AFMSS

U.S. Department of the Interior
Bureau of Land Management

Application for Permit to Drill

APD Package Report

Date Printed: 07/15/2025 02:02 PM

APD ID:	10400097989	Well Status:	AAPD
APD Received Date:	04/11/2024 09:20 AM	Well Name:	GRACKLE 26 EAST FED COM
Operator:	EOG RESOURCES INCORPORATED	Well Number:	304H

APD Package Report Contents

- Form 3160-3

- Operator Certification Report

- Application Report
- Application Attachments
  -- Well Plat: 1 file(s)

- Drilling Plan Report
- Drilling Plan Attachments
  -- Blowout Prevention Choke Diagram Attachment: 2 file(s)
  -- Blowout Prevention BOP Diagram Attachment: 7 file(s)
  -- Casing Design Assumptions and Worksheet(s): 3 file(s)
  -- Hydrogen sulfide drilling operations plan: 1 file(s)
  -- Proposed horizontal/directional/multi-lateral plan submission: 2 file(s)
  -- Other Facets: 9 file(s)
  -- Other Variances: 9 file(s)

- SUPO Report
- SUPO Attachments
  -- Existing Road Map: 1 file(s)
  -- New Road Map: 2 file(s)
  -- Attach Well map: 1 file(s)
  -- Production Facilities map: 11 file(s)
  -- Water source and transportation map: 2 file(s)
  -- Construction Materials source location attachment: 1 file(s)
  -- Well Site Layout Diagram: 4 file(s)
  -- Recontouring attachment: 1 file(s)
  -- Other SUPO Attachment: 2 file(s)

- PWD Report
- PWD Attachments
  -- None

- Bond Report
- Bond Attachments
  -- None

Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM117125

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☑ Multiple Zone

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

8. Lease Name and Well No.: GRACKLE 26 EAST FED COM 304H

2. Name of Operator: EOG RESOURCES INCORPORATED

9. API Well No.: 30-025-55223

3a. Address: 1111 BAGBY SKY LOBBY 2, HOUSTON, TX 77002

3b. Phone No. *(include area code)*: (713) 651-7000

10. Field and Pool, or Exploratory: RED HILLS/BONE SPRING, NORTH

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: TR P / 718 FSL / 750 FEL / LAT 32.183157 / LONG -103.434636

At proposed prod. zone: TR B / 100 FNL / 1650 FEL / LAT 32.209997 / LONG -103.437538

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 26/T24S/R34E/NMP

14. Distance in miles and direction from nearest town or post office*

12. County or Parish: LEA

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 100 feet

16. No of acres in lease:

17. Spacing Unit dedicated to this well: 640.0

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 33 feet

19. Proposed Depth: 10647 feet / 20956 feet

20. BLM/BIA Bond No. in file: FED: NM2308

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3430 feet

22. Approximate date work will start*: 12/31/2024

23. Estimated duration: 25 days

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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	SHEA BAILEY / Ph: (713) 651-7000	04/11/2024

Title: Regulatory Contractor

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	CODY LAYTON / Ph: (575) 234-5959	04/25/2025

Title	Office
Assistant Field Manager Lands & Minerals	Carlsbad Field Office

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

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

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 04/25/2025

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 wen, 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 directionany 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 wen 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 win 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 conects this information to anow 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 Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

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Approval Date: 04/25/2025

Additional Operator Remarks

Location of Well

0. SHL: TR P / 718 FSL / 750 FEL / TWSP: 24S / RANGE: 34E / SECTION: 26 / LAT: 32.183157 / LONG: -103.434636 (TVD: 0 feet, MD: 0 feet)

PPP: TR O / 100 FSL / 1650 FEL / TWSP: 24S / RANGE: 34E / SECTION: 26 / LAT: 32.181494 / LONG: -103.437544 (TVD: 10382 feet, MD: 10484 feet)

BHL: TR B / 100 FNL / 1650 FEL / TWSP: 24S / RANGE: 34E / SECTION: 23 / LAT: 32.209997 / LONG: -103.437538 (TVD: 10647 feet, MD: 20956 feet)

BLM Point of Contact

Name: JANET D ESTES
Title: ADJUDICATOR
Phone: (575) 234-6233
Email: JESTES@BLM.GOV

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	EOG Resources Incorporated
WELL NAME & NO.:	GRACKLE 26 EAST FED COM 304H
LOCATION:	Section 26, T.24 S., R.34 E.
COUNTY:	Lea County, New Mexico

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

The above well is approved for the primary design and 5 Designs listed in the "EOG BLM Variance 5a - Alternate Shallow Casing Designs" document. The casing set points and directional plans for the wells in the batch are within the boundary conditions reviewed in the blanket design. The COA is written for the deepest well on the pad. Operator is responsible to review the cement volumes based on the set points, design executed and to achieve the TOC requirements listed in the COA.

Approval Date: 04/25/2025

Primary(Design E:)

1. The **10-3/4** inch surface casing shall be set at approximately **1120** feet **TVD** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **8-5/8** inch intermediate casing shall be set at approximately **5080** feet **TVD**.
    a. Mud weight could brine up to 10.2ppg. Reviewed and OK
    b. Keep casing half full during run for collapse SF

    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.

3. The **6** inch **x 5.5** inch tapered production casing shall be set at approximately **20,956** feet. Operator has also proposed ONLY running **6** inch casing for the production string. Reviewed and is OK. 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. Operator shall provide method of verification.

Shallow Design A:

1. The **13-3/8** inch surface casing shall be set at approximately **1120** feet **TVD** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature

survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **9-5/8** inch intermediate casing shall be set at approximately **5080** feet **TVD**.
   a. Mud weight could brine up to 10.2ppg. Reviewed and OK
   b. Keep casing half full during run for collapse SF

   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.

3. The **5-1/2** inch production casing shall be set at approximately **20,956** feet. 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. Operator shall provide method of verification.

Shallow Design B:

1. The **10-3/4** inch surface casing shall be set at approximately **1120** feet **TVD** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.

e. 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.
f. 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)
g. 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.
If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **8-5/8** inch intermediate casing shall be set at approximately **5080** feet **TVD**.
   a. **Mud weight could brine up to 10.2ppg. Reviewed and OK**
   b. **Keep casing half full during run for collapse SF**

   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.

3. The **5-1/2** inch production casing shall be set at approximately **20,956** feet. 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. Operator shall provide method of verification.

Shallow Design C:

1. The **13-3/8** inch surface casing shall be set at approximately **1120** feet **TVD** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.

   h. 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.
   i. 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)
   j. 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.
   k. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **9-5/8** inch intermediate casing shall be set at approximately **5080** feet **TVD**.
   a. **Mud weight could brine up to 10.2ppg. Reviewed and OK**
   b. **Keep casing half full during run for collapse SF**

   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.

3. The **6** inch production casing shall be set at approximately **20,956** feet. The minimum required fill of cement behind the **6** inch production casing is:

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

Shallow Design D:

1. The **13-3/8** inch surface casing shall be set at approximately **1120** feet **TVD** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.

    l. 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.
    m. 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)
    n. 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.
    o. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **9-5/8** inch intermediate casing shall be set at approximately **5080** feet **TVD**.
    a. Mud weight could brine up to 10.2ppg. Reviewed and OK
    b. Keep casing half full during run for collapse SF

    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.

3. The **6** inch x **5.5** inch tapered production casing shall be set at approximately **20,956** feet. The minimum required fill of cement behind the **6** inch x **5.5** inch tapered production casing is:

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

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **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 3500 (70% Working Pressure) psi.**

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

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.
- 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 Onshore Oil and Gas Order No. 2.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Casing Clearance:

- Variance in place for production interval as long as the 500' overlap into the previous casing meets the requirement
- Variance in place for salt interval clearance based on caliper data study

Offline Cementing

Operator is approved for offline cementing for surface and intermediate intervals. Notify 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
(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 2nd 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 intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours.

WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172** and **API STD 53 Sec. 5.3**.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

    c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

KPI 4/19/2025

AFMSS

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

Operator Certification Data Report

07/15/2025

Operator

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

NAME: SHEA BAILEY **Signed on:** 09/24/2024

Title: Regulatory Contractor

Street Address: 5509 CHAMPIONS BLVD

City: MIDLAND **State:** TX **Zip:** 79707

Phone: (432)214-9797

Email address: SHEA_BAILEY@EOGRESOURCES.COM

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

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

Application Data
07/15/2025

APD ID: 10400097989
Submission Date: 04/11/2024
Operator Name: EOG RESOURCES INCORPORATED
Well Name: GRACKLE 26 EAST FED COM
Well Number: 304H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes
Show Final Text

Section 1 - General

APD ID: 10400097989
Tie to previous NOS?
Submission Date: 04/11/2024
BLM Office: Carlsbad
User: SHEA BAILEY
Title: Regulatory Contractor
Federal/Indian APD: FED
Is the first lease penetrated for production Federal or Indian? FED
Lease number: NMNM117125
Lease Acres:
Surface access agreement in place?
Allotted?
Reservation:
Agreement in place? NO
Federal or Indian agreement:
Agreement number:
Agreement name:
Keep application confidential? N
Permitting Agent? NO
APD Operator: EOG RESOURCES INCORPORATED
Operator letter of

Operator Info

Operator Organization Name: EOG RESOURCES INCORPORATED
Operator Address: 600 17TH STREET, SUITE 1000 N
Zip: 80202
Operator PO Box:
Operator City: DENVER
State: CO
Operator Phone: (303)262-9894
Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO
Master Development Plan name:
Well in Master SUPO? NO
Master SUPO name:
Well in Master Drilling Plan? NO
Master Drilling Plan name:
Well Name: GRACKLE 26 EAST FED COM
Well Number: 304H
Well API Number:
Field/Pool or Exploratory? Field and Pool
Field Name: RED HILLS
Pool Name: BONE SPRING, NORTH

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** GRACKLE 26 EAST FED COM **Number:** 302H, 303H, 304H, 305H

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: **Distance to nearest well:** 33 FT **Distance to lease line:** 100 FT

Reservoir well spacing assigned acres Measurement: 640 Acres

Well plat: REV_Grackle_26_East_Fed_Com_C102_304H_S_20240410092351.pdf

Well work start Date: 12/31/2024 **Duration:** 25 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: **Reference Datum:** KELLY BUSHING

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
SHL Leg #1	718	FSL	750	FEL	24S	34E	26	Tract P	32.183157	-103.434636	LEA	NEW MEXICO	NEW MEXICO	F	FEE	3430			Y
KOP Leg #1	50	FSL	1650	FEL	24S	34E	26	Tract O	32.181356	-103.437543	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-6740	10263	10170	Y
PPP Leg #1-1	100	FSL	1650	FEL	24S	34E	26	Tract O	32.181494	-103.437544	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-6952	10484	10382	Y

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
EXIT Leg #1	100	FNL	1650	FEL	24S	34E	23	Tract B	32.209997	-103.437538	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 117125	-7217	20956	10647	Y
BHL Leg #1	100	FNL	1650	FEL	24S	34E	23	Tract B	32.209997	-103.437538	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 117125	-7217	20956	10647	Y

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) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-	96434	Red Hills, Bone Spring, North

Property Code	Property Name	Well Number
	GRACKLE 26 EAST FED COM	304H

OGRID No.	Operator Name	Elevation
7377	EOG RESOURCES, INC.	3430'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	26	24 S	34 E		718	SOUTH	750	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	23	24 S	34 E		100	NORTH	1650	EAST	LEA

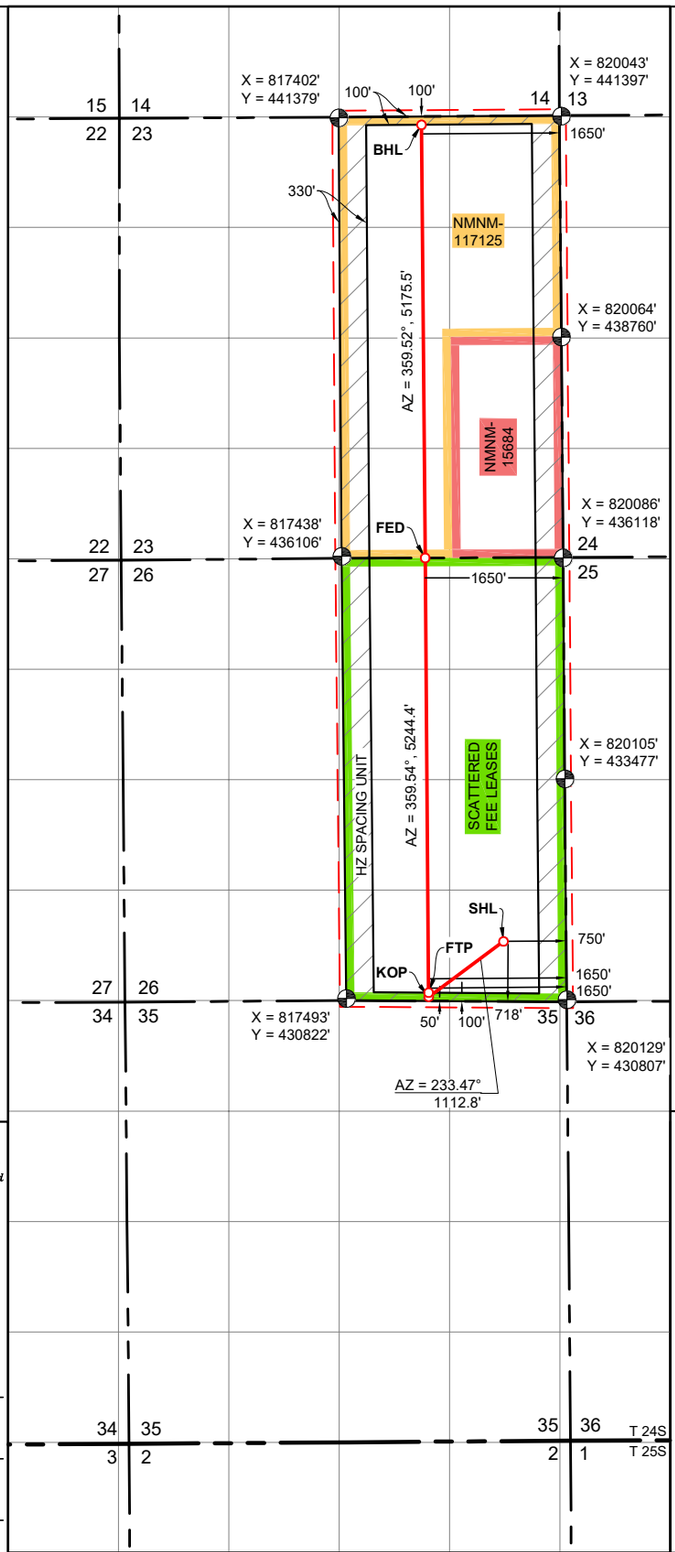
Dedicated Acres	Joint or Infill	Consolidated Code	Order No.
640			PENDING COM AGREEMENT

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

SURFACE LOCATION
NEW MEXICO EAST
NAD 1983
X=819373' Y=431528'
LAT=N32.183157°
LONG=W103.434636°
NAD 1927
X=778187' Y=431470'
LAT=N32.183031°
LONG=W103.434165°
718' FSL 750' FEL

KOP LOCATION
NEW MEXICO EAST
NAD 1983
X=818479' Y=430866'
LAT=N32.181356°
LONG=W103.437543°
NAD 1927
X=777293' Y=430807'
LAT=N32.181231°
LONG=W103.437073°
50' FSL 1650' FEL

FIRST TAKE POINT
NEW MEXICO EAST
NAD 1983
X=818478' Y=430916'
LAT=N32.181494°
LONG=W103.437544°
NAD 1927
X=777293' Y=430857'
LAT=N32.181369°
LONG=W103.437073°
100' FSL 1650' FEL



FED PERF. POINT
NEW MEXICO EAST
NAD 1983
X=818437' Y=436110'
LAT=N32.195771°
LONG=W103.437538°
NAD 1927
X=777251' Y=436052'
LAT=N32.195646°
LONG=W103.437067°
0' FNL 1650' FEL

LOWER MOST PERF./ BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1983
X=818393' Y=441286'
LAT=N32.209997°
LONG=W103.437538°
NAD 1927
X=777208' Y=441227'
LAT=N32.209872°
LONG=W103.437065°
100' FNL 1650' FEL

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Shea Bailey 4/10/24
Signature Date

Shea Bailey
Print Name

sbailey1@eogresources.com
E-mail Address

SURVEYORS CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

DECEMBER 19, 2023
Date of Survey
Signature and Seal of Professional Surveyor:

5 APRIL 2024

TIM C. PAPPAS
NEW MEXICO
21209
REGISTERED PROFESSIONAL SURVEYOR

Job No.: EOG B200054 TIM C. PAPPAS, N.M.P.L.S. Certificate Number 21209

\\agrt\projects\EOG_B200054\PRODC\102_WLE\0-GRACKLE_26_EAST_FED_COM_C102_WLE_304H_R1.dwg KSARMIENTO 4/5/2024 1:12 PM

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

Drilling Plan Data Report
07/15/2025

APD ID: 10400097989
Submission Date: 04/11/2024
Operator Name: EOG RESOURCES INCORPORATED
Well Name: GRACKLE 26 EAST FED COM
Well Number: 304H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
15501190	PERMIAN	3430	0	0	ALLUVIUM	NONE	N
15501191	RUSTLER	2441	989	989	ANHYDRITE	NONE	N
15501192	TOP SALT	1871	1559	1559	SALT	NONE	N
15501193	BASE OF SALT	-1546	4976	4976	SALT	NONE	N
15501194	LAMAR	-1814	5244	5244	LIMESTONE	NONE	N
15501196	BELL CANYON	-1842	5272	5272	SANDSTONE	NATURAL GAS, OIL	N
15501197	CHERRY CANYON	-2779	6209	6209	SANDSTONE	NATURAL GAS, OIL	N
15501198	BRUSHY CANYON	-4272	7702	7702	SANDSTONE	NATURAL GAS, OIL	N
15501199	BONE SPRING LIME	-5648	9078	9078	LIMESTONE	NATURAL GAS, OIL	N
15501200	AVALON SAND	-5999	9429	9429	SANDSTONE	NATURAL GAS, OIL	N
15501201	BONE SPRING 1ST	-7031	10461	10461	SANDSTONE	NATURAL GAS, OIL	Y
15501202	BONE SPRING 2ND	-7554	10984	10984	SANDSTONE	NATURAL GAS, OIL	Y
15501204	BONE SPRING 3RD	-8589	12019	12019	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

Pressure Rating (PSI): 10M **Rating Depth:** 10647

Equipment: The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (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. 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. 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 vendors 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 vendors representative. All BOP equipment will be tested utilizing a conventional test plug. Not a cup or Jpacker 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.

Requesting Variance? YES

Variance request: SEE VARIANCE REQUEST LIST FOR FULL LIST OF VARAINCES REQUESTED 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. Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line). Variance is requested to use a 5,000 psi annular BOP with the 10,000 psi BOP stack. 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 21 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" 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.

Testing Procedure: 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. EOG will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program. EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

Choke Diagram Attachment:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

10_M_Choke_Manifold_20211227095328.pdf

Gates_Co_Flex_Hose_Test_Chart_and_Certifications_20250314065611.pdf

BOP Diagram Attachment:

Wellhead_3_string_10.750x8.625x5.500_SDT_3141_20230227071046.pdf

EOG_BLM_Variance_3a___Offline_Cement_Intermediate_Operational_Procedure_20230227071046.pdf

EOG_BLM_Variance_5a___Alternate_Shallow_Casing_Designs_20240229085523.pdf

EOG_BLM_Variance_4a___Salt_Section_Annular_Clearance_11.8.2022_20230307144721.pdf

Grackle_26_East_Fed_Com_101H_Variances_20240402070240.pdf

EOG_BLM_Variance_1c___10M_Annular_Variance___3_String_Large_surface_hole_20230227071046.pdf

10_M_BOP_Diagram_13.625_in_20230227071101.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	13.5	10.75	NEW	API	N	0	1120	0	1120	3430	2310	1120	J-55	40.5	ST&C	1.125	1.25	BUOY	1.6	BUOY	1.6
2	INTERMEDIATE	9.875	8.625	NEW	API	N	0	5178	0	5080	3411	-1650	5178	J-55	32	OTHER - BTC-SC	1.125	1.25	BUOY	1.6	BUOY	1.6
3	PRODUCTION	6.75	5.5	NEW	API	N	0	20956	0	10647	3319	-7217	20956	P-110	20	OTHER - DWC/C IS MS	1.125	1.25	BUOY	1.6	BUOY	1.6

Casing Attachments

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Grackle_26_East_Fed_Com_304H_Permit_Info_20240410092934.pdf

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

8.625in_32ppf_J55_BTC_SC_20240410092924.pdf

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

5.500in_20.00ppf_VST_P110EC_DWC_C_IS_MS_CDS_AB_20240410092908.pdf

Section 4 - Cement

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Lead		0	412	320	2.22	12.7	710.4	25	Class C	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
INTERMEDIATE	Tail		4142	5280	140	1.32	14.8	184.8	25	Class C	Tail: Class C + 10% NaCL + 3% MagOx (TOC @ 4042)
SURFACE	Lead		0	920	290	1.73	13.5	501.7	25	Class C	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello- Flake (TOC @ Surface)
SURFACE	Tail		920	1120	140	1.34	14.8	187.6	25	Class C	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 920')
PRODUCTION	Lead		4680	10270	350	3.21	10.5	1123.5	25	CLASS H	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @4680)
PRODUCTION	Tail		10270	20956	750	1.52	13.2	1140	25	CLASS H	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 @ 10270)

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with 43 CFR 3172:

Diagram of the equipment for the circulating system in accordance with 43 CFR 3172:

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

Describe the mud monitoring system utilized: The highest mud weight needed to balance formation is expected to be 11.5 ppg. In order to maintain hole stability, mud weights up to 14.0 ppg may be utilized. An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate. 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.

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1120	WATER-BASED MUD	8.6	8.8							
1120	5180	SALT SATURATED	9	10.5							
5180	10647	OIL-BASED MUD	8.8	9.5							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Open-hole logs are not planned for this well.
GRCCL will be run in cased hole during completions phase of operations.

List of open and cased hole logs run in the well:

DIRECTIONAL SURVEY,

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4983 **Anticipated Surface Pressure:** 2640

Anticipated Bottom Hole Temperature(F): 176

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

Grackle_26_East_Fed_Com_304H_H2S_Plan_Summary_20240410093150.pdf

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Grackle_26_East_Fed_Com_304H_Planning_Report_20240410093309.pdf

Grackle_26_East_Fed_Com_304H_Wall_Plot_20240410093309.pdf

Other proposed operations facets description:

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 1,000 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.

Other proposed operations facets attachment:

Grackle_26_East_Fed_Com_304H_Permit_Info_20240410093324.pdf

Grackle_26_East_Fed_Com_304H_Rig_Layout_20240410093324.pdf

10.750in_40.5ppf_J55_STC_20230227072935.pdf

10_M_BOP_Diagram_13.625_in_20230227072935.pdf

10_M_Choke_Manifold_20230227072936.pdf

8.625in_32ppf_J55_BTC_SC_20230227072935.pdf

8.625in_32ppf_P110EC_BTC_SC_20230227072935.pdf

EOG_Cameron_3_String_13in_10M_MNDS_20230227072935.PDF

Wellhead_3_string_10.750x8.625x5.500_SDT_3141_20230227072935.pdf

Other Variance request(s)?: Y

Other Variance attachment:

10M_BOP_Diagram_13.625in_20230208150436.pdf

10_M_Choke_Manifold_20211227132831.pdf

EOG_BLM_Variance_1c___10M_Annular_Variance___3_String_Large_surface_hole_20230227073050.pdf

EOG_Cameron_3_String_13in_10M_MNDS_20230227073051.PDF

EOG_BLM_10M_Annular_Variance___9.625_in_20230113071033.pdf

EOG_BLM_Variance_3a___Offline_Cement_Intermediate_Operational_Procedure_20230113071034.pdf

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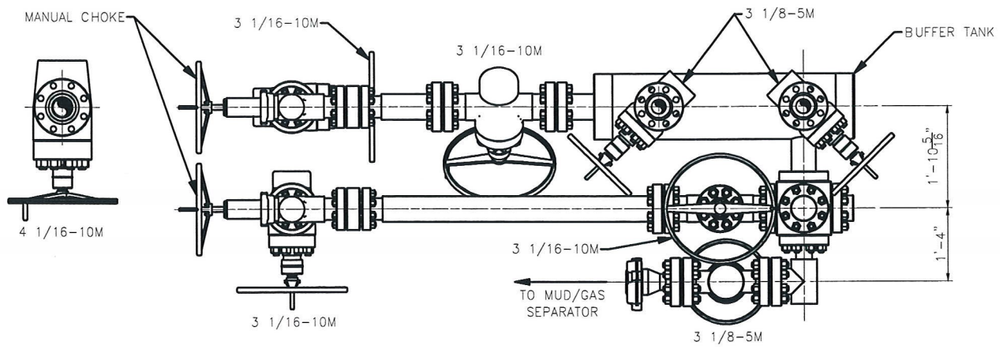
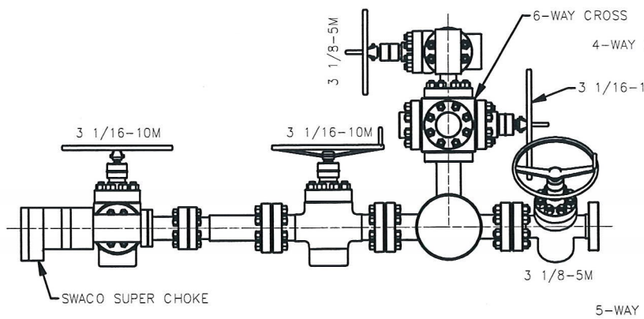
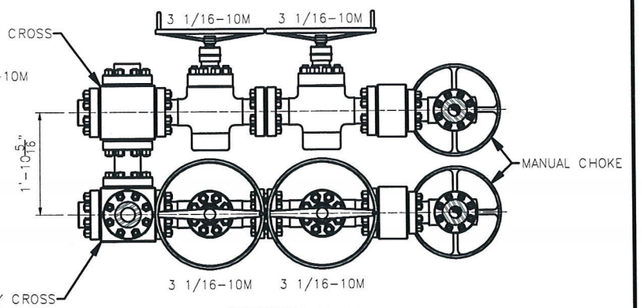
Blanket_Casing_Design___Grackle_26_East_Fed_Com_4.1.2024_20250314065724.pdf

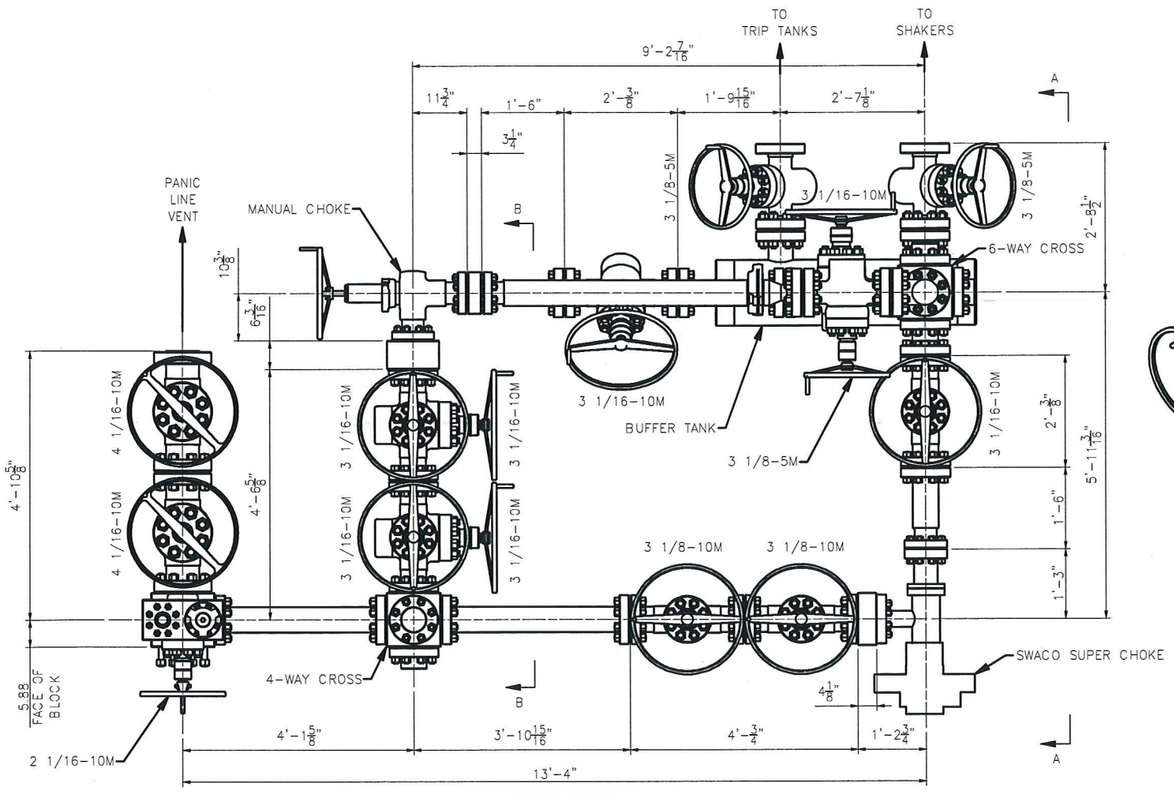




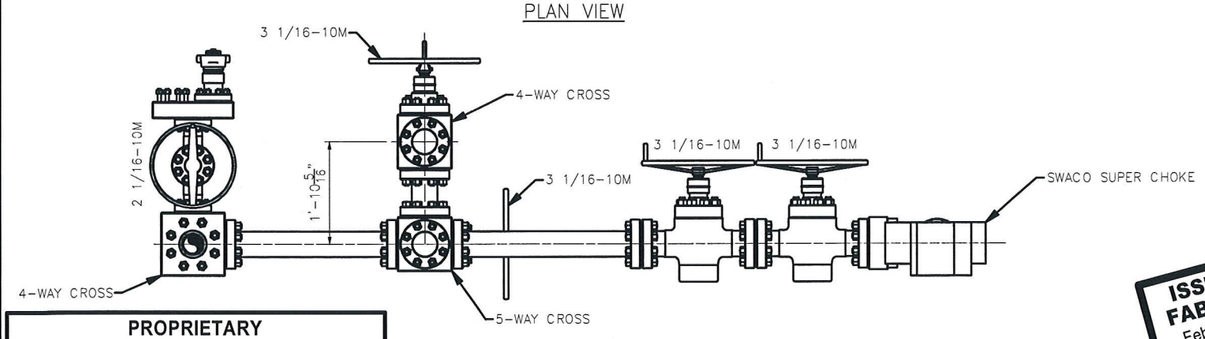
VIEW A–A

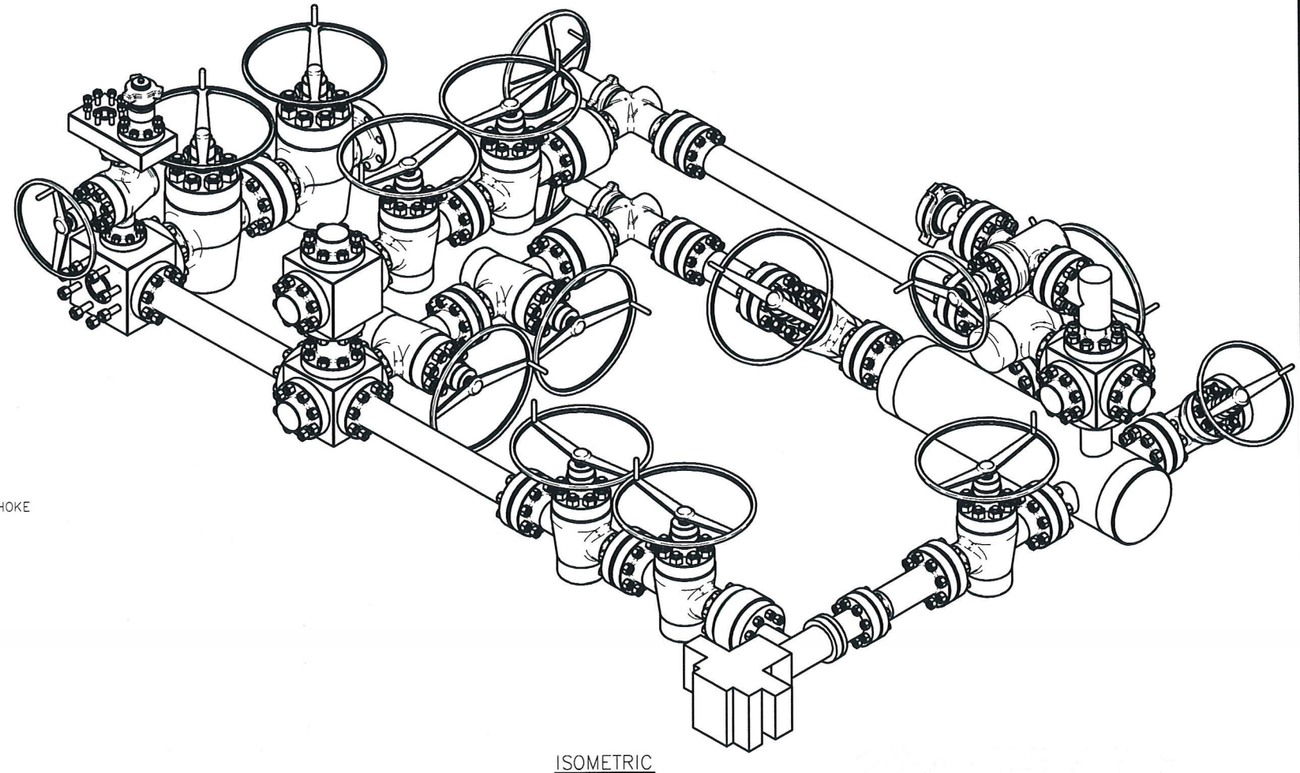


SECTION B–B



PLAN VIEW





ISOMETRIC

ISSUED FOR FABRICATION
February-10-2014
DRAFTSMAN MWL
ENGINEER

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
	LINEAR (EXPRESSED TO ONE DECIMAL)	±.1
	LINEAR (EXPRESSED TO TWO DECIMALS)	±.015
	LINEAR (EXPRESSED TO THREE DECIMALS)	±.005

REV	DATE	DESCRIPTION	BY
–			

HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

TITLE: 3 CHOKE, 3 LEVEL, 10M CHOKE MANIFOLD G.A.

CUSTOMER: H&P

PROJECT:

DRAWN: MWL | DATE: 2/10/2014 | DWG. NO.: HP-D1254 | REV: –

SCALE: 3/4"=1'-0" | SHEET: 1 OF 1

Nabors 1210
Choke hose
10-28-22

BLACK GOLD®

GATES ENGINEERING & SERVICES NORTH AMERICA
7603 Prairie Oak Dr.
Houston, TX. 77086

PHONE: +1 (281) 602-4100
FAX: +1 (281) 602-4147
EMAIL: gesna.quality@gates.com
WEB: www.gates.com/oilandgas

CERTIFICATE OF CONFORMANCE

This is to verify that the items detailed below meet the requirements of the Customer's Purchase Order referenced herein, and are in Conformance with applicable specifications, and that Records of Required Tests are on file and subject to examination. The following items were inspected and hydrostatically tested at **Gates Engineering & Services North America** facilities in Houston, TX, USA.

CUSTOMER:	NABORS DRILLING TECHNOLOGIES USA DBA NABORS DRILLING USA
CUSTOMER P.O.#:	15485579 (NABORS PO#15485579 SN 73981ASSET 66-1486)
CUSTOMER P/N:	IMR RETEST SN 73981 ASSET #66-1486
PART DESCRIPTION:	RETEST OF CUSTOMER 3" X 45 FT 16C CHOKE & KILL HOSE ASSEMBLY C/W 4 1/16" 10K FLANGES
SALES ORDER #:	525500
QUANTITY:	1
SERIAL #:	73981 H3-101822-15

SIGNATURE: _____

TITLE: QUALITY ASSURANCE

DATE: 10/18/2022

H3-10667

10/18/2022 11:48:25 AM

TEST REPORT

CUSTOMER

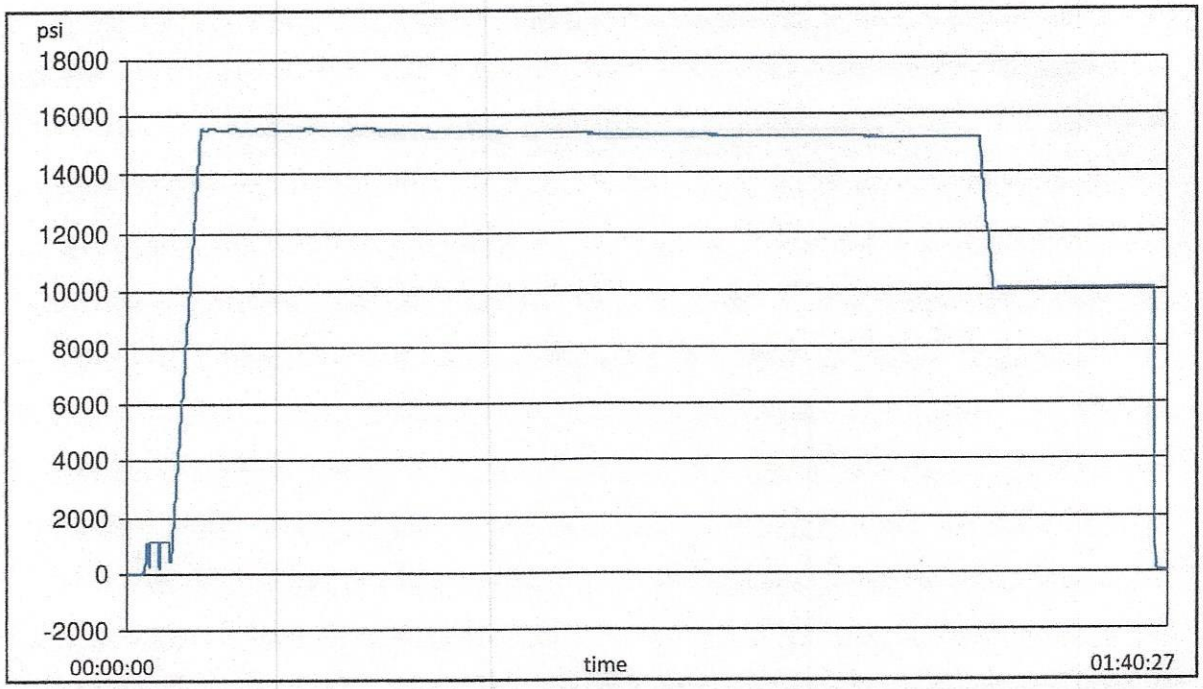
Company:	Nabors Industries Inc.
Production description:	
Sales order #:	525500
Customer reference:	FG0144 NABORS PO#15485579 SN 73981 ASSET 66-1486

TEST INFORMATION

Test procedure:	GTS-04-053	
Test pressure:	15000.00	psi
Test pressure hold:	3600.00	sec
Work pressure:	10000.00	psi
Work pressure hold:	900.00	sec
Length difference:	0.00	%
Length difference:	0.00	inch
Visual check:		
Pressure test result:	PASS	
Length measurement result:		
Test operator:	Martin	

TEST OBJECT

Serial number:	H3-101822-15
Lot number:	
Description:	
Hose ID:	3.0 CK03 16C 10K
Part number:	
Fitting 1:	3.0 x 4-1/16 10K
Part number:	
Description:	
Fitting 2:	3.0 x 4-1/16 10K
Part number:	
Description:	
Length:	45 feet



Filename: D:\Certificates\Report_101822-H3-101822-15.pdf

H3-10667

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TEST REPORT

GAUGE TRACEABILITY

Description	Serial number	Calibration date	Calibration due date
S-25-A-W	110AMCL2	2022-01-10	2023-01-10
S-25-A-W	110APO2K	2022-01-10	2023-01-10

Comment

Certificate of Authority to use the Official API Monogram

License Number: 7K-0519 **ORIGINAL**

The American Petroleum Institute hereby grants to

GATES ENGINEERING AND SERVICES
7603 Prairie Oak Drive, Suite 190
Houston, TX
United States

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and **API-7K** and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: **7K-0519**

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: High Pressure Mud and Cement Hoses at FSL 0, at FSL 1, at FSL 2

QMS Exclusions: Servicing

Effective Date: DECEMBER 18, 2021
Expiration Date: DECEMBER 18, 2024

To verify the authenticity of this license, go to www.api.org/compositelist.

Vice President of Product Management

American Petroleum Institute

2018-151 | Digital

Certificate of Authority to use the Official API Monogram

License Number: 16C-0485 **ORIGINAL**

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GATES ENGINEERING AND SERVICES
7603 Prairie Oak Drive, Suite 190
Houston, TX
United States

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and **API-16C** and in accordance with the provisions of the License Agreement.

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The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Flexible Choke and Kill Lines atFSL 0, FSL 1, FSL 2, FSL 3

QMS Exclusions: Servicing

Effective Date: DECEMBER 18, 2021
Expiration Date: DECEMBER 18, 2024

To verify the authenticity of this license, go to www.api.org/compositelist.

Vice President of Product Management

American Petroleum Institute

2018-151 | Digital

American Petroleum Institute

REGISTRATION NO. Q1-3650

Certificate of Registration

The American Petroleum Institute certifies that the quality management system of

GATES ENGINEERING AND SERVICES
7603 Prairie Oak Drive, Suite 190
Houston, TX
United States

has been assessed by the American Petroleum Institute and found to be in conformance with the following:

API Spec Q1, 9th Edition

The scope of this registration and the approved quality management system applies to the:

Assembly and Pressure Test of High Pressure Mud and Cement Hoses, Flexible Choke and Kill Lines, and General Rubber Hydraulic Hose Assemblies

API approves the organization's justification for excluding:

Servicing

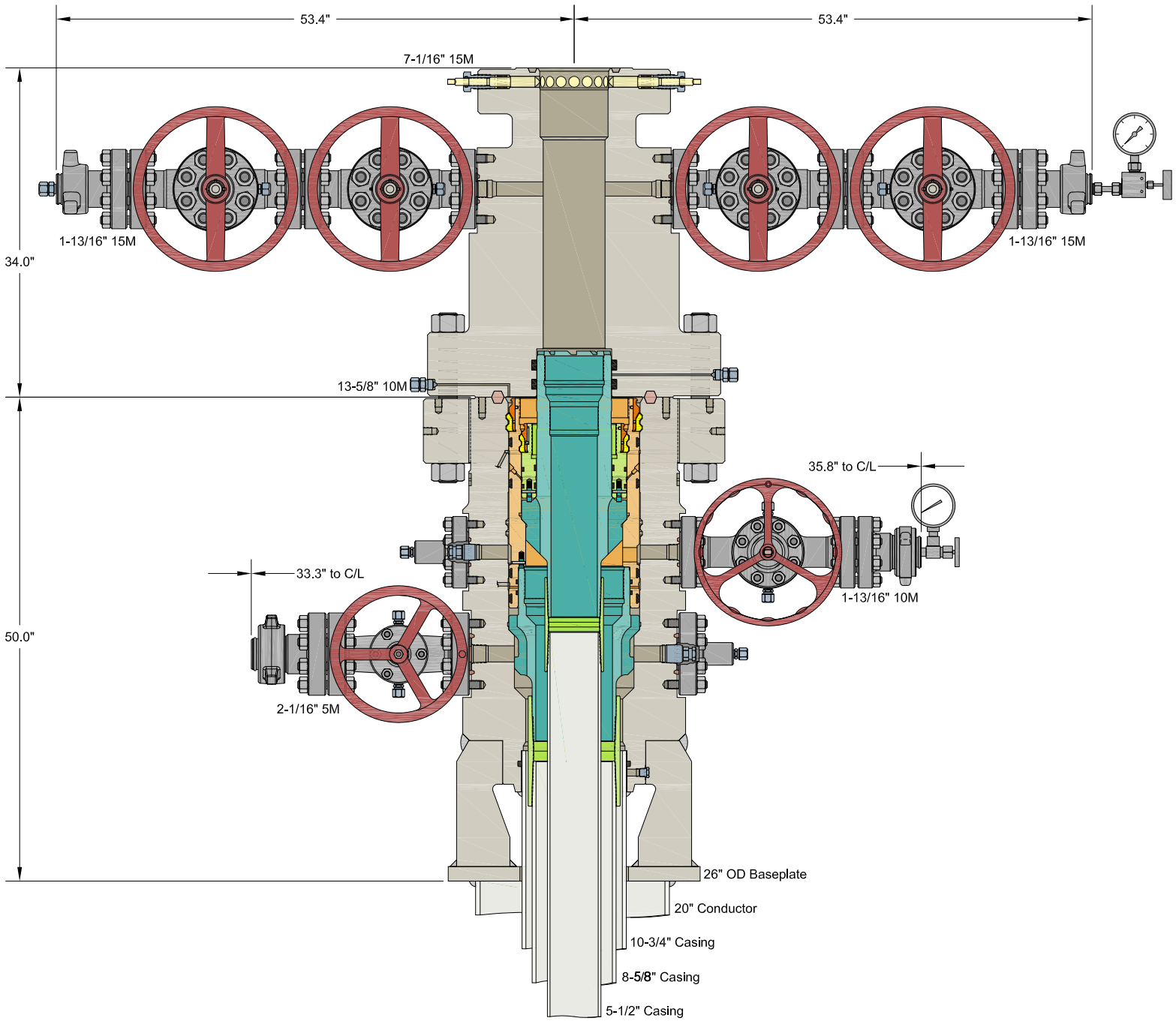
API Spec Q1 Registered ®

Effective Date: **DECEMBER 18, 2021**
Expiration Date: **DECEMBER 18, 2024**
Registered Since: **DECEMBER 18, 2018**

Vice President of Product Management

This certificate is valid for the period specified herein. The registered organization must continually meet all requirements of API Spec Q1, *Specification for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas Industry,* and the requirements of the Registration Agreement. Registration is maintained and regularly monitored through annual full system audits. This certificate has been issued from API offices located at 200 Massachusetts Avenue, NW Suite 1100, Washington, DC 20001-5571, U.S.A. It is the property of API, and must be returned upon request.
To verify the authenticity of this certificate, go to www.api.org/compositelist.

2021-164 | 10.21 | Digital



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	

eog resources

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 nippled 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 nippled back up for any further remediation.

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.

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 nippled 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.

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.

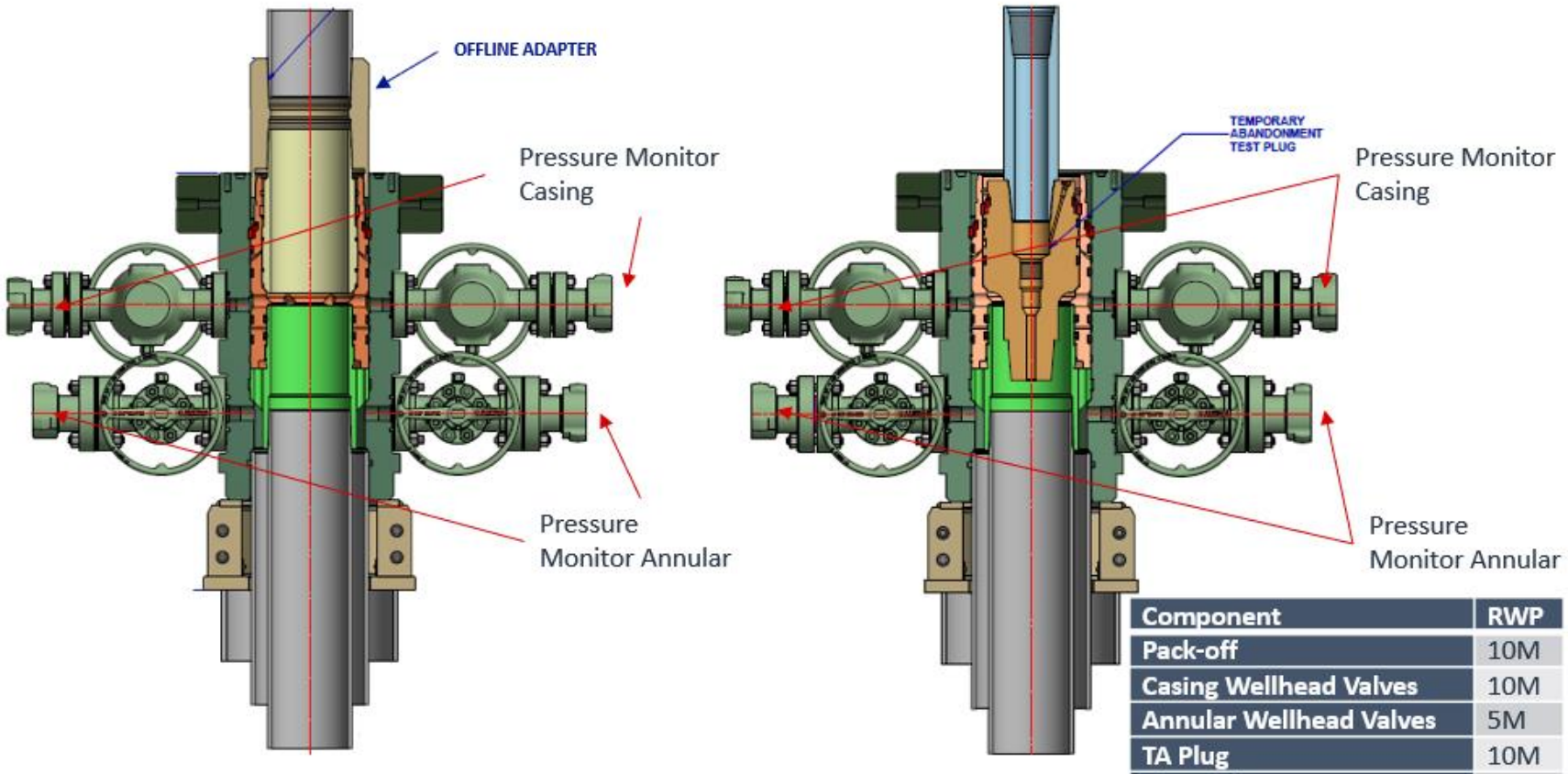
General Procedure While Cementing

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

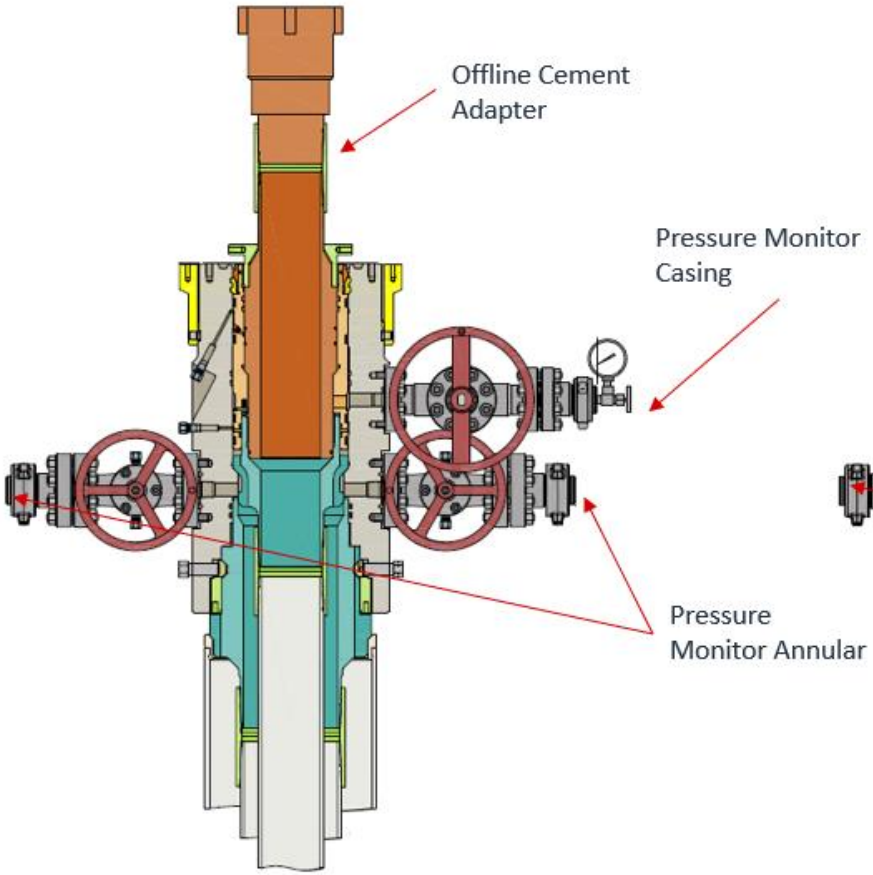
1. Sound alarm (alert crew).
2. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
3. Confirm shut-in.
4. Notify tool pusher/company representative.
5. Read and record the following:
    a. SICP and AP
    b. Pit gain
    c. Time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

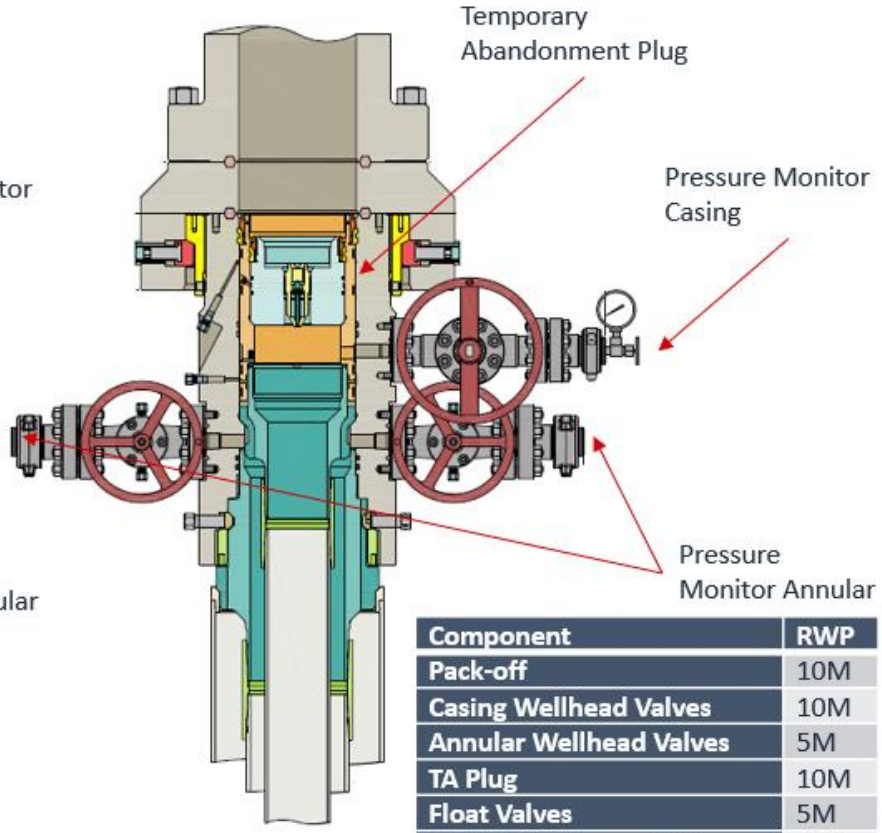
Figure 1: Cameron TA Plug and Offline Adapter Schematic



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

Figure 2: Cactus TA Plug and Offline Adapter Schematic





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

Figure 3: Back Yard Rig Up

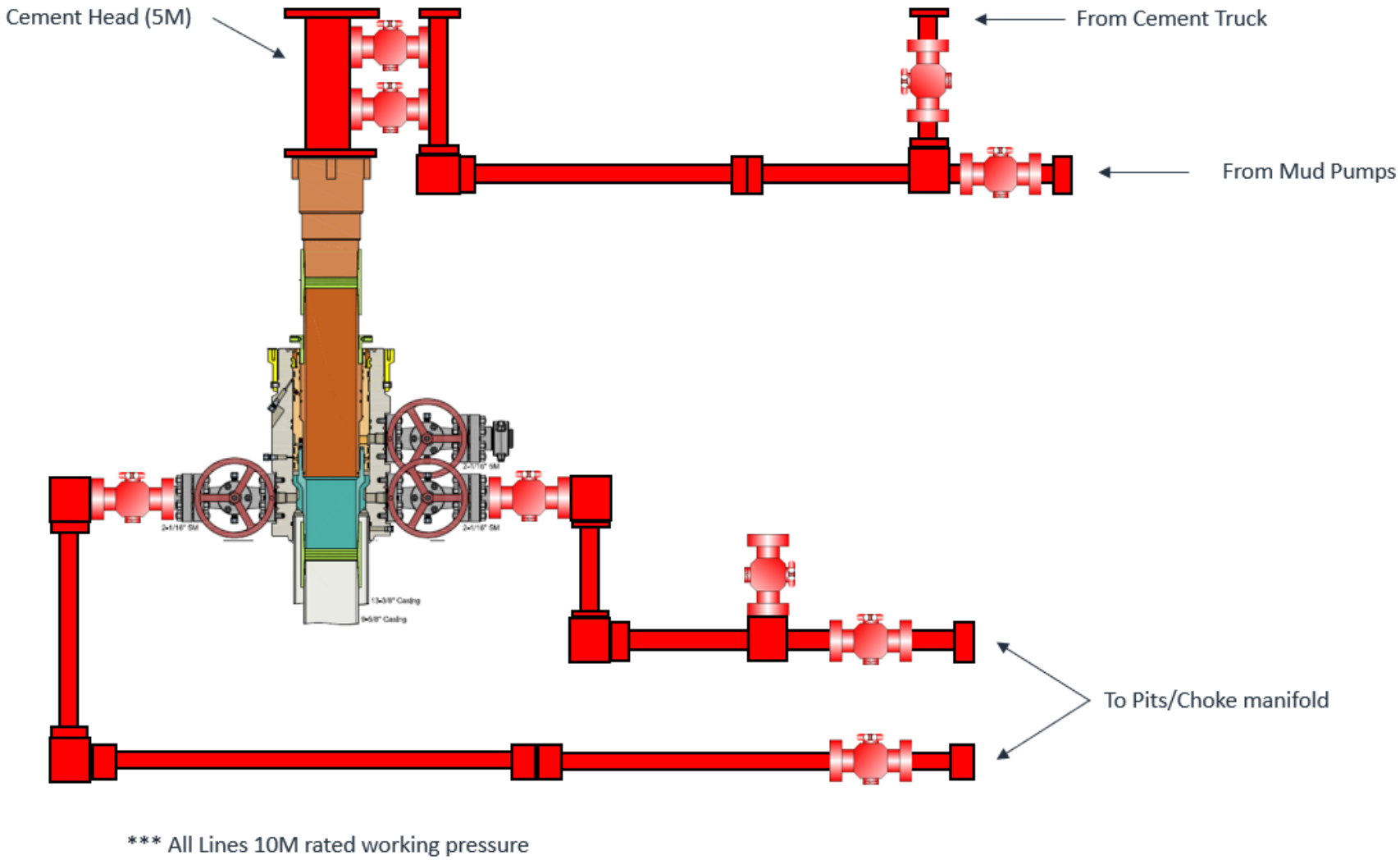
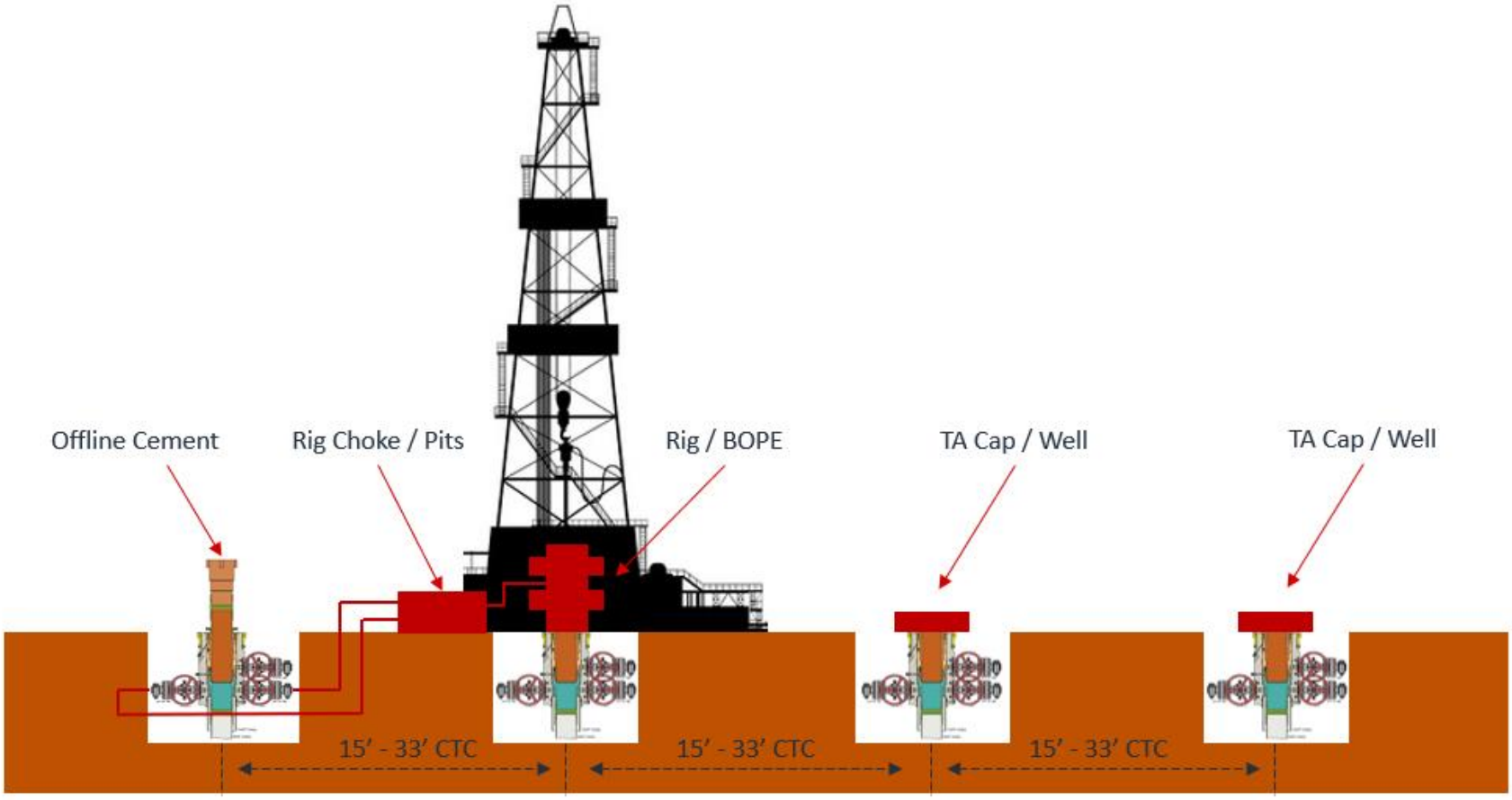


Figure 4: Rig Placement Diagram



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EOG BLANKET CASING DESIGN VARIANCE

EOG respectfully requests the drill plans in the attached document 'EOG Alternate Casing Designs – BLM APPROVED' be added to the COA's for this well. These designs have been approved by the BLM down to the TVDs listed below and will allow EOG to run alternate casing designs for this well if necessary.

The designs and associated details listed are the "worst case scenario" boundaries for design safety factors. Location and lithology have NOT been accounted for in these designs. The specific well details will be based on the APD/Sundry package and the information listed in the COA.

The mud program will not change from the original design for this well. Summary of the mud programs for both shallow and deep targets are listed at the end of this document. If the target is changing, a sundry will be filed to update the casing design and mud/cement programs.

Cement volumes listed in this document are for reference only. The cement volumes for the specific well will be adjusted to ensure cement tops meet BLM requirements as listed in the COA and to allow bradenhead cementing when applicable.

This blanket document only applies to wells with three string designs outside of Potash and Capitan Reef boundaries.

Shallow Design Boundary Conditions				
	Deepest MD (ft)	Deepest TVD (ft)	Max Inc (deg)	Max DLS (°/100usft)
Surface	2030	2030	0	0
Intermediate	7793	5650	40	8
Production	28578	11225	90	25

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Shallow Design A

1. CASING PROGRAM

Hole Size	Interval MD From (ft)	Interval MD To (ft)	Interval TVD From (ft)	Interval TVD To (ft)	Csg OD	Weight	Grade	Conn
16"	0	2,030	0	2,030	13-3/8"	54.5#	J-55	STC
11"	0	7,793	0	5,650	9-5/8"	40#	J-55	LTC
6-3/4"	0	28,578	0	11,225	5-1/2"	20#	P110-EC	DWC/C IS MS

Hole will be full during casing run for well control and tensile SF factor. Casing will be kept at least half full during run for this design to meet BLM collapse SF requirement. External pressure will be reviewed prior to conducting casing pressure tests to ensure that 70% of the yield is not exceeded.

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 Title 43 CFR Part 3170 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.

2. CEMENTING PROGRAM:

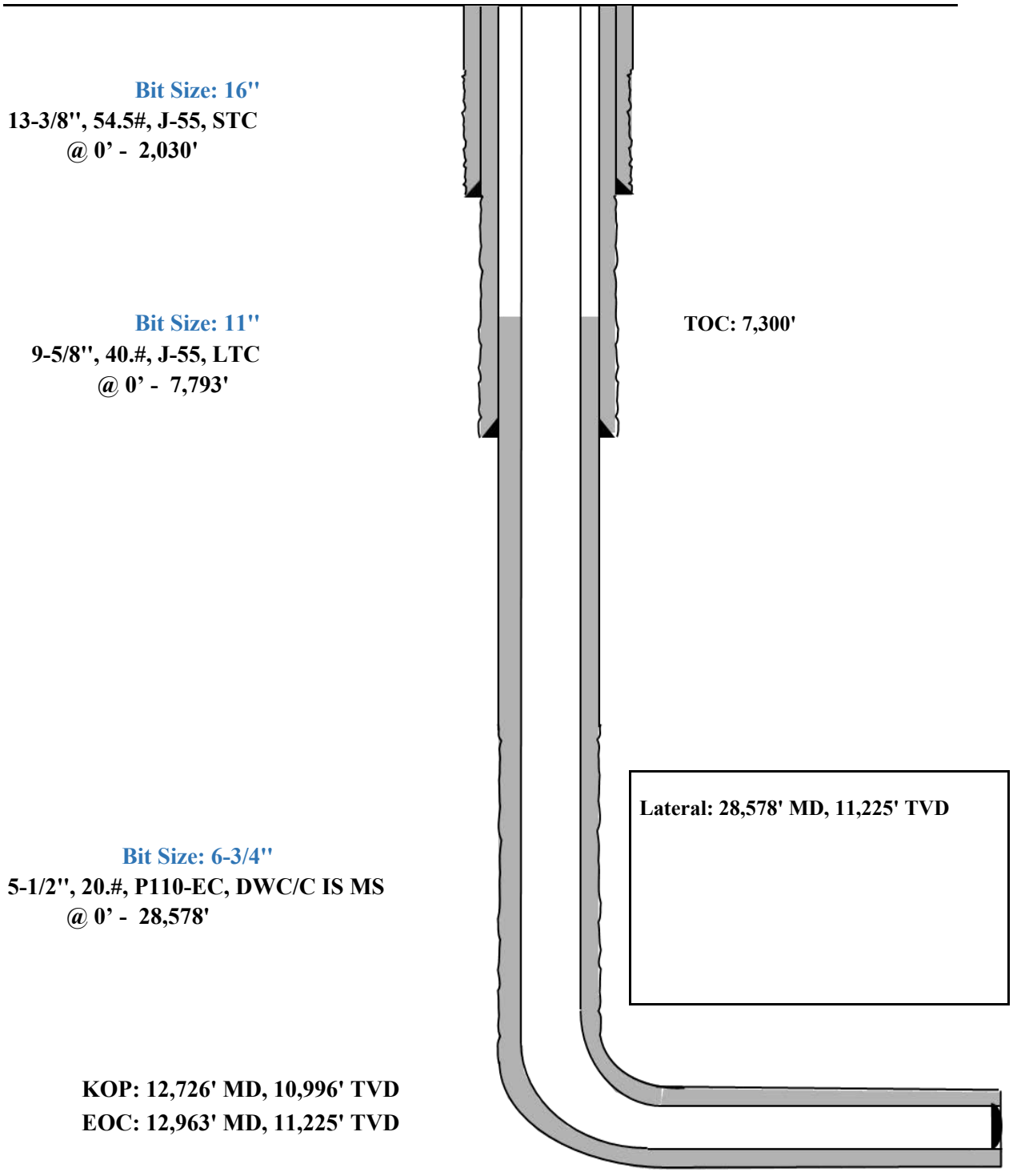
Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
2,030' 13-3/8''	570	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	160	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
7,793' 9-5/8''	770	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	250	14.8	1.32	Tail: Class C + 10% NaCL + 3% MagOx (TOC @ 6238')
28,578' 5-1/2''	410	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 7300')
	1110	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 @ 12730')

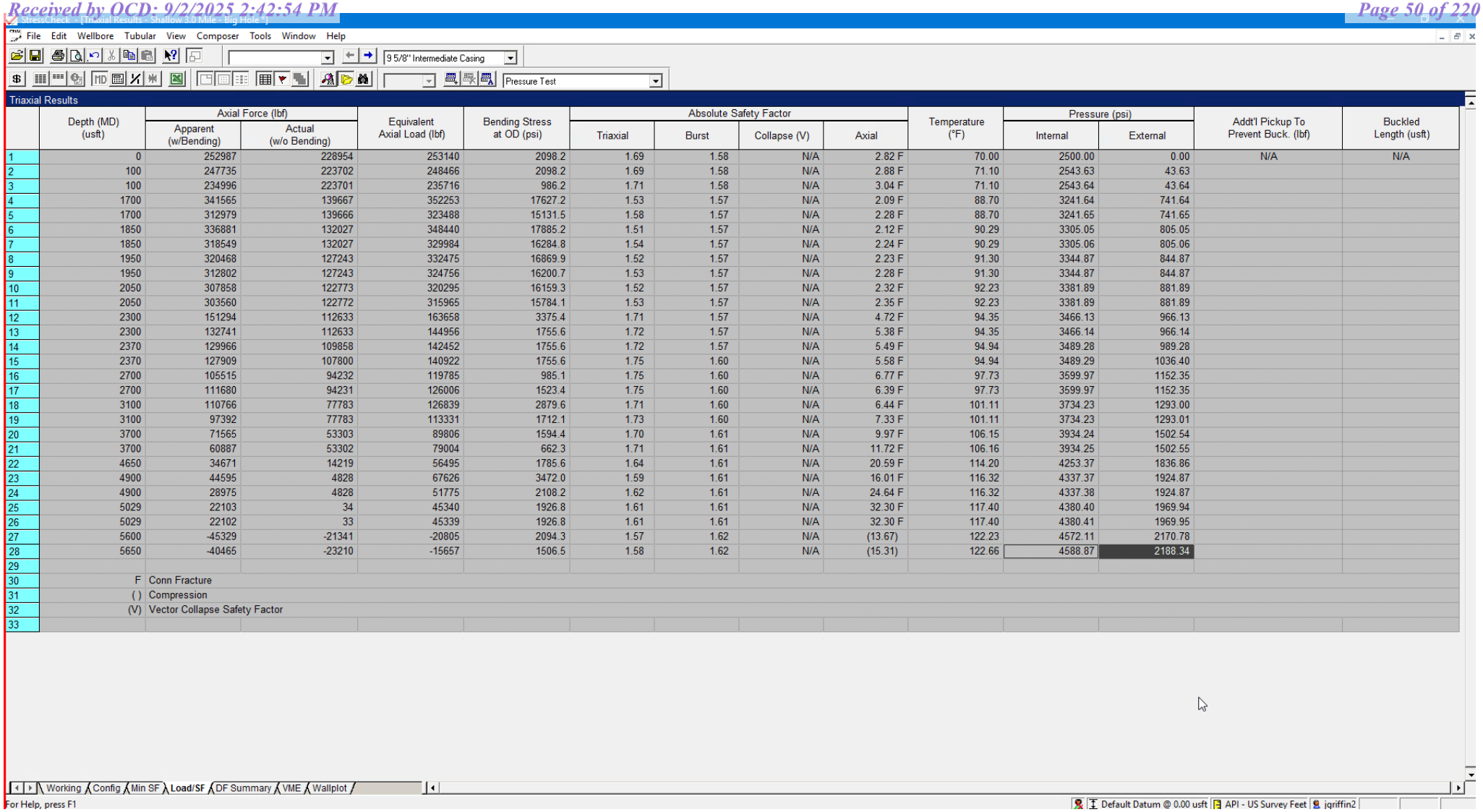
eog resources

Shallow Design A

KB: 3558'
GL: 3533'

Proposed Wellbore





StressCheck - [Triaxial Results - Shallow 3.0 Mile - Big Hole*]

File Edit Wellbore Tubular View Composer Tools Window Help

9 5/8" Intermediate Casing

Pressure Test

Triaxial Results

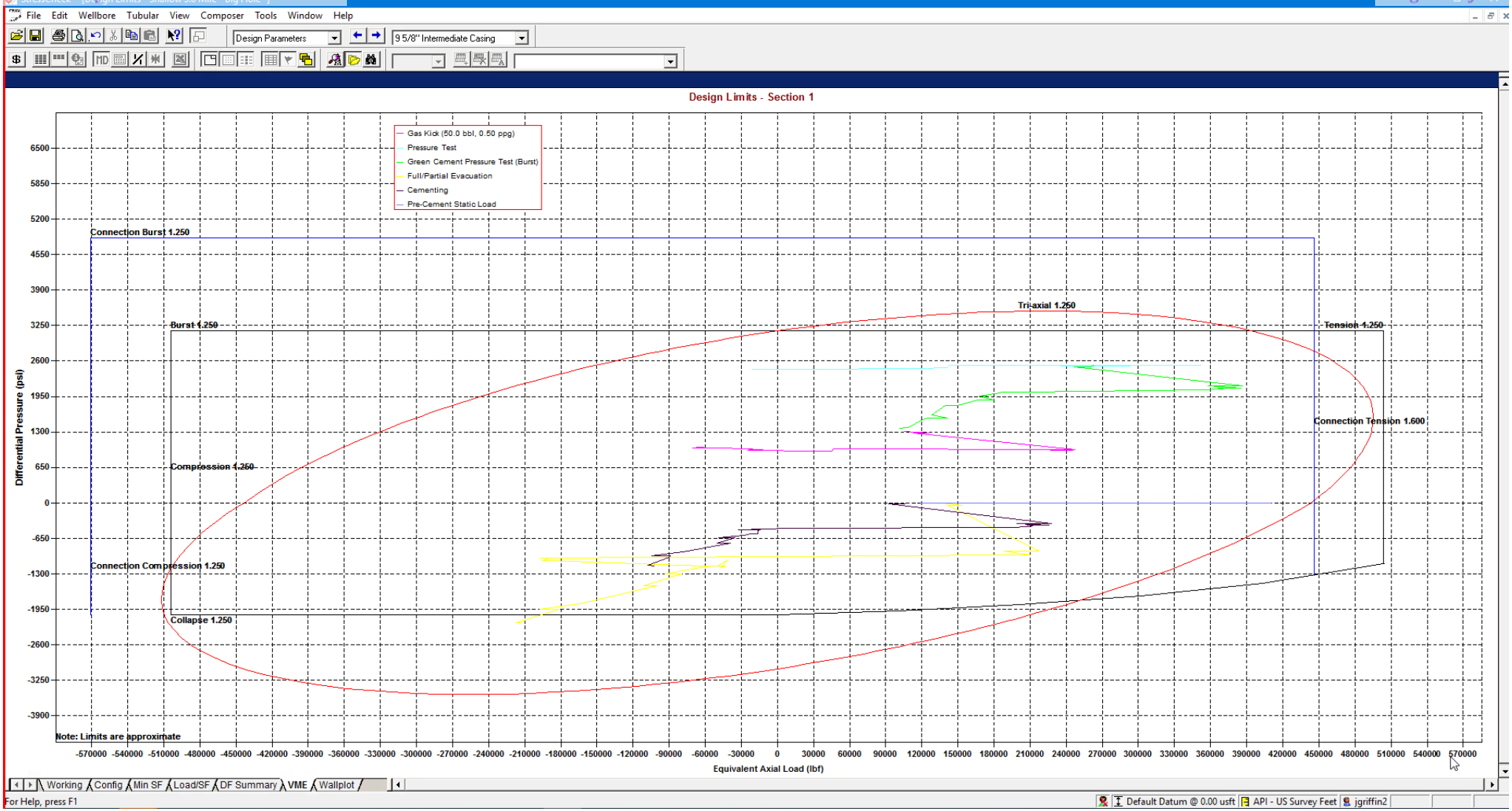
	Depth (MD) (usft)	Axial Force (lbf)		Equivalent Axial Load (lbf)	Bending Stress at OD (psi)	Absolute Safety Factor				Temperature (°F)	Pressure (psi)		Addt'l Pickup To Prevent Buck. (lbf)	Buckled Length (usft)
		Apparent (w/Bending)	Actual (w/o Bending)			Triaxial	Burst	Collapse (V)	Axial		Internal	External		
1	0	252987	228954	253140	2098.2	1.69	1.58	N/A	2.82 F	70.00	2500.00	0.00	N/A	N/A
2	100	247735	223702	248466	2098.2	1.69	1.58	N/A	2.88 F	71.10	2543.63	43.63		
3	100	234996	223701	235716	986.2	1.71	1.58	N/A	3.04 F	71.10	2543.64	43.64		
4	1700	341565	139667	352253	17627.2	1.53	1.57	N/A	2.09 F	88.70	3241.64	741.64		
5	1700	312979	139666	323488	15131.5	1.58	1.57	N/A	2.28 F	88.70	3241.65	741.65		
6	1850	336881	132027	348440	17885.2	1.51	1.57	N/A	2.12 F	90.29	3305.05	805.05		
7	1850	318549	132027	329984	16284.8	1.54	1.57	N/A	2.24 F	90.29	3305.06	805.06		
8	1950	320468	127243	332475	16869.9	1.52	1.57	N/A	2.23 F	91.30	3344.87	844.87		
9	1950	312802	127243	324756	16200.7	1.53	1.57	N/A	2.28 F	91.30	3344.87	844.87		
10	2050	307858	122773	320295	16159.3	1.52	1.57	N/A	2.32 F	92.23	3381.89	881.89		
11	2050	303560	122772	315965	15784.1	1.53	1.57	N/A	2.35 F	92.23	3381.89	881.89		
12	2300	151294	112633	163658	3375.4	1.71	1.57	N/A	4.72 F	94.35	3466.13	966.13		
13	2300	132741	112633	144956	1755.6	1.72	1.57	N/A	5.38 F	94.35	3466.14	966.14		
14	2370	129966	109858	142452	1755.6	1.72	1.57	N/A	5.49 F	94.94	3489.28	989.28		
15	2370	127909	107800	140922	1755.6	1.75	1.60	N/A	5.58 F	94.94	3489.29	1036.40		
16	2700	105515	94232	119785	985.1	1.75	1.60	N/A	6.77 F	97.73	3599.97	1152.35		
17	2700	111680	94231	126006	1523.4	1.75	1.60	N/A	6.39 F	97.73	3599.97	1152.35		
18	3100	110766	77783	126839	2879.6	1.71	1.60	N/A	6.44 F	101.11	3734.23	1293.00		
19	3100	97392	77783	113331	1712.1	1.73	1.60	N/A	7.33 F	101.11	3734.23	1293.01		
20	3700	71565	53303	89806	1594.4	1.70	1.61	N/A	9.97 F	106.15	3934.24	1502.54		
21	3700	60887	53302	79004	662.3	1.71	1.61	N/A	11.72 F	106.16	3934.25	1502.55		
22	4650	34671	14219	56495	1785.6	1.64	1.61	N/A	20.59 F	114.20	4253.37	1836.86		
23	4900	44595	4828	67626	3472.0	1.59	1.61	N/A	16.01 F	116.32	4337.37	1924.87		
24	4900	28975	4828	51775	2108.2	1.62	1.61	N/A	24.64 F	116.32	4337.38	1924.87		
25	5029	22103	34	45340	1926.8	1.61	1.61	N/A	32.30 F	117.40	4380.40	1969.94		
26	5029	22102	33	45339	1926.8	1.61	1.61	N/A	32.30 F	117.40	4380.41	1969.95		
27	5600	-45329	-21341	-20805	2094.3	1.57	1.62	N/A	(13.67)	122.23	4572.11	2170.78		
28	5650	-40465	-23210	-15657	1506.5	1.58	1.62	N/A	(15.31)	122.66	4588.87	2188.34		
29														
30	F	Conn Fracture												
31	( )	Compression												
32	(V)	Vector Collapse Safety Factor												
33														

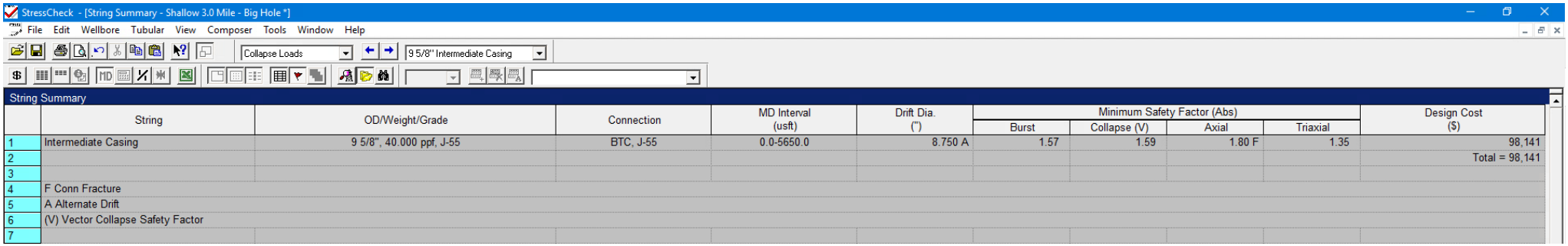
Working Config Min SF Load/SF DF Summary VME Wallplot

For Help, press F1

Default Datum @ 0.00 usft API - US Survey Feet jqriffin2

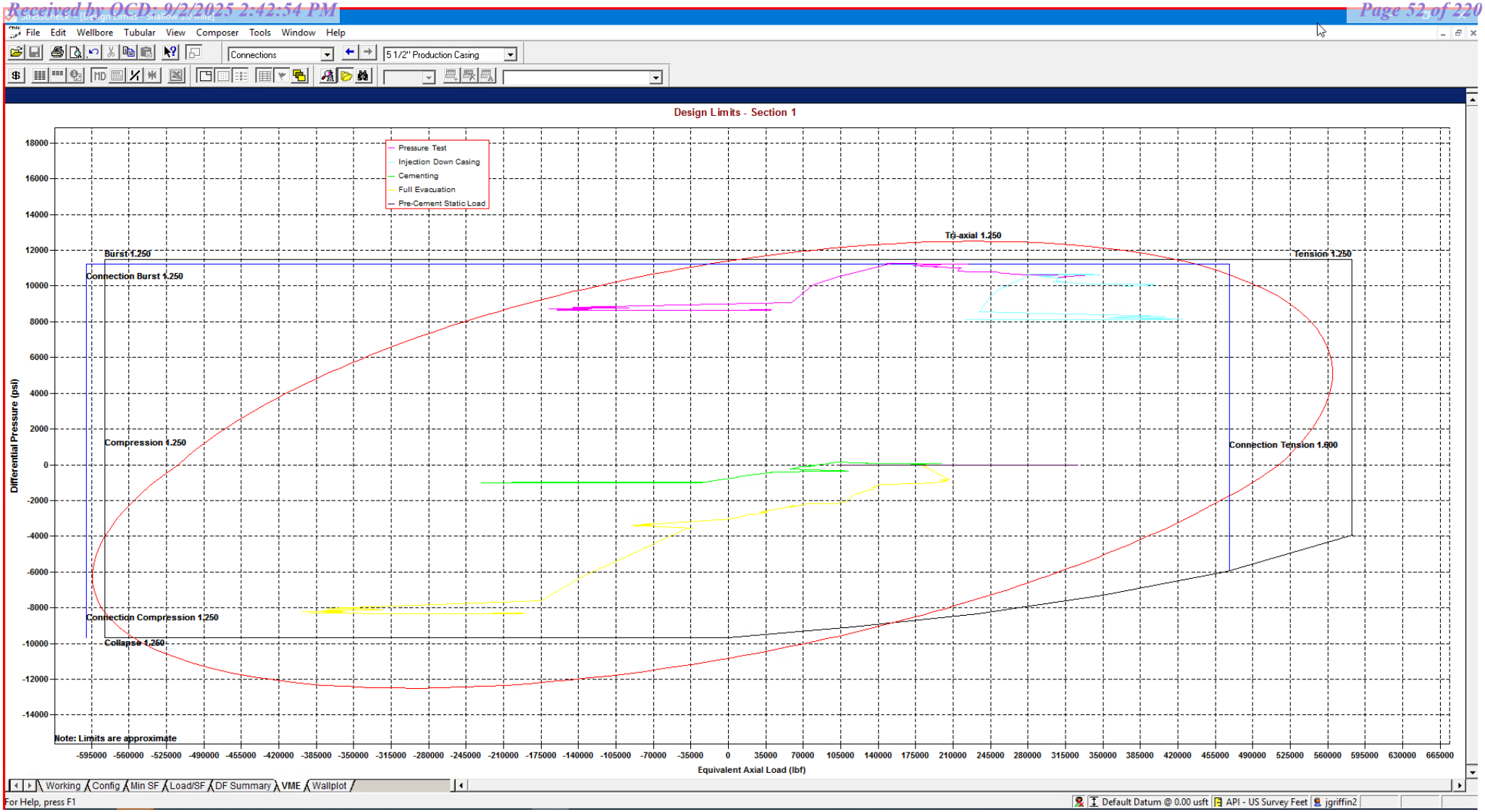
9-5/8” Intermediate Casing Pressure Test:
Internal Profile based off Surface Pressure + Hydrostatic: 4589 psi
External Profile based off Pore Pressure: 2188 psi

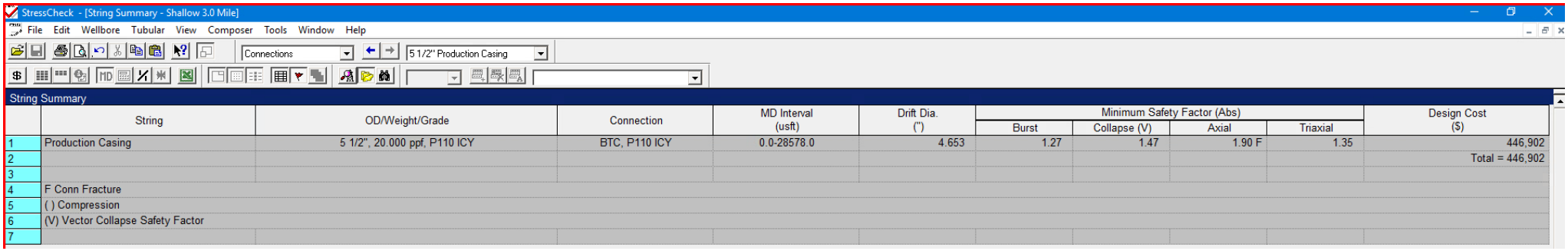




	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs) Burst	Collapse (V)	Axial	Triaxial	Design Cost ($)
1	Intermediate Casing	9 5/8", 40.000 ppf, J-55	BTC, J-55	0.0-5650.0	8.750 A	1.57	1.59	1.80 F	1.35	98,141
2										Total = 98,141
3										
4	F Conn Fracture									
5	A Alternate Drift									
6	(V) Vector Collapse Safety Factor									
7										

*Modelling done with 9-5/8” 40# Intermediate Casing. Passes all Burst, Collapse and Tensile design criteria.





String Summary

	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs) Burst	Collapse (V)	Axial	Triaxial	Design Cost ($)
1	Production Casing	5 1/2", 20.000 ppf, P110 ICY	BTC, P110 ICY	0.0-28578.0	4.653	1.27	1.47	1.90 F	1.35	446,902
2										Total = 446,902
3										
4	F Conn Fracture									
5	( ) Compression									
6	(V) Vector Collapse Safety Factor									
7										

*Modelling done with 5-1/2” 20# Production Casing with a 125ksi Control Yield. Passes all Burst, Collapse and Tensile design criteria.

eog resources

Shallow Design B

1. CASING PROGRAM

Hole Size	Interval MD From (ft)	Interval MD To (ft)	Interval TVD From (ft)	Interval TVD To (ft)	Csg OD	Weight	Grade	Conn
13-1/2"	0	2,030	0	2,030	10-3/4"	40.5#	J-55	STC
9-7/8"	0	7,793	0	5,650	8-5/8"	32#	J-55	BTC-SC
6-3/4"	0	28,578	0	11,225	5-1/2"	20#	P110-EC	DWC/C IS MS

Hole will be full during casing run for well control and tensile SF factor. Casing will be kept at least half full during run for this design to meet BLM collapse SF requirement. External pressure will be reviewed prior to conducting casing pressure tests to ensure that 70% of the yield is not exceeded.

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 Title 43 CFR Part 3170 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.

2. CEMENTING PROGRAM:

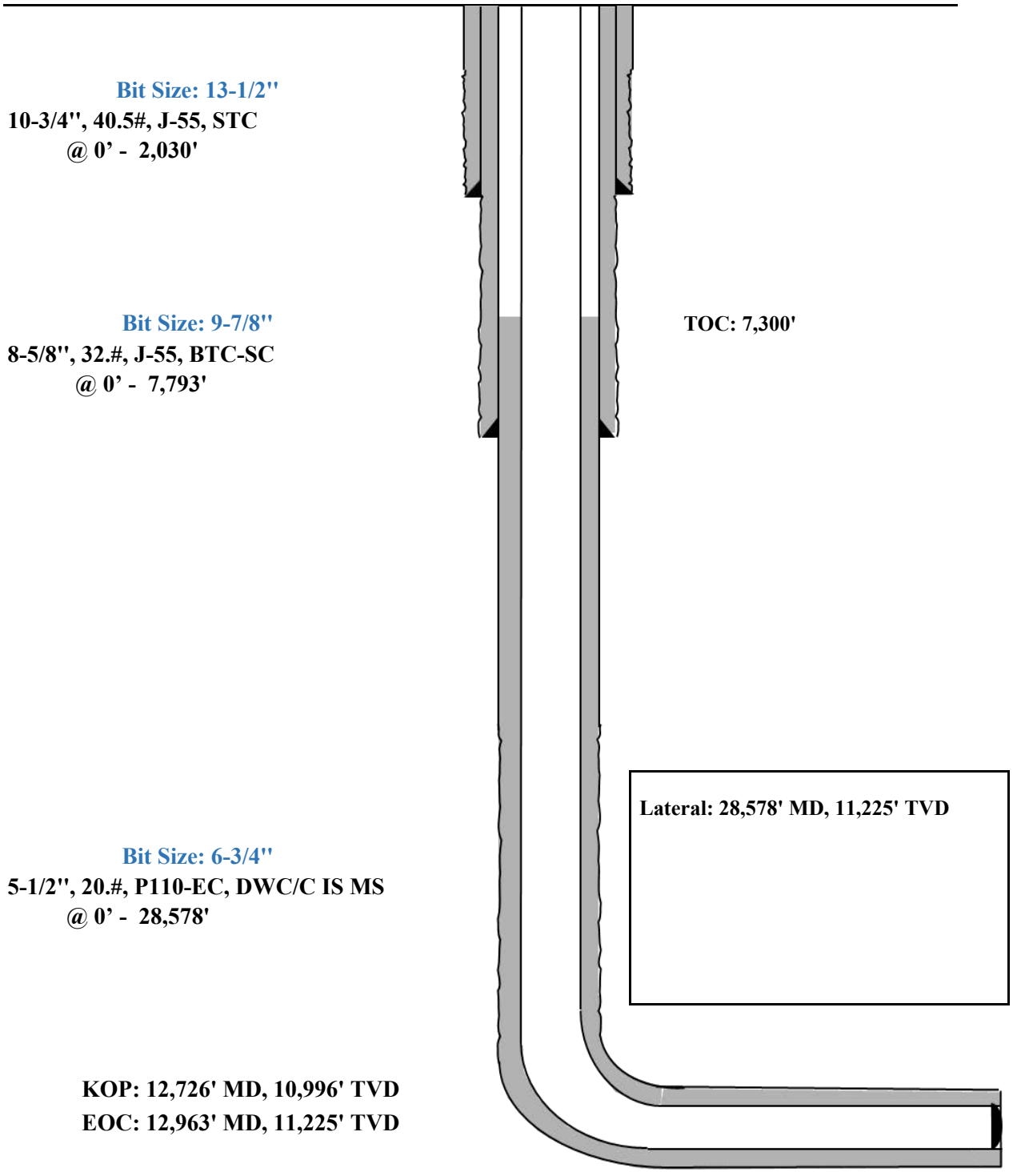
Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
2,030' 10-3/4''	530	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	140	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
7,793' 8-5/8''	460	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	210	14.8	1.32	Tail: Class C + 10% NaCL + 3% MagOx (TOC @ 6238')
28,578' 5-1/2''	400	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 7300')
	1110	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 @ 12730')

eog resources

Shallow Design B

KB: 3558'
GL: 3533'

Proposed Wellbore



StressCheck - [Triaxial Results - Shallow 3.0 Mile *]

File Edit Wellbore Tubular View Composer Tools Window Help

Burst Design | 8 5/8" Intermediate Casing | Pressure Test

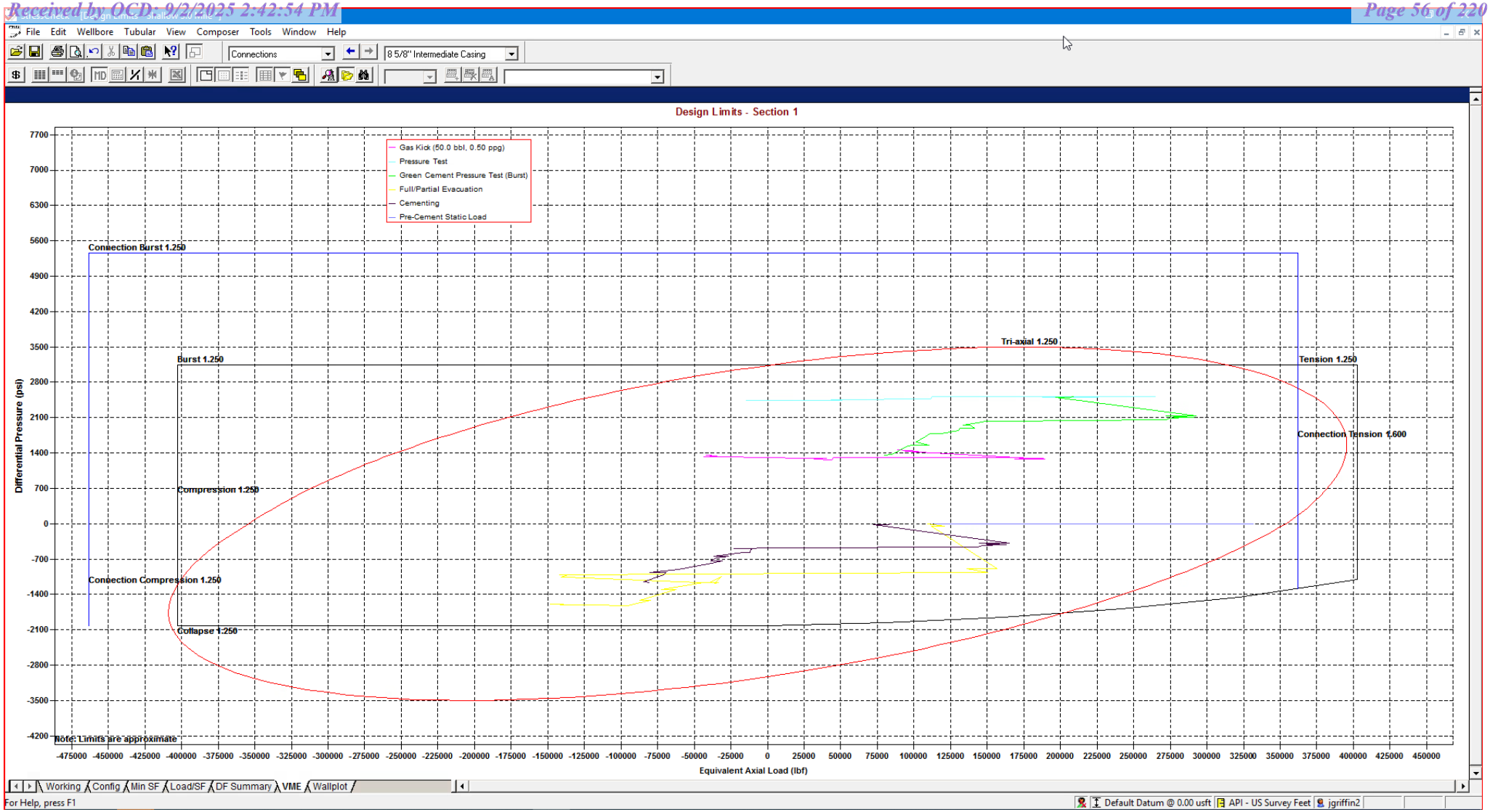
Triaxial Results

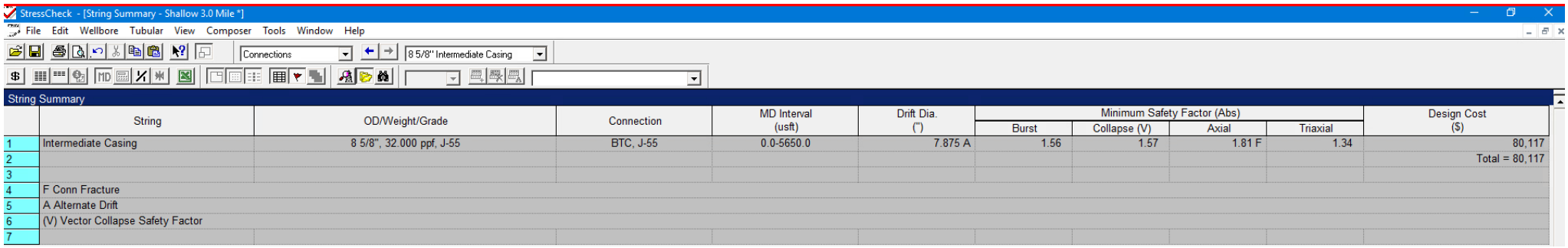
	Depth (MD) (usft)	Axial Force (lbf)		Equivalent Axial Load (lbf)	Bending Stress at OD (psi)	Absolute Safety Factor				Temperature (°F)	Pressure (psi)		Addt'l Pickup To Prevent Buck. (lbf)	Buckled Length (usft)
		Apparent (w/Bending)	Actual (w/o Bending)			Triaxial	Burst	Collapse (V)	Axial		Internal	External		
1	0	200426	183224	200546	1880.2	1.68	1.57	N/A	2.89 F	70.00	2500.00	0.00	N/A	N/A
2	100	196229	179028	196812	1880.2	1.69	1.57	N/A	2.95 F	71.10	2543.63	43.63		
3	100	187111	179027	187686	883.7	1.70	1.57	N/A	3.10 F	71.10	2543.64	43.64		
4	1700	256401	111891	264835	15795.8	1.56	1.56	N/A	2.26 F	88.70	3241.64	741.64		
5	1700	235940	111891	244247	13559.4	1.60	1.56	N/A	2.45 F	88.70	3241.65	741.65		
6	1850	252413	105788	261533	16027.0	1.54	1.56	N/A	2.29 F	90.29	3305.05	805.05		
7	1850	239292	105787	248323	14592.9	1.56	1.56	N/A	2.42 F	90.29	3305.06	805.06		
8	1950	240267	101966	249748	15117.2	1.54	1.56	N/A	2.41 F	91.30	3344.87	844.87		
9	1950	234781	101965	244223	14517.5	1.56	1.56	N/A	2.47 F	91.30	3344.87	844.87		
10	2050	230871	98395	240694	14480.4	1.55	1.56	N/A	2.51 F	92.23	3381.89	881.89		
11	2050	227794	98394	237594	14144.2	1.55	1.56	N/A	2.54 F	92.23	3381.89	881.89		
12	2300	117966	90294	127818	3024.7	1.70	1.56	N/A	4.91 F	94.35	3466.13	966.13		
13	2300	104686	90293	114432	1573.2	1.71	1.56	N/A	5.53 F	94.35	3466.14	966.14		
14	2370	102469	88077	112431	1573.2	1.71	1.56	N/A	5.65 F	94.94	3489.28	989.28		
15	2370	100817	86424	111200	1573.2	1.75	1.59	N/A	5.75 F	94.94	3489.29	1036.40		
16	2700	83660	75583	95052	882.8	1.74	1.59	N/A	6.92 F	97.73	3599.97	1152.35		
17	2700	88072	75583	99504	1365.1	1.74	1.59	N/A	6.58 F	97.73	3599.97	1152.35		
18	3100	86049	62442	98863	2580.4	1.71	1.59	N/A	6.73 F	101.11	3734.23	1293.00		
19	3100	76477	62441	89195	1534.2	1.72	1.59	N/A	7.57 F	101.11	3734.23	1293.01		
20	3700	55953	42882	70509	1428.8	1.69	1.60	N/A	10.35 F	106.15	3934.24	1502.54		
21	3700	48311	42881	62778	593.5	1.71	1.60	N/A	11.99 F	106.16	3934.25	1502.55		
22	4000	41458	33043	56865	919.9	1.69	1.60	N/A	13.97 F	108.69	4034.82	1607.91		
23	4650	26293	11655	43706	1600.1	1.63	1.60	N/A	22.03 F	114.20	4253.37	1836.86		
24	4900	32619	4156	50970	3111.2	1.59	1.60	N/A	17.76 F	116.32	4337.37	1924.87		
25	4900	21439	4155	39625	1889.2	1.61	1.60	N/A	27.02 F	116.32	4337.38	1924.87		
26	5039	15822	26	34389	1726.6	1.61	1.61	N/A	36.61 F	117.49	4383.77	1973.48		
27	5039	15822	26	34388	1726.6	1.61	1.61	N/A	36.61 F	117.49	4383.78	1973.49		
28	5600	-33912	-16743	-14286	1876.7	1.57	1.61	N/A	(14.60)	122.23	4572.11	2170.78		
29	5650	-30585	-18235	-10742	1350.0	1.58	1.61	N/A	(16.18)	122.66	4588.87	2188.34		
30														
31	F	Conn Fracture												
32	( )	Compression												
33	(V)	Vector Collapse Safety Factor												
34														

Working | Config | Min SF | Load/SF | DF Summary | VME | Wallplot

For Help, press F1 | Default Datum @ 0.00 usft | API - US Survey Feet | jgriffin2

8-5/8” Intermediate Casing Pressure Test:
Internal Profile based off Surface Pressure + Hydrostatic: 4589 psi
External Profile based off Pore Pressure: 2188 psi

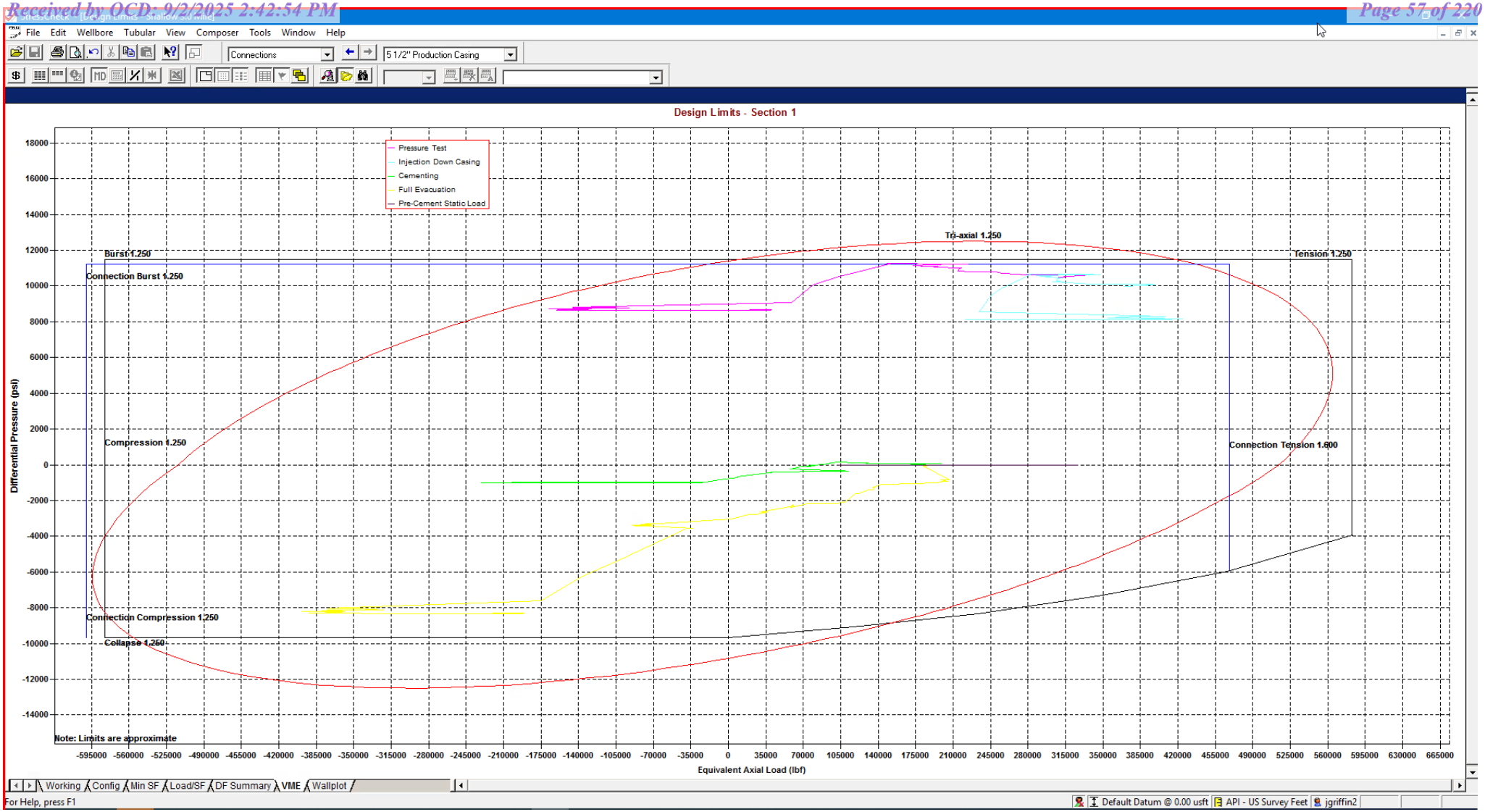


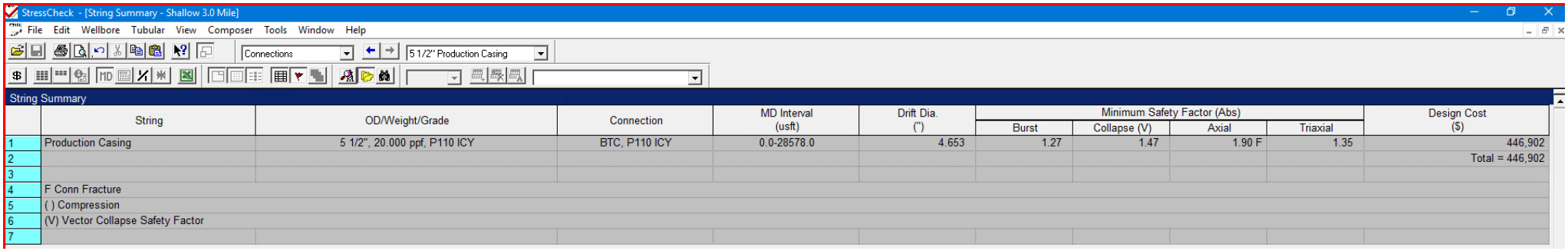


String Summary

	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs) Burst	Collapse (V)	Axial	Triaxial	Design Cost ($)
1	Intermediate Casing	8 5/8", 32.000 ppf, J-55	BTC, J-55	0.0-5650.0	7.875 A	1.56	1.57	1.81 F	1.34	80,117
2										Total = 80,117
3										
4	F Conn Fracture									
5	A Alternate Drift									
6	(V) Vector Collapse Safety Factor									
7										

*Modelling done with 8-5/8" 32# Intermediate Casing. Passes all Burst, Collapse and Tensile design criteria.





String Summary

	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs) Burst	Collapse (V)	Axial	Triaxial	Design Cost ($)
1	Production Casing	5 1/2", 20.000 ppf, P110 ICY	BTC, P110 ICY	0.0-28578.0	4.653	1.27	1.47	1.90 F	1.35	446,902
2										Total = 446,902
3										
4	F Conn Fracture									
5	( ) Compression									
6	(V) Vector Collapse Safety Factor									
7										

*Modelling done with 5-1/2” 20# Production Casing with a 125ksi Control Yield. Passes all Burst, Collapse and Tensile design criteria.

eog resources

Shallow Design C

1. CASING PROGRAM

Hole Size	Interval MD From (ft)	Interval MD To (ft)	Interval TVD From (ft)	Interval TVD To (ft)	Csg OD	Weight	Grade	Conn
16"	0	2,030	0	2,030	13-3/8"	54.5#	J-55	STC
11"	0	7,793	0	5,650	9-5/8"	40#	J-55	LTC
7-7/8"	0	28,578	0	11,225	6"	24.5#	P110-EC	VAM Sprint-SF

Hole will be full during casing run for well control and tensile SF factor. Casing will be kept at least half full during run for this design to meet BLM collapse SF requirement. External pressure will be reviewed prior to conducting casing pressure tests to ensure that 70% of the yield is not exceeded.

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 6" casing in the 7-7/8" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 7-7/8" 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 Title 43 CFR Part 3170 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.

2. CEMENTING PROGRAM:

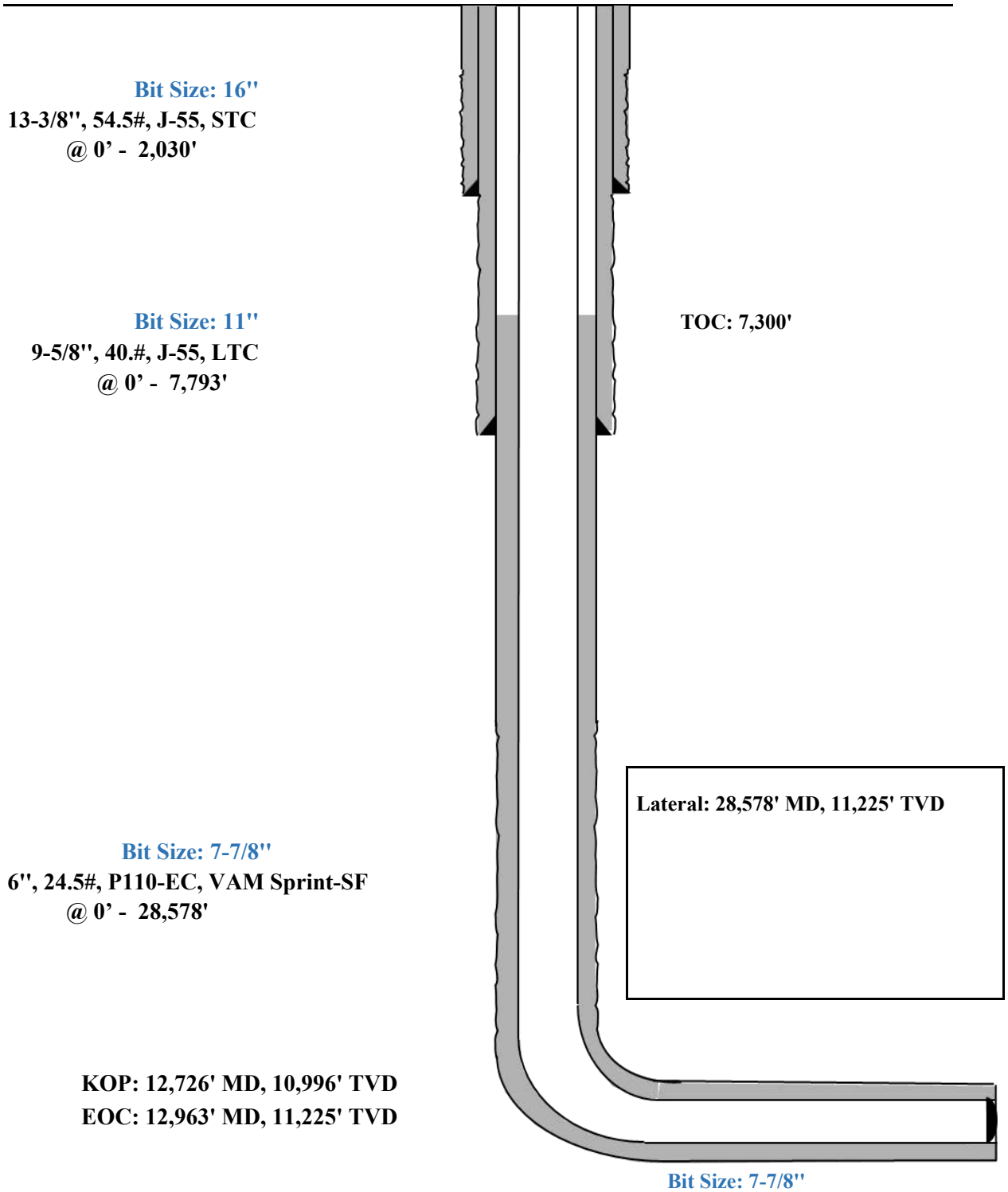
Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
2,030' 13-3/8''	570	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	160	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
7,793' 9-5/8''	770	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	250	14.8	1.32	Tail: Class C + 10% NaCL + 3% MagOx (TOC @ 6238')
28,578' 6''	650	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 7300')
	1870	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 @ 12730')

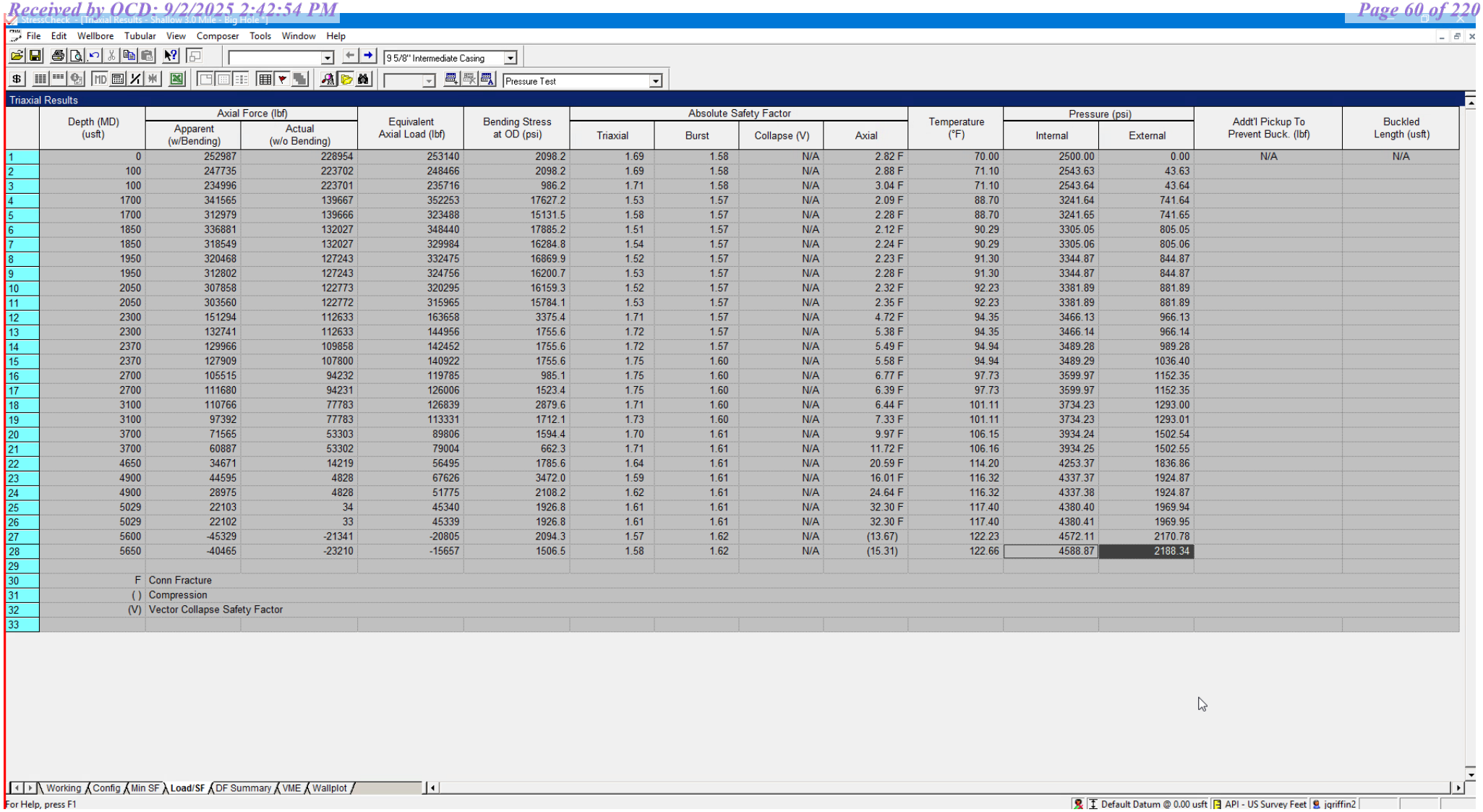
eog resources

Shallow Design C

KB: 3558'
GL: 3533'

Proposed Wellbore





StressCheck - [Triaxial Results - Shallow 3.0 Mile - Big Hole*]

File Edit Wellbore Tubular View Composer Tools Window Help

9 5/8" Intermediate Casing

Pressure Test

Triaxial Results

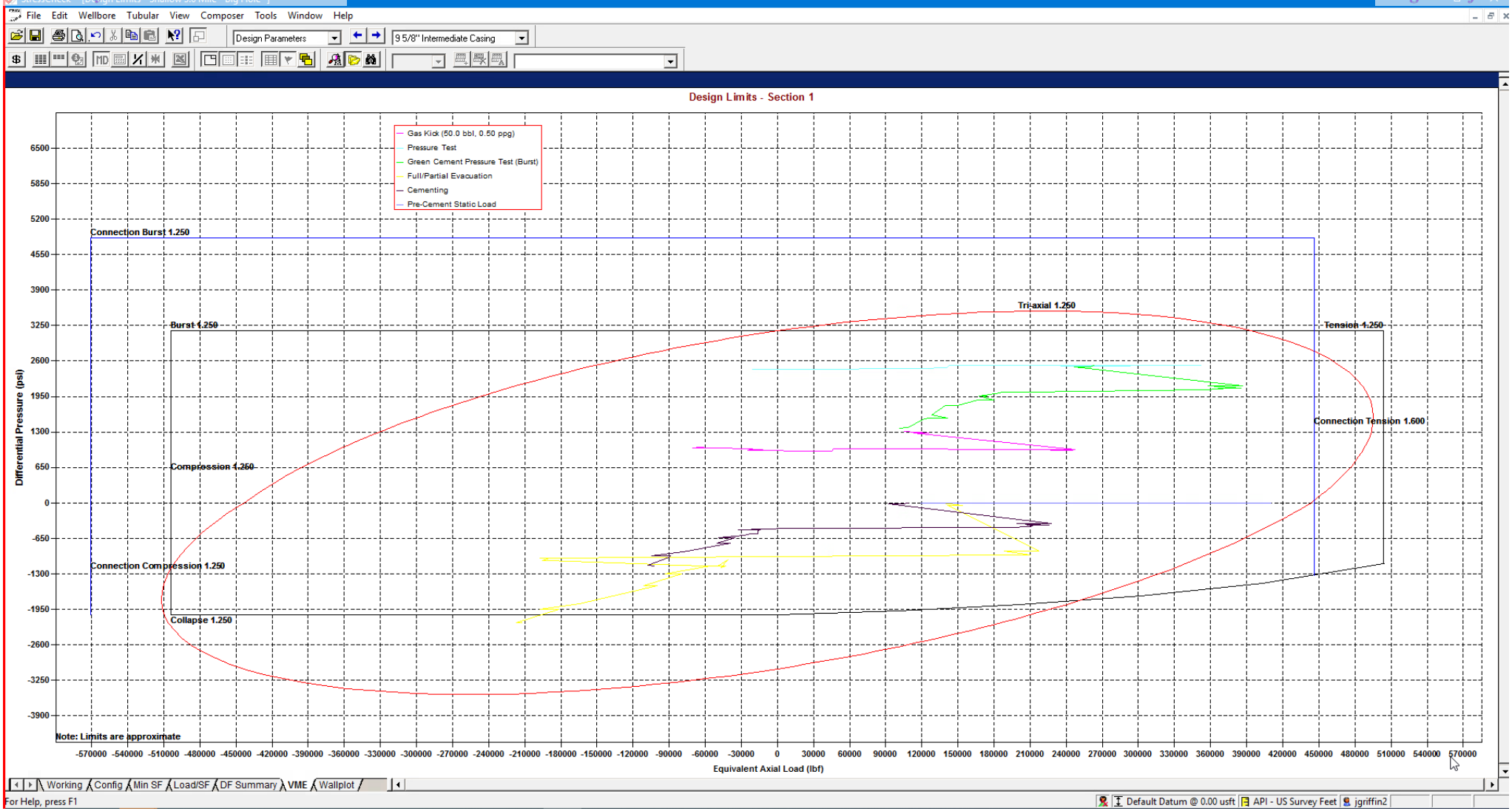
	Depth (MD) (usft)	Axial Force (lbf)		Equivalent Axial Load (lbf)	Bending Stress at OD (psi)	Absolute Safety Factor				Temperature (°F)	Pressure (psi)		Addt'l Pickup To Prevent Buck. (lbf)	Buckled Length (usft)
		Apparent (w/Bending)	Actual (w/o Bending)			Triaxial	Burst	Collapse (V)	Axial		Internal	External		
1	0	252987	228954	253140	2098.2	1.69	1.58	N/A	2.82 F	70.00	2500.00	0.00	N/A	N/A
2	100	247735	223702	248466	2098.2	1.69	1.58	N/A	2.88 F	71.10	2543.63	43.63		
3	100	234996	223701	235716	986.2	1.71	1.58	N/A	3.04 F	71.10	2543.64	43.64		
4	1700	341565	139667	352253	17627.2	1.53	1.57	N/A	2.09 F	88.70	3241.64	741.64		
5	1700	312979	139666	323488	15131.5	1.58	1.57	N/A	2.28 F	88.70	3241.65	741.65		
6	1850	336881	132027	348440	17885.2	1.51	1.57	N/A	2.12 F	90.29	3305.05	805.05		
7	1850	318549	132027	329984	16284.8	1.54	1.57	N/A	2.24 F	90.29	3305.06	805.06		
8	1950	320468	127243	332475	16869.9	1.52	1.57	N/A	2.23 F	91.30	3344.87	844.87		
9	1950	312802	127243	324756	16200.7	1.53	1.57	N/A	2.28 F	91.30	3344.87	844.87		
10	2050	307858	122773	320295	16159.3	1.52	1.57	N/A	2.32 F	92.23	3381.89	881.89		
11	2050	303560	122772	315965	15784.1	1.53	1.57	N/A	2.35 F	92.23	3381.89	881.89		
12	2300	151294	112633	163658	3375.4	1.71	1.57	N/A	4.72 F	94.35	3466.13	966.13		
13	2300	132741	112633	144956	1755.6	1.72	1.57	N/A	5.38 F	94.35	3466.14	966.14		
14	2370	129966	109858	142452	1755.6	1.72	1.57	N/A	5.49 F	94.94	3489.28	989.28		
15	2370	127909	107800	140922	1755.6	1.75	1.60	N/A	5.58 F	94.94	3489.29	1036.40		
16	2700	105515	94232	119785	985.1	1.75	1.60	N/A	6.77 F	97.73	3599.97	1152.35		
17	2700	111680	94231	126006	1523.4	1.75	1.60	N/A	6.39 F	97.73	3599.97	1152.35		
18	3100	110766	77783	126839	2879.6	1.71	1.60	N/A	6.44 F	101.11	3734.23	1293.00		
19	3100	97392	77783	113331	1712.1	1.73	1.60	N/A	7.33 F	101.11	3734.23	1293.01		
20	3700	71565	53303	89806	1594.4	1.70	1.61	N/A	9.97 F	106.15	3934.24	1502.54		
21	3700	60887	53302	79004	662.3	1.71	1.61	N/A	11.72 F	106.16	3934.25	1502.55		
22	4650	34671	14219	56495	1785.6	1.64	1.61	N/A	20.59 F	114.20	4253.37	1836.86		
23	4900	44595	4828	67626	3472.0	1.59	1.61	N/A	16.01 F	116.32	4337.37	1924.87		
24	4900	28975	4828	51775	2108.2	1.62	1.61	N/A	24.64 F	116.32	4337.38	1924.87		
25	5029	22103	34	45340	1926.8	1.61	1.61	N/A	32.30 F	117.40	4380.40	1969.94		
26	5029	22102	33	45339	1926.8	1.61	1.61	N/A	32.30 F	117.40	4380.41	1969.95		
27	5600	-45329	-21341	-20805	2094.3	1.57	1.62	N/A	(13.67)	122.23	4572.11	2170.78		
28	5650	-40465	-23210	-15657	1506.5	1.58	1.62	N/A	(15.31)	122.66	4588.87	2188.34		
29														
30	F	Conn Fracture												
31	( )	Compression												
32	(V)	Vector Collapse Safety Factor												
33														

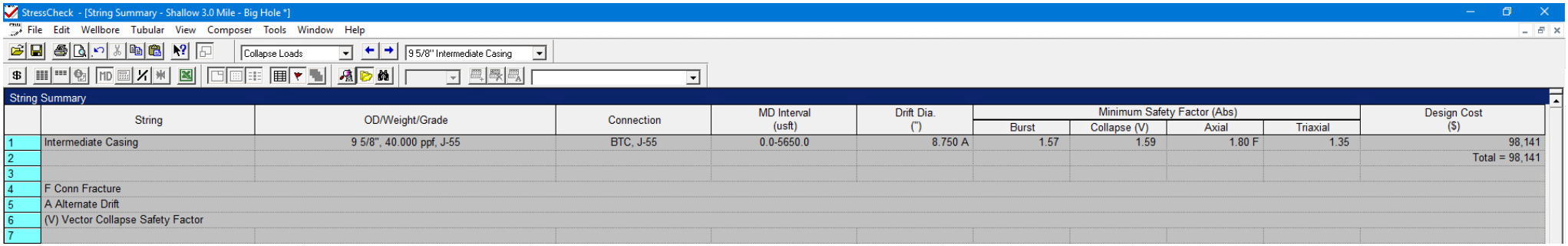
Working Config Min SF Load/SF DF Summary VME Wallplot

For Help, press F1

Default Datum @ 0.00 usft API - US Survey Feet jqriffin2

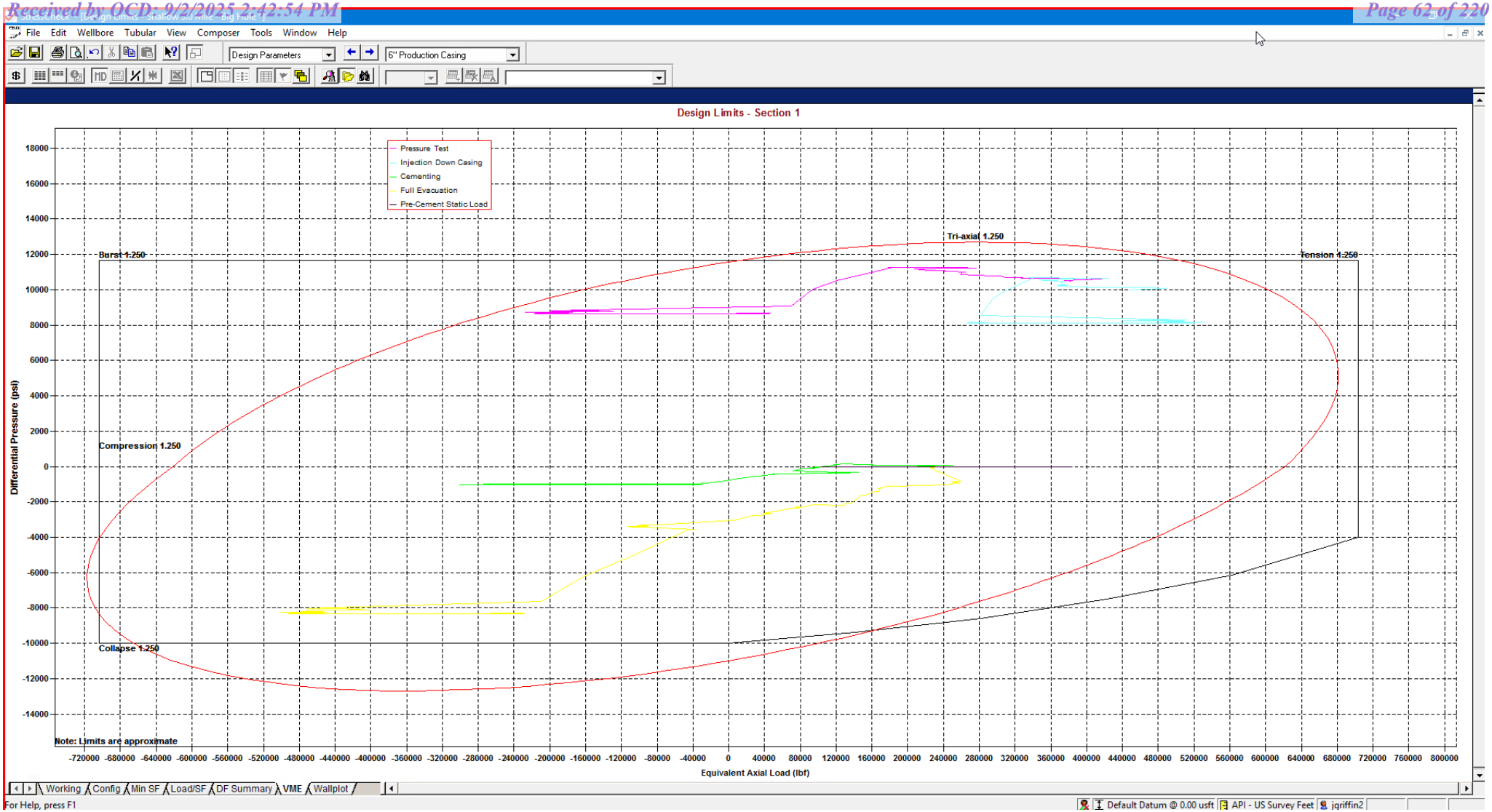
9-5/8” Intermediate Casing Pressure Test:
Internal Profile based off Surface Pressure + Hydrostatic: 4589 psi
External Profile based off Pore Pressure: 2188 psi

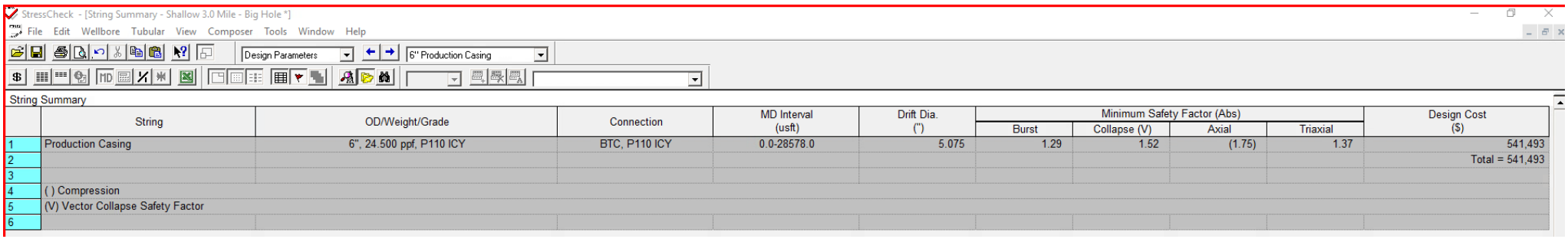




	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs) Burst	Collapse (V)	Axial	Triaxial	Design Cost ($)
1	Intermediate Casing	9 5/8", 40.000 ppf, J-55	BTC, J-55	0.0-5650.0	8.750 A	1.57	1.59	1.80 F	1.35	98,141
2										Total = 98,141
3										
4	F Conn Fracture									
5	A Alternate Drift									
6	(V) Vector Collapse Safety Factor									
7										

*Modelling done with 9-5/8” 40# Intermediate Casing. Passes all Burst, Collapse and Tensile design criteria.





String Summary

	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs) Burst	Collapse (V)	Axial	Triaxial	Design Cost ($)
1	Production Casing	6", 24.500 ppf, P110 ICY	BTC, P110 ICY	0.0-28578.0	5.075	1.29	1.52	(1.75)	1.37	541,493
2										Total = 541,493
3										
4	( ) Compression									
5	(V) Vector Collapse Safety Factor									
6										

*Modelling done with 6” Production Casing with a 125ksi Control Yield. Passes all Burst, Collapse and Tensile design criteria.

eog resources

Shallow Design D

4. CASING PROGRAM

Hole Size	Interval MD From (ft)	Interval MD To (ft)	Interval TVD From (ft)	Interval TVD To (ft)	Csg OD	Weight	Grade	Conn
16"	0	2,030	0	2,030	13-3/8"	54.5#	J-55	STC
11"	0	7,793	0	5,650	9-5/8"	40#	J-55	LTC
7-7/8"	0	12,626	0	10,896	6"	22.3#	P110-EC	DWC/C IS
6-3/4"	12,626	28,578	10,896	11,225	5-1/2"	20#	P110-EC	DWC/C IS MS

Hole will be full during casing run for well control and tensile SF factor. Casing will be kept at least half full during run for this design to meet BLM collapse SF requirement. External pressure will be reviewed prior to conducting casing pressure tests to ensure that 70% of the yield is not exceeded.

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 6" and 5-1/2" casings in the 7-7/8" and 6-3/4" hole sizes. An expansion additive will be utilized in the cement slurry for the entire length of the 7-7/8" and 6-3/4" hole intervals 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 Title 43 CFR Part 3170 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.

5. CEMENTING PROGRAM:

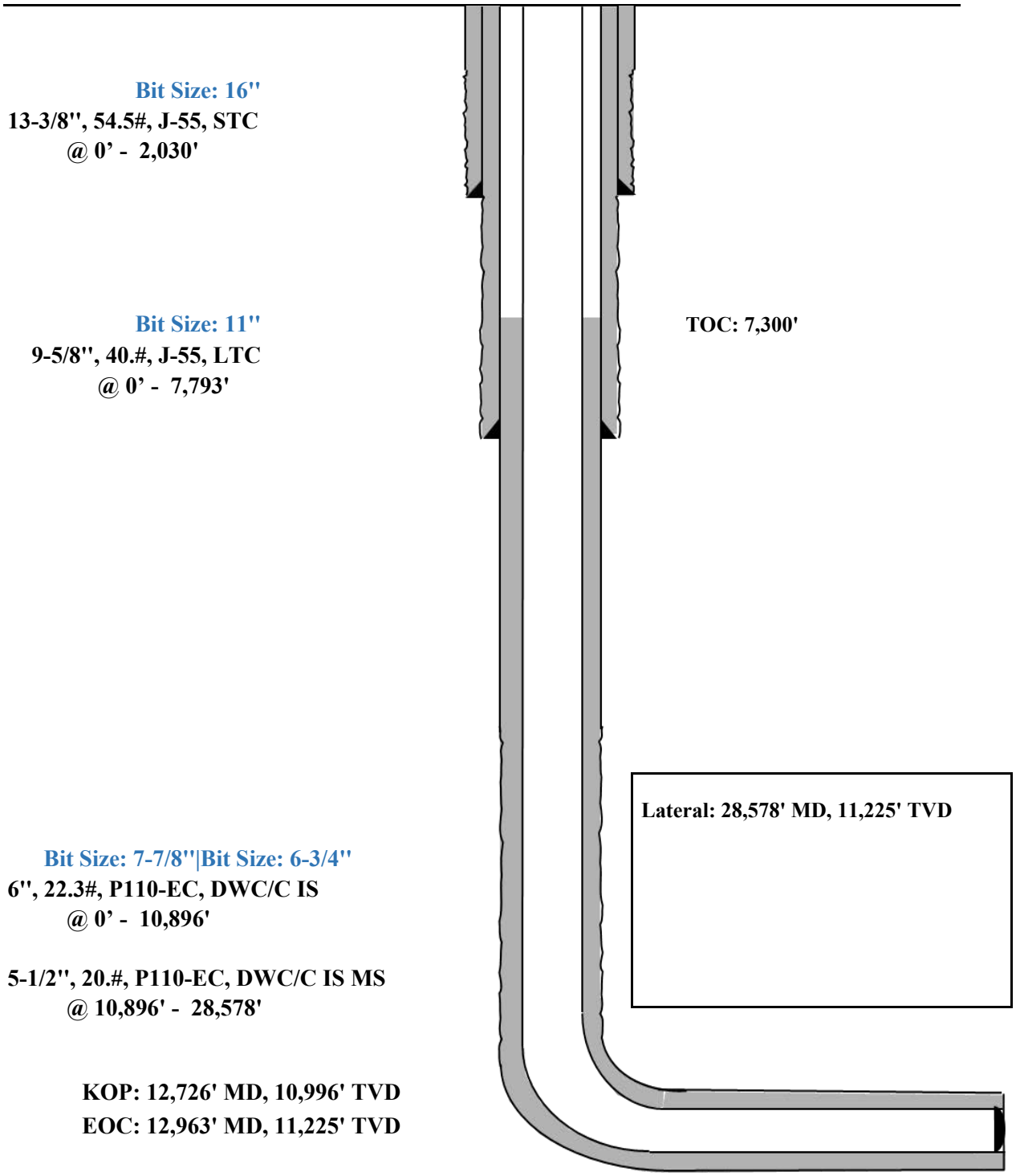
Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
2,030' 13-3/8''	570	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	160	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
7,793' 9-5/8''	770	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	250	14.8	1.32	Tail: Class C + 10% NaCL + 3% MagOx (TOC @ 6238')
28,578' 6''	650	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 7300')
	1870	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 @ 12730')

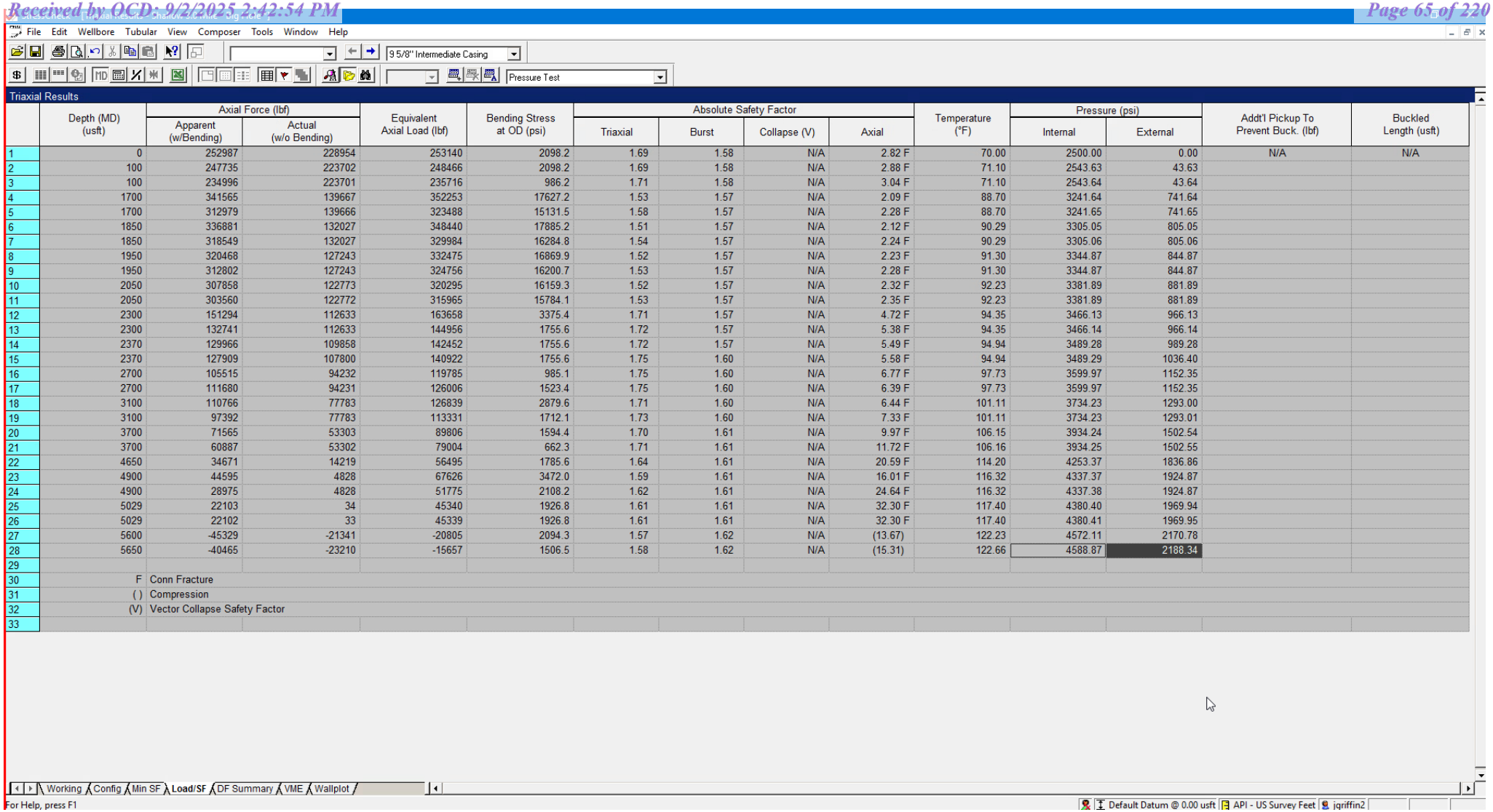
eog resources

Shallow Design D

KB: 3558'
GL: 3533'

Proposed Wellbore





File Edit Wellbore Tubular View Composer Tools Window Help

9 5/8" Intermediate Casing

Pressure Test

Triaxial Results

	Depth (MD) (usft)	Axial Force (lbf)		Equivalent Axial Load (lbf)	Bending Stress at OD (psi)	Absolute Safety Factor				Temperature (°F)	Pressure (psi)		Addt'l Pickup To Prevent Buck. (lbf)	Buckled Length (usft)
		Apparent (w/Bending)	Actual (w/o Bending)			Triaxial	Burst	Collapse (V)	Axial		Internal	External		
1	0	252987	228954	253140	2098.2	1.69	1.58	N/A	2.82 F	70.00	2500.00	0.00	N/A	N/A
2	100	247735	223702	248466	2098.2	1.69	1.58	N/A	2.88 F	71.10	2543.63	43.63		
3	100	234996	223701	235716	986.2	1.71	1.58	N/A	3.04 F	71.10	2543.64	43.64		
4	1700	341565	139667	352253	17627.2	1.53	1.57	N/A	2.09 F	88.70	3241.64	741.64		
5	1700	312979	139666	323488	15131.5	1.58	1.57	N/A	2.28 F	88.70	3241.65	741.65		
6	1850	336881	132027	348440	17885.2	1.51	1.57	N/A	2.12 F	90.29	3305.05	805.05		
7	1850	318549	132027	329984	16284.8	1.54	1.57	N/A	2.24 F	90.29	3305.06	805.06		
8	1950	320468	127243	332475	16869.9	1.52	1.57	N/A	2.23 F	91.30	3344.87	844.87		
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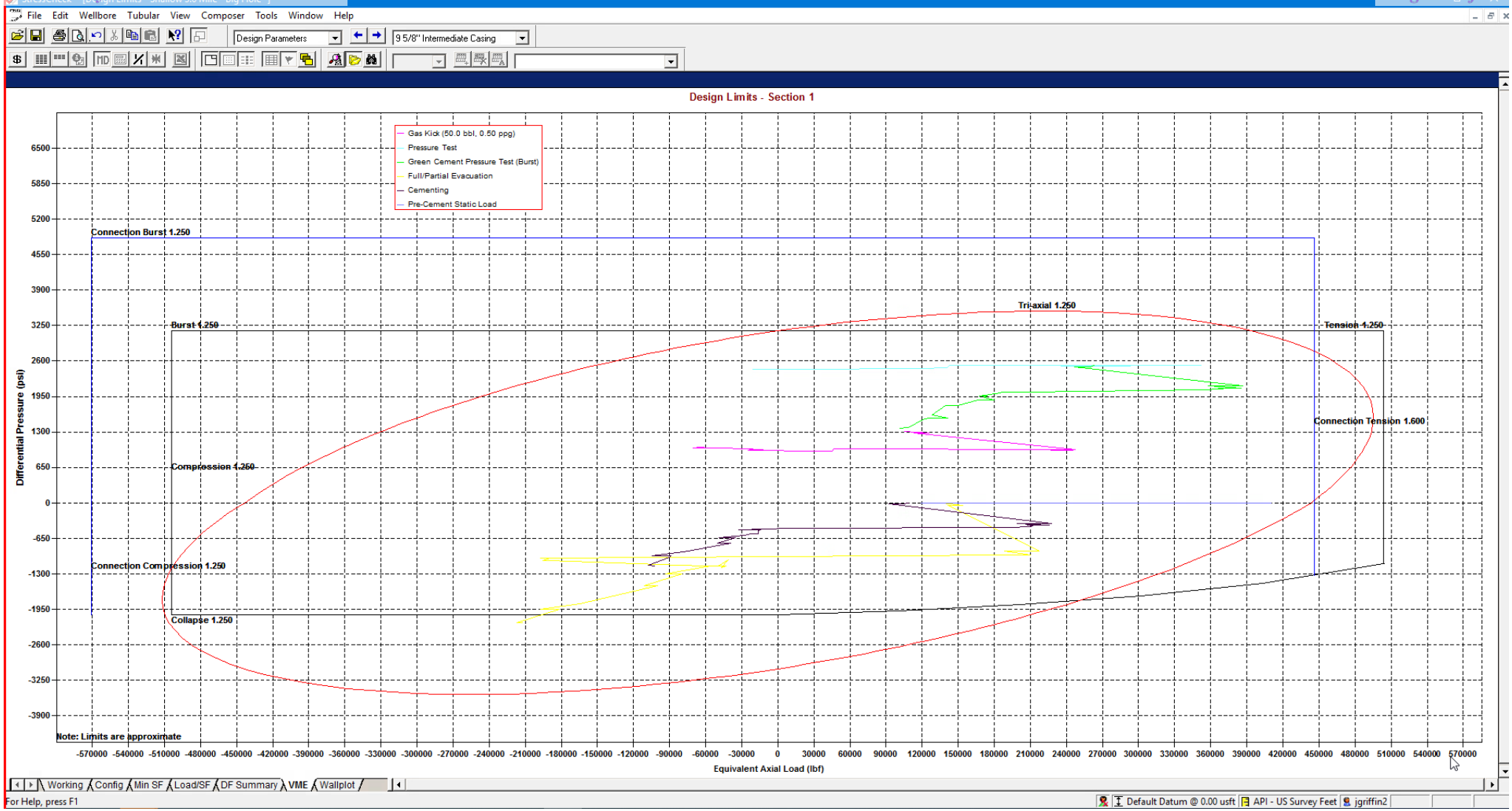
10	2050	307858	122773	320295	16159.3	1.52	1.57	N/A	2.32 F	92.23	3381.89	881.89		
11	2050	303560	122772	315965	15784.1	1.53	1.57	N/A	2.35 F	92.23	3381.89	881.89		
12	2300	151294	112633	163658	3375.4	1.71	1.57	N/A	4.72 F	94.35	3466.13	966.13		
13	2300	132741	112633	144956	1755.6	1.72	1.57	N/A	5.38 F	94.35	3466.14	966.14		
14	2370	129966	109858	142452	1755.6	1.72	1.57	N/A	5.49 F	94.94	3489.28	989.28		
15	2370	127909	107800	140922	1755.6	1.75	1.60	N/A	5.58 F	94.94	3489.29	1036.40		
16	2700	105515	94232	119785	985.1	1.75	1.60	N/A	6.77 F	97.73	3599.97	1152.35		
17	2700	111680	94231	126006	1523.4	1.75	1.60	N/A	6.39 F	97.73	3599.97	1152.35		
18	3100	110766	77783	126839	2879.6	1.71	1.60	N/A	6.44 F	101.11	3734.23	1293.00		
19	3100	97392	77783	113331	1712.1	1.73	1.60	N/A	7.33 F	101.11	3734.23	1293.01		
20	3700	71565	53303	89806	1594.4	1.70	1.61	N/A	9.97 F	106.15	3934.24	1502.54		
21	3700	60887	53302	79004	662.3	1.71	1.61	N/A	11.72 F	106.16	3934.25	1502.55		
22	4650	34671	14219	56495	1785.6	1.64	1.61	N/A	20.59 F	114.20	4253.37	1836.86		
23	4900	44595	4828	67626	3472.0	1.59	1.61	N/A	16.01 F	116.32	4337.37	1924.87		
24	4900	28975	4828	51775	2108.2	1.62	1.61	N/A	24.64 F	116.32	4337.38	1924.87		
25	5029	22103	34	45340	1926.8	1.61	1.61	N/A	32.30 F	117.40	4380.40	1969.94		
26	5029	22102	33	45339	1926.8	1.61	1.61	N/A	32.30 F	117.40	4380.41	1969.95		
27	5600	-45329	-21341	-20805	2094.3	1.57	1.62	N/A	(13.67)	122.23	4572.11	2170.78		
28	5650	-40465	-23210	-15657	1506.5	1.58	1.62	N/A	(15.31)	122.66	4588.87	2188.34		
29														
30	F	Conn Fracture												
31	( )	Compression												
32	(V)	Vector Collapse Safety Factor												
33														

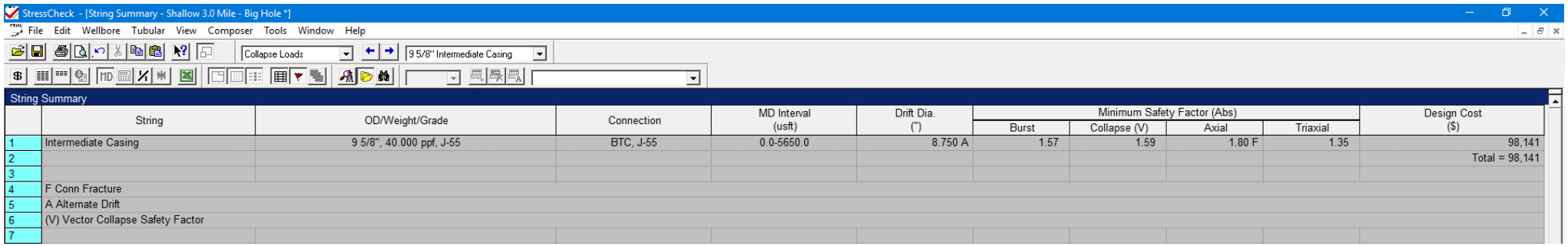
Working Config Min SF Load/SF DF Summary VME Wallplot

For Help, press F1

Default Datum @ 0.00 usft API - US Survey Feet jqriffin2

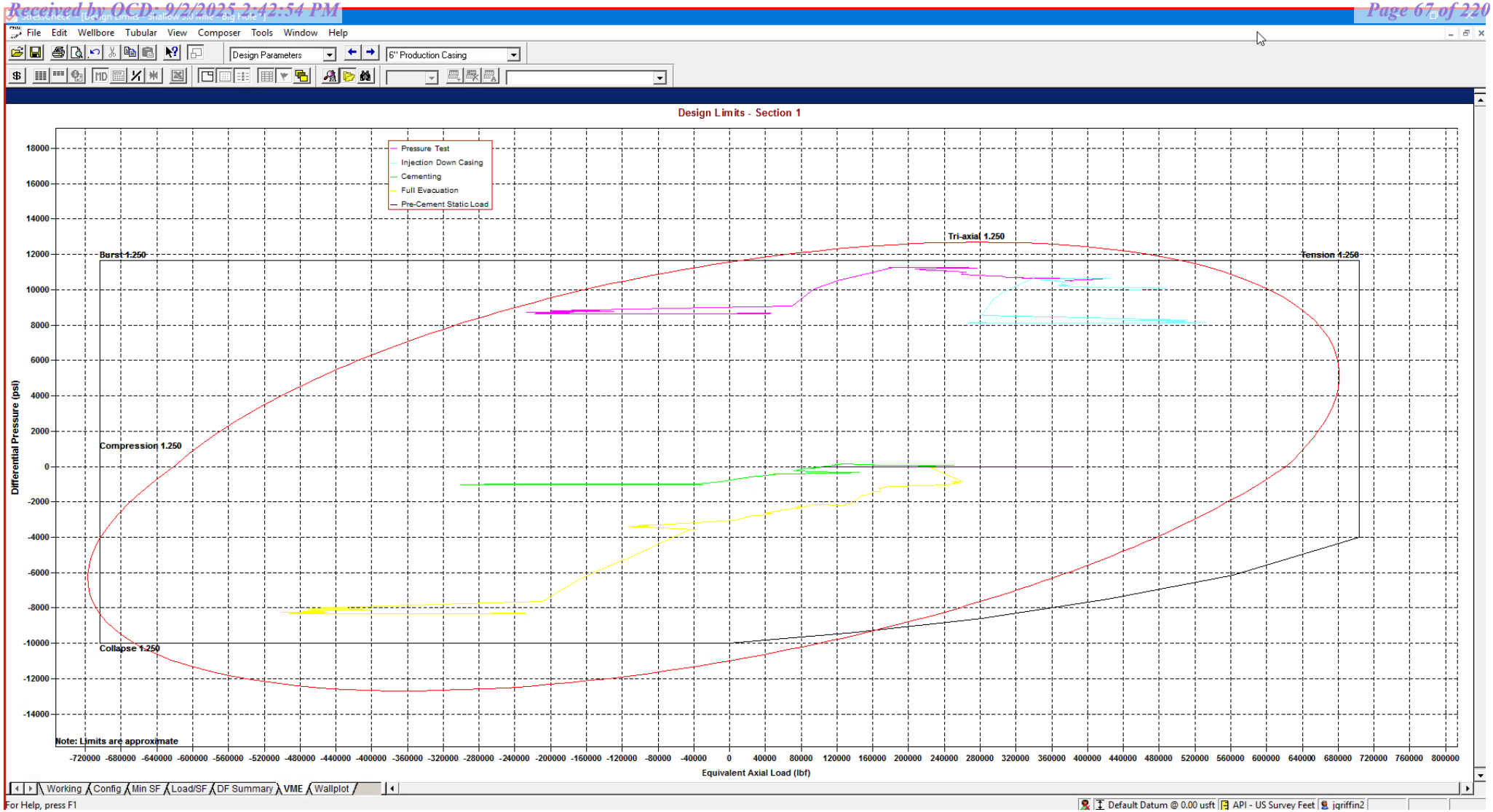
9-5/8” Intermediate Casing Pressure Test:
Internal Profile based off Surface Pressure + Hydrostatic: 4589 psi
External Profile based off Pore Pressure: 2188 psi

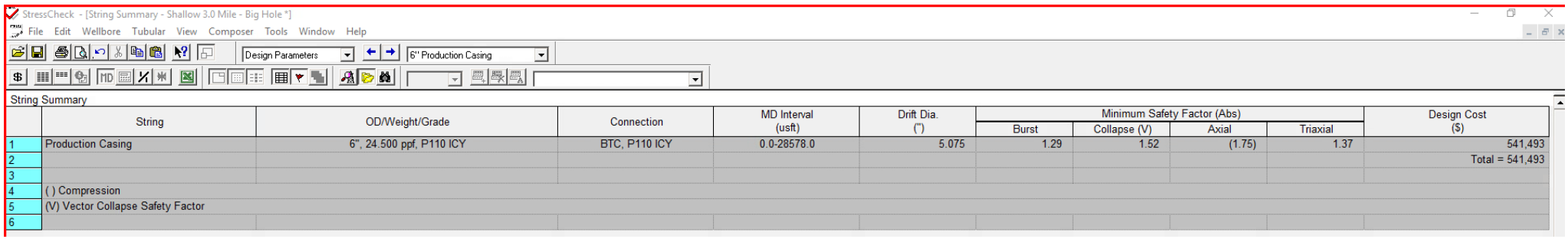




	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs) Burst	Collapse (V)	Axial	Triaxial	Design Cost ($)
1	Intermediate Casing	9 5/8", 40.000 ppf, J-55	BTC, J-55	0.0-5650.0	8.750 A	1.57	1.59	1.80 F	1.35	98,141
2										Total = 98,141
3										
4	F Conn Fracture									
5	A Alternate Drift									
6	(V) Vector Collapse Safety Factor									
7										

*Modelling done with 9-5/8” 40# Intermediate Casing. Passes all Burst, Collapse and Tensile design criteria.

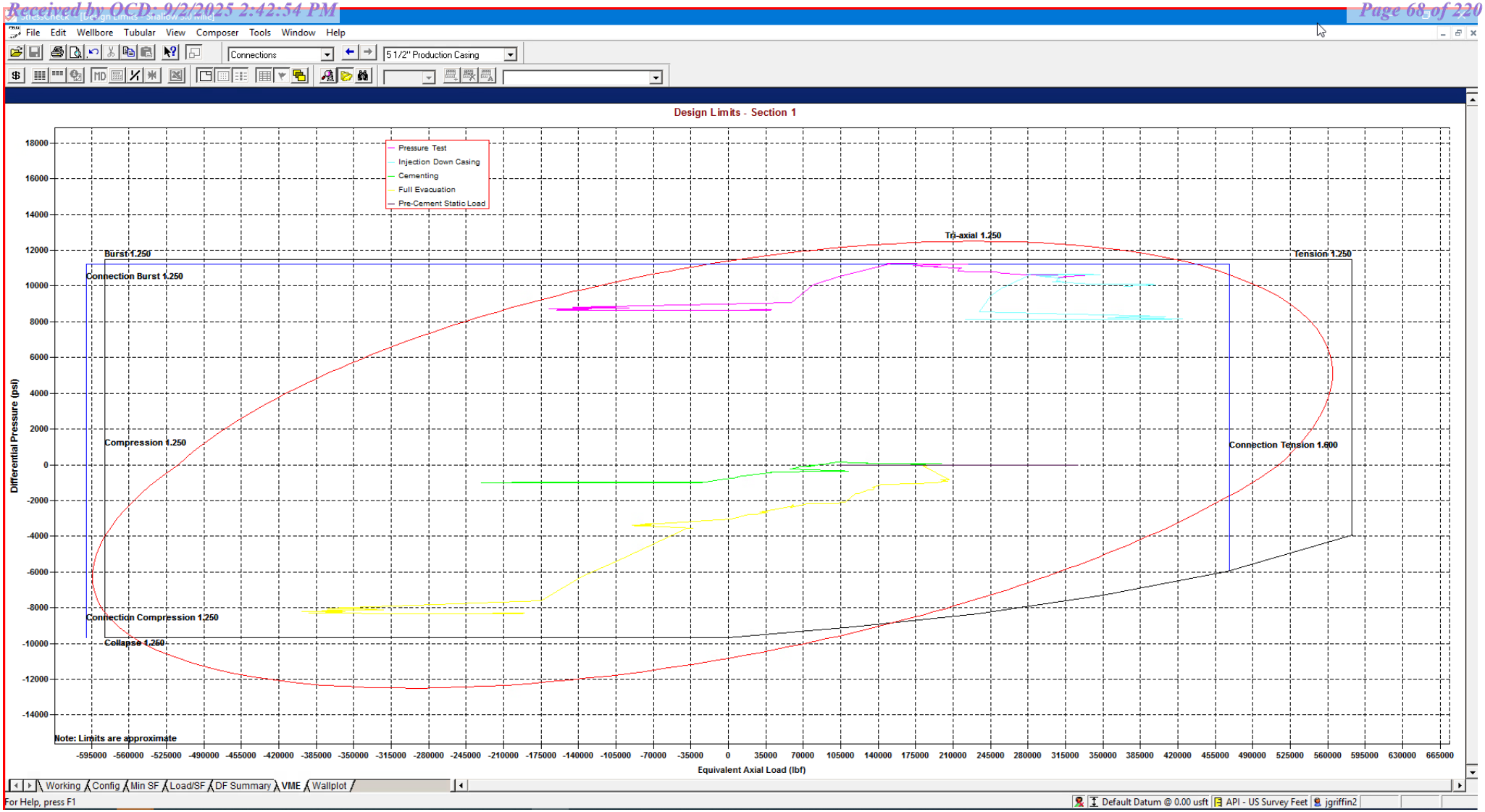


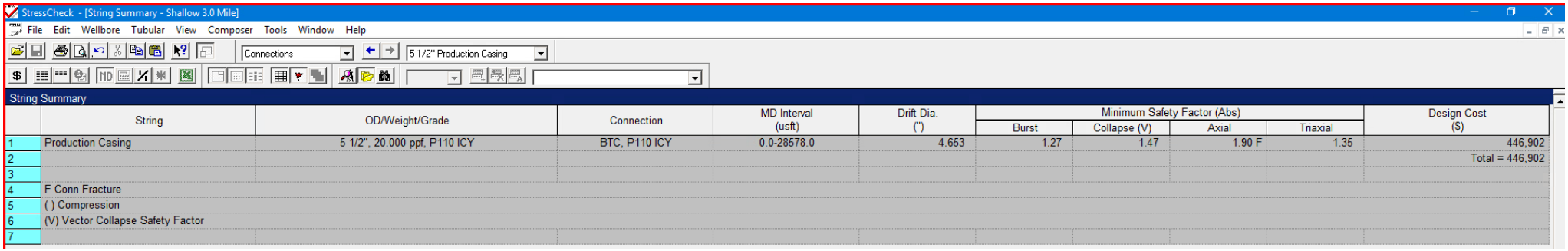


String Summary

	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs) Burst	Collapse (V)	Axial	Triaxial	Design Cost ($)
1	Production Casing	6", 24.500 ppf, P110 ICY	BTC, P110 ICY	0.0-28578.0	5.075	1.29	1.52	(1.75)	1.37	541,493
2										Total = 541,493
3										
4	( ) Compression									
5	(V) Vector Collapse Safety Factor									
6										

*Modelling done with 6” Production Casing with a 125ksi Control Yield. Passes all Burst, Collapse and Tensile design criteria.





String Summary

	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs) Burst	Collapse (V)	Axial	Triaxial	Design Cost ($)
1	Production Casing	5 1/2", 20.000 ppf, P110 ICY	BTC, P110 ICY	0.0-28578.0	4.653	1.27	1.47	1.90 F	1.35	446,902
2										Total = 446,902
3										
4	F Conn Fracture									
5	( ) Compression									
6	(V) Vector Collapse Safety Factor									
7										

*Modelling done with 5-1/2” 20# Production Casing with a 125ksi Control Yield. Passes all Burst, Collapse and Tensile design criteria.

MUD PROGRAM:

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:

Measured Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 2,030'	Fresh - Gel	8.6-8.8	28-34	N/c
2,030' – 7,793'	Brine	9-10.5	28-34	N/c
5,450' – 28,578' 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.

CEMENTING ADDITIVES:

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.

Pipe Body and API Connections Performance Data

13.375 54.50/0.380 J55

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USC Metric

6/8/2015 10:04:37 AM

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

Pipe Body and API Connections Performance Data

9.625 40.00/0.395 J55

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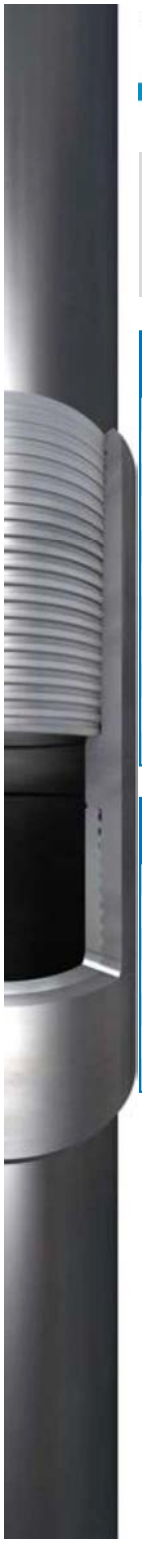
USC Metric

6/8/2015 10:23:27 AM

Mechanical Properties	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi
Dimensions	**Pipe**	**BTC**	**LTC**	**STC**	
Outside Diameter	9.625	10.625	10.625	10.625	in.
Wall Thickness	0.395	--	--	--	in.
Inside Diameter	8.835	8.835	8.835	8.835	in.
Standard Drift	8.679	8.679	8.679	8.679	in.
Alternate Drift	8.750	8.750	8.750	8.750	in.
Nominal Linear Weight, T&C	40.00	--	--	--	lbs/ft
Plain End Weight	38.97	--	--	--	lbs/ft
Performance	**Pipe**	**BTC**	**LTC**	**STC**	
Minimum Collapse Pressure	2,570	2,570	2,570	2,570	psi
Minimum Internal Yield Pressure	3,950	3,950	3,950	3,950	psi
Minimum Pipe Body Yield Strength	630.00	--	--	--	1000 lbs
Joint Strength	--	714	520	452	1000 lbs
Reference Length	--	11,898	8,665	7,529	ft
Make-Up Data	**Pipe**	**BTC**	**LTC**	**STC**	
Make-Up Loss	--	4.81	4.75	3.38	in.
Minimum Make-Up Torque	--	--	3,900	3,390	ft-lbs
Maximum Make-Up Torque	--	--	6,500	5,650	ft-lbs



DWC/C-IS MS™

Connection Data Sheet

OD (in.)	WEIGHT (lbs./ft.)	WALL (in.)	GRADE	API DRIFT (in.)	RBW%	CONNECTION
5.500	Nominal: 20.00 Plain End: 19.83	0.361	VST P110EC	4.653	87.5	DWC/C-IS MS

PIPE PROPERTIES		
Outside Diameter	5.500	in.
Inside Diameter	4.778	in.
Nominal Area	5.828	sq.in.
Grade Type	API 5CT	
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Tensile Strength	135	ksi
Yield Strength	729	klb
Ultimate Strength	787	klb
Min. Internal Yield	14,360	psi
Collapse	12,090	psi

CONNECTION PROPERTIES		
Connection Type	Semi-Premium T&C	
Connection O.D. (nom)	6.115	in.
Connection I.D. (nom)	4.778	in.
Make-Up Loss	4.125	in.
Coupling Length	9.250	in.
Critical Cross Section	5.828	sq.in.
Tension Efficiency	100.0%	of pipe
Compression Efficiency	100.0%	of pipe
Internal Pressure Efficiency	100.0%	of pipe
External Pressure Efficiency	100.0%	of pipe

CONNECTION PERFORMANCES		
Yield Strength	729	klb
Parting Load	787	klb
Compression Rating	729	klb
Min. Internal Yield	14,360	psi
External Pressure	12,090	psi
Maximum Uniaxial Bend Rating	104.2	°/100 ft
Reference String Length w 1.4 Design Factor	26,040	ft

FIELD END TORQUE VALUES		
Min. Make-up torque	16,100	ft.lb
Opti. Make-up torque	17,350	ft.lb
Max. Make-up torque	18,600	ft.lb
Min. Shoulder Torque	1,610	ft.lb
Max. Shoulder Torque	12,880	ft.lb
Min. Delta Turn	-	Turns
Max. Delta Turn	0.200	Turns
Maximum Operational Torque	21,100	ft.lb
Maximum Torsional Value (MTV)	23,210	ft.lb

Need Help? Contact: tech.support@vam-usa.com

Reference Drawing: 8136PP Rev.01 & 8136BP Rev.01

Date: 12/03/2019

Time: 06:19:27 PM

For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

VAM USA
2107 CityWest Boulevard Suite 1300
Houston, TX 77042
Phone: 713-479-3200
Fax: 713-479-3234
VAM® USA Sales E-mail: VAMUSAsales@vam-usa.com
Tech Support Email: tech.support@vam-usa.com

DWC Connection Data Sheet Notes:
1. DWC connections are available with a seal ring (SR) option.
2. All standard DWC/C connections are interchangeable for a given pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
3. Connection performance properties are based on nominal pipe body and connection dimensions.
4. DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
7. Bending efficiency is equal to the compression efficiency.
8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
9. Connection yield torque is not to be exceeded.
10. Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
11. DWC connections will accommodate API standard drift diameters.
12. DWC/C family of connections are compatible with API Buttress BTC connections. Please contact tech.support@vam-usa.com for details on connection ratings and make-up.

Pipe Body and API Connections Performance Data

10.750 40.50/0.350 J55

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USC Metric

6/8/2015 10:14:05 AM

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

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

vallourec

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

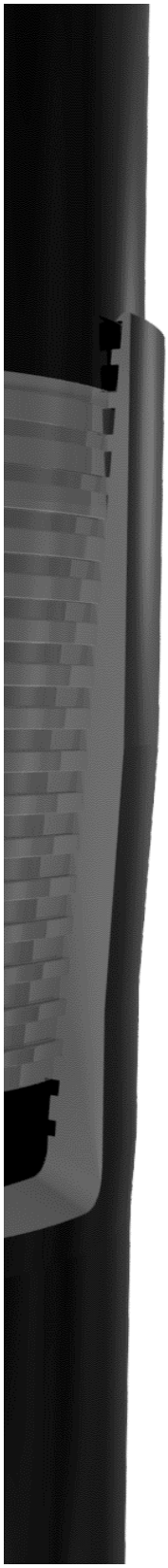
Pipe Body Data (PE)		
Geometry		
Nominal ID:	7.92	inch
Nominal Area:	9.149	in^2
*Special/Alt. Drift:	7.875	inch
Performance		
Pipe Body Yield Strength:	503	kips
Collapse Resistance:	2,530	psi
Internal Yield Pressure: (API Historical)	3,930	psi

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.



Issued on: 10 Feb. 2021 by Wesley Ott

VAM® SPRINT-SF
Connection Data Sheet

OD	Weight (lb/ft)	Wall Th.	Grade	API Drift:	Connection
6 in.	Nominal: 24.50 Plain End: 23.95	0.400 in.	P110EC	5.075 in.	**VAM® SPRINT-SF**

PIPE PROPERTIES		
Nominal OD	6.000	in.
Nominal ID	5.200	in.
Nominal Cross Section Area	7.037	sqin.
Grade Type	High Yield	
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Ultimate Tensile Strength	135	ksi

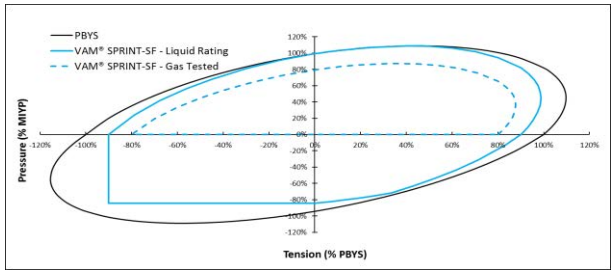
CONNECTION PROPERTIES		
Connection Type	Integral Semi-Flush	
Connection OD (nom):	6.277	in.
Connection ID (nom):	5.146	in.
Make-Up Loss	5.386	in.
Critical Cross Section	6.417	sqin.
Tension Efficiency	91.0	% of pipe
Compression Efficiency	91.0	% of pipe
Internal Pressure Efficiency	100	% of pipe
External Pressure Efficiency	100	% of pipe

CONNECTION PERFORMANCES		
Tensile Yield Strength	801	klb
Compression Resistance	801	klb
Internal Yield Pressure	14,580	psi
Collapse Resistance	12,500	psi
Max. Structural Bending	83	°/100ft
Max. Bending with ISO/API Sealability	30	°/100ft

* 87.5% RBW

TORQUE VALUES		
Min. Make-up torque	21,750	ft.lb
Opt. Make-up torque	24,250	ft.lb
Max. Make-up torque	26,750	ft.lb
Max. Torque with Sealability (MTS)	53,000	ft.lb

VAM® SPRINT-SF is a semi-flush connection innovatively designed for extreme shale applications. Its high tension rating and ultra high torque capacity make it ideal to run a fill string length as production casing in shale wells with extended horizontal sections and tight clearance requirements.



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

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

DWC/C-IS™

Connection Data Sheet

OD (in.)	WEIGHT (lbs./ft.)	WALL (in.)	GRADE	API DRIFT (in.)	RBW%	CONNECTION
6.000	Nominal: 22.30 Plain End: 21.70	0.360	VST P110EC	5.155	92.5	DWC/C-IS

PIPE PROPERTIES

Nominal OD	6.000	in.
Nominal ID	5.280	in.
Nominal Area	6.379	sq.in.
Grade Type	API 5CT	
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Tensile Strength	135	ksi
Yield Strength	797	klb
Ultimate Strength	861	klb
Min. Internal Yield Pressure	13,880	psi
Collapse Pressure	9,800	psi

CONNECTION PROPERTIES

Connection Type	Semi-Premium T&C	
Connection OD (nom)	6.650	in.
Connection ID (nom)	5.280	in.
Make-Up Loss	4.313	in.
Coupling Length	9.625	in.
Critical Cross Section	6.379	sq.in.
Tension Efficiency	100.0%	of pipe
Compression Efficiency	100.0%	of pipe
Internal Pressure Efficiency	100.0%	of pipe
External Pressure Efficiency	100.0%	of pipe

CONNECTION PERFORMANCES

Yield Strength	797	klb
Parting Load	861	klb
Compression Rating	797	klb
Min. Internal Yield	13,880	psi
External Pressure	9,800	psi
Maximum Uniaxial Bend Rating	47.7	°/100 ft
Reference String Length w 1.4 Design Factor	25,530	ft.

FIELD END TORQUE VALUES

Min. Make-up torque	17,000	ft.lb
Opti. Make-up torque	18,250	ft.lb
Max. Make-up torque	19,500	ft.lb
Min. Shoulder Torque	1,700	ft.lb
Max. Shoulder Torque	13,600	ft.lb
Min. Delta Turn	-	Turns
Max. Delta Turn	0.200	Turns
Maximum Operational Torque	24,200	ft.lb
Maximum Torsional Value (MTV)	26,620	ft.lb

Need Help? Contact: tech.support@vam-usa.com

Reference Drawing: 8135PP Rev.02 & 8135BP Rev.02

Date: 07/30/2020

Time: 07:50:47 PM

For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

VAM® USA

VAM USA
2107 CityWest Boulevard Suite 1300
Houston, TX 77042
Phone: 713-479-3200
Fax: 713-479-3234
VAM® USA Sales E-mail: VAMUSAsales@vam-usa.com
Tech Support Email: tech.support@vam-usa.com

DWC Connection Data Sheet Notes:
1. DWC connections are available with a seal ring (SR) option.
2. All standard DWC/C connections are interchangeable for a given pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
3. Connection performance properties are based on nominal pipe body and connection dimensions.
4. DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
7. Bending efficiency is equal to the compression efficiency.
8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
9. Connection yield torque is not to be exceeded.
10. Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
11. DWC connections will accommodate API standard drift diameters.
12. DWC/C family of connections are compatible with API Buttress BTC connections. Please contact tech.support@vam-usa.com for details on connection ratings and make-up.

Salt Section Annular Clearance Variance Request

Daniel Moose

Current Design (Salt Strings)

0.422” Annular clearance requirement

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

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

Annular Clearance Variance Request

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

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

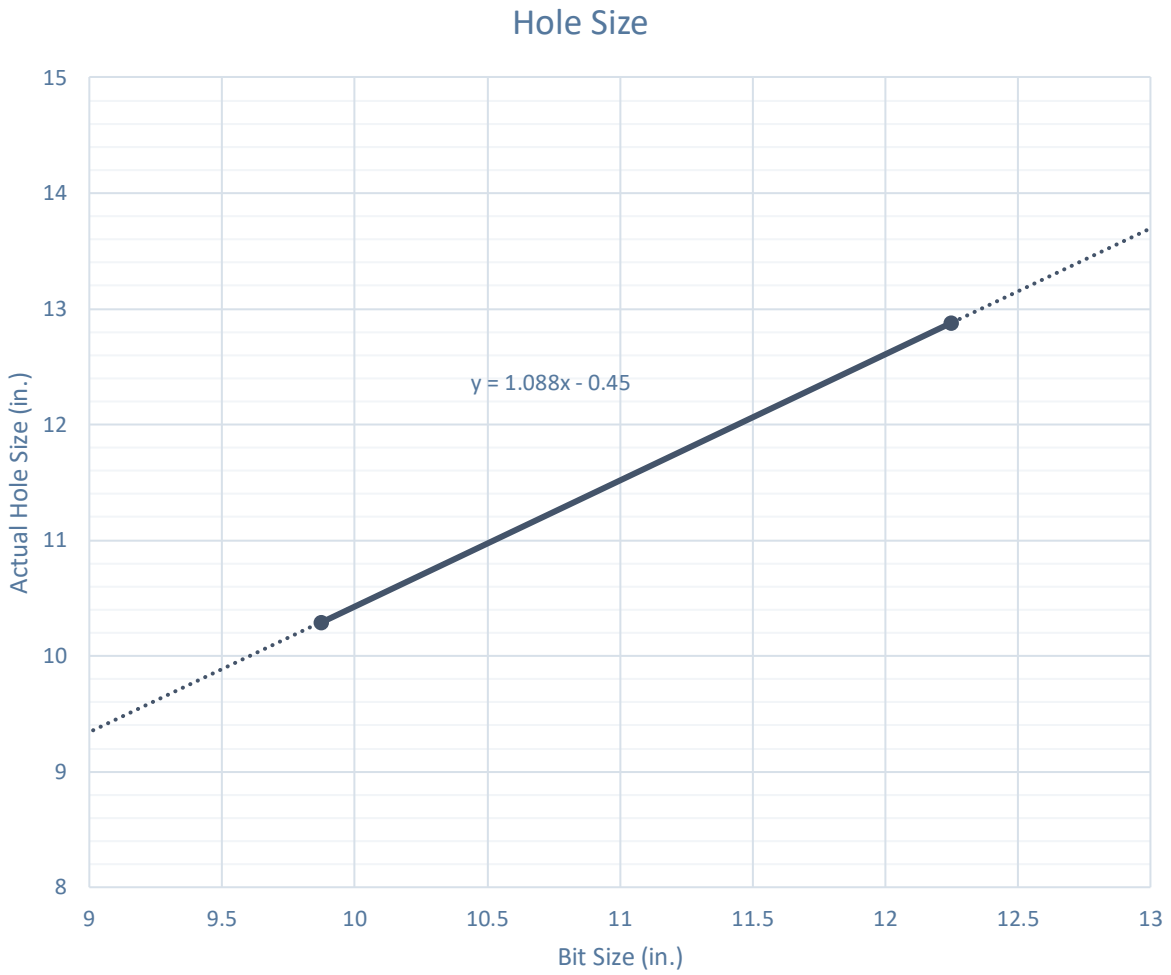
Volumetric Hole Size Calculation

Hole Size Calculations Off Cement Volumes

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

Average Hole Size

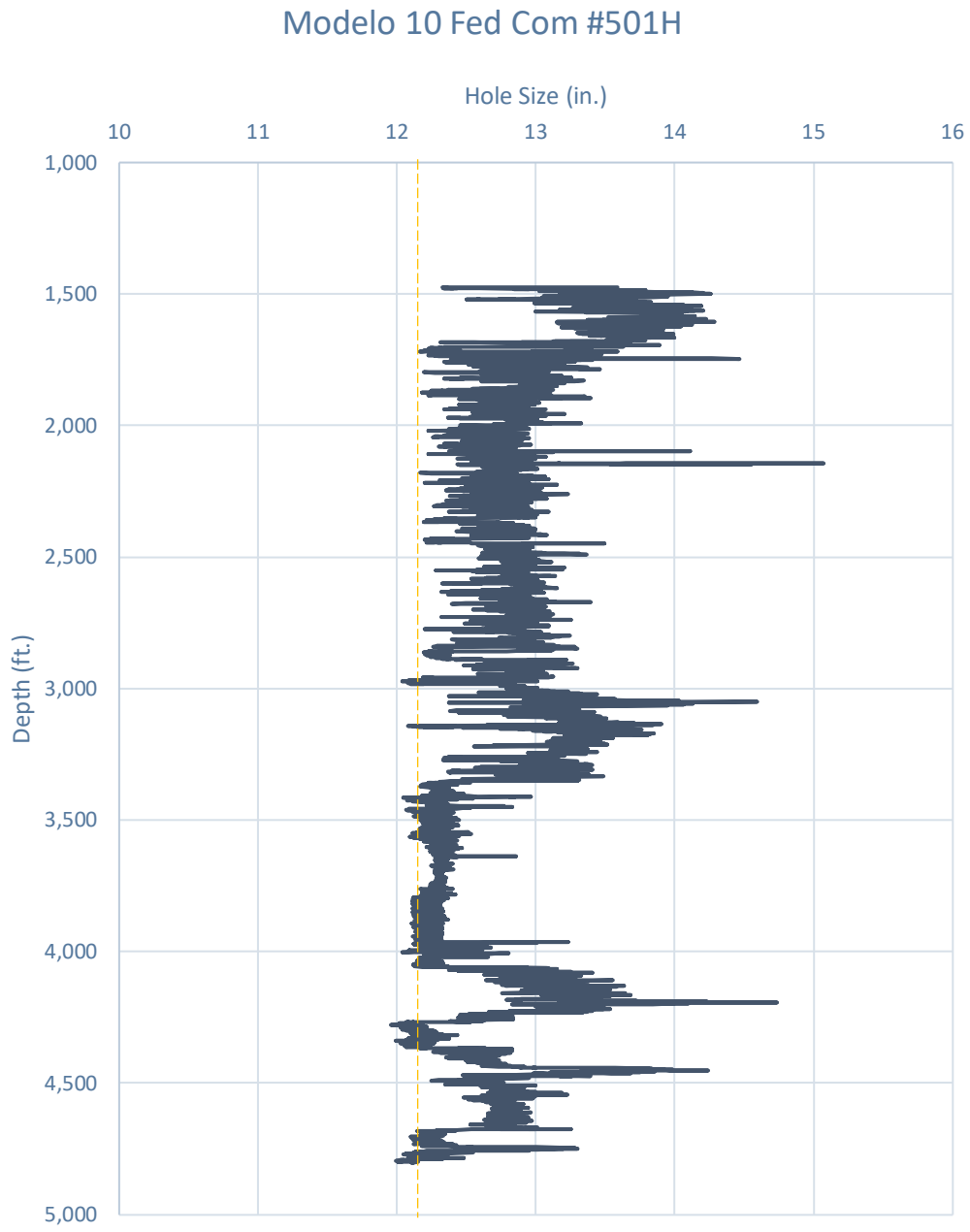
- 12.25” Hole
  - 12.88” Hole
    - 5.13% diameter increase
    - 10.52% area increase
  - 0.63” Average enlargement
  - 0.58” Median enlargement
  - 179 Well Count
- 9.875” Hole
  - 10.30” Hole
    - 4.24% diameter increase
    - 9.64% area increase
  - 0.42” Average enlargement
  - 0.46” Median enlargement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



Caliper Hole Size (12.25”)

Average Hole Size

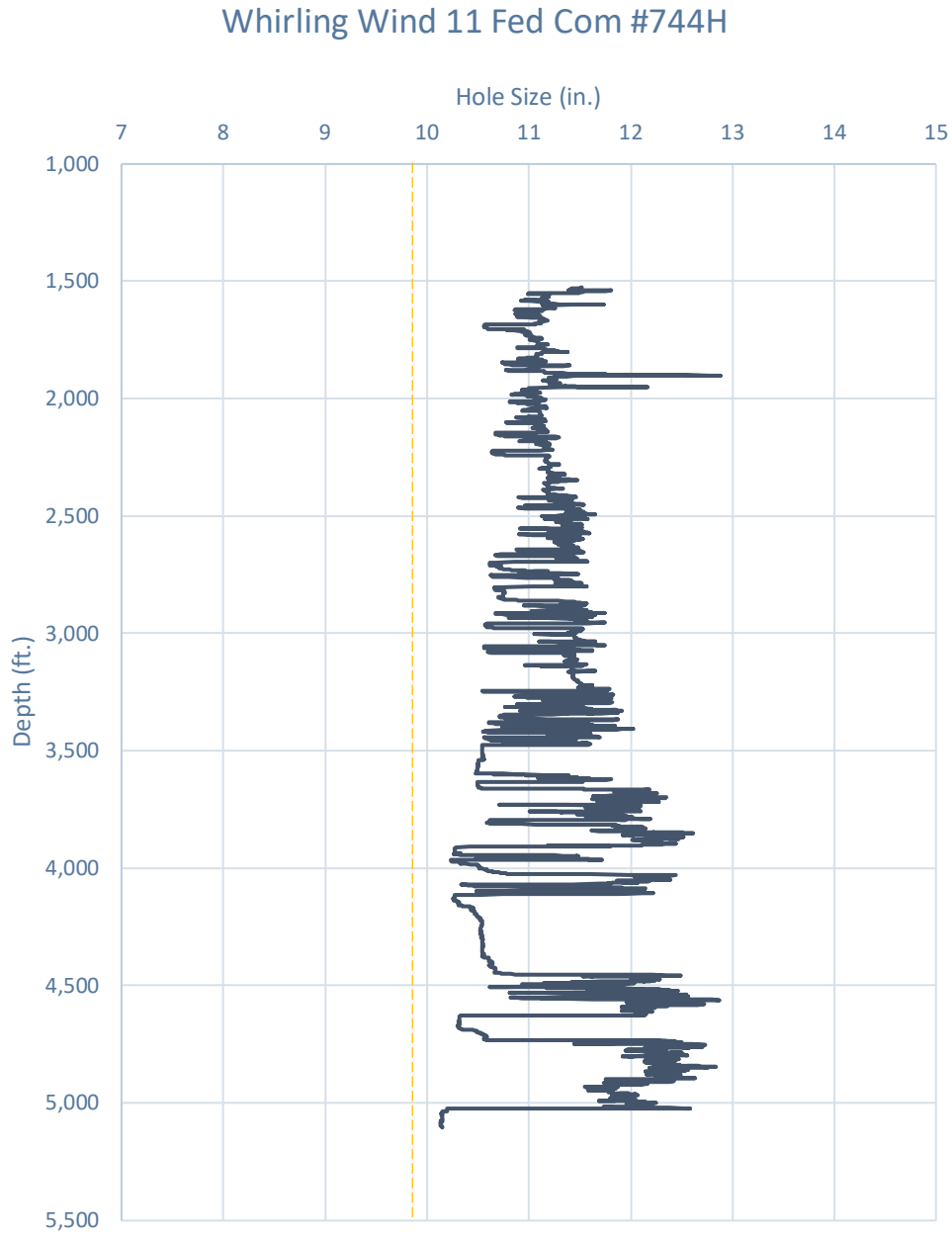
- 12.25” Bit
  - 12.76” Hole
    - 4.14% diameter increase
    - 8.44% area increase
  - 0.51” Average enlargement
  - 0.52” Median enlargement
  - Brine



Caliper Hole Size (9.875”)

Average Hole Size

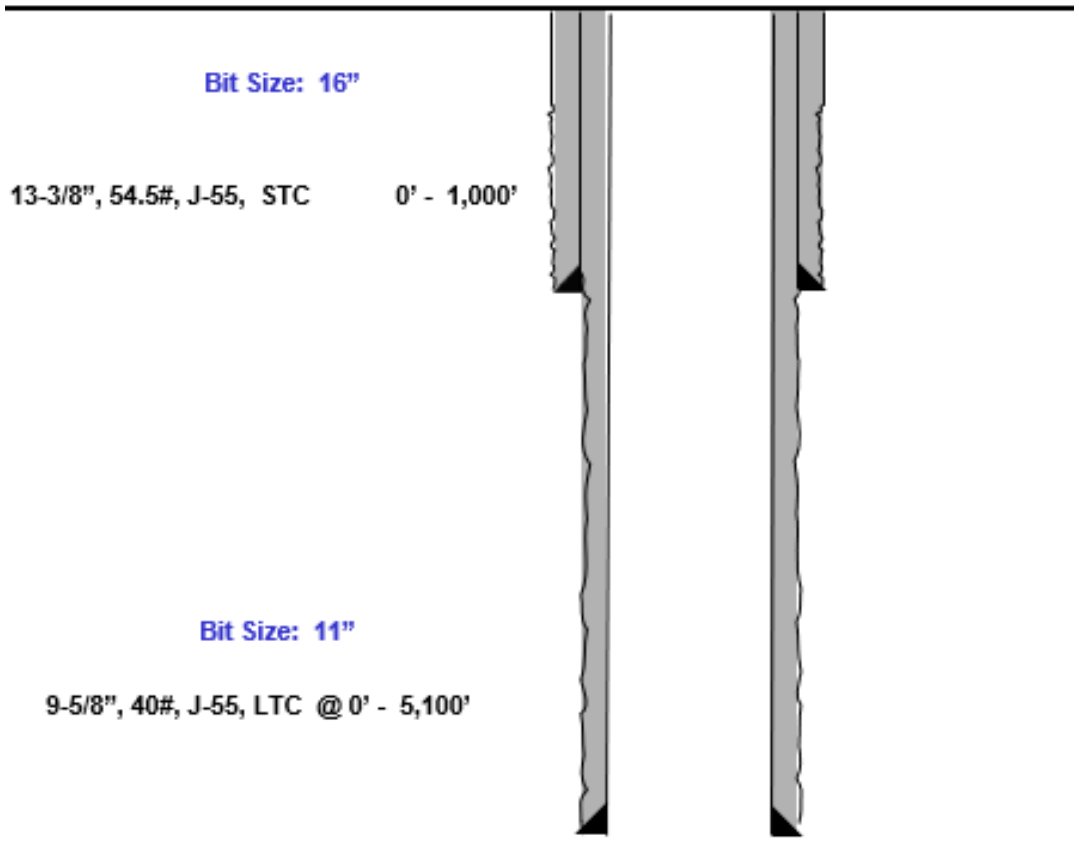
- 9.875” Hole
  - 11.21” Hole
    - 13.54% diameter increase
    - 28.92% area increase
  - 1.33” Average enlargement
  - 1.30” Median enlargement
  - EnerLite



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

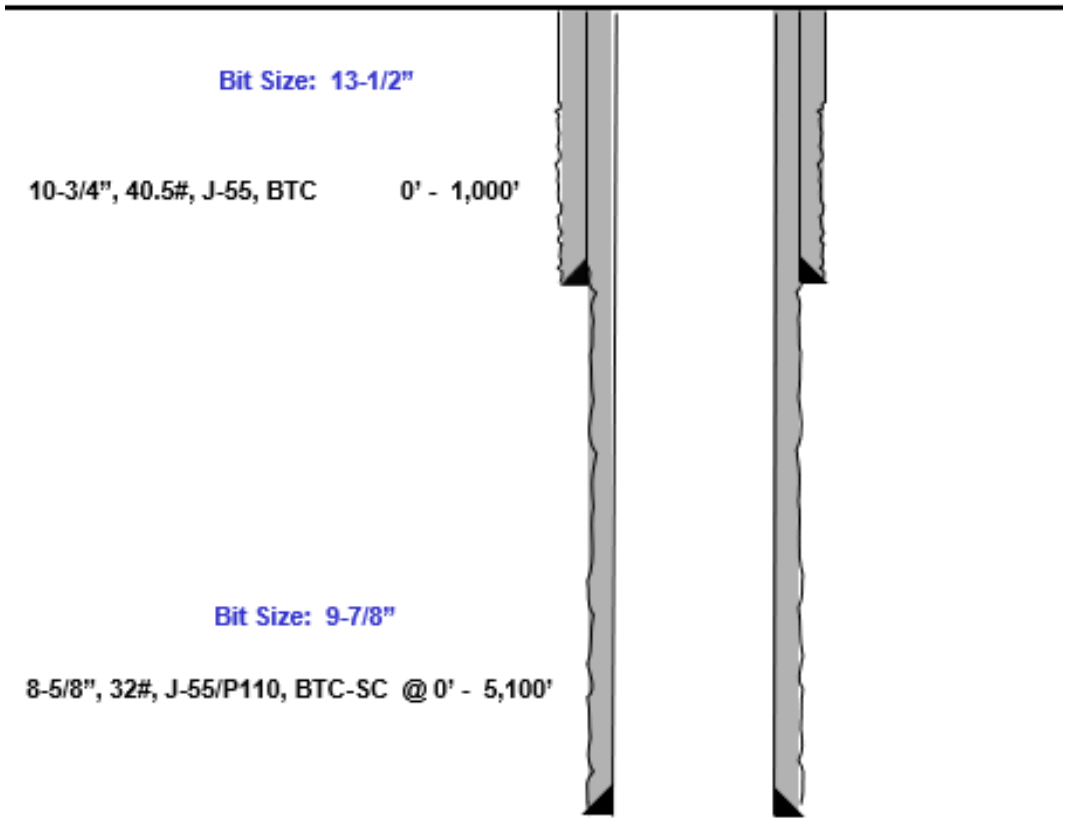
Proposed 9.875” Hole with 8.625” 32# J55/P110 BTC-SC Casing

- 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

Casing Spec Sheets

PERFORMANCE DATA

API LTC 9.625 in 40.00 lbs/ft K55 HC

Technical Data Sheet

Tubular Parameters

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

Connection Parameters

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

Pipe Body and API Connections Performance Data

13.375 54.50/0.380 J55 PDF

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USC Metric

6/8/2015 10:04:37 AM

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

Casing Spec Sheets

Pipe Body and API Connections Performance Data

10.750 40.50/0.350 J55 PDF

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USC Metric

6/8/2015 10:14:05 AM

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

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

vallourec

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^2
*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.

Rev 3, 7/30/2021 10/21/2022 15:24

Grackle 26 East Fed Com 101H API #: 30-025-*** Variances**

EOG respectfully requests the below variances to be applied to the above well:

- Variance is requested to waive the centralizer requirements for the intermediate casing in the intermediate hole. An expansion additive will be utilized, in the cement slurry, for the entire length of the intermediate interval to maximize cement bond and zonal isolation.
- Variance is also requested to waive the centralizer requirements for the production casing in the production hole. An expansion additive will be utilized, in the cement slurry, for the entire length of the production interval to maximize cement bond and zonal isolation.

- Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).
- Variance is requested to use a 5,000 psi annular BOP with the 10,000 psi BOP stack.
- 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.

EOG requests the additional variance(s) in the attached document(s):

- EOG BLM Variance 3a_b - BOP Break-test and Offline Intermediate Cement
- EOG BLM Variance 4a - Salt Section Annular Clearance
- EOG BLM Variance 5a - Alternate Shallow Casing Designs

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

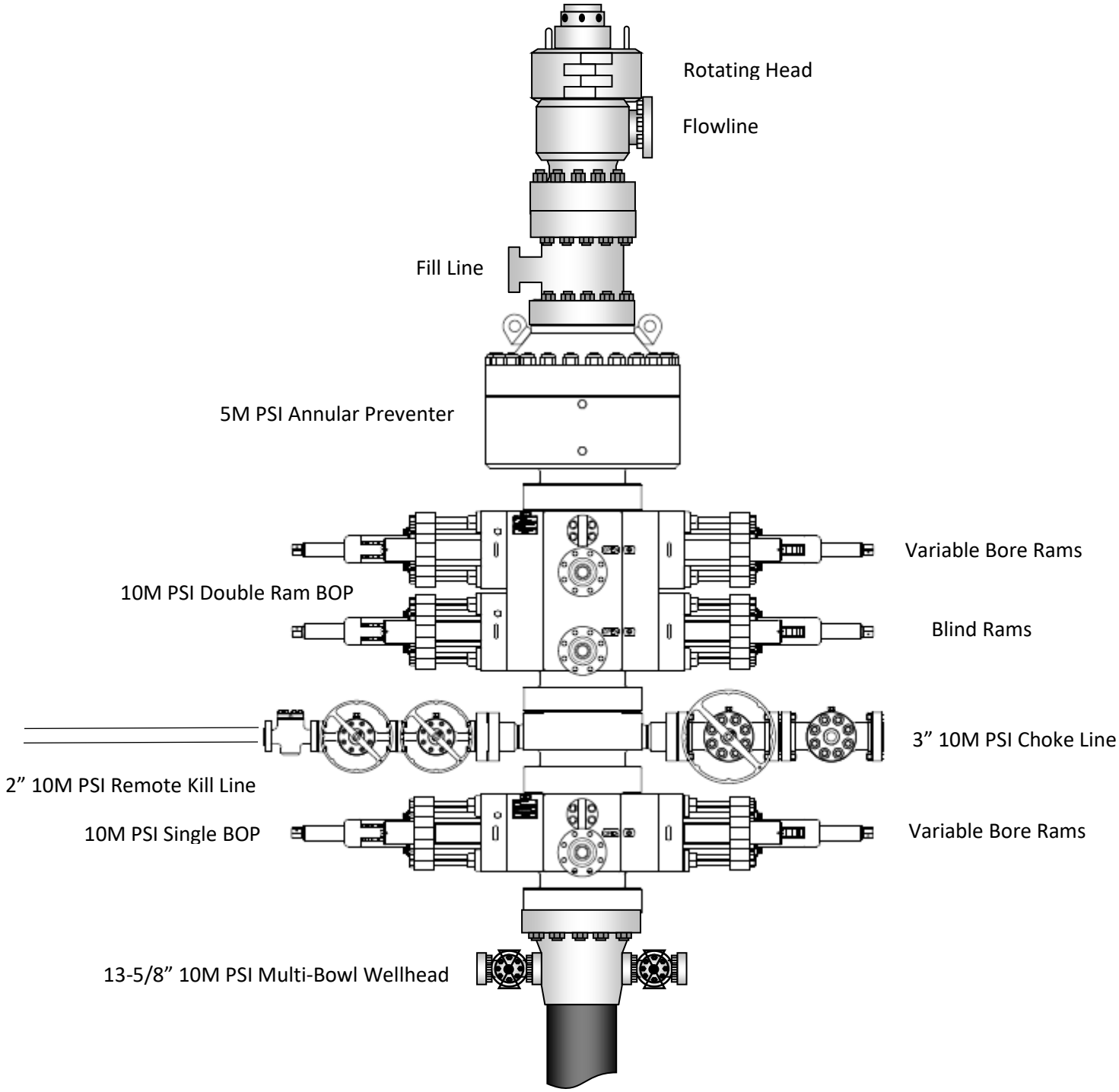
The tables below outlines the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

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	-	-
1st 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	-	-
2nd 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

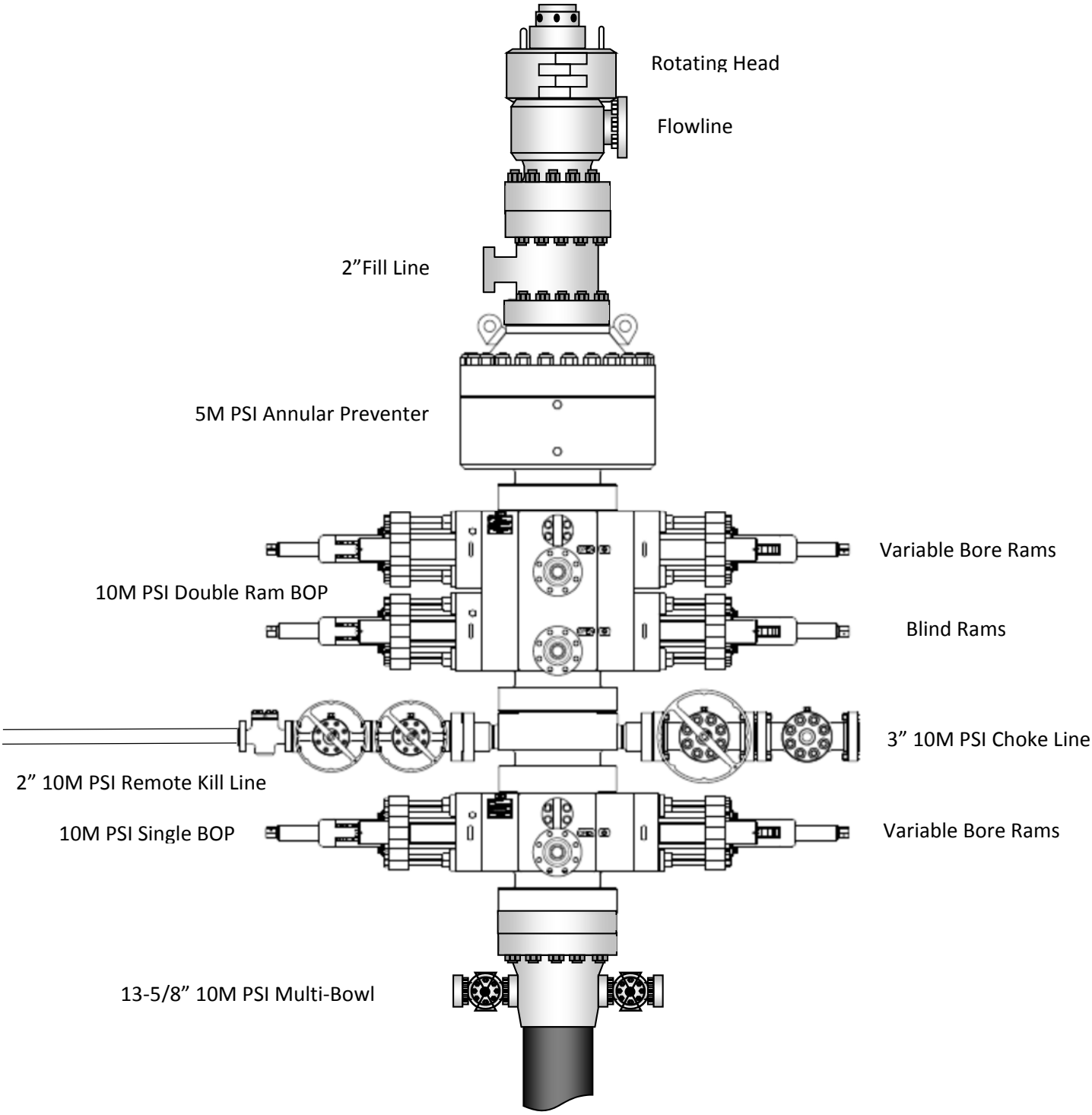
General Procedures While Pulling BHA thru Stack

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

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



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

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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^2
*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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Grackle 26 East Fed Com 304H

1. GEOLOGIC NAME OF SURFACE FORMATION:
Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	989'
Tamarisk Anhydrite	1,094'
Top of Salt	1,559'
Base of Salt	4,976'
Lamar	5,244'
Bell Canyon	5,272'
Cherry Canyon	6,209'
Brushy Canyon	7,702'
Bone Spring Lime	9,078'
Leonard (Avalon) Shale	9,429'
1st Bone Spring Sand	10,461'
2nd Bone Spring Shale	10,692'
2nd Bone Spring Sand	10,984'
3rd Bone Spring Carb	11,492'
3rd Bone Spring Sand	12,019'
Wolfcamp	12,320'
TD	10,647'

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

Upper Permian Sands	0- 400’	Fresh Water
Bell Canyon	5,272'	Oil
Cherry Canyon	6,209'	Oil
Brushy Canyon	7,702'	Oil
Leonard (Avalon) Shale	9,429'	Oil
1st Bone Spring Sand	10,461'	Oil
2nd Bone Spring Shale	10,692'	Oil
2nd Bone Spring Sand	10,984'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 10-3/4" casing at 1,120' and circulating cement back to surface.

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4. CASING PROGRAM

Hole Size	Interval MD From (ft)	Interval MD To (ft)	Interval TVD From (ft)	Interval TVD To (ft)	Csg OD	Weight	Grade	Conn
13-1/2"	0	1,120	0	1,120	10-3/4"	40.5#	J-55	STC
9-7/8"	0	5,178	0	5,080	8-5/8"	32#	J-55	BTC-SC
6-3/4"	0	20,956	0	10,647	5-1/2"	20#	P110-EC	DWC/C IS MS

Hole will be full during casing run for well control and tensile SF factor. Casing will be kept at least half full during run for this design to meet BLM collapse SF requirement. External pressure will be reviewed prior to conducting casing pressure tests to ensure that 70% of the yield is not exceeded.

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 Title 43 CFR Part 3170 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.

5. CEMENTING PROGRAM:

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
1,120' 10-3/4''	290	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	140	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 920')
5,280' 8-5/8''	320	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	140	14.8	1.32	Tail: Class C + 10% NaCL + 3% MagOx (TOC @ 4142')
20,956' 5-1/2''	350	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 4680')
	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 @ 10270')

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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.

6. 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.

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Grackle 26 East Fed Com 304H

7. 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 – 1,120'	Fresh - Gel	8.6-8.8	28-34	N/c
1,120' – 5,180'	Brine	9-10.5	28-34	N/c
5,180' – 20,956' 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.

8. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

(A) A kelly cock will be kept in the drill string at all times.

(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

(C) H2S monitoring and detection equipment will be utilized from surface casing point to TD.

9. 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.

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

The estimated bottom-hole temperature (BHT) at TD is 176 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 4,983 psig and a maximum anticipated surface pressure of 2,640 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 7,702' to intermediate casing point.

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Grackle 26 East Fed Com 304H

11. 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.

12. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the surface casing, a 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 Title 43 CFR Part 3170.

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 Title 43 CFR Part 3170 to at least 0.22 psi/ft or 1,500 psi, whichever is greater.

Grackle 26 East Fed Com 304H

13. VARIANCE REQUESTS:

EOG requests the additional variance(s) in the attached document(s):

- EOG BLM Variance 3a_b - BOP Break-test and Offline Intermediate Cement
- EOG BLM Variance 4a - Salt Section Annular Clearance
- EOG BLM Variance 5a - Alternate Shallow Casing Designs

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Grackle 26 East Fed Com 304H

14. TUBING REQUIREMENTS:

EOG respectively requests an exception to the following NMOCD rule:

- 19.15.16.10 Casing AND TUBING RQUIREMENTS:
  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.

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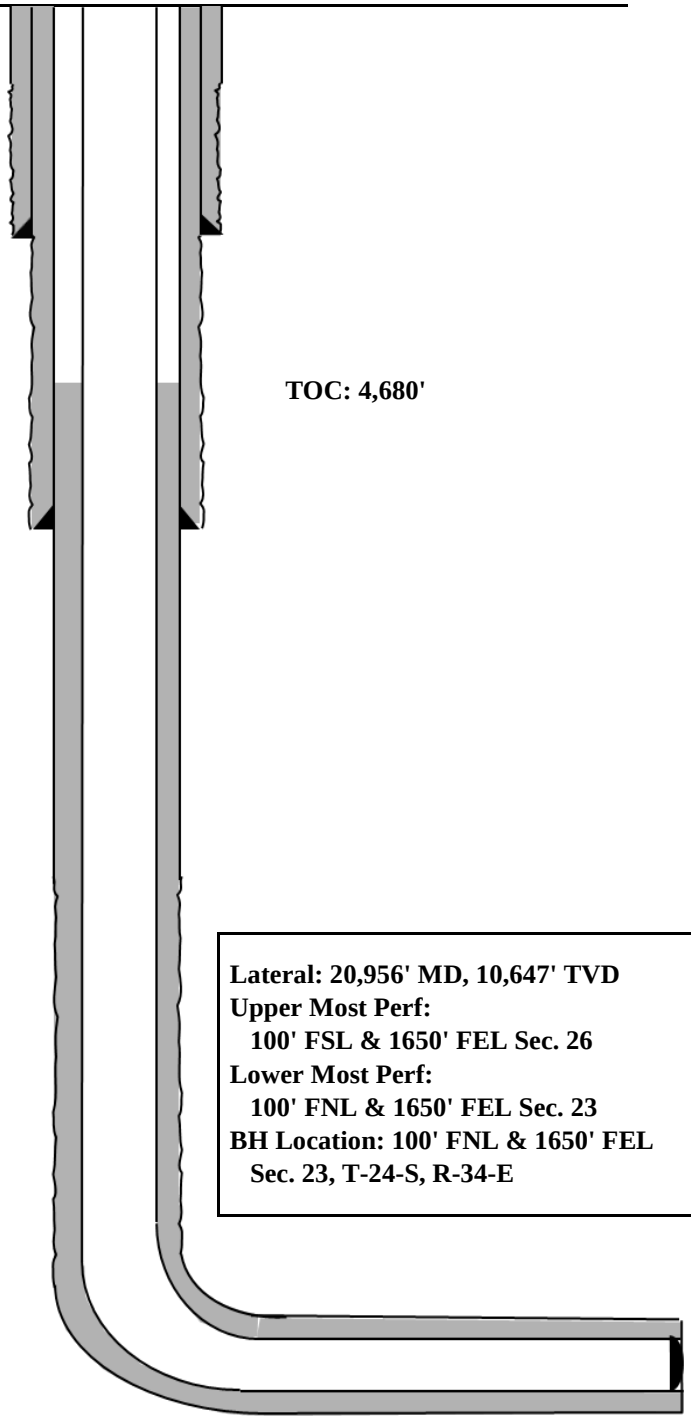
Grackle 26 East Fed Com 304H

718' FSL
750' FEL
Section 26
T-24-S, R-34-E

Proposed Wellbore

API: 30-025-*****

KB: 3455'
GL: 3430'



Bit Size: 13-1/2''
10-3/4'', 40.5#, J-55, STC
@ 0' - 1,120'

Bit Size: 9-7/8''
8-5/8'', 32.#, J-55, BTC-SC
@ 0' - 5,180'

TOC: 4,680'

Bit Size: 6-3/4''
5-1/2'', 20.#, P110-EC, DWC/C IS MS
@ 0' - 20,956'

Lateral: 20,956' MD, 10,647' TVD
Upper Most Perf:
100' FSL & 1650' FEL Sec. 26
Lower Most Perf:
100' FNL & 1650' FEL Sec. 23
BH Location: 100' FNL & 1650' FEL
Sec. 23, T-24-S, R-34-E

KOP: 10,263' MD, 9,338' TVD
EOC: 11,013' MD, 9,911' TVD

Bit Size: 6-3/4''

Grackle 26 East Fed Com #304H

Hydrogen Sulfide Plan Summary

A. All personnel shall receive proper H2S training in accordance with Onshore Order III.C.3.a.

B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.

C. Required Emergency Equipment:

- **Well control equipment**
  a. Flare line 150' from wellhead to be ignited by flare gun.
  b. Choke manifold with a remotely operated choke.
  c. Mud/gas separator
- **Protective equipment for essential personnel:**
  a. Breathing Apparatus:
    i. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
    ii. Work/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.

Grackle 26 East Fed Com #304H

- **Mud Program:**
  The mud program has been designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S 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 H2S service.

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

eog resources

Grackle 26 East Fed Com #304H

Emergency Assistance Telephone List

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

Midland

Lea County, NM (NAD 83 NME)
Grackle 26 East Fed Com #
#304H

OH

Plan: Plan #0.1 RT

Standard Planning Report

01 April, 2024

Planning Report

Database:	PEDMB	**Local Co-ordinate Reference:**	Well #304H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3456.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3456.0usft
Site:	Grackle 26 East Fed Com #	**North Reference:**	Grid
Well:	#304H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1 RT		

Project Lea County, NM (NAD 83 NME)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Grackle 26 East Fed Com #

Site Position:		**Northing:**	430,017.00 usft	**Latitude:**	32° 10' 44.525 N
From:	Map	**Easting:**	817,955.00 usft	**Longitude:**	103° 26' 21.331 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well #304H

Well Position	**+N/-S**	0.0 usft	**Northing:**	431,470.00 usft	**Latitude:**	32° 10' 58.785 N
	+E/-W	0.0 usft	**Easting:**	819,373.00 usft	**Longitude:**	103° 26' 4.692 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,430.0 usft
Grid Convergence:		0.48 °				

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	4/1/2024	6.15	59.79	47,191.48058781

Design Plan #0.1 RT

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	354.30

Plan Survey Tool Program **Date** 4/1/2024

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	20,956.0	Plan #0.1 RT (OH)	EOG MWD+IFR1	
				MWD + IFR1	

Planning Report

Database:	PEDMB	**Local Co-ordinate Reference:**	Well #304H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3456.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3456.0usft
Site:	Grackle 26 East Fed Com #	**North Reference:**	Grid
Well:	#304H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1 RT		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,710.5	10.21	235.96	1,707.8	-25.4	-37.6	2.00	2.00	0.00	235.96	
7,285.2	10.21	235.96	7,194.2	-578.6	-856.4	0.00	0.00	0.00	0.00	
7,795.7	0.00	0.00	7,702.0	-604.0	-894.0	2.00	-2.00	0.00	180.00	
10,263.2	0.00	0.00	10,169.5	-604.0	-894.0	0.00	0.00	0.00	0.00	KOP(Grackle 26 East
10,483.6	26.46	358.85	10,382.2	-554.0	-895.0	12.00	12.00	-0.52	358.85	FTP(Grackle 26 East
11,013.1	90.00	359.54	10,646.9	-126.6	-900.0	12.00	12.00	0.13	0.76	
20,956.0	90.00	359.54	10,647.0	9,816.0	-980.0	0.00	0.00	0.00	0.00	PBHL(Grackle 26 Eas

Planning Report

Database:	PEDMB	**Local Co-ordinate Reference:**	Well #304H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3456.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3456.0usft
Site:	Grackle 26 East Fed Com #	**North Reference:**	Grid
Well:	#304H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	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	2.00	235.96	1,300.0	-1.0	-1.4	-0.8	2.00	2.00	0.00
1,400.0	4.00	235.96	1,399.8	-3.9	-5.8	-3.3	2.00	2.00	0.00
1,500.0	6.00	235.96	1,499.5	-8.8	-13.0	-7.5	2.00	2.00	0.00
1,600.0	8.00	235.96	1,598.7	-15.6	-23.1	-13.2	2.00	2.00	0.00
1,700.0	10.00	235.96	1,697.5	-24.4	-36.1	-20.7	2.00	2.00	0.00
1,710.5	10.21	235.96	1,707.8	-25.4	-37.6	-21.5	2.00	2.00	0.00
1,800.0	10.21	235.96	1,795.9	-34.3	-50.7	-29.1	0.00	0.00	0.00
1,900.0	10.21	235.96	1,894.3	-44.2	-65.4	-37.5	0.00	0.00	0.00
2,000.0	10.21	235.96	1,992.7	-54.1	-80.1	-45.9	0.00	0.00	0.00
2,100.0	10.21	235.96	2,091.1	-64.0	-94.8	-54.3	0.00	0.00	0.00
2,200.0	10.21	235.96	2,189.6	-74.0	-109.5	-62.7	0.00	0.00	0.00
2,300.0	10.21	235.96	2,288.0	-83.9	-124.2	-71.1	0.00	0.00	0.00
2,400.0	10.21	235.96	2,386.4	-93.8	-138.9	-79.6	0.00	0.00	0.00
2,500.0	10.21	235.96	2,484.8	-103.7	-153.6	-88.0	0.00	0.00	0.00
2,600.0	10.21	235.96	2,583.2	-113.7	-168.2	-96.4	0.00	0.00	0.00
2,700.0	10.21	235.96	2,681.6	-123.6	-182.9	-104.8	0.00	0.00	0.00
2,800.0	10.21	235.96	2,780.0	-133.5	-197.6	-113.2	0.00	0.00	0.00
2,900.0	10.21	235.96	2,878.5	-143.4	-212.3	-121.6	0.00	0.00	0.00
3,000.0	10.21	235.96	2,976.9	-153.4	-227.0	-130.1	0.00	0.00	0.00
3,100.0	10.21	235.96	3,075.3	-163.3	-241.7	-138.5	0.00	0.00	0.00
3,200.0	10.21	235.96	3,173.7	-173.2	-256.4	-146.9	0.00	0.00	0.00
3,300.0	10.21	235.96	3,272.1	-183.1	-271.1	-155.3	0.00	0.00	0.00
3,400.0	10.21	235.96	3,370.5	-193.1	-285.7	-163.7	0.00	0.00	0.00
3,500.0	10.21	235.96	3,469.0	-203.0	-300.4	-172.1	0.00	0.00	0.00
3,600.0	10.21	235.96	3,567.4	-212.9	-315.1	-180.5	0.00	0.00	0.00
3,700.0	10.21	235.96	3,665.8	-222.8	-329.8	-189.0	0.00	0.00	0.00
3,800.0	10.21	235.96	3,764.2	-232.7	-344.5	-197.4	0.00	0.00	0.00
3,900.0	10.21	235.96	3,862.6	-242.7	-359.2	-205.8	0.00	0.00	0.00
4,000.0	10.21	235.96	3,961.0	-252.6	-373.9	-214.2	0.00	0.00	0.00
4,100.0	10.21	235.96	4,059.5	-262.5	-388.6	-222.6	0.00	0.00	0.00
4,200.0	10.21	235.96	4,157.9	-272.4	-403.3	-231.0	0.00	0.00	0.00
4,300.0	10.21	235.96	4,256.3	-282.4	-417.9	-239.5	0.00	0.00	0.00
4,400.0	10.21	235.96	4,354.7	-292.3	-432.6	-247.9	0.00	0.00	0.00
4,500.0	10.21	235.96	4,453.1	-302.2	-447.3	-256.3	0.00	0.00	0.00
4,600.0	10.21	235.96	4,551.5	-312.1	-462.0	-264.7	0.00	0.00	0.00
4,700.0	10.21	235.96	4,650.0	-322.1	-476.7	-273.1	0.00	0.00	0.00
4,800.0	10.21	235.96	4,748.4	-332.0	-491.4	-281.5	0.00	0.00	0.00
4,900.0	10.21	235.96	4,846.8	-341.9	-506.1	-289.9	0.00	0.00	0.00
5,000.0	10.21	235.96	4,945.2	-351.8	-520.8	-298.4	0.00	0.00	0.00
5,100.0	10.21	235.96	5,043.6	-361.8	-535.4	-306.8	0.00	0.00	0.00
5,200.0	10.21	235.96	5,142.0	-371.7	-550.1	-315.2	0.00	0.00	0.00

Planning Report

Database:	PEDMB	**Local Co-ordinate Reference:**	Well #304H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3456.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3456.0usft
Site:	Grackle 26 East Fed Com #	**North Reference:**	Grid
Well:	#304H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1 RT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	10.21	235.96	5,240.5	-381.6	-564.8	-323.6	0.00	0.00	0.00
5,400.0	10.21	235.96	5,338.9	-391.5	-579.5	-332.0	0.00	0.00	0.00
5,500.0	10.21	235.96	5,437.3	-401.5	-594.2	-340.4	0.00	0.00	0.00
5,600.0	10.21	235.96	5,535.7	-411.4	-608.9	-348.9	0.00	0.00	0.00
5,700.0	10.21	235.96	5,634.1	-421.3	-623.6	-357.3	0.00	0.00	0.00
5,800.0	10.21	235.96	5,732.5	-431.2	-638.3	-365.7	0.00	0.00	0.00
5,900.0	10.21	235.96	5,831.0	-441.1	-653.0	-374.1	0.00	0.00	0.00
6,000.0	10.21	235.96	5,929.4	-451.1	-667.6	-382.5	0.00	0.00	0.00
6,100.0	10.21	235.96	6,027.8	-461.0	-682.3	-390.9	0.00	0.00	0.00
6,200.0	10.21	235.96	6,126.2	-470.9	-697.0	-399.3	0.00	0.00	0.00
6,300.0	10.21	235.96	6,224.6	-480.8	-711.7	-407.8	0.00	0.00	0.00
6,400.0	10.21	235.96	6,323.0	-490.8	-726.4	-416.2	0.00	0.00	0.00
6,500.0	10.21	235.96	6,421.5	-500.7	-741.1	-424.6	0.00	0.00	0.00
6,600.0	10.21	235.96	6,519.9	-510.6	-755.8	-433.0	0.00	0.00	0.00
6,700.0	10.21	235.96	6,618.3	-520.5	-770.5	-441.4	0.00	0.00	0.00
6,800.0	10.21	235.96	6,716.7	-530.5	-785.1	-449.8	0.00	0.00	0.00
6,900.0	10.21	235.96	6,815.1	-540.4	-799.8	-458.2	0.00	0.00	0.00
7,000.0	10.21	235.96	6,913.5	-550.3	-814.5	-466.7	0.00	0.00	0.00
7,100.0	10.21	235.96	7,012.0	-560.2	-829.2	-475.1	0.00	0.00	0.00
7,200.0	10.21	235.96	7,110.4	-570.2	-843.9	-483.5	0.00	0.00	0.00
7,285.2	10.21	235.96	7,194.2	-578.6	-856.4	-490.7	0.00	0.00	0.00
7,300.0	9.91	235.96	7,208.8	-580.1	-858.6	-491.9	2.00	-2.00	0.00
7,400.0	7.91	235.96	7,307.6	-588.7	-871.4	-499.2	2.00	-2.00	0.00
7,500.0	5.91	235.96	7,406.8	-595.5	-881.4	-505.0	2.00	-2.00	0.00
7,600.0	3.91	235.96	7,506.5	-600.3	-888.5	-509.0	2.00	-2.00	0.00
7,700.0	1.91	235.96	7,606.3	-603.1	-892.7	-511.4	2.00	-2.00	0.00
7,795.7	0.00	0.00	7,702.0	-604.0	-894.0	-512.2	2.00	-2.00	0.00
7,800.0	0.00	0.00	7,706.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
7,900.0	0.00	0.00	7,806.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
8,000.0	0.00	0.00	7,906.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
8,100.0	0.00	0.00	8,006.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
8,200.0	0.00	0.00	8,106.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
8,300.0	0.00	0.00	8,206.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
8,400.0	0.00	0.00	8,306.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
8,500.0	0.00	0.00	8,406.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
8,600.0	0.00	0.00	8,506.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
8,700.0	0.00	0.00	8,606.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
8,800.0	0.00	0.00	8,706.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
8,900.0	0.00	0.00	8,806.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
9,000.0	0.00	0.00	8,906.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
9,100.0	0.00	0.00	9,006.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
9,200.0	0.00	0.00	9,106.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
9,300.0	0.00	0.00	9,206.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
9,400.0	0.00	0.00	9,306.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
9,500.0	0.00	0.00	9,406.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
9,600.0	0.00	0.00	9,506.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
9,700.0	0.00	0.00	9,606.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
9,800.0	0.00	0.00	9,706.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
9,900.0	0.00	0.00	9,806.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
10,000.0	0.00	0.00	9,906.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
10,100.0	0.00	0.00	10,006.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
10,200.0	0.00	0.00	10,106.3	-604.0	-894.0	-512.2	0.00	0.00	0.00
10,263.2	0.00	0.00	10,169.5	-604.0	-894.0	-512.2	0.00	0.00	0.00
10,275.0	1.42	358.85	10,181.3	-603.9	-894.0	-512.1	12.00	12.00	0.00

Planning Report

Database:	PEDMB	**Local Co-ordinate Reference:**	Well #304H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3456.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3456.0usft
Site:	Grackle 26 East Fed Com #	**North Reference:**	Grid
Well:	#304H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	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)
10,300.0	4.42	358.85	10,206.3	-602.6	-894.0	-510.8	12.00	12.00	0.00
10,325.0	7.42	358.85	10,231.1	-600.0	-894.1	-508.2	12.00	12.00	0.00
10,350.0	10.42	358.85	10,255.8	-596.1	-894.2	-504.3	12.00	12.00	0.00
10,375.0	13.42	358.85	10,280.3	-591.0	-894.3	-499.2	12.00	12.00	0.00
10,400.0	16.42	358.85	10,304.5	-584.5	-894.4	-492.8	12.00	12.00	0.00
10,425.0	19.42	358.85	10,328.2	-576.8	-894.5	-485.1	12.00	12.00	0.00
10,450.0	22.43	358.85	10,351.6	-567.9	-894.7	-476.2	12.00	12.00	0.00
10,475.0	25.43	358.85	10,374.4	-557.8	-894.9	-466.1	12.00	12.00	0.00
10,483.6	26.46	358.85	10,382.2	-554.0	-895.0	-462.3	12.00	12.00	0.00
10,500.0	28.43	358.91	10,396.7	-546.5	-895.1	-454.8	12.00	12.00	0.34
10,525.0	31.43	358.98	10,418.4	-534.0	-895.4	-442.4	12.00	12.00	0.29
10,550.0	34.43	359.04	10,439.4	-520.4	-895.6	-428.9	12.00	12.00	0.24
10,575.0	37.43	359.09	10,459.6	-505.7	-895.8	-414.2	12.00	12.00	0.21
10,600.0	40.43	359.14	10,479.1	-490.0	-896.1	-398.6	12.00	12.00	0.18
10,625.0	43.43	359.18	10,497.7	-473.3	-896.3	-381.9	12.00	12.00	0.16
10,650.0	46.43	359.21	10,515.4	-455.7	-896.6	-364.4	12.00	12.00	0.14
10,675.0	49.43	359.25	10,532.1	-437.1	-896.8	-345.9	12.00	12.00	0.13
10,700.0	52.42	359.28	10,547.9	-417.7	-897.1	-326.5	12.00	12.00	0.12
10,725.0	55.42	359.30	10,562.6	-397.5	-897.3	-306.4	12.00	12.00	0.11
10,750.0	58.42	359.33	10,576.2	-376.6	-897.6	-285.5	12.00	12.00	0.10
10,775.0	61.42	359.35	10,588.8	-354.9	-897.8	-264.0	12.00	12.00	0.10
10,800.0	64.42	359.38	10,600.1	-332.7	-898.1	-241.8	12.00	12.00	0.09
10,825.0	67.42	359.40	10,610.3	-309.9	-898.3	-219.1	12.00	12.00	0.09
10,850.0	70.42	359.42	10,619.3	-286.5	-898.6	-195.9	12.00	12.00	0.08
10,875.0	73.42	359.44	10,627.1	-262.8	-898.8	-172.2	12.00	12.00	0.08
10,900.0	76.42	359.46	10,633.6	-238.7	-899.0	-148.2	12.00	12.00	0.08
10,925.0	79.42	359.48	10,638.8	-214.2	-899.3	-123.8	12.00	12.00	0.07
10,950.0	82.42	359.49	10,642.7	-189.5	-899.5	-99.2	12.00	12.00	0.07
10,975.0	85.42	359.51	10,645.4	-164.7	-899.7	-74.5	12.00	12.00	0.07
11,000.0	88.42	359.53	10,646.7	-139.7	-899.9	-49.6	12.00	12.00	0.07
11,013.1	90.00	359.54	10,646.9	-126.6	-900.0	-36.5	12.00	12.00	0.07
11,100.0	90.00	359.54	10,646.9	-39.7	-900.7	50.0	0.00	0.00	0.00
11,200.0	90.00	359.54	10,646.9	60.3	-901.5	149.5	0.00	0.00	0.00
11,300.0	90.00	359.54	10,646.9	160.3	-902.3	249.1	0.00	0.00	0.00
11,400.0	90.00	359.54	10,646.9	260.3	-903.1	348.7	0.00	0.00	0.00
11,500.0	90.00	359.54	10,646.9	360.3	-903.9	448.3	0.00	0.00	0.00
11,600.0	90.00	359.54	10,646.9	460.3	-904.7	547.9	0.00	0.00	0.00
11,700.0	90.00	359.54	10,646.9	560.3	-905.5	647.5	0.00	0.00	0.00
11,800.0	90.00	359.54	10,646.9	660.3	-906.3	747.0	0.00	0.00	0.00
11,900.0	90.00	359.54	10,646.9	760.3	-907.1	846.6	0.00	0.00	0.00
12,000.0	90.00	359.54	10,646.9	860.3	-908.0	946.2	0.00	0.00	0.00
12,100.0	90.00	359.54	10,646.9	960.3	-908.8	1,045.8	0.00	0.00	0.00
12,200.0	90.00	359.54	10,646.9	1,060.3	-909.6	1,145.4	0.00	0.00	0.00
12,300.0	90.00	359.54	10,646.9	1,160.2	-910.4	1,244.9	0.00	0.00	0.00
12,400.0	90.00	359.54	10,646.9	1,260.2	-911.2	1,344.5	0.00	0.00	0.00
12,500.0	90.00	359.54	10,646.9	1,360.2	-912.0	1,444.1	0.00	0.00	0.00
12,600.0	90.00	359.54	10,646.9	1,460.2	-912.8	1,543.7	0.00	0.00	0.00
12,700.0	90.00	359.54	10,646.9	1,560.2	-913.6	1,643.3	0.00	0.00	0.00
12,800.0	90.00	359.54	10,646.9	1,660.2	-914.4	1,742.9	0.00	0.00	0.00
12,900.0	90.00	359.54	10,646.9	1,760.2	-915.2	1,842.4	0.00	0.00	0.00
13,000.0	90.00	359.54	10,646.9	1,860.2	-916.0	1,942.0	0.00	0.00	0.00
13,100.0	90.00	359.54	10,646.9	1,960.2	-916.8	2,041.6	0.00	0.00	0.00
13,200.0	90.00	359.54	10,646.9	2,060.2	-917.6	2,141.2	0.00	0.00	0.00
13,300.0	90.00	359.54	10,646.9	2,160.2	-918.4	2,240.8	0.00	0.00	0.00

Planning Report

Database:	PEDMB	**Local Co-ordinate Reference:**	Well #304H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3456.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3456.0usft
Site:	Grackle 26 East Fed Com #	**North Reference:**	Grid
Well:	#304H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1 RT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,400.0	90.00	359.54	10,646.9	2,260.2	-919.2	2,340.3	0.00	0.00	0.00
13,500.0	90.00	359.54	10,646.9	2,360.2	-920.0	2,439.9	0.00	0.00	0.00
13,600.0	90.00	359.54	10,646.9	2,460.2	-920.8	2,539.5	0.00	0.00	0.00
13,700.0	90.00	359.54	10,646.9	2,560.2	-921.6	2,639.1	0.00	0.00	0.00
13,800.0	90.00	359.54	10,646.9	2,660.2	-922.4	2,738.7	0.00	0.00	0.00
13,900.0	90.00	359.54	10,646.9	2,760.2	-923.2	2,838.3	0.00	0.00	0.00
14,000.0	90.00	359.54	10,646.9	2,860.2	-924.0	2,937.8	0.00	0.00	0.00
14,100.0	90.00	359.54	10,646.9	2,960.2	-924.8	3,037.4	0.00	0.00	0.00
14,200.0	90.00	359.54	10,646.9	3,060.2	-925.7	3,137.0	0.00	0.00	0.00
14,300.0	90.00	359.54	10,646.9	3,160.2	-926.5	3,236.6	0.00	0.00	0.00
14,400.0	90.00	359.54	10,646.9	3,260.2	-927.3	3,336.2	0.00	0.00	0.00
14,500.0	90.00	359.54	10,646.9	3,360.2	-928.1	3,435.8	0.00	0.00	0.00
14,600.0	90.00	359.54	10,646.9	3,460.2	-928.9	3,535.3	0.00	0.00	0.00
14,700.0	90.00	359.54	10,646.9	3,560.2	-929.7	3,634.9	0.00	0.00	0.00
14,800.0	90.00	359.54	10,646.9	3,660.2	-930.5	3,734.5	0.00	0.00	0.00
14,900.0	90.00	359.54	10,646.9	3,760.2	-931.3	3,834.1	0.00	0.00	0.00
15,000.0	90.00	359.54	10,646.9	3,860.2	-932.1	3,933.7	0.00	0.00	0.00
15,100.0	90.00	359.54	10,646.9	3,960.2	-932.9	4,033.2	0.00	0.00	0.00
15,200.0	90.00	359.54	10,647.0	4,060.2	-933.7	4,132.8	0.00	0.00	0.00
15,300.0	90.00	359.54	10,647.0	4,160.2	-934.5	4,232.4	0.00	0.00	0.00
15,400.0	90.00	359.54	10,647.0	4,260.1	-935.3	4,332.0	0.00	0.00	0.00
15,500.0	90.00	359.54	10,647.0	4,360.1	-936.1	4,431.6	0.00	0.00	0.00
15,600.0	90.00	359.54	10,647.0	4,460.1	-936.9	4,531.2	0.00	0.00	0.00
15,700.0	90.00	359.54	10,647.0	4,560.1	-937.7	4,630.7	0.00	0.00	0.00
15,800.0	90.00	359.54	10,647.0	4,660.1	-938.5	4,730.3	0.00	0.00	0.00
15,900.0	90.00	359.54	10,647.0	4,760.1	-939.3	4,829.9	0.00	0.00	0.00
16,000.0	90.00	359.54	10,647.0	4,860.1	-940.1	4,929.5	0.00	0.00	0.00
16,100.0	90.00	359.54	10,647.0	4,960.1	-940.9	5,029.1	0.00	0.00	0.00
16,200.0	90.00	359.54	10,647.0	5,060.1	-941.7	5,128.6	0.00	0.00	0.00
16,300.0	90.00	359.54	10,647.0	5,160.1	-942.5	5,228.2	0.00	0.00	0.00
16,400.0	90.00	359.54	10,647.0	5,260.1	-943.3	5,327.8	0.00	0.00	0.00
16,500.0	90.00	359.54	10,647.0	5,360.1	-944.2	5,427.4	0.00	0.00	0.00
16,600.0	90.00	359.54	10,647.0	5,460.1	-945.0	5,527.0	0.00	0.00	0.00
16,700.0	90.00	359.54	10,647.0	5,560.1	-945.8	5,626.6	0.00	0.00	0.00
16,800.0	90.00	359.54	10,647.0	5,660.1	-946.6	5,726.1	0.00	0.00	0.00
16,900.0	90.00	359.54	10,647.0	5,760.1	-947.4	5,825.7	0.00	0.00	0.00
17,000.0	90.00	359.54	10,647.0	5,860.1	-948.2	5,925.3	0.00	0.00	0.00
17,100.0	90.00	359.54	10,647.0	5,960.1	-949.0	6,024.9	0.00	0.00	0.00
17,200.0	90.00	359.54	10,647.0	6,060.1	-949.8	6,124.5	0.00	0.00	0.00
17,300.0	90.00	359.54	10,647.0	6,160.1	-950.6	6,224.0	0.00	0.00	0.00
17,400.0	90.00	359.54	10,647.0	6,260.1	-951.4	6,323.6	0.00	0.00	0.00
17,500.0	90.00	359.54	10,647.0	6,360.1	-952.2	6,423.2	0.00	0.00	0.00
17,600.0	90.00	359.54	10,647.0	6,460.1	-953.0	6,522.8	0.00	0.00	0.00
17,700.0	90.00	359.54	10,647.0	6,560.1	-953.8	6,622.4	0.00	0.00	0.00
17,800.0	90.00	359.54	10,647.0	6,660.1	-954.6	6,722.0	0.00	0.00	0.00
17,900.0	90.00	359.54	10,647.0	6,760.1	-955.4	6,821.5	0.00	0.00	0.00
18,000.0	90.00	359.54	10,647.0	6,860.1	-956.2	6,921.1	0.00	0.00	0.00
18,100.0	90.00	359.54	10,647.0	6,960.1	-957.0	7,020.7	0.00	0.00	0.00
18,200.0	90.00	359.54	10,647.0	7,060.1	-957.8	7,120.3	0.00	0.00	0.00
18,300.0	90.00	359.54	10,647.0	7,160.1	-958.6	7,219.9	0.00	0.00	0.00
18,400.0	90.00	359.54	10,647.0	7,260.1	-959.4	7,319.5	0.00	0.00	0.00
18,500.0	90.00	359.54	10,647.0	7,360.0	-960.2	7,419.0	0.00	0.00	0.00
18,600.0	90.00	359.54	10,647.0	7,460.0	-961.0	7,518.6	0.00	0.00	0.00
18,700.0	90.00	359.54	10,647.0	7,560.0	-961.9	7,618.2	0.00	0.00	0.00

Planning Report

Database:	PEDMB	**Local Co-ordinate Reference:**	Well #304H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3456.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3456.0usft
Site:	Grackle 26 East Fed Com #	**North Reference:**	Grid
Well:	#304H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	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)
18,800.0	90.00	359.54	10,647.0	7,660.0	-962.7	7,717.8	0.00	0.00	0.00
18,900.0	90.00	359.54	10,647.0	7,760.0	-963.5	7,817.4	0.00	0.00	0.00
19,000.0	90.00	359.54	10,647.0	7,860.0	-964.3	7,916.9	0.00	0.00	0.00
19,100.0	90.00	359.54	10,647.0	7,960.0	-965.1	8,016.5	0.00	0.00	0.00
19,200.0	90.00	359.54	10,647.0	8,060.0	-965.9	8,116.1	0.00	0.00	0.00
19,300.0	90.00	359.54	10,647.0	8,160.0	-966.7	8,215.7	0.00	0.00	0.00
19,400.0	90.00	359.54	10,647.0	8,260.0	-967.5	8,315.3	0.00	0.00	0.00
19,500.0	90.00	359.54	10,647.0	8,360.0	-968.3	8,414.9	0.00	0.00	0.00
19,600.0	90.00	359.54	10,647.0	8,460.0	-969.1	8,514.4	0.00	0.00	0.00
19,700.0	90.00	359.54	10,647.0	8,560.0	-969.9	8,614.0	0.00	0.00	0.00
19,800.0	90.00	359.54	10,647.0	8,660.0	-970.7	8,713.6	0.00	0.00	0.00
19,900.0	90.00	359.54	10,647.0	8,760.0	-971.5	8,813.2	0.00	0.00	0.00
20,000.0	90.00	359.54	10,647.0	8,860.0	-972.3	8,912.8	0.00	0.00	0.00
20,100.0	90.00	359.54	10,647.0	8,960.0	-973.1	9,012.3	0.00	0.00	0.00
20,200.0	90.00	359.54	10,647.0	9,060.0	-973.9	9,111.9	0.00	0.00	0.00
20,300.0	90.00	359.54	10,647.0	9,160.0	-974.7	9,211.5	0.00	0.00	0.00
20,400.0	90.00	359.54	10,647.0	9,260.0	-975.5	9,311.1	0.00	0.00	0.00
20,500.0	90.00	359.54	10,647.0	9,360.0	-976.3	9,410.7	0.00	0.00	0.00
20,600.0	90.00	359.54	10,647.0	9,460.0	-977.1	9,510.3	0.00	0.00	0.00
20,700.0	90.00	359.54	10,647.0	9,560.0	-977.9	9,609.8	0.00	0.00	0.00
20,800.0	90.00	359.54	10,647.0	9,660.0	-978.7	9,709.4	0.00	0.00	0.00
20,900.0	90.00	359.54	10,647.0	9,760.0	-979.5	9,809.0	0.00	0.00	0.00
20,956.0	90.00	359.54	10,647.0	9,816.0	-980.0	9,864.8	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP(Grackle 26 East Fe - plan hits target center - Point	0.00	0.00	10,169.5	-604.0	-894.0	430,866.00	818,479.00	32° 10' 52.882 N	103° 26' 15.152 W
FTP(Grackle 26 East Fe - plan hits target center - Point	0.00	0.00	10,382.2	-554.0	-895.0	430,916.00	818,478.00	32° 10' 53.377 N	103° 26' 15.159 W
PBHL(Grackle 26 East F - plan hits target center - Point	0.00	0.00	10,647.0	9,816.0	-980.0	441,286.00	818,393.00	32° 12' 35.994 N	103° 26' 15.143 W

eog resources

Lea County, NM (NAD 83 NME)

Grackle 26 East Fed Com # #304H

Plan #0.1 RT

Azimuths to Grid North
True North: -0.48°
Magnetic North: 5.67°

Magnetic Field
Strength: 47191.5nT
Dip Angle: 59.79°
Date: 4/1/2024
Model: IGRF2020

To convert a Magnetic Direction to a Grid Direction, Add 5.67°
To convert a Magnetic Direction to a True Direction, Add 6.15° East
To convert a True Direction to a Grid Direction, Subtract 0.48°

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

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

WELL DETAILS: #304H

3430.0
kb = 26' @ 3456.0usft

Northing	Easting	Latitude	Longitude
431470.00	819373.00	32° 10' 58.785 N	103° 26' 4.692 W

SECTION DETAILS

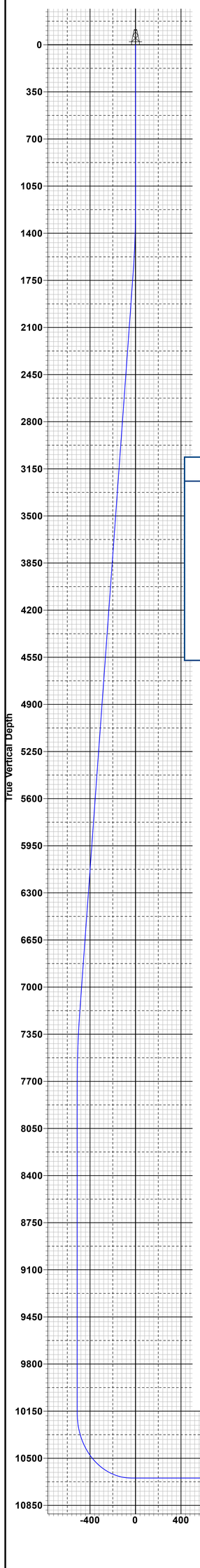
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	1710.5	10.21	235.96	1707.8	-25.4	-37.6	2.00	235.96	-21.5	
4	7285.2	10.21	235.96	7194.2	-578.6	-856.4	0.00	0.00	-490.7	
5	7795.7	0.00	0.00	7702.0	-604.0	-894.0	2.00	180.00	-512.2	
6	10263.2	0.00	0.00	10169.5	-604.0	-894.0	0.00	0.00	-512.2	KOP(Grackle 26 East Fed Com #304H)
7	10483.6	26.46	358.85	10382.2	-554.0	-895.0	12.00	358.85	-462.3	FTP(Grackle 26 East Fed Com #304H)
8	11013.1	90.00	359.54	10646.9	-126.6	-900.0	12.00	0.76	-36.5	
9	20956.0	90.00	359.54	10647.0	9816.0	-980.0	0.00	0.00	9864.8	PBHL(Grackle 26 East Fed Com #304H)

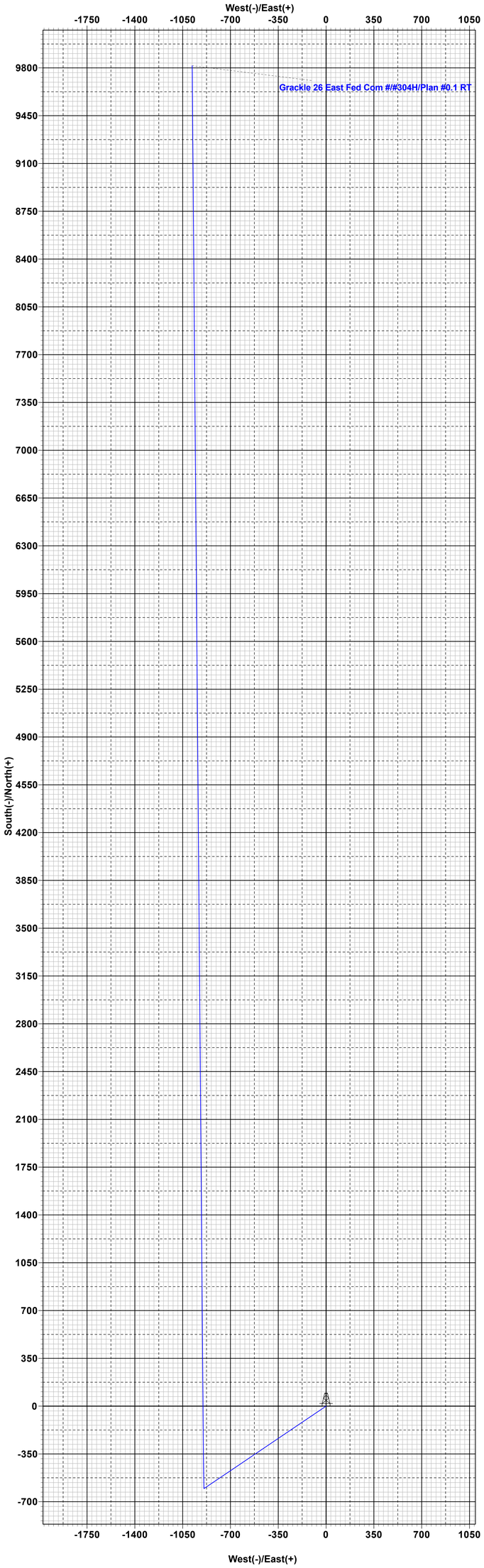
CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP(Grackle 26 East Fed Com #304H)	10169.5	-604.0	-894.0	430866.00	818479.00
FTP(Grackle 26 East Fed Com #304H)	10382.2	-554.0	-895.0	430916.00	818478.00
PBHL(Grackle 26 East Fed Com #304H)	10647.0	9816.0	-980.0	441286.00	818393.00





Lea County, NM (NAD 83 NME)
Grackle 26 East Fed Com #
#304H
OH
Plan #0.1 RT
14:30, April 01 2024

eog resources

Grackle 26 East Fed Com 304H

1. GEOLOGIC NAME OF SURFACE FORMATION:
Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	989'
Tamarisk Anhydrite	1,094'
Top of Salt	1,559'
Base of Salt	4,976'
Lamar	5,244'
Bell Canyon	5,272'
Cherry Canyon	6,209'
Brushy Canyon	7,702'
Bone Spring Lime	9,078'
Leonard (Avalon) Shale	9,429'
1st Bone Spring Sand	10,461'
2nd Bone Spring Shale	10,692'
2nd Bone Spring Sand	10,984'
3rd Bone Spring Carb	11,492'
3rd Bone Spring Sand	12,019'
Wolfcamp	12,320'
TD	10,647'

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

Upper Permian Sands	0- 400’	Fresh Water
Bell Canyon	5,272'	Oil
Cherry Canyon	6,209'	Oil
Brushy Canyon	7,702'	Oil
Leonard (Avalon) Shale	9,429'	Oil
1st Bone Spring Sand	10,461'	Oil
2nd Bone Spring Shale	10,692'	Oil
2nd Bone Spring Sand	10,984'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 10-3/4" casing at 1,120' and circulating cement back to surface.

eog resources

Grackle 26 East Fed Com 304H

4. CASING PROGRAM

Hole Size	Interval MD From (ft)	Interval MD To (ft)	Interval TVD From (ft)	Interval TVD To (ft)	Csg OD	Weight	Grade	Conn
13-1/2"	0	1,120	0	1,120	10-3/4"	40.5#	J-55	STC
9-7/8"	0	5,178	0	5,080	8-5/8"	32#	J-55	BTC-SC
6-3/4"	0	20,956	0	10,647	5-1/2"	20#	P110-EC	DWC/C IS MS

Hole will be full during casing run for well control and tensile SF factor. Casing will be kept at least half full during run for this design to meet BLM collapse SF requirement. External pressure will be reviewed prior to conducting casing pressure tests to ensure that 70% of the yield is not exceeded.

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 Title 43 CFR Part 3170 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.

5. CEMENTING PROGRAM:

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
1,120' 10-3/4''	290	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	140	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 920')
5,280' 8-5/8''	320	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	140	14.8	1.32	Tail: Class C + 10% NaCL + 3% MagOx (TOC @ 4142')
20,956' 5-1/2''	350	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 4680')
	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 @ 10270')

eog resources

Grackle 26 East Fed Com 304H

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.

6. 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.

eog resources

Grackle 26 East Fed Com 304H

7. 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 – 1,120'	Fresh - Gel	8.6-8.8	28-34	N/c
1,120' – 5,180'	Brine	9-10.5	28-34	N/c
5,180' – 20,956' 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.

8. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

(A) A kelly cock will be kept in the drill string at all times.

(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

(C) H2S monitoring and detection equipment will be utilized from surface casing point to TD.

9. 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.

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

The estimated bottom-hole temperature (BHT) at TD is 176 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 4,983 psig and a maximum anticipated surface pressure of 2,640 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 7,702' to intermediate casing point.

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Grackle 26 East Fed Com 304H

11. 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.

12. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the surface casing, a 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 Title 43 CFR Part 3170.

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 Title 43 CFR Part 3170 to at least 0.22 psi/ft or 1,500 psi, whichever is greater.

Grackle 26 East Fed Com 304H

13. VARIANCE REQUESTS:

EOG requests the additional variance(s) in the attached document(s):

- EOG BLM Variance 3a_b - BOP Break-test and Offline Intermediate Cement
- EOG BLM Variance 4a - Salt Section Annular Clearance
- EOG BLM Variance 5a - Alternate Shallow Casing Designs

Grackle 26 East Fed Com 304H

14. TUBING REQUIREMENTS:

EOG respectively requests an exception to the following NMOCD rule:

- 19.15.16.10 Casing AND TUBING RQUIREMENTS:
  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.

eog resources

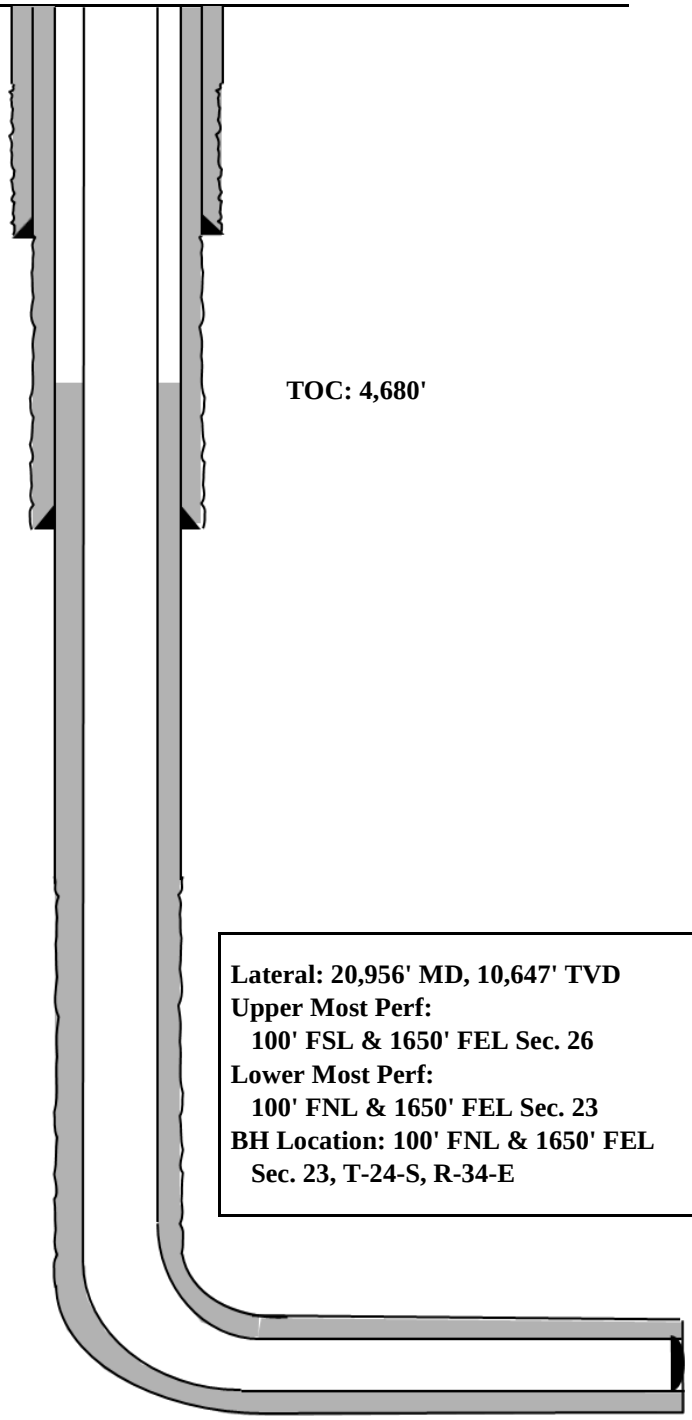
Grackle 26 East Fed Com 304H

718' FSL
750' FEL
Section 26
T-24-S, R-34-E

Proposed Wellbore

API: 30-025-*****

KB: 3455'
GL: 3430'



Bit Size: 13-1/2''
10-3/4'', 40.5#, J-55, STC
@ 0' - 1,120'

Bit Size: 9-7/8''
8-5/8'', 32.#, J-55, BTC-SC
@ 0' - 5,180'

TOC: 4,680'

Bit Size: 6-3/4''
5-1/2'', 20.#, P110-EC, DWC/C IS MS
@ 0' - 20,956'

Lateral: 20,956' MD, 10,647' TVD
Upper Most Perf:
100' FSL & 1650' FEL Sec. 26
Lower Most Perf:
100' FNL & 1650' FEL Sec. 23
BH Location: 100' FNL & 1650' FEL
Sec. 23, T-24-S, R-34-E

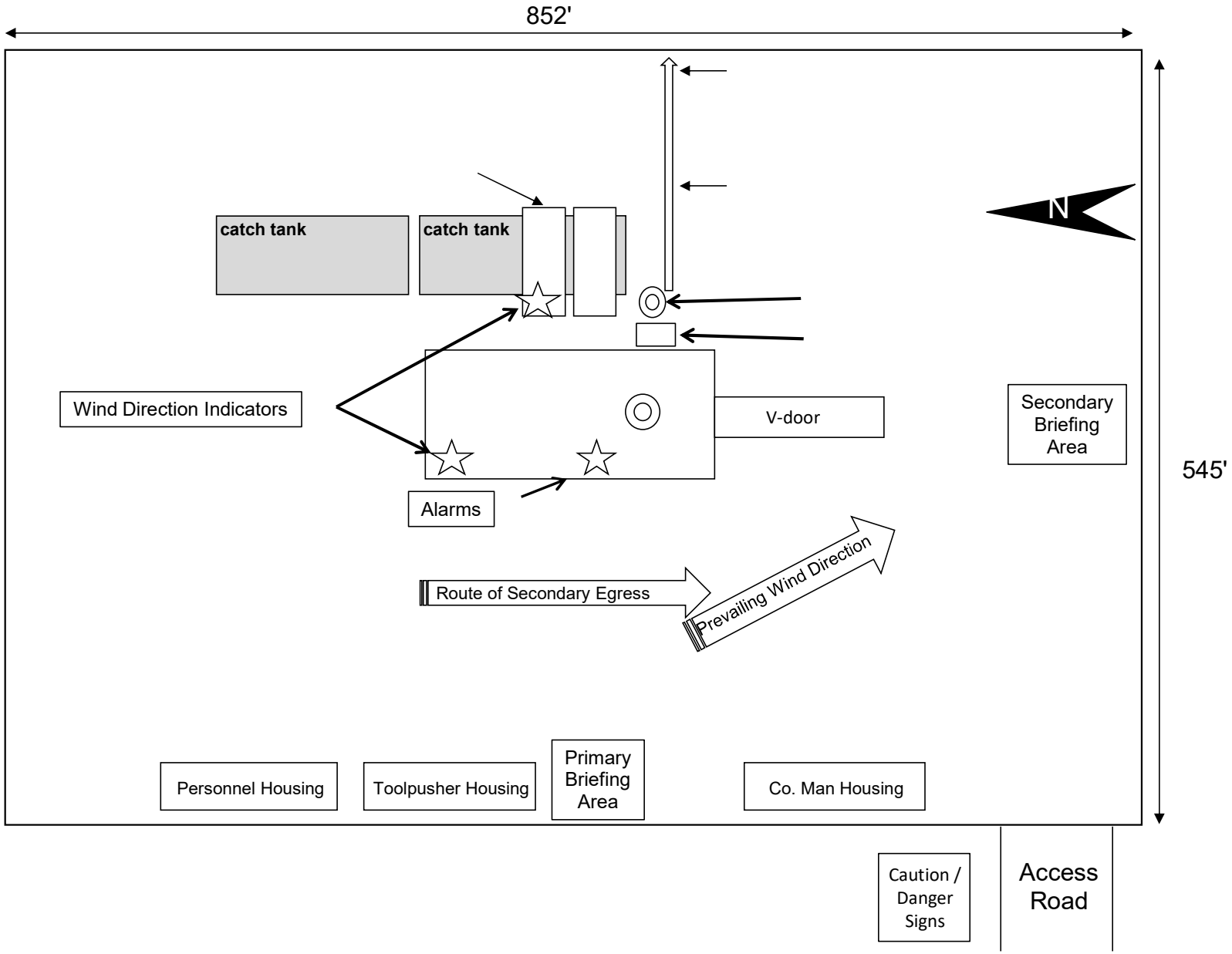
KOP: 10,263' MD, 9,338' TVD
EOC: 11,013' MD, 9,911' TVD

Bit Size: 6-3/4''

Exhibit 4

Well Site Diagram

EOG Resources
Grackle 26 East Fed Com #304H



Pipe Body and API Connections Performance Data

10.750 40.50/0.350 J55

PDF

New Search »

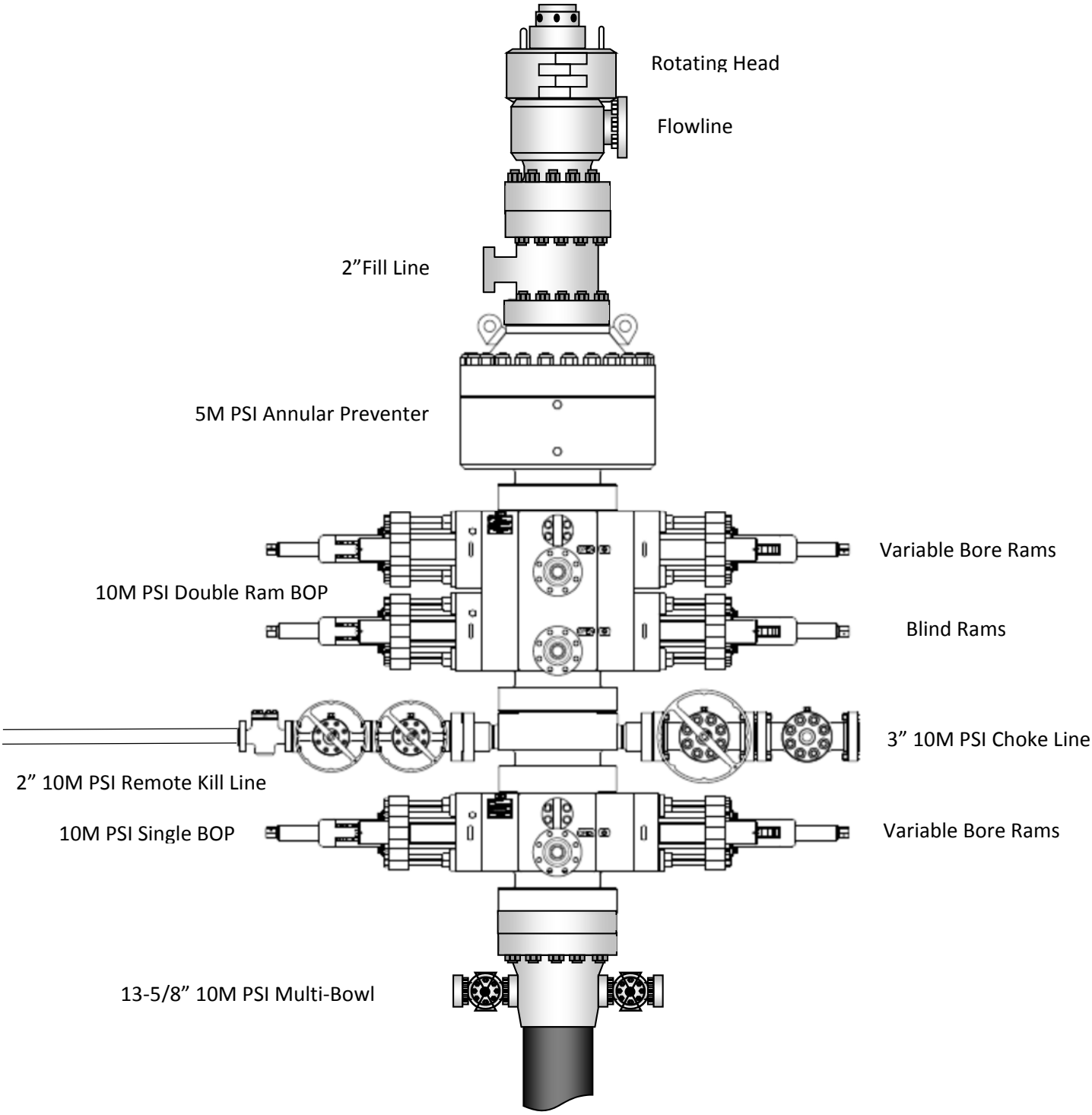
« Back to Previous List

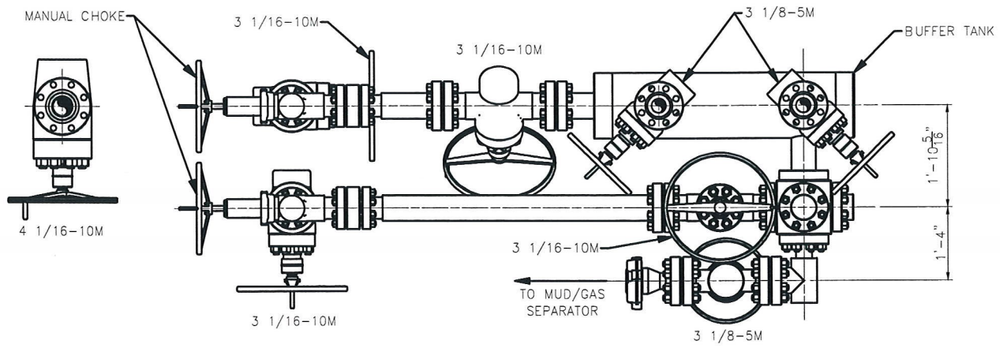
USC Metric

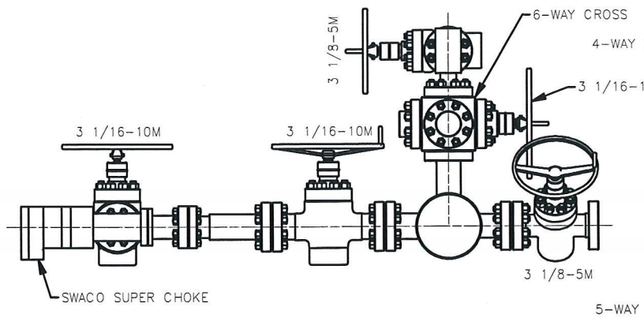
6/8/2015 10:14:05 AM

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

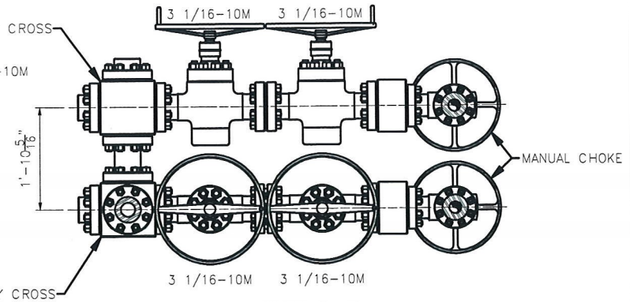
Exhibit 1
EOG Resources
13-5/8” 10M PSI BOP Stack



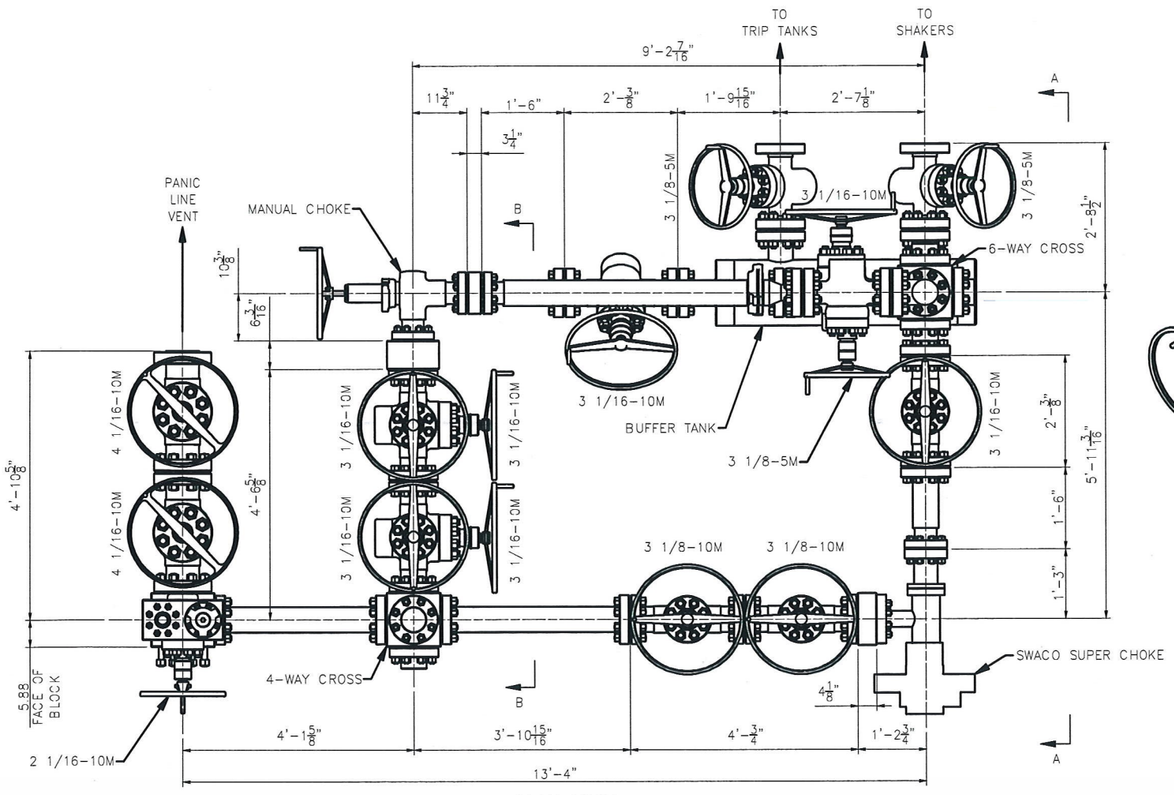




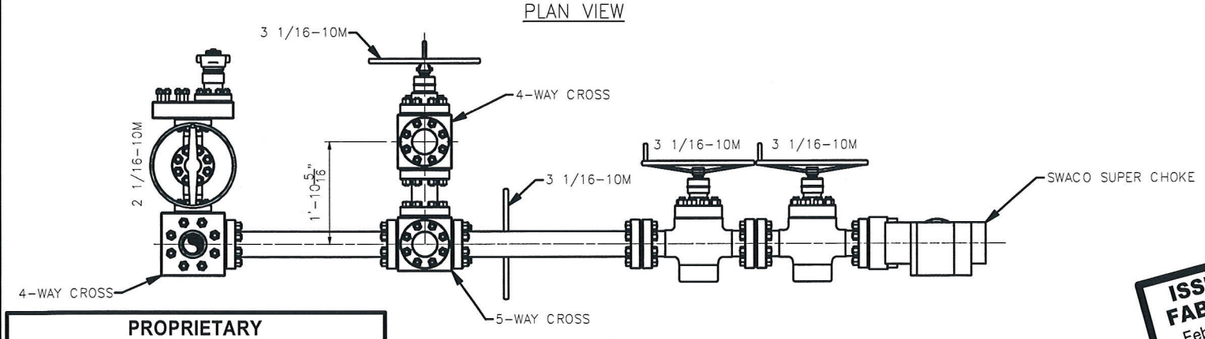
VIEW A-A

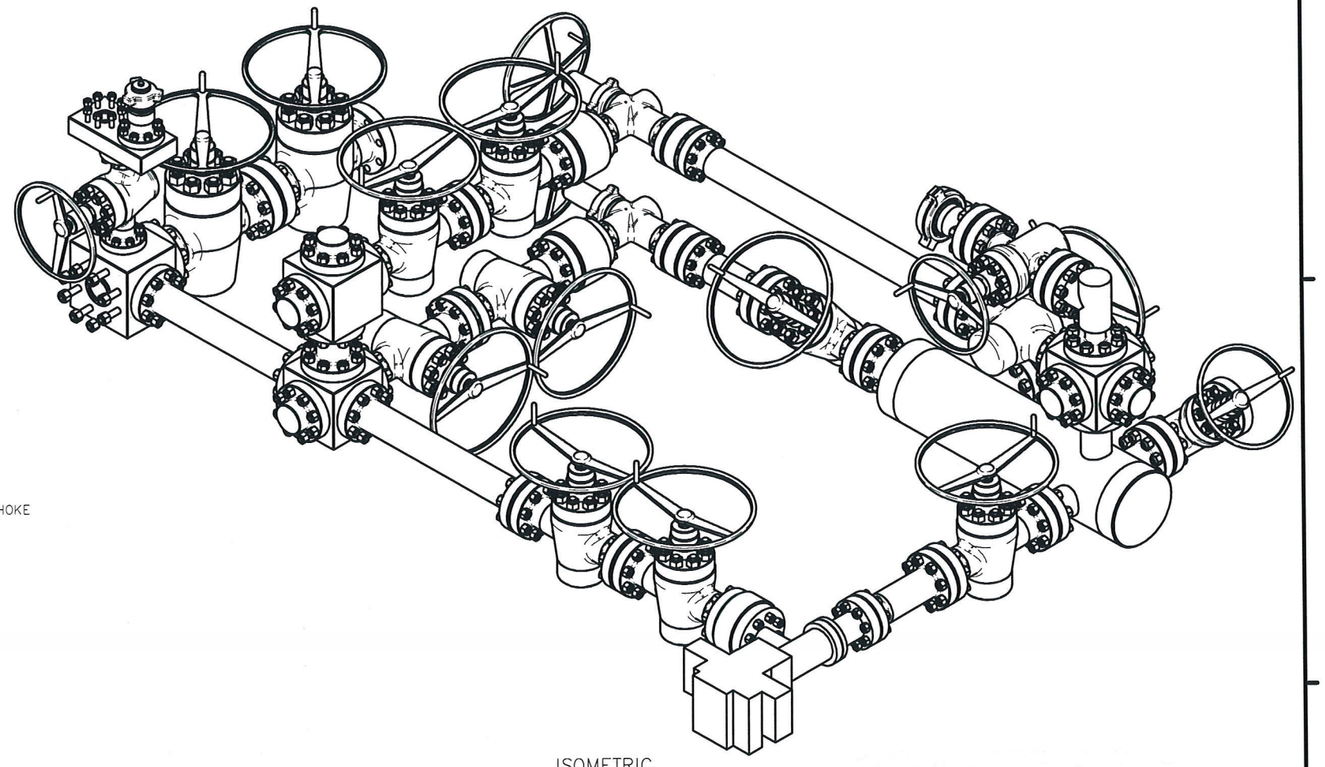


SECTION B-B



PLAN VIEW





ISOMETRIC

PROPRIETARY

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ISSUED FOR FABRICATION
February-10-2014
DRAFTSMAN MWL
ENGINEER

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
	LINEAR (EXPRESSED TO ONE DECIMAL)	±.1
	LINEAR (EXPRESSED TO TWO DECIMALS)	±.015
	LINEAR (EXPRESSED TO THREE DECIMALS)	±.005

REV	DATE	DESCRIPTION	BY
—			

HELMERICH & PAYNE INTERNATIONAL DRILLING CO.

TITLE: 3 CHOKE, 3 LEVEL, 10M CHOKE MANIFOLD G.A.

CUSTOMER: H&P

PROJECT:

DRAWN: MWL | DATE: 2/10/2014 | DWG. NO.: HP-D1254 | REV: —

SCALE: 3/4"=1'-0" | SHEET: 1 OF 1

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

vallourec

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^2
*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.

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

vallourec

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^2
*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

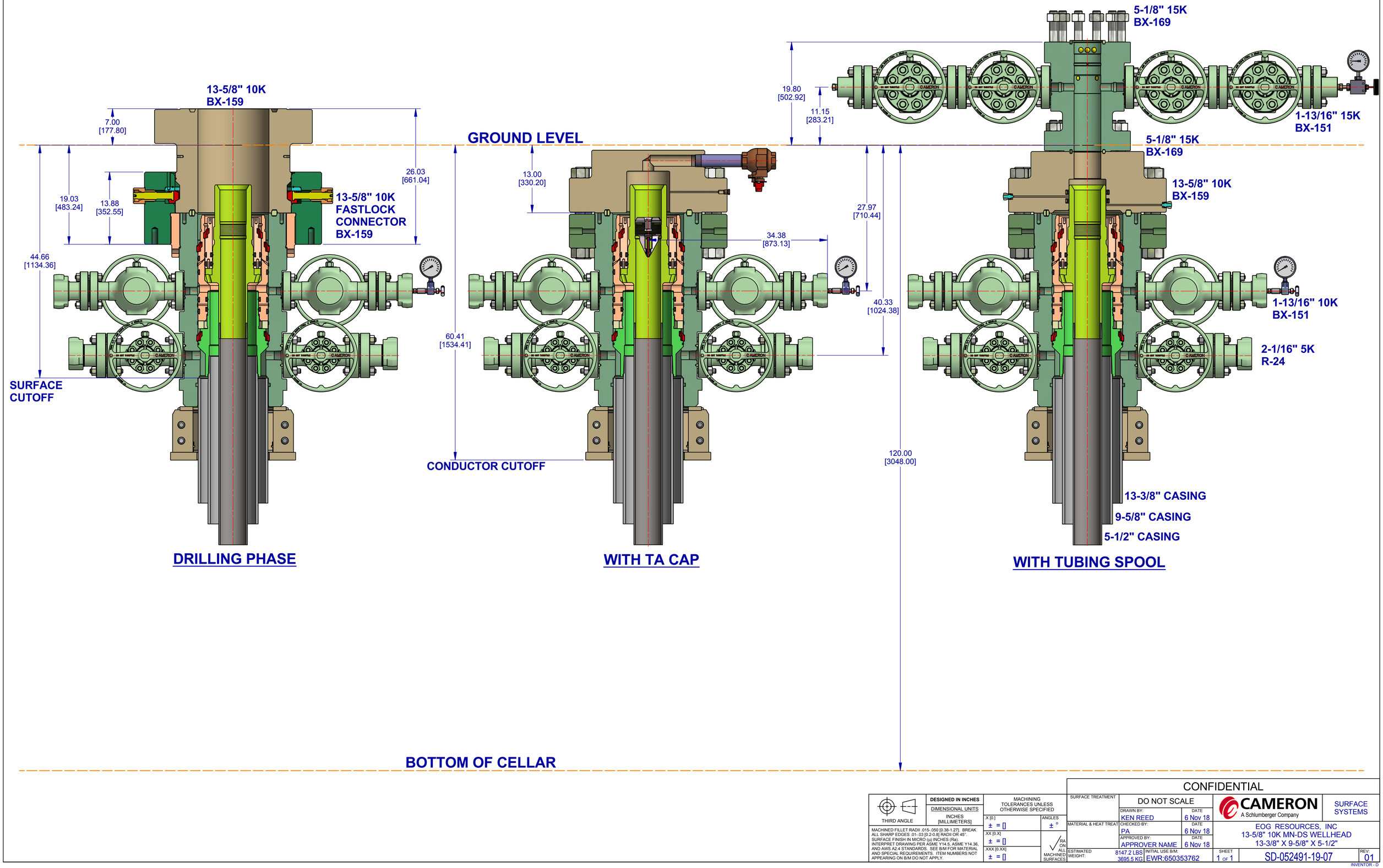
BTC Torque (ft-lbs)

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.

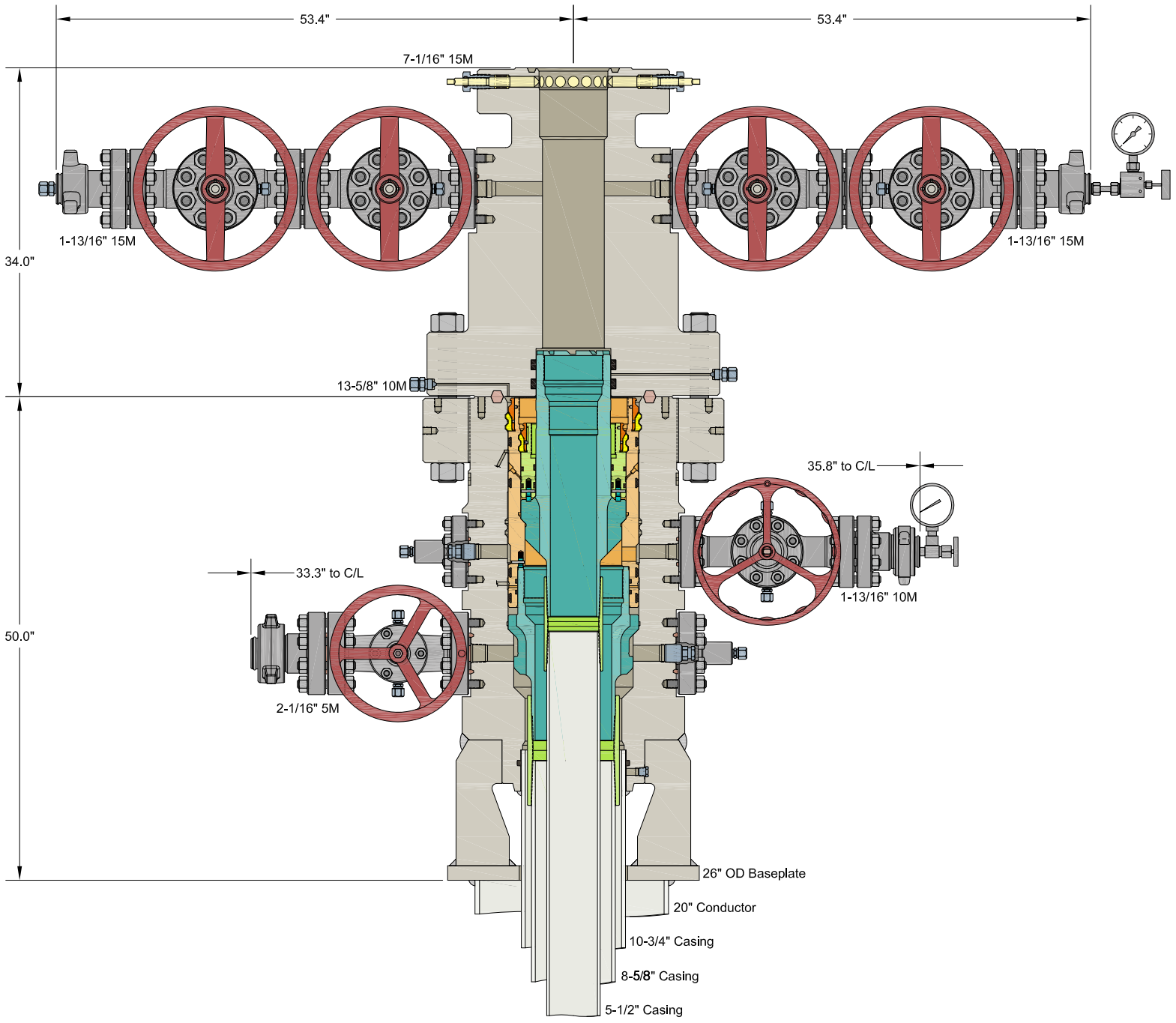
Rev 3, 7/30/2021 10/26/2022 14:52



CONFIDENTIAL

THIRD ANGLE	DESIGNED IN INCHES DIMENSIONAL UNITS INCHES [MILLIMETERS]	MACHINING TOLERANCES UNLESS OTHERWISE SPECIFIED X [0.] ± = [] .XX [0.X] ± = [] .XXX [0.XX] ± = [] ANGLES ± ° RA ON ALL MACHINED SURFACES	SURFACE TREATMENT	DO NOT SCALE	CAMERON A Schlumberger Company / SURFACE SYSTEMS
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 B/M FOR MATERIAL AND SPECIAL REQUIREMENTS. ITEM NUMBERS NOT APPEARING ON B/M DO NOT APPLY.				DRAWN BY: KEN REED — DATE: 6 Nov 18	
			MATERIAL & HEAT TREAT	CHECKED BY: PA — DATE: 6 Nov 18	EOG RESOURCES, INC 13-5/8" 10K MN-DS WELLHEAD 13-3/8" X 9-5/8" X 5-1/2"
				APPROVED BY: APPROVER NAME — DATE: 6 Nov 18	
			ESTIMATED WEIGHT:	8147.2 LBS 3695.5 KG — INITIAL USE B/M: EWR:650353762	SHEET 1 OF 1 — SD-052491-19-07 — REV. 01

INVENTOR - D



ALL DIMENSIONS APPROXIMATE

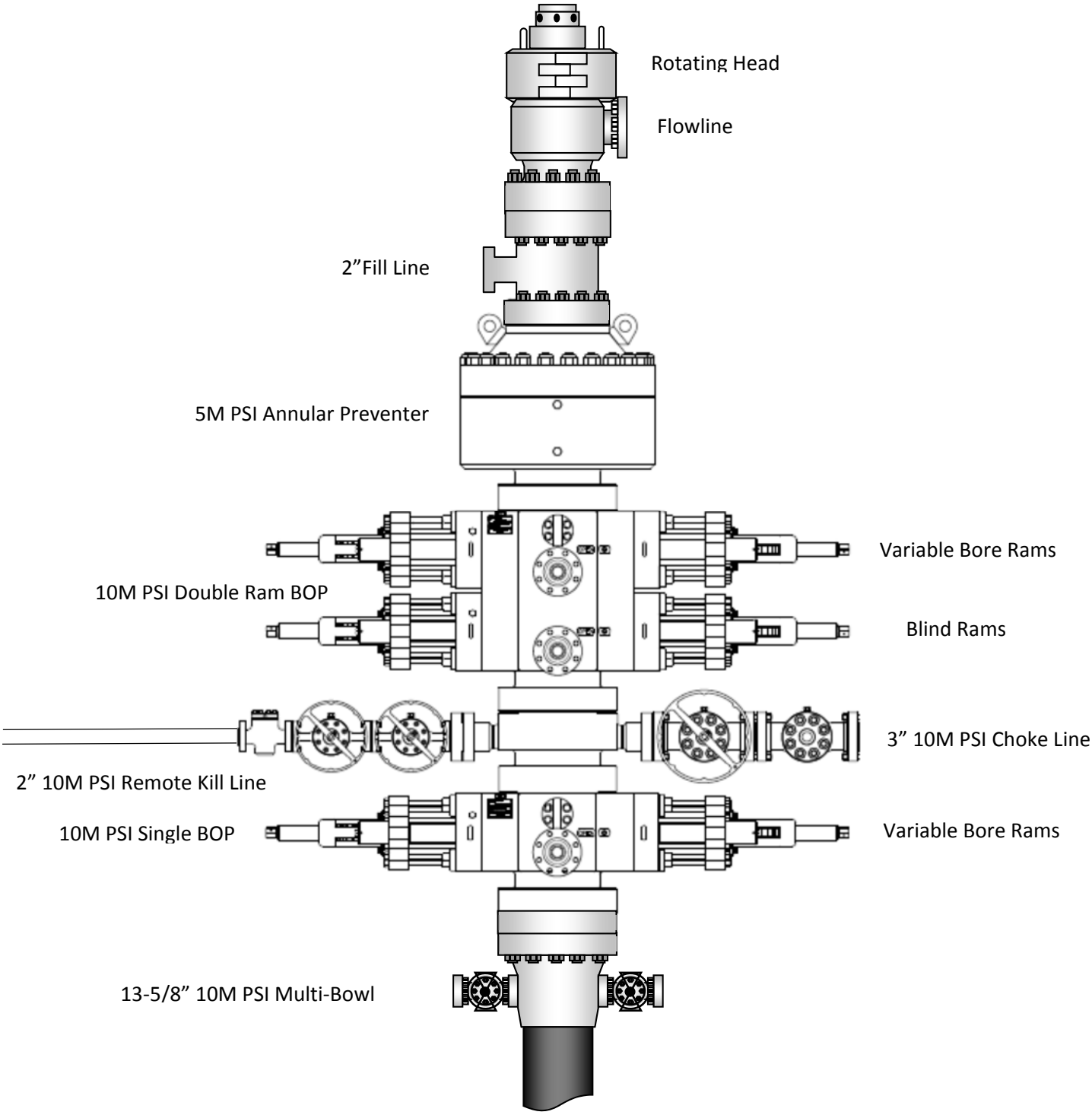
CACTUS WELLHEAD LLC

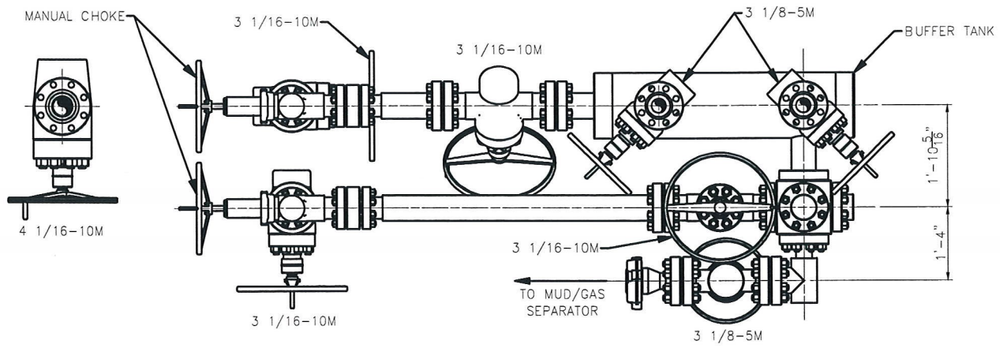
EOG RESOURCES

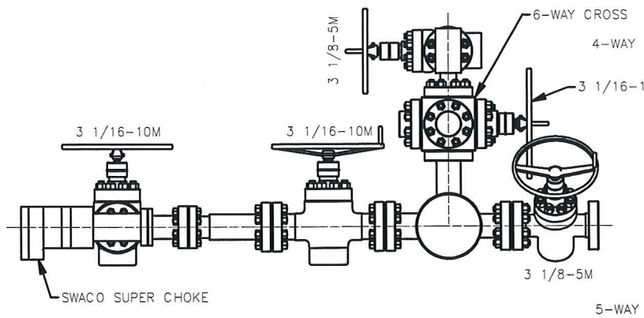
10-3/4" x 8-5/8" x 5-1/2" MBU-3T-SF-SOW Wellhead System
With 8-5/8" & 5-1/2" Pin Bottom Mandrel Casing Hangers
And 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head

DRAWN	DLE	14APR21
APPRV		
DRAWING NO.	SDT-3141	

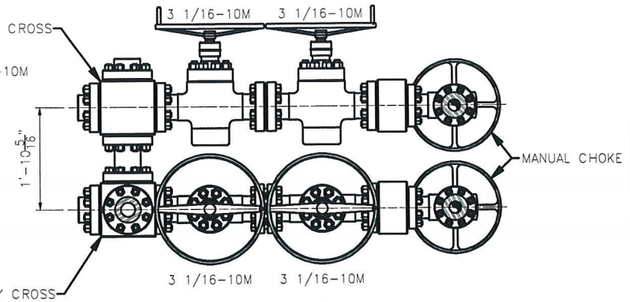
Exhibit 1
EOG Resources
13-5/8” 10M PSI BOP Stack



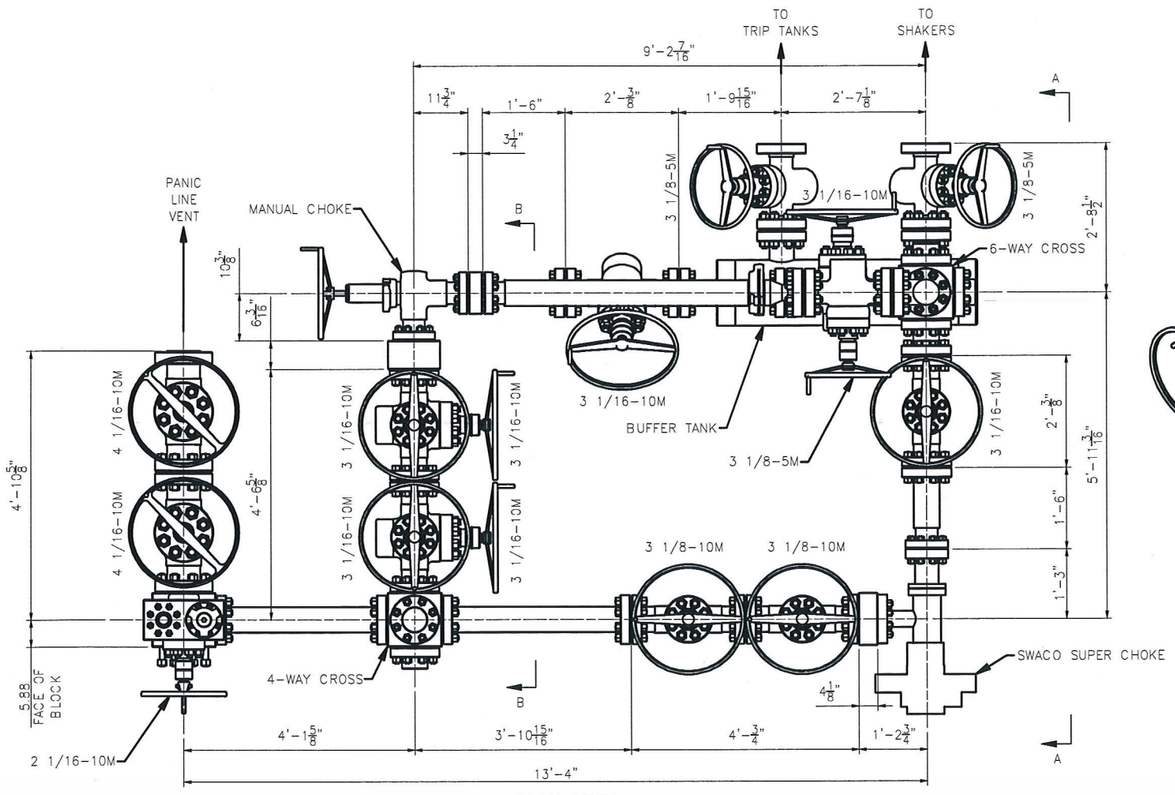




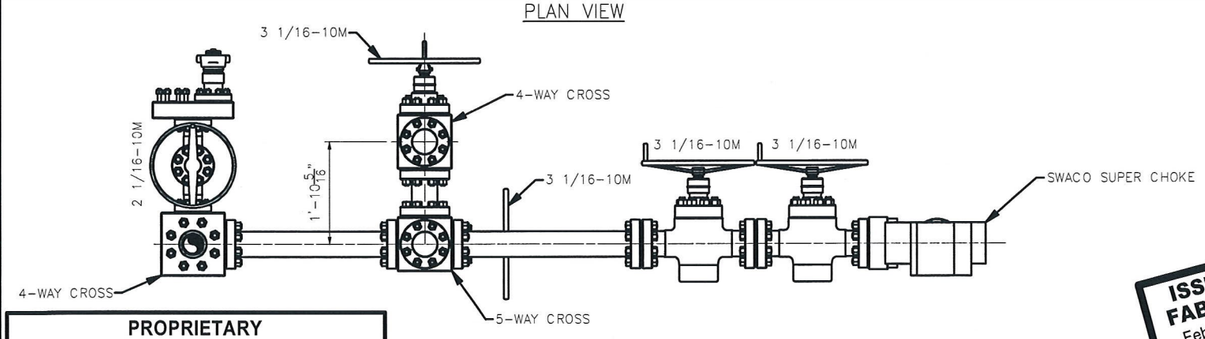
VIEW A-A

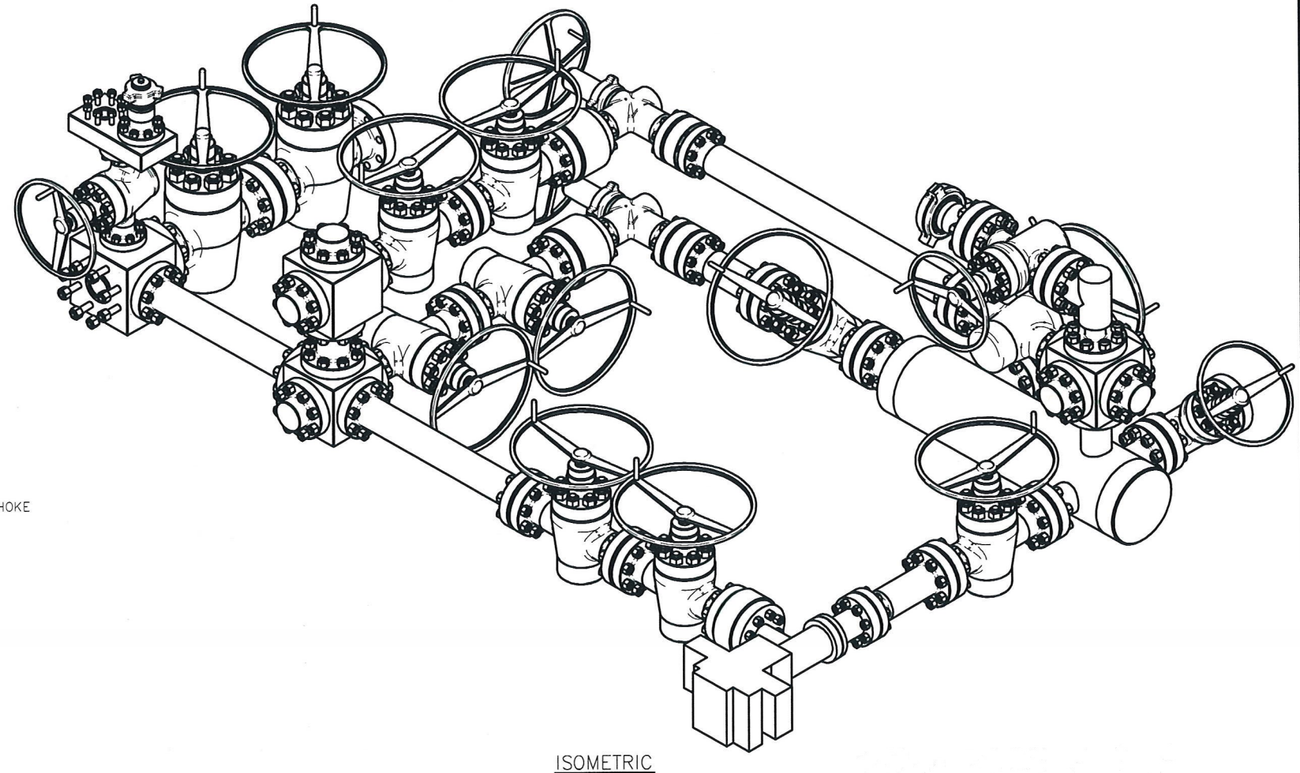


SECTION B-B



PLAN VIEW





ISOMETRIC

ISSUED FOR FABRICATION
February-10-2014
DRAFTSMAN MWL
ENGINEER

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
	LINEAR (EXPRESSED TO ONE DECIMAL)	±.1
	LINEAR (EXPRESSED TO TWO DECIMALS)	±.015
	LINEAR (EXPRESSED TO THREE DECIMALS)	±.005

REV	DATE	DESCRIPTION	BY
—			

HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

TITLE: 3 CHOKE, 3 LEVEL, 10M CHOKE MANIFOLD G.A.

CUSTOMER: H&P

PROJECT:

DRAWN:	DATE:	DWG. NO.:	REV:
MWL	2/10/2014	HP-D1254	—

SCALE: 3/4"=1'-0" SHEET: 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

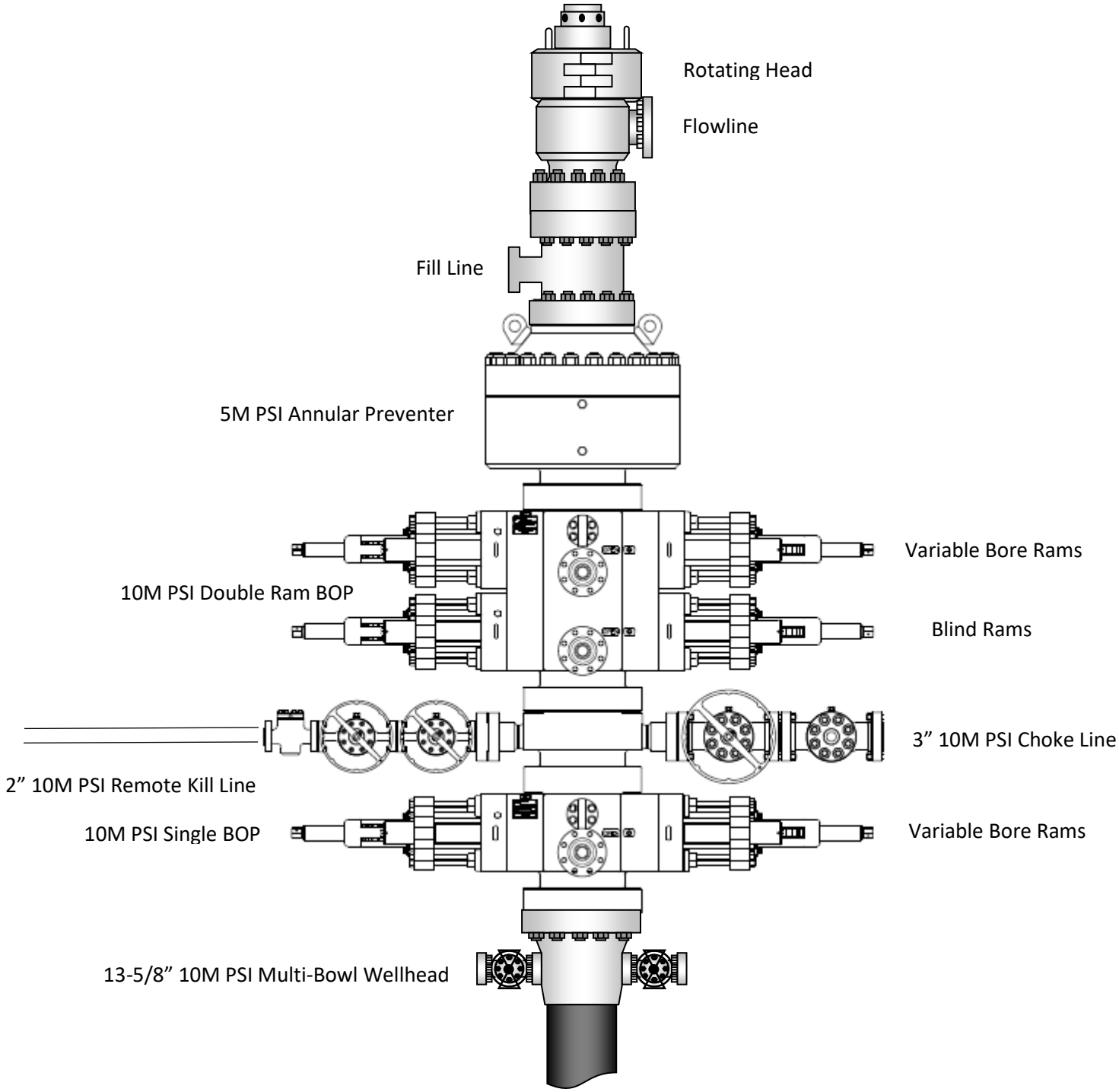
The tables below outlines the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

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	-	-
1st 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	-	-
2nd 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)

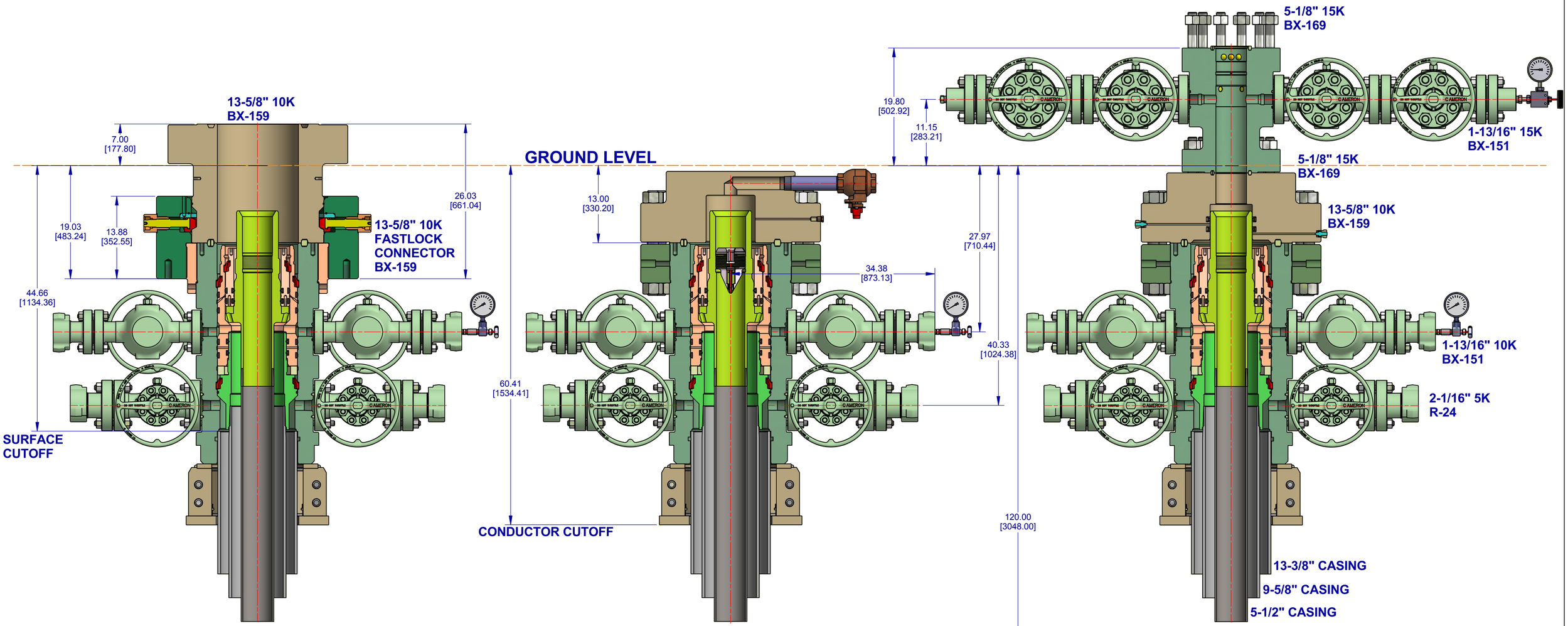
1. Sound alarm (alert crew)
2. Shut-in with blind rams. (HCR and choke will already be in the closed position.)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
    a. SICP
    b. Pit gain
    c. Time
6. Regroup and identify forward plan

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 X [0.] ± = [] .XX [0.X] ± = [] .XXX [0.XX] ± = [] ANGLES ± ° RA ON ALL MACHINED SURFACES	SURFACE TREATMENT	DO NOT SCALE	CAMERON A Schlumberger Company / SURFACE SYSTEMS
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 B/M FOR MATERIAL AND SPECIAL REQUIREMENTS. ITEM NUMBERS NOT APPEARING ON B/M DO NOT APPLY.				DRAWN BY: KEN REED — DATE: 6 Nov 18	
			MATERIAL & HEAT TREAT	CHECKED BY: PA — DATE: 6 Nov 18	EOG RESOURCES, INC 13-5/8" 10K MN-DS WELLHEAD 13-3/8" X 9-5/8" X 5-1/2"
				APPROVED BY: APPROVER NAME — DATE: 6 Nov 18	
			ESTIMATED WEIGHT:	8147.2 LBS 3695.5 KG — INITIAL USE B/M: EWR:650353762	SHEET 1 OF 1 — SD-052491-19-07 — REV: 01

INVENTOR - D

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

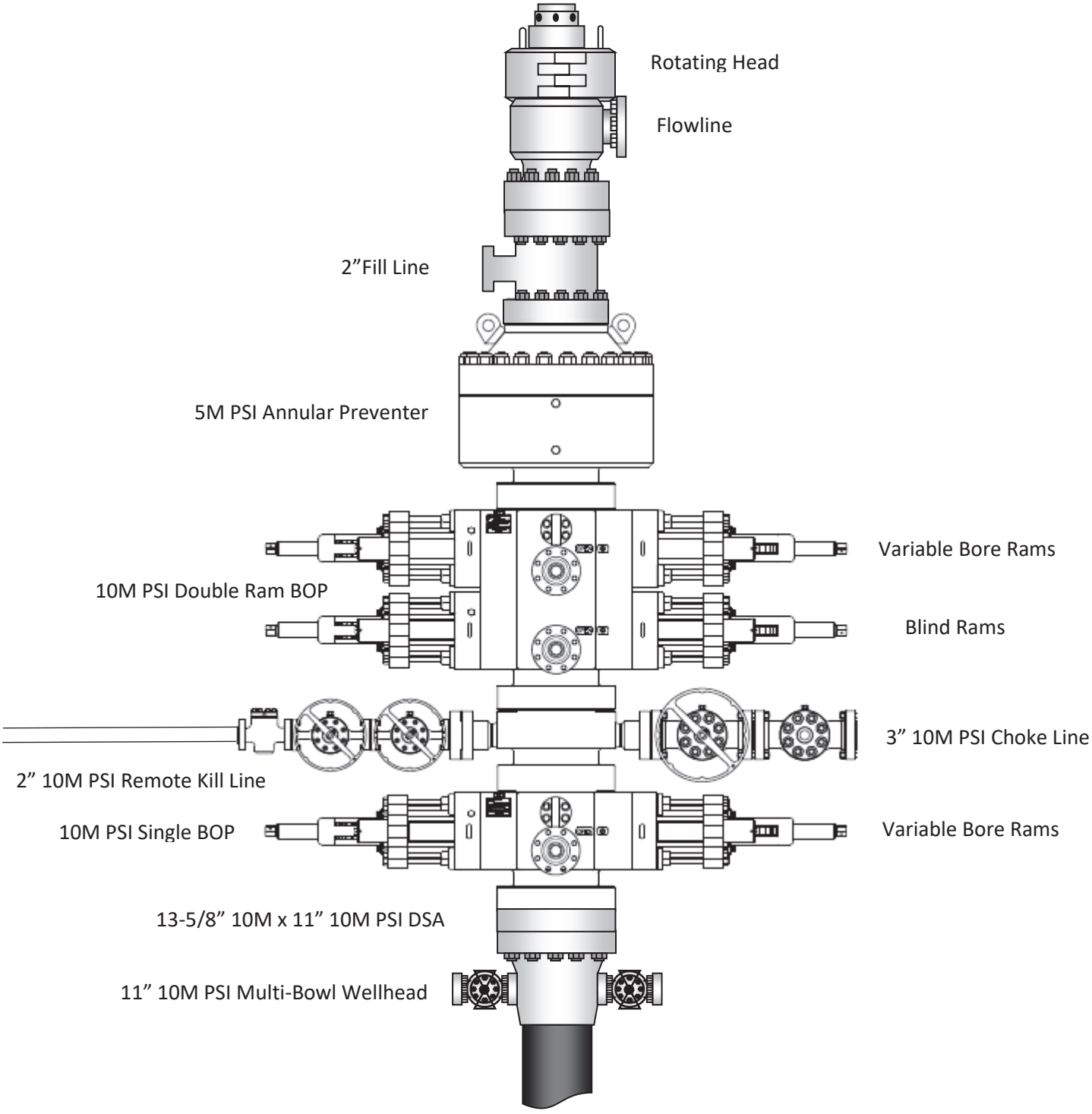
The tables below outlines the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

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

eog resources

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 nippled 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 nippled back up for any further remediation.

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.

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 nippled 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.

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.

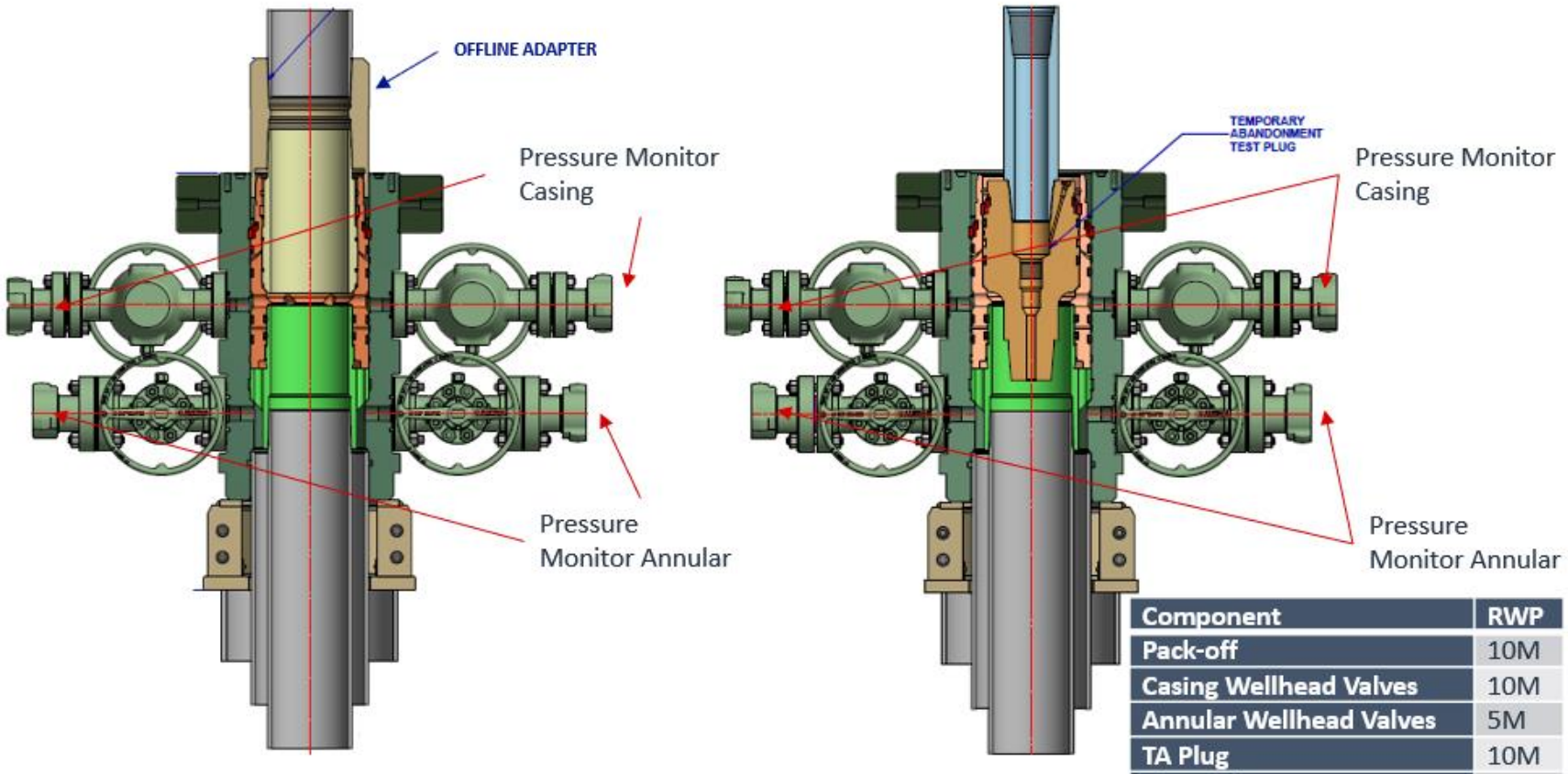
General Procedure While Cementing

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

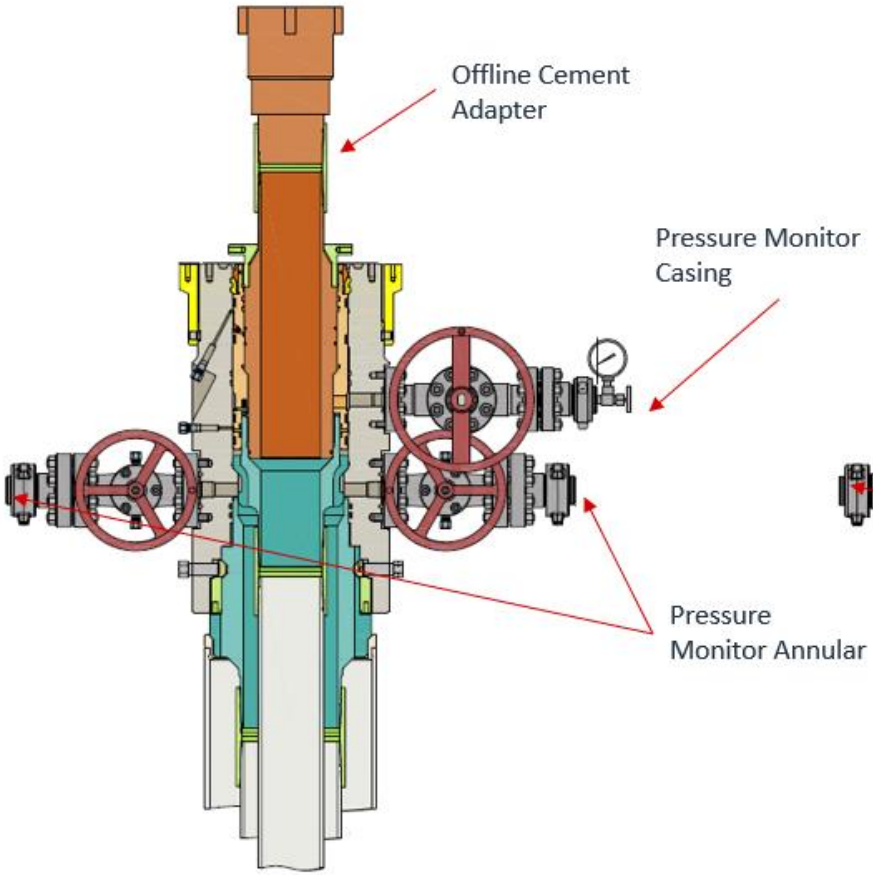
1. Sound alarm (alert crew).
2. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
3. Confirm shut-in.
4. Notify tool pusher/company representative.
5. Read and record the following:
    a. SICP and AP
    b. Pit gain
    c. Time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

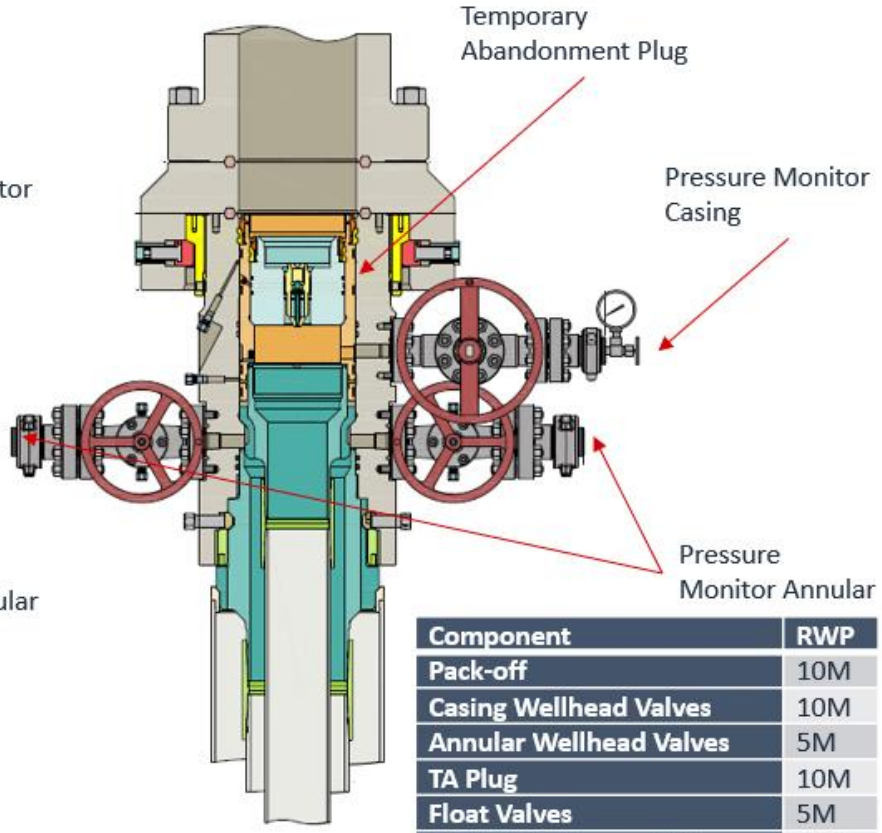
Figure 1: Cameron TA Plug and Offline Adapter Schematic



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

Figure 2: Cactus TA Plug and Offline Adapter Schematic





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

Figure 3: Back Yard Rig Up

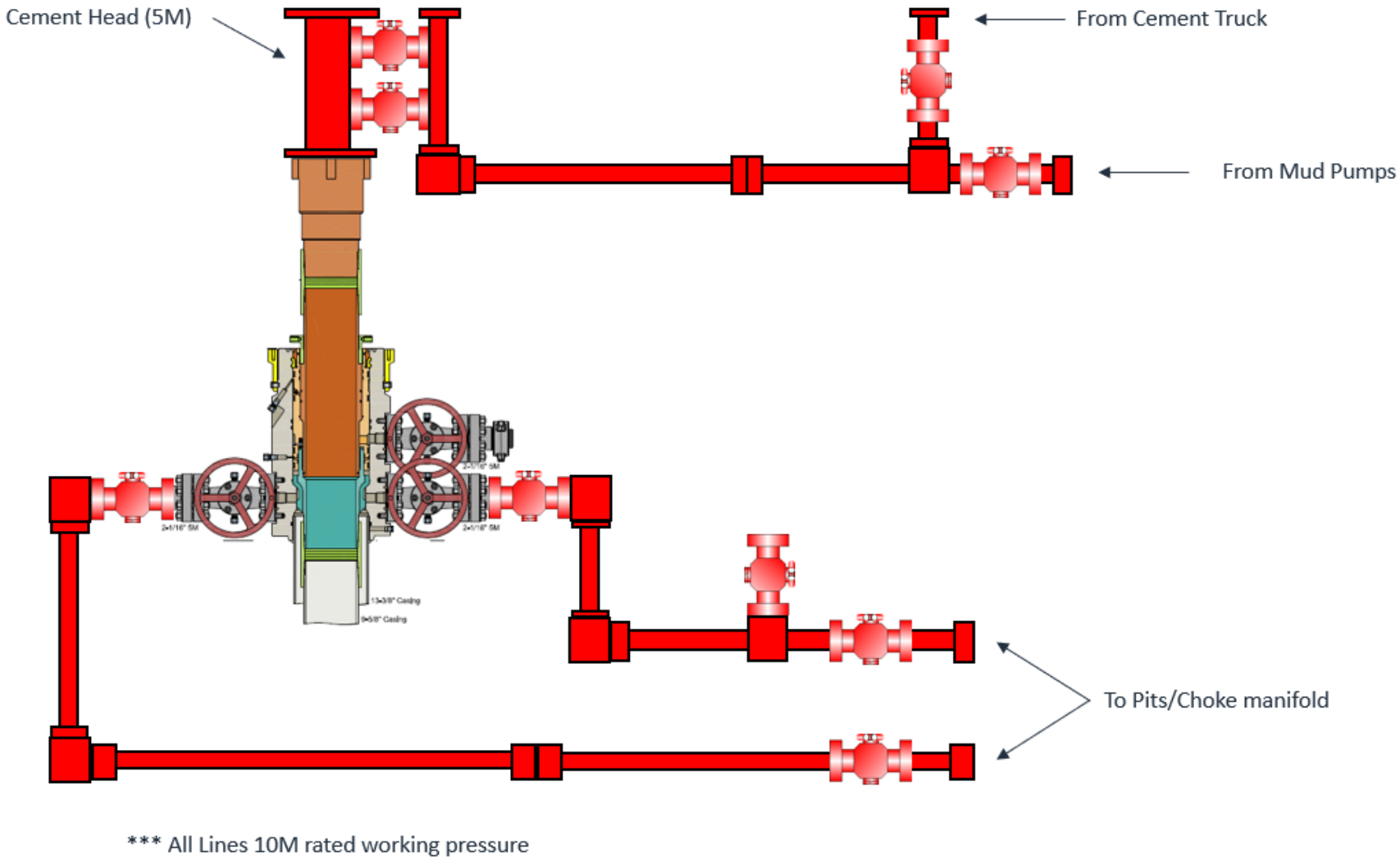
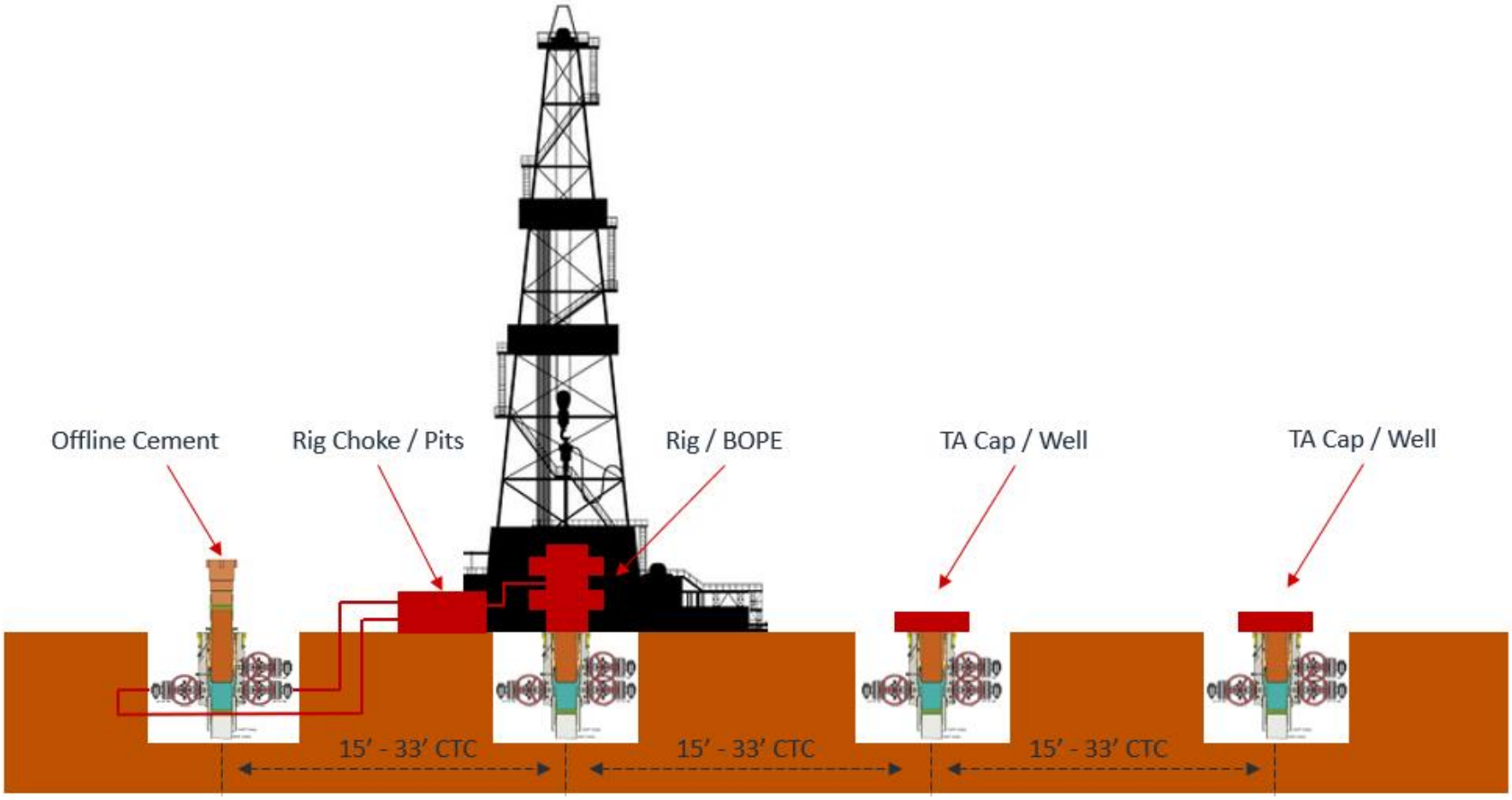


Figure 4: Rig Placement Diagram



Grackle 26 East Fed Com 101H API #: 30-025-*** Variances**

EOG respectfully requests the below variances to be applied to the above well:

- Variance is requested to waive the centralizer requirements for the intermediate casing in the intermediate hole. An expansion additive will be utilized, in the cement slurry, for the entire length of the intermediate interval to maximize cement bond and zonal isolation.
- Variance is also requested to waive the centralizer requirements for the production casing in the production hole. An expansion additive will be utilized, in the cement slurry, for the entire length of the production interval to maximize cement bond and zonal isolation.

- Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).
- Variance is requested to use a 5,000 psi annular BOP with the 10,000 psi BOP stack.
- 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.

EOG requests the additional variance(s) in the attached document(s):

- EOG BLM Variance 3a_b - BOP Break-test and Offline Intermediate Cement
- EOG BLM Variance 4a - Salt Section Annular Clearance
- EOG BLM Variance 5a - Alternate Shallow Casing Designs

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Title 43 CFR Part 3170 - OO II Language Replacement

Any language referencing Onshore Order II (OO II) in any document associated with this well now references Title 43 CFR Part 3170.

eog resources

EOG Batch Casing

Pad Name: Grackle 26 East Fed Com
SHL: Section 35, Township 24-S, Range 34-E, Lea County, NM

EOG requests for the below wells to be approved for all four designs listed in the Blanket Casing Design ('EOG BLM Variance 5a - Alternate Shallow Casing Designs.pdf' OR 'EOG BLM Variance 5b - Alternate Deep Casing Designs.pdf') document. The MDs and TVDs for all intervals are within the boundary conditions. The max inclination and DLS are also within the boundary conditions.
The directional plans for the wells are attached separately.

Well Name	API #	Surface		Intermediate		Production	
		MD	TVD	MD	TVD	MD	TVD
Grackle 26 East Fed Com #101H	30-025-*****	1,120	1,120	5,150	5,080	19,861	9,587
Grackle 26 East Fed Com #102H	30-025-*****	1,120	1,120	5,123	5,080	19,848	9,587
Grackle 26 East Fed Com #103H	30-025-*****	1,120	1,120	5,105	5,080	19,843	9,587
Grackle 26 East Fed Com #201H	30-025-*****	1,120	1,120	5,151	5,080	20,348	10,103
Grackle 26 East Fed Com #202H	30-025-*****	1,120	1,120	5,127	5,080	20,368	10,103
Grackle 26 East Fed Com #203H	30-025-*****	1,120	1,120	5,110	5,080	20,364	10,103
Grackle 26 East Fed Com #301H	30-025-*****	1,120	1,120	5,152	5,080	20,923	10,647
Grackle 26 East Fed Com #302H	30-025-*****	1,120	1,120	5,108	5,080	20,898	10,647
Grackle 26 East Fed Com #303H	30-025-*****	1,120	1,120	5,132	5,080	20,917	10,647
Grackle 26 East Fed Com #304H	30-025-*****	1,120	1,120	5,178	5,080	20,956	10,647
Grackle 26 East Fed Com #305H	30-025-*****	1,120	1,120	5,129	5,080	20,926	10,647
Grackle 26 East Fed Com #401H	30-025-*****	1,120	1,120	5,147	5,080	20,918	10,647
Grackle 26 East Fed Com #402H	30-025-*****	1,120	1,120	5,140	5,080	21,069	10,791
Grackle 26 East Fed Com #403H	30-025-*****	1,120	1,120	5,144	5,080	21,086	10,791
Grackle 26 East Fed Com #501H	30-025-*****	1,120	1,120	5,149	5,080	21,673	11,400
Grackle 26 East Fed Com #502H	30-025-*****	1,120	1,120	5,149	5,080	21,686	11,400
Grackle 26 East Fed Com #503H	30-025-*****	1,120	1,120	5,153	5,080	21,703	11,400
Grackle 26 East Fed Com #591H	30-025-*****	1,120	1,120	5,151	5,080	22,030	11,755
Grackle 26 East Fed Com #592H	30-025-*****	1,120	1,120	5,167	5,080	22,058	11,755
Grackle 26 East Fed Com #593H	30-025-*****	1,120	1,120	5,155	5,080	22,059	11,755

EOG Batch Casing

Variances

EOG requests the additional variance(s) in the attached document(s):

- EOG BLM Variance 3a_b - BOP Break-test and Offline Intermediate Cement
- EOG BLM Variance 4a - Salt Section Annular Clearance
- EOG BLM Variance 5a - Alternate Shallow Casing Designs

eog resources

EOG Batch Casing

GEOLOGIC NAME OF SURFACE FORMATION:

Permian

ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	989'
Tamarisk Anhydrite	1,094'
Top of Salt	1,559'
Base of Salt	4,976'
Lamar	5,244'
Bell Canyon	5,272'
Cherry Canyon	6,209'
Brushy Canyon	7,702'
Bone Spring Lime	9,078'
Leonard (Avalon) Shale	9,429'
1st Bone Spring Sand	10,461'
2nd Bone Spring Shale	10,692'
2nd Bone Spring Sand	10,984'
3rd Bone Spring Carb	11,492'
3rd Bone Spring Sand	12,019'
Wolfcamp	12,320'

ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Upper Permian Sands	0- 400’	Fresh Water
Bell Canyon	5,272'	Oil
Cherry Canyon	6,209'	Oil
Brushy Canyon	7,702'	Oil
Leonard (Avalon) Shale	9,429'	Oil
1st Bone Spring Sand	10,461'	Oil
2nd Bone Spring Shale	10,692'	Oil
2nd Bone Spring Sand	10,984'	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 surface casing at 1,120' and circulating cement back to surface.

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

SUPO Data Report
07/15/2025

APD ID: 10400097989
Submission Date: 04/11/2024
Operator Name: EOG RESOURCES INCORPORATED
Well Name: GRACKLE 26 EAST FED COM
Well Number: 304H
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:

2_Grackle_26_East_Fed_Com_Vicinity_304H_20240410093338.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_GRACKLE_26_EAST_FED_COM_ACCESS_ROADS_SEC35_1OF2_REV1_20240402071327.pdf
EP_GRACKLE_26_EAST_FED_COM_ACCESS_ROADS_SEC35_2OF2_REV1_20240402071327.pdf

New road type: RESOURCE

Length: 1834 Feet **Width (ft.):** 30

Max slope (%): 20 **Max grade (%):** 2

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. We plan to grade and water twice a year.

New road access plan or profile prepared? N

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

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 attached 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,OTHER

Other Description: Crown and ditched

Drainage Control comments: n/a

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

Existing Well map Attachment:

3_Grackle_26_East_Fed_Com_Radius_304H_20240410093353.pdf

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: SECTION 35, TOWNSHIP 24 SOUTH, RANGE 34 EAST, LEA COUNTY, NEW MEXICO

Production Facilities map:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

EOG_GRACKLE_26_EAST_FED_COM_FLOWLINE_DETAIL_EXHIBIT_5_20240402080519.pdf
EP_GRACKLE_26_EAST_FED_COM_GAS_LINE_1OF2_20240402081408.pdf
EP_GRACKLE_26_EAST_FED_COM_GAS_LINE_2OF2_20240402081408.pdf
EP_GRACKLE_26_EAST_FED_COM_LGL_LINE_1OF2_20240402081408.pdf
EP_GRACKLE_26_EAST_FED_COM_LGL_LINE_2OF2_20240402081408.pdf
EP_GRACKLE_26_EAST_FED_COM_OIL_LINE_BLM_20240402081409.pdf
EP_GRACKLE_26_EAST_FED_COM_OIL_LINE_PRIVATE_1OF2_20240402081408.pdf
EP_GRACKLE_26_EAST_FED_COM_OIL_LINE_PRIVATE_2OF2_20240402081409.pdf
EP_GRACKLE_26_EAST_FED_COM_PAD_A_FL_R1_20240402081409.pdf
EP_GRACKLE_26_EAST_FED_COM_PAD_B_FL_R1_SEC_26_20240402081409.pdf
EP_GRACKLE_26_EAST_FED_COM_PAD_B_FL_R1_SEC_35_NM_20240402081409.pdf

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 wat
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 eight 12-in
water. Freshwater contains less than 10,000 mg/l Total
petroleum sheen when standing, and is not previously u
expose it to heavy metals or other potential toxins. EOG
polyethylene or layflat lines and up to eight 12-inch layfl
produced water, defined as reconditioning produced wa
include mechanical and chemical processes. Freshwate
Township 25S, Range 33E, Lea County, New Mexico (N
Treated Produced Water Source: Lomas Reuse Pit, Sec
33E, Lea County, New Mexico (NW4 in lots 3, 4, 5, and
originate from a single or multiple water source location
proposed action and be temporarily laid above ground v
Temporary surface line(s) shall be laid no more than 10
disturbance (i.e., edge of bar/borrow ditch, road surface
made addition to the landscape). A push-off arm or ano
vehicle equipment will remain within the existing disturb
locations of the temporary surface lines will be provided
Environmental Assessment. An electronic map file (sha
submitted with the Environmental Assessment.

Source latitude:

Source longitude:

Source datum:

City:

Water source permit type: WATER RIGHT

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

Water source transport method: TRUCKING

PIPELINE

Source land ownership: FEDERAL

Source transportation land ownership: FEDERAL

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

Source volume (gal): 42

Water source and transportation

EP_GRACKLE_26_EAST_FED_COM_WATER_LINE_20240402072437.pdf
Water_Map_20240402072443.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

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

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

Grackle_26_Caliche_Map_20240402072723.pdf

Section 7 - Methods for Handling

Waste type: SEWAGE

Waste content description: Human grey water waste

Amount of waste: 1 barrels

Waste disposal frequency : Weekly

<style isBold="true">Safe containment description:</style> 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:

<style isBold="true">Disposal location description:</style> 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)

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

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

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: GARBAGE

Waste content description: trash generated by onsite personnel

Amount of waste: 1 pounds

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 landfill.

Safe containmant attachment:

Waste disposal type: OTHER **Disposal location ownership:** OTHER

Disposal type description: Lee County Landfill

Disposal location description: Lee County 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.)**

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

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

Cuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

6_Grackle_26_East_Fed_Com_Padsite_304H_2_20240410093435.pdf
Grackle_26_East_Fed_Com_304H_Rig_Layout_20240410093435.pdf
4_Grackle_26_East_Fed_Com_WLE_304H_20240410093435.pdf
EOG_GRACKLE_26_EAST_FED_COM_FLOWLINE_DETAIL_EXHIBIT_5_20240404141222.pdf
Comments: Exhibit 2A-Wellsite, Exhibit 2B-Padsite, Exhibit 4-Rig Layout

Section 10 - Plans for Surface

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** GRACKLE 26 EAST FED COM

Multiple Well Pad Number: 302H, 303H, 304H, 305H

Recontouring

7_Grackle_26_East_Fed_Com_Reclamation_Diagram_304H_20240410093446.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

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

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

Existing Vegetation at the well pad

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

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Seed

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type	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

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: AGREEMENT

Surface Access Agreement Need description: SUA - Quail Ranch, LLC

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Section 12 - Other

Right of Way needed? N **Use APD as ROW?**

ROW Type(s):

ROW

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

SUPO Additional Information: Onsite meeting was conducted on 12/19/2023 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. Roads: Pad A 102-103, 202-203, 302-305, 402-403, 502-503, 592-593, PH1-2: 1,834.30 or 111.17 rods Pad B 101, 201, 301, 401, 501, 591, PH3-4: 6,752.30 or 409.20 rods Grackle 26 CTB 1,557.70 or 94.41 rods 6-inch Flowlines, Gas Lift and Fiber Optic: Pad A 102-103, 202-203, 302-305, 402-403, 502-503, 592-593, PH1-2: 1,408.85 or 85.38 rods Pad B Fee 101, 201, 301, 401, 501, 591, PH3-4: 3,627.70 or 219.86 rods Pad B State 101, 201, 301, 401, 501, 591, PH3-4: 864.18 or 52.37 rods 24-inch Produced Water: Total length 1,386.5 or 84.00 rods Section 26, T24-S, R34-E, on lease portion 1,386.5 or 84.00 rods rods Fee Surface 20-inch Gas Sales: Total length 9,246.13 or 560.38 rods Section 4, T24-S, R34-E, on lease portion 3,588.37 or 217.48 rods Fed Surface Section 33, T25-S, R34-E 347.45 or 21.06 rods Fed Surface Section 32, T25-S, R34-E 5310.31 or 321.84 rods State Surface 3 Phase 14.4 Primary Voltage Overhead Electric Lines: Total length 93.6 or 5.70 Section 26, T24-S, R34-E, on lease portion 93.6 or 5.70 rods Fee Surface 8 Gas Lift Pipeline: Total length 7,263.00 or 440.20 rods Section 26, T24-S, R34-E, on lease portion 7,263.00 or 440.20 rods Fee Surface 8 Crude Oil Pipeline: Total length 6,549.70 or 397.00 rods Section 26, T24-S, R34-E, on lease portion 6,507.40 or 394.4 rods Fee Surface Section 26, T24-S, R34-E, on lease portion 42.3 or 2.6 rods Fed Surface Caliche Pit Options: Quail Ranch Battle Axe Pit- SE/4 Section 26, Range 34E, Township 24 South, Lea County, NM. Fresh and Reuse Options: EOG McCloy Freshwater Pit in Section 31, Range 34 East, Township 25 South. EOG Klondike Reuse Pit in Section 23, Range 34 East, Township 25 South. EOG will install up to 30-inch culverts crossing proposed lease roads in thirteen locations identified on the attached map. See the coordinates below: Culvert #1 - 3211'9.61"N, - 10326'13.97"W Culvert #2 - 3211'1.95"N, - 10326'9.11"W Culvert #3 - 3210'55.37"N, - 10326'11.06"W Culvert #4 - 3210'52.94"N, - 10326'15.47"W Culvert #5 - 3210'41.94"N, - 10326'26.29"W Culvert #6 - 3210'41.93"N, - 10326'24.56"W Culvert #7 - 3210'46.28"N, - 10326'24.52"W EOG will install 3 cattleguards at 3 locations on the proposed lease roads. See coordinates below. Cattleguard #1- 3211'11.82", -10326'9.69"W Cattleguard #2- 3210'41.93"N, - 10326'25.18"W

Use a previously conducted onsite? N

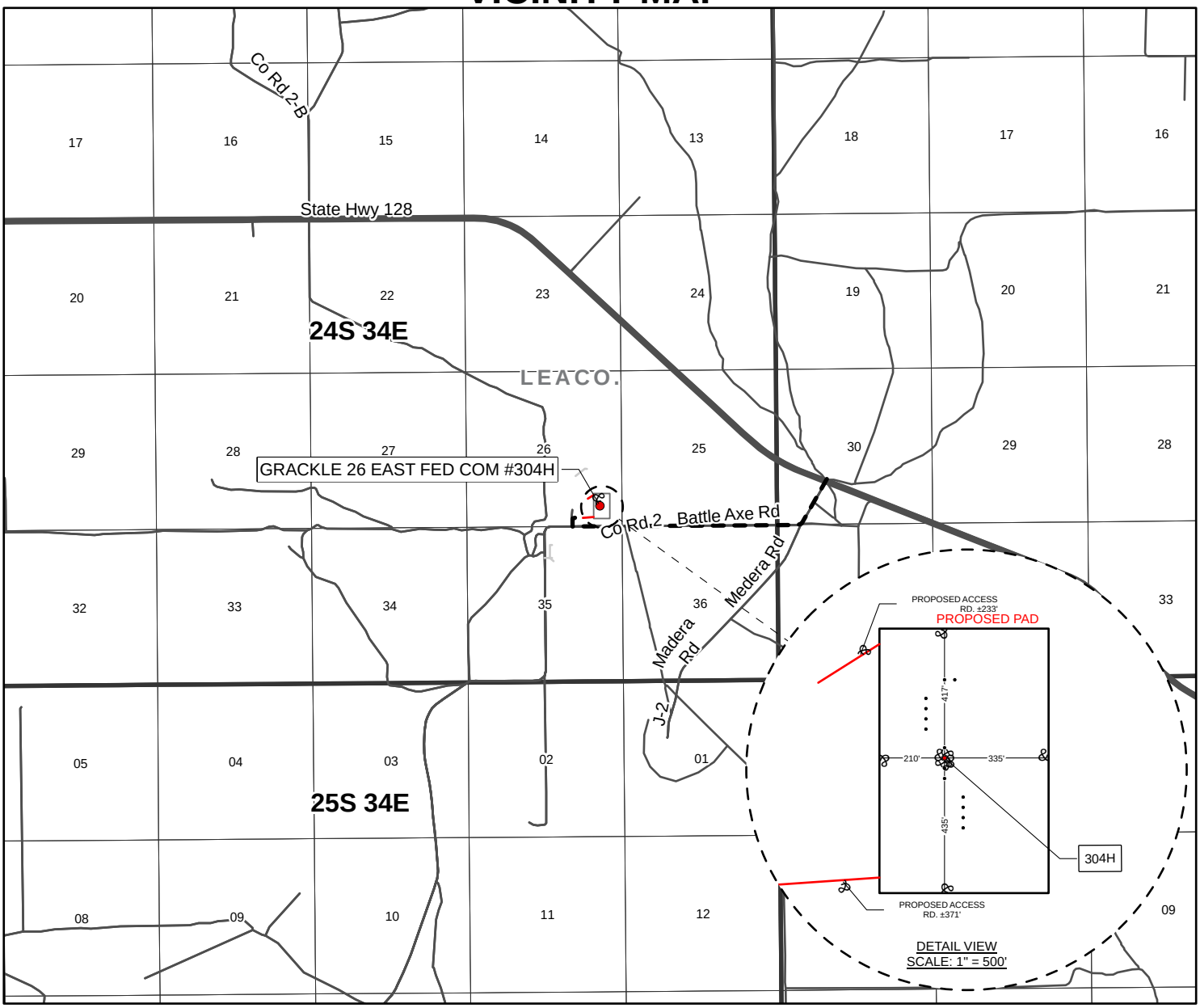
Previous Onsite information:

Other SUPO

1_Grackle_26_East_Fed_Com_Location_304H_20240410093507.pdf

REV_SUPO_GRACKLE_26_EAST_FED_COM_304H_20240410093513.pdf

EXHIBIT 2
VICINITY MAP



LEASE NAME & WELL NO.: GRACKLE 26 EAST FED COM #304H
LATITUDE: N 32.183157 LONG: W 103.434636 ELEVATION: 3430'

SECTION: 26 TWP: 24S RGE: 34E SURVEY: N.M.P.M.
COUNTY: LEA STATE: NM

DESCRIPTION: 718' FSL & 750' FEL

DISTANCE & DIRECTION:
FROM THE INTERSECTION OF NEW MEXICO STATE ROAD 128 AND COUNTY ROAD 2, TRAVEL SOUTHWEST ON COUNTY ROAD 2 ±1.8 MILES; THENCE NORTH (RIGHT) ONTO AN EXISTING LEASE ROAD ±288 FEET; THENCE EAST (RIGHT) ON AN EXISTING LEASE ROAD ±347 FEET; THENCE EAST (RIGHT) ON A PROPOSED ACCESS ROAD ±371 FEET TO THE EDGE OF PAD.
(PROPOSED ACCESS ROAD LENGTH = ±371')

- Proposed Well
- Proposed Access Road
- Proposed Pad
- Road
- Section
- Township

eog resources

JOB No.: EOG__B200054

NOTE:
ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE FOLLOWING COORDINATE SYSTEM: NAD83 NEW MEXICO STATE PLANE, EAST ZONE, U.S. SURVEY FEET

DISCLAIMER:
THIS PLOT DOES NOT REPRESENT A MONUMENTED LAND SURVEY AND SHOULD NOT BE RELIED UPON TO DETERMINE BOUNDARY LINES, PROPERTY OWNERSHIP OR OTHER PROPERTY INTERESTS.

0 0.5 1
SCALE: 1"=1 MI.

ASCENT GEOMATICS SOLUTIONS
8620 WOLFF COURT
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128
WWW.ASCENTGEOMATICS.COM

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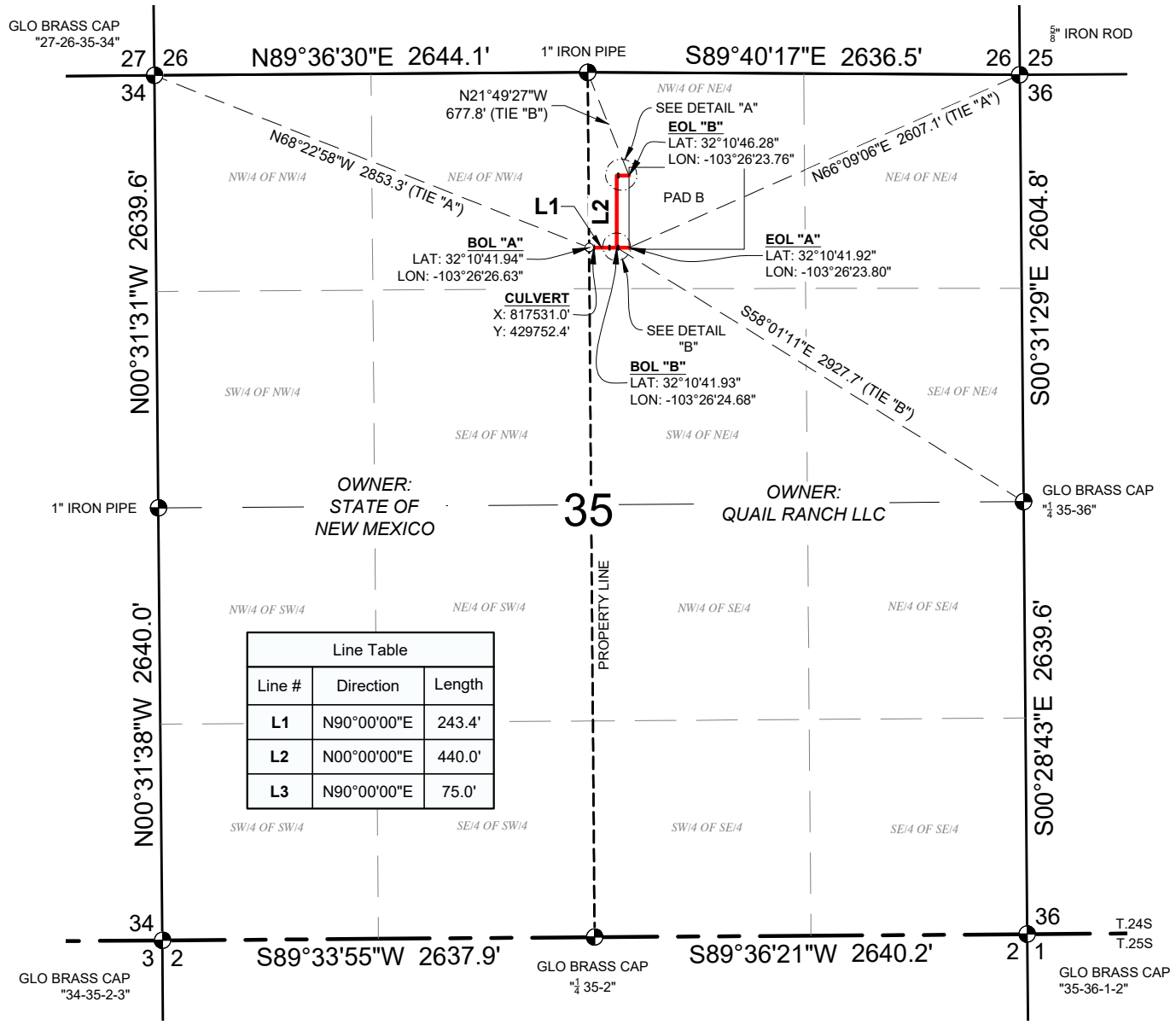
SECTION 35, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO



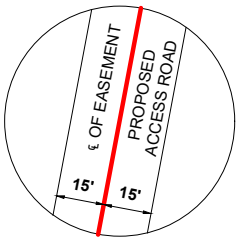
Line Table		
Line #	Direction	Length
L1	N90°00'00"E	243.4'
L2	N00°00'00"E	440.0'
L3	N90°00'00"E	75.0'

PROPOSED ACCESS ROADS

POINT FOR BEGIN/END OR ANGLE POINT

FOUND MONUMENT AS SHOWN

*SEE SHEET 2 OF 2 FOR LEGAL DESCRIPTIONS & DETAIL VIEWS

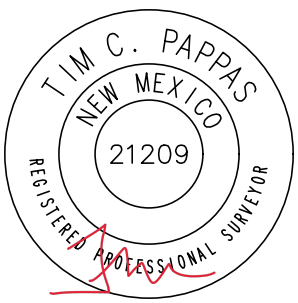


TYPICAL
RIGHT-OF-WAY EASEMENT

0 500' 1000'

SCALE: 1"= 1000'

NOTES:
- BEARINGS, COORDINATES, AND DISTANCES SHOWN HEREON ARE BASED ON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83- 2011 (EPOCH 2010) FRAMEWORK, AS DERIVED BY OPUS SOLUTION. THE ELEVATIONS SHOWN HEREON AREA BASED ON NAVD 88.
- LAND OWNERSHIP INFORMATION REFLECTED HEREON WAS PROVIDED BY CLIENT AND/OR OBTAINED FROM PUBLIC DOMAIN DATA, NO INDEPENDENT OWNERSHIP SEARCH WAS PERFORMED BY ASCENT



I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT PLAT OF A PROPOSED EASEMENT. 21 FEB 2024

TIM C. PAPPAS, N.M. P.L.S. **No.21209**

SURVEY DATE: 02/09/2024
JOB NO.: B20.EOG.0054

DRAFT: JC
SHEET: 1 OF 2

eog resources

GRACKLE 26 FED COM PROPOSED ACCESS ROADS REV 1
SEC. 35, T-24-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

PETROLEUM FIELD SERVICES, LLC
DBA: ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128

PLAT: P:\EOG_ B20\0054\PROD\ROW\ACCESS\EP_GRACKLE_26_EAST_FED_COM_ACCESS_ROADS 2/21/24 8:29 PM: Jcastro

SECTION 35, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO

GRACKLE 26 FED COM PROPOSED ACCESS ROADS

CENTERLINE "A" DESCRIPTION

A STRIP OF LAND, 30 FEET IN WIDTH SITUATED IN THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 35, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AS CONVEYED TO QUAIL RANCH LLC, AND BEING 15 FEET ON EACH SIDE OF THE SURVEY OF CENTERLINE AS SHOWN HEREON AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

BEGINNING AT A POINT, FROM WHICH A GLO BRASS CAP FOUND AND ACCEPTED AS THE NORTHWEST CORNER OF SAID SECTION 35 BEARS N68°22'58"W, 2853.3 FEET, FOR THE BEGINNING OF THE HEREIN DESCRIBED CENTERLINE;

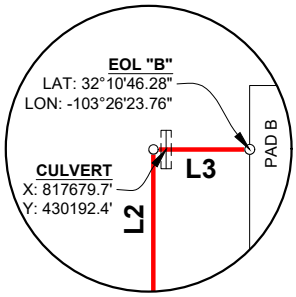
THENCE THE FOLLOWING ONE (1) COURSE, N90°00'00"E, 243.4 FEET TO A POINT, BEING THE END OF THE DESCRIBED CENTERLINE, FROM WHICH A 5/8" IRON ROD FOUND AND ACCEPTED AS THE NORTHEAST CORNER OF SAID SECTION 35 BEARS N66°09'06"E, 2607.1 FEET, IN ALL BEING 243.4 FEET OR 14.8 RODS IN LENGTH.

CENTERLINE "B" DESCRIPTION

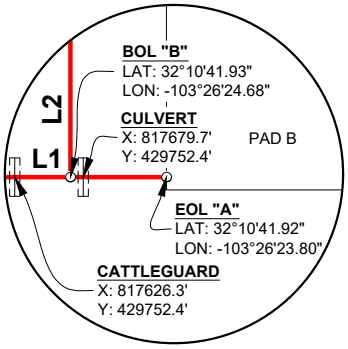
A STRIP OF LAND, 30 FEET IN WIDTH SITUATED IN THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 35, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AS CONVEYED TO QUAIL RANCH LLC, AND BEING 15 FEET ON EACH SIDE OF THE SURVEY OF CENTERLINE AS SHOWN HEREON AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

BEGINNING AT A POINT, FROM WHICH A GLO BRASS CAP FOUND AND ACCEPTED AS THE EAST QUARTER CORNER OF SAID SECTION 35 BEARS S58°01'11"E, 2927.7 FEET, FOR THE BEGINNING OF THE HEREIN DESCRIBED CENTERLINE;

THENCE THE FOLLOWING TWO (2) COURSES, N00°00'00"E, 440.0 FEET, N90°00'00"E, 75.0 FEET TO A POINT, BEING THE END OF THE DESCRIBED CENTERLINE, FROM WHICH A 1" IRON PIPE FOUND AND ACCEPTED AS THE NORTH QUARTER CORNER OF SAID SECTION 35 BEARS N21°49'27"W, 677.8 FEET, IN ALL BEING 515.0 FEET OR 31.2 RODS IN LENGTH.



DETAIL "A"
N.T.S.

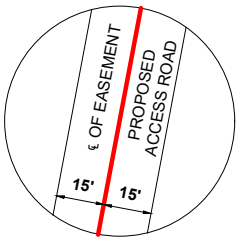


DETAIL "B"
N.T.S.

PROPOSED ACCESS ROADS

POINT FOR BEGIN/END OR ANGLE POINT

*SEE SHEET 1 OF 2 FOR MORE INFORMATION



TYPICAL
RIGHT-OF-WAY EASEMENT

NOTES:
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- LAND OWNERSHIP INFORMATION REFLECTED HEREON WAS PROVIDED BY CLIENT AND/OR OBTAINED FROM PUBLIC DOMAIN DATA, NO INDEPENDENT OWNERSHIP SEARCH WAS PERFORMED BY ASCENT

TIM C. PAPPAS NEW MEXICO 21209 REGISTERED PROFESSIONAL SURVEYOR

I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT PLAT OF A PROPOSED EASEMENT. 21 FEB 2024

TIM C. PAPPAS, N.M. P.L.S. **No.21209**

SURVEY DATE: 02/09/2024 DRAFT: JC
JOB NO.: B20.EOG.0054 SHEET: 2 OF 2

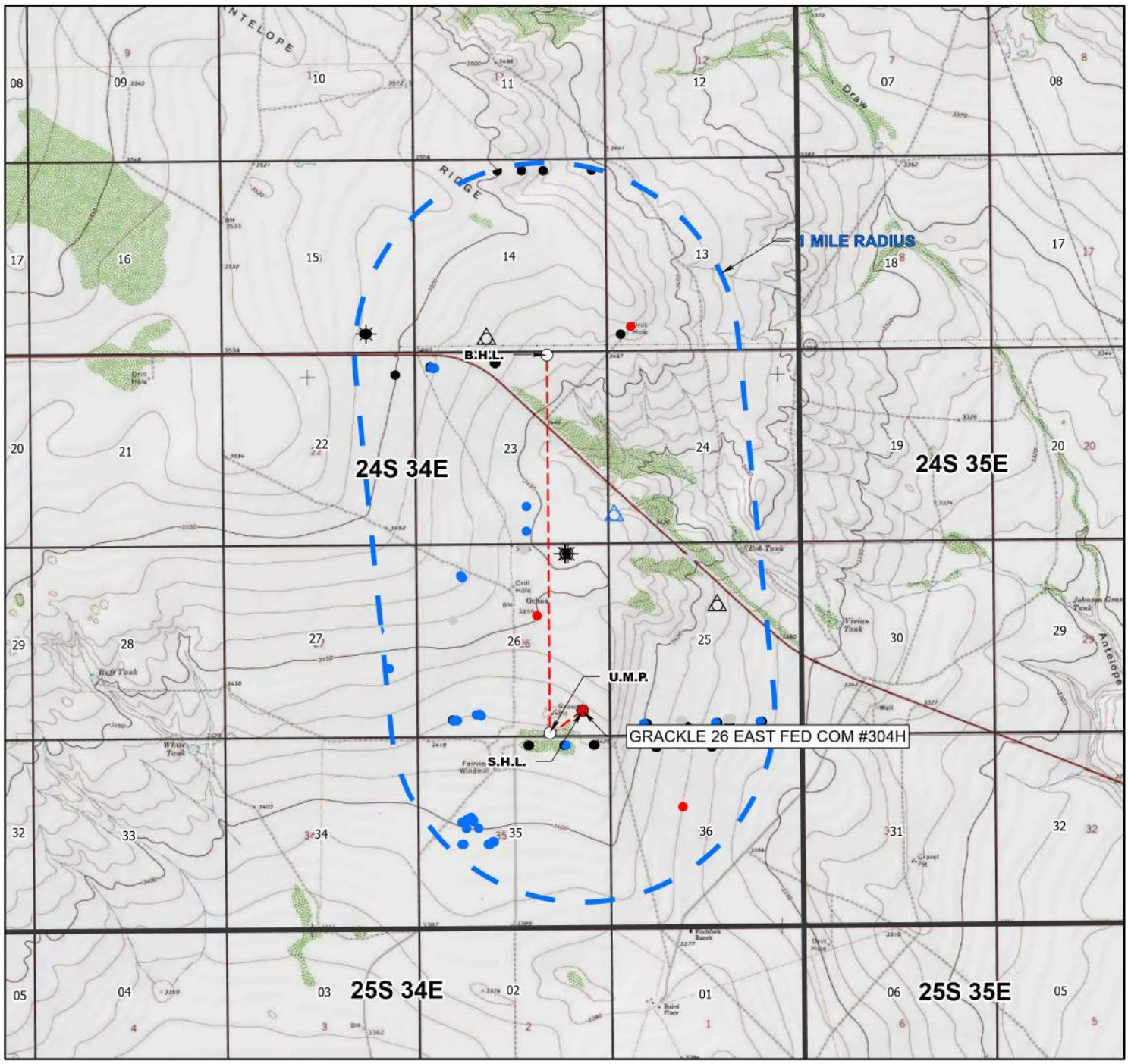
eog resources

GRACKLE 26 FED COM PROPOSED ACCESS ROADS REV 1
SEC. 35, T-24-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

ASCENT GEOMATICS SOLUTIONS
PETROLEUM FIELD SERVICES, LLC
DBA: ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128

PLAT: P:\EOG_B20\0054\PROD\ROWACCESS\EP_GRACKLE_26_EAST_FED_COM_ACCESS_ROADS 2/21/24 8:32 PM Jcastro

EXHIBIT 3
1 MILE RADIUS BUFFER MAP



LEASE NAME & WELL NO.: GRACKLE 26 EAST FED COM #304H
LATITUDE: N 32.183157 LONG: W 103.434636 ELEVATION: 3430'

SECTION: 26 TWP: 24S RGE: 34E SURVEY: N.M.P.M.
COUNTY: LEA STATE: NM

DESCRIPTION: 718' FSL & 750' FEL

- S.H.L.
- UMP; LMP; BHL
- Bore Line
- Gas, Active
- Oil, Active
- Oil, Cancelled
- Oil, New
- Oil, Plugged
- Salt Water Injection, Active
- Salt Water Injection, New
- Section
- Township

eog resources

JOB No.: EOG_B200054

NOTE:
ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE FOLLOWING COORDINATE SYSTEM: NAD83 NEW MEXICO STATE PLANE, EAST ZONE, U.S. SURVEY FEET

DISCLAIMER:
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N

0 2,000 4,000

SCALE: 1"=4,000'

ASCENT GEOMATICS SOLUTIONS
8620 WOLFF COURT
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128
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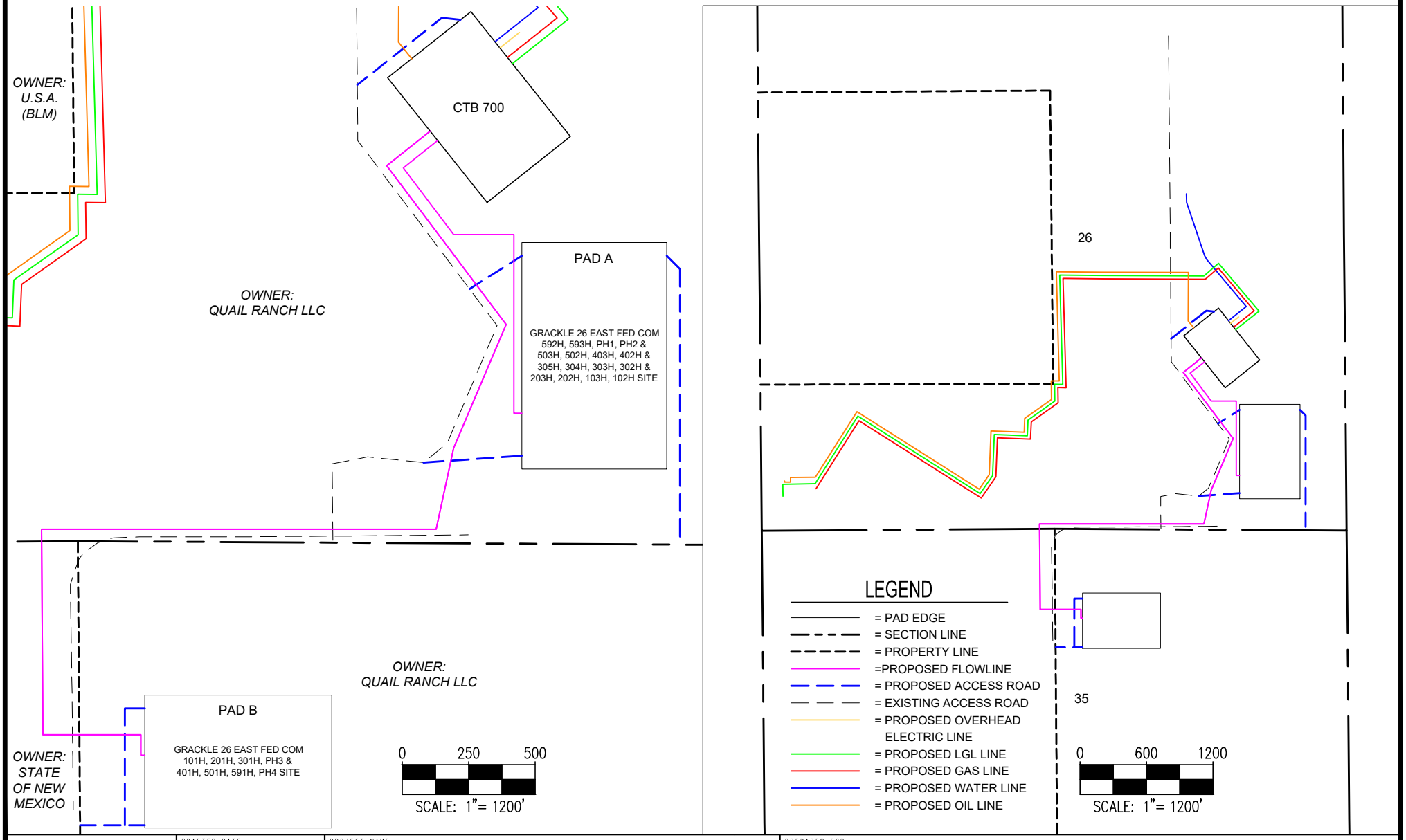
EXHIBIT 5

SECTIONS 26 & 35, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO

GRACKLE 26 EAST FED COM
INFRASTRUCTURE MAP



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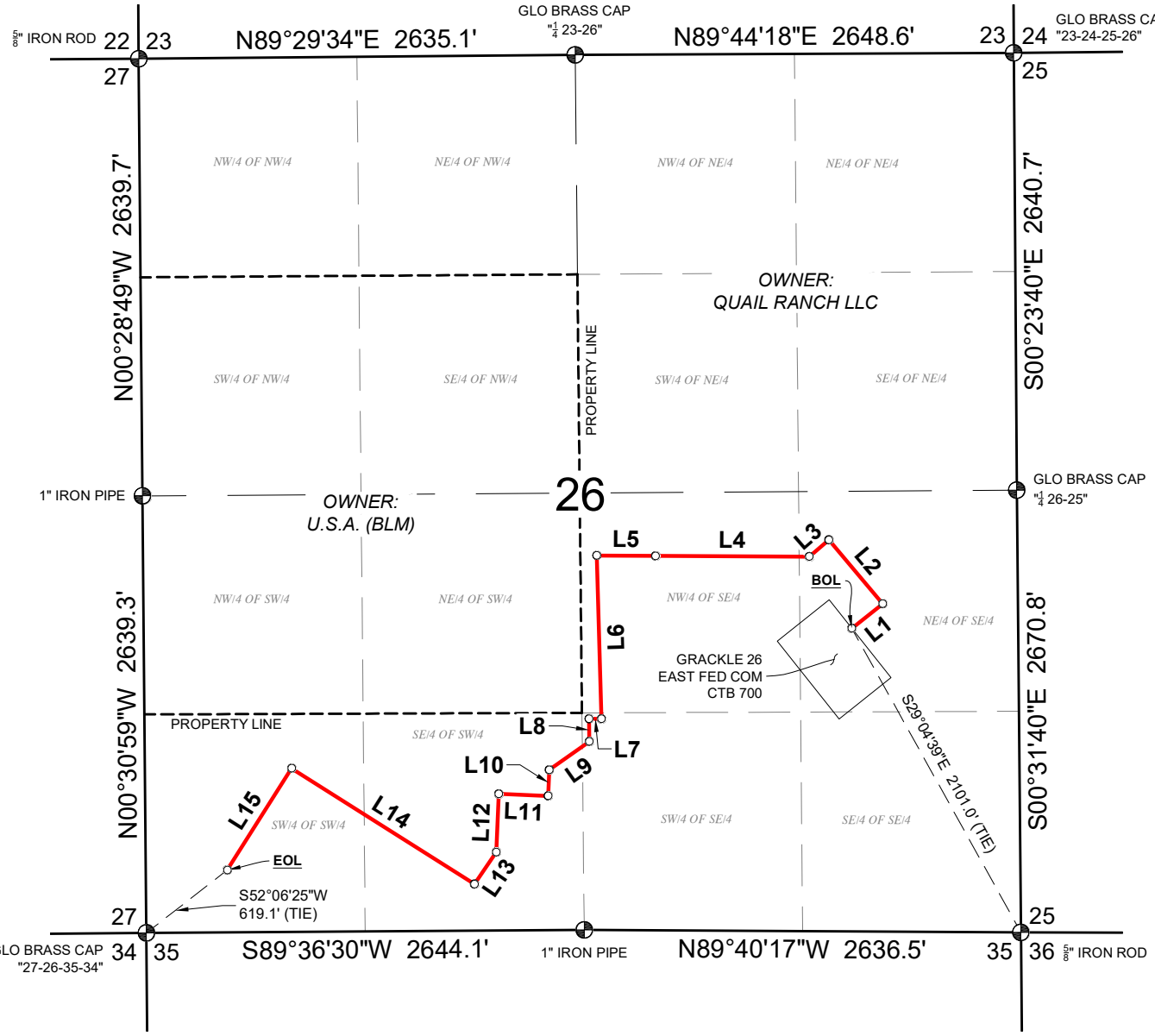
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE:(303) 928-7128
www.ascentgeomatics.com

DRAFTED DATE: 03/06/2024
FILE: EOG_GRACKLE_26_EAST_FED_COM_FLOWLINE_DETAIL
BY: JC
CHECKED: LE

PROJECT NAME: GRACKLE 26 EAST FED COM INFRASTRUCTURE MAP
REV. 0
SURFACE LOCATION: SEC. 26 & 35, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO
PROJECT NUMBER: EOG__B200054

PREPARED FOR: eog resources

SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO



PROPOSED GAS LINE

POINT FOR BEGIN/END OR ANGLE POINT

FOUND MONUMENT AS SHOWN

*SEE SHEET 2 OF 2 FOR LEGAL DESCRIPTION & LINE TABLE.

NOTES:
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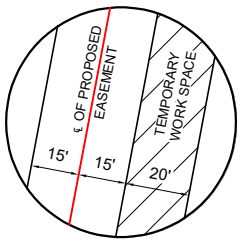
0 500' 1000'
SCALE: 1"= 1000'



TYPICAL N.T.S
RIGHT-OF-WAY EASEMENT, TEMPORARY WORK SPACE CONFIGURATION

I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT PLAT OF A PROPOSED EASEMENT. 18 FEB 2024

TIM C. PAPPAS, N.M. P.L.S. **No.21209**

SURVEY DATE: 02/09/2024
JOB NO.: B20.EOG.0054

DRAFT: JC
SHEET: 1 OF 2

eog resources

GRACKLE 26 EAST FED COM PROPOSED GAS LINE
SEC. 26, T-24-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

PETROLEUM FIELD SERVICES, LLC
DBA: ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128

PLAT: P:\EOG_B20\0054\PROD\ROW\UTILITIES\LGL\EP_GRACKLE_26_EAST_FED_COM_LGL_LINE 2/16/24 3:40 AM Jcastro

SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO

GRACKLE 26 EAST FED COM PROPOSED GAS LINE
CENTERLINE DESCRIPTION

A STRIP OF LAND, 30 FEET IN WIDTH SITUATED IN THE SOUTH HALF OF SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AS CONVEYED TO QUAIL RANCH LLC, AND BEING 15 FEET ON EACH SIDE OF THE SURVEY OF CENTERLINE AS SHOWN HEREON AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

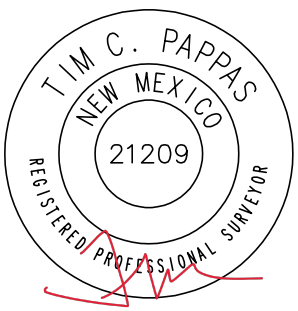
BEGINNING AT A POINT, FROM WHICH A $\frac{5}{8}$" IRON ROD FOUND AND ACCEPTED AS THE SOUTHEAST CORNER OF SAID SECTION 26 BEARS S29°04'39"E, 2101.0 FEET, FOR THE BEGINNING OF THE HEREIN DESCRIBED CENTERLINE;

THENCE THE FOLLOWING FIFTEEN (15) COURSES, N51°31'01"E, 238.5 FEET, N40°04'39"W, 505.1 FEET, S49°08'07"W, 155.3 FEET, N89°44'36"W, 929.0 FEET, N89°33'16"W, 354.1 FEET, S01°35'25"E, 987.2 FEET, N89°20'38"W, 74.2 FEET, S00°34'30"E, 137.4 FEET, S54°47'03"W, 296.4 FEET, S02°20'59"W, 157.8 FEET, N87°39'01"W, 298.7 FEET, S02°20'59"W, 351.3 FEET, S34°27'20"W, 234.6 FEET, N57°39'01"W, 1306.1 FEET, S32°20'59"W, 726.6 FEET TO A POINT, BEING THE END OF THE DESCRIBED CENTERLINE, FROM WHICH A GLO BRASS CAP FOUND AND ACCEPTED AS THE SOUTHWEST CORNER OF SAID SECTION 26 BEARS S52°06'25"W, 619.1 FEET, IN ALL BEING 6752.3 FEET OR 409.2 RODS IN LENGTH.

Line Table		
Line #	Direction	Length
L1	N51°31'01"E	238.5'
L2	N40°04'39"W	505.1'
L3	S49°08'07"W	155.3'
L4	N89°44'36"W	929.0'
L5	N89°33'16"W	354.1'
L6	S01°35'25"E	987.2'
L7	N89°20'38"W	74.2'
L8	S00°34'30"E	137.4'
L9	S54°47'03"W	296.4'
L10	S02°20'59"W	157.8'
L11	N87°39'01"W	298.7'
L12	S02°20'59"W	351.3'
L13	S34°27'20"W	234.6'
L14	N57°39'01"W	1306.1'
L15	S32°20'59"W	726.6'

*SEE SHEET 1 OF 2 FOR MORE INFORMATION

NOTES:
- BEARINGS, COORDINATES, AND DISTANCES SHOWN HEREON ARE BASED ON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83- 2011 (EPOCH 2010) FRAMEWORK, AS DERIVED BY OPUS SOLUTION. THE ELEVATIONS SHOWN HEREON AREA BASED ON NAVD 88.
- LAND OWNERSHIP INFORMATION REFLECTED HEREON WAS PROVIDED BY CLIENT AND/OR OBTAINED FROM PUBLIC DOMAIN DATA, NO INDEPENDENT OWNERSHIP SEARCH WAS PERFORMED BY ASCENT



I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT PLAT OF A PROPOSED EASEMENT. 18 FEB 2024

TIM C. PAPPAS, N.M. P.L.S. **No.21209**

SURVEY DATE: 02/09/2024 DRAFT: JC
JOB NO.: B20.EOG.0054 SHEET: 2 OF 2

eog resources

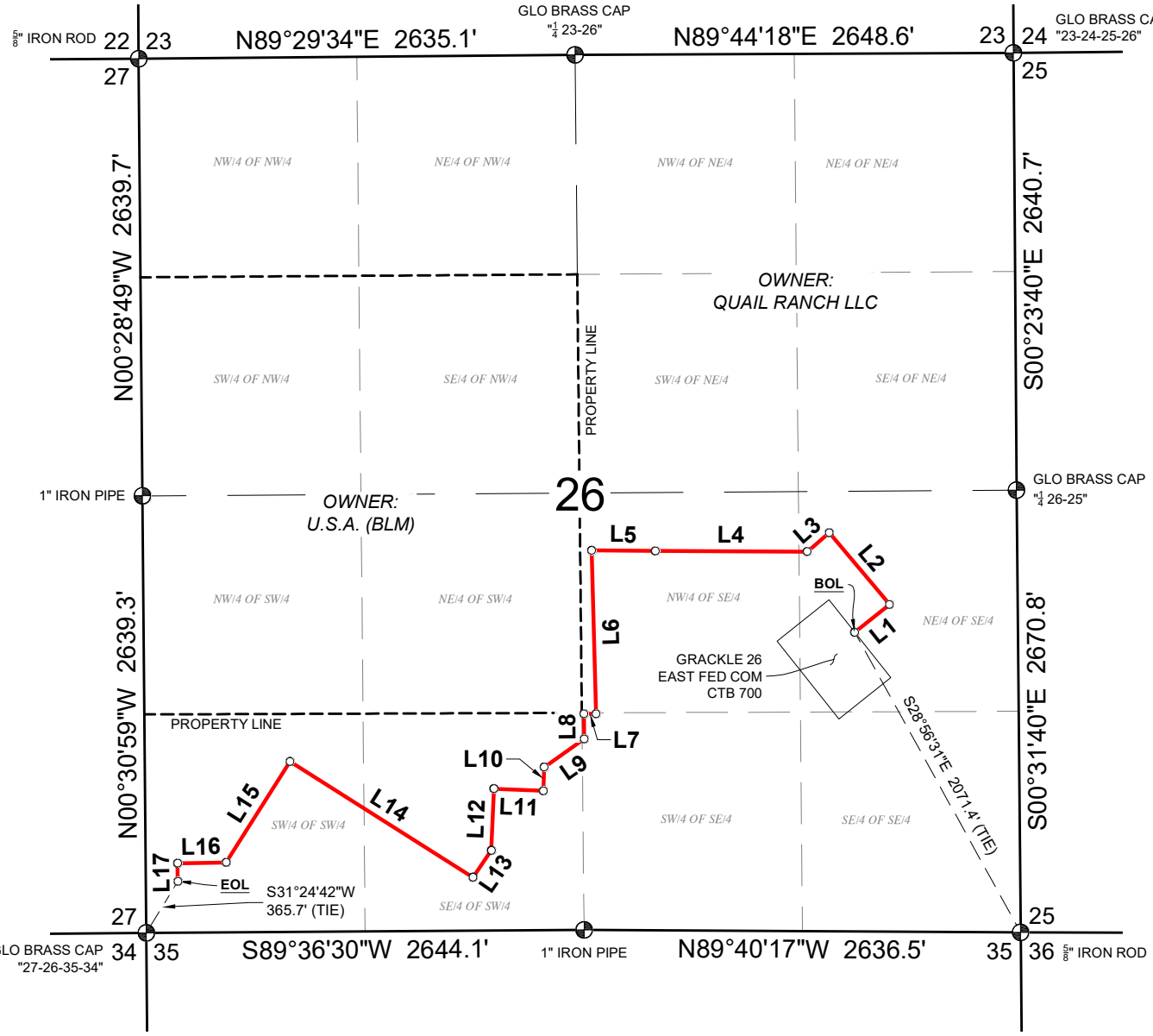
GRACKLE 26 EAST FED COM PROPOSED GAS LINE
SEC. 26, T-24-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

ASCENT GEOMATICS SOLUTIONS

PETROLEUM FIELD SERVICES, LLC
DBA: ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128

PLAT: P:\EOG_B20\05\4\PROD\ROW\UTILITIES\GAS\EP_GRACKLE_26_EAST_FED_COM_GAS_LINE 2/16/24 12:31 PM Jcastro

SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO



PROPOSED LGL LINE

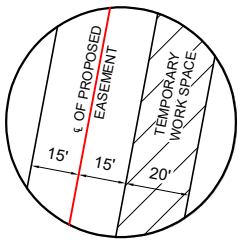
POINT FOR BEGIN/END OR ANGLE POINT

FOUND MONUMENT AS SHOWN

*SEE SHEET 2 OF 2 FOR LEGAL DESCRIPTION & LINE TABLE.

NOTES:
- BEARINGS, COORDINATES, AND DISTANCES SHOWN HEREON ARE BASED ON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83- 2011 (EPOCH 2010) FRAMEWORK, AS DERIVED BY OPUS SOLUTION. THE ELEVATIONS SHOWN HEREON AREA BASED ON NAVD 88.
- LAND OWNERSHIP INFORMATION REFLECTED HEREON WAS PROVIDED BY CLIENT AND/OR OBTAINED FROM PUBLIC DOMAIN DATA, NO INDEPENDENT OWNERSHIP SEARCH WAS PERFORMED BY ASCENT

0 500' 1000'
SCALE: 1"= 1000'



TYPICAL N.T.S
RIGHT-OF-WAY EASEMENT, TEMPORARY WORK SPACE CONFIGURATION

TIM C. PAPPAS NEW MEXICO 21209 REGISTERED PROFESSIONAL SURVEYOR

I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT PLAT OF A PROPOSED EASEMENT.

18 FEB 2024

TIM C. PAPPAS, N.M. P.L.S. **No.21209**

SURVEY DATE: 02/09/2024
JOB NO.: B20.EOG.0054

DRAFT: JC
SHEET: 1 OF 2

eog resources

GRACKLE 26 EAST FED COM PROPOSED LGL LINE
SEC. 26, T-24-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

ASCENT GEOMATICS SOLUTIONS

PETROLEUM FIELD SERVICES, LLC
DBA: ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128

PLAT: \\AGS\FS\PROJECTS\EOG_ B20005\4PROD\ROW\UTILITIES\LGL\EP_GRACKLE_26_EAST_FED_COM_LGL_LINE 2/19/24 3:27 AM Jcastro

SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO

GRACKLE 26 EAST FED COM PROPOSED LGL LINE
CENTERLINE DESCRIPTION

A STRIP OF LAND, 30 FEET IN WIDTH SITUATED IN THE SOUTH HALF OF SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AS CONVEYED TO QUAIL RANCH LLC, AND BEING 15 FEET ON EACH SIDE OF THE SURVEY OF CENTERLINE AS SHOWN HEREON AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

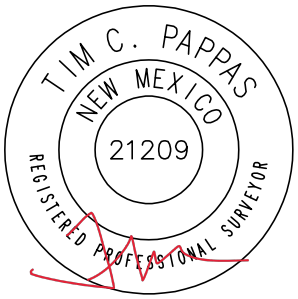
BEGINNING AT A POINT, FROM WHICH A $\frac{5}{8}$" IRON ROD FOUND AND ACCEPTED AS THE SOUTHEAST CORNER OF SAID SECTION 26 BEARS S28°56'31"E, 2071.4 FEET, FOR THE BEGINNING OF THE HEREIN DESCRIBED CENTERLINE;

THENCE THE FOLLOWING SEVENTEEN (17) COURSES, N51°31'01"E, 269.3 FEET, N40°04'39"W, 566.4 FEET, S49°08'07"W, 174.4 FEET, N89°44'36"W, 917.7 FEET, N89°33'16"W, 385.1 FEET, S01°35'25"E, 987.1 FEET, N89°20'38"W, 73.6 FEET, S00°34'30"E, 152.3 FEET, S54°47'03"W, 295.5 FEET, S02°20'59"W, 142.6 FEET, N87°39'01"W, 298.7 FEET, S02°20'59"W, 372.7 FEET, S34°27'20"W, 197.0 FEET, N57°39'01"W, 1307.2 FEET, S32°20'59"W, 721.8 FEET, S88°58'50"W, 293.2 FEET, S01°01'10"E, 108.4 FEET, TO A POINT, BEING THE END OF THE DESCRIBED CENTERLINE, FROM WHICH A GLO BRASS CAP FOUND AND ACCEPTED AS THE SOUTHWEST CORNER OF SAID SECTION 26 BEARS S31°24'42"W, 365.7 FEET, IN ALL BEING 7263.0 FEET OR 440.2 RODS IN LENGTH.

Line Table		
Line #	Direction	Length
L1	N51°31'01"E	269.3'
L2	N40°04'39"W	566.4'
L3	S49°08'07"W	174.4'
L4	N89°44'36"W	917.7'
L5	N89°33'16"W	385.1'
L6	S01°35'25"E	987.1'
L7	N89°20'38"W	73.6'
L8	S00°34'30"E	152.3'
L9	S54°47'03"W	295.5'
L10	S02°20'59"W	142.6'
L11	N87°39'01"W	298.7'
L12	S02°20'59"W	372.7'
L13	S34°27'20"W	197.0'
L14	N57°39'01"W	1307.2'
L15	S32°20'59"W	721.8'
L16	S88°58'50"W	293.2'
L17	S01°01'10"E	108.4'

*SEE SHEET 1 OF 2 FOR MORE INFORMATION

NOTES:
- BEARINGS, COORDINATES, AND DISTANCES SHOWN HEREON ARE BASED ON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83- 2011 (EPOCH 2010) FRAMEWORK, AS DERIVED BY OPUS SOLUTION. THE ELEVATIONS SHOWN HEREON AREA BASED ON NAVD 88.
- LAND OWNERSHIP INFORMATION REFLECTED HEREON WAS PROVIDED BY CLIENT AND/OR OBTAINED FROM PUBLIC DOMAIN DATA, NO INDEPENDENT OWNERSHIP SEARCH WAS PERFORMED BY ASCENT



I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT PLAT OF A PROPOSED EASEMENT.

18 FEB 2024

TIM C. PAPPAS, N.M. P.L.S. **No.21209**

SURVEY DATE: 02/09/2024
JOB NO.: B20.EOG.0054

DRAFT: JC
SHEET: 2 OF 2

eog resources

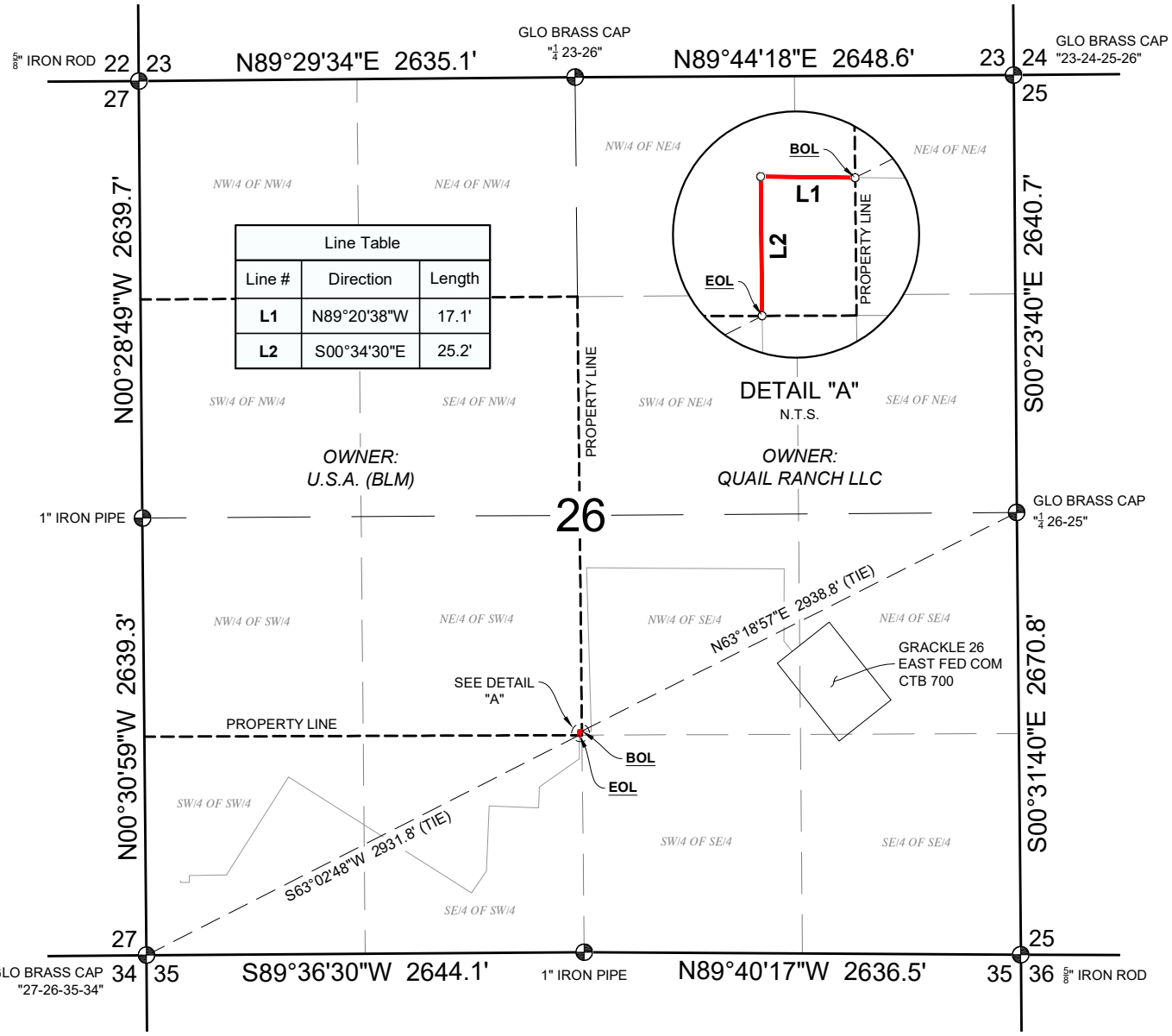
GRACKLE 26 EAST FED COM PROPOSED LGL LINE
SEC. 26, T-24-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

ASCENT GEOMATICS SOLUTIONS

PETROLEUM FIELD SERVICES, LLC
DBA: ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128

PLAT: P:\EOG_B20\0054\PROD\ROW\UTILITIES\LGL\EP_GRACKLE_26_EAST_FED_COM_LGL_LINE 2/16/24 12:44 PM Jcastro

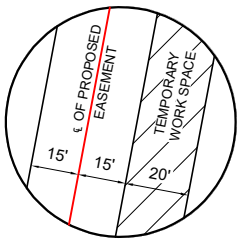
SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO



GRACKLE 26 EAST FED COM PROPOSED OIL LINE
CENTERLINE DESCRIPTION

A STRIP OF LAND 30 FEET IN WIDTH AND 42.3 FEET, 2.6 RODS OR 0.01 MILES IN LENGTH, SITUATED IN SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AND BEING 15 FEET ON EACH SIDE OF THE SURVEY OF CENTERLINE AS SHOWN HEREON.

- PROPOSED OIL LINE
- PROPOSED TIE-IN OIL LINE
- POINT FOR BEGIN/END OR ANGLE POINT
- FOUND MONUMENT AS SHOWN



TYPICAL N.T.S.
RIGHT-OF-WAY EASEMENT, TEMPORARY WORK SPACE CONFIGURATION

0 500' 1000'
SCALE: 1"= 1000'

NOTES:
- BEARINGS, COORDINATES, AND DISTANCES SHOWN HEREON ARE BASED ON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83- 2011 (EPOCH 2010) FRAMEWORK, AS DERIVED BY OPUS SOLUTION. THE ELEVATIONS SHOWN HEREON AREA BASED ON NAVD 88.
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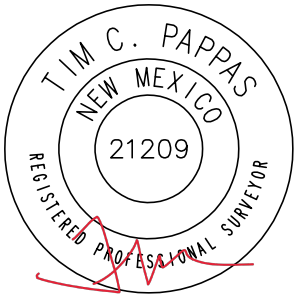


I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT PLAT OF A PROPOSED EASEMENT.

18 FEB 2024

TIM C. PAPPAS, N.M. P.L.S. **No.21209**

SURVEY DATE: 02/09/2024
JOB NO.: B20.EOG.0054
DRAFT: LJ
SHEET: 1 OF 1

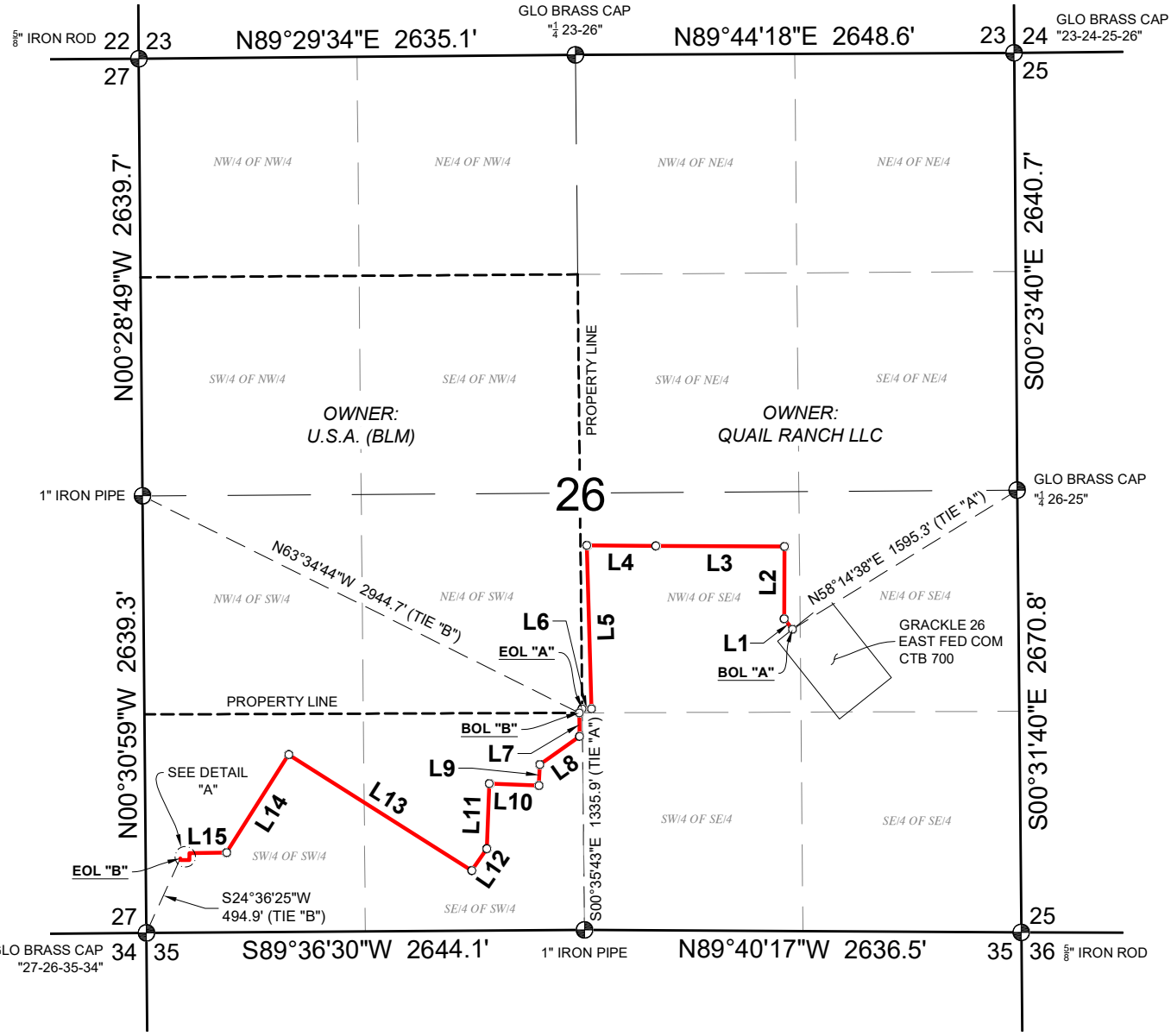
eog resources

GRACKLE 26 EAST FED COM PROPOSED OIL LINE
SEC. 26, T-24-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

PETROLEUM FIELD SERVICES, LLC
DBA: ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128

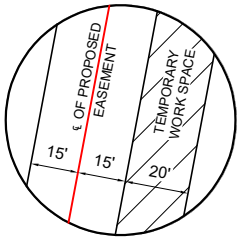
PLAT: P:\EOG_B200054\PROD\ROW\UTILITIES\EP_GRACKLE_26_EAST_FED_COM_OIL_LINE 2/14/24 1:59 PM Ljackson

SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO



*SEE SHEET 2 OF 2 FOR LEGAL DESCRIPTIONS, LINE TABLES AND DETAIL VIEW.

- PROPOSED OIL LINE
- PROPOSED TIE-IN OIL LINE
- POINT FOR BEGIN/END OR ANGLE POINT
- FOUND MONUMENT AS SHOWN



TYPICAL N.T.S
RIGHT-OF-WAY EASEMENT, TEMPORARY WORK SPACE CONFIGURATION

NOTES:
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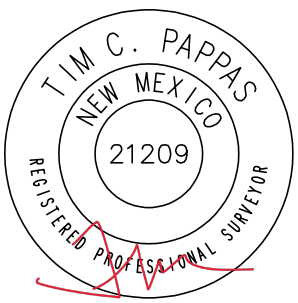
- LAND OWNERSHIP INFORMATION REFLECTED HEREON WAS PROVIDED BY CLIENT AND/OR OBTAINED FROM PUBLIC DOMAIN DATA, NO INDEPENDENT OWNERSHIP SEARCH WAS PERFORMED BY ASCENT

0 500' 1000'
SCALE: 1"= 1000'



I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT PLAT OF A PROPOSED EASEMENT. 18 FEB 2024

TIM C. PAPPAS, N.M. P.L.S. **No.21209**

SURVEY DATE: 02/09/2024
JOB NO.: B20.EOG.0054
DRAFT: LJ
SHEET: 1 OF 2

eog resources

GRACKLE 26 EAST FED COM PROPOSED OIL LINE
SEC. 26, T-24-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

PETROLEUM FIELD SERVICES, LLC
DBA: ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128

PLAT: P:\EOG_B20\0054\PROD\ROW\UTILITIES\EP_GRACKLE_26_EAST_FED_COM_OIL_LINE 2/16/24 12:24 PM Ljackson

SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO

GRACKLE 26 EAST FED COM PROPOSED OIL LINE

CENTERLINE "A"DESCRIPTION

A STRIP OF LAND, 30 FEET IN WIDTH SITUATED IN THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AS CONVEYED TO QUAIL RANCH LLC, AND BEING 15 FEET ON EACH SIDE OF THE SURVEY OF CENTERLINE AS SHOWN HEREON AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

BEGINNING AT A POINT, FROM WHICH A GLO BRASS CAP FOUND AND ACCEPTED AS THE EAST QUARTER CORNER OF SAID SECTION 26 BEARS N58°14'38"E, 1595.3 FEET, FOR THE BEGINNING OF THE HEREIN DESCRIBED CENTERLINE;

THENCE THE FOLLOWING SIX (6) COURSES, N38°28'59"W, 80.0 FEET, N00°15'24"E, 436.5 FEET, N89°44'36"W, 776.8 FEET, N89°33'16"W, 416.1 FEET, S01°35'25"E, 987.0 FEET, N89°20'38"W, 56.0 FEET TO A POINT, BEING THE END OF THE DESCRIBED CENTERLINE, FROM WHICH A 1" IRON PIPE FOUND AND ACCEPTED AS THE SOUTH QUARTER CORNER OF SAID SECTION 26 BEARS S00°35'43"E, 1335.9 FEET, IN ALL BEING 2752.4 FEET OR 166.8 RODS IN LENGTH.

CENTERLINE "B"DESCRIPTION

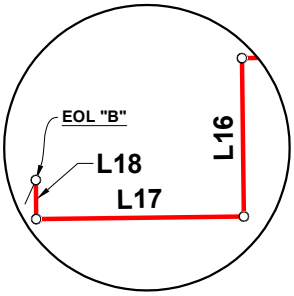
A STRIP OF LAND, 30 FEET IN WIDTH SITUATED IN THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AS CONVEYED TO QUAIL RANCH LLC, AND BEING 15 FEET ON EACH SIDE OF THE SURVEY OF CENTERLINE AS SHOWN HEREON AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

BEGINNING AT A POINT, FROM WHICH A 1" IRON PIPE FOUND AND ACCEPTED AS THE WEST QUARTER CORNER OF SAID SECTION 26 BEARS N63°34'44"W, 2944.7 FEET, FOR THE BEGINNING OF THE HEREIN DESCRIBED CENTERLINE;

THENCE THE FOLLOWING TWELVE (12) COURSES, S00°34'30"E, 142.0 FEET, S54°47'03"W, 294.5 FEET, S02°20'59"W, 127.4 FEET, N87°39'01"W, 298.7 FEET, S02°20'59"W, 394.0 FEET, S34°27'20"W, 159.5 FEET, N57°39'01"W, 1308.3 FEET, S32°20'59"W, 701.2 FEET, S89°17'36"W, 223.8 FEET, S00°42'24"E, 41.3 FEET, S89°17'36"W, 54.1 FEET, N00°42'24"W, 10.2 FEET TO A POINT, BEING THE END OF THE DESCRIBED CENTERLINE, FROM WHICH A GLO BRASS CAP FOUND AND ACCEPTED AS THE SOUTHWEST CORNER OF SAID SECTION 26 BEARS S24°36'25"W, 494.9 FEET, IN ALL BEING 3755.0 FEET OR 227.6 RODS IN LENGTH.

Line Table		
Line #	Direction	Length
L1	N38°28'59"W	80.0'
L2	N00°15'24"E	436.5'
L3	N89°44'36"W	776.8'
L4	N89°33'16"W	416.1'
L5	S01°35'25"E	987.0'
L6	N89°20'38"W	56.0'
L7	S00°34'30"E	142.0'
L8	S54°47'03"W	294.5'
L9	S02°20'59"W	127.4'

Line Table		
Line #	Direction	Length
L10	N87°39'01"W	298.7'
L11	S02°20'59"W	394.0'
L12	S34°27'20"W	159.5'
L13	N57°39'01"W	1308.3'
L14	S32°20'59"W	701.2'
L15	S89°17'36"W	223.8'
L16	S00°42'24"E	41.3'
L17	S89°17'36"W	54.1'
L18	N00°42'24"W	10.2'

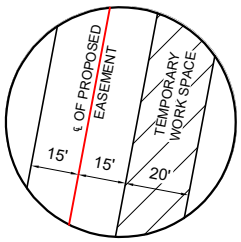


DETAIL "A"
N.T.S.

PROPOSED OIL LINE

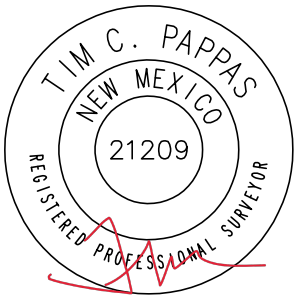
POINT FOR BEGIN/END OR ANGLE POINT

*SEE SHEET 1 OF 2 FOR MORE INFORMATION.



TYPICAL N.T.S
RIGHT-OF-WAY EASEMENT,
TEMPORARY WORK SPACE
CONFIGURATION

NOTES:
- BEARINGS, COORDINATES, AND DISTANCES SHOWN HEREON ARE BASED ON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83- 2011 (EPOCH 2010) FRAMEWORK, AS DERIVED BY OPUS SOLUTION. THE ELEVATIONS SHOWN HEREON AREA BASED ON NAVD 88.
- LAND OWNERSHIP INFORMATION REFLECTED HEREON WAS PROVIDED BY CLIENT AND/OR OBTAINED FROM PUBLIC DOMAIN DATA, NO INDEPENDENT OWNERSHIP SEARCH WAS PERFORMED BY ASCENT



I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT PLAT OF A PROPOSED EASEMENT.

18 FEB 2024

TIM C. PAPPAS, N.M. P.L.S. **No.21209**

SURVEY DATE: 02/09/2024
JOB NO.: B20.EOG.0054

DRAFT: LJ
SHEET: 2 OF 2

eog resources

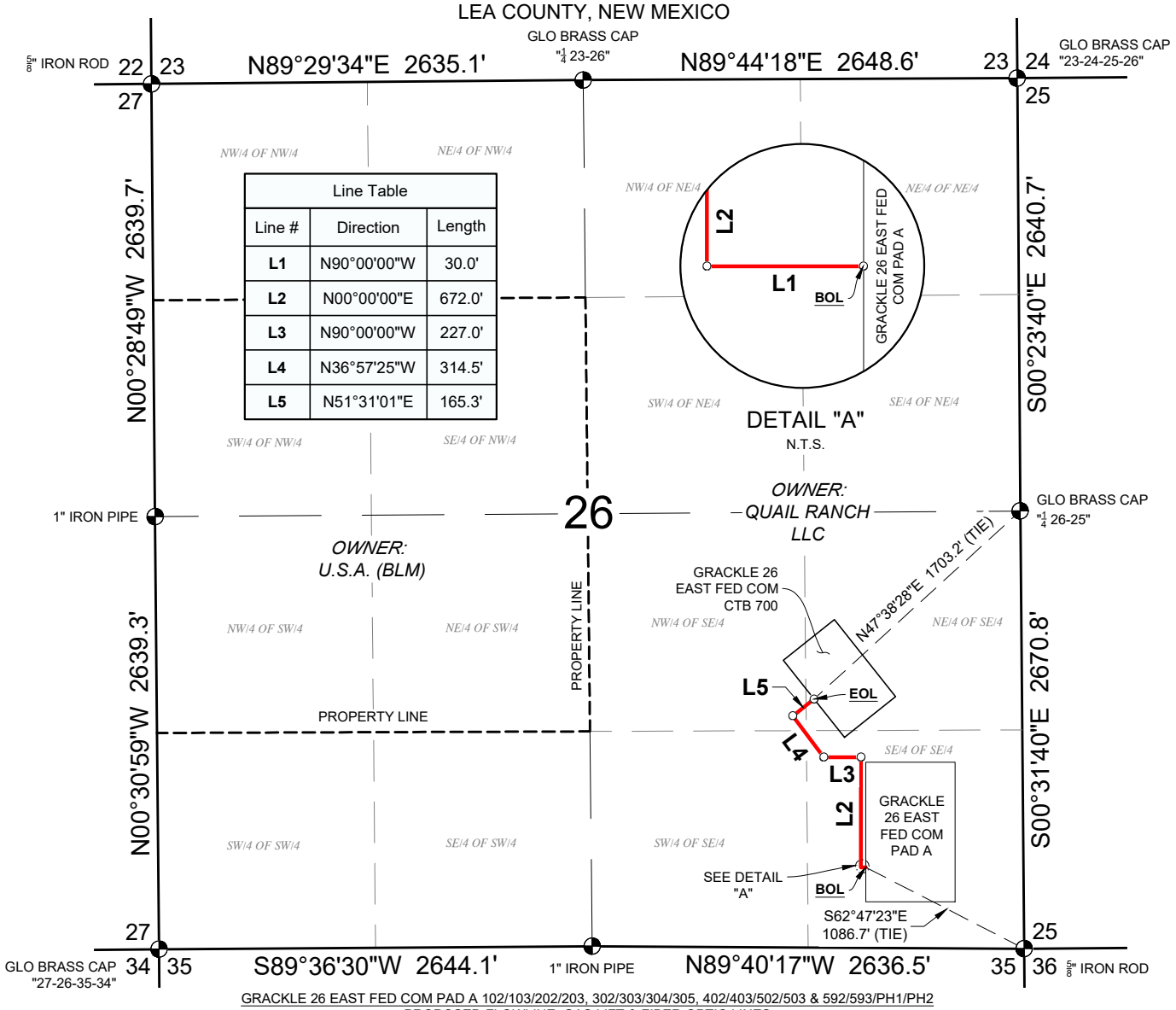
GRACKLE 26 EAST FED COM PROPOSED OIL LINE
SEC. 26, T-24-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

ASCENT GEOMATICS SOLUTIONS

PETROLEUM FIELD SERVICES, LLC
DBA: ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128

PLAT: P:\EOG_B200054\PROD\ROW\UTILITIES\EP_GRACKLE_26_EAST_FED_COM_OIL_LINE 2/14/24 1:10 PM Ljackson

SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO



Line Table		
Line #	Direction	Length
L1	N90°00'00"W	30.0'
L2	N00°00'00"E	672.0'
L3	N90°00'00"W	227.0'
L4	N36°57'25"W	314.5'
L5	N51°31'01"E	165.3'

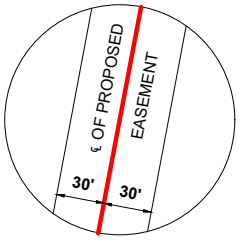
GRACKLE 26 EAST FED COM PAD A 102/103/202/203, 302/303/304/305, 402/403/502/503 & 592/593/PH1/PH2
PROPOSED FLOWLINE, GAS LIFT & FIBER OPTIC LINES

CENTERLINE DESCRIPTION

A STRIP OF LAND, 60 FEET IN WIDTH SITUATED IN THE SOUTHEAST QUARTER OF SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AS CONVEYED TO QUAIL RANCH LLC, AND BEING 30 FEET ON EACH SIDE OF THE SURVEY OF CENTERLINE AS SHOWN HEREON AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

BEGINNING AT A POINT, FROM WHICH A 5" IRON ROD FOUND AND ACCEPTED AS THE SOUTHEAST CORNER OF SAID SECTION 26 BEARS S62°47'23"E, 1086.7 FEET, FOR THE BEGINNING OF THE HEREIN DESCRIBED CENTERLINE;

THENCE THE FOLLOWING FIVE (5) COURSES, N90°00'00"W, 30.0 FEET, N00°00'00"E, 672.0 FEET, N90°00'00"W, 227.0 FEET, N36°57'25"W, 314.5 FEET, N51°31'01"E, 165.3 FEET TO A POINT, BEING THE END OF THE DESCRIBED CENTERLINE, FROM WHICH A GLO BRASS CAP FOUND AND ACCEPTED AS THE EAST QUARTER CORNER OF SAID SECTION 26 BEARS N47°38'28"E, 1703.2 FEET, IN ALL BEING 1408.8 FEET OR 85.4 RODS IN LENGTH.



TYPICAL
RIGHT-OF-WAY EASEMENT

— PROPOSED FLOWLINE, GAS LIFT & FIBER OPTIC LINES

○ POINT FOR BEGIN/END OR ANGLE POINT

⊕ FOUND MONUMENT AS SHOWN

NOTES:
- BEARINGS, COORDINATES, AND DISTANCES SHOWN HEREON ARE BASED ON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83- 2011 (EPOCH 2010) FRAMEWORK, AS DERIVED BY OPUS SOLUTION. THE ELEVATIONS SHOWN HEREON AREA BASED ON NAVD 88.
- LAND OWNERSHIP INFORMATION REFLECTED HEREON WAS PROVIDED BY CLIENT AND/OR OBTAINED FROM PUBLIC DOMAIN DATA, NO INDEPENDENT OWNERSHIP SEARCH WAS PERFORMED BY ASCENT

0 500' 1000'
SCALE: 1"= 1000'

N

TIM C. PAPPAS NEW MEXICO 21209 REGISTERED PROFESSIONAL SURVEYOR

I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT PLAT OF A PROPOSED EASEMENT. 22 FEB 2024

TIM C. PAPPAS, N.M. P.L.S. **No.21209**

SURVEY DATE: 02/09/2024
JOB NO.: B20.EOG.0054

DRAFT: KS
SHEET: 1 OF 1

eog resources

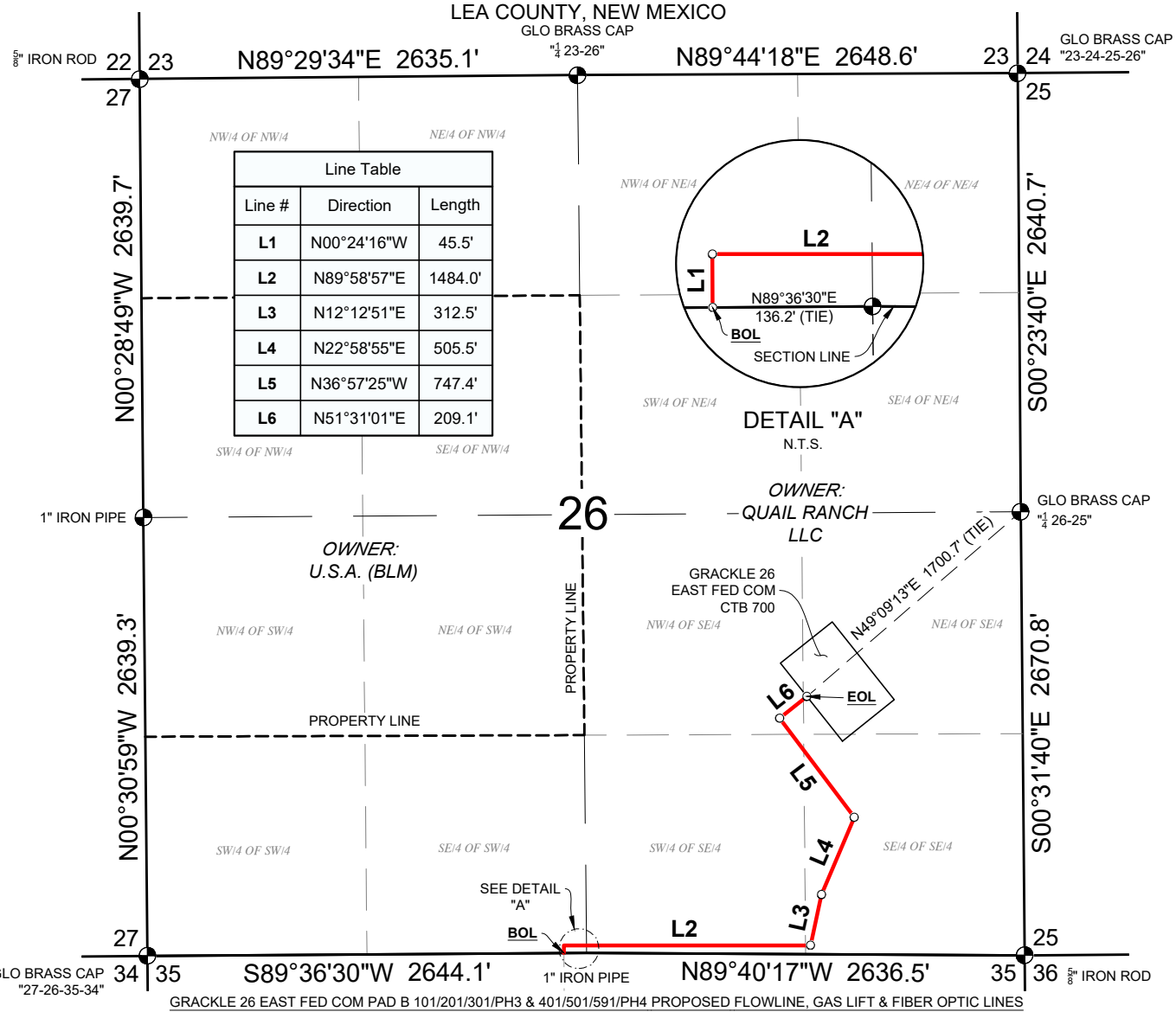
GRACKLE 26 EAST FED COM PAD A 102/103/202/203, 302/303/304/305, 402/403/502/503 & 592/593/PH1/PH2
PROPOSED FLOWLINE, GAS LIFT & FIBER OPTIC LINES REV 1
SEC. 26, T-24-S, R-34-E, N.M.P.M., LEA COUNTY, NEW MEXICO

ASCENT GEOMATICS SOLUTIONS

PETROLEUM FIELD SERVICES, LLC
DBA: ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128

PLAT: P:\EOG_ B20\0054\PROD\ROW\FLOWLINES\PAD_A\EP_GRACKLE_26_EAST_FED_COM_PAD_A_FL_R1 2/22/24 2:22 PM Ksarmiento

SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO



Line Table		
Line #	Direction	Length
L1	N00°24'16"W	45.5'
L2	N89°58'57"E	1484.0'
L3	N12°12'51"E	312.5'
L4	N22°58'55"E	505.5'
L5	N36°57'25"W	747.4'
L6	N51°31'01"E	209.1'

GRACKLE 26 EAST FED COM PAD B 101/201/301/PH3 & 401/501/591/PH4 PROPOSED FLOWLINE, GAS LIFT & FIBER OPTIC LINES

CENTERLINE DESCRIPTION

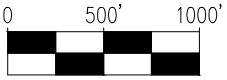
A STRIP OF LAND, 30 FEET IN WIDTH SITUATED IN THE SOUTH HALF OF SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AS CONVEYED TO QUAIL RANCH LLC, AND BEING 15 FEET ON EACH SIDE OF THE SURVEY OF CENTERLINE AS SHOWN HEREON AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

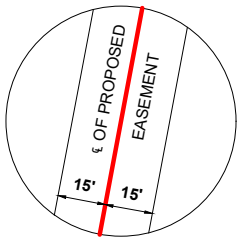
BEGINNING AT A POINT, FROM WHICH A 1" IRON PIPE FOUND AND ACCEPTED AS THE SOUTH QUARTER CORNER OF SAID SECTION 26 BEARS N89°36'30"E, 136.2 FEET, FOR THE BEGINNING OF THE HEREIN DESCRIBED CENTERLINE;

THENCE THE FOLLOWING SIX (6) COURSES, N00°24'16"W, 45.5 FEET, N89°58'57"E, 1484.0 FEET, N12°12'51"E, 312.5 FEET, N22°58'55"E, 505.5 FEET, N36°57'25"W, 747.4 FEET, N51°31'01"E, 209.1 FEET TO A POINT, BEING THE END OF THE DESCRIBED CENTERLINE, FROM WHICH A GLO BRASS CAP FOUND AND ACCEPTED AS THE EAST QUARTER CORNER OF SAID SECTION 26 BEARS N49°09'13"E, 1700.7 FEET, IN ALL BEING 3304.0 FEET OR 200.2 RODS IN LENGTH.

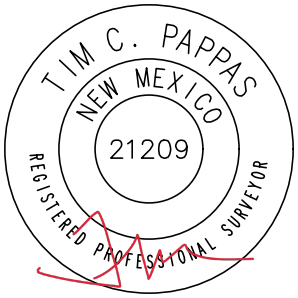
- PROPOSED FLOWLINE, GAS LIFT & FIBER OPTIC LINES
- PROPOSED TIE-IN FLOWLINE, GAS LIFT & FIBER OPTIC LINES
- POINT FOR BEGIN/END OR ANGLE POINT
- FOUND MONUMENT AS SHOWN

NOTES:
- BEARINGS, COORDINATES, AND DISTANCES SHOWN HEREON ARE BASED ON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83- 2011 (EPOCH 2010) FRAMEWORK, AS DERIVED BY OPUS SOLUTION. THE ELEVATIONS SHOWN HEREON AREA BASED ON NAVD 88.
- LAND OWNERSHIP INFORMATION REFLECTED HEREON WAS PROVIDED BY CLIENT AND/OR OBTAINED FROM PUBLIC DOMAIN DATA, NO INDEPENDENT OWNERSHIP SEARCH WAS PERFORMED BY ASCENT





TYPICAL RIGHT-OF-WAY EASEMENT



I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT PLAT OF A PROPOSED EASEMENT. 22 FEB 2024

TIM C. PAPPAS, N.M. P.L.S. **No.21209**

SURVEY DATE: 02/09/2024
JOB NO.: B20.EOG.0054

DRAFT: KS
SHEET: 1 OF 1

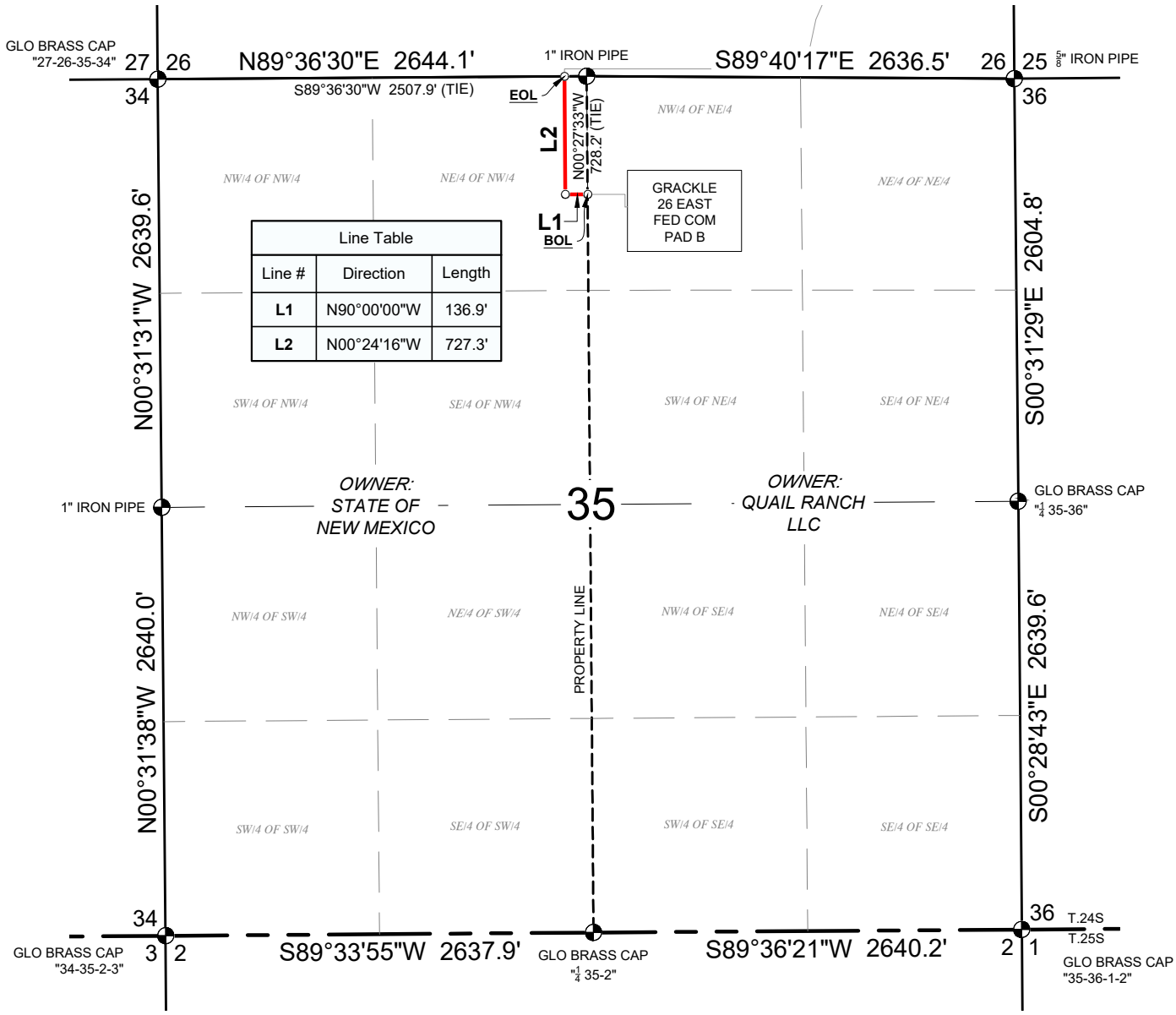
eog resources

GRACKLE 26 EAST FED COM PAD B 101/201/301/PH3 & 401/501/591/PH4
PROPOSED FLOWLINE, GAS LIFT & FIBER OPTIC LINES REV 1
SEC. 26, T-24-S, R-34-E, N.M.P.M., LEA COUNTY, NEW MEXICO

PETROLEUM FIELD SERVICES, LLC
DBA: ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128

PLAT: P:\EOG_ B200854\PROD\ROW\FLOWLINES\PAD_B\EP_GRACKLE_26_EAST_FED_COM_PAD_B_FL_R1 2/22/24 2:25 PM Jbryant

SECTION 35, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO



Line Table		
Line #	Direction	Length
L1	N90°00'00"W	136.9'
L2	N00°24'16"W	727.3'

GRACKLE 26 EAST FED COM PAD B 101/201/301/PH3 & 401/501/591/PH4 PROPOSED FLOWLINE, GAS LIFT & FIBER OPTIC LINES

CENTERLINE DESCRIPTION

A STRIP OF LAND 30 FEET IN WIDTH AND 864.2 FEET OR 52.4 RODS IN LENGTH, 0.6 ACRES SITUATED IN SECTION 35, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AND BEING 15 FEET ON EACH SIDE OF THE SURVEY OF CENTERLINE AS SHOWN HEREON.
NE/4 NW/4 = 864.2 FEET, 52.4 RODS, 0.6 ACRES

- PROPOSED FLOWLINE, GAS LIFT & FIBER OPTIC LINES
- PROPOSED TIE-IN FLOWLINE, GAS LIFT & FIBER OPTIC LINES
- POINT FOR BEGIN/END OR ANGLE POINT
- FOUND MONUMENT AS SHOWN

NOTES:
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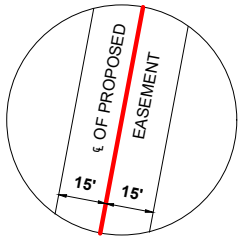
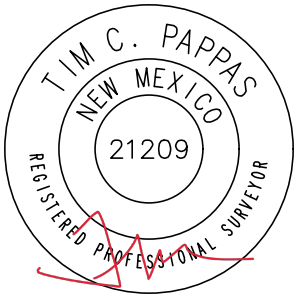
0 500' 1000'
SCALE: 1"= 1000'



TYPICAL
RIGHT-OF-WAY EASEMENT



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22 FEB 2024

TIM C. PAPPAS, N.M. P.L.S. **No.21209**

SURVEY DATE: 02/09/2024
JOB NO.: B20.EOG.0054

DRAFT: KS
SHEET: 1 OF 1

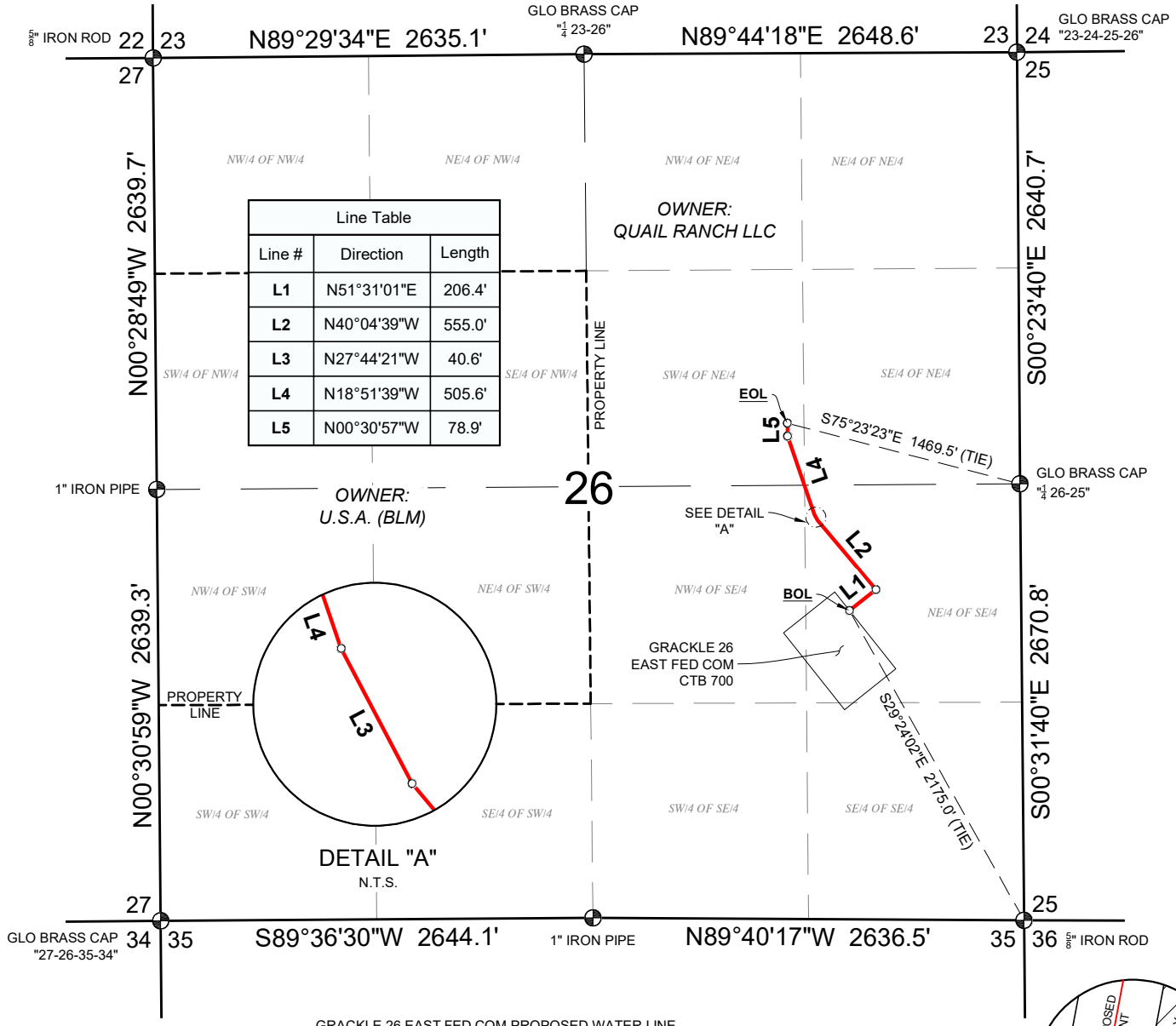
eog resources

GRACKLE 26 EAST FED COM PAD B 101/201/301/PH3 & 401/501/591/PH4
PROPOSED FLOWLINE, GAS LIFT & FIBER OPTIC LINES REV 1
SEC. 35, T-24-S, R-34-E, N.M.P.M., LEA COUNTY, NEW MEXICO

ASCENT GEOMATICS SOLUTIONS
PETROLEUM FIELD SERVICES, LLC
DBA: ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128

PLAT: P:\EOG_ B200854\PROD\ROW\FLOWLINES\PAD_B\EP_GRACKLE_26_EAST_FED_COM_PAD_B_FL_R1 2/22/24 2:26 PM Jbryant

SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO



Line Table		
Line #	Direction	Length
L1	N51°31'01"E	206.4'
L2	N40°04'39"W	555.0'
L3	N27°44'21"W	40.6'
L4	N18°51'39"W	505.6'
L5	N00°30'57"W	78.9'

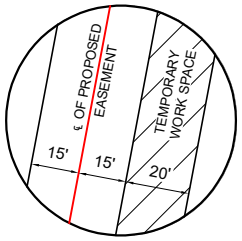
GRACKLE 26 EAST FED COM PROPOSED WATER LINE

CENTERLINE DESCRIPTION

A STRIP OF LAND, 30 FEET IN WIDTH SITUATED IN THE EAST HALF OF SECTION 26, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AS CONVEYED TO QUAIL RANCH LLC, AND BEING 15 FEET ON EACH SIDE OF THE SURVEY OF CENTERLINE AS SHOWN HEREON AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

BEGINNING AT A POINT, FROM WHICH A ⅝" IRON ROD FOUND AND ACCEPTED AS THE SOUTHEAST CORNER OF SAID SECTION 26 BEARS S29°24'02"E, 2175.0 FEET, FOR THE BEGINNING OF THE HEREIN DESCRIBED CENTERLINE;

THENCE THE FOLLOWING FIVE (5) COURSES, N51°31'01"E, 206.4 FEET, N40°04'39"W, 555.0 FEET, N27°44'21"W, 40.6 FEET, N18°51'39"W, 505.6 FEET, N00°30'57"W, 78.9 FEET TO A POINT, BEING THE END OF THE DESCRIBED CENTERLINE, FROM WHICH A GLO BRASS CAP FOUND AND ACCEPTED AS THE EAST QUARTER CORNER OF SAID SECTION 26 BEARS S75°23'23"E, 1469.5 FEET, IN ALL BEING 1386.5 FEET OR 84.0 RODS IN LENGTH.



TYPICAL N.T.S
RIGHT-OF-WAY EASEMENT, TEMPORARY WORK SPACE CONFIGURATION

NOTES:
- BEARINGS, COORDINATES, AND DISTANCES SHOWN HEREON ARE BASED ON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83- 2011 (EPOCH 2010) FRAMEWORK, AS DERIVED BY OPUS SOLUTION. THE ELEVATIONS SHOWN HEREON AREA BASED ON NAVD 88.
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PROPOSED WATER LINE
POINT FOR BEGIN/END OR ANGLE POINT
FOUND MONUMENT AS SHOWN

0 500' 1000'
SCALE: 1"= 1000'

TIM C. PAPPAS NEW MEXICO 21209 REGISTERED PROFESSIONAL SURVEYOR

I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT AND THAT THIS INSTRUMENT IS AN EASEMENT PLAT OF A PROPOSED EASEMENT. 18 FEB 2024

TIM C. PAPPAS, N.M. P.L.S. **No.21209**

SURVEY DATE: 02/09/2024
JOB NO.: B20.EOG.0054

DRAFT: JC
SHEET: 1 OF 1

eog resources

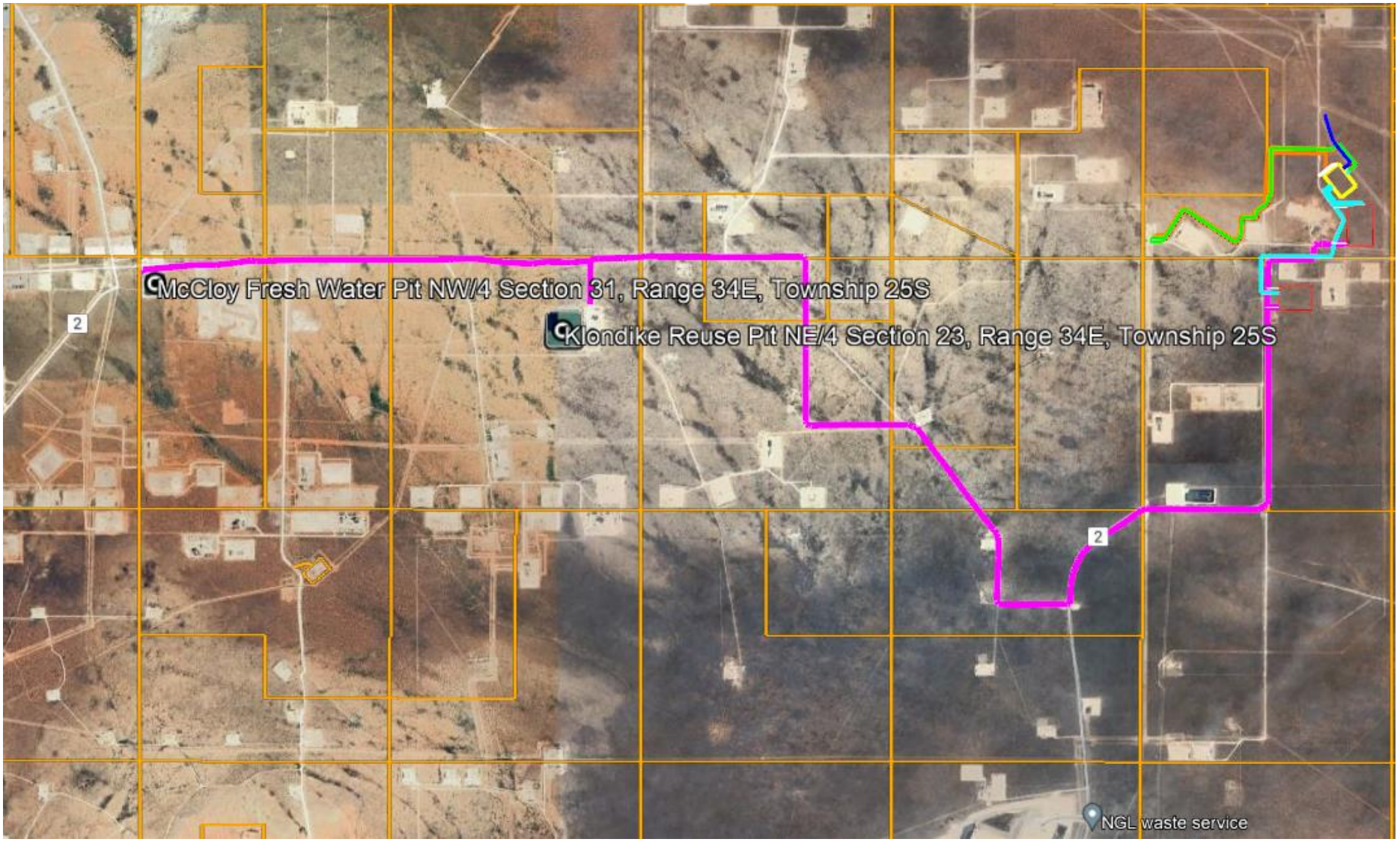
GRACKLE 26 EAST FED COM PROPOSED WATER LINE
SEC. 26, T-24-S, R-34-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO

ASCENT GEOMATICS SOLUTIONS

PETROLEUM FIELD SERVICES, LLC
DBA: ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128

PLAT: P:\EOG_B200054\PROD\ROW\UTILITIES\WATER\EP_GRACKLE_26_EAST_FED_COM_WATER_LINE 2/16/24 1:00 PM Jcastro

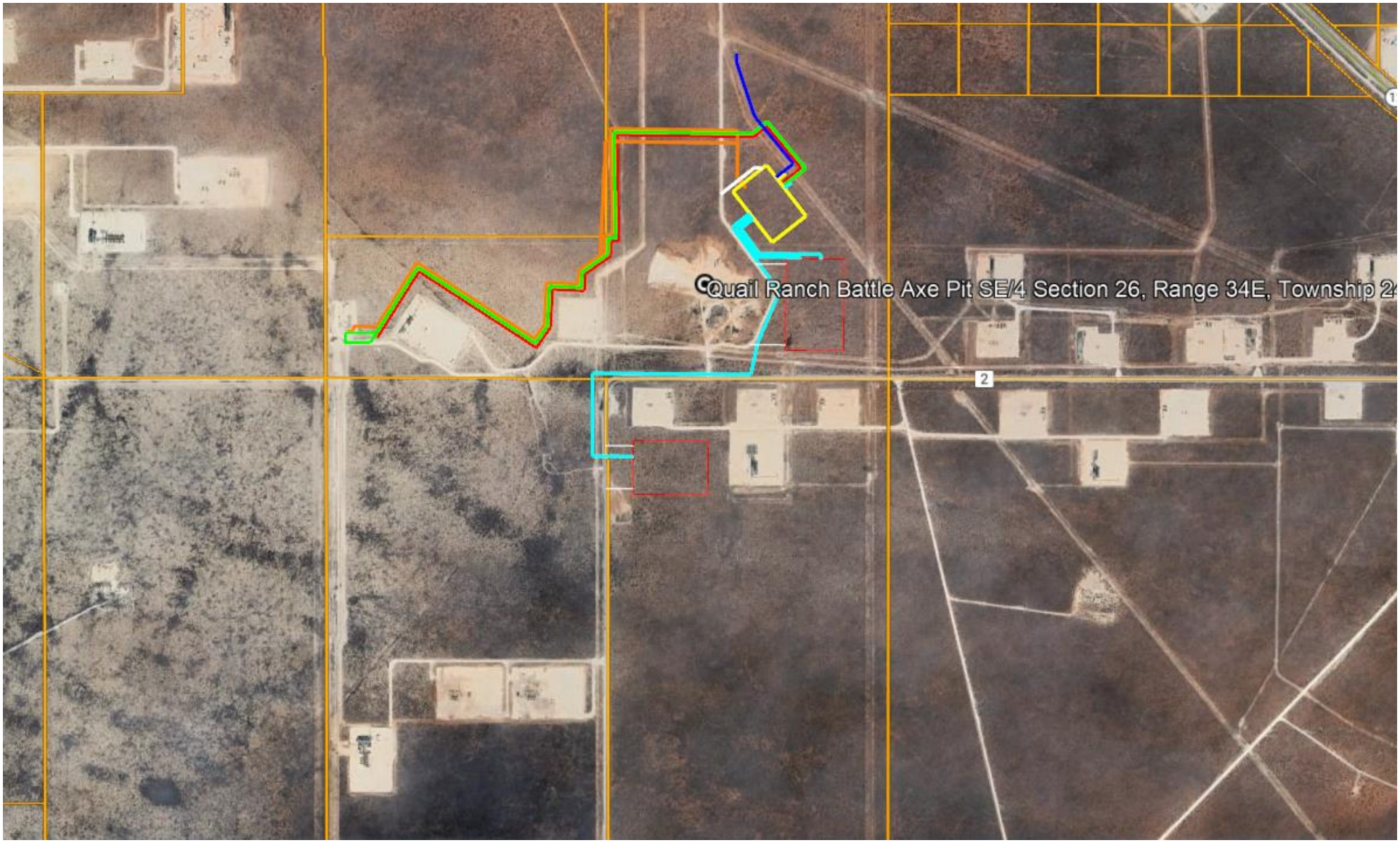
Grackle 26 Water Map



Fresh Water for drilling operations will be sourced from EOG's McCloy Freshwater pit in the NW/4 Section 31, Range 34E, Township 25S. Access to this pit is off Resources Lane, the depicted route will follow EOG lease roads and Battle Axe Road.

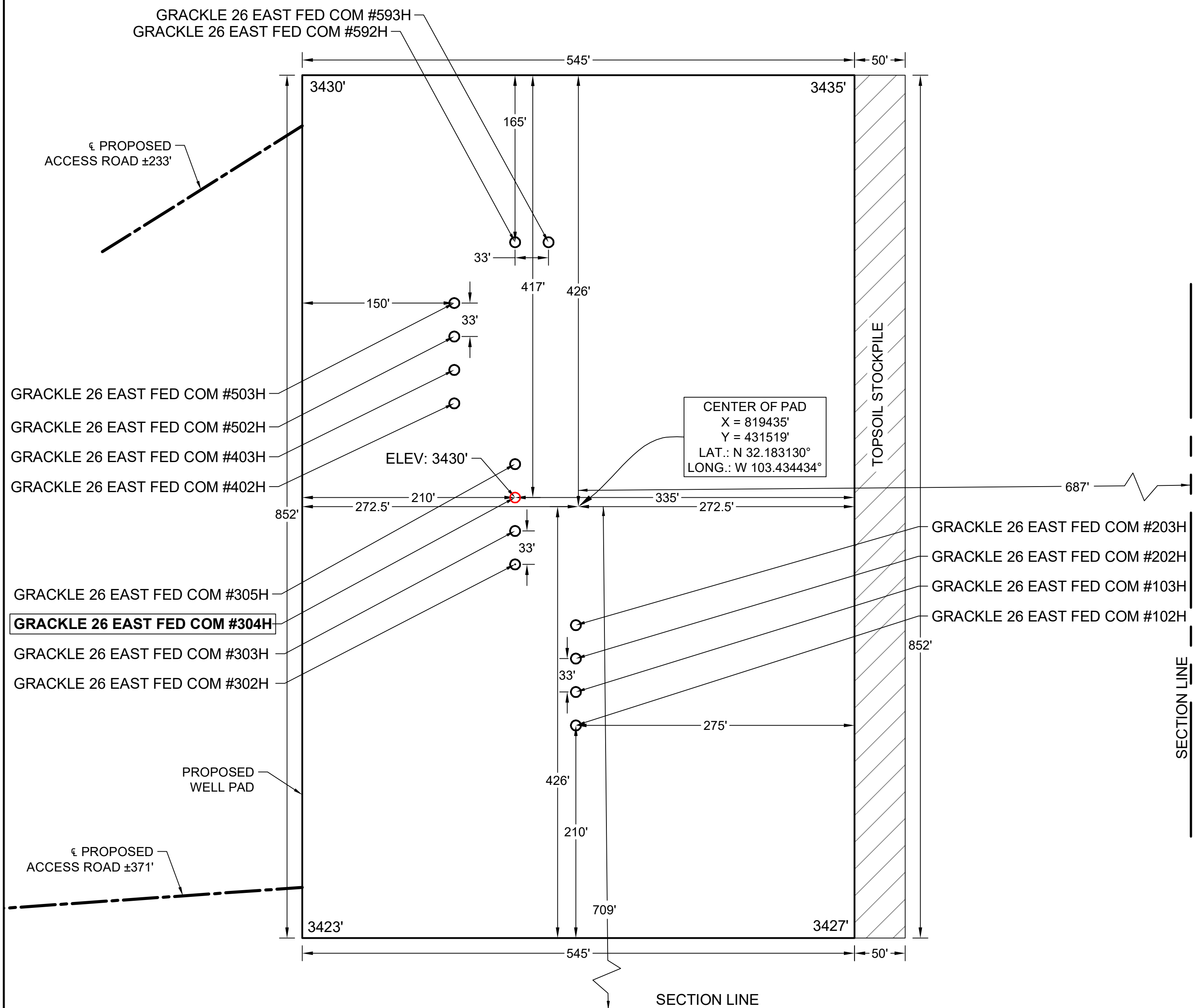
Reuse Water for completions operations be sourced from EOG's Klondike Reuse Pit in the NE/4 Section 23, Range 34E, Township 25S. Access to this pit is off Resources Lane, the depicted route will follow EOG lease roads and Battle Axe Road.

Grackle 26 Caliche Map



Quail Ranch Battle Axe Pit- SE/4 Section 26, Range 34E, Township 24 South, Lea County, NM. Access to this pit is off of Battle Axe road and existing oil and gas lease roads.

EXHIBIT 2B
PAD LAYOUT



LEASE NAME & WELL NO.: GRACKLE 26 EAST FED COM #304H

LATITUDE: N 32.183157° LONG.: W 103.434636° ELEVATION: 3430'

SECTION: 26 TWP: 24S RGE: 34E SURVEY: N.M.P.M.

COUNTY: LEA STATE: NM

DESCRIPTION: CENTER OF PAD IS 709' FSL & 687' FEL

LEGEND

— — —	= PROPOSED ACCESS ROAD
— — —	= SECTION LINE

eog resources

JOB No.: EOG__B200054

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE FOLLOWING COORDINATE SYSTEM: NAD83 NEW MEXICO STATE PLANE, EAST ZONE, U.S. SURVEY FEET

DISCLAIMER:
THIS PLOT DOES NOT REPRESENT A MONUMENTED LAND SURVEY AND SHOULD NOT BE RELIED UPON TO DETERMINE BOUNDARY LINES, PROPERTY OWNERSHIP OR OTHER PROPERTY INTERESTS.

SHEET 2 OF 2

0 75 150
SCALE: 1"= 150'

ASCENT
GEOMATICS SOLUTIONS
8620 WOLFF CT
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128
WWW.ASCENTGEOMATICS.COM

Exhibit 4

Well Site Diagram

EOG Resources
Grackle 26 East Fed Com #304H

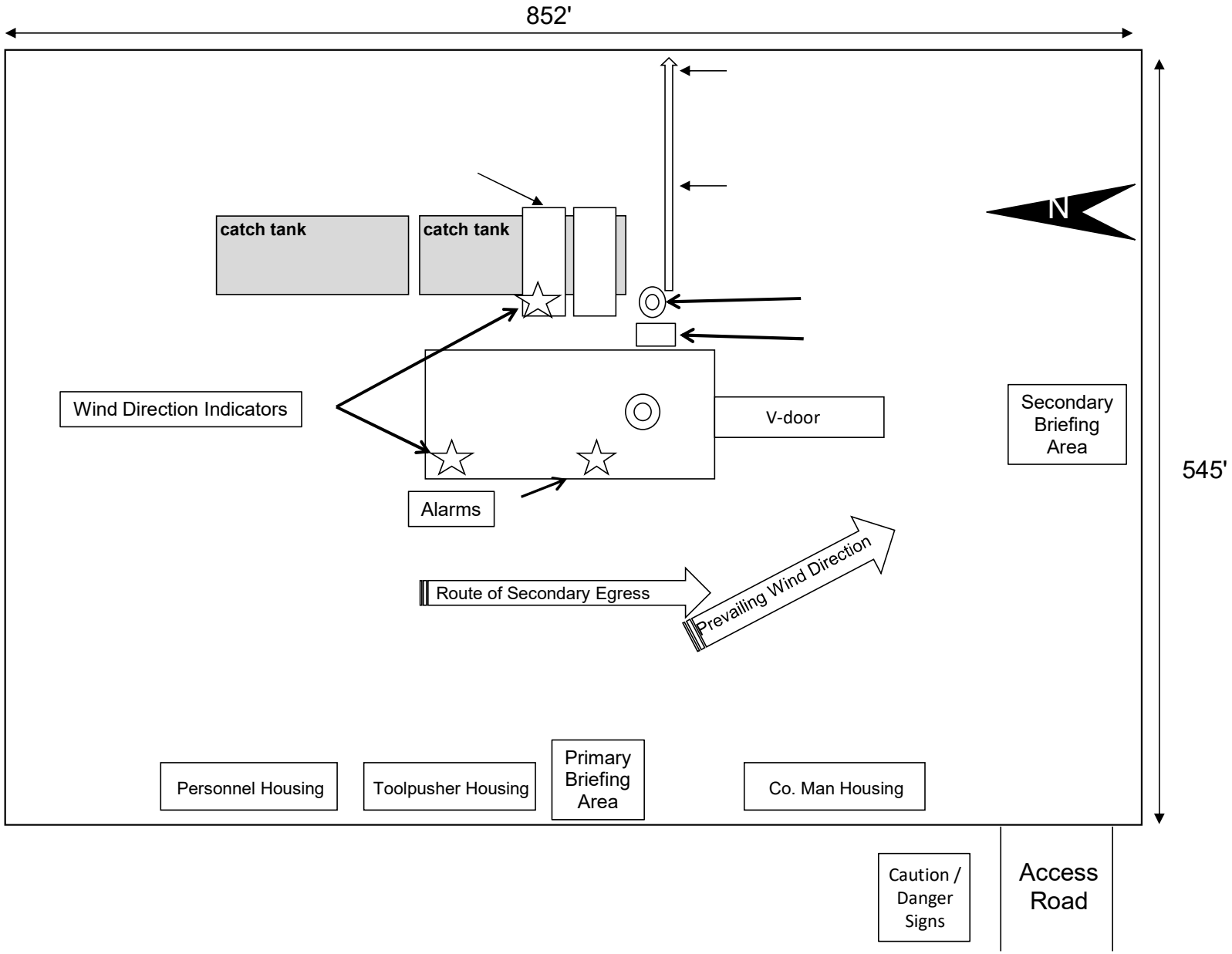
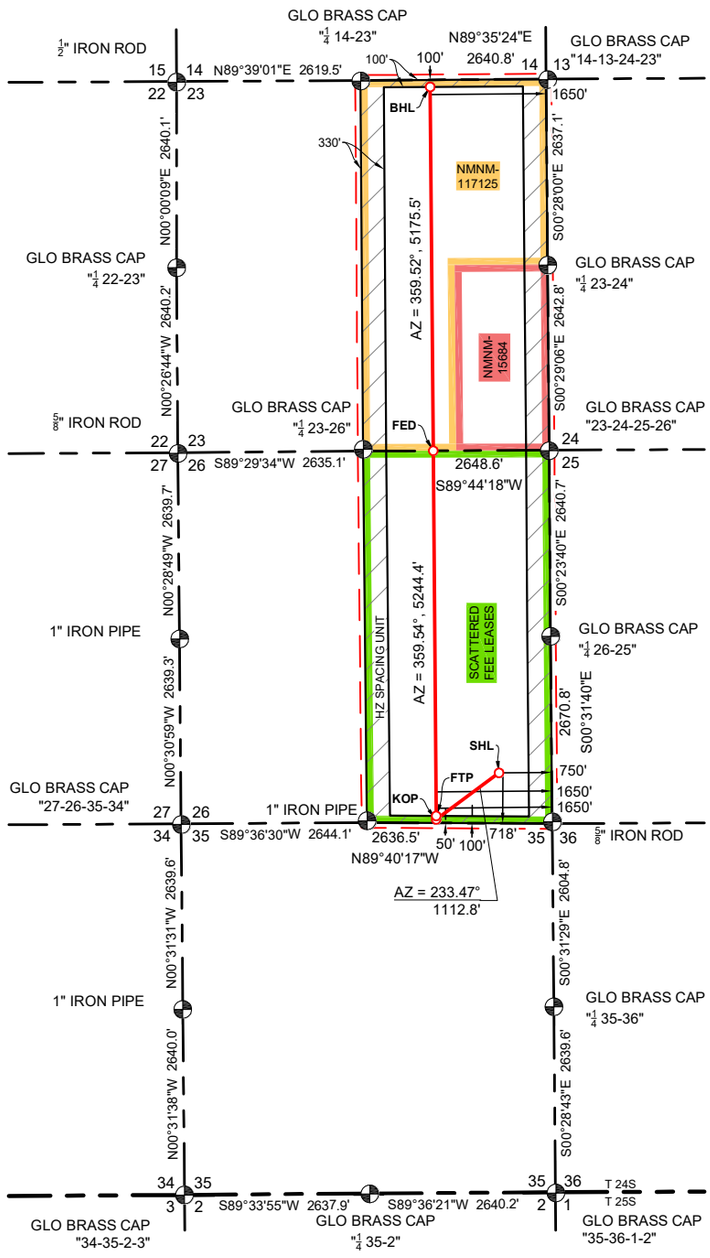


EXHIBIT 2A
WELL LOCATION EXHIBIT

SURFACE LOCATION
NEW MEXICO EAST
NAD 1983
X=819373' Y=431528'
LAT=N32.183157°
LONG=W103.434636°
NAD 1927
X=778187' Y=431470'
LAT=N32.183031°
LONG=W103.434165°
718' FSL 750' FEL

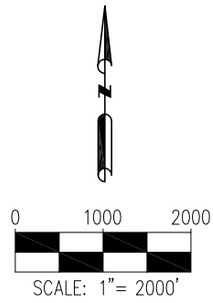
KOP LOCATION
NEW MEXICO EAST
NAD 1983
X=818479' Y=430866'
LAT=N32.181356°
LONG=W103.437543°
NAD 1927
X=777293' Y=430807'
LAT=N32.181231°
LONG=W103.437073°
50' FSL 1650' FEL

FIRST TAKE POINT
NEW MEXICO EAST
NAD 1983
X=818478' Y=430916'
LAT=N32.181494°
LONG=W103.437544°
NAD 1927
X=777293' Y=430857'
LAT=N32.181369°
LONG=W103.437073°
100' FSL 1650' FEL



FED PERF. POINT
NEW MEXICO EAST
NAD 1983
X=818437' Y=436110'
LAT=N32.195771°
LONG=W103.437538°
NAD 1927
X=777251' Y=436052'
LAT=N32.195646°
LONG=W103.437067°
1650' FEL

LOWER MOST PERF./ BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1983
X=818393' Y=441286'
LAT=N32.209997°
LONG=W103.437538°
NAD 1927
X=777208' Y=441227'
LAT=N32.209872°
LONG=W103.437065°
100' FNL 1650' FEL



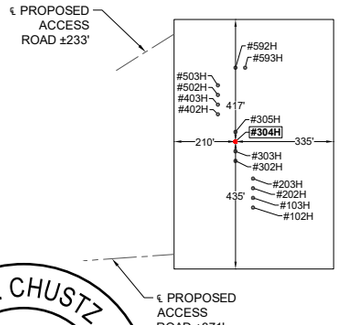
LEASE NAME & WELL NO.: GRACKLE 26 EAST FED COM #304H
LATITUDE: N 32.183157° LONG: W 103.434636° ELEVATION: 3430'

SECTION: 26 TWP: 24 S RGE: 34 E SURVEY: N.M.P.M.
COUNTY: LEA STATE: NM

DESCRIPTION: 718' FSL & 750' FEL

DISTANCE & DIRECTION:
FROM THE INTERSECTION OF NEW MEXICO STATE ROAD 128 AND COUNTY ROAD 2, TRAVEL SOUTHWEST ON COUNTY ROAD 2 ±1.8 MILES; THENCE NORTH (RIGHT) ONTO AN EXISTING LEASE ROAD ±288 FEET; THENCE EAST (RIGHT) ON AN EXISTING LEASE ROAD ±347 FEET; THENCE EAST (RIGHT) ON A PROPOSED ACCESS ROAD ±371 FEET TO THE EDGE OF PAD.
(PROPOSED ACCESS ROAD LENGTH = ±371')

DETAIL VIEW
SCALE: 1" = 600'



eog resources

JOB No.: EOG_B200054

NOTE:
ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE FOLLOWING COORDINATE SYSTEM: NAD83 NEW MEXICO STATE PLANE, EAST ZONE, U.S. SURVEY FEET.
DISCLAIMER:
THIS PLOT DOES NOT REPRESENT A MONUMENTED LAND SURVEY AND SHOULD NOT BE RELIED UPON TO DETERMINE BOUNDARY LINES, PROPERTY OWNERSHIP OR OTHER PROPERTY INTERESTS.

RALPH B. CHUSTZ, JR., N.M. P.L.S. No. 26264

ASCENT GEOMATICS SOLUTIONS
8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128
WWW.ASCENTGEOMATICS.COM

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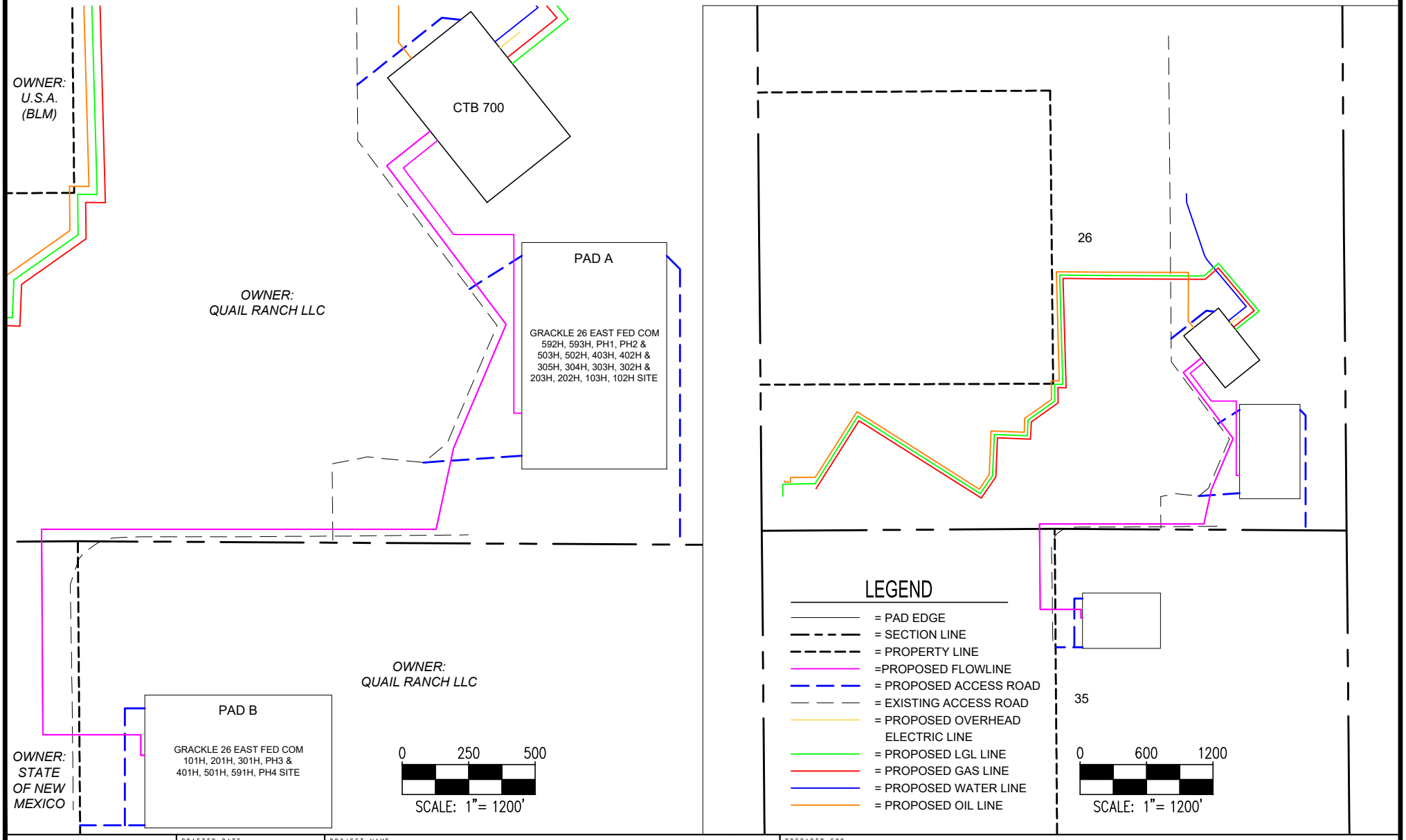
EXHIBIT 5

SECTIONS 26 & 35, TOWNSHIP 24 SOUTH, RANGE 34 EAST,
LEA COUNTY, NEW MEXICO

GRACKLE 26 EAST FED COM
INFRASTRUCTURE MAP



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8620 WOLFF CT.
WESTMINSTER, CO 80031
OFFICE:(303) 928-7128
www.ascentgeomatics.com

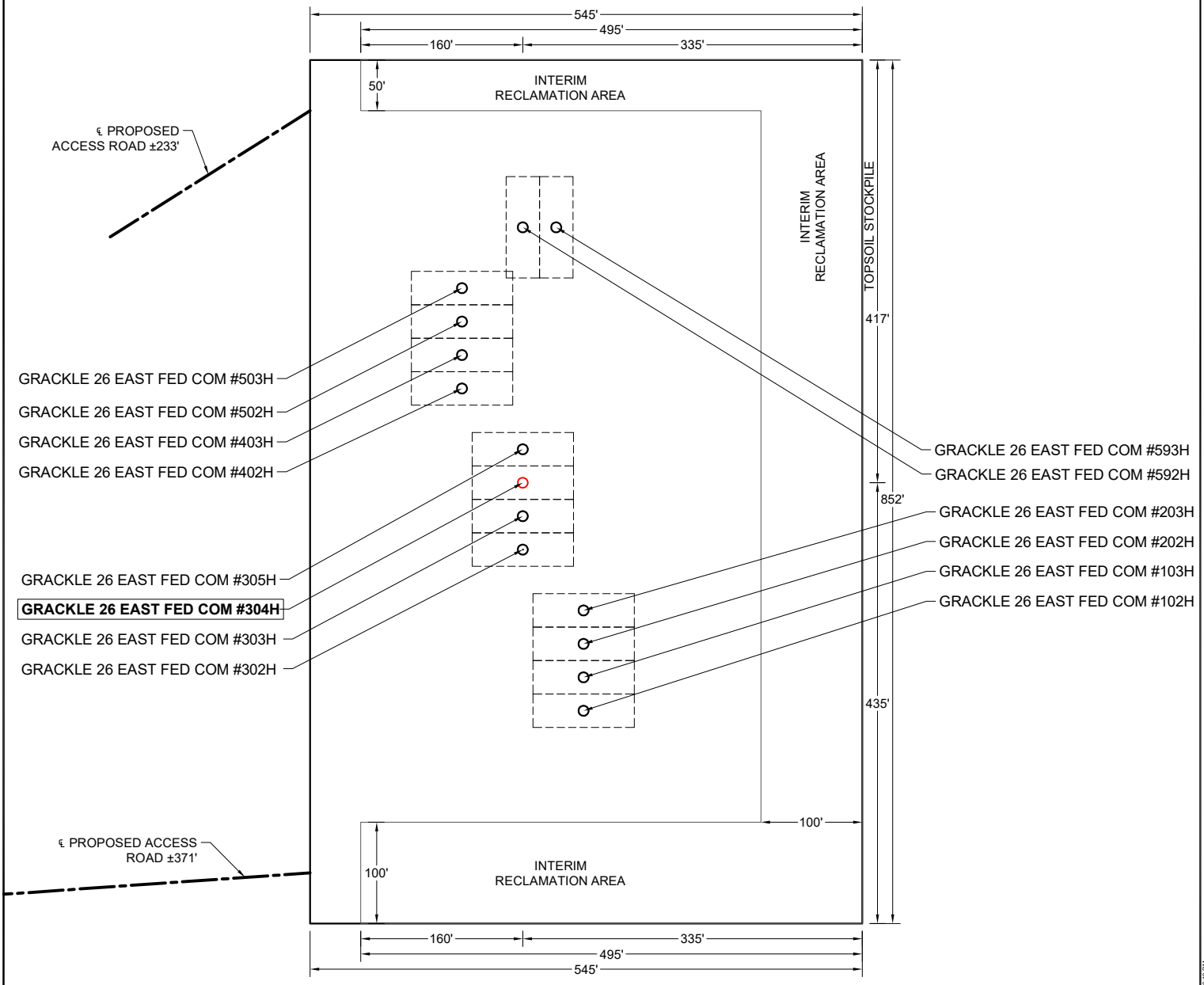
DRAFTED DATE: 03/06/2024
FILE: EOG_GRACKLE_26_EAST_FED_COM_FLOWLINE_DETAIL
BY: JC
CHECKED: LE

PROJECT NAME: GRACKLE 26 EAST FED COM INFRASTRUCTURE MAP
REV. 0
SURFACE LOCATION: SEC. 26 & 35, T24S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO
PROJECT NUMBER: EOG__B200054

PREPARED FOR: eog resources

EXHIBIT 2C
RECLAMATION DIAGRAM

DETAIL VIEW
SCALE: 1" = 150'



LEASE NAME & WELL NO.: GRACKLE 26 EAST FED COM #304H
LATITUDE: N 32.183157° LONG: W 103.434636° ELEVATION: 3430'

SECTION: 26 TWP: 24 S RGE: 34 E SURVEY: N.M.P.M.
COUNTY: LEA STATE: NM

DESCRIPTION: CENTER OF PAD IS 709' FSL & 687' FEL

eog resources

JOB No.: EOG_B200054

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE FOLLOWING COORDINATE SYSTEM: NAD83 NEW MEXICO STATE PLANE, EAST ZONE, U.S. SURVEY FEET.

DISCLAIMER:
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N

0 75 150
SCALE: 1"= 150'

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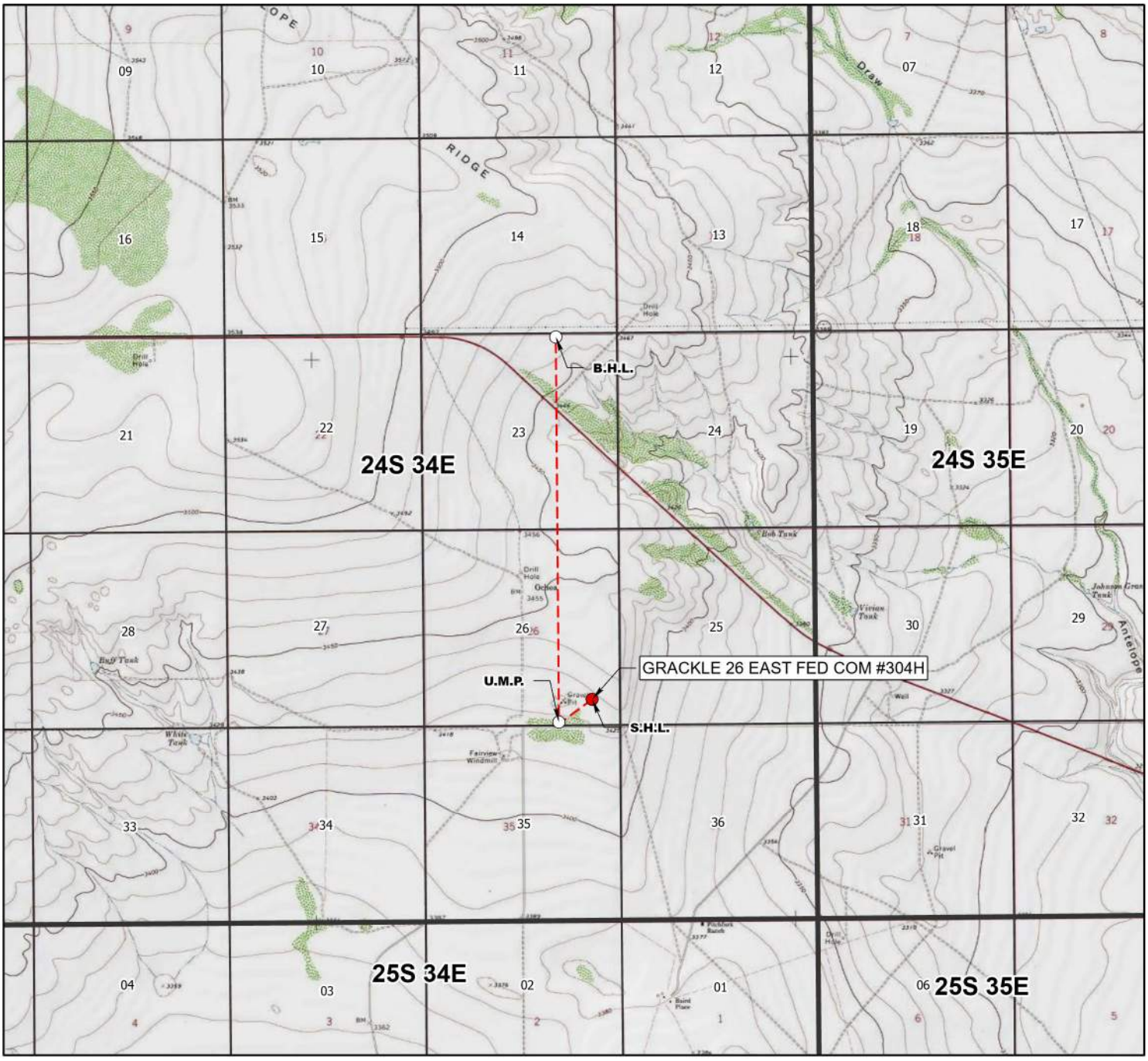
EXHIBIT 1
LOCATION & ELEVATION VERIFICATION MAP



LEASE NAME & WELL NO.: GRACKLE 26 EAST FED COM #304H
LATITUDE: N 32.183157 LONG: W 103.434636 ELEVATION: 3430'

SECTION: 26 TWP: 24S RGE: 34E SURVEY: N.M.P.M.
COUNTY: LEA STATE: NM

DESCRIPTION: 718' FSL & 750' FEL

- S.H.L.
- U.M.P.; L.M.P.; B.H.L.
- Bore Line
- Section
- Township

eog resources

JOB No.: EOG_B200054

NOTE:
ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE FOLLOWING COORDINATE SYSTEM: NAD83 NEW MEXICO STATE PLANE, EAST ZONE, U.S. SURVEY FEET

DISCLAIMER:
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N

0 2,000 4,000

SCALE: 1"=4,000'

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8620 WOLFF COURT
WESTMINSTER, CO 80031
OFFICE: (303) 928-7128
WWW.ASCENTGEOMATICS.COM

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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 GRACKLE 26 EAST FED COM 304H 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 cross lease boundaries and a BLM road right-of-way will be acquired from the BLM prior to construction activities.

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

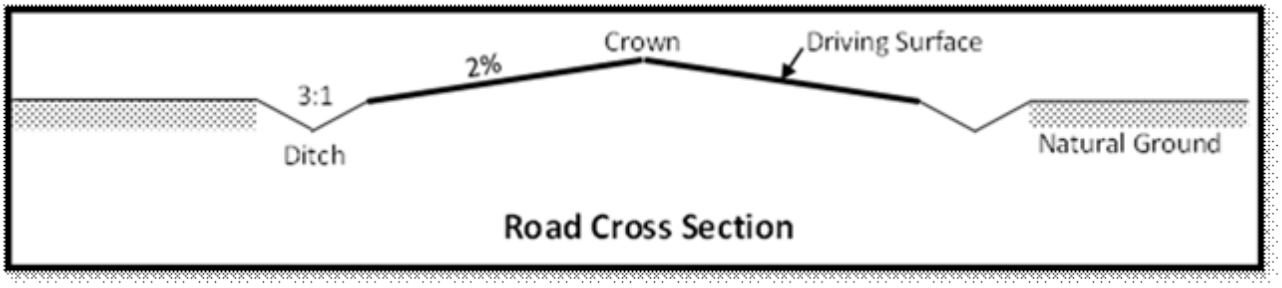
a. An access road will be needed for this proposed project. See the survey plat for the location of the access road.

b. The length of access road needed to be constructed for this proposed project is about 1834 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.



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 20 percent.

h. No turnouts will be constructed on the proposed access road.

i. An appropriately sized cattleguard sufficient to carry out the project will be installed and maintained at the fence crossing(s). Prior to cutting the fence, the fence will be braced and tied off on both sides of the passageway with H braces to protect the integrity of the fence line. See the survey plat for the location of the proposed cattle guard.

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. GRACKLE 26 EAST FED COM 304H 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 SEE ELECTRICAL ATTACHMENT

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. A production facility is proposed to be installed off the proposed well location. Production from the well will be processed at this production facility. GRACKLE 26 EAST FED COM CTB depicts the location of the production facilities.

d. The proposed production facility will have a secondary containment structure that is constructed to hold the capacity of 1-1/2 times the largest tank, plus freeboard to account for percipitation, unless more stringent protective requirements are deemed necessary.

e. GRACKLE 26 EAST FED COM INFRASTRUCTURE MAP/SKETCH depicts the production facility as well.

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

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 1409 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. GRACKLE 26 EAST FED COM INFRASTRUCTURE EXHIBIT 5 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 a 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_I 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:
Bear Pit Section 36_ Township 25S_ Range 36E_ Lea County_ New Mexico (NWSW)

Treated Produced Water Source:
Lomas Reuse Pit_ Section 26_ Township 25S_ Range 36E_ Lea County_ New Mexico (SWNW and SENW)

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 Environmental Assessment.

b. GRACKLE 26 EAST 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 SEE SECTION SEVEN ATTACHMENT

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:

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' archaeoligical 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. A title of a well site diagram is GRACKL 26 EAST FED COM 304H RIG LAYOUT. This diagram depicts the RIG LAYOUT.

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 respreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. 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. GRACKLE 26 EAST FED COM 304H RECLAMATION depicts the location and dimensions of the planned interim reclamation for the well site.

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.

11. Surface Ownership

a. The surface ownership of the proposed project is PRIVATE.

1. **Surface Owner:** QUAIL RANCH, LLC
   Phone Number: (432) 683-7443
   Address: One Concho Center, 600 West Illinois Ave Midland, Texas 79701

   a. A surface use agreement was obtained from the private surface owner regarding the proposed project.

   b. A good faith effort was made to provide a copy of the APD Surface Use Plan of Operations to the private surface owner.

12. Other Information

a. Onsite meeting was conducted on 12/19/2023
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.

24-inch Produced Water:
Total length 1,386.5’ or 84.00 rods
Section 26, T24-S, R34-E, on lease portion – 1,386.5’ or 84.00 rods rods Fee Surface

20-inch Gas Sales:
Total length 9,246.13’ or 560.38 rods
Section 4, T24-S, R34-E, on lease portion – 3,588.37’ or 217.48 rods Fed Surface
Section 33, T25-S, R34-E – 347.45’ or 21.06 rods Fed Surface
Section 32, T25-S, R34-E – 5310.31’ or 321.84 rods State Surface

3 Phase 14.4 Primary Voltage Overhead Electric Lines:
Total length 93.6’ or 5.70
Section 26, T24-S, R34-E, on lease portion – 93.6’ or 5.70 rods Fee Surface

8” Gas Lift Pipeline:
Total length 7,263.00’ or 440.20 rods
Section 26, T24-S, R34-E, on lease portion – 7,263.00’ or 440.20 rods Fee Surface

8” Crude Oil Pipeline:
Total length 6,549.70’ or 397.00 rods
Section 26, T24-S, R34-E, on lease portion – 6,507.40’ or 394.4 rods Fee Surface

Section 26, T24-S, R34-E, on lease portion – 42.3’ or 2.6 rods Fed Surface

Caliche Pit Options:
Quail Ranch Battle Axe Pit- SE/4 Section 26, Range 34E, Township 24 South, Lea County, NM.
Fresh and Reuse Options:
EOG McCloy Freshwater Pit in Section 31, Range 34 East, Township 25 South.
EOG Klondike Reuse Pit in Section 23, Range 34 East, Township 25 South.

EOG will install up to 30-inch culverts crossing proposed lease roads in thirteen locations identified on the attached map. See the coordinates below:
Culvert #1 - 32°11'9.61"N, - 103°26'13.97"W
Culvert #2 - 32°11'1.95"N, - 103°26'9.11"W
Culvert #3 - 32°10'55.37"N, - 103°26'11.06"W
Culvert #4 - 32°10'52.94"N, - 103°26'15.47"W
Culvert #5 - 32°10'41.94"N, - 103°26'26.29"W
Culvert #6 - 32°10'41.93"N, - 103°26'24.56"W
Culvert #7 - 32°10'46.28"N, - 103°26'24.52"W

EOG will install 3 cattleguards at 3 locations on the proposed lease roads. See coordinates below.
Cattleguard #1- 32°11'11.82", -103°26'9.69"W
Cattleguard #2- 32°10'41.93"N, - 103°26'25.18"W

13. Maps and Diagrams

GRACKLE 26 EAST FED COM 304H VICINITY - Existing Road
GRACKLE 26 EAST FED COM 304H RADIUS - Wells Within One Mile
GRACKLE 26 EAST FED COM CTB - Production Facilities Diagram
GRACKLE 26 EAST FED COM INFRASTRUCTURE MAP/SKETCH - Additional Production Facilities Diagram
GRACKLE 26 EAST FED COM INFRASTRUCTURE EXHIBIT 5 - Production Pipeline
GRACKLE 26 EAST FED COM WATER AND CALICHE MAP - Drilling Water Pipeline
GRACKLE 26 EAST FED COM 304H RIG LAYOUT - Well Site Diagram
GRACKLE 26 EAST FED COM 304H 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.

OVERHEAD ELECTRIC LINE ATTACHMENT

Electric Line(s)

a. We plan to install an overhead electric line for the proposed well. The proposed length of the electric line will be 94 feet. Overhead Electric Line depicts the location of the proposed electric line route. The electric line will be constructed to provide protection from raptor electrocution.

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

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

PWD Data Report
07/15/2025

APD ID: 10400097989 **Submission Date:** 04/11/2024

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

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):**

Other PWD Surface Owner Description:

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:

Decribe 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: GRACKLE 26 EAST FED COM **Well Number:** 304H

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:**

Other PWD Surface Owner Description:

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit

Precipitated solids disposal:

Decribe 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):

Precipitated Solids Permit

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

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

State

Unlined Produced Water Pit Estimated

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

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information

Section 4 -

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD Surface Owner Description:

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):**

Other PWD Surface Owner Description :

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:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM **Well Number:** 304H

Section 6 -

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

PWD Surface Owner Description:

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type

Have other regulatory requirements been met?

Other regulatory requirements

AFMSS

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

Bond Info Data

07/15/2025

APD ID: 10400097989

Submission Date: 04/11/2024

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GRACKLE 26 EAST FED COM

Well Number: 304H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Bond

Federal/Indian APD: FED

BLM Bond number: NM2308

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

C-102

Submit Electronically
Via OCD Permitting

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

Revised July 9, 2024

Submittal Type: ☒ Initial Submittal ☐ Amended Report ☐ As Drilled

Property Name and Well Number

GRACKLE 26 EAST FED COM 304H

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-55223	96434	Red Hills; Bone Spring, North

Property Code	Property Name	Well Number
336553	**GRACKLE 26 EAST FED COM**	**304H**

OGRID No.	Operator Name	Ground Level Elevation
7377	EOG RESOURCES, INC.	3430'

Surface Owner: ☐ State ☒ Fee ☐ Tribal ☐ Federal
Mineral Owner: ☐ State ☒ Fee ☐ Tribal ☒ Federal

Surface Location

UL or Lot No.	Section	Township	Range	Lot	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
P	26	24 S	34 E		718 FSL	750 FEL	N 32.183157°	W 103.434636°	LEA

Bottom Hole Location If Different From Surface

UL or Lot No.	Section	Township	Range	Lot	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
B	23	24 S	34 E		100 FNL	1650 FEL	N 32.209997°	W 103.437538°	LEA

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidated Code
640	INFILL	PENDING GRACKLE 26 EAST FED COM 402H	Y	C

Order Numbers: COM AGREEMENT PENDING
Well Setbacks are under Common Ownership: ☐ Yes ☐ No

Kick Off Point (KOP)

UL or lot no.	Section	Township	Range	Lot	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
O	26	24 S	34 E		50 FSL	1650 FEL	N 32.181356°	W 103.437543°	LEA

First Take Point (FTP)

UL or lot no.	Section	Township	Range	Lot	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
O	26	24 S	34 E		100 FSL	1650 FEL	N 32.181494°	W 103.437544°	LEA

Last Take Point (LTP)

UL or lot no.	Section	Township	Range	Lot	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
B	23	24 S	34 E		100 FNL	1650 FEL	N 32.209997°	W 103.437538°	LEA

Unitized Area or Area of Uniform Interest	Spacing Unity Type	Ground Floor Elevation
UNITIZED AREA	☒ Horizontal ☐ Vertical	3455'

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief; and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received The consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Star L Harrell 8/22/25
Signature Date

Star L Harrell
Print Name

star_harrell@eogresources.com
E-mail Address

SURVEYORS CERTIFICATION

MITCHELL L. McDONALD NEW MEXICO 29821 PROFESSIONAL SURVEYOR 06/20/2025

Signature and Seal of Professional Surveyor Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

MITCHELL L. MCDONALD, N.M. P.L.S.

Certificate Number	Date of Survey
29821	DECEMBER 19, 2023

P:\EOG_Z\30084\PROD\C102_Package\C102_WLE\GRACKLE_26_EAST_FED_COM_C102_WLE_304H_R2.dwg RHOMSLEY 6/17/2025 12:35 PM

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

C-102

Submit Electronically
Via OCD Permitting

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

Revised July 9, 2024

Submittal Type:
- [x] Initial Submittal
- [ ] Amended Report
- [ ] As Drilled

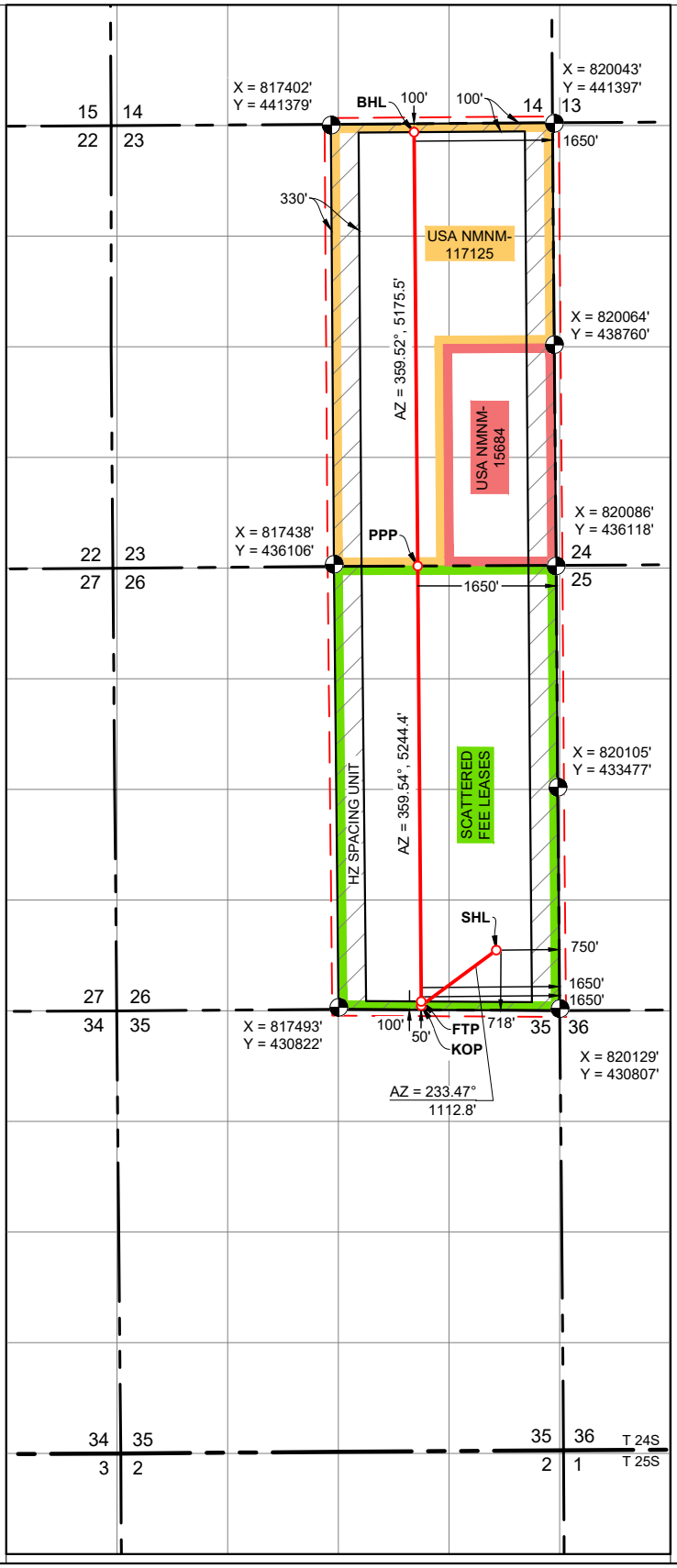
Property Name and Well Number

GRACKLE 26 EAST FED COM 304H

SURFACE LOCATION
NEW MEXICO EAST
NAD 1983
X=819373' Y=431528'
LAT=N32.183157°
LONG=W103.434636°
NAD 1927
X=778187' Y=431470'
LAT=N32.183031°
LONG=W103.434165°
718' FSL 750' FEL

KOP LOCATION
NEW MEXICO EAST
NAD 1983
X=818479' Y=430866'
LAT=N32.181356°
LONG=W103.437543°
NAD 1927
X=777293' Y=430807'
LAT=N32.181231°
LONG=W103.437073°
50' FSL 1650' FEL

FIRST TAKE POINT
NEW MEXICO EAST
NAD 1983
X=818478' Y=430916'
LAT=N32.181494°
LONG=W103.437544°
NAD 1927
X=777293' Y=430857'
LAT=N32.181369°
LONG=W103.437073°
100' FSL 1650' FEL



PROPOSED PENETRATION POINT
NEW MEXICO EAST
NAD 1983
X=818437' Y=436110'
LAT=N32.195771°
LONG=W103.437538°
NAD 1927
X=777251' Y=436052'
LAT=N32.195646°
LONG=W103.437067°
0' FNL 1650' FEL

LOWER MOST PERF./ BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1983
X=818393' Y=441286'
LAT=N32.209997°
LONG=W103.437538°
NAD 1927
X=777208' Y=441227'
LAT=N32.209872°
LONG=W103.437065°
100' FNL 1650' FEL

Note: Bearings, coordinates, and distances (grid) shown hereon are based on the New Mexico State Plane Coordinate System, East Zone, NAD 83-2011 (EPOCH 2010) framework, as derived by OPUS Solution. The elevations shown hereon are based on NAVD 88.

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: ___EOG Resources, Inc._____ **OGRID:** _____7377_____ **Date:** 7/15/2025

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
GRACKLE 26 EAST FED COM 304H		P-26-24S-34E	718' FSL & 750' FEL	+/- 1000	+/- 3500	+/- 3000

IV. Central Delivery Point Name: ___Grackle 26 East 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
GRACKLE 26 EAST FED COM 304H		9/15/25	10/2/25	12/01/25	1/01/65	2/01/26

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: Star L Harrell
Printed Name: Star L Harrell
Title: Sr Regulatory Specialist
E-mail Address: Star_Harrell@eogresources.com
Date: 7/15/2025
Phone: (432) 848-9161

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 with 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.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

ACKNOWLEDGMENTS

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 502036
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

ACKNOWLEDGMENTS

☑	I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 502036
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
sharrell1	Cement is required to circulate on both surface and intermediate1 strings of casing.	9/2/2025
sharrell1	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	9/2/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	9/19/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	9/19/2025
ward.rikala	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.	9/19/2025
ward.rikala	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.	9/19/2025