

Well Name: TOP SPOT 12_13 FEDERAL COM	Well Location: T22S / R31E / SEC 13 / SESE / 32.385676 / -103.726915	County or Parish/State: EDDY / NM
Well Number: 13H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM29233	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001556985	Operator: OXY USA INCORPORATED	

Notice of Intent

Sundry ID: 2896945

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 02/19/2026	Time Sundry Submitted: 02:07
Date proposed operation will begin: 05/01/2026	

Procedure Description: OXY USA Inc., respectfully requests to amend the subject AAPD to revise the Drill Plan. We will no longer drill the pilot hole as previous approved. *THERE IS NO ADDITIONAL SURFACE DISTURBANCE RELATED TO THIS SUNDRY" Attached is the current C102, drill plan, directional, Blanket Designs, updated variances and APD change worksheet.

NOI Attachments

Procedure Description

- TOPSPOT12_13FEDCOM13H_API_BTC_SC_10.750_40.5ppf_J55_20260219140707.pdf
- TOPSPOT12_13FEDCOM13H_13inADAPT_4S_10x15_20260219140702.pdf
- Blanket_Design_B_Pad_Review_Document_LSTTNK_T22SR31E_13_LSTTNK_1302_20260219140655.pdf
- TOPSPOT12_13FEDCOM13H_DrillPlan_4S_20260219140647.pdf
- TOPSPOT12_13FEDCOM13H_VAM_DWC_C_HT_IS_5.500in_20ppf_P110RY_20260219140631.pdf
- TOPSPOT12_13FEDCOM13H_13inADAPT_13.375in_7.625in_10x15_20260219140625.pdf
- TOPSPOT12_13FEDCOM13H_CombinedVariances_2026_20260219140611.pdf
- Combined_Blanket_Design___A1___A2___B___OXY___3S_Slim_v8.0_and_4S_Slim_Contingency_v4.0_20260219140601.pdf
- Blanket_Design_A_Pad_Review_Document_LSTTNK_T22SR31E_13_LSTTNK_1302_20260219140550.pdf

Well Name: TOP SPOT 12_13 FEDERAL COM	Well Location: T22S / R31E / SEC 13 / SESE / 32.385676 / -103.726915	County or Parish/State: EDDY / NM
Well Number: 13H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM29233	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001556985	Operator: OXY USA INCORPORATED	

TOPSPOT12_13FEDCOM13H_DirectPlan_20260219140541.pdf

TOPSPOT12_13FEDCOM13H_DrillPlan_3S_20260219140533.pdf

TOPSPOT12_13FEDCOM13H_C102_20260219140527.pdf

TOPSPOT12_13FEDCOM13H_APDCHGSUNDRYWORKSHEET_20260219140517.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: MELISSA GUIDRY	Signed on: FEB 19, 2026 02:07 PM
Name: OXY USA INCORPORATED	
Title: Advisor Regulatory Sr.	
Street Address: 5 GREENWAY PLAZA SUITE 110	
City: HOUSTON	State: TX
Phone: (713) 497-2481	
Email address: MELISSA_GUIDRY@OXY.COM	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: KEITH P IMMATTY	BLM POC Title: ENGINEER
BLM POC Phone: 5759884722	BLM POC Email Address: KIMMATTY@BLM.GOV
Disposition: Approved	Disposition Date: 03/26/2026
Signature: KEITH IMMATTY	

Form 3160-5
(October 2024)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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.

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

5. Lease Serial No.
NMNM29233

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

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

2. Name of Operator
OXY USA INCORPORATED

3a. Address 5 GREENWAY PLAZA SUITE 110, HOUSTON, TX 3b. Phone No. (include area code)
(713) 366-5716

4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)
SEC 13/T22S/R31E/NMP

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

8. Well Name and No.
TOP SPOT 12_13 FEDERAL COM/13H

9. API Well No. 3001556985

10. Field and Pool or Exploratory Area
BILBREY BASIN/BONE SPRING

11. Country or Parish, State
EDDY/NM

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

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

OXY USA Inc., respectfully requests to amend the subject AAPD to revise the Drill Plan.

We will no longer drill the pilot hole as previous approved.

*THERE IS NO ADDITIONAL SURFACE DISTURBANCE RELATED TO THIS SUNDRY"

Attached is the current C102, drill plan, directional, Blanket Designs, updated variances and APD change worksheet.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
MELISSA GUIDRY / Ph: (713) 497-2481

Advisor Regulatory Sr.

Signature (Electronic Submission)

Date
02/19/2026

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by
KEITH P IMMATTY / Ph: (575) 988-4722 / Approved

ENGINEER

Date
03/26/2026

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
CARLSBAD

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 of this form to U.S. Department of the Interior, Bureau of Land 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

Location of Well

0. SHL: SESE / 520 FSL / 1225 FEL / TWSP: 22S / RANGE: 31E / SECTION: 13 / LAT: 32.385676 / LONG: -103.726915 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 100 FSL / 1194 FEL / TWSP: 22S / RANGE: 31E / SECTION: 13 / LAT: 32.384522 / LONG: -103.726815 (TVD: 8978 feet, MD: 9410 feet)

PPP: SENE / 2640 FNL / 1193 FEL / TWSP: 22S / RANGE: 31E / SECTION: 12 / LAT: 32.406019 / LONG: -103.726806 (TVD: 8978 feet, MD: 17061 feet)

BHL: NENE / 20 FNL / 1372 FEL / TWSP: 22S / RANGE: 31E / SECTION: 12 / LAT: 32.413219 / LONG: -103.726803 (TVD: 8978 feet, MD: 19680 feet)



API BTC -Special Clearance

Coupling	Pipe Body
Grade: J55 (Casing)	Grade: J55 (Casing)
Body: Bright Green	1st Band: Bright Green
1st Band: White	2nd Band: -
2nd Band: -	3rd Band: -
3rd Band: -	4th Band: -

Outside Diameter	10.750 in.	Wall Thickness	0.350 in.	Grade	J55 (Casing)
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	Special Clearance				

Pipe Body Data

Geometry			Performance		
Nominal OD	10.750 in.	Drift	9.894 in.	SMYS	55,000 psi
Wall Thickness	0.350 in.	Plain End Weight	38.91 lb/ft	Min UTS	75,000 psi
Nominal Weight	40.500 lb/ft	OD Tolerance	API	Body Yield Strength	629 x1000 lb
Nominal ID	10.050 in.			Min. Internal Yield Pressure	3130 psi
				Collapse Pressure	1580 psi
				Max. Allowed Bending	23 °/100 ft

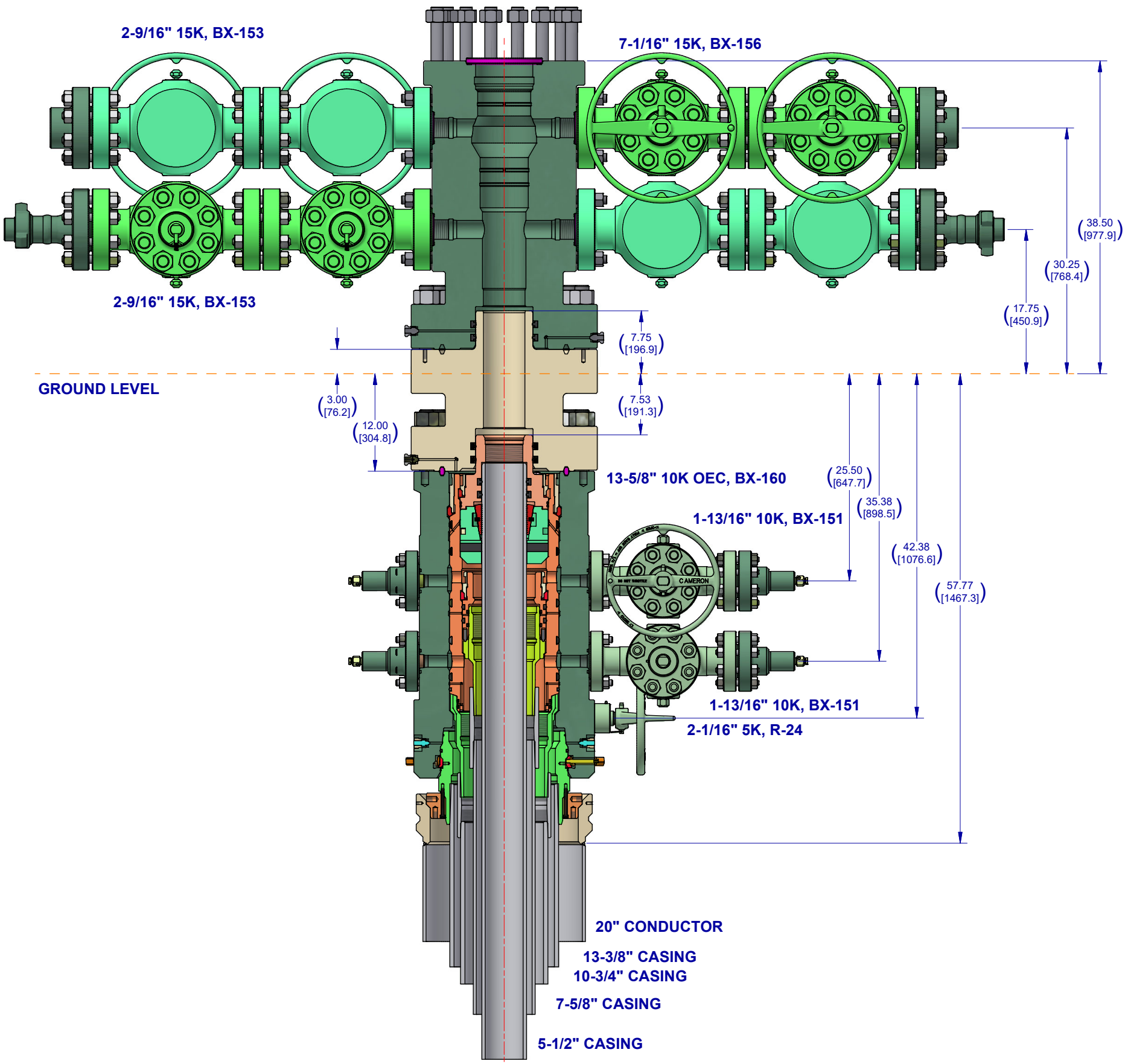
Connection Data

Geometry		Performance	
Thread per In	5	Joint Strength	700 x1000 lb
Connection OD	11.250 in.	Coupling Face Load	329 x1000 lb
Hand Tight Stand Off	1 in.	Internal Pressure Capacity	3130 psi

Notes

For products according to API Standards 5CT & 5B; Performance calculated considering API Technical Report 5C3 (Sections 9 & 10) equations.
For geometrical and steel grades combinations not considered in the API Standards 5CT and/or 5B; Performance calculations indirectly derived from API Technical Report 5C3 (Sections 9 & 10) equations.
Couplings OD are shown according to current API 5CT 10th Edition.

Tenaris has issued this document for general information only, and the information in this document, including, without limitation, any pictures, drawings or designs ("Information") is not intended to constitute professional or any other type of advice or recommendation and is provided on an "as is" basis. No warranty is given. Tenaris has not independently verified any information—if any- provided by the user in connection with, or for the purpose of, the Information contained hereunder. The use of the Information is at user's own risk and Tenaris does not assume any responsibility or liability of any kind for any loss, damage or injury resulting from, or in connection with any Information contained hereunder or any use thereof. The Information in this document is subject to change or modification without notice. Tenaris's products and services are subject to Tenaris's standard terms and conditions or otherwise to the terms resulting from the respective contracts of sale or services, as the case may be, between petitioner and Tenaris. For more complete information please contact a Tenaris's representative or visit our website at www.tenaris.com . ©Tenaris 2025. All rights reserved.



Notes:

1. THIS IS A PROPOSAL DRAWING AND DIMENSIONS SHOWN ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PROCESS.

2. DIGITALLY ENABLED SOLUTIONS, CHOKES AND ESD'S AVAILABLE ON REQUEST

CONFIDENTIAL					
SURFACE TREATMENT	DO NOT SCALE		 CAMERON An SLB company	SURFACE SYSTEMS	
	DRAWN BY: D. GOTTUNG	DATE 20 Aug 25		OXY WT SPOOLTREE	
MATERIAL & HEAT TREAT	CHECKED BY: D. GOTTUNG	DATE 20 Aug 25			
	APPROVED BY: D. GOTTUNG	DATE 20 Aug 25			
ESTIMATED WEIGHT:	16383.5 LBS 7431.4 KG	INITIAL USE B/M: EWR: 650687960	SHEET 1 of 1	SD-053434-277-25	REV: 01 INVENTOR - D

Oxy USA Inc. - Blanket Design Pad Document

OXY - Blanket Design B

Pad Name: LSTTNK_T22SR31E_13_LSTTNK_1302

SHL: 520' FSL 1255' FEL, Sec 13, T22S-R31E

Oxy requests for the bellow wells to be approved for the two designs listed in the Blanket Design document (**Blanket Design B –OXY –4S Slim v4.0.**) The MDs and TVDs for all intervals are within the boundary conditions. The max inclination and DLS are also within the boundary conditions (directional plans attached separately for review.)

1. Blanket Design - Wells

Well Name	APD #	Surface		Salt		Intermediate		Production	
		MD	TVD	MD	TVD	MD	TVD	MD	TVD
TOP SPOT 12_13 FED COM 43H	10400101353	905	905	4492	4492	12000	11916	22439	12133
TOP SPOT 12_13 FED COM 44H	10400101365	899	899	4515	4515	12000	11909	22455	12143
TOP SPOT 12_13 FED COM 13H	10400101319	903	903	4499	4499	8493	8493	19508	9222

2. Review Criteria Table

	Y or N
Is casing new? If used, attach certification as required in 43 CFR 3160	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-Q?	Y
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	Y
Is well located in R-111-Q and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Geologic Formations

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	835	835	
Salado	1134	1134	Salt
Marker Bed 126	2000	2000	Salt
Castile	2872	2872	Salt
Delaware	4492	4492	Oil/Gas/Brine
Bell Canyon	4550	4550	Oil/Gas/Brine
Cherry Canyon	5413	5413	Oil/Gas/Brine
Brushy Canyon	6641	6641	Losses
Bone Spring	8396	8390	Oil/Gas
Bone Spring 1st	9531	9508	Oil/Gas
Bone Spring 2nd	10149	10116	Oil/Gas
Bone Spring 3rd	11189	11140	Oil/Gas
Wolfcamp	11707	11651	Oil/Gas
Penn			Oil/Gas
Strawn			Oil/Gas

4. Cementing Program

Section	Stage	Slurry:	Sacks	Yield (ft^3/ft)	Density (lb/gal)	Excess:	TOC	Placement	Description
Surface	1	Surface - Tail	945	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.1	1	Intermediate - Tail	85	1.33	14.8	20%	3,992	Circulate	Class C+Accel.
Int.1	1	Intermediate - Lead	628	1.73	12.9	50%	-	Circulate	Class Pozz+Ret.
Int. 2	1	Intermediate 1S - Tail	755	1.68	13.2	5%	6,891	Circulate	Class C+Ret., Disper.
Int. 2	2	Intermediate 2S - Tail BH	991	1.71	13.3	25%	-	Bradenhead	Class C+Accel.
Prod.	1	Production - Tail	590	1.84	13.3	25%	12,019	Circulate	Class C+Ret.

Oxy USA Inc. - TOP SPOT 12_13 FED COM 13H

Drill Plan

1. Geologic Formations

TVD of Target (ft):	9222	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	19508	Deepest Expected Fresh Water (ft):	833

Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	833	833	
Salado	1132	1132	Salt
Marker Bed 126	2000	2000	Salt
Castile	2868	2868	Salt
Delaware	4499	4499	Oil/Gas/Brine
Bell Canyon	4564	4564	Oil/Gas/Brine
Cherry Canyon	5414	5414	Oil/Gas/Brine
Brushy Canyon	6659	6648	Losses
Bone Spring	8437	8399	Oil/Gas
Bone Spring 1st			Oil/Gas
Bone Spring 2nd			Oil/Gas
Bone Spring 3rd			Oil/Gas
Wolfcamp			Oil/Gas
Penn			Oil/Gas
Strawn			Oil/Gas

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

Section	Hole Size (in)	MD		TVD		Csg. OD (in)	Csg Wt. (ppf)	Grade	Conn.
		From (ft)	To (ft)	From (ft)	To (ft)				
Surface	17.5	0	903	0	903	13.375	54.5	J-55	BTC
Salt	12.25	0	4499	0	4499	10.75	40.5	J-55	BTC-SC
Intermediate	9.875	0	8493	0	8493	7.625	26.4	L-80 HC	BTC
Production	6.75	0	19508	0	9222	5.5	20	P-110	DWC/C-HT-IS

All casing strings will be tested in accordance with 43 CFR part 3170 Subpart 3172

*Oxy requests the option to run the 10.75" Intermediate I as a contingency string to be run only if severe hole conditions dictate an additional casing string necessary. This would make the planned 7.625" / 7.827" Casing the Intermediate II.

**If 4S Contingency is not required, Oxy requests permission to transition from 12.25" to 9.875" Intermediate I at 1st trip point below Brushy top (estimated top in formation table above). Cement volumes will be updated on C103 submission.

Occidental - Permian New Mexico

TOP SPOT 12_13 FED COM 13H

All Casing SF Values will meet or exceed those below			
SF Collapse	SF Burst	Body SF Tension	Joint SF Tension
1.00	1.100	1.4	1.4

Annular Clearance Variance Request

As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow deviation from the 0.422" annular clearance requirement. Please see Annular Clearance Variance attachment for further details.

	Y or N
Is casing new? If used, attach certification as required in 43 CFR 3160	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards?	Y
If not provide justification (loading assumptions, casing design criteria).	
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-Q?	Y
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	Y
Is well located in R-111-Q and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Occidental - Permian New Mexico

TOP SPOT 12_13 FED COM 13H

3. Cementing Program

Section	Stage	Slurry:	Sacks	Yield (ft ³ /ft)	Density (lb/gal)	Excess:	TOC	Placement	Description
Surface	1	Surface - Tail	943	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.1	1	Intermediate - Tail	85	1.33	14.8	20%	3,999	Circulate	Class C+Accel.
Int.1	1	Intermediate - Lead	629	1.73	12.9	50%	-	Circulate	Class Pozz+Ret.
Int. 2	1	Intermediate 1S - Tail	213	1.68	13.2	5%	6,909	Circulate	Class C+Ret., Disper.
Int. 2	2	Intermediate 2S - Tail BH	993	1.71	13.3	25%	-	Bradenhead	Class C+Accel.
Prod.	1	Production - Tail	652	1.84	13.3	25%	7,993	Circulate	Class C+Ret.

Offline Cementing Request

Oxy requests a variance to cement the intermediate and production casing strings offline in accordance to the approved variances. Please see Offline Cementing sections of the Combined Variance attachment for further details.

Bradenhead CBL Request

Oxy requests permission to adjust the CBL requirement after bradenhead cement jobs, on 7-5/8" intermediate casings, as per the agreement reached in the OXY/BLM meeting on September 5, 2019. Please see Bradenhead CBL Variance attachment for further details.

Occidental - Permian New Mexico

TOP SPOT 12_13 FED COM 13H

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?		Size?	Min. Required WP	Type	✓	Tested to:	TVD Depth (ft) per Section:
12.25" Hole	13-5/8"	5M	Annular		✓	70% of working pressure	4499
		5M	Blind Ram		✓	250 psi / 5000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				
9.875" Hole	13-5/8"	5M	Annular		✓	70% of working pressure	8493
		5M	Blind Ram		✓	250 psi / 5000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				
6.75" Hole	13-5/8"	5M	Annular		✓	70% of working pressure	9222
		5M	Blind Ram		✓	250 psi / 5000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				

*Specify if additional ram is utilized

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR part 3170 Subpart 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

Occidental - Permian New Mexico

TOP SPOT 12_13 FED COM 13H

	Formation integrity test will be performed per 43 CFR part 3170 Subpart 3172. On Exploratory wells or 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. Will be tested in accordance with 43 CFR part 3170 Subpart 3172.
	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
Y	Are anchors required by manufacturer?
	A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per 43 CFR part 3170 Subpart 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015. See attached schematics.

BOP Break Testing Request

Oxy requests permission to adjust the BOP break testing (intermediate and production) requirements as per the agreement reached with OXY/BLM in January 2026. Please see BOP Break Testing Variance attachment for further details.

Oxy will use Cameron ADAPT wellhead system that uses an OEC top flange connection. This connection has been fully vetted and verified by API to Spec 6A and carries an API monogram.

Occidental - Permian New Mexico

TOP SPOT 12_13 FED COM 13H

5. Mud Program

Section	Depth		Depth - TVD		Type	Weight (ppg)	Viscosity	Water Loss
	From (ft)	To (ft)	From (ft)	To (ft)				
Surface	0	903	0	903	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate 1	903	4499	903	4499	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Intermediate 2	4499	8493	4499	8493	Water-Based or Oil-Based Mud	8.0 - 10.0	38-50	N/C
Production	8493	19508	8493	9222	Water-Based or Oil-Based Mud	8.0 - 8.5	38-50	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CACL2. Oxy will use a closed mud system.

What will be used to monitor the loss or gain of fluid?	PVT/MD Totco/Visual Monitoring
---	--------------------------------

6. Logging and Testing Procedures

Logging, Coring and Testing.		
Yes	Will run GR from TD to surface (horizontal well – vertical portion of hole).	
	Stated logs run will be in the Completion Report and submitted to the BLM.	
No	Logs are planned based on well control or offset log information.	
No	Drill stem test? If yes, explain	
No	Coring? If yes, explain	
Additional logs planned		Interval
No	Resistivity	
No	Density	
Yes	CBL	Production string
Yes	Mud log	Bone Spring – TD
No	PEX	

Occidental - Permian New Mexico

TOP SPOT 12_13 FED COM 13H

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4077 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	154°F

Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal

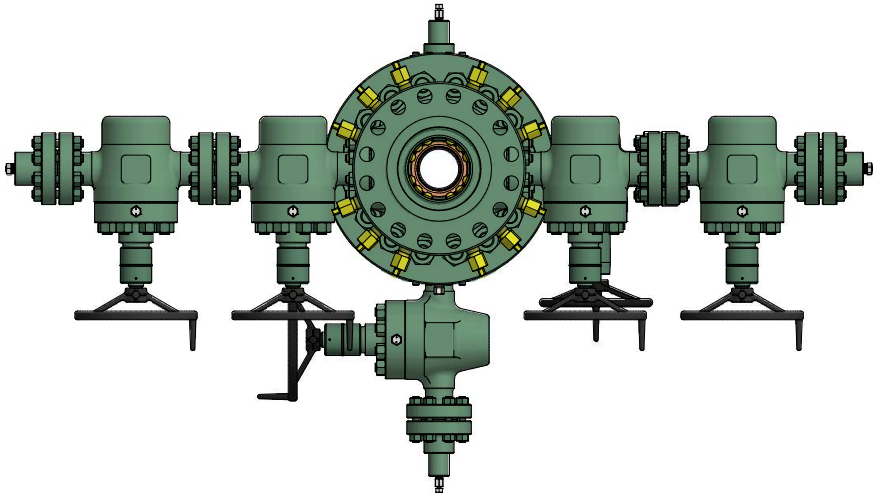
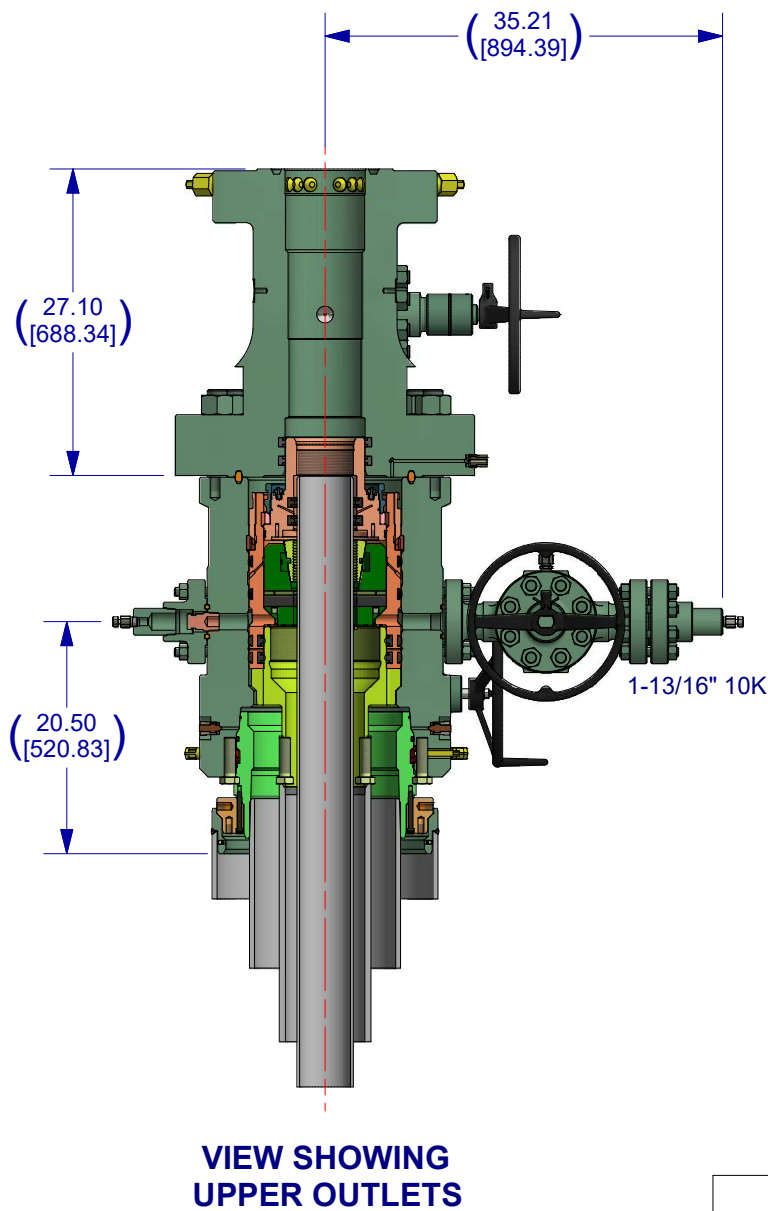
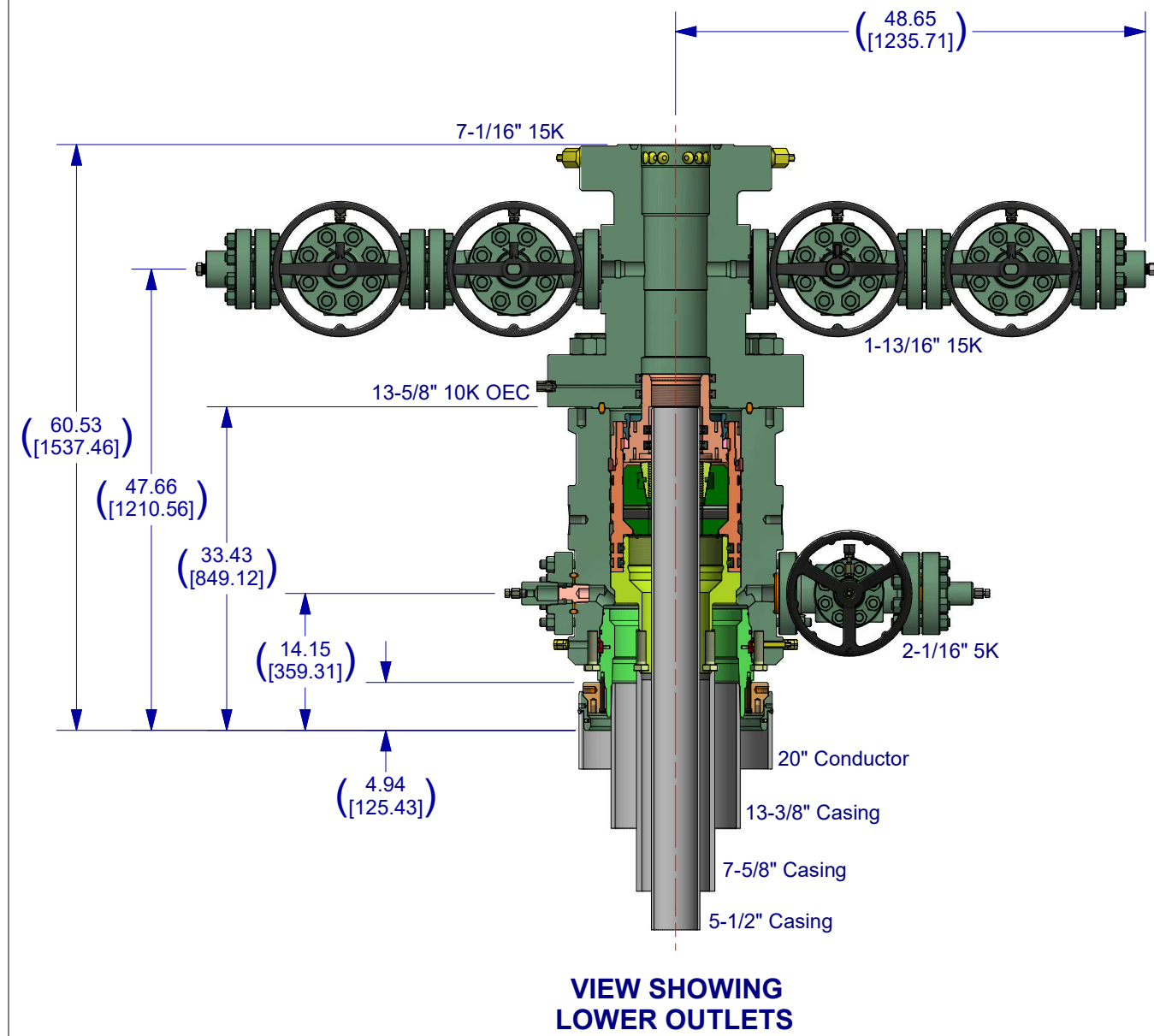
Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of 43 CFR part 3170 Subpart 3172. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N	H2S is present
Y	H2S Plan attached

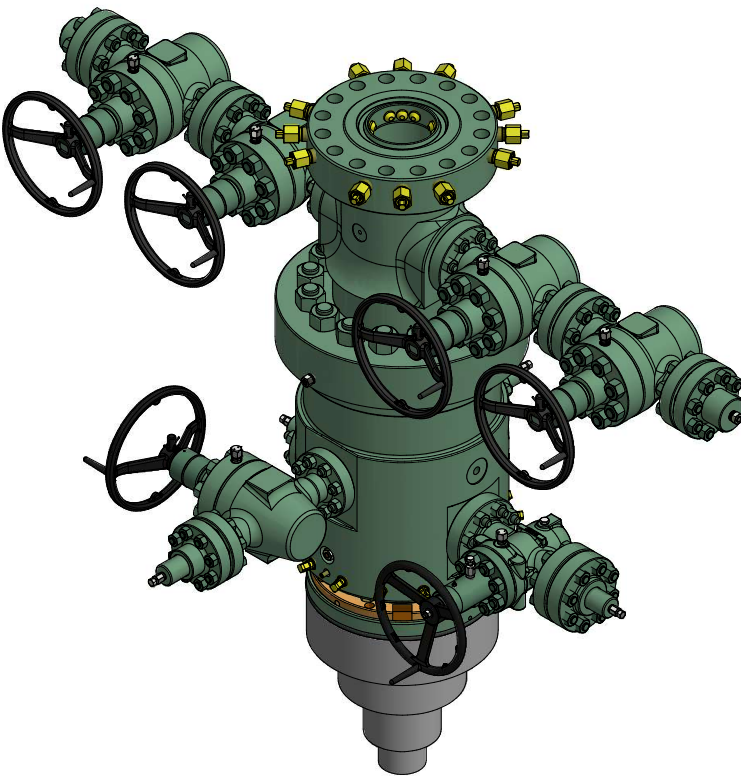
8. Other facets of operation

	Yes/No
Will the well be drilled with a walking/skidding operation? If yes, describe. We plan to drill the 4 well pad in batch by section: all surface sections, intermediate sections and production sections. The wellhead will be secured with a night cap whenever the rig is not over the well.	Yes
Will more than one drilling rig be used for drilling operations? If yes, describe. Oxy requests the option to contract a Surface Rig to drill, set surface casing, and cement for this well. If the timing between rigs is such that Oxy would not be able to preset surface, the Primary Rig will MIRU and drill the well in its entirety per the APD. Please see the attached document for information on the spudder rig.	Yes

Total Estimated Cuttings Volume: 1659 bbls



TOP VIEW



ISOMETRIC VIEW

NOTE: This is a proposal drawing and dimensions shown are subject to change during the final design process.

CAMERON CONFIDENTIAL INFORMATION			
DO NOT SCALE		 A Schlumberger Company	SURFACE SYSTEMS
DRAWN BY: C. LOPEZ	DATE: 01/21/2022		
CHECKED BY: M. MORGAN	DATE: 01/21/2022	13-5/8" 10K 'OEC ADAPT-NST' WELLHEAD	
DRAWING NO: QD-06-00095	REV: 01		

Oxy Combined Variances - Table of Contents

5MAnnBOPVariance.pdf	2
BOPBreakTestingVariance2026.pdf	6
BradenheadCBLVariance.pdf	7
FalconSL1AnnClearanceVariance.pdf	8
ProdCsgAnnClearanceVariance.pdf	9
OfflineIntermediateCementVariance.pdf	10
Oxy-BLM Offline Production Cementing rev2.pdf	13
SpudRigData.pdf	24

5M Annular BOP Variance Request

Per BLM's Memorandum No. NM-2017-008: *Decision and Rationale for a Variance Allowing the Use of a 5M Annular Preventer with a 10M BOP Stack*, Oxy requests to employ a 5M annular with a 10M BOPE stack in the pilot and lateral sections of the well and will ensure that two barriers to flow are maintained at all times. Please see Well Control Plan below.

Oxy Well Control Plan

A. Component and Preventer Compatibility Table

The table below, which covers the drilling and casing of the >5M MASP portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

Pilot hole and Lateral sections, 10M requirement

Component	OD	Preventer	RWP
Drillpipe	4-1/2"-5"	Lower 3-1/2 - 5-1/2" VBR Upper 3-1/2 - 5-1/2" VBR	10M
HWDP	4-1/2"-5"	Lower 3-1/2 - 5-1/2" VBR Upper 3-1/2 - 5-1/2" VBR	10M
Drill collars and MWD tools	4-3/4" – 5-1/2"	Lower 3-1/2 - 5-1/2" VBR Upper 3-1/2 - 5-1/2" VBR	10M
Mud Motor	4-3/4"	Lower 3-1/2 - 5-1/2" VBR Upper 3-1/2 - 5-1/2" VBR	10M
Production casing	5-1/2"	Lower 3-1/2 - 5-1/2" VBR Upper 3-1/2 - 5-1/2" VBR	10M
ALL	0" - 13-5/8"	Annular	5M
Open-hole	6-3/4"	Blind Rams	10M

VBR = Variable Bore Ram. Compatible range listed in chart.

HWDP = Heavy Weight Drill Pipe

MWD = Measurement While Drilling

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 drilling, tripping, running casing, pipe out of the hole (open hole), and moving the Bottom Hole Assembly (BHA) through the Blowout Preventers (BOP). The pressure at which control is swapped from the annular to another compatible ram will occur when the anticipated pressure is approaching or envisioned to exceed 70% of the 5M annular Rated Working Pressure (RWP) or 3500 PSI.

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. The Hydraulic Control Remote (HCR) valve and choke will already be in the closed position).
5. Confirm shut-in
6. Notify tool pusher/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 expected to reach 70% of the annular RWP during kill operations, crew will reconfirm spacing and swap to the upper pipe ram

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. The HCR and choke will already be in the closed position)
5. Confirm shut-in
6. Notify tool pusher/company representative
7. Read and record the following
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
 - d. Regroup and identify forward plan
 - e. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram

General Procedure While Running 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. The HCR and choke will already be in the closed position).
5. Confirm shut-in
6. Notify tool pusher/company representative
7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
 - d. Regroup and identify forward plan.
 - e. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to compatible pipe ram.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams or BSR. (The HCR and 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
 - 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 drill pipe thru the stack.
 - a. Perform flow check, 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 pipe ram
 - e. Shut-in using upper pipe ram. (The HCR and choke will already be in the closed position)
 - f. Confirm shut-in
 - g. Notify tool pusher/company representative
 - h. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - iv. 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 compatible pipe ram
 - d. Shut-in using compatible pipe ram. (The HCR and choke will already be in the closed position.)
 - e. Confirm shut-in
 - f. Notify tool pusher/company representative
 - g. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - iv. 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 drill pipe, and full opening safety valve and close
- e. Space out drill string with tool joint just beneath the upper pipe ram
- f. Shut-in using upper pipe ram. (The HCR and choke will already be in the closed position)
- g. Confirm shut-in
- h. Notify tool pusher/company representative
- i. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
- j. Regroup and identify forward plan

BOP Break Testing Request

Oxy requests permission to adjust the BOP break testing requirements as per the agreement reached with OXY/BLM on January 22nd, 2026.

BOPE Break Testing is ONLY permitted for 5M MASP or less on wells that are in the Wolfcamp formation or shallower. If the MASP approaches 10% of the rated working pressure of a 5M system, the BOPE must be tested to 10M and annular to 5M.

BOP break test for the **intermediate or production** section under the following conditions:

- After a full BOP test is conducted.
- When skidding to drill an intermediate or production section which does not penetrate the deeper than the Wolfcamp formation ($\leq 5M$ MASP).
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 3 CFR part 3170 Subpart 3172
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- In the event break testing is not utilized, then a full BOPE test would be conducted.
- If the kill line is broken prior to skid, two tests will be performed.
 - 1) Wellhead flange, co-flex hose, kill line connections and upper pipe rams
 - 2) Wellhead flange, HCR valve, check valve, upper pipe rams
- If the kill line is not broken prior to skid, only one test will be performed.
 - 1) Wellhead flange, co-flex hose, check valve, upper pipe rams

Bradenhead Cement CBL Variance Request

Oxy requests permission to adjust the CBL requirement after bradenhead cement jobs, on 7-5/8" intermediate casings, as per the agreement reached in the OXY/BLM meeting on September 5, 2019.

Three string wells:

- CBL will be required on one well per pad
- If the pumped volume of cement is less than permitted in the APD, BLM will be notified and a CBL may be run
- Echometer will be used after bradenhead cement job to determine TOC before pumping top-out cement

Four string wells:

- CBL is not required
- If the pumped volume of cement is less than permitted in the APD, BLM will be notified and a CBL may be run
- Echometer will be used after bradenhead cement job to determine TOC before pumping top-out cement

Falcon SL1 Production Casing Annular Clearance Variance Request

If Production Casing Connection OD does not meet 0.422" annular clearance inside casing:

- Cement excess will be circulated from Top of Liner to surface (Cement Confirmation)
- Liner Top will be tested to confirm seal.
- If ICP in Bone Spring Pool and lateral landed in Wolfcamp Pool, a CBL will be ran.

Production Casing Annular Clearance Variance Request

As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow deviation from the 0.422" annular clearance requirement from 43 CFR part 3170 Subpart 3172 under the following conditions:

1. Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casings.
2. Annular clearance less than 0.422" is acceptable for the curve and lateral portions of the production open hole section.

Offline Intermediate Cementing Variance Request

Oxy requests a variance to cement the 9.625" and/or 7.625" intermediate casing strings offline in accordance to the approved variance, EC Tran 461365.

1. Cement Program

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

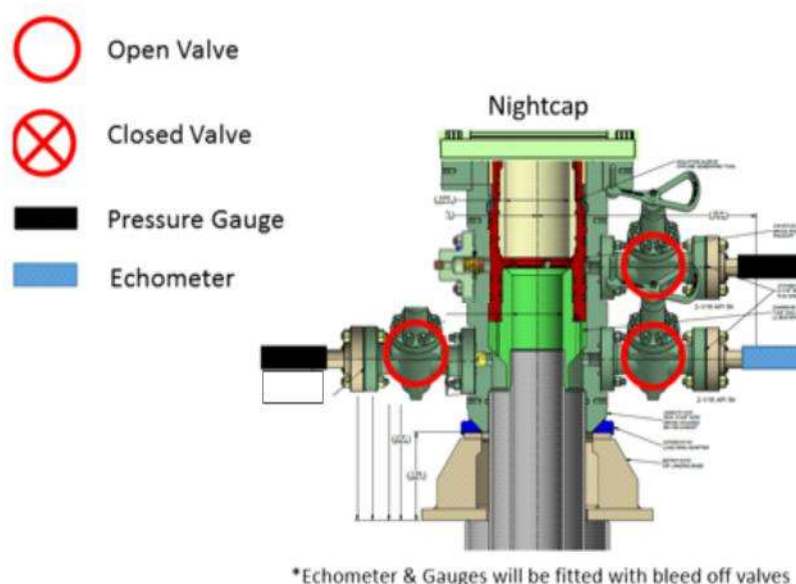
2. Offline Cementing Procedure

The operational sequence will be as follows:

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe)
2. Land casing with mandrel
3. Fill pipe with kill weight fluid, do not circulate through floats and confirm well is static
4. Set annular packoff shown below and pressure test to confirm integrity of the seal.
Pressure ratings of wellhead components and valves is 5,000 psi

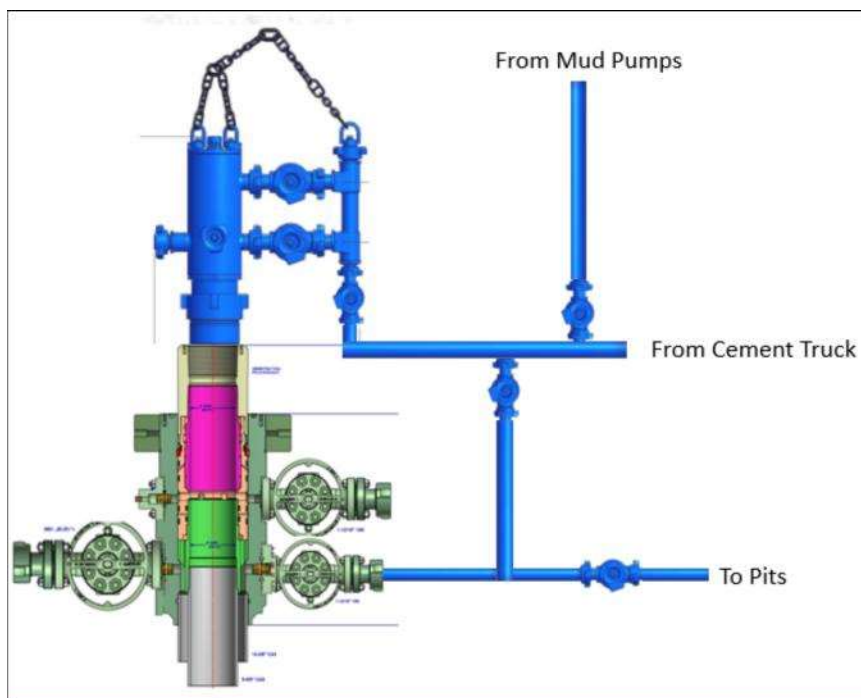
Annular packoff with both external and internal seals





Wellhead diagram during skidding operations

5. After confirmation of both annular barriers and internal barriers, nipple down BOP and install cap flange.
 - a. If any barrier fails to test, the BOP stack will not be nipped down until after the cement job is completed with cement 500ft above the highest formation capable of flow with kill weight mud above or after it has achieved 50 psi compressive strength if cannot be verified.
6. Skid rig to next well on pad.
7. Confirm well is static before removing cap flange, flange will not be removed and offline cementing operations will not commence until well is under control. If well is not static, 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 or nipping up for further remediation.
 - a. Well Control Plan
 - i. The Drillers Method will be the primary well control method to regain control of the wellbore prior to cementing, if wellbore conditions do not permit the drillers method other methods of well control may be used
 - ii. Rig pumps or a 3rd party pump will be tied into the upper casing valve to pump down the casing ID
 - iii. A high pressure return line will be rigged up to lower casing valve and run to choke manifold to control annular pressure
 - iv. Once influx is circulated out of the hole, kill weight mud will be circulated
 - v. Well will be confirmed static
 - vi. Once confirmed static, cap flange will be removed to allow for offline cementing operations to commence
8. Install offline cement tool
9. Rig up cement equipment



Wellhead diagram during offline cementing operations

10. Circulate bottoms up with cement truck
 - a. If gas is present on bottoms up, well will be shut in and returns rerouted through gas buster to handle entrained gas
 - b. Max anticipated time before circulating with cement truck is 6 hrs
11. Perform cement job taking returns from the annulus wellhead valve
12. Confirm well is static and floats are holding after cement job
13. Remove cement equipment, offline cement tools and install night cap with pressure gauge for monitoring.



OXY – OFFLINE PRODUCTION CEMENTING

SAFETY & EFFICIENCY

Oxy NM Team

12/22/25

LEAD WITH PASSION • OUTPERFORM EXPECTATIONS • DELIVER RESULTS RESPONSIBLY • UNLEASH OPPORTUNITIES • COMMIT TO GOOD

BACKGROUND

- Oxy has successfully pumped hundreds of offline intermediate jobs (both deep/salts) since 2018
 - Single stage, two stage, bradenheads
- Why not productions?
 - Typically set production casing on slips, no ability to cement offline
 - Recently swapped to mandrel/packoffs on production
- Historical success
 - TX group cemented over 120+ production sections offline without issues. No well control incidents. Same wellhead provider as NM.
- Big Rig Well control certification
 - 2 x OXY DSM IADC supervisor level well control training
 - 2 x Rig manager IADC supervisor level well control training
 - 2 x driller IADC Driller level well control training
 - 1 x Oxy Field Superintendent IADC supervisor level well control training

INITIAL OFFLINE CHECKLIST

- All items must be met, if not job will be performed online
 1. Offline production cement jobs must be at or above Wolfcamp formation
 2. Nothing out of the ordinary observed during drilling, tripping or casing running operations in the production hole section
 3. Casing must be landed out on hanger
 4. Oxy Company man with well control certification must be present to monitor returns
 5. Rig manager is responsible for walking rig to next well
 6. BOP will **NOT** be nipped down if
 1. Any barrier fails to test
 2. Any offset frac operations are observed within 1 mile and in the same producing interval
 7. Oxy will not drill out next well until cement operations are concluded on offline portion

PROCEDURE

- Run casing as per standard ops. Confirm well is candidate via checklist. Conduct negative pressure test while running casing and confirm integrity of the float equipment.
 - Float equipment has 2 x 15K valves
- Land production casing on mandrel hanger
 - If casing is unable to be landed with a mandrel hanger, casing will be cemented online.
 - 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
 - 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.
- Install back pressure valve in the casing for a 3rd casing barrier.
 - Back pressure valve rated to a minimum of 10,000 psi.
- With the well Secured; nipple down BOP and secure on hydraulic carrier or cradle and Skid/Walk rig to next well on pad.
 - If any of the barriers fail to test, the BOP stack will not be nipped down until after the cement job has concluded.
 - b. Oxy Company Man/Field supt. will oversee Cementing Operations while Rig Manager walks the rig and nipples up the BOP.
 - c. Oxy will not drill out of the subsequent well until after plug bump.

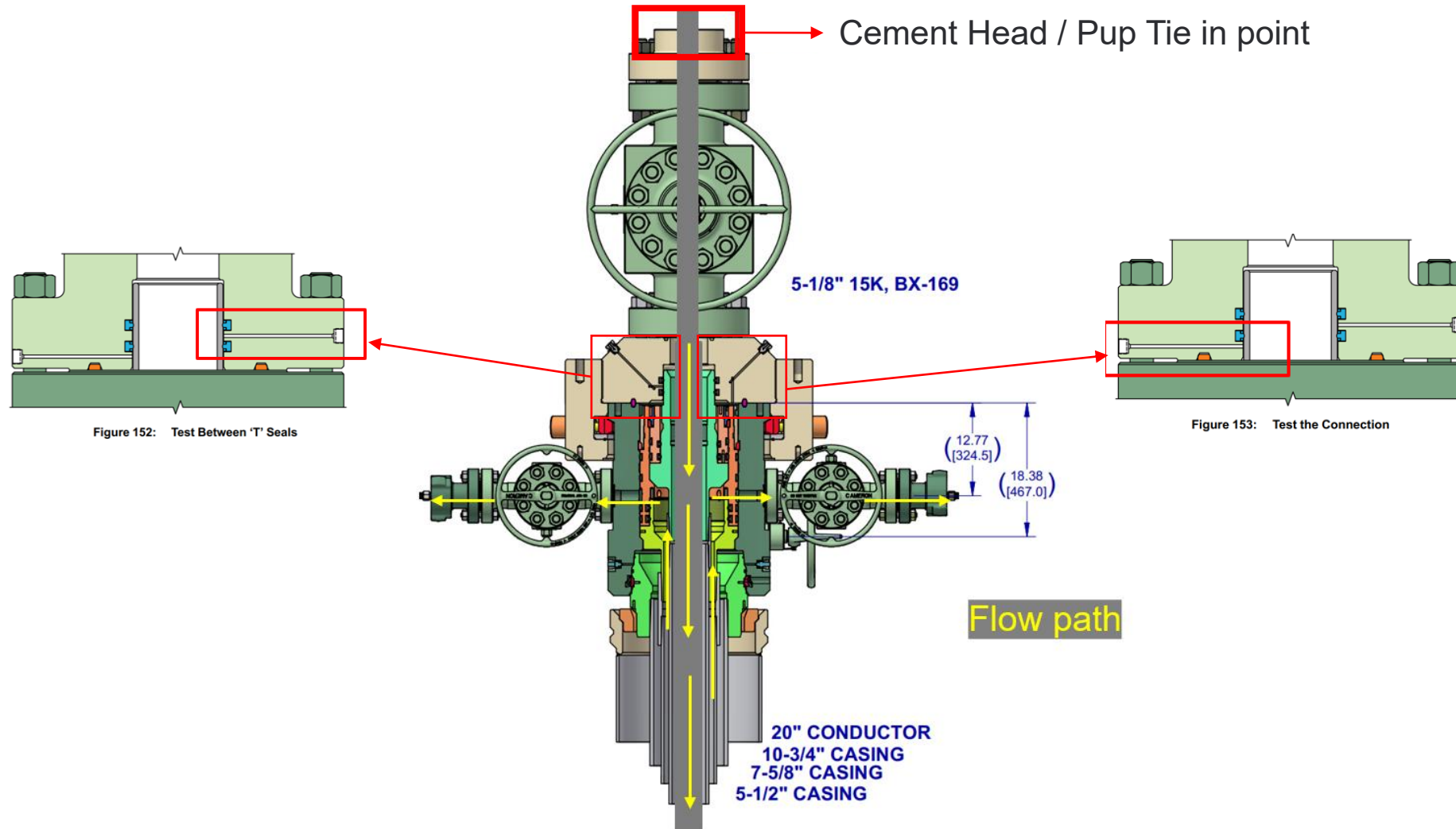
PROCEDURE CONT.

- Install 15M Gate Valve, with wellhead adapter.
 - This creates an additional barrier on the annulus and inside the casing.
 - Gate valve rated to a minimum of 15,000 psi.
- Test connection between wellhead adapter seals against hanger neck and ring gasket to 10,000 psi.
- Remove backpressure valve from the casing.
- Rig up cement head and cementing lines.
- Perform cement job.
- Procedure continued on next page.

PROCEDURE CONT.

- If an influx is noted during the Cement Job:
 - It is the Company Man and field Supt. responsibility to maintain well control. Driller/rig manager will divert to offline operations and assist.
 - The manifold will redirect flow to the rig's chokes.
 - 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.
 - 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).
 - Once cement is in place, we will close the casing valves and confirm the well is static and floats are holding.
 - If the floats fail, the gate valve (15M) or cement head (10M) can be closed to secure the well.
- Confirm well is static and floats are holding after cement job.
- Remove cement head.
- Install back pressure valve.
- Remove 15M Gate Valve and Wellhead Adapter.
- Install night cap with pressure gauge for monitoring.
- Test night cap to 10,000 psi

WELLHEAD SCHEMATIC



CASING BARRIERS – ONLINE VS OFFLINE

Operation	Online	Offline
Install Cement Head	1. Hydrostatic Barrier 2. Float Valves	1. Hydrostatic Barrier 2. Float Valves 3. 15M Gate Valve
Cement Job	1. Hydrostatic Barrier 2. Float Valves 3. Cement Head	1. Hydrostatic Barrier 2. Float Valves 3. 15M Gate Valve 4. Cement Head
Remove Cement Head	1. Float Valves	1. Float Valves 2. 15M Gate Valve
Install BPV & Nipple down BOP/ Offline Adapter	1. Float Valves 2. BPV	1. Float Valves 2. BPV
Nipple up TA Cap	1. Float Valves 2. BPV	1. Float Valves 2. BPV

BARRIERS

Barriers: During Removal of BOP

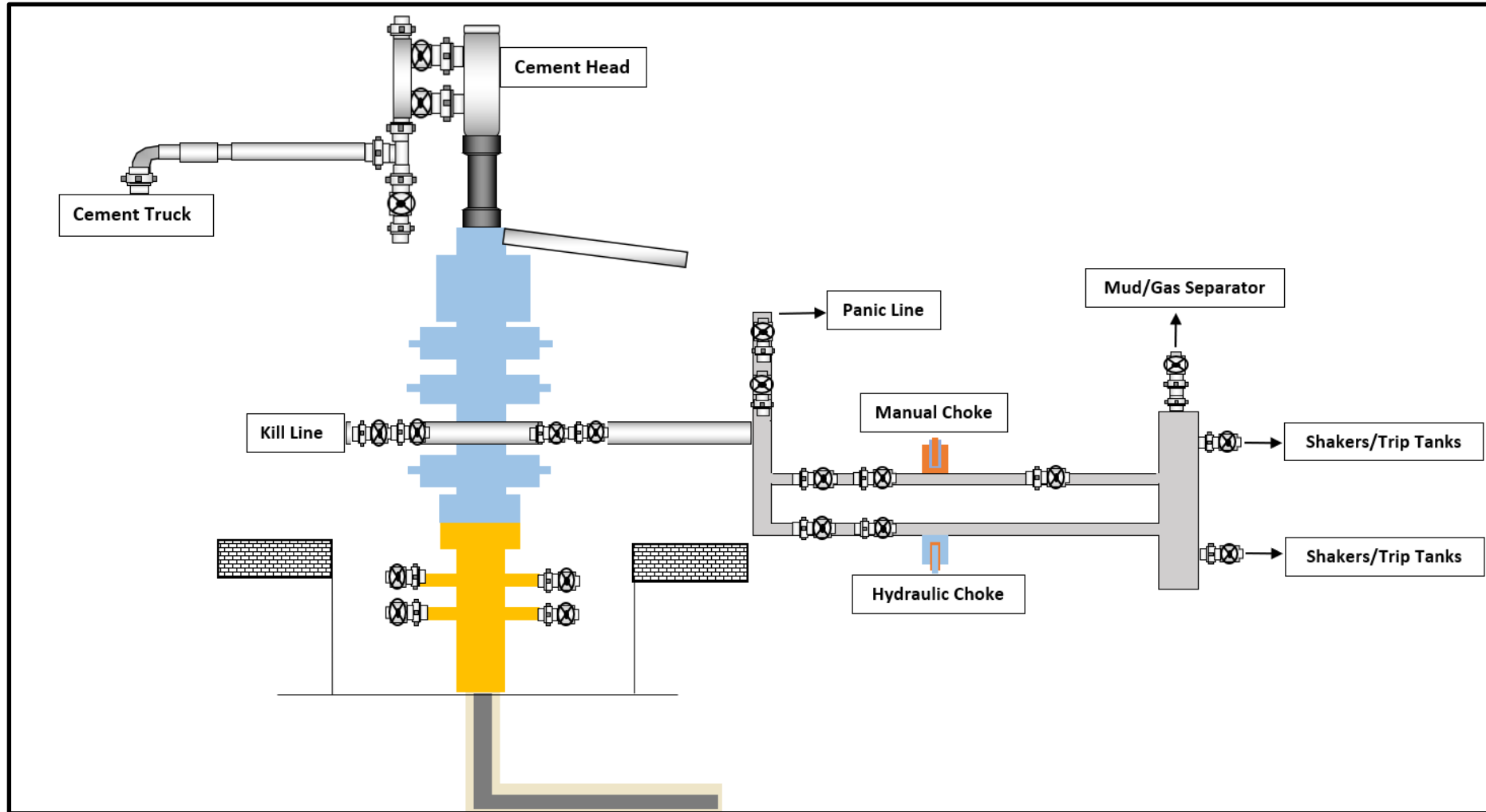
Operation	Casing	Annulus
Nippling Down BOP	1. BPV 2. Hydrostatic Barrier 3. Float Valves	1. Hydrostatic Barrier 2. Mechanical 10M Packoff

Barriers: During Offline Cementing of Production Casing

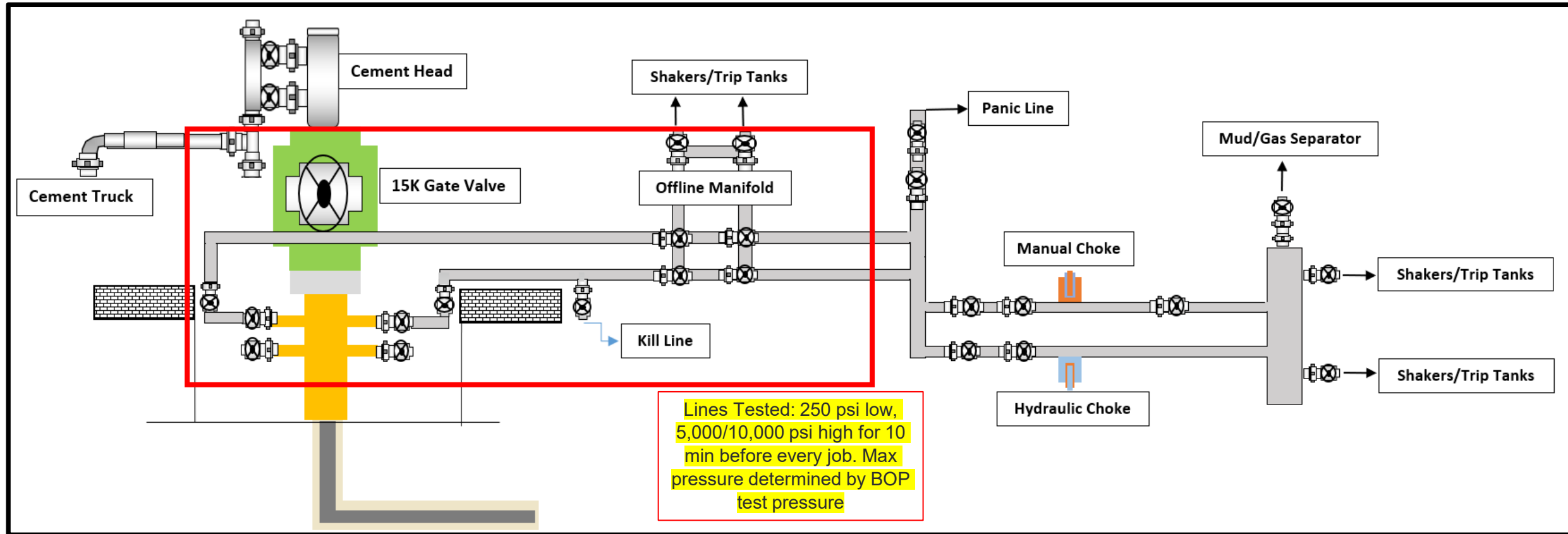
Operation	Casing	Annulus
Pull BPV	1. Hydrostatic Barrier 2. Float Valves 3. 15M Gate Valve	1. Hydrostatic Barrier 2. Mechanical Packoff 3. 10M Wellhead Adapter
Install Cement Head	1. Hydrostatic Barrier 2. Float Valves 3. 15M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Cement Job	1. Float Valves 2. 15M Gate Valve 3. Cement Head	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Remove Cement Head	1. Float Valves 2. 15M Gate Valve	1. Hydrostatic Barrier 2. Mechanical 10M Packoff 3. 10M Wellhead Adapter
Install BPV	1. Float Valves 2. 15M 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

RIG UP: TRADITIONAL METHOD - ONLINE

10



RIG UP: PROPOSED METHOD - OFFLINE



- Same well control capabilities as online
- Gate valve offers flexibility

OXY USA Inc
APD ATTACHMENT: SPUDDER RIG DATA

OPERATOR NAME / NUMBER: OXY USA Inc

1. SUMMARY OF REQUEST:

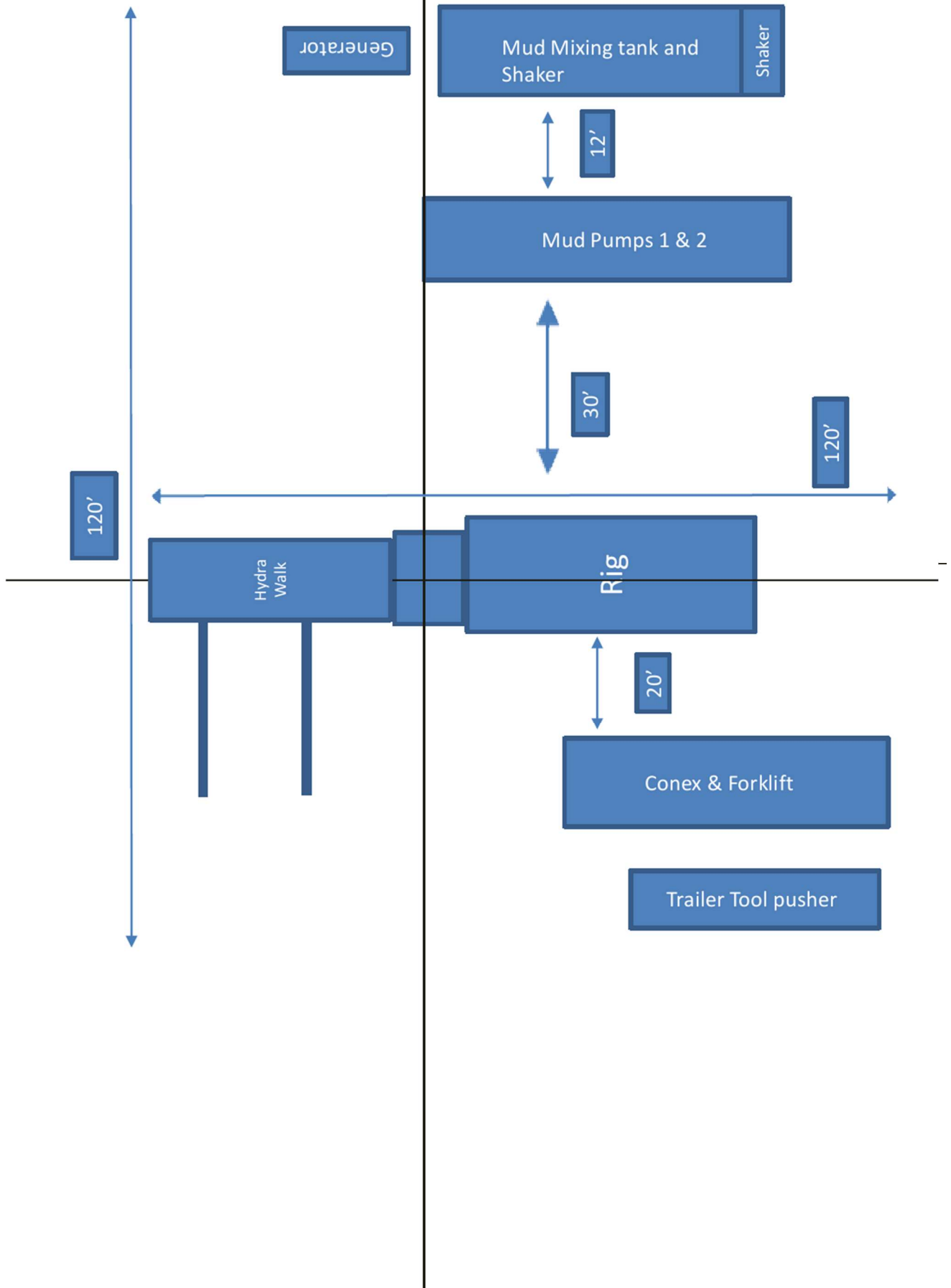
Oxy USA respectfully requests approval for the following operations for the surface hole in the drill plan:

1. Utilize a spudder rig to pre-set surface casing for time and cost savings.

2. Description of Operations

1. Spudder rig will move in to drill the surface hole and pre-set surface casing on the well.
 - a. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (43 CFR part 3170 Subpart 3172, all COAs and NMOCD regulations).
 - b. The spudder rig will utilize fresh water-based mud to drill the surface hole to TD. Solids control will be handled entirely on a closed loop basis. No earth pits will be used.
2. The wellhead will be installed and tested as soon as the surface casing is cut off and the WOC time has been reached.
3. A blind flange at the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wingvalves.
 - a. A means for intervention will be maintained while the drilling rig is not over the well.
4. Spudder rig operations are expected to take 2-3 days per well on the pad.
5. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
6. Drilling operations will begin with a larger rig and a BOP stack equal to or greater than the pressure rating that was permitted will be nipped up and tested on the wellhead before drilling operations resume on each well.
 - a. The larger rig will move back onto the location within 90 days from the point at which the wells are secured and the spudder rig is moved off location.
 - b. The BLM will be contacted / notified 24 hours before the larger rig moves back on the pre-set locations.
7. Oxy will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
8. Once the rig is removed, Oxy will secure the wellhead area by placing a guard rail around the cellar area.

Spudder Rig Layout





Oxy Blanket Design - Casing Design "B"



1. Casing Program

The designs and associated details listed in this document are the "worst case scenario" boundaries for design safety factors.

Location and lithology have NOT been accounted for in these designs; however, the designs are NOT valid for wells within KPLA Boundaries or Capitan Reef areas. The specific well details will be based on the APD/Sundry package and the information listed in the COA.

The mud program listed below will remain the same between each design variation.

Hole will be full during casing run for well control and tensile SF.

Casing will be kept at least half full during run for these designs to meet BLM collapse SF requirement.

Section	Hole Size (in)	MD		TVD		Csg. OD (in)	Csg Wt. (ppf)	Grade	Conn.
		From (ft)	To (ft)	From (ft)	To (ft)				
Surface	17.5	0	1200	0	1200	13.375	54.5	J-55	BTC
Intermediate 1	12.25+	0	4832	0	4832	10.75	40.5	J-55	BTC-SC
Intermediate 2	9.875	0	13111*	0	12775*	7.625	26.4	L-80 HC	BTC Axis-HT
Production	6.75	0	23361	0	12775	5.5	20	P-110	Wedge 461 Sprint SF DWC/C-HT-IS Sprint-TC SC

*Curve could be in intermediate or production section

†Oxy requests the option to set intermediate 1 casing shallower, yet still below the salts, if required due to losses or hole conditions. Cement volumes may be adjusted if casing is set shallower and a DV tool may be run incase hole conditions merit pumping a second stage cement job to comply with the permitted top of cement. If cement is circulated to surface during first stage, Oxy will drop a cancelation cone and not pump the second stage. Well specific depths for the pad will be included with the casing setting depths information submitted for review.

All casing strings will be tested in accordance with 43 CFR part 3170 Subpart 3172.

All Casing SF Values will meet or exceed those below			
SF Collapse	SF Burst	Body SF Tension	Joint SF Tension
1.00	1.100	1.4	1.4

§Annular Clearance Variance Request

As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow deviation from the 0.422" annular clearance requirement. Please see Annular Clearance Variance attachment for further details.

§Annular Clearance Variance Request may not apply to all connections used or presented.



Oxy Blanket Design - Casing Design "B"



2. Trajectory / Boundary Conditions

Section	MD		TVD		Max. Angle	Max. Planned DLS
	Deepest KOP (ft)	End Build (ft)	Deepest KOP (ft)	End Build (ft)		
Surface	0	1200	0	1200	5°	1°/100 ft
Salt	0	4832	0	4832	5°	1°/100 ft
Intermediate	5000 (inside Cherry Canyon)	6500	4980	6390	20°	2°/100 ft
	12211	13111	12202	12775	92° ±	12°/100 ft ±
Production	12211 (~100' MD past ICP)	13111	12202	12775	92° ±	12°/100 ft ±

± Applies only when intermediate casing depth is deepened to landing point to match TVD of production in some areas where required to accommodate higher MWs in depleted areas.

Oxy has reviewed casing burst, collapse, and axial loadcases in Landmark StressCheck with the boundary conditions in the table above which satisfies Oxy and BLM minimum design criteria. Triaxial plots for each casing string is shown in Section 7 and intermediate load case inputs are shown in Section 8.

3. Cementing Program

NOTE: Blanket design is for technical review only. The cement volumes will be adjusted to ensure cement tops meet BLM requirements.

Section	Stage	Slurry:	Sacks	Yield (ft ³ /ft)	Density (lb/gal)	Excess:	TOC	Placement	Description
Surface	1	Surface - Tail	1253	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.1	1	Intermediate - Tail	85	1.33	14.8	20%	4,332	Circulate	Class C+Accel.
Int.1	1	Intermediate - Lead	676	1.73	12.9	50%	-	Circulate	Class Pozz+Ret.
Int. 2	1	Intermediate 1S - Tail	793	1.68	13.2	5%	7,206	Circulate	Class C+Ret., Disper.
Int. 2	2	Intermediate 2S - Tail BH	1002	1.71	13.3	25%	-	Bradenhead	Class C+Accel.
Prod.	1	Production - Tail	609	1.84	13.3	25%	12,611	Circulate	Class C+Ret.
Prod.	2*	Production - Tail	TBD	1.84	13.3	50%	500' inside prev csg	Circulate	Class C+Ret.

*Only applies in scenario where planned single stage job TOC is not 500' above previous shoe as designed/programmed requiring bradenhead 2nd stage to meet requirements

As Reviewed and Approved by BLM on Feb 8, 2024: Oxy uses a Class C / Pozzolan mix on its production cement slurry, which has the same fluid properties as Class H, and has been pilot and field blend tested to have as good or better compressive strength development at our target densities.

Offline Cementing Request

Oxy requests a variance to cement the 9.625" and/or 7.625" intermediate casing strings offline in accordance to the approved variance, EC Tran 461365. Please see Offline Cementing Variance attachment for further details.



Oxy Blanket Design - Casing Design "B"



Bradenhead CBL Request

Oxy requests permission to adjust the CBL requirement after bradenhead cement jobs, on 7-5/8" intermediate casings, as per the agreement reached in the OXY/BLM meeting on September 5, 2019. Please see Bradenhead CBL Variance attachment for further details.

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type		✓	Tested to:	TVD Depth (ft) per Section:
12.25" Hole	13-5/8"	5M	Annular		✓	70% of working pressure	4832
		5M	Blind Ram		✓	250 psi / 5000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				
9.875" Hole	13-5/8"	5M	Annular		✓	70% of working pressure	12102
		5M	Blind Ram		✓	250 psi / 5000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				
6.75" Hole	13-5/8"	5M	Annular		✓	100% of working pressure	12775
		10M	Blind Ram		✓	250 psi / 10000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				

*Specify if additional ram is utilized

**Curve could be in intermediate or production section

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR part 3170 Subpart 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

5M Annular BOP Request

Per BLM's Memorandum No. NM-2017-008: *Decision and Rationale for a Variance Allowing the Use of a 5M Annular Preventer with a 10M BOP Stack*, Oxy requests to employ a 5M annular with a 10M BOPE stack in the pilot and lateral sections of the well and will ensure that two barriers to flow are



Oxy Blanket Design - Casing Design "B"



Formation integrity test will be performed per 43 CFR part 3170 Subpart 3172.

On Exploratory wells or 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. Will be tested in accordance with 43 CFR part 3170 Subpart 3172.

A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. Coflex hoses are in compliance with API 16C and meets inspection and testing requirements. See attached for specs and hydrostatic test chart.

Y

Are anchors required by manufacturer?

A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per 43 CFR part 3170 Subpart 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015.

See attached Schematics.

BOP Break Testing Request

Oxy requests permission to adjust the BOP break testing (intermediate and production) requirements as per the agreement reached in the OXY/BLM meeting on April 4th, 2025. Please see BOP Break Testing Variance attachment for further details.

Hammer Union Variance

Oxy requests permission for hammer unions behind the choke to be routed to the gas buster. The hammer unions will not be subject to wellbore pressure in compliance with API STD 53.

Oxy will use Cameron ADAPT wellhead system that uses an OEC top flange connection. This connection has been fully vetted and verified by API to Spec 6A and carries an API monogram.



Oxy Blanket Design - Casing Design "B"



5. Mud Program & Drilling Conditions

Section	Depth - MD		Depth - TVD		Type	Weight (ppg)	Viscosity	Water Loss
	From (ft)	To (ft)	From (ft)	To (ft)				
Surface	0	1200	0	1200	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate 1	1200	4832	1200	4832	Saturated Brine-Based or Oil-Based Mud	8.0 – 10.0	35-45	N/C
Intermediate 2	1200	13111*	1200	12775*	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Production	13111	23361	12775	12775	Water-Based or Oil-Based Mud	9.5 - 13.5	38-50	N/C

Curve could be in intermediate or production section

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CACL2. Oxy will use a closed mud system.

Drilling Blind Request

In the event total losses are encountered in the intermediate section, Oxy requests permission to drill blind due to depleted formations where risk of hydrocarbon kicks are unlikely.

- Oxy will first attempt to cure losses before proceeding with drilling blind
- Drilling blind will only be allowed in the Castille and formations below
- While drilling blind, will monitor backside by filling-up on connections and utilizing gas monitors
- Depths at which losses occurred and attempt to cure losses with relevant details (LCM sweep info, etc.) will be documented in the drillers log and Subsequent Reports to the BLM.
- If a well control event (hydrocarbon kick) occurs while drilling blind, the BLM will be notified after the well is secured and returned to static.

What will be used to monitor the loss or gain of fluid?

PVT/MD Totco/Visual Monitoring

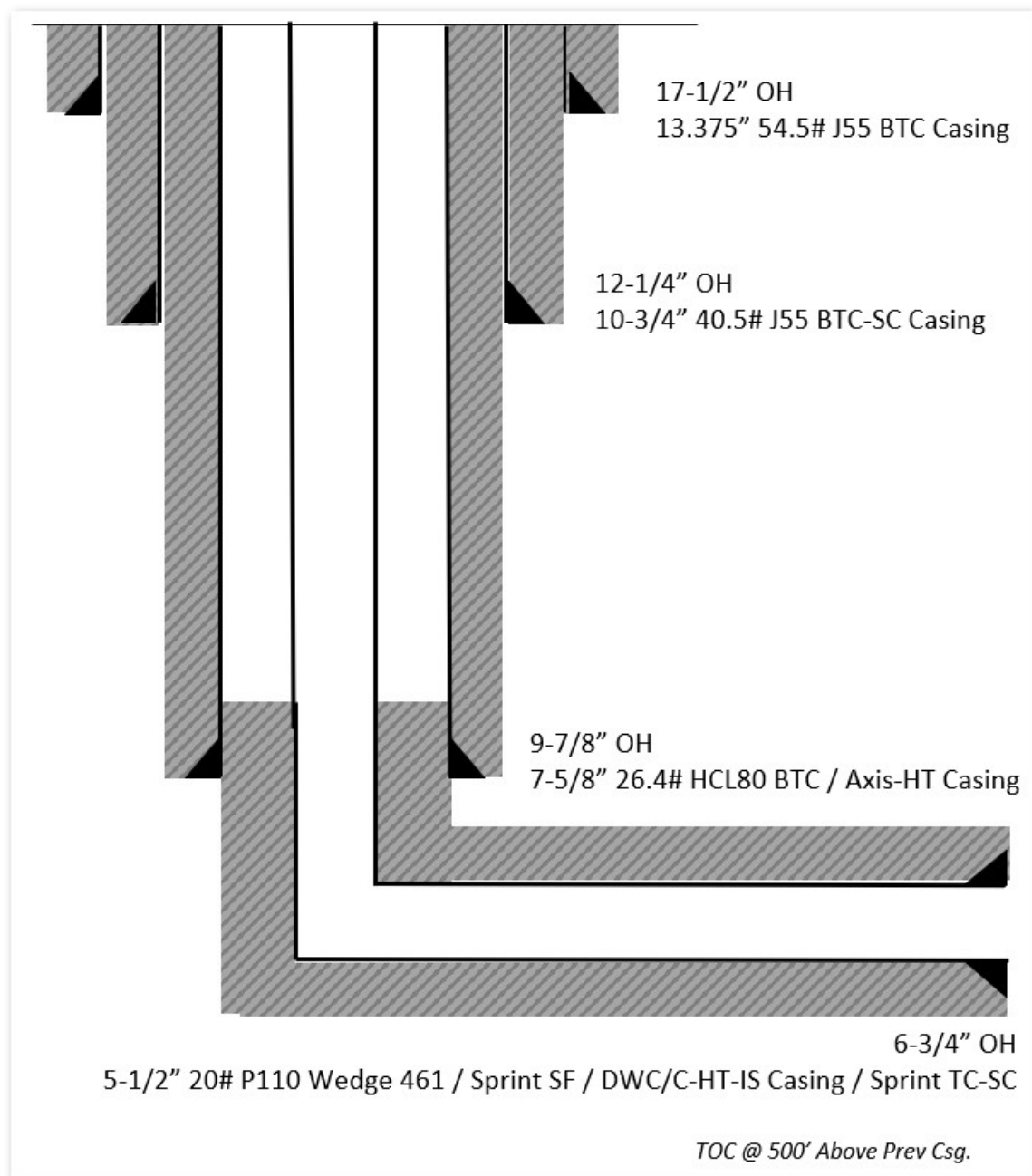
Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.



Oxy Blanket Design - Casing Design "B"



6. Wellbore Diagram

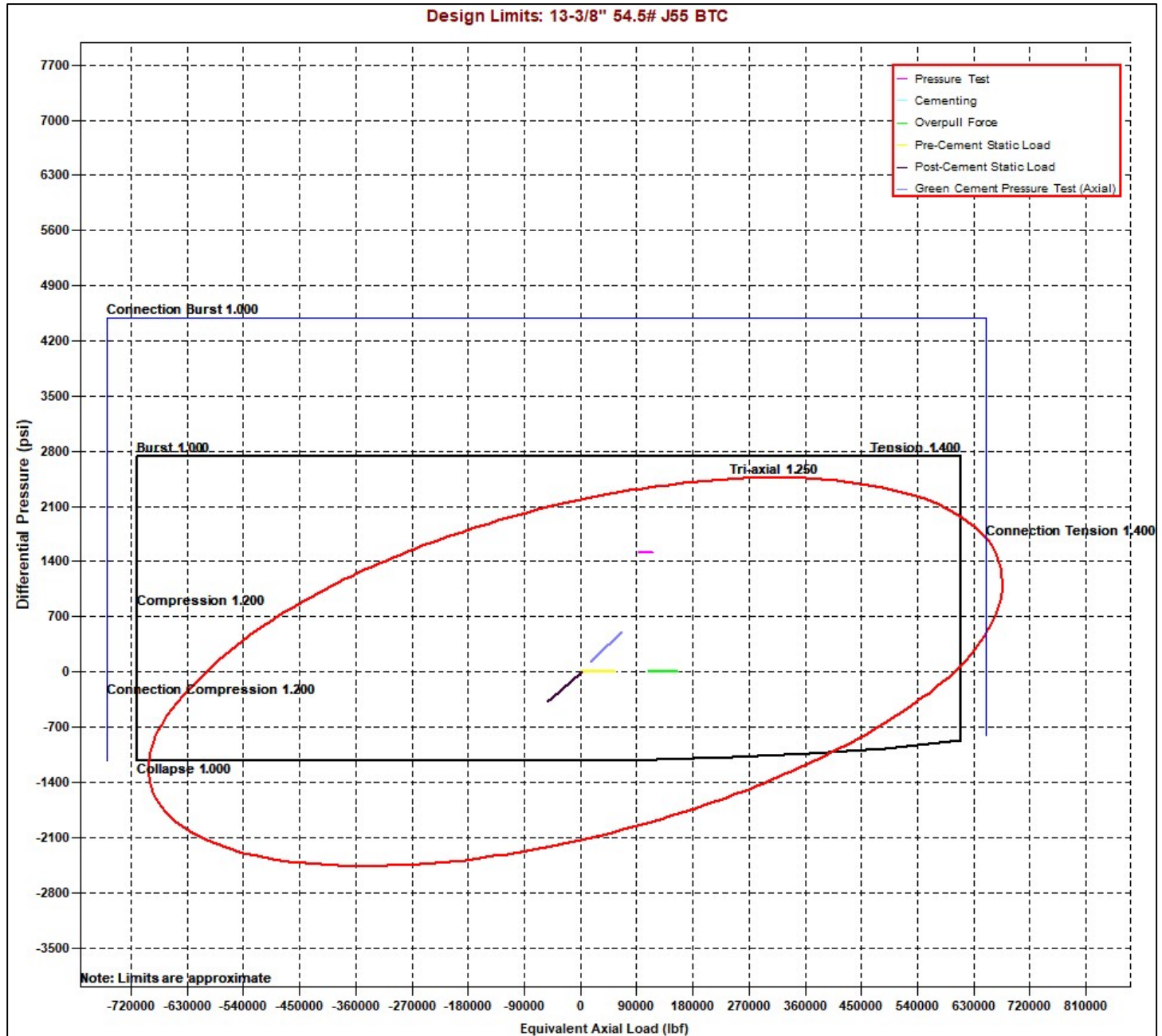




Oxy Blanket Design - Casing Design "B"

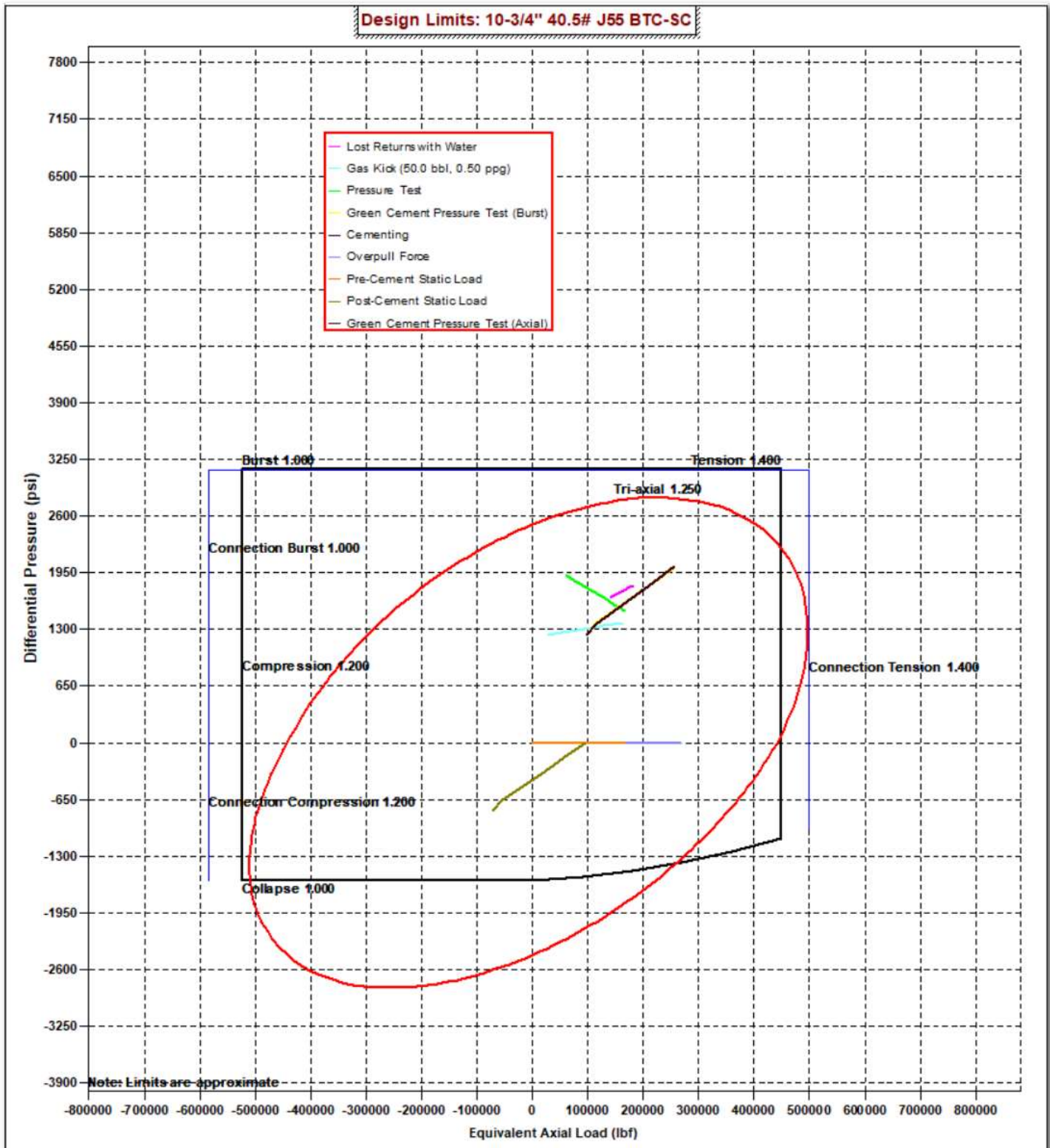


7. Landmark StressCheck Screenshots – Triaxial Output



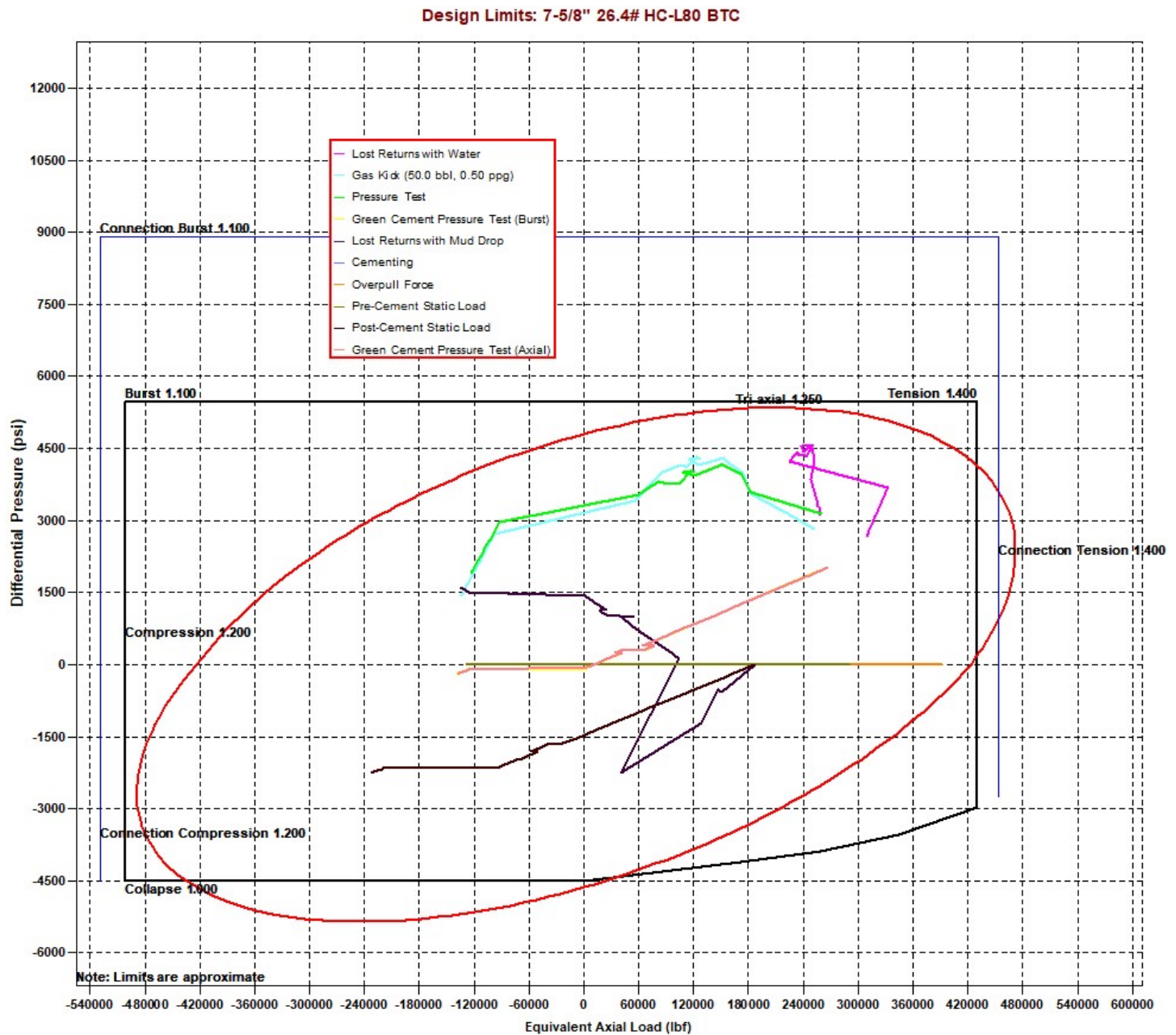


Oxy Blanket Design - Casing Design "B"





Oxy Blanket Design - Casing Design "B"

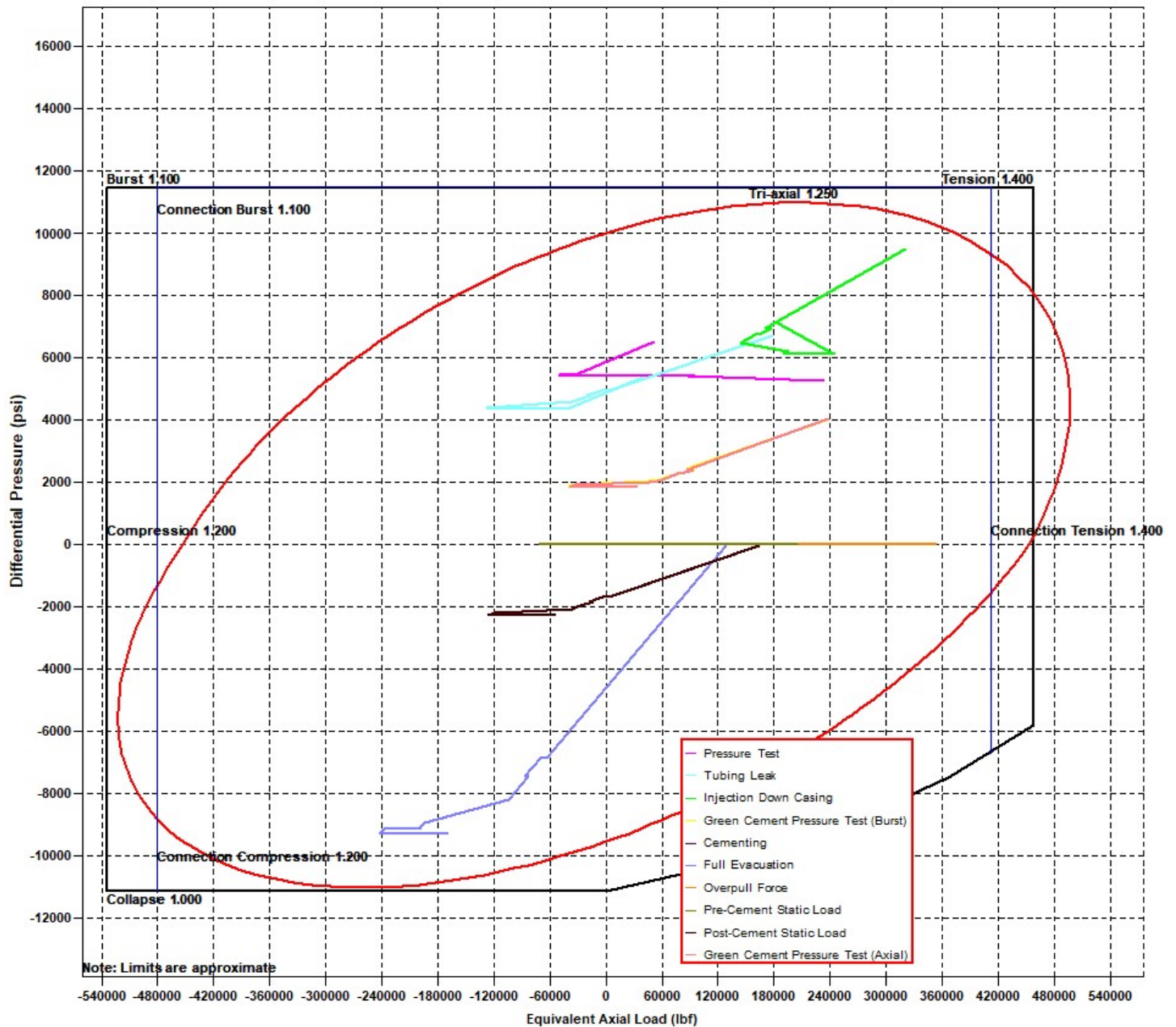




Oxy Blanket Design - Casing Design "B"



Design Limits: 5-1/2" 20# P110 Sprint SF





Oxy Blanket Design - Casing Design "B"



8. Landmark StressCheck Screenshots – Inputs for Intermediate 2 CSG Load Cases

Burst Load Cases

Burst Loads Data	
Drilling Load:	Lost Returns with Water
Fracture at Shoe (MD= 13111.00 ft):	10591 psi
Mud/Water Interface, MD:	0.00 ft
Mud Weight	11.28 ppg
Assigned External Pressure:	Fluid Gradients (w/ Pore Pressure)
Drilling Load:	Gas Kick Profile
Influx Depth, MD:	23361.00 ft
Kick Volume:	50.0 bbl
Kick Intensity	0.50 ppg
Maximum Mud Weight:	13.50 ppg
Kick Gas Gravity:	0.55 (0.1159 psi/ft @ 182 °F & 9291 psi)
Fracture at Shoe (MD= 13111.00 ft):	10591 psi
Drill Pipe OD:	5.000 in
Collar OD:	5.500 in
Collar Length:	200.00 ft
Assigned External Pressure:	Fluid Gradients (w/ Pore Pressure)
Drilling Load:	Pressure Test
Test Pressure:	3120 psi
Mud Weight:	10.00 ppg
Assigned External Pressure:	Fluid Gradients (w/ Pore Pressure)
Drilling Load:	Green Cement Pressure Test
Test Pressure:	4000 psi
Mud Weight at Shoe:	10.00 ppg
TOC, MD:	25.00 ft
Lead Slurry Density:	13.30 ppg
Tail Slurry Density:	13.20 ppg
Tail Slurry Length:	5909.00 ft
Displacement Fluid Density:	10.00 ppg
Float Collar Depth, MD:	13111.00 ft
External Pressure:	Fluid Gradients (w/ Pore Pressure)
TOC, MD:	25.00 ft
Prior Shoe, MD:	4832.00 ft
Mud Weight Above TOC:	10.00 ppg
Fluid Gradient Below TOC:	8.33 ppg
Wellhead Pressure:	18 psi
Pore Pressure In Open Hole:	Yes



Oxy Blanket Design - Casing Design "B"



Collapse Load Cases

Collapse Loads Data	
Drilling Load:	Cementing
Mud Weight at Shoe:	10.00 ppg
TOC, MD:	25.00 ft
Lead Slurry Density:	13.30 ppg
Tail Slurry Density:	13.20 ppg
Tail Slurry Length:	5909.00 ft
Displacement Fluid Density:	10.00 ppg
Float Collar Depth, MD:	13111.00 ft
Assigned External Pressure:	Fluid Gradients (w/ Pore Pressure)
Drilling Load:	Lost Returns with Mud Drop
Lost Returns Depth, MD:	13111.10 ft
Pore Pressure at Lost Returns Depth:	7918 psi
Pore Pressure Gradient at Lost Returns Depth:	11.93 ppg
Mud Weight:	13.50 ppg
Mud Drop Level, MD:	1484.14 ft
Assigned External Pressure:	Fluid Gradients (w/ Pore Pressure)
External Pressure:	Fluid Gradients (w/ Pore Pressure)
TOC, MD:	25.00 ft
Prior Shoe, MD:	4832.00 ft
Fluid Gradient Above TOC:	10.00 ppg
Fluid Gradient Below TOC:	10.00 ppg
Wellhead Pressure:	18 psi
Pore Pressure In Open Hole Below TOC:	No

Axial Load Cases

Axial Loads Data	
Overpull Force:	100000 lbf
Pre-Cement Static Load:	Yes
Pickup Force:	0 lbf
Post-Cement Static Load:	Yes
Green Cement Pressure Test:	2000 psi
Service Loads:	Yes



Oxy Blanket Design - Casing Design "B"



9. Landmark StressCheck Screenshot – Int. Casing Triaxial Results Table (Pressure Test)

StressCheck - [Triaxial Results - Blanket Design B *]

File Edit Wellbore Tubular View Composer Tools Window Help

7 5/8" Intermediate Casing

Pressure Test

	Depth (MD) (ft)	Axial Force (lbf)		Equivalent Axial Load (lbf)	Bending Stress at OD (psi)	Absolute Safety Factor				Temperature (°F)	Pressure (psi)		Add'l Pickup To Prevent Buck. (lbf)	Buckled Length (ft)
		Apparent (w/Bending)	Actual (w/o Bending)			Triaxial	Burst	Collapse (V)	Axial		Internal	External		
29	12400	-149056	-24069	-99987	16622.5	1.88	2.25	N/A	(3.90)	179	9555	6970		
30	12500	-155877	-30890	-105328	16622.5	1.96	2.42	N/A	(3.73)	180	9603	7193		
31	12500	-155878	-30891	-105329	16622.5	1.96	2.42	N/A	(3.73)	180	9603	7193		
32	12550	-159065	-34078	-107825	16622.5	2.00	2.50	N/A	(3.66)	180	9625	7298		
33	12550	-159066	-34079	-107826	16622.5	2.00	2.50	N/A	(3.66)	180	9625	7298		
34	12600	-162071	-37084	-110180	16622.5	2.03	2.59	N/A	(3.59)	180	9646	7396		
35	12600	-162072	-37085	-110181	16622.5	2.03	2.59	N/A	(3.59)	180	9646	7396		
36	12650	-164872	-39885	-112376	16622.5	2.07	2.67	N/A	(3.53)	181	9665	7488		
37	12650	-164873	-39886	-112377	16622.5	2.07	2.67	N/A	(3.53)	181	9665	7488		
38	12700	-167448	-42461	-114394	16622.5	2.10	2.76	N/A	(3.47)	181	9683	7573		
39	12700	-167449	-42462	-114395	16622.5	2.10	2.76	N/A	(3.47)	181	9683	7573		
40	12750	-169778	-44791	-116221	16622.5	2.14	2.84	N/A	(3.43)	181	9699	7649		
41	12750	-169779	-44792	-116221	16622.5	2.14	2.84	N/A	(3.43)	181	9699	7649		
42	12800	-171844	-46858	-117841	16622.5	2.17	2.91	N/A	(3.38)	181	9714	7717		
43	12800	-171845	-46858	-117842	16622.5	2.17	2.91	N/A	(3.38)	181	9714	7717		
44	12850	-173632	-48645	-119243	16622.5	2.19	2.98	N/A	(3.35)	182	9726	7775		
45	12850	-173633	-48646	-119243	16622.5	2.19	2.98	N/A	(3.35)	182	9726	7775		
46	12900	-175127	-50141	-120416	16622.5	2.21	3.04	N/A	(3.32)	182	9736	7824		
47	12900	-175128	-50141	-120416	16622.5	2.21	3.04	N/A	(3.32)	182	9736	7824		
48	12950	-176319	-51332	-121350	16622.5	2.23	3.09	N/A	(3.30)	182	9745	7863		
49	13000	-177197	-52210	-122039	16622.5	2.24	3.13	N/A	(3.28)	182	9751	7892		
50	13050	-177755	-52769	-122477	16622.5	2.25	3.15	N/A	(3.27)	182	9755	7910		
51	13050	-177756	-52769	-122477	16622.5	2.25	3.15	N/A	(3.27)	182	9755	7910		
52	13111	-177998	-53011	-122667	16622.5	2.25	3.16	N/A	(3.27)	182	9756	7918		
53														
54														
55														
56														

() Compression
(V) Vector Collapse Safety Factor

Work Csg_Scheme PP_FG Wellpath Diagram String_Conn Design Burst Collapse Axi

Internal Pressure = Surface Pressure + Hydrostatic = 9756 psi

External Pressure = Fluid Gradient w/ Pore Pressure = 7918 psi

Burst SF = 3.16

NOTE: Specific load case inputs for the pressure test can be seen in **Section 8** above. The test pressure does not exceed 70% of the minimum internal yield.



Oxy Blanket Design - Casing Design "B"



10. Intermediate Non-API Casing Spec Sheet



API BTC -Special Clearance

Coupling	Pipe Body
Grade: J55 (Casing)	Grade: J55 (Casing)
Body: Bright Green	1st Band: Bright Green
1st Band: White	2nd Band: -
2nd Band: -	3rd Band: -
3rd Band: -	4th Band: -

Printed on: 06-19-2025

Outside Diameter	10.750 in.	Wall Thickness	0.350 in.	Grade	J55 (Casing)
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	Special Clearance				

Pipe Body Data

Geometry		Performance	
Nominal OD	10.750 in.	Drift	9.894 in.
Wall Thickness	0.350 in.	Plain End Weight	38.91 lb/ft
Nominal Weight	40.500 lb/ft	OD Tolerance	API
Nominal ID	10.050 in.		
		SMYS	55,000 psi
		Min UTS	75,000 psi
		Body Yield Strength	629 x1000 lb
		Min. Internal Yield Pressure	3130 psi
		Collapse Pressure	1580 psi
		Max. Allowed Bending	23 °/100 ft

Connection Data

Geometry		Performance	
Thread per In	5	Joint Strength	700 x1000 lb
Connection OD	11.250 in.	Coupling Face Load	329 x1000 lb
Hand Tight Stand Off	1 in.	Internal Pressure Capacity	3130 psi

Notes

For products according to API Standards 5CT & 5B; Performance calculated considering API Technical Report 5C3 (Sections 9 & 10) equations. For geometrical and steel grades combinations not considered in the API Standards 5CT and/or 5B; Performance calculations indirectly derived from API Technical Report 5C3 (Sections 9 & 10) equations.

Couplings OD are shown according to current API 5CT 10th Edition.

Tenaris has issued this document for general information only and the information in this document, including, without limitation, any pictures, drawings or designs ("Information") is not intended to constitute professional or any other type of advice or recommendation and is provided on an "as is" basis. No warranty is given. Tenaris has not independently verified any information –if any- provided by the user in connection with, or for the purpose of, the Information contained hereunder. The use of the Information is at user's own risk and Tenaris does not assume any responsibility or liability of any kind for any loss, damage or injury resulting from, or in connection with any Information contained hereunder or any use thereof. The Information in this document is subject to change or modification without notice. Tenaris's products and services are subject to Tenaris's standard terms and conditions or otherwise to the terms resulting from the respective contracts of sale or services, as the case may be, between petitioner and Tenaris. For more complete information please contact a Tenaris's representative or visit our website at www.tenaris.com. ©Tenaris 2025. All rights reserved.



Oxy Blanket Design - Casing Design "B"



Technical Data Sheet

7 5/8" 26.40 lbs/ft. L80HC - Axis HT

Mechanical Properties

Minimum Yield Strength	psi.	80,000
Maximum Yield Strength	psi.	95,000
Minimum Tensile Strength	psi.	95,000

Dimensions

		Pipe	AXIS HT
Outside Diameter	in.	7.625	8.500
Wall Thickness	in.	0.328	-
Inside Diameter	in.	6.969	-
Standard Drift	in.	6.844	6.844
Alternate Drift	in.	-	-
Plain End Weight	lbs/ft.	-	-
Nominal Linear Weight	lbs/ft.	26.40	-

Performance

		Pipe	AXIS HT
Minimum Collapse Pressure	psi.	4,320	-
Minimum Internal Yield Pressure	psi.	6,020	6,020
Minimum Pipe Body Yield Strength	lbs.	602 x 1,000	-
Joint Strength	lbs.	-	635 x 1,000

Make-Up Torques

		Pipe	AXIS HT
Optimum Make-Up Torque	ft/lbs.	-	8,000
Maximum Operational Torque	ft/lbs.	-	25,000

Disclaimer: The content of this Technical Data Sheet is for general information only and does not guarantee performance and/or accuracy, which can only be determined by a professional expert with the specific installation and operation parameters. Information printed or downloaded may not be current and no longer in control by Axis Pipe and Tube. Anyone using the information herein does so at his or her own risk. To verify that you have the latest technical information, please contact Axis Pipe and Tube Technical Sales +1 (979) 599-7600. www.axispipeandtube.com

11. Production Non-API Casing Spec Sheets



Oxy Blanket Design - Casing Design "B"



Printed on: 11/09/2021

Tenaris

TenarisHydril Wedge 461[®] MS



Coupling	Pipe Body
Grade: P110-ICV	Grade: P110-ICV
Body: White	1st Band: White
1st Band: Pale Green	2nd Band: Pale Green
2nd Band: -	3rd Band: Pale Green
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	5.500 in.	Wall Thickness	0.361 in.	Grade	P110-ICV
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	MS				

Pipe Body Data

Geometry		Performance	
Nominal OD	5.500 in.	Wall Thickness	0.361 in.
Nominal Weight	20 lb/ft	Plain End Weight	19.83 lb/ft
Drift	4.653 in.	OD Tolerance	API
Nominal ID	4.778 in.		
		Body Yield Strength	729 x1000 lb
		Min. Internal Yield Pressure	14,360 psi
		SMYS	125,000 psi
		Collapse Pressure	12,300 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	6.050 in.	Tension Efficiency	100 %	Minimum	17,000 ft-lb
Coupling Length	7.714 in.	Joint Yield Strength	729 x1000 lb	Optimum	18,000 ft-lb
Connection ID	4.778 in.	Internal Pressure Capacity	14,360 psi	Maximum	21,600 ft-lb
Make-up Loss	3.775 in.	Compression Efficiency	100 %		
Threads per inch	3.40	Compression Strength	729 x1000 lb	Operation Limit Torques	
Connection OD Option	Ms	Max. Allowable Bending	104 °/100 ft	Operating Torque	43,000 ft-lb
		External Pressure Capacity	12,300 psi	Yield Torque	51,000 ft-lb
		Coupling Face Load	273,000 lb		
				Buck-On	
				Minimum	21,600 ft-lb
				Maximum	23,100 ft-lb

Notes

This connection is fully interchangeable with:
 Wedge 441® - 5.5 in. - 0.304 / 0.361 in.
 Wedge 461® - 5.5 in. - 0.304 / 0.415 / 0.476 in.
 Connections with Dopeless® Technology are fully compatible with the same connection in its Standard version
 In October 2019, TenarisHydril Wedge XP® 2.0 was renamed TenarisHydril Wedge 461™. Product dimensions and properties remain identical and both connections are fully interchangeable

For the latest performance data, always visit our website: www.tenaris.com

Tenaris has issued this document for general information only, and the information in this document, including, without limitation, any pictures, drawings or designs ("Information") is not intended to constitute professional or any other type of advice or recommendation and is provided on an "as is" basis. No warranty is given. Tenaris has not independently verified any information – if any – provided by the user in connection with, or for the purpose of, the Information contained hereunder. The use of the Information is at user's own risk and Tenaris does not assume any responsibility or liability of any kind for any loss, damage or injury resulting from, or in connection with any Information contained hereunder or any use thereof. The Information in this document is subject to change or modification without notice. Tenaris's products and services are subject to Tenaris's standard terms and conditions or otherwise to the terms resulting from the respective contracts of sale or services, as the case may be, between petitioner and Tenaris. For more complete information please contact a Tenaris's representative or visit our website at www.tenaris.com. ©Tenaris 2021. All rights reserved.



Oxy Blanket Design - Casing Design "B"



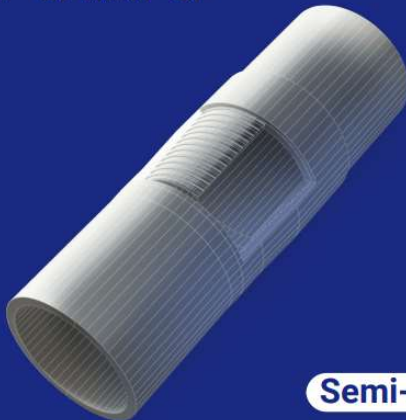
Generated on May 21, 2024



CONNECTION DATA SHEET

OD: 5.500 in. Grade: P110
Weight: 20.00 lb/ft Drift: 4.653 in. (API)
Wall Th.: 0.361 in.

VAM® SPRINT-SF



Semi-Flush

Field Torque Values

Make-up Torque (ft-lb)

20,000 MIN
22,500 OPTI
25,000 MAX

Torque with Sealability (ft-lb)

36,000 MTS

Locked Flank Torque (ft-lb)

4,500 MIN
15,750 MAX

(2) MTS: Maximum Torque with Sealability.

PIPE BODY PROPERTIES

Nominal OD	5.500	in.
Nominal ID	4.778	in.
Nominal Wall Thickness	0.361	in.
Minimum Wall Thickness	87.5	%
Nominal Weight (API)	20.00	lb/ft
Plain End Weight	19.83	lb/ft
Drift	4.653	in.
Grade Type	API 5CT	
Minimum Yield Strength	110	ksi
Maximum Yield Strength	140	ksi
Minimum Ultimate Tensile Strength	125	ksi
Pipe Body Yield Strength	641	klb
Internal Yield Pressure	12,640	psi
Collapse Pressure	11,100	psi

CONNECTION PROPERTIES

Connection Type	Semi-Premium Integral Semi-Flu	
Nominal Connection OD	5.783	in.
Nominal Connection ID	4.718	in.
Make-up Loss	5.965	in.
Tension Efficiency	90	% Pipe Body
Compression Efficiency	90	% Pipe Body
Internal Pressure Efficiency	100	% Pipe Body
External Pressure Efficiency	100	% Pipe Body

JOINT PERFORMANCES

Tension Strength	577	klb
Compression Strength	577	klb
Internal Pressure Resistance	12,640	psi
External Pressure Resistance	11,100	psi
Maximum Bending, Structural	78	°/100 ft
Maximum Bending, with Sealability(1)	30	°/100 ft

(1) Sealability rating demonstrated as per API RP 5C5 / ISO 13679



BOOST YOUR EFFICIENCY, REDUCE COSTS
AND ENSURE 100% WELL INTEGRITY WITH
VAM® FIELD SERVICE

Scan the QR code
to contact us



The information available on this Site ("Information") is offered for general information. It is supposed to be correct at the time of publishing on the Site but is not intended to constitute professional advice and is provided 'as is'. Vallourec does not guarantee the completeness and accuracy of this information. Under no circumstances will Vallourec be liable for damage, liability of any kind, or any loss or injury that may result from the credibility given to this information or its use. The information may be amended, corrected, at any time by Vallourec without warning. Vallourec's products and services are subject to Vallourec's The Information may be amended, corrected, and/or supplemented at any time by Vallourec without warning, standard terms and conditions or otherwise to the terms resulting from the respective contracts of sale or services.



Oxy Blanket Design - Casing Design "B"



DWC/C-HT-IS

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 P110MY	4.653	87.5	DWC/C-HT-IS

PIPE PROPERTIES

Nominal OD	5.500	in.
Nominal ID	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 Pressure	14,360	psi
Collapse Pressure	12,090	psi

CONNECTION PROPERTIES

Connection Type	Semi-Premium T&C
Connection OD (nom)	6.050 in.
Connection ID (nom)	4.778 in.
Make-Up Loss	4.125 in.
Coupling Length	9.250 in.
Critical Cross Section	5.828 sq.in.
Tension Efficiency	89.1% of pipe
Compression Efficiency	88.0% of pipe
Internal Pressure Efficiency	86.1% of pipe
External Pressure Efficiency	100.0% of pipe

CONNECTION PERFORMANCES

Yield Strength	649	klb
Parting Load	729	klb
Compression Rating	641	klb
Min. Internal Yield Pressure	12,360	psi
External Pressure Resistance	12,090	psi
Maximum Uniaxial Bend Rating	91.7	°/100 ft
Reference String Length w 1.4 Design Factor	22,890	ft.

FIELD TORQUE VALUES

Min. Make-up torque	16,600	ftlb
Opti. Make-up torque	17,950	ftlb
Max. Make-up torque	19,300	ftlb
Min. Shoulder Torque	1,660	ftlb
Max. Shoulder Torque	13,280	ftlb
Max. Delta Turn	0.200	Turns
‡Maximum Operational Torque	23,800	ftlb
‡Maximum Torsional Value (MTV)	26,180	ftlb

‡ Maximum Operational Torque and Maximum Torsional Value only valid with Vallourec P110MY Material.

‡ P110MY - Coupling Min Yield Strength is 110ksi and Coupling Max Yield is 125ksi.

"VST = Vallourec Star as the mill source for the pipe, "P110EC" is the grade name"

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

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.

All information is provided by VAM USA or its affiliates at user's sole risk, without liability for loss, damage or injury resulting from the use thereof; and on an "AS IS" basis without warranty or representation of any kind, whether express or implied, including without limitation any warranty of merchantability, fitness for purpose or completeness. This document and its contents are subject to change without notice. In no event shall VAM USA or its affiliates be responsible for any indirect, special, incidental, punitive, exemplary or consequential loss or damage (including without limitation, loss of use, loss of bargain, loss of revenue, profit or anticipated profit) however caused or arising, and whether such losses or damages were foreseeable or VAM USA or its affiliates was advised of the possibility of such damages.

03/04/2024 08:36:50 PM





Oxy Blanket Design - Casing Design "B"



VAM USA
2107 CityWest Boulevard Suite 1300
Houston, TX 77042
Phone: 713-479-3200
Fax: 713-479-3234

VAM[®] USA Sales E-mail: VAMUSAsales@vam-usa.com
Tech Support Email: tech.support@vam-usa.com

DWC Connection Data Sheet Notes:

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

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.

All information is provided by VAM USA or its affiliates at user's sole risk, without liability for loss, damage or injury resulting from the use thereof; and on an "AS IS" basis without warranty or representation of any kind, whether express or implied, including without limitation any warranty of merchantability, fitness for purpose or completeness. This document and its contents are subject to change without notice. In no event shall VAM USA or its affiliates be responsible for any indirect, special, incidental, punitive, exemplary or consequential loss or damage (including without limitation, loss of use, loss of bargain, loss of revenue, profit or anticipated profit) however caused or arising, and whether such losses or damages were foreseeable or VAM USA or its affiliates was advised of the possibility of such damages.

03/04/2024 08:36:50 PM





Oxy Blanket Design - Casing Design "B"



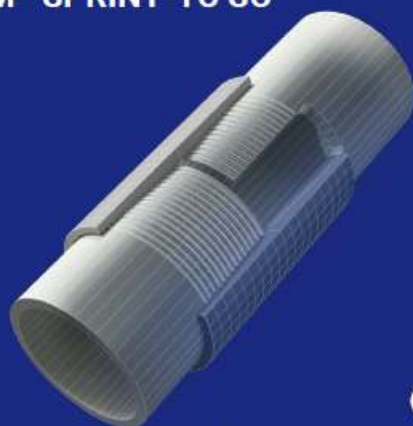
Generated on May 14, 2025



CONNECTION DATA SHEET

OD: 5.500 in. Grade: P110 EC
Weight: 20.00 lb/ft Drift: 4.653 in. (API)
Wall Th.: 0.361 in.

VAM® SPRINT-TC SC



T&C

Field Torque Values

Make-up Torque (ft-lb)

23,000 MIN
24,000 OPTI
25,000 MAX

Torque with Sealability (ft-lb)

39,200 MTS

Locked Flank Torque (ft-lb)

1,200 MIN
16,800 MAX

(1) MTS: Maximum Torque with Sealability.
(2) Note: Thread compound must be applied as a thin even layer

PIPE BODY PROPERTIES

Nominal OD	5.500	in.
Nominal ID	4.778	in.
Nominal Wall Thickness	0.361	in.
Minimum Wall Thickness	87.5	%
Nominal Weight (API)	20.00	lb/ft
Plain End Weight	19.83	lb/ft
Drift	4.653	in.
Grade Type	High Yield	
Minimum Yield Strength	125	ksi
Maximum Yield Strength	140	ksi
Minimum Ultimate Tensile Strength	135	ksi
Pipe Body Yield Strength	729	klb
Internal Yield Pressure	14,360	psi
Collapse Pressure	12,090	psi

CONNECTION PROPERTIES

Connection Type	Semi-Premium Threaded & Coupled	
Nominal Connection OD	5.900	in.
Nominal Connection ID	4.830	in.
Make-up Loss	3.973	in.
Coupling Length	8.296	in.
Tension Efficiency	100	% Pipe Body
Compression Efficiency	100	% Pipe Body
Internal Pressure Efficiency	100	% Pipe Body
External Pressure Efficiency	100	% Pipe Body

JOINT PERFORMANCES

Tension Strength	729	klb
Compression Strength	729	klb
Internal Pressure Resistance	14,360	psi
External Pressure Resistance	12,090	psi
Maximum Bending, Structural	104	°/100 ft
Maximum Bending, with Sealability	30	°/100 ft
Maximum Load on Coupling Face	227	klb

(4) Sealability rating demonstrated as per API RP 5C5 / ISO 13679



BOOST YOUR EFFICIENCY, REDUCE COSTS
AND ENSURE 100% WELL INTEGRITY WITH
VAM® FIELD SERVICE

Scan the QR code
to contact us



The information available on this Site ("Information") is offered for general information. It is supposed to be correct at the time of publishing on the Site but is not intended to constitute professional advice and is provided "as is". Vallourec does not guarantee the completeness and accuracy of this information. Under no circumstances will Vallourec be liable for damage, liability of any kind, or any loss or injury that may result from the credibility given to this information or its use. The information may be amended, corrected, at any time by Vallourec without warning. Vallourec's products and services are subject to Vallourec's standard terms and conditions or otherwise to the terms resulting from the respective contracts of sale or services. The information may be amended, corrected, and/or supplemented at any time by Vallourec without warning.



Oxy Blanket Design - Casing Design "A"



1. Casing Program

The designs and associated details listed in this document are the "worst case scenario" boundaries for design safety factors.

Location and lithology have NOT been accounted for in these designs; however, the designs are NOT valid for wells within KPLA Boundaries or Capitan Reef areas. The specific well details will be based on the APD/Sundry package and the information listed in the COA.

The mud program listed below will remain the same between each design variation.

Hole will be full during casing run for well control and tensile SF.

Casing will be kept at least half full during run for these designs to meet BLM collapse SF requirement.

Design Variation "A1"

Section	Hole Size (in)	MD		TVD		Csg. OD (in)	Csg Wt. (ppf)	Grade	Conn.
		From (ft)	To (ft)	From (ft)	To (ft)				
Surface	14.75	0	1200	0	1200	10.75	40.5	J-55	BTC
Intermediate	9.875	0	13111*	0	12775*	7.625	26.4	L-80 HC	BTC Axis HT GBCD
Production	6.75	0	23361	0	12775	5.5	20	P-110	Wedge 461 Sprint SF DWC/C-HT-IS Sprint-TC SC

*Curve could be in intermediate or production section

Design Variation "A2" - Option to Pivot to Design "B" for Contingency 4S

Section	Hole Size (in)	MD		TVD		Csg. OD (in)	Csg Wt. (ppf)	Grade	Conn.
		From (ft)	To (ft)	From (ft)	To (ft)				
Surface	17.5	0	1200	0	1200	13.375	54.5	J-55	BTC
Intermediate	12.25+	0	13111*	0	12775*	7.625	26.4	L-80 HC	BTC Axis HT GBCD
Production	6.75	0	23361	0	12775	5.5	20	P-110	Wedge 461 Sprint SF DWC/C-HT-IS Sprint-TC SC

*Curve could be in intermediate or production section

†If 4S Contingency is not required, Oxy requests permission to transition from 12.25" to 9.875" Intermediate at some point during the hole section. Cement volumes will be updated on C103 submission.

All casing strings will be tested in accordance with 43 CFR part 3170 Subpart 3172



Oxy Blanket Design - Casing Design "A"



All Casing SF Values will meet or exceed those below			
SF Collapse	SF Burst	Body SF Tension	Joint SF Tension
1.00	1.100	1.4	1.4

§Annular Clearance Variance Request

As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow deviation from the 0.422" annular clearance requirement. Please see Annular Clearance Variance attachment for further details.

§Annular Clearance Variance Request may not apply to all connections used or presented.

2. Trajectory / Boundary Conditions

Section	MD		TVD		Max. Angle	Max. Planned DLS
	Deepest KOP (ft)	End Build (ft)	Deepest KOP (ft)	End Build (ft)		
Surface	0	1200	0	1200	5°	1°/100 ft
Intermediate	5000 (inside Cherry Canyon)	6500	4980	6390	20°	2°/100 ft
	12211	13111	12202	12775	92° ‡	12°/100 ft ‡
Production	12211 (~100' MD past ICP)	13111	12202	12775	92° ‡	12°/100 ft ‡

‡ Applies only when intermediate casing depth is deepened to landing point to match TVD of production in some areas where required to accommodate higher MWs in depleted areas.

Oxy has reviewed casing burst, collapse, and axial loadcases in Landmark StressCheck with the boundary conditions in the table above which satisfies Oxy and BLM minimum design criteria. Triaxial plots for each casing string is shown in Section 7 and intermediate load case inputs are shown in Section 8.



Oxy Blanket Design - Casing Design "A"



3. Cementing Program

NOTE: Blanket design is for technical review only. The cement volumes will be adjusted to ensure cement tops meet BLM requirements.

Design Variation "A1"

Section	Stage	Slurry:	Sacks	Yield (ft ³ /ft)	Density (lb/gal)	Excess:	TOC	Placement	Description
Surface	1	Surface - Tail	819	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.	1	Intermediate 1S - Tail	658	1.68	13.2	5%	7,206	Circulate	Class C+Ret., Disper.
Int.	2	Intermediate 2S - Tail BH	1111	1.71	13.3	25%	-	Bradenhead	Class C+Accel.
Prod.	1	Production - Tail	665	1.84	13.3	25%	11,611	Circulate	Class C+Ret.
Prod.	2*	Production - Tail BH*	TBD	1.84	13.3	50%	500' inside prev csg	Circulate	Class C+Ret.

*Only applies in scenario where planned single stage job TOC is not 500' above previous shoe as designed/programmed requiring bradenhead 2nd stage to meet requirements

Design Variation "A2"

Section	Stage	Slurry:	Sacks	Yield (ft ³ /ft)	Density (lb/gal)	Excess:	TOC	Placement	Description
Surface	1	Surface - Tail	1023	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.	1	Intermediate 1S - Tail	658	1.68	13.2	5%	7,206	Circulate	Class C+Ret., Disper.
Int.	2	Intermediate 2S - Tail BH	1293	1.71	13.3	25%	-	Bradenhead	Class C+Accel.
Prod.	1	Production - Tail	665	1.84	13.3	25%	11,611	Circulate	Class C+Ret.
Prod.	2*	Production - Tail BH*	TBD	1.84	13.3	50%	500' inside prev csg	Circulate	Class C+Ret.

*Only applies in scenario where planned single stage job TOC is not 500' above previous shoe as designed/programmed requiring bradenhead 2nd stage to meet requirements

As Reviewed and Approved by BLM on Feb 8, 2024: Oxy uses a Class C / Pozzolan mix on its production cement slurry, which has the same fluid properties as Class H, and has been pilot and field blend tested to have as good or better compressive strength development at our target densities.

Offline Cementing Request

Oxy requests a variance to cement the 9.625" and/or 7.625" intermediate casing strings offline in accordance to the approved variance, EC Tran 461365. Please see Offline Cementing Variance attachment for further details.

Bradenhead CBL Request

Oxy requests permission to adjust the CBL requirement after bradenhead cement jobs, on 7-5/8" intermediate casings, as per the agreement reached in the OXY/BLM meeting on September 5, 2019. Please see Bradenhead CBL Variance attachment for further details.



Oxy Blanket Design - Casing Design "A"



4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type		✓	Tested to:	Deepest TVD Depth (ft) per Section:
9.875" Hole	13-5/8"	5M	Annular		✓	70% of working pressure	12775**
		5M	Blind Ram		✓	250 psi / 5000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				
6.75" Hole	13-5/8"	5M	Annular		✓	100% of working pressure	12775
		10M	Blind Ram		✓	250 psi / 10000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				

*Specify if additional ram is utilized

**Curve could be in intermediate or production section

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR part 3170 Subpart 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

5M Annular BOP Request

Per BLM's Memorandum No. NM-2017-008: *Decision and Rationale for a Variance Allowing the Use of a 5M Annular Preventer with a 10M BOP Stack*, Oxy requests to employ a 5M annular with a 10M BOPE stack in the pilot and lateral sections of the well and will ensure that two barriers to flow are



Oxy Blanket Design - Casing Design "A"



Formation integrity test will be performed per 43 CFR part 3170 Subpart 3172.

On Exploratory wells or 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. Will be tested in accordance with 43 CFR part 3170 Subpart 3172.

A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. Coflex hoses are in compliance with API 16C and meets inspection and testing requirements. See attached for specs and hydrostatic test chart.

Y	Are anchors required by manufacturer?
---	---------------------------------------

A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per 43 CFR part 3170 Subpart 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015.

See attached Schematics.

BOP Break Testing Request

Oxy requests permission to adjust the BOP break testing (intermediate and production) requirements as per the agreement reached in the OXY/BLM meeting on April 4th, 2025. Please see BOP Break Testing Variance attachment for further details.

Hammer Union Variance

Oxy requests permission for hammer unions behind the choke to be routed to the gas buster. The hammer unions will not be subject to wellbore pressure in compliance with API STD 53.

Oxy will use Cameron ADAPT wellhead system that uses an OEC top flange connection. This connection has been fully vetted and verified by API to Spec 6A and carries an API monogram.



Oxy Blanket Design - Casing Design "A"



5. Mud Program & Drilling Conditions

Section	Depth - MD		Depth - TVD		Type	Weight (ppg)	Viscosity	Water Loss
	From (ft)	To (ft)	From (ft)	To (ft)				
Surface	0	1200	0	1200	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate	1200	13111*	1200	12775*	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Production	13111	23361	12775	12775	Water-Based or Oil-Based Mud	9.5 - 13.5	38-50	N/C

Curve could be in intermediate or production section

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CACL2. Oxy will use a closed mud system.

Drilling Blind Request

In the event total losses are encountered in the intermediate section, Oxy requests permission to drill blind due to depleted formations where risk of hydrocarbon kicks are unlikely.

- Oxy will first attempt to cure losses before proceeding with drilling blind
- Drilling blind will only be allowed in the Castille and formations below
- While drilling blind, will monitor backside by filling-up on connections and utilize gas monitors
- Depths at which losses occurred and attempt to cure losses with relevant details (LCM sweep info, etc.) will be documented in the drillers log and Subsequent Reports to the BLM.
- If a well control event (hydrocarbon kick) occurs while drilling blind, the BLM will be notified after the well is secured and returned to static.

What will be used to monitor the loss or gain of fluid?	PVT/MD Totco/Visual Monitoring
---	--------------------------------

Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

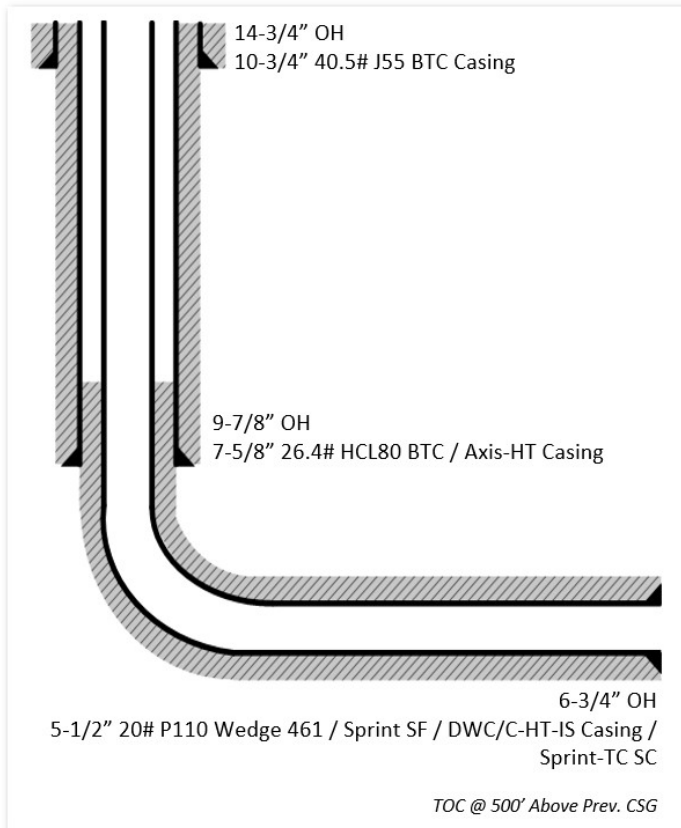


Oxy Blanket Design - Casing Design "A"

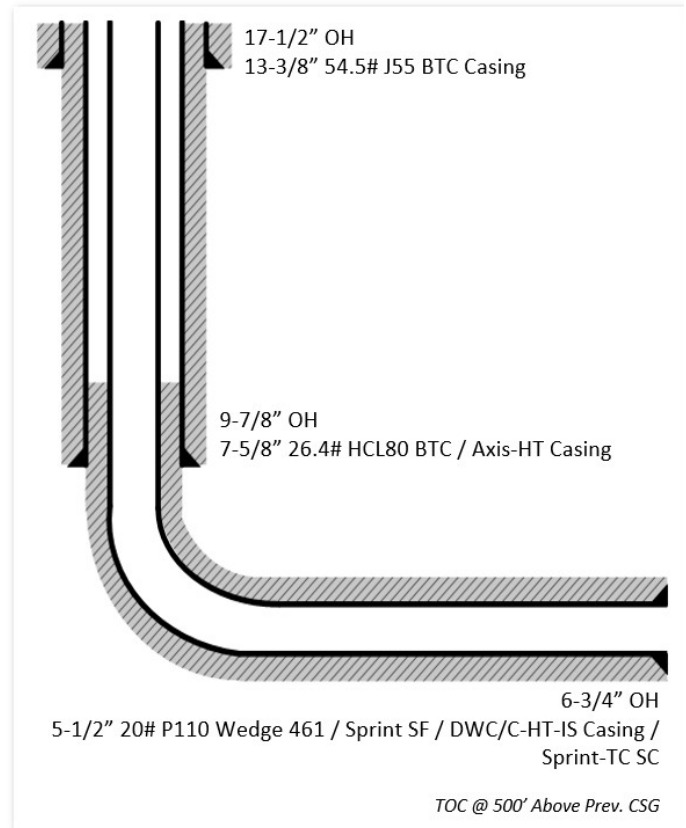


6. Wellbore Diagram(s)

Design Variation "A1"



Design Variation "A2"

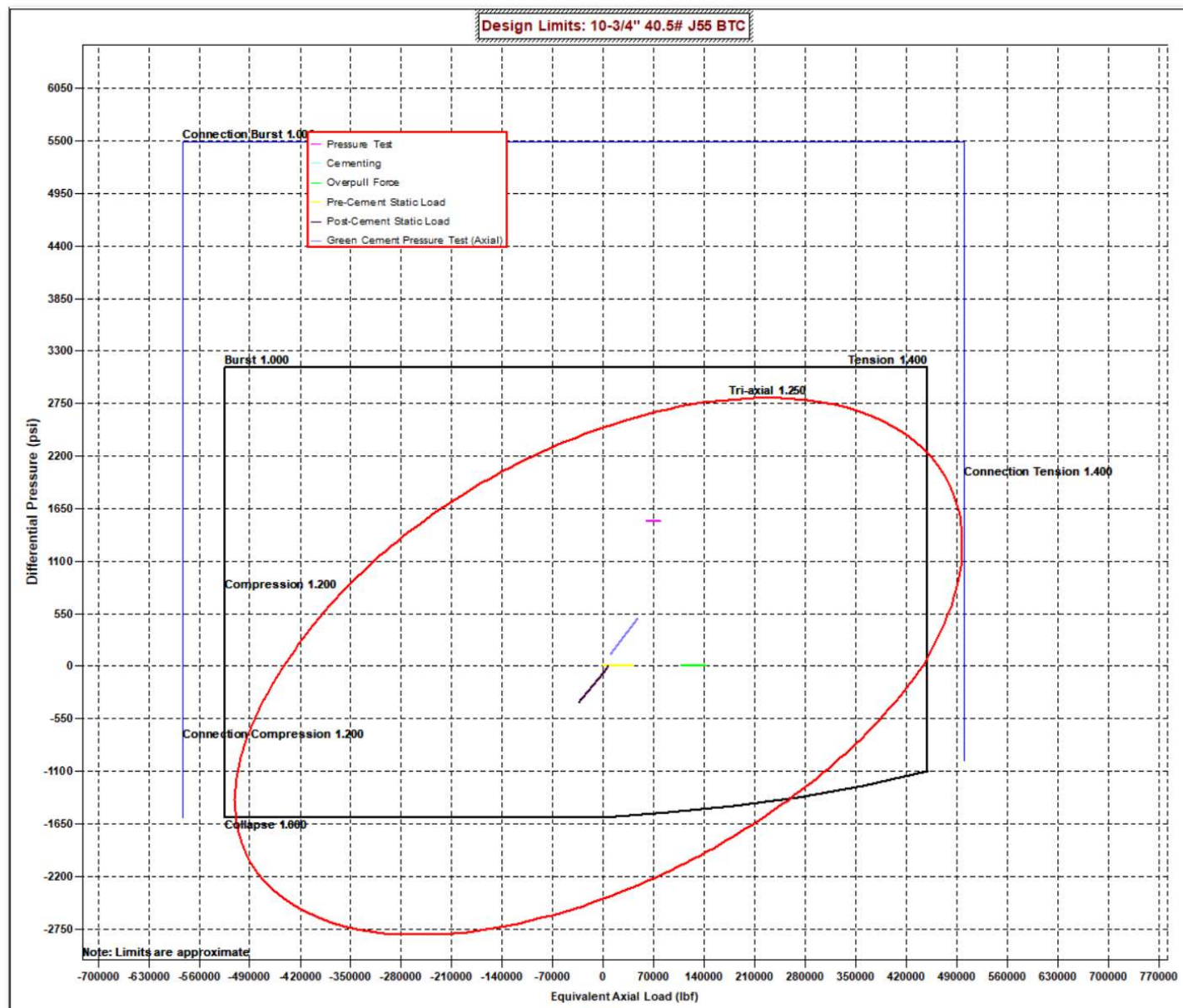




Oxy Blanket Design - Casing Design "A"

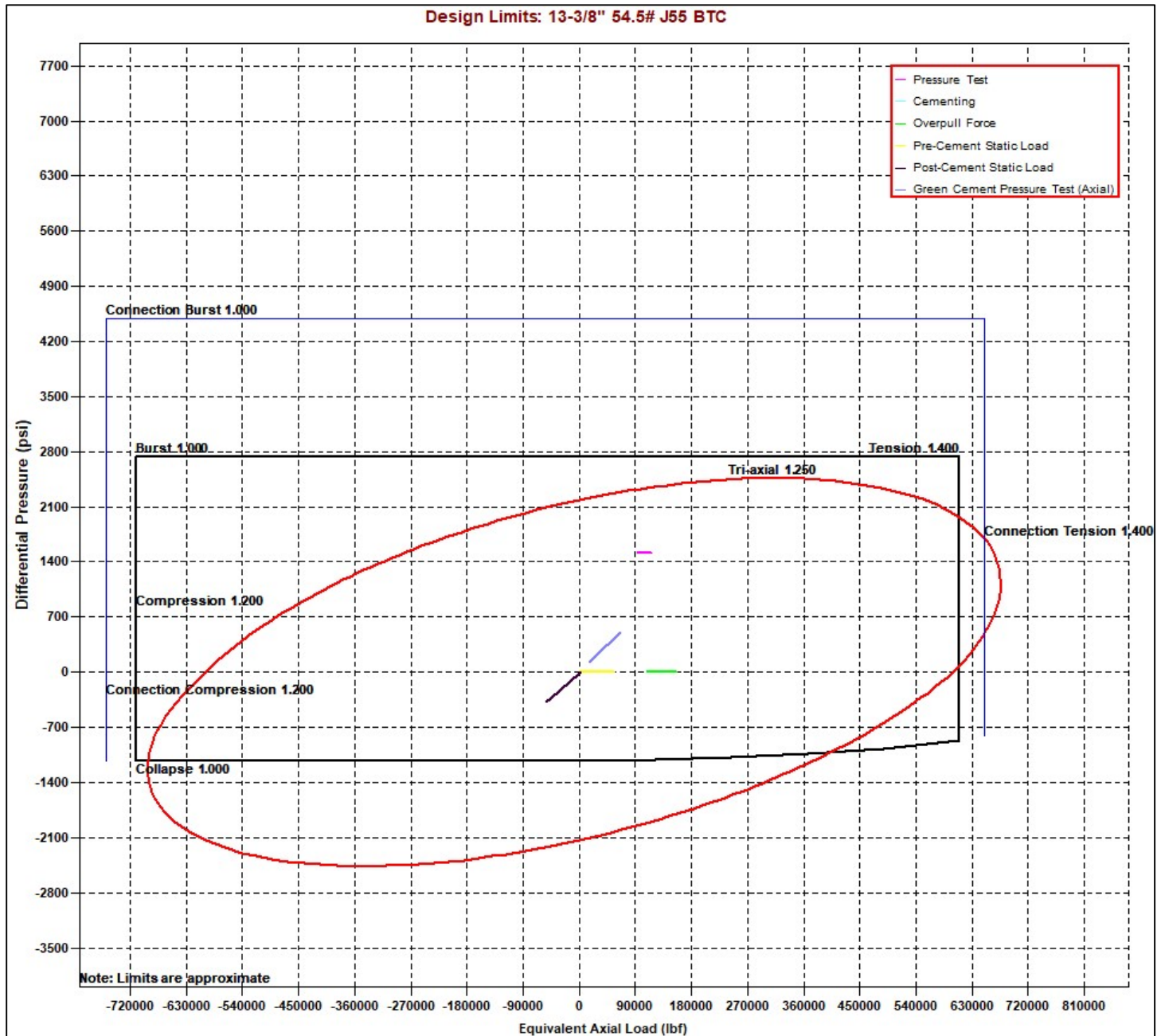


7. Landmark StressCheck Screenshots – Triaxial Output





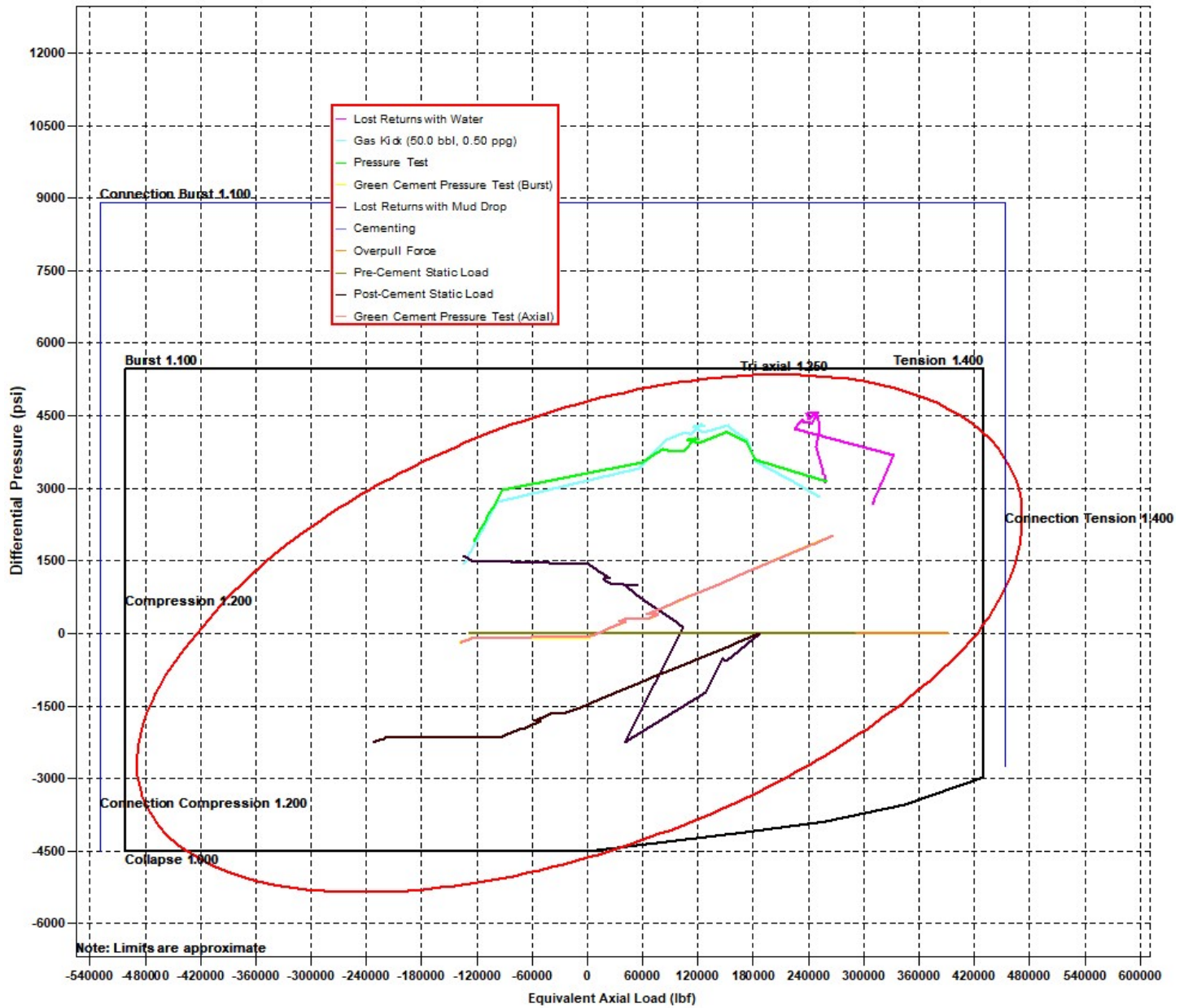
Oxy Blanket Design - Casing Design "A"





Oxy Blanket Design - Casing Design "A"

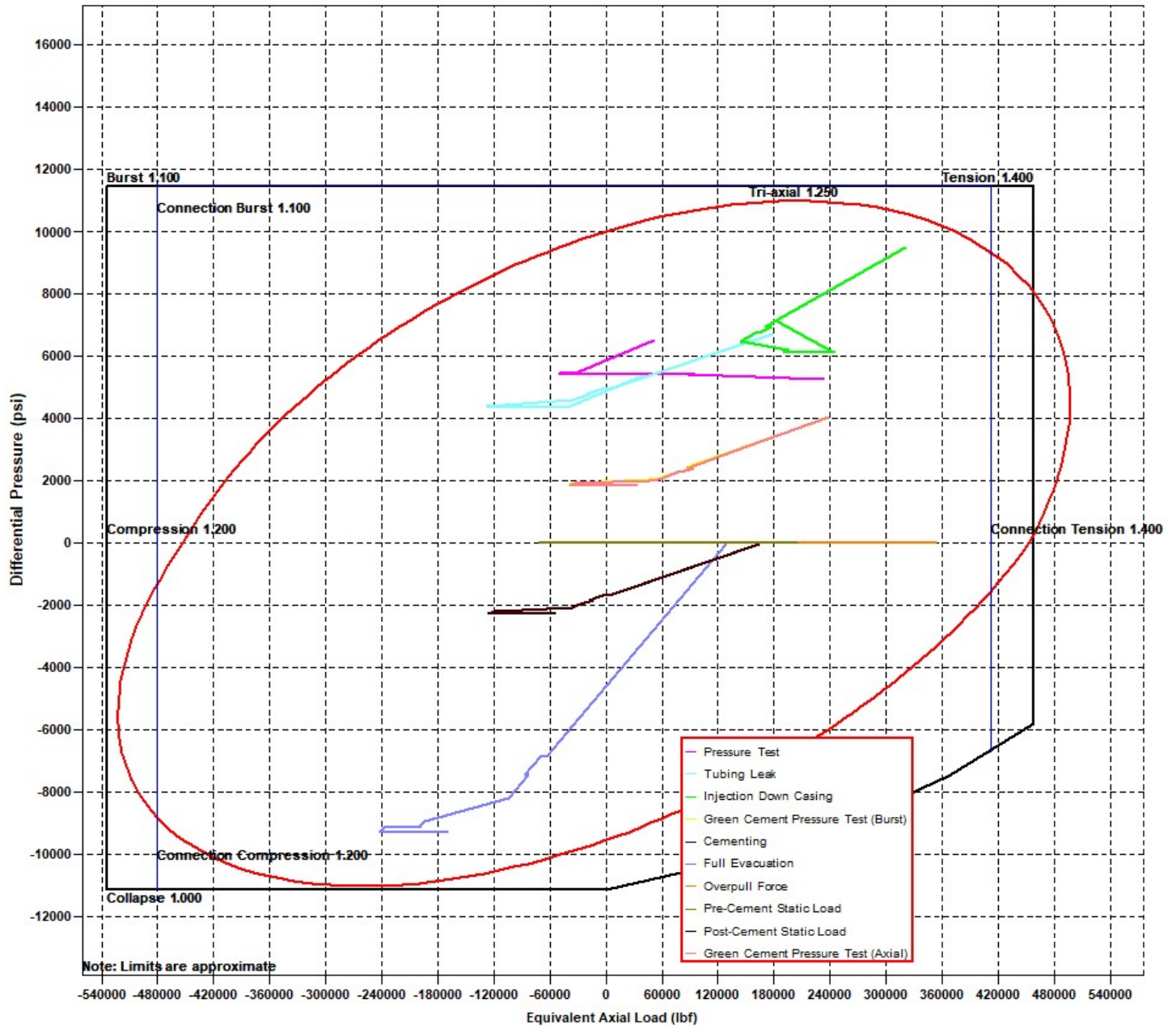
Design Limits: 7-5/8" 26.4# HC-L80 BTC





Oxy Blanket Design - Casing Design "A"

Design Limits: 5-1/2" 20# P110 Sprint SF





Oxy Blanket Design - Casing Design "A"



8. Landmark StressCheck Screenshots – Inputs for Intermediate CSG Load Cases

Burst Load Cases

General		7 5/8" Intermediate Casing
Burst Loads Data		
Drilling Load:	Lost Returns with Water	
Fracture at Shoe (MD= 13111.00 ft):	10591 psi	
Mud/Water Interface, MD:	0.00 ft	
Mud Weight	11.28 ppg	
Assigned External Pressure:	Fluid Gradients (w/ Pore Pressure)	
Drilling Load:	Gas Kick Profile	
Influx Depth, MD:	23361.00 ft	
Kick Volume:	50.0 bbl	
Kick Intensity	0.50 ppg	
Maximum Mud Weight:	13.50 ppg	
Kick Gas Gravity:	0.55 (0.1159 psi/ft @ 182 °F & 9291 psi)	
Fracture at Shoe (MD= 13111.00 ft):	10591 psi	
Drill Pipe OD:	5.000 in	
Collar OD:	5.500 in	
Collar Length:	200.00 ft	
Assigned External Pressure:	Fluid Gradients (w/ Pore Pressure)	
Drilling Load:	Pressure Test	
Test Pressure:	3120 psi	
Mud Weight:	10.00 ppg	
Assigned External Pressure:	Fluid Gradients (w/ Pore Pressure)	
Drilling Load:	Green Cement Pressure Test	
Test Pressure:	2000 psi	
Mud Weight at Shoe:	10.00 ppg	
TOC, MD:	25.00 ft	
Lead Slurry Density:	13.30 ppg	
Tail Slurry Density:	13.30 ppg	
Tail Slurry Length:	5906.00 ft	
Displacement Fluid Density:	10.00 ppg	
Float Collar Depth, MD:	12800.00 ft	
External Pressure:	Fluid Gradients (w/ Pore Pressure)	
TOC, MD:	25.00 ft	
Prior Shoe, MD:	1200.00 ft	
Mud Weight Above TOC:	10.00 ppg	
Fluid Gradient Below TOC:	8.33 ppg	
Wellhead Pressure:	13 psi	
Pore Pressure In Open Hole:	Yes	



Oxy Blanket Design - Casing Design "A"



Collapse Load Cases

General		7 5/8" Intermediate Casing
Collapse Loads Data		
Drilling Load:		Cementing
Mud Weight at Shoe:		10.00 ppg
TOC, MD:		25.00 ft
Lead Slurry Density:		13.30 ppg
Tail Slurry Density:		13.30 ppg
Tail Slurry Length:		5906.00 ft
Displacement Fluid Density:		10.00 ppg
Float Collar Depth, MD:		12800.00 ft
Assigned External Pressure:		Fluid Gradients (w/ Pore Pressure)
Drilling Load:		Lost Returns with Mud Drop
Lost Returns Depth, MD:		13110.89 ft
Pore Pressure at Lost Returns Depth:		8183 psi
Pore Pressure Gradient at Lost Returns Depth:		12.33 ppg
Mud Weight:		13.50 ppg
Mud Drop Level, MD:		1106.39 ft
Assigned External Pressure:		Fluid Gradients (w/ Pore Pressure)
External Pressure:		Fluid Gradients (w/ Pore Pressure)
TOC, MD:		25.00 ft
Prior Shoe, MD:		1200.00 ft
Fluid Gradient Above TOC:		10.00 ppg
Fluid Gradient Below TOC:		10.00 ppg
Wellhead Pressure:		13 psi
Pore Pressure In Open Hole Below TOC:		No

Axial Load Cases

General		7 5/8" Intermediate Casing
Axial Loads Data		
Overpull Force:		100000 lbf
Pre-Cement Static Load:		Yes
Pickup Force:		0 lbf
Post-Cement Static Load:		Yes
Green Cement Pressure Test:		2000 psi
Service Loads:		Yes



Oxy Blanket Design - Casing Design "A"



9. Landmark StressCheck Screenshot – Int. Casing Triaxial Results Table (Pressure Test)

StressCheck - [Triaxial Results - Blanket Design A1 *]

File Edit Wellbore Tubular View Composer Tools Window Help

7 5/8" Intermediate Casing

Pressure Test

Triaxial Results

	Depth (MD) (ft)	Axial Force (lbf)		Equivalent Axial Load (lbf)	Bending Stress at OD (psi)	Absolute Safety Factor				Temperature (°F)	Pressure (psi)		Add'l Pickup To Prevent Buck. (lbf)	Buckled Length (ft)
		Apparent (w/Bending)	Actual (w/o Bending)			Triaxial	Burst	Collapse (V)	Axial		Internal	External		
28	12300	-142410	-17423	-94936	16622.5	1.79	2.10	N/A	(4.09)	178	9505	6732		
29	12400	-149639	-24652	-100590	16622.5	1.87	2.25	N/A	(3.89)	179	9555	6970		
30	12400	-149640	-24653	-100591	16622.5	1.87	2.25	N/A	(3.89)	179	9555	6970		
31	12500	-156448	-31461	-105919	16622.5	1.95	2.42	N/A	(3.72)	180	9603	7193		
32	12500	-156449	-31462	-105920	16622.5	1.95	2.42	N/A	(3.72)	180	9603	7193		
33	12550	-159630	-34643	-108410	16622.5	1.99	2.50	N/A	(3.64)	180	9625	7298		
34	12550	-159631	-34644	-108411	16622.5	1.99	2.50	N/A	(3.64)	180	9625	7298		
35	12600	-162630	-37643	-110759	16622.5	2.03	2.59	N/A	(3.58)	180	9646	7396		
36	12600	-162631	-37644	-110760	16622.5	2.03	2.59	N/A	(3.58)	180	9646	7396		
37	12650	-165426	-40439	-112949	16622.5	2.07	2.67	N/A	(3.52)	181	9665	7488		
38	12650	-165427	-40440	-112950	16622.5	2.07	2.67	N/A	(3.52)	181	9665	7488		
39	12700	-167997	-43010	-114963	16622.5	2.10	2.76	N/A	(3.46)	181	9683	7573		
40	12700	-167998	-43011	-114963	16622.5	2.10	2.76	N/A	(3.46)	181	9683	7573		
41	12750	-170322	-45335	-116784	16622.5	2.13	2.84	N/A	(3.41)	181	9699	7649		
42	12750	-170323	-45336	-116785	16622.5	2.13	2.84	N/A	(3.41)	181	9699	7649		
43	12800	-172385	-47398	-118401	16622.5	2.16	2.91	N/A	(3.37)	181	9714	7717		
44	12800	-172386	-47399	-118401	16622.5	2.16	2.91	N/A	(3.37)	181	9714	7717		
45	12850	-174169	-49183	-119799	16622.5	2.19	2.98	N/A	(3.34)	182	9726	7775		
46	12850	-174170	-49183	-119800	16622.5	2.19	2.98	N/A	(3.34)	182	9726	7775		
47	12900	-175662	-50675	-120969	16622.5	2.21	3.04	N/A	(3.31)	182	9736	7824		
48	12950	-176851	-51864	-121901	16622.5	2.23	3.09	N/A	(3.29)	182	9745	7863		
49	13000	-177727	-52740	-122588	16622.5	2.24	3.13	N/A	(3.27)	182	9751	7892		
50	13000	-177728	-52741	-122588	16622.5	2.24	3.13	N/A	(3.27)	182	9751	7892		
51	13050	-178285	-53298	-123025	16622.5	2.25	3.15	N/A	(3.26)	182	9755	7910		
52	13111	-178527	-53540	-123214	16622.5	2.25	3.16	N/A	(3.26)	182	9756	7918		
53														
54														
55														
56														

() Compression
(V) Vector Collapse Safety Factor

Internal Pressure = Surface Pressure + Hydrostatic = 9756 psi

External Pressure = Fluid Gradient w/ Pore Pressure = 7918 psi

Burst SF = 3.16

NOTE: Specific load case inputs for the pressure test can be seen in **Section 8** above. The test pressure does not exceed 70% of the minimum internal yield.



Oxy Blanket Design - Casing Design "A"



10. Intermediate Non-API Casing Spec Sheet



Technical Data Sheet

7 5/8" 26.40 lbs/ft. L80HC - Axis HT

Mechanical Properties

Minimum Yield Strength	psi.	80,000
Maximum Yield Strength	psi.	95,000
Minimum Tensile Strength	psi.	95,000

Dimensions

		Pipe	AXIS HT
Outside Diameter	in.	7.625	8.500
Wall Thickness	in.	0.328	-
Inside Diameter	in.	6.969	-
Standard Drift	in.	6.844	6.844
Alternate Drift	in.	-	-
Plain End Weight	lbs/ft.	-	-
Nominal Linear Weight	lbs/ft.	26.40	-

Performance

		Pipe	AXIS HT
Minimum Collapse Pressure	psi.	4,320	-
Minimum Internal Yield Pressure	psi.	6,020	6,020
Minimum Pipe Body Yield Strength	lbs.	602 x 1,000	-
Joint Strength	lbs.	-	635 x 1,000

Make-Up Torques

		Pipe	AXIS HT
Optimum Make-Up Torque	ft/lbs.	-	8,000
Maximum Operational Torque	ft/lbs.	-	25,000

Disclaimer: The content of this Technical Data Sheet is for general information only and does not guarantee performance and/or accuracy, which can only be determined by a professional expert with the specific installation and operation parameters. Information printed or downloaded may not be current and no longer in control by Axis Pipe and Tube. Anyone using the information herein does so at his or her own risk. To verify that you have the latest technical information, please contact Axis Pipe and Tube Technical Sales +1 (979) 599-7600, www.axispipeandtube.com



Oxy Blanket Design - Casing Design "A"



11. Production Non-API Casing Spec Sheets

Printed on: 11/09/2021



TenarisHydril Wedge 461[®] MS



Coupling	Pipe Body
Grade: P110-4CY	Grade: P110-4CY
Body: White	1st Band: White
1st Band: Pale Green	2nd Band: Pale Green
2nd Band: -	3rd Band: Pale Green
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	5.500 in.	Wall Thickness	0.361 in.	Grade	P110-4CY
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	MS				

Pipe Body Data

Geometry		Performance	
Nominal OD	5.500 in.	Body Yield Strength	729 x1000 lb
Nominal Weight	20 lb/ft	Min. Internal Yield Pressure	14,360 psi
Drift	4.653 in.	SMYS	125,000 psi
Nominal ID	4.778 in.	Collapse Pressure	12,300 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	6.050 in.	Tension Efficiency	100 %	Minimum	17,000 ft-lb
Coupling Length	7.714 in.	Joint Yield Strength	729 x1000 lb	Optimum	18,000 ft-lb
Connection ID	4.778 in.	Internal Pressure Capacity	14,360 psi	Maximum	21,600 ft-lb
Make-up Loss	3.775 in.	Compression Efficiency	100 %	Operation Limit Torques	
Threads per inch	3.40	Compression Strength	729 x1000 lb		
Connection OD Option	Ms	Max. Allowable Bending	104 °/100 ft	Operating Torque	43,000 ft-lb
		External Pressure Capacity	12,300 psi	Yield Torque	51,000 ft-lb
		Coupling Face Load	273,000 lb	Buck-On	
				Minimum	21,600 ft-lb
				Maximum	23,100 ft-lb

Notes

This connection is fully interchangeable with:
 Wedge 441® - 5.5 in. - 0.304 / 0.361 in.
 Wedge 461® - 5.5 in. - 0.304 / 0.415 / 0.476 in.
 Connections with Dopeless® Technology are fully compatible with the same connection in its Standard version
 In October 2019, TenarisHydril Wedge XP® 2.0 was renamed TenarisHydril Wedge 461™. Product dimensions and properties remain identical and both connections are fully interchangeable

For the latest performance data, always visit our website: www.tenaris.com

Tenaris has issued this document for general information only, and the information in this document, including, without limitation, any pictures, drawings or designs ("Information") is not intended to constitute professional or any other type of advice or recommendation and is provided on an "as is" basis. No warranty is given. Tenaris has not independently verified any information – if any – provided by the user in connection with, or for the purpose of, the Information contained hereunder. The use of the Information is at user's own risk and Tenaris does not assume any responsibility or liability of any kind for any loss, damage or injury resulting from, or in connection with any Information contained hereunder or any use thereof. The Information in this document is subject to change or modification without notice. Tenaris's products and services are subject to Tenaris's standard terms and conditions or otherwise to the terms resulting from the respective contracts of sale or services, as the case may be, between petitioner and Tenaris. For more complete information please contact a Tenaris's representative or visit our website at www.tenaris.com. ©Tenaris 2021. All rights reserved.



Oxy Blanket Design - Casing Design "A"



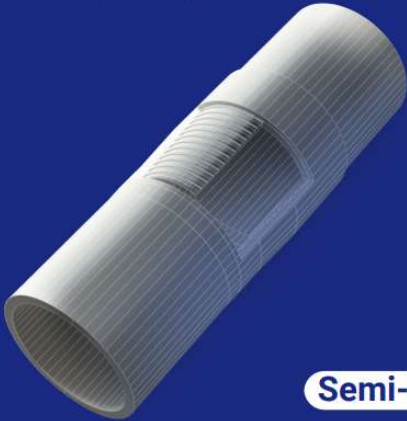
Generated on May 21, 2024



CONNECTION DATA SHEET

OD: 5.500 in. Grade: P110
Weight: 20.00 lb/ft Drift: 4.653 in. (API)
Wall Th.: 0.361 in.

VAM® SPRINT-SF



Semi-Flush

Field Torque Values

Make-up Torque (ft-lb)

20,000 MIN
22,500 OPTI
25,000 MAX

Torque with Sealability (ft-lb)

36,000 MTS

Locked Flank Torque (ft-lb)

4,500 MIN
15,750 MAX

(2) MTS: Maximum Torque with Sealability.

PIPE BODY PROPERTIES

Nominal OD	5.500	in.
Nominal ID	4.778	in.
Nominal Wall Thickness	0.361	in.
Minimum Wall Thickness	87.5	%
Nominal Weight (API)	20.00	lb/ft
Plain End Weight	19.83	lb/ft
Drift	4.653	in.
Grade Type	API 5CT	
Minimum Yield Strength	110	ksi
Maximum Yield Strength	140	ksi
Minimum Ultimate Tensile Strength	125	ksi
Pipe Body Yield Strength	641	klb
Internal Yield Pressure	12,640	psi
Collapse Pressure	11,100	psi

CONNECTION PROPERTIES

Connection Type	Semi-Premium Integral Semi-Flu	
Nominal Connection OD	5.783	in.
Nominal Connection ID	4.718	in.
Make-up Loss	5.965	in.
Tension Efficiency	90	% Pipe Body
Compression Efficiency	90	% Pipe Body
Internal Pressure Efficiency	100	% Pipe Body
External Pressure Efficiency	100	% Pipe Body

JOINT PERFORMANCES

Tension Strength	577	klb
Compression Strength	577	klb
Internal Pressure Resistance	12,640	psi
External Pressure Resistance	11,100	psi
Maximum Bending, Structural	78	°/100 ft
Maximum Bending, with Sealability(1)	30	°/100 ft

(1) Sealability rating demonstrated as per API RP 5C5 / ISO 13679



BOOST YOUR EFFICIENCY, REDUCE COSTS
AND ENSURE 100% WELL INTEGRITY WITH
VAM® FIELD SERVICE

Scan the QR code
to contact us



The information available on this Site ("Information") is offered for general information. It is supposed to be correct at the time of publishing on the Site but is not intended to constitute professional advice and is provided 'as is'. Vallourec does not guarantee the completeness and accuracy of this information. Under no circumstances will Vallourec be liable for damage, liability of any kind, or any loss or injury that may result from the credibility given to this information or its use. The information may be amended, corrected, at any time by Vallourec without warning. Vallourec's products and services are subject to Vallourec's The Information may be amended, corrected, and/or supplemented at any time by Vallourec without warning, standard terms and conditions or otherwise to the terms resulting from the respective contracts of sale or services.



Oxy Blanket Design - Casing Design "A"



DWC/C-HT-IS

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 P110MY	4.653	87.5	DWC/C-HT-IS

PIPE PROPERTIES

Nominal OD	5.500	in.
Nominal ID	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 Pressure	14,360	psi
Collapse Pressure	12,090	psi

CONNECTION PROPERTIES

Connection Type	Semi-Premium T&C	
Connection OD (nom)	6.050	in.
Connection ID (nom)	4.778	in.
Make-Up Loss	4.125	in.
Coupling Length	9.250	in.
Critical Cross Section	5.828	sq.in.
Tension Efficiency	89.1%	of pipe
Compression Efficiency	88.0%	of pipe
Internal Pressure Efficiency	86.1%	of pipe
External Pressure Efficiency	100.0%	of pipe

CONNECTION PERFORMANCES

Yield Strength	649	klb
Parting Load	729	klb
Compression Rating	641	klb
Min. Internal Yield Pressure	12,360	psi
External Pressure Resistance	12,090	psi
Maximum Uniaxial Bend Rating	91.7	°/100 ft
Reference String Length w 1.4 Design Factor	22,890	ft.

FIELD TORQUE VALUES

Min. Make-up torque	16,600	ftlb
Opti. Make-up torque	17,950	ftlb
Max. Make-up torque	19,300	ftlb
Min. Shoulder Torque	1,660	ftlb
Max. Shoulder Torque	13,280	ftlb
Max. Delta Turn	0.200	Turns
‡Maximum Operational Torque	23,800	ftlb
‡Maximum Torsional Value (MTV)	26,180	ftlb

‡ Maximum Operational Torque and Maximum Torsional Value only valid with Vallourec P110MY Material.

‡ P110MY - Coupling Min Yield Strength is 110ksi and Coupling Max Yield is 125ksi.

"VST = Vallourec Star as the mill source for the pipe, "P110EC" is the grade name"

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

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.

All information is provided by VAM USA or its affiliates at user's sole risk, without liability for loss, damage or injury resulting from the use thereof; and on an "AS IS" basis without warranty or representation of any kind, whether express or implied, including without limitation any warranty of merchantability, fitness for purpose or completeness. This document and its contents are subject to change without notice. In no event shall VAM USA or its affiliates be responsible for any indirect, special, incidental, punitive, exemplary or consequential loss or damage (including without limitation, loss of use, loss of bargain, loss of revenue, profit or anticipated profit) however caused or arising, and whether such losses or damages were foreseeable or VAM USA or its affiliates was advised of the possibility of such damages.

03/04/2024 08:36:50 PM





Oxy Blanket Design - Casing Design "A"



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

DWC Connection Data Sheet Notes:

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

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.

All information is provided by VAM USA or its affiliates at user's sole risk, without liability for loss, damage or injury resulting from the use thereof; and on an "AS IS" basis without warranty or representation of any kind, whether express or implied, including without limitation any warranty of merchantability, fitness for purpose or completeness. This document and its contents are subject to change without notice. In no event shall VAM USA or its affiliates be responsible for any indirect, special, incidental, punitive, exemplary or consequential loss or damage (including without limitation, loss of use, loss of bargain, loss of revenue, profit or anticipated profit) however caused or arising, and whether such losses or damages were foreseeable or VAM USA or its affiliates was advised of the possibility of such damages.

03/04/2024 08:36:50 PM





Oxy Blanket Design - Casing Design "A"



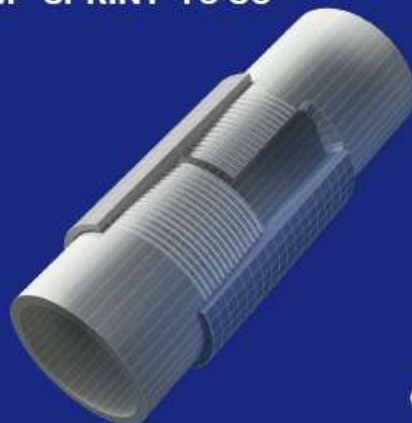
Generated on May 14, 2025



CONNECTION DATA SHEET

OD: 5.500 in. Grade: P110 EC
Weight: 20.00 lb/ft Drift: 4.653 in. (API)
Wall Th.: 0.361 in.

VAM® SPRINT-TC SC



T&C

Field Torque Values

Make-up Torque (ft-lb)

23,000 MIN
24,000 OPTI
25,000 MAX

Torque with Sealability (ft-lb)

39,200 MTS

Locked Flank Torque (ft-lb)

1,200 MIN
16,800 MAX

(1) MTS: Maximum Torque with Sealability
(2) Note: Thread compound must be applied as a thin even layer

PIPE BODY PROPERTIES

Nominal OD	5.500	in.
Nominal ID	4.778	in.
Nominal Wall Thickness	0.361	in.
Minimum Wall Thickness	87.5	%
Nominal Weight (API)	20.00	lb/ft
Plain End Weight	19.83	lb/ft
Drift	4.653	in.
Grade Type	High Yield	
Minimum Yield Strength	125	ksi
Maximum Yield Strength	140	ksi
Minimum Ultimate Tensile Strength	135	ksi
Pipe Body Yield Strength	729	kib
Internal Yield Pressure	14,360	psi
Collapse Pressure	12,090	psi

CONNECTION PROPERTIES

Connection Type	Semi-Premium Threaded & Coupled	
Nominal Connection OD	5.900	in.
Nominal Connection ID	4.830	in.
Make-up Loss	3.973	in.
Coupling Length	8.296	in.
Tension Efficiency	100	% Pipe Body
Compression Efficiency	100	% Pipe Body
Internal Pressure Efficiency	100	% Pipe Body
External Pressure Efficiency	100	% Pipe Body

JOINT PERFORMANCES

Tension Strength	729	kib
Compression Strength	729	kib
Internal Pressure Resistance	14,360	psi
External Pressure Resistance	12,090	psi
Maximum Bending, Structural	104	°/100 ft
Maximum Bending, with Sealability	30	°/100 ft
Maximum Load on Coupling Face	227	kib

(4) Sealability rating demonstrated as per API RP 5C5 / ISO 13679



BOOST YOUR EFFICIENCY, REDUCE COSTS
AND ENSURE 100% WELL INTEGRITY WITH
VAM® FIELD SERVICE

Scan the QR code
to contact us



The information available on this Site ("Information") is offered for general information. It is supposed to be correct at the time of publishing on the Site but is not intended to constitute professional advice and is provided "as is". Vallourec does not guarantee the completeness and accuracy of this information. Under no circumstances will Vallourec be liable for damage, liability of any kind, or any loss or injury that may result from the credibility given to this information or its use. The information may be amended, corrected, at any time by Vallourec without warning. Vallourec's products and services are subject to Vallourec's standard terms and conditions or otherwise to the terms resulting from the respective contracts of sale or services. The information may be amended, corrected, and/or supplemented at any time by Vallourec without warning.

Oxy USA Inc. - Blanket Design Pad Document

OXY - Blanket Design A

Pad Name: LSTTNK_T22SR31E_13_LSTTNK_1302

SHL: 520' FSL 1195' FEL, Sec 13, T22S-R31E

Oxy requests for the bellow wells to be approved for the two designs listed in the Blanket Design document (**Blanket Design A –OXY –3S Slim v8.0.**) The MDs and TVDs for all intervals are within the boundary conditions. The max inclination and DLS are also within the boundary conditions (directional plans attached separately for review.)

1. Blanket Design - Wells

Well Name	APD #	Surface		Intermediate		Production	
		MD	TVD	MD	TVD	MD	TVD
TOP SPOT 12_13 FED COM 43H	10400101353	905	905	12000	11916	22439	12133
TOP SPOT 12_13 FED COM 44H	10400101365	899	899	12000	11909	22455	12143
TOP SPOT 12_13 FED COM 12H	10400101278	900	900	8328	8262	19313	8989
TOP SPOT 12_13 FED COM 13H	10400101319	903	903	8493	8493	19508	9222

2. Review Criteria Table

	Y or N
Is casing new? If used, attach certification as required in 43 CFR 3160	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-Q?	Y
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	Y
Is well located in R-111-Q and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Occidental - Permian New Mexico

Pad Review Document - Blanket Design A

3. Geologic Formations

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	835	835	
Salado	1134	1134	Salt
Marker Bed 126	2000	2000	Salt
Castile	2872	2872	Salt
Delaware	4492	4492	Oil/Gas/Brine
Bell Canyon	4550	4550	Oil/Gas/Brine
Cherry Canyon	5413	5413	Oil/Gas/Brine
Brushy Canyon	6641	6641	Losses
Bone Spring	8396	8390	Oil/Gas
Bone Spring 1st	9531	9508	Oil/Gas
Bone Spring 2nd	10149	10116	Oil/Gas
Bone Spring 3rd	11189	11140	Oil/Gas
Wolfcamp	11707	11651	Oil/Gas
Penn			Oil/Gas
Strawn			Oil/Gas

4. Cementing Program

Section	Stage	Slurry:	Sacks	Yield (ft ³ /ft)	Density (lb/gal)	Excess:	TOC	Placement	Description
Surface	1	Surface - Tail	945	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.	1	Intermediate 1S - Tail	755	1.68	13.2	5%	6,891	Circulate	Class C+Ret., Disper.
Int.	2	Intermediate 2S - Tail BH	1231	1.71	13.3	25%	-	Bradenhead	Class C+Accel.
Prod.	1	Production - Tail	590	1.84	13.3	25%	12,019	Circulate	Class C+Ret.

OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)

Top Spot 12_13 Fed Com

Top Spot 12_13 Fed Com 13H

ORIG HOLE

Plan: Permitting Plan

Standard Planning Report

19 February, 2026

OXY
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Top Spot 12_13 Fed Com 13H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=25' @ 3608.50ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=25' @ 3608.50ft
Site:	Top Spot 12_13 Fed Com	North Reference:	Grid
Well:	Top Spot 12_13 Fed Com 13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIG HOLE		
Design:	Permitting Plan		

Project	PRD NM DIRECTIONAL PLANS (NAD 1983)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site	Top Spot 12_13 Fed Com		
Site Position:		Northing:	514,494.39 usft
From:	Map	Easting:	725,461.56 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Latitude:	32.413000
		Longitude:	-103.736677

Well	Top Spot 12_13 Fed Com 13H		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty		6.00 ft	Wellhead Elevation:
Grid Convergence:		0.32 °	Ground Level:
			3,583.50 ft

Wellbore	ORIG HOLE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	2/19/2026	6.22	59.92	47,301.30000000

Design	Permitting Plan			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	358.86

Plan Survey Tool Program	Date 2/19/2026			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,508.05	Permitting Plan (ORIG HOLE)	SQC_C705Mb_MWD+IFR1
				MWD+IFR1+Sag+FDIR

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,100.00	10.00	194.00	6,097.47	-42.23	-10.53	2.00	2.00	0.00	194.00	
8,593.18	10.00	194.00	8,552.77	-462.31	-115.28	0.00	0.00	0.00	0.00	
9,590.05	90.00	359.70	9,221.50	102.32	-147.42	10.00	8.03	16.62	165.48	
19,508.05	90.00	359.70	9,221.50	10,020.18	-200.18	0.00	0.00	0.00	0.00	PBHL (Top Spot

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Top Spot 12_13 Fed Com 13H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=25' @ 3608.50ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=25' @ 3608.50ft
Site:	Top Spot 12_13 Fed Com	North Reference:	Grid
Well:	Top Spot 12_13 Fed Com 13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIG HOLE		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Top Spot 12_13 Fed Com 13H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=25' @ 3608.50ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=25' @ 3608.50ft
Site:	Top Spot 12_13 Fed Com	North Reference:	Grid
Well:	Top Spot 12_13 Fed Com 13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIG HOLE		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
Build 2°/100'									
5,700.00	2.00	194.00	5,699.98	-1.69	-0.42	-1.68	2.00	2.00	0.00
5,800.00	4.00	194.00	5,799.84	-6.77	-1.69	-6.74	2.00	2.00	0.00
5,900.00	6.00	194.00	5,899.45	-15.23	-3.80	-15.15	2.00	2.00	0.00
6,000.00	8.00	194.00	5,998.70	-27.05	-6.75	-26.91	2.00	2.00	0.00
6,100.00	10.00	194.00	6,097.47	-42.23	-10.53	-42.01	2.00	2.00	0.00
Hold 10° Tangent									
6,200.00	10.00	194.00	6,195.95	-59.08	-14.73	-58.77	0.00	0.00	0.00
6,300.00	10.00	194.00	6,294.43	-75.93	-18.93	-75.53	0.00	0.00	0.00
6,400.00	10.00	194.00	6,392.91	-92.78	-23.13	-92.30	0.00	0.00	0.00
6,500.00	10.00	194.00	6,491.39	-109.63	-27.34	-109.06	0.00	0.00	0.00
6,600.00	10.00	194.00	6,589.87	-126.47	-31.54	-125.82	0.00	0.00	0.00
6,700.00	10.00	194.00	6,688.35	-143.32	-35.74	-142.58	0.00	0.00	0.00
6,800.00	10.00	194.00	6,786.83	-160.17	-39.94	-159.34	0.00	0.00	0.00
6,900.00	10.00	194.00	6,885.31	-177.02	-44.14	-176.10	0.00	0.00	0.00
7,000.00	10.00	194.00	6,983.79	-193.87	-48.34	-192.87	0.00	0.00	0.00
7,100.00	10.00	194.00	7,082.27	-210.72	-52.54	-209.63	0.00	0.00	0.00
7,200.00	10.00	194.00	7,180.75	-227.57	-56.75	-226.39	0.00	0.00	0.00
7,300.00	10.00	194.00	7,279.23	-244.42	-60.95	-243.15	0.00	0.00	0.00
7,400.00	10.00	194.00	7,377.72	-261.27	-65.15	-259.91	0.00	0.00	0.00
7,500.00	10.00	194.00	7,476.20	-278.12	-69.35	-276.68	0.00	0.00	0.00
7,600.00	10.00	194.00	7,574.68	-294.97	-73.55	-293.44	0.00	0.00	0.00
7,700.00	10.00	194.00	7,673.16	-311.81	-77.75	-310.20	0.00	0.00	0.00
7,800.00	10.00	194.00	7,771.64	-328.66	-81.95	-326.96	0.00	0.00	0.00
7,900.00	10.00	194.00	7,870.12	-345.51	-86.15	-343.72	0.00	0.00	0.00
8,000.00	10.00	194.00	7,968.60	-362.36	-90.36	-360.48	0.00	0.00	0.00
8,100.00	10.00	194.00	8,067.08	-379.21	-94.56	-377.25	0.00	0.00	0.00
8,200.00	10.00	194.00	8,165.56	-396.06	-98.76	-394.01	0.00	0.00	0.00
8,300.00	10.00	194.00	8,264.04	-412.91	-102.96	-410.77	0.00	0.00	0.00
8,400.00	10.00	194.00	8,362.52	-429.76	-107.16	-427.53	0.00	0.00	0.00
8,500.00	10.00	194.00	8,461.00	-446.61	-111.36	-444.29	0.00	0.00	0.00
8,593.18	10.00	194.00	8,552.77	-462.31	-115.28	-459.91	0.00	0.00	0.00
KOP, Build & Turn 10°/100'									
8,600.00	9.34	195.05	8,559.49	-463.42	-115.56	-461.01	10.00	-9.66	15.44
8,700.00	2.69	291.45	8,659.03	-470.41	-119.86	-467.93	10.00	-6.66	96.39
8,800.00	11.27	347.07	8,758.26	-460.01	-124.24	-457.43	10.00	8.59	55.62
8,900.00	21.14	353.22	8,854.17	-432.51	-128.57	-429.85	10.00	9.86	6.16
9,000.00	31.09	355.55	8,943.86	-388.76	-132.71	-386.03	10.00	9.95	2.33
9,100.00	41.06	356.83	9,024.59	-330.08	-136.54	-327.29	10.00	9.97	1.28
9,200.00	51.04	357.68	9,093.90	-258.26	-139.94	-255.41	10.00	9.98	0.85
9,300.00	61.03	358.31	9,149.71	-175.48	-142.81	-172.59	10.00	9.99	0.64
9,400.00	71.01	358.84	9,190.30	-84.25	-145.07	-81.34	10.00	9.99	0.52
9,500.00	81.00	359.30	9,214.45	12.64	-146.63	15.57	10.00	9.99	0.46
9,590.05	90.00	359.70	9,221.50	102.32	-147.42	105.24	10.00	9.99	0.44
Landing Point									
9,600.00	90.00	359.70	9,221.50	112.27	-147.47	115.19	0.00	0.00	0.00
9,700.00	90.00	359.70	9,221.50	212.27	-148.00	215.18	0.00	0.00	0.00
9,800.00	90.00	359.70	9,221.50	312.27	-148.54	315.17	0.00	0.00	0.00
9,900.00	90.00	359.70	9,221.50	412.27	-149.07	415.16	0.00	0.00	0.00
10,000.00	90.00	359.70	9,221.50	512.26	-149.60	515.15	0.00	0.00	0.00
10,100.00	90.00	359.70	9,221.50	612.26	-150.13	615.14	0.00	0.00	0.00
10,200.00	90.00	359.70	9,221.50	712.26	-150.66	715.13	0.00	0.00	0.00
10,300.00	90.00	359.70	9,221.50	812.26	-151.20	815.12	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSP	Local Co-ordinate Reference:	Well Top Spot 12_13 Fed Com 13H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=25' @ 3608.50ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=25' @ 3608.50ft
Site:	Top Spot 12_13 Fed Com	North Reference:	Grid
Well:	Top Spot 12_13 Fed Com 13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIG HOLE		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,400.00	90.00	359.70	9,221.50	912.26	-151.73	915.11	0.00	0.00	0.00
10,500.00	90.00	359.70	9,221.50	1,012.26	-152.26	1,015.10	0.00	0.00	0.00
10,600.00	90.00	359.70	9,221.50	1,112.26	-152.79	1,115.09	0.00	0.00	0.00
10,700.00	90.00	359.70	9,221.50	1,212.25	-153.32	1,215.07	0.00	0.00	0.00
10,800.00	90.00	359.70	9,221.50	1,312.25	-153.86	1,315.06	0.00	0.00	0.00
10,900.00	90.00	359.70	9,221.50	1,412.25	-154.39	1,415.05	0.00	0.00	0.00
11,000.00	90.00	359.70	9,221.50	1,512.25	-154.92	1,515.04	0.00	0.00	0.00
11,100.00	90.00	359.70	9,221.50	1,612.25	-155.45	1,615.03	0.00	0.00	0.00
11,200.00	90.00	359.70	9,221.50	1,712.25	-155.98	1,715.02	0.00	0.00	0.00
11,300.00	90.00	359.70	9,221.50	1,812.25	-156.52	1,815.01	0.00	0.00	0.00
11,400.00	90.00	359.70	9,221.50	1,912.24	-157.05	1,915.00	0.00	0.00	0.00
11,500.00	90.00	359.70	9,221.50	2,012.24	-157.58	2,014.99	0.00	0.00	0.00
11,600.00	90.00	359.70	9,221.50	2,112.24	-158.11	2,114.98	0.00	0.00	0.00
11,700.00	90.00	359.70	9,221.50	2,212.24	-158.64	2,214.97	0.00	0.00	0.00
11,800.00	90.00	359.70	9,221.50	2,312.24	-159.18	2,314.96	0.00	0.00	0.00
11,900.00	90.00	359.70	9,221.50	2,412.24	-159.71	2,414.95	0.00	0.00	0.00
12,000.00	90.00	359.70	9,221.50	2,512.24	-160.24	2,514.93	0.00	0.00	0.00
12,100.00	90.00	359.70	9,221.50	2,612.23	-160.77	2,614.92	0.00	0.00	0.00
12,200.00	90.00	359.70	9,221.50	2,712.23	-161.30	2,714.91	0.00	0.00	0.00
12,300.00	90.00	359.70	9,221.50	2,812.23	-161.84	2,814.90	0.00	0.00	0.00
12,400.00	90.00	359.70	9,221.50	2,912.23	-162.37	2,914.89	0.00	0.00	0.00
12,500.00	90.00	359.70	9,221.50	3,012.23	-162.90	3,014.88	0.00	0.00	0.00
12,600.00	90.00	359.70	9,221.50	3,112.23	-163.43	3,114.87	0.00	0.00	0.00
12,700.00	90.00	359.70	9,221.50	3,212.23	-163.96	3,214.86	0.00	0.00	0.00
12,800.00	90.00	359.70	9,221.50	3,312.22	-164.50	3,314.85	0.00	0.00	0.00
12,900.00	90.00	359.70	9,221.50	3,412.22	-165.03	3,414.84	0.00	0.00	0.00
13,000.00	90.00	359.70	9,221.50	3,512.22	-165.56	3,514.83	0.00	0.00	0.00
13,100.00	90.00	359.70	9,221.50	3,612.22	-166.09	3,614.82	0.00	0.00	0.00
13,200.00	90.00	359.70	9,221.50	3,712.22	-166.62	3,714.81	0.00	0.00	0.00
13,300.00	90.00	359.70	9,221.50	3,812.22	-167.16	3,814.80	0.00	0.00	0.00
13,400.00	90.00	359.70	9,221.50	3,912.22	-167.69	3,914.78	0.00	0.00	0.00
13,500.00	90.00	359.70	9,221.50	4,012.21	-168.22	4,014.77	0.00	0.00	0.00
13,600.00	90.00	359.70	9,221.50	4,112.21	-168.75	4,114.76	0.00	0.00	0.00
13,700.00	90.00	359.70	9,221.50	4,212.21	-169.28	4,214.75	0.00	0.00	0.00
13,800.00	90.00	359.70	9,221.50	4,312.21	-169.82	4,314.74	0.00	0.00	0.00
13,900.00	90.00	359.70	9,221.50	4,412.21	-170.35	4,414.73	0.00	0.00	0.00
14,000.00	90.00	359.70	9,221.50	4,512.21	-170.88	4,514.72	0.00	0.00	0.00
14,100.00	90.00	359.70	9,221.50	4,612.21	-171.41	4,614.71	0.00	0.00	0.00
14,200.00	90.00	359.70	9,221.50	4,712.20	-171.94	4,714.70	0.00	0.00	0.00
14,300.00	90.00	359.70	9,221.50	4,812.20	-172.48	4,814.69	0.00	0.00	0.00
14,400.00	90.00	359.70	9,221.50	4,912.20	-173.01	4,914.68	0.00	0.00	0.00
14,500.00	90.00	359.70	9,221.50	5,012.20	-173.54	5,014.67	0.00	0.00	0.00
14,600.00	90.00	359.70	9,221.50	5,112.20	-174.07	5,114.66	0.00	0.00	0.00
14,700.00	90.00	359.70	9,221.50	5,212.20	-174.60	5,214.64	0.00	0.00	0.00
14,800.00	90.00	359.70	9,221.50	5,312.20	-175.13	5,314.63	0.00	0.00	0.00
14,900.00	90.00	359.70	9,221.50	5,412.19	-175.67	5,414.62	0.00	0.00	0.00
15,000.00	90.00	359.70	9,221.50	5,512.19	-176.20	5,514.61	0.00	0.00	0.00
15,100.00	90.00	359.70	9,221.50	5,612.19	-176.73	5,614.60	0.00	0.00	0.00
15,200.00	90.00	359.70	9,221.50	5,712.19	-177.26	5,714.59	0.00	0.00	0.00
15,300.00	90.00	359.70	9,221.50	5,812.19	-177.79	5,814.58	0.00	0.00	0.00
15,400.00	90.00	359.70	9,221.50	5,912.19	-178.33	5,914.57	0.00	0.00	0.00
15,500.00	90.00	359.70	9,221.50	6,012.19	-178.86	6,014.56	0.00	0.00	0.00
15,600.00	90.00	359.70	9,221.50	6,112.18	-179.39	6,114.55	0.00	0.00	0.00
15,700.00	90.00	359.70	9,221.50	6,212.18	-179.92	6,214.54	0.00	0.00	0.00
15,800.00	90.00	359.70	9,221.50	6,312.18	-180.45	6,314.53	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Top Spot 12_13 Fed Com 13H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=25' @ 3608.50ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=25' @ 3608.50ft
Site:	Top Spot 12_13 Fed Com	North Reference:	Grid
Well:	Top Spot 12_13 Fed Com 13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIG HOLE		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15,900.00	90.00	359.70	9,221.50	6,412.18	-180.99	6,414.52	0.00	0.00	0.00
16,000.00	90.00	359.70	9,221.50	6,512.18	-181.52	6,514.51	0.00	0.00	0.00
16,100.00	90.00	359.70	9,221.50	6,612.18	-182.05	6,614.49	0.00	0.00	0.00
16,200.00	90.00	359.70	9,221.50	6,712.18	-182.58	6,714.48	0.00	0.00	0.00
16,300.00	90.00	359.70	9,221.50	6,812.17	-183.11	6,814.47	0.00	0.00	0.00
16,400.00	90.00	359.70	9,221.50	6,912.17	-183.65	6,914.46	0.00	0.00	0.00
16,500.00	90.00	359.70	9,221.50	7,012.17	-184.18	7,014.45	0.00	0.00	0.00
16,600.00	90.00	359.70	9,221.50	7,112.17	-184.71	7,114.44	0.00	0.00	0.00
16,700.00	90.00	359.70	9,221.50	7,212.17	-185.24	7,214.43	0.00	0.00	0.00
16,800.00	90.00	359.70	9,221.50	7,312.17	-185.77	7,314.42	0.00	0.00	0.00
16,889.83	90.00	359.70	9,221.50	7,402.00	-186.25	7,404.24	0.00	0.00	0.00
LC Crossing									
16,900.00	90.00	359.70	9,221.50	7,412.17	-186.31	7,414.41	0.00	0.00	0.00
17,000.00	90.00	359.70	9,221.50	7,512.16	-186.84	7,514.40	0.00	0.00	0.00
17,100.00	90.00	359.70	9,221.50	7,612.16	-187.37	7,614.39	0.00	0.00	0.00
17,200.00	90.00	359.70	9,221.50	7,712.16	-187.90	7,714.38	0.00	0.00	0.00
17,300.00	90.00	359.70	9,221.50	7,812.16	-188.43	7,814.37	0.00	0.00	0.00
17,400.00	90.00	359.70	9,221.50	7,912.16	-188.97	7,914.35	0.00	0.00	0.00
17,500.00	90.00	359.70	9,221.50	8,012.16	-189.50	8,014.34	0.00	0.00	0.00
17,600.00	90.00	359.70	9,221.50	8,112.16	-190.03	8,114.33	0.00	0.00	0.00
17,700.00	90.00	359.70	9,221.50	8,212.15	-190.56	8,214.32	0.00	0.00	0.00
17,800.00	90.00	359.70	9,221.50	8,312.15	-191.09	8,314.31	0.00	0.00	0.00
17,900.00	90.00	359.70	9,221.50	8,412.15	-191.63	8,414.30	0.00	0.00	0.00
18,000.00	90.00	359.70	9,221.50	8,512.15	-192.16	8,514.29	0.00	0.00	0.00
18,100.00	90.00	359.70	9,221.50	8,612.15	-192.69	8,614.28	0.00	0.00	0.00
18,200.00	90.00	359.70	9,221.50	8,712.15	-193.22	8,714.27	0.00	0.00	0.00
18,300.00	90.00	359.70	9,221.50	8,812.15	-193.75	8,814.26	0.00	0.00	0.00
18,400.00	90.00	359.70	9,221.50	8,912.14	-194.29	8,914.25	0.00	0.00	0.00
18,500.00	90.00	359.70	9,221.50	9,012.14	-194.82	9,014.24	0.00	0.00	0.00
18,600.00	90.00	359.70	9,221.50	9,112.14	-195.35	9,114.23	0.00	0.00	0.00
18,700.00	90.00	359.70	9,221.50	9,212.14	-195.88	9,214.22	0.00	0.00	0.00
18,800.00	90.00	359.70	9,221.50	9,312.14	-196.41	9,314.20	0.00	0.00	0.00
18,900.00	90.00	359.70	9,221.50	9,412.14	-196.95	9,414.19	0.00	0.00	0.00
19,000.00	90.00	359.70	9,221.50	9,512.14	-197.48	9,514.18	0.00	0.00	0.00
19,100.00	90.00	359.70	9,221.50	9,612.14	-198.01	9,614.17	0.00	0.00	0.00
19,200.00	90.00	359.70	9,221.50	9,712.13	-198.54	9,714.16	0.00	0.00	0.00
19,300.00	90.00	359.70	9,221.50	9,812.13	-199.07	9,814.15	0.00	0.00	0.00
19,400.00	90.00	359.70	9,221.50	9,912.13	-199.61	9,914.14	0.00	0.00	0.00
19,500.00	90.00	359.70	9,221.50	10,012.13	-200.14	10,014.13	0.00	0.00	0.00
19,508.05	90.00	359.70	9,221.50	10,020.18	-200.18	10,022.18	0.00	0.00	0.00
TD at 19508.05' MD									

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Top Spot 12_13 Fed Com 13H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=25' @ 3608.50ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=25' @ 3608.50ft
Site:	Top Spot 12_13 Fed Com	North Reference:	Grid
Well:	Top Spot 12_13 Fed Com 13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIG HOLE		
Design:	Permitting Plan		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP (Top Spot 12_13 - plan misses target center by 492.23ft at 0.10ft MD (0.10 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.10	-470.58	-144.36	504,100.62	728,385.93	32.384385	-103.727392
PBHL (Top Spot - plan hits target center - Point	0.00	0.00	9,221.50	10,020.18	-200.18	514,590.83	728,330.11	32.413220	-103.727380
FTP (Top Spot 12_13 - plan misses target center by 202.86ft at 9171.95ft MD (9075.74 TVD, -279.61 N, -139.04 E) - Point	0.00	0.00	9,221.50	-420.59	-144.64	504,150.61	728,385.65	32.384523	-103.727392

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
904.00	904.00	13 3/8" Surface Casing	13.375	17.500
12,200.00	9,221.50	9 5/8" Intermediate Casing	9.625	12.250
13,540.08	9,221.50	5 1/2" Production Casing	5.500	8.500

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
833.00	833.00	RUSTLER			
1,131.50	1,131.50	SALADO			
2,000.00	2,000.00	MARKER BED 126			
2,867.50	2,867.50	CASTILE			
4,498.50	4,498.50	DELAWARE			
4,563.50	4,563.50	BELL CANYON			
5,413.50	5,413.50	CHERRY CANYON			
6,658.52	6,647.50	BRUSHY CANYON			
8,436.53	8,398.50	BONE SPRING			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
5,600.00	5,600.00	0.00	0.00	Build 2°/100'
6,100.00	6,097.47	-42.23	-10.53	Hold 10° Tangent
8,593.18	8,552.77	-462.31	-115.28	KOP, Build & Turn 10°/100'
9,590.05	9,221.50	102.32	-147.42	Landing Point
16,889.83	9,221.50	7,402.00	-186.25	LC Crossing
19,508.05	9,221.50	10,020.18	-200.18	TD at 19508.05' MD

Oxy USA Inc. - TOP SPOT 12_13 FED COM 13H

Drill Plan

1. Geologic Formations

TVD of Target (ft):	9222	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	19508	Deepest Expected Fresh Water (ft):	833

Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	833	833	
Salado	1132	1132	Salt
Marker Bed 126	2000	2000	Salt
Castile	2868	2868	Salt
Delaware	4499	4499	Oil/Gas/Brine
Bell Canyon	4564	4564	Oil/Gas/Brine
Cherry Canyon	5414	5414	Oil/Gas/Brine
Brushy Canyon	6659	6648	Losses
Bone Spring	8437	8399	Oil/Gas
Bone Spring 1st			Oil/Gas
Bone Spring 2nd			Oil/Gas
Bone Spring 3rd			Oil/Gas
Wolfcamp			Oil/Gas
Penn			Oil/Gas
Strawn			Oil/Gas

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

Section	Hole Size (in)	MD		TVD		Csg. OD (in)	Csg Wt. (ppf)	Grade	Conn.
		From (ft)	To (ft)	From (ft)	To (ft)				
Surface	17.5	0	903	0	903	13.375	54.5	J-55	BTC
Intermediate	9.875	0	8493	0	8493	7.625	26.4	L-80 HC	BTC
Production	6.75	0	19508	0	9222	5.5	20	P-110	DWC/C-HT-IS

All casing strings will be tested in accordance with 43 CFR part 3170 Subpart 3172

*Oxy requests the option to run the 10.75" Intermediate I as a contingency string to be run only if severe hole conditions dictate an additional casing string necessary. This would make the planned 7.625" / 7.827" Casing the Intermediate II.

**If 4S Contingency is not required, Oxy requests permission to transition from 12.25" to 9.875" Intermediate I at 1st trip point below Brushy top (estimated top in formation table above). Cement volumes will be updated on C103 submission.

Occidental - Permian New Mexico

TOP SPOT 12_13 FED COM 13H

All Casing SF Values will meet or exceed those below			
SF Collapse	SF Burst	Body SF Tension	Joint SF Tension
1.00	1.100	1.4	1.4

Annular Clearance Variance Request

As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow deviation from the 0.422" annular clearance requirement. Please see Annular Clearance Variance attachment for further details.

	Y or N
Is casing new? If used, attach certification as required in 43 CFR 3160	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards?	Y
If not provide justification (loading assumptions, casing design criteria).	
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-Q?	Y
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	Y
Is well located in R-111-Q and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Occidental - Permian New Mexico

TOP SPOT 12_13 FED COM 13H

3. Cementing Program

Section	Stage	Slurry:	Sacks	Yield (ft ³ /ft)	Density (lb/gal)	Excess:	TOC	Placement	Description
Surface	1	Surface - Tail	943	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.	1	Intermediate 1S - Tail	213	1.68	13.2	5%	6,909	Circulate	Class C+Ret., Disper.
Int.	2	Intermediate 2S - Tail BH	1234	1.71	13.3	25%	-	Bradenhead	Class C+Accel.
Prod.	1	Production - Tail	652	1.84	13.3	25%	7,993	Circulate	Class C+Ret.

Offline Cementing Request

Oxy requests a variance to cement the intermediate and production casing strings offline in accordance to the approved variances. Please see Offline Cementing sections of the Combined Variance attachment for further details.

Bradenhead CBL Request

Oxy requests permission to adjust the CBL requirement after bradenhead cement jobs, on 7-5/8" intermediate casings, as per the agreement reached in the OXY/BLM meeting on September 5, 2019. Please see Bradenhead CBL Variance attachment for further details.

Occidental - Permian New Mexico

TOP SPOT 12_13 FED COM 13H

4. Pressure Control Equipment

Pressure Control Equipment							
BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type		✓	Tested to:	Deepest TVD Depth (ft) per Section:
9.875" Hole	13-5/8"	5M	Annular		✓	70% of working pressure	8493
		5M	Blind Ram		✓	250 psi / 5000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				
6.75" Hole	13-5/8"	5M	Annular		✓	70% of working pressure	9222
		5M	Blind Ram		✓	250 psi / 5000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				

*Specify if additional ram is utilized

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR part 3170 Subpart 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

Occidental - Permian New Mexico

TOP SPOT 12_13 FED COM 13H

	Formation integrity test will be performed per 43 CFR part 3170 Subpart 3172. On Exploratory wells or 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. Will be tested in accordance with 43 CFR part 3170 Subpart 3172.
	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
Y	Are anchors required by manufacturer?
	A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per 43 CFR part 3170 Subpart 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015. See attached schematics.

BOP Break Testing Request

Oxy requests permission to adjust the BOP break testing (intermediate and production) requirements as per the agreement reached with OXY/BLM in January 2026. Please see BOP Break Testing Variance attachment for further details.

Oxy will use Cameron ADAPT wellhead system that uses an OEC top flange connection. This connection has been fully vetted and verified by API to Spec 6A and carries an API monogram.

Occidental - Permian New Mexico

TOP SPOT 12_13 FED COM 13H

5. Mud Program

Section	Depth - MD		Depth - TVD		Type	Weight (ppg)	Viscosity	Water Loss
	From (ft)	To (ft)	From (ft)	To (ft)				
Surface	0	903	0	903	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate	903	8493	903	8493	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Production	8493	19508	8493	9222	Water-Based or Oil-Based Mud	8.0 - 8.5	38-50	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CACL2. Oxy will use a closed mud system.

What will be used to monitor the loss or gain of fluid?	PVT/MD Totco/Visual Monitoring
---	--------------------------------

6. Logging and Testing Procedures

Logging, Coring and Testing.		
Yes	Will run GR from TD to surface (horizontal well – vertical portion of hole).	
	Stated logs run will be in the Completion Report and submitted to the BLM.	
No	Logs are planned based on well control or offset log information.	
No	Drill stem test? If yes, explain	
No	Coring? If yes, explain	
Additional logs planned		
No	Resistivity	
No	Density	
Yes	CBL	Production string
Yes	Mud log	Bone Spring – TD
No	PEX	

Occidental - Permian New Mexico

TOP SPOT 12_13 FED COM 13H

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4077 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	154°F

Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of 43 CFR part 3170 Subpart 3172. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N	H2S is present
Y	H2S Plan attached

8. Other facets of operation

	Yes/No
Will the well be drilled with a walking/skidding operation? If yes, describe. We plan to drill the 4 well pad in batch by section: all surface sections, intermediate sections and production sections. The wellhead will be secured with a night cap whenever the rig is not over the well.	Yes
Will more than one drilling rig be used for drilling operations? If yes, describe. Oxy requests the option to contract a Surface Rig to drill, set surface casing, and cement for this well. If the timing between rigs is such that Oxy would not be able to preset surface, the Primary Rig will MIRU and drill the well in its entirety per the APD. Please see the attached document for information on the spudder rig.	Yes

Total Estimated Cuttings Volume: 1476 bbls

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 INFORMATION

API Number 30-015-56985	Pool Code 5695	Pool Name BILBREY BASIN; BONE SPRING
Property Code 335970	Property Name TOP SPOT 12_13 FED COM	Well Number 13H
OGRID No. 16696	Operator Name OXY USA INC.	Ground Level Elevation 3583.5'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL P	Section 13	Township 22S	Range 31E	Lot	Ft. from N/S 520 SOUTH	Ft. from E/W 1225 EAST	Latitude (NAD 83) 32.385676°	Longitude (NAD 83) -103.726915°	County EDDY
---------	---------------	-----------------	--------------	-----	---------------------------	---------------------------	---------------------------------	------------------------------------	----------------

Bottom Hole Location

UL B	Section 12	Township 22S	Range 31E	Lot	Ft. from N/S 20 NORTH	Ft. from E/W 1372 EAST	Latitude (NAD 83) 32.413220°	Longitude (NAD 83) -103.727380°	County EDDY
---------	---------------	-----------------	--------------	-----	--------------------------	---------------------------	---------------------------------	------------------------------------	----------------

Dedicated Acres 320	Infill or Defining Well INFILL	Defining Well API 24H - 30-015-47954	Overlapping Spacing Unit (Y/N) N	Consolidation Code C
Order Numbers. N/A		Well setbacks are under Common Ownership: ☐ Yes ☒ No		

Kick Off Point (KOP)

UL O	Section 13	Township 22S	Range 31E	Lot	Ft. from N/S 50 SOUTH	Ft. from E/W 1372 EAST	Latitude (NAD 83) 32.384385°	Longitude (NAD 83) -103.727391°	County EDDY
---------	---------------	-----------------	--------------	-----	--------------------------	---------------------------	---------------------------------	------------------------------------	----------------

First Take Point (FTP)

UL O	Section 13	Township 22S	Range 31E	Lot	Ft. from N/S 100 SOUTH	Ft. from E/W 1372 EAST	Latitude (NAD 83) 32.384523°	Longitude (NAD 83) -103.727391°	County EDDY
---------	---------------	-----------------	--------------	-----	---------------------------	---------------------------	---------------------------------	------------------------------------	----------------

Last Take Point (LTP)

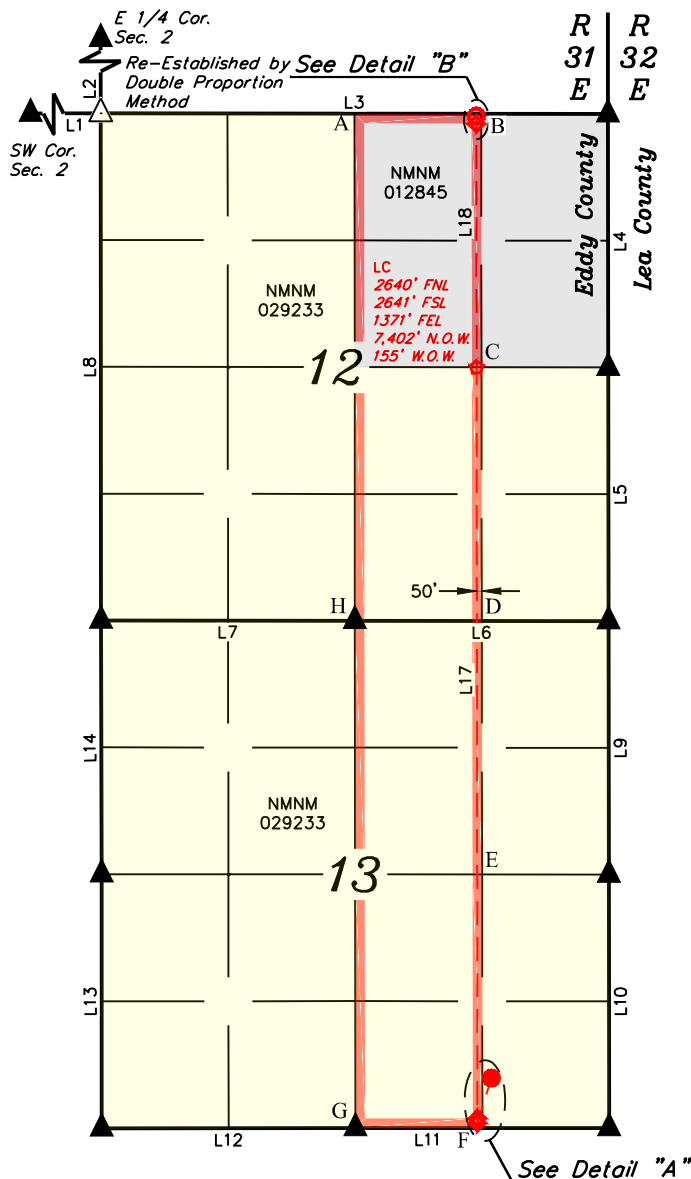
UL B	Section 12	Township 22S	Range 31E	Lot	Ft. from N/S 100 NORTH	Ft. from E/W 1372 EAST	Latitude (NAD 83) 32.413000°	Longitude (NAD 83) -103.727380°	County EDDY
---------	---------------	-----------------	--------------	-----	---------------------------	---------------------------	---------------------------------	------------------------------------	----------------

Unitized Area or Area of Uniform Interest N	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 3583.5'
---	--	--

OPERATOR CERTIFICATIONS <i>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.</i> <i>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.</i> Melissa Guidry 09/10/25 Signature _____ Date _____ Melissa Guidry Printed Name _____ melissa_guidry@oxy.com Email Address _____	SURVEYOR CERTIFICATIONS <i>I hereby certify that the well location shown on this plat was plotted from the 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.</i>  Signature and Seal of Professional Surveyor _____ 23782 June 25, 2025 Certificate Number _____ Date of Survey _____
---	---

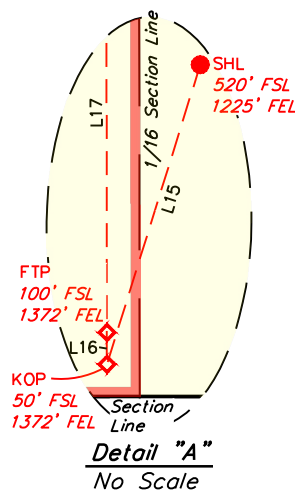
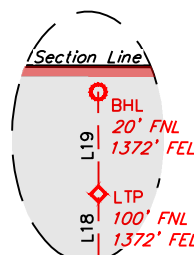
Note: No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

Property Name TOP SPOT 12_13 FED COM	Well Number 13H	Drawn By T.I.R. 08-26-24	Revised By REV. 3 T.J.S. 07-17-25 (WELLBORE PATH UPDATE)
---	--------------------	-----------------------------	---



- NOTE:**
- Distances referenced on plat to section lines are perpendicular.
 - Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)
 - Colored areas within section lines represent federal oil & gas leases.

HSU COORDINATES				
	NAD 27 N.M. STATE PLANE, EAST ZONE		NAD 83 N.M. STATE PLANE, EAST ZONE	
POINT	NORTHING	EASTING	NORTHING	EASTING
A	514547.09'	685877.72'	514607.78'	727059.77'
B	514550.25'	687198.70'	514610.95'	728380.77'
C	511911.03'	687212.16'	511971.66'	728394.30'
D	509270.21'	687226.09'	509330.77'	728408.30'
E	506629.60'	687240.39'	506690.09'	728422.68'
F	503990.44'	687255.04'	504050.86'	728437.41'
G	503984.61'	685934.52'	504045.03'	727116.88'
H	509266.21'	685905.18'	509326.77'	727087.38'



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S89°48'38"W	5283.00'
L2	N00°05'15"W	2642.31'
L3	N89°53'45"W	5284.97'
L4	N00°02'49"W	2638.99'
L5	N00°04'00"W	2641.40'
L6	N89°55'57"W	2642.34'
L7	N89°57'03"W	2643.31'
L8	N00°02'58"W	5284.61'
L9	N00°03'46"W	2640.91'
L10	N00°04'43"W	2638.22'
L11	S89°59'17"W	2641.57'
L12	S89°52'27"W	2645.53'
L13	N00°00'53"W	2649.62'
L14	N00°05'42"W	2641.26'
L15	S17°17'43"W	492.29'
L16	N00°04'43"W	50.00'
L17	N00°03'50"W	7822.45'
L18	N00°03'50"W	2539.85'
L19	N00°02'49"W	80.00'

- = SURFACE HOLE LOCATION
- ◆ = KICK OFF POINT/TAKE POINTS
- = LEASE CROSSING
- = BOTTOM HOLE LOCATION
- ▲ = SECTION CORNER LOCATED
- = HORIZONTAL SPACING UNIT
- N.O.W. = NORTH OF WELL
- W.O.W. = WEST OF WELL

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°23'08.44" (32.385676°)
LONGITUDE = -103°43'36.89" (-103.726915°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°23'07.99" (32.385554°)
LONGITUDE = -103°43'35.14" (-103.726426°)
STATE PLANE NAD 83 (N.M. EAST)
N: 504571.18' E: 728530.28'
STATE PLANE NAD 27 (N.M. EAST)
N: 504510.75' E: 687347.92'

NAD 83 (KICK OFF POINT)
LATITUDE = 32°23'03.79" (32.384385°)
LONGITUDE = -103°43'38.61" (-103.727391°)
NAD 27 (KICK OFF POINT)
LATITUDE = 32°23'03.35" (32.384263°)
LONGITUDE = -103°43'36.85" (-103.726903°)
STATE PLANE NAD 83 (N.M. EAST)
N: 504100.62' E: 728385.93'
STATE PLANE NAD 27 (N.M. EAST)
N: 504040.20' E: 687203.56'

NAD 83 (FIRST TAKE POINT)
LATITUDE = 32°23'04.28" (32.384523°)
LONGITUDE = -103°43'38.61" (-103.727391°)
NAD 27 (FIRST TAKE POINT)
LATITUDE = 32°23'03.84" (32.384400°)
LONGITUDE = -103°43'36.85" (-103.726903°)
STATE PLANE NAD 83 (N.M. EAST)
N: 504150.61' E: 728385.65'
STATE PLANE NAD 27 (N.M. EAST)
N: 504090.19' E: 687203.28'

NAD 83 (LEASE CROSSING)
LATITUDE = 32°24'21.67" (32.406020°)
LONGITUDE = -103°43'38.58" (-103.727383°)
NAD 27 (LEASE CROSSING)
LATITUDE = 32°24'21.23" (32.405898°)
LONGITUDE = -103°43'36.82" (-103.726893°)
STATE PLANE NAD 83 (N.M. EAST)
N: 511971.50' E: 728344.03'
STATE PLANE NAD 27 (N.M. EAST)
N: 511910.87' E: 687161.89'

NAD 83 (LAST TAKE POINT)
LATITUDE = 32°24'46.80" (32.413000°)
LONGITUDE = -103°43'38.57" (-103.727380°)
NAD 27 (LAST TAKE POINT)
LATITUDE = 32°24'46.36" (32.412878°)
LONGITUDE = -103°43'36.80" (-103.726890°)
STATE PLANE NAD 83 (N.M. EAST)
N: 514510.84' E: 728330.52'
STATE PLANE NAD 27 (N.M. EAST)
N: 514450.15' E: 687148.45'

NAD 83 (BOTTOM HOLE LOCATION)
LATITUDE = 32°24'47.59" (32.413220°)
LONGITUDE = -103°43'38.57" (-103.727380°)
NAD 27 (BOTTOM HOLE LOCATION)
LATITUDE = 32°24'47.15" (32.413098°)
LONGITUDE = -103°43'36.80" (-103.726890°)
STATE PLANE NAD 83 (N.M. EAST)
N: 514590.83' E: 728330.11'
STATE PLANE NAD 27 (N.M. EAST)
N: 514530.13' E: 687148.05'



OXY APD CHANGE SUNDRY LIST FORM

DATE SUNDRY WORKSHEET CREATED	2/19/2026
WELL NAME - NUMBER	TOP SPOT 12_13 FEDERAL COM 13H
API NUMBER	39-0115-56985
ESTIMATED SPUD DATE	3/1/2026

ITEM	APD BASE LINE (For Regulatory to Complete)										SUNDRY PLAN (Groups to complete the latest plan)									
	Date APD/BASE LINE APPROVED: 01/27/26										DATE Sundry Worksheet :02/19/26									
NAME	TOP SPOT 12_13 FEDERAL COM 13H										TOP SPOT 12_13 FEDERAL COM 13H									
NSL	YES										YES									
SHL	520' FSL 1225' FEL										520' FSL 1225' FEL									
PAD	LSTTNK_22531E_1302										LSTTNK_22531E_1302									
BHL	20' FNL 1372' FEL										20' FNL 1372' FEL									
HSU SIZE, ACRES	320										320									
POOL	BILBREY BASIN										BILBREY BASIN									
TVD	9222										9222									
TARGET FORMATION	BONE SPRING										BONE SPRING									
Casing Program	APD BASE LINE										SUNDRY PLAN									
	Section	Hole Size (in.)	MD	TVD	Csg OD	Csg WT	Grade	Conn.			Section	Hole Size (in.)	MD	TVD	Csg OD (in)	Csg WT (ppf)	Grade	Conn.		
	Surface	17.5	904	904	13.375	54.5	J-55	BTC			Surface	17.5	903	903	13.375	54.5	J-55	BTC		
	Int	12.25	12200	12159	9.625	40	L-80 HC	BTC			Int	9.875	8493	8493	7.625	26.4	L-80 HC	BTC		
	Int2										Int2									
Drilling	Prod	8.5	19442	9222	5.5	20	P-110	DWC/C-HT-IS			Prod	6.75	19508	9222	5.5	20	P-110	DWC/C-HT-IS		
	Liner										Liner									
	APD BASE LINE										SUNDRY PLAN									
	Section/Stage	Slurry	Sacks	Yield (ft³)	Density (lb/gal)	Excess	TOC	Placement	Description		Section/Stage	Slurry	Sacks	Yield (ft³/ft)	Density (lb/gal)	Excess	TOC	Placement	Description	
	Surf	SURFACE - TAIL	944	1.33	14.8	100%		CIRCULATE	CLASS C+ACCEL		Surf	SURFACE - TAIL	943	1.33	14.8	100%		CIRCULATE	CLASS C+ACCEL	
	Int1	INTERMEDIATE 15 - TAIL	1037	1.68	13.2	5%	6904	CIRCULATE	CLASS C+RET,DISPER		Int1	INTERM 15 - TAIL	213	1.68	13.2	5%	6909	CIRCULATE	CLASS C+RET,DISPER	
	Int2	INTERMEDIATE 25 - TAIL BH	1565	1.71	13.3	25%		BRADENHEAD	CLASS C+ACCEL		Int2	INTERM 25 - TAIL BH	1234	1.71	13.3	25%		BRADENHEAD	CLASS C+ACCEL	
	Prod1	PRODUCTION - TAIL	1198	1.84	13.3	25%	11700	CIRCULATE	CLASS C+RET		Prod	PROD - TAIL	652	1.84	13.3	25%	7993	CIRCULATE	CLASS C+RET	
	Pilot 1	PILOT - FILLER PLUG	206	1.39	14.8	10%	12878	CIRCULATE	CLASS C+											
	Pilot 2	PILOT - FILLER PLUG	206	1.39	14.8	10%	12216	CIRCULATE	CLASS C+											
	Pilot 2	PILOT - FILLER PLUG	5	1.39	14.8	10%	12200	CIRCULATE	CLASS C+											
	Pilot 3	PILOT - FILLER PLUG	218	1.39	14.8	10%	11554	CIRCULATE	CLASS C+											
	APD BASE LINE										SUNDRY PLAN									
	BOP Break Testing Variance		X								BOP Break Testing Variance		X							
	SAM Annular BOP Variance		X								SAM Annular BOP Variance		X							
	Bradenhead CBL Variance		X								Bradenhead CBL Variance		X							
	Offline Cementing Variance		X								Offline Cementing Variance		X							
	Production Annular Clearance Variance		X								Production Annular Clearance Variance		X							
	Flexible Choke Line Variance										Flexible Choke Line Variance									
	(Pilot Hole, Logs etc.)										(Pilot Hole, Logs etc.)									

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

Action 567061

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 567061
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	4/8/2026