Form 3160-3 FORM APPROVED OMB No. 1004-0137 (June 2015) Expires: January 31, 2018 **UNITED STATES** DEPARTMENT OF THE INTERIOR 5. Lease Serial No. NMNM108502 BUREAU OF LAND MANAGEMENT APPLICATION FOR PERMIT TO DRILL OR REENTER 6. If Indian, Allotee or Tribe Name 7. If Unit or CA Agreement, Name and No. **✓** DRILL REENTER 1a. Type of work: 1b. Type of Well: ✓ Oil Well Gas Well Other 8. Lease Name and Well No. 1c. Type of Completion: Hydraulic Fracturing ✓ Single Zone Multiple Zone LACEY SWISS 1 FED COM 3Н 2. Name of Operator 9. API Well No. EOG RESOURCES INCORPORATED 30-025-55099 3a. Address 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory 1111 BAGBY SKY LOBBY 2, HOUSTON, TX 77002 (713) 651-7000 WC-025, G-05 S25330124/DELAWARE 4. Location of Well (Report location clearly and in accordance with any State requirements.*) 11. Sec., T. R. M. or Blk. and Survey or Area SEC 1/T25S/R33E/NMP At surface LOT 1 / 326 FNL / 665 FEL / LAT 32.1659046 / LONG -103.5196534 At proposed prod. zone TR G / 2538 FNL / 1330 FEL / LAT 32.130806 / LONG -103.5218088 14. Distance in miles and direction from nearest town or post office* 12. County or Parish 13 State LEA NM 15. Distance from proposed* 16. No of acres in lease 17. Spacing Unit dedicated to this well 100 feet location to nearest 0.008 property or lease line, ft. (Also to nearest drig. unit line, if any) 18. Distance from proposed location* 19. Proposed Depth 20. BLM/BIA Bond No. in file to nearest well, drilling, completed, 9226 feet / 22111 feet FED: NM2308 applied for, on this lease, ft. 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start* 23. Estimated duration 3473 feet 07/15/2025 25 days 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable) 1. Well plat certified by a registered surveyor. 4. Bond to cover the operations unless covered by an existing bond on file (see 2. A Drilling Plan. Item 20 above) 3. A Surface Use Plan (if the location is on National Forest System Lands, the 5. Operator certification. 6. Such other site specific information and/or plans as may be requested by the SUPO must be filed with the appropriate Forest Service Office). 25. Signature Name (Printed/Typed) Date SHEA BAILEY / Ph: (713) 651-7000 (Electronic Submission) 06/18/2025 Title Regulatory Contractor Approved by (Signature) Name (Printed/Typed) Date (Electronic Submission) 08/22/2025 CODY LAYTON / Ph: (575) 234-5959 Title Office Assistant Field Manager Lands & Minerals Carlsbad Field Office Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Conditions of approval, if any, are attached. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction



(Continued on page 2)

*(Instructions on page 2)

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

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

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Form 3160-3, page 2)

Additional Operator Remarks

Location of Well

0. SHL: LOT 1 / 326 FNL / 665 FEL / TWSP: 25S / RANGE: 33E / SECTION: 1 / LAT: 32.1659046 / LONG: -103.5196534 (TVD: 0 feet, MD: 0 feet)
PPP: LOT 2 / 100 FNL / 1330 FEL / TWSP: 25S / RANGE: 33E / SECTION: 1 / LAT: 32.165274 / LONG: -103.5218023 (TVD: 8961 feet, MD: 9011 feet)
PPP: LOT 2 / 0 FNL / 1331 FEL / TWSP: 25S / RANGE: 33E / SECTION: 1 / LAT: 32.152292 / LONG: -103.521805 (TVD: 9226 feet, MD: 14293 feet)
BHL: TR G / 2538 FNL / 1330 FEL / TWSP: 25S / RANGE: 33E / SECTION: 13 / LAT: 32.130806 / LONG: -103.5218088 (TVD: 9226 feet, MD: 22111 feet)

BLM Point of Contact

Name: MARIAH HUGHES Title: Land Law Examiner Phone: (575) 234-5972 Email: mhughes@blm.gov

Review and Appeal Rights

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

<u>C-102</u>			Energy		State of New Is & Natura	v Mexico l Resources Department			Revised July 9, 2024		
Submit Electronic Via OCD Permitt			0	*		ION DIVIS				Initial Submittal	
									nittal	X Amended Report	
								Тур	·	As Drilled	
		W	ELL LO	CATIO		REAGE DE					
API Number 30-025-	55099		Pool Code 51	020 983	398 Pool N	ame WC-025	G-05 S2; LLS; LOV	3301I VER B	4: DI ONE	ELAWARE SPRING	
Property Code	30827	:	Property Name	L	ACEY SWIS	SS 1 FED CC	OM			Well Number	3H
OGRID No.	7377		Operator Name		EOG RESO	URCES, INC) .			Ground Level Elev	ation 3473'
Surface Owner:	State Fee	Tribal X Federal	•			Mineral Owner:	State Fee Trib	al X Federal			
					Surface	Location					
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S		Latitude	:]	Longitude	County
1	1	25-S	33-E	-	326' N	665' E	N 32.165	9046	W 10	3.5196534	LEA
						le Location					
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude			Longitude	County
G	13	25-S	33-E	-	2538' N	1330' E	N 32.130	8060	W 10	3.5218088	LEA
Dedicated Acres	Infill or Defi	ning Well Defini	ing Well API			Overlapping Spacing	Linit (V/N)	I C	onsolidated	1 Code	
799.91	DEFIN	Ŭ				N C					
Order Numbers						Well Setbacks are under Common Ownership: Yes No					
order realisers		Tr' 1 0 00 P	!		.вр						
UL or lot no.	Section	Township	Range	Lot Idn	K1CK Off P	oint (KOP)	Latitud	· T	1	Longitude	County
2	1	25-S	33-E	-	50' N	1330' E N 32.1666649 W 103.5218023		LEA			
	-					Deint (ETD)					
UL or lot no.	Section	Township	Range	Lot Idn	First Take	Footnt (FTP) Feet from the E/W Latitude Longitude County				County	
2	1	25-S	33-E	_	100' N	1330' E	N 32.166			3.5218023	LEA
	•							<u></u>		0.02.0020	
UL or lot no.	Section	Township	Range	Lot Idn	Last Take	Point (LTP) Feet from the E/W	Latitud	<u>, l</u>		Longitude	County
G	13	25-S	33-E	_	2538' N	1330' E	N 32.130			3.5218088	LEA
	10	200	00 L		2000 11	1000 L	14 02.100	0000	** 10	0.0210000	LL/\
Unitized Area or A	uaa af Unifama I	ntanaat		Cassina Unity	Tyma		Caro	and Floor Elev	vation		
1		EEMENT		Spacing Unity	Horizonta	al Vertical	Giot	ind Floor Elev	vation	3498'	
				•			•				
OPERATO	OR CERTIF	FICATION				SURVEYOR	RS CERTIFIC	CATION		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4.
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					I hereby certify that the well location shown on this stat was proffed from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.						
or wheelsed military interest, or to a continuory pooling agreement or a compassory pooling order heretofore entered by the division. If this well is a horizontal well, I further certify that this organization has							$ \not\equiv $	(2A508)			
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.					5/30/2025 8:32:18 AM				URVELLING TO THE PROPERTY OF T		
Shea Bailey 6/11/25								5/3	0/2025 8	:32:18 AM	Inn.
Signature	0		Date	_		Signature and Seal	of Professional Surv	eyor	Date		
Shea Ba	iley					-					
Print Name	ilav@aa	arecour	nae com			Certificate Number	Da	te of Survey	10005		
E-mail Address	shea_bailey@eogresources.com E-mail Address							05/07	/2025		

<u>C-102</u>	State of New Mexico Energy, Minerals & Natural Resources Department							Revised July 9, 2024
Submit Electronically Via OCD Permitting		OIL CONSERVATION DIVISION						Initial Submittal
							Submittal Type:	Amended Report
							J1	As Drilled
Property Name and Well Number		LA	CEY SWIS	S 1 FED C	ОМ 3Н			
SURFACE LOCATION (SHL) NEW MEXICO EAST		I		.0.0	T-24-S, R-33-E	X=1,031,1 R-34-E		PPOSED PERF. POINT (PPP2) NEW MEXICO EAST
NAD 1983 X=793117 Y=425043 LAT.: N 32.1659046 LONG.: W 103.5196534	35 2	36	X=791137.85 Y=425356.52	1312'	1330 1330 326' / 665' +	31 Y=42537		NAD 1983 X=792489 Y=420087 LAT.: N 32.1522942 LONG.: W 103.5218050
NAD 1927 X=751932 Y=424985 LAT.: N 32.1657810 LONG.: W 103.5191796 326' FNL 665' FEL		LOT 4	: LOT 3	// AZ = 292.15° // 720.2' // LOT 2	SHL LOT 1 USA NMNM 019859			NAD 1927 X=751303 Y=420028 LAT.: N 32.1521698 LONG.: W 103.5213312 0' FNL 1331' FEL
PROPOSED PERF. POINT (PPP1) NEW MEXICO EAST NAD 1983 X=792459 Y=425311 LAT.: N 32.1666545 LONG.: W 103.5217730		 	X=791154.71 Y=422719.16	USA NMNM		X=793799.36 Y=422732.59	6	NEW MEXICO EAST NAD 1983 X=792528 Y=414807 LAT.: N 32.1377814
NAD 1927 X=751274 Y=425253 LAT.: N 32.1665309 LONG.: W 103.5212990 54' FNL 1321' FEL		- 	: 	HZ SDACING CONTROL NAMINA 108502 NO. CONTROL				LONG.: W 103.5218076 NAD 1927 X=751342 Y=414749 LAT.: N 32.1376568 LONG.: W 103.5213346 0' FNL 1331' FEL
KICK OFF POINT (KOP)	_ 2	1	Y=420079.33	1317'	1331'			OWER MOST PERF. (LMP)
NEW MEXICO EAST NAD 1983 X=792450 Y=425314 LAT.: N 32.1666649 LONG.: W 103.5218023 NAD 1927 X=751265 Y=425256 LAT.: N 32.1665406 LONG.: W 103.5213278	11	12 	: : : : : : : : : : : : : : : : : : :	AZ = 179.58° 12995.6'	PENDING COM #	X=793819.2: Y=420093.8:	3 	TOM HOLE LOCATION (BHL) NEW MEXICO EAST NAD 1983 X=792546 Y=412269 LAT.: N 32.1308060 LONG.: W 103.5218088 NAD 1927 X=751361 Y=412211 LAT.: N 32.1306813
50' FNL 1330' FEL UPPER MOST PERF. (UMP) NEW MEXICO EAST NAD 1983 X=792450 Y=425265 LAT.: N 32.1665274 LONG.: W 103.5218023		 	: 	030400		X=793839.0 Y=417454.7		LONG.: W 103.5213362 2538' FNL 1330' FEL
NAD 1927 X=751265 Y=425206 LAT.: N 32.1664031	11	12	! : 	PPP3 -	1331'	X=793858 7 Y=414812	3.14 2.09	
LONG.: W 103.5213278 100' FNL 1330' FEL	14	13 	X=791214.12 : Y=414801.72	USA NMNM	188	18		
				19623	1330'		I hereby plat wo made b same is 05/07	
			: X=791232.36 Y=412161.27	LMP/ J BHL		X=793877. Y=412177.: W 12, 42,	Signature 01 39	and Seal of Professional Surveyor: DOM/NG///// BLUM ME YOUR SEAL OF THE PROFESSIONAL SURVEYORS AND THE PROFESSIONAL SURVEY OF THE PROFESSIONAL SURVEY AND THE PROFESSIONAL SURVEY OF THE PROFESSIONAL SURVEY AND THE PROFESSIONAL SURVEY OF
T-25-S, R-33-E SECTION 1 LOT 1 - 39.98 ACRES LOT 2 - 39.93 ACRES LOT 3 - 39.89 ACRES	14	+	: 		: 13 24	18	(urvey and Seal of Professional Surveyor: DOM/JOHN ME TO SURVEYOR 24508 24508 SURVEYOR DOS 8:32:18 AM
lot 4 - 39.84 ACRES eleased to Imaging: 8/28/2025 10:	23 FAD20 A	1			24	119	5/30/20	025 8:32:18 AM



1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,184'
Tamarisk Anhydrite	1,262'
Top of Salt	1,641'
Base of Salt	4,914'
Lamar	5,179'
Bell Canyon	5,198'
Cherry Canyon	6,219'
Brushy Canyon	7,774'
Bone Spring Lime	9,257'
Leonard (Avalon) Shale	9,311'
1st Bone Spring Sand	10,251'
2nd Bone Spring Shale	10,517'
2nd Bone Spring Sand	10,838'
3rd Bone Spring Carb	11,362'
3rd Bone Spring Sand	11,907'
Wolfcamp	12,350'
TD	9,226'

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

Upper Permian Sands	0-400'	Fresh Water
Lamar	5,179'	Oil
Cherry Canyon	6,219'	Oil
Brushy Canyon	7,774'	Oil
Bone Spring Lime	9,257'	Oil
Leonard (Avalon) Shale	9,311'	Oil
1st Bone Spring Sand	10,251'	Oil
2nd Bone Spring Shale	10,517'	Oil
2nd Bone Spring Sand	10,838'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 10-3/4" casing at 1,290' and circulating cement back to surface.



4. CASING PROGRAM: APD Design A

Hole	Interv	al MD	Interva	ıl TVD	TVD Csg			
Size	From (ft)	To (ft)	From (ft)	To (ft)	OD	Weight	Grade	Conn
13"	0	1,287	0	1,287	10-3/4"	40.5#	J-55	STC
9-7/8"	0	5,272	0	5,229	8-5/8"	32#	J-55	BTC-SC
7-7/8"	0	8,790	0	8,749	6"	24.5#	P110-EC	VAM Sprint-TC
6-3/4"	8,790	22,111	8,749	9,226	5-1/2"	20#	P110-EC	VAM Sprint SF

^{**}For highlighted rows above, variance is requested to run entire string of either 6" or 5-1/2" casing string above due to availability.

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

Variance is also requested to waive any centralizer requirements for the 6" and 5-1/2" casings in the 7-7/8" and 6-3/4" hole sizes. An expansion additive will be utilized, in the cement slurry, for the entire length of the 7-7/8" and 6-3/4" hole intervals to maximize cement bond and zonal isolation.

EOG requests permission to allow deviation from the 0.422" annulus clearance requirement for the intermediate (salt) section from Title 43 CFR Part 3170 under the following conditions:

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

5. CEMENTING PROGRAM: APD Design A

Depth	No. Sacks	Wt.	Yld Ft3/sk	Slurry Description
1,290'	290	13.5	1.73	Lead: Class C/H + additives (TOC @ Surface)
10-5/4	120	14.8	1.34	Tail: Class C/H + additives (TOC @ 1090')
5,370' 8-5/8"	320	12.7	2.22	Lead: Class C/H + additives + expansive additives (TOC @ Surface)
	150	14.8	1.32	Tail: Class C/H + additives + expansive additives (TOC @ 4218')
22,111'	1000	14.8	1.32	Bradenhead squeeze: Class C/H + additives + expansive additives (TOC @ surface OR TOC @ 4,772' if performed conventionally)
	1690	13.2	1.52	Tail: Class C/H + additives (TOC @ 7780')



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

Cement integrity tests will be performed immediately following plug bump.

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

EOG requests variance from minimum standards to pump a two stage cement job on the 6" and 5-1/2" production casing strings with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (7,774') and the second stage performed as a 1000 sack bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 400 sacks of Class C/H cement + additives (1.32 yld, 14.8 ppg) will be executed as a contingency. Top will be verified by Echo-meter.

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



6. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

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

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

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

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

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

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

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



7. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

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

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

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,287'	Fresh - Gel	8.6-8.8	28-34	N/c
1,287' – 5,229'	Brine	9.8-10.8	28-34	N/c
5,229' – 22,111' Lateral	Oil Base	8.8-9.5	58-68	N/c - 6

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

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

8. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

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

9. LOGGING, TESTING AND CORING PROGRAM:

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

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

The estimated bottom-hole temperature (BHT) at TD is 162 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 4,318 psig and a maximum anticipated surface pressure of 2,288 psig (based on 9.0 ppg MW). No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. Severe loss circulation is expected from 7,774' to intermediate casing point.



11. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

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

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

12. WELLHEAD:

A multi-bowl wellhead system will be utilized.

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

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

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

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

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

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

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



13. VARIANCE REQUESTS:

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

- Intermediate Bradenhead Cement (EOG BLM Variance 2a)
- Break-test BOP and Offline Cementing (EOG BLM Variance 3e)
- Production Offline Cement (EOG BLM Variance 3 d)
- Shallow Target Offline Bradenhead Production Cement (EOG BLM Variance 3c)
- Salt Interval Washout Annular Clearnace (EOG BLM Variance 4a)
- Alternate Shallow Casing Designs (EOG BLM Variance 5a)

14. TUBING REQUIREMENTS:

EOG respectively requests an exception to the following NMOCD rule:

• 19.15.16.10 Casing AND TUBING RQUIREMENTS:

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

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



326' FNL

Proposed Wellbore: APD Design A

KB: 3498' GL: 3473'

665' FEL Section 1

T-25-S, R-33-E

API: 30-025-****

Bit Size: 13"

10-3/4", 40.5#, J-55, STC

@ 0' - 1,287' MD

@ 0' - 1,287' TVD

Bit Size: 9-7/8"

8-5/8", 32.#, J-55, BTC-SC

@ 0' - 5,272' MD

@ 0' - 5,229' TVD

Bit Size: 7-7/8"|Bit Size: 6-3/4"

6", 24.5#, P110-EC, VAM Sprint-TC

@ 0' - 8,790' MD

@ 0' - 8,749' TVD

5-1/2", 20.#, P110-EC, VAM Sprint SF

@ 8,790' - 22,111' MD

@ 8,749' - 9,226' TVD

KOP: 8,790' MD, 8,749' TVD EOC: 9,545' MD, 9,230' TVD If production Bradenhead is performed, TOC will be at surface

TOC @ 4,772', if performed conventionally.

Lateral: 22,111' MD, 9,226' TVD

Upper Most Perf:

100' FNL & 1330' FEL Sec. 1

Lower Most Perf:

2538' FNL & 1330' FEL Sec. 13

BH Location: 2538' FNL & 1330' FEL

Sec. 13, T-25-S, R-33-E



Well Name: Lacey Swiss 1 Fed Com 3H

Location: SHL: 326' FNL & 665' FEL, Section 1, T-25-S, R-33-E, LEA Co., N.M.

BHL: 2538' FNL & 1330' FEL, Section 13, T-25-S, R-33-E, LEA Co., N.M.

15. CASING PROGRAM: APD Design B

Hole	Interv	al MD	Interva	al TVD	Csg			
Size	From (ft)	To (ft)	From (ft)	To (ft)	OD	Weight	Grade	Conn
16"	0	1,287	0	1,287	13-3/8"	54.5#	J-55	STC
11"	0	11,505	0	11,462	9-5/8"	40#	J-55	LTC
8-3/4"	0	11,605	0	11,562	7"	32#	P110-HP	BTC
7-7/8"	11,605	22,111	11,562	9,226	5-1/2"	20#	P110-EC	DWC/C IS MS

^{**}For highlighted rows above, variance is requested to run entire string of either 7" or 5-1/2" casing string above due to availablility.

16. CEMENTING PROGRAM: APD Design B

		Wt.	Yld	Slurry Description
Depth	No. Sacks	ppg	Ft3/sk	Siurry Description
1,290'	420	13.5	1.73	Lead: Class C/H + additives (TOC @ Surface)
13-3/8"				
	120	14.8	1.34	Tail: Class C/H + additives (TOC @ 1,090')
5,010'	860	12.7	2.22	Lead: Class C/H + additives (TOC @ Surface)
9-5/8''				
	810	14.8	1.32	Tail: Class C/H + additives (TOC @ 4,220')
22,111'	1000	14.8	1.32	Bradenhead squeeze: Class C/H + additives (TOC @ surface)
7''				
	1690	13.2	1.52	Tail: Class C/H + additives (TOC @ 7,774')



Cement integrity tests will be performed immediately following plug bump.

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

EOG requests variance from minimum standards to pump a two stage cement job on the 7" and 5-1/2" production casing strings with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (7,774') and the second stage performed as a 1000 sack bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 400 sacks of Class C/H cement + additives (1.32 yld, 14.8 ppg) will be executed as a contingency. Top will be verified by Echo-meter.

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

17. VARIANCE REQUESTS:

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

- Intermediate Bradenhead Cement (EOG BLM Variance 2a)
- Break-test BOP and Offline Cementing (EOG BLM Variance 3e)
- Production Offline Cement (EOG BLM Variance 3 d)
- Shallow Target Offline Bradenhead Production Cement (EOG BLM Variance 3c)
- Salt Interval Washout Annular Clearnace (EOG BLM Variance 4a)
- Alternate Shallow Casing Designs (EOG BLM Variance 5a)



326' Proposed Wellbore: APD Design B

KB: 3498' GL: 3473'

Section 1

665'

T-25-S, R-33-E

API: 30-025-****

Bit Size: 16"

10-3/4", 54.5#, J-55, STC,

@ 0' - 1,287' MD

@ 0' - 1,287' TVD

Bit Size: 11"

9-5/8", 40#, J-55, LTC,

- @ 0' 11,505' MD
- @ 0' 11,462' TVD

Bit Size: 8-3/4"|Bit Size: 7-7/8"

7", 32.#, P110-HP, BTC

- @ 0' 11,605' MD
- @ 0' 11,562' TVD

5-1/2", 20.#, P110-EC, DWC/C IS

MS

- @ 11,605' 22,111' MD
- @ 11,562' 9,226' TVD

KOP: 8,790' MD, 8,749' TVD EOC: 9,545' MD, 9,230' TVD If production Bradenhead is performed, TOC will be at surface

TOC @ 4,772', if performed conventionally.

Lateral: 22,111' MD, 9,226' TVD

Upper Most Perf:

100' FNL & 1330' FEL Sec. 1

Lower Most Perf:

2538' FNL & 1330' FEL Sec. 13

BH Location: 2538' FNL & 1330' FEL

Sec. 13

T-25-S R-33-E



EOG Batch Casing

Pad Name: Lacey Swiss 1 Fed Com SHALLOW

SHL: Section 1, Township 25-S, Range 33-E, LEA County, NM

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

Well Name	API#	Surface		Intermediate		Production	
wen name	AFI#	MD	TVD	MD	TVD	MD	TVD
Lacey Swiss 1 Fed Com #3H	30-025-****	1,287	1,287	5,272	5,229	22,111	9,226
Lacey Swiss 1 Fed Com #313H	30-025-****	1,287	1,287	5,395	5,229	20,687	10,330
Lacey Swiss 1 Fed Com #521H	30-025-****	1,287	1,287	5,400	5,229	21,311	10,950
Lacey Swiss 1 Fed Com #553H	30-025-****	1,287	1,287	5,529	5,229	21,726	11,250
Lacey Swiss 1 Fed Com #583H	30-025-****	1,287	1,287	5,387	5,229	21,949	11,600
Lacey Swiss 1 Fed Com #592H	30-025-****	1,287	1,287	5,319	5,229	21,888	11,601
Lacey Swiss 1 Fed Com #593H	30-025-****	1,287	1,287	5,516	5,229	22,066	11,601
Lacey Swiss 1 Fed Com #594H	30-025-****	1,287	1,287	5,516	5,229	22,066	11,601



EOG Batch Casing

GEOLOGIC NAME OF SURFACE FORMATION:

Permian

ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,184'
Tamarisk Anhydrite	1,262'
Top of Salt	1,641'
Base of Salt	4,914'
Lamar	5,179'
Bell Canyon	5,198'
Cherry Canyon	6,219'
Brushy Canyon	7,774'
Bone Spring Lime	9,257'
Leonard (Avalon) Shale	9,311'
1st Bone Spring Sand	10,251'
2nd Bone Spring Shale	10,517'
2nd Bone Spring Sand	10,838'
3rd Bone Spring Carb	11,362'
3rd Bone Spring Sand	11,907'
Wolfcamp	12,350'

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS: O-400' Fresh Water

Upper Permian Sands	0-400' Fresh Water
Lamar	5,179' Oil
Cherry Canyon	6,219' Oil
Brushy Canyon	7,774' Oil
Bone Spring Lime	9,257' Oil
Leonard (Avalon) Shale	9,311' Oil
1st Bone Spring Sand	10,251' Oil
2nd Bone Spring Shale	10,517' Oil
2nd Bone Spring Sand	10,838' Oil



EOG Batch Casing

Variances

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

- EOG BLM Variance 2a Intermediate Bradenhead Cement
- EOG BLM Variance 3d Production Offline Cement
- EOG BLM Variance 3e BOP Break-test and Offline Surface and Intermediate Cement
- EOG BLM Variance 4a Salt Section Annular Clearance
- EOG BLM Variance 5a Alternate Shallow Casing Designs



Midland

Lea County, NM (NAD 83 NME) Lacey Swiss 1 Fed Com #3H

OH

Plan: Plan #0.1 RT

Standard Planning Report

04 June, 2025



Planning Report

Database: PEDMB Company: Midland

Project: Lea County, NM (NAD 83 NME)
Site: Lacey Swiss 1 Fed Com

Well: #3H Wellbore: OH

Design: Plan #0.1 RT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #3H

kb = 26' @ 3499.0usft kb = 26' @ 3499.0usft

Grid

Minimum Curvature

Project Lea County, NM (NAD 83 NME)

Map System:US State Plane 1983Geo Datum:North American Datum 1983Map Zone:New Mexico Eastern Zone

System Datum:

Mean Sea Level

Site Lacey Swiss 1 Fed Com

 Site Position:
 Northing:
 425,128.00 usft
 Latitude:
 32° 9′ 58.098 N

 From:
 Map
 Easting:
 793,117.00 usft
 Longitude:
 103° 31′ 10.745 W

Position Uncertainty: 0.0 usft Slot Radius: 13-3/16 "

Well #3H

 Well Position
 +N/-S
 0.0 usft
 Northing:
 425,043.00 usft
 Latitude:
 32° 9' 57.257 N

 +E/-W
 0.0 usft
 Easting:
 793,117.00 usft
 Longitude:
 103° 31' 10.753 W

Position Uncertainty 0.0 usft Wellhead Elevation: usft Ground Level: 3,473.0 usft

Grid Convergence: 0.43°

Wellbore OH

 Magnetics
 Model Name
 Sample Date
 Declination (°)
 Dip Angle (°)
 Field Strength (nT)

 IGRF2025
 6/4/2025
 6.22
 59.71
 46,999.33564368

Design Plan #0.1 RT

Audit Notes:

Version: PLAN Tie On Depth: 0.0

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

 0.0
 0.0
 0.0
 182.56

Plan Survey Tool Program Date 6/4/2025

Depth From Depth To

(usft) (usft) Survey (Wellbore) Tool Name Remarks

1 0.0 22,111.4 Plan #0.1 RT (OH) EOG MWD+IFR1

MWD + IFR1



Planning Report

Database: PEDMB Company: Midland

Project: Lea County, NM (NAD 83 NME)
Site: Lacey Swiss 1 Fed Com

Well: #3H Wellbore: OH

Design: Plan #0.1 RT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #3H

kb = 26' @ 3499.0usft kb = 26' @ 3499.0usft

Grid

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,387.0	0.00	0.00	1,387.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,726.5	6.79	292.11	1,725.7	7.6	-18.6	2.00	2.00	0.00	292.11	
7,476.4	6.79	292.11	7,435.3	263.4	-648.4	0.00	0.00	0.00	0.00	
7,815.9	0.00	0.00	7,774.0	271.0	-667.0	2.00	-2.00	0.00	180.00	
8,790.4	0.00	0.00	8,748.5	271.0	-667.0	0.00	0.00	0.00	0.00	KOP(Lacey Swiss 1F
9,010.6	25.95	180.00	8,961.2	222.0	-667.0	11.79	11.79	81.76	180.00	FTP(Lacey Swiss 1Fe
9,544.7	90.05	179.56	9,229.8	-207.7	-664.7	12.00	12.00	-0.08	-0.49	
14,293.2	90.05	179.56	9,226.0	-4,956.0	-628.0	0.00	0.00	0.00	0.00	Fed Perf 1(Lacey Swi
19,573.3	89.95	179.60	9,226.0	-10,236.0	-589.0	0.00	0.00	0.00	156.76	Fed Perf 2(Lacey Swi
22,111.4	90.05	179.59	9,226.0	-12,774.0	-571.0	0.00	0.00	0.00	-3.36	PBHL(Lacey Swiss 1

eog resources

Planning Report

Database: PEDMB Company: Midland

Project: Lea County, NM (NAD 83 NME)
Site: Lacey Swiss 1 Fed Com

Well: #3H Wellbore: OH

Design: Plan #0.1 RT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #3H

kb = 26' @ 3499.0usft kb = 26' @ 3499.0usft

Grid

Jesigii.	Flail #0.1 IXI								
Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,387.0	0.00	0.00	1,387.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.26	292.11	1,400.0	0.0	0.0	0.0	2.00	2.00	0.00
1,500.0	2.26	292.11	1,500.0	0.8	-2.1	-0.7	2.00	2.00	0.00
1,600.0	4.26	292.11	1,599.8	3.0	-7.3	-2.6	2.00	2.00	0.00
	6.26			6.4			2.00		
1,700.0		292.11	1,699.4		-15.8	-5.7		2.00	0.00
1,726.5	6.79	292.11	1,725.7	7.6	-18.6	-6.7	2.00	2.00	0.00
1,800.0	6.79	292.11	1,798.7	10.8	-26.7	-9.6	0.00	0.00	0.00
1,900.0	6.79	292.11	1,898.0	15.3	-37.6	-13.6	0.00	0.00	0.00
2,000.0	6.79	292.11	1,997.3	19.7	-48.6	-17.5	0.00	0.00	0.00
2,100.0	6.79	292.11	2,096.6	24.2	-59.5	-21.5	0.00	0.00	0.00
					-70.5		0.00		
2,200.0	6.79	292.11	2,195.9	28.6	-70.5	-25.5	0.00	0.00	0.00
2,300.0	6.79	292.11	2,295.2	33.1	-81.4	-29.4	0.00	0.00	0.00
2,400.0	6.79	292.11	2,394.5	37.5	-92.4	-33.4	0.00	0.00	0.00
2,500.0	6.79	292.11	2,493.8	42.0	-103.3	-37.3	0.00	0.00	0.00
2,600.0	6.79		2,593.1	46.4		-41.3	0.00		
		292.11			-114.3			0.00	0.00
2,700.0	6.79	292.11	2,692.4	50.9	-125.2	-45.2	0.00	0.00	0.00
2,800.0	6.79	292.11	2,791.7	55.3	-136.2	-49.2	0.00	0.00	0.00
2,900.0	6.79	292.11	2,891.0	59.8	-147.1	-53.2	0.00	0.00	0.00
3,000.0	6.79	292.11	2,990.3	64.2	-158.1	-57.1	0.00	0.00	0.00
3,100.0	6.79	292.11	3,089.6	68.7	-169.1	-61.1	0.00	0.00	0.00
3,200.0	6.79	292.11	3,188.9	73.1	-180.0	-65.0	0.00	0.00	0.00
3,300.0	6.79	292.11	3,288.2	77.6	-191.0	-69.0	0.00	0.00	0.00
3,400.0	6.79	292.11	3,387.5	82.0	-201.9	-72.9	0.00	0.00	0.00
3,500.0	6.79		3,486.8	86.5	-201.9	-72.9 -76.9	0.00	0.00	0.00
		292.11							
3,600.0	6.79	292.11	3,586.1	90.9	-223.8	-80.8	0.00	0.00	0.00
3,700.0	6.79	292.11	3,685.4	95.4	-234.8	-84.8	0.00	0.00	0.00
3,800.0	6.79	292.11	3,784.7	99.8	-245.7	-88.8	0.00	0.00	0.00
3,900.0	6.79	292.11	3,884.0	104.3	-256.7	-92.7	0.00	0.00	0.00
4,000.0		292.11	3,983.3		-267.6	-92.7 -96.7		0.00	0.00
	6.79			108.7			0.00		
4,100.0	6.79	292.11	4,082.6	113.2	-278.6	-100.6	0.00	0.00	0.00
4,200.0	6.79	292.11	4,181.9	117.6	-289.5	-104.6	0.00	0.00	0.00
4,300.0	6.79	292.11	4,281.2	122.1	-300.5	-108.5	0.00	0.00	0.00
4,400.0	6.79	292.11	4,380.5	126.5	-311.4	-112.5	0.00	0.00	0.00
4,500.0	6.79	292.11	4,479.8	131.0	-322.4	-116.5	0.00	0.00	0.00
4,600.0	6.79	292.11	4,579.1	135.4	-333.3	-120.4	0.00	0.00	0.00
4,700.0	6.79	292.11	4,678.4	139.9	-344.3	-124.4	0.00	0.00	0.00
4,800.0	6.79	292.11	4,777.7	144.3	-355.2	-128.3	0.00	0.00	0.00
4,900.0		292.11	4,877.0					0.00	0.00
	6.79			148.8	-366.2	-132.3	0.00		
5,000.0	6.79	292.11	4,976.2	153.2	-377.2	-136.2	0.00	0.00	0.00
5,100.0	6.79	292.11	5,075.5	157.7	-388.1	-140.2	0.00	0.00	0.00

eog resources

Planning Report

Database: PEDMB Company: Midland

Project: Lea County, NM (NAD 83 NME)
Site: Lacey Swiss 1 Fed Com

Well: #3H Wellbore: OH

Design: Plan #0.1 RT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #3H

kb = 26' @ 3499.0usft

kb = 26' @ 3499.0usft Grid

sign:	Flail #U. I Ki								
nned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	6.79	292.11	5,174.8	162.1	-399.1	-144.2	0.00	0.00	0.00
5,300.0	6.79	292.11	5,274.1	166.6	-410.0	-148.1	0.00	0.00	0.00
5,400.0	6.79	292.11	5,373.4	171.0	-421.0	-152.1	0.00	0.00	0.00
5,500.0	6.79	292.11	5,472.7	175.5	-431.9	-156.0	0.00	0.00	0.00
5,600.0	6.79	292.11	5,572.0	179.9	-442.9	-160.0	0.00	0.00	0.00
5,700.0	6.79	292.11	5,671.3	184.4	-453.8	-163.9	0.00	0.00	0.00
5,800.0	6.79	292.11	5,770.6	188.8	-464.8	-167.9	0.00	0.00	0.00
5,900.0	6.79	292.11	5,869.9	193.3	-404.0 -475.7	-171.8	0.00	0.00	0.00
6,000.0	6.79	292.11	5,969.2	197.7	-475.7 -486.7	-171.8	0.00	0.00	0.00
6,100.0	6.79	292.11	6,068.5	202.2	-497.6	-179.8	0.00	0.00	0.00
6,200.0	6.79	292.11	6,167.8	206.6	-508.6	-173.0	0.00	0.00	0.00
6,300.0	6.79	292.11	6,267.1	211.1	-519.5	-187.7	0.00	0.00	0.00
6,400.0	6.79	292.11	6,366.4	215.5	-530.5	-191.6	0.00	0.00	0.00
6,500.0	6.79	292.11	6,465.7	220.0	-541.4	-195.6	0.00	0.00	0.00
6,600.0	6.79	292.11	6,565.0	224.4	-552.4	-199.5	0.00	0.00	0.00
6,700.0	6.79	292.11	6,664.3	228.9	-563.3	-203.5	0.00	0.00	0.00
6,800.0	6.79	292.11	6,763.6	233.3	-574.3	-207.5	0.00	0.00	0.00
6,900.0	6.79	292.11	6,862.9	237.8	-585.3	-211.4	0.00	0.00	0.00
7,000.0	6.79	292.11	6,962.2	242.2	-596.2	-215.4	0.00	0.00	0.00
7,100.0	6.79	292.11	7,061.5	246.7	-607.2	-219.3	0.00	0.00	0.00
7,100.0	6.79	292.11	7,160.8	251.1	-618.1	-223.3	0.00	0.00	0.00
7,300.0	6.79	292.11	7,260.1	255.6	-629.1	-227.2	0.00	0.00	0.00
7,400.0	6.79	292.11	7,359.4	260.0	-640.0	-231.2	0.00	0.00	0.00
7,476.4	6.79	292.11	7,435.3	263.4	-648.4	-234.2	0.00	0.00	0.00
7,500.0	6.32	292.11	7,458.7	264.5	-650.9	-235.1	2.00	-2.00	0.00
7,600.0	4.32	292.11	7,558.3	267.9	-659.5	-238.2	2.00	-2.00	0.00
7,700.0	2.32	292.11	7,658.1	270.1	-664.8	-240.2	2.00	-2.00	0.00
7,800.0	0.32	292.11	7,758.1	271.0	-667.0	-240.9	2.00	-2.00	0.00
7,815.9	0.00	0.00	7,774.0	271.0	-667.0	-240.9	2.00	-2.00	0.00
7,900.0	0.00	0.00	7,858.1	271.0	-667.0	-240.9	0.00	0.00	0.00
8,000.0	0.00	0.00	7,958.1	271.0	-667.0	-240.9	0.00	0.00	0.00
0.400.0	0.00	0.00	0.050.4	271.0	667.0	240.0	0.00	0.00	0.00
8,100.0			8,058.1		-667.0	-240.9	0.00	0.00	0.00
8,200.0	0.00	0.00 0.00	8,158.1	271.0	-667.0	-240.9	0.00	0.00	0.00
8,300.0	0.00		8,258.1	271.0	-667.0	-240.9	0.00	0.00	0.00
8,400.0 8,500.0	0.00 0.00	0.00 0.00	8,358.1 8,458.1	271.0 271.0	-667.0 -667.0	-240.9 -240.9	0.00 0.00	0.00 0.00	0.00 0.00
8,600.0	0.00	0.00	8,558.1	271.0	-667.0	-240.9	0.00	0.00	0.00
8,700.0	0.00	0.00	8,658.1	271.0	-667.0	-240.9	0.00	0.00	0.00
8,790.4	0.00	0.00	8,748.5	271.0	-667.0	-240.9	0.00	0.00	0.00
8,800.0	1.13	180.00	8,758.1	270.9	-667.0	-240.8	11.79	11.79	0.00
8,825.0	4.08	180.00	8,783.1	269.8	-667.0	-239.7	11.79	11.79	0.00
8,850.0	7.02	180.00	8,807.9	267.4	-667.0	-237.3	11.79	11.79	0.00
8,875.0	9.97	180.00	8,832.7	263.7	-667.0	-237.5	11.79	11.79	0.00
8,900.0	12.92	180.00	8,857.2	258.7	-667.0	-228.7	11.79	11.79	0.00
8,925.0	15.86	180.00	8,881.4	252.5	-667.0	-222.5	11.79	11.79	0.00
8,950.0	18.81	180.00	8,905.2	245.0	-667.0	-215.0	11.79	11.79	0.00
,									
8,975.0	21.76	180.00	8,928.7	236.4	-667.0	-206.4	11.79	11.79	0.00
9,000.0	24.70	180.00	8,951.7	226.5	-667.0	-196.5	11.79	11.79	0.00
9,010.6	25.95	180.00	8,961.2	222.0	-667.0	-192.0	11.79	11.79	0.00
9,025.0	27.68	179.97	8,974.1	215.5	-667.0	-185.5	12.00	12.00	-0.22
9,050.0	30.68	179.92	8,995.9	203.3	-667.0	-173.3	12.00	12.00	-0.19
9,075.0	33.68	179.88	9,017.1	190.0	-667.0	-160.0	12.00	12.00	-0.16
9,100.0	36.68	179.85	9,037.5	175.6	-666.9	-145.6	12.00	12.00	-0.14
9,125.0	39.68	179.82	9,057.2	160.1	-666.9	-130.2	12.00	12.00	-0.12

beog resources

Planning Report

Database: PEDMB Company: Midland

Project: Lea County, NM (NAD 83 NME)
Site: Lacey Swiss 1 Fed Com

Well: #3H Wellbore: OH

Design: Plan #0.1 RT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #3H

kb = 26' @ 3499.0usft kb = 26' @ 3499.0usft

Grid

esign:	Plan #0.1 RT								
Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,150.0	42.68	179.79	9,076.0	143.7	-666.8	-113.8	12.00	12.00	-0.10
9,175.0	45.68	179.77	9,093.9	126.3	-666.8	-96.4	12.00	12.00	-0.09
9,200.0	48.68	179.75	9,110.9	107.9	-666.7	-78.0	12.00	12.00	-0.08
9,225.0	51.68	179.73	9,126.9	88.7	-666.6	-58.9	12.00	12.00	-0.08
9,250.0	54.68	179.71	9,141.9	68.7	-666.5	-38.9	12.00	12.00	-0.07
9,275.0	57.68	179.69	9,155.8	47.9	-666.4	-18.1	12.00	12.00	-0.07
9,300.0	60.68	179.68	9,168.6	26.5	-666.3	3.3	12.00	12.00	-0.06
9,325.0	63.68	179.66	9,180.3	4.4	-666.1	25.4	12.00	12.00	-0.06
9,350.0	66.68	179.65	9,190.8	-18.3	-666.0	48.0	12.00	12.00	-0.05
9,375.0	69.68	179.64	9,200.0	-41.5	-665.9	71.2	12.00	12.00	-0.05
9,400.0	72.68	179.62	9,208.1	-65.2	-665.7	94.8	12.00	12.00	-0.05
9,425.0	75.68	179.61	9,214.9	-89.2	-665.5	118.9	12.00	12.00	-0.05
9,450.0	78.68	179.60	9,220.5	-113.6	-665.4	143.2	12.00	12.00	-0.05
9,475.0	81.68	179.59	9,224.7	-138.2	-665.2	167.8	12.00	12.00	-0.05
9,500.0	84.68	179.58	9,227.7 9,229.4	-163.1	-665.0 -664.8	192.6 217.5	12.00	12.00 12.00	-0.05
9,525.0 9,544.7	87.68 90.05	179.57 179.56	9,229.4	-188.0 -207.7	-664.7	217.5	12.00 12.00	12.00	-0.05 -0.05
9,600.0	90.05	179.56	9,229.7	-263.0	-664.3	292.4	0.00	0.00	0.00
9,700.0 9,800.0	90.05 90.05	179.56 179.56	9,229.6 9,229.6	-363.0 -463.0	-663.5 -662.7	392.3 492.1	0.00 0.00	0.00 0.00	0.00 0.00
9,900.0	90.05	179.56	9,229.5	-463.0 -563.0	-661.9	592.0	0.00	0.00	0.00
10,000.0	90.05	179.56	9,229.4	-663.0	-661.2	691.8	0.00	0.00	0.00
10,100.0	90.05	179.56	9,229.3	-763.0	-660.4	791.7	0.00	0.00	0.00
10,200.0	90.05	179.56	9,229.2	-863.0	-659.6	891.6	0.00	0.00	0.00
10,300.0	90.05	179.56	9,229.2	-963.0	-658.9	991.4	0.00	0.00	0.00
10,400.0	90.05	179.56	9,229.1	-1,063.0	-658.1	1,091.3	0.00	0.00	0.00
10,500.0	90.05	179.56	9,229.0	-1,163.0	-657.3	1,191.2	0.00	0.00	0.00
10,600.0	90.05	179.56	9,228.9	-1,263.0	-656.5	1,291.0	0.00	0.00	0.00
10,700.0	90.05	179.56	9,228.9	-1,363.0	-655.8	1,390.9	0.00	0.00	0.00
10,800.0	90.05	179.56	9,228.8	-1,463.0	-655.0	1,490.7	0.00	0.00	0.00
10,900.0	90.05	179.56	9,228.7	-1,562.9	-654.2	1,590.6	0.00	0.00	0.00
11,000.0	90.05	179.56	9,228.6	-1,662.9	-653.4	1,690.5	0.00	0.00	0.00
11,100.0	90.05	179.56	9,228.5	-1,762.9	-652.7	1,790.3	0.00	0.00	0.00
11,200.0	90.05	179.56	9,228.5	-1,862.9	-651.9	1,890.2	0.00	0.00	0.00
11,300.0	90.05	179.56	9,228.4	-1,962.9	-651.1	1,990.1	0.00	0.00	0.00
11,400.0	90.05	179.56	9,228.3	-2,062.9	-650.4	2,089.9	0.00	0.00	0.00
11,500.0	90.05	179.56	9,228.2	-2,162.9	-649.6	2,189.8	0.00	0.00	0.00
11,600.0	90.05	179.56	9,228.1	-2,262.9	-648.8	2,289.6	0.00	0.00	0.00
11,700.0	90.05	179.56	9,228.1	-2,362.9	-648.0	2,389.5	0.00	0.00	0.00
11,800.0	90.05	179.56	9,228.0	-2,462.9	-647.3	2,489.4	0.00	0.00	0.00
11,900.0 12,000.0	90.05 90.05	179.56 179.56	9,227.9 9,227.8	-2,562.9 -2,662.9	-646.5 -645.7	2,589.2 2,689.1	0.00 0.00	0.00 0.00	0.00 0.00
12,100.0 12,200.0	90.05 90.05	179.56 179.56	9,227.7 9,227.7	-2,762.9 -2,862.9	-644.9 -644.2	2,789.0 2,888.8	0.00 0.00	0.00 0.00	0.00 0.00
12,300.0	90.05	179.56	9,227.7	-2,862.9 -2,962.9	-643.4	2,888.8	0.00	0.00	0.00
12,400.0	90.05	179.56	9,227.5	-3,062.9	-642.6	3,088.5	0.00	0.00	0.00
12,500.0	90.05	179.56	9,227.4	-3,162.9	-641.9	3,188.4	0.00	0.00	0.00
12,600.0	90.05	179.56	9,227.3	-3,262.9	-641.1	3,288.3	0.00	0.00	0.00
12,700.0	90.05	179.56	9,227.3	-3,362.9	-640.3	3,388.1	0.00	0.00	0.00
12,800.0	90.05	179.56	9,227.2	-3,462.9	-639.5	3,488.0	0.00	0.00	0.00
12,900.0	90.05	179.56	9,227.1	-3,562.9	-638.8	3,587.9	0.00	0.00	0.00
13,000.0	90.05	179.56	9,227.0	-3,662.9	-638.0	3,687.7	0.00	0.00	0.00
13,100.0	90.05	179.56	9,226.9	-3,762.9	-637.2	3,787.6	0.00	0.00	0.00
13,200.0	90.05	179.56	9,226.9	-3,862.9	-636.4	3,887.4	0.00	0.00	0.00

eog resources

Planning Report

Database: PEDMB Company: Midland

Project: Lea County, NM (NAD 83 NME)
Site: Lacey Swiss 1 Fed Com

Well: #3H Wellbore: OH

Design: Plan #0.1 RT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #3H

kb = 26' @ 3499.0usft kb = 26' @ 3499.0usft

Grid

- Jooigin									
Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,300.0	90.05	179.56	9,226.8	-3,962.9	-635.7	3,987.3	0.00	0.00	0.00
13,400.0 13,500.0	90.05 90.05	179.56 179.56	9,226.7 9,226.6	-4,062.9 -4,162.9	-634.9 -634.1	4,087.2 4,187.0	0.00 0.00	0.00 0.00	0.00 0.00
13,600.0	90.05	179.56	9,226.5	-4,262.9	-633.4	4,286.9	0.00	0.00	0.00
13,700.0	90.05	179.56	9,226.5	-4,362.9	-632.6	4,386.8	0.00	0.00	0.00
13,800.0	90.05	179.56	9,226.4	-4,462.9	-631.8	4,486.6	0.00	0.00	0.00
13,900.0	90.05	179.56	9,226.3	-4,562.9	-631.0	4,586.5	0.00	0.00	0.00
14,000.0	90.05	179.56	9,226.2	-4,662.9	-630.3	4,686.3	0.00	0.00	0.00
14,100.0	90.05	179.56	9,226.2	-4,762.9	-629.5	4,786.2	0.00	0.00	0.00
14,200.0	90.05	179.56	9,226.1	-4,862.8	-628.7	4,886.1	0.00	0.00	0.00
14,293.2	90.05	179.56	9,226.0	-4,956.0	-628.0	4,979.1	0.00	0.00	0.00
14,300.0	90.05	179.56	9,226.0	-4,962.8	-627.9	4,985.9	0.00	0.00	0.00
14,400.0	90.04	179.56	9,225.9	-5,062.8	-627.2	5,085.8	0.00	0.00	0.00
14,500.0	90.04	179.56	9,225.8	-5,162.8	-626.4	5,185.7	0.00	0.00	0.00
14,600.0	90.04	179.56	9,225.8	-5,262.8	-625.6	5,285.5	0.00	0.00	0.00
14,700.0	90.04	179.56	9,225.7	-5,362.8	-624.9	5,385.4	0.00	0.00	0.00
14,800.0	90.04	179.56	9,225.6	-5,462.8	-624.1	5,485.3	0.00	0.00	0.00
14,900.0	90.04	179.56	9,225.6	-5,562.8	-623.3	5,585.1	0.00	0.00	0.00
15,000.0	90.03	179.56	9,225.5	-5,662.8	-622.6	5,685.0	0.00	0.00	0.00
15,100.0	90.03	179.56	9,225.5	-5,762.8	-621.8	5,784.8	0.00	0.00	0.00
15,200.0	90.03	179.56	9,225.4	-5,862.8	-621.0	5,884.7	0.00	0.00	0.00
15,300.0	90.03	179.56	9,225.4	-5,962.8	-620.3	5,984.6	0.00	0.00	0.00
15,400.0	90.03	179.57	9,225.3	-6,062.8	-619.5	6,084.4	0.00	0.00	0.00
15,500.0	90.02	179.57	9,225.3	-6,162.8	-618.8	6,184.3	0.00	0.00	0.00
15,600.0	90.02	179.57	9,225.2	-6,262.8	-618.0	6,284.2	0.00	0.00	0.00
15,700.0	90.02	179.57	9,225.2	-6,362.8	-617.3	6,384.0	0.00	0.00	0.00
15,800.0	90.02	179.57	9,225.1	-6,462.8	-616.5	6,483.9	0.00	0.00	0.00
15,900.0	90.02	179.57	9,225.1	-6,562.8	-615.8	6,583.7	0.00	0.00	0.00
16,000.0	90.02	179.57	9,225.1	-6,662.8	-615.0	6,683.6	0.00	0.00	0.00
16,100.0	90.01	179.57	9,225.1	-6,762.8	-614.2	6,783.5	0.00	0.00	0.00
16,200.0	90.01	179.57	9,225.0	-6,862.8	-613.5	6,883.3	0.00	0.00	0.00
16,300.0 16,400.0	90.01 90.01	179.57 179.57	9,225.0 9,225.0	-6,962.8 -7,062.8	-612.8 -612.0	6,983.2 7,083.1	0.00 0.00	0.00 0.00	0.00 0.00
16,500.0	90.01	179.57	9,225.0	-7,162.8	-611.3	7,182.9	0.00	0.00	0.00
16,600.0	90.01	179.57	9,225.0	-7,262.8 7,262.8	-610.5	7,282.8	0.00	0.00	0.00
16,700.0 16,800.0	90.00 90.00	179.58 179.58	9,225.0 9,225.0	-7,362.8 7,462.8	-609.8	7,382.7 7,482.5	0.00	0.00	0.00
16,800.0	90.00	179.58 179.58	9,225.0 9,225.0	-7,462.8 -7,562.8	-609.0 -608.3	7,482.5 7,582.4	0.00 0.00	0.00 0.00	0.00 0.00
17,000.0	90.00	179.58	9,225.0	-7,662.8	-607.6	7,682.3	0.00	0.00	0.00
17,100.0	90.00	179.58	9,225.0	-7,762.8	-606.8	7,782.1	0.00	0.00	0.00
17,100.0	90.00	179.58	9,225.0	-7,862.8	-606.1	7,882.0	0.00	0.00	0.00
17,300.0	89.99	179.58	9,225.0	-7,962.8	-605.3	7,981.8	0.00	0.00	0.00
17,400.0	89.99	179.58	9,225.0	-8,062.8	-604.6	8,081.7	0.00	0.00	0.00
17,500.0	89.99	179.58	9,225.0	-8,162.8	-603.9	8,181.6	0.00	0.00	0.00
17,600.0	89.99	179.58	9,225.0	-8,262.8	-603.2	8,281.4	0.00	0.00	0.00
17,700.0	89.99	179.58	9,225.0	-8,362.7	-602.4	8,381.3	0.00	0.00	0.00
17,800.0	89.99	179.58	9,225.1	-8,462.7	-601.7	8,481.2	0.00	0.00	0.00
17,900.0	89.98	179.58	9,225.1	-8,562.7	-601.0	8,581.0	0.00	0.00	0.00
18,000.0	89.98	179.58	9,225.1	-8,662.7	-600.2	8,680.9	0.00	0.00	0.00
18,100.0	89.98	179.59	9,225.2	-8,762.7	-599.5	8,780.8	0.00	0.00	0.00
18,200.0	89.98	179.59	9,225.2	-8,862.7	-598.8	8,880.6	0.00	0.00	0.00
18,300.0	89.98	179.59	9,225.2	-8,962.7	-598.1	8,980.5	0.00	0.00	0.00
18,400.0	89.97	179.59	9,225.3	-9,062.7	-597.4	9,080.4	0.00	0.00	0.00
18,500.0	89.97	179.59	9,225.3	-9,162.7	-596.6	9,180.2	0.00	0.00	0.00



Planning Report

Database: PEDMB Company: Midland

Project: Lea County, NM (NAD 83 NME)
Site: Lacey Swiss 1 Fed Com

 Well:
 #3H

 Wellbore:
 OH

 Design:
 Plan #0.1 RT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #3H

kb = 26' @ 3499.0usft kb = 26' @ 3499.0usft

Grid

gn:	Plan #0.1 RT								
nned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
40,000,0			0.005.4	, ,	, ,	0.000.4	0.00	0.00	0.00
18,600.0	89.97 89.97	179.59	9,225.4 9,225.4	-9,262.7	-595.9	9,280.1	0.00 0.00	0.00 0.00	0.00
18,700.0		179.59		-9,362.7	-595.2	9,380.0			0.00
18,800.0	89.97	179.59	9,225.5	-9,462.7	-594.5	9,479.8	0.00	0.00	0.00
18,900.0	89.97	179.59	9,225.5	-9,562.7	-593.8	9,579.7	0.00	0.00	0.00
19,000.0	89.96	179.59	9,225.6	-9,662.7	-593.1	9,679.6	0.00	0.00	0.00
19,100.0	89.96	179.59	9,225.7	-9,762.7	-592.3	9,779.4	0.00	0.00	0.00
19,200.0	89.96	179.59	9,225.7	-9,862.7	-591.6	9,879.3	0.00	0.00	0.00
19,300.0	89.96	179.59	9,225.8	-9,962.7	-590.9	9,979.2	0.00	0.00	0.00
19,400.0	89.96	179.60	9,225.9	-10,062.7	-590.2	10,079.0	0.00	0.00	0.00
19,500.0	89.96	179.60	9,225.9	-10,162.7	-589.5	10,178.9	0.00	0.00	0.00
19,573.3	89.95	179.60	9,226.0	-10,236.0	-589.0	10,252.1	0.00	0.00	0.00
19,600.0	89.96	179.60	9,226.0	-10,262.7	-588.8	10,278.8	0.00	0.00	0.00
19,700.0	89.96	179.60	9,226.1	-10,362.7	-588.1	10,378.6	0.00	0.00	0.00
19,800.0	89.96	179.60	9,226.2	-10,462.7	-587.4	10,478.5	0.00	0.00	0.00
19,900.0	89.97	179.60	9,226.2	-10,562.7	-586.7	10,578.4	0.00	0.00	0.00
20,000.0	89.97	179.60	9,226.3	-10,662.7	-586.0	10,678.2	0.00	0.00	0.00
20,100.0	89.97	179.60	9,226.3	-10,762.7	-585.3	10,078.2	0.00	0.00	0.00
20,100.0	89.98	179.60	9,226.4	-10,762.7	-584.6	10,778.1	0.00	0.00	0.00
20,200.0	89.98	179.60		-10,862.7	-583.9	10,676.0	0.00	0.00	0.00
			9,226.4						
20,400.0	89.98	179.59	9,226.4	-11,062.7	-583.2	11,077.7	0.00	0.00	0.00
20,500.0	89.99	179.59	9,226.5	-11,162.7	-582.5	11,177.6	0.00	0.00	0.00
20,600.0	89.99	179.59	9,226.5	-11,262.7	-581.7	11,277.4	0.00	0.00	0.00
20,700.0	89.99	179.59	9,226.5	-11,362.7	-581.0	11,377.3	0.00	0.00	0.00
20,800.0	90.00	179.59	9,226.5	-11,462.7	-580.3	11,477.2	0.00	0.00	0.00
20,900.0	90.00	179.59	9,226.5	-11,562.7	-579.6	11,577.0	0.00	0.00	0.00
21,000.0	90.01	179.59	9,226.5	-11,662.7	-578.9	11,676.9	0.00	0.00	0.00
21,100.0	90.01	179.59	9,226.5	-11,762.7	-578.2	11,776.7	0.00	0.00	0.00
21,200.0	90.01	179.59	9,226.5	-11,862.7	-577.5	11,876.6	0.00	0.00	0.00
21,300.0	90.02	179.59	9,226.4	-11,962.7	-576.8	11,976.5	0.00	0.00	0.00
21,400.0	90.02	179.59	9,226.4	-12,062.7	-576.1	12,076.3	0.00	0.00	0.00
21,500.0	90.02	179.59	9,226.4	-12,162.7	-575.4	12,176.2	0.00	0.00	0.00
21,600.0	90.02	179.59	9,226.3	-12,762.7	-574.6	12,176.2	0.00	0.00	0.00
21,700.0	90.03	179.59	9,226.3	-12,362.6	-573.9	12,375.9	0.00	0.00	0.00
21,700.0	90.03	179.59	9,226.2	-12,362.6	-573.9 -573.2	12,375.9	0.00	0.00	0.00
21,900.0	90.04	179.59	9,226.2	-12,562.6	-572.5	12,575.7	0.00	0.00	0.00
22,000.0	90.04	179.59	9,226.1	-12,662.6	-571.8	12,675.5	0.00	0.00	0.00
22,100.0	90.05	179.59	9,226.0	-12,762.6	-571.1	12,775.4	0.00	0.00	0.00
22,111.4	90.05	179.59	9,226.0	-12,774.0	-571.0	12,786.8	0.00	0.00	0.00



Planning Report

Database: PEDMB Company: Midland

Project: Lea County, NM (NAD 83 NME)
Site: Lacey Swiss 1 Fed Com

Well: #3H Wellbore: OH

Design: Plan #0.1 RT

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

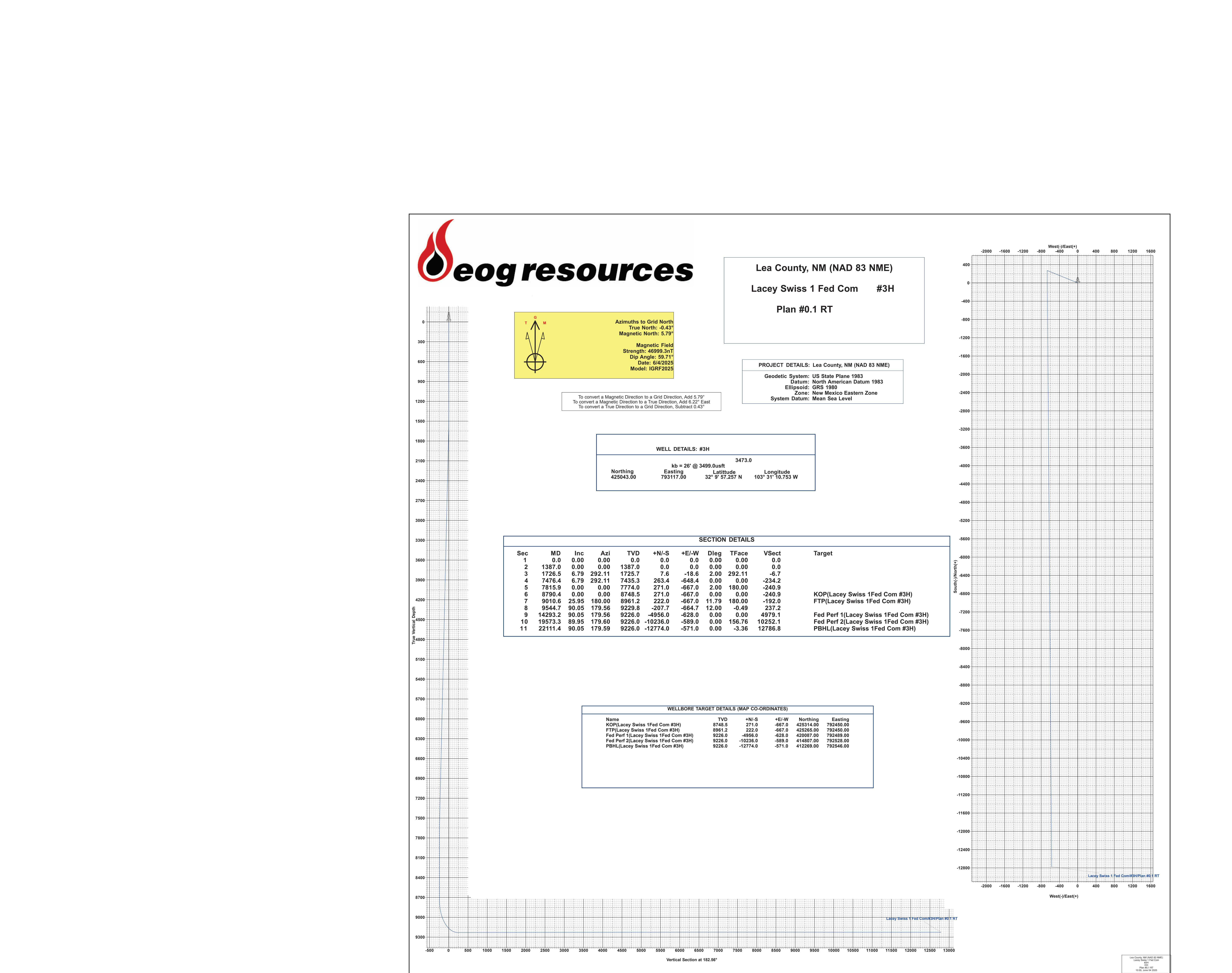
Survey Calculation Method:

Well #3H

kb = 26' @ 3499.0usft kb = 26' @ 3499.0usft

Grid

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP(Lacey Swiss 1Fed - plan hits target cent - Point	0.00 er	0.00	8,748.5	271.0	-667.0	425,314.00	792,450.00	32° 9′ 59.989 N	103° 31' 18.488 W
FTP(Lacey Swiss 1Fed (- plan hits target cent - Point	0.00 er	0.00	8,961.2	222.0	-667.0	425,265.00	792,450.00	32° 9' 59.504 N	103° 31' 18.492 W
Fed Perf 1(Lacey Swiss - plan hits target cent - Point	0.00 er	0.00	9,226.0	-4,956.0	-628.0	420,087.00	792,489.00	32° 9' 8.264 N	103° 31' 18.493 W
PBHL(Lacey Swiss 1Fec - plan hits target cent - Point	0.00 er	0.00	9,226.0	-12,774.0	-571.0	412,269.00	792,546.00	32° 7′ 50.899 N	103° 31' 18.515 W
Fed Perf 2(Lacey Swiss - plan hits target cent - Point	0.00 er	0.00	9,226.0	-10,236.0	-589.0	414,807.00	792,528.00	32° 8′ 16.014 N	103° 31' 18.502 W



Received by OCD: 8/26/2025 6:57:36 AM

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: EOG Resources Incorporated
WELL NAME & NO.: LACEY SWISS 1 FED COM 3H
LOCATION: Section 1, T.25 S., R.33 E.
COUNTY: Lea County, New Mexico

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

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

Primary(Design E:)

- 1. The **10-3/4** inch surface casing shall be set at approximately **1287 feet TVD** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8** hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The 8-5/8 inch intermediate casing shall be set at approximately 4229 feet TVD.
 - a. Mud weight could brine up to 10.2ppg. Reviewed and OK
 - b. Keep casing half full during run for collapse SF

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

- Cement to surface. If cement does not circulate see B.1.a, c-d above.
- 3. The 6 inch x 5.5 inch tapered production casing shall be set at approximately 22,111 feet. Operator has also proposed ONLY running 6 inch casing for the production string. Reviewed and is OK. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Shallow Design A:

- 1. The 13-3/8 inch surface casing shall be set at approximately 1287 feet TVD (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run

- to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8** hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The 9-5/8 inch intermediate casing shall be set at approximately 4229 feet TVD.
 - a. Mud weight could brine up to 10.2ppg. Reviewed and OK
 - b. Keep casing half full during run for collapse SF

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

- Cement to surface. If cement does not circulate see B.1.a, c-d above.
- 3. The 5-1/2 inch production casing shall be set at approximately 22,111 feet. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Shallow Design B:

- 1. The 10-3/4 inch surface casing shall be set at approximately 1287 feet TVD (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8** hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

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

- 2. The 8-5/8 inch intermediate casing shall be set at approximately 4229 feet TVD.
 - a. Mud weight could brine up to 10.2ppg. Reviewed and OK
 - b. Keep casing half full during run for collapse SF

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

- Cement to surface. If cement does not circulate see B.1.a, c-d above.
- 3. The 5-1/2 inch production casing shall be set at approximately 22,111 feet. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Shallow Design C:

- 1. The 13-3/8 inch surface casing shall be set at approximately 1287 feet TVD (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of <u>8 hours</u> or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The 9-5/8 inch intermediate casing shall be set at approximately 4229 feet TVD.
 - c. Mud weight could brine up to 10.2ppg. Reviewed and OK
 - d. Keep casing half full during run for collapse SF

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

• Cement to surface. If cement does not circulate see B.1.a, c-d above.

- 3. The 6 inch production casing shall be set at approximately 22,111 feet. The minimum required fill of cement behind the 6 inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Shallow Design D:

- 1. The 13-3/8 inch surface casing shall be set at approximately 1287 feet TVD (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The 9-5/8 inch intermediate casing shall be set at approximately 4229 feet TVD.
 - e. Mud weight could brine up to 10.2ppg. Reviewed and OK
 - f. Keep casing half full during run for collapse SF

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

- Cement to surface. If cement does not circulate see B.1.a, c-d above.
- 3. The 6 inch x 5.5 inch tapered production casing shall be set at approximately 22,111 feet. The minimum required fill of cement behind the 6 inch x 5.5 inch tapered production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

- 1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 13-3/8 inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 3500 (70% Working Pressure) psi.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

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

(Note: For a minimum 5M BOPE or less (Utilizing a 10M BOPE system) BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. (Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)
- BOPE Break Testing is NOT permitted to drilling the production hole section.

- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (575-706-2779) prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-689-5981 Lea County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Casing Clearance:

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

Offline Cementing

Operator is approved for offline cementing for surface and intermediate intervals. Notify the BLM prior to the commencement of any offline cementing procedure.

GENERAL REQUIREMENTS

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

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

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

BLM_NM_CFO_DrillingNotifications@BLM.GOV (575) 361-2822

- ✓ Lea CountyCall the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981
- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

- a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
- b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per **43** CFR part **3170** Subpart **3172** as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

- 1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
- 2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours.

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

B. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3.
- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
- 3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test
 - d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR part 3170 Subpart 3172 must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
 - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to 43 CFR part 3170 Subpart 3172 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per 43 CFR part 3170 Subpart 3172.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

KPI 8/11/2025



Lacey Swiss 1 Fed Com #3H

Hydrogen Sulfide Plan Summary

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

■ H2S Detection and Monitoring Equipment:

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged. (Gas sample tubes will be stored in the safety trailer)

■ Visual Warning System:

- a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
- b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
- c. Two wind socks will be placed in strategic locations, visible from all angles.



Lacey Swiss 1 Fed Com #3H

■ Mud Program:

The mud program has been designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.

■ Metallurgy:

All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

■ Communication:

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



Lacey Swiss 1 Fed Com #3H

Emergency Assistance Telephone List

PUBLIC SAFETY:	911 or
Lea County Sheriff's Department	(575) 396-3611
Corey Helton	
Fire Department	
Carlsbad	(575) 885-3125
Artesia	(575) 746-5050
Hospitals	
Carlsbad	(575) 887-4121
Artesia	(575) 748-3333
Hobbs	(575) 392-1979
Dept. of Public Safety/Carlsbad	(575) 748-9718
Highway Department	(575) 885-3281
U.S. Department of Labor	(575) 887-1174
Bureau of Land Management - Hobbs (Lea Co)	(575) 393-3612
PET On Call - Hobbs	(575) 706-2779
Bureau of Land Management - Carlsbad (Eddy Co)	(575) 234-5972
PET On Call - Carlsbad	(575) 706-2779
New Mexico Oil Conservation Division - Artesia	(575) 748-1283
Inspection Group South - Gilbert Gordero	(575) 626-0830
EOG Resources, Inc.	
EOG Midland	(432) 686-3600
Company Drilling Consultants:	
Jett Dueitt	(432) 230-4840
Blake Burney	
Drilling Engineers	
Stephen Davis	(432) 235-9789
Matt Day	(210) 296-4456
Drilling Managers	
Branden Keener	(210) 294-3729
Branden Recher	(210) 274-3727
Drilling Superintendents	
Lance Hardy	(432) 215-8152
Ryan Reynolds	(432) 215-5978
Steve Kelly	(210) 416-7894
H&P Drilling	
H&P Drilling	(432) 563-5757
Nabors Drilling	•
Nabors Drilling	(432) 363-8180
Patterson UTI	•
Patterson UTI	(432) 561-9382
EOG Safety	•
Brian Chandler (HSE Manager)	(817) 239-0251



Lacey Swiss 1 Fed Com 3H API #: 30-025-**** Variances

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

- Variance is requested to waive the centralizer requirements for the intermediate casing in the intermediate hole. An expansion additive will be utilized, in the cement slurry, for the entire length of the intermediate interval to maximize cement bond and zonal isolation.
- Variance is also requested to waive the centralizer requirements for the production casing in the production hole. An expansion additive will be utilized, in the cement slurry, for the entire length of the production interval to maximize cement bond and zonal isolation.
- Bradenhead will be the primary option for production cementing. EOG also requests to have the conventional option in place to accommodate for logistical or wellbore conditions. The tie back requirements will be met if the cement is pumped conventionally, and cement volumes will be adjusted accordingly. TOC will be verified by CBL.
- Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).- Variance is requested to use a 5,000 psi annular BOP with the 10,000 psi BOP stack.
- EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and Cement on the subject well. After WOC 8 hours or 500 psi compressive strength (whichever is greater), the Surface Rig will move off so the wellhead can be installed. A welder will cut the casing to the proper height and weld on the wellhead (both "A" and "B" sections). The weld will be tested to 1,500 psi. All valves will be closed and a wellhead cap will be installed (diagram attached). If the timing between rigs is such that EOG Resources would not be able to preset the surface, the Primary Rig will MIRU and drill the well in its entirety per the APD.

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

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

State of New Mexico Energy, Minerals and Natural Resources Department

Submit Electronically Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description Effective May 25, 2021

I. Operator:EOG	Resources, Inc	eOGRID): 7377		Dat	e: 8/25	5/2025	
II. Type: ⊠ Origin	al □ Amendm	ent due to \Box 19.15.	27.9.D(6)(a) N	MAC □ 19.15.27.	9.D(6)(b)) NMAC	C □ Oti	her.
If Other, please describ	e:							
III. Well(s): Provide the recompleted from a					wells pro	posed to	be dri	lled or proposed to
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D		ipated ICF/D	P	Anticipated roduced Water BBL/D
LACEY SWISS 1 FED COM 3H		A-1-25S-33E	326' FNL & 665' FEL	+/- 1000	+/- 350	00	+/- 3	000
V. Anticipated Scheoor proposed to be recon	lule: Provide the mpleted from a	ne following informa single well pad or c	ntion for each no	ew or recompleted entral delivery poi	l well or s	et of we	ells pro	posed to be drilled
Well Name	API	Spud Date	TD Reached Date	Completion Commencement		Initial I Back I		First Production Date
LACEY SWISS 1 FED COM 3H		9/3/25	9/17/25	11/01/25		12/01/2	5	2/01/26
VII. Operational Prac Subsection A through I VIII. Best Manageme during active and plant	ctices: ⊠ Attac F of 19.15.27.8 Int Practices: [ch a complete descr NMAC. ⊠ Attach a complet	iption of the ac	tions Operator wi	ll take to	comply	with t	he requirements of

Section 2 – Enhanced Plan EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

XII. Line Capacity. The natural	gas gathering system [□ will □ will	not have capacity t	o gather 1	100% of the	e anticipated	natural ga
production volume from the well	prior to the date of first	production.					

VIII I : Programme Outside of the control of the	'(1
	its existing well(s) connected to the same segment, or portion, of the
natural gas gathering system(s) described above will continue to m	neet anticipated increases in line pressure caused by the new well(s)

\neg	Attach On	arator's	nlan to	monoga	production	in rocnone	o to the inc	reased line r	roccuro
	Affach Ob	erator s	nian to	manage	production	in respons	se to the inc	reased line i	ressure

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

Section 3 - Certifications <u>Effective May 25, 2021</u>

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal: 🗵 Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or ☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. If Operator checks this box, Operator will select one of the following: Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or Venting and Flaring Plan.

Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including: power generation on lease; (a) **(b)** power generation for grid; (c) compression on lease; (d) liquids removal on lease; reinjection for underground storage; (e)

- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

- 1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:
- (a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or
- Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.
- 2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

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

Signature: Star L Harrell					
Printed Name: Star L Harrell					
Title: Sr Regulatory Specialist					
E-mail Address: Star_Harrell@eogresources.com					
Date: 8/25/2025					
Phone: (432) 848-9161					
OIL CONSERVATION DIVISION					
(Only applicable when submitted as a standalone form)					
Approved By:					
Title:					
Approval Date:					
Conditions of Approval:					

Natural Gas Management Plan Items VI-VIII

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

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

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

Drilling Operations

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

Completions/Recompletions Operations

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

Production Operations

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

Performance Standards

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

Measurement & Estimation

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

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

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

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

Received by OCD: 8/26/2025 6:57:36 AM

Page 52 of 138



Master Variance Document

Table of Contents

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

Received by OCD: 8/26/2025 6:57:36 AM

Page 54 of 138



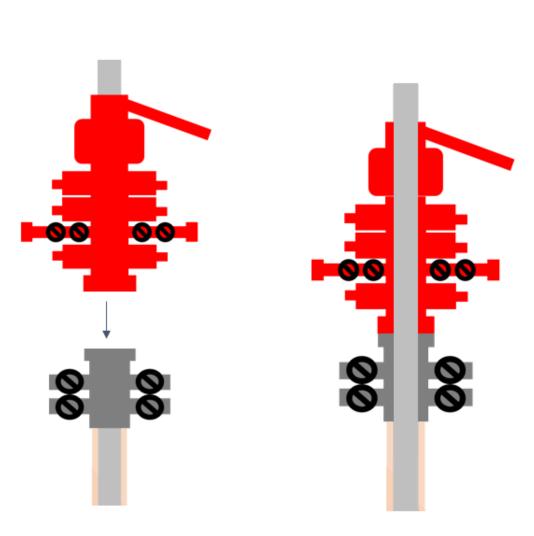
BOPE Break Test Variance

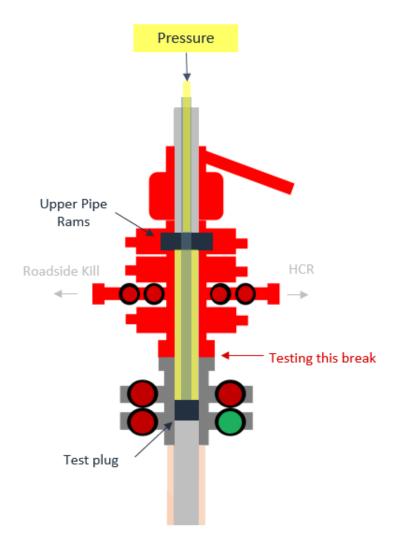
EOG BOPE Break Test Variance (Intervals 5M MASP or less)

EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards for well control equipment testing of ECFR Title 43 Part 3172.6(b)(9)(iv) to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) along with Batch Drilling & Offline cement operations to include the following:

- Full BOPE test at first installation on the pad.
- Full BOPE test every 21 days.
- Break-test only available for the Base of the Wolfcamp or shallower
 - If anything out of the ordinary is observed during drilling, tripping or casing running operations in the production hole section, break testing will not be performed in the subsequent well's production hole section.
 - Furthermore, break testing in the production hole section will not be performed if offset frac operations are observed within 1 mile and within the same producing horizon.
- Each rig requesting the break-test variance is capable of picking up the BOP without damaging components using winches, following API Standard 53, Well Control Equipment Systems for Drilling Wells (Fifth edition, December 2018, Annex C. Table C.4) which recognizes break testing as an acceptable practice.
- Function tests will be performed on the following BOP elements:
 - Annular → during each full BOPE test and at least weekly
 - Pipe Rams → Every trip and on trip ins where FIT required
 - Blind Rams → Every trip
- Break testing BOP and BOPE coupled with batch drilling operations and option to offline cement and/or remediate (if needed) any surface, intermediate or production sections, according to attached offline cementing support documentation.
- After the well section is secured, the BOP will be disconnected from the wellhead and walked with the rig to another well on the pad.
- TA cap will also be installed per Wellhead vendor procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

Break Test Diagram (Test Joint)





Steps

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

Received by OCD: 8/26/2025 6:57:36 AM

Page 57 of 138



Offline Surface + Intermediate Variance

Received by OCD: 8/26/2025 6:57:36 AM

Page 58 of 138

Offline Surface + Intermediate Cement

Cement Program

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

Summarized Operational Procedure for Intermediate Casing

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

Received by OCD: 8/26/2025 6:57:36 AM Page 59 of 138

- e. Diagram for rig positioning relative to offline cementing can be seen in Figure 4.
- 9. Rig up return lines to take returns from wellhead to pits and rig choke.
 - a. Test all connections and lines from wellhead to choke manifold to 5,000 psi high for 10 min.
 - b. If either test fails, perform corrections and retest before proceeding.
 - c. Return line schematics can be seen in Figure 3.
- 10. Remove TA Plug from the casing.
- 11. Install offline cement tool.
 - a. Current offline cement tool schematics can be seen in Figure 1 (Cameron) and Figure 2 (Cactus).
- 12. Rig up cement head and cementing lines.
 - a. Pressure test cement lines against cement head to 80% of casing burst for 10 min.
- 13. Break circulation on well to confirm no restrictions.
 - a. If gas is present on circulation, well will be shut in and returns rerouted through gas buster.
 - b. Max anticipated time before circulating with cement truck is 6 hrs.
- 14. Pump cement job as per plan.
 - a. At plug bump, test casing to 0.22 psi/ft or 1500 psi, whichever is greater.
 - b. If plug does not bump on calculated, shut down and wait 8 hrs or 500 psi compressive strength, whichever is greater before testing casing.
- 15. Confirm well is static and floats are holding after cement job.
 - a. With floats holding and backside static:
 - i. Remove cement head.
 - b. If floats are leaking:
 - Shut-in well and WOC (Wait on Cement) until tail slurry reaches 500 psi compressive strength and the casing is static prior to removing cement head.
 - c. If there is flow on the backside:
 - Shut in well and WOC until tail slurry reaches 500 psi compressive strength. Ensure that the casing is static prior to removing cement head.
- 16. Remove offline cement tool.
- 17. Install night cap with pressure gauge for monitoring. Released to timeging: 8/28/2025 10:54:20 AM 18. Fest night cap to 5,000 psi for 10 min.



Received by OCD: 8/26/2025 6:57:36 AM

Page 60 of 138

Offline Surface + Intermediate Cement

Example Well Control Plan Content

A. Well Control Component Table

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

Intermediate hole section, 5M requirement

RWP
10M
10M
5M
10M
5M
15M

B. Well Control Procedures

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

General Procedure While Circulating

- 1. Sound alarm (alert crew).
- 2. Shut down pumps.
- 3. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).

Released to Amaging 28/28/2025 10:54:20 AM

5. Notify tool pusher/company representative.

Received by OCD: 8/26/2025 6:57:36 AM Page 61 of 138

Offline Surface + Intermediate Cement

Example Well Control Plan Content

A. Well Control Component Table

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

Intermediate hole section, 5M requirement

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

B. Well Control Procedures

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

General Procedure While Circulating

- 1. Sound alarm (alert crew).
- 2. Shut down pumps.
- 3. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).

Released to Imaging: 8/28/2025 10:54:20 AM

5. Notify tool pusher/company representative.

Received by OCD: 8/26/2025 6:57:36 AM

Page 62 of 138

Offline Surface + Intermediate Cement

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

General Procedure While Cementing

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

General Procedure After Cementing

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



Figure 1: Cameron TA Plug and Offline Adapter Schematic

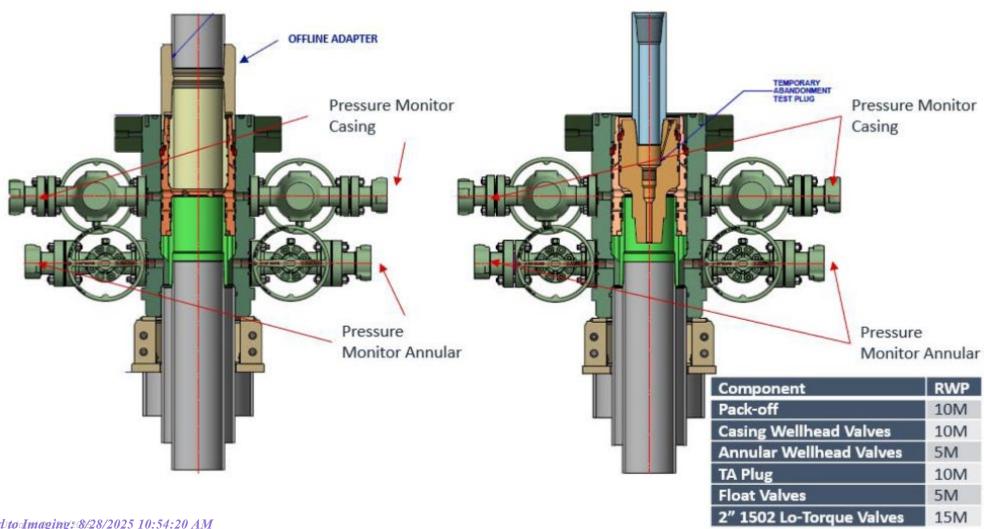


Figure 2: Cactus TA Plug and Offline Adapter Schematic

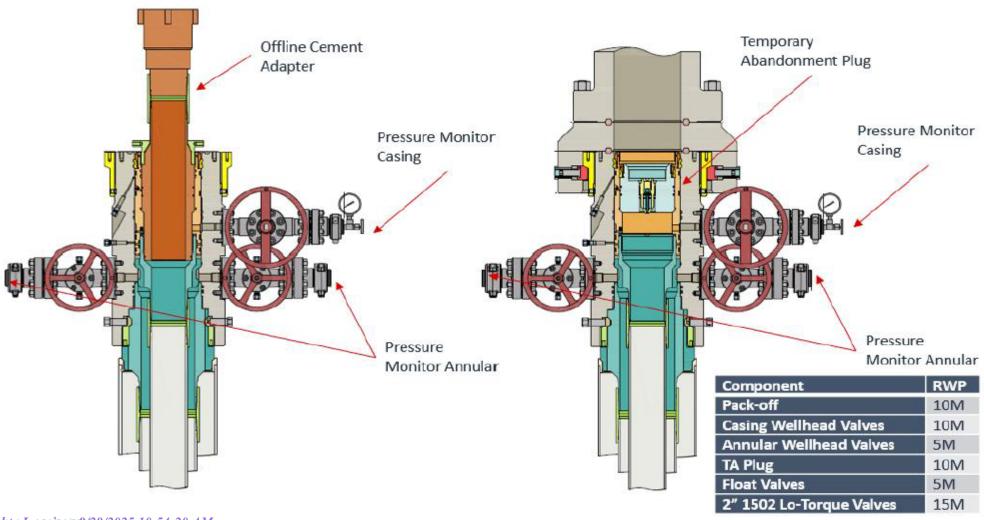


Figure 3: Back Yard Rig Up

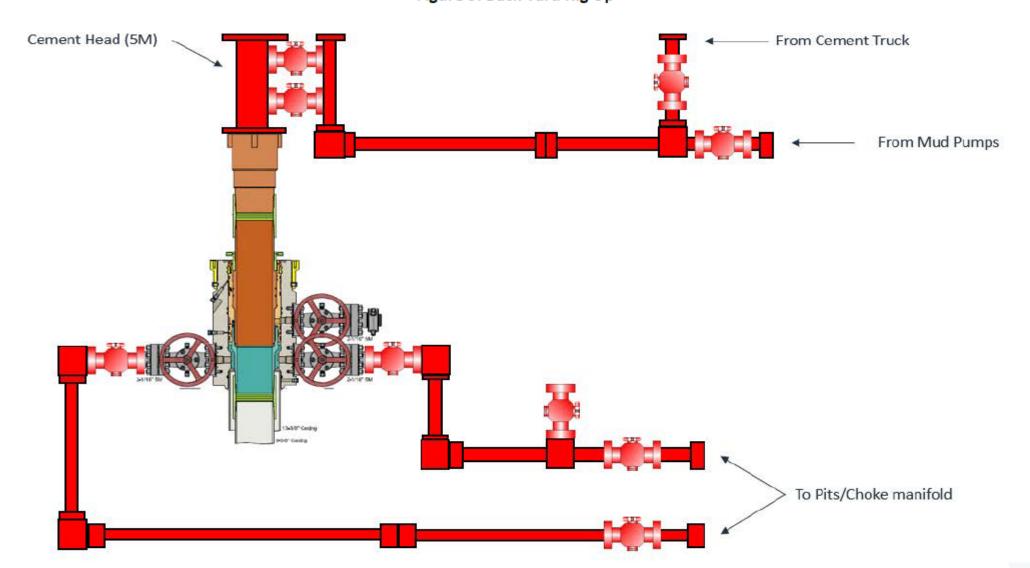
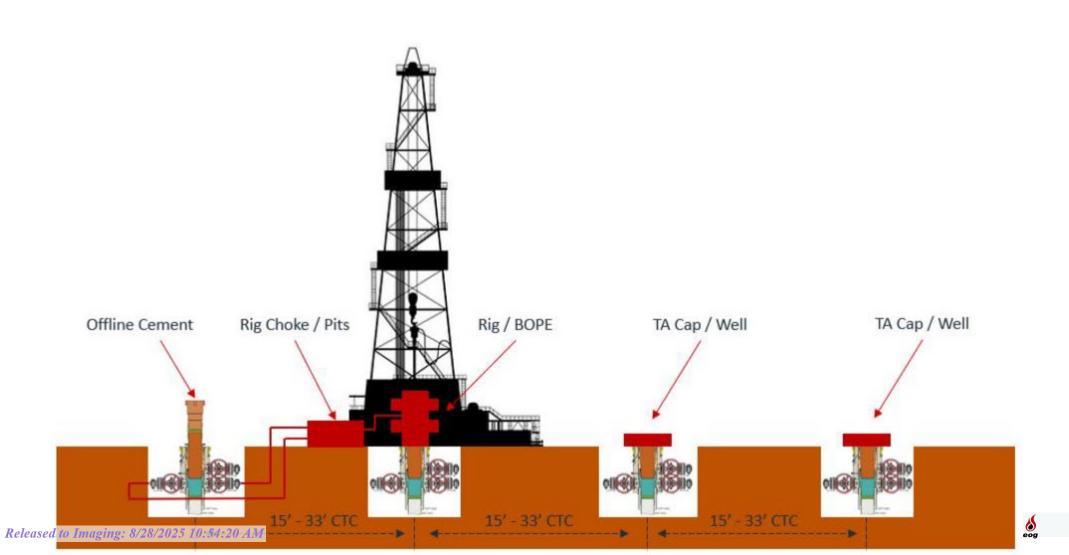


Figure 4: Rig Placement Diagram



Received by OCD: 8/26/2025 6:57:36 AM



Intermediate Bradenhead Cement Variance

Intermediate Bradenhead Cement

Deep Target Intermediate Bradenhead:

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

EOG will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures. Received by OCD: 8/26/2025 6:57:36 AM

Page 69 of 138



Wolfcamp Intermediate Casing Setpoint

Intermediate Bradenhead Cement

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

Received by OCD: 8/26/2025 6:57:36 AM

Page 71 of 138



Offline Production Cement Variance

EOG Offline Production Checklist

Offline Checklist

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

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

Received by OCD: 8/26/2025 6:57:36 AM

Offline Procedure

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

Received by OCD: 8/26/2025 6:57:36 AM

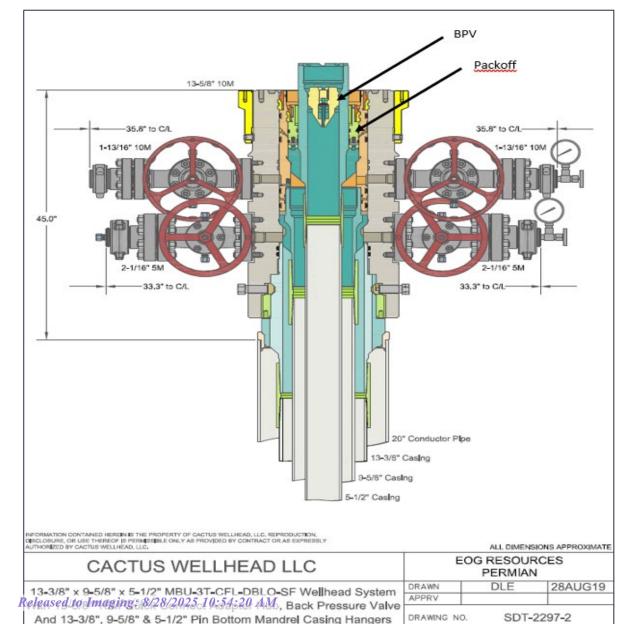
Offline Procedure

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

Received by OCD: 8/26/2025 6:57:36 AM

Page 75 of 138

Offline Barrier Overview



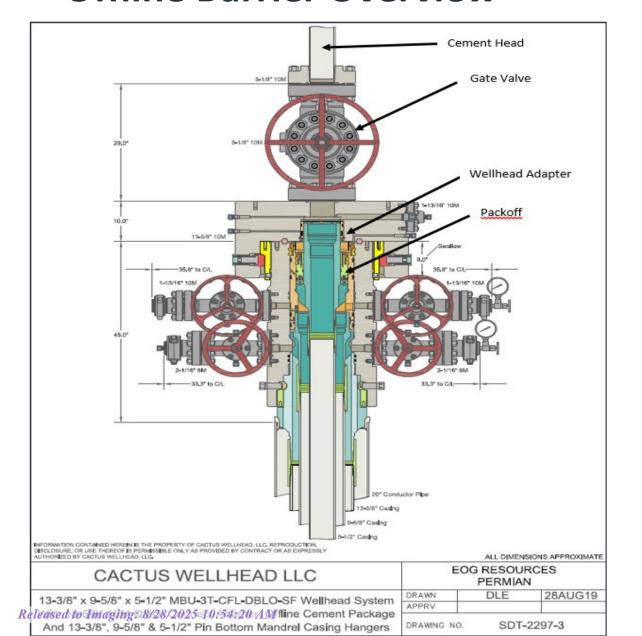
Barriers in Place during removal of BOP						
Operation Casing Annulus						
Nippling Down BOP	 BPV Hydrostatic Barrier Float Valves 	Hydrostatic Barrier Mechanical 10M Packoff				

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

Received by OCD: 8/26/2025 6:57:36 AM

Page 76 of 138

Offline Barrier Overview



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

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

Received by OCD: 8/26/2025 6:57:36 AM

Page 77 of 138

More Control: Meeting/Exceeding Barrier Requirements

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

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

Received by OCD: 8/26/2025 6:57:36 AM Page 78 of 138

Return Rig Up Diagram

Offline Online Annular Tested: Lines Tested: 5000psi f/10min 5000psi f/10min 250psi f/10min 250psi f/10min ~5-30days Before every job Aux Choke Manifold Kill line Pits Rig Choke Rig Choke Kill line Open Top Manifold Manifold Note:

- 1) Have the Rig's same Well Control Capabilities as Online
- 2) Have more flexibility with Gate Valve than with a Landing Joint through BOP 3) Released to Imaging: 8/28/2025 10:54:20 AM Never had to circulate out a kick during Offline

Received by OCD: 8/26/2025 6:57:36 AM

Page 79 of 138



Production Bradenhead Cement Variance

Production Bradenhead Cement

Shallow Target Production Offline Bradenhead:

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

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

Received by OCD: 8/26/2025 6:57:36 AM



Salt Section Annular Clearance

Current Design (Salt Strings)

0.422" Annular clearance requirement

- Casing collars shall have a minimum clearance of 0.422 inches on all sides in the hole/casing annulus, with recognition that variances can be granted for justified exceptions.
- 12.25" Hole x 9.625"40# J55/HCK55 LTC Casing
 - 1.3125" Clearance to casing OD
 - 0.8125" Clearance to coupling OD
- 9.875" Hole x 8.75" 38.5# P110 Sprint-SF Casing
 - 0.5625" Clearance to casing OD
 - 0.433" Clearance to coupling OD

Annular Clearance Variance Request

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

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

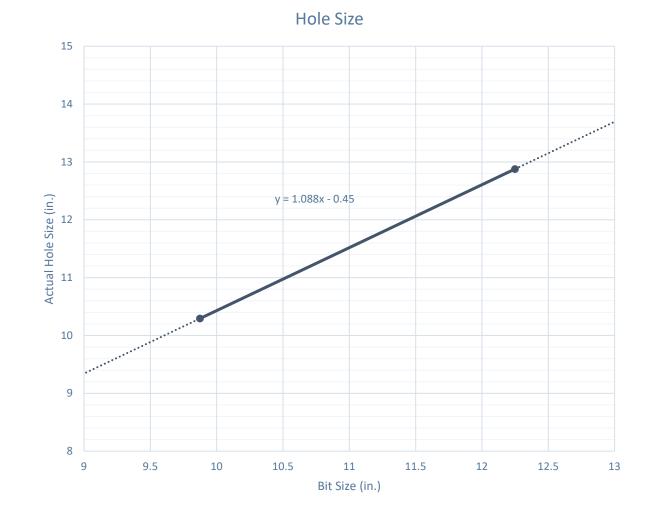
Volumetric Hole Size Calculation

Hole Size Calculations Off Cement Volumes

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

Average Hole Size

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

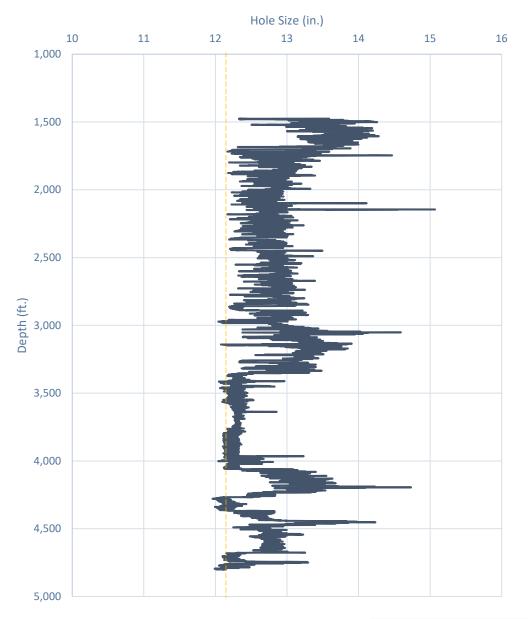


Modelo 10 Fed Com #501H

Caliper Hole Size (12.25")

Average Hole Size

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

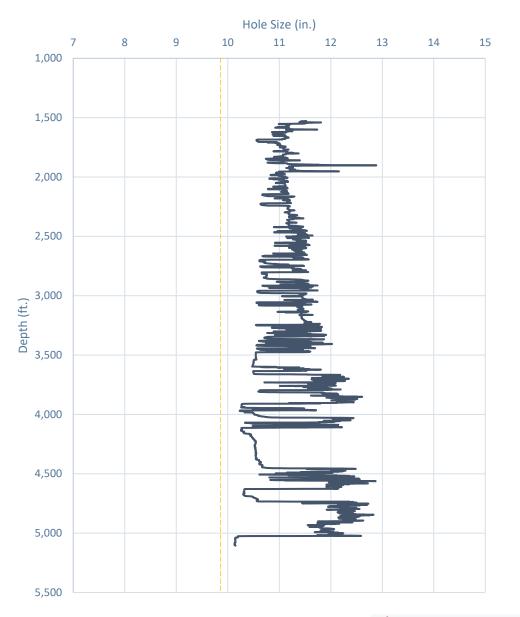


Caliper Hole Size (9.875")

Average Hole Size

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

Whirling Wind 11 Fed Com #744H



Design A

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

- 11" Bit + 0.52" Average hole enlargement = 11.52" Hole Size
 - 0.9475" Clearance to casing OD

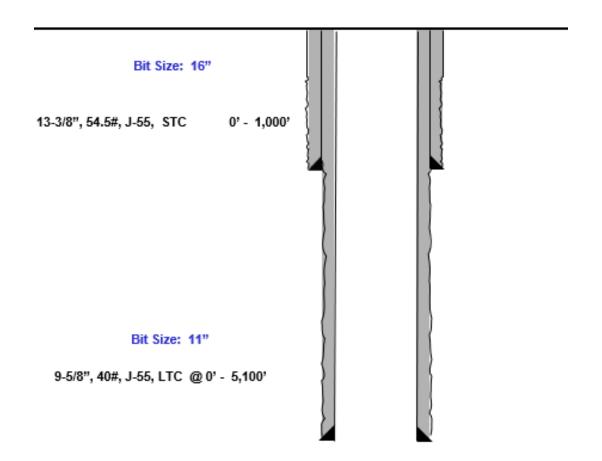
$$=\frac{11.52-9.625}{2}$$

• 0.4475" Clearance to coupling OD

$$=\frac{11.52-10.625}{^2}$$

- Previous Shoe 13.375" 54.5# J55 STC
 - 0.995" Clearance to coupling OD (~1,200' overlap)

$$=\frac{12.615-10.625}{2}$$



Design B

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

- 9.875" Bit + 0.42" Average hole enlargement = 10.295" Hole Size
 - 0.835" Clearance to casing OD

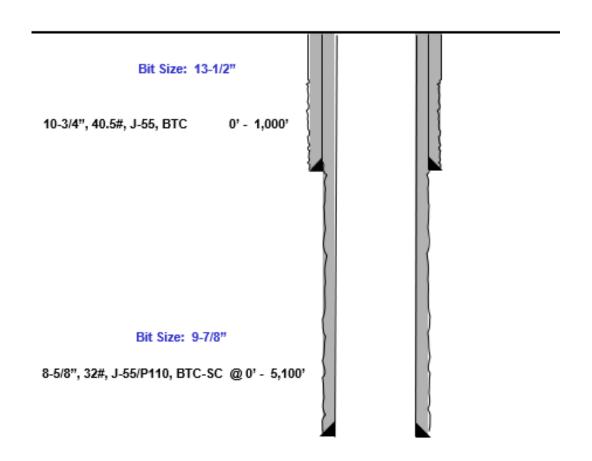
$$=\frac{10.295-8.625}{2}$$

• 0.585" Clearance to coupling OD

$$=\frac{10.295-9.125}{2}$$

- Previous Shoe 10.75" 40.5# J55 STC
 - 0.4625" Clearance to coupling OD (~1,200' overlap)

$$=\frac{10.05-9.125}{2}$$



Received by OCD: 8/26/2025 6:57:36 AM

Page 89 of 138



Index

Received by OCD: 8/26/2025 6:57:36 AM

Page 90 of 138

Casing Spec Sheets

PERFORMANCE DATA

API LTC 9.625 in 40.00 lbs/ft K55 HC Technical Data Sheet

Tubular Parameters					
Size	9.625	in	Minimum Yield	55	ksi
Nominal Weight	40.00	lbs/ft	Minimum Tensile	95	ksi
Grade	K55 HC		Yield Load	629	kips
PE Weight	38.94	lbs/ft	Tensile Load	1088	kips
Wall Thickness	0.395	in	Min. Internal Yield Pressure	3,950	psi
Nominal ID	8.835	in	Collapse Pressure	3600	psi
Drift Diameter	8.750	in		1	1

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

11.454

Pipe Body and API Connections Performance Data

13.375 54.50/0.380 J55 PDF

New Search »



6/8/2015 10:04:37 AM					
Mechanical Properties	Ptpe	втс	LTC	STC	
Minimum Yield Strength	55,000	-	-	-	psi
Maximum Yield Strength	80,000	-	-	-	psi
Minimum Tensile Strength	75,000	-	-	-	psi
Dimensions	Ptpe	втс	LTC	STC	
Outside Diameter	13.375	14.375	-	14.375	in.
Wall Thickness	0.380	-	-	-	in.
Inside Diameter	12.615	12.615	-	12.615	in.
Standard Drift	12.459	12.459	-	12.459	in.
Alternate Drift	-	-	-	-	in.
Nominal Linear Weight, T&C	54.50	-	-	-	lbs/ft
Plain End Weight	52.79	-	-	-	lbs/ft
Performance	Pipe	втс	LTC	STC	
Minimum Collapse Pressure	1,130	1,130	-	1,130	psi
Minimum Internal Yield Pressure	2,740	2,740	-	2,740	psi
Minimum Pipe Body Yield Strength	853.00	-	-	-	1000 lbs
Joint Strength	-	909	-	514	1000 lbs
Reference Length	-	11,125	-	6,290	ft
Make-Up Data	Ptpe	втс	LTC	STC	
Make-Up Loss	-	4.81	-	3.50	in.
Minimum Make-Up Torque	-	-	-	3,860	ff-lbs
Maximum Make-Up Torque	-	-	-	6,430	ft-lbs

Nom. Pipe Body Area

Received by OCD: 8/26/2025 6:57:36 AM

Page 91 of 138

3,150

5,250

ft-lbs

ft-lbs

Casing Spec Sheets

Pipe Body and API Connections Performance Data

10.750 40.50/0.350 J55 PDF

New Search » « Back to Previous List USC Metric 6/8/2015 10:14:05 AM втс Ptpe STC **Mechanical Properties** Minimum Yield Strength 55,000 psi Maximum Yield Strength 80,000 Minimum Tensile Strength 75,000 psi BTC LTC STC Ptpe Outside Diameter 10.750 11.750 11.750 Wall Thickness 0.350 Inside Diameter 10.050 10.050 10.050 Standard Drift 9.894 9.894 Alternate Drift 40.50 Nominal Linear Weight, T&C lbs/ft 38.91 lbs/ft Plain End Weight Performance Ptpe BTC LTC STC 1,580 Minimum Collapse Pressure psi 3.130 Minimum Internal Yield Pressure 3.130 3.130 629.00 1000 lbs Minimum Pipe Body Yield Strength Joint Strength 700 420 1000 lbs Reference Length 11,522 6,915 BTC STC Make-Up Data Pipe 4.81 Make-Up Loss 3.50 in.



API 5CT, 10th Ed. Connection Data Sheet

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

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

MADE IN USA

#0d

NTS

#0/M

DA

S

VALLOUREC STAR

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

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

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

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

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

ALL INFORMATION IS PROVIDED BY VALICURED OR ITS AFFLIATES AT USER'S SOLE RISK, WITHOUT LIBBILITY FOR LOSS, DAMAGE OR INJURY RESULTING FROM THE USE THEREOF, AND ON AN "AS IS "BASIS WITHOUT WARRANTY OR REPRESENTATION OF ANY WIRD, WHITE THERE EXPRESS OR IMPLEE), INCLUDING TWITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR PURPOSE, ACCURACY OR COMPLETENESS. THE INFORMATION CONTAINED IN THIS DOCUMENT IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND IS BASED ON ESTIMATES THAT THAY IN OTHER PROVIDED FOR THE PURPOSES ONLY AND IS BASED ON ESTIMATES THAT THAY IN OTHER PURPOSES. THE INFORMATION ONLY AND IS A PURPOSED ANY INDIRECT, SECRIAL INCIDENTAL, DURINTIES, EXCENDING LOSS OF BARGAIN, LOSS OF BREADING, FOR PEVENUE, PROFIT OR ANTICIPATED PROFIT) HOWEVER CAUSED OR ARISING, AND WHETHER SUCH LOSSES OR DAMAGES WERE FORESEABLE OR VALLOURED OR ITS AFFILIATES WERE ADVISED OF THE AD

eo

Minimum Make-Up Torque

Maximum Make-Up Torque

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

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

1. Component and Preventer Compatibility Tables

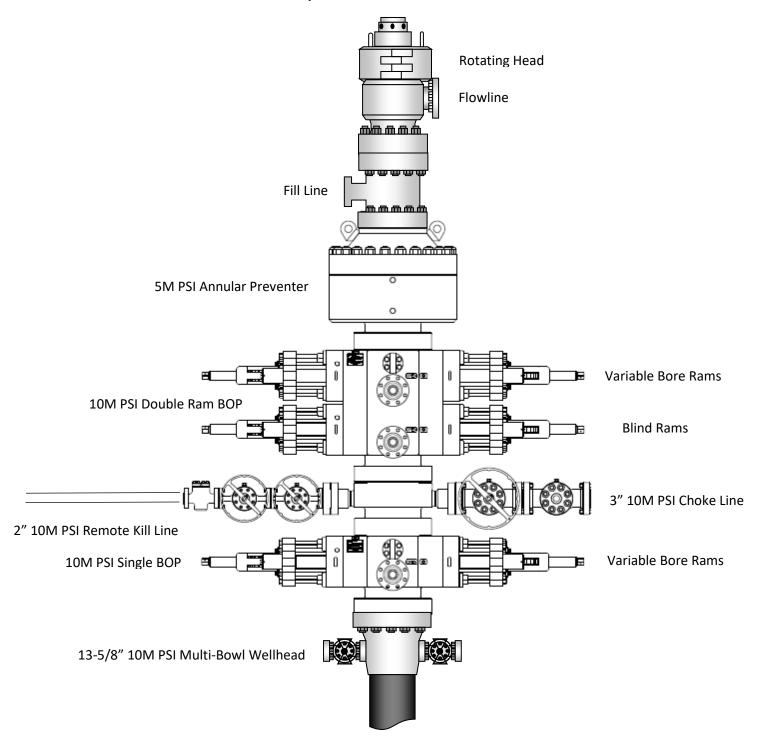
The tables below outlines the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

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

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

VBR = Variable Bore Ram

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



2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the EOG Resources drilling supervisor's office on location, and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 100% of its RWP.

General Procedure While Drilling

- 1. Sound alarm (alert crew)
- 2. Space out drill string
- 3. Shut down pumps (stop pumps and rotary)
- 4. Shut-in Well (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
- 8. Regroup and identify forward plan
- 9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

- 1. Sound alarm (alert crew)
- 2. Stab full opening safety valve and close
- 3. Space out drill string
- 4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
- 8. Regroup and identify forward plan
- 9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

- 1. Sound alarm (alert crew)
- 2. Stab crossover and full opening safety valve and close
- 3. Space out string
- 4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
- 8. Regroup and identify forward plan
- 9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure With No Pipe In Hole (Open Hole)

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

General Procedures While Pulling BHA thru Stack

- 1. PRIOR to pulling last joint of drillpipe thru the stack.
 - a. Perform flowcheck, if flowing:
 - b. Sound alarm (alert crew)
 - c. Stab full opening safety valve and close
 - d. Space out drill string with tool joint just beneath the upper variable bore rams.
 - e. Shut-in using upper variable bore rams. (HCR and choke will already be in the closed position.)
 - f. Confirm shut-in
 - g. Notify toolpusher/company representative
 - h. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - i. Regroup and identify forward plan

- 2. With BHA in the stack and compatible ram preventer and pipe combo immediately available.
 - a. Sound alarm (alert crew)
 - b. Stab crossover and full opening safety valve and close
 - c. Space out drill string with upset just beneath the upper variable bore rams.
 - d. Shut-in using upper variable bore rams. (HCR and choke will already be in the closed position.)
 - e. Confirm shut-in
 - f. Notify toolpusher/company representative
 - g. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - h. Regroup and identify forward plan
- 3. With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.
 - a. Sound alarm (alert crew)
 - b. If possible to pick up high enough, pull string clear of the stack and follow "Open Hole" scenario.
 - c. If impossible to pick up high enough to pull the string clear of the stack:
 - d. Stab crossover, make up one joint/stand of drillpipe, and full opening safety valve and close
 - e. Space out drill string with tooljoint just beneath the upper variable bore ram.
 - f. Shut-in using upper variable bore ram. (HCR and choke will already be in the closed position.)
 - g. Confirm shut-in
 - h. Notify toolpusher/company representative
 - i. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - j. Regroup and identify forward plan



EOG BLANKET CASING DESIGN VARIANCE

EOG respectfully requests the drill plans in the attached document 'EOG BLM Variance 5a - Alternate Shallow Casing Designs' be added to the COA's for this well. These designs have been approved by the BLM down to the TVDs listed below and will allow EOG to run alternate casing designs for this well if necessary.

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

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

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

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

Shallow Design Boundary Conditions									
	Deepest	Deepest	Max Inc	Max DLS					
	MD (ft)	TVD (ft)	(deg)	(°/100usft)					
Surface	2030	2030	0	0					
Intermediate	7793	5650	40	8					
Production	28578	12000	90	25					



Shallow Design A

4. CASING PROGRAM

Hole	Interval MD		Interval TVD		Csg			
Size	From (ft)	To (ft)	From (ft)	To (ft)	OD	Weight	Grade	Conn
16"	0	2,161	0	2,030	13-3/8"	54.5#	J-55	STC
11"	0	7,951	0	5,650	9-5/8"	40#	J-55	LTC
6-3/4"	0	29,353	0	12,000	5-1/2"	20#	P110-EC	DWC/C IS MS

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

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

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

EOG requests permission to allow deviation from the 0.422" annulus clearance requirement for the intermediate (salt) section from Title 43 CFR Part 3170 under the following conditions:

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

5. CEMENTING PROGRAM:

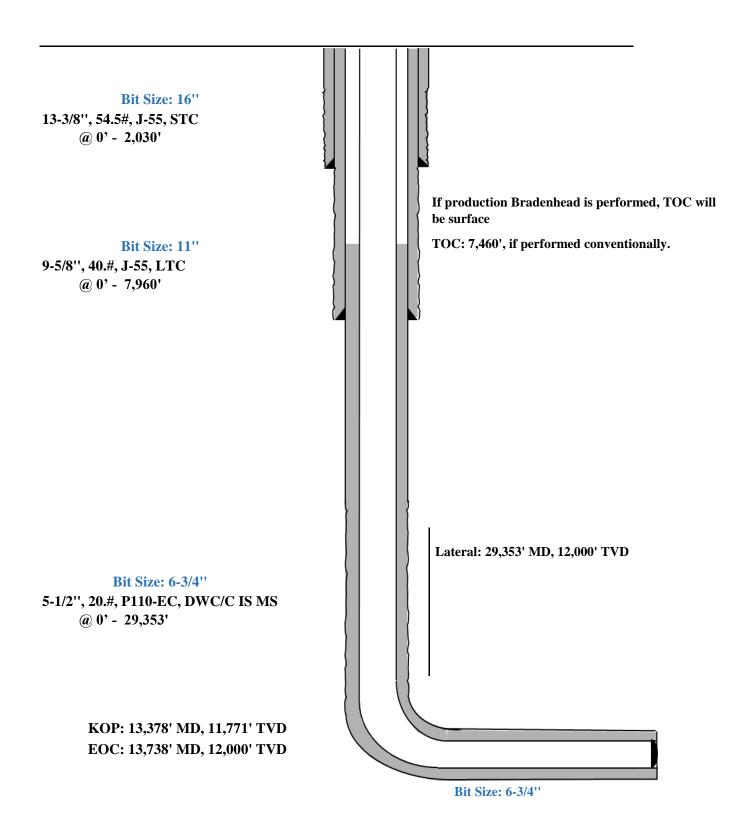
		Wt.	Yld	Slurry Description
Depth	No. Sacks	ppg	Ft3/sk	Sidily Description
2,030' 13-3/8"	570	13.5	1.73	Lead: Class C/H + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello- Flake (TOC @ Surface)
	160	14.8	1.34	Tail: Class C/H + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
8,050' 9-5/8"	760	12.7	2.22	Lead: Class C/H + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	250	14.8	1.32	Tail: Class C/H + 10% NaCL + 3% MagOx (TOC @ 6360')
29,353' 5-1/2"	1000	14.8	1.32	Bradenhead squeeze: Class C/H + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
	1480	13.2	1.52	Tail: Class C/H + 5% NEX-020 + 0.2% NAC-102 + 0.15% NAS-725 + 0.5% NFL-549 + 0.2% NFP-703 + 1% NBE-737 + 0.3% NRT-241 (TOC @ Top of Brushy)

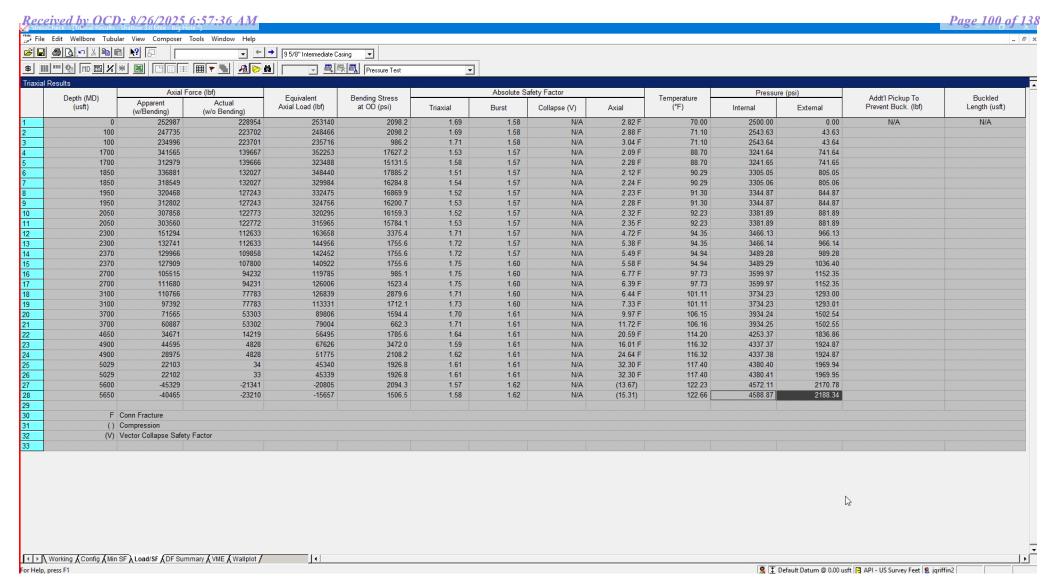


Shallow Design A

Proposed Wellbore

KB: 3558' GL: 3533'

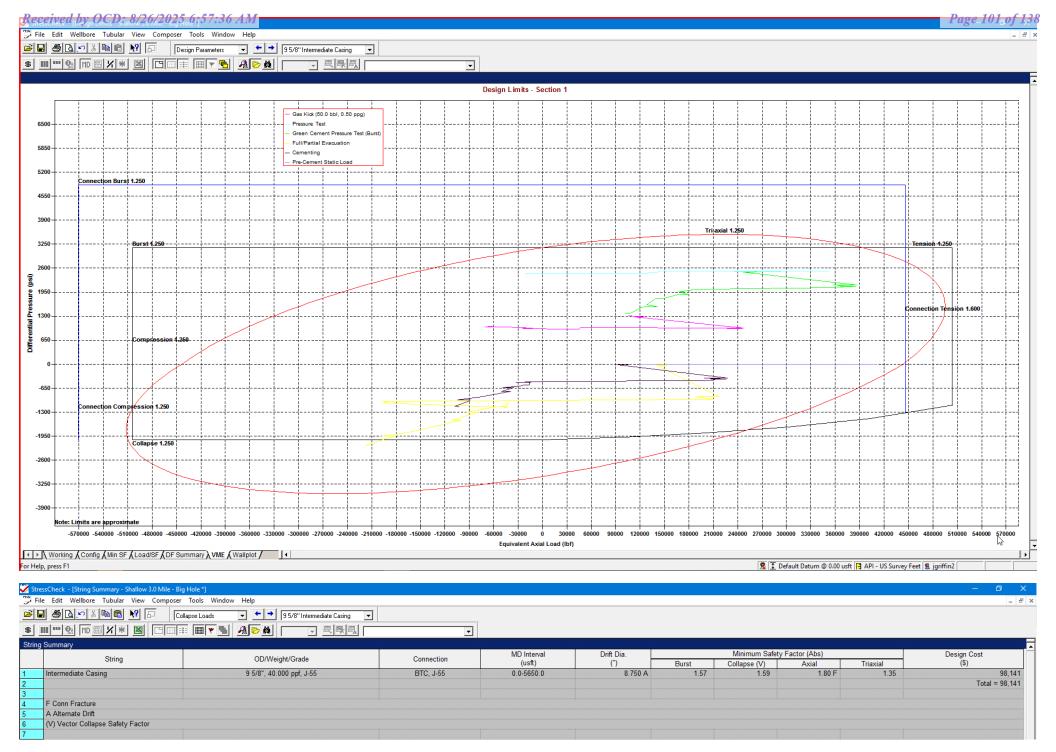




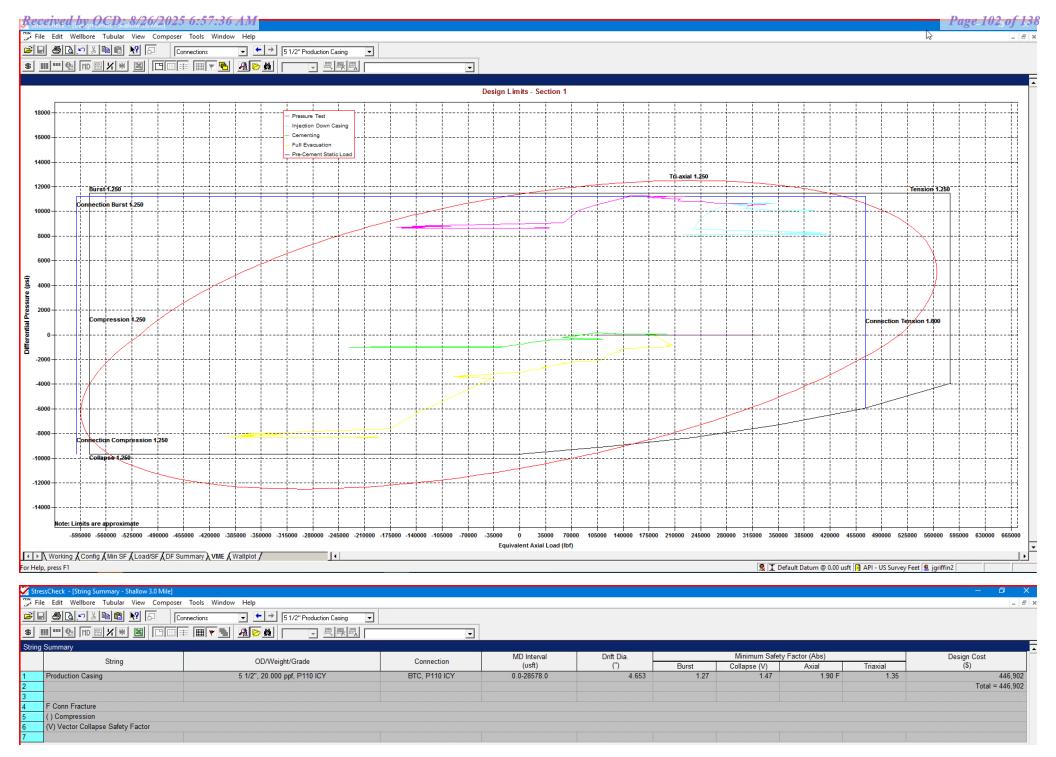
9-5/8" Intermediate Casing Pressure Test:

Internal Profile based off Surface Pressure + Hydrostatic: 4589 psi

External Profile based off Pore Pressure: 2188 psi



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



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

Page 6 of 31



Shallow Design B

4. CASING PROGRAM

Hole	Interval MD		Interval TVD		Csg			
Size	From (ft)	To (ft)	From (ft)	To (ft)	OD	Weight	Grade	Conn
13-1/2"	0	2,161	0	2,030	10-3/4"	40.5#	J-55	STC
9-7/8"	0	7,951	0	5,650	8-5/8"	32#	J-55	BTC-SC
6-3/4"	0	29,353	0	12,000	5-1/2"	20#	P110-EC	DWC/C IS MS

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

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

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

EOG requests permission to allow deviation from the 0.422" annulus clearance requirement for the intermediate (salt) section from Title 43 CFR Part 3170 under the following conditions:

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

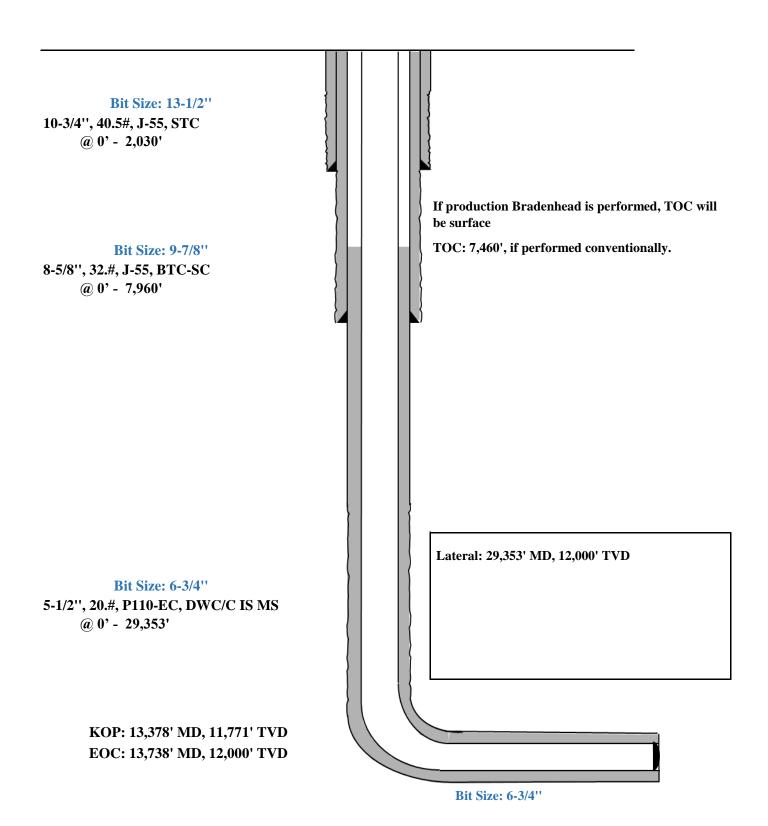
5. CEMENTING PROGRAM:

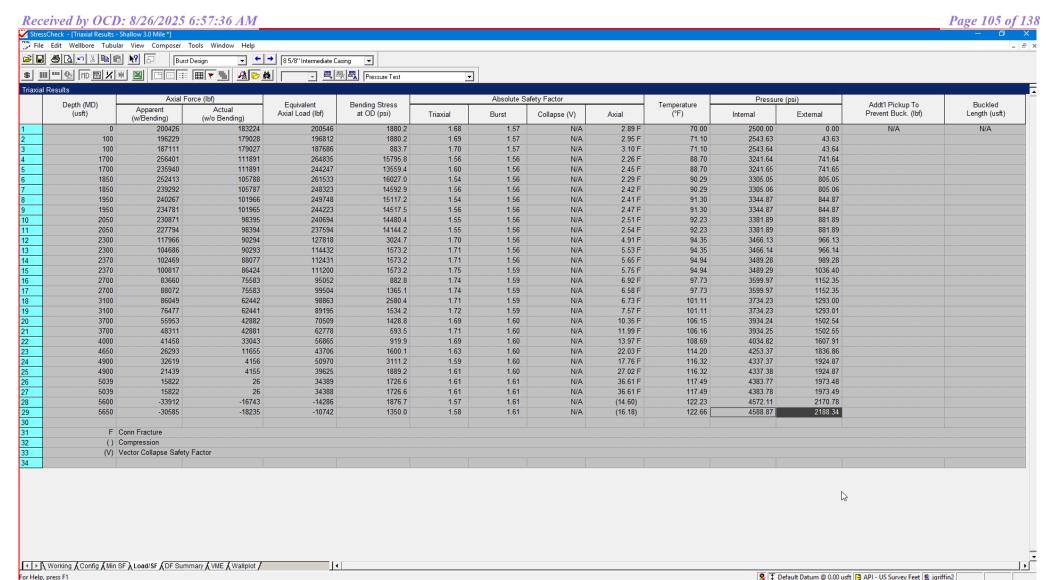
		Wt.	Yld	Slurry Description
Depth	No. Sacks	ppg	Ft3/sk	Sidify Description
2,030' 10-3/4''	530	13.5	1.73	Lead: Class C/H + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello- Flake (TOC @ Surface)
	140	14.8	1.34	Tail: Class C/H + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
8,050' 8-5/8"	470	12.7	2.22	Lead: Class C/H + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	210	14.8	1.32	Tail: Class C/H + 10% NaCL + 3% MagOx (TOC @ 6360')
29,353 ¹ 5-1/2"	1000	14.8	1.32	Bradenhead squeeze: Class C/H + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
	1480	13.2	1.52	Tail: Class C/H + 5% NEX-020 + 0.2% NAC-102 + 0.15% NAS-725 + 0.5% NFL-549 + 0.2% NFP-703 + 1% NBE-737 + 0.3% NRT-241 (TOC @ Top of Brushy)

Shallow Casing Design B

Proposed Wellbore

KB: 3558' GL: 3533'

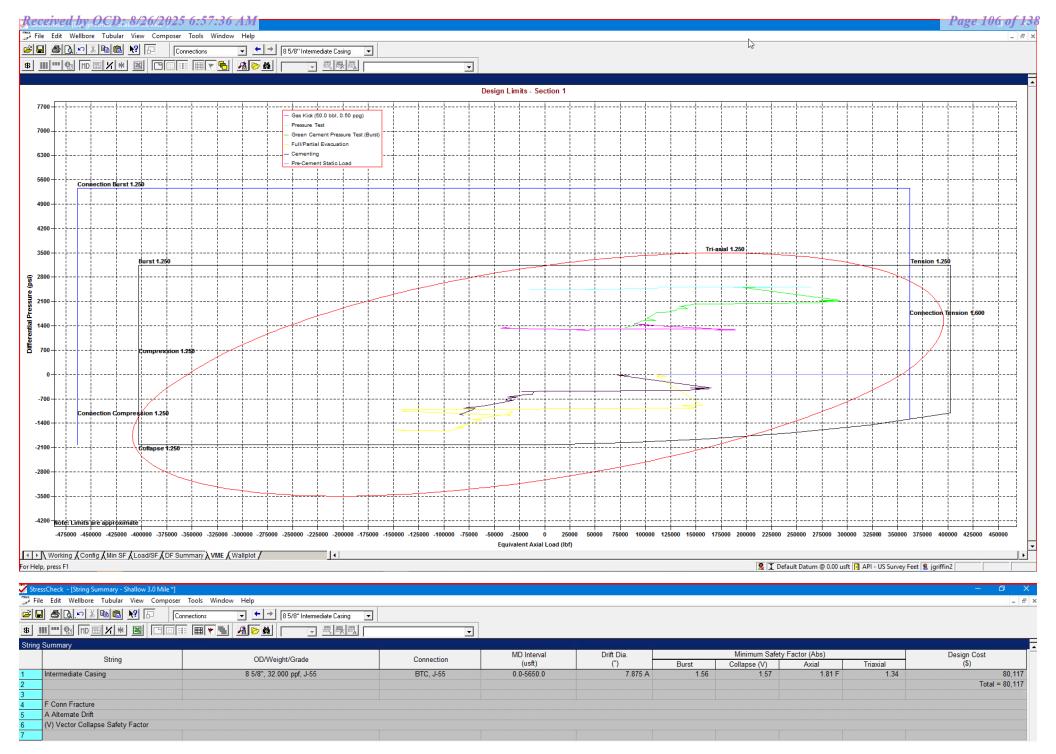




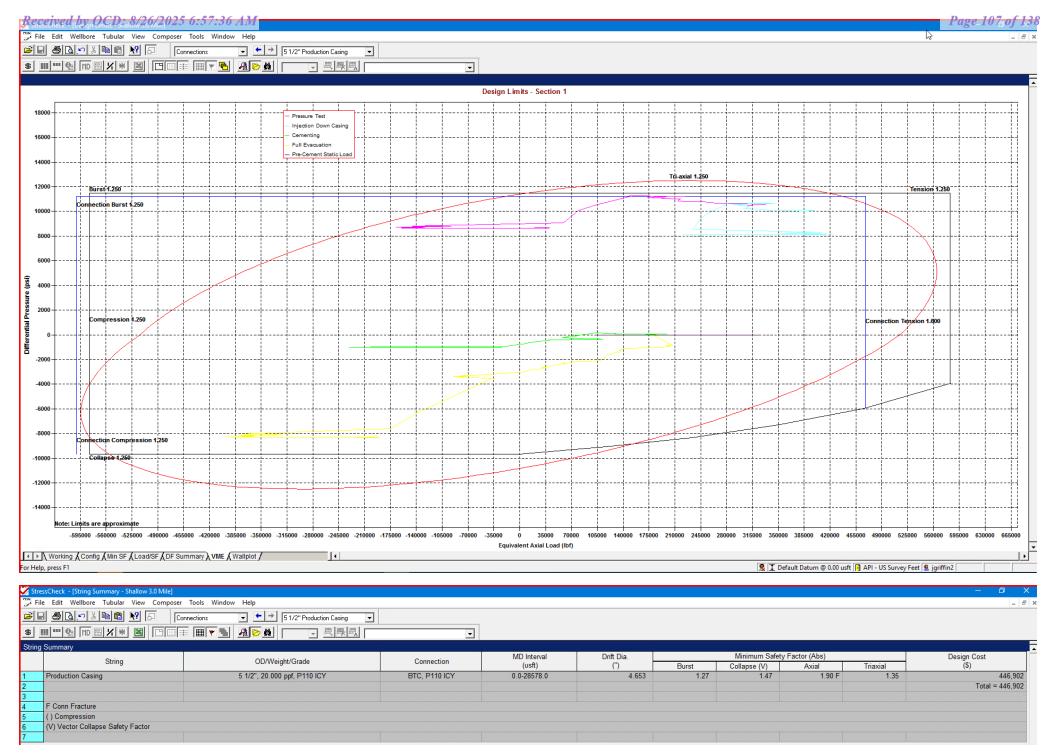
8-5/8" Intermediate Casing Pressure Test:

Internal Profile based off Surface Pressure + Hydrostatic: 4589 psi

External Profile based off Pore Pressure: 2188 psi



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



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

Page 11 of 31



Shallow Design C

4. CASING PROGRAM

Hole	Interval MD		Interval TVD		Csg			
Size	From (ft)	To (ft)	From (ft)	To (ft)	OD	Weight	Grade	Conn
16"	0	2,161	0	2,030	13-3/8"	54.5#	J-55	STC
11"	0	7,951	0	5,650	9-5/8"	40#	J-55	LTC
7-7/8"	0	29,353	0	12,000	6"	24.5#	P110-EC	VAM Sprint-SF

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

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

Variance is also requested to waive any centralizer requirements for the 6" casing in the 7-7/8" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 7-7/8" hole interval to maximize cement bond and zonal isolation.

EOG requests permission to allow deviation from the 0.422" annulus clearance requirement for the intermediate (salt) section from Title 43 CFR Part 3170 under the following conditions:

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

5. CEMENTING PROGRAM:

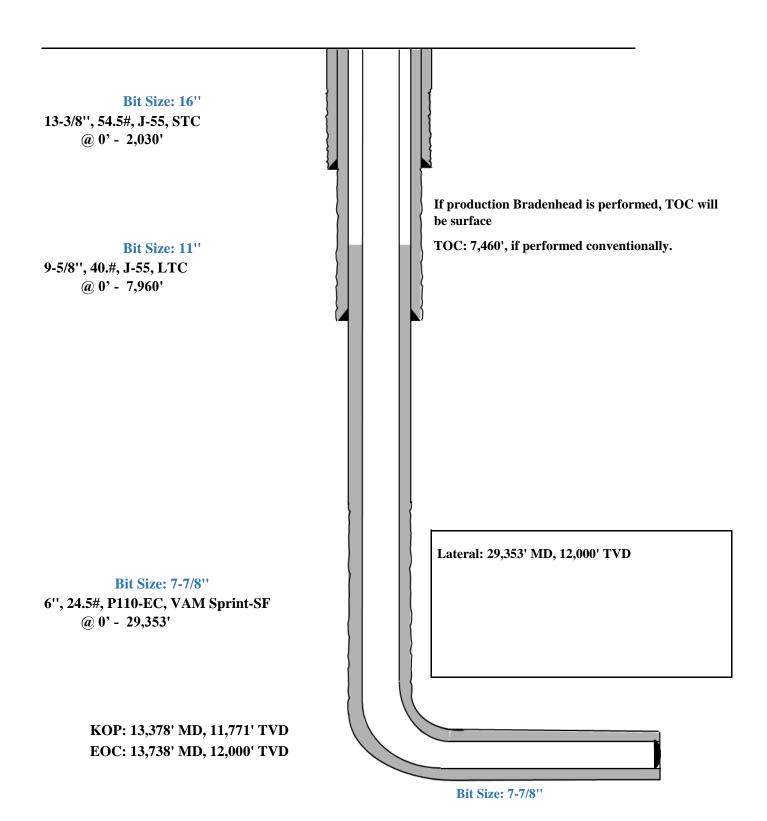
		Wt.	Yld	Slurry Description
Depth	No. Sacks	ppg	Ft3/sk	Sidify Description
2,030' 13-3/8"	570	13.5	1.73	Lead: Class C/H + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello- Flake (TOC @ Surface)
	160	14.8	1.34	Tail: Class C/H + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
8,050' 9-5/8"	760	12.7	2.22	Lead: Class C/H + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	250	14.8	1.32	Tail: Class C/H + 10% NaCL + 3% MagOx (TOC @ 6360')
29,353' 6"	1000	14.8	1.32	Bradenhead squeeze: Class C/H + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
	2500	13.2	1.52	Tail: Class C/H + 5% NEX-020 + 0.2% NAC-102 + 0.15% NAS-725 + 0.5% NFL-549 + 0.2% NFP-703 + 1% NBE-737 + 0.3% NRT-241 (TOC @ Top of Brushy)

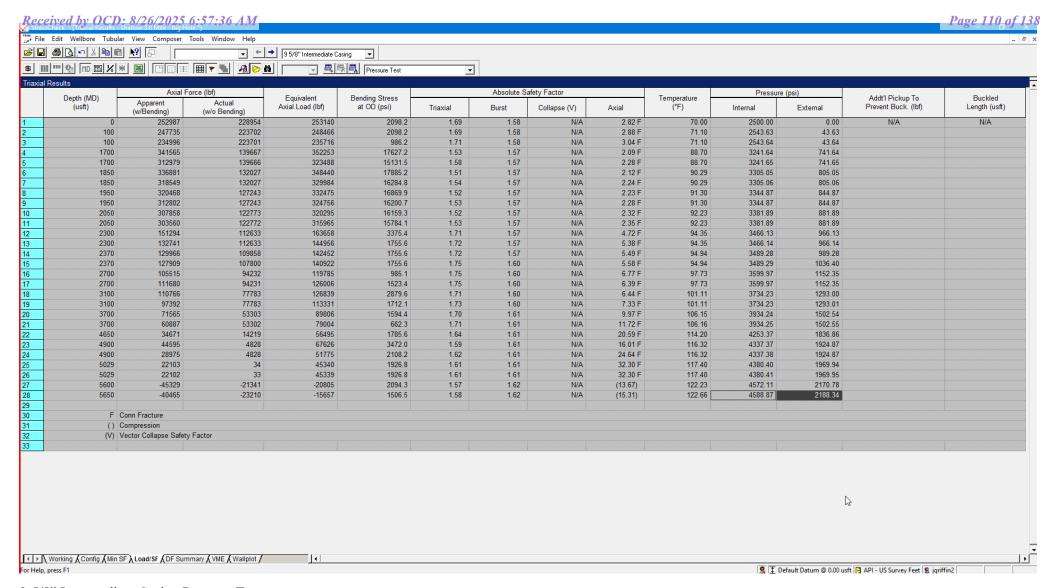


Shallow Design C

Proposed Wellbore

KB: 3558' GL: 3533'

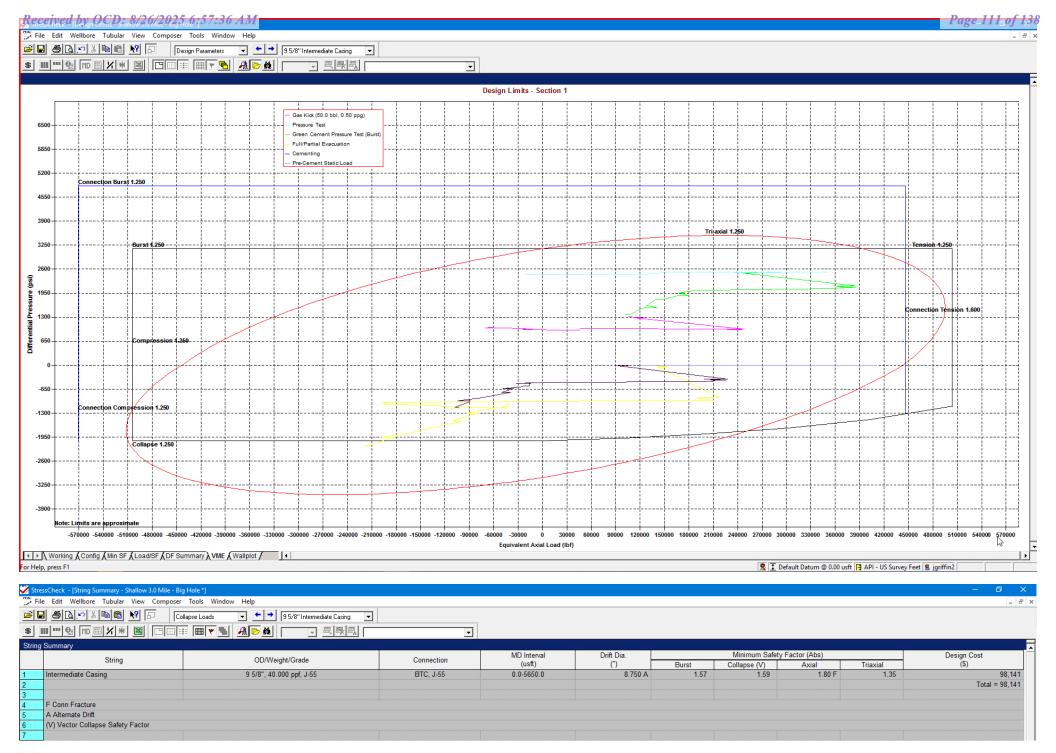




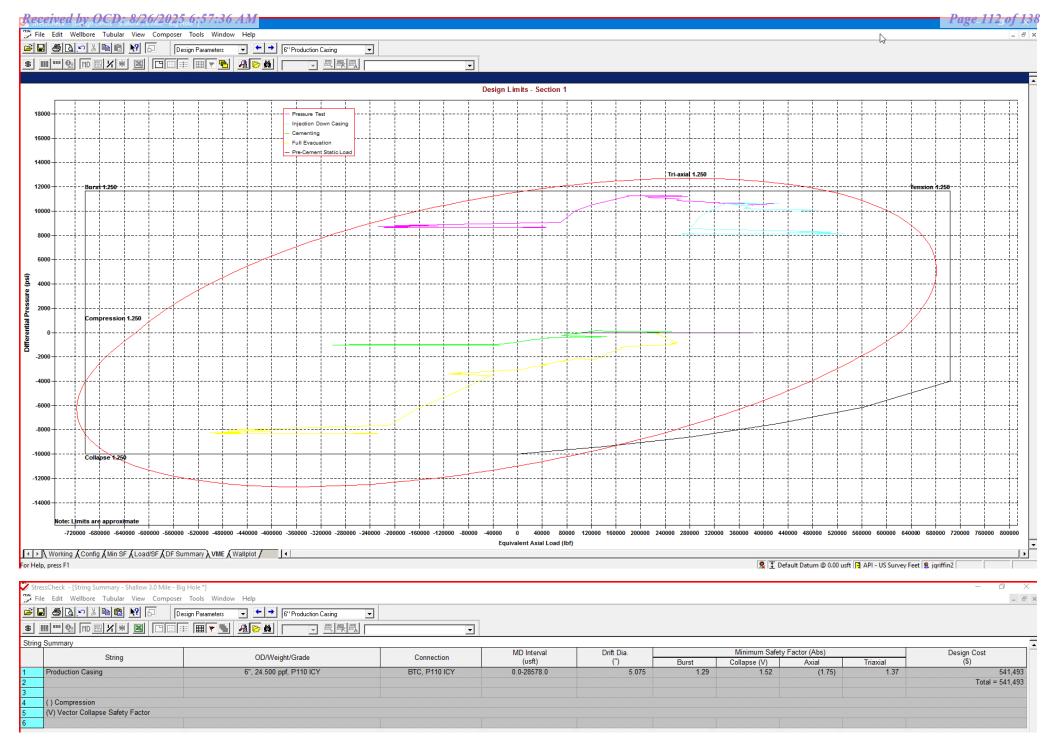
9-5/8" Intermediate Casing Pressure Test:

Internal Profile based off Surface Pressure + Hydrostatic: 4589 psi

External Profile based off Pore Pressure: 2188 psi



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



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



Shallow Design D

4. CASING PROGRAM

Hole	Interval MD		Interval MD Interval TVD		Csg			
Size	From (ft)	To (ft)	From (ft)	To (ft)	OD	Weight	Grade	Conn
16"	0	2,161	0	2,030	13-3/8"	54.5#	J-55	STC
11"	0	7,951	0	5,650	9-5/8"	40#	J-55	LTC
7-7/8"	0	13,278	0	11,671	6"	22.3#	P110-EC	DWC/C IS
6-3/4"	13,278	29,353	11,671	12,000	5-1/2"	20#	P110-EC	DWC/C IS MS

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

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

Variance is also requested to waive any centralizer requirements for the 6" and 5-1/2" casings in the 7-7/8" and 6-3/4" hole sizes. An expansion additive will be utilized in the cement slurry for the entire length of the 7-7/8" and 6-3/4" hole intervals to maximize cement bond and zonal isolation.

EOG requests permission to allow deviation from the 0.422" annulus clearance requirement for the intermediate (salt) section from Title 43 CFR Part 3170 under the following conditions:

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

5. CEMENTING PROGRAM:

		Wt.	Yld	Slurry Description
Depth	No. Sacks	ppg	Ft3/sk	Sidify Description
2,030' 13-3/8"	570	13.5	1.73	Lead: Class C/H + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello- Flake (TOC @ Surface)
	160	14.8	1.34	Tail: Class C/H + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
8,050' 9-5/8"	760	12.7	2.22	Lead: Class C/H + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	250	14.8	1.32	Tail: Class C/H + 10% NaCL + 3% MagOx (TOC @ 6360')
29,353' 6"	1000	14.8	1.32	Bradenhead squeeze: Class C/H + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
	2500	13.2	1.52	Tail: Class C/H + 5% NEX-020 + 0.2% NAC-102 + 0.15% NAS-725 + 0.5% NFL-549 + 0.2% NFP-703 + 1% NBE-737 + 0.3% NRT-241 (TOC @ Top of Brushy)

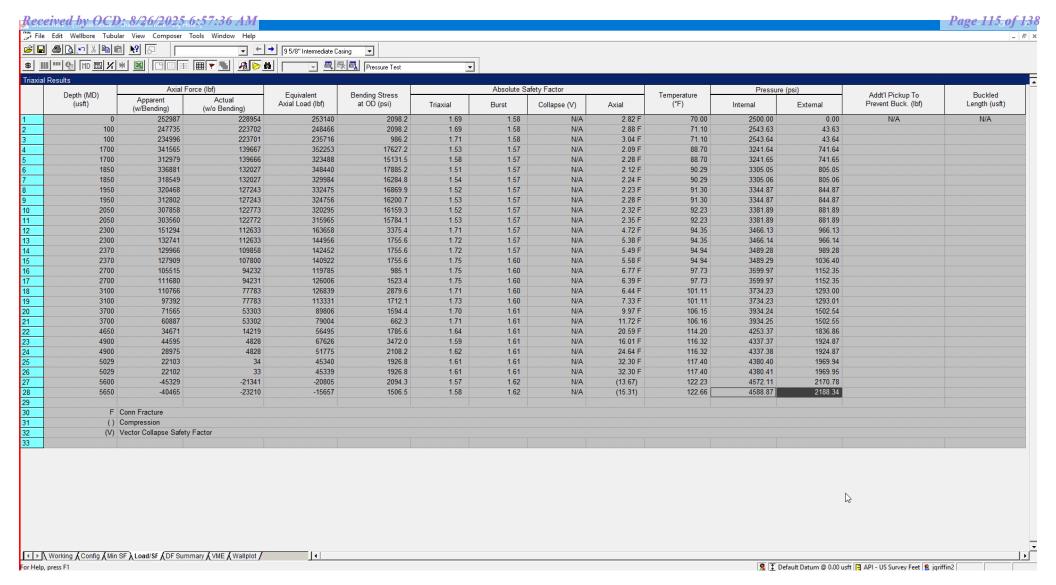


Shallow Design D

Proposed Wellbore

KB: 3558' GL: 3533'

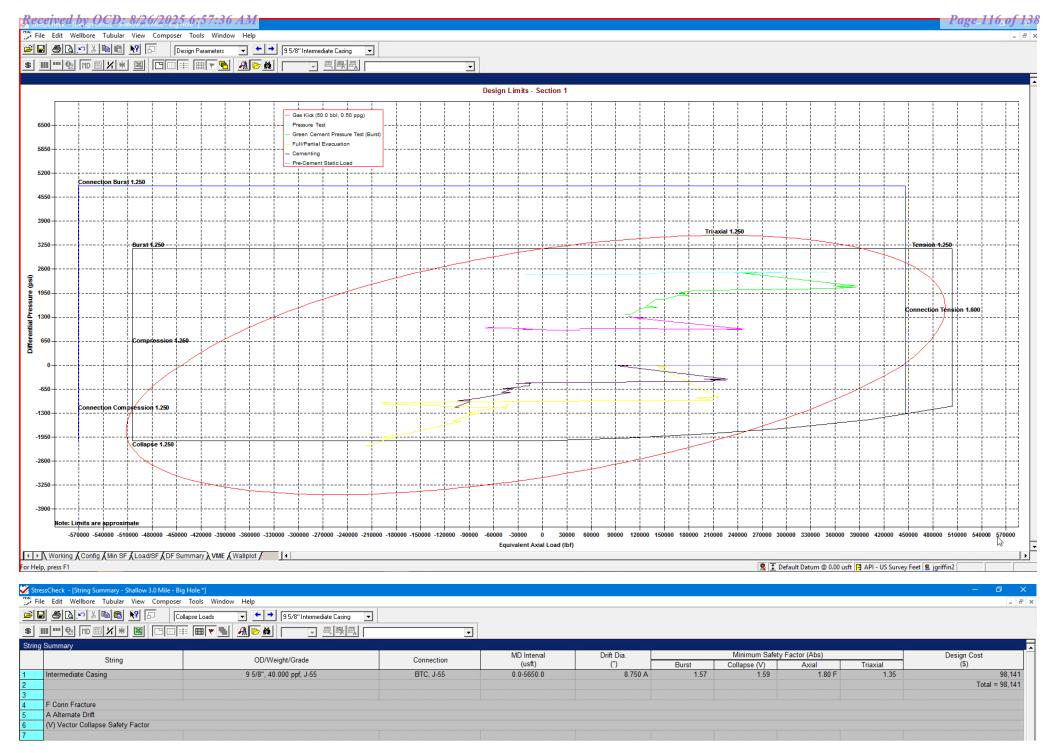
Bit Size: 16'' 13-3/8", 54.5#, J-55, STC @ 0' - 2,030' If production Bradenhead is performed, TOC will be surface TOC: 7,460', if performed conventionally. **Bit Size: 11''** 9-5/8", 40.#, J-55, LTC @ 0' - 7,960' Lateral: 29,353' MD, 12,000' TVD Bit Size: 7-7/8"|Bit Size: 6-3/4" 6", 22.3#, P110-EC, DWC/C IS @ 0' - 11,671' 5-1/2", 20.#, P110-EC, DWC/C IS MS @ 11,671' - 29,353' KOP: 13,378' MD, 11,771' TVD EOC: 13,738' MD, 12,000' TVD



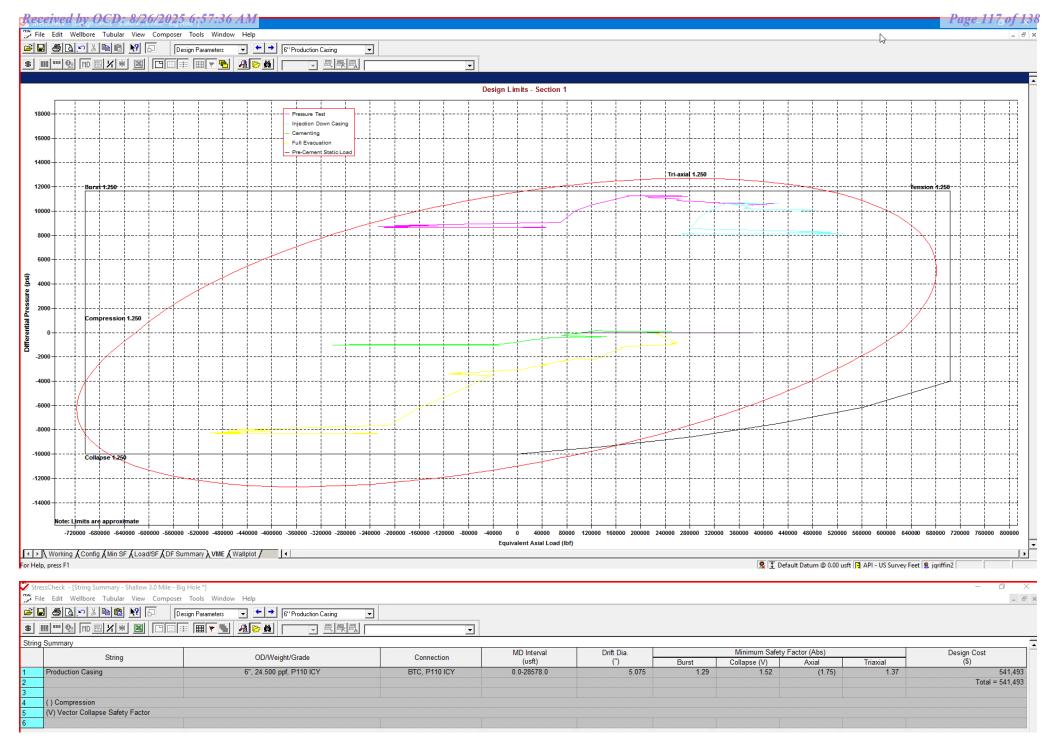
9-5/8" Intermediate Casing Pressure Test:

Internal Profile based off Surface Pressure + Hydrostatic: 4589 psi

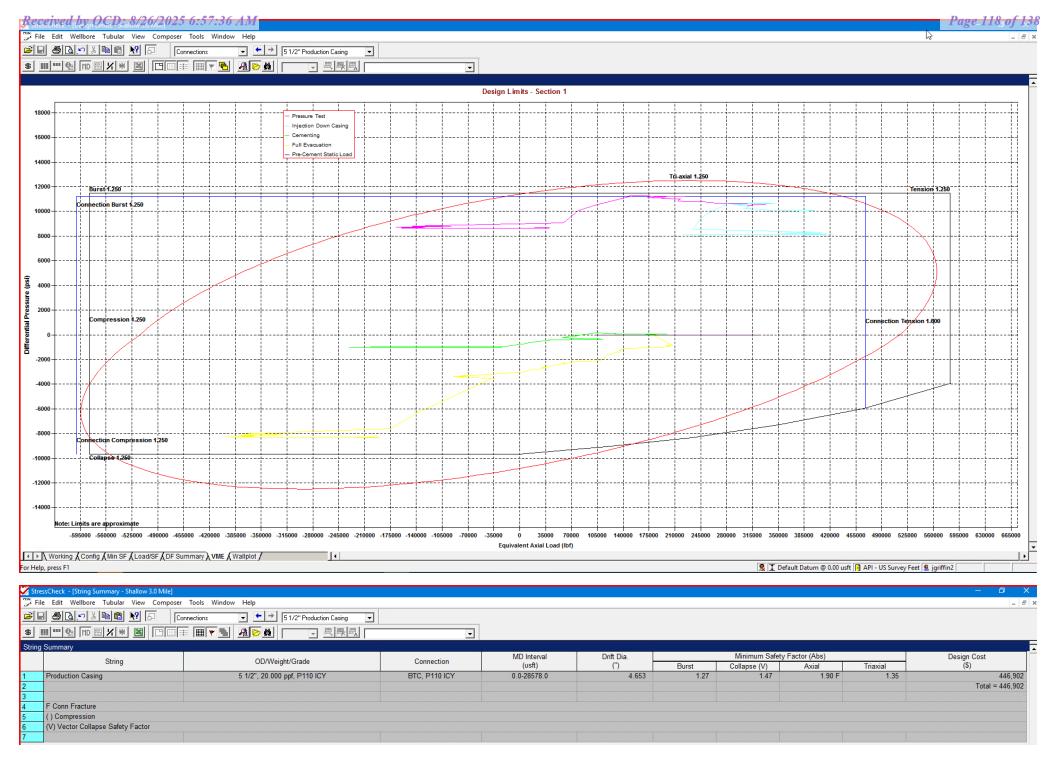
External Profile based off Pore Pressure: 2188 psi



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



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



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

Page 22 of 31



Shallow Casing Design E

1. CASING PROGRAM

Hole	Interval MD		Interva	l TVD	Csg			
Size	From (ft)	To (ft) From (ft)		To (ft)	OD	Weight	Grade	Conn
13"	0	2,025	0	2,025	10-3/4"	40.5#	J-55	STC
9-7/8"	0	7,793	0	5,645	8-5/8"	32#	J-55	BTC-SC
7-7/8"	0	12,626	0	10,896	6"	24.5#	P110-EC	VAM Sprint-TC
6-3/4"	12,626	28,578	10,896	11,225	5-1/2"	20#	P110-EC	VAM Sprint SF

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

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

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

Variance is also requested to waive any centralizer requirements for the 6" and 5-1/2" casings in the 7-7/8" and 6-3/4" hole sizes. An expansion additive will be utilized in the cement slurry for the entire length of the 7-7/8" and 6-3/4" hole intervals to maximize cement bond and zonal isolation.

EOG requests permission to allow deviation from the 0.422" annulus clearance requirement for the intermediate (salt) section from Title 43 CFR Part 3170 under the following conditions:

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

2. CEMENTING PROGRAM:

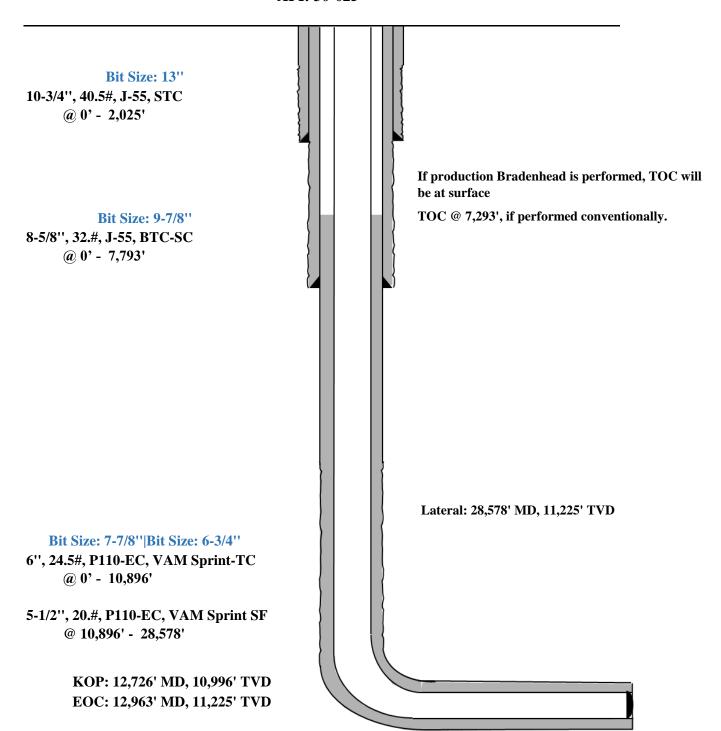
Depth	No. Sacks	Wt.	Yld Ft3/sk	Slurry Description
2,030' 10-3/4"	450	13.5	1.73	Lead: Class C/H + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	120	14.8	1.34	Tail: Class C/H + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1830')
7,890' 8-5/8"	460	12.7	2.22	Lead: Class C/H + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	210	14.8	1.32	Tail: Class C/H + 10% NaCL + 3% MagOx (TOC @ 6234')
28,578'	1000	14.8	1.32	Bradenhead squeeze: Class C/H + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
	2410	13.2	1.52	Tail: Class C/H + 5% NEX-020 + 0.2% NAC-102 + 0.15% NAS-725 + 0.5% NFL-549 + 0.2% NFP-703 + 1% NBE-737 + 0.3% NRT-241 (TOC @ 8140')

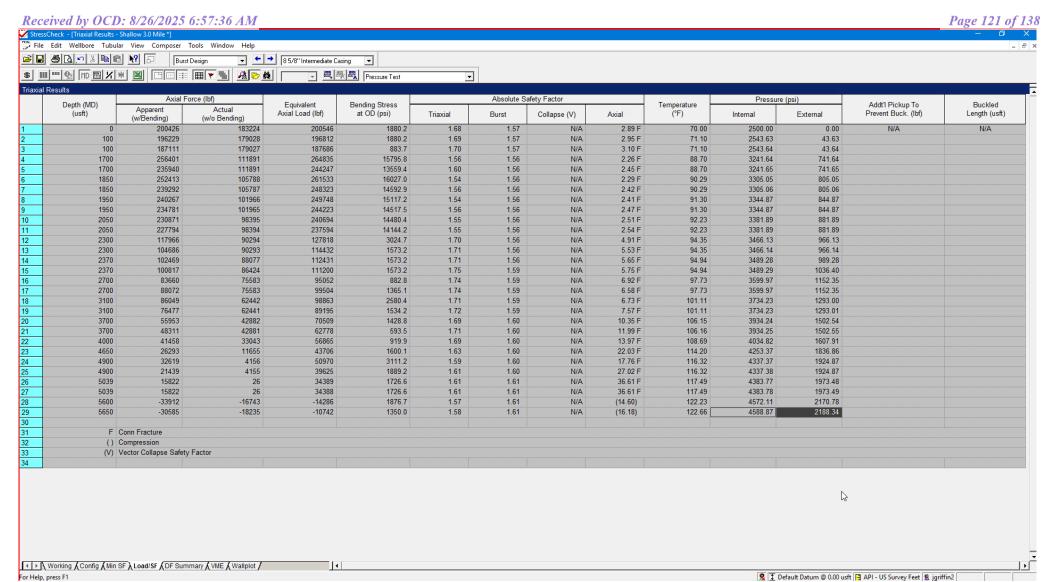
Shallow Casing Design E

Proposed Wellbore

KB: 3558' GL: 3533'

API: 30-025-****

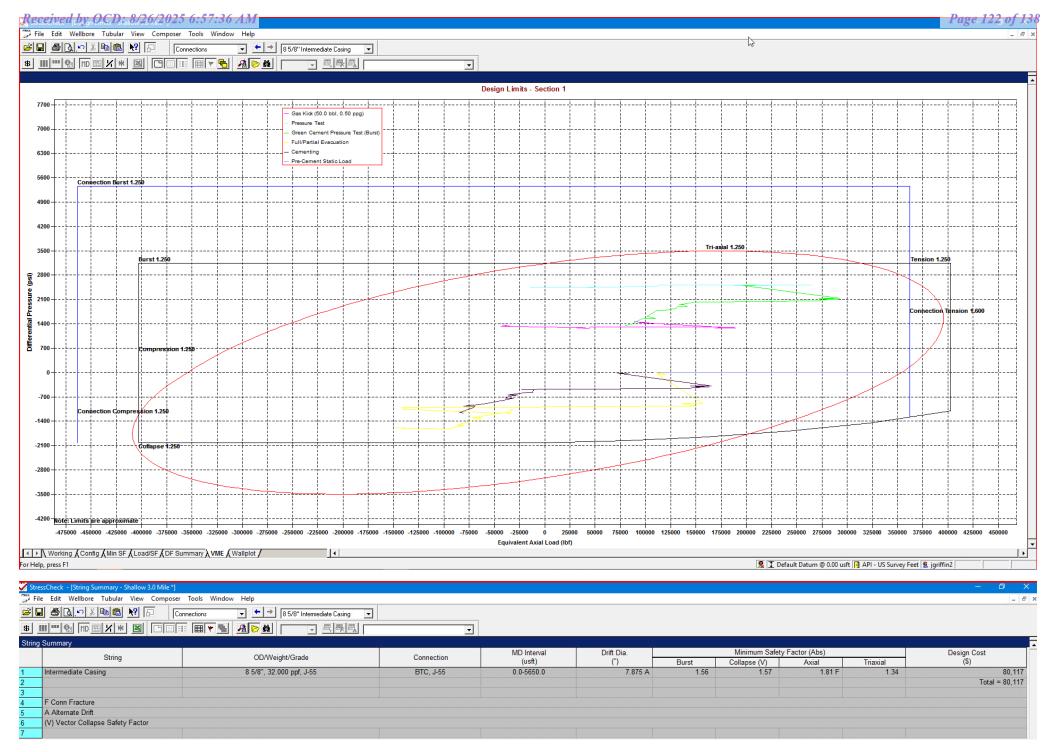




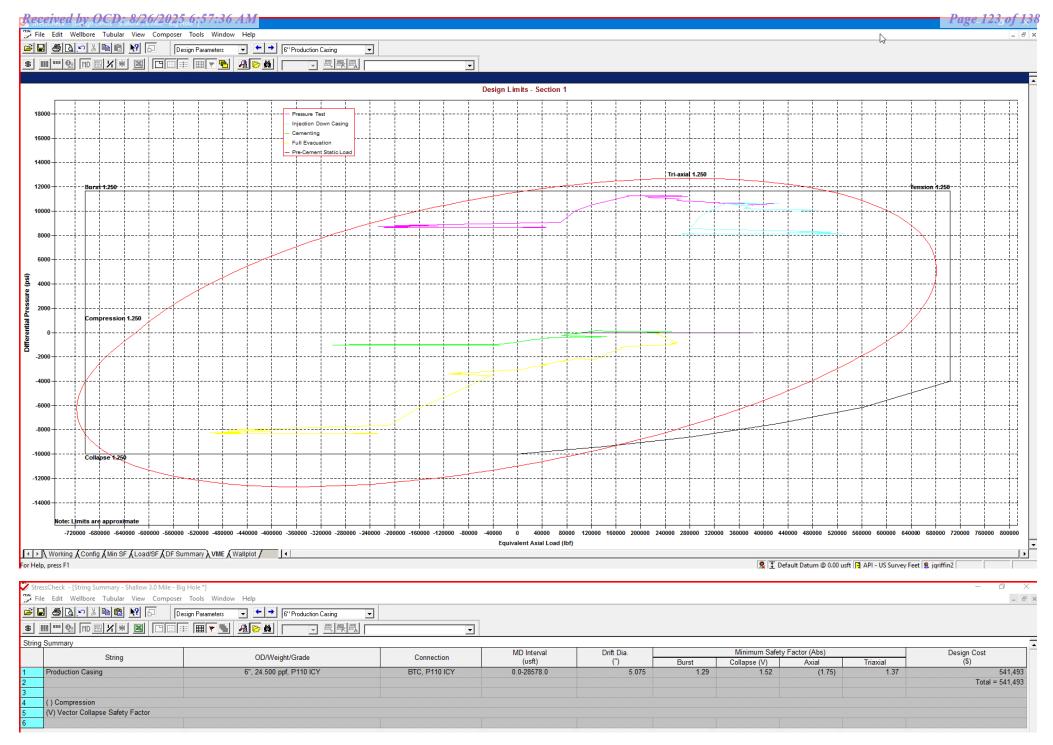
8-5/8" Intermediate Casing Pressure Test:

Internal Profile based off Surface Pressure + Hydrostatic: 4589 psi

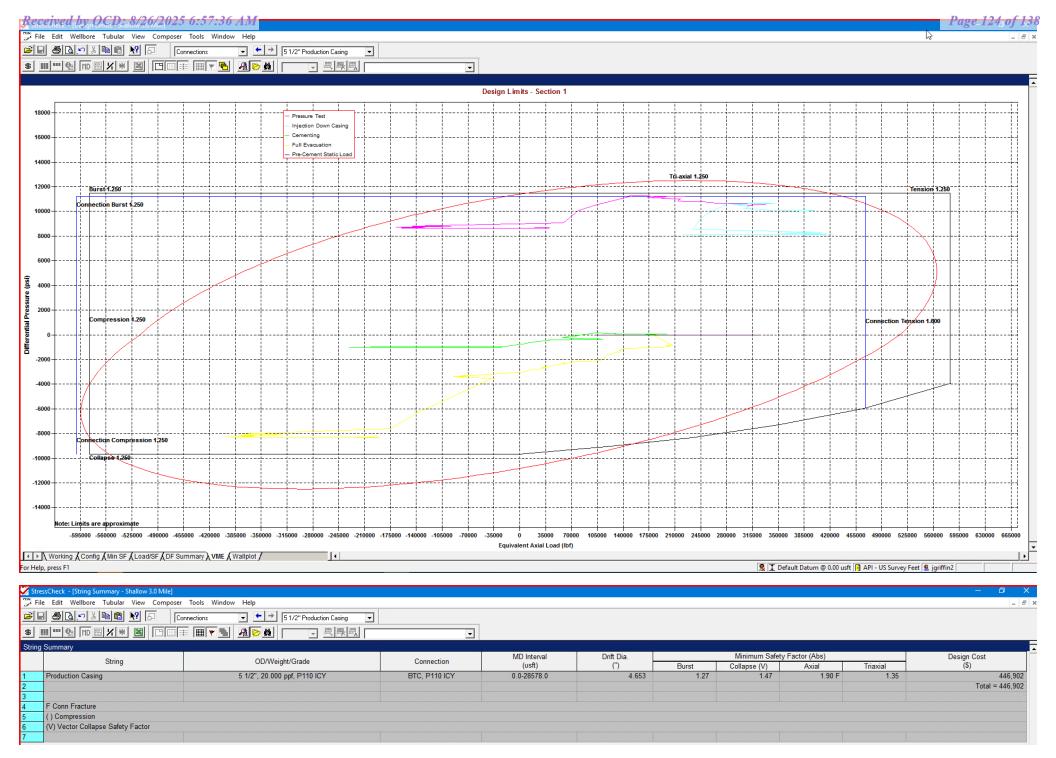
External Profile based off Pore Pressure: 2188 psi



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



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



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

Page 28 of 31



Shallow Casing Design 501H

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

Cement integrity tests will be performed immediately following plug bump.

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

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

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



MUD PROGRAM:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal. The applicable depths and properties of the drilling fluid systems are as follows:

Measured Depth	Туре	Weight (ppg)	Viscosity	Water Loss
0-2,030'	Fresh - Gel	8.6-8.8	28-34	N/c
2,030' – 7,793'	Brine	9-10.5	28-34	N/c
5,450' – 28,578' Lateral	Oil Base	8.8-9.5	58-68	N/c - 6

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

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



Appendix A - Spec Sheets

6,430

ft-lbs

Maximum Make-Up Torque

New Search »					Back to Previous List
					USC Metric
6/8/2015 10:04:37 AM			26	83	×
Mechanical Properties	Pipe	втс	LTC	STC	
Minimum Yield Strength	55,000	-	-	_	psi
Maximum Yield Strength	80,000	-		=	psi
Minimum Tensile Strength	75,000	20	_	-	psi
Dimensions	Ptpe	втс	LTC	STC	
Outside Diameter	13.375	14.375		14.375	in.
Wall Thickness	0.380	= 1	:=:::		in.
Inside Diameter	12.615	12.615		12.615	in.
Standard Drift	12.459	12.459		12.459	in.
Alternate Drift	~	-		_	in.
Nominal Linear Weight, T&C	54.50	-	1 - 12	3-3	lbs/ft
Plain End Weight	52.79		_	-	lbs/ft
Performance	Pipe	втс	LTC	STC	
Minimum Collapse Pressure	1,130	1,130	-	1,130	psi
Minimum Internal Yield Pressure	2,740	2,740	=-	2,740	psi
Minimum Pipe Body Yield Strength	853.00	2.1		-	1000 lbs
Joint Strength	-	909	- 3	514	1000 lbs
Reference Length	1 =	11,125	_	6,290	n
Make-Up Data	Ptpe	втс	LTC	STC	
Make-Up Loss	-	4.81		3.50	in.
Minimum Make-Up Torque	-		 3	3,860	ft-lbs
Released to Imaging: 8/28/2025 10:54:20 AM				6.430	ft lbe

Make-Up Loss

Minimum Make-Up Torque

Maximum Make-Up Torque

Released to Imaging: 8/28/2025 10:54:20 AM

New Search »					« Back to Previous List
					USC Metric
6/8/2015 10:23:27 AM	As-	8/	<u></u>	<u> </u>	Az.
Mechanical Properties	Ріре	втс	LTC	STC	
Minimum Yield Strength	55,000	-	4	-	psi
Maximum Yield Strength	80,000	-	-	-	psi
Minimum Tensile Strength	75,000	_	=	-	psi
Dimensions	Ріре	втс	LTC	STC	
Outside Diameter	9.625	10.625	10.625	10.625	in.
Wall Thickness	0.395	-	7.1	-	in.
Inside Diameter	8.835	8.835	8.835	8.835	in.
Standard Drift	8.679	8.679	8.679	8.679	in.
Alternate Drift	8.750	8.750	8.750	8.750	in.
Nominal Linear Weight, T&C	40.00		-	-	lbs/ft
Plain End Weight	38.97	-	-	_	lbs/ft
Performance	Ріре	втс	LTC	STC	
Minimum Collapse Pressure	2,570	2,570	2,570	2,570	psi
Minimum Internal Yield Pressure	3,950	3,950	3,950	3,950	psi
Minimum Pipe Body Yield Strength	630.00	-	-	-	1000 lbs
Joint Strength		714	520	452	1000 lbs
Reference Length	r- 	11,898	8,665	7,529	ft
Make-Up Data	Pipe	втс	LTC	STC	

4.81

4.75

3,900

6,500

3.38

3,390

5,650

in.

ft-lbs

ft-lbs





Connection Data Sheet

OD (in.) WEIGHT (lbs./ft.) 5.500 Nominal: 20.00

Plain End: 19.83

WALL (in.) 0.361

GRADE VST P110EC

729

787

14,360

12,090

API DRIFT (in.) 4.653

RBW% 87.5

CONNECTION PROPERTIES

CONNECTION DWC/C-IS MS

PIPE PROPERTIES Outside Diameter 5.500 in Inside Diameter 4.778 in Nominal Area 5.828 sq.in Grade Type **API 5CT** Min. Yield Strength 125 ks Max. Yield Strength 140 ks Min. Tensile Strength 135 ks

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

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

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

Need Help? Contact: tech.support@vam-usa.com Reference Drawing: 8136PP Rev.01 & 8136BP Rev.01

Date: 12/03/2019 Time: 06:19:27 PM

Yield Strength

Collapse

Ultimate Strength

Min. Internal Yield

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 ourpose 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.



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.

10.750 40.50/0.350 J55 PDF

New Search »

« Back to Previous List

USC Metric

6/8/2015 10:14:05 AM

Mechanical Properties	Pipe	втс	LTC	STC	
Minimum Yield Strength	55,000	-	-	-	psi
Maximum Yield Strength	80,000	-	-		psi
Minimum Tensile Strength	75,000	-	-	-	psi
Dimensions	Pipe	втс	LTC	STC	
Outside Diameter	10.750	11.750	-	11.750	in.
Wall Thickness	0.350				in.
Inside Diameter	10.050	10.050	-	10.050	in.
Standard Drift	9.894	9.894	-	9.894	in.
Alternate Drift	-	-	-	-	in.
Nominal Linear Weight, T&C	40.50		-		lbs/ft
Plain End Weight	38.91	-	-	-	lbs/ft
Performance	Pipe	втс	LTC	STC	
Minimum Collapse Pressure	1,580	1,580	-	1,580	psi
Minimum Internal Yield Pressure	3,130	3,130	-	3,130	psi
Minimum Pipe Body Yield Strength	629.00	-	-	-	1000 lbs
Joint Strength	-	700	-	420	1000 lbs
Reference Length	-	11,522	-	6,915	ft
Make-Up Data	Pipe	втс	LTC	STC	
Make-Up Loss	-	4.81	-	3.50	in.
Minimum Make-Up Torque				3,150	ft-lbs
Released to Imaging: 8/28/2025 10:54:20 AM Maximum Make-Up Torque		-	-	5,250	ft-lbs



API 5CT, 10th Ed. Connection Data Sheet

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

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

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

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

API Connection Torque						
	5	STC Tor	que (ft-lb	s)		
Min:	2,793	Opti:	3,724	Max:	4,655	
	LTC Torque (ft-lbs)					
Min:	3,130	Opti:	4,174	Max:	5,217	
	D-0 - (6.11.)					
BTC Torque (ft-lbs)						
follow API guidelines regarding positional make up						

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

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

ALL INFORMATION IS PROVIDED BY VALLOUREC 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, ACCURACY OR COMPLETENESS. THE INFORMATION CONTAINED IN THIS DOCUMENT IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND IS BASED ON ESTIMATES THAT HAVE NOT BEEN VERIFIED OR TESTED. IN NO EVENT SHALL VALLOUREC 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 VALLOUREC OR ITS AFFILIATES WERE ADVISED OF THE

Rev 3, 7/30/2021 POSSIBILITY OF SUCH DAMAGES. 10/21/2022 15:24

Issued on: 10 Feb. 2021 by Wesley Ott



Connection Data Sheet

OD Weight (lb/ft) Wall Th. Grade API Drift: Connection

6 in. Nominal: 24.50 Plain End: 23.95

O.400 in. P110EC 5.075 in. VAM® SPRINT-SF

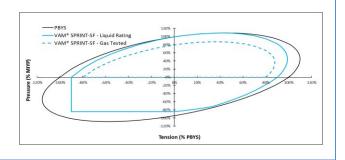
PI PE PROPERTI ES		
Nominal OD	6.000	in.
Nominal ID	5.200	in.
Nominal Cross Section Area	7.037	sqin.
Grade Type	Hig	jh Yield
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Ultimate Tensile Strength	135	ksi

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

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

21,750	ft.lb
24,250	ft.lb
26,750	ft.lb
53,000	ft.lb
	24,250 26,750

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



canada@vamfieldservice.com usa@vamfieldservice.com mexico@vamfieldservice.com brazil@vamfieldservice.com Do you need help on this product? - Remember no one knows VAM® like VAM®

uk@vamfieldservice.com dubai@vamfieldservice.com nigeria@vamfieldservice.com angola@vamfieldservice.com

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

china@vamfieldservice.com baku@vamfieldservice.com singapore@vamfieldservice.com australia@vamfieldservice.com



^{* 87.5%} RBW



Connection Data Sheet

 OD (in.)
 WEIGHT (lbs./ft.)
 WALL (in.)
 GRADE
 API DRIFT (in.)
 RBW%
 CONNECTION

 6.000
 Nominal: 22.30
 0.360
 VST P110EC
 5.155
 92.5
 DWC/C-IS

 Plain End: 21.70

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

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

Need Help? Contact: tech.support@vam-usa.com
Reference Drawing: 8135PP Rev.02 & 8135BP Rev.02

Date: 07/30/2020 Time: 07:50:47 PM

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

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

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.



VAM USA

2107 CityWest Boulevard Suite 1300

Houston, TX 77042 Phone: 713-479-3200 Fax: 713-479-3234

VAM® USA Sales E-mail: <u>VAMUSAsales@vam-usa.com</u> Tech Support Email: <u>tech.support@vam-usa.com</u>

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 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 one 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.



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

General Information Phone: (505) 629-6116

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

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

ACKNOWLEDGMENTS

Action 499176

ACKNOWLEDGMENTS

Operator:	OGRID:
EOG RESOURCES INC	7377
5509 Champions Drive	Action Number:
Midland, TX 79706	499176
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

ACKNOWLEDGMENTS

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

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

General Information Phone: (505) 629-6116

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

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

CONDITIONS

Action 499176

CONDITIONS

Operator:	OGRID:
EOG RESOURCES INC	7377
5509 Champions Drive	Action Number:
Midland, TX 79706	499176
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
sharrell1	Cement is required to circulate on both surface and intermediate1 strings of casing.	8/26/2025
sharrell1	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	8/26/2025
matthew.gomez	Notify the OCD 24 hours prior to casing & cement.	8/28/2025
matthew.gomez	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.	8/28/2025
matthew.gomez	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.	8/28/2025
matthew.gomez	File As Drilled C-102 and a directional Survey with C-104 completion packet.	8/28/2025
matthew.gomez	If an alteration to the setting depth of the intermediate casing shoe is desired a form C-103A must be approved prior to the change being made.	8/28/2025
matthew.gomez	No additives containing PFAS chemicals will be added to the drilling fluids or completion fluids used during drilling, completions, or recompletions operations.	8/28/2025