Form 3160-3
(October 2024)

FORM APPROVED
OMB No. 1004-0220
Expires: October 31, 2027

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

*Please refer to approved NOI appended to this application for the most recent details for the planned well.

5. Lease Serial No.: NMNM122624

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.: WILD WEASEL 22 FED COM 743H ~~103H~~

2. Name of Operator: EOG RESOURCES INCORPORATED

9. API Well No.: 30-025-56129

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; Upper Bone Spring, Shale~~ PITCHFORK RANCH;WOLFCAMP, SOUTH

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

At surface: ~~TR B / 659 FNL / 2639 FEL / LAT 32.1214489 / LONG -103.4578068~~

At proposed prod. zone: ~~TR O / 100 FSL / 2178 FEL / LAT 32.0945108 / LONG -103.456307~~

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 22/T25S/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~~ 1280

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 15 feet

19. Proposed Depth: 9500 feet / ~~19705 feet~~

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3352 feet

22. Approximate date work will start*: 08/14/2023

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)	CRAIG RICHARDSON / Ph: (713) 651-7000	02/03/2023

Title: Regulatory Specialist

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	CODY LAYTON / Ph: (575) 234-5959	03/10/2025

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: 03/10/2025

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.

(Continued on page 3)

Approval Date: 03/10/2025

Additional Operator Remarks

Location of Well

0. SHL: TR B / 659 FNL / 2639 FEL / TWSP: 25S / RANGE: 34E / SECTION: 22 / LAT: 32.1214489 / LONG: -103.4578068 (TVD: 0 feet, MD: 0 feet)

PPP: TR B / 100 FNL / 2178 FEL / TWSP: 25S / RANGE: 34E / SECTION: 22 / LAT: 32.1229844 / LONG: -103.4563151 (TVD: 9235 feet, MD: 9243 feet)

BHL: TR O / 100 FSL / 2178 FEL / TWSP: 25S / RANGE: 34E / SECTION: 27 / LAT: 32.0945108 / LONG: -103.456307 (TVD: 9500 feet, MD: 19705 feet)

BLM Point of Contact

Name: MARIAH HUGHES
Title: Land Law Examiner
Phone: (575) 234-5972
Email: MHUGHES@BLM.GOV

C-102	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024
Submit Electronically Via OCD Permitting		Submittal Type: ☑ Initial Submittal ☐ Amended Report ☐ As Drilled

*Please refer to approved NOI appended to this application for the most recent details for the planned well.

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-	97900	Red Hills; Upper Bone Spring, Shale

Property Code	Property Name	Well Number
325178	WILD WEASEL 22 FED COM	103H

OGRID No.	Operator Name	Ground Level Elevation
7377	EOG RESOURCES, INC.	3352'

Surface Owner: ☑ State ☐ Fee ☐ Tribal ☐ Federal

Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☑ Federal

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
B	22	25-S	34-E	-	659' N	2639' E	N 32.1214489	W 103.4578068	LEA

Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
O	27	25-S	34-E	-	100' S	2178' E	N 32.0945108	W 103.4563070	LEA

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidated Code
640	Defining	Pending 103H Approval	N	C

Order Numbers: Com Pending

Well Setbacks are under Common Ownership: ☐ Yes ☐ No

Kick Off Point (KOP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
B	22	25-S	34-E	-	50' N	2178' E	N 32.1231219	W 103.4563150	LEA

First Take Point (FTP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
B	22	25-S	34-E	-	100' N	2178' E	N 32.1229844	W 103.4563151	LEA

Last Take Point (LTP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
O	27	25-S	34-E	-	100' S	2178' E	N 32.0945108	W 103.4563070	LEA

Unitized Area or Area of Uniform Intrest	Spacing Unity Type	Ground Floor Elevation
Com Pending	☑ Horizontal ☐ Vertical	3377'

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 2/24/26

Signature Date

Star L Harrell

Print Name

star_harrell@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.

RAMON DOMINGUEZ NEW MEXICO 24508 PROFESSIONAL SURVEYOR

3/17/2025 2:29:40 PM

Signature and Seal of Professional Surveyor Date

Certificate Number

Date of Survey: 01/14/2021

S:\SURVEY\EOG_MIDLAND\WILD_WEASEL_22_FED_COM\FINAL_PRODUCTS\LO_WILD_WEASEL_22_FED_COM_103H.dwg USER:A 3/17/2025 2:29 PM

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

*Please refer to approved NOI appended to this application for the most recent details for the planned well.

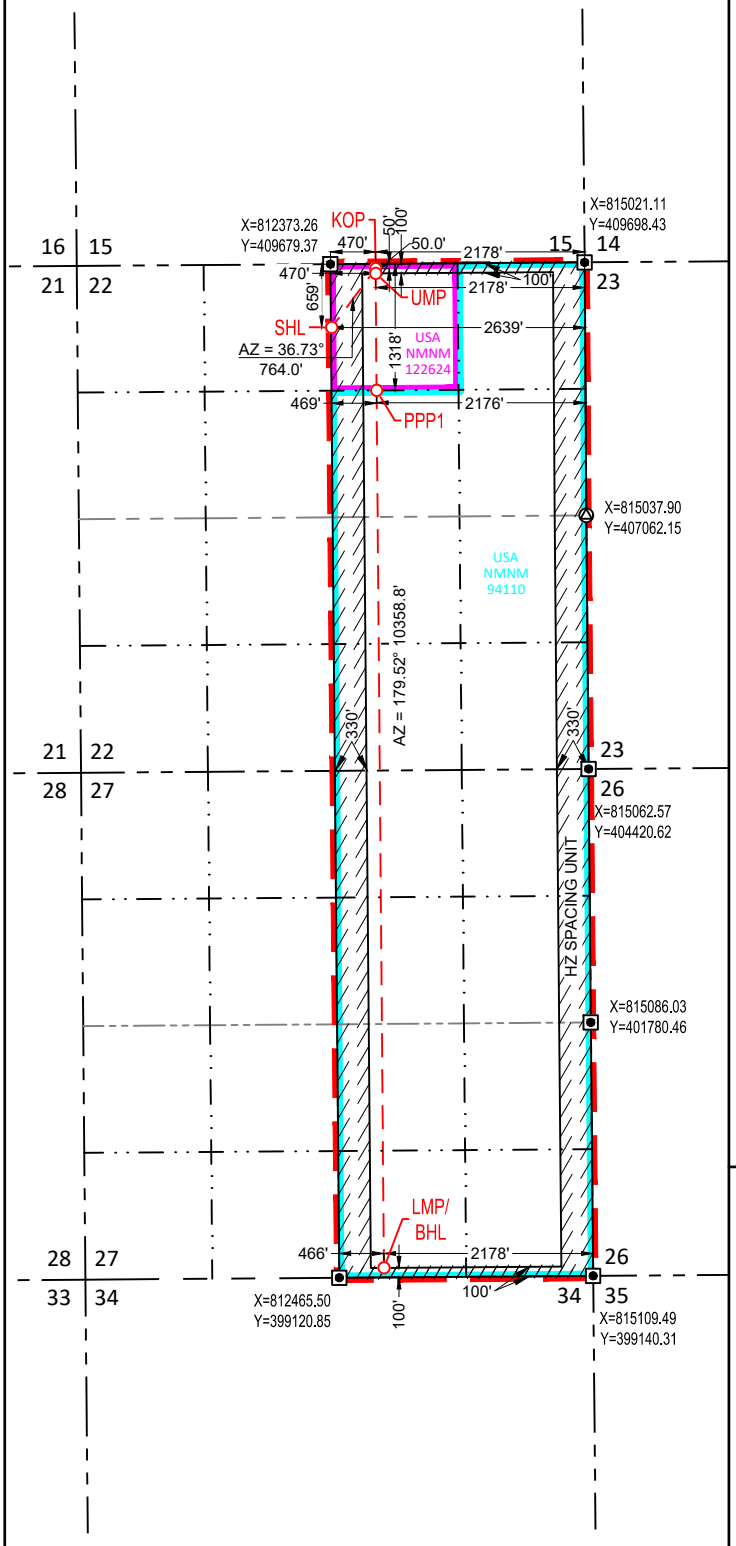
Property Name and Well Number

WILD WEASEL 22 FED COM 103H

SURFACE LOCATION (SHL)
NEW MEXICO EAST
NAD 1983
X=812387 Y=409020
LAT.: N 32.1214489
LONG.: W 103.4578068
NAD 1927
X=771200 Y=408962
LAT.: N 32.1213237
LONG.: W 103.4573387
659' FNL 2639' FEL

KICK OFF POINT (KOP)
NEW MEXICO EAST
NAD 1983
X=812843 Y=409633
LAT.: N 32.1231219
LONG.: W 103.4563150
NAD 1927
X=771657 Y=409575
LAT.: N 32.1229966
LONG.: W 103.4558469
50' FNL 2178' FEL

UPPER MOST PERF. (UMP)
NEW MEXICO EAST
NAD 1983
X=812844 Y=409583
LAT.: N 32.1229844
LONG.: W 103.4563151
NAD 1927
X=771657 Y=409525
LAT.: N 32.1228592
LONG.: W 103.4558471
100' FNL 2178' FEL



PROPOSED PERF. POINT (PPP1)
NEW MEXICO EAST
NAD 1983
X=812854 Y=408364
LAT.: N 32.1196356
LONG.: W 103.4563142
NAD 1927
X=771668 Y=408307
LAT.: N 32.1195103
LONG.: W 103.4558463
1318' FNL 2176' FEL

LOWER MOST PERF. (LMP)
BOTTOM HOLE LOCATION (BHL)
NEW MEXICO EAST
NAD 1983
X=812931 Y=399224
LAT.: N 32.0945108
LONG.: W 103.4563070
NAD 1927
X=771744 Y=399167
LAT.: N 32.0943854
LONG.: W 103.4558406
100' FSL 2178' FEL

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.

01/14/2021
Date of Survey
Signature and Seal of Professional Surveyor:

RAMON DOMINGUEZ
NEW MEXICO
24508
PROFESSIONAL SURVEYOR

3/17/2025 2:29:41 PM

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State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: ___EOG Resources, Inc._____ **OGRID:** _____7377_____ **Date:** 1/29/2026

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
WILD WEASEL 22 FED COM 103H		B-22-25S-34E	659' FNL & 2639' FEL	+/- 1000	+/- 3500	+/- 3000

IV. Central Delivery Point Name: ___Wild Weasel 22 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
WILD WEASEL 22 FED COM 103H		3/10/26	3/25/26	5/01/26	6/01/26	7/01/26

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: Regulatory Advisor
E-mail Address: Star_Harrell@eogresources.com
Date: 1/29/2026
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.

eog resources

Wild Weasel 22 Fed Com 103H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	890'
Tamarisk Anhydrite	970'
Top of Salt	1,308'
Base of Salt	5,095'
Lamar	5,323'
Bell Canyon	5,354'
Cherry Canyon	6,302'
Brushy Canyon	7,882'
Bone Spring Lime	9,146'
Leonard (Avalon) Shale	9,370'
1st Bone Spring Sand	10,390'
2nd Bone Spring Shale	10,605'
2nd Bone Spring Sand	10,932'
3rd Bone Spring Carb	11,413'
3rd Bone Spring Sand	12,010'
Wolfcamp	12,475'
TD	9,500'

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

Upper Permian Sands	0- 400’	Fresh Water
Bell Canyon	5,354'	Oil
Cherry Canyon	6,302'	Oil
Brushy Canyon	7,882'	Oil
Leonard (Avalon) Shale	9,370'	Oil
1st Bone Spring Sand	10,390'	Oil
2nd Bone Spring Shale	10,605'	Oil
2nd Bone Spring Sand	10,932'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 13-3/8" casing at 1,000' and circulating cement back to surface.

eog resources

Wild Weasel 22 Fed Com 103H

*Please refer to approved NOI appended to this application for the most recent details for the planned well.

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	1,000	0	1,000	13-3/8"	54.5#	J-55	STC
11"	0	4,000	0	4,000	9-5/8"	40#	J-55	LTC
11"	4,000	5,200	4,000	5,200	9-5/8"	40#	HCK-55	LTC
6-3/4"	0	19,704	0	9,500	5-1/2"	17#	HCP-110	LTC

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

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

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

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

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
1,000' 13-3/8''	300	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	100	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 800')
5,200' 9-5/8''	470	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	170	14.8	1.32	Tail: Class C + 10% NaCL + 3% MagOx (TOC @ 4160')
19,704' 5-1/2''	330	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 4700')
	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 @ 9030')

eog resources

Wild Weasel 22 Fed Com 103H

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

Cement integrity tests will be performed immediately following plug bump.

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

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

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

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

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

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

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

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

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

eog resources

Wild Weasel 22 Fed Com 103H

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

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

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

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,000'	Fresh - Gel	8.6-8.8	28-34	N/c
1,000' – 5,200'	Brine	8.6-8.8	28-34	N/c
5,000' – 19,704' Lateral	Oil Base	8.8-9.5	58-68	N/c - 6

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

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

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

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

8. LOGGING, TESTING AND CORING PROGRAM:

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

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

The estimated bottom-hole temperature (BHT) at TD is 165 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 4,446 psig and a maximum anticipated surface pressure of 2,356 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 7,882' to intermediate casing point.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

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

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

11. WELLHEAD & Offline Cementing:

A multi-bowl wellhead system will be utilized.

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

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

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

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

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

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

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

Wild Weasel 22 Fed Com 103H

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

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

eog resources

Wild Weasel 22 Fed Com 103H

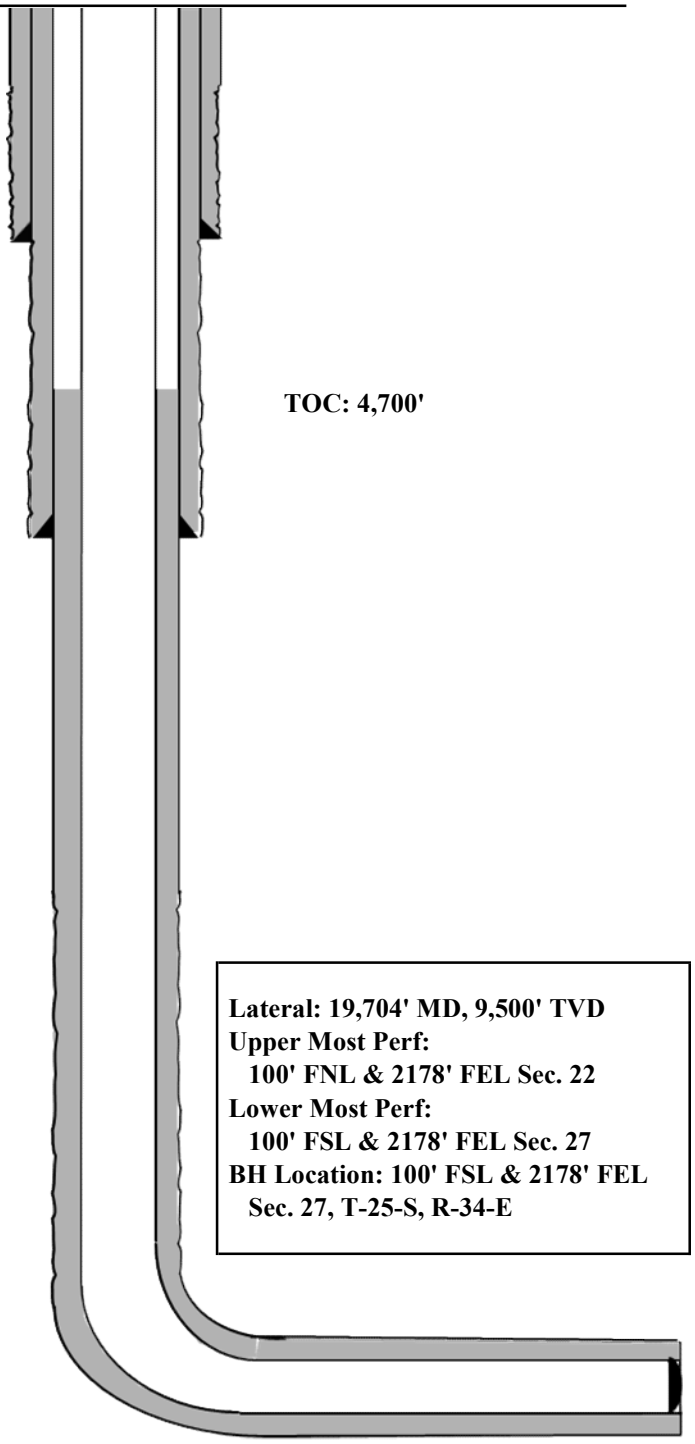
*Please refer to approved NOI appended to this application for the most recent details for the planned well.

659' FNL
2639' FEL
Section 22
T-25-S, R-34-E

Proposed Wellbore A

API: 30-025-***

KB: 3377'
GL: 3352'



Bit Size: 16"
13-3/8", 54.5#, J-55, STC
@ 0' - 1,000'

Bit Size: 11"
9-5/8", 40.#, J-55, LTC
@ 0' - 4,000'
9-5/8", 40.#, HCK-55, LTC
@ 4,000' - 5,200'

TOC: 4,700'

Bit Size: 6-3/4"
5-1/2", 17.#, HCP-110, LTC
@ 0' - 19,704'

Lateral: 19,704' MD, 9,500' TVD
Upper Most Perf:
100' FNL & 2178' FEL Sec. 22
Lower Most Perf:
100' FSL & 2178' FEL Sec. 27
BH Location: 100' FSL & 2178' FEL
Sec. 27, T-25-S, R-34-E

KOP: 9,023' MD, 9,022' TVD
EOC: 9,773' MD, 9,500' TVD

Bit Size: 6-3/4"

eog resources

Wild Weasel 22 Fed Com 103H

Well Name: Wild Weasel 22 Fed Com 103H
Location: SHL: 659' FNL & 2639' FEL, Section 22, T-25-S, R-34-E, Lea Co., N.M.
BHL: 100' FSL & 2178' FEL, Section 27, T-25-S, R-34-E, Lea Co., N.M.

*Please refer to approved NOI appended to this application for the most recent details for the planned well.

Casing Program B:

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	1,000	0	1,000	10-3/4"	40.5#	J-55	STC
9-7/8"	0	4,000	0	4,000	8-5/8"	32#	J-55	BTC-SC
9-7/8"	4,000	5,200	4,000	5,200	8-5/8"	32#	P110-EC	BTC-SC
6-3/4"	0	19,704	0	9,500	5-1/2"	17#	HCP-110	LTC

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
1,000' 10-3/4"	340	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	110	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 800')
5,200' 8-5/8"	350	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	160	14.8	1.32	Tail: Class C + 10% NaCL + 3% MagOx (TOC @ 4,160')
19,704' 5-1/2"	460	10.5	3.21	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 4,700')
	770	13.2	1.52	Tail: Class H + 5% NEX-020 + 0.2% NAC-102 + 0.15% NAS-725 + 0.5% NFL-549 + 0.2% NFP-703 + 1% NBE-737 + 0.3% NRT-241 (TOC @ 9030')

Wild Weasel 22 Fed Com 103H

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

Wellhead & Offline Cementing:

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

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

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Wild Weasel 22 Fed Com 103H

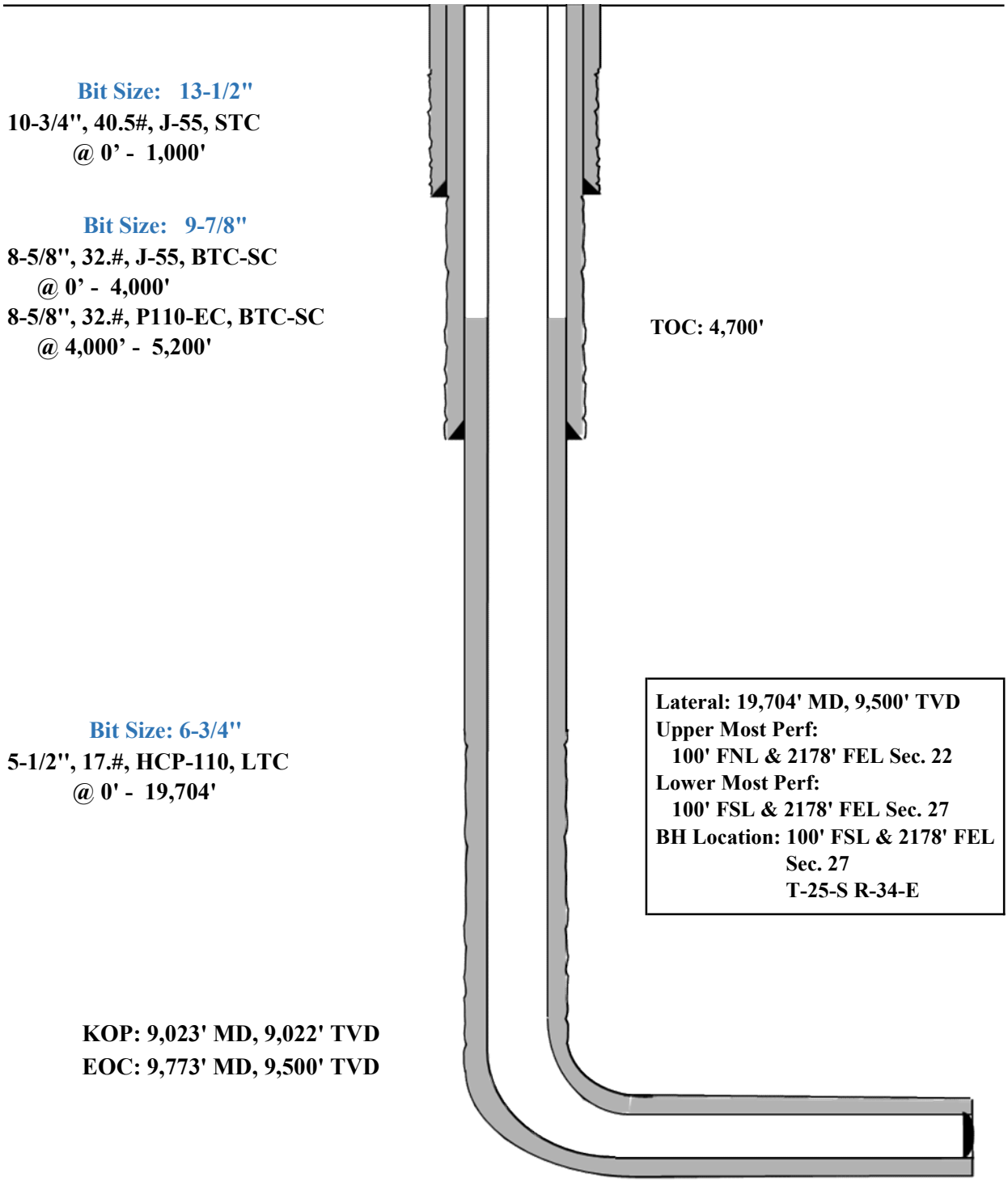
*Please refer to approved NOI appended to this application for the most recent details for the planned well.

659'
2639'
Section 22
T-25-S, R-34-E

Proposed Wellbore B:

API: 30-025-***

KB: 3377'
GL: 3352'



Midland

Lea County, NM (NAD 83 NME)
Wild Weasel 22 Fed Com
#103H

OH

Plan: Plan #0.1 RT

*Please refer to approved NOI appended to this application for the most recent details for the planned well.

Standard Planning Report

24 February, 2026

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Site Wild Weasel 22 Fed Com
Company:	Midland	**TVD Reference:**	kb = 26' @ 3378.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3378.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#103H	**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 Wild Weasel 22 Fed Com

Site Position:		**Northing:**	409,434.00 usft	**Latitude:**	32° 7' 21.137 N
From:	Map	**Easting:**	814,510.00 usft	**Longitude:**	103° 27' 3.375 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well #103H

Well Position	**+N/-S**	-414.0 usft	**Northing:**	409,020.00 usft	**Latitude:**	32° 7' 17.212 N
	+E/-W	-2,123.0 usft	**Easting:**	812,387.00 usft	**Longitude:**	103° 27' 28.099 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,352.0 usft
Grid Convergence:		0.47 °				

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	1/12/2023	6.30	59.77	47,280.60181091

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	-414.0	-2,123.0	176.82

Plan Survey Tool Program **Date** 2/24/2026

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	19,750.2	Plan #0.1 RT (OH)	EOG MWD+IFR1	
				MWD + IFR1	

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Site Wild Weasel 22 Fed Com
Company:	Midland	**TVD Reference:**	kb = 26' @ 3378.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3378.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#103H	**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	-414.0	-2,123.0	0.00	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	-414.0	-2,123.0	0.00	0.00	0.00	0.00	
1,649.5	6.99	36.64	1,648.6	-396.9	-2,110.3	2.00	2.00	0.00	36.64	
7,578.3	6.99	36.64	7,533.4	181.9	-1,679.7	0.00	0.00	0.00	0.00	
7,927.8	0.00	0.00	7,882.0	199.0	-1,667.0	2.00	-2.00	0.00	180.00	
9,068.3	0.00	0.00	9,022.5	199.0	-1,667.0	0.00	0.00	0.00	0.00	KOP(Wild Weasel 22
9,288.7	26.46	178.85	9,235.2	149.0	-1,666.0	12.00	12.00	81.13	178.85	FTP(Wild Weasel 22 I
9,818.2	89.99	179.61	9,499.9	-278.4	-1,661.4	12.00	12.00	0.14	0.85	
10,609.8	89.99	179.61	9,500.0	-1,070.0	-1,656.0	0.00	0.00	0.00	0.00	Fed Perf 1(Wild Weas
19,750.2	90.01	179.42	9,500.0	-10,210.0	-1,579.0	0.00	0.00	0.00	-86.34	PBHL(Wild Weasel 22

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Site Wild Weasel 22 Fed Com
Company:	Midland	**TVD Reference:**	kb = 26' @ 3378.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3378.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#103H	**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	-414.0	-2,123.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	-414.0	-2,123.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	-414.0	-2,123.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	-414.0	-2,123.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	-414.0	-2,123.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	-414.0	-2,123.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	-414.0	-2,123.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	-414.0	-2,123.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	-414.0	-2,123.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	-414.0	-2,123.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	-414.0	-2,123.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	-414.0	-2,123.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	-414.0	-2,123.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	-414.0	-2,123.0	0.0	0.00	0.00	0.00
1,400.0	2.00	36.64	1,400.0	-412.6	-2,122.0	-1.3	2.00	2.00	0.00
1,500.0	4.00	36.64	1,499.8	-408.4	-2,118.8	-5.4	2.00	2.00	0.00
1,600.0	6.00	36.64	1,599.5	-401.4	-2,113.6	-12.1	2.00	2.00	0.00
1,649.5	6.99	36.64	1,648.6	-396.9	-2,110.3	-16.3	2.00	2.00	0.00
1,700.0	6.99	36.64	1,698.8	-392.0	-2,106.6	-21.1	0.00	0.00	0.00
1,800.0	6.99	36.64	1,798.0	-382.2	-2,099.4	-30.4	0.00	0.00	0.00
1,900.0	6.99	36.64	1,897.3	-372.5	-2,092.1	-39.8	0.00	0.00	0.00
2,000.0	6.99	36.64	1,996.5	-362.7	-2,084.8	-49.1	0.00	0.00	0.00
2,100.0	6.99	36.64	2,095.8	-352.9	-2,077.6	-58.5	0.00	0.00	0.00
2,200.0	6.99	36.64	2,195.0	-343.2	-2,070.3	-67.8	0.00	0.00	0.00
2,300.0	6.99	36.64	2,294.3	-333.4	-2,063.0	-77.1	0.00	0.00	0.00
2,400.0	6.99	36.64	2,393.6	-323.6	-2,055.8	-86.5	0.00	0.00	0.00
2,500.0	6.99	36.64	2,492.8	-313.9	-2,048.5	-95.8	0.00	0.00	0.00
2,600.0	6.99	36.64	2,592.1	-304.1	-2,041.3	-105.2	0.00	0.00	0.00
2,700.0	6.99	36.64	2,691.3	-294.4	-2,034.0	-114.5	0.00	0.00	0.00
2,800.0	6.99	36.64	2,790.6	-284.6	-2,026.7	-123.9	0.00	0.00	0.00
2,900.0	6.99	36.64	2,889.8	-274.8	-2,019.5	-133.2	0.00	0.00	0.00
3,000.0	6.99	36.64	2,989.1	-265.1	-2,012.2	-142.6	0.00	0.00	0.00
3,100.0	6.99	36.64	3,088.4	-255.3	-2,004.9	-151.9	0.00	0.00	0.00
3,200.0	6.99	36.64	3,187.6	-245.5	-1,997.7	-161.3	0.00	0.00	0.00
3,300.0	6.99	36.64	3,286.9	-235.8	-1,990.4	-170.6	0.00	0.00	0.00
3,400.0	6.99	36.64	3,386.1	-226.0	-1,983.2	-179.9	0.00	0.00	0.00
3,500.0	6.99	36.64	3,485.4	-216.3	-1,975.9	-189.3	0.00	0.00	0.00
3,600.0	6.99	36.64	3,584.6	-206.5	-1,968.6	-198.6	0.00	0.00	0.00
3,700.0	6.99	36.64	3,683.9	-196.7	-1,961.4	-208.0	0.00	0.00	0.00
3,800.0	6.99	36.64	3,783.2	-187.0	-1,954.1	-217.3	0.00	0.00	0.00
3,900.0	6.99	36.64	3,882.4	-177.2	-1,946.8	-226.7	0.00	0.00	0.00
4,000.0	6.99	36.64	3,981.7	-167.4	-1,939.6	-236.0	0.00	0.00	0.00
4,100.0	6.99	36.64	4,080.9	-157.7	-1,932.3	-245.4	0.00	0.00	0.00
4,200.0	6.99	36.64	4,180.2	-147.9	-1,925.1	-254.7	0.00	0.00	0.00
4,300.0	6.99	36.64	4,279.4	-138.1	-1,917.8	-264.1	0.00	0.00	0.00
4,400.0	6.99	36.64	4,378.7	-128.4	-1,910.5	-273.4	0.00	0.00	0.00
4,500.0	6.99	36.64	4,478.0	-118.6	-1,903.3	-282.7	0.00	0.00	0.00
4,600.0	6.99	36.64	4,577.2	-108.9	-1,896.0	-292.1	0.00	0.00	0.00
4,700.0	6.99	36.64	4,676.5	-99.1	-1,888.7	-301.4	0.00	0.00	0.00
4,800.0	6.99	36.64	4,775.7	-89.3	-1,881.5	-310.8	0.00	0.00	0.00
4,900.0	6.99	36.64	4,875.0	-79.6	-1,874.2	-320.1	0.00	0.00	0.00
5,000.0	6.99	36.64	4,974.2	-69.8	-1,867.0	-329.5	0.00	0.00	0.00
5,100.0	6.99	36.64	5,073.5	-60.0	-1,859.7	-338.8	0.00	0.00	0.00
5,200.0	6.99	36.64	5,172.8	-50.3	-1,852.4	-348.2	0.00	0.00	0.00

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Site Wild Weasel 22 Fed Com
Company:	Midland	**TVD Reference:**	kb = 26' @ 3378.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3378.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#103H	**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	6.99	36.64	5,272.0	-40.5	-1,845.2	-357.5	0.00	0.00	0.00
5,400.0	6.99	36.64	5,371.3	-30.8	-1,837.9	-366.9	0.00	0.00	0.00
5,500.0	6.99	36.64	5,470.5	-21.0	-1,830.6	-376.2	0.00	0.00	0.00
5,600.0	6.99	36.64	5,569.8	-11.2	-1,823.4	-385.5	0.00	0.00	0.00
5,700.0	6.99	36.64	5,669.0	-1.5	-1,816.1	-394.9	0.00	0.00	0.00
5,800.0	6.99	36.64	5,768.3	8.3	-1,808.9	-404.2	0.00	0.00	0.00
5,900.0	6.99	36.64	5,867.5	18.1	-1,801.6	-413.6	0.00	0.00	0.00
6,000.0	6.99	36.64	5,966.8	27.8	-1,794.3	-422.9	0.00	0.00	0.00
6,100.0	6.99	36.64	6,066.1	37.6	-1,787.1	-432.3	0.00	0.00	0.00
6,200.0	6.99	36.64	6,165.3	47.4	-1,779.8	-441.6	0.00	0.00	0.00
6,300.0	6.99	36.64	6,264.6	57.1	-1,772.5	-451.0	0.00	0.00	0.00
6,400.0	6.99	36.64	6,363.8	66.9	-1,765.3	-460.3	0.00	0.00	0.00
6,500.0	6.99	36.64	6,463.1	76.6	-1,758.0	-469.6	0.00	0.00	0.00
6,600.0	6.99	36.64	6,562.3	86.4	-1,750.8	-479.0	0.00	0.00	0.00
6,700.0	6.99	36.64	6,661.6	96.2	-1,743.5	-488.3	0.00	0.00	0.00
6,800.0	6.99	36.64	6,760.9	105.9	-1,736.2	-497.7	0.00	0.00	0.00
6,900.0	6.99	36.64	6,860.1	115.7	-1,729.0	-507.0	0.00	0.00	0.00
7,000.0	6.99	36.64	6,959.4	125.5	-1,721.7	-516.4	0.00	0.00	0.00
7,100.0	6.99	36.64	7,058.6	135.2	-1,714.4	-525.7	0.00	0.00	0.00
7,200.0	6.99	36.64	7,157.9	145.0	-1,707.2	-535.1	0.00	0.00	0.00
7,300.0	6.99	36.64	7,257.1	154.7	-1,699.9	-544.4	0.00	0.00	0.00
7,400.0	6.99	36.64	7,356.4	164.5	-1,692.7	-553.8	0.00	0.00	0.00
7,500.0	6.99	36.64	7,455.7	174.3	-1,685.4	-563.1	0.00	0.00	0.00
7,578.3	6.99	36.64	7,533.4	181.9	-1,679.7	-570.4	0.00	0.00	0.00
7,600.0	6.56	36.64	7,554.9	184.0	-1,678.2	-572.4	2.00	-2.00	0.00
7,700.0	4.56	36.64	7,654.5	191.7	-1,672.4	-579.8	2.00	-2.00	0.00
7,800.0	2.56	36.64	7,754.3	196.7	-1,668.7	-584.6	2.00	-2.00	0.00
7,900.0	0.56	36.64	7,854.2	198.9	-1,667.1	-586.7	2.00	-2.00	0.00
7,927.8	0.00	0.00	7,882.0	199.0	-1,667.0	-586.8	2.00	-2.00	0.00
8,000.0	0.00	0.00	7,954.2	199.0	-1,667.0	-586.8	0.00	0.00	0.00
8,100.0	0.00	0.00	8,054.2	199.0	-1,667.0	-586.8	0.00	0.00	0.00
8,200.0	0.00	0.00	8,154.2	199.0	-1,667.0	-586.8	0.00	0.00	0.00
8,300.0	0.00	0.00	8,254.2	199.0	-1,667.0	-586.8	0.00	0.00	0.00
8,400.0	0.00	0.00	8,354.2	199.0	-1,667.0	-586.8	0.00	0.00	0.00
8,500.0	0.00	0.00	8,454.2	199.0	-1,667.0	-586.8	0.00	0.00	0.00
8,600.0	0.00	0.00	8,554.2	199.0	-1,667.0	-586.8	0.00	0.00	0.00
8,700.0	0.00	0.00	8,654.2	199.0	-1,667.0	-586.8	0.00	0.00	0.00
8,800.0	0.00	0.00	8,754.2	199.0	-1,667.0	-586.8	0.00	0.00	0.00
8,900.0	0.00	0.00	8,854.2	199.0	-1,667.0	-586.8	0.00	0.00	0.00
9,000.0	0.00	0.00	8,954.2	199.0	-1,667.0	-586.8	0.00	0.00	0.00
9,068.3	0.00	0.00	9,022.5	199.0	-1,667.0	-586.8	0.00	0.00	0.00
9,075.0	0.81	178.85	9,029.2	199.0	-1,667.0	-586.7	12.00	12.00	0.00
9,100.0	3.81	178.85	9,054.2	197.9	-1,667.0	-585.7	12.00	12.00	0.00
9,125.0	6.81	178.85	9,079.1	195.6	-1,666.9	-583.4	12.00	12.00	0.00
9,150.0	9.81	178.85	9,103.8	192.0	-1,666.9	-579.8	12.00	12.00	0.00
9,175.0	12.81	178.85	9,128.3	187.1	-1,666.8	-574.9	12.00	12.00	0.00
9,200.0	15.81	178.85	9,152.5	180.9	-1,666.6	-568.7	12.00	12.00	0.00
9,225.0	18.81	178.85	9,176.4	173.5	-1,666.5	-561.3	12.00	12.00	0.00
9,250.0	21.81	178.85	9,199.9	164.8	-1,666.3	-552.6	12.00	12.00	0.00
9,275.0	24.81	178.85	9,222.8	154.9	-1,666.1	-542.7	12.00	12.00	0.00
9,288.7	26.46	178.85	9,235.2	149.0	-1,666.0	-536.8	12.00	12.00	0.00
9,300.0	27.81	178.90	9,245.2	143.9	-1,665.9	-531.7	12.00	12.00	0.38
9,325.0	30.81	178.98	9,267.0	131.6	-1,665.7	-519.4	12.00	12.00	0.33
9,350.0	33.81	179.05	9,288.1	118.3	-1,665.4	-506.1	12.00	12.00	0.28

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Site Wild Weasel 22 Fed Com
Company:	Midland	**TVD Reference:**	kb = 26' @ 3378.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3378.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#103H	**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)
9,375.0	36.81	179.11	9,308.5	103.8	-1,665.2	-491.6	12.00	12.00	0.24
9,400.0	39.81	179.16	9,328.2	88.3	-1,665.0	-476.2	12.00	12.00	0.21
9,425.0	42.81	179.20	9,346.9	71.8	-1,664.7	-459.7	12.00	12.00	0.18
9,450.0	45.81	179.25	9,364.8	54.4	-1,664.5	-442.2	12.00	12.00	0.16
9,475.0	48.81	179.28	9,381.8	36.0	-1,664.3	-423.9	12.00	12.00	0.15
9,500.0	51.81	179.32	9,397.7	16.8	-1,664.0	-404.6	12.00	12.00	0.13
9,525.0	54.81	179.35	9,412.7	-3.3	-1,663.8	-384.6	12.00	12.00	0.12
9,550.0	57.81	179.37	9,426.5	-24.1	-1,663.6	-363.8	12.00	12.00	0.11
9,575.0	60.81	179.40	9,439.3	-45.6	-1,663.3	-342.4	12.00	12.00	0.11
9,600.0	63.81	179.43	9,450.9	-67.7	-1,663.1	-320.3	12.00	12.00	0.10
9,625.0	66.81	179.45	9,461.3	-90.4	-1,662.9	-297.6	12.00	12.00	0.10
9,650.0	69.81	179.47	9,470.6	-113.6	-1,662.7	-274.4	12.00	12.00	0.09
9,675.0	72.81	179.50	9,478.6	-137.3	-1,662.5	-250.7	12.00	12.00	0.09
9,700.0	75.81	179.52	9,485.3	-161.4	-1,662.3	-226.7	12.00	12.00	0.09
9,725.0	78.81	179.54	9,490.8	-185.8	-1,662.0	-202.3	12.00	12.00	0.08
9,750.0	81.81	179.56	9,495.0	-210.4	-1,661.9	-177.7	12.00	12.00	0.08
9,775.0	84.81	179.58	9,498.0	-235.2	-1,661.7	-152.9	12.00	12.00	0.08
9,800.0	87.81	179.60	9,499.6	-260.2	-1,661.5	-128.0	12.00	12.00	0.08
9,818.2	89.99	179.61	9,499.9	-278.4	-1,661.4	-109.8	12.00	12.00	0.08
9,900.0	89.99	179.61	9,499.9	-360.2	-1,660.8	-28.1	0.00	0.00	0.00
10,000.0	89.99	179.61	9,499.9	-460.2	-1,660.1	71.8	0.00	0.00	0.00
10,100.0	89.99	179.61	9,499.9	-560.2	-1,659.5	171.7	0.00	0.00	0.00
10,200.0	89.99	179.61	9,500.0	-660.2	-1,658.8	271.5	0.00	0.00	0.00
10,300.0	89.99	179.61	9,500.0	-760.2	-1,658.1	371.4	0.00	0.00	0.00
10,400.0	89.99	179.61	9,500.0	-860.2	-1,657.4	471.3	0.00	0.00	0.00
10,500.0	89.99	179.61	9,500.0	-960.2	-1,656.7	571.2	0.00	0.00	0.00
10,609.8	89.99	179.61	9,500.0	-1,070.0	-1,656.0	680.9	0.00	0.00	0.00
10,700.0	89.99	179.61	9,500.0	-1,160.2	-1,655.4	770.9	0.00	0.00	0.00
10,800.0	89.99	179.61	9,500.0	-1,260.2	-1,654.7	870.8	0.00	0.00	0.00
10,900.0	89.99	179.61	9,500.0	-1,360.2	-1,654.0	970.7	0.00	0.00	0.00
11,000.0	89.99	179.60	9,500.0	-1,460.2	-1,653.3	1,070.6	0.00	0.00	0.00
11,100.0	89.99	179.60	9,500.0	-1,560.2	-1,652.6	1,170.5	0.00	0.00	0.00
11,200.0	89.99	179.60	9,500.1	-1,660.2	-1,651.9	1,270.4	0.00	0.00	0.00
11,300.0	89.99	179.60	9,500.1	-1,760.1	-1,651.2	1,370.2	0.00	0.00	0.00
11,400.0	90.00	179.60	9,500.1	-1,860.1	-1,650.5	1,470.1	0.00	0.00	0.00
11,500.0	90.00	179.59	9,500.1	-1,960.1	-1,649.8	1,570.0	0.00	0.00	0.00
11,600.0	90.00	179.59	9,500.1	-2,060.1	-1,649.1	1,669.9	0.00	0.00	0.00
11,700.0	90.00	179.59	9,500.1	-2,160.1	-1,648.4	1,769.8	0.00	0.00	0.00
11,800.0	90.00	179.59	9,500.1	-2,260.1	-1,647.7	1,869.7	0.00	0.00	0.00
11,900.0	90.00	179.59	9,500.1	-2,360.1	-1,647.0	1,969.5	0.00	0.00	0.00
12,000.0	90.00	179.58	9,500.1	-2,460.1	-1,646.2	2,069.4	0.00	0.00	0.00
12,100.0	90.00	179.58	9,500.1	-2,560.1	-1,645.5	2,169.3	0.00	0.00	0.00
12,200.0	90.00	179.58	9,500.1	-2,660.1	-1,644.8	2,269.2	0.00	0.00	0.00
12,300.0	90.00	179.58	9,500.1	-2,760.1	-1,644.0	2,369.1	0.00	0.00	0.00
12,400.0	90.00	179.57	9,500.2	-2,860.1	-1,643.3	2,469.0	0.00	0.00	0.00
12,500.0	90.00	179.57	9,500.2	-2,960.1	-1,642.6	2,568.8	0.00	0.00	0.00
12,600.0	90.00	179.57	9,500.2	-3,060.1	-1,641.8	2,668.7	0.00	0.00	0.00
12,700.0	90.00	179.57	9,500.2	-3,160.1	-1,641.1	2,768.6	0.00	0.00	0.00
12,800.0	90.00	179.57	9,500.2	-3,260.1	-1,640.3	2,868.5	0.00	0.00	0.00
12,900.0	90.00	179.56	9,500.2	-3,360.1	-1,639.5	2,968.4	0.00	0.00	0.00
13,000.0	90.00	179.56	9,500.2	-3,460.1	-1,638.8	3,068.3	0.00	0.00	0.00
13,100.0	90.00	179.56	9,500.2	-3,560.1	-1,638.0	3,168.2	0.00	0.00	0.00
13,200.0	90.00	179.56	9,500.2	-3,660.1	-1,637.2	3,268.0	0.00	0.00	0.00
13,300.0	90.00	179.56	9,500.2	-3,760.1	-1,636.5	3,367.9	0.00	0.00	0.00

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Site Wild Weasel 22 Fed Com
Company:	Midland	**TVD Reference:**	kb = 26' @ 3378.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3378.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#103H	**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	179.55	9,500.2	-3,860.1	-1,635.7	3,467.8	0.00	0.00	0.00
13,500.0	90.00	179.55	9,500.2	-3,960.1	-1,634.9	3,567.7	0.00	0.00	0.00
13,600.0	90.00	179.55	9,500.2	-4,060.1	-1,634.1	3,667.6	0.00	0.00	0.00
13,700.0	90.00	179.55	9,500.2	-4,160.1	-1,633.3	3,767.5	0.00	0.00	0.00
13,800.0	90.00	179.55	9,500.2	-4,260.1	-1,632.6	3,867.4	0.00	0.00	0.00
13,900.0	90.00	179.54	9,500.2	-4,360.1	-1,631.8	3,967.2	0.00	0.00	0.00
14,000.0	90.00	179.54	9,500.2	-4,460.1	-1,631.0	4,067.1	0.00	0.00	0.00
14,100.0	90.00	179.54	9,500.2	-4,560.1	-1,630.2	4,167.0	0.00	0.00	0.00
14,200.0	90.00	179.54	9,500.2	-4,660.1	-1,629.4	4,266.9	0.00	0.00	0.00
14,300.0	90.00	179.54	9,500.2	-4,760.1	-1,628.5	4,366.8	0.00	0.00	0.00
14,400.0	90.00	179.53	9,500.2	-4,860.1	-1,627.7	4,466.7	0.00	0.00	0.00
14,500.0	90.00	179.53	9,500.2	-4,960.1	-1,626.9	4,566.6	0.00	0.00	0.00
14,600.0	90.00	179.53	9,500.2	-5,060.1	-1,626.1	4,666.5	0.00	0.00	0.00
14,700.0	90.00	179.53	9,500.2	-5,160.0	-1,625.3	4,766.3	0.00	0.00	0.00
14,800.0	90.00	179.53	9,500.2	-5,260.0	-1,624.4	4,866.2	0.00	0.00	0.00
14,900.0	90.00	179.52	9,500.2	-5,360.0	-1,623.6	4,966.1	0.00	0.00	0.00
15,000.0	90.00	179.52	9,500.2	-5,460.0	-1,622.8	5,066.0	0.00	0.00	0.00
15,100.0	90.00	179.52	9,500.2	-5,560.0	-1,621.9	5,165.9	0.00	0.00	0.00
15,200.0	90.00	179.52	9,500.2	-5,660.0	-1,621.1	5,265.8	0.00	0.00	0.00
15,300.0	90.00	179.51	9,500.2	-5,760.0	-1,620.3	5,365.7	0.00	0.00	0.00
15,400.0	90.00	179.51	9,500.2	-5,860.0	-1,619.4	5,465.6	0.00	0.00	0.00
15,500.0	90.00	179.51	9,500.2	-5,960.0	-1,618.6	5,565.5	0.00	0.00	0.00
15,600.0	90.00	179.51	9,500.2	-6,060.0	-1,617.7	5,665.3	0.00	0.00	0.00
15,700.0	90.00	179.51	9,500.2	-6,160.0	-1,616.8	5,765.2	0.00	0.00	0.00
15,800.0	90.00	179.50	9,500.2	-6,260.0	-1,616.0	5,865.1	0.00	0.00	0.00
15,900.0	90.00	179.50	9,500.2	-6,360.0	-1,615.1	5,965.0	0.00	0.00	0.00
16,000.0	90.00	179.50	9,500.2	-6,460.0	-1,614.2	6,064.9	0.00	0.00	0.00
16,100.0	90.00	179.50	9,500.2	-6,560.0	-1,613.4	6,164.8	0.00	0.00	0.00
16,200.0	90.00	179.50	9,500.2	-6,660.0	-1,612.5	6,264.7	0.00	0.00	0.00
16,300.0	90.00	179.49	9,500.2	-6,760.0	-1,611.6	6,364.6	0.00	0.00	0.00
16,400.0	90.00	179.49	9,500.2	-6,860.0	-1,610.7	6,464.5	0.00	0.00	0.00
16,500.0	90.00	179.49	9,500.2	-6,960.0	-1,609.8	6,564.4	0.00	0.00	0.00
16,600.0	90.00	179.49	9,500.2	-7,060.0	-1,608.9	6,664.3	0.00	0.00	0.00
16,700.0	90.00	179.49	9,500.2	-7,160.0	-1,608.0	6,764.1	0.00	0.00	0.00
16,800.0	90.00	179.48	9,500.2	-7,260.0	-1,607.1	6,864.0	0.00	0.00	0.00
16,900.0	90.00	179.48	9,500.2	-7,360.0	-1,606.2	6,963.9	0.00	0.00	0.00
17,000.0	90.00	179.48	9,500.2	-7,460.0	-1,605.3	7,063.8	0.00	0.00	0.00
17,100.0	90.00	179.48	9,500.2	-7,560.0	-1,604.4	7,163.7	0.00	0.00	0.00
17,200.0	90.00	179.48	9,500.2	-7,660.0	-1,603.5	7,263.6	0.00	0.00	0.00
17,300.0	90.00	179.47	9,500.2	-7,759.9	-1,602.6	7,363.5	0.00	0.00	0.00
17,400.0	90.00	179.47	9,500.2	-7,859.9	-1,601.7	7,463.4	0.00	0.00	0.00
17,500.0	90.00	179.47	9,500.2	-7,959.9	-1,600.8	7,563.3	0.00	0.00	0.00
17,600.0	90.00	179.47	9,500.2	-8,059.9	-1,599.8	7,663.2	0.00	0.00	0.00
17,700.0	90.00	179.47	9,500.2	-8,159.9	-1,598.9	7,763.1	0.00	0.00	0.00
17,800.0	90.00	179.46	9,500.2	-8,259.9	-1,598.0	7,863.0	0.00	0.00	0.00
17,900.0	90.00	179.46	9,500.2	-8,359.9	-1,597.0	7,962.9	0.00	0.00	0.00
18,000.0	90.00	179.46	9,500.1	-8,459.9	-1,596.1	8,062.8	0.00	0.00	0.00
18,100.0	90.00	179.46	9,500.1	-8,559.9	-1,595.1	8,162.7	0.00	0.00	0.00
18,200.0	90.00	179.45	9,500.1	-8,659.9	-1,594.2	8,262.5	0.00	0.00	0.00
18,300.0	90.00	179.45	9,500.1	-8,759.9	-1,593.2	8,362.4	0.00	0.00	0.00
18,400.0	90.00	179.45	9,500.1	-8,859.9	-1,592.3	8,462.3	0.00	0.00	0.00
18,500.0	90.00	179.45	9,500.1	-8,959.9	-1,591.3	8,562.2	0.00	0.00	0.00
18,600.0	90.00	179.45	9,500.1	-9,059.9	-1,590.3	8,662.1	0.00	0.00	0.00
18,700.0	90.00	179.44	9,500.1	-9,159.9	-1,589.4	8,762.0	0.00	0.00	0.00

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Site Wild Weasel 22 Fed Com
Company:	Midland	**TVD Reference:**	kb = 26' @ 3378.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3378.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#103H	**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	179.44	9,500.1	-9,259.9	-1,588.4	8,861.9	0.00	0.00	0.00
18,900.0	90.00	179.44	9,500.1	-9,359.9	-1,587.4	8,961.8	0.00	0.00	0.00
19,000.0	90.01	179.44	9,500.1	-9,459.9	-1,586.5	9,061.7	0.00	0.00	0.00
19,100.0	90.01	179.44	9,500.1	-9,559.9	-1,585.5	9,161.6	0.00	0.00	0.00
19,200.0	90.01	179.43	9,500.1	-9,659.9	-1,584.5	9,261.5	0.00	0.00	0.00
19,300.0	90.01	179.43	9,500.0	-9,759.9	-1,583.5	9,361.4	0.00	0.00	0.00
19,400.0	90.01	179.43	9,500.0	-9,859.9	-1,582.5	9,461.3	0.00	0.00	0.00
19,500.0	90.01	179.43	9,500.0	-9,959.8	-1,581.5	9,561.2	0.00	0.00	0.00
19,600.0	90.01	179.43	9,500.0	-10,059.8	-1,580.5	9,661.1	0.00	0.00	0.00
19,700.0	90.01	179.42	9,500.0	-10,159.8	-1,579.5	9,761.0	0.00	0.00	0.00
19,750.2	90.01	179.42	9,500.0	-10,210.0	-1,579.0	9,811.1	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(Wild Weasel 22 Fe - plan hits target center - Point	0.00	0.00	9,022.5	199.0	-1,667.0	409,633.00	812,843.00	32° 7' 23.241 N	103° 27' 22.739 W
FTP(Wild Weasel 22 Fe - plan hits target center - Point	0.00	0.00	9,235.2	149.0	-1,666.0	409,583.00	812,844.00	32° 7' 22.746 N	103° 27' 22.732 W
Fed Perf 1(Wild Weasel - plan hits target center - Point	0.00	0.00	9,500.0	-1,070.0	-1,656.0	408,364.00	812,854.00	32° 7' 10.683 N	103° 27' 22.731 W
PBHL(Wild Weasel 22 F - plan hits target center - Point	0.00	0.00	9,500.0	-10,210.0	-1,579.0	399,224.00	812,931.00	32° 5' 40.236 N	103° 27' 22.701 W

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Lea County, NM (NAD 83 NME)

Wild Weasel 22 Fed Com #103H

Plan #0.1 RT

Azimuths to Grid North
True North: -0.47°
Magnetic North: 5.83°

Magnetic Field
Strength: 47280.6nT
Dip Angle: 59.77°
Date: 1/12/2023
Model: IGRF2020

To convert a Magnetic Direction to a Grid Direction, Add 5.83°
To convert a Magnetic Direction to a True Direction, Add 6.30° East
To convert a True Direction to a Grid Direction, Subtract 0.47°

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: #103H

3352.0
kb = 26' @ 3378.0usft

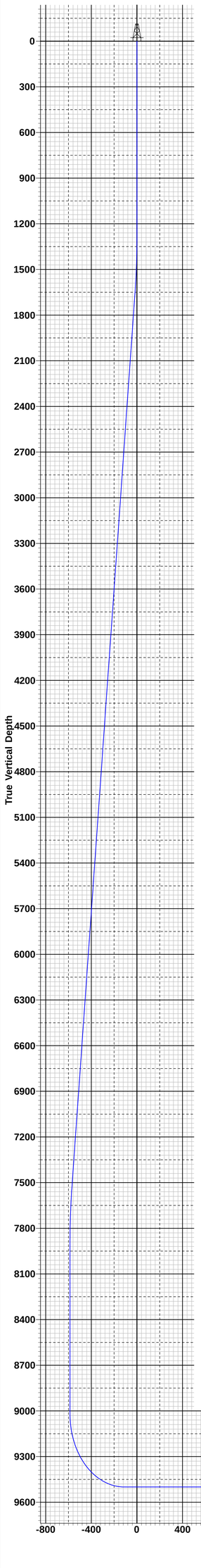
Northing	Easting	Latittude	Longitude
-212309416.00	812387.00	32° 7' 17.212 N	103° 27' 28.099 W

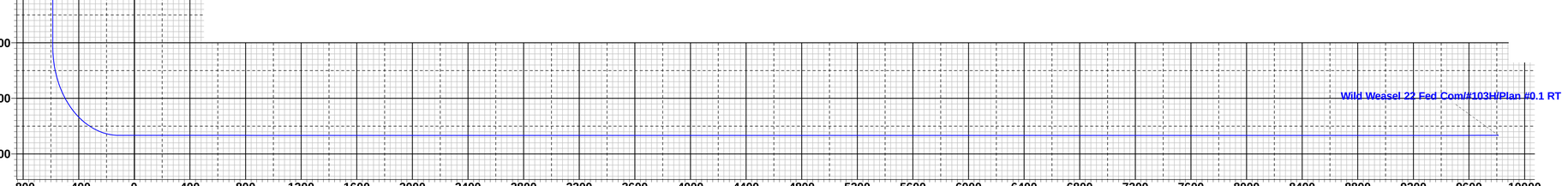
SECTION DETAILS

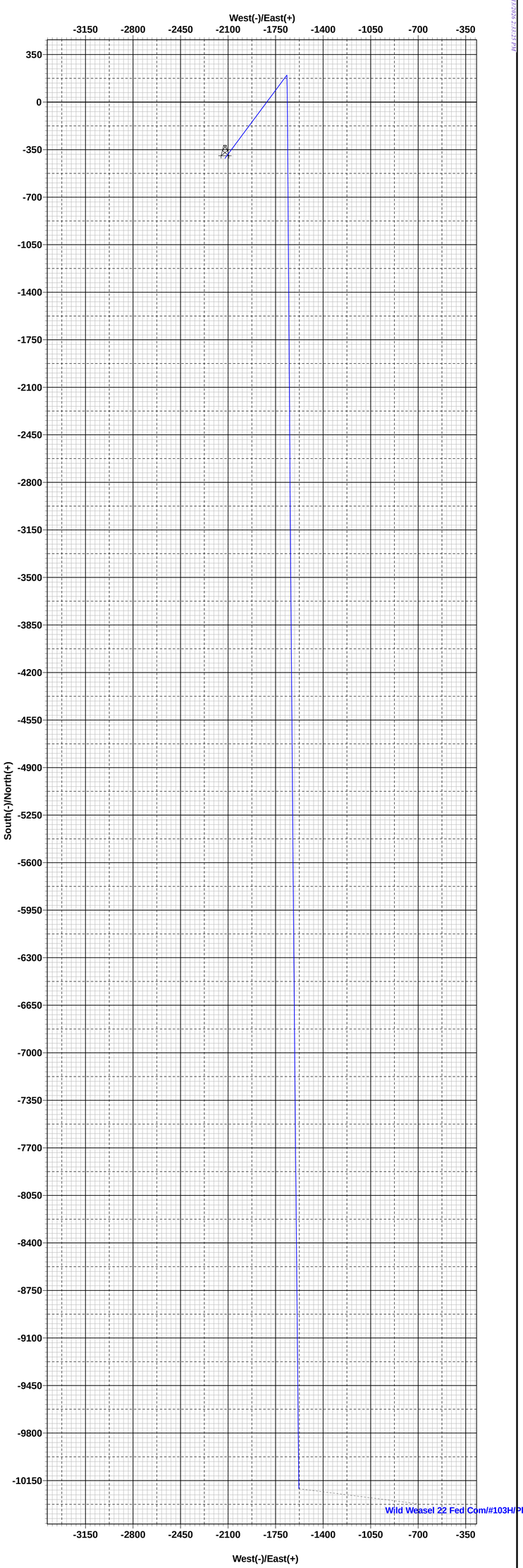
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	-414.0	-2123.0	0.00	0.00	0.0	
2	1300.0	0.00	0.00	1300.0	-414.0	-2123.0	0.00	0.00	0.0	
3	1649.5	6.99	36.64	1648.6	-396.9	-2110.3	2.00	36.64	-16.3	
4	7578.3	6.99	36.64	7533.4	181.9	-1679.7	0.00	0.00	-570.4	
5	7927.8	0.00	0.00	7882.0	199.0	-1667.0	2.00	180.00	-586.8	
6	9068.3	0.00	0.00	9022.5	199.0	-1667.0	0.00	0.00	-586.8	KOP(Wild Weasel 22 Fed Com #103H)
7	9288.7	26.46	178.85	9235.2	149.0	-1666.0	12.00	178.85	-536.8	FTP(Wild Weasel 22 Fed Com #103H)
8	9818.2	89.99	179.61	9499.9	-278.4	-1661.4	12.00	0.85	-109.8	
9	10609.8	89.99	179.61	9500.0	-1070.0	-1656.0	0.00	0.00	680.9	Fed Perf 1(Wild Weasel 22 Fed Com #103H)
10	19750.2	90.01	179.42	9500.0	-10210.0	-1579.0	0.00	-86.34	9811.1	PBHL(Wild Weasel 22 Fed Com #103H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP(Wild Weasel 22 Fed Com #103H)	9022.5	199.0	-1667.0	409633.00	812843.00
FTP(Wild Weasel 22 Fed Com #103H)	9235.2	149.0	-1666.0	409583.00	812844.00
Fed Perf 1(Wild Weasel 22 Fed Com #103H)	9500.0	-1070.0	-1656.0	408364.00	812854.00
PBHL(Wild Weasel 22 Fed Com #103H)	9500.0	-10210.0	-1579.0	399224.00	812931.00







Lea County, NM (NAD 83 NME)
Wild Weasel 22 Fed Com
#103H
OH
Plan #0.1 RT
14:19, February 24 2026

eog resources

Wild Weasel 22 Fed Com #103H

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.

Wild Weasel 22 Fed Com #103H

- **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

Wild Weasel 22 Fed Com #103H

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

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	EOG Resources, Inc.
WELL NAME & NO.:	Wild Weasel 22 Fed Com 103H
LOCATION:	Section 22, T.25S., R.34E.
COUNTY:	Lea County

*Please refer to approved NOI appended to this application for the most recent details for the planned well.

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 43 CFR part 3170 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

Primary Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **1000** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. The surface hole shall be **16** inch in diameter.

Approval Date: 03/10/2025

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

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

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

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

Casing Alternative Design A:

1. The **13-3/8** inch surface casing shall be set at approximately **2030** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. The surface hole shall be **16** inch in diameter.

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

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

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

   - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

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

Operator has proposed to pump down 9-5/8" X 5-1/2" annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus Or operator shall run a CBL from TD of the 5-1/2" casing to surface after the second stage BH to verify TOC.

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad.

If cement does not reach surface, the next casing string must come to surface.

Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

Casing Alternative Design B:

1. The **10-3/4** inch surface casing shall be set at approximately **2030** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. The surface hole shall be **13-1/2** inch in diameter.

   a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
   b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8**

hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

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

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

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

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

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

Operator has proposed to pump down 8-5/8" X 5-1/2" annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus Or operator shall run a CBL from TD of the 5-1/2" casing to surface after the second stage BH to verify TOC.

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad.

If cement does not reach surface, the next casing string must come to surface.

Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

Casing Alternative Design C:

1. The **13-3/8** inch surface casing shall be set at approximately **2030** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. The surface hole shall be **16** inch in diameter.

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

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

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

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

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

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.**

3. The minimum required fill of cement behind the **6** inch production casing is:

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

Operator has proposed to pump down 9-5/8" X 6 " annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus Or operator shall run a CBL from TD of the 6" casing to surface after the second stage BH to verify TOC.

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad.

If cement does not reach surface, the next casing string must come to surface.

Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

Casing Alternative Design D:

1. The **13-3/8** inch surface casing shall be set at approximately **2030** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable

fresh water) and cemented to the surface. The surface hole shall be **16** inch in diameter.

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

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

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

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.**

3. The minimum required fill of cement behind the **6 X 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.

Operator has proposed to pump down 9-5/8" X 6 " annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus Or operator shall run a CBL from TD of the 6" casing to surface after the second stage BH to verify TOC.

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad.

If cement does not reach surface, the next casing string must come to surface.

Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

C. PRESSURE CONTROL

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

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **Surface** casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** 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.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in Onshore Order 1 and 2.
- 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.

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:

Operator casing variance is approved for the utilization of

- Annular clearance to meet or exceed 0.422'' between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.

-Annular clearance less than 0.422'' is acceptable for the production open hole section.

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

Offline Cementing:

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

GENERAL REQUIREMENTS

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

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

☒ 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
        i. Notify the BLM when moving in and removing the Spudder Rig.
        ii. 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.
        iii. BOP/BOPE test to be conducted per **43 CFR 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. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

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 of both lead and tail cement, 2) until cement has been in place at least 8

hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-Q 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 3172**.
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:
    i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    ii. 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.
    iii. Manufacturer representative shall install the test plug for the initial BOP test.
    iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
    v. 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.
    i. 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).
    ii. 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.)

iii. 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 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 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

iv. 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.

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

vi. 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.

vii. 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.

viii. 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 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.

JAM 3/7/2025

Approval Date: 03/10/2025

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.

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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.

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

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Pipe Body and API Connections Performance Data

10.750 40.50/0.350 J55

PDF

New Search »

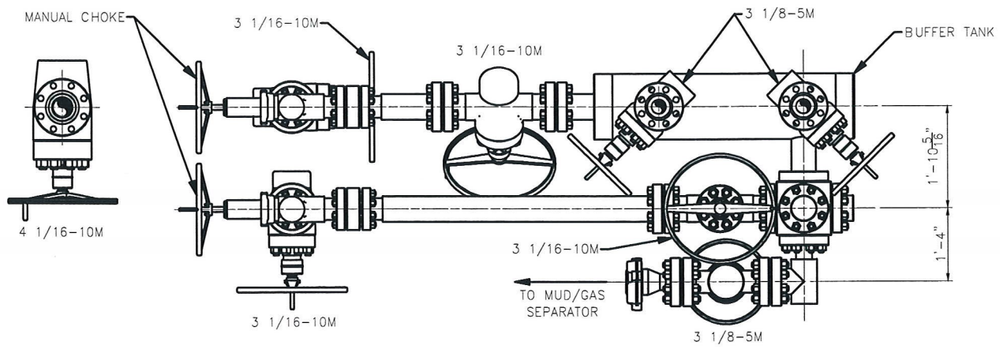
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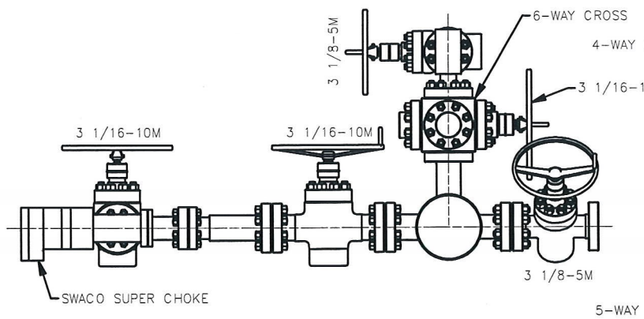
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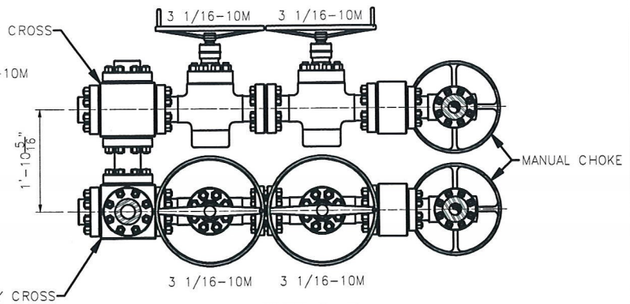
Mechanical Properties	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi
Dimensions	**Pipe**	**BTC**	**LTC**	**STC**	
Outside Diameter	10.750	11.750	--	11.750	in.
Wall Thickness	0.350	--	--	--	in.
Inside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

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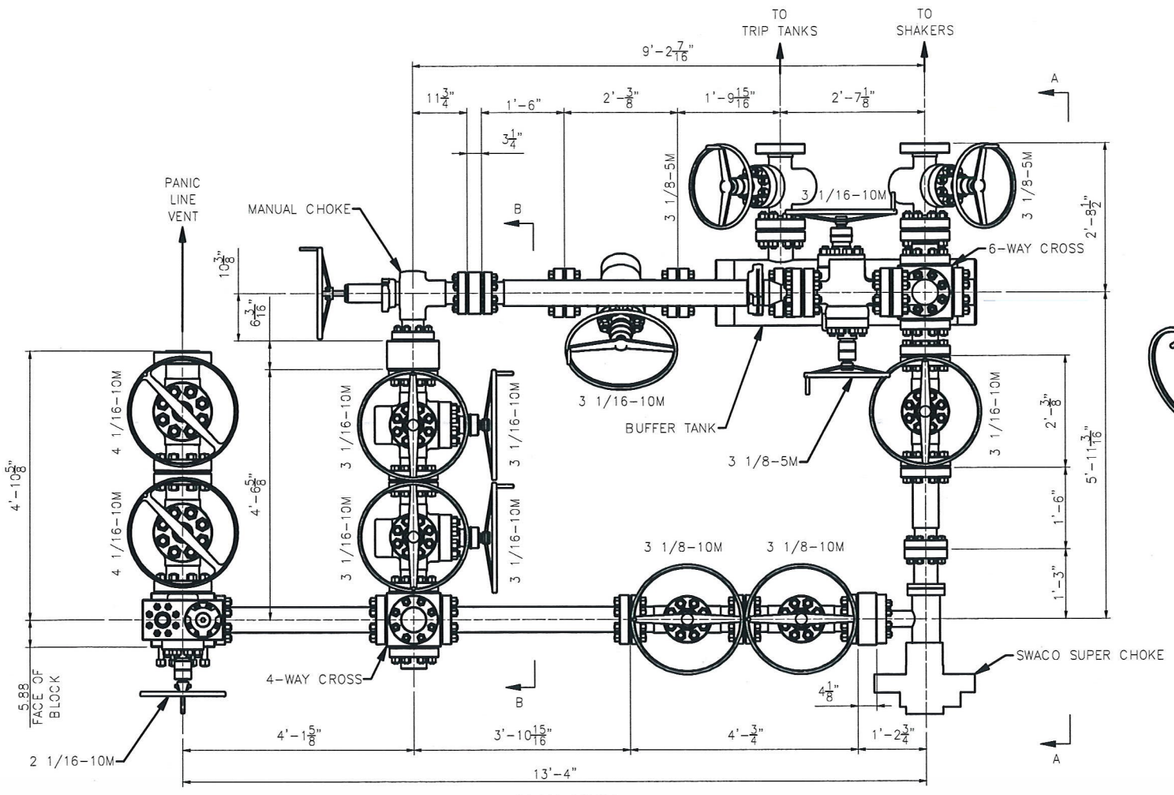




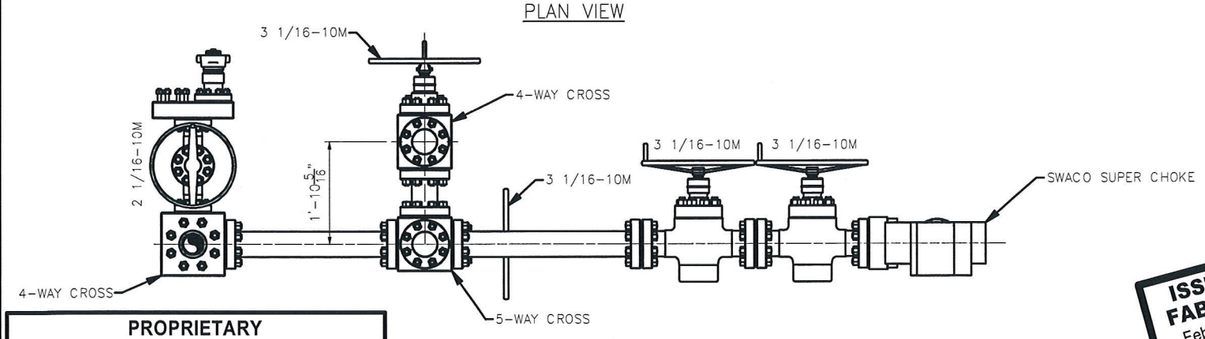
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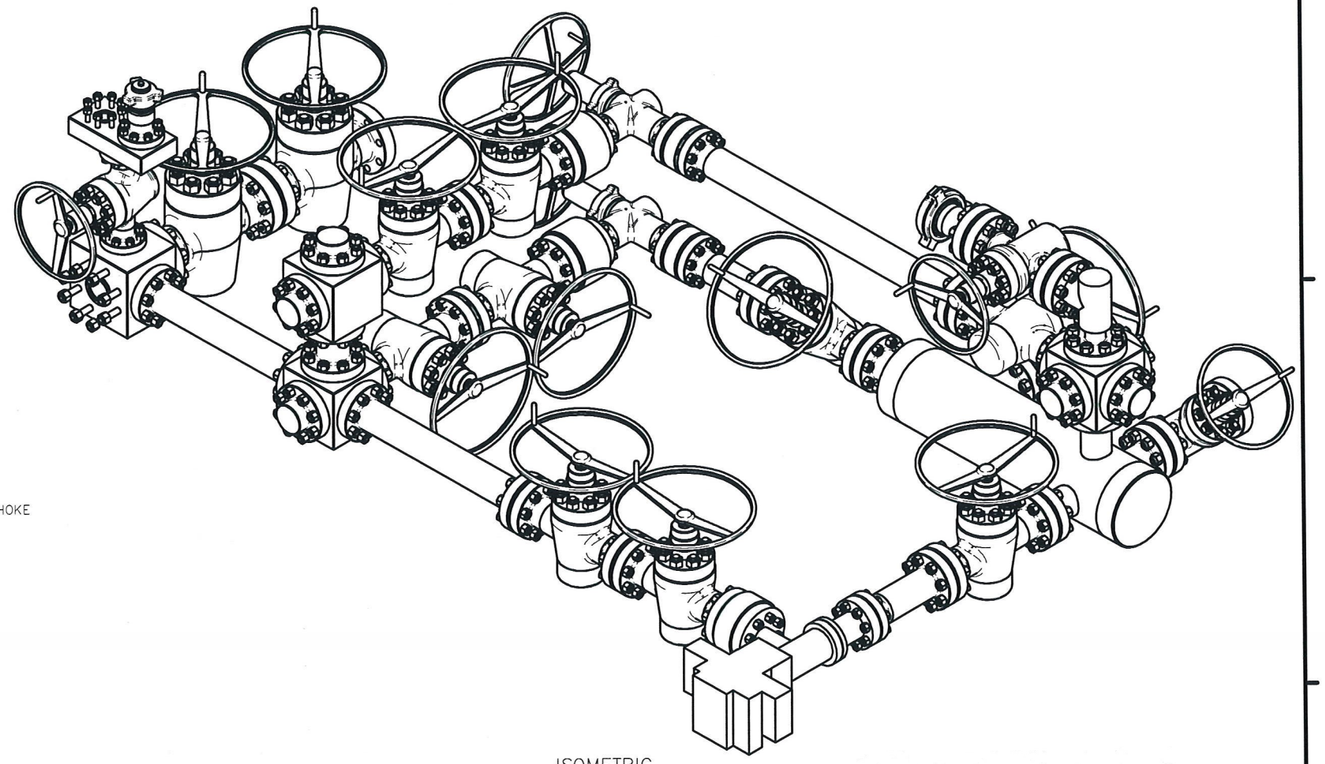


SECTION B–B



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.

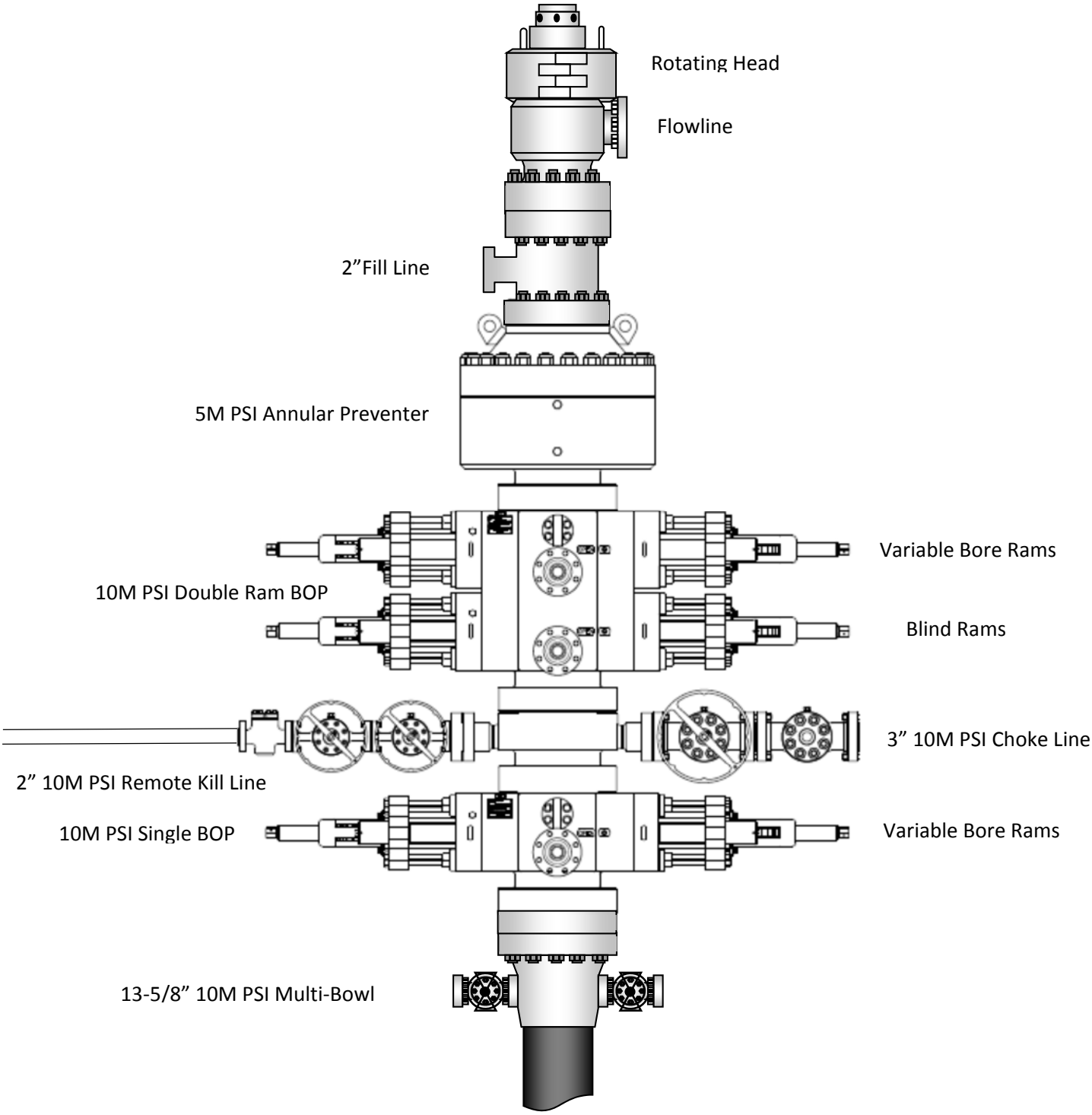
CUSTOMER: H&P

PROJECT:

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

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

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



Page 52 of 241

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.

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

American Petroleum Institute

2018-151

QMS Exclusions: No Exclusions Identified as Applicable

Effective Date: OCTOBER 24, 2024
Expiration Date: DECEMBER 18, 2027

Anchal Liddar

Senior Vice President of Global Industry Services

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

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Page 53 of 241

Certificate of Authority to use the Official API Monogram

License Number: 16C-0485

ORIGINAL

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Houston, TX
United States

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

American Petroleum Institute

AMERICAN PETROLEUM INSTITUTE CORPORATE SEAL INCORPORATED 1919

2018-151

QMS Exclusions: No Exclusions Identified as Applicable

Effective Date: OCTOBER 24, 2024
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Senior Vice President of Global Industry Services

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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

No Exclusions Identified as Applicable

API Spec Q1 Registered ®

Effective Date:	**OCTOBER 24, 2024**
Expiration Date:	**DECEMBER 18, 2027**
Registered Since:	**DECEMBER 18, 2018**

Anchal Lidder

Senior Vice President of Global Industry Services

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.**

2023-120 | 06.23 | 4M | Printed in the USA |

BLACK GOLD®

GATES ENGINEERING & SERVICES NORTH AMERICA
7603 Prairie Oak Dr. Suite 190
Houston, TX. 77086

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

CERTIFICATE OF CONFORMANCE

This is to verify that all Parts and/or Materials included in this shipment have been manufactured and/or processed in Conformance with applicable drawings and specifications, and that Records of Required Tests are on file and subject to examination. The following items were purchased via **Gates Engineering & Services North America** facilities in Houston, TX, USA. This hose assembly was designed and manufactured to meet requirements of API Spec 16C, 3rd Edition.

CUSTOMER:	HELMERICH & PAYNE INTERNATIONAL DRILLING CO.
CUSTOMER P.O.#:	740399823 (TAG WITH H&P I.D # 88076545 &H&P P.O. # 740399823 (UK S/O 34557))
CUSTOMER P/N:	3.035.016C4116FX-FLTSSA
PART DESCRIPTION:	3" X 35 FT GATES API 16C CHOKE & KILL FSL 3 TEMP B HOSE ASSEMBLY WITH STAINLESS STEEL ARMOR C/W 4 1/16" 10K H2S SUITED FLOAT X FLOAT FLANGES WITH BX 155 RING GROOVE SUPPLIED WITH SAFETY CLAMPS/LIFT EYE CLAMPS
SALES ORDER #:	525112
QUANTITY:	1
SERIAL #:	SN 139321 HOSE BATCH 139244

SIGNATURE: _____

TITLE: QUALITY ASSURANCE

DATE: 2/10/2023

Gates Engineering & Services UK Ltd		CERTIFICATE OF CONFORMITY	
Doc. Ref.	Form-056		
Revision	4		

Gates SO No. 34557	**Customer Name & Address:** Gates Engineering & Services NA Inc Accounts payable 7N GESNA 1144 Fifteenth Street, Suite 1400 Denver, CO 80202 USA
Customer PO No: 1803964/ 1	
Description: 3" 10K API 16C CHOKE & KILL HOSE ASSEMBLY X 35FT OAL (QTY 5)	

This is to certify that the components listed below have been supplied in accordance with API 16C & the above referenced order number. The assemblies listed below have been manufactured and tested in the UK.

SPECIFICATION

ITEM	DESCRIPTION	BATCH NUMBER	QTY
1	3" 10K API 16C CHOKE & KILL HOSE ASSEMBLY X 35FT OAL PART NO: HA34539-001 END A: 4.1/16" 10K API SPEC 6A TYPE FLANGE WITH BX155 RING GROOVE END B: 4.1/16" 10K API SPEC 17D SV SWIVEL FLANGE WITH BX155 RING GROOVE EACH END HAS AN INCONEL 625 INLAID RING GROOVE HOSE METALLIC PARTS MEET NACE-MR-0175 LATEST EDITION REQUIREMENTS WORKING PRESSURE: 10,000 PSI TEST PRESSURE: 15,000 PSI STANDARD: API 16C FSL3 MONOGRAMMED, 3RD EDITION EXTERNAL PROTECTION: STAINLESS STEEL ARMOUR INCLUDED FIRE RATED: API 16C STANDARD SECTION B.12.4 (704° FOR 30 MINS) H2S SERVICE SUITABLE TEMPERATURE CLASS B(-25 TO 100°C) HIGH TEMPERATURE EXPOSURE / SURVIVAL @ 177°C (INTERNAL IN A KICK SITUATION) SAFETY EQUIPMENT: INCLUDED 2 X HOSE SAFETY CLAMPS 2 X 3.6T SHACKLES 2 X 10MM OD X 6FT PCP COATED CHAINS HOSE ASSEMBLYY WORKS ORDERS NUMBERS: 139051 139052 139053 139054 139321	139062 139063 139064 139065 139244	5
	SAFETY/LIFTER CLAMP 195MM 1.7T PART NO: HCC108	MYB59483	10
	SAFETY CHAIN 10MM C/S PCP 6FT PART NO: CHC001	ACU59481	10

QA JW D. Watkins 06 DEC 2022

Accepted by..... **for and on behalf of Gates Engineering & Services UK Ltd**

Gates Engineering & Services UK Ltd		PRESSURE TEST CERTIFICATE	Gates
Doc. Ref.	Form-051		
Revision	9		

	Certificate No:
☐ BURST ☑ HYDROSTATIC ☐ CYCLIC	PTC-139321

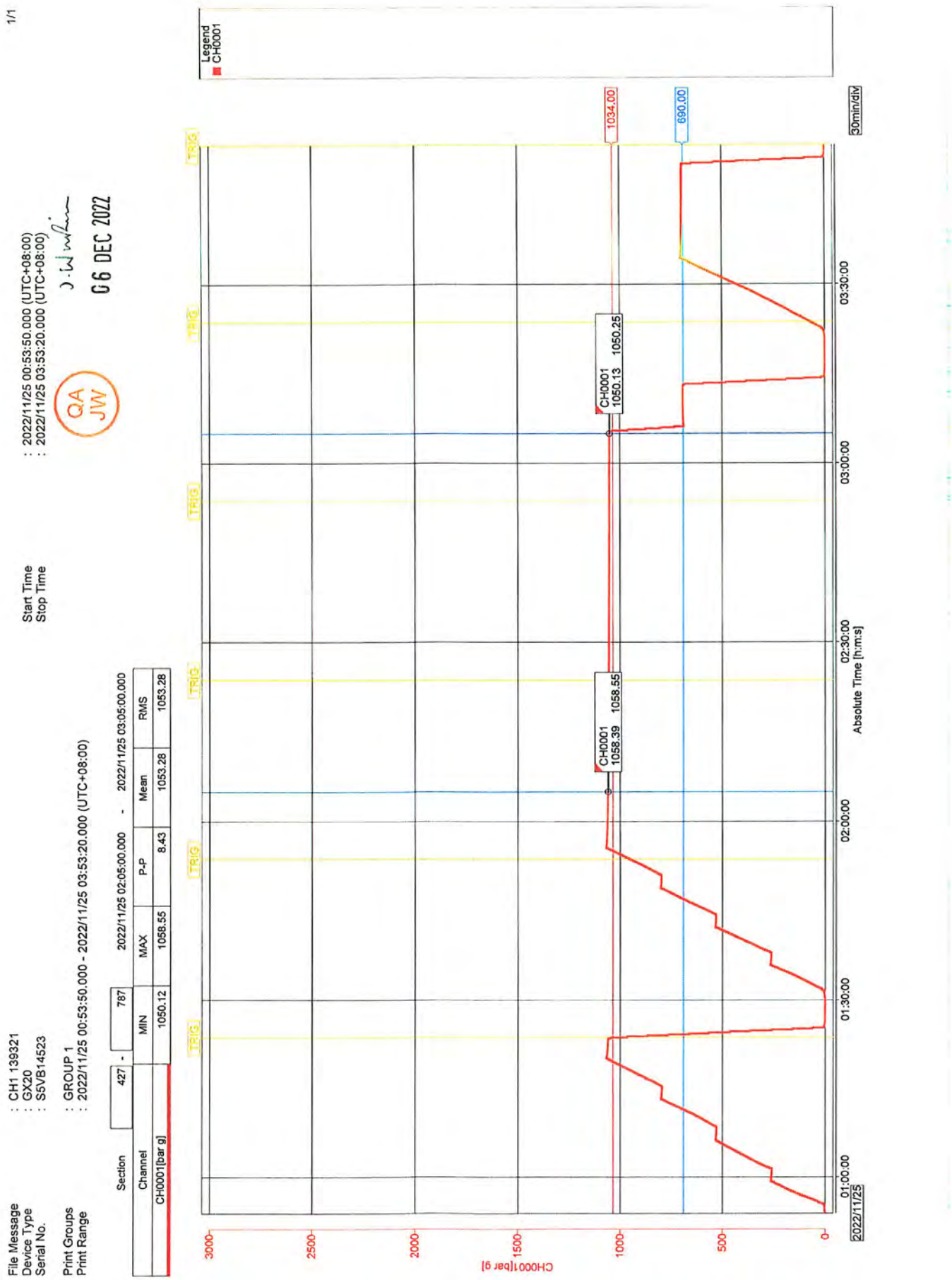
Product:	CK03F	**Hose WO/Batch:**	139244
Assembly WO:	139321	**Length:**	35FT
SO No:	34557	**Date:**	25/11/22
Customer:	Gates Engineering & Services NA Inc	**Customer Reference:**	PO 1803964/ 1

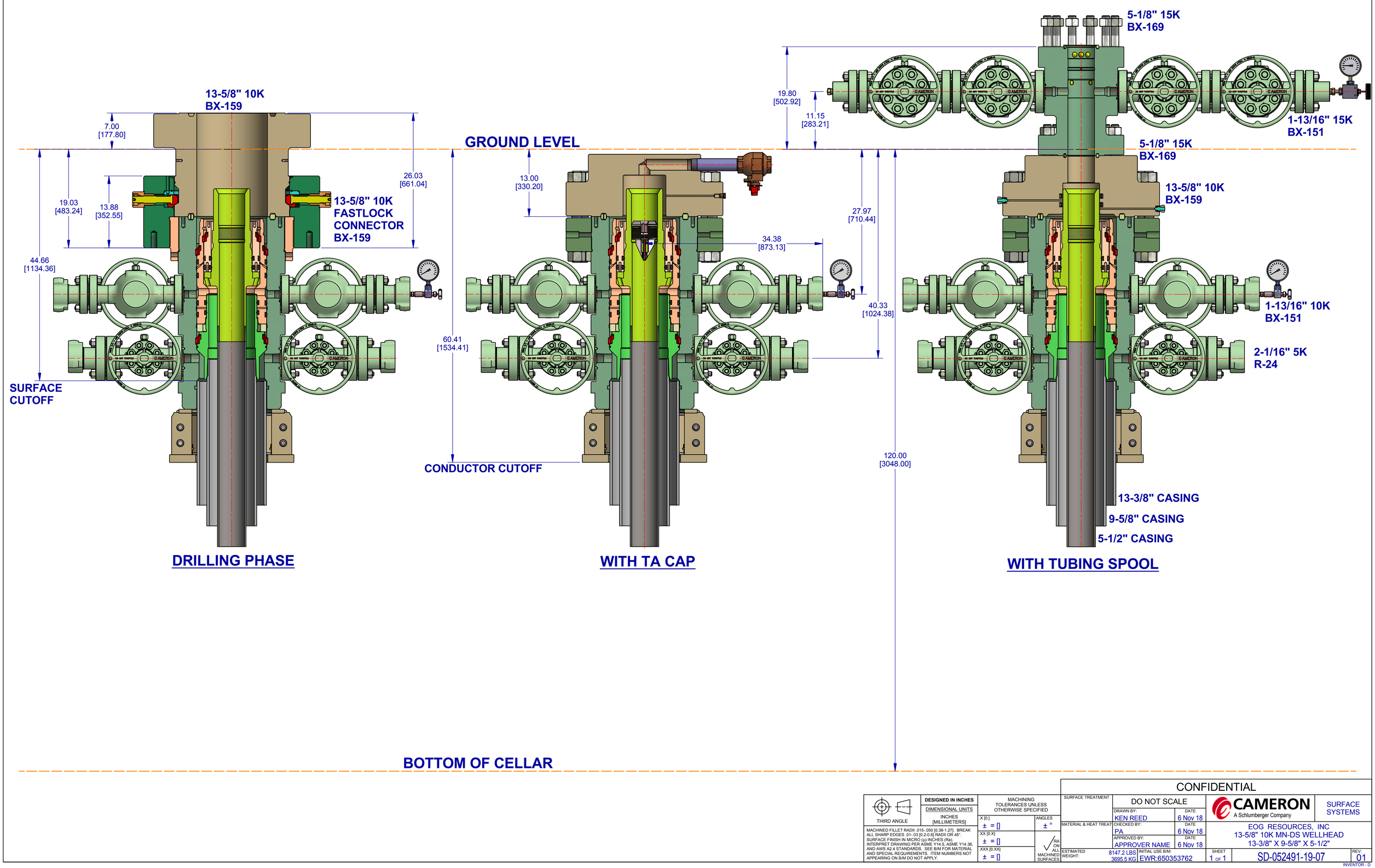
Inner Diameter:	3	**Inch**		
Working Pressure:	10000	**Psi**	690	**bar**
Test Pressure:	15000	**Psi**	1034	**bar**
Burst Pressure:	22500	**Psi**	1551	**bar**

Hose Description:	3" 10K API 16C CHOKE & KILL HOSE ASSEMBLY X 35FT OAL END A: 4.1/16" 10K API SPEC 6A TYPE FLANGE WITH BX155 RING GROOVE END B: 4.1/16" 10K API SPEC 17D SV SWIVEL FLANGE WITH BX155 RING GROOVE	
Item No	**Qty**	**Part Code**	**Customer Tag No (if applicable)**
1	1	HA34539-001	N/A

Details of Test:	Pressure tested with water at ambient temperature for a minimum of **60** minutes at test pressure **1034 BAR** Pressure Transducer S/N: 131203 (CH1) Chart Recorder S/N: S5VB14523 Calibration Certificate No: IKMCERTU823
Results:	Pressure Loss: **8.43 BAR** Acceptance Criteria: Pressure loss not to exceed **500 PSI (34.47 BAR)**

GESUK Ltd	Third Party
QA JW J. Wilson 06 DEC 2022	


1/1
File Message : CH1 139321
Device Type : GX20
Serial No. : S5VB14523
Print Groups : GROUP 1
Print Range : 2022/11/25 00:53:50.000 - 2022/11/25 03:53:20.000 (UTC+08:00)
Start Time : 2022/11/25 00:53:50.000 (UTC+08:00)
Stop Time : 2022/11/25 03:53:20.000 (UTC+08:00)
QA JW
06 DEC 2022
Section 427 - 787 2022/11/25 02:05:00.000 - 2022/11/25 03:05:00.000
Channel MIN MAX P-P Mean RMS
CH0001[Bar g] 1050.12 1058.55 8.43 1053.28 1053.28
Legend CH0001
1034.00
690.00
CH0001 1058.39 1058.55
CH0001 1050.13 1050.25
TRIG
CH0001[Bar g]
3000
2500
2000
1500
1000
500
0
2022/11/25
01:00:00
01:30:00
02:00:00
02:30:00
03:00:00
03:30:00
Absolute Time [h:m:s]
30min/div



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

eog resources

Wild Weasel 22 Fed Com Package

Wells in package:	Tgt TVD
Wild Weasel 15 Fed Com #203H	10,287
Wild Weasel 15 Fed Com #303H	10,410
Wild Weasel 15 Fed Com #304H	10,410
Wild Weasel 15 Fed Com #504H	11,000
Wild Weasel 15 Fed Com #505H	11,000
Wild Weasel 22 Fed Com #101H	9,500
Wild Weasel 22 Fed Com #102H	9,500
Wild Weasel 22 Fed Com #103H	9,500
Wild Weasel 22 Fed Com #104H	9,500
Wild Weasel 22 Fed Com #105H	9,500
Wild Weasel 22 Fed Com #106H	9,500
Wild Weasel 22 Fed Com #201H	10,287
Wild Weasel 22 Fed Com #202H	10,287
Wild Weasel 22 Fed Com #204H	10,287
Wild Weasel 22 Fed Com #205H	10,287
Wild Weasel 22 Fed Com #301H	10,410
Wild Weasel 22 Fed Com #302H	10,410
Wild Weasel 22 Fed Com #305H	10,410
Wild Weasel 22 Fed Com #306H	10,410
Wild Weasel 22 Fed Com #501H	11,000
Wild Weasel 22 Fed Com #502H	11,000
Wild Weasel 22 Fed Com #503H	11,000
Wild Weasel 22 Fed Com #506H	11,000
Wild Weasel 22 Fed Com #507H	11,000
Wild Weasel 22 Fed Com #508H	11,000

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

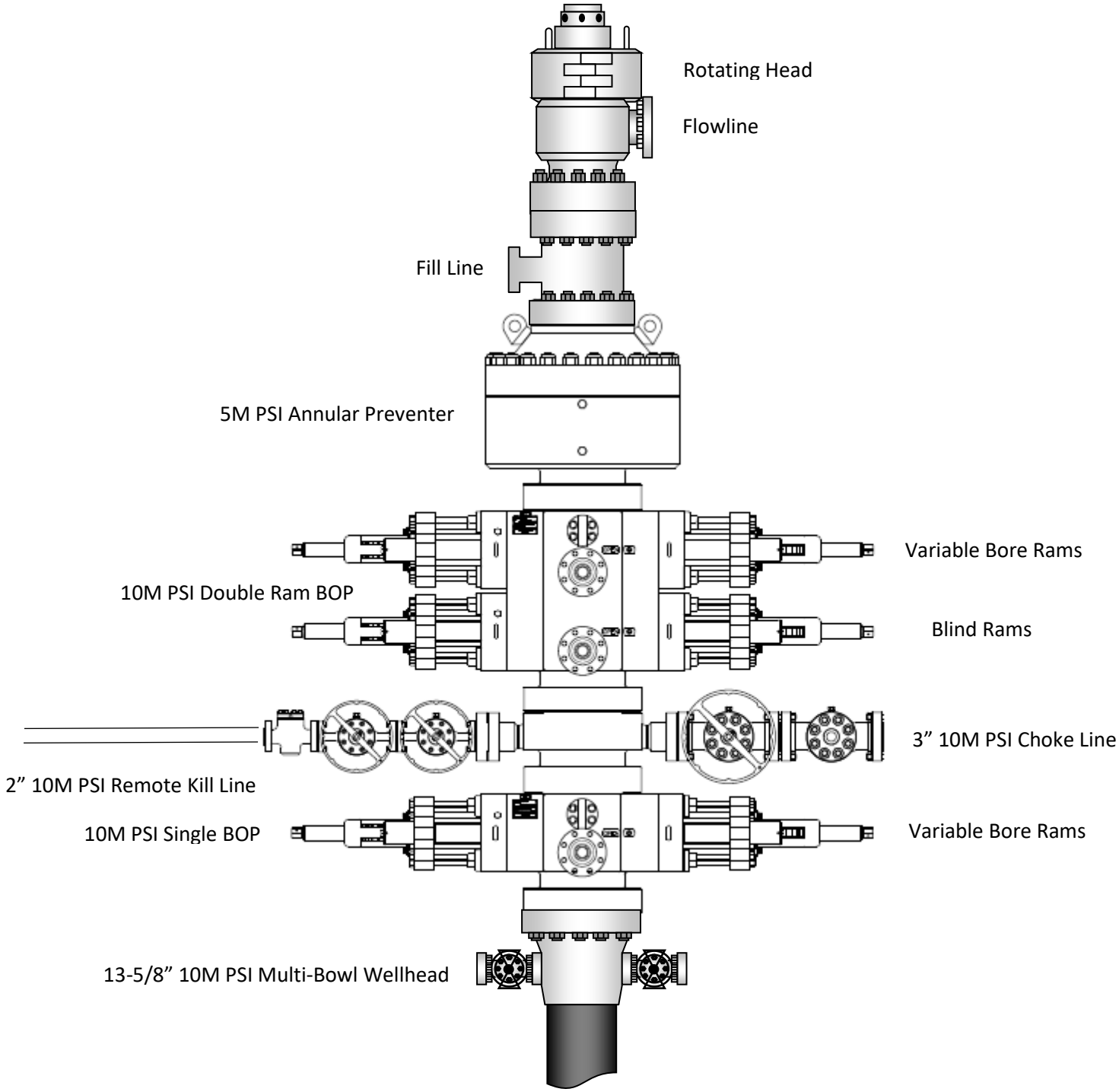
The tables below outlines the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

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

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

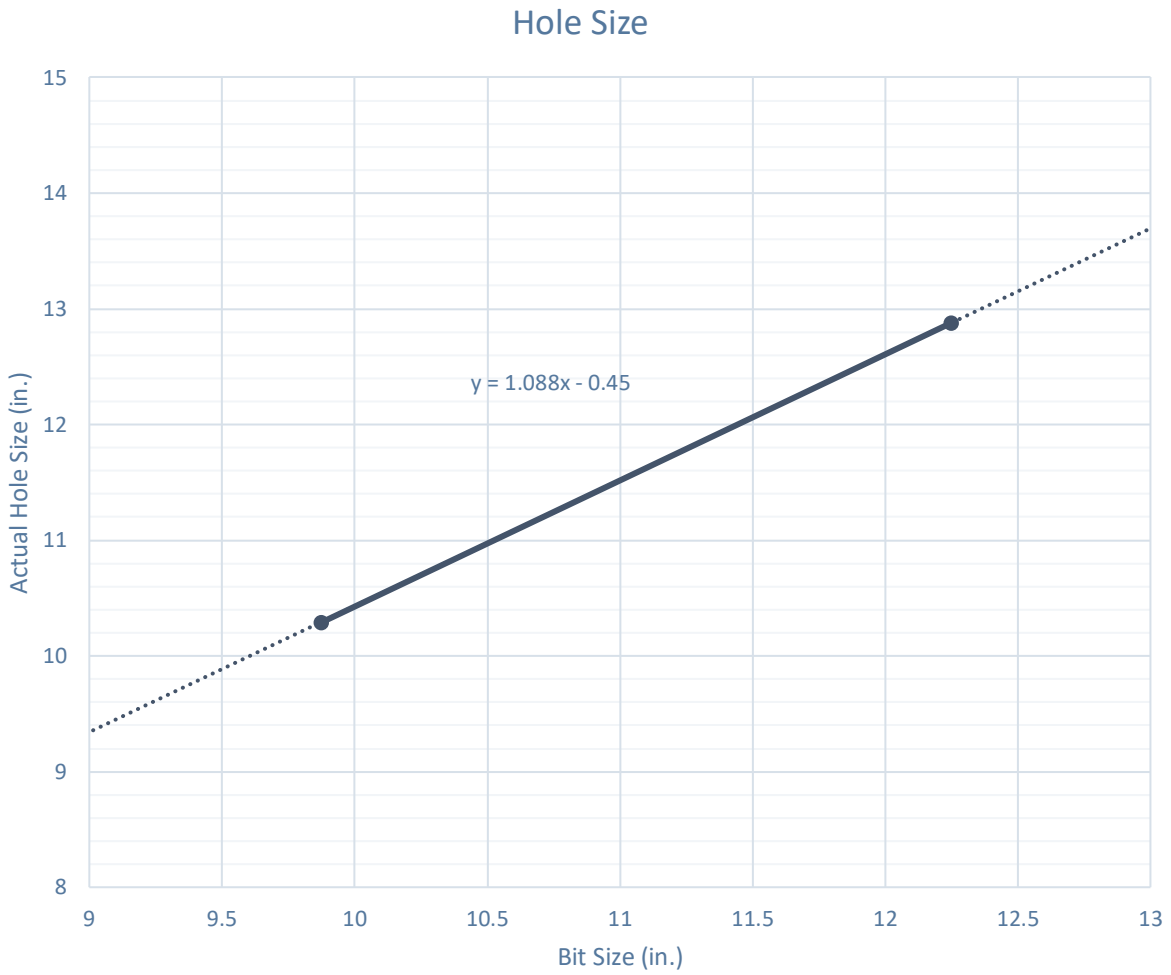
Volumetric Hole Size Calculation

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

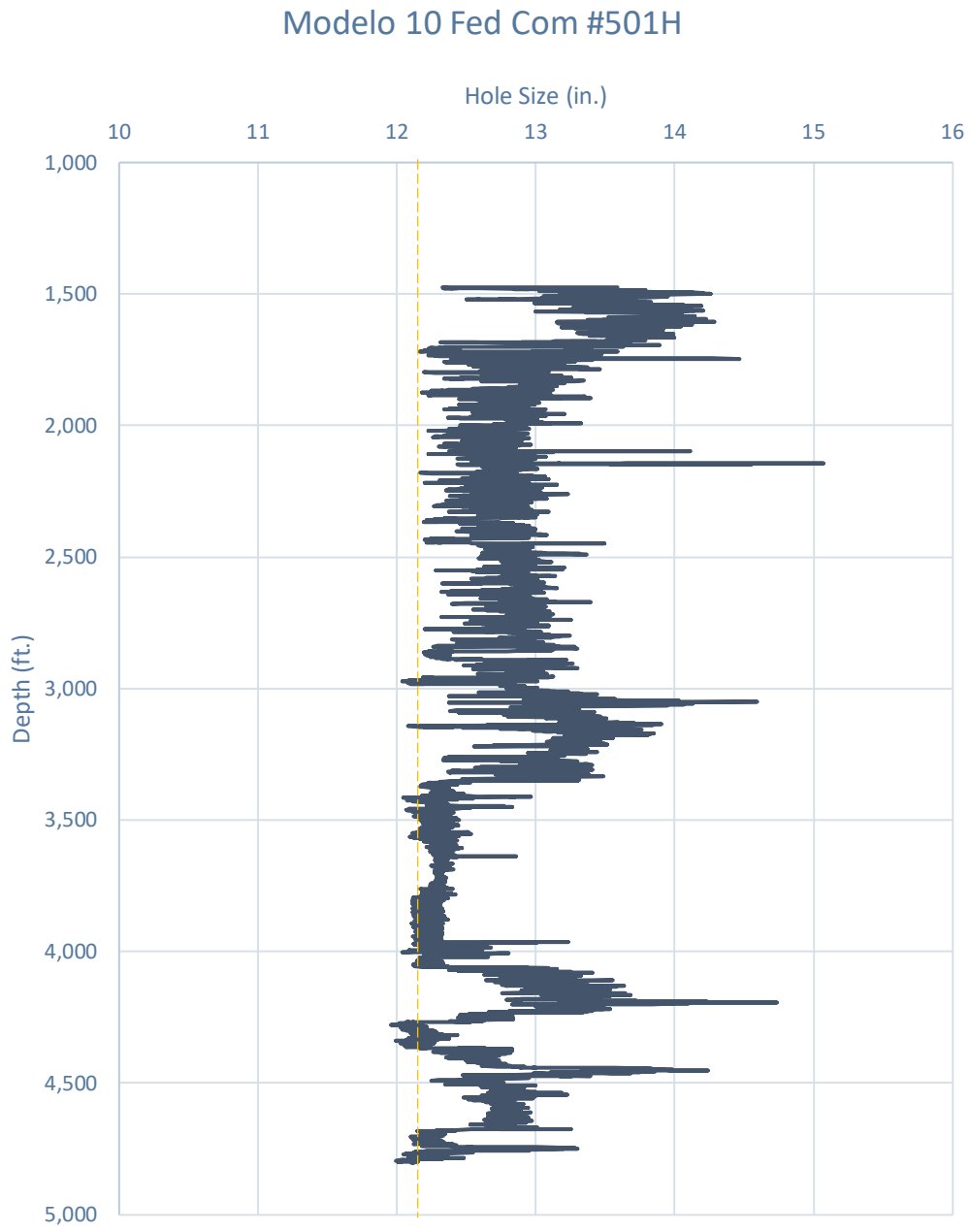
- 12.25” Hole
  - 12.88” Hole
    - 5.13% diameter increase
    - 10.52% area increase
  - 0.63” Average enlargement
  - 0.58” Median enlargement
  - 179 Well Count
- 9.875” Hole
  - 10.30” Hole
    - 4.24% diameter increase
    - 9.64% area increase
  - 0.42” Average enlargement
  - 0.46” Median enlargement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



Caliper Hole Size (12.25”)

Average Hole Size

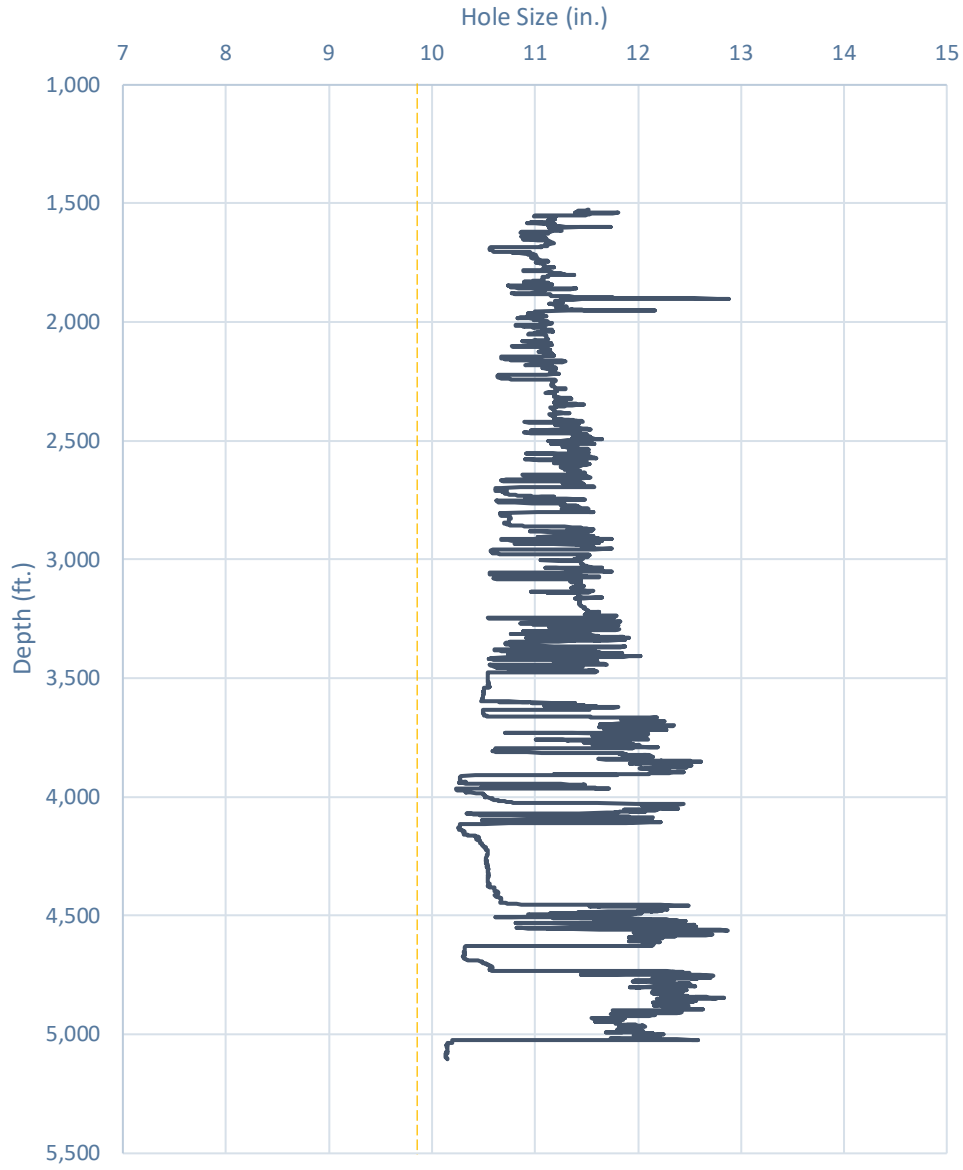
- 12.25” Bit
  - 12.76” Hole
    - 4.14% diameter increase
    - 8.44% area increase
  - 0.51” Average enlargement
  - 0.52” Median enlargement
  - Brine



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

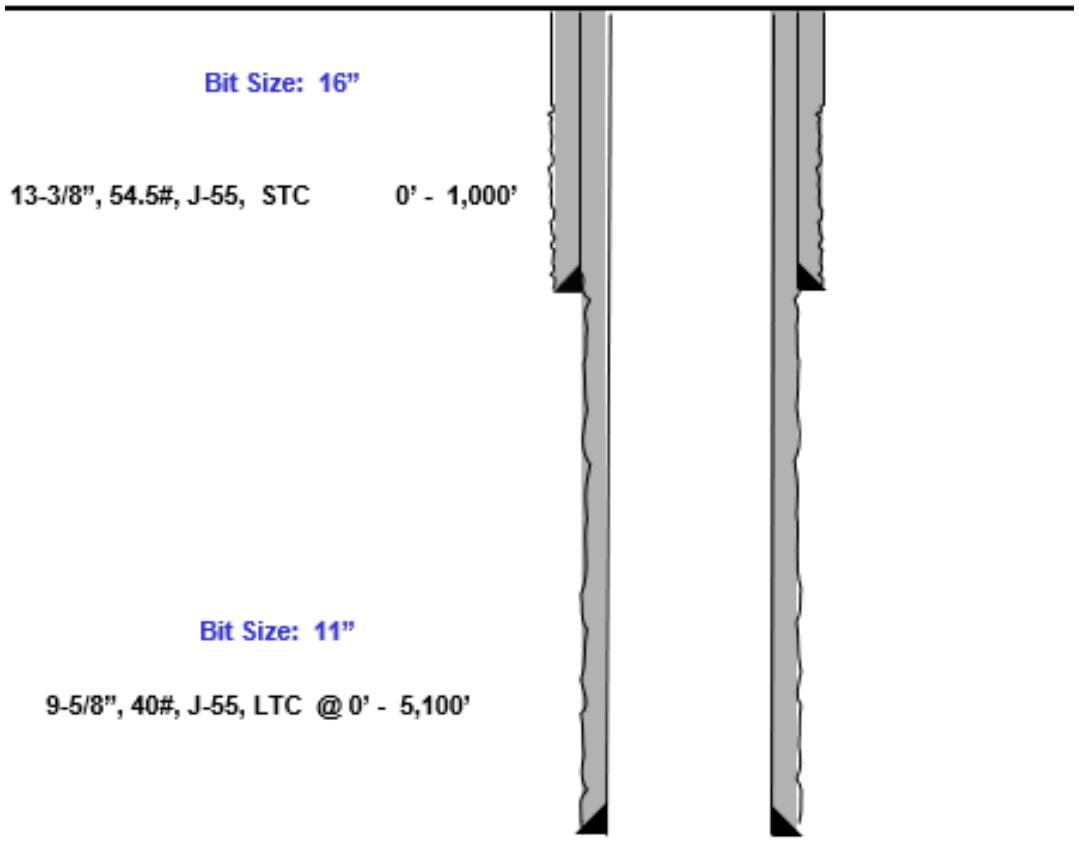
Proposed 11” Hole with 9.625” 40# J55/HCK55 LTC Casing

- 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

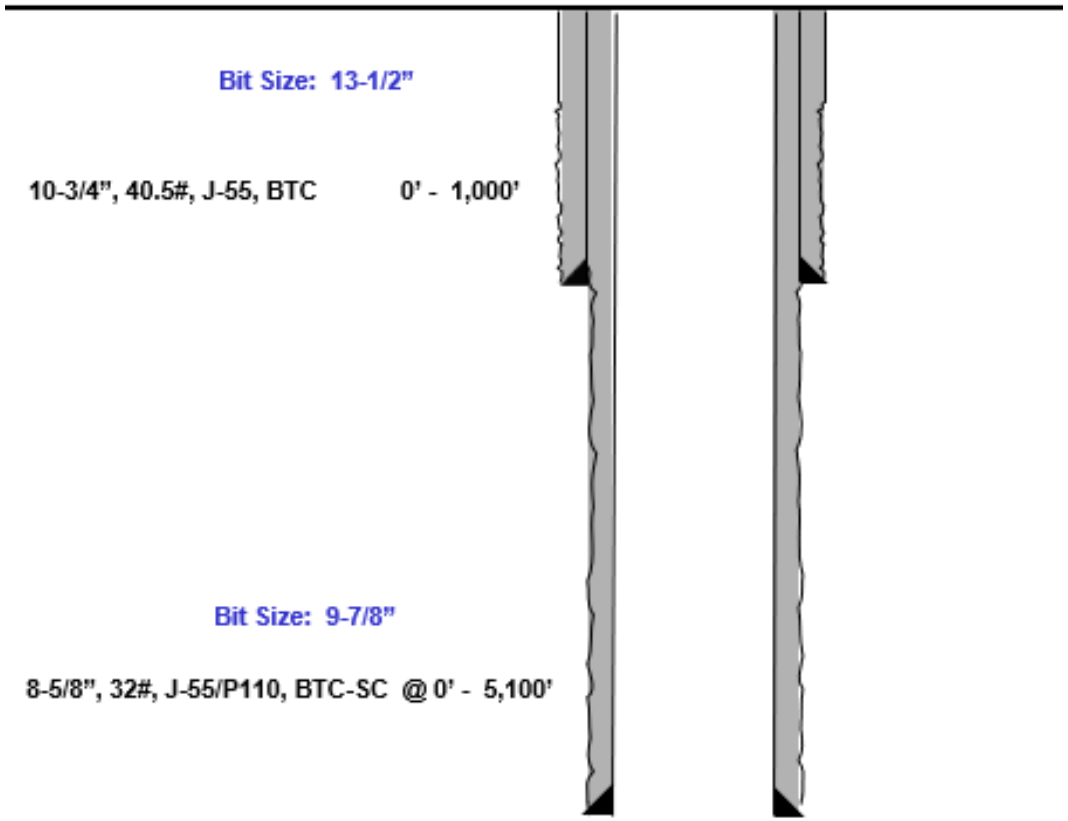
Proposed 9.875” Hole with 8.625” 32# J55/P110 BTC-SC Casing

- 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

New Search »

« Back to Previous List

USC Metric

6/8/2015 10:04:37 AM

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

Casing Spec Sheets

Pipe Body and API Connections Performance Data

10.750 40.50/0.350 J55 PDF

New Search »

« Back to Previous List

USC Metric

6/8/2015 10:14:05 AM

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

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.

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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.

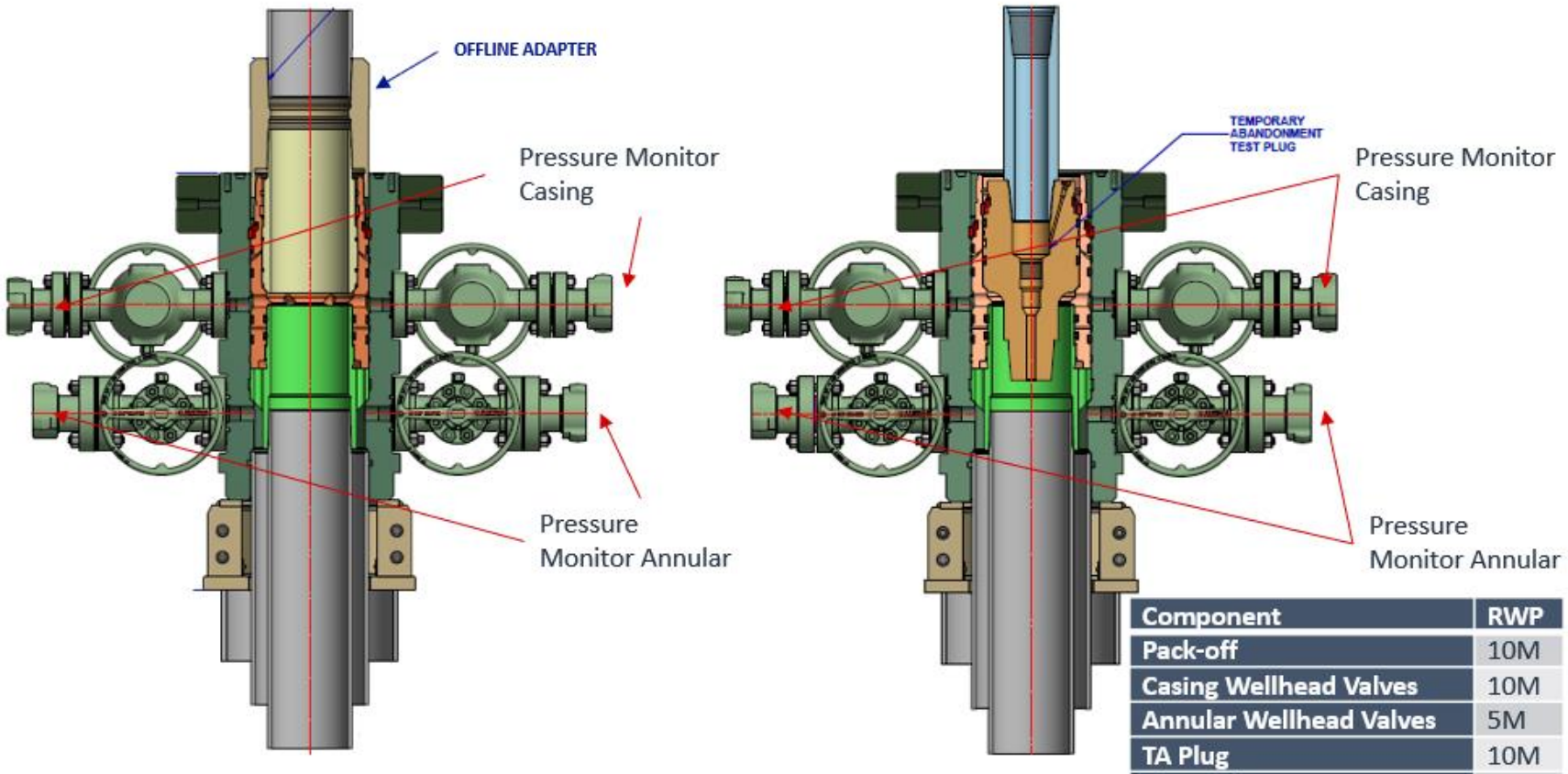
General Procedure While Cementing

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

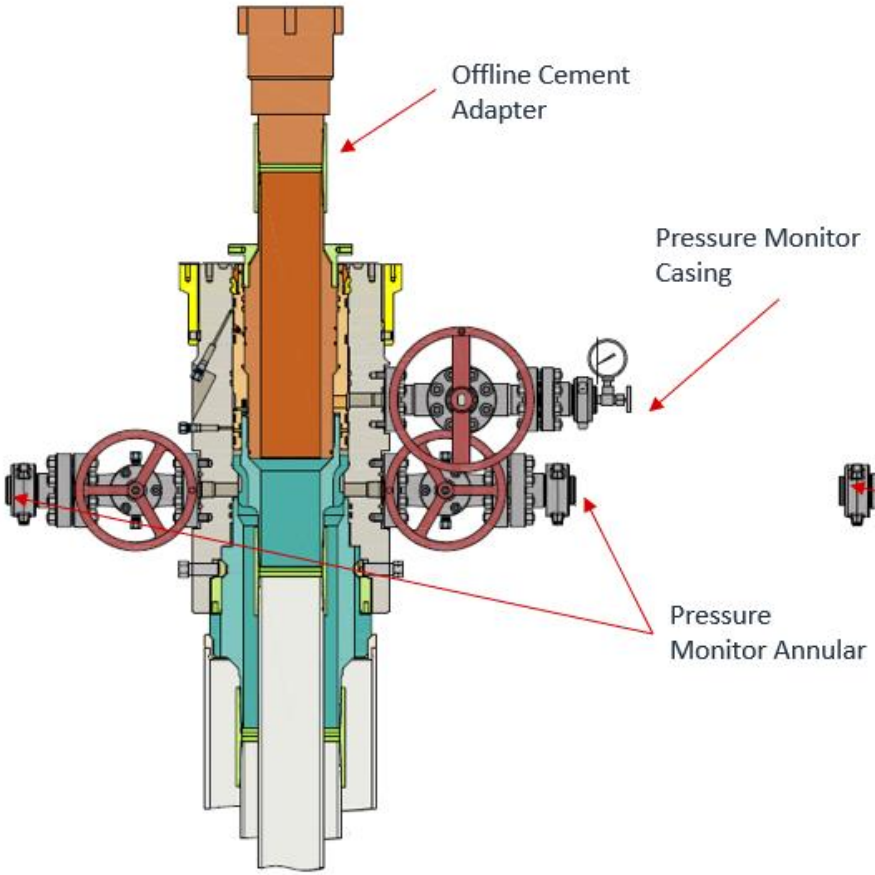
1. Sound alarm (alert crew).
2. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
3. Confirm shut-in.
4. Notify tool pusher/company representative.
5. Read and record the following:
    a. SICP and AP
    b. Pit gain
    c. Time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

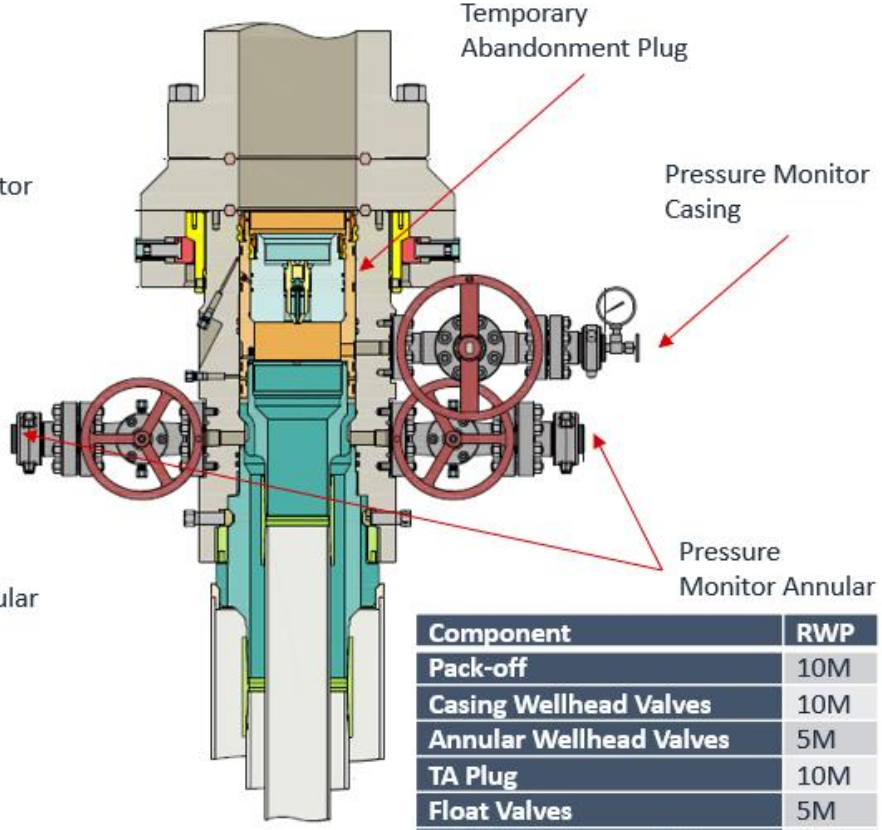
Figure 1: Cameron TA Plug and Offline Adapter Schematic



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

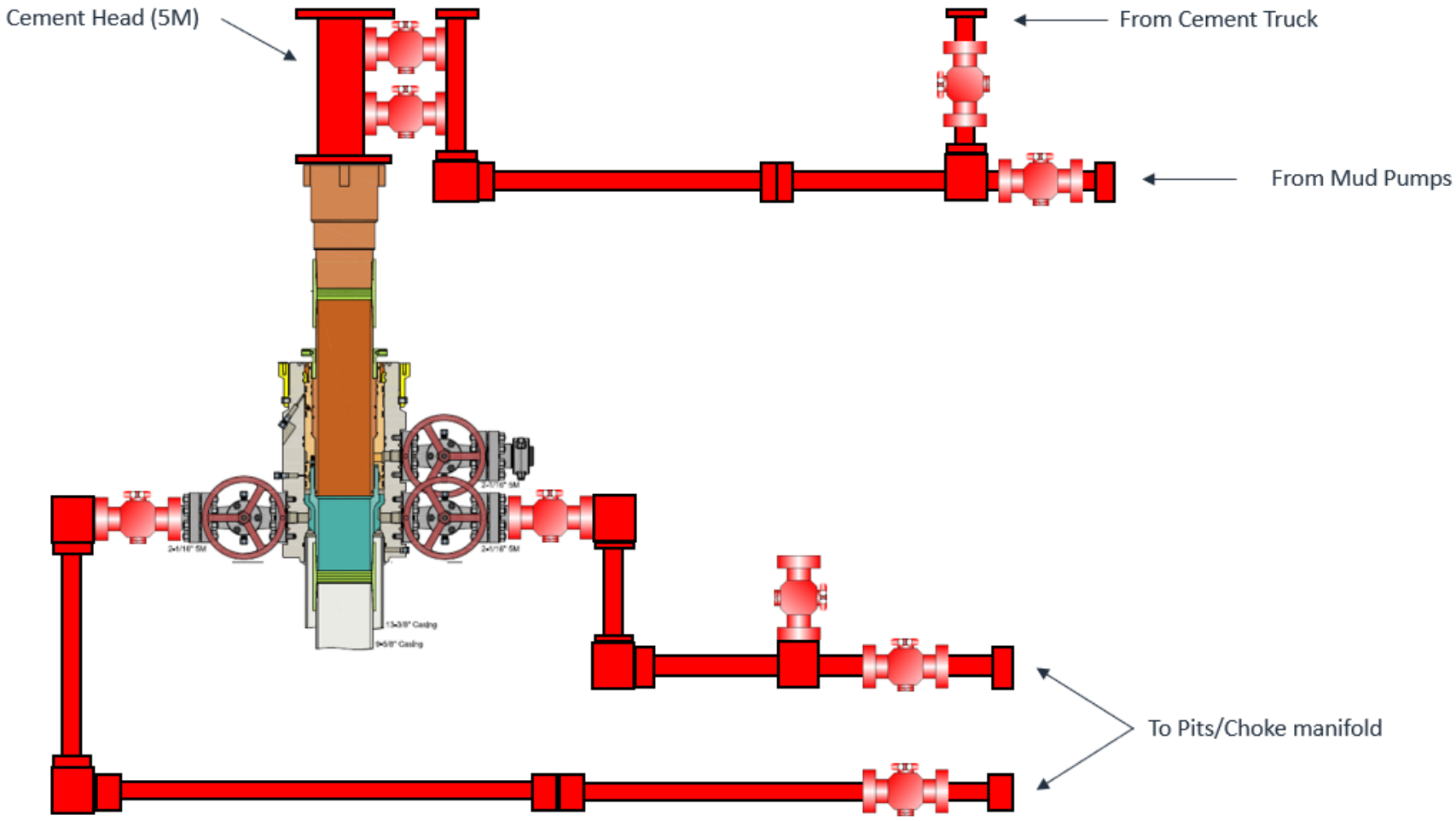
Figure 2: Cactus TA Plug and Offline Adapter Schematic





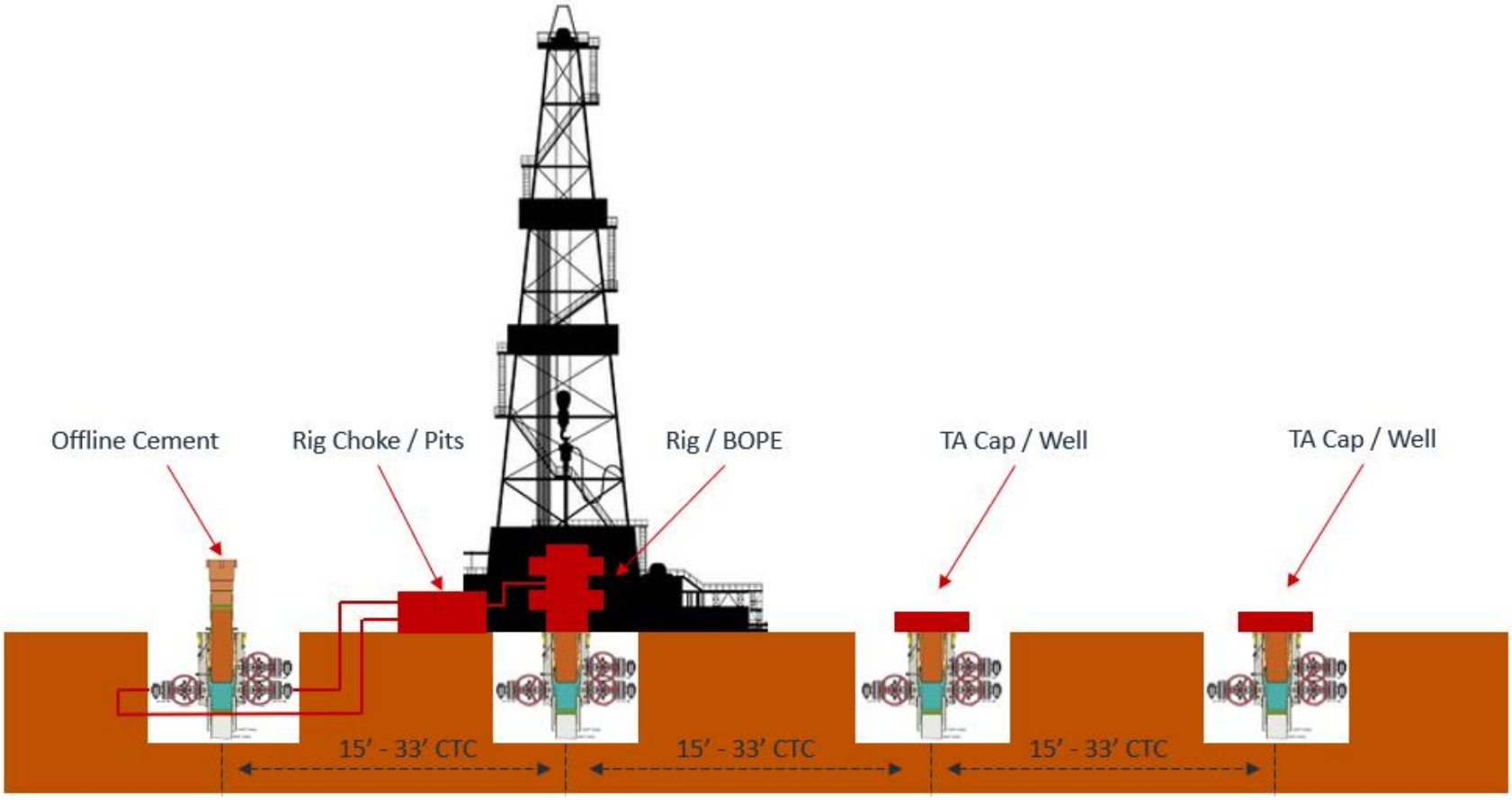
Component	RWP
Pack-off	10M
Casing Wellhead Valves	10M
Annular Wellhead Valves	5M
TA Plug	10M
Float Valves	5M
2" 1502 Lo-Torque Valves	15M

Figure 3: Back Yard Rig Up



*** All Lines 10M rated working pressure

Figure 4: Rig Placement Diagram



Master Variance Document

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Table of Contents

- BOPE Break Test (3/25/2025)
- Offline Surface/Intermediate Cement (8/15/2023)
- Intermediate Bradenhead Cement (Deep Targets) (8/15/2023)
- Wolfcamp Intermediate Casing Setpoint (6/26/2024)
- Offline Production Cement (11/12/2024)
- Production Bradenhead Cement (8/9/2024)
- Salt Section Annular Clearance (11/8/2022)

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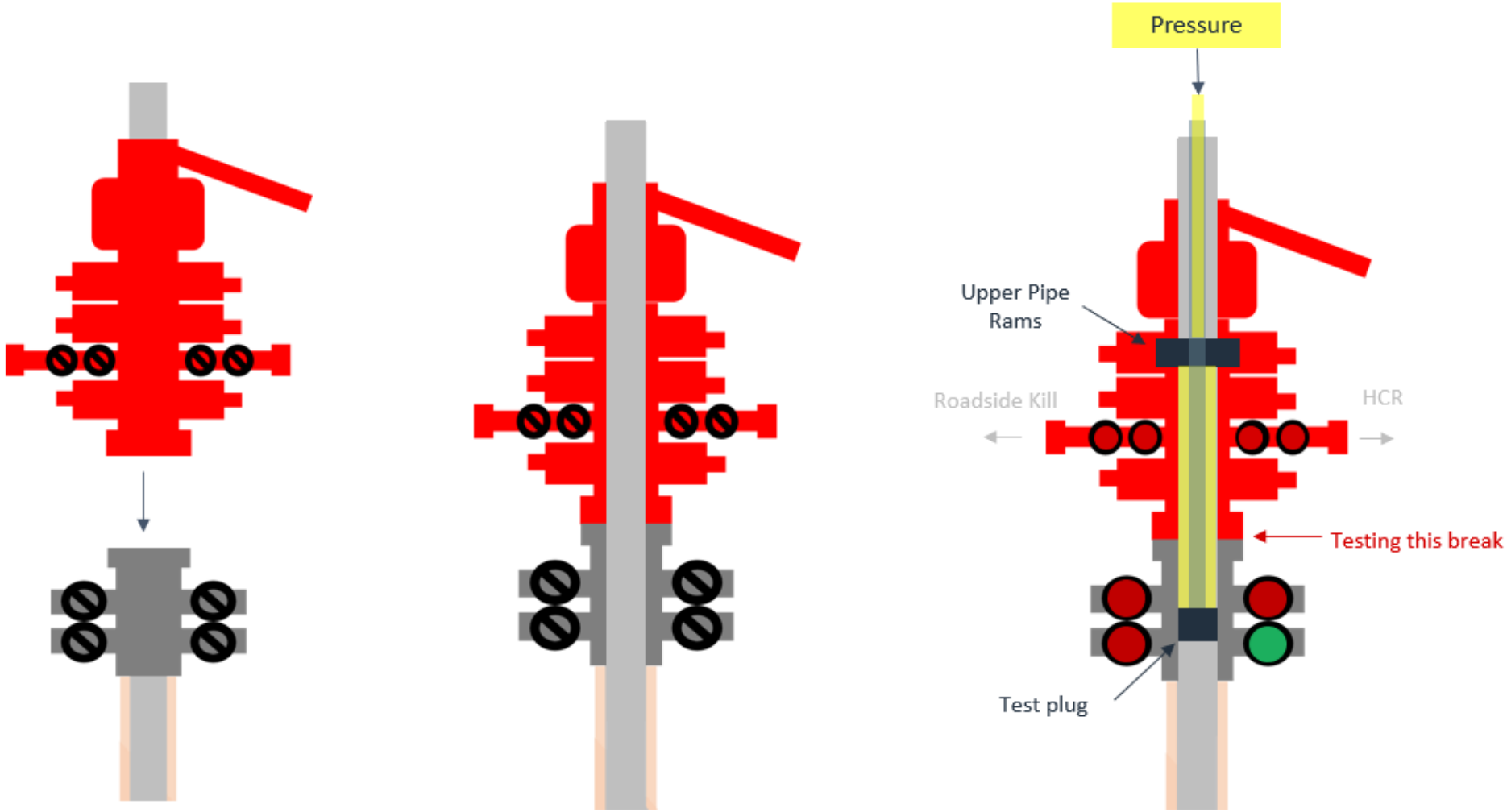
BOPE Break Test Variance

EOG BOPE Break Test Variance (Intervals 5M MASP or less)

EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards for well control equipment testing of ECFR Title 43 Part 3172.6(b)(9)(iv) 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.**
- **Break-test only available for the Base of the Wolfcamp or shallower**
  - If anything out of the ordinary is observed during drilling, tripping or casing running operations in the production hole section, break testing will not be performed in the subsequent well's production hole section.
  - Furthermore, break testing in the production hole section will not be performed if offset frac operations are observed within 1 mile and within the same producing horizon.
- **Each rig requesting the break-test variance is capable of picking up the BOP without damaging components using winches, following API Standard 53, Well Control Equipment Systems for Drilling Wells (Fifth edition, December 2018, Annex C. Table C.4) which recognizes break testing as an acceptable practice.**
- **Function tests will be performed on the following BOP elements:**
  - Annular → during each full BOPE test and at least weekly
  - Pipe Rams → Every trip and on trip ins where FIT required
  - Blind Rams → Every trip
- **Break testing BOP and BOPE coupled with batch drilling operations and option to offline cement and/or remediate (if needed) any surface, intermediate or production 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.**

Break Test Diagram (Test Joint)



Steps

1. Set plug in with test joint wellhead (lower barrier)
2. Close Upper Pipe Rams (upper barrier)
3. Close roadside kill
4. Close HCR
5. Open wellhead valves below test plug to ensure if leak past test plug, pressure won't be applied to wellbore
6. Tie BOP testers high pressure line to top of test joint
7. Pressure up to test break
8. Bleed test pressure from BOP testing unit

Offline Surface + Intermediate Variance

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Offline Surface + Intermediate Cement

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.

Offline Surface + Intermediate Cement

e. Diagram for rig positioning relative to offline cementing can be seen in Figure 4.

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

Offline Surface + Intermediate Cement

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.

Offline Surface + Intermediate Cement

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.

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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.

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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.

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Offline Surface + Intermediate Cement

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

General Procedure While Cementing

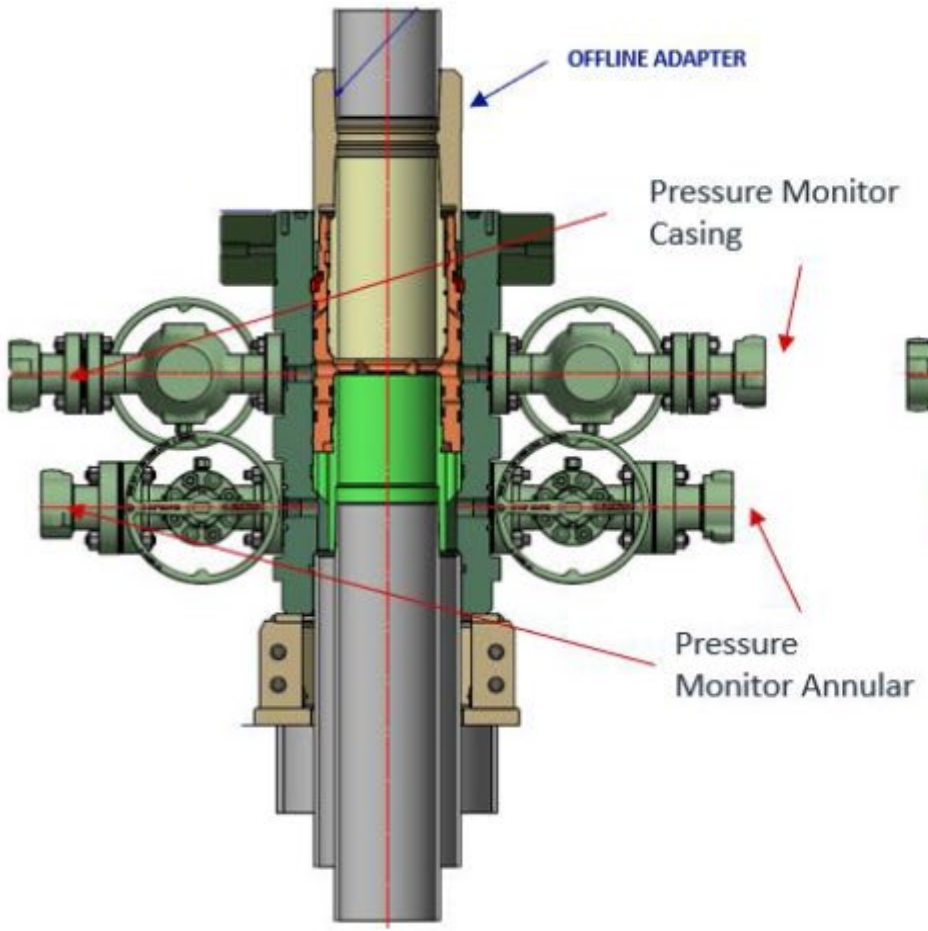
1. Sound alarm (alert crew).
2. Shut down pumps.
3. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
4. Confirm shut-in.
5. Notify tool pusher/company representative.
6. Open rig choke and begin pumping again taking returns through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

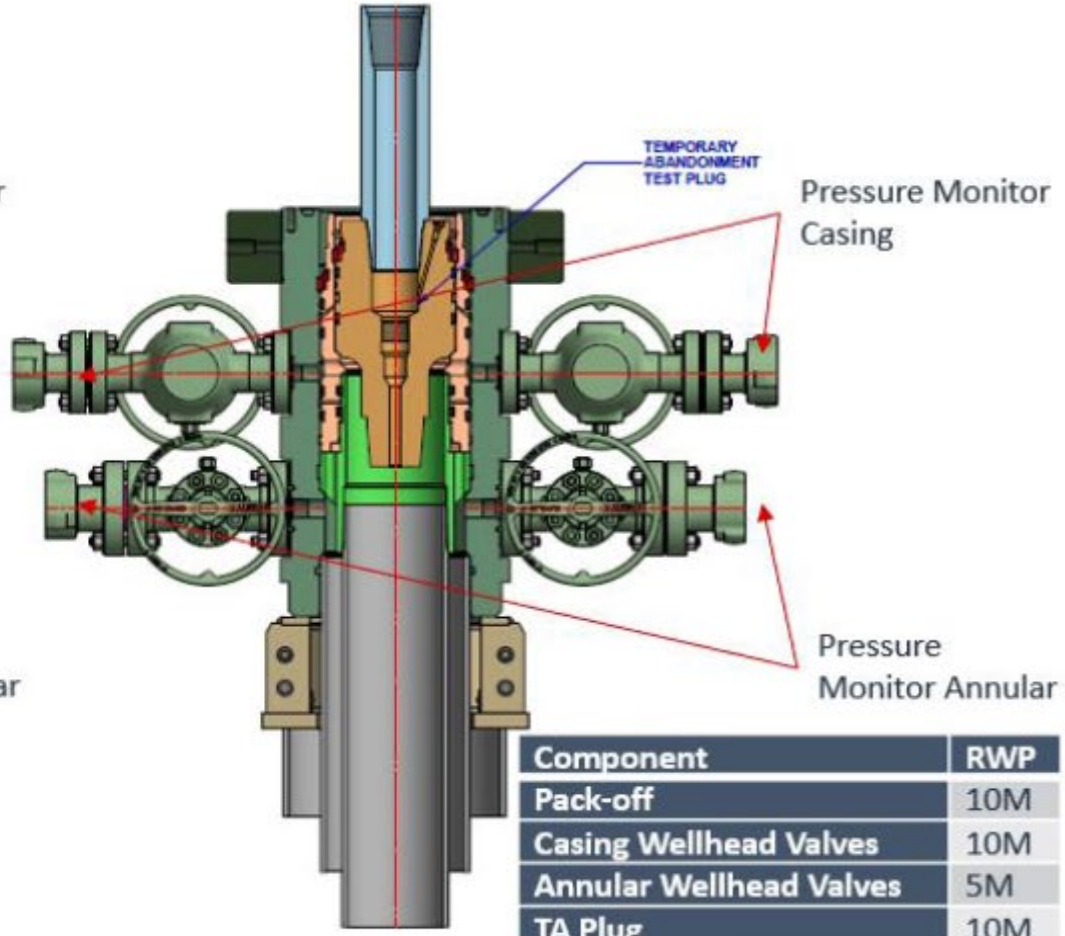
General Procedure After Cementing

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

Offline Surface + Intermediate Cement

Figure 1: Cameron TA Plug and Offline Adapter Schematic



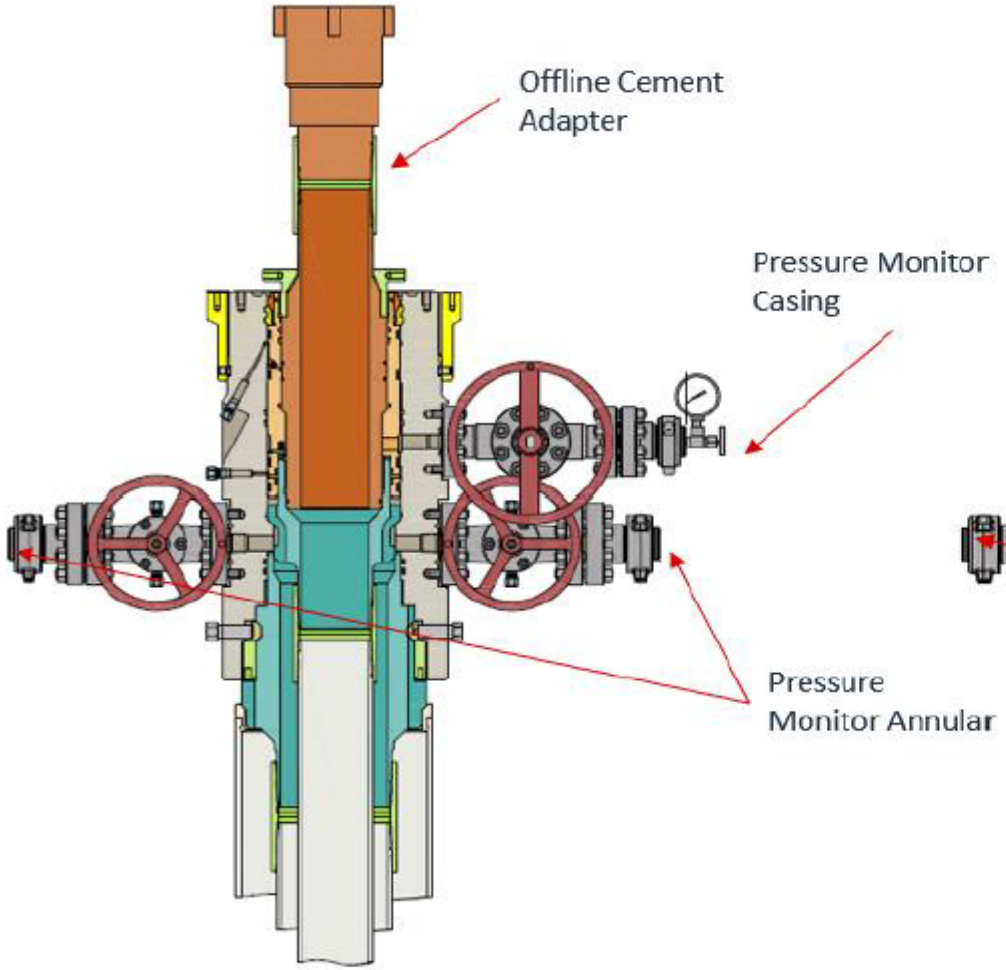


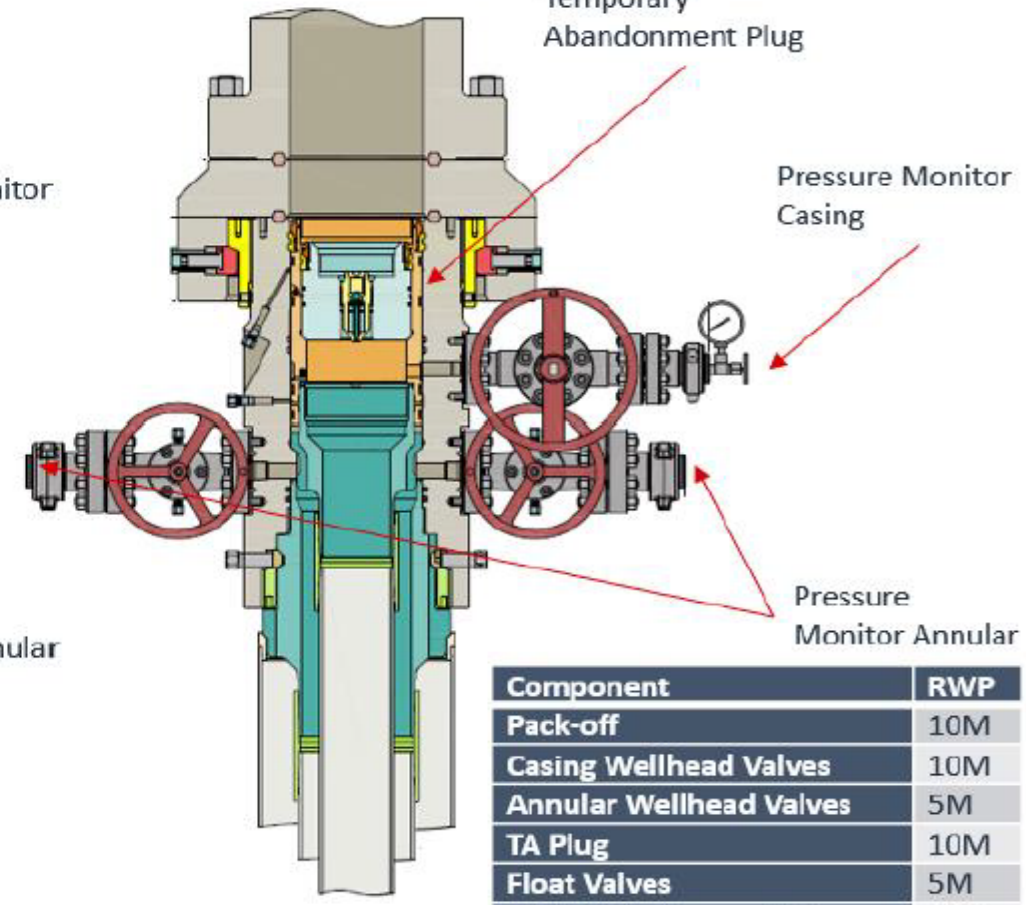
Component	RWP
Pack-off	10M
Casing Wellhead Valves	10M
Annular Wellhead Valves	5M
TA Plug	10M
Float Valves	5M
2" 1502 Lo-Torque Valves	15M

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Offline Surface + Intermediate Cement

Figure 2: Cactus TA Plug and Offline Adapter Schematic

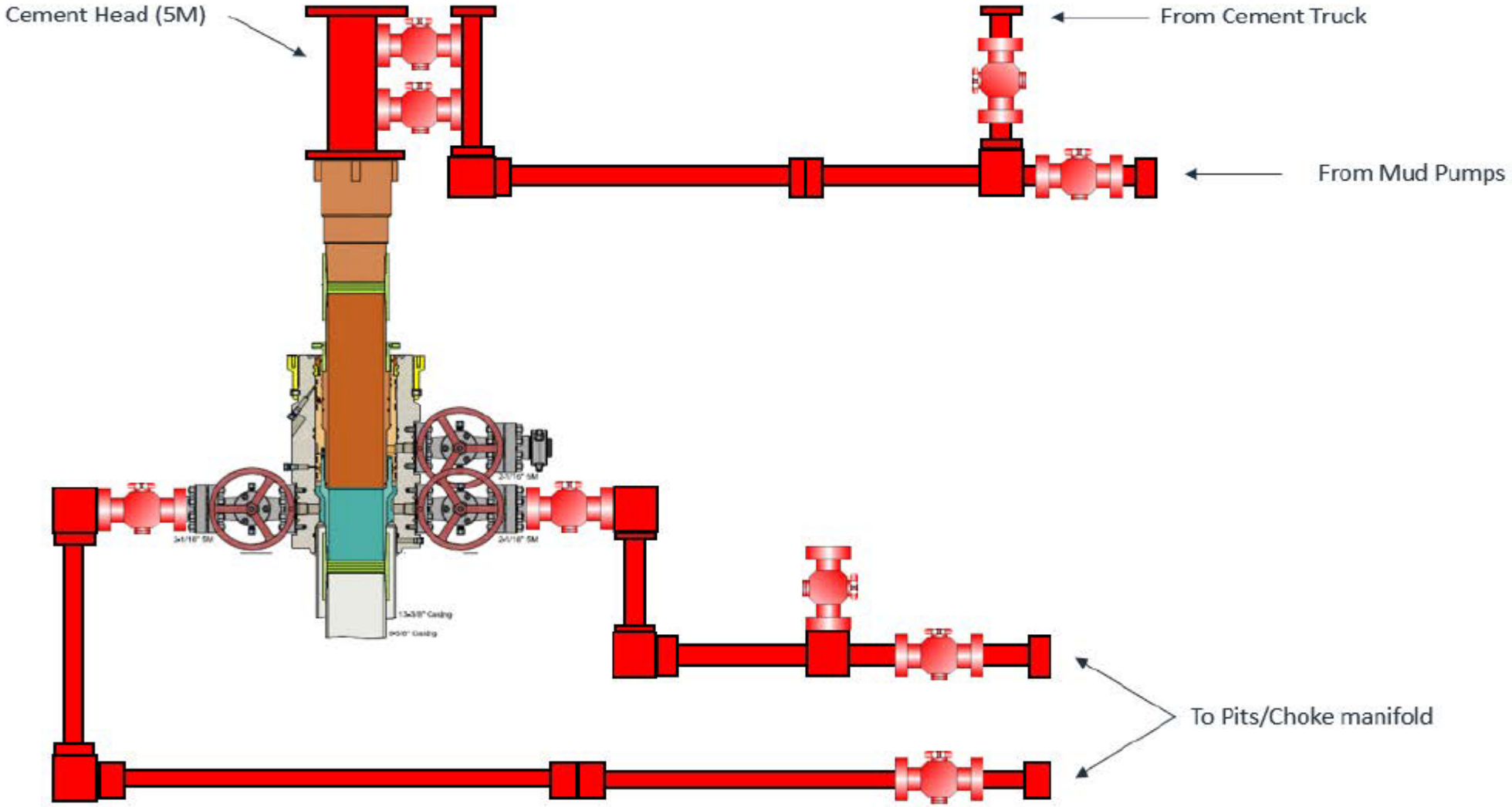




Component	RWP
Pack-off	10M
Casing Wellhead Valves	10M
Annular Wellhead Valves	5M
TA Plug	10M
Float Valves	5M
2" 1502 Lo-Torque Valves	15M

Offline Surface + Intermediate Cement

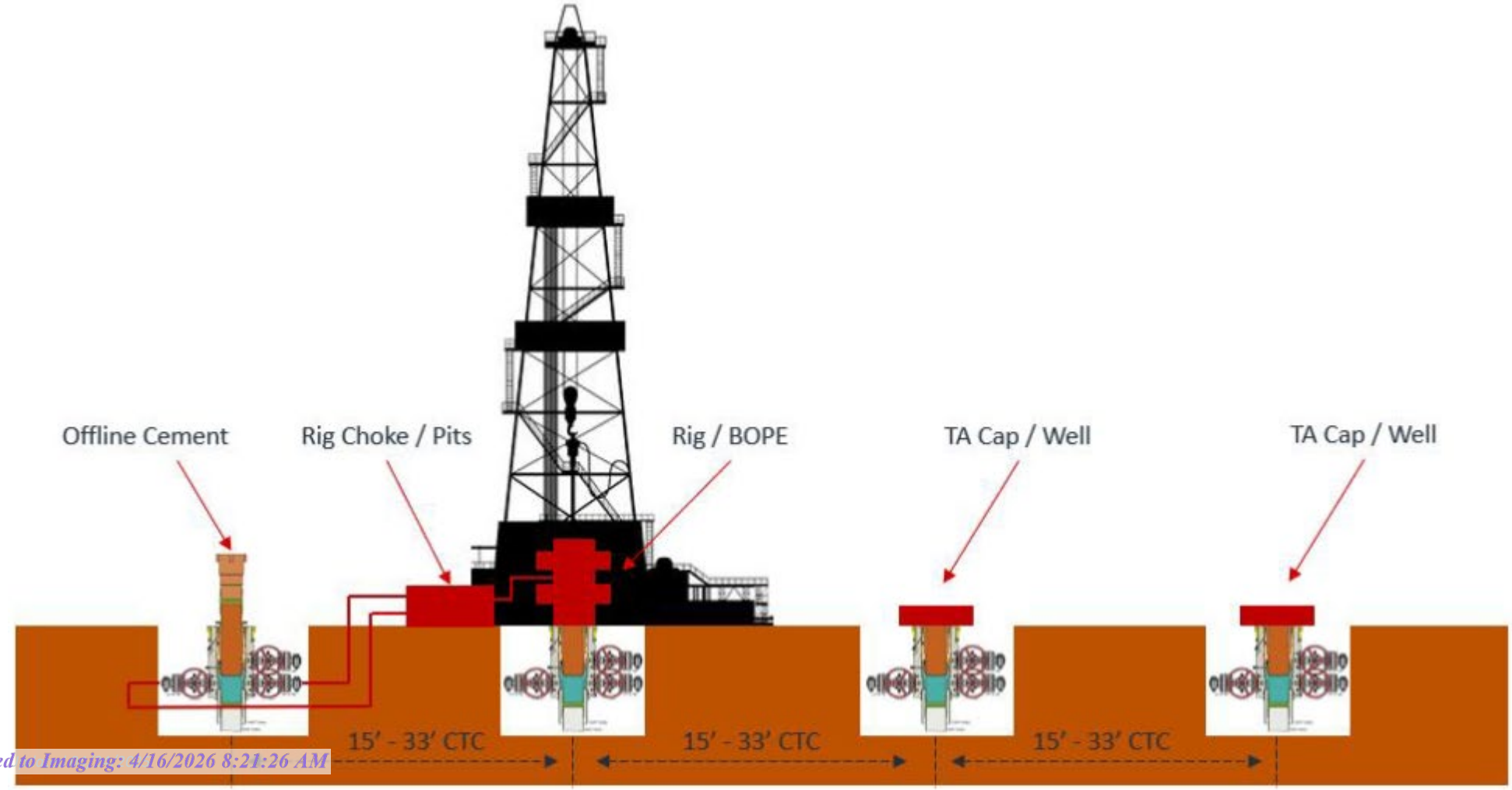
Figure 3: Back Yard Rig Up



All Lines 10M rated working pressure

Offline Surface + Intermediate Cement

Figure 4: Rig Placement Diagram



Intermediate Bradenhead Cement Variance

Intermediate Bradenhead Cement

Deep Target Intermediate Bradenhead:
EOG requests variance from minimum standards to pump a two stage cement job on the intermediate casing string when set below the Delaware Mountain Group with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon and the second stage bradenhead squeezed to be performed at a minimum of 50% of OH excess (typically increased to ~1,000 sacks) with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of Class C/H cement + additives (2.30 yld, 12.91 ppg) will be executed as a contingency. Top of cement will be verified by Echo-meter.

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.

Wolfcamp Intermediate Casing Setpoint

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Intermediate Bradenhead Cement

EOG Resources Inc. (EOG) requests a variance to set the intermediate casing shoe in the Bone Spring formation OR the Wolfcamp formation, depending on depletion in the area and well conditions. EOG will monitor the well and ensure the well is static before casing operations begin.

Offline Production Cement Variance

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EOG Offline Production Checklist

Offline Checklist

All items below must be met. If not, the production cement will be done online.

1. **Offline production cement jobs are applicable for the Base of the Wolfcamp or shallower.**
2. **Nothing out of the ordinary observed during drilling, tripping, or casing running operations in the Production Hole Section.**
3. **Casing must be landed with Hanger.**
4. **EOG Company Man and Superintendent with Well Control certification must be present to monitor returns.**
5. **EOG Cement Advisor must be present to oversee the Cement Job.**
6. **Rig Manager is responsible for walking the rig to the next well.**
7. **The BOP will *NOT* be nippled down if:**
   a) **ANY** barrier fails to test.
   b) **ANY** offset frac operations are observed within 1 mile and within the same producing horizon.
8. **After all barriers test and the BLM has been notified, the BOP may be nippled down to proceed with offline operations.**
9. **EOG will not Drill out of the next well until Cement Operations have concluded on the offline well.**

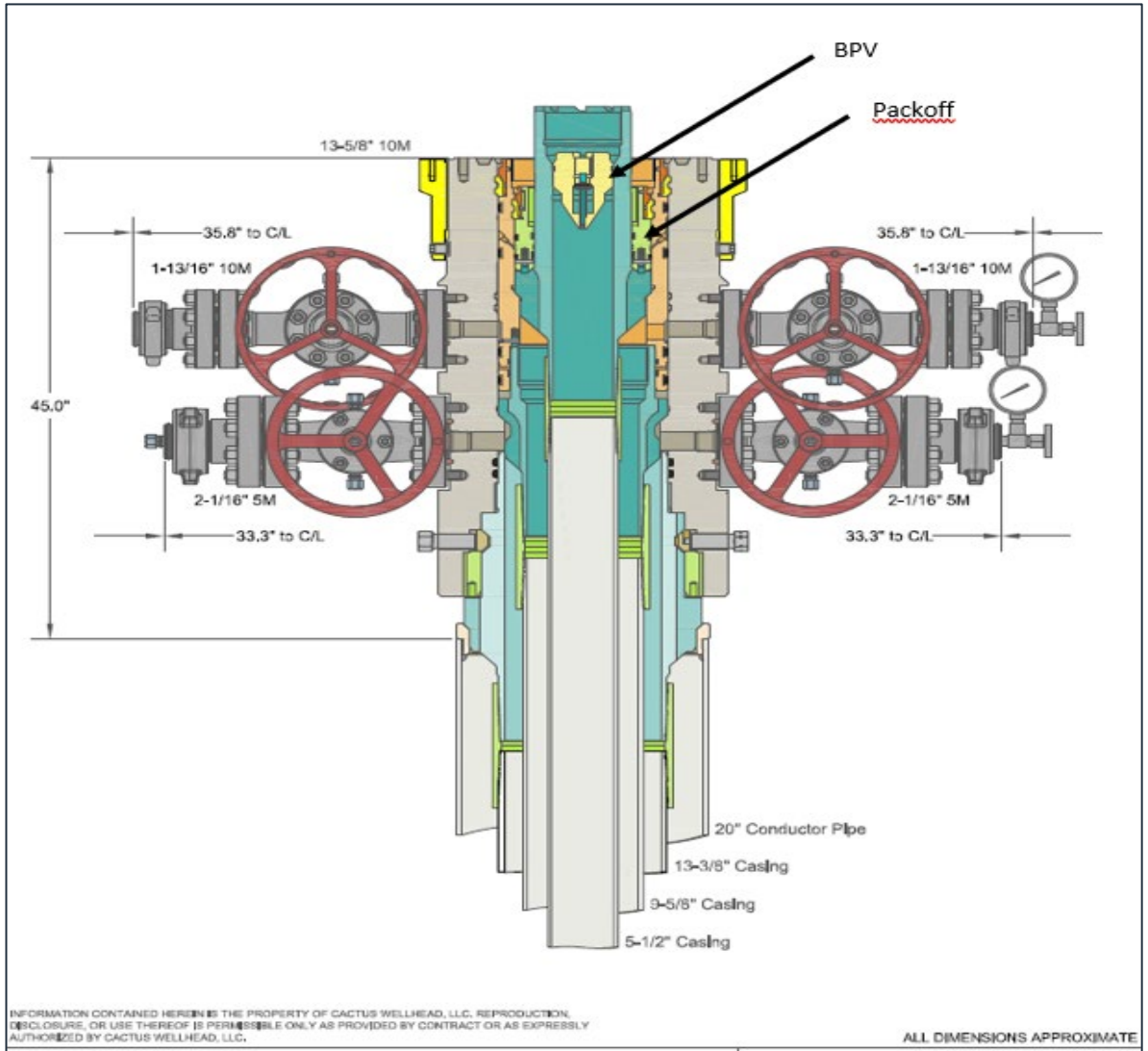
Offline Procedure

1. Run casing as per normal operations. Review EOG Offline Requirements Checklist, if the well is a candidate for Offline Cement on the Production continue following this procedure. Conduct negative pressure test while running casing and confirm integrity of the float equipment back pressure valves.
   a. Float equipment is equipped with two back pressure valves rated to 15,000 psi.
2. Land production casing on mandrel hanger.
   a. If casing is unable to be landed with a mandrel hanger, then the casing will be cemented online.
   b. 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 rated to 10,000 psi. Pressure test same to 10,000 psi.
   c. 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 10,000 psi. Remove landing joint.
3. Install back pressure valve in the casing for a 3rd casing barrier.
   a. Back pressure valve rated to a minimum of 10,000 psi.
4. With the well Secured and BLM notified; Nipple down BOP and secure on hydraulic carrier or cradle and Skid/Walk rig to next well on pad.
   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.
   b. Note, EOG Company Man and Cement Advisor will oversee Cementing Operations while Rig Manager walks the rig and nipples up the BOP.
   c. Note, EOG will not drill out of the subsequent well until after plug bump.
5. Install 10M Gate Valve, with Wellhead Adapter.
   a. This creates an additional barrier on the annulus and inside the casing.
   b. Gate valve rated to a minimum of 10,000 psi.
6. Test connection between Wellhead Adapter seals against hanger neck and ring gasket to 10,000 psi.
7. Remove backpressure valve from the casing.
8. Rig up cement head and cementing lines.
9. After rig up of cement head and cement lines, and confirmation of the annular barriers and casing barriers, notify the BLM with intent to proceed offline cementing.
10. Perform cement job.
11. *Note* – Procedure continued on the next page.

Offline Procedure

12. If an influx is noted during the Cement Job:
    a. It is the Company Man and Superintendent's responsibility to maintain well control.
    b. The aux manifold will be redirected to the rig's chokes.
    c. Backpressure will be held on the well with the chokes to ensure well control is maintained through the remainder of the cement job while circulating out the influx.
    d. If annular surface pressure approaches 90% tested pressure of the manifold or if circulating the influx out with the cementing pumps is not feasible, the well can be secured by closing the casing valves (10M).
    e. Once cement is in place, we will close the casing valves and confirm the well is static and floats are holding.
    f. If the floats fail, the gate valve (10M) or cement head (10M) can be closed to secure the well.
13. Confirm well is static and floats are holding after cement job.
14. Remove cement head.
15. Install back pressure valve.
16. Remove 10M Gate Valve and Wellhead Adapter.
17. Install night cap with pressure gauge for monitoring.
18. Test night cap to 5,000 psi.

Offline Barrier Overview

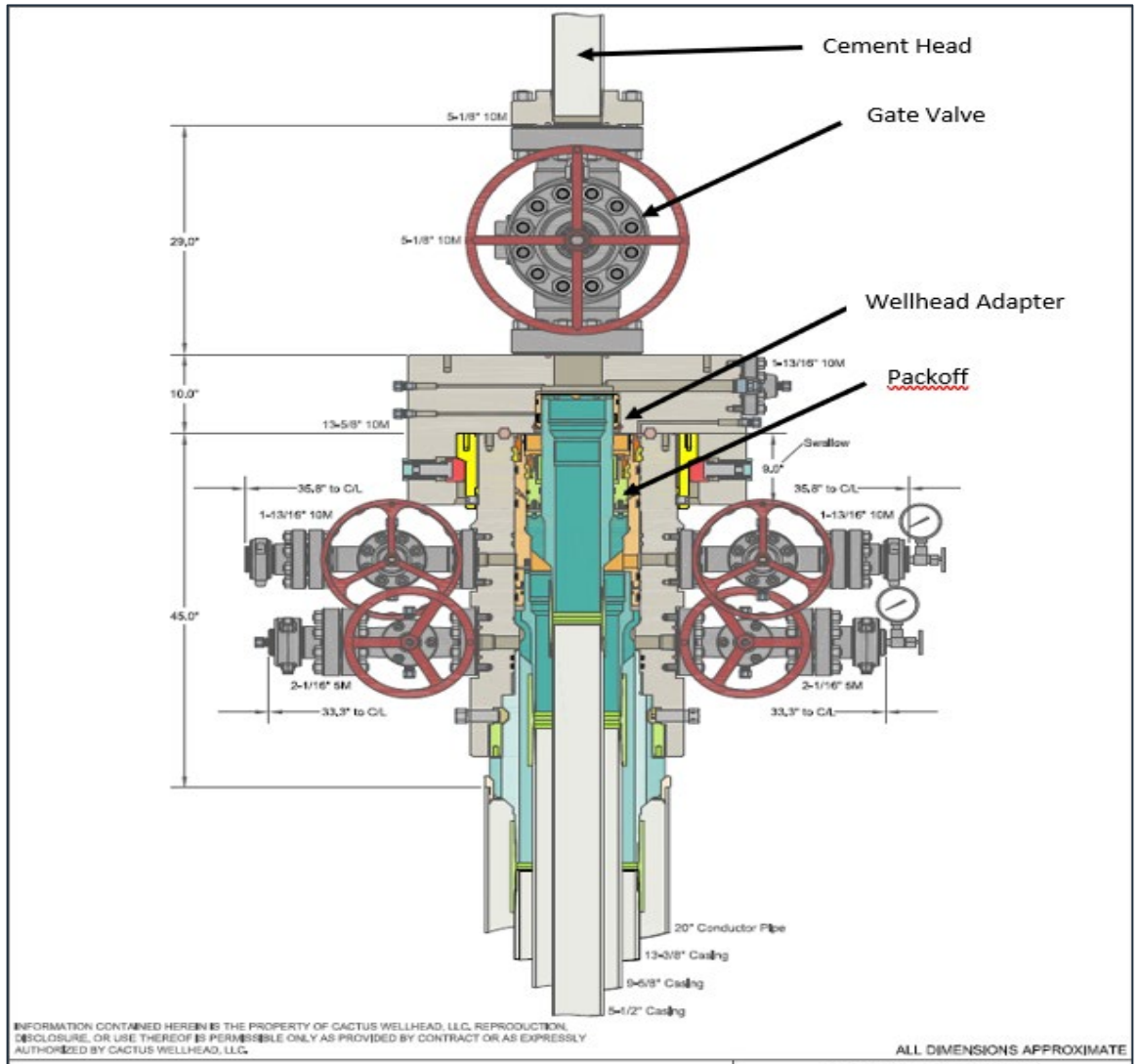


Barriers in Place during removal of BOP		
Operation	Casing	Annulus
Nippling Down BOP	1. BPV 2. Hydrostatic Barrier 3. Float Valves	1. Hydrostatic Barrier 2. Mechanical 10M Packoff

Barriers in Place during Offline Cementing of Production Casing		
Operation	Casing	Annulus
Pull BPV	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical Packoff 3. 10M Wellhead Adapter
Install Cement Head	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Cement Job	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve 4. Cement Head	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Remove Cement Head	1. Float Valves 2. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Install BPV	1. Float Valves 2. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Remove 10M Gate Valve	1. Float Valves 2. BPV	1. Hydrostatic Barrier 2. Mechanical 10M Packoff
Nipple Up TA Cap	1. Float Valves 2. BPV	1. Hydrostatic Barrier 2. Mechanical 10M Packoff

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Offline Barrier Overview



Barriers in Place during removal of BOP		
Operation	Casing	Annulus
Nippling Down BOP	1. BPV 2. Hydrostatic Barrier 3. Float Valves	1. Hydrostatic Barrier 2. Mechanical 10M Packoff

Barriers in Place during Offline Cementing of Production Casing		
Operation	Casing	Annulus
Pull BPV	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical Packoff 3. 10M Wellhead Adapter
Install Cement Head	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Cement Job	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve 4. Cement Head	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Remove Cement Head	1. Float Valves 2. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Install BPV	1. Float Valves 2. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Remove 10M Gate Valve	1. Float Valves 2. BPV	1. Hydrostatic Barrier 2. Mechanical 10M Packoff
Nipple Up TA Cap	1. Float Valves 2. BPV	1. Hydrostatic Barrier 2. Mechanical 10M Packoff

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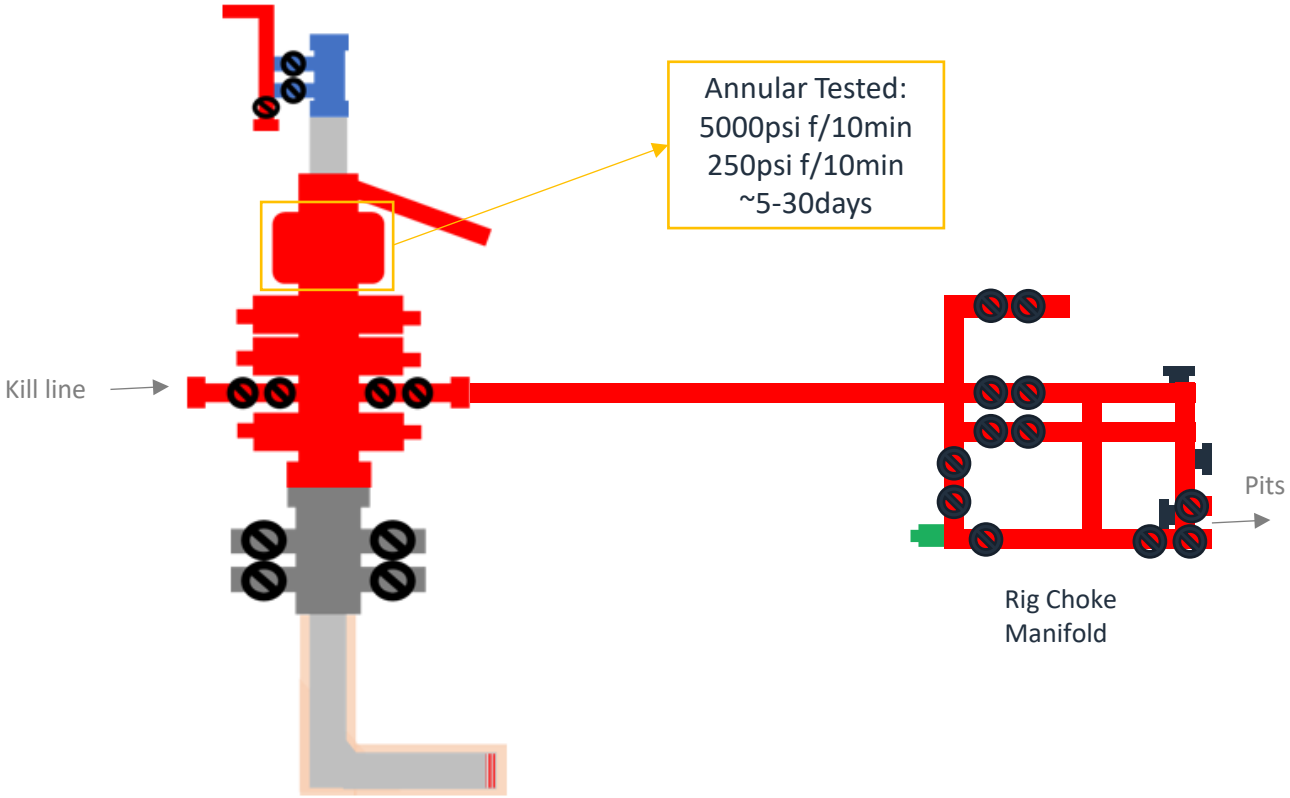
More Control: Meeting/Exceeding Barrier Requirements

Casing Barriers – Online vs Offline		
Operation	Online	Offline
Install Cement Head	1. Hydrostatic Barrier 2. Float Valves	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve ✓
Cement Job	1. Hydrostatic Barrier 2. Float Valves 3. Cement Head	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve 4. Cement Head ✓
Remove Cement Head	1. Float Valves	1. Float Valves 2. 10M Gate Valve ✓
Install BPV & Nipple Down BOP / Offline Adapter	1. Float Valves	1. Float Valves 2. BPV ✓
Nipple Up TA Cap	1. Float Valves	1. Float Valves 2. BPV ✓

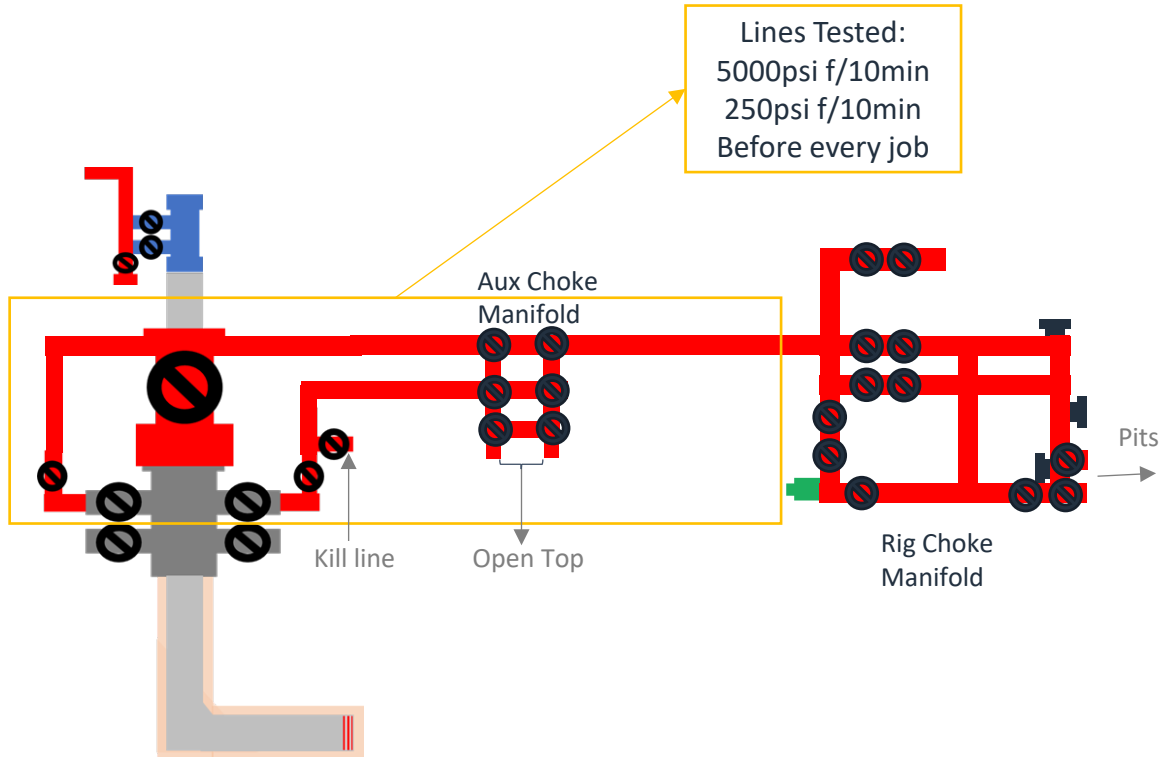
Annulus Barriers – Online vs Offline		
Operation	Online	Offline
Install Cement Head	1. Hydrostatic Barrier 2. Annular 3. VBR	1. Hydrostatic Barrier 2. Mechanical Pack-off 3. 10M Wellhead Adapter ✓
Cement Job	1. Hydrostatic Barrier 2. Annular 3. VBR	1. Hydrostatic Barrier 2. Mechanical Pack-off 3. 10M Wellhead Adapter ✓
Remove Cement Head	1. Hydrostatic Barrier 2. Annular 3. VBR	1. Hydrostatic Barrier 2. Mechanical Pack-off 3. 10M Wellhead Adapter ✓
Install BPV & Nipple Down BOP / Offline Adapter	1. Hydrostatic barrier 2. Mechanical Pack-off	1. Hydrostatic Barrier 2. Mechanical Pack-off ✓
Nipple Up TA Cap	1. Hydrostatic barrier 2. Mechanical Pack-off	1. Hydrostatic Barrier 2. Mechanical Pack-off ✓

Return Rig Up Diagram

Online



Offline



Note:

1) Have the Rig's same Well Control Capabilities as Online
2) Have more flexibility with Gate Valve than with a Landing Joint through BOP
3) Never had to circulate out a kick during Offline

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Production Bradenhead Cement Variance

Production Bradenhead Cement

Shallow Target Production Offline Bradenhead:

EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards to allow for offline bradenhead cementing of the production string after primary cementing operations have been completed. The primary cement job will be pumped conventionally (online) to top of the Brushy Canyon and will cover the target production intervals, and after production pack-off is set and tested, bradenhead will be pumped through casing valves between the production and intermediate casings (offline). For the bradenhead stage of production cementing, the barriers remain the same for offline cementing compared to performing it online.

The bradenhead will be the primary option for production cementing. EOG also requests to have the conventional option in place to accommodate for logistical or wellbore conditions. The tie back requirements will be met if the cement is pumped conventionally, and cement volumes will be adjusted accordingly. TOC will be verified by CBL.

Salt Section Annular Clearance

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

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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

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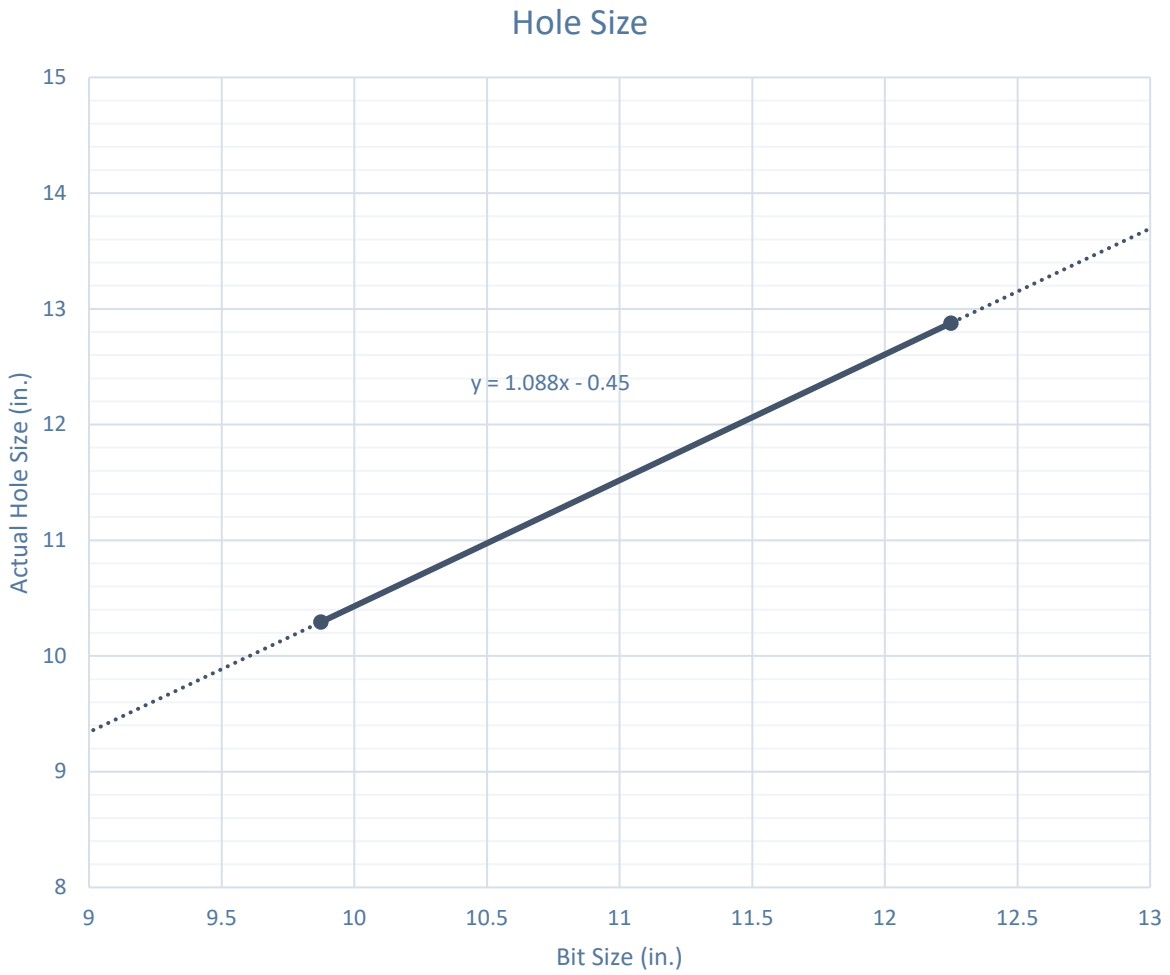
Volumetric Hole Size Calculation

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

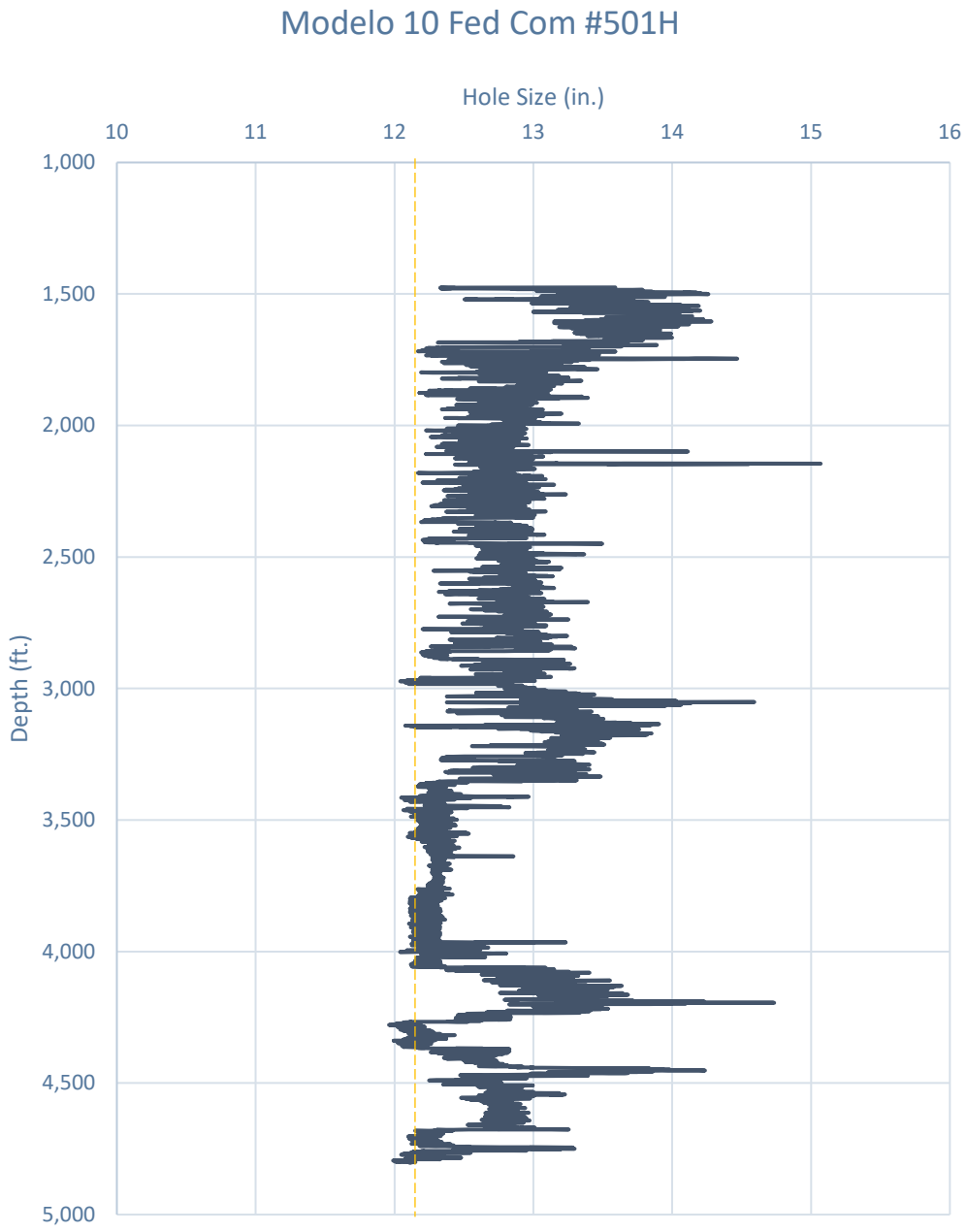
- 12.25” Hole
  - 12.88” Hole
    - 5.13% diameter increase
    - 10.52% area increase
  - 0.63” Average enlargement
  - 0.58” Median enlargement
  - 179 Well Count
- 9.875” Hole
  - 10.30” Hole
    - 4.24% diameter increase
    - 9.64% area increase
  - 0.42” Average enlargement
  - 0.46” Median enlargement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



Caliper Hole Size (12.25”)

Average Hole Size

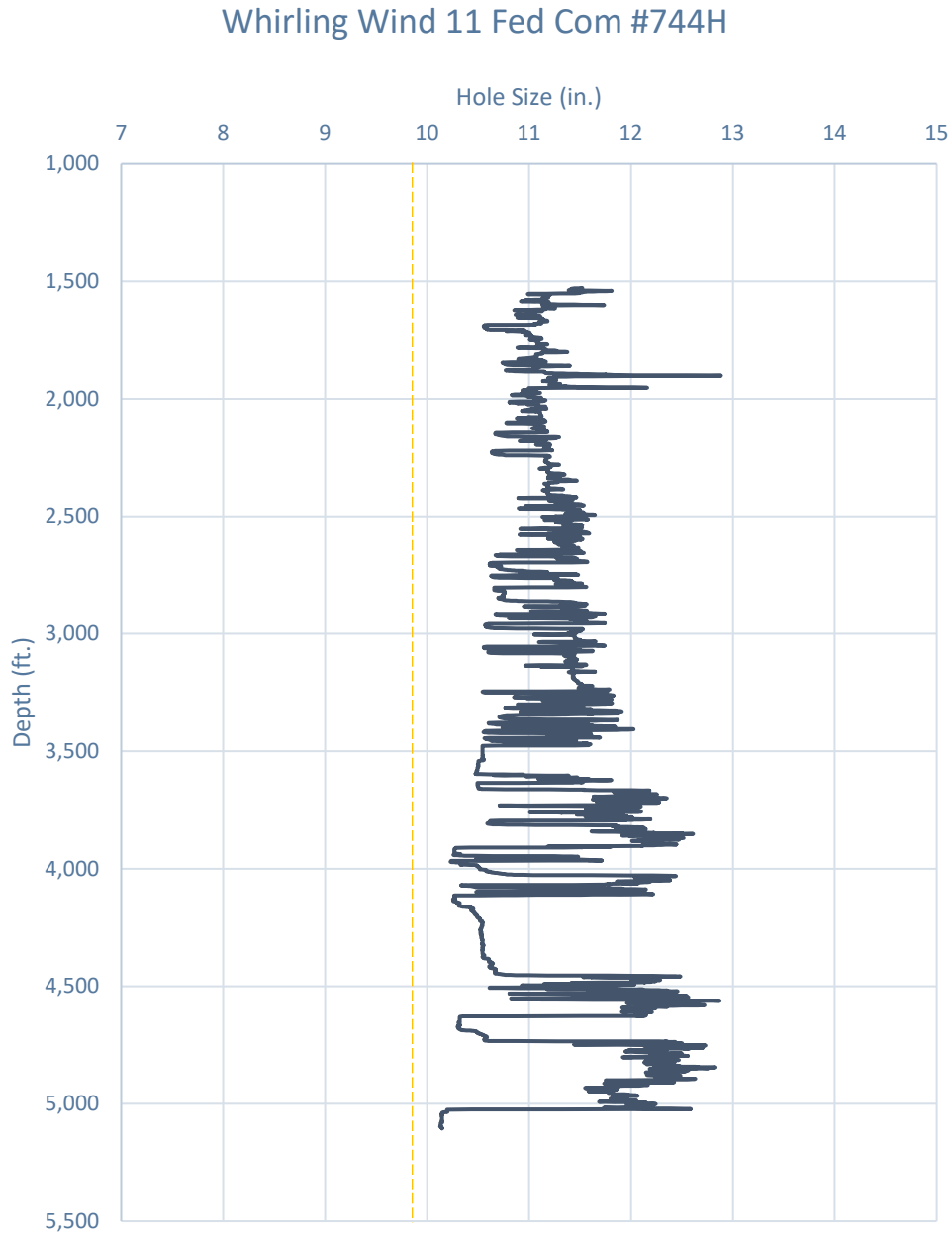
- 12.25” Bit
  - 12.76” Hole
    - 4.14% diameter increase
    - 8.44% area increase
  - 0.51” Average enlargement
  - 0.52” Median enlargement
  - Brine



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

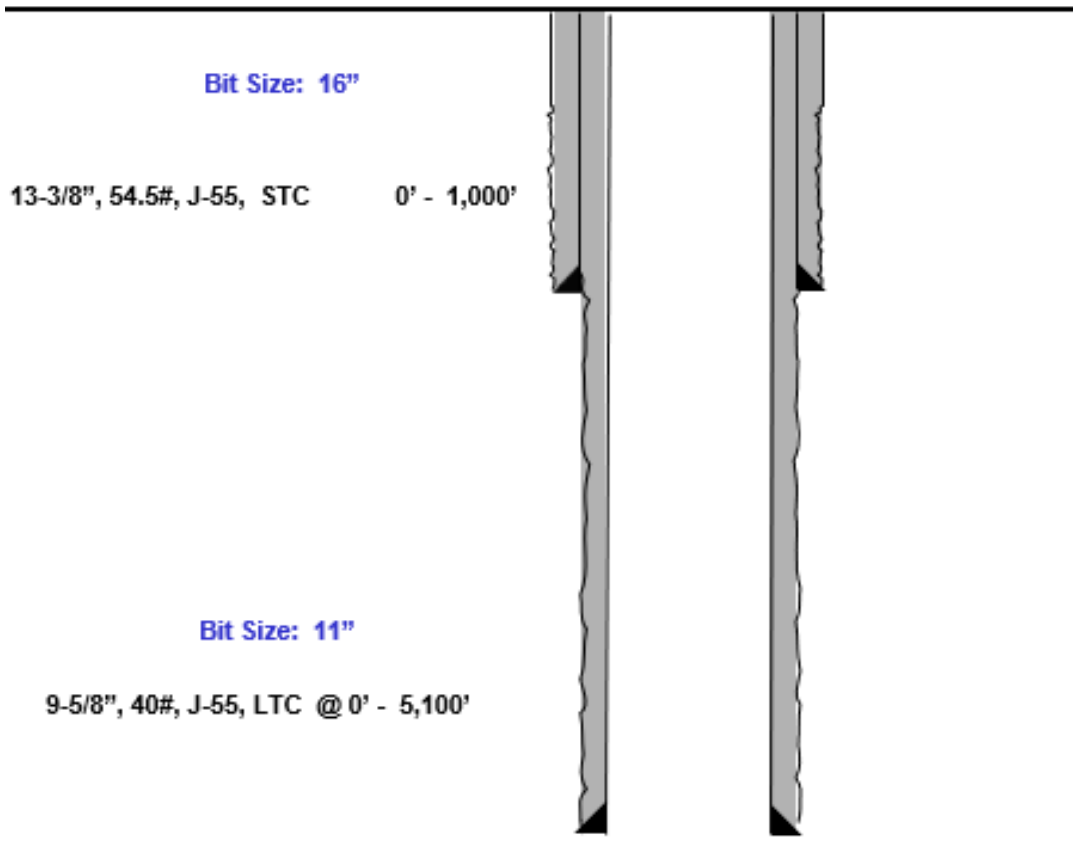


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Design A

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

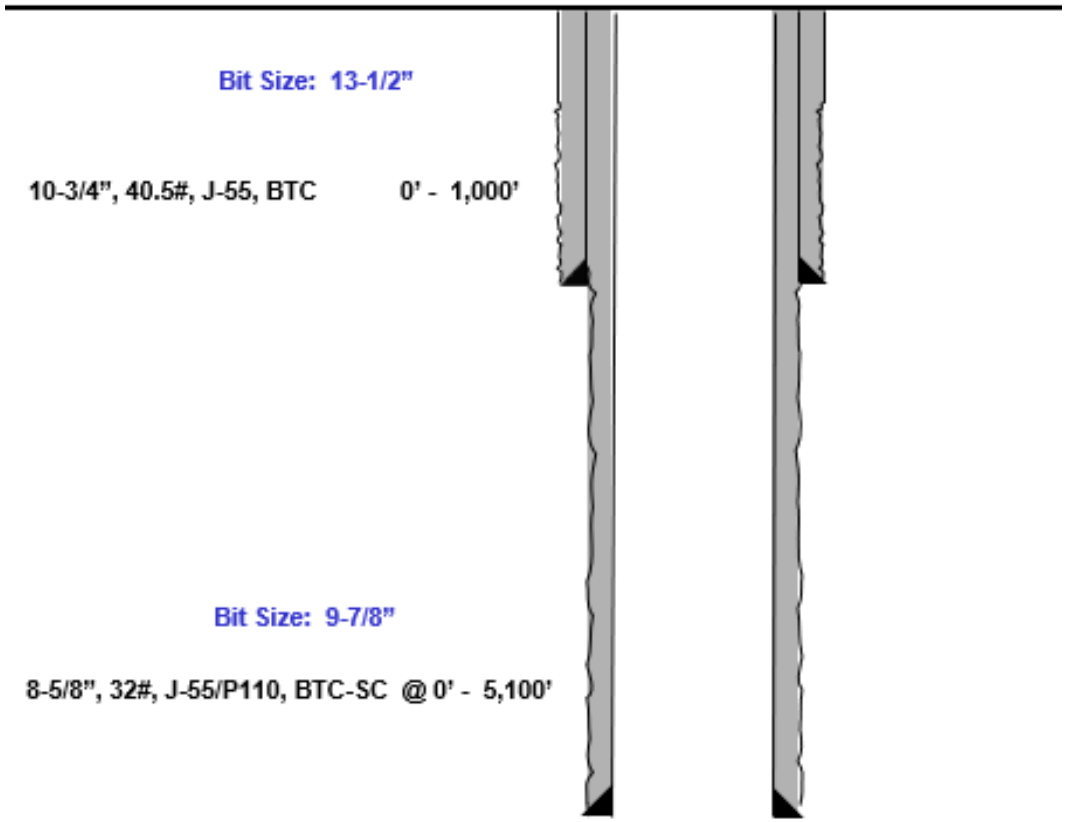
- 11” Bit + 0.52” Average hole enlargement = 11.52” Hole Size
  - 0.9475” Clearance to casing OD
    $$= \frac{11.52 - 9.625}{2}$$
  - 0.4475” Clearance to coupling OD
    $$= \frac{11.52 - 10.625}{2}$$
- Previous Shoe – 13.375” 54.5# J55 STC
  - 0.995” Clearance to coupling OD (~1,200’ overlap)
   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



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

New Search »

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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

New Search »

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USC Metric

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Mechanical Properties	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi
Dimensions	**Pipe**	**BTC**	**LTC**	**STC**	
Outside Diameter	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.

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

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EOG BLANKET CASING DESIGN VARIANCE

EOG respectfully requests the drill plans in the attached document 'EOG BLM Variance 5a - Alternate Shallow Casing Designs' 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	12000	90	25

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Shallow Design A

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	2,161	0	2,030	13-3/8"	54.5#	J-55	STC
11"	0	7,951	0	5,650	9-5/8"	40#	J-55	LTC
6-3/4"	0	29,353	0	12,000	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.

5. CEMENTING PROGRAM:

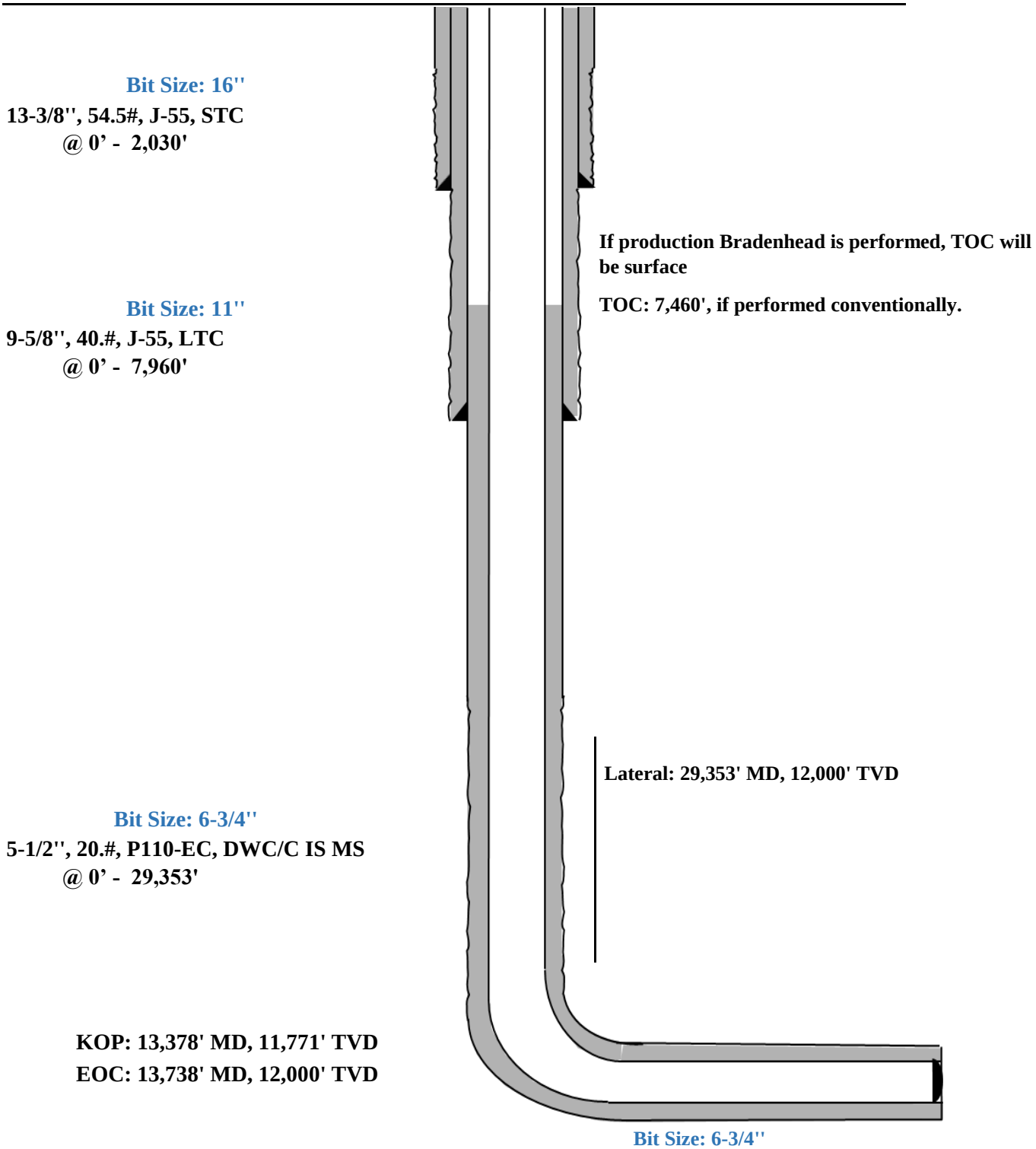
Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
2,030' 13-3/8''	570	13.5	1.73	Lead: Class C/H + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	160	14.8	1.34	Tail: Class C/H + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
8,050' 9-5/8''	760	12.7	2.22	Lead: Class C/H + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	250	14.8	1.32	Tail: Class C/H + 10% NaCL + 3% MagOx (TOC @ 6360')
29,353' 5-1/2''	1000	14.8	1.32	Bradenhead squeeze: Class C/H + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
	1480	13.2	1.52	Tail: Class C/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 @ Top of Brushy)

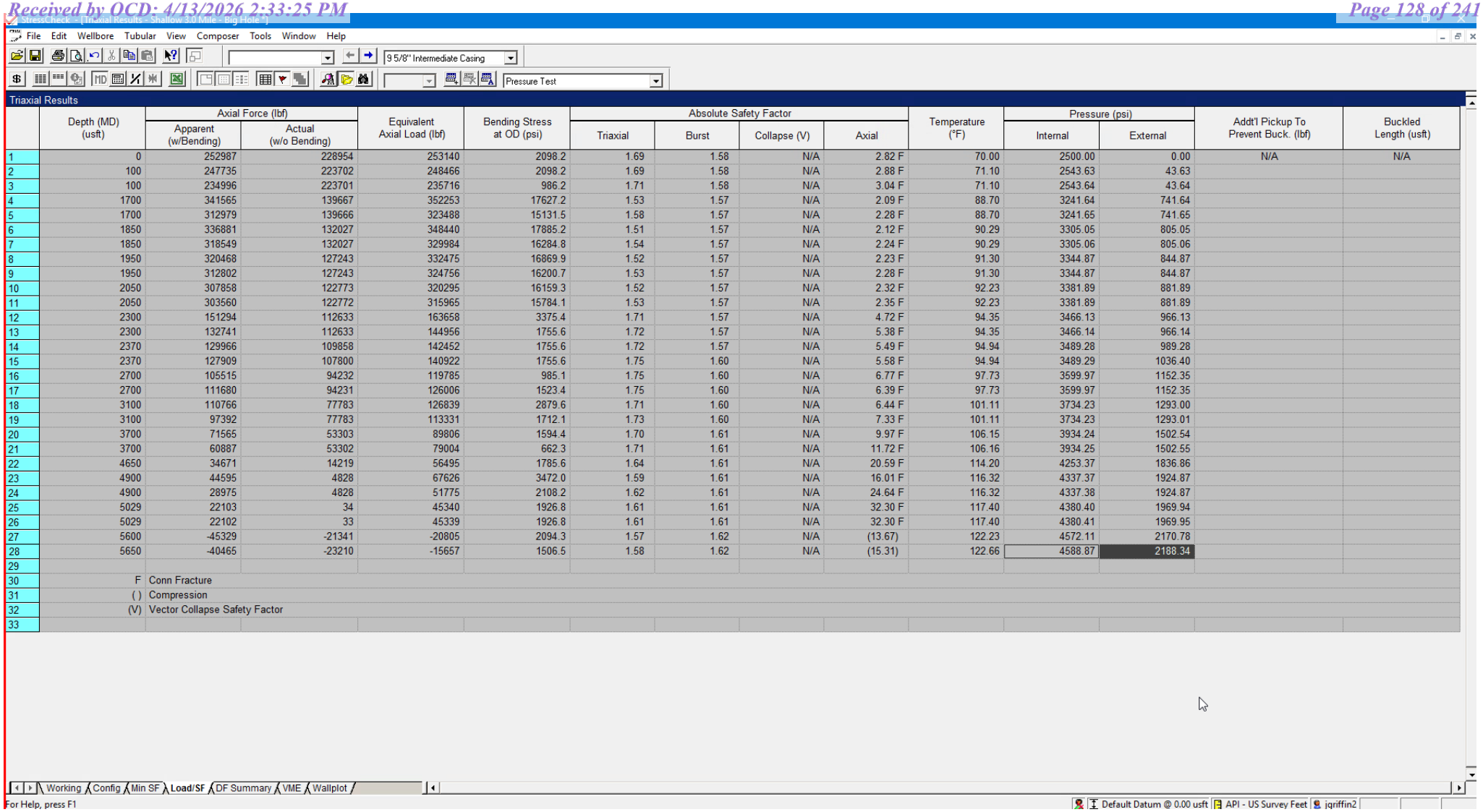
eog resources

Shallow Design A

Proposed Wellbore

KB: 3558'
GL: 3533'





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

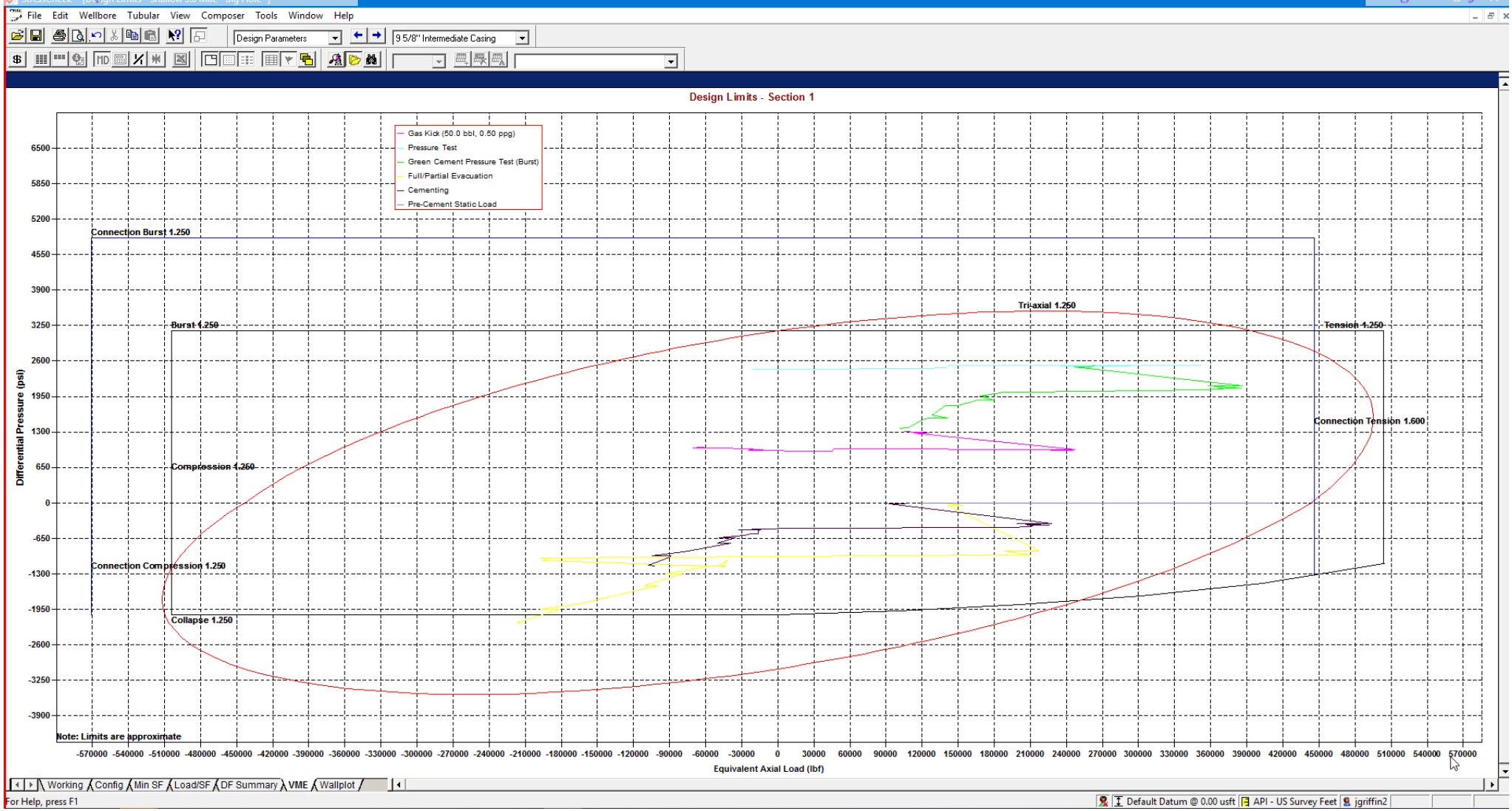
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		Apparent (w/Bending)	Actual (w/o Bending)			Triaxial	Burst	Collapse (V)	Axial		Internal	External		
1	0	252987	228954	253140	2098.2	1.69	1.58	N/A	2.82 F	70.00	2500.00	0.00	N/A	N/A
2	100	247735	223702	248466	2098.2	1.69	1.58	N/A	2.88 F	71.10	2543.63	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														

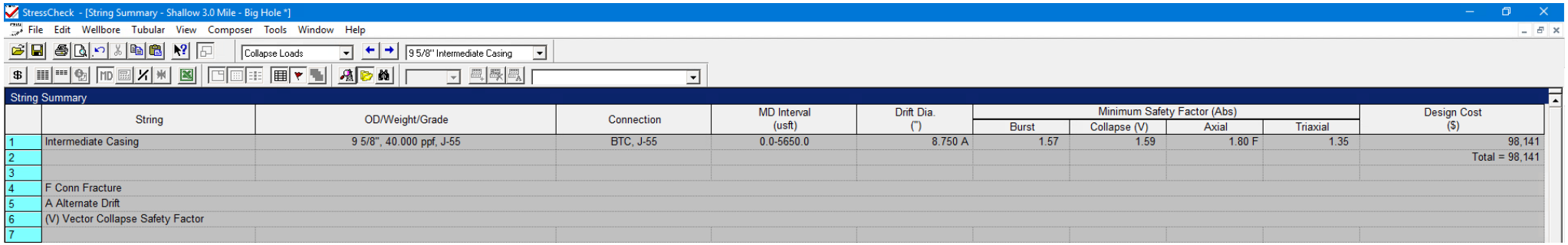
Working Config Min SF Load/SF DF Summary VME Wallplot

For Help, press F1

Default Datum @ 0.00 usft API - US Survey Feet jqriffin2

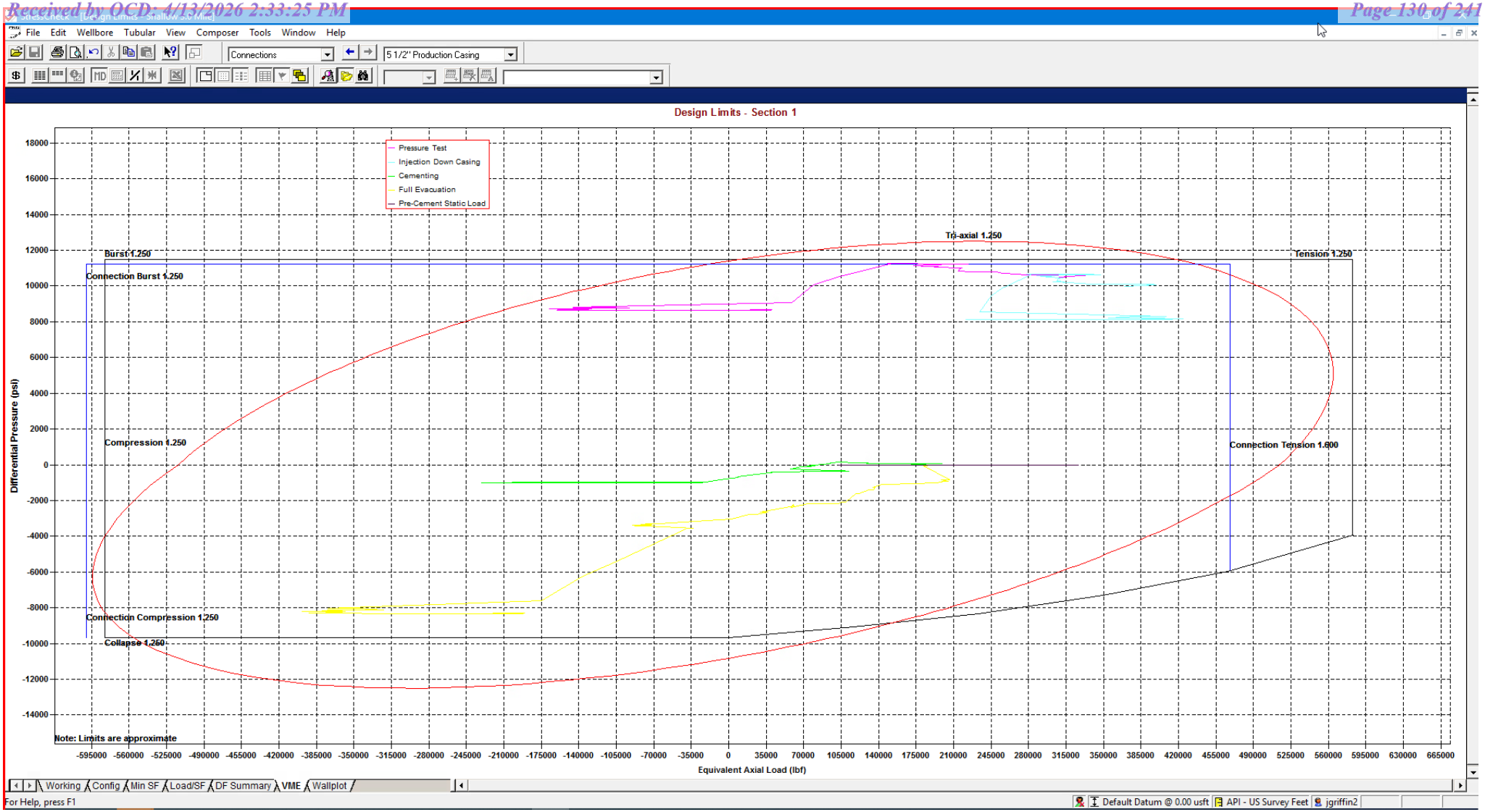
9-5/8” Intermediate Casing Pressure Test:
Internal Profile based off Surface Pressure + Hydrostatic: 4589 psi
External Profile based off Pore Pressure: 2188 psi

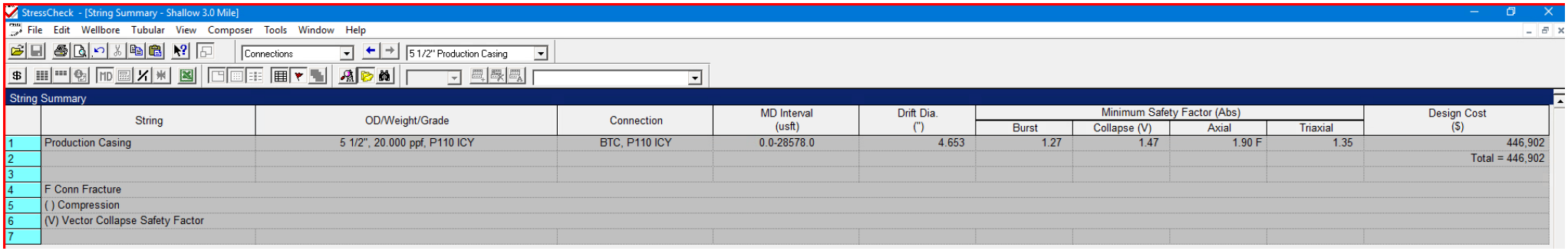




	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs) Burst	Collapse (V)	Axial	Triaxial	Design Cost ($)
1	Intermediate Casing	9 5/8", 40.000 ppf, J-55	BTC, J-55	0.0-5650.0	8.750 A	1.57	1.59	1.80 F	1.35	98,141
2										Total = 98,141
3										
4	F Conn Fracture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

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Shallow Design B

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	2,161	0	2,030	10-3/4"	40.5#	J-55	STC
9-7/8"	0	7,951	0	5,650	8-5/8"	32#	J-55	BTC-SC
6-3/4"	0	29,353	0	12,000	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:

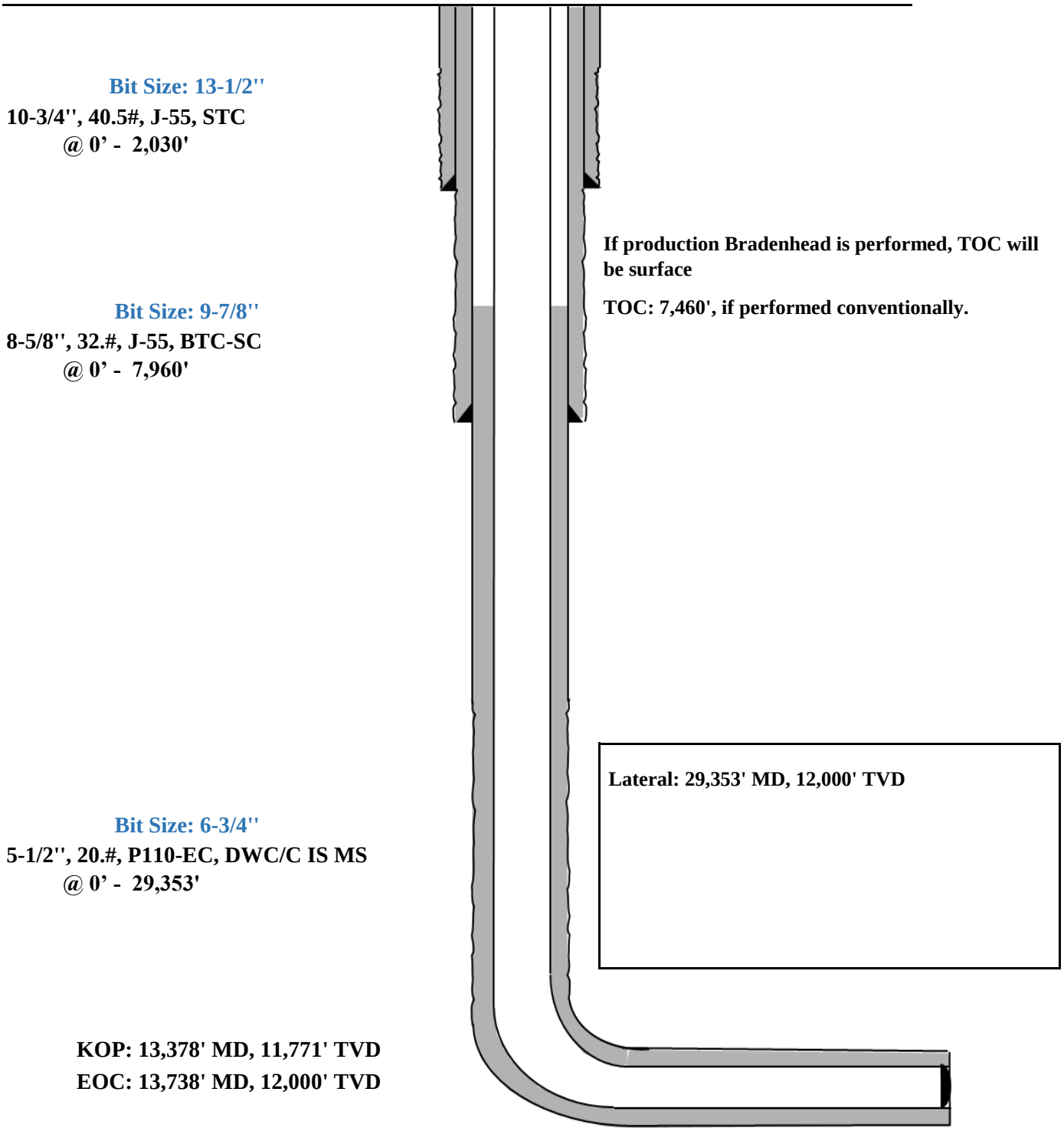
Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
2,030' 10-3/4''	530	13.5	1.73	Lead: Class C/H + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	140	14.8	1.34	Tail: Class C/H + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
8,050' 8-5/8''	470	12.7	2.22	Lead: Class C/H + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	210	14.8	1.32	Tail: Class C/H + 10% NaCL + 3% MagOx (TOC @ 6360')
29,353' 5-1/2''	1000	14.8	1.32	Bradenhead squeeze: Class C/H + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
	1480	13.2	1.52	Tail: Class C/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 @ Top of Brushy)

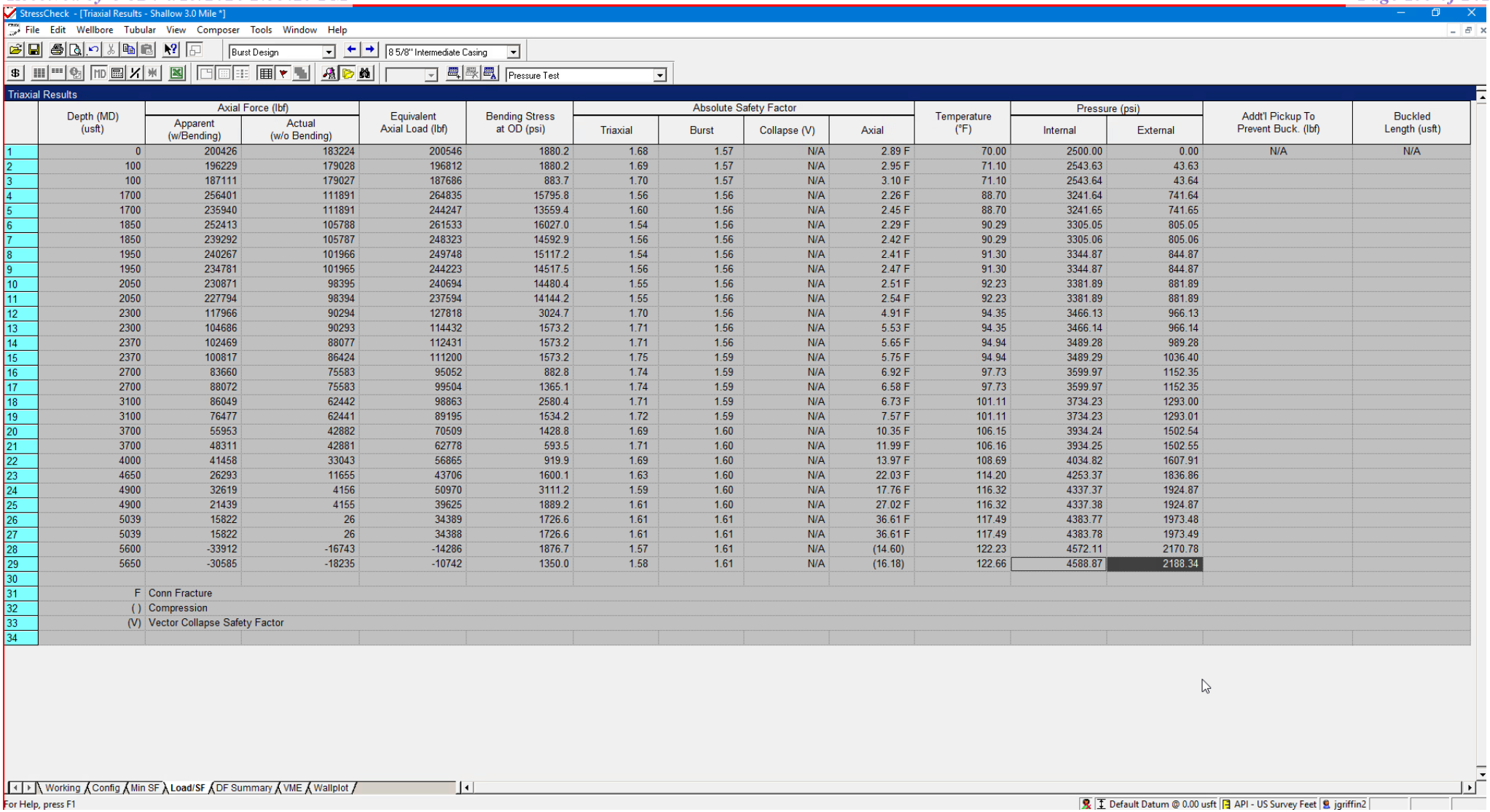
eog resources

Shallow Casing Design B

Proposed Wellbore

KB: 3558'
GL: 3533'

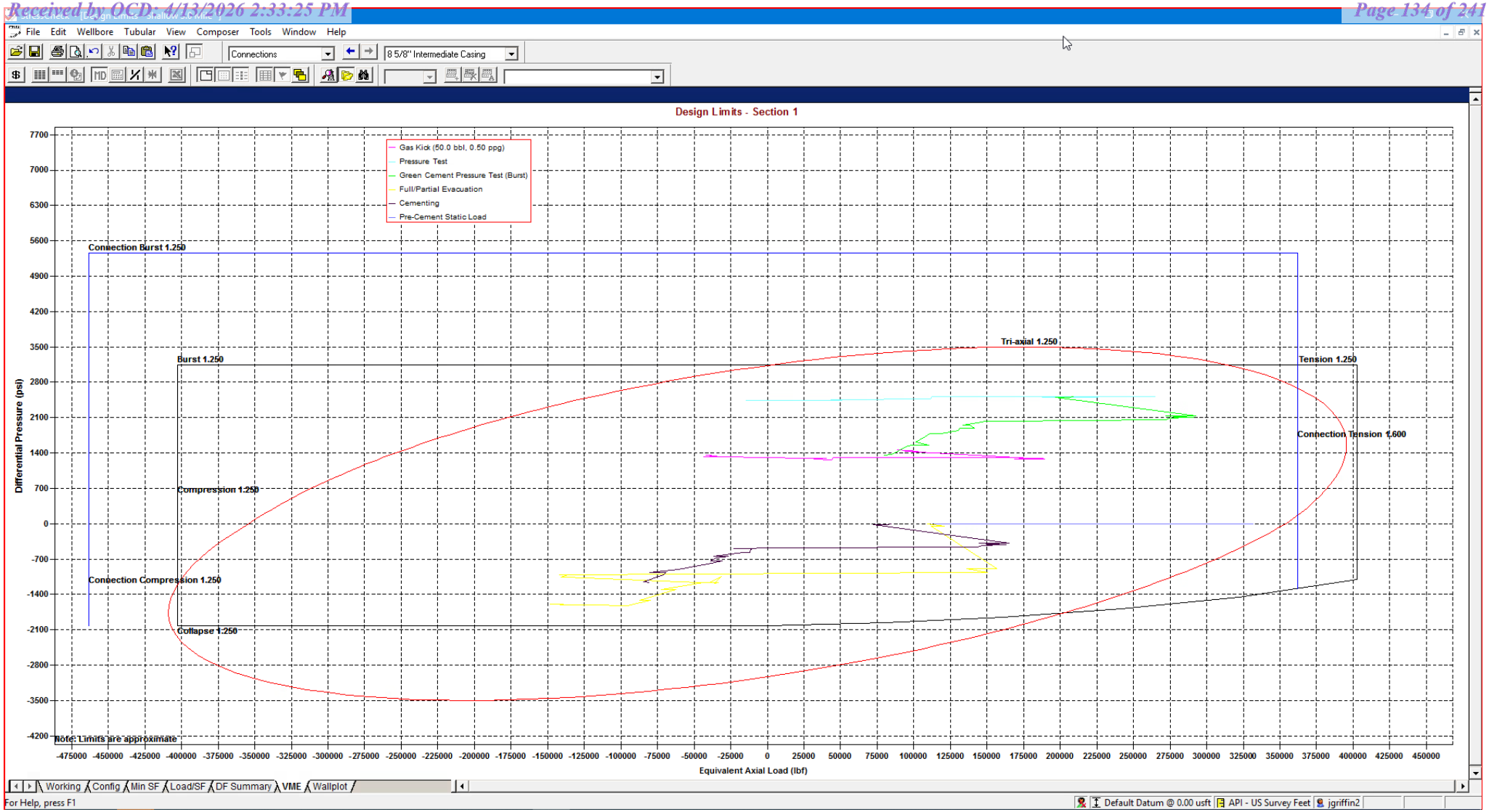


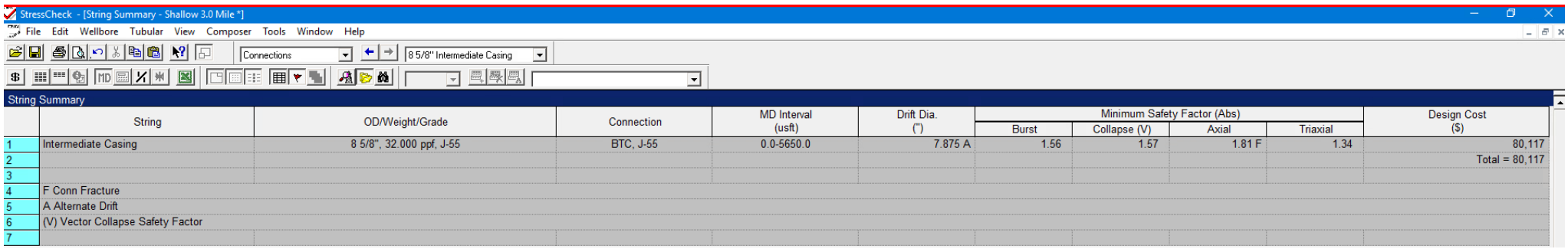


Triaxial Results

	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														

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

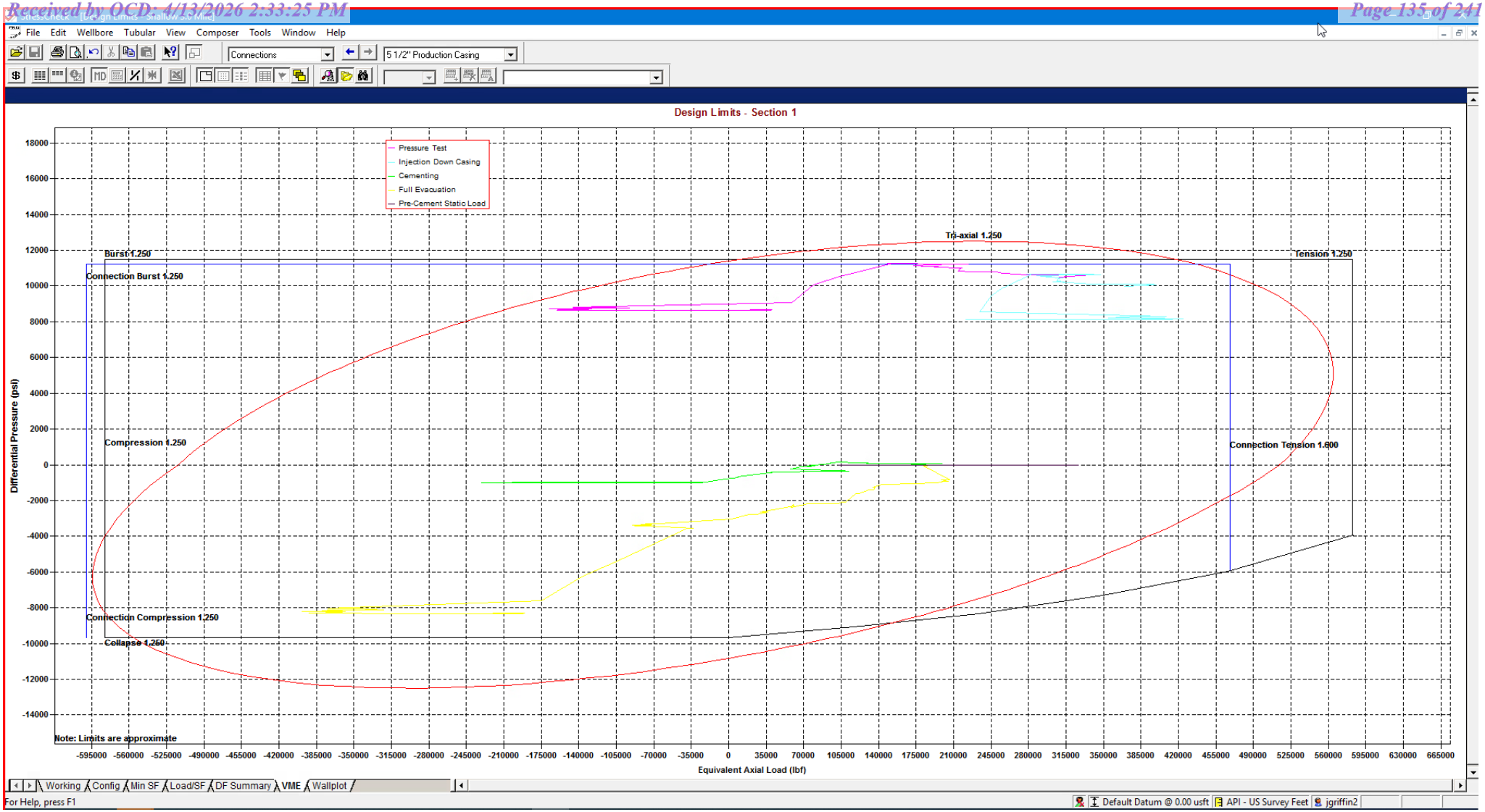


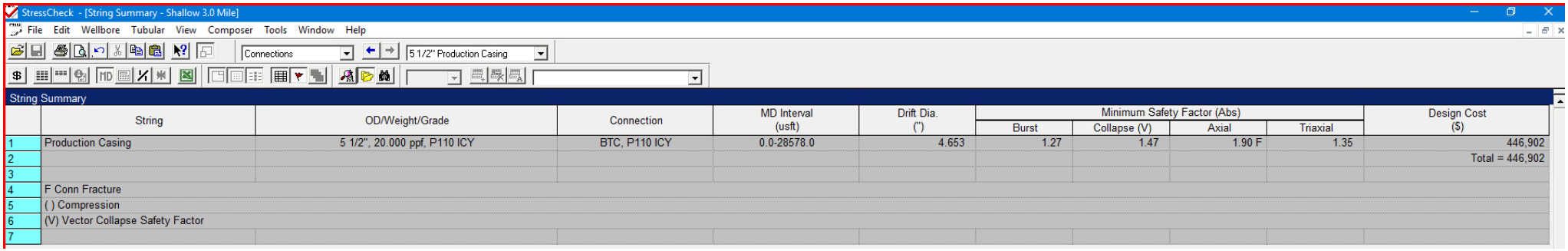


String Summary

	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs)				Design Cost ($)
						Burst	Collapse (V)	Axial	Triaxial	
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

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	2,161	0	2,030	13-3/8"	54.5#	J-55	STC
11"	0	7,951	0	5,650	9-5/8"	40#	J-55	LTC
7-7/8"	0	29,353	0	12,000	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.

5. CEMENTING PROGRAM:

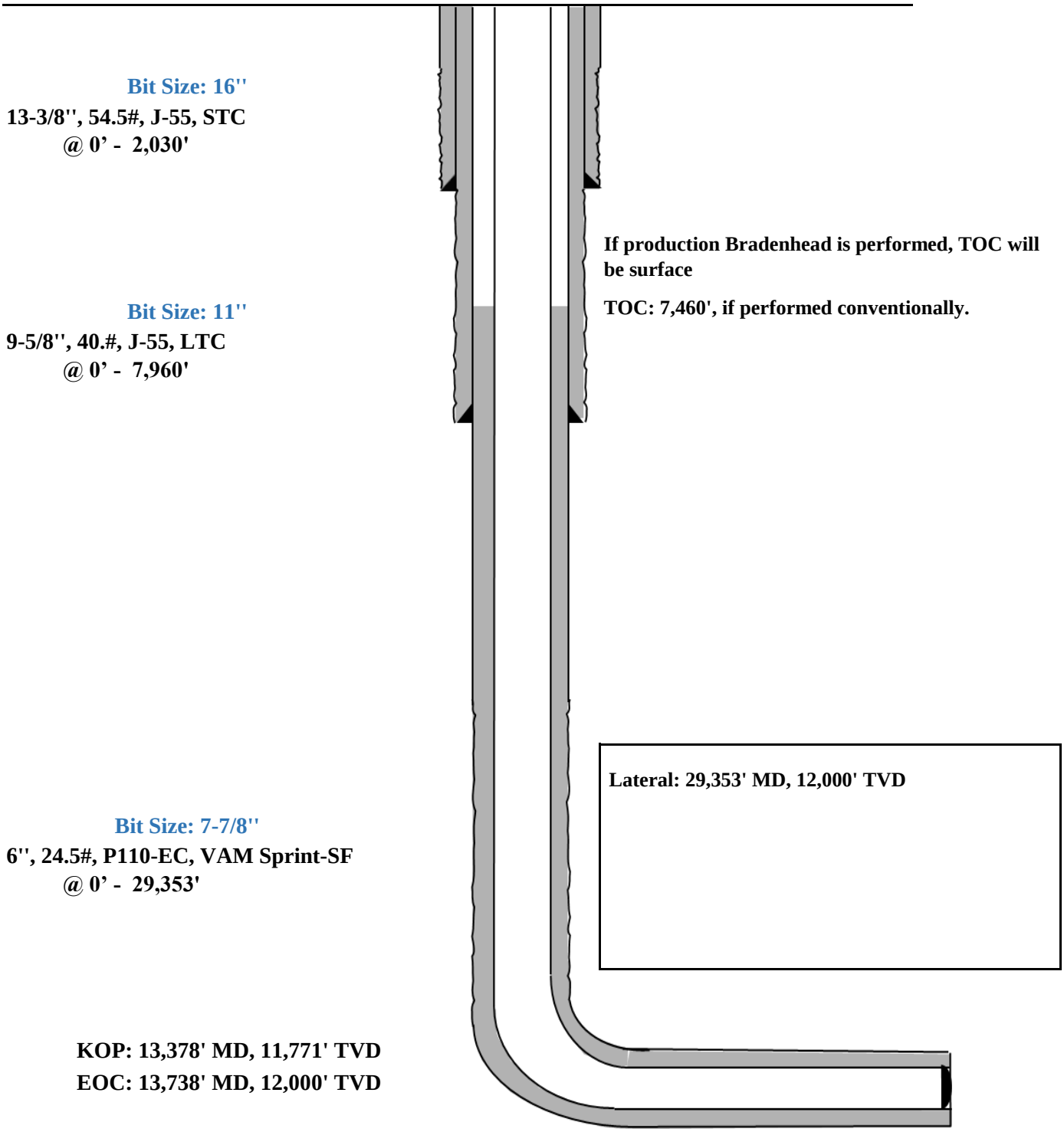
Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
2,030' 13-3/8''	570	13.5	1.73	Lead: Class C/H + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	160	14.8	1.34	Tail: Class C/H + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
8,050' 9-5/8''	760	12.7	2.22	Lead: Class C/H + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	250	14.8	1.32	Tail: Class C/H + 10% NaCL + 3% MagOx (TOC @ 6360')
29,353' 6''	1000	14.8	1.32	Bradenhead squeeze: Class C/H + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
	2500	13.2	1.52	Tail: Class C/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 @ Top of Brushy)

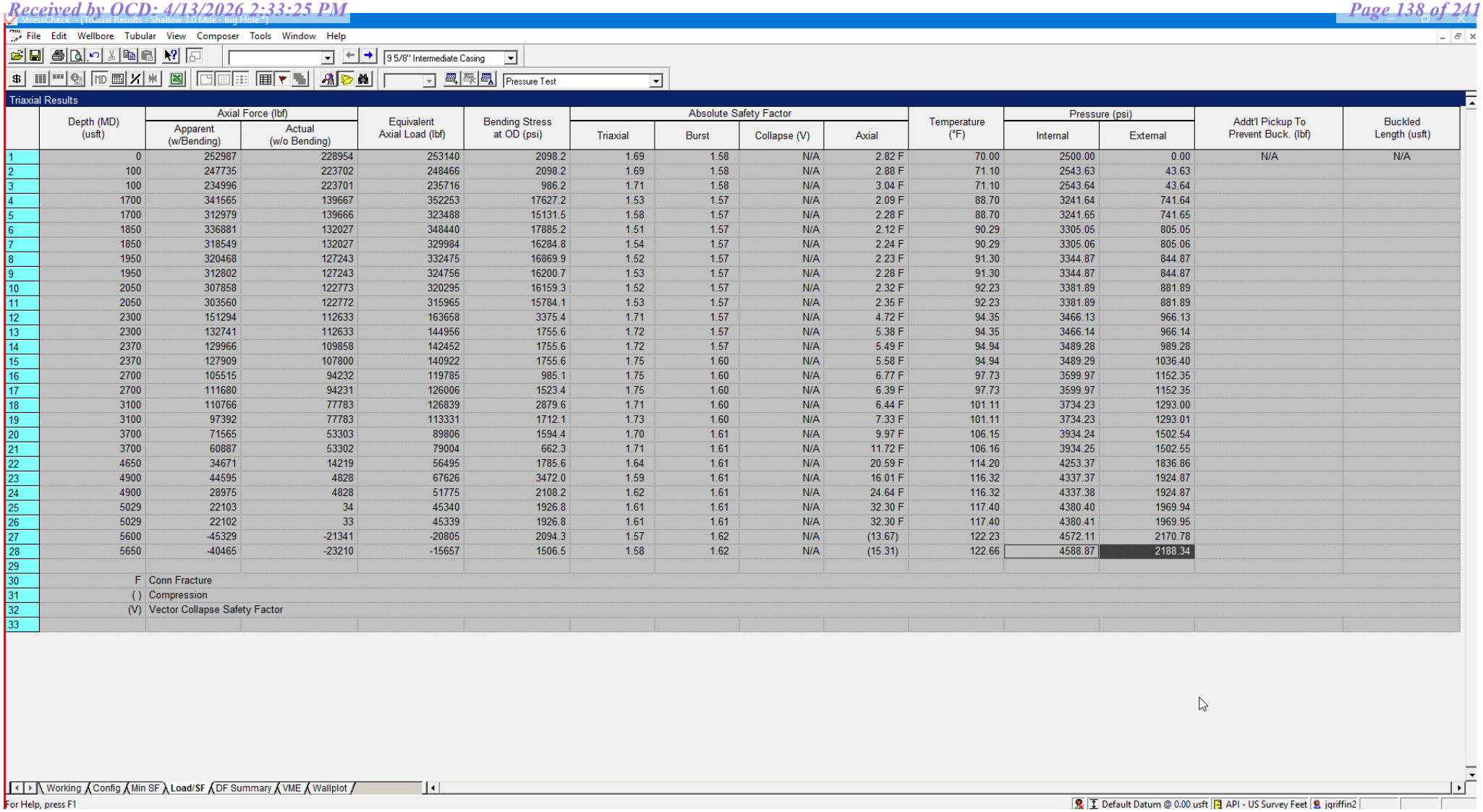
eog resources

Shallow Design C

Proposed Wellbore

KB: 3558'
GL: 3533'





StressCheck - [Triaxial Results - Shallow 30 Mile - Big Hole*]

File Edit Wellbore Tubular View Composer Tools Window Help

9 5/8" Intermediate Casing

Pressure Test

Triaxial Results

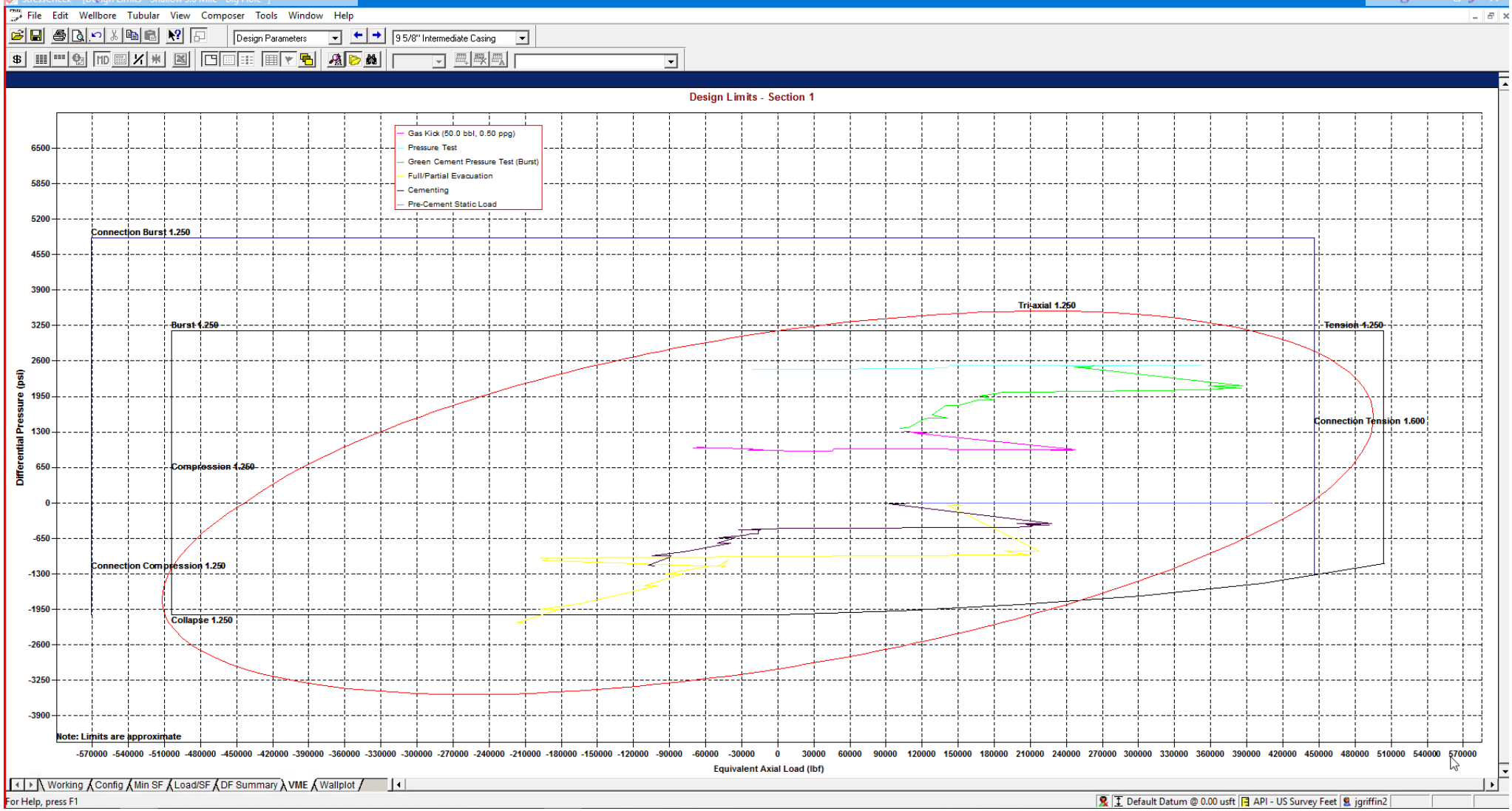
	Depth (MD) (usft)	Axial Force (lbf)		Equivalent Axial Load (lbf)	Bending Stress at OD (psi)	Absolute Safety Factor				Temperature (°F)	Pressure (psi)		Addt'l Pickup To Prevent Buck. (lbf)	Buckled Length (usft)
		Apparent (w/Bending)	Actual (w/o Bending)			Triaxial	Burst	Collapse (V)	Axial		Internal	External		
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														

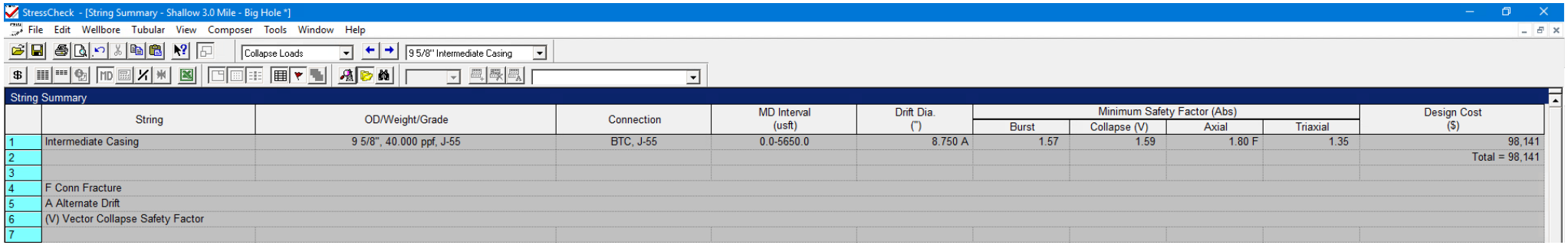
Working Config Min SF Load/SF DF Summary VME Wallplot

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

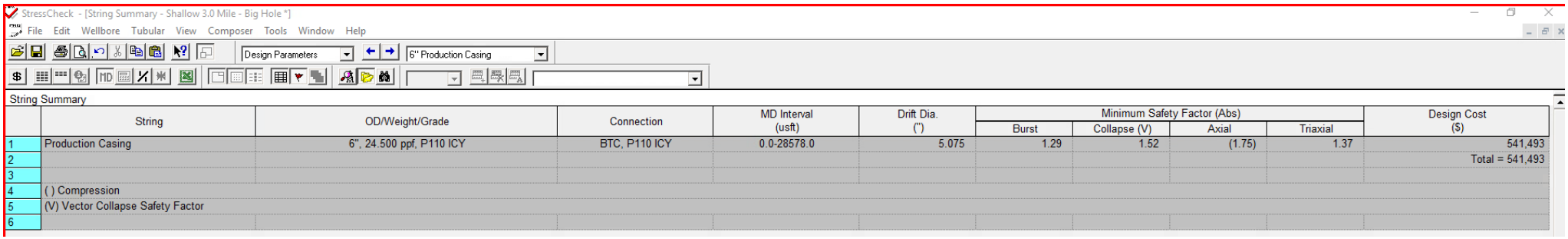




	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs) Burst	Collapse (V)	Axial	Triaxial	Design Cost ($)
1	Intermediate Casing	9 5/8", 40.000 ppf, J-55	BTC, J-55	0.0-5650.0	8.750 A	1.57	1.59	1.80 F	1.35	98,141
2										Total = 98,141
3										
4	F Conn Fracture									
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	2,161	0	2,030	13-3/8"	54.5#	J-55	STC
11"	0	7,951	0	5,650	9-5/8"	40#	J-55	LTC
7-7/8"	0	13,278	0	11,671	6"	22.3#	P110-EC	DWC/C IS
6-3/4"	13,278	29,353	11,671	12,000	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:

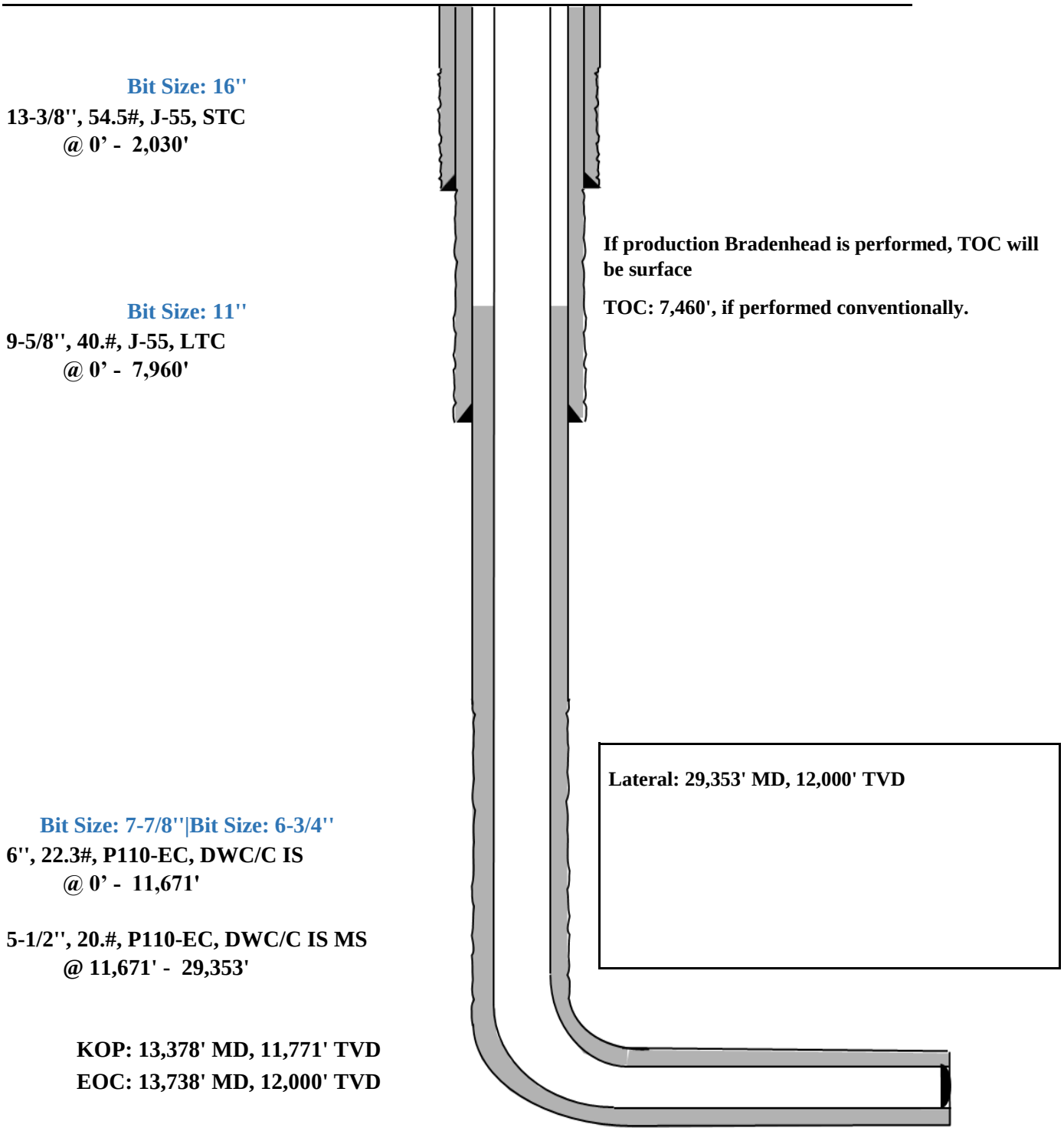
Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
2,030' 13-3/8''	570	13.5	1.73	Lead: Class C/H + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	160	14.8	1.34	Tail: Class C/H + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
8,050' 9-5/8''	760	12.7	2.22	Lead: Class C/H + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	250	14.8	1.32	Tail: Class C/H + 10% NaCL + 3% MagOx (TOC @ 6360')
29,353' 6''	1000	14.8	1.32	Bradenhead squeeze: Class C/H + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
	2500	13.2	1.52	Tail: Class C/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 @ Top of Brushy)

eog resources

Shallow Design D

Proposed Wellbore

KB: 3558'
GL: 3533'



Bit Size: 16''
13-3/8'', 54.5#, J-55, STC
@ 0' - 2,030'

If production Bradenhead is performed, TOC will be surface

TOC: 7,460', if performed conventionally.

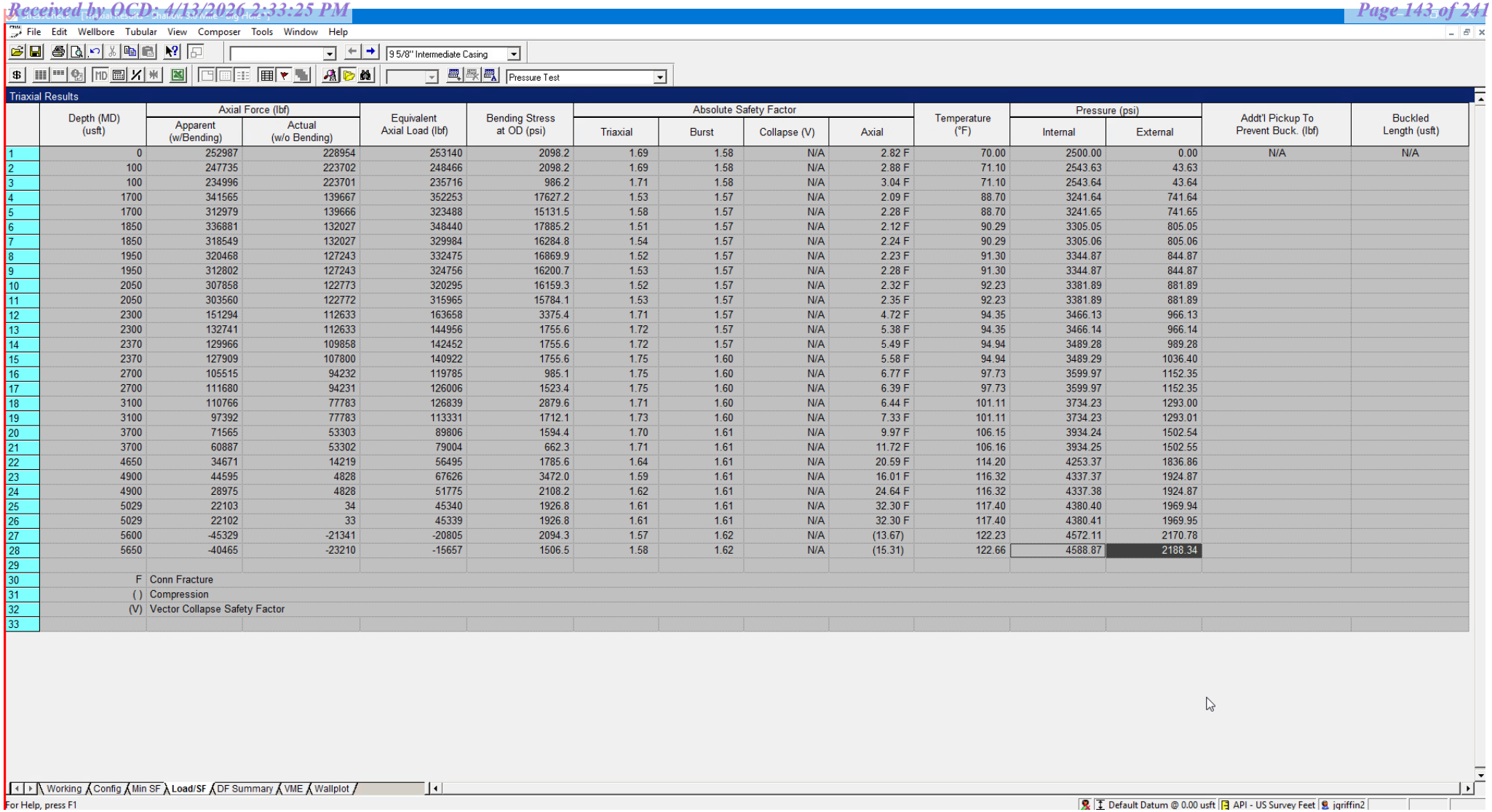
Bit Size: 11''
9-5/8'', 40.#, J-55, LTC
@ 0' - 7,960'

Lateral: 29,353' MD, 12,000' TVD

Bit Size: 7-7/8''|Bit Size: 6-3/4''
6'', 22.3#, P110-EC, DWC/C IS
@ 0' - 11,671'

5-1/2'', 20.#, P110-EC, DWC/C IS MS
@ 11,671' - 29,353'

KOP: 13,378' MD, 11,771' TVD
EOC: 13,738' MD, 12,000' TVD



File Edit Wellbore Tubular View Composer Tools Window Help

9 5/8" Intermediate Casing

Pressure Test

Triaxial Results

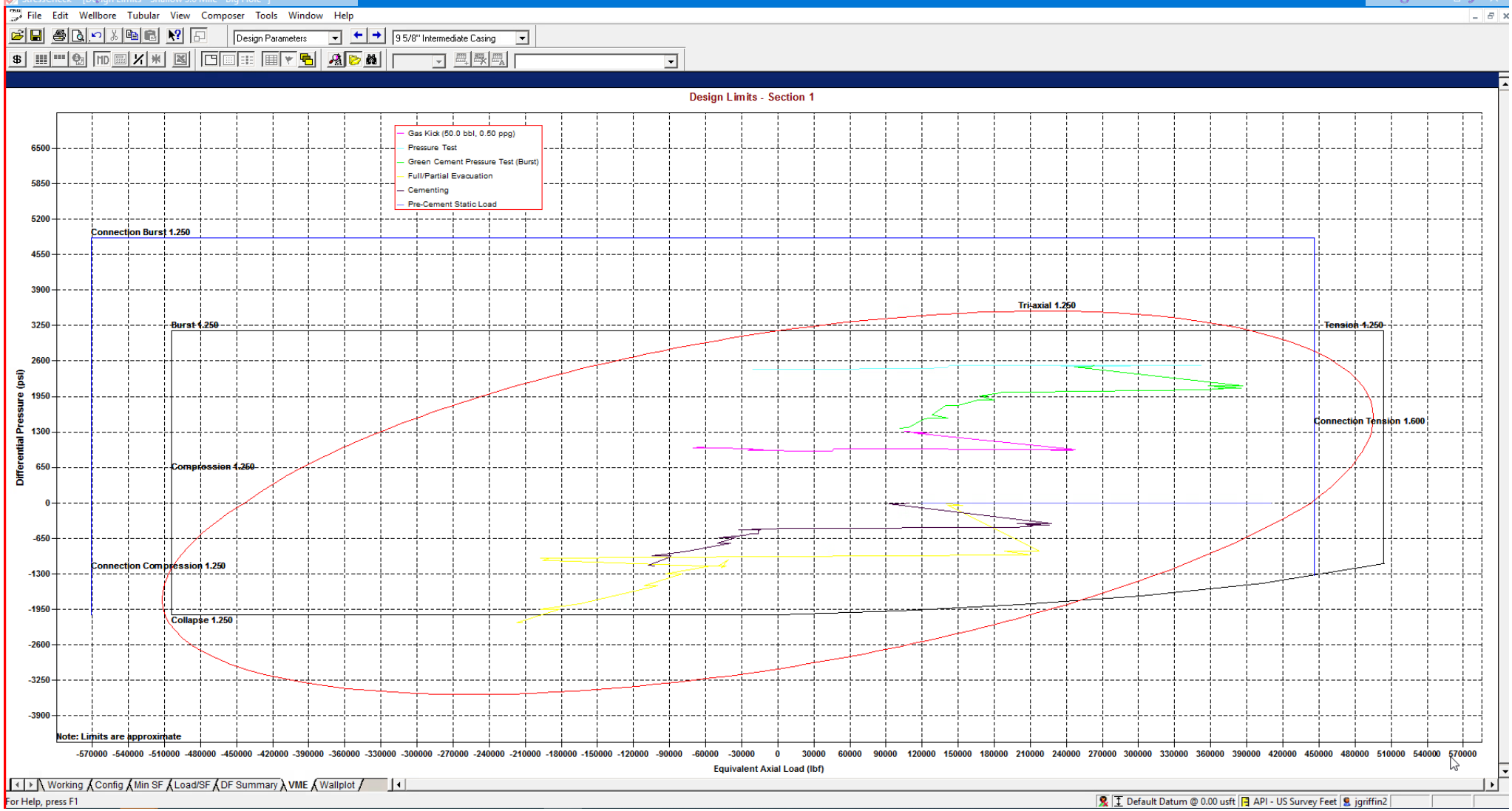
	Depth (MD) (usft)	Axial Force (lbf)		Equivalent Axial Load (lbf)	Bending Stress at OD (psi)	Absolute Safety Factor				Temperature (°F)	Pressure (psi)		Addt'l Pickup To Prevent Buck. (lbf)	Buckled Length (usft)
		Apparent (w/Bending)	Actual (w/o Bending)			Triaxial	Burst	Collapse (V)	Axial		Internal	External		
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														

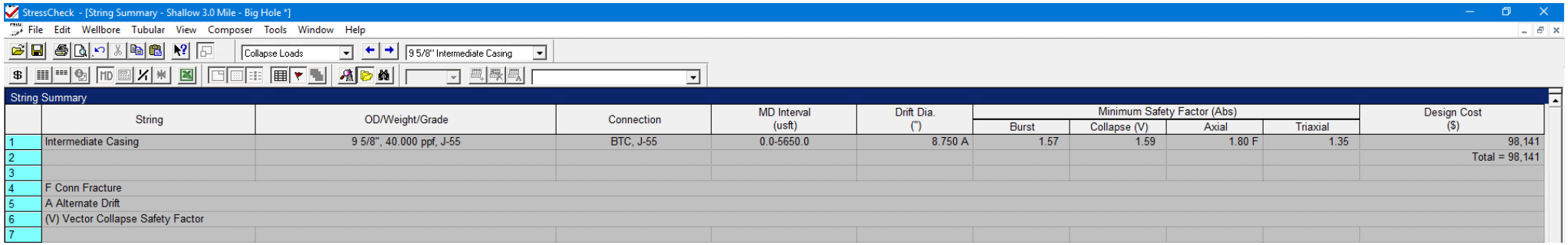
Working Config Min SF Load/SF DF Summary VME Wallplot

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



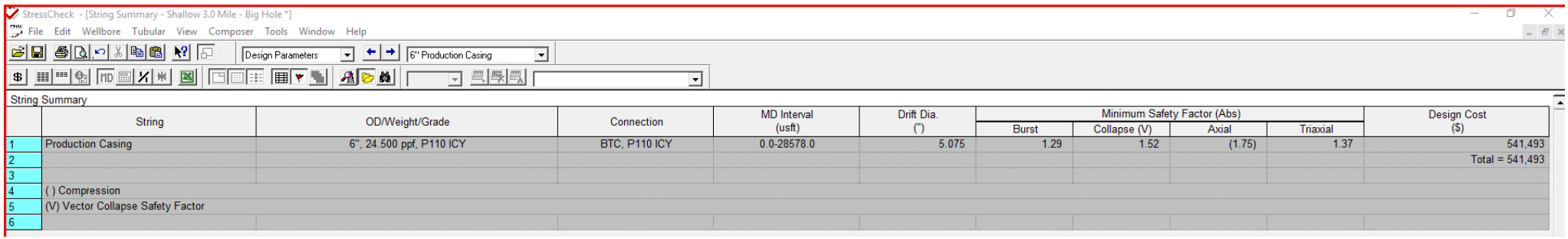


String Summary

	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs)				Design Cost ($)
						Burst	Collapse (V)	Axial	Triaxial	
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.

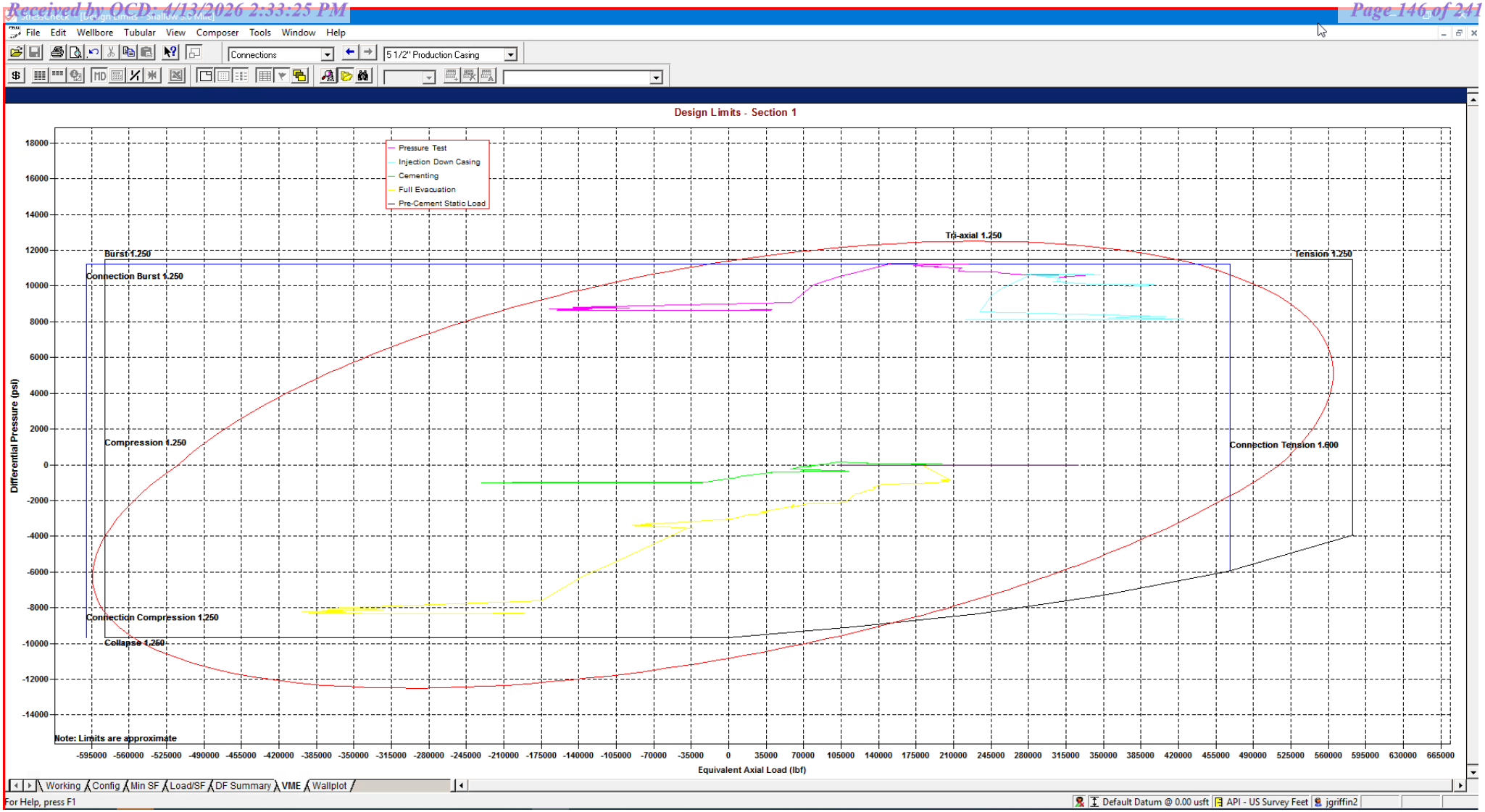


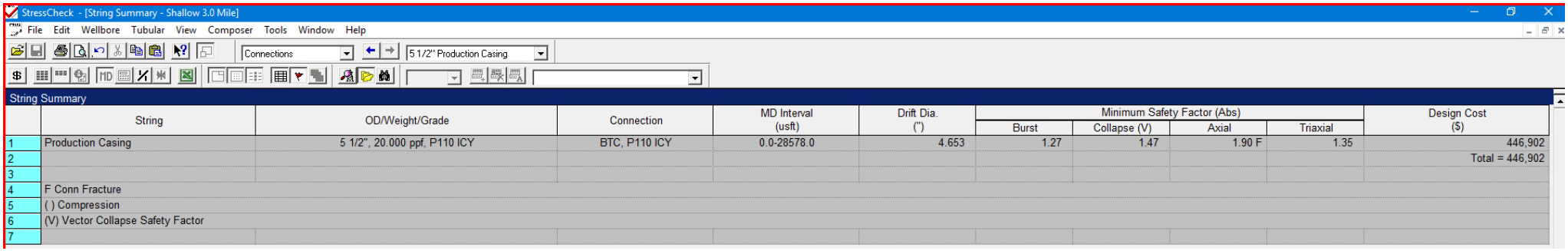


String Summary

	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.

eog resources

Shallow Casing Design E

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"	0	2,025	0	2,025	10-3/4"	40.5#	J-55	STC
9-7/8"	0	7,793	0	5,645	8-5/8"	32#	J-55	BTC-SC
7-7/8"	0	12,626	0	10,896	6"	24.5#	P110-EC	VAM Sprint-TC
6-3/4"	12,626	28,578	10,896	11,225	5-1/2"	20#	P110-EC	VAM Sprint SF

**For highlighted rows above, variance is requested to run entire string of either 6'' or 5-1/2'' casing string above due to availablility.

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 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.

2. CEMENTING PROGRAM:

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
2,030' 10-3/4"	450	13.5	1.73	Lead: Class C/H + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	120	14.8	1.34	Tail: Class C/H + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
7,890' 8-5/8"	460	12.7	2.22	Lead: Class C/H + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	210	14.8	1.32	Tail: Class C/H + 10% NaCL + 3% MagOx (TOC @ 6234')
28,578' 6"	1000	14.8	1.32	Bradenhead squeeze: Class C/H + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
	2410	13.2	1.52	Tail: Class C/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 @ 8140')

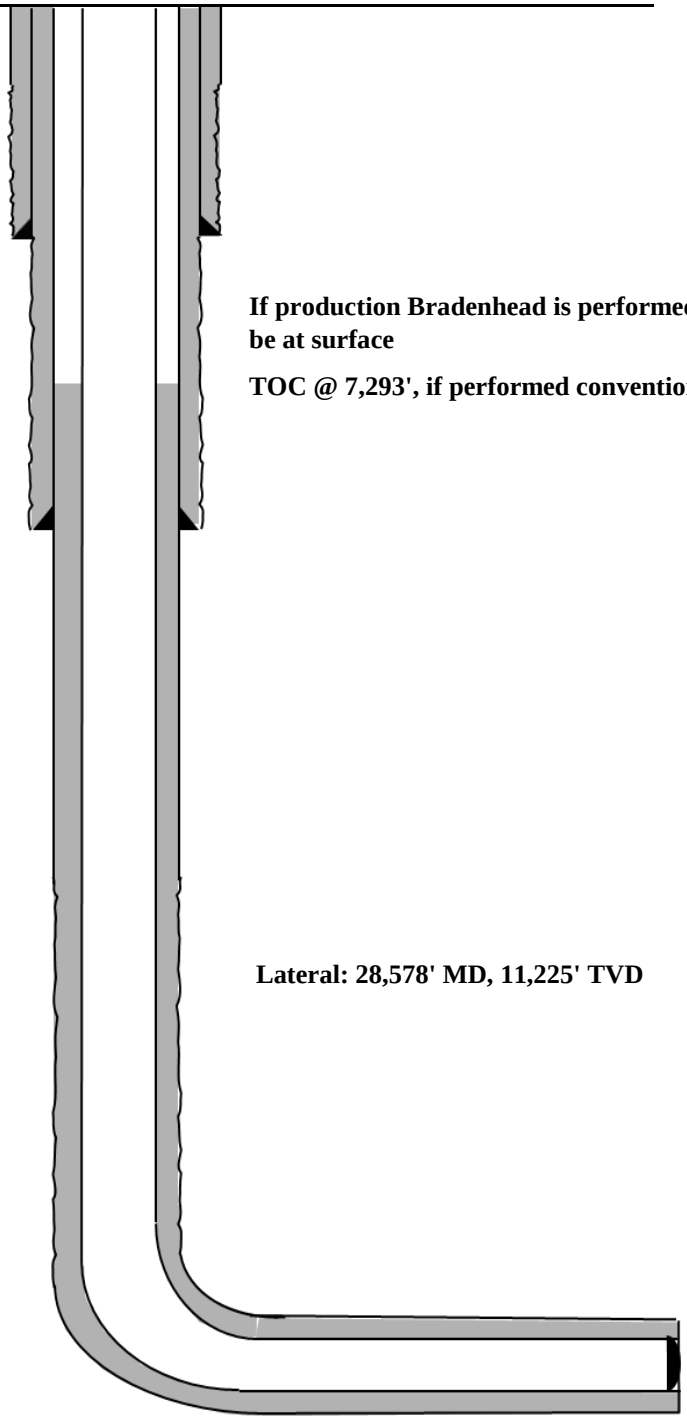
eog resources

Shallow Casing Design E

Proposed Wellbore

KB: 3558'
GL: 3533'

API: 30-025-***



Bit Size: 13''
10-3/4'', 40.5#, J-55, STC
@ 0' - 2,025'

If production Bradenhead is performed, TOC will be at surface

TOC @ 7,293', if performed conventionally.

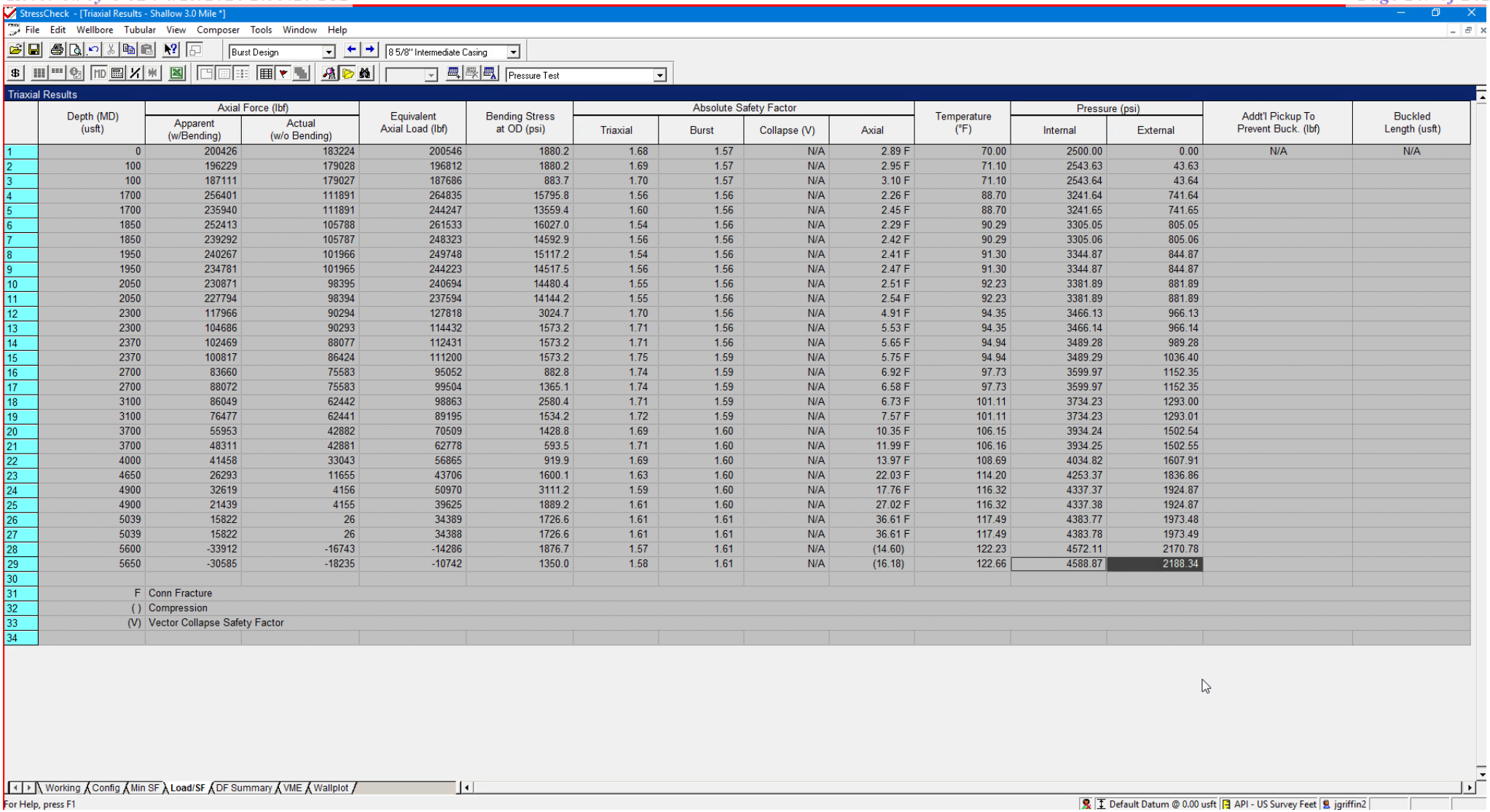
Bit Size: 9-7/8''
8-5/8'', 32.#, J-55, BTC-SC
@ 0' - 7,793'

Lateral: 28,578' MD, 11,225' TVD

Bit Size: 7-7/8''|Bit Size: 6-3/4''
6'', 24.5#, P110-EC, VAM Sprint-TC
@ 0' - 10,896'

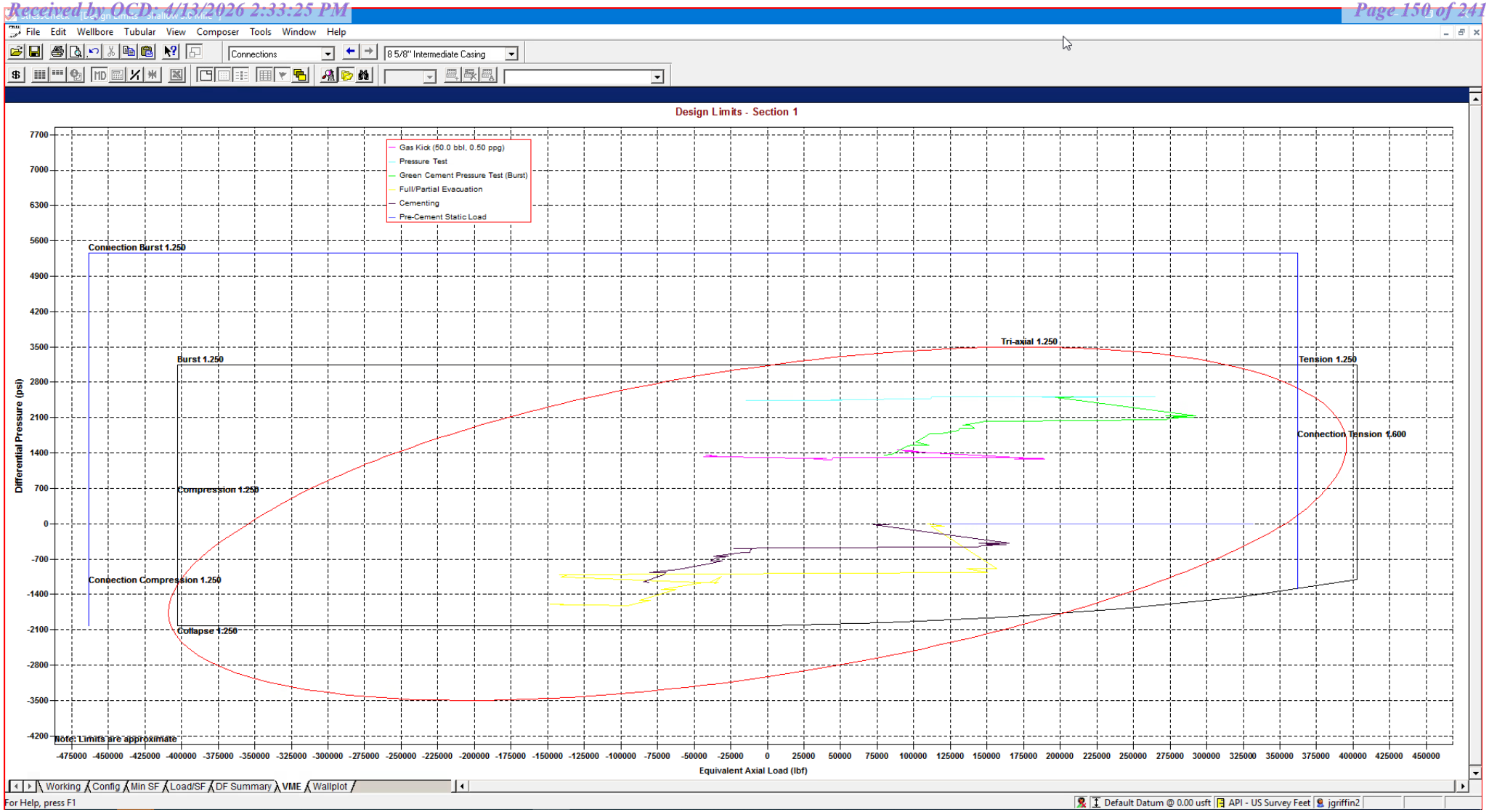
5-1/2'', 20.#, P110-EC, VAM Sprint SF
@ 10,896' - 28,578'

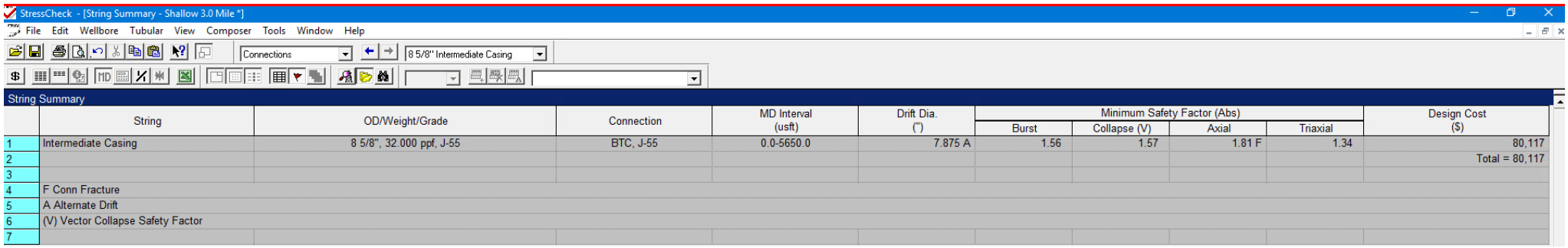
KOP: 12,726' MD, 10,996' TVD
EOC: 12,963' MD, 11,225' TVD



	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														

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

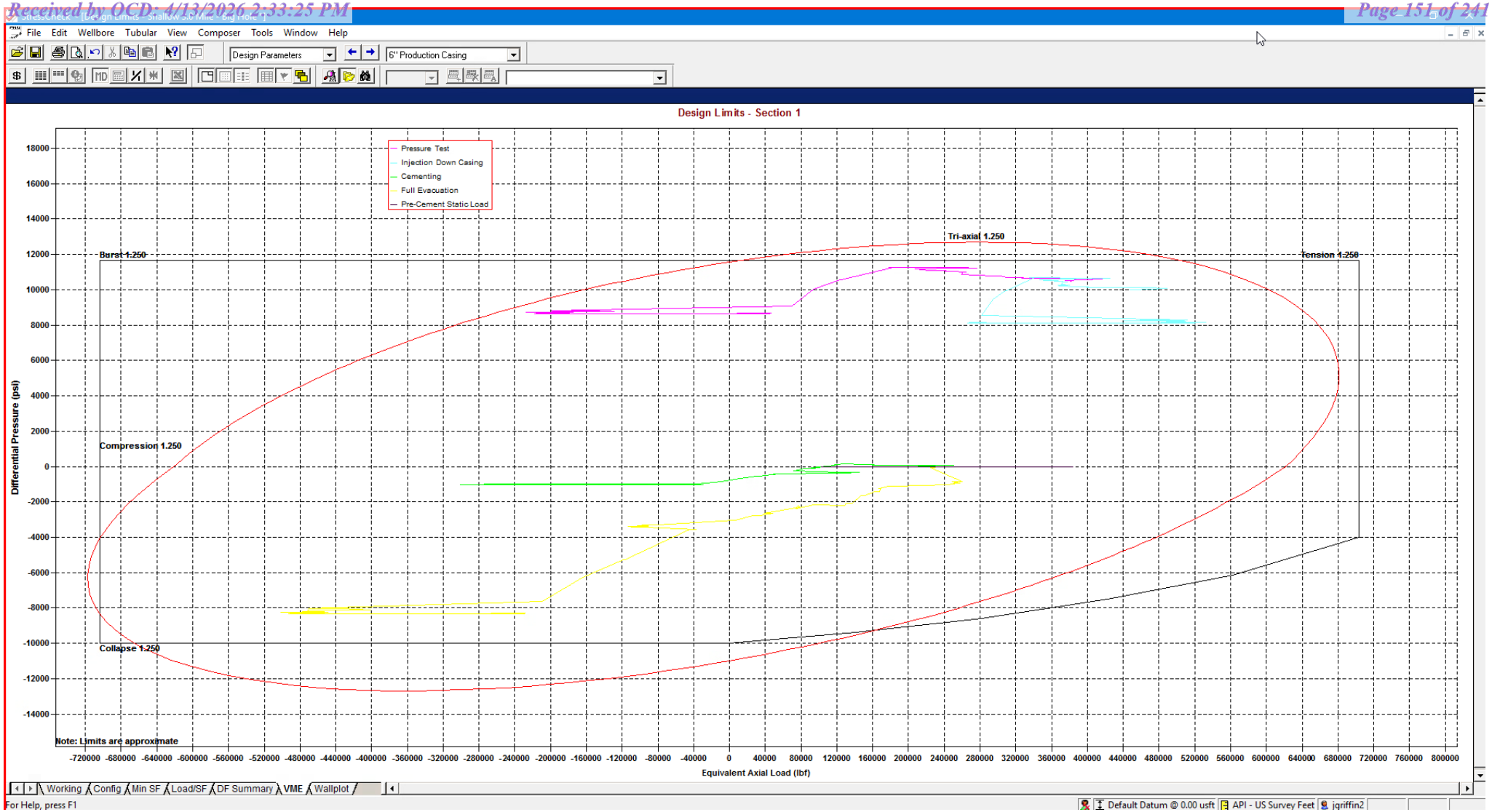


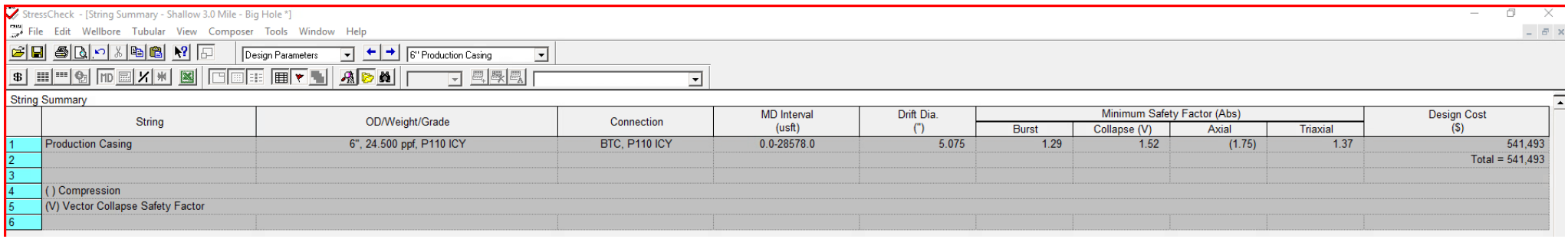


String Summary

	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs)				Design Cost ($)
						Burst	Collapse (V)	Axial	Triaxial	
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.

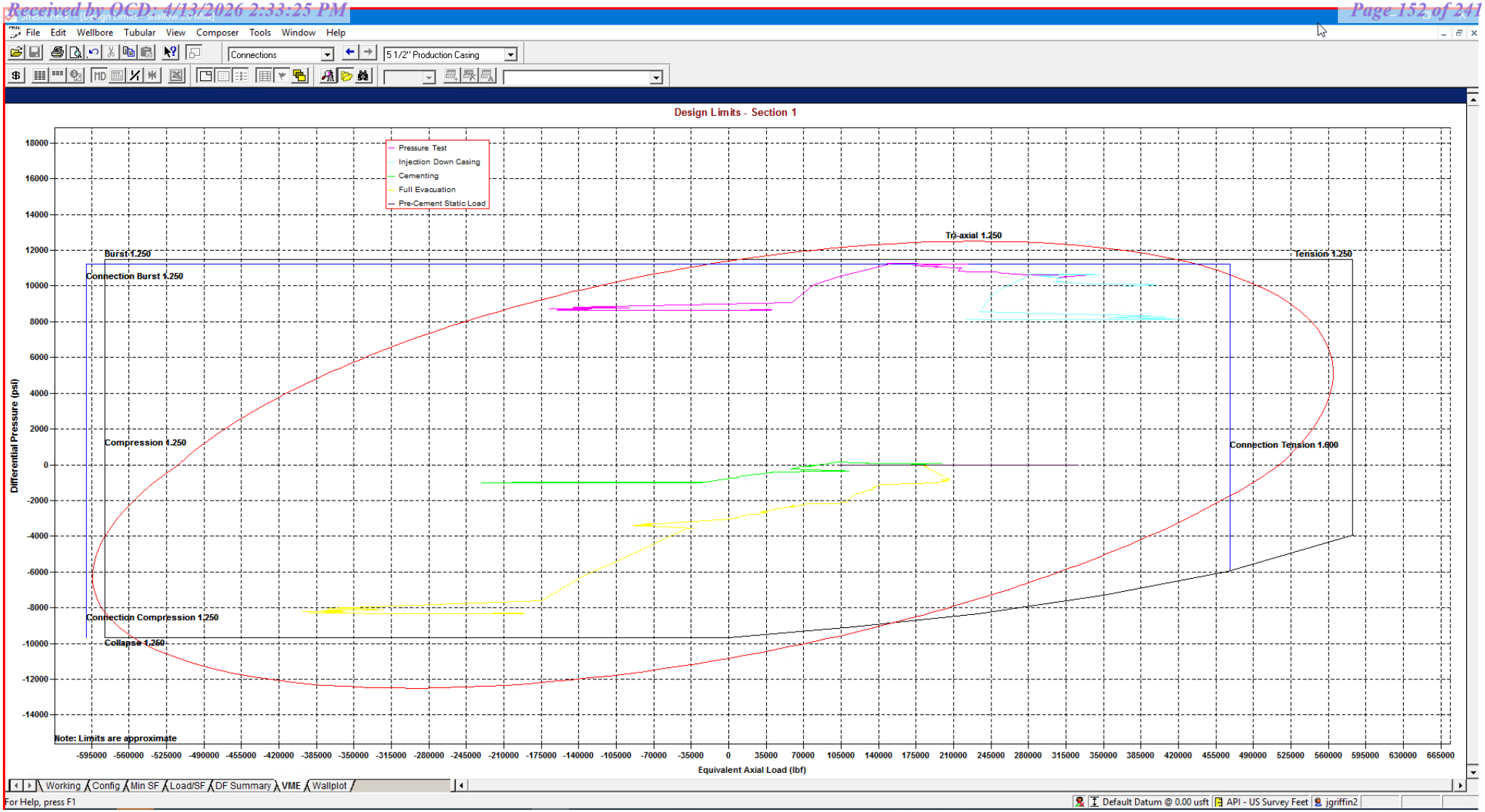


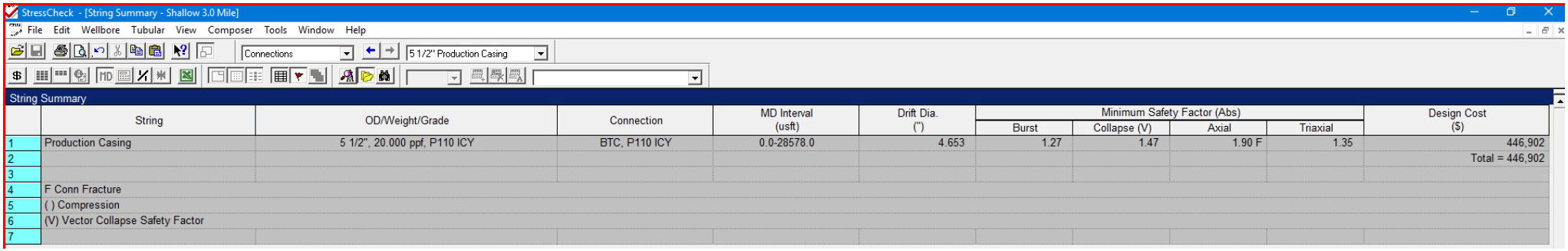


String Summary

	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs) Burst	Collapse (V)	Axial	Triaxial	Design Cost ($)
1	Production Casing	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.

Shallow Casing Design 501H

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.

EOG requests variance from minimum standards to pump a two stage cement job on the production casing string with the first stage being pumped conventionally with the calculated top of cement at the top of the Brushy Canyon and the second stage performed as a 1000 sack bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 400 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (1.32 yld, 14.8 ppg) will be executed as a contingency. Top will be verified by Echo-meter.

Bradenhead will be the primary option for production cementing. EOG also requests to have the conventional option in place to accommodate for logistical or wellbore conditions. The tie back requirements will be met if the cement is pumped conventionally, and cement volumes will be adjusted accordingly. TOC will be verified by CBL.

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.

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Appendix A - Spec Sheets

Received by OCD: 4/13/2026 2:33:25 PM

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

Released to Imaging: 4/16/2026 8:21:26 AM

Received by OCD: 4/13/2026 2:33:25 PM

Pipe Body and API Connections Performance Data

9.625 40.00/0.395 J55

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New Search »

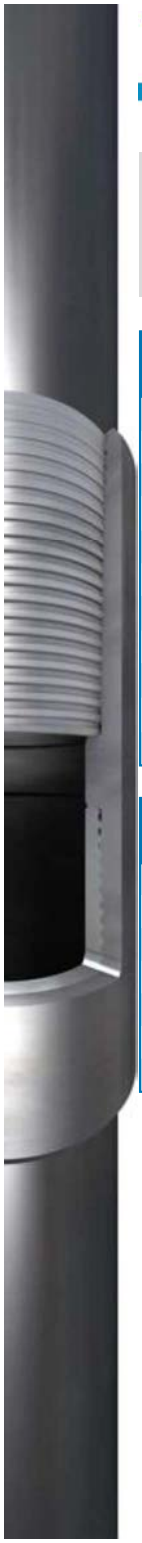
« Back to Previous List

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

Released to Imaging: 4/16/2026 8:21:26 AM



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).

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

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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.

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Pipe Body and API Connections Performance Data

10.750 40.50/0.350 J55

PDF

New Search »

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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

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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

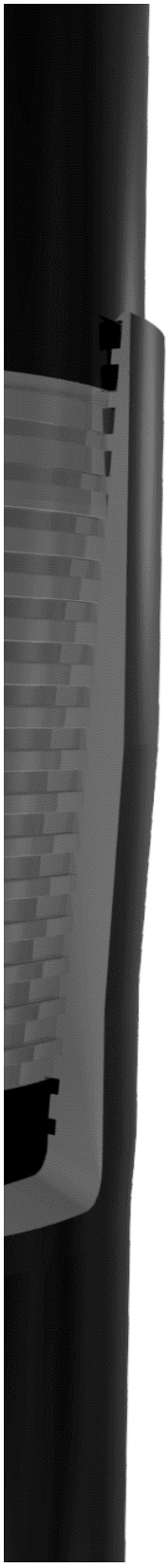
BTC Torque (ft-lbs)

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.

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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

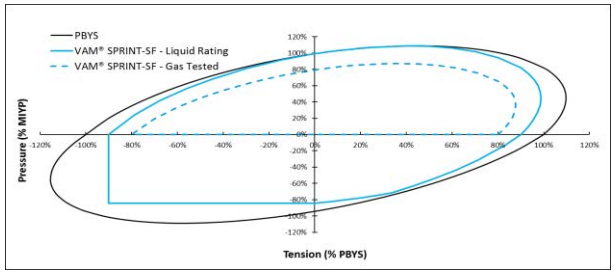
CONNECTION PROPERTIES		
Connection Type	Integral Semi-Flush	
Connection OD (nom):	6.277	in.
Connection ID (nom):	5.146	in.
Make-Up Loss	5.386	in.
Critical Cross Section	6.417	sqin.
Tension Efficiency	91.0	% of pipe
Compression Efficiency	91.0	% of pipe
Internal Pressure Efficiency	100	% of pipe
External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

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

VAM USA



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

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VAM® USA

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Well Name: WILD WEASEL 22 FED COM

Well Location: T25S / R34E / SEC 22 / TR B / 32.1214489 / -103.4578068

County or Parish/State: LEA / NM

Well Number: 103H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM122624

Unit or CA Name:

Unit or CA Number:

US Well Number:

Operator: EOG RESOURCES INCORPORATED

Notice of Intent

Sundry ID: 2900063

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 03/11/2026

Time Sundry Submitted: 02:39

Date proposed operation will begin: 03/25/2026

Procedure Description: EOG respectfully requests an amendment to our approved APD for this well to reflect the following changes: Wild Weasel 22 Fed Com 743H (FKA 103H) APD #: 10400090534 Change name from Wild Weasel 22 Fed Com 103H to Wild Weasel 22 Fed Com 743H. Change SHL from T-25-S, R-34-E, Sec 22, 659' FNL, 2639' FEL, LEA Co., NM, to T-25-S, R-34-E, Sec 22, 644' FNL, 2639' FEL, LEA Co., N.M. Change BHL from T-25-S, R-34-E, Sec 27, 100' FSL, 2178' FEL, LEA Co., NM, to T-25-S, R-34-E, Sec 27, 100' FSL, 1100' FEL, LEA Co., N.M. Change target formation to Wolfcamp U4. Update casing and cement program to current design. Update the Pool from FAIRVIEW MILLS; BONESPRING to PITCHFORK RANCH; WOLFCAMP, SOUTH as reflected in the C-102.

NOI Attachments

Procedure Description

Wild_Weasel_22_Fed_Com_743H_Planning_Report_20260311143636.pdf

Wild_Weasel_22_Fed_Com_743H_Wall_Plot_20260311143636.pdf

EOG_BLM_Master_Variance_Document_04.24.25_V2_20260311143621.pdf

Wild_Weasel_22_Fed_Com_743H_Variances_20260311143621.pdf

WILD_WEASEL_22_FED_COM__743H_PLAT_20260311143621.pdf

Blanket_Casing_Design___Wild_Weasel_22_Fed_Com_Deep_2.12.2026_20260311143621.pdf

Wild_Weasel_22_Fed_Com_743H_Sundry_Info___Rev_Name__SHL__BHL__tgt__csg__Pool_2.12.2026_20260311143621.pdf

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Well Name: WILD WEASEL 22 FED COM

Well Location: T25S / R34E / SEC 22 / TR B / 32.1214489 / -103.4578068

County or Parish/State: LEA / NM

Well Number: 103H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM122624

Unit or CA Name:

Unit or CA Number:

US Well Number:

Operator: EOG RESOURCES INCORPORATED

Conditions of Approval

Additional

WILD_WEASEL_22_FED_COM___SUNDRY_COA___03312026___DEEP_TARGET_20260331150431.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: SHEA BAILEY

Signed on: MAR 11, 2026 02:36 PM

Name: EOG RESOURCES INCORPORATED

Title: Regulatory Contractor

Street Address: 5509 CHAMPIONS BLVD

City: MIDLAND **State:** TX

Phone: (432) 214-9797

Email address: SHEA_BAILEY@EOGRESOURCES.COM

Field

Representative Name:

Street Address:

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

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: CWALLS@BLM.GOV

Disposition: Approved

Disposition Date: 04/08/2026

Signature: Chris Walls

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Form 3160-5
(October 2024)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0220
Expires: October 31, 2027

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No. — New #743H

2. Name of Operator

9. API Well No. 30-025-56129

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool or Exploratory Area

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

11. Country or Parish, State

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

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

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

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by

Title

Date

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

Office

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law 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, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. 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 the 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., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.
PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.
ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.
EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.
Response to this request is mandatory.
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 ofthis form to U.S. Department ofthe Interior, Bureau ofLand Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Additional Remarks

Change target formation to Wolfcamp U4.

Update casing and cement program to current design.

Update the Pool from FAIRVIEW MILLS; BONESPRING to PITCHFORK RANCH; WOLFCAMP, SOUTH as reflected in the C-102.

Location of Well

0. SHL: TR B / 659 FNL / 2639 FEL / TWSP: 25S / RANGE: 34E / SECTION: 22 / LAT: 32.1214489 / LONG: -103.4578068 (TVD: 0 feet, MD: 0 feet)

PPP: TR B / 100 FNL / 2178 FEL / TWSP: 25S / RANGE: 34E / SECTION: 22 / LAT: 32.1229844 / LONG: -103.4563151 (TVD: 9235 feet, MD: 9243 feet)

BHL: TR O / 100 FSL / 2178 FEL / TWSP: 25S / RANGE: 34E / SECTION: 27 / LAT: 32.0945108 / LONG: -103.456307 (TVD: 9500 feet, MD: 19705 feet)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

Pad Name: Wild Weasel 22 Fed Com Deep
SHL: Section 22, Township 25-S, Range 34-E, LEA County, NM

Well Name	API #	Surface		Intermediate		Production	
		MD	TVD	MD	TVD	MD	TVD
Wild Weasel 22 Fed Com #743H (103H)	30-025-*****	974	974	12,766	12,557	23,448	13,034
Wild Weasel 22 Fed Com #753H (104H)	30-025-*****	974	974	12,740	12,671	23,421	13,148
Wild Weasel 22 Fed Com #754H (106H)	30-025-*****	974	974	13,117	12,671	23,797	13,148

Create COAs

H_2S	Cave / Karst	Waste Prevention Rule
Present	Low	Waste Minimization Plan

Potash	R-111-Q Design
None	

Wellhead	Casing	Cementing
Multibowl	3-String Well	☐ DV Tool ☑ Bradenhead ☐ Echometer
☑ Flex Hose	☐ Liner ☑ Fluid ☐ Casing Clearance	☑ Offline Cement ☐ Open Annulus ☐ Pilot Hole
☑ Break Testing		

Special Requirements

☑ Capitan Reef ☐ Water Disposal ☑ COM ☐ Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H_2S) Drilling Plan shall be activated AT SPUD. As a result, the Hydrogen Sulfide area must meet all requirements from 43 CFR 3176, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **974** feet (a minimum of **70'** 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 (including lead cement.)
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **8-5/8** inch intermediate casing is **cement to surface**. If cement does not circulate, see B.1.a, c-d above.

Bradenhead Squeeze: Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.

a. **First stage:** Operator will cement with intent to reach the top of the **Brushy Canyon**.
b. **Second stage:** Operator to squeeze and top-out. Cement to meet requirements listed for this casing string. If cement does not circulate see B.1.a, c-d above.

Operator has proposed to pump down **Surface X Intermediate 1** annulus. Submit results to the BLM. If cement does not tie-back into the previous casing shoe, a third stage remediation BH may be performed. The appropriate BLM office shall be notified.

- Operator shall run a CBL from TD of the **Intermediate 1** casing to tieback requirements listed above after the second stage BH to verify TOC.

Keep casing 2/3 full during run for collapse SF.

3. The mini/mum required fill of cement behind the **6** inch X **5-1/2** inch tapered production casing is at least **200 feet** into previous casing string. Operator shall provide method of verification. Operator has requested to run either 6 inch or 5-1/2 inch casing only. Reviewed and is OK.

- If cement does not circulate to surface on the previous casing, this string must come to surface.

Keep casing 1/2 full during run for collapse SF.

C. PRESSURE CONTROL

1. Operator has proposed a multi-bowl wellhead assembly. 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 and intermediate casing shoe shall be **10,000**

(10M) psi. **Variance is approved to use a 5000 (5M) annular which shall be tested to 3500 (3.5M) psi.**

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

2. 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).

3. Break testing has been approved for this well ONLY on those intervals utilizing a 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.)** If in the event break testing is not utilized, then a full BOPE test would be conducted.
   a. Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation. **BOPE Break Testing is NOT permitted to drilling the production hole section for this well.**
   b. While in transfer between wells, BOPE shall be secured by the hydraulic carrier or cradle.
   c. 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).
   d. As a minimum, a full BOPE test shall be performed at 21-day intervals.
   e. In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR 3172**. 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.

D. SPECIAL REQUIREMENT(S)

Communitization Agreement:

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date

of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- 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.

Offline Cementing

Offline cementing has been approved for **all hole sections.** Contact the BLM prior to the commencement of any offline cementing procedure.

GENERAL REQUIREMENTS

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

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

For multi-well pads, notifications for the following operations may be made together going from one well to the next. This does NOT apply to notifications for wells in the R111Q potash area:

- Casing run
- Offline cementing
- Break testing

Contact Lea County Petroleum Engineering Inspection Staff:

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

Contact Eddy County Petroleum Engineering Inspection Staff:

Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220; **BLM_NM_CFO_DrillingNotifications@BLM.GOV**; (575) 361-2822

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
        i. Notify the BLM when moving in and removing the Spudder Rig.
        ii. 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.
        iii. BOP/BOPE test to be conducted per **43 CFR 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. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

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

8. Whenever a casing string is cemented in the R-111-Q 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 3172**.
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:
    i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    ii. 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.
    iii. Manufacturer representative shall install the test plug for the initial BOP test.
    iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
    v. 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.
    i. 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).

ii. 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.)

iii. 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 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 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

iv. 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.

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

vi. 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.

vii. 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.

viii. 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 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 3/31/2026

Midland

Lea County, NM (NAD 83 NME)
Wild Weasel 22 Fed Com
#743H

OH

Plan: Plan #0.1 RT

Standard Planning Report

05 March, 2026

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Well #743H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3377.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3377.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#743H	**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 Wild Weasel 22 Fed Com

Site Position:		**Northing:**	409,434.00 usft	**Latitude:**	32° 7' 21.137 N
From:	Map	**Easting:**	814,510.00 usft	**Longitude:**	103° 27' 3.375 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well #743H

Well Position	**+N/-S**	0.0 usft	**Northing:**	409,035.00 usft	**Latitude:**	32° 7' 17.361 N
	+E/-W	0.0 usft	**Easting:**	812,386.00 usft	**Longitude:**	103° 27' 28.109 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,351.0 usft
Grid Convergence:		0.47 °				

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2025	3/5/2026	6.13	59.66	46,888.78197702

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	170.60

Plan Survey Tool Program **Date** 3/5/2026

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	23,447.6	Plan #0.1 RT (OH)	EOG MWD+IFR1	
				MWD + IFR1	

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Well #743H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3377.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3377.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#743H	**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	
1,071.0	0.00	0.00	1,071.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,823.2	15.04	68.46	1,814.5	36.1	91.3	2.00	2.00	0.00	68.46	
7,425.0	15.04	68.46	7,224.5	569.9	1,443.7	0.00	0.00	0.00	0.00	
8,177.2	0.00	0.00	7,968.0	606.0	1,535.0	2.00	-2.00	0.00	180.00	
12,765.7	0.00	0.00	12,556.5	606.0	1,535.0	0.00	0.00	0.00	0.00	KOP(Wild Weasel 22
12,986.1	26.46	178.85	12,769.2	556.0	1,536.0	12.00	12.00	81.13	178.85	FTP(Wild Weasel 22 I
13,515.6	90.00	179.53	13,033.9	128.6	1,541.1	12.00	12.00	0.13	0.75	
23,447.6	90.00	179.53	13,034.0	-9,803.0	1,623.0	0.00	0.00	0.00	0.00	PBHL(Wild Weasel 22

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Well #743H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3377.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3377.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#743H	**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
1,071.0	0.00	0.00	1,071.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.58	68.46	1,100.0	0.1	0.1	0.0	2.00	2.00	0.00
1,200.0	2.58	68.46	1,200.0	1.1	2.7	-0.6	2.00	2.00	0.00
1,300.0	4.58	68.46	1,299.8	3.4	8.5	-1.9	2.00	2.00	0.00
1,400.0	6.58	68.46	1,399.3	6.9	17.6	-4.0	2.00	2.00	0.00
1,500.0	8.58	68.46	1,498.4	11.8	29.8	-6.7	2.00	2.00	0.00
1,600.0	10.58	68.46	1,597.0	17.9	45.3	-10.2	2.00	2.00	0.00
1,700.0	12.58	68.46	1,695.0	25.3	64.0	-14.5	2.00	2.00	0.00
1,800.0	14.58	68.46	1,792.2	33.9	85.8	-19.4	2.00	2.00	0.00
1,823.2	15.04	68.46	1,814.5	36.1	91.3	-20.7	2.00	2.00	0.00
1,900.0	15.04	68.46	1,888.8	43.4	109.9	-24.8	0.00	0.00	0.00
2,000.0	15.04	68.46	1,985.3	52.9	134.0	-30.3	0.00	0.00	0.00
2,100.0	15.04	68.46	2,081.9	62.4	158.1	-35.8	0.00	0.00	0.00
2,200.0	15.04	68.46	2,178.5	72.0	182.3	-41.2	0.00	0.00	0.00
2,300.0	15.04	68.46	2,275.0	81.5	206.4	-46.7	0.00	0.00	0.00
2,400.0	15.04	68.46	2,371.6	91.0	230.6	-52.1	0.00	0.00	0.00
2,500.0	15.04	68.46	2,468.2	100.6	254.7	-57.6	0.00	0.00	0.00
2,600.0	15.04	68.46	2,564.8	110.1	278.9	-63.1	0.00	0.00	0.00
2,700.0	15.04	68.46	2,661.3	119.6	303.0	-68.5	0.00	0.00	0.00
2,800.0	15.04	68.46	2,757.9	129.2	327.1	-74.0	0.00	0.00	0.00
2,900.0	15.04	68.46	2,854.5	138.7	351.3	-79.4	0.00	0.00	0.00
3,000.0	15.04	68.46	2,951.1	148.2	375.4	-84.9	0.00	0.00	0.00
3,100.0	15.04	68.46	3,047.6	157.7	399.6	-90.4	0.00	0.00	0.00
3,200.0	15.04	68.46	3,144.2	167.3	423.7	-95.8	0.00	0.00	0.00
3,300.0	15.04	68.46	3,240.8	176.8	447.8	-101.3	0.00	0.00	0.00
3,400.0	15.04	68.46	3,337.4	186.3	472.0	-106.7	0.00	0.00	0.00
3,500.0	15.04	68.46	3,433.9	195.9	496.1	-112.2	0.00	0.00	0.00
3,600.0	15.04	68.46	3,530.5	205.4	520.3	-117.7	0.00	0.00	0.00
3,700.0	15.04	68.46	3,627.1	214.9	544.4	-123.1	0.00	0.00	0.00
3,800.0	15.04	68.46	3,723.6	224.5	568.6	-128.6	0.00	0.00	0.00
3,900.0	15.04	68.46	3,820.2	234.0	592.7	-134.0	0.00	0.00	0.00
4,000.0	15.04	68.46	3,916.8	243.5	616.8	-139.5	0.00	0.00	0.00
4,100.0	15.04	68.46	4,013.4	253.0	641.0	-145.0	0.00	0.00	0.00
4,200.0	15.04	68.46	4,109.9	262.6	665.1	-150.4	0.00	0.00	0.00
4,300.0	15.04	68.46	4,206.5	272.1	689.3	-155.9	0.00	0.00	0.00
4,400.0	15.04	68.46	4,303.1	281.6	713.4	-161.3	0.00	0.00	0.00
4,500.0	15.04	68.46	4,399.7	291.2	737.5	-166.8	0.00	0.00	0.00
4,600.0	15.04	68.46	4,496.2	300.7	761.7	-172.3	0.00	0.00	0.00
4,700.0	15.04	68.46	4,592.8	310.2	785.8	-177.7	0.00	0.00	0.00
4,800.0	15.04	68.46	4,689.4	319.8	810.0	-183.2	0.00	0.00	0.00
4,900.0	15.04	68.46	4,785.9	329.3	834.1	-188.6	0.00	0.00	0.00
5,000.0	15.04	68.46	4,882.5	338.8	858.2	-194.1	0.00	0.00	0.00
5,100.0	15.04	68.46	4,979.1	348.4	882.4	-199.6	0.00	0.00	0.00

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Well #743H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3377.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3377.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#743H	**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)
5,200.0	15.04	68.46	5,075.7	357.9	906.5	-205.0	0.00	0.00	0.00
5,300.0	15.04	68.46	5,172.2	367.4	930.7	-210.5	0.00	0.00	0.00
5,400.0	15.04	68.46	5,268.8	376.9	954.8	-215.9	0.00	0.00	0.00
5,500.0	15.04	68.46	5,365.4	386.5	979.0	-221.4	0.00	0.00	0.00
5,600.0	15.04	68.46	5,462.0	396.0	1,003.1	-226.8	0.00	0.00	0.00
5,700.0	15.04	68.46	5,558.5	405.5	1,027.2	-232.3	0.00	0.00	0.00
5,800.0	15.04	68.46	5,655.1	415.1	1,051.4	-237.8	0.00	0.00	0.00
5,900.0	15.04	68.46	5,751.7	424.6	1,075.5	-243.2	0.00	0.00	0.00
6,000.0	15.04	68.46	5,848.3	434.1	1,099.7	-248.7	0.00	0.00	0.00
6,100.0	15.04	68.46	5,944.8	443.7	1,123.8	-254.1	0.00	0.00	0.00
6,200.0	15.04	68.46	6,041.4	453.2	1,147.9	-259.6	0.00	0.00	0.00
6,300.0	15.04	68.46	6,138.0	462.7	1,172.1	-265.1	0.00	0.00	0.00
6,400.0	15.04	68.46	6,234.5	472.3	1,196.2	-270.5	0.00	0.00	0.00
6,500.0	15.04	68.46	6,331.1	481.8	1,220.4	-276.0	0.00	0.00	0.00
6,600.0	15.04	68.46	6,427.7	491.3	1,244.5	-281.4	0.00	0.00	0.00
6,700.0	15.04	68.46	6,524.3	500.8	1,268.7	-286.9	0.00	0.00	0.00
6,800.0	15.04	68.46	6,620.8	510.4	1,292.8	-292.4	0.00	0.00	0.00
6,900.0	15.04	68.46	6,717.4	519.9	1,316.9	-297.8	0.00	0.00	0.00
7,000.0	15.04	68.46	6,814.0	529.4	1,341.1	-303.3	0.00	0.00	0.00
7,100.0	15.04	68.46	6,910.6	539.0	1,365.2	-308.7	0.00	0.00	0.00
7,200.0	15.04	68.46	7,007.1	548.5	1,389.4	-314.2	0.00	0.00	0.00
7,300.0	15.04	68.46	7,103.7	558.0	1,413.5	-319.7	0.00	0.00	0.00
7,400.0	15.04	68.46	7,200.3	567.6	1,437.6	-325.1	0.00	0.00	0.00
7,425.0	15.04	68.46	7,224.5	569.9	1,443.7	-326.5	0.00	0.00	0.00
7,500.0	13.54	68.46	7,297.1	576.7	1,460.9	-330.4	2.00	-2.00	0.00
7,600.0	11.54	68.46	7,394.7	584.7	1,481.1	-334.9	2.00	-2.00	0.00
7,700.0	9.54	68.46	7,493.0	591.4	1,498.1	-338.8	2.00	-2.00	0.00
7,800.0	7.54	68.46	7,591.9	596.9	1,511.9	-341.9	2.00	-2.00	0.00
7,900.0	5.54	68.46	7,691.2	601.1	1,522.5	-344.3	2.00	-2.00	0.00
8,000.0	3.54	68.46	7,790.9	604.0	1,529.9	-346.0	2.00	-2.00	0.00
8,100.0	1.54	68.46	7,890.8	605.6	1,534.0	-346.9	2.00	-2.00	0.00
8,177.2	0.00	0.00	7,968.0	606.0	1,535.0	-347.1	2.00	-2.00	0.00
8,200.0	0.00	0.00	7,990.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
8,300.0	0.00	0.00	8,090.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
8,400.0	0.00	0.00	8,190.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
8,500.0	0.00	0.00	8,290.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
8,600.0	0.00	0.00	8,390.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
8,700.0	0.00	0.00	8,490.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
8,800.0	0.00	0.00	8,590.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
8,900.0	0.00	0.00	8,690.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
9,000.0	0.00	0.00	8,790.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
9,100.0	0.00	0.00	8,890.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
9,200.0	0.00	0.00	8,990.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
9,300.0	0.00	0.00	9,090.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
9,400.0	0.00	0.00	9,190.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
9,500.0	0.00	0.00	9,290.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
9,600.0	0.00	0.00	9,390.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
9,700.0	0.00	0.00	9,490.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
9,800.0	0.00	0.00	9,590.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
9,900.0	0.00	0.00	9,690.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
10,000.0	0.00	0.00	9,790.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
10,100.0	0.00	0.00	9,890.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
10,200.0	0.00	0.00	9,990.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
10,300.0	0.00	0.00	10,090.8	606.0	1,535.0	-347.1	0.00	0.00	0.00

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Well #743H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3377.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3377.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#743H	**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)
10,400.0	0.00	0.00	10,190.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
10,500.0	0.00	0.00	10,290.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
10,600.0	0.00	0.00	10,390.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
10,700.0	0.00	0.00	10,490.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
10,800.0	0.00	0.00	10,590.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
10,900.0	0.00	0.00	10,690.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
11,000.0	0.00	0.00	10,790.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
11,100.0	0.00	0.00	10,890.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
11,200.0	0.00	0.00	10,990.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
11,300.0	0.00	0.00	11,090.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
11,400.0	0.00	0.00	11,190.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
11,500.0	0.00	0.00	11,290.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
11,600.0	0.00	0.00	11,390.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
11,700.0	0.00	0.00	11,490.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
11,800.0	0.00	0.00	11,590.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
11,900.0	0.00	0.00	11,690.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
12,000.0	0.00	0.00	11,790.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
12,100.0	0.00	0.00	11,890.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
12,200.0	0.00	0.00	11,990.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
12,300.0	0.00	0.00	12,090.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
12,400.0	0.00	0.00	12,190.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
12,500.0	0.00	0.00	12,290.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
12,600.0	0.00	0.00	12,390.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
12,700.0	0.00	0.00	12,490.8	606.0	1,535.0	-347.1	0.00	0.00	0.00
12,765.7	0.00	0.00	12,556.5	606.0	1,535.0	-347.1	0.00	0.00	0.00
12,775.0	1.12	178.85	12,565.8	605.9	1,535.0	-347.0	12.00	12.00	0.00
12,800.0	4.12	178.85	12,590.8	604.8	1,535.0	-345.9	12.00	12.00	0.00
12,825.0	7.12	178.85	12,615.7	602.3	1,535.1	-343.5	12.00	12.00	0.00
12,850.0	10.12	178.85	12,640.4	598.6	1,535.1	-339.8	12.00	12.00	0.00
12,875.0	13.12	178.85	12,664.9	593.5	1,535.2	-334.8	12.00	12.00	0.00
12,900.0	16.12	178.85	12,689.0	587.2	1,535.4	-328.6	12.00	12.00	0.00
12,925.0	19.12	178.85	12,712.9	579.7	1,535.5	-321.1	12.00	12.00	0.00
12,950.0	22.12	178.85	12,736.3	570.9	1,535.7	-312.4	12.00	12.00	0.00
12,975.0	25.12	178.85	12,759.2	560.9	1,535.9	-302.4	12.00	12.00	0.00
12,986.1	26.46	178.85	12,769.2	556.0	1,536.0	-297.6	12.00	12.00	0.00
13,000.0	28.12	178.90	12,781.5	549.7	1,536.1	-291.4	12.00	12.00	0.33
13,025.0	31.12	178.97	12,803.2	537.3	1,536.4	-279.1	12.00	12.00	0.29
13,050.0	34.12	179.03	12,824.3	523.8	1,536.6	-265.8	12.00	12.00	0.24
13,075.0	37.12	179.08	12,844.6	509.3	1,536.8	-251.4	12.00	12.00	0.21
13,100.0	40.12	179.13	12,864.1	493.7	1,537.1	-236.0	12.00	12.00	0.18
13,125.0	43.12	179.17	12,882.8	477.1	1,537.3	-219.6	12.00	12.00	0.16
13,150.0	46.12	179.21	12,900.6	459.5	1,537.6	-202.2	12.00	12.00	0.14
13,175.0	49.12	179.24	12,917.5	441.0	1,537.8	-183.9	12.00	12.00	0.13
13,200.0	52.12	179.27	12,933.3	421.7	1,538.1	-164.8	12.00	12.00	0.12
13,225.0	55.12	179.29	12,948.1	401.6	1,538.3	-144.9	12.00	12.00	0.11
13,250.0	58.12	179.32	12,961.9	380.7	1,538.6	-124.3	12.00	12.00	0.10
13,275.0	61.12	179.34	12,974.5	359.2	1,538.8	-103.0	12.00	12.00	0.09
13,300.0	64.12	179.36	12,986.0	337.0	1,539.1	-81.0	12.00	12.00	0.09
13,325.0	67.12	179.39	12,996.4	314.2	1,539.3	-58.5	12.00	12.00	0.08
13,350.0	70.12	179.41	13,005.5	290.9	1,539.6	-35.5	12.00	12.00	0.08
13,375.0	73.12	179.43	13,013.3	267.2	1,539.8	-12.1	12.00	12.00	0.08
13,400.0	76.12	179.44	13,020.0	243.1	1,540.0	11.7	12.00	12.00	0.08
13,425.0	79.12	179.46	13,025.3	218.7	1,540.3	35.8	12.00	12.00	0.07
13,450.0	82.12	179.48	13,029.4	194.0	1,540.5	60.2	12.00	12.00	0.07

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Well #743H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3377.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3377.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#743H	**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)
13,475.0	85.12	179.50	13,032.2	169.2	1,540.7	84.8	12.00	12.00	0.07
13,500.0	88.12	179.52	13,033.7	144.2	1,540.9	109.4	12.00	12.00	0.07
13,515.6	90.00	179.53	13,033.9	128.6	1,541.1	124.9	12.00	12.00	0.07
13,600.0	90.00	179.53	13,033.9	44.2	1,541.8	208.2	0.00	0.00	0.00
13,700.0	90.00	179.53	13,033.9	-55.8	1,542.6	307.0	0.00	0.00	0.00
13,800.0	90.00	179.53	13,033.9	-155.8	1,543.4	405.8	0.00	0.00	0.00
13,900.0	90.00	179.53	13,033.9	-255.8	1,544.2	504.6	0.00	0.00	0.00
14,000.0	90.00	179.53	13,033.9	-355.8	1,545.1	603.3	0.00	0.00	0.00
14,100.0	90.00	179.53	13,033.9	-455.8	1,545.9	702.1	0.00	0.00	0.00
14,200.0	90.00	179.53	13,033.9	-555.7	1,546.7	800.9	0.00	0.00	0.00
14,300.0	90.00	179.53	13,033.9	-655.7	1,547.5	899.7	0.00	0.00	0.00
14,400.0	90.00	179.53	13,033.9	-755.7	1,548.4	998.5	0.00	0.00	0.00
14,500.0	90.00	179.53	13,033.9	-855.7	1,549.2	1,097.3	0.00	0.00	0.00
14,600.0	90.00	179.53	13,033.9	-955.7	1,550.0	1,196.1	0.00	0.00	0.00
14,700.0	90.00	179.53	13,033.9	-1,055.7	1,550.8	1,294.9	0.00	0.00	0.00
14,800.0	90.00	179.53	13,033.9	-1,155.7	1,551.7	1,393.7	0.00	0.00	0.00
14,900.0	90.00	179.53	13,033.9	-1,255.7	1,552.5	1,492.4	0.00	0.00	0.00
15,000.0	90.00	179.53	13,033.9	-1,355.7	1,553.3	1,591.2	0.00	0.00	0.00
15,100.0	90.00	179.53	13,033.9	-1,455.7	1,554.1	1,690.0	0.00	0.00	0.00
15,200.0	90.00	179.53	13,033.9	-1,555.7	1,555.0	1,788.8	0.00	0.00	0.00
15,300.0	90.00	179.53	13,033.9	-1,655.7	1,555.8	1,887.6	0.00	0.00	0.00
15,400.0	90.00	179.53	13,033.9	-1,755.7	1,556.6	1,986.4	0.00	0.00	0.00
15,500.0	90.00	179.53	13,033.9	-1,855.7	1,557.4	2,085.2	0.00	0.00	0.00
15,600.0	90.00	179.53	13,033.9	-1,955.7	1,558.3	2,184.0	0.00	0.00	0.00
15,700.0	90.00	179.53	13,033.9	-2,055.7	1,559.1	2,282.7	0.00	0.00	0.00
15,800.0	90.00	179.53	13,033.9	-2,155.7	1,559.9	2,381.5	0.00	0.00	0.00
15,900.0	90.00	179.53	13,033.9	-2,255.7	1,560.7	2,480.3	0.00	0.00	0.00
16,000.0	90.00	179.53	13,033.9	-2,355.7	1,561.6	2,579.1	0.00	0.00	0.00
16,100.0	90.00	179.53	13,033.9	-2,455.7	1,562.4	2,677.9	0.00	0.00	0.00
16,200.0	90.00	179.53	13,033.9	-2,555.7	1,563.2	2,776.7	0.00	0.00	0.00
16,300.0	90.00	179.53	13,033.9	-2,655.7	1,564.0	2,875.5	0.00	0.00	0.00
16,400.0	90.00	179.53	13,033.9	-2,755.7	1,564.9	2,974.3	0.00	0.00	0.00
16,500.0	90.00	179.53	13,033.9	-2,855.7	1,565.7	3,073.1	0.00	0.00	0.00
16,600.0	90.00	179.53	13,033.9	-2,955.7	1,566.5	3,171.8	0.00	0.00	0.00
16,700.0	90.00	179.53	13,033.9	-3,055.7	1,567.3	3,270.6	0.00	0.00	0.00
16,800.0	90.00	179.53	13,033.9	-3,155.7	1,568.2	3,369.4	0.00	0.00	0.00
16,900.0	90.00	179.53	13,033.9	-3,255.7	1,569.0	3,468.2	0.00	0.00	0.00
17,000.0	90.00	179.53	13,033.9	-3,355.7	1,569.8	3,567.0	0.00	0.00	0.00
17,100.0	90.00	179.53	13,033.9	-3,455.7	1,570.6	3,665.8	0.00	0.00	0.00
17,200.0	90.00	179.53	13,033.9	-3,555.6	1,571.5	3,764.6	0.00	0.00	0.00
17,300.0	90.00	179.53	13,033.9	-3,655.6	1,572.3	3,863.4	0.00	0.00	0.00
17,400.0	90.00	179.53	13,033.9	-3,755.6	1,573.1	3,962.2	0.00	0.00	0.00
17,500.0	90.00	179.53	13,033.9	-3,855.6	1,573.9	4,060.9	0.00	0.00	0.00
17,600.0	90.00	179.53	13,033.9	-3,955.6	1,574.8	4,159.7	0.00	0.00	0.00
17,700.0	90.00	179.53	13,033.9	-4,055.6	1,575.6	4,258.5	0.00	0.00	0.00
17,800.0	90.00	179.53	13,034.0	-4,155.6	1,576.4	4,357.3	0.00	0.00	0.00
17,900.0	90.00	179.53	13,034.0	-4,255.6	1,577.2	4,456.1	0.00	0.00	0.00
18,000.0	90.00	179.53	13,034.0	-4,355.6	1,578.1	4,554.9	0.00	0.00	0.00
18,100.0	90.00	179.53	13,034.0	-4,455.6	1,578.9	4,653.7	0.00	0.00	0.00
18,200.0	90.00	179.53	13,034.0	-4,555.6	1,579.7	4,752.5	0.00	0.00	0.00
18,300.0	90.00	179.53	13,034.0	-4,655.6	1,580.5	4,851.2	0.00	0.00	0.00
18,400.0	90.00	179.53	13,034.0	-4,755.6	1,581.4	4,950.0	0.00	0.00	0.00
18,500.0	90.00	179.53	13,034.0	-4,855.6	1,582.2	5,048.8	0.00	0.00	0.00
18,600.0	90.00	179.53	13,034.0	-4,955.6	1,583.0	5,147.6	0.00	0.00	0.00

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Well #743H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3377.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3377.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#743H	**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)
18,700.0	90.00	179.53	13,034.0	-5,055.6	1,583.8	5,246.4	0.00	0.00	0.00
18,800.0	90.00	179.53	13,034.0	-5,155.6	1,584.7	5,345.2	0.00	0.00	0.00
18,900.0	90.00	179.53	13,034.0	-5,255.6	1,585.5	5,444.0	0.00	0.00	0.00
19,000.0	90.00	179.53	13,034.0	-5,355.6	1,586.3	5,542.8	0.00	0.00	0.00
19,100.0	90.00	179.53	13,034.0	-5,455.6	1,587.1	5,641.6	0.00	0.00	0.00
19,200.0	90.00	179.53	13,034.0	-5,555.6	1,588.0	5,740.3	0.00	0.00	0.00
19,300.0	90.00	179.53	13,034.0	-5,655.6	1,588.8	5,839.1	0.00	0.00	0.00
19,400.0	90.00	179.53	13,034.0	-5,755.6	1,589.6	5,937.9	0.00	0.00	0.00
19,500.0	90.00	179.53	13,034.0	-5,855.6	1,590.4	6,036.7	0.00	0.00	0.00
19,600.0	90.00	179.53	13,034.0	-5,955.6	1,591.3	6,135.5	0.00	0.00	0.00
19,700.0	90.00	179.53	13,034.0	-6,055.6	1,592.1	6,234.3	0.00	0.00	0.00
19,800.0	90.00	179.53	13,034.0	-6,155.6	1,592.9	6,333.1	0.00	0.00	0.00
19,900.0	90.00	179.53	13,034.0	-6,255.6	1,593.7	6,431.9	0.00	0.00	0.00
20,000.0	90.00	179.53	13,034.0	-6,355.6	1,594.6	6,530.7	0.00	0.00	0.00
20,100.0	90.00	179.53	13,034.0	-6,455.5	1,595.4	6,629.4	0.00	0.00	0.00
20,200.0	90.00	179.53	13,034.0	-6,555.5	1,596.2	6,728.2	0.00	0.00	0.00
20,300.0	90.00	179.53	13,034.0	-6,655.5	1,597.0	6,827.0	0.00	0.00	0.00
20,400.0	90.00	179.53	13,034.0	-6,755.5	1,597.9	6,925.8	0.00	0.00	0.00
20,500.0	90.00	179.53	13,034.0	-6,855.5	1,598.7	7,024.6	0.00	0.00	0.00
20,600.0	90.00	179.53	13,034.0	-6,955.5	1,599.5	7,123.4	0.00	0.00	0.00
20,700.0	90.00	179.53	13,034.0	-7,055.5	1,600.3	7,222.2	0.00	0.00	0.00
20,800.0	90.00	179.53	13,034.0	-7,155.5	1,601.2	7,321.0	0.00	0.00	0.00
20,900.0	90.00	179.53	13,034.0	-7,255.5	1,602.0	7,419.7	0.00	0.00	0.00
21,000.0	90.00	179.53	13,034.0	-7,355.5	1,602.8	7,518.5	0.00	0.00	0.00
21,100.0	90.00	179.53	13,034.0	-7,455.5	1,603.6	7,617.3	0.00	0.00	0.00
21,200.0	90.00	179.53	13,034.0	-7,555.5	1,604.5	7,716.1	0.00	0.00	0.00
21,300.0	90.00	179.53	13,034.0	-7,655.5	1,605.3	7,814.9	0.00	0.00	0.00
21,400.0	90.00	179.53	13,034.0	-7,755.5	1,606.1	7,913.7	0.00	0.00	0.00
21,500.0	90.00	179.53	13,034.0	-7,855.5	1,606.9	8,012.5	0.00	0.00	0.00
21,600.0	90.00	179.53	13,034.0	-7,955.5	1,607.8	8,111.3	0.00	0.00	0.00
21,700.0	90.00	179.53	13,034.0	-8,055.5	1,608.6	8,210.1	0.00	0.00	0.00
21,800.0	90.00	179.53	13,034.0	-8,155.5	1,609.4	8,308.8	0.00	0.00	0.00
21,900.0	90.00	179.53	13,034.0	-8,255.5	1,610.2	8,407.6	0.00	0.00	0.00
22,000.0	90.00	179.53	13,034.0	-8,355.5	1,611.1	8,506.4	0.00	0.00	0.00
22,100.0	90.00	179.53	13,034.0	-8,455.5	1,611.9	8,605.2	0.00	0.00	0.00
22,200.0	90.00	179.53	13,034.0	-8,555.5	1,612.7	8,704.0	0.00	0.00	0.00
22,300.0	90.00	179.53	13,034.0	-8,655.5	1,613.5	8,802.8	0.00	0.00	0.00
22,400.0	90.00	179.53	13,034.0	-8,755.5	1,614.4	8,901.6	0.00	0.00	0.00
22,500.0	90.00	179.53	13,034.0	-8,855.5	1,615.2	9,000.4	0.00	0.00	0.00
22,600.0	90.00	179.53	13,034.0	-8,955.5	1,616.0	9,099.1	0.00	0.00	0.00
22,700.0	90.00	179.53	13,034.0	-9,055.5	1,616.8	9,197.9	0.00	0.00	0.00
22,800.0	90.00	179.53	13,034.0	-9,155.5	1,617.7	9,296.7	0.00	0.00	0.00
22,900.0	90.00	179.53	13,034.0	-9,255.5	1,618.5	9,395.5	0.00	0.00	0.00
23,000.0	90.00	179.53	13,034.0	-9,355.4	1,619.3	9,494.3	0.00	0.00	0.00
23,100.0	90.00	179.53	13,034.0	-9,455.4	1,620.1	9,593.1	0.00	0.00	0.00
23,200.0	90.00	179.53	13,034.0	-9,555.4	1,621.0	9,691.9	0.00	0.00	0.00
23,300.0	90.00	179.53	13,034.0	-9,655.4	1,621.8	9,790.7	0.00	0.00	0.00
23,400.0	90.00	179.53	13,034.0	-9,755.4	1,622.6	9,889.5	0.00	0.00	0.00
23,447.6	90.00	179.53	13,034.0	-9,803.0	1,623.0	9,936.4	0.00	0.00	0.00

Planning Report

Database:	EDT_18	**Local Co-ordinate Reference:**	Well #743H
Company:	Midland	**TVD Reference:**	kb = 26' @ 3377.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	kb = 26' @ 3377.0usft
Site:	Wild Weasel 22 Fed Com	**North Reference:**	Grid
Well:	#743H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1 RT		

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(Wild Weasel 22 Fe - plan hits target center - Point	0.00	0.00	12,556.5	606.0	1,535.0	409,641.00	813,921.00	32° 7' 23.233 N	103° 27' 10.204 W
FTP(Wild Weasel 22 Fe - plan hits target center - Point	0.00	0.00	12,769.2	556.0	1,536.0	409,591.00	813,922.00	32° 7' 22.739 N	103° 27' 10.197 W
PBHL(Wild Weasel 22 F - plan hits target center - Point	0.00	0.00	13,034.0	-9,803.0	1,623.0	399,232.00	814,009.00	32° 5' 40.228 N	103° 27' 10.169 W

eog resources

Lea County, NM (NAD 83 NME)

Wild Weasel 22 Fed Com #743H

Plan #0.1 RT

Azimuths to Grid North
True North: -0.47°
Magnetic North: 5.67°

Magnetic Field
Strength: 46888.8nT
Dip Angle: 59.66°
Date: 3/5/2026
Model: IGRF2025

To convert a Magnetic Direction to a Grid Direction, Add 5.67°
To convert a Magnetic Direction to a True Direction, Add 6.13° East
To convert a True Direction to a Grid Direction, Subtract 0.47°

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: #743H

3351.0
kb = 26' @ 3377.0usft

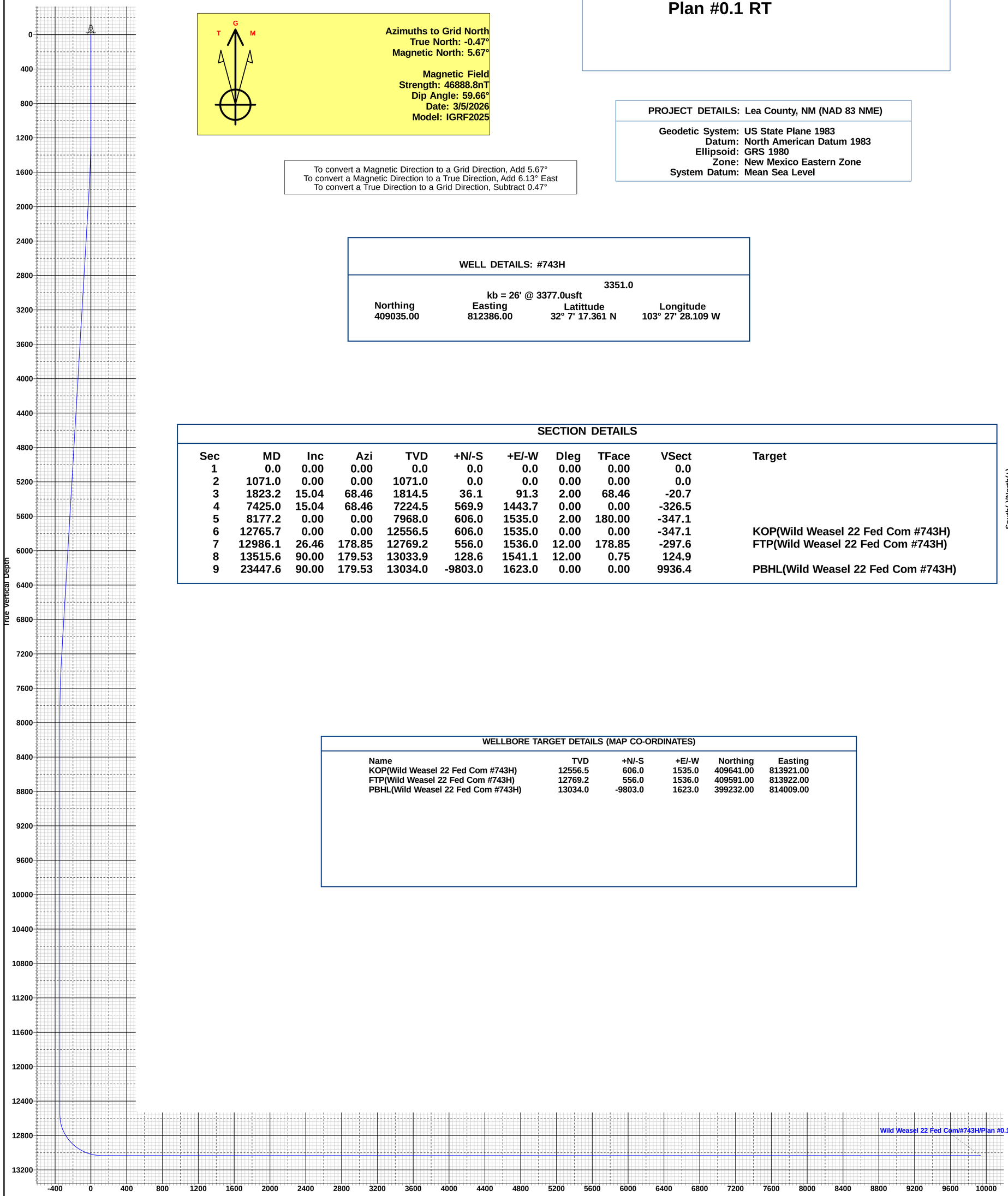
Northing	Easting	Latittude	Longitude
409035.00	812386.00	32° 7' 17.361 N	103° 27' 28.109 W

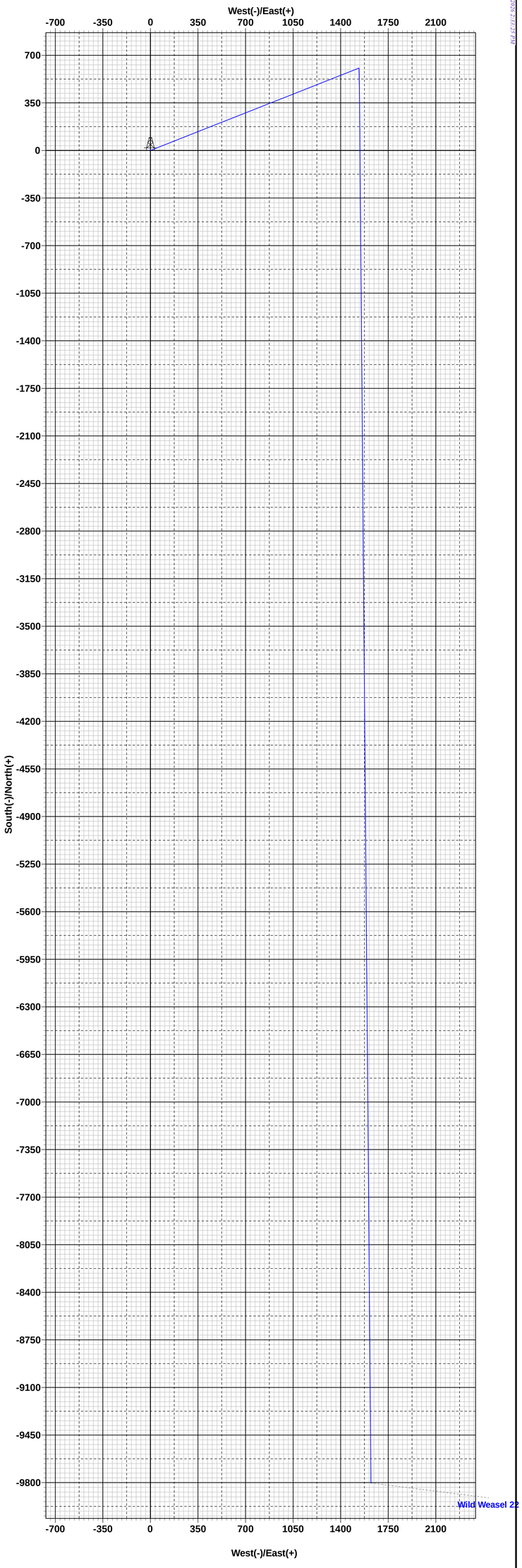
SECTION DETAILS

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	1071.0	0.00	0.00	1071.0	0.0	0.0	0.00	0.00	0.0	
3	1823.2	15.04	68.46	1814.5	36.1	91.3	2.00	68.46	-20.7	
4	7425.0	15.04	68.46	7224.5	569.9	1443.7	0.00	0.00	-326.5	
5	8177.2	0.00	0.00	7968.0	606.0	1535.0	2.00	180.00	-347.1	
6	12765.7	0.00	0.00	12556.5	606.0	1535.0	0.00	0.00	-347.1	KOP(Wild Weasel 22 Fed Com #743H)
7	12986.1	26.46	178.85	12769.2	556.0	1536.0	12.00	178.85	-297.6	FTP(Wild Weasel 22 Fed Com #743H)
8	13515.6	90.00	179.53	13033.9	128.6	1541.1	12.00	0.75	124.9	
9	23447.6	90.00	179.53	13034.0	-9803.0	1623.0	0.00	0.00	9936.4	PBHL(Wild Weasel 22 Fed Com #743H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP(Wild Weasel 22 Fed Com #743H)	12556.5	606.0	1535.0	409641.00	813921.00
FTP(Wild Weasel 22 Fed Com #743H)	12769.2	556.0	1536.0	409591.00	813922.00
PBHL(Wild Weasel 22 Fed Com #743H)	13034.0	-9803.0	1623.0	399232.00	814009.00





Lea County, NM (NAD 83 NME)
Wild Weasel 22 Fed Com
#743H
OH
Plan #0.1 RT
16:07, March 05 2026

eog resources

Master Variance Document

Table of Contents

- BOPE Break Test (3/25/2025)
- Offline Surface/Intermediate Cement (8/15/2023)
- Intermediate Bradenhead Cement (Deep Targets) (8/15/2023)
- Wolfcamp Intermediate Casing Setpoint (6/26/2024)
- Offline Production Cement (11/12/2024)
- Production Bradenhead Cement (8/9/2024)
- Salt Section Annular Clearance (11/8/2022)

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BOPE Break Test Variance

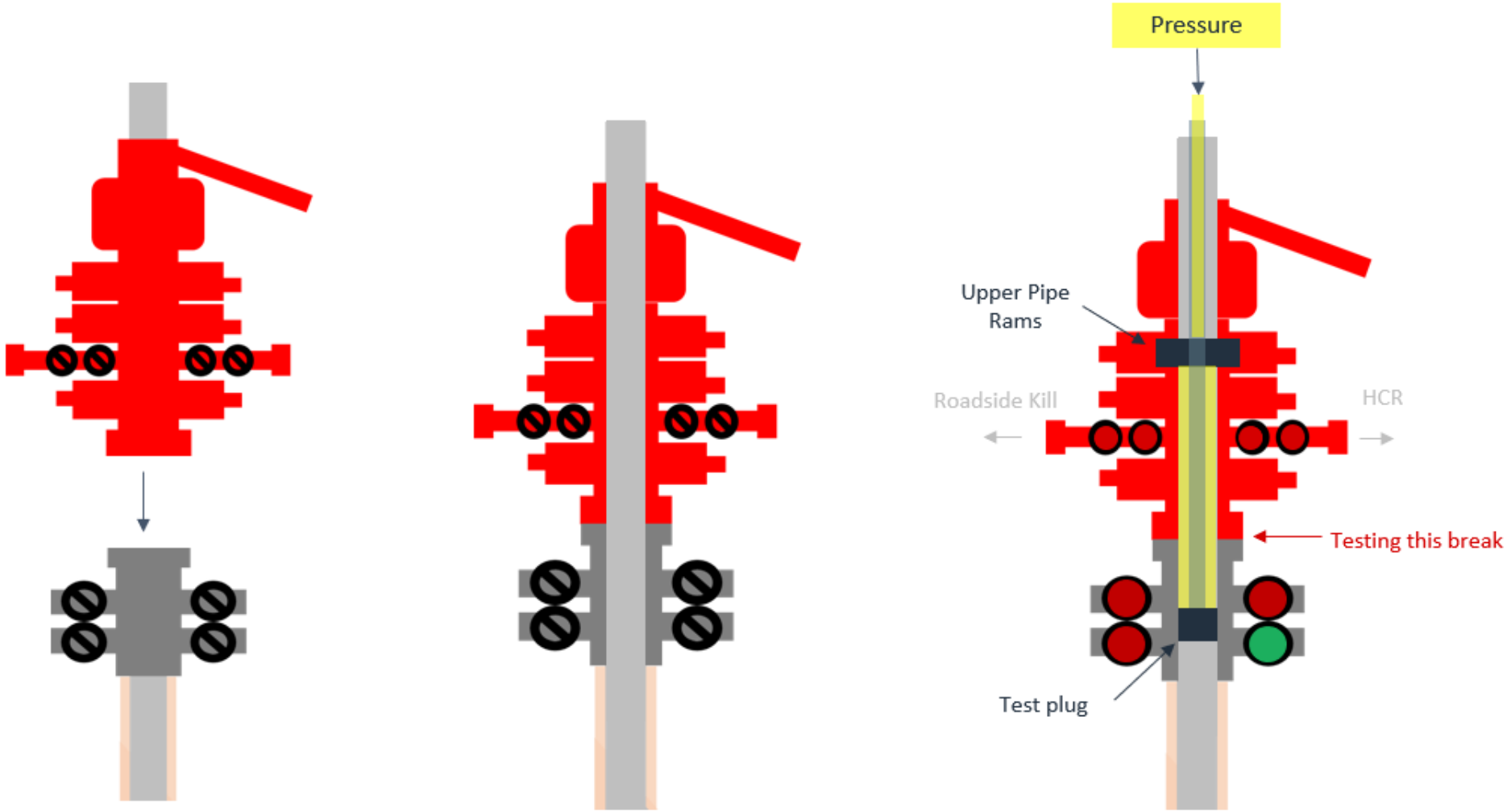
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EOG BOPE Break Test Variance (Intervals 5M MASP or less)

EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards for well control equipment testing of ECFR Title 43 Part 3172.6(b)(9)(iv) 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.**
- **Break-test only available for the Base of the Wolfcamp or shallower**
  - If anything out of the ordinary is observed during drilling, tripping or casing running operations in the production hole section, break testing will not be performed in the subsequent well's production hole section.
  - Furthermore, break testing in the production hole section will not be performed if offset frac operations are observed within 1 mile and within the same producing horizon.
- **Each rig requesting the break-test variance is capable of picking up the BOP without damaging components using winches, following API Standard 53, Well Control Equipment Systems for Drilling Wells (Fifth edition, December 2018, Annex C. Table C.4) which recognizes break testing as an acceptable practice.**
- **Function tests will be performed on the following BOP elements:**
  - Annular → during each full BOPE test and at least weekly
  - Pipe Rams → Every trip and on trip ins where FIT required
  - Blind Rams → Every trip
- **Break testing BOP and BOPE coupled with batch drilling operations and option to offline cement and/or remediate (if needed) any surface, intermediate or production 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.**

Break Test Diagram (Test Joint)



Steps

1. Set plug in with test joint wellhead (lower barrier)
2. Close Upper Pipe Rams (upper barrier)
3. Close roadside kill
4. Close HCR
5. Open wellhead valves below test plug to ensure if leak past test plug, pressure won't be applied to wellbore
6. Tie BOP testers high pressure line to top of test joint
7. Pressure up to test break
8. Bleed test pressure from BOP testing unit

Offline Surface + Intermediate Variance

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Offline Surface + Intermediate Cement

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.

Offline Surface + Intermediate Cement

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.

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Offline Surface + Intermediate Cement

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.

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Offline Surface + Intermediate Cement

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.

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Offline Surface + Intermediate Cement

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

General Procedure While Cementing

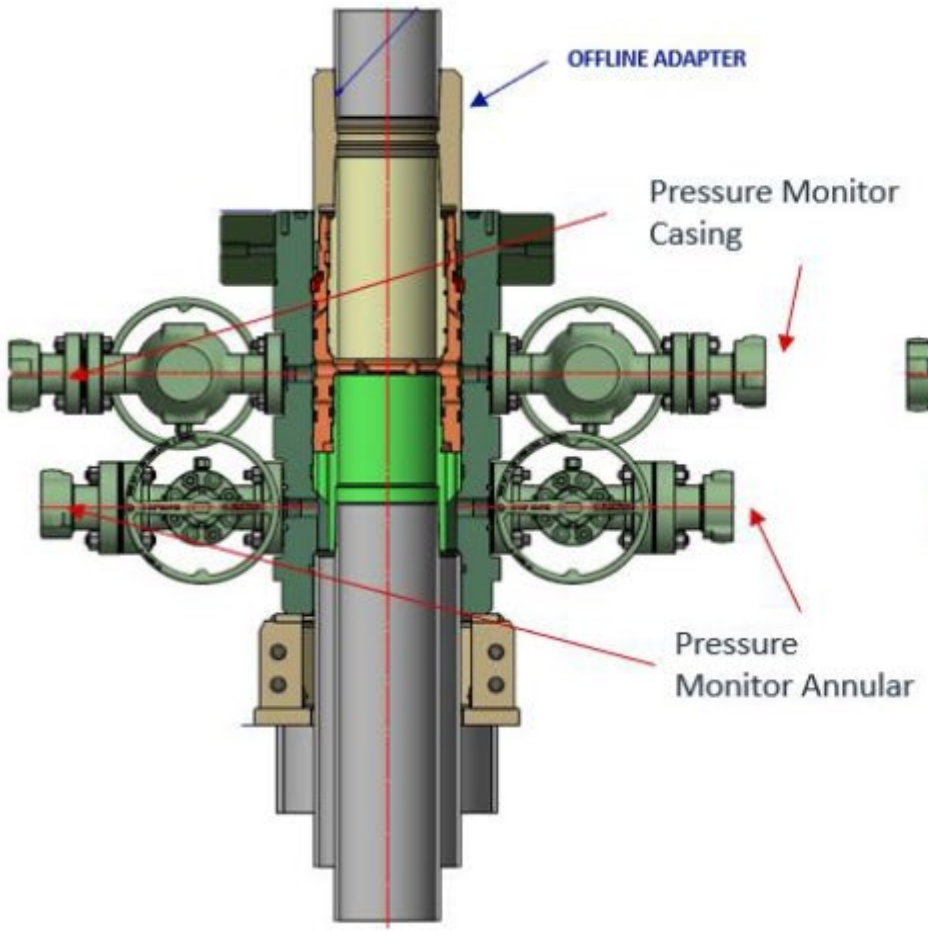
1. Sound alarm (alert crew).
2. Shut down pumps.
3. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
4. Confirm shut-in.
5. Notify tool pusher/company representative.
6. Open rig choke and begin pumping again taking returns through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

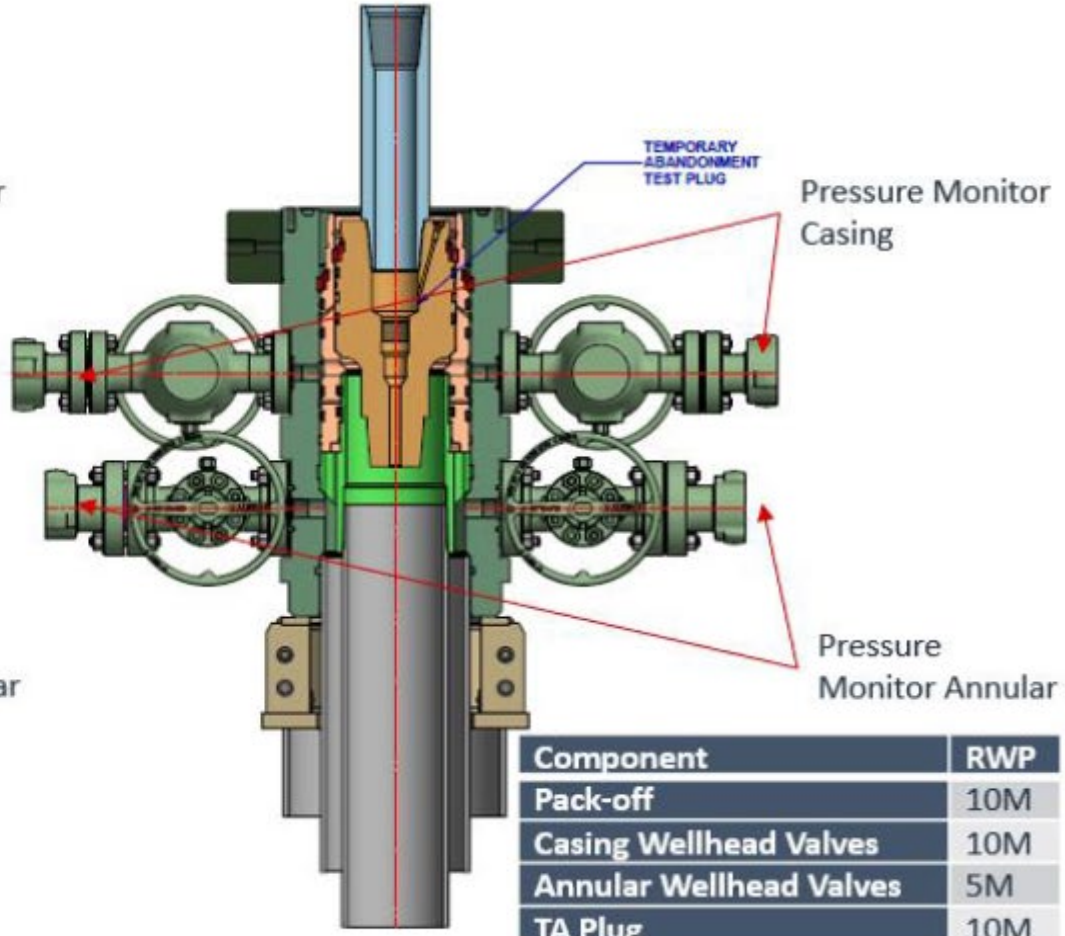
General Procedure After Cementing

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

Offline Surface + Intermediate Cement

Figure 1: Cameron TA Plug and Offline Adapter Schematic



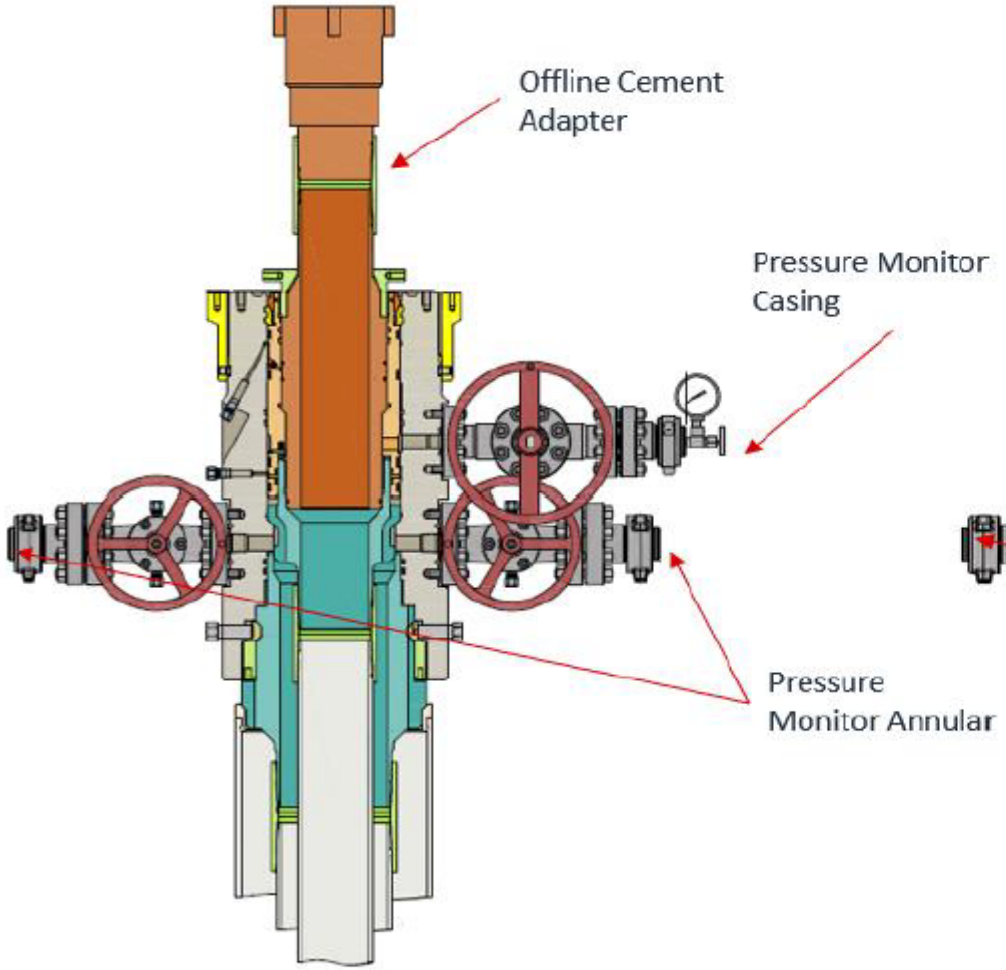


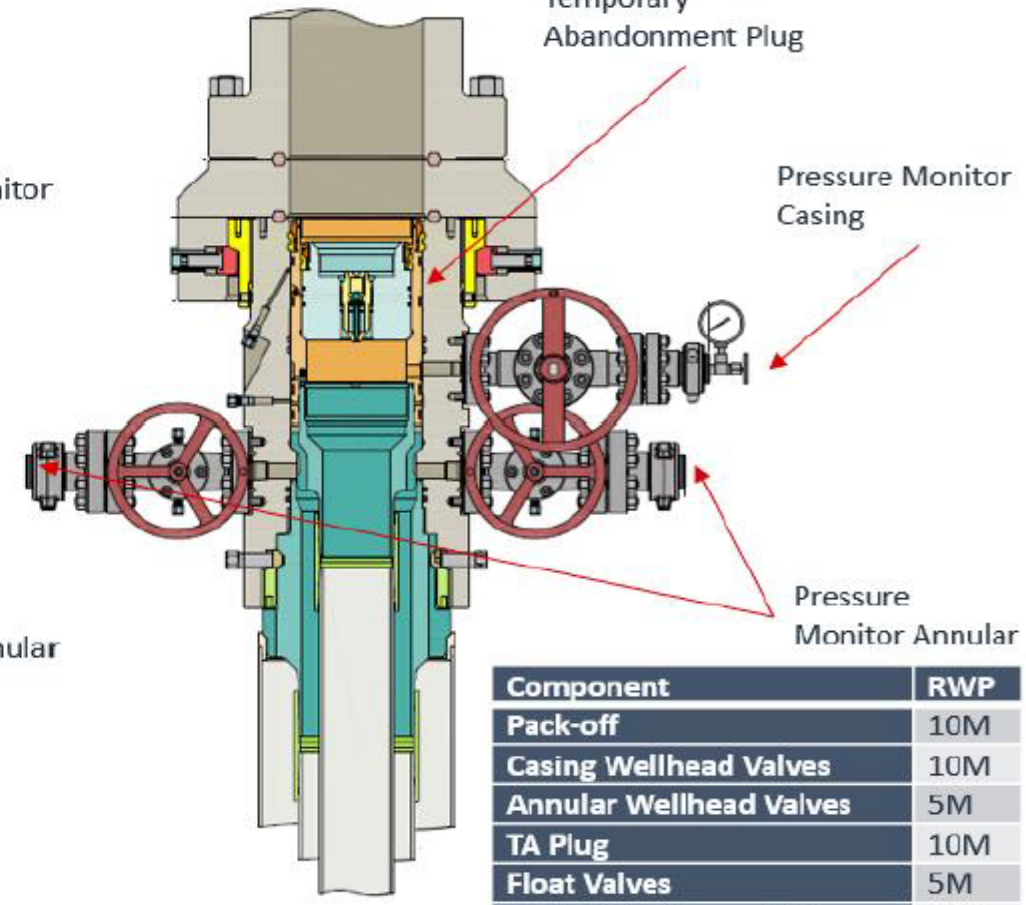
Component	RWP
Pack-off	10M
Casing Wellhead Valves	10M
Annular Wellhead Valves	5M
TA Plug	10M
Float Valves	5M
2" 1502 Lo-Torque Valves	15M

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Offline Surface + Intermediate Cement

Figure 2: Cactus TA Plug and Offline Adapter Schematic

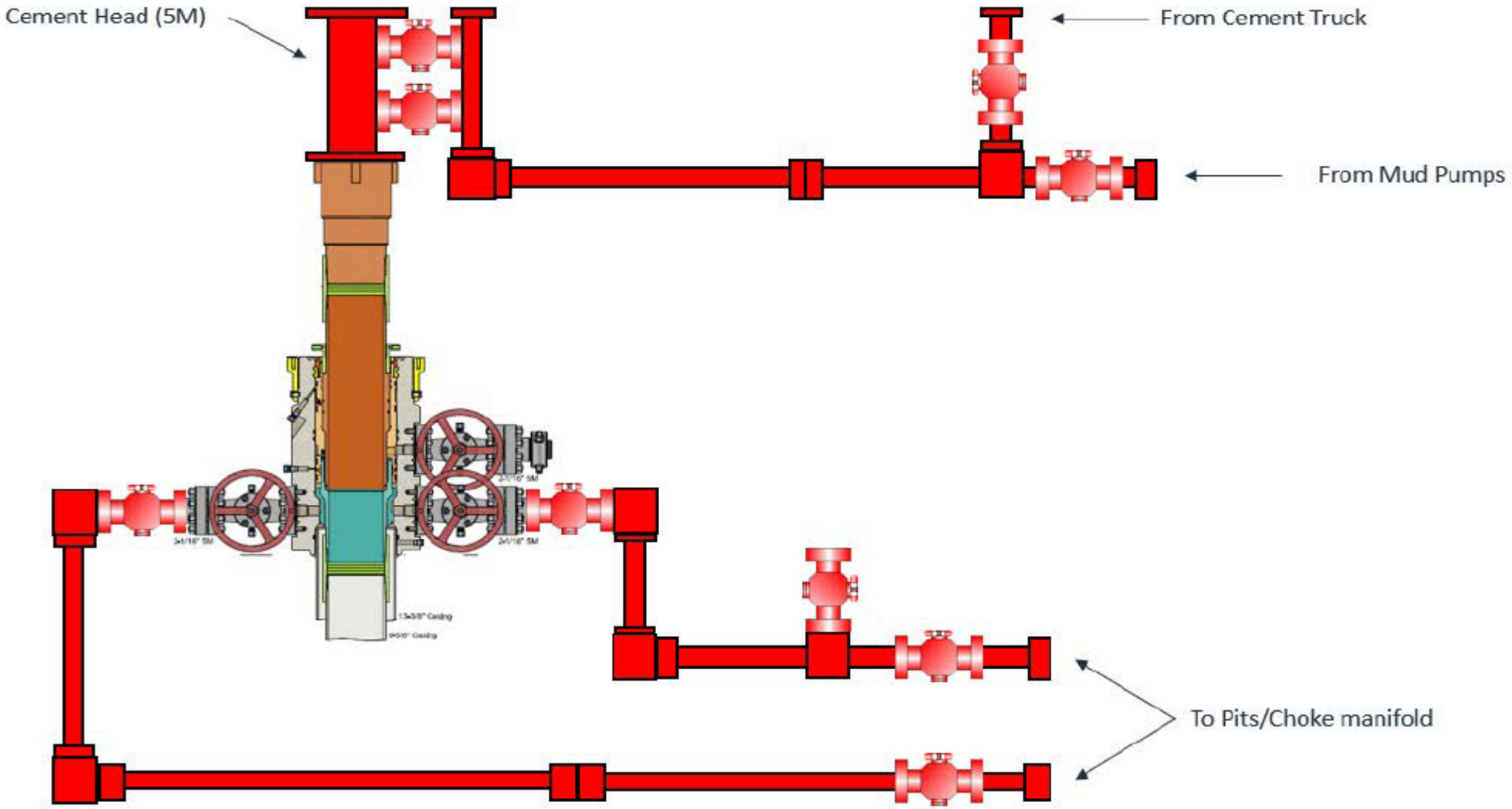




Component	RWP
Pack-off	10M
Casing Wellhead Valves	10M
Annular Wellhead Valves	5M
TA Plug	10M
Float Valves	5M
2" 1502 Lo-Torque Valves	15M

Offline Surface + Intermediate Cement

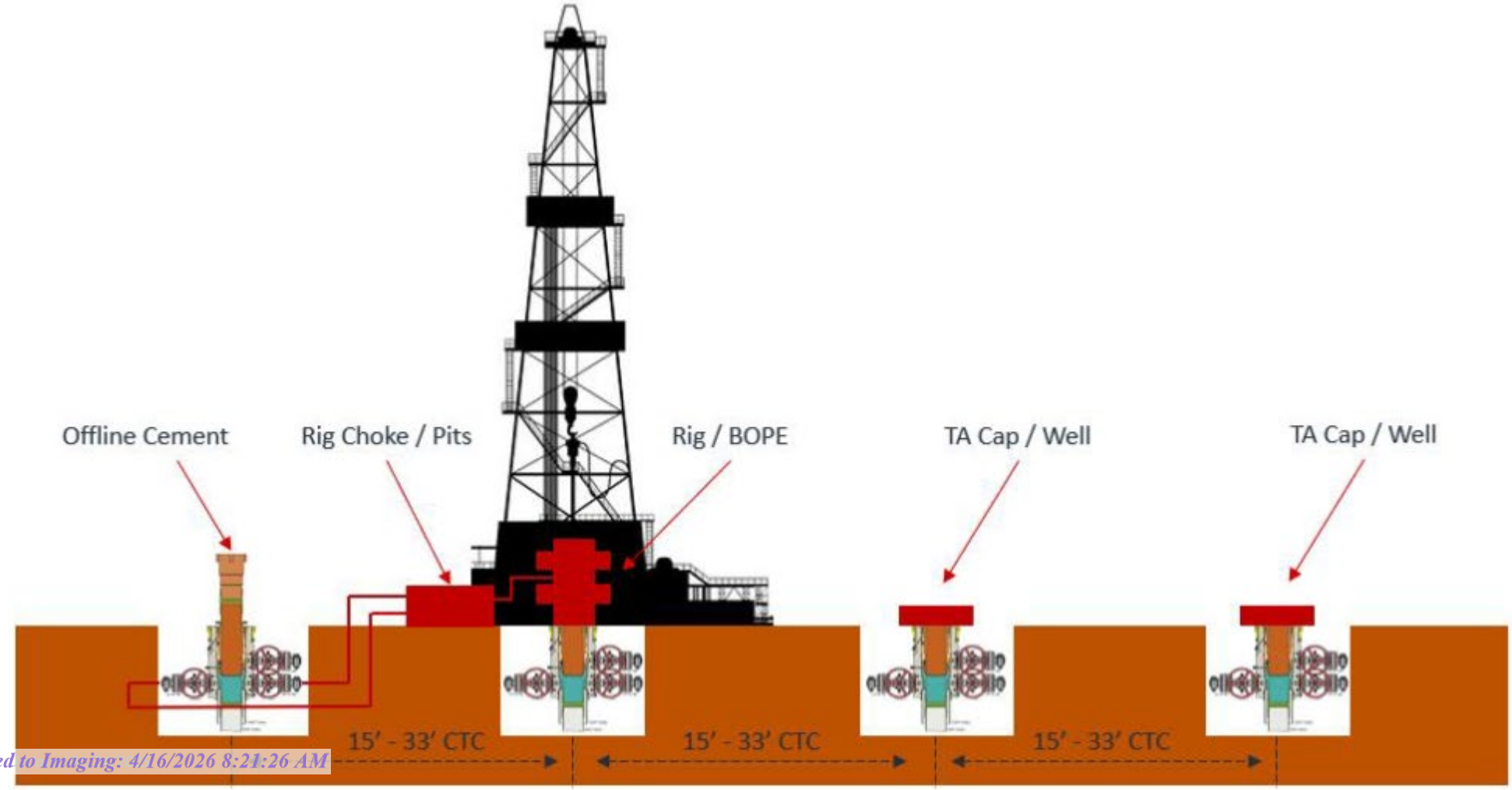
Figure 3: Back Yard Rig Up



All Lines 10M rated working pressure

Offline Surface + Intermediate Cement

Figure 4: Rig Placement Diagram



Intermediate Bradenhead Cement Variance

Intermediate Bradenhead Cement

Deep Target Intermediate Bradenhead:
EOG requests variance from minimum standards to pump a two stage cement job on the intermediate casing string when set below the Delaware Mountain Group with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon and the second stage bradenhead squeezed to be performed at a minimum of 50% of OH excess (typically increased to ~1,000 sacks) with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of Class C/H cement + additives (2.30 yld, 12.91 ppg) will be executed as a contingency. Top of cement will be verified by Echo-meter.

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.

Wolfcamp Intermediate Casing Setpoint

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Intermediate Bradenhead Cement

EOG Resources Inc. (EOG) requests a variance to set the intermediate casing shoe in the Bone Spring formation OR the Wolfcamp formation, depending on depletion in the area and well conditions. EOG will monitor the well and ensure the well is static before casing operations begin.

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Offline Production Cement Variance

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EOG Offline Production Checklist

Offline Checklist

All items below must be met. If not, the production cement will be done online.

1. **Offline production cement jobs are applicable for the Base of the Wolfcamp or shallower.**
2. **Nothing out of the ordinary observed during drilling, tripping, or casing running operations in the Production Hole Section.**
3. **Casing must be landed with Hanger.**
4. **EOG Company Man and Superintendent with Well Control certification must be present to monitor returns.**
5. **EOG Cement Advisor must be present to oversee the Cement Job.**
6. **Rig Manager is responsible for walking the rig to the next well.**
7. **The BOP will *NOT* be nippled down if:**
   a) **ANY** barrier fails to test.
   b) **ANY** offset frac operations are observed within 1 mile and within the same producing horizon.
8. **After all barriers test and the BLM has been notified, the BOP may be nippled down to proceed with offline operations.**
9. **EOG will not Drill out of the next well until Cement Operations have concluded on the offline well.**

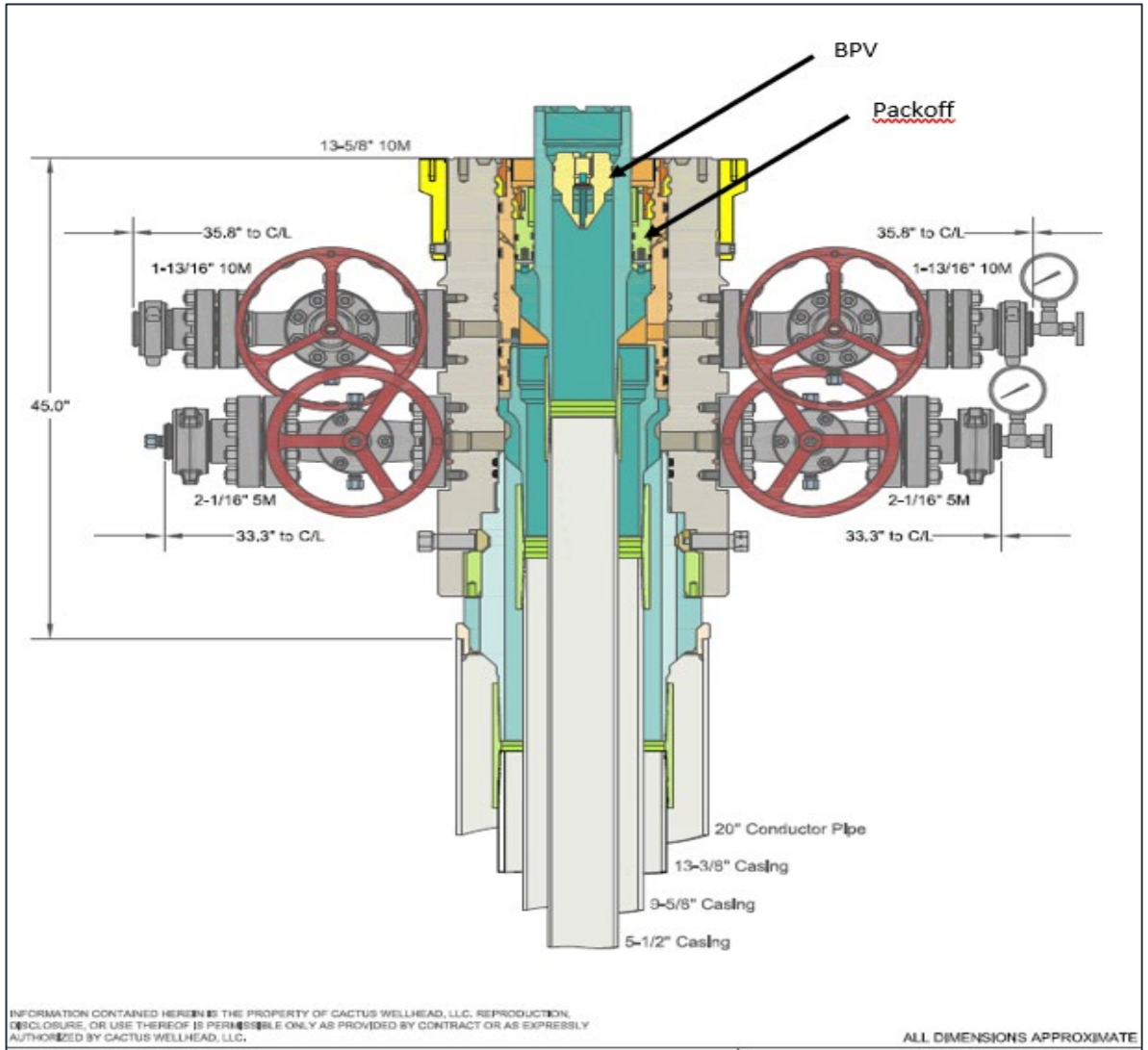
Offline Procedure

1. Run casing as per normal operations. Review EOG Offline Requirements Checklist, if the well is a candidate for Offline Cement on the Production continue following this procedure. Conduct negative pressure test while running casing and confirm integrity of the float equipment back pressure valves.
   a. Float equipment is equipped with two back pressure valves rated to 15,000 psi.
2. Land production casing on mandrel hanger.
   a. If casing is unable to be landed with a mandrel hanger, then the casing will be cemented online.
   b. 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 rated to 10,000 psi. Pressure test same to 10,000 psi.
   c. 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 10,000 psi. Remove landing joint.
3. Install back pressure valve in the casing for a 3rd casing barrier.
   a. Back pressure valve rated to a minimum of 10,000 psi.
4. With the well Secured and BLM notified; Nipple down BOP and secure on hydraulic carrier or cradle and Skid/Walk rig to next well on pad.
   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.
   b. Note, EOG Company Man and Cement Advisor will oversee Cementing Operations while Rig Manager walks the rig and nipples up the BOP.
   c. Note, EOG will not drill out of the subsequent well until after plug bump.
5. Install 10M Gate Valve, with Wellhead Adapter.
   a. This creates an additional barrier on the annulus and inside the casing.
   b. Gate valve rated to a minimum of 10,000 psi.
6. Test connection between Wellhead Adapter seals against hanger neck and ring gasket to 10,000 psi.
7. Remove backpressure valve from the casing.
8. Rig up cement head and cementing lines.
9. After rig up of cement head and cement lines, and confirmation of the annular barriers and casing barriers, notify the BLM with intent to proceed offline cementing.
10. Perform cement job.
11. *Note* – Procedure continued on the next page.

Offline Procedure

12. If an influx is noted during the Cement Job:
    a. It is the Company Man and Superintendent's responsibility to maintain well control.
    b. The aux manifold will be redirected to the rig's chokes.
    c. Backpressure will be held on the well with the chokes to ensure well control is maintained through the remainder of the cement job while circulating out the influx.
    d. If annular surface pressure approaches 90% tested pressure of the manifold or if circulating the influx out with the cementing pumps is not feasible, the well can be secured by closing the casing valves (10M).
    e. Once cement is in place, we will close the casing valves and confirm the well is static and floats are holding.
    f. If the floats fail, the gate valve (10M) or cement head (10M) can be closed to secure the well.
13. Confirm well is static and floats are holding after cement job.
14. Remove cement head.
15. Install back pressure valve.
16. Remove 10M Gate Valve and Wellhead Adapter.
17. Install night cap with pressure gauge for monitoring.
18. Test night cap to 5,000 psi.

Offline Barrier Overview



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ALL DIMENSIONS APPROXIMATE

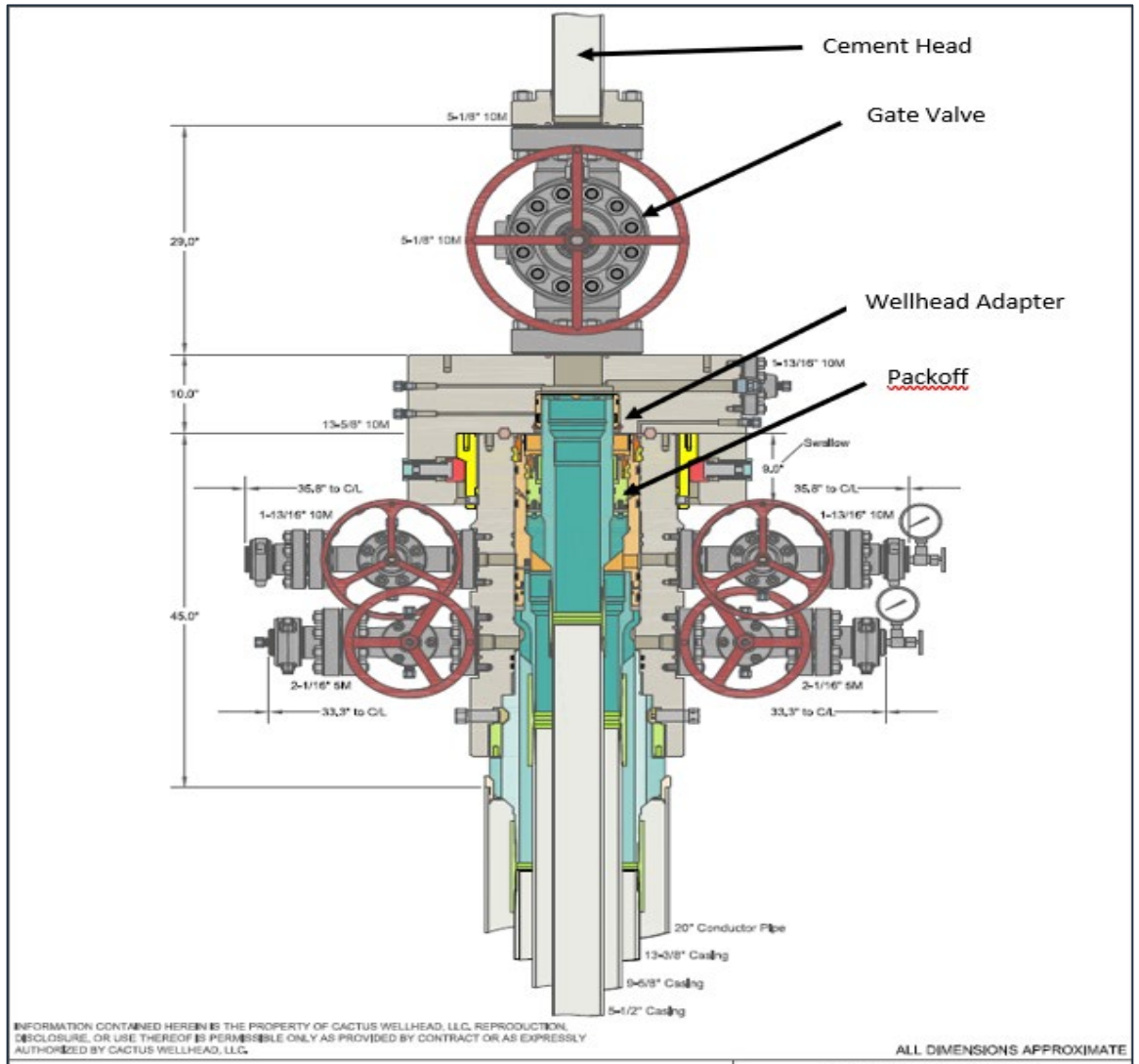
CACTUS WELLHEAD LLC	EOG RESOURCES PERMIAN		
13-3/8" x 9-5/8" x 5-1/2" MBU-3T-CFL-DBLO-SF Wellhead System	DRAWN	DLE	28AUG19
With Double Locking Lower Flange, Back Pressure Valve	APPRV		
And 13-3/8", 9-5/8" & 5-1/2" Pin Bottom Mandrel Casing Hangers	DRAWING NO.	SDT-2297-2	

Barriers in Place during removal of BOP		
Operation	Casing	Annulus
Nippling Down BOP	1. BPV 2. Hydrostatic Barrier 3. Float Valves	1. Hydrostatic Barrier 2. Mechanical 10M Packoff

Barriers in Place during Offline Cementing of Production Casing		
Operation	Casing	Annulus
Pull BPV	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical Packoff 3. 10M Wellhead Adapter
Install Cement Head	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Cement Job	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve 4. Cement Head	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Remove Cement Head	1. Float Valves 2. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Install BPV	1. Float Valves 2. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Remove 10M Gate Valve	1. Float Valves 2. BPV	1. Hydrostatic Barrier 2. Mechanical 10M Packoff
Nipple Up TA Cap	1. Float Valves 2. BPV	1. Hydrostatic Barrier 2. Mechanical 10M Packoff

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Offline Barrier Overview



Barriers in Place during removal of BOP		
Operation	Casing	Annulus
Nippling Down BOP	1. BPV 2. Hydrostatic Barrier 3. Float Valves	1. Hydrostatic Barrier 2. Mechanical 10M Packoff

Barriers in Place during Offline Cementing of Production Casing		
Operation	Casing	Annulus
Pull BPV	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical Packoff 3. 10M Wellhead Adapter
Install Cement Head	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Cement Job	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve 4. Cement Head	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Remove Cement Head	1. Float Valves 2. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Install BPV	1. Float Valves 2. 10M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Remove 10M Gate Valve	1. Float Valves 2. BPV	1. Hydrostatic Barrier 2. Mechanical 10M Packoff
Nipple Up TA Cap	1. Float Valves 2. BPV	1. Hydrostatic Barrier 2. Mechanical 10M Packoff

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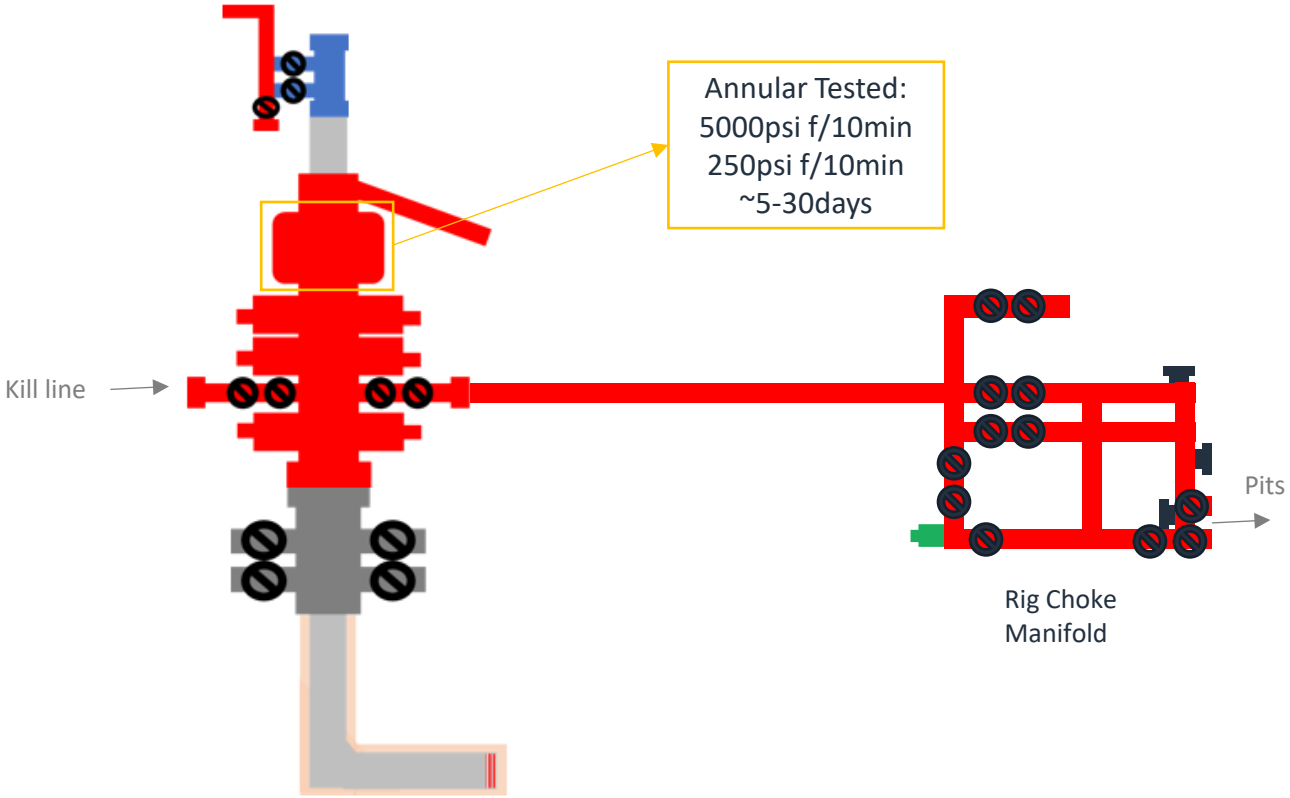
More Control: Meeting/Exceeding Barrier Requirements

Casing Barriers – Online vs Offline		
Operation	Online	Offline
Install Cement Head	1. Hydrostatic Barrier 2. Float Valves	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve ✓
Cement Job	1. Hydrostatic Barrier 2. Float Valves 3. Cement Head	1. Hydrostatic Barrier 2. Float Valves 3. 10M Gate Valve 4. Cement Head ✓
Remove Cement Head	1. Float Valves	1. Float Valves 2. 10M Gate Valve ✓
Install BPV & Nipple Down BOP / Offline Adapter	1. Float Valves	1. Float Valves 2. BPV ✓
Nipple Up TA Cap	1. Float Valves	1. Float Valves 2. BPV ✓

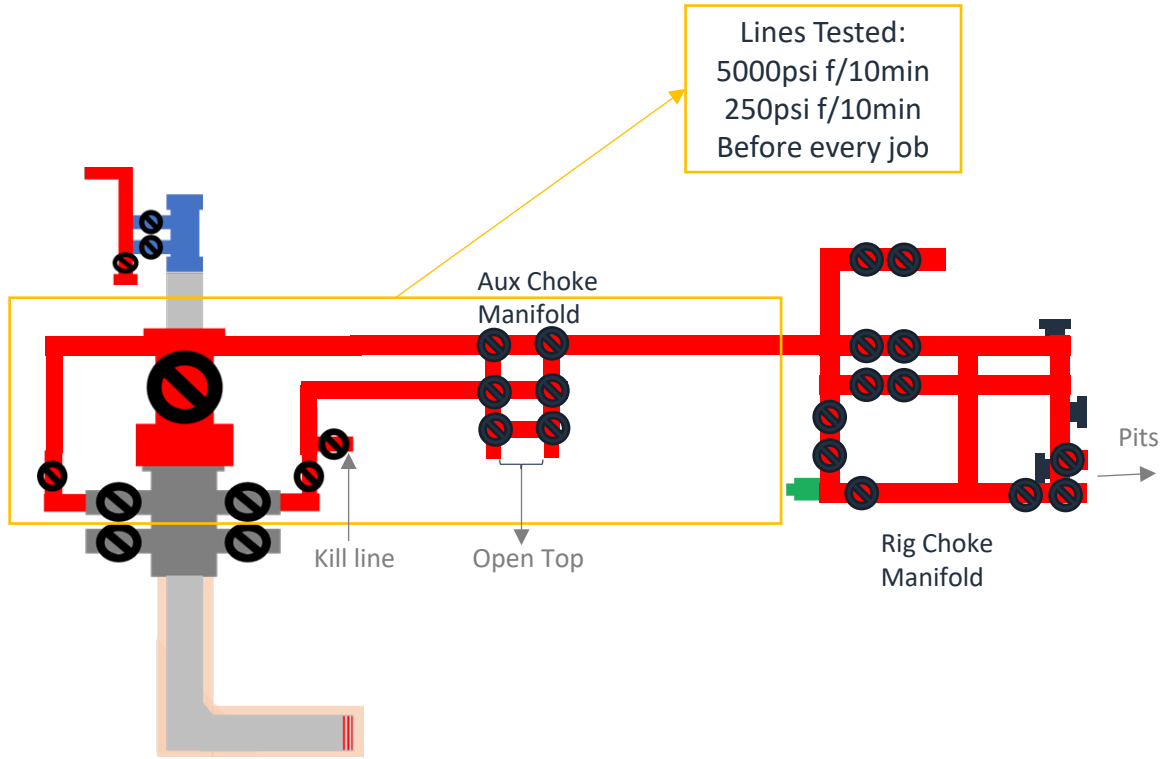
Annulus Barriers – Online vs Offline		
Operation	Online	Offline
Install Cement Head	1. Hydrostatic Barrier 2. Annular 3. VBR	1. Hydrostatic Barrier 2. Mechanical Pack-off 3. 10M Wellhead Adapter ✓
Cement Job	1. Hydrostatic Barrier 2. Annular 3. VBR	1. Hydrostatic Barrier 2. Mechanical Pack-off 3. 10M Wellhead Adapter ✓
Remove Cement Head	1. Hydrostatic Barrier 2. Annular 3. VBR	1. Hydrostatic Barrier 2. Mechanical Pack-off 3. 10M Wellhead Adapter ✓
Install BPV & Nipple Down BOP / Offline Adapter	1. Hydrostatic barrier 2. Mechanical Pack-off	1. Hydrostatic Barrier 2. Mechanical Pack-off ✓
Nipple Up TA Cap	1. Hydrostatic barrier 2. Mechanical Pack-off	1. Hydrostatic Barrier 2. Mechanical Pack-off ✓

Return Rig Up Diagram

Online



Offline



Note:

1) Have the Rig's same Well Control Capabilities as Online
2) Have more flexibility with Gate Valve than with a Landing Joint through BOP
3) Never had to circulate out a kick during Offline

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Production Bradenhead Cement Variance

Production Bradenhead Cement

Shallow Target Production Offline Bradenhead:

EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards to allow for offline bradenhead cementing of the production string after primary cementing operations have been completed. The primary cement job will be pumped conventionally (online) to top of the Brushy Canyon and will cover the target production intervals, and after production pack-off is set and tested, bradenhead will be pumped through casing valves between the production and intermediate casings (offline). For the bradenhead stage of production cementing, the barriers remain the same for offline cementing compared to performing it online.

The bradenhead will be the primary option for production cementing. EOG also requests to have the conventional option in place to accommodate for logistical or wellbore conditions. The tie back requirements will be met if the cement is pumped conventionally, and cement volumes will be adjusted accordingly. TOC will be verified by CBL.

Salt Section Annular Clearance

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

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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

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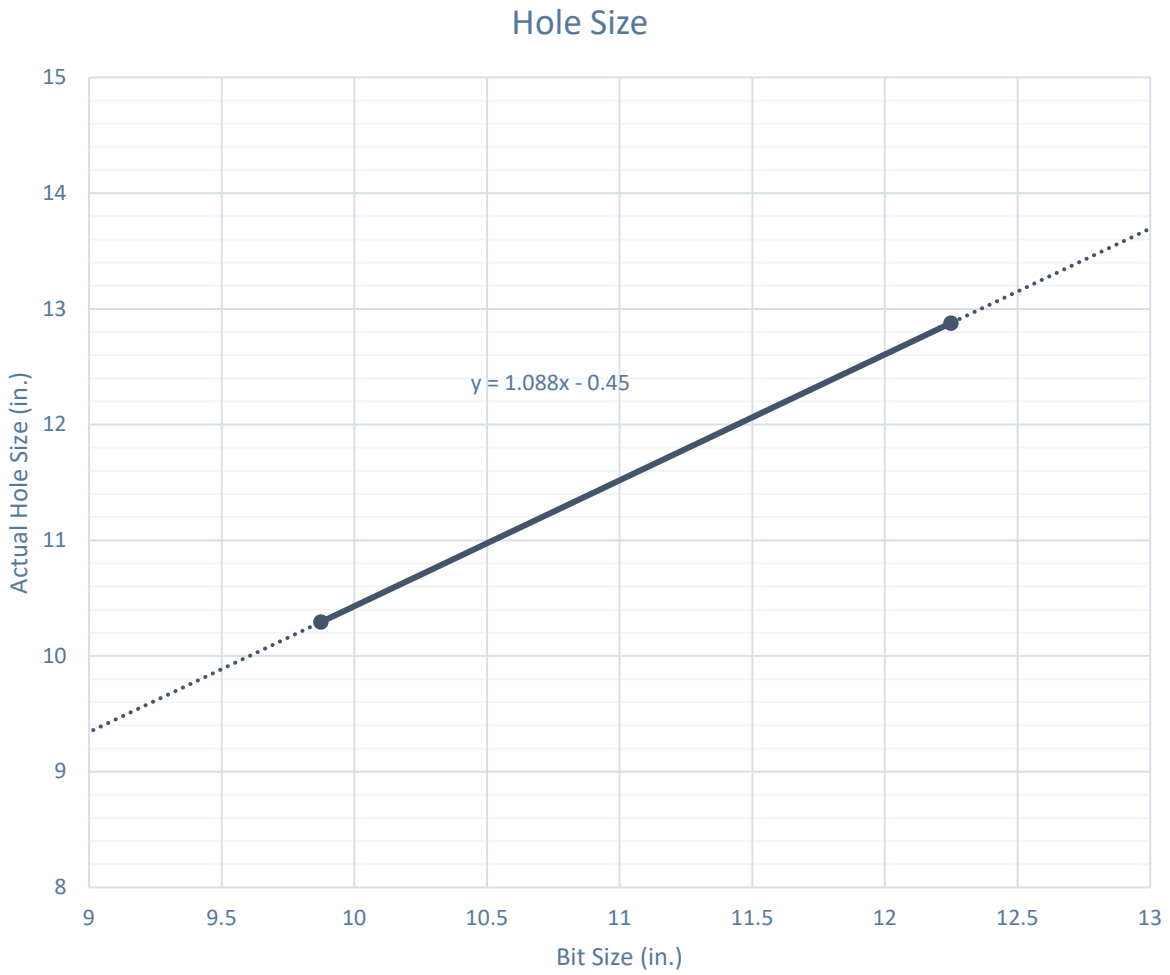
Volumetric Hole Size Calculation

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

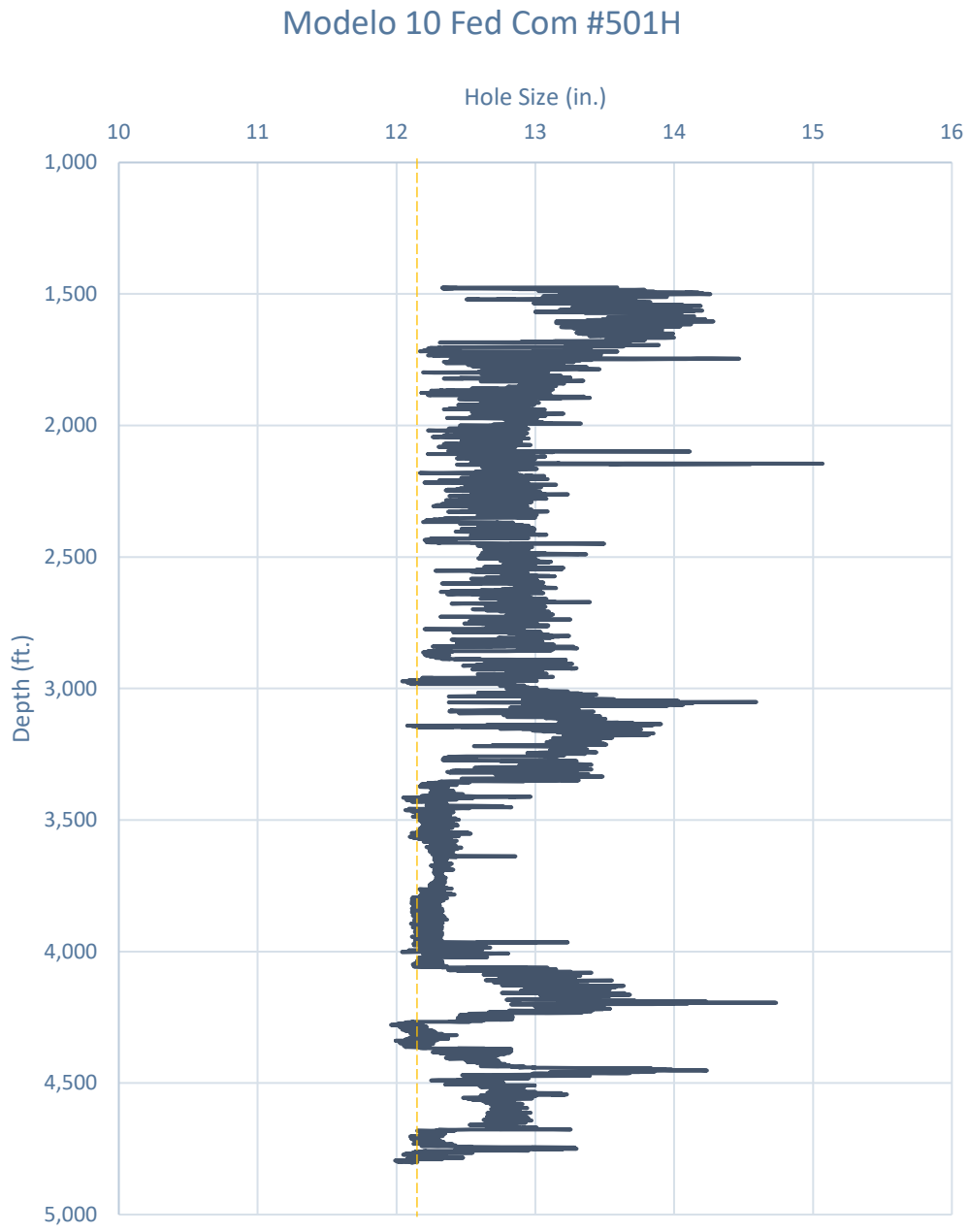
- 12.25” Hole
  - 12.88” Hole
    - 5.13% diameter increase
    - 10.52% area increase
  - 0.63” Average enlargement
  - 0.58” Median enlargement
  - 179 Well Count
- 9.875” Hole
  - 10.30” Hole
    - 4.24% diameter increase
    - 9.64% area increase
  - 0.42” Average enlargement
  - 0.46” Median enlargement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



Caliper Hole Size (12.25”)

Average Hole Size

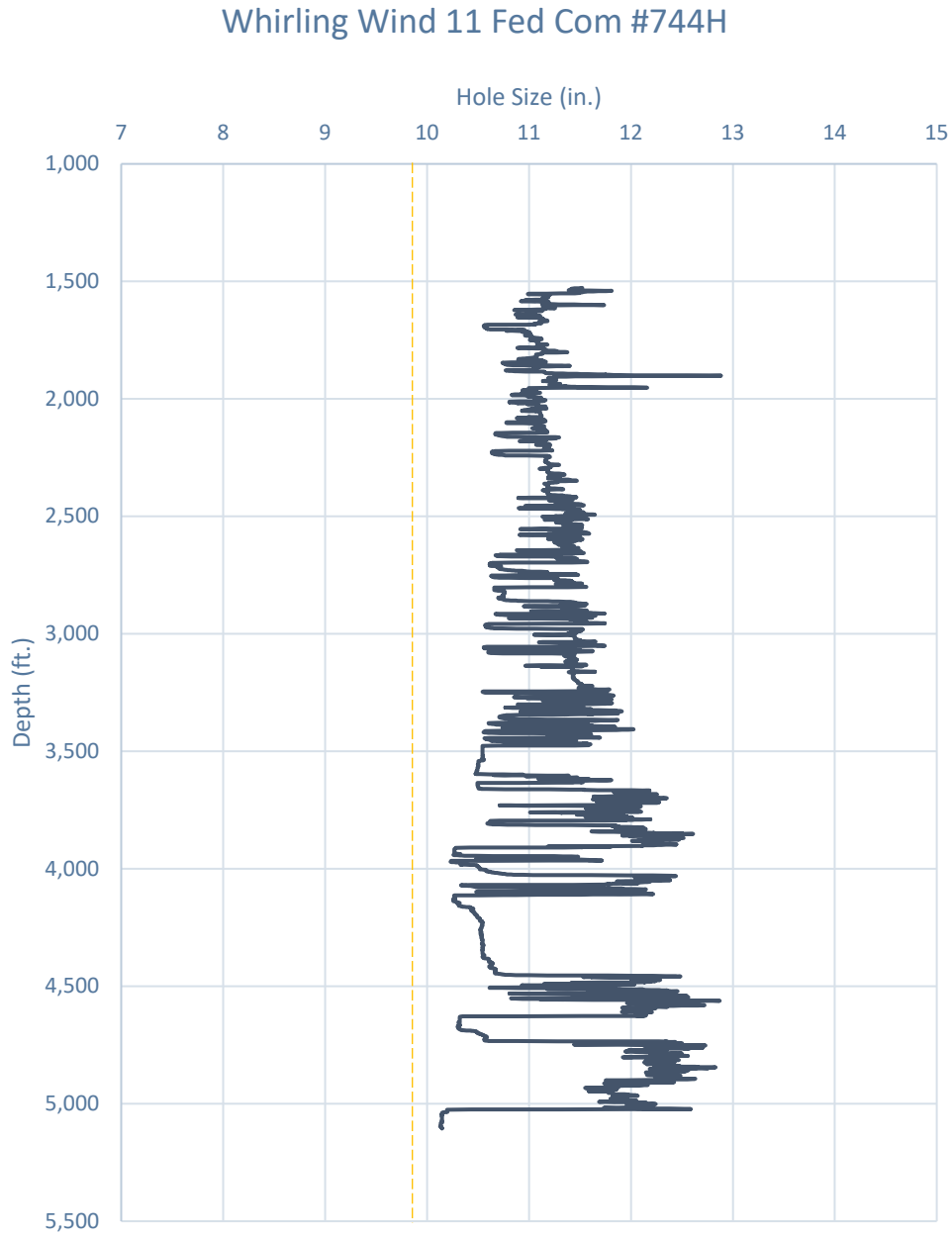
- 12.25” Bit
  - 12.76” Hole
    - 4.14% diameter increase
    - 8.44% area increase
  - 0.51” Average enlargement
  - 0.52” Median enlargement
  - Brine



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

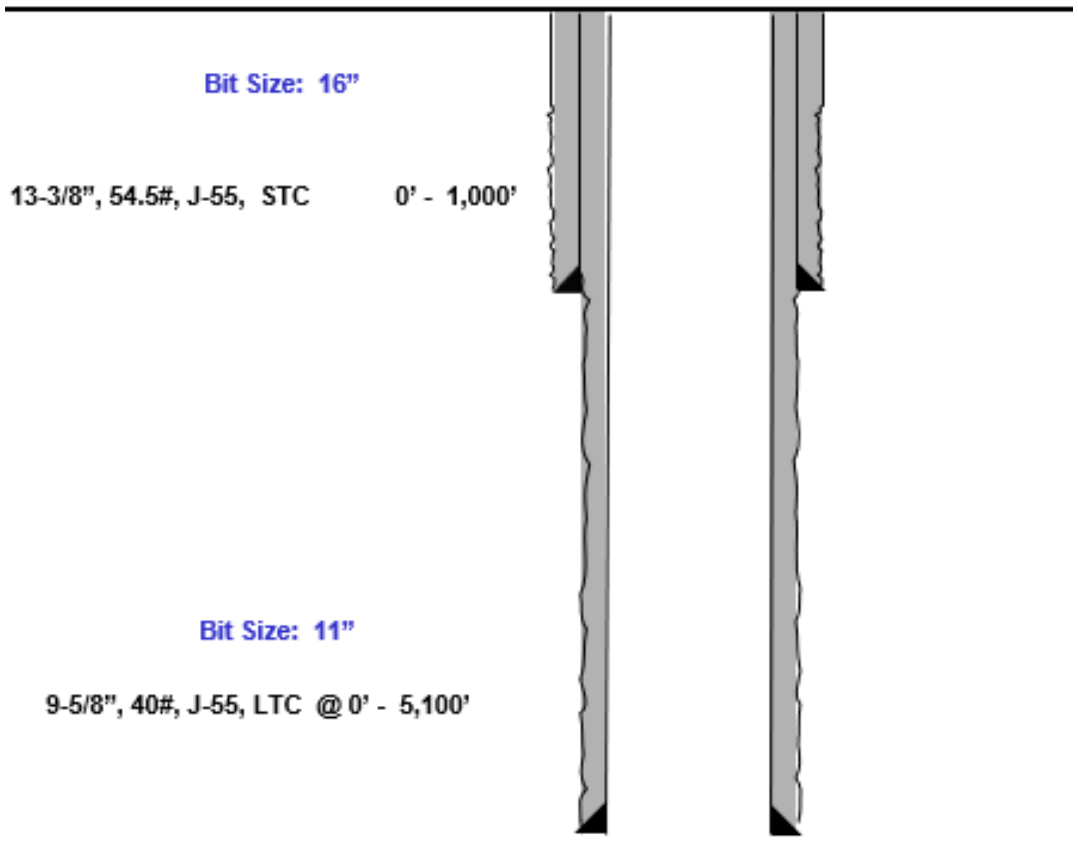


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Design A

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

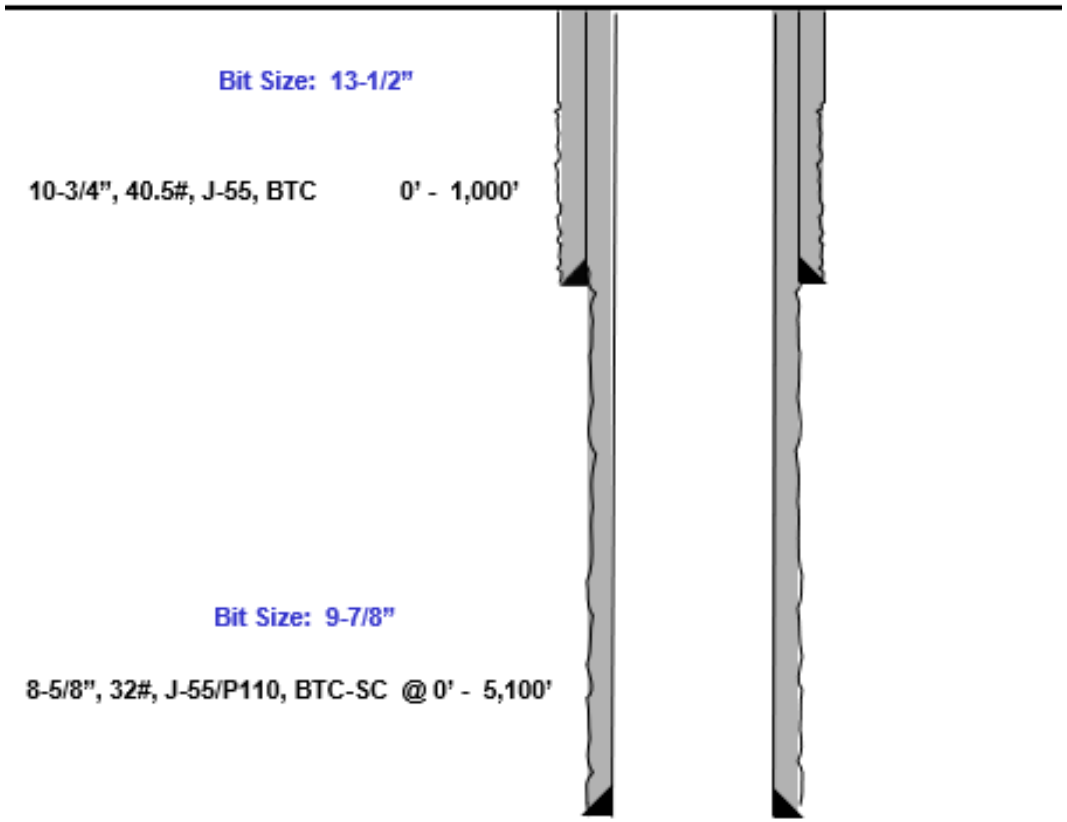
- 11” Bit + 0.52” Average hole enlargement = 11.52” Hole Size
  - 0.9475” Clearance to casing OD
    $$= \frac{11.52 - 9.625}{2}$$
  - 0.4475” Clearance to coupling OD
    $$= \frac{11.52 - 10.625}{2}$$
- Previous Shoe – 13.375” 54.5# J55 STC
  - 0.995” Clearance to coupling OD (~1,200’ overlap)
   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



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

New Search »

« Back to Previous List

USC Metric

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

Casing Spec Sheets

Pipe Body and API Connections Performance Data

10.750 40.50/0.350 J55 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

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.

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

Wild Weasel 22 Fed Com 743H (FKA 103H) 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.
- EOG requests a variance to set the intermediate casing shoe in the Bone Spring formation or the Wolfcamp formation, depending on depletion in the area and well conditions. EOG will monitor the well and ensure the well is static before casing operations begin.

- 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 2a - Intermediate Bradenhead Cement
- EOG BLM Variance 2b - Bonespring/Wolfcamp Intermediate Casing Setpoint
- EOG BLM Variance 3a_b - BOP Break-test and Offline Intermediate Cement
- EOG BLM Variance 3d - Production Offline Cement

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025- 56129	96994	PITCHFORK RANCH; WOLFCAMP, SOUTH

Property Code	Property Name	Well Number
~~333555~~ 325178	WILD WEASEL 22 FED COM	743H

OGRID No.	Operator Name	Ground Level Elevation
7377	EOG RESOURCES, INC.	3351'

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

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
B	22	25-S	34-E	-	644' N	2639' E	N 32.1214901	W 103.4578067	LEA

Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
P	27	25-S	34-E	-	100' S	1100' E	N 32.0945085	W 103.4528260	LEA

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidated Code
1280.00	DEFINING	WILD WEASEL 22 FED COM #743H	N	C

Order Numbers: NSP-2162, COM AGREEMENT NMNM 105689262
Well Setbacks are under Common Ownership: ☐ Yes ☐ No

Kick Off Point (KOP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
A	22	25-S	34-E	-	50' N	1100' E	N 32.1231190	W 103.4528329	LEA

First Take Point (FTP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
A	22	25-S	34-E	-	100' N	1100' E	N 32.1229816	W 103.4528329	LEA

Last Take Point (LTP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
P	27	25-S	34-E	-	100' S	1100' E	N 32.0945085	W 103.4528260	LEA

Unitized Area or Area of Uniform Interest	Spacing Unity Type	Ground Floor Elevation
UNITIZED AREA: COM NMNM 105689262	☒ Horizontal ☐ Vertical	3376'

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.

Shea Bailey 3/11/26
Signature Date
Shea Bailey
Print Name
shea_bailey@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.

RAMON DOMINGUEZ NEW MEXICO 24508 PROFESSIONAL SURVEYOR

Signature and Seal of Professional Surveyor
Date: 2/23/2026 7:05:37 AM

Certificate Number

Date of Survey: 02/14/2026

S:\SURVEY\EOG_MIDLAND\WILD_WEASEL_22_FED_COM\FINAL_PRODUCTS\LO_WILD_WEASEL_22_FED_COM_743H_C102.dwg TGRIFFIN 2/23/2026 7:03 AM

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

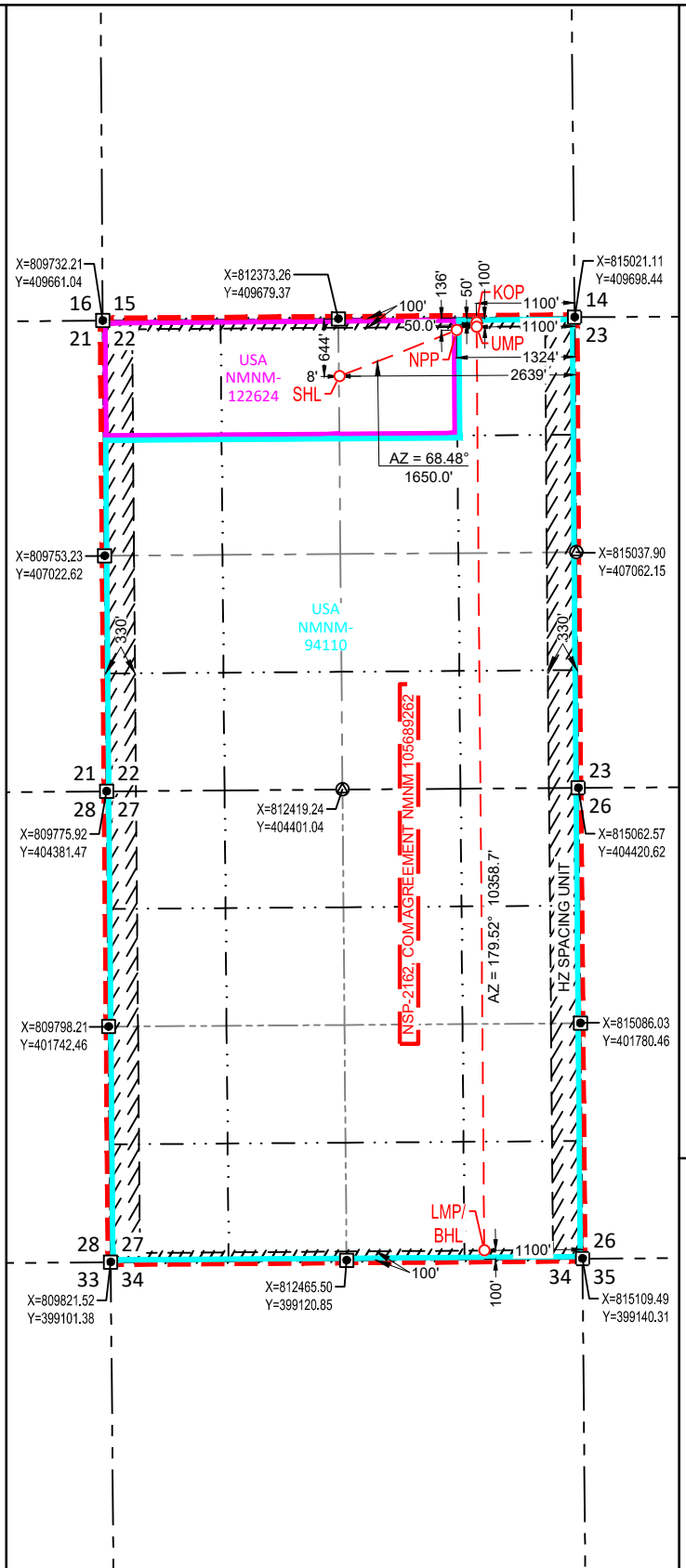
Property Name and Well Number

WILD WEASEL 22 FED COM 743H

SURFACE LOCATION (SHL)
NEW MEXICO EAST
NAD 1983
X=812386 Y=409035
LAT.: N 32.1214901
LONG.: W 103.4578067
NAD 1927
X=771200 Y=408978
LAT.: N 32.1213652
LONG.: W 103.4573391
644' FNL 2639' FEL

NON-PRODUCING LEASE REFERENCE POINT (NPP)
NEW MEXICO EAST
NAD 1983
X=813698 Y=409553
LAT.: N 32.1228821
LONG.: W 103.4535563
NAD 1927
X=772512 Y=409495
LAT.: N 32.1227572
LONG.: W 103.4530887
136' FNL 1324' FEL

KICK OFF POINT (KOP)
NEW MEXICO EAST
NAD 1983
X=813921 Y=409641
LAT.: N 32.1231190
LONG.: W 103.4528329
NAD 1927
X=772735 Y=409583
LAT.: N 32.1229941
LONG.: W 103.4523654
50' FNL 1100' FEL



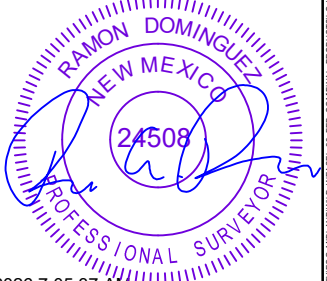
UPPER MOST PERF. (UMP)
NEW MEXICO EAST
NAD 1983
X=813922 Y=409591
LAT.: N 32.1229816
LONG.: W 103.4528329
NAD 1927
X=772735 Y=409533
LAT.: N 32.1228567
LONG.: W 103.4523654
100' FNL 1100' FEL

LOWER MOST PERF. (LMP) BOTTOM HOLE LOCATION (BHL)
NEW MEXICO EAST
NAD 1983
X=814009 Y=399232
LAT.: N 32.0945085
LONG.: W 103.4528260
NAD 1927
X=772822 Y=399175
LAT.: N 32.0943831
LONG.: W 103.4523599
100' FSL 1100' FEL

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.

02/14/2026
Date of Survey
Signature and Seal of Professional Surveyor:



2/23/2026 7:05:37 AM

S:\SURVEY\EOG_MIDLAND\WILD_WEASEL_22_FED_COM\FINAL_PRODUCTS\LO_WILD_WEASEL_22_FED_COM_743H_C102.dwg | GRIFFIN 2/23/2026 7:05 AM

eog resources

EOG Batch Casing

Pad Name: Wild Weasel 22 Fed Com Deep
SHL: Section 22, Township 25-S, Range 34-E, LEA County, NM

Well Name	API #	Surface		Intermediate		Production	
		MD	TVD	MD	TVD	MD	TVD
Wild Weasel 22 Fed Com #743H (103H)	30-025-*****	974	974	12,766	12,557	23,448	13,034
Wild Weasel 22 Fed Com #753H (104H)	30-025-*****	974	974	12,740	12,671	23,421	13,148
Wild Weasel 22 Fed Com #754H (106H)	30-025-*****	974	974	13,117	12,671	23,797	13,148

eog resources

EOG Batch Casing

GEOLOGIC NAME OF SURFACE FORMATION:

Permian

ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	874'
Tamarisk Anhydrite	949'
Top of Salt	1,287'
Base of Salt	5,100'
Lamar	5,383'
Bell Canyon	5,416'
Cherry Canyon	6,378'
Brushy Canyon	7,968'
Bone Spring Lime	9,326'
Leonard (Avalon) Shale	9,345'
1st Bone Spring Sand	10,387'
2nd Bone Spring Shale	10,643'
2nd Bone Spring Sand	10,930'
3rd Bone Spring Carb	11,455'
3rd Bone Spring Sand	12,015'
Wolfcamp	12,424'

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

Upper Permian Sands	0- 400’ Fresh Water
Lamar	5,383' Oil
Cherry Canyon	6,378' Oil
Brushy Canyon	7,968' Oil
Bone Spring Lime	9,326' Oil
Leonard (Avalon) Shale	9,345' Oil
1st Bone Spring Sand	10,387' Oil
2nd Bone Spring Shale	10,643' Oil
2nd Bone Spring Sand	10,930' Oil
3rd Bone Spring Carb	11,455' Oil
3rd Bone Spring Sand	12,015' Oil
Wolfcamp	12,424' Oil

EOG Batch Casing

Variances

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

- EOG BLM Variance 2a - Intermediate Bradenhead Cement
- EOG BLM Variance 3d - Production Offline Cement
- EOG BLM Variance 2b - Wolfcamp Intermediate Casing Setpoint
- EOG BLM Variance 3e - BOP Break-test and Offline Surface and Intermediate Cement

eog resources

Wild Weasel 22 Fed Com 743H

Revised Permit Information 02/12/2026:

Well Name: Wild Weasel 22 Fed Com 743H

Location: SHL: 644' FNL & 2639' FEL, Section 22, T-25-S, R-34-E, LEA Co., N.M.
BHL: 100' FSL & 1100' FEL, Section 27, T-25-S, R-34-E, LEA Co., N.M.

CASING PROGRAM Primary APD Design A:

Hole Size	Interval MD From (ft)	Interval MD To (ft)	Interval TVD From (ft)	Interval TVD To (ft)	Csg OD	Weight	Grade	Conn
13"	0	974	0	974	10-3/4"	40.5#	J-55	STC
9-7/8"	0	12,766	0	12,557	8-5/8"	32#	P110-HSCY	GB CD Butt 9.03
7-7/8"	0	12,966	0	12,757	6"	22.3#	P110-EC	DWC/C IS
6-3/4"	12,966	23,448	12,757	13,034	5-1/2"	20#	P110-EC	DWC/C IS MS

**For highlighted rows above, variance is requested to run entire string of either 6'' or 5-1/2'' casing string above due to availablility.

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 6" and 5-1/2" casings in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive the annular clearance requirements for the 6" and 5-1/2" casings by 8-5/8" casing annulus to the proposed top of cement.

EOG requests permission to allow deviation from the 0.422'' annulus clearance requirement from Title 43 CFR Part 3170 under the following conditions:

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

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
974' 10-3/4''	260	13.5	1.73	Lead: Class C/H + additives (TOC @ Surface)
	70	14.8	1.34	Tail: Class C/H + additives (TOC @ 774')
12,557' 8-5/8''	1800	14.2	1.11	1st Stage (Tail): Class C/H + additives (TOC @ 7,768')
	1000	13.2	1.85	2nd Stage (Bradenhead squeeze): Class C/H + additives (TOC @ surface)
23,448' 5-1/2''	1800	13.2	1.31	Lead: Class C/H + additives (TOC @ 11,557')

eog resources

Wild Weasel 22 Fed Com 743H

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

EOG requests variance from minimum standards to pump a two stage cement job on the 8-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (7,968') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 100 sacks of Class C/H cement + addtives (2.30 yld, 12.91 ppg) will be executed as a contingency. Top will be verified by Echo-meter.

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.

EOG requests a variance to set the intermediate casing shoe in the Bone Spring formation OR the Wolfcamp formation, depending on depletion in the area and well conditions. EOG will monitor the well and ensure the well is static before casing operations begin.

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 974'	Fresh - Gel	8.6-8.8	28-34	N/c
974' – 12,557'	Brine	9.8-10.8	28-34	N/c
12,557' – 12,766'	Water - Gel	8.7-9.4	58-68	N/c - 6
12,766' – 23,448'	Oil Base	10.0-14.0	58-68	4 - 6

eog resources

Wild Weasel 22 Fed Com 743H

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.

VARIANCE REQUESTS:

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

- EOG BLM Variance 2a - Intermediate Bradenhead Cement
- EOG BLM Variance 2b - Wolfcamp Intermediate Casing Setpoint
- EOG BLM Variance 3e - BOP Break-test and Offline Surface and Intermediate Cement
- EOG BLM Variance 3d - Production Offline Cement

eog resources

Wild Weasel 22 Fed Com 743H

644' FNL
2639' FEL
Section 22
T-25-S, R-34-E

Revised Wellbore
Primary APD Design A

API: 30-025-*****

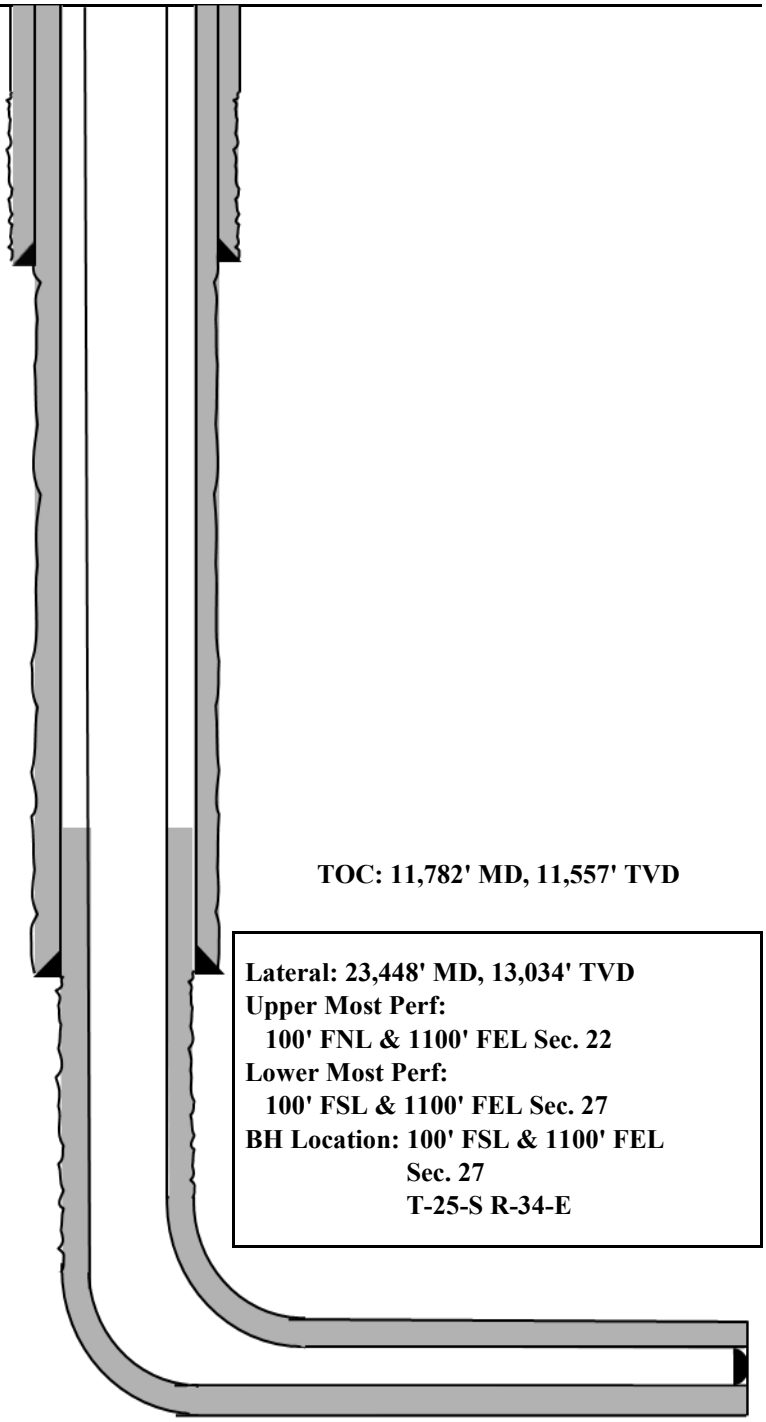
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GL: 3351'

Bit Size: 13"
10-3/4", 40.5#, J-55, STC,
@ 0' - 974' MD
@ 0' - 974' TVD

Bit Size: 9-7/8"
8-5/8", 32#, P110-HSCY, GB CD Butt 9.03,
@ 0' - 12,766' MD
@ 0' - 12,557' TVD

Bit Size: 7-7/8"|6-3/4"
6", 22.3#, P110-EC, DWC/C IS
@ 0' - 12,966' MD
@ 0' - 12,757' TVD
5-1/2", 20.#, P110-EC, DWC/C IS MS
@ 12,966' - 23,448' MD
@ 12,757' - 13,034' TVD

KOP: 12,766' MD, 12,557' TVD
EOC: 13,516' MD, 13,034' TVD



TOC: 11,782' MD, 11,557' TVD

Lateral: 23,448' MD, 13,034' TVD
Upper Most Perf:
100' FNL & 1100' FEL Sec. 22
Lower Most Perf:
100' FSL & 1100' FEL Sec. 27
BH Location: 100' FSL & 1100' FEL
Sec. 27
T-25-S R-34-E

eog resources

Wild Weasel 22 Fed Com 743H

GEOLOGIC NAME OF SURFACE FORMATION:

Permian

ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	874'
Tamarisk Anhydrite	949'
Top of Salt	1,287'
Base of Salt	5,100'
Lamar	5,383'
Bell Canyon	5,416'
Cherry Canyon	6,378'
Brushy Canyon	7,968'
Bone Spring Lime	9,326'
Leonard (Avalon) Shale	9,345'
1st Bone Spring Sand	10,387'
2nd Bone Spring Shale	10,643'
2nd Bone Spring Sand	10,930'
3rd Bone Spring Carb	11,455'
3rd Bone Spring Sand	12,015'
Wolfcamp	12,424'
TD	13,034'

ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Upper Permian Sands	0- 400’	Fresh Water
Lamar	5,383'	Oil
Cherry Canyon	6,378'	Oil
Brushy Canyon	7,968'	Oil
Bone Spring Lime	9,326'	Oil
Leonard (Avalon) Shale	9,345'	Oil
1st Bone Spring Sand	10,387'	Oil
2nd Bone Spring Shale	10,643'	Oil
2nd Bone Spring Sand	10,930'	Oil
3rd Bone Spring Carb	11,455'	Oil
3rd Bone Spring Sand	12,015'	Oil
Wolfcamp	12,424'	Oil

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: 574680
	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: 574680
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
kayla_mcconnell	Cement is required to circulate on both surface and intermediate1 strings of casing.	4/13/2026
jeffrey.harrison	If the method of isolation was not by circulation, a CBL must be performed; if strata isolation is not achieved, then remediation will be required before further operations.	4/15/2026
jeffrey.harrison	All logs run on the well must be submitted to NMOCD.	4/15/2026
jeffrey.harrison	Approval is only for Primary APD design A presented in approved BLM NOI attached to permit application.	4/15/2026
jeffrey.harrison	NSP required prior to production if not included in an existing order or not an infill to an appropriate defining well in the same pool and spacing unit.	4/15/2026
jeffrey.harrison	File As Drilled C-102 and a directional Survey with C-104 completion packet.	4/16/2026
jeffrey.harrison	Notify the OCD 24 hours prior to casing & cement.	4/16/2026
jeffrey.harrison	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.	4/16/2026
jeffrey.harrison	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.	4/16/2026