.00	0.00
9,800.0	0.00	0.00	9,727.3	869.0	308.0	-855.9	0.00	0.00	0.00
9,900.0	0.00	0.00	9,827.3	869.0	308.0	-855.9	0.00	0.00	0.00
10,000.0	0.00	0.00	9,927.3	869.0	308.0	-855.9	0.00	0.00	0.00
10,100.0	0.00	0.00	10,027.3	869.0	308.0	-855.9	0.00	0.00	0.00
10,200.0	0.00	0.00	10,127.3	869.0	308.0	-855.9	0.00	0.00	0.00
10,300.0	0.00	0.00	10,227.3	869.0	308.0	-855.9	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #507H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3489.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3489.0usft
<b>Site:</b>	Lacey Swiss 1 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#507H	<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)
10,400.0	0.00	0.00	10,327.3	869.0	308.0	-855.9	0.00	0.00	0.00
10,500.0	0.00	0.00	10,427.3	869.0	308.0	-855.9	0.00	0.00	0.00
10,545.2	0.00	0.00	10,472.5	869.0	308.0	-855.9	0.00	0.00	0.00
<b>KOP(Lacey Swiss 1 Fed Com #507H)</b>									
10,550.0	0.58	180.00	10,477.3	869.0	308.0	-855.9	12.00	12.00	0.00
10,575.0	3.58	180.00	10,502.3	868.1	308.0	-854.9	12.00	12.00	0.00
10,600.0	6.58	180.00	10,527.2	865.9	308.0	-852.7	12.00	12.00	0.00
10,625.0	9.58	180.00	10,551.9	862.3	308.0	-849.2	12.00	12.00	0.00
10,650.0	12.58	180.00	10,576.5	857.5	308.0	-844.4	12.00	12.00	0.00
10,675.0	15.58	180.00	10,600.7	851.5	308.0	-838.4	12.00	12.00	0.00
10,700.0	18.58	180.00	10,624.6	844.1	308.0	-831.0	12.00	12.00	0.00
10,725.0	21.58	180.00	10,648.1	835.5	308.0	-822.4	12.00	12.00	0.00
10,750.0	24.58	180.00	10,671.1	825.7	308.0	-812.7	12.00	12.00	0.00
10,765.6	26.46	180.00	10,685.2	819.0	308.0	-805.9	12.00	12.00	0.00
<b>FTP(Lacey Swiss 1 Fed Com #507H)</b>									
10,775.0	27.58	179.98	10,693.5	814.8	308.0	-801.7	12.00	12.00	-0.23
10,800.0	30.58	179.93	10,715.4	802.6	308.0	-789.5	12.00	12.00	-0.20
10,825.0	33.58	179.89	10,736.6	789.3	308.0	-776.3	12.00	12.00	-0.17
10,850.0	36.58	179.85	10,757.0	775.0	308.1	-761.9	12.00	12.00	-0.14
10,875.0	39.58	179.82	10,776.7	759.5	308.1	-746.5	12.00	12.00	-0.12
10,900.0	42.58	179.79	10,795.5	743.1	308.2	-730.1	12.00	12.00	-0.11
10,925.0	45.58	179.77	10,813.5	725.7	308.2	-712.7	12.00	12.00	-0.10
10,950.0	48.58	179.75	10,830.5	707.4	308.3	-694.4	12.00	12.00	-0.09
10,975.0	51.58	179.73	10,846.6	688.3	308.4	-675.3	12.00	12.00	-0.08
11,000.0	54.58	179.71	10,861.6	668.3	308.5	-655.3	12.00	12.00	-0.07
11,025.0	57.58	179.69	10,875.5	647.5	308.6	-634.6	12.00	12.00	-0.07
11,050.0	60.58	179.67	10,888.4	626.1	308.7	-613.1	12.00	12.00	-0.06
11,075.0	63.58	179.66	10,900.1	604.0	308.9	-591.1	12.00	12.00	-0.06
11,100.0	66.58	179.65	10,910.6	581.3	309.0	-568.4	12.00	12.00	-0.06
11,125.0	69.58	179.63	10,919.9	558.1	309.1	-545.2	12.00	12.00	-0.05
11,150.0	72.58	179.62	10,928.0	534.5	309.3	-521.6	12.00	12.00	-0.05
11,175.0	75.58	179.61	10,934.9	510.5	309.5	-497.6	12.00	12.00	-0.05
11,200.0	78.58	179.59	10,940.5	486.1	309.6	-473.2	12.00	12.00	-0.05
11,225.0	81.58	179.58	10,944.8	461.5	309.8	-448.6	12.00	12.00	-0.05
11,250.0	84.58	179.57	10,947.8	436.7	310.0	-423.8	12.00	12.00	-0.05
11,275.0	87.58	179.56	10,949.5	411.7	310.2	-398.9	12.00	12.00	-0.05
11,295.2	90.00	179.55	10,949.9	391.6	310.3	-378.7	12.00	12.00	-0.05
11,300.0	90.00	179.55	10,949.9	386.7	310.4	-373.9	0.00	0.00	0.00
11,400.0	90.00	179.55	10,949.9	286.7	311.2	-273.9	0.00	0.00	0.00
11,500.0	90.00	179.55	10,950.0	186.7	311.9	-174.0	0.00	0.00	0.00
11,600.0	90.00	179.55	10,950.0	86.7	312.7	-74.1	0.00	0.00	0.00
11,700.0	90.00	179.55	10,950.0	-13.3	313.5	25.9	0.00	0.00	0.00
11,800.0	90.00	179.55	10,950.0	-113.3	314.3	125.8	0.00	0.00	0.00
11,900.0	90.00	179.55	10,950.0	-213.3	315.1	225.8	0.00	0.00	0.00
12,000.0	90.00	179.55	10,950.0	-313.3	315.9	325.7	0.00	0.00	0.00
12,100.0	90.00	179.55	10,950.0	-413.3	316.7	425.7	0.00	0.00	0.00
12,200.0	90.00	179.55	10,950.0	-513.3	317.5	525.6	0.00	0.00	0.00
12,300.0	90.00	179.55	10,950.0	-613.2	318.3	625.6	0.00	0.00	0.00
12,400.0	90.00	179.55	10,950.0	-713.2	319.0	725.5	0.00	0.00	0.00
12,500.0	90.00	179.55	10,950.0	-813.2	319.8	825.5	0.00	0.00	0.00
12,600.0	90.00	179.55	10,950.0	-913.2	320.6	925.4	0.00	0.00	0.00
12,700.0	90.00	179.55	10,950.0	-1,013.2	321.4	1,025.4	0.00	0.00	0.00
12,800.0	90.00	179.55	10,950.0	-1,113.2	322.2	1,125.3	0.00	0.00	0.00
12,900.0	90.00	179.55	10,950.0	-1,213.2	323.0	1,225.3	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #507H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3489.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3489.0usft
<b>Site:</b>	Lacey Swiss 1 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#507H	<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)
13,000.0	90.00	179.55	10,950.0	-1,313.2	323.8	1,325.2	0.00	0.00	0.00
13,100.0	90.00	179.55	10,950.0	-1,413.2	324.6	1,425.2	0.00	0.00	0.00
13,200.0	90.00	179.55	10,950.0	-1,513.2	325.4	1,525.1	0.00	0.00	0.00
13,300.0	90.00	179.55	10,950.0	-1,613.2	326.1	1,625.1	0.00	0.00	0.00
13,407.8	90.00	179.55	10,950.0	-1,721.0	327.0	1,732.8	0.00	0.00	0.00
Fed Perf 1(Lacey Swiss 1 Fed Com #507H)									
13,500.0	90.00	179.55	10,950.0	-1,813.2	327.7	1,824.9	0.00	0.00	0.00
13,600.0	90.00	179.55	10,950.0	-1,913.2	328.5	1,924.9	0.00	0.00	0.00
13,700.0	90.00	179.55	10,950.0	-2,013.2	329.3	2,024.8	0.00	0.00	0.00
13,800.0	90.00	179.55	10,950.0	-2,113.2	330.1	2,124.8	0.00	0.00	0.00
13,900.0	90.00	179.55	10,950.0	-2,213.2	330.9	2,224.7	0.00	0.00	0.00
14,000.0	90.00	179.56	10,950.0	-2,313.2	331.6	2,324.7	0.00	0.00	0.00
14,100.0	90.00	179.56	10,950.0	-2,413.2	332.4	2,424.6	0.00	0.00	0.00
14,200.0	90.00	179.56	10,950.0	-2,513.2	333.2	2,524.6	0.00	0.00	0.00
14,300.0	90.00	179.56	10,950.0	-2,613.2	333.9	2,624.5	0.00	0.00	0.00
14,400.0	90.00	179.56	10,950.0	-2,713.2	334.7	2,724.5	0.00	0.00	0.00
14,500.0	90.00	179.56	10,950.0	-2,813.2	335.5	2,824.4	0.00	0.00	0.00
14,600.0	90.00	179.56	10,950.0	-2,913.2	336.2	2,924.4	0.00	0.00	0.00
14,700.0	90.00	179.57	10,950.0	-3,013.2	337.0	3,024.3	0.00	0.00	0.00
14,800.0	90.00	179.57	10,950.0	-3,113.2	337.8	3,124.3	0.00	0.00	0.00
14,900.0	90.00	179.57	10,950.0	-3,213.2	338.5	3,224.2	0.00	0.00	0.00
15,000.0	90.00	179.57	10,950.0	-3,313.2	339.3	3,324.2	0.00	0.00	0.00
15,100.0	90.00	179.57	10,950.0	-3,413.2	340.0	3,424.1	0.00	0.00	0.00
15,200.0	90.00	179.57	10,950.0	-3,513.2	340.8	3,524.0	0.00	0.00	0.00
15,300.0	90.00	179.57	10,950.0	-3,613.2	341.5	3,624.0	0.00	0.00	0.00
15,400.0	90.00	179.57	10,950.0	-3,713.2	342.2	3,723.9	0.00	0.00	0.00
15,500.0	90.00	179.58	10,950.0	-3,813.2	343.0	3,823.9	0.00	0.00	0.00
15,600.0	90.00	179.58	10,950.0	-3,913.1	343.7	3,923.8	0.00	0.00	0.00
15,700.0	90.00	179.58	10,950.0	-4,013.1	344.5	4,023.8	0.00	0.00	0.00
15,800.0	90.00	179.58	10,950.0	-4,113.1	345.2	4,123.7	0.00	0.00	0.00
15,900.0	90.00	179.58	10,950.0	-4,213.1	345.9	4,223.7	0.00	0.00	0.00
16,000.0	90.00	179.58	10,950.0	-4,313.1	346.7	4,323.6	0.00	0.00	0.00
16,046.9	90.00	179.58	10,950.0	-4,360.0	347.0	4,370.4	0.00	0.00	0.00
Fed Perf 2(Lacey Swiss 1 Fed Com #507H)									
16,100.0	90.00	179.58	10,950.0	-4,413.1	347.4	4,423.6	0.00	0.00	0.00
16,200.0	90.00	179.58	10,950.0	-4,513.1	348.1	4,523.5	0.00	0.00	0.00
16,300.0	90.00	179.58	10,950.0	-4,613.1	348.8	4,623.4	0.00	0.00	0.00
16,400.0	90.00	179.58	10,950.0	-4,713.1	349.6	4,723.4	0.00	0.00	0.00
16,500.0	90.00	179.58	10,950.0	-4,813.1	350.3	4,823.3	0.00	0.00	0.00
16,600.0	90.00	179.58	10,950.0	-4,913.1	351.0	4,923.3	0.00	0.00	0.00
16,700.0	90.00	179.58	10,950.0	-5,013.1	351.8	5,023.2	0.00	0.00	0.00
16,800.0	90.00	179.58	10,950.0	-5,113.1	352.5	5,123.2	0.00	0.00	0.00
16,900.0	90.00	179.58	10,950.0	-5,213.1	353.2	5,223.1	0.00	0.00	0.00
17,000.0	90.00	179.58	10,950.0	-5,313.1	353.9	5,323.1	0.00	0.00	0.00
17,100.0	90.00	179.58	10,950.0	-5,413.1	354.7	5,423.0	0.00	0.00	0.00
17,200.0	90.00	179.58	10,950.0	-5,513.1	355.4	5,523.0	0.00	0.00	0.00
17,300.0	90.00	179.58	10,950.0	-5,613.1	356.1	5,622.9	0.00	0.00	0.00
17,400.0	90.00	179.58	10,950.0	-5,713.1	356.9	5,722.8	0.00	0.00	0.00
17,500.0	90.00	179.58	10,950.0	-5,813.1	357.6	5,822.8	0.00	0.00	0.00
17,600.0	90.00	179.58	10,950.0	-5,913.1	358.3	5,922.7	0.00	0.00	0.00
17,700.0	90.00	179.58	10,950.0	-6,013.1	359.0	6,022.7	0.00	0.00	0.00
17,800.0	90.00	179.58	10,950.0	-6,113.1	359.8	6,122.6	0.00	0.00	0.00
17,900.0	90.00	179.58	10,950.0	-6,213.1	360.5	6,222.6	0.00	0.00	0.00





## Planning Report

<b>Database:</b>	PEDM	<b>Local Co-ordinate Reference:</b>	Well #507H
<b>Company:</b>	Midland	<b>TVD Reference:</b>	kb = 26' @ 3489.0usft
<b>Project:</b>	Lea County, NM (NAD 83 NME)	<b>MD Reference:</b>	kb = 26' @ 3489.0usft
<b>Site:</b>	Lacey Swiss 1 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	#507H	<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)
18,000.0	90.00	179.58	10,950.0	-6,313.1	361.2	6,322.5	0.00	0.00	0.00
18,100.0	90.00	179.58	10,950.0	-6,413.1	362.0	6,422.5	0.00	0.00	0.00
18,200.0	90.00	179.58	10,950.0	-6,513.1	362.7	6,522.4	0.00	0.00	0.00
18,300.0	90.00	179.58	10,950.0	-6,613.1	363.4	6,622.4	0.00	0.00	0.00
18,400.0	90.00	179.58	10,950.0	-6,713.1	364.2	6,722.3	0.00	0.00	0.00
18,500.0	90.00	179.58	10,950.0	-6,813.1	364.9	6,822.2	0.00	0.00	0.00
18,600.0	90.00	179.58	10,950.0	-6,913.1	365.6	6,922.2	0.00	0.00	0.00
18,700.0	90.00	179.58	10,950.0	-7,013.1	366.4	7,022.1	0.00	0.00	0.00
18,800.0	90.00	179.58	10,950.0	-7,113.1	367.1	7,122.1	0.00	0.00	0.00
18,900.0	90.00	179.58	10,950.0	-7,213.1	367.8	7,222.0	0.00	0.00	0.00
19,000.0	90.00	179.58	10,950.0	-7,313.1	368.6	7,322.0	0.00	0.00	0.00
19,100.0	90.00	179.58	10,950.0	-7,413.1	369.3	7,421.9	0.00	0.00	0.00
19,200.0	90.00	179.58	10,950.0	-7,513.1	370.0	7,521.9	0.00	0.00	0.00
19,300.0	90.00	179.58	10,950.0	-7,613.1	370.8	7,621.8	0.00	0.00	0.00
19,400.0	90.00	179.58	10,950.0	-7,713.0	371.5	7,721.8	0.00	0.00	0.00
19,500.0	90.00	179.58	10,950.0	-7,813.0	372.2	7,821.7	0.00	0.00	0.00
19,600.0	90.00	179.58	10,950.0	-7,913.0	373.0	7,921.6	0.00	0.00	0.00
19,700.0	90.00	179.58	10,950.0	-8,013.0	373.7	8,021.6	0.00	0.00	0.00
19,800.0	90.00	179.58	10,950.0	-8,113.0	374.5	8,121.5	0.00	0.00	0.00
19,900.0	90.00	179.58	10,950.0	-8,213.0	375.2	8,221.5	0.00	0.00	0.00
20,000.0	90.00	179.58	10,950.0	-8,313.0	375.9	8,321.4	0.00	0.00	0.00
20,100.0	90.00	179.58	10,950.0	-8,413.0	376.7	8,421.4	0.00	0.00	0.00
20,200.0	90.00	179.58	10,950.0	-8,513.0	377.4	8,521.3	0.00	0.00	0.00
20,300.0	90.00	179.58	10,950.0	-8,613.0	378.1	8,621.3	0.00	0.00	0.00
20,400.0	90.00	179.58	10,950.0	-8,713.0	378.9	8,721.2	0.00	0.00	0.00
20,500.0	90.00	179.58	10,950.0	-8,813.0	379.6	8,821.2	0.00	0.00	0.00
20,600.0	90.00	179.58	10,950.0	-8,913.0	380.4	8,921.1	0.00	0.00	0.00
20,700.0	90.00	179.58	10,950.0	-9,013.0	381.1	9,021.0	0.00	0.00	0.00
20,800.0	90.00	179.58	10,950.0	-9,113.0	381.8	9,121.0	0.00	0.00	0.00
20,900.0	90.00	179.58	10,950.0	-9,213.0	382.6	9,220.9	0.00	0.00	0.00
21,000.0	90.00	179.58	10,950.0	-9,313.0	383.3	9,320.9	0.00	0.00	0.00
21,100.0	90.00	179.58	10,950.0	-9,413.0	384.1	9,420.8	0.00	0.00	0.00
21,200.0	90.00	179.58	10,950.0	-9,513.0	384.8	9,520.8	0.00	0.00	0.00
21,228.0	90.00	179.58	10,950.0	-9,541.0	385.0	9,548.8	0.00	0.00	0.00
PBHL(Lacey Swiss 1 Fed Com #507H)									



Planning Report

Database:	PEDM	Local Co-ordinate Reference:	Well #507H
Company:	Midland	TVD Reference:	kb = 26' @ 3489.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	kb = 26' @ 3489.0usft
Site:	Lacey Swiss 1 Fed Com	North Reference:	Grid
Well:	#507H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1 RT		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
KOP(Lacey Swiss 1 Fed - plan hits target center - Point	0.00	0.00	10,472.5	869.0	308.0	425,321.00	793,450.00	32° 9' 59.983 N	103° 31' 6.854 W
FTP(Lacey Swiss 1 Fed - plan hits target center - Point	0.00	0.00	10,685.2	819.0	308.0	425,271.00	793,450.00	32° 9' 59.488 N	103° 31' 6.859 W
Fed Perf 1(Lacey Swiss - plan hits target center - Point	0.00	0.00	10,950.0	-1,721.0	327.0	422,731.00	793,469.00	32° 9' 34.353 N	103° 31' 6.861 W
Fed Perf 2(Lacey Swiss - plan hits target center - Point	0.00	0.00	10,950.0	-4,360.0	347.0	420,092.00	793,489.00	32° 9' 8.238 N	103° 31' 6.861 W
PBHL(Lacey Swiss 1 Fe - plan hits target center - Point	0.00	0.00	10,950.0	-9,541.0	385.0	414,911.00	793,527.00	32° 8' 16.969 N	103° 31' 6.875 W

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	EOG RESOURCES INCORPORATED
WELL NAME & NO.:	LACEY SWISS 1 FED COM 507H
SURFACE HOLE FOOTAGE:	916'/N & 644'/E
BOTTOM HOLE FOOTAGE:	100'/S & 330'/E
LOCATION:	Section 1, T.25 S., R.33 E., NMP
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 checked="" 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 43 CFR part 3170 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

*Operator has proposed a primary and alternate casing plan – listed separately below.*

#### Primary Casing Design:

- The **13-3/8** inch surface casing shall be set at approximately **1300 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. The surface hole shall be **16 inch** in diameter.

- 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 minimum required fill of cement behind the **9-5/8** inch intermediate casing is:
- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the tail cement slurry due to cave/karst or potash.**
  - **Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.**
3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
- Cement should tie-back at least **200 feet** into previous casing string due to operator not meeting casing clearance requirement per 43 CFR part 3170. Operator shall provide method of verification.

**Alternate Casing Design:**

1. The **10-3/4** inch surface casing shall be set at approximately **1300 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. The surface hole shall be **13-1/2** inch in diameter.
  - 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 minimum required fill of cement behind the **8-5/8** inch intermediate casing is:
- Cement to surface. If cement does not circulate see B.1.a, c-d above.  
**Wait on cement (WOC) time for a primary cement job is to include the tail cement slurry due to cave/karst or potash.**
3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
- Cement should tie-back at least **200 ft** previous casing string due to operator not meeting casing clearance requirement per 43 CFR part 3170. 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 **13-3/8** inch 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 5000 (5M) 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 **43 CFR 3172.6(b)(9)** must be followed.

## D. SPECIAL REQUIREMENT (S)

### Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3170.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

### (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 3170.

#### Casing Clearance:

Operator casing variance is approved for the utilization of

- Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.
- Annular clearance less than 0.422" is acceptable for the production open hole section.

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.

### Offline Cementing

Contact the BLM prior to the commencement of any offline cementing procedure.

## 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 OOGO2.III.A.2.i 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.

JS 1/23/2024

## 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.

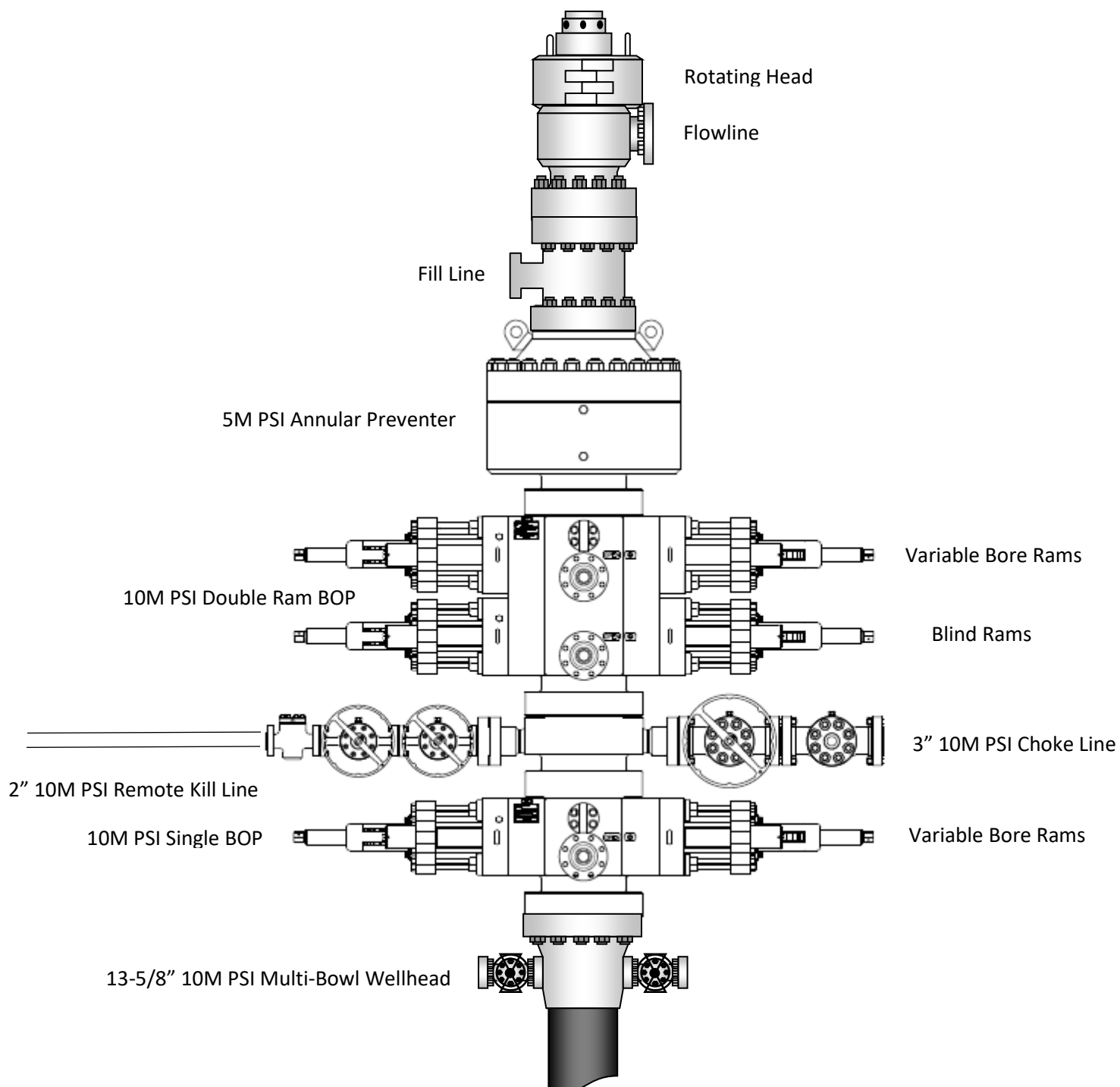
12-1/4" Intermediate Hole Section 10M psi requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Jars	6.500"	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

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Figure 2: Cactus TA Plug and Offline Adapter Schematic

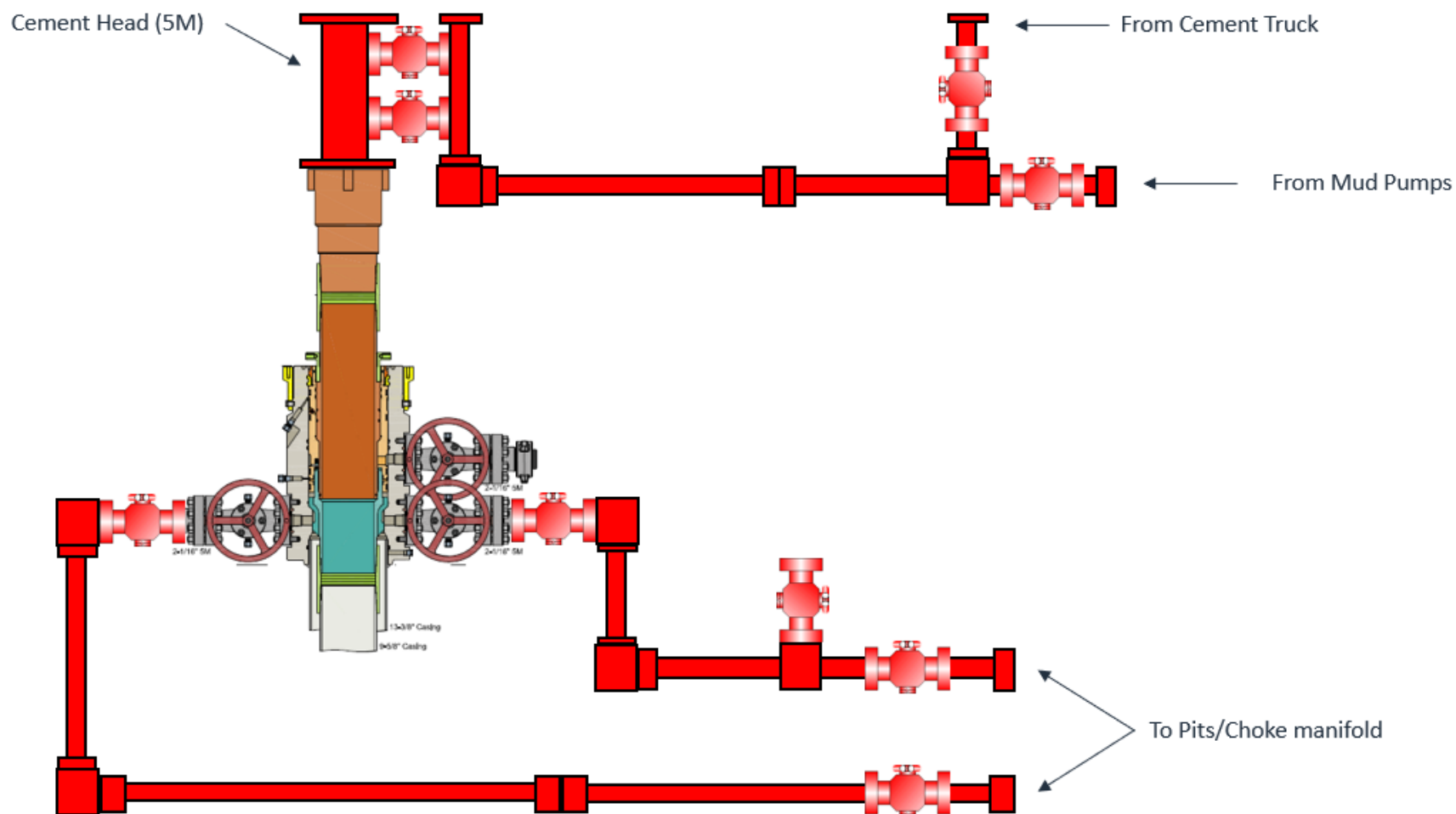




## Offline Intermediate Cementing Procedure

2/24/2022

Figure 3: Back Yard Rig Up



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

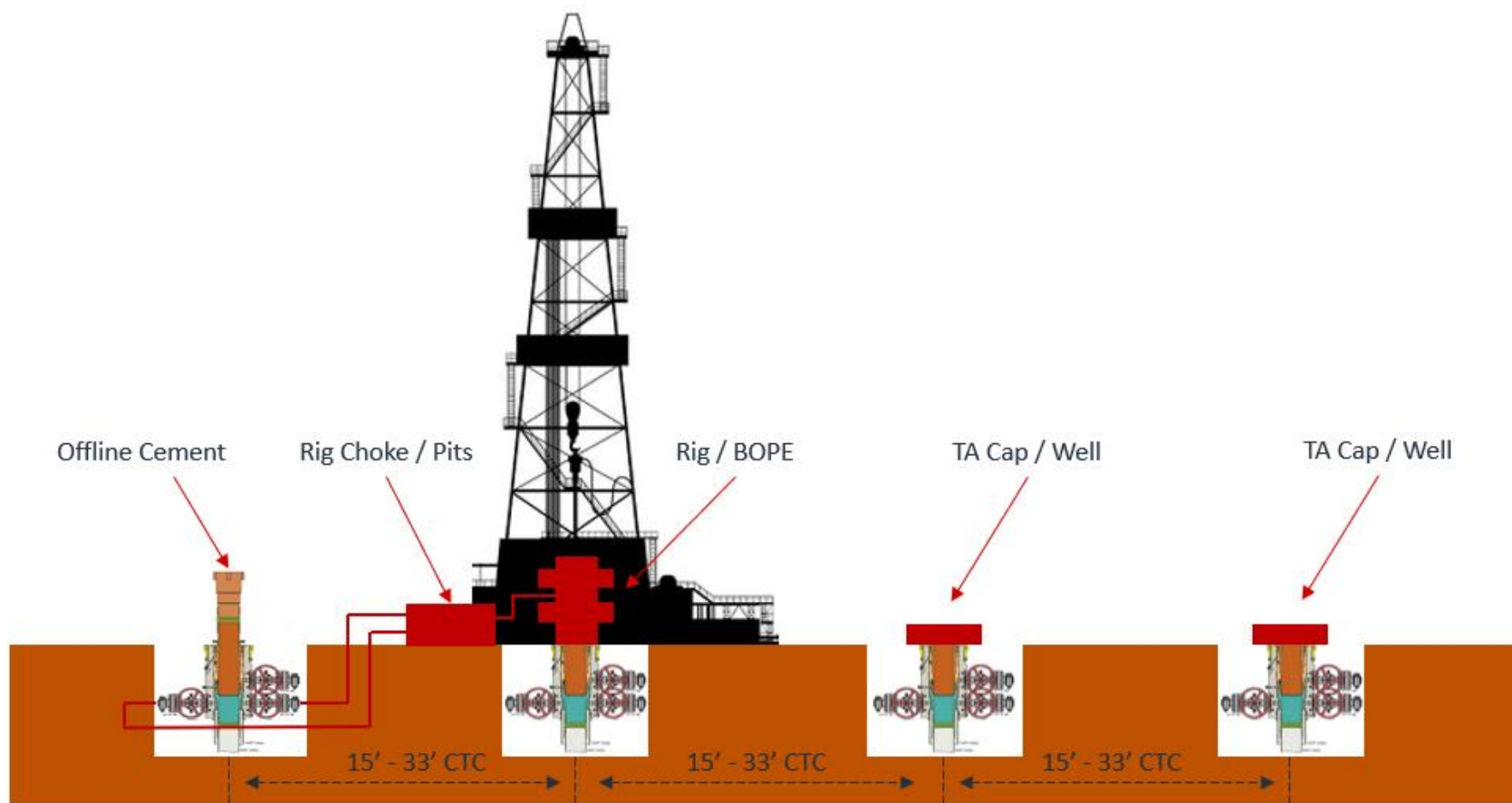




Offline Intermediate Cementing Procedure

2/24/2022

Figure 4: Rig Placement Diagram







# Salt Section Annular Clearance Variance Request

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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

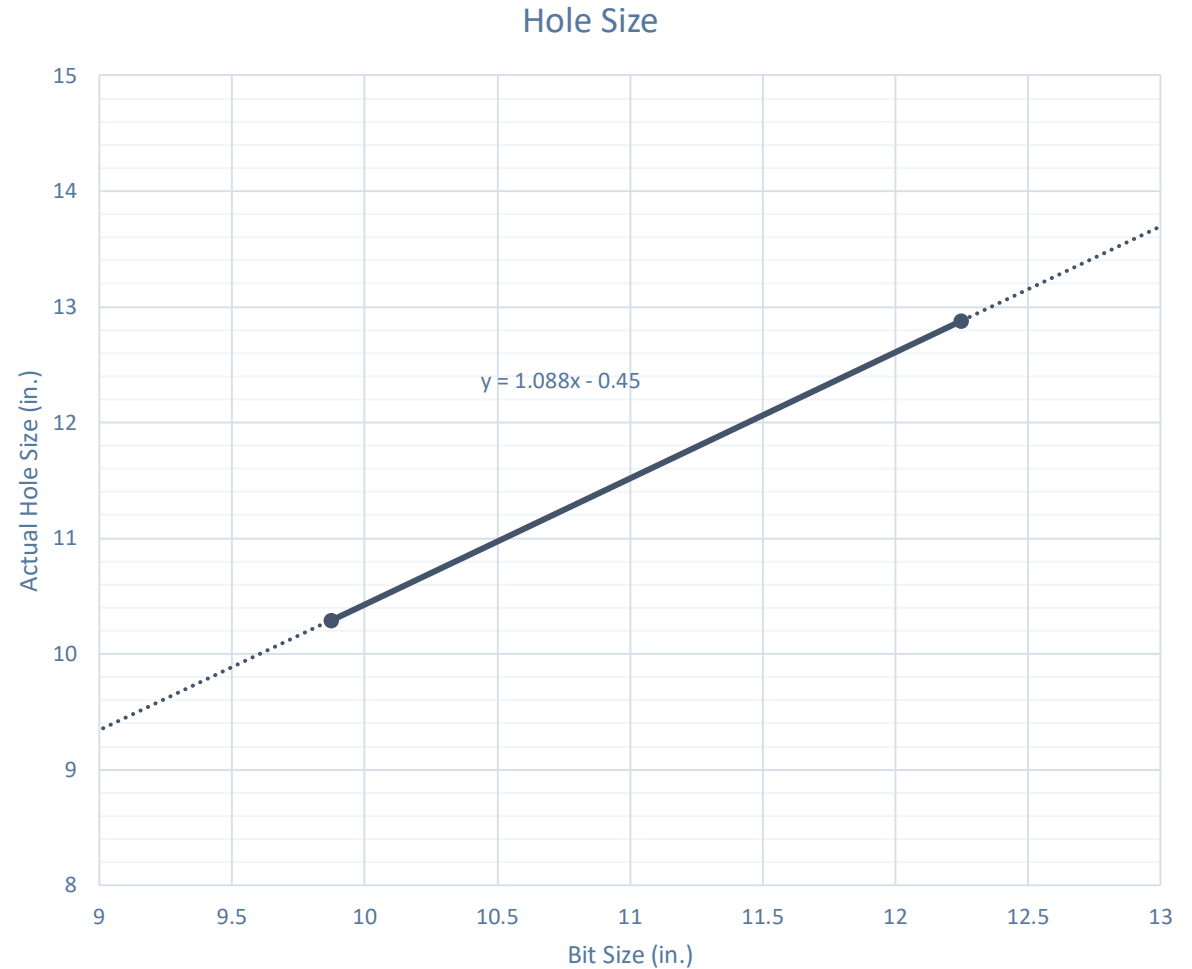
# Volumetric Hole Size Calculation

## 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

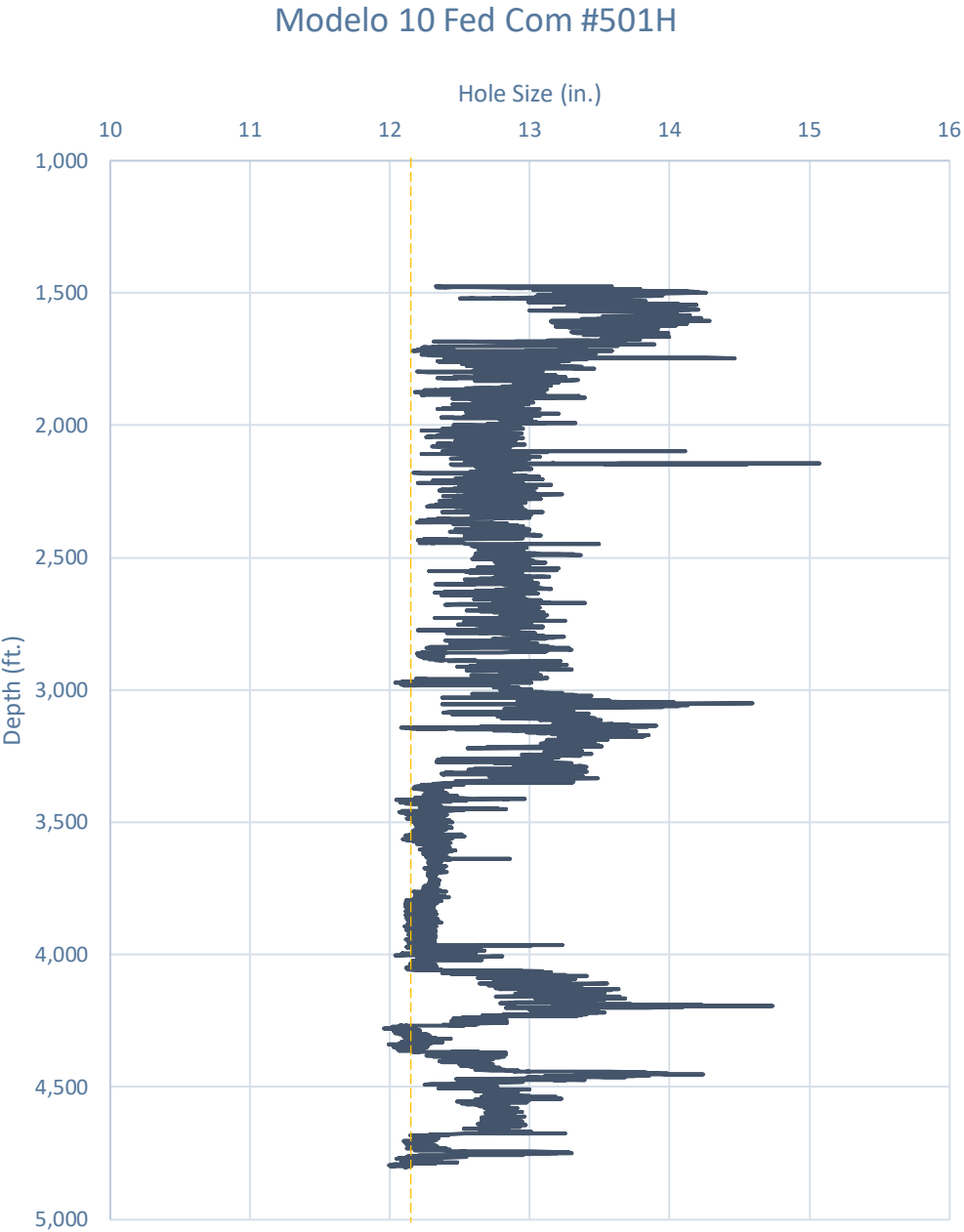
- 12.25" Hole
  - 12.88" Hole
    - 5.13% diameter increase
    - 10.52% area increase
  - 0.63" Average enlargement
  - 0.58" Median enlargement
  - 179 Well Count
- 9.875" Hole
  - 10.30" Hole
    - 4.24% diameter increase
    - 9.64% area increase
  - 0.42" Average enlargement
  - 0.46" Median enlargement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

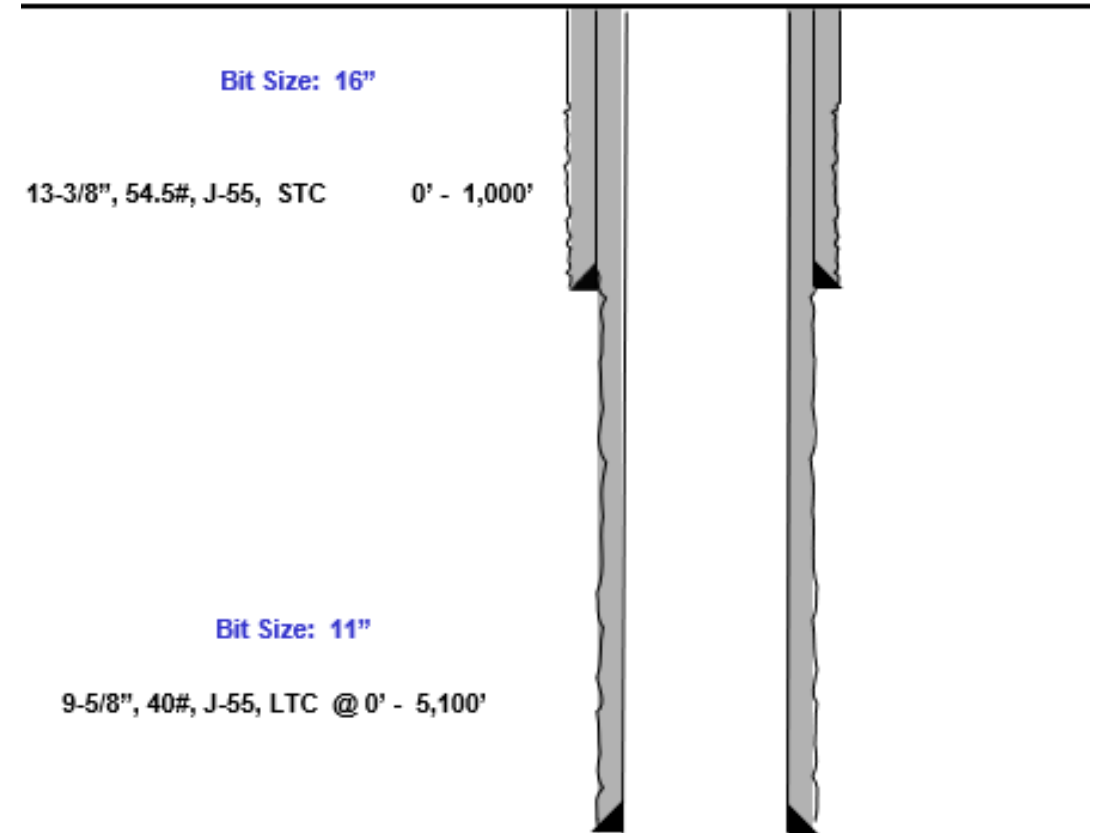
Whirling Wind 11 Fed Com #744H



# Design A

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

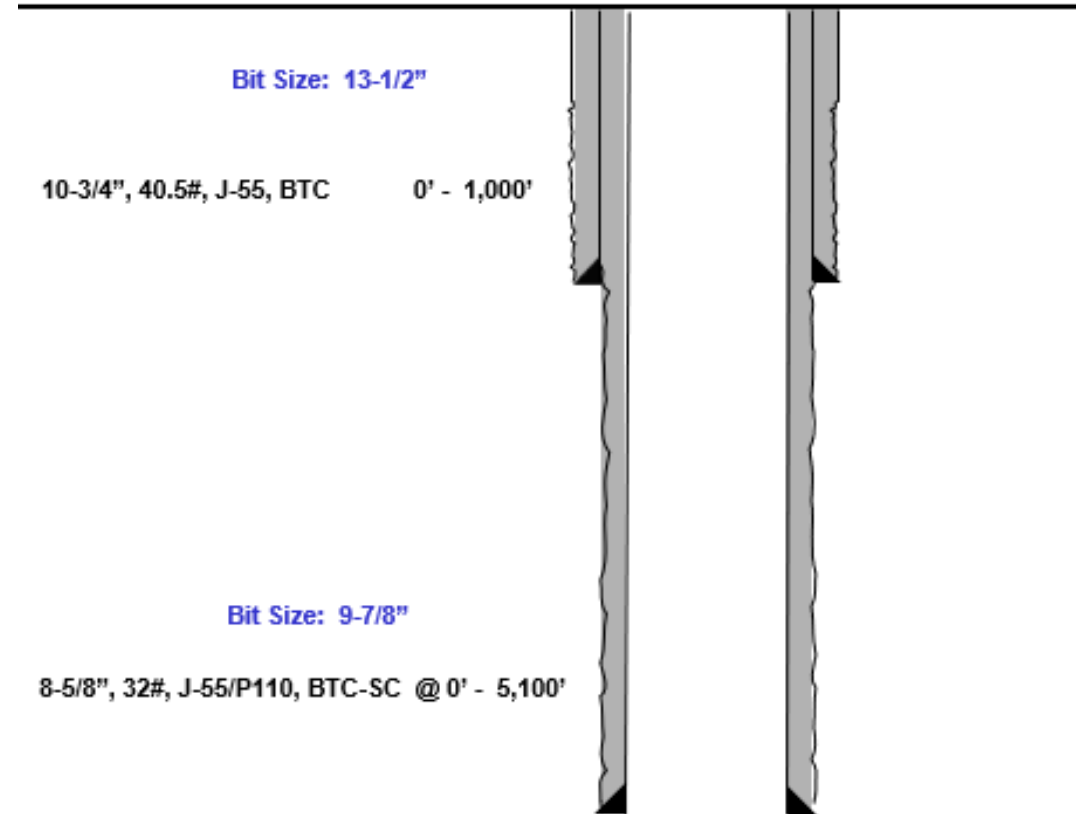
- 11" Bit + 0.52" Average hole enlargement = 11.52" Hole Size
  - 0.9475" Clearance to casing OD
 
$$= \frac{11.52 - 9.625}{2}$$
  - 0.4475" Clearance to coupling OD
 
$$= \frac{11.52 - 10.625}{2}$$
- Previous Shoe – 13.375" 54.5# J55 STC
  - 0.995" Clearance to coupling OD (~1,200' overlap)
 
$$= \frac{12.615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



# 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

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New Search »

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USC ☒ Metric

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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

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USC ☒ Metric

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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:		LTC Torque (ft-lbs)	
STC Joint Strength:		Min: 3,130 Opti: 4,174 Max: 5,217	
LTC Performance		BTC Torque (ft-lbs)	
LTC Internal Pressure:		follow API guidelines regarding positional make up	
LTC Joint Strength:			
SC-BTC Performance - Cplg OD = 9.125"			
BTC Internal Pressure:			
BTC Joint Strength:			

\*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

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Annular Clearance Variance

See previously attached Drill Plan

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USC



Metric

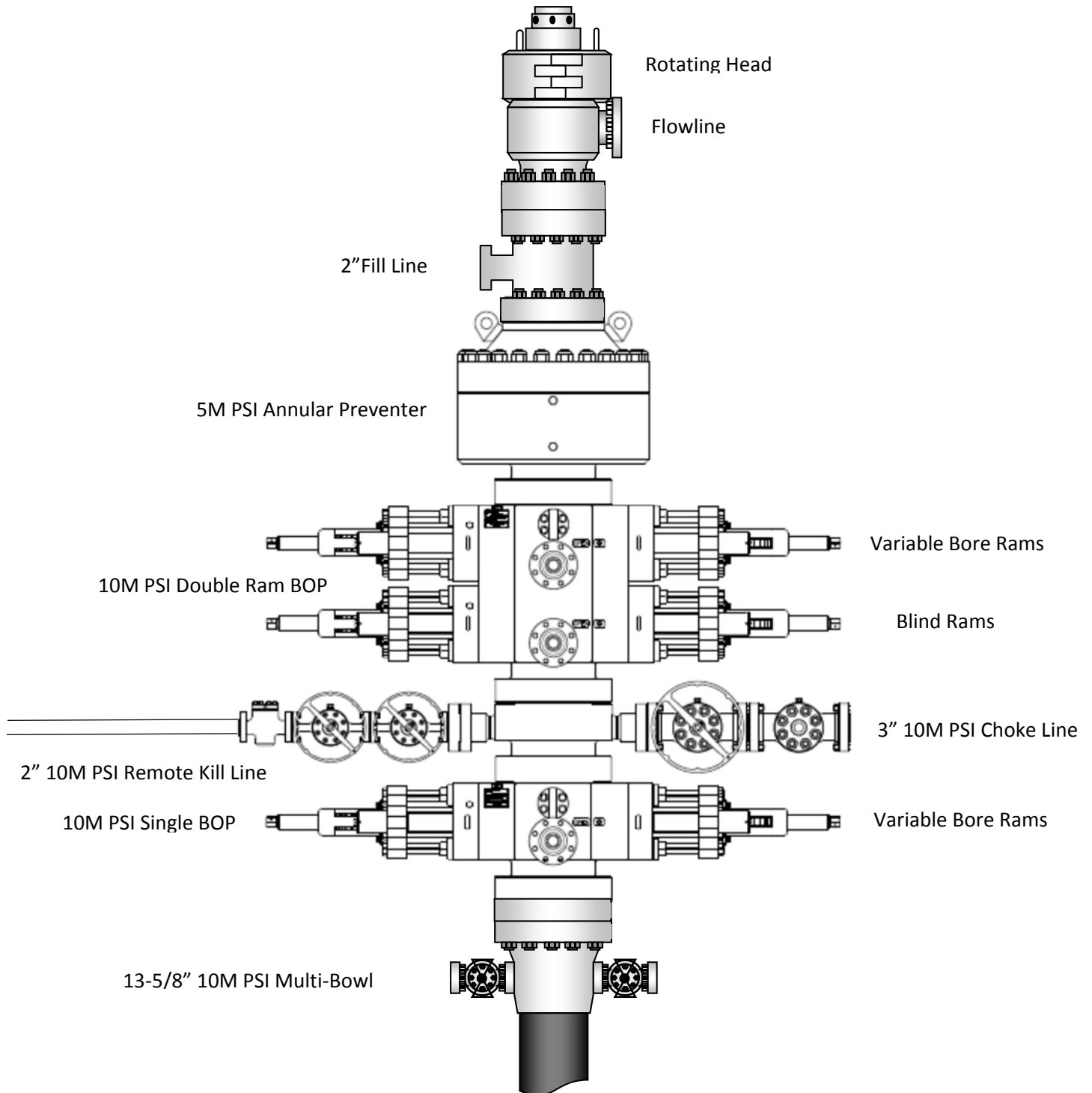
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Mechanical Properties	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi
Dimenstons	Pipe	BTC	LTC	STC	
Outside Diameter	10.750	11.750	--	11.750	in.
Wall 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

# Exhibit 1

## EOG Resources

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







**PROPRIETARY**

THIS DRAWING AND THE IDEAS AND INFORMATION INCLUDED IN THIS DRAWING ARE PROPRIETARY AND ARE NOT TO BE REPRODUCED, DISTRIBUTED OR DISCLOSED IN ANY MANNER, WITHOUT THE PRIOR, WRITTEN CONSENT OF A DULY AUTHORIZED OFFICER OF HELMERICH & PAYNE INT'L DRILLING CO.

**ISSUED FOR FABRICATION**  
February-10-2014  
DRAFTSMAN *MWL*  
ENGINEER *JSK*



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	DWG. NO.:
SCALE:	3/4"=1'-0"	SHEET:	1 OF 1	HP-D1254





## 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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Rev 3, 7/30/2021

10/21/2022 15:24

VALLOUREC STAR 8.625 32# J55 S S2L2 DA 7.875 W/O# SLN# PO# MADE IN USA FT LB



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.

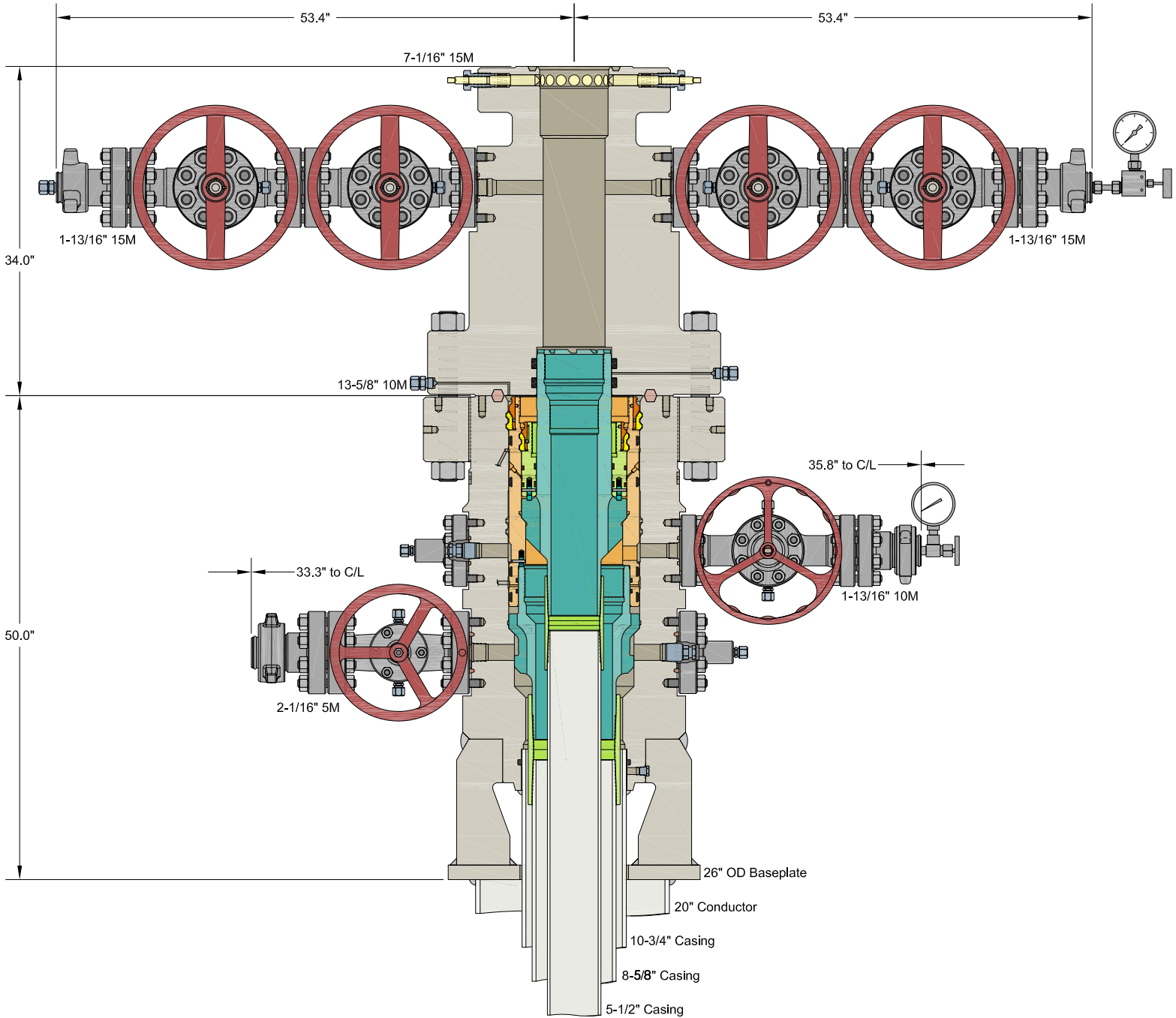
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CONFIDENTIAL									
 THIRD ANGLE	DESIGNED IN INCHES DIMENSIONAL UNITS  INCHES [MILLIMETERS]	MACHINING TOLERANCES UNLESS OTHERWISE SPECIFIED		SURFACE TREATMENT		DO NOT SCALE		 A Schlumberger Company	SURFACE SYSTEMS
				DRAWN BY: KEN REED		DATE 6 Nov 18			
		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.		CHECKED BY: PA		DATE 6 Nov 18			
				APPROVED BY: APPROVER NAME		DATE 6 Nov 18			
				ESTIMATED WEIGHT: 8147.2 LBS 3695.5 KG		INITIAL USE BIM: EWR:650353762			
X [D.] ± = []		ANGLES ± °	MATERIAL & HEAT TREAT	EOG RESOURCES, INC 13-5/8" 10K MN-DS WELLHEAD 13-3/8" X 9-5/8" X 5-1/2"					
XX [D.X] ± = []	 RA ON ALL MACHINED SURFACES	SD-052491-19-07							
XXX [D.XX] ± = []		REV: 01							





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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	

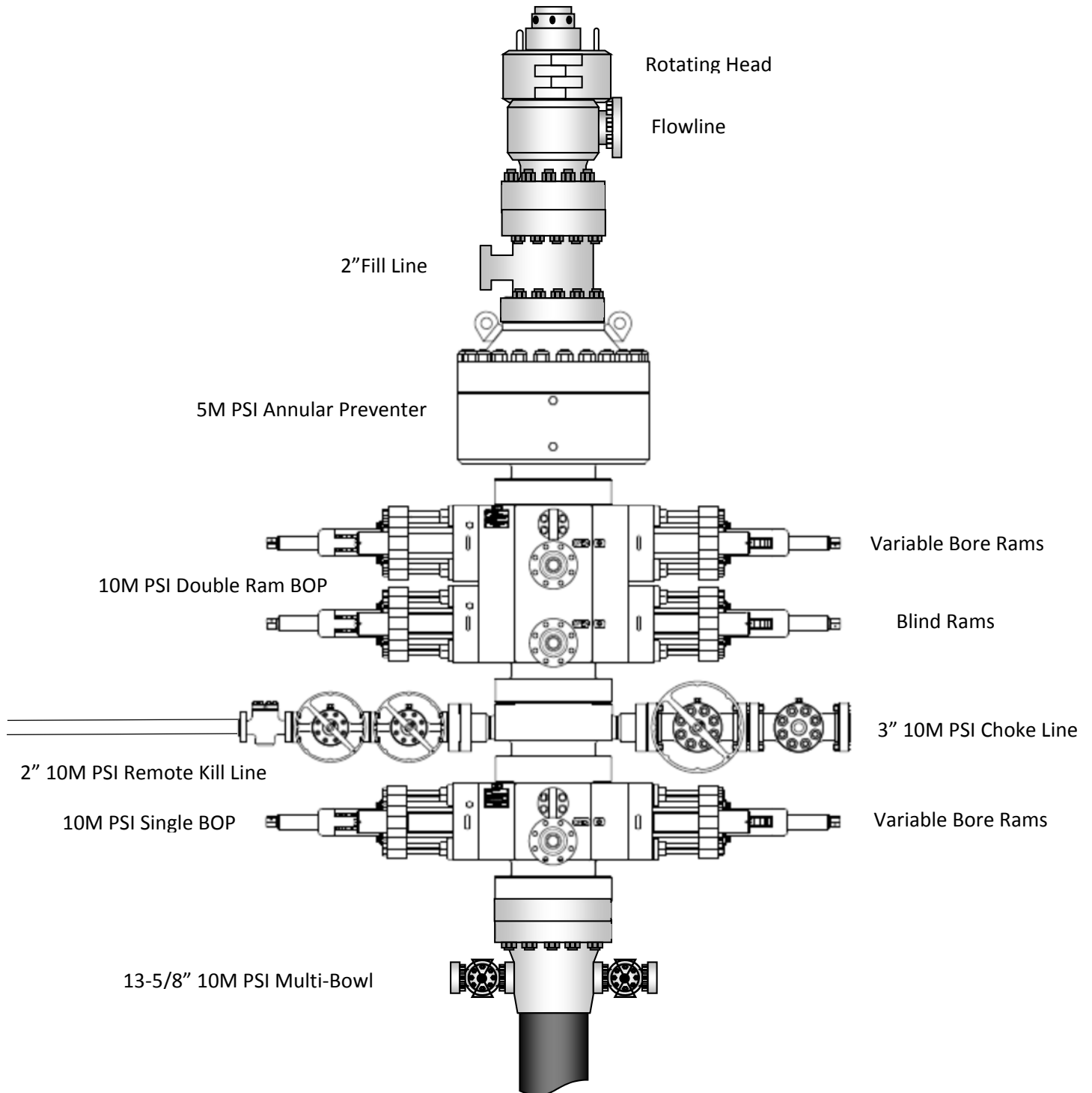
**Lacey Swiss 1 Fed Com Package**

<b>Wells in package:</b>	<b>Tgt TVD</b>
Lacey Swiss 1 Fed Com #101H	9,500
Lacey Swiss 1 Fed Com #102H	9,500
Lacey Swiss 1 Fed Com #103H	9,500
Lacey Swiss 1 Fed Com #104H	9,500
Lacey Swiss 1 Fed Com #105H	9,500
Lacey Swiss 1 Fed Com #106H	9,500
Lacey Swiss 1 Fed Com #107H	9,500
Lacey Swiss 1 Fed Com #108H	9,500
Lacey Swiss 1 Fed Com #201H	9,915
Lacey Swiss 1 Fed Com #202H	9,915
Lacey Swiss 1 Fed Com #203H	9,915
Lacey Swiss 1 Fed Com #204H	9,915
Lacey Swiss 1 Fed Com #205H	9,915
Lacey Swiss 1 Fed Com #206H	9,915
Lacey Swiss 1 Fed Com #207H	9,915
Lacey Swiss 1 Fed Com #301H	10,330
Lacey Swiss 1 Fed Com #302H	10,330
Lacey Swiss 1 Fed Com #303H	10,330
Lacey Swiss 1 Fed Com #304H	10,330
Lacey Swiss 1 Fed Com #305H	10,330
Lacey Swiss 1 Fed Com #306H	10,330
Lacey Swiss 1 Fed Com #401H	10,760
Lacey Swiss 1 Fed Com #402H	10,760
Lacey Swiss 1 Fed Com #403H	10,760
Lacey Swiss 1 Fed Com #404H	10,760
Lacey Swiss 1 Fed Com #405H	10,760
Lacey Swiss 1 Fed Com #507H	10,950
Lacey Swiss 1 Fed Com #508H	10,950
Lacey Swiss 1 Fed Com #509H	10,950
Lacey Swiss 1 Fed Com #510H	10,950
Lacey Swiss 1 Fed Com #511H	10,950
Lacey Swiss 1 Fed Com #512H	10,950
Lacey Swiss 1 Fed Com #513H	10,950
Lacey Swiss 1 Fed Com #514H	10,950
Lacey Swiss 1 Fed Com #515H	10,950
Lacey Swiss 1 Fed Com #516H	10,950

# 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 *JSK*



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	DWG. NO.:
SCALE:	3/4"=1'-0"	SHEET:	1 OF 1	HP-D1254



## 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

Hose Manufacturer	Contitech Rubber Industrial
-------------------	-----------------------------

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

## Connections

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

2nd 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.

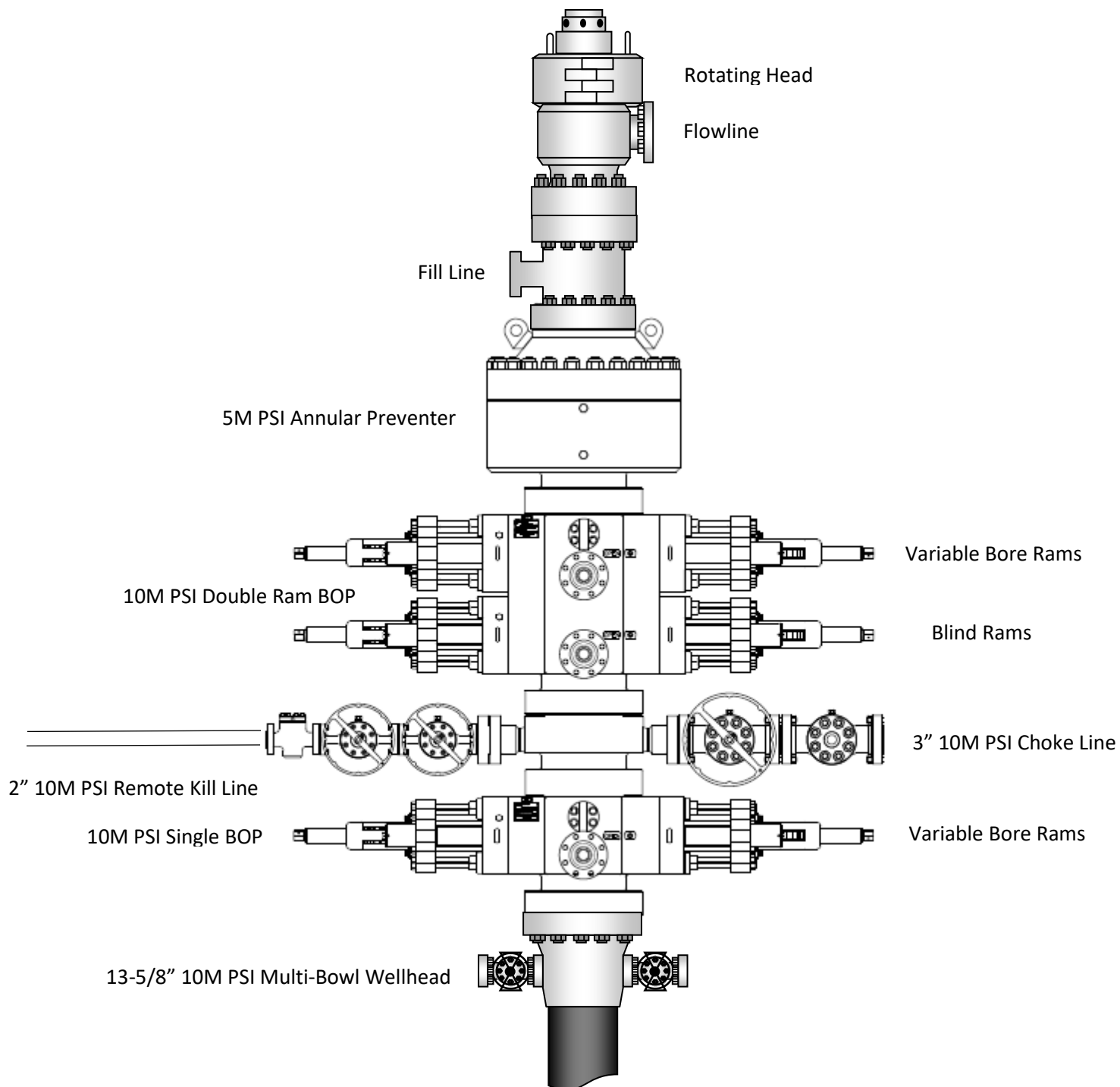
12-1/4" Intermediate Hole Section 10M psi requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Jars	6.500"	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





CONFIDENTIAL											
 THIRD ANGLE	DESIGNED IN INCHES DIMENSIONAL UNITS INCHES [MILLIMETERS]	MACHINING TOLERANCES UNLESS OTHERWISE SPECIFIED		SURFACE TREATMENT		DO NOT SCALE		 CAMERON A Schlumberger Company	SURFACE SYSTEMS		
				DRAWN BY: KEN REED						DATE 6 Nov 18	
				X [D.] ± = []	ANGLES ± °	MATERIAL & HEAT TREAT	CHECKED BY: PA			DATE 6 Nov 18	
							APPROVED BY: APPROVER NAME			DATE 6 Nov 18	
							ESTIMATED WEIGHT: 8147.2 LBS 3695.5 KG			INITIAL USE BIM: EWR:650353762	
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 (u) 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.				SHEET 1 OF 1		EOG RESOURCES, INC 13-5/8" 10K MN-DS WELLHEAD 13-3/8" X 9-5/8" X 5-1/2" SD-052491-19-07		REV: 01			



## 10,000 PSI BOP Annular Variance Request

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

### 1. Component and Preventer Compatibility Tables

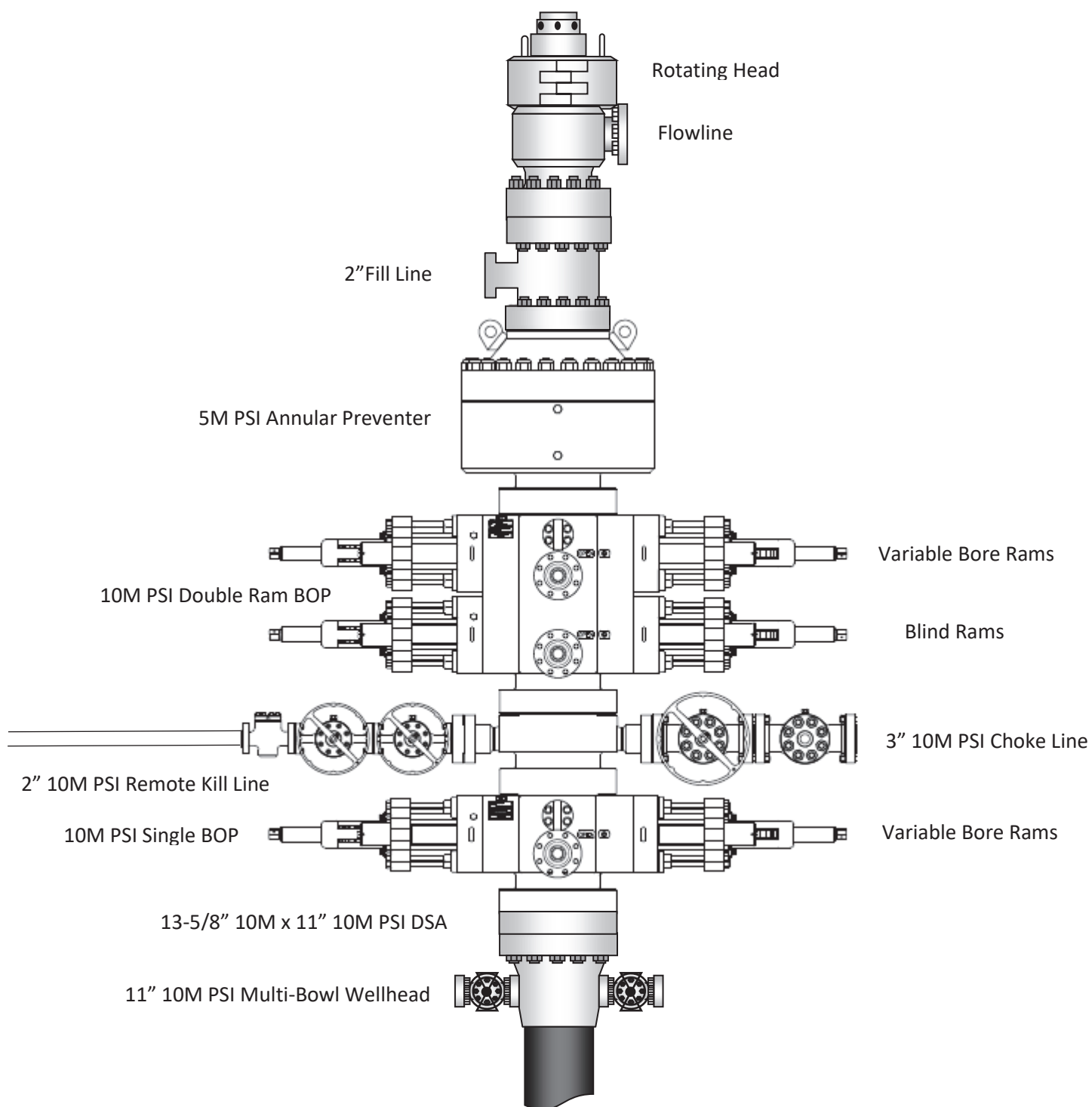
The tables below outlines the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

9-7/8" & 8-3/4" Intermediate Hole Section 10M psi requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
HWDP	4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Jars	4.500"	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	-	-
Intermediate casing	7.625"	Annular	5M	-	-
Open-hole	-	Blind Rams	10M	-	-

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

VBR = Variable Bore Ram

## EOG Resources 11" 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

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## 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

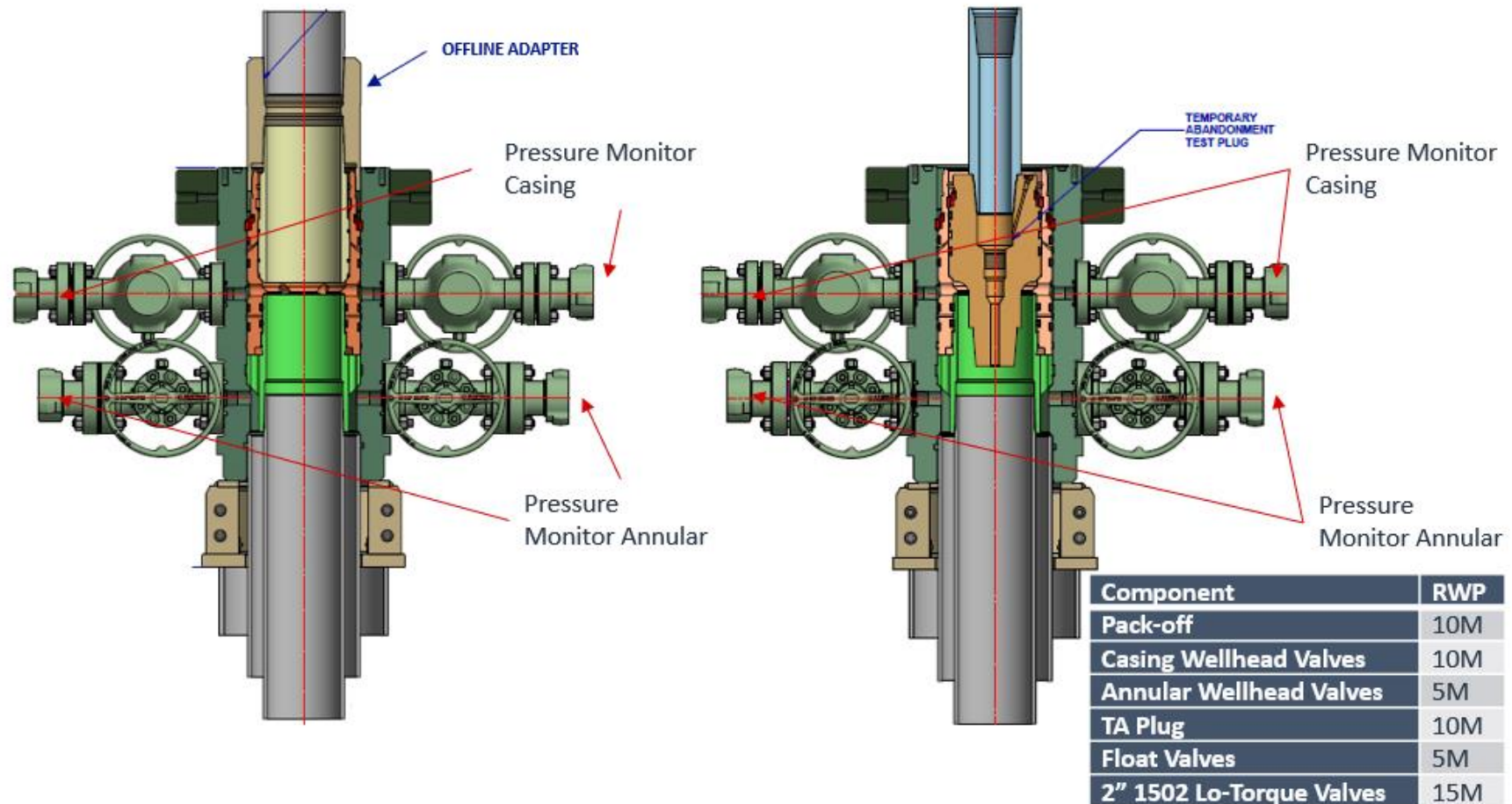
1. Sound alarm (alert crew).
2. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
3. Confirm shut-in.
4. Notify tool pusher/company representative.
5. Read and record the following:
  - a. SICP and AP
  - b. Pit gain
  - c. Time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



## Offline Intermediate Cementing Procedure

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Figure 1: Cameron TA Plug and Offline Adapter Schematic



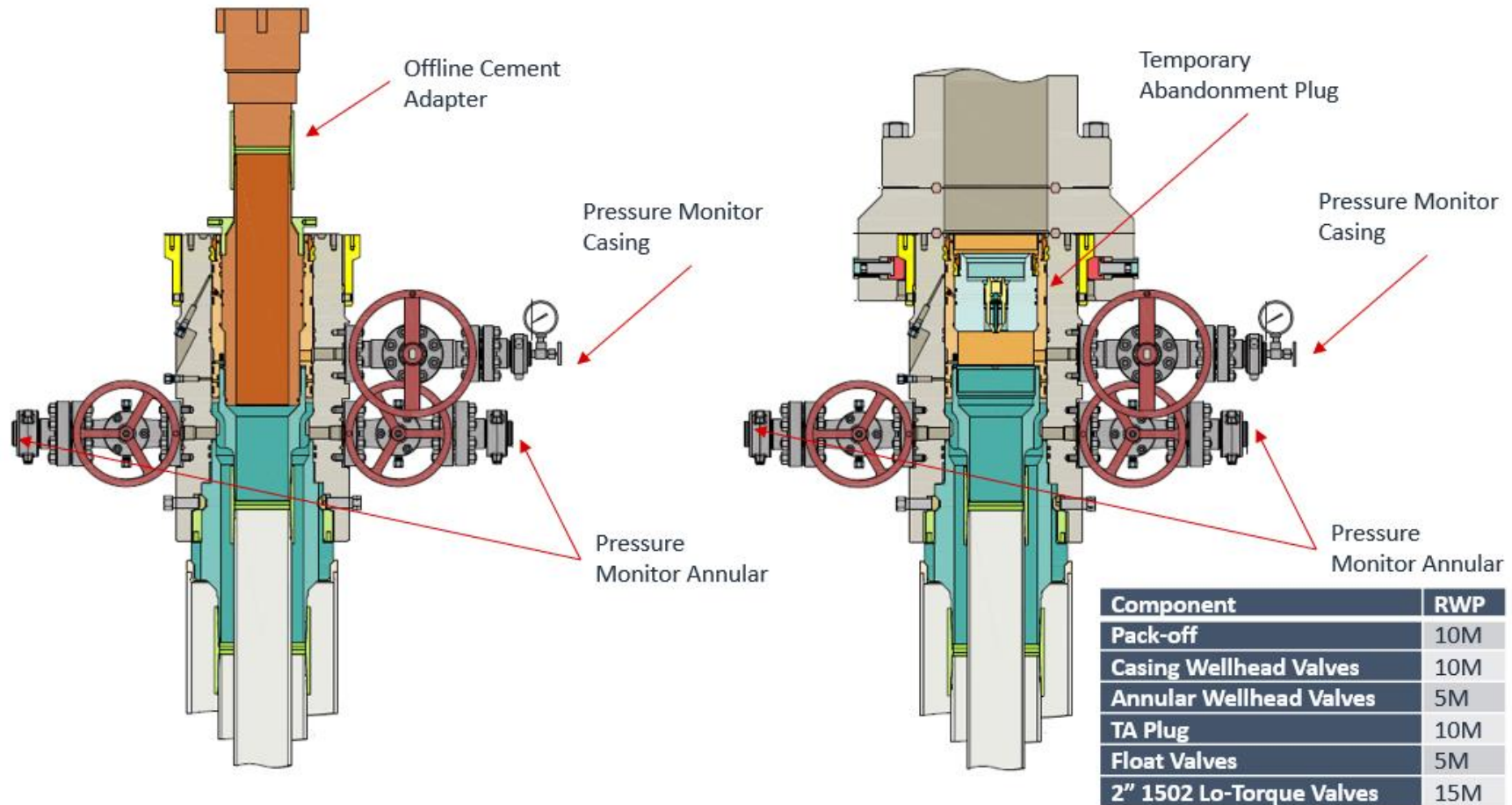




## Offline Intermediate Cementing Procedure

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Figure 2: Cactus TA Plug and Offline Adapter Schematic

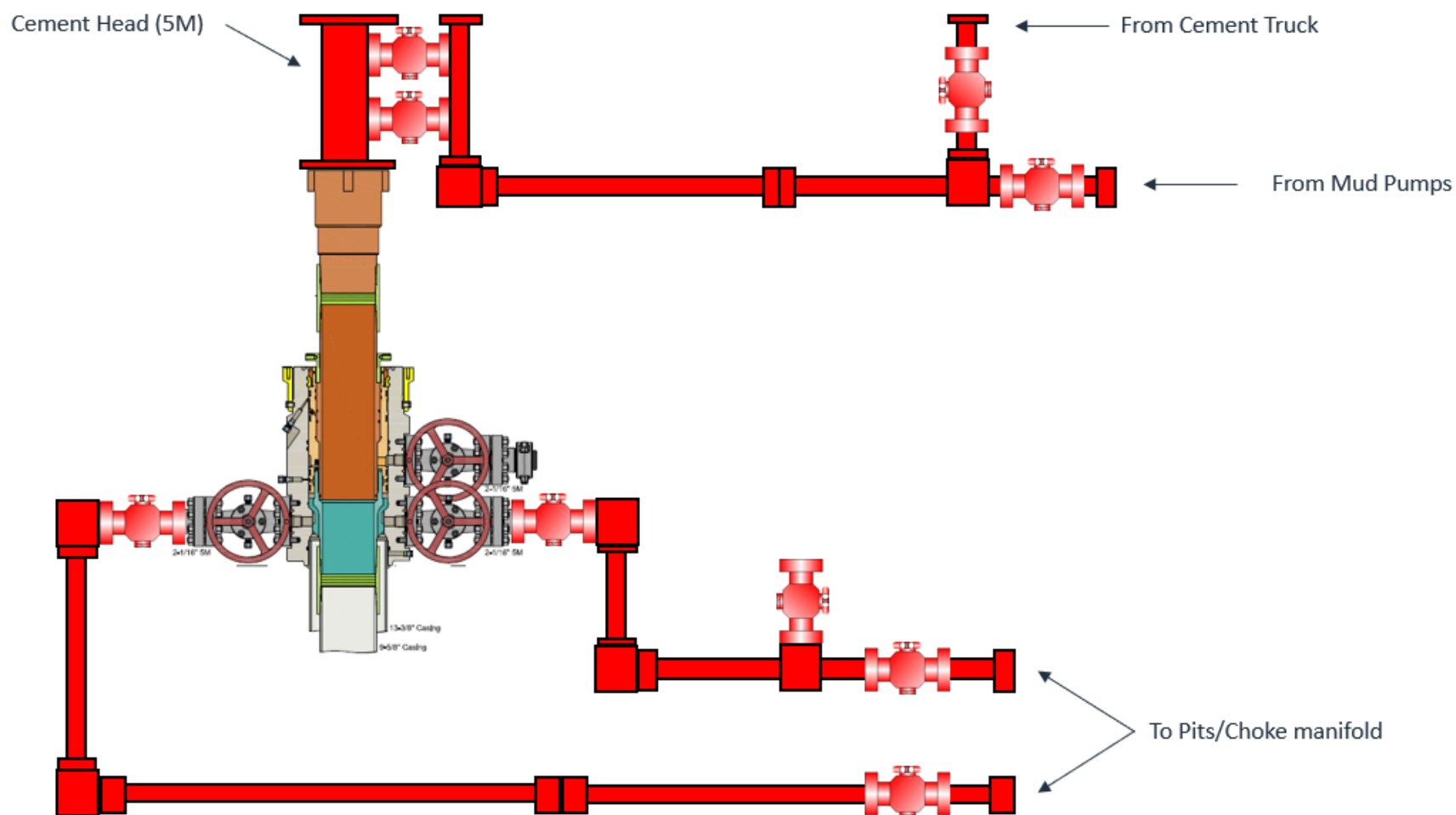




## Offline Intermediate Cementing Procedure

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Figure 3: Back Yard Rig Up



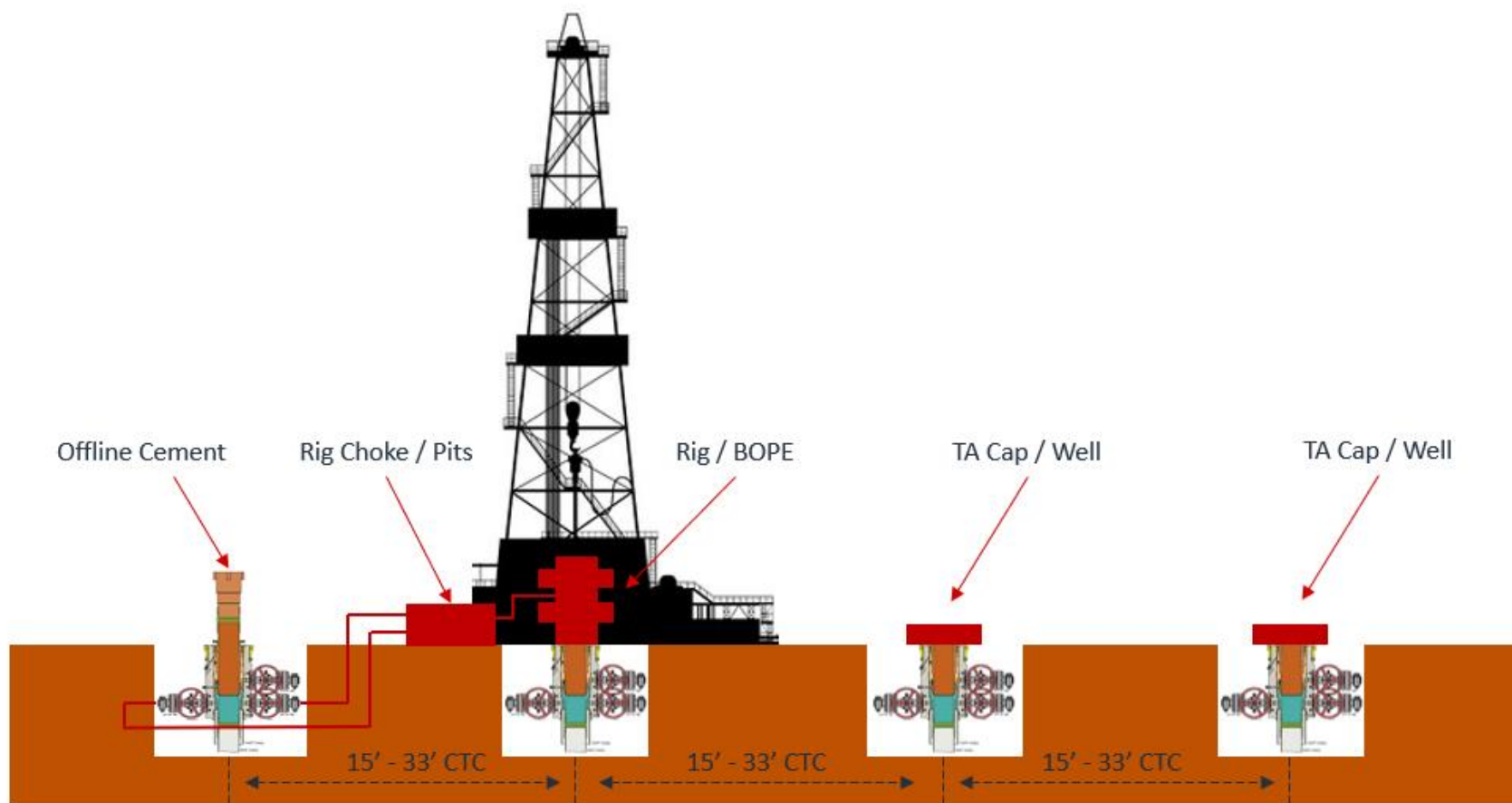
\*\*\* All Lines 10M rated working pressure



Offline Intermediate Cementing Procedure

2/24/2022

Figure 4: Rig Placement Diagram





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

# SUPO Data Report

08/21/2024

APD ID: 10400092953

Submission Date: 06/21/2023

Operator Name: EOG RESOURCES INCORPORATED

Well Name: LACEY SWISS 1 FED COM

Well Number: 507H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data  
reflects the most  
recent changes

[Show Final Text](#)

## Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

LO\_LACEY\_SWISS\_1\_FC\_507H\_VIC\_20230619074939.pdf

SK\_LACEY\_SWISS\_1\_FC\_2\_FC\_WELLS\_20230613135509.pdf

Existing Road Purpose: ACCESS

Row(s) Exist? NO

**ROW ID(s)**

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

## Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

EP\_LACEY\_SWISS\_1\_FC\_101\_201\_102\_202\_301\_401\_302\_402\_507\_508\_509\_RD\_S\_20230613135854.pdf

ROADS\_20230613135903.pdf

New road type: RESOURCE

Length: 2338

Feet

Width (ft.): 30

Max slope (%): 2

Max grade (%): 6

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 24

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

New road access plan or profile prepared? N

Operator Name: EOG RESOURCES INCORPORATED

Well Name: LACEY SWISS 1 FED COM

Well Number: 507H

New road access plan

Access road engineering design? N

Access road engineering design

Turnout? N

Access surfacing type: OTHER

Access topsoil source: OFFSITE

Access surfacing type description: 6" compacted caliche

Access onsite topsoil source depth:

Offsite topsoil source description: see supo

Onsite topsoil removal process:

Access other construction information:

Access miscellaneous information:

Number of access turnouts:                      Access turnout map:

Drainage Control

New road drainage crossing: CULVERT

Drainage Control comments: No draining crossing

Road Drainage Control Structures (DCS) description: n/a

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

LO\_LACEY\_SWISS\_1\_FC\_507H\_MILE\_RADIUS\_20230619080346.pdf

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Lot 6, Unit F of Section 1, Township 25S, Range 33E

Production Facilities map:

EP\_LACEY\_SWISS\_1\_FC\_101\_201\_102\_202\_301\_401\_302\_402\_507\_508\_509\_FL\_INST\_AIR\_GAS\_LIFT\_FIBER\_S\_20230613140321.pdf  
EP\_LACEY\_SWISS\_1\_FC\_103\_203\_104\_204\_205\_105\_303\_403\_304\_404\_510\_511\_512\_513\_FL\_INST\_AIR\_GAS\_LIFT\_FIBER\_S\_20230613140321.pdf

Operator Name: EOG RESOURCES INCORPORATED

Well Name: LACEY SWISS 1 FED COM

Well Number: 507H

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: RECYCLED

Water source use type: OTHER

**Describe use type:** The source and location of the water location will be drilled using a combination of water muc program. (i) Water will be obtained from commercial wa to the location by trucks using existing and proposed ro attached. (ii) Water may be supplied from frac ponds an temporary above-ground surface lines a shown on the r 4-inch polyethylene or layflat lines and up to six 12-inch water. Freshwater is defined as containing less than 10 (TDS), exhibiting no petroleum sheen when standing, a mechanical processes that expose it to heavy metals or to utilize up to six 4-inch polyethylene or layflat lines and transport treated produced water is defined as the recor reusable form and may include mechanical and chemical RESOLUTE FRAC POND, SECTION 24, TOWNSHIP 2 Treated Produced Water Source: Dauntless Riser, SEC RANGE 32 EAST. Temporary surface lines would origin source locations in the surrounding area of the propose above ground with minimal disturbance. Temporary sur than 10 feet from the edge of the existing disturbance (i surface or two-track road, or other man-made addition t another mechanism will be used. All vehicle equipment disturbance. Map or maps showing the locations of the provided with the APD and included in the Environment file (shape file or KMZ file) shall be submitted with the E

Source latitude:

Source longitude:

Source datum:

Water source permit type: WATER RIGHT

Water source transport method: PIPELINE  
TRUCKING

Source land ownership: FEDERAL

Source transportation land ownership: FEDERAL

Water source volume (barrels): 1      Source volume (acre-feet): 0.00012889

Source volume (gal): 42

Operator Name: EOG RESOURCES INCORPORATED

Well Name: LACEY SWISS 1 FED COM

Well Number: 507H

Water source and transportation

Lacey\_Swiss\_Water\_Map\_20231218143135.pdf

Water source comments: see SUPO

New water well? N

New Water Well Info

Well latitude:

Well Longitude:

Well datum:

Well target aquifer:

Est. depth to top of aquifer(ft):

Est thickness of aquifer:

Aquifer comments:

Aquifer documentation:

Well depth (ft):

Well casing type:

Well casing outside diameter (in.):

Well casing inside diameter (in.):

New water well casing?

Used casing source:

Drilling method:

Drill material:

Grout material:

Grout depth:

Casing length (ft.):

Casing top depth (ft.):

Well Production type:

Completion Method:

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

**Construction Materials description:** Caliche will be supplied from pits shown on the attached caliche source map. Caliche utilized for the drilling pad will be obtained either from an existing approved mineral pit, or by benching into a hill, which will allow the pad to be level with existing caliche from the cut or extracted by Flipping the well location. A mineral material permit will be obtained from BLM prior to excavating any caliche on Federal Lands. Amount will vary for each pad. The procedure for Flipping a well location is as follows: \* -An adequate amount of topsoil/root zone (usually top 6 inches of soil) will be stripped from the proposed well location and stockpiled along the side of the well location as depicted on the well site diagram/survey plat. -An area within the proposed well site dimensions will be used to excavate caliche. Subsoil will be removed and stockpiled within the surveyed well pad dimensions. -Once caliche/surfacing mineral is found, the mineral material will be excavated and stockpiled within the approved drilling pad dimensions. -Then, subsoil will be pushed back in the excavated hole, and caliche will be spread accordingly across the entire well pad and road (if available). -Neither caliche nor subsoil will be stockpiled outside the well pad dimensions. Topsoil will be stockpiled along the edge of the pad as depicted in the Well Site Layout or survey plat. \* If no caliche is found onsite, caliche will be hauled in from a BLM-approved caliche pit or other established mineral pit. A BLM mineral material permit will be acquired before obtaining mineral material from BLM pits or federal land.

Construction Materials source location



**Operator Name:** EOG RESOURCES INCORPORATED**Well Name:** LACEY SWISS 1 FED COM**Well Number:** 507H

Lacey\_Swiss\_Caliche\_Map\_20231218143149.pdf

**Section 7 - Methods for Handling****Waste type:** DRILLING

**Waste content description:** Drilling fluids and produced oil and water from the well during drilling and completion operations will be stored onsite in frac tanks and disposed of at the time of rig down. Primary disposal location for EOGs NM operations is the North Delaware Basin Disposal facility in Jal, New Mexico which is a privately owned commercial facility. Some EOG locations within New Mexico may require transportation of cuttings to other licensed commercial disposal facilities based on geographic location.

**Amount of waste:** 0 barrels**Waste disposal frequency :** Daily**Safe containment description:** STEEL TANKS**Safe containmant attachment:****Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL**Disposal type description:****Disposal location description:** North Delaware Basin Disposal facility in Jal, New Mexico**Waste type:** SEWAGE**Waste content description:** human waste**Amount of waste:****Waste disposal frequency :** Weekly

**Safe containment description:** Human waste managed by third-party vendors. ROW construction waste contained in on-site portable toilets maintained by third party vendor. During drilling activities waste is managed by third party vendor utilizing onsite aerobic (treatment) wastewater management. Liquids treated through the aerobic system are transferred to via water line to CTBs for reuse by EOG. All solid waste remaining after treatment process are pumped into an enclosed waste transfer truck at the time of rig down and taken to one of the following disposal facilities by the third-party vendor: Qual Run Services LLC (a Licensed Waste Management Service Facility in Reeves County, Texas) or ReUse OilField Services (a Licensed Waste Management Facility in Mentone, TX)

**Safe containmant attachment:****Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL**Disposal type description:****Disposal location description:** Qual Run Services LLC (a Licensed Waste Management Service Facility in Reeves County, Texas) or ReUse OilField Services (a Licensed Waste Management Facility in Mentone, TX)**Waste type:** GARBAGE**Waste content description:** trash**Amount of waste:****Waste disposal frequency :** Weekly

**Safe containment description:** Trash dumpsters are utilized to contain garbage onsite. Dumpsters are maintained by a third-party vendor. All trash is hauled to Lee County, NM landfill.

**Safe containmant attachment:**

Operator Name: EOG RESOURCES INCORPORATED

Well Name: LACEY SWISS 1 FED COM

Well Number: 507H

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

Disposal type description:

Disposal location description: Lee County, NM landfill.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.)                  Reserve pit width (ft.)

Reserve pit depth (ft.)                                  Reserve pit volume (cu. yd.)

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

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? Y

Description of cuttings location EOG utilizes a Closed Loop System, cuttings leave the rig and enter low/highwall cuttings bin. Cuttings are then transferred to trucks for transportation to a State of New Mexico approved disposal facility. Primary disposal location for EOGs NM operations is the North Delaware Basin Disposal Facility in Jal, New Mexico which is a privately owned commercial facility. Some EOG locations within New Mexico may require transportation of cuttings to other licensed commercial disposal facilities based on geographic location.

Cuttings area length (ft.)                                  Cuttings area width (ft.)

Cuttings area depth (ft.)                                  Cuttings area volume (cu. yd.)

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

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: LACEY SWISS 1 FED COM

Well Number: 507H

Section 9 - Well Site

Well Site Layout Diagram:

LO\_LACEY\_SWISS\_1\_FC\_507H\_SITE\_20230619080447.pdf

LO\_LACEY\_SWISS\_1\_FC\_507H\_WELLSITE\_20230619080447.pdf

Lacey\_Swiss\_1\_Fed\_Com\_507H\_Rig\_Layout\_20230619080504.pdf

Comments: Exhibit 2A-Wellsite, Exhibit 2B-Padsite, Exhibit 4-Rig Layout

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: LACEY SWISS 1 FED COM

Multiple Well Pad Number: 507H, 508H, 509H

Recontouring

LO\_LACEY\_SWISS\_1\_FC\_507H\_RECLAMATION\_20230619080528.pdf

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

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

Well pad proposed disturbance (acres): 0	Well pad interim reclamation (acres): 0	Well pad long term disturbance (acres): 0
Road proposed disturbance (acres): 0	Road interim reclamation (acres): 0	Road long term disturbance (acres): 0
Powerline proposed disturbance (acres): 0	Powerline interim reclamation (acres): 0	Powerline long term disturbance (acres): 0
Pipeline proposed disturbance (acres): 0	Pipeline interim reclamation (acres): 0	Pipeline long term disturbance (acres): 0
Other proposed disturbance (acres): 0	Other interim reclamation (acres): 0	Other long term disturbance (acres): 0
Total proposed disturbance: 0	Total interim reclamation: 0	Total long term disturbance: 0

Disturbance Comments: All Interim and Final reclamation must be within 6 months. Interim must be within 6 months of completion and final within 6 months of abandonment plugging. Dual pad operations may alter timing.

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

Topsoil redistribution: Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts and fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.

Soil treatment: Re-seed according to BLM standards. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.

Existing Vegetation at the well pad: Grass, forbs, and small woody vegetation, such as mesquite will be

**Operator Name:** EOG RESOURCES INCORPORATED**Well Name:** LACEY SWISS 1 FED COM**Well Number:** 507H

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

**Existing Vegetation at the well pad**

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

**Existing Vegetation Community at the road**

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

**Existing Vegetation Community at the pipeline**

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

**Existing Vegetation Community at other disturbances****Non native seed used?** N**Non native seed description:****Seedling transplant description:****Will seedlings be transplanted for this project?** N**Seedling transplant description****Will seed be harvested for use in site reclamation?** N**Seed harvest description:****Seed harvest description attachment:**

Operator Name: EOG RESOURCES INCORPORATED

Well Name: LACEY SWISS 1 FED COM

Well Number: 507H

Seed

Seed Table

Seed Summary	
Seed Type	Pounds/Acre

Total pounds/Acre:

Seed reclamation

Operator Contact/Responsible Official

First Name:

Last Name:

Phone:

Email:

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment

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

Weed treatment plan

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

Monitoring plan

Success standards: N/A

Pit closure description: N/A

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

**Operator Name:** EOG RESOURCES INCORPORATED**Well Name:** LACEY SWISS 1 FED COM**Well Number:** 507H**BOR Local Office:****COE Local Office:****DOD Local Office:****NPS Local Office:****State Local Office:****Military Local Office:****USFWS Local Office:****Other Local Office:****USFS Region:****USFS Forest/Grassland:****USFS Ranger District:**

## Section 12 - Other

**Right of Way needed?** N**Use APD as ROW?****ROW Type(s):****ROW**

**SUPO Additional Information:** Onsite meeting was conducted on 4-11-2023 We plan to use eight 12-inch lay flat hoses to transport water and eight 4-inch polylines or layflay for drilling and frac operations. The well will be produced using gas lift as the artificial lift method. Produced water will be transported via pipeline to the EOG produced water gathering system. Central Tank Battery 400 ft. x 600 ft: Existing CTB located in Lot 6, Unit F of Section 1, Township 25S, Range 33E Produced Water Gathering Sale Line: Existing Gas Gathering Sale Line: Existing Localized Gas Lift: Existing Crude Oil Gathering Sale Line: Existing Overhead Electric Line: Existing Monoline: EXISTING

**Use a previously conducted onsite?** N**Previous Onsite information:**

## Other SUPO

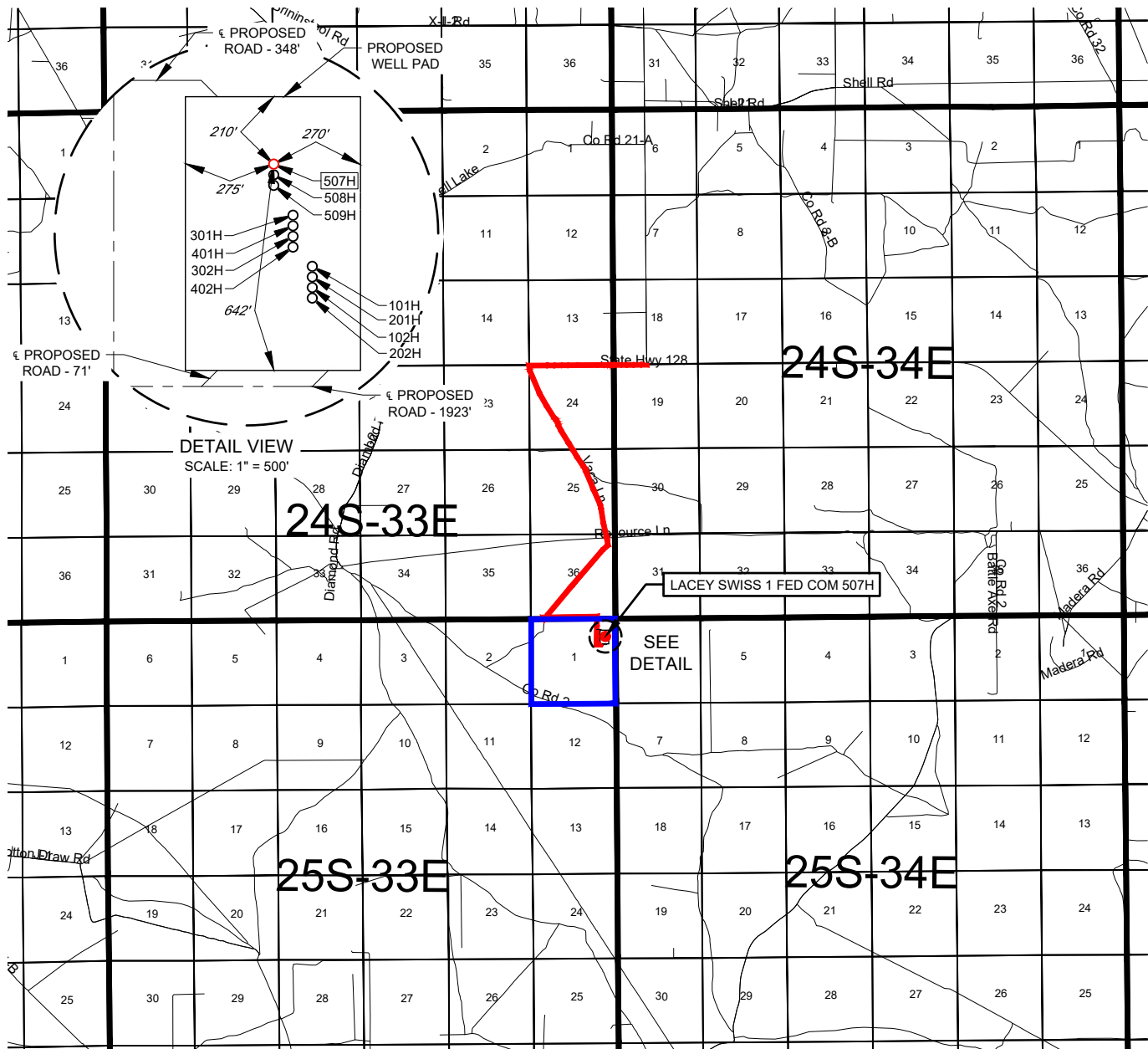
LO\_LACEY\_SWISS\_1\_FC\_507H\_L\_E\_20230619080622.pdf

SUPO\_LACEY\_SWISS\_1\_FED\_COM\_507H\_20230619080622.pdf

SUPO\_SEC\_7\_WASTE\_ATTACHMENT\_20231218143322.pdf





EXHIBIT 2  
VICINITY MAPLEASE NAME & WELL NO.: LACEY SWISS 1 FED COM 507HSECTION 1 TWP 25-S RGE 33-E SURVEY N.M.P.M.  
COUNTY LEA STATE NM  
DESCRIPTION 916' FNL & 644' FEL

## DISTANCE &amp; DIRECTION

FROM INT. OF NM-128. & DELAWARE BASIN RD.. GO WEST ON NM-128  
±1.4 MILES. THENCE SOUTH (LEFT) ON VACA LN. ±3.5 MILES. THENCE  
EAST (LEFT) ON A LEASE RD. ±0.6 MILES, THENCE CONTINUE SOUTH ON  
A PROPOSED RD. ±281 FEET, THENCE EAST (LEFT) ON A PROPOSED  
RD. ±348 FEET TO A POINT ±273 FEET NORTHWEST OF THE LOCATION.

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

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



SCALE: 1" = 10000'  
0' 5000' 10000'



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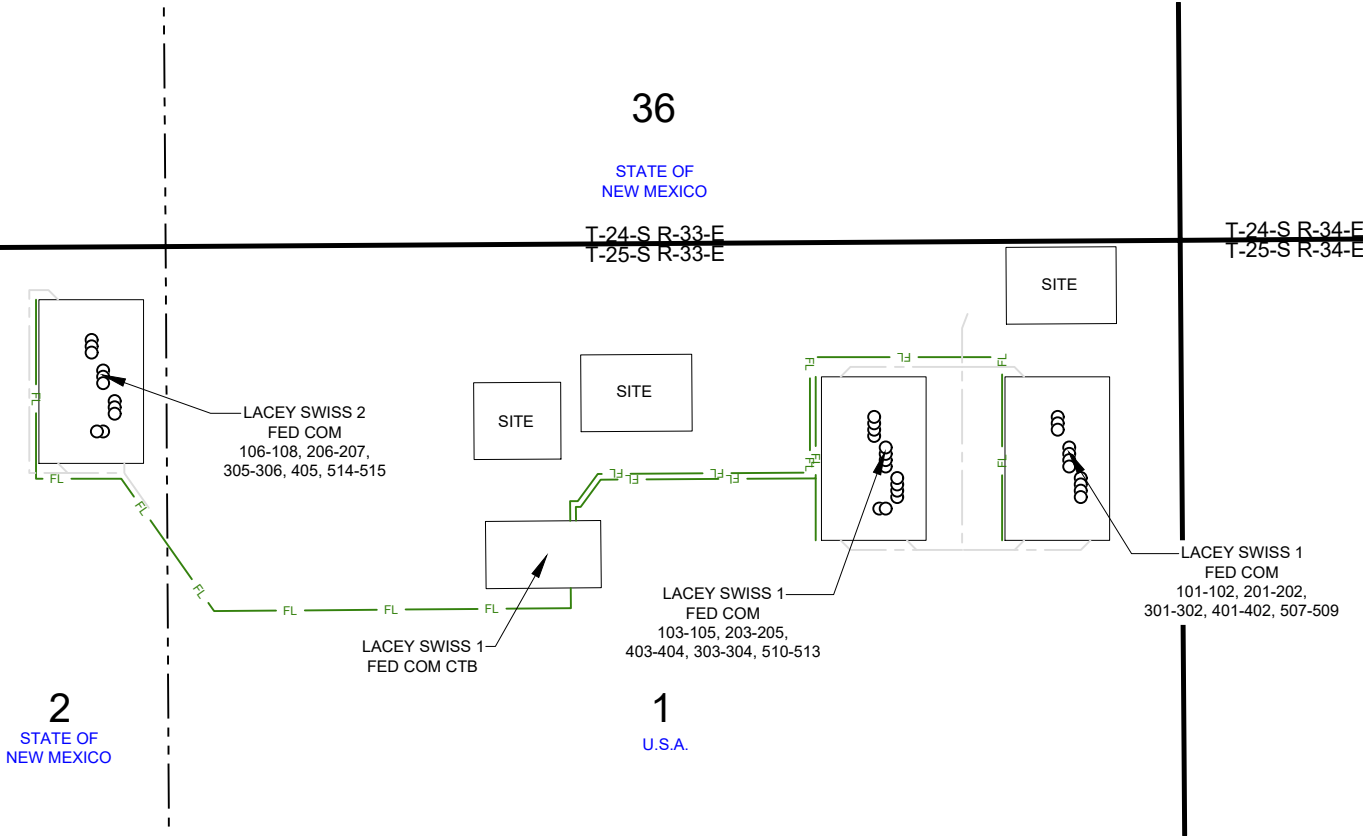
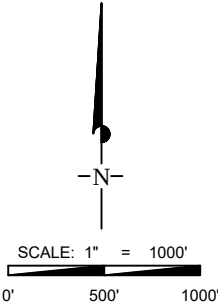
EXHIBIT 5

SECTION 29, TOWNSHIP 25-S, RANGE 32-E, N.M.P.M.

LEA COUNTY, NEW MEXICO

LACEY SWISS 1 FED COM / LACEY SWISS 2 FED COM

WELLS



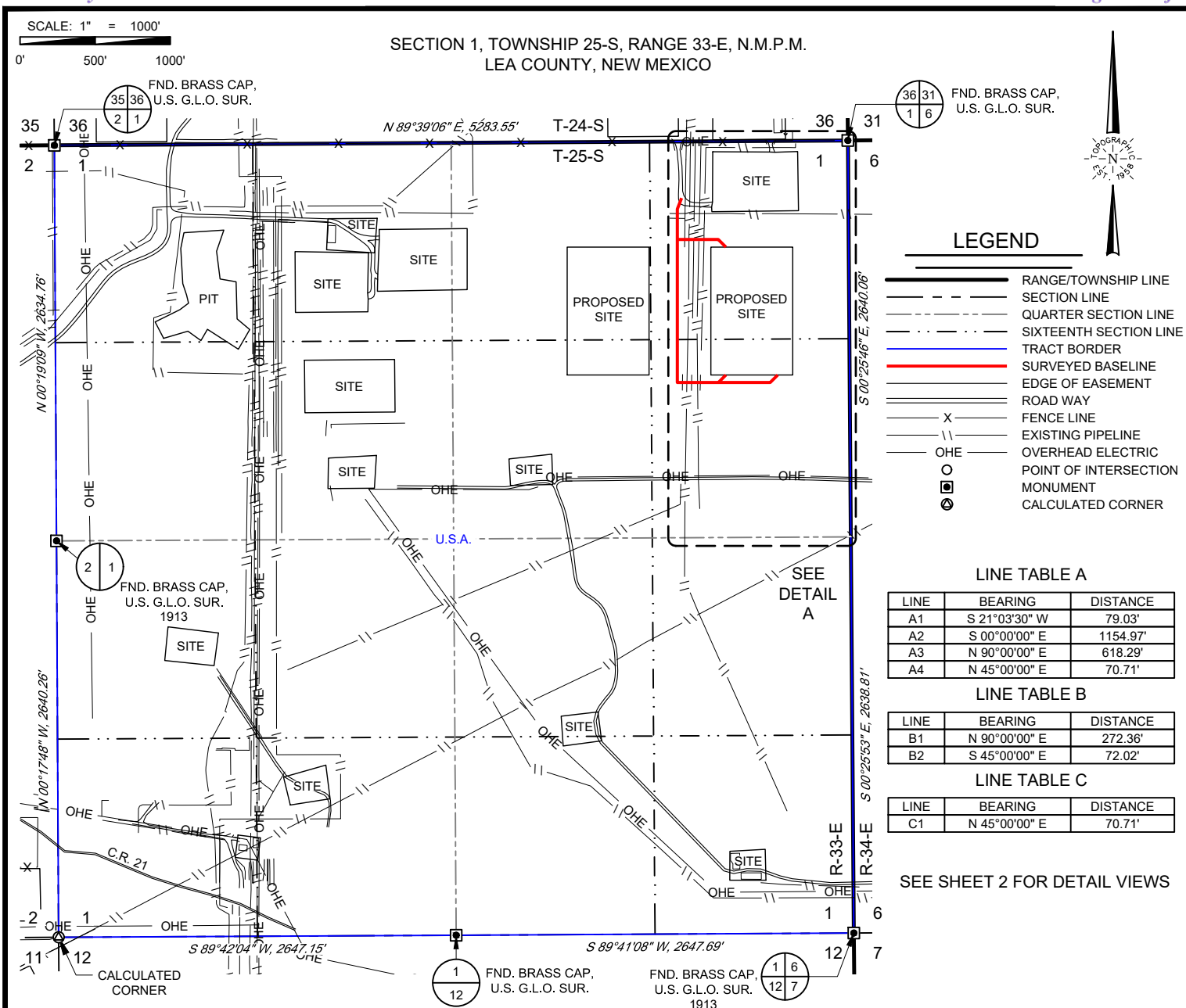
LACEY SWISS 1 FED COM / LACEY SWISS 2 FED COM WELLS	REVISION:	
	INT	DATE
DATE: 5/10/2023		
FILE:SK_LACEY_SWISS_1_FC_2_FC_WELLS		
DRAWN BY: JTS		
SHEET : 1 OF 1		

LEGEND

SECTION LINE

PROPOSED FLOW LINE

ROAD WAY



## LACEY SWISS 1 FED COM

## 101-201-102-202-301-401-302-402-507-508-509 ROADS

Being a proposed easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 2338.09 feet or 141.70 rods, containing 1.61 acres more or less.



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Ramon A. Dominguez, P.S. No. 24508



LACEY SWISS 1 FED COM  
101-201-102-202-301-  
401-302-402-507-508-509  
ROADS

DATE: 05/08/2023

FILE: EP\_LACEY\_SWISS\_1\_FC\_101-201-102-202-301-401-302-402-507-508-509\_RD

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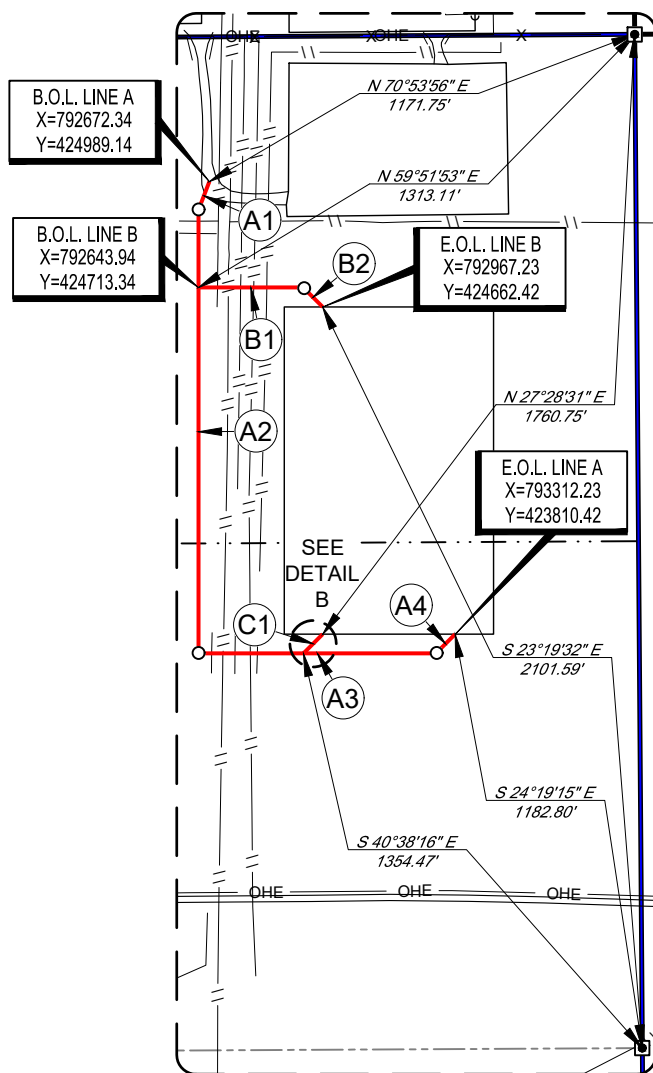
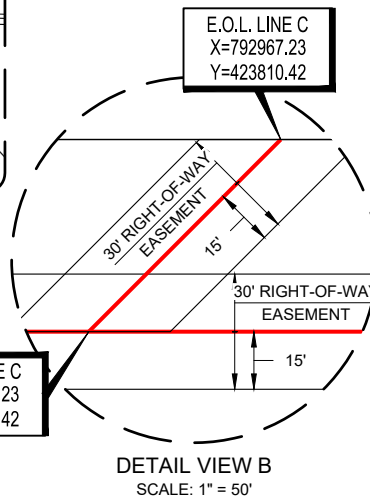
SHEET: 1 OF 2

## REVISION:

INT DATE

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5. E.O.L./P.O.E. = END OF LINE/POINT OF EXIT
6. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.

SECTION 1, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.  
LEA COUNTY, NEW MEXICODETAIL VIEW A  
SCALE: 1" = 500'DETAIL VIEW B  
SCALE: 1" = 50'

## LEGEND

—	RANGE/TOWNSHIP LINE
- - -	SECTION LINE
- . - . -	QUARTER SECTION LINE
- . . . -	SIXTEENTH SECTION LINE
—	TRACT BORDER
—	SURVEYED BASELINE
—	EDGE OF EASEMENT
—	ROAD WAY
X	FENCE LINE
—	EXISTING PIPELINE
—	OVERHEAD ELECTRIC
○	POINT OF INTERSECTION
⊙	MONUMENT
⊙	CALCULATED CORNER

## LINE TABLE A

LINE	BEARING	DISTANCE
A1	S 21°03'30" W	79.03'
A2	S 00°00'00" E	1154.97'
A3	N 90°00'00" E	618.29'
A4	N 45°00'00" E	70.71'

## LINE TABLE B

LINE	BEARING	DISTANCE
B1	N 90°00'00" E	272.36'
B2	S 45°00'00" E	72.02'

## LINE TABLE C

LINE	BEARING	DISTANCE
C1	N 45°00'00" E	70.71'



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401-302-402-507-508-509  
ROADS

DATE: 05/08/2023

FILE: EP\_LACEY\_SWISS\_1\_FC\_101-201-102-202-301-401-302-402-507-508-509\_RD

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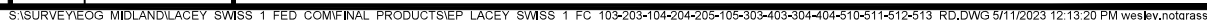
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## REVISION:

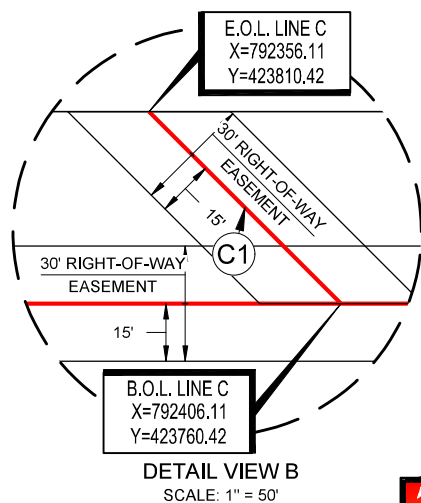
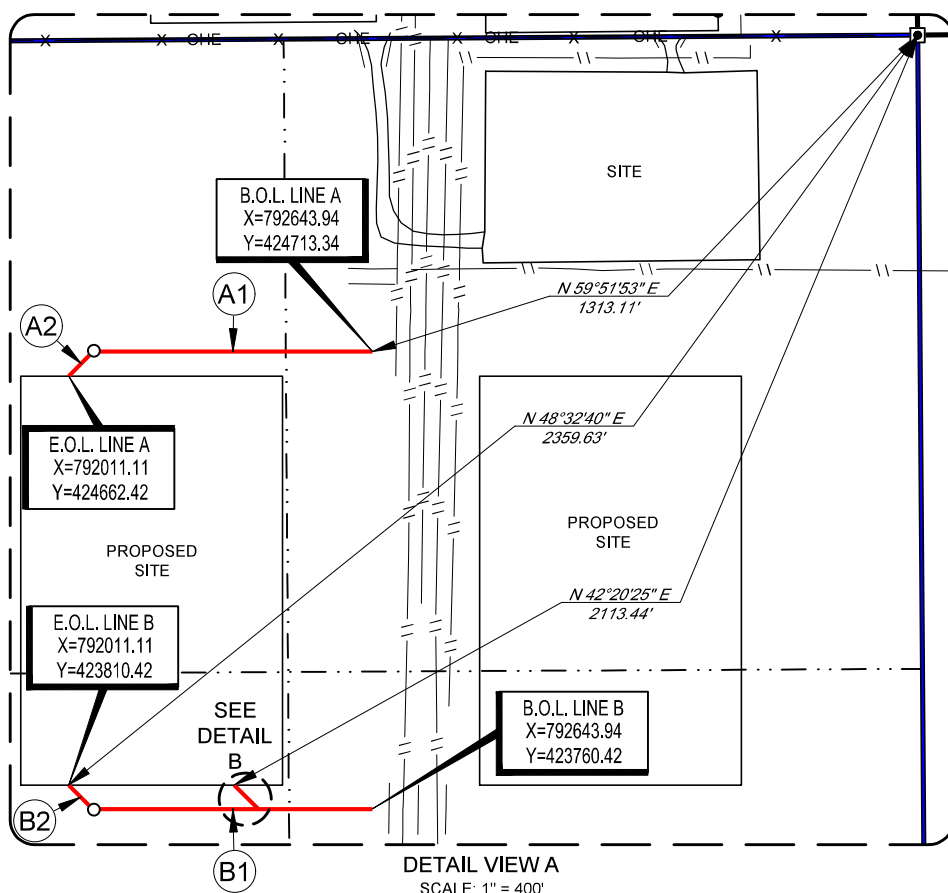
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SECTION 1, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.  
LEA COUNTY, NEW MEXICO

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LACEY SWISS 1 FED COM  
103-203-104-204-205-105-  
303-403-304-404-510-511-  
512-513 ROADS

DATE: 05/08/2023

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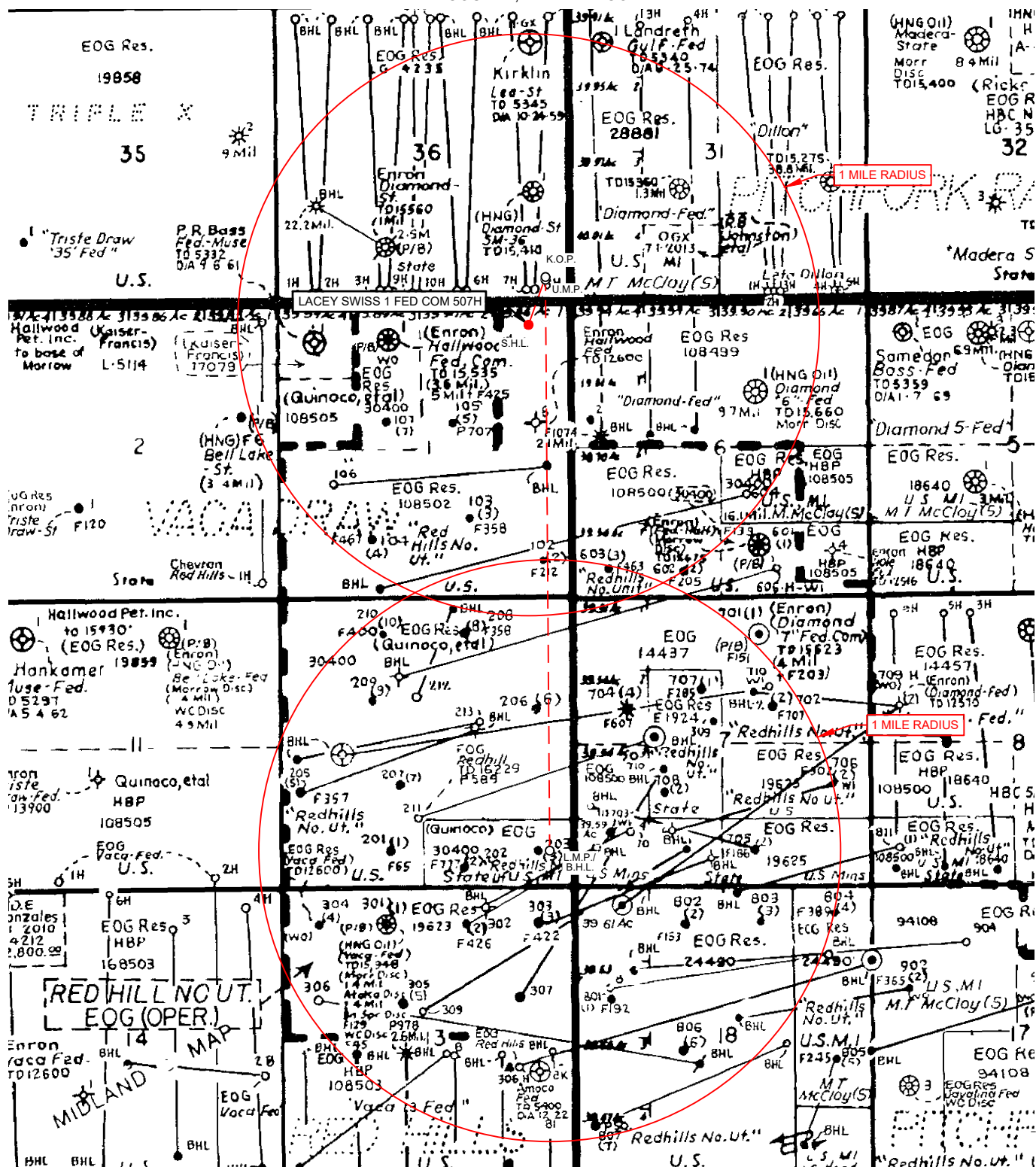
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## EXHIBIT 3

SECTION 1, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.  
LEA COUNTY, NEW MEXICO

LEASE NAME &amp; WELL NO.: LACEY SWISS 1 FED COM 507H

507H LATITUDE N 32.1642809

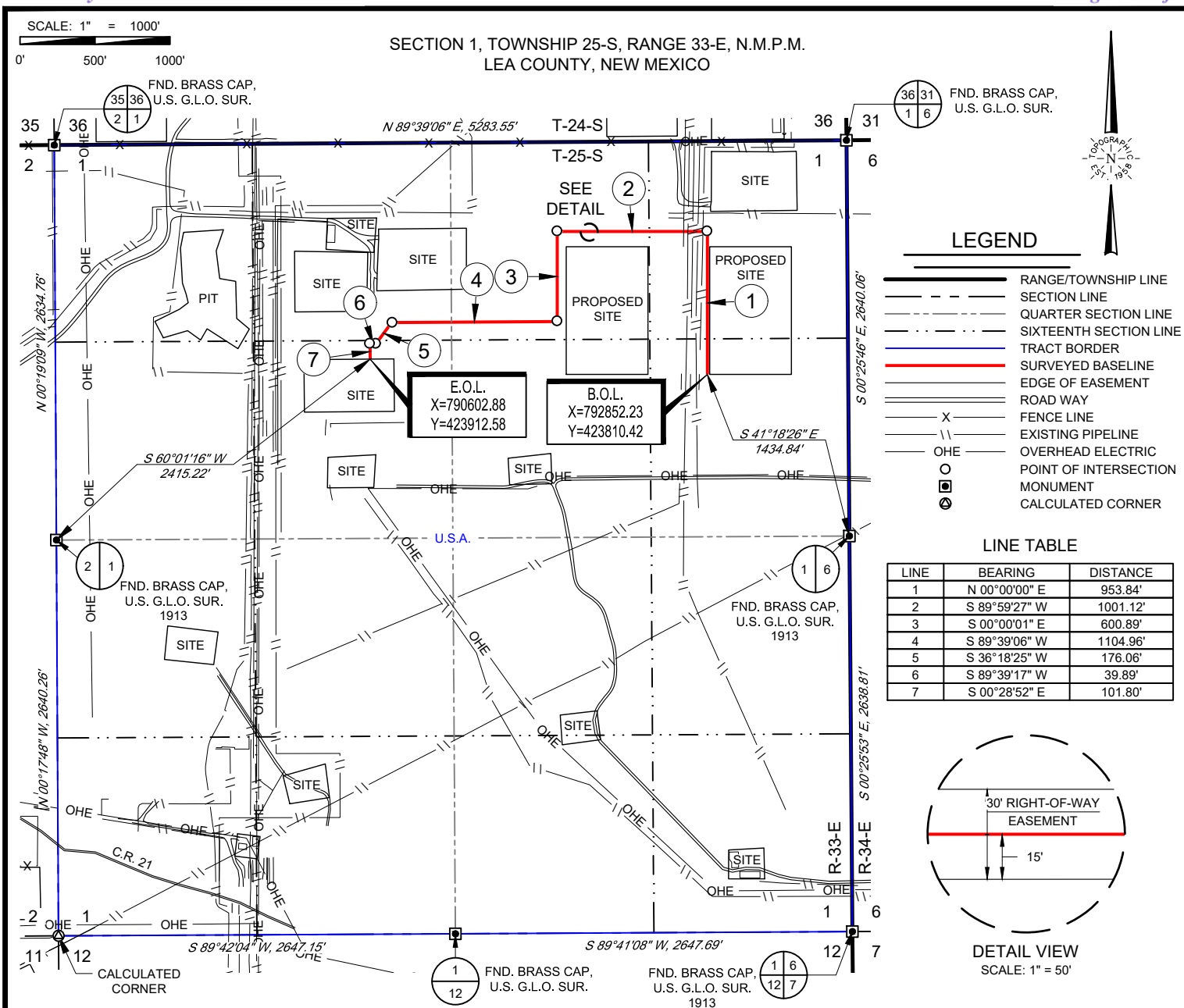
507H LONGITUDE W 103.5195864

SCALE: NTS

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LACEY SWISS 1 FED COM 101-201-102-202-301-401-302-402-507-508-509  
FLOWLINE-INSTRUMENT AIR-GAS LIFT-FIBER OPTIC

Being a proposed easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline  
total line footage containing 3978.56 feet or 241.12 rods, containing 2.74 acres more or less.



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101-201-102-202-301-401-  
302-402-507-508-509  
FLOWLINE-INSTRUMENT  
AIR-GAS LIFT-FIBER OPTIC

DATE: 05/08/2023

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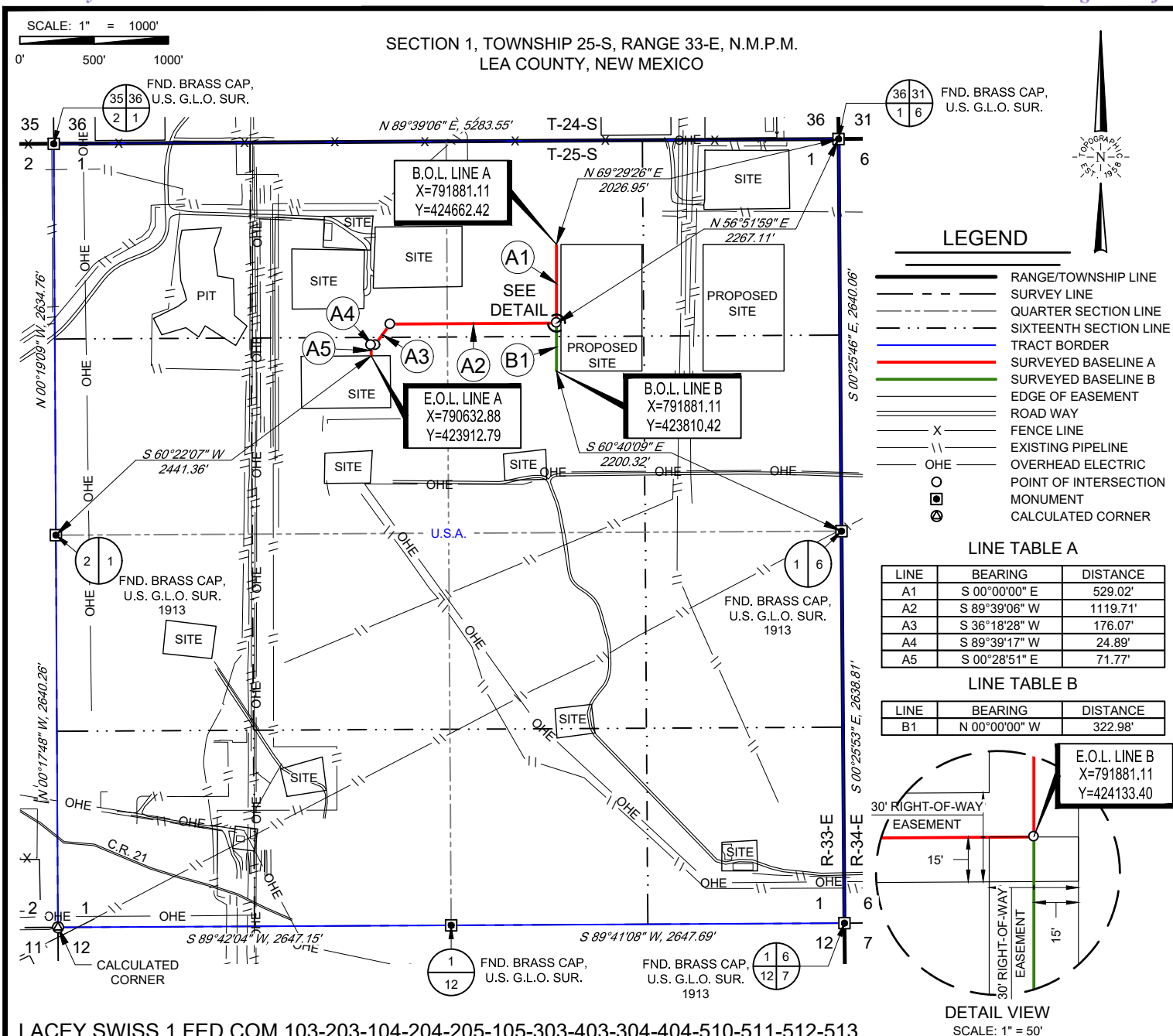
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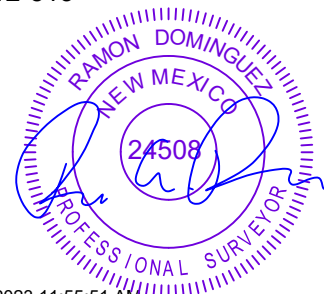


LACEY SWISS 1 FED COM 103-203-104-204-205-105-303-403-304-404-510-511-512-513  
FLOWLINE-INSTRUMENT AIR-GAS LIFT-FIBER OPTIC LINES

Being a proposed easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline  
total line footage containing 2244.44 feet or 136.03 rods, containing 1.55 acres more or less.



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LACEY SWISS 1 FED COM  
103-203-104-204-205-105-303-  
403-304-404-510-511-512-513  
FLOWLINE-INSTRUMENT AIR-GAS  
LIFT-FIBER OPTIC LINES

DATE: 05/08/2023

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SHEET: 1 OF 1

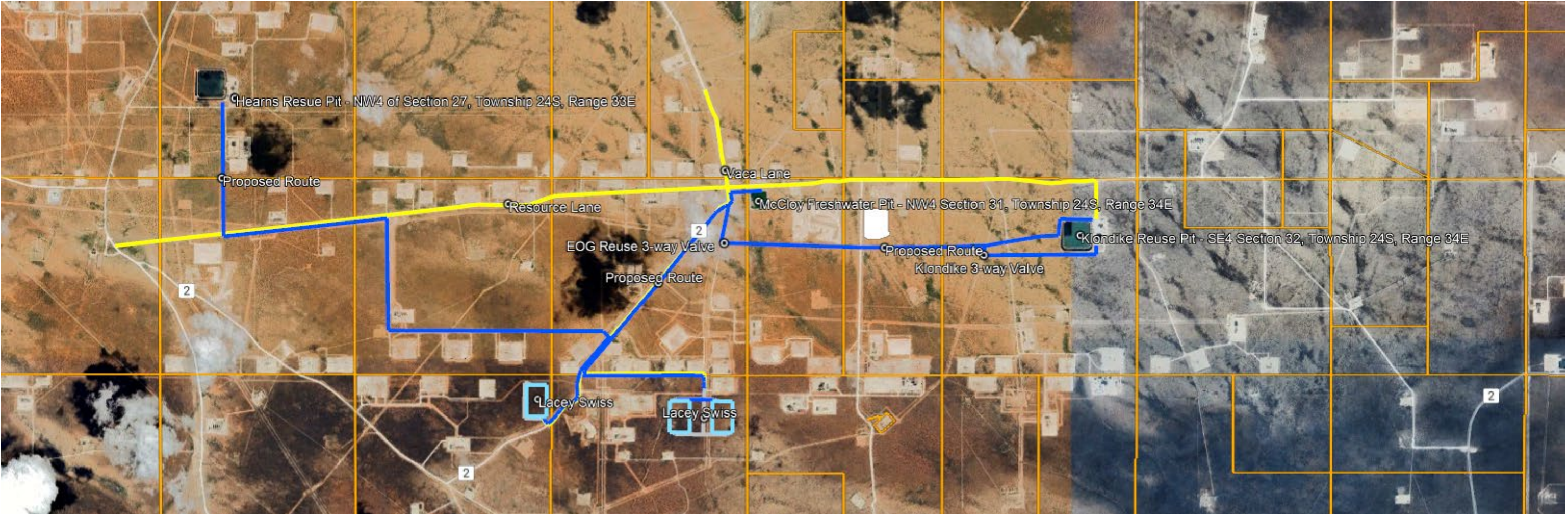
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Fresh Water will come from the McCloy Freshwater Pit on Resources Lane in the NW4 Section 31, Township 24S, Range 34E. Our proposed layflat route consists of one (12-inch) above-ground layflat line running alongside Resource Lane for 0.15 miles east from the pit, turning onto Vaca Lane and heading south 2.05 miles to the Lacey Swiss Well Pads.

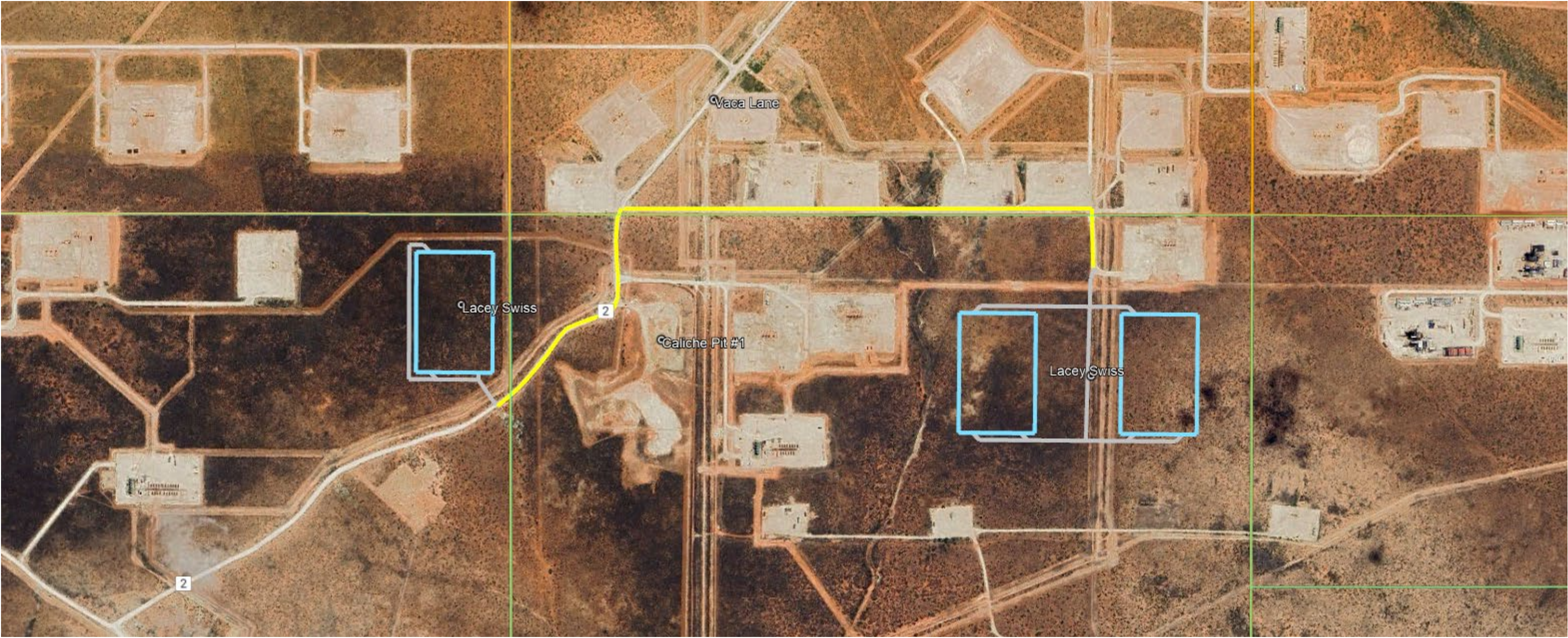
We plan to use the Hearns Resue Pit in the NW4 of Section 27, Township 24S, Range 33E. Our proposed layflat route consists of six (12-inch) above-ground layflat lines running south from the pit following an EOG Pipeline ROW for 0.78 miles and then turning east alongside Resource Lane for 1 mile, turning south onto the Hawk 35 lease road for 2.15 miles to the Vaca Lane, turn south on Vaca Lane for 1.64 miles to the Lacey Swiss Well Package.

We plan to use the Klondike Reuse Pit in the SE4 Section 32, Township 24S, Range 34E. Our proposed layflat route consists of six (12-inch) above-ground layflat lines running west from the pit for 2 miles on an EOG ROW, then turning north alongside an existing lease road for 0.25 miles, turning onto Vaca Lane, heading south for 2.05 miles to the Lacey Swiss Well Package.

EOG would like to have the option to use two 3-way valves at two riser locations. The first riser location is NE4 of Section 36, Township 24S, Range 33E. Our proposed layflat route consists of six (12-inch) above-ground layflat lines running north from the riser following an existing lease for 0.39 miles, then turning east alongside Vaca Lane heading south for 2 miles to the Lacey Swiss Well Package.

The Klondike riser location is NW4 of Section 32, Township 24S, Range 34E. Our proposed layflat route consists of six (12-inch) above-ground layflat lines running west from the pit for 1 mile to the riser on an EOG ROW, then continuing west for 2 miles on an EOG ROW, then turning north alongside an existing lease road for 0.25 miles, turning onto Vaca Lane, heading south for 2.05 miles to the Lacey Swiss Well Package.





EOG will use caliche pit #1 in the NW4 of Section 1, Township 25S, Range 35E, to build its access roads and well pads for the Lacey Swiss Fed Package. We will use Vaca Lane to access the caliche pit and the existing lease roads.






## LEGEND

 TOWNSHIP/RANGE LINE  
 PROPOSED ROAD

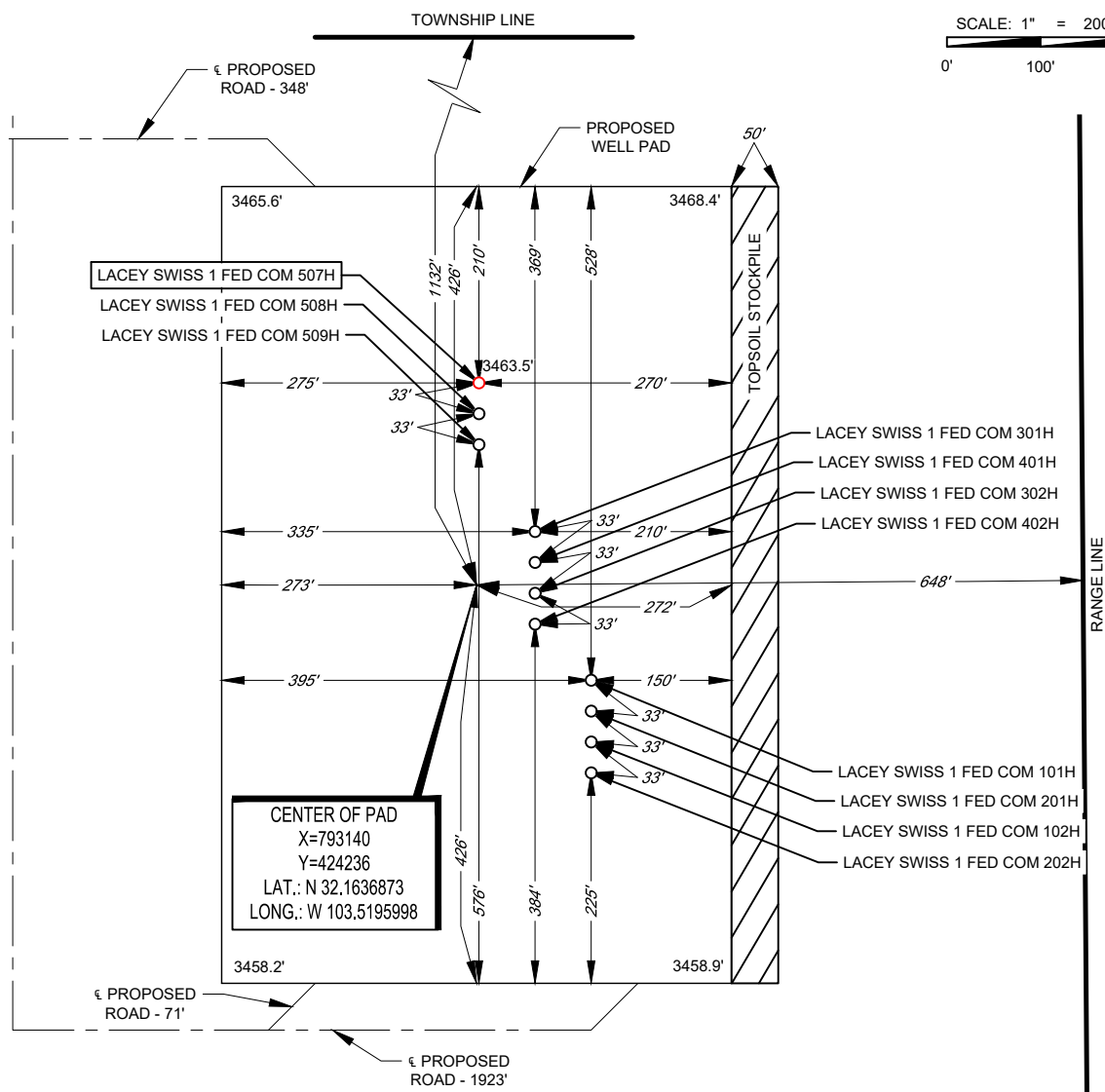
SECTION 1, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.  
LEA COUNTY, NEW MEXICO

DETAIL VIEW  
SCALE: 1" = 200'

SCALE: 1" = 200'



0' 100' 200'



5/24/2023 4:18:43 PM

Ramon A. Dominguez, P.S. No. 24508

May 4, 2023

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET. ELEVATIONS USED ARE NAVD88, OBTAINED THROUGH AN OPUS SOLUTION.

THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. ONLY THE DATA SHOWN ABOVE IS BEING CERTIFIED TO. ALL OTHER INFORMATION WAS INTENTIONALLY OMITTED. THIS PLAT IS ONLY INTENDED TO BE USED FOR A PERMIT AND IS NOT A BOUNDARY SURVEY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

LEASE NAME & WELL NO.: LACEY SWISS 1 FED COM 507H  
507H LATITUDE N 32.1642809 507H LONGITUDE W 103.5195864

CENTER OF PAD IS 1132' FNL & 648' FEL



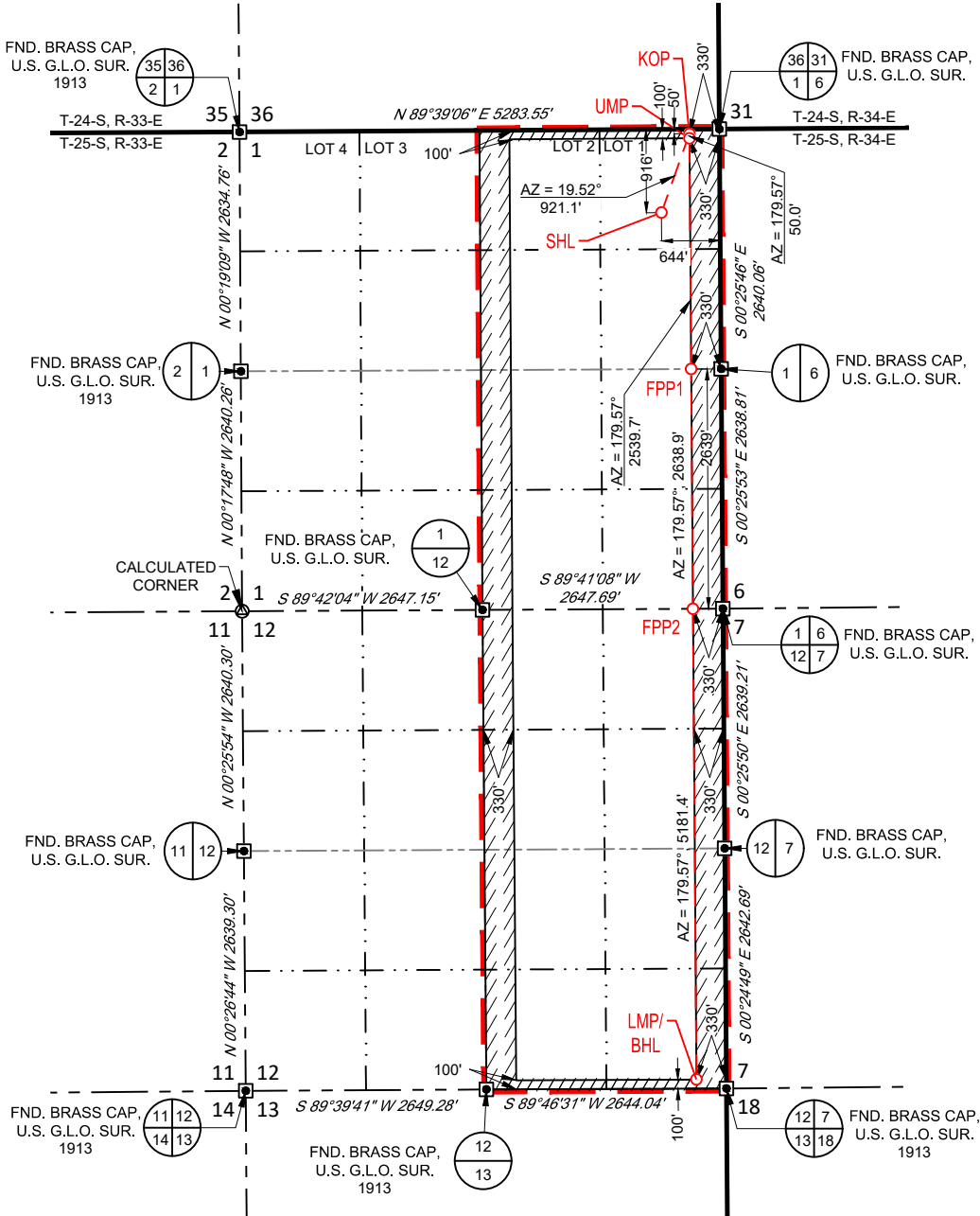
481 WINSKOTT ROAD, Ste. 200 • BENBROOK, TEXAS 76126  
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554  
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705  
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743  
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ORIGINAL DOCUMENT SIZE: 8.5" X 11"



EXHIBIT 2A

SECTION 1, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.  
LEA COUNTY, NEW MEXICO



SURFACE LOCATION (SHL)

NEW MEXICO EAST  
NAD 1983  
X=793142 Y=424452  
LAT.: N 32.1642809  
LONG.: W 103.5195864  
916' FNL 644' FEL

KICK OFF POINT (KOP)

NEW MEXICO EAST  
NAD 1983  
X=793450 Y=425321  
LAT.: N 32.1666608  
LONG.: W 103.5185708  
50' FNL 330' FEL

UPPER MOST PERF. (UMP)

NEW MEXICO EAST  
NAD 1983  
X=793450 Y=425271  
LAT.: N 32.1665234  
LONG.: W 103.5185708  
100' FNL 330' FEL

FED PERF. POINT (FPP1)

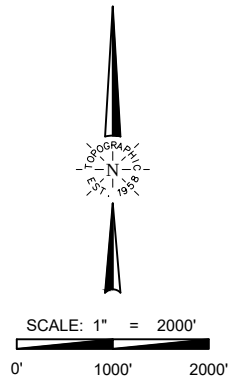
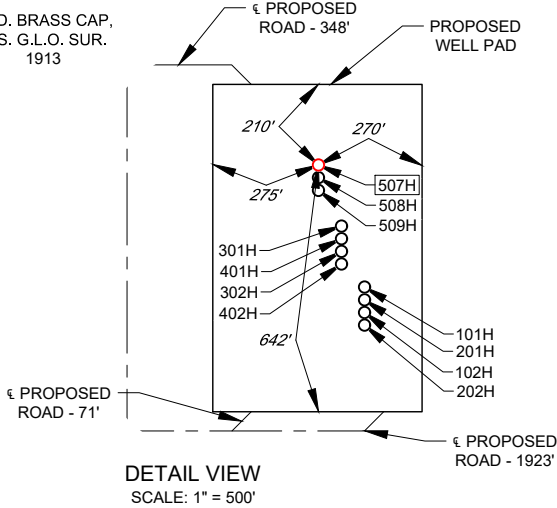
NEW MEXICO EAST  
NAD 1983  
X=793469 Y=422731  
LAT.: N 32.1595423  
LONG.: W 103.5185718  
2640' FSL 330' FEL

FED PERF. POINT (FPP2)

NEW MEXICO EAST  
NAD 1983  
X=793489 Y=420092  
LAT.: N 32.1522887  
LONG.: W 103.5185729  
0' FSL 330' FEL

LOWER MOST PERF. (LMP)  
BOTTOM HOLE LOCATION (BHL)

NEW MEXICO EAST  
NAD 1983  
X=793527 Y=414911  
LAT.: N 32.1380463  
LONG.: W 103.5185750  
100' FSL 330' FEL

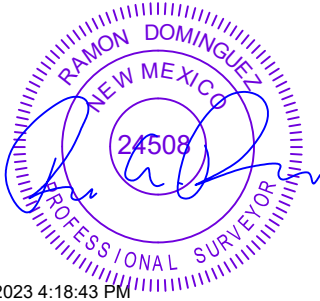


LEASE NAME & WELL NO.: LACEY SWISS 1 FED COM 507H

SECTION 1 TWP 25-S RGE 33-E SURVEY N.M.P.M.  
COUNTY LEA STATE NM  
DESCRIPTION 916' FNL & 644' FEL

DISTANCE & DIRECTION  
FROM INT. OF NM-128 & DELAWARE BASIN RD., GO WEST ON NM-128  
±1.4 MILES, THENCE SOUTH (LEFT) ON VACA LN. ±3.5 MILES, THENCE  
EAST (LEFT) ON A LEASE RD. ±0.6 MILES, THENCE CONTINUE SOUTH ON  
A PROPOSED RD. ±281 FEET, THENCE EAST (LEFT) ON A PROPOSED  
RD. ±348 FEET TO A POINT ±273 FEET NORTHWEST OF THE LOCATION.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID  
BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY  
FEET.  
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND  
UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF  
SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED  
TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.  
THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.



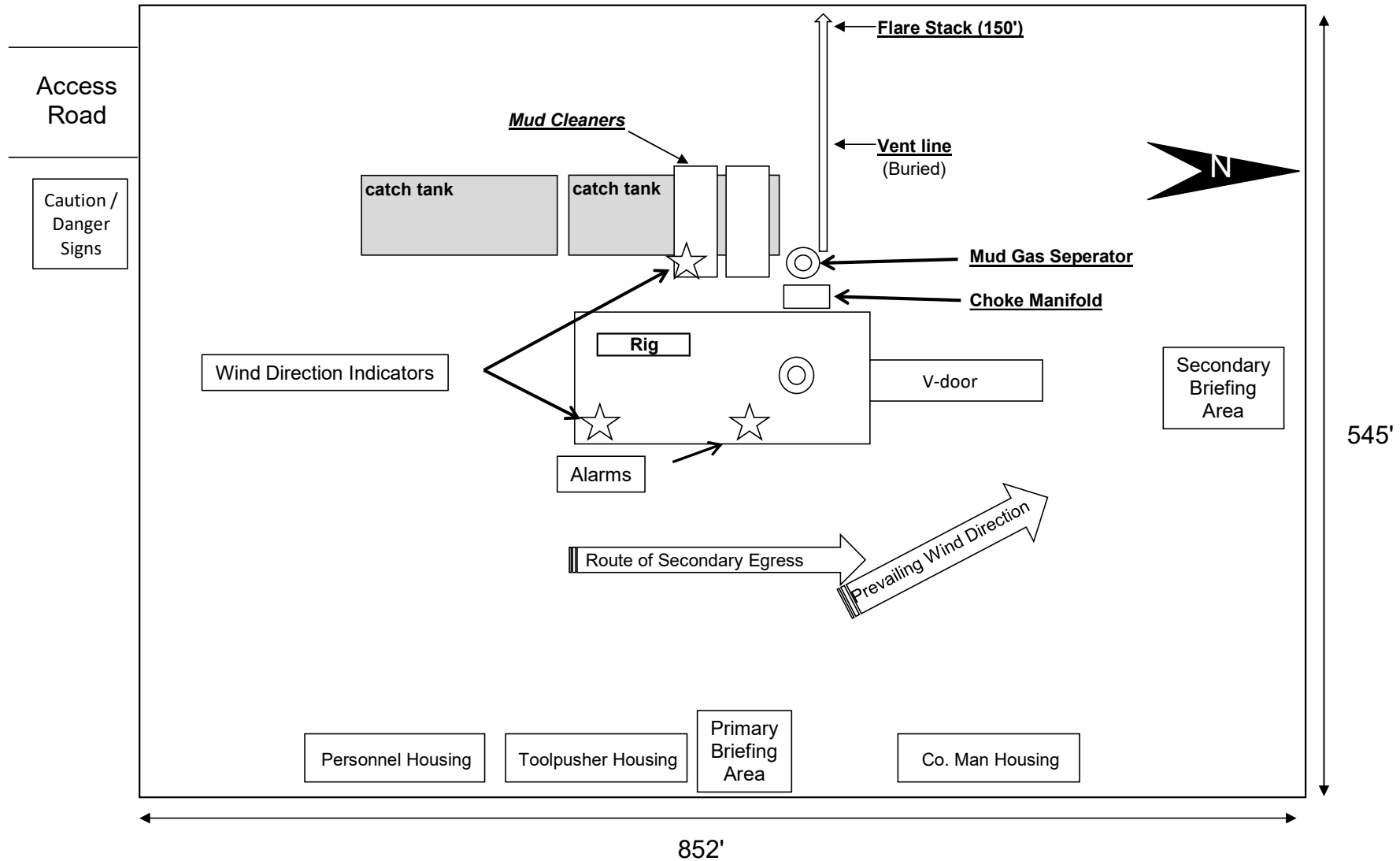
5/24/2023 4:18:43 PM  
Ramon A. Dominguez, P.S. No. 24508  
May 4, 2023



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Exhibit 4  
EOG Resources  
Lacey Swiss 1 Fed Com #507H

Well Site Diagram

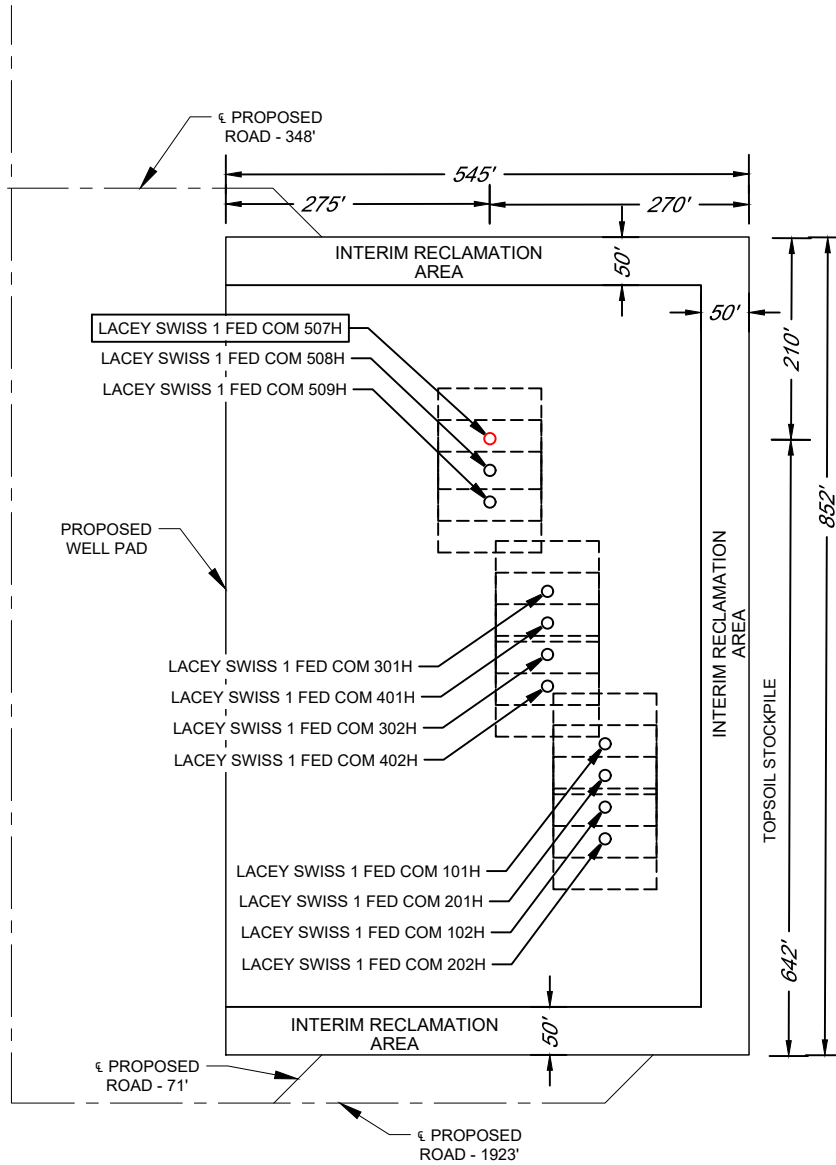


# EXHIBIT 2C

## RECLAMATION AND FACILITY DIAGRAM - PRODUCTION FACILITIES DIAGRAM

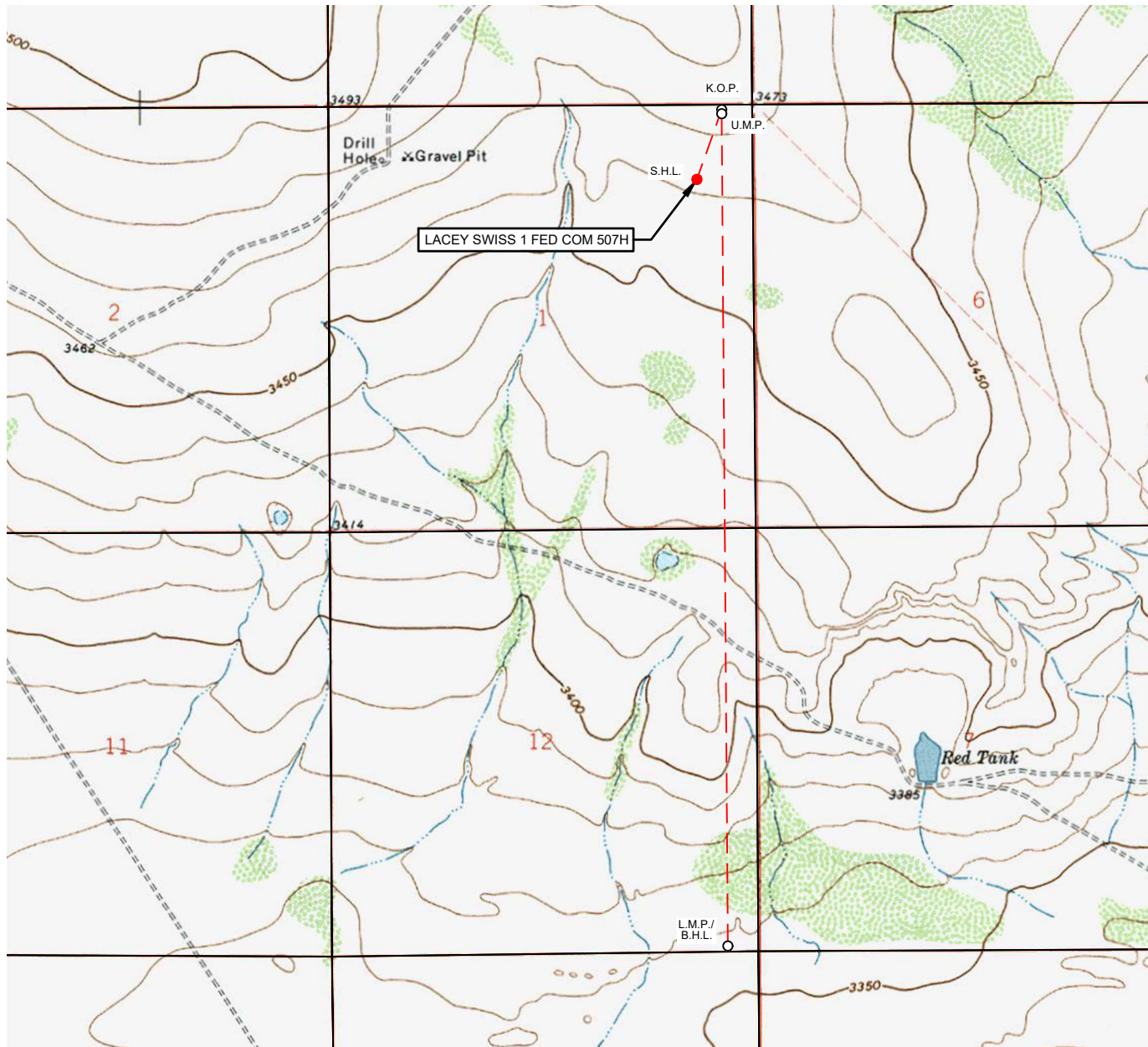
SECTION 1, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.  
LEA COUNTY, NEW MEXICO

DETAIL VIEW  
SCALE: 1" = 200'



LEASE NAME & WELL NO.: LACEY SWISS 1 FED COM 507H  
507H LATITUDE N 32.1642809 507H LONGITUDE W 103.5195864

## LOCATION &amp; ELEVATION VERIFICATION MAP

LEASE NAME & WELL NO.: LACEY SWISS 1 FED COM 507H

SECTION 1 TWP 25-S RGE 33-E SURVEY N.M.P.M.  
 COUNTY LEA STATE NM ELEVATION 3463'  
 DESCRIPTION 916' FNL & 644' FEL

LATITUDE N 32.1642809 LONGITUDE W 103.5195864

SCALE: 1" = 2000'  
 0' 1000' 2000'

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

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



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 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705  
 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743  
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EOG Resources, Inc.

SHL: 916 FNL &amp; 644 FEL, Section: 1, T.25S., R.33E.

LACEY SWISS 1 FED COM 507H

BHL: 100 FSL &amp; 330 FEL, Section: 12, T.25S., R.33E.

# Surface Use Plan of Operations

## Introduction

The following surface use plan of operations will be followed and carried out once the APD is approved. No other disturbance will be created other than what was submitted in this surface use plan. If any other surface disturbance is needed after the APD is approved, a BLM approved sundry notice or right of way application will be acquired prior to any new surface disturbance.

Before any surface disturbance is created, stakes or flagging will be installed to mark boundaries of permitted areas of disturbance, including soils storage areas. As necessary, slope, grade, and other construction control stakes will be placed to ensure construction in accordance with the surface use plan. All boundary markers will be maintained in place until final construction cleanup is completed. If disturbance boundary markers are disturbed or knocked down, they will be replaced before construction proceeds.

If terms and conditions are attached to the approved APD and amend any of the proposed actions in this surface use plan, we will adhere to the terms and conditions.

## 1. Existing Roads

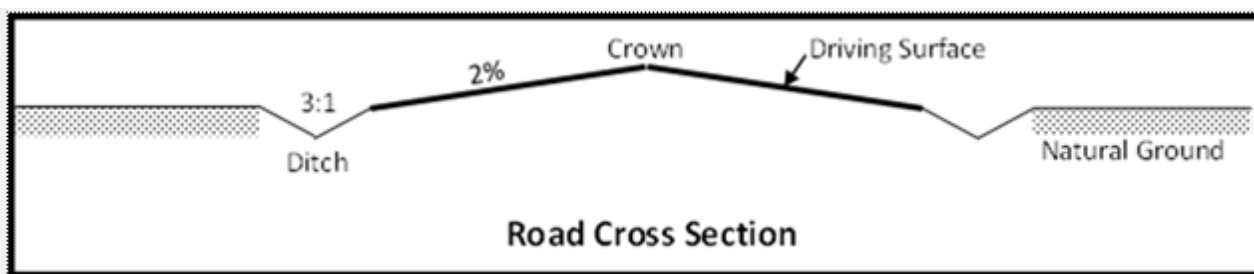
- a. The existing access road route to the proposed project is depicted on LACEY SWISS 1 FED COM 507H VICINITY. Improvements to the driving surface will be done where necessary. No new surface disturbance will be done, unless otherwise noted in the New or Reconstructed Access Roads section of this surface use plan..
- b. The existing access road route to the proposed project does not cross lease or unit boundaries, so a BLM right-of-way grant will not be acquired for this proposed road route.
- c. The operator will improve or maintain existing roads in a condition the same as or better than before operations begin. The operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures on the entire access route such as cattleguards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use.
- d. We will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. BLM written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

## 2. New or Reconstructed Access Roads

- a. An access road will be needed for this proposed project. See the survey plat for the location of the access road.
- b. The length of access road needed to be constructed for this proposed project is about 2338 feet.
- c. The maximum driving width of the access road will be 30 feet. The maximum width of surface disturbance when constructing the access road will not exceed 25 feet. All areas outside of the driving surface will be revegetated.
- d. The access road will be constructed with 6 inches of compacted CALICHE.
- e. When the road travels on fairly level ground, the road will be crowned and ditched with a 2% slope from the tip of the road crown to the edge of the driving surface. The ditches will be 3 feet wide with 3:1 slopes. See Road Cross Section diagram below.

EOG Resources, Inc.  
LACEY SWISS 1 FED COM 507H

SHL: 916 FNL & 644 FEL, Section: 1, T.25S., R.33E.  
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- f. The access road will be constructed with a ditch on each side of the road.
- g. The maximum grade for the access road will be 6 percent.
- h. No turnouts will be constructed on the proposed access road.
- i. No cattleguards will be installed for this proposed access road.
- j. Since the proposed access road crosses lease boundaries, a right-of-way will be required for this access road. A right-of-way grant will be applied for through the BLM. The access road will not be constructed until an approved BLM right-of-way grant is acquired.
- k. An appropriately sized culvert will be installed where drainages cross the access road. The culvert(s) will be no less than 18 inches in diameter and covered with no less than 12 inches of surfacing material. Each culvert will be marked with reflectors attached to T-Posts on both sides of the road. The uphill and downhill opening of the culvert will have rip-rap (cobble stone) extending 3 feet out and 12 inches deep to slow water flow entering and exiting the culvert. Standards in the BLM Gold Book will be used. The culvert will be maintained in its original condition throughout the life of the road. See survey plat for location of culvert(s).
- l. No low water crossings will be constructed for the access road.
- m. Since the access road is on level ground, no lead-off ditches will be constructed for the proposed access road.
- n. Newly constructed or reconstructed roads, on surface under the jurisdiction of the Bureau of Land Management, will be constructed as outlined in the BLM "Gold Book" and to meet the standards of the anticipated traffic flow and all anticipated weather requirements as needed. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well-constructed and safe road.

### 3. Location of Existing Wells

- a. LACEY SWISS 1 FED COM 507H RADIUS of the APD depicts all known wells within a one mile radius of the proposed well.
- b. There is no other information regarding wells within a one mile radius.

### 4. Location of Existing and/or Proposed Production Facilities

- a. All permanent, lasting more than 6 months, above ground structures including but not limited to pumpjacks, storage tanks, barrels, pipeline risers, meter housing, etc. that are not subject to safety requirements will be painted a non-reflective paint color, Shale Green, from the BLM Standard Environmental Colors chart, unless another color is required in the APD Conditions of Approval.
- b. If any type of production facilities are located on the well pad, they will be strategically placed to allow for maximum interim reclamation, recontouring, and revegetation of the well location.
- c. Production from the proposed well will be transported to the production facility named LACEY SWISS 1 FED

EOG Resources, Inc.

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LACEY SWISS 1 FED COM 507H

BHL: 100 FSL &amp; 330 FEL, Section: 12, T.25S., R.33E.

COM CTB. The location of the facility is as follows: Lot 6, Unit F of Section 1, Township 25S, Range 33E.

d. A pipeline to transport production will be installed from the proposed well to the existing production facility.

i. We plan to install a 6 inch buried FLEXPIPE/FLEXSTEEL pipeline from the proposed well to the offsite production facility. The proposed length of the pipeline will be 3979 feet. The working pressure of the pipeline will be about 1440 psi. A 30 feet wide work area will be needed to install the buried pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

ii. LACEY SWISS 1 FED COM INFRASTRUCTURE MAP/SKETCH depicts the proposed production pipeline route from the well to the existing production facility.

iii. The proposed pipeline does not cross lease boundaries, so a right of way grant will not need to be acquired from the BLM.

**If any plans change regarding the production facility or other infrastructure (pipeline, electric line, etc.), we will submit a sundry notice or right of way (if applicable) prior to installation or construction.**

#### Electric Line(s)

a. No electric line will be applied for with this APD.

### 5. Location and Types of Water

a. The source and location of the water supply are as follows: The source and location of the water supply are as follows: This location will be drilled using a combination of water mud systems as outlined in the drilling program (i) Water will be obtained from commercial water stations in the area and hauled to the location by trucks using existing and proposed roads as depicted on the road map attached (ii) Water may be supplied from frac ponds and transported to the location by temporary above ground surface lines as shown on the map EOG plans to utilize up to eight 4 inch polyethylene or layflat lines and up to eight 12 inch layflat lines to transport fresh water Freshwater contains less than 10,000 mg/l Total Dissolved Solids (TDS) exhibits no petroleum sheen when standing and is not previously used in mechanical processes that expose it to heavy metals or other potential toxins

EOG plans to utilize up to eight 4 inch polyethylene or layflat lines and up to eight 12 inch layflat lines to transport treated produced water defined as reconditioning produced water to a reusable form and may include mechanical and chemical processes

Freshwater Source:

McCloy Pit Section 31 Township 24S Range 34E Lea County New Mexico

Treated Produced Water Source:

Hearns Reuse Pit Section 27 Township 24S Range 33E Lea County New Mexico

Lomas Reuse Pit Section 26 Township 25S Range 33E Lea County New Mexico

Temporary surface lines would originate from a single or multiple water source locations in the surrounding area of the proposed action and be temporarily laid above ground with minimal disturbance

Temporary surface line(s) shall be laid no more than 10 feet from the edge of the existing disturbance (ie edge of bar borrow ditch road surface or two track road or other man made addition to the landscape) A push off arm or another mechanism will be used All vehicle equipment will remain within the existing disturbance

Map or maps showing the locations of the temporary surface lines will be provided with the APD and included in the Environmental Assessment An electronic map file (shape file or KMZ file) shall be submitted with the

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EOG Resources, Inc.

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LACEY SWISS 1 FED COM 507H

BHL: 100 FSL & 330 FEL, Section: 12, T.25S., R.33E.

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Environmental Assessment.

b. LACEY SWISS 1 FED COM WATER AND CALICHE MAP depicts the proposed route for a 12 inch POLY OR LAYFLAT temporary (<90 days) water pipeline supplying water for drilling operations.

## 6. Construction Material

a. Caliche will be supplied from pits shown on the attached caliche source map.

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

\*□

-An adequate amount of topsoil/root zone (usually top 6 inches of soil) will be stripped from the proposed well location and stockpiled along the side of the well location as depicted on the well site diagram/survey plat.

-An area within the proposed well site dimensions will be used to excavate caliche.

Subsoil will be removed and stockpiled within the surveyed well pad dimensions.

-Once caliche/surfacing mineral is found, the mineral material will be excavated and stockpiled within the approved drilling pad dimensions.

-Then, subsoil will be pushed back in the excavated hole, and caliche will be spread accordingly across the entire well pad and road (if available).

-Neither caliche nor subsoil will be stockpiled outside the well pad dimensions. Topsoil will be stockpiled along the edge of the pad as depicted in the Well Site Layout or survey plat.

\*□

If no caliche is found onsite, caliche will be hauled in from a BLM-approved caliche pit or other established mineral pit. A BLM mineral material permit will be acquired before obtaining mineral material from BLM pits or federal land.

## 7. Methods for Handling Waste

a. Drilling fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility.

b. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.

c. Human waste and grey water will be properly contained and disposed of properly at a state approved disposal facility.

d. After drilling and completion operations, trash, chemicals, salts, frac sand and other waste material will be removed and disposed of properly at a state approved disposal facility.

e. The well will be drilled utilizing a closed loop system. Drill cutting will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

## 8. Ancillary Facilities

a. No ancillary facilities will be needed for this proposed project.

## 9. Well Site Layout

a. The following information is presented in the well site survey plat or diagram:

EOG Resources, Inc.

SHL: 916 FNL &amp; 644 FEL, Section: 1, T.25S., R.33E.

LACEY SWISS 1 FED COM 507H

BHL: 100 FSL &amp; 330 FEL, Section: 12, T.25S., R.33E.

- i. reasonable scale (near 1":50')
  - ii. well pad dimensions
  - iii. well pad orientation
  - iv. drilling rig components
  - v. proposed access road
  - vi. elevations of all points
  - vii. topsoil stockpile
  - viii. reserve pit location/dimensions if applicable
  - ix. other disturbances needed (flare pit, stinger, frac farm pad, etc.)
  - x. existing structures within the 600' x 600' archaeological surveyed area (pipelines, electric lines, well pads, etc)
- b. The proposed drilling pad was staked and surveyed by a professional surveyor. The attached survey plat of the well site depicts the drilling pad layout as staked.
- c. The submitted survey plat does depict all the necessary information required by Onshore Order No. 1.
- d. Topsoil Salvaging
- i. Grass, forbs, and small woody vegetation, such as mesquite will be excavated as the topsoil is removed. Large woody vegetation will be stripped and stored separately and respread evenly on the site following topsoil resspreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

## 10. Plans for Surface Reclamation

### Reclamation Objectives

- i. The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.
- ii. The long-term objective of final reclamation is to return the land to a condition similar to what existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity.
- iii. The BLM will be notified at least 3 days prior to commencement of any reclamation procedures.
- iv. If circumstances allow, interim reclamation and/or final reclamation actions will be completed no later than 6 months from when the final well on the location has been completed or plugged. We will gain written permission from the BLM if more time is needed.
- v. Interim reclamation will be performed on the well site after the well is drilled and completed. LACEY SWISS 1 FED COM 507H RECLAMATION depicts the location and dimensions of the planned interim reclamation for the well site.



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EOG Resources, Inc.

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LACEY SWISS 1 FED COM 507H

BHL: 100 FSL & 330 FEL, Section: 12, T.25S., R.33E.

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**Interim Reclamation Procedures (If performed)**

1. Within 30 days of well completion, the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not required for production.
2. In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
3. The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.
4. Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
5. Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area.
6. The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

**Final Reclamation (well pad, buried pipelines, etc.)**

1. Prior to final reclamation procedures, the well pad, road, and surrounding area will be cleared of material, trash, and equipment.
2. All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
3. All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.
4. After all the disturbed areas have been properly prepared, the areas will be seeded with the proper BLM seed mixture, free of noxious weeds. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
5. Proper erosion control methods will be used on the entire area to control erosion, runoff and siltation of the surrounding area.
6. All unused equipment and structures including pipelines, electric line poles, tanks, etc. that serviced the well will be removed.
7. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.

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EOG Resources, Inc.

SHL: 916 FNL & 644 FEL, Section: 1, T.25S., R.33E.

LACEY SWISS 1 FED COM 507H

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BHL: 100 FSL & 330 FEL, Section: 12, T.25S., R.33E.

## 11. Surface Ownership

- a. The surface ownership of the proposed project is FEDERAL.

## 12. Other Information

- a. Onsite meeting was conducted on 4-11-2023

We plan to use eight 12-inch lay flat hoses to transport water and eight 4-inch polylines or layflay for drilling and frac operations.

Regulatory will list all proposed pipelines.

The well will be produced using gas lift as the artificial lift method.

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

## 13. Maps and Diagrams

LACEY SWISS 1 FED COM 507H VICINITY - Existing Road

LACEY SWISS 1 FED COM 507H RADIUS - Wells Within One Mile

LACEY SWISS 1 FED COM INFRASTRUCTURE MAP/SKETCH - Production Pipeline

LACEY SWISS 1 FED COM WATER AND CALICHE MAP - Drilling Water Pipeline

LACEY SWISS 1 FED COM 507H RECLAMATION - Interim Reclamation

EOG Resources, Inc.

**Surface Use Plan of Operations Section 7 Methods for Handling Waste Attachment**

Human waste managed by third-party vendors. ROW construction waste contained in on-site portable toilets maintained by third party vendor. During drilling activities waste is managed by third party vendor utilizing onsite aerobic (treatment) wastewater management. Liquids treated through the aerobic system are transferred to via water line to CTBs for reuse by EOG. All solid waste remaining after treatment process are pumped into an enclosed waste transfer truck at the time of rig down and taken to one of the following disposal facilities by the third-party vendor: Qual Run Services LLC (a Licensed Waste Management Service Facility in Reeves County, Texas) or ReUse OilField Services (a Licensed Waste Management Facility in Mentone, TX)

Trash dumpsters are utilized to contain garbage onsite. Dumpsters are maintained by a third-party vendor. All trash is hauled to Lee County, NM landfill.

EOG utilizes a Closed Loop System, cuttings leave the rig and enter low/highwall cuttings bin. Cuttings are then transferred to trucks for transportation to a State of New Mexico approved disposal facility. Primary disposal location for EOG's NM operations is the North Delaware Basin Disposal Facility in Jal, New Mexico which is a privately owned commercial facility. Some EOG locations within New Mexico may require transportation of cuttings to other licensed commercial disposal facilities based on geographic location.

Drilling fluids and produced oil and water from the well during drilling and completion operations will be stored onsite in frac tanks and disposed of at the time of rig down. Primary disposal location for EOG's NM operations is the North Delaware Basin Disposal facility in Jal, New Mexico which is a privately owned commercial facility. Some EOG locations within New Mexico may require transportation of cuttings to other licensed commercial disposal facilities based on geographic location.



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

## PWD Data Report

08/21/2024

**APD ID:** 10400092953

**Submission Date:** 06/21/2023

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** LACEY SWISS 1 FED COM

**Well Number:** 507H

**Well Type:** OIL WELL

**Well Work Type:** Drill

### Section 1 - General

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

### Section 2 - Lined

Would you like to utilize Lined Pit PWD options? N

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

**PWD surface owner:**

**PWD disturbance (acres):**

**Lined pit PWD on or off channel:**

**Lined pit PWD discharge volume (bbl/day):**

**Lined pit**

**Pit liner description:**

**Pit liner manufacturers**

**Precipitated solids disposal:**

**Describe precipitated solids disposal:**

**Precipitated solids disposal**

**Lined pit precipitated solids disposal schedule:**

**Lined pit precipitated solids disposal schedule**

**Lined pit reclamation description:**

**Lined pit reclamation**

**Leak detection system description:**

**Leak detection system**

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** LACEY SWISS 1 FED COM

**Well Number:** 507H

**Lined pit Monitor description:**

**Lined pit Monitor**

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

**Is the reclamation bond a rider under the BLM bond?**

**Lined pit bond number:**

**Lined pit bond amount:**

**Additional bond information**

### Section 3 - Unlined

**Would you like to utilize Unlined Pit PWD options?** N

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

**PWD disturbance (acres):**

**PWD surface owner:**

**Unlined pit PWD on or off channel:**

**Unlined pit PWD discharge volume (bbl/day):**

**Unlined pit**

**Precipitated solids disposal:**

**Describe precipitated solids disposal:**

**Precipitated solids disposal**

**Unlined pit precipitated solids disposal schedule:**

**Unlined pit precipitated solids disposal schedule**

**Unlined pit reclamation description:**

**Unlined pit reclamation**

**Unlined pit Monitor description:**

**Unlined pit Monitor**

**Do you propose to put the produced water to beneficial use?**

**Beneficial use user**

**Estimated depth of the shallowest aquifer (feet):**

**Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?**

**TDS lab results:**

**Geologic and hydrologic**

**State**

**Unlined Produced Water Pit Estimated**

**Unlined pit: do you have a reclamation bond for the pit?**



**Operator Name:** EOG RESOURCES INCORPORATED**Well Name:** LACEY SWISS 1 FED COM**Well Number:** 507H**Is the reclamation bond a rider under the BLM bond?****Unlined pit bond number:****Unlined pit bond amount:****Additional bond information****Section 4 -****Would you like to utilize Injection PWD options?** N**Produced Water Disposal (PWD) Location:****PWD surface owner:****PWD disturbance (acres):****Injection PWD discharge volume (bbl/day):****Injection well mineral owner:****Injection well type:****Injection well number:****Injection well name:****Assigned injection well API number?****Injection well API number:****Injection well new surface disturbance (acres):****Minerals protection information:****Mineral protection****Underground Injection Control (UIC) Permit?****UIC Permit****Section 5 - Surface****Would you like to utilize Surface Discharge PWD options?** N**Produced Water Disposal (PWD) Location:****PWD surface owner:****PWD disturbance (acres):****Surface discharge PWD discharge volume (bbl/day):****Surface Discharge NPDES Permit?****Surface Discharge NPDES Permit attachment:****Surface Discharge site facilities information:****Surface discharge site facilities map:****Section 6 -****Would you like to utilize Other PWD options?** N**Produced Water Disposal (PWD) Location:****PWD surface owner:****PWD disturbance (acres):****Other PWD discharge volume (bbl/day):**

Operator Name: EOG RESOURCES INCORPORATED

Well Name: LACEY SWISS 1 FED COM

Well Number: 507H

Other PWD type description:

Other PWD type

Have other regulatory requirements been met?

Other regulatory requirements



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

## Bond Info Data

08/21/2024

**APD ID:** 10400092953

**Submission Date:** 06/21/2023

Highlighted data  
reflects the most  
recent changes  
[Show Final Text](#)

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** LACEY SWISS 1 FED COM

**Well Number:** 507H

**Well Type:** OIL WELL

**Well Work Type:** Drill

### Bond

**Federal/Indian APD:** FED

**BLM Bond number:**

**BIA Bond number:**

**Do you have a reclamation bond?** NO

**Is the reclamation bond a rider under the BLM bond?**

**Is the reclamation bond BLM or Forest Service?**

**BLM reclamation bond number:**

**Forest Service reclamation bond number:**

**Forest Service reclamation bond**

**Reclamation bond number:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond 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 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 376817

CONDITIONS

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID:
	7377
	Action Number: 376817
	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	9/2/2024
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	9/2/2024
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	9/2/2024
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	9/2/2024
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing	9/2/2024