

Well Name: ROYAL OAK 25 FED COM	Well Location: T18S / R33E / SEC 25 / NWNW / 32.7254868 / -103.6209	County or Parish/State: LEA / NM
Well Number: 502H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM0245247	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002552845	Operator: AVANT OPERATING LLC	

Notice of Intent

Sundry ID: 2835970

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 02/07/2025	Time Sundry Submitted: 11:35
Date proposed operation will begin: 02/20/2025	

**Procedure Description:** Avant Operating, LLC would like to request to change the SHL, BHL, and target depth for the Royal Oak 25 Fed Com 502H well (API# 30-025-52845). The SHL will change from 160' FNL and 1300' FWL, to 320' FNL and 1340' FWL. The BHL will change from 100' FSL and 1650' FWL, to 100' FSL and 2178' FWL. The target depth will change from 9600' TVD to 9720' TVD. Please see the attached updated plat and documents for this request. Thank you!

NOI Attachments

Procedure Description

- Royal\_Oak\_25\_Fed\_Com\_502H\_Plan\_0.1\_20250207113522.pdf
- Royal\_Oak\_25\_Fed\_Com\_502H\_Plan\_0.1\_Report\_20250207113510.pdf
- Royal\_Oak\_25\_Fed\_Com\_502H\_Plan\_0.1\_AC\_20250207113459.pdf
- Royal\_Oak\_25\_Fed\_Com\_502H\_WBS\_\_Prelim\_\_20250207113451.pdf
- Coterra\_Energy\_\_\_Royal\_Oak\_25\_Fed\_Com\_\_\_502H\_\_\_Cement\_Program\_20250207113437.pdf
- Royal\_Oak\_25\_Fed\_Com\_502H\_C\_102\_SUB\_2.7.25\_20250207113424.pdf

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Lease Number: NMNM0245247	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002552845	Operator: AVANT OPERATING LLC	

Conditions of Approval

Additional

25\_18\_33\_D\_Sundry\_ID\_2835970\_Royal\_Oak\_25\_Fed\_Com\_502H\_Lea\_NM245247\_AVANT\_OPERATING\_LLC\_13\_22fa\_6\_12\_2023\_LV\_20250211102414.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: SARAH FERREYROS	Signed on: FEB 07, 2025 11:35 AM
Name: AVANT OPERATING LLC	
Title: Director of Regulatory	
Street Address: 1515 WYNKOOP	
City: DENVER	State: CO
Phone: (720) 854-9020	
Email address: SARAH@AVANTNR.COM	

Field

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

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752342234	BLM POC Email Address: cwalls@blm.gov
Disposition: Approved	Disposition Date: 02/12/2025
Signature: Chris Walls	

Form 3160-5  
(June 2019)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2021

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

5. Lease Serial No.	
6. If Indian, Allottee or Tribe Name	
7. If Unit of CA/Agreement, Name and/or No.	
8. Well Name and No.	
9. API Well No.	
10. Field and Pool or Exploratory Area	
11. Country or Parish, State	

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well		
<input type="checkbox"/> Oil Well	<input type="checkbox"/> Gas Well	<input type="checkbox"/> Other
2. Name of Operator		
3a. Address	3b. Phone No. (include area code)	
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		

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

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

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

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

**THE SPACE FOR FEDERAL OR STATE OFFICE USE**

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

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

(Instructions on page 2)

## GENERAL INSTRUCTIONS

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

## SPECIFIC INSTRUCTIONS

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

*Item 13*: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

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

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

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

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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



## Additional Information

### Location of Well

0. SHL: NWNW / 160 FNL / 1300 FWL / TWSP: 18S / RANGE: 33E / SECTION: 25 / LAT: 32.7254868 / LONG: -103.6209 ( TVD: 0 feet, MD: 0 feet )

PPP: NENW / 100 FNL / 1650 FWL / TWSP: 18S / RANGE: 33E / SECTION: 25 / LAT: 32.7256551 / LONG: -103.6197618 ( TVD: 9600 feet, MD: 9886 feet )

BHL: SESW / 100 FSL / 1650 FWL / TWSP: 18S / RANGE: 33E / SECTION: 36 / LAT: 32.6971829 / LONG: -103.6197523 ( TVD: 9600 feet, MD: 19805 feet )

25-18-33-D Sundry ID 2835970 Royal Oak 25 Fed Com 502H Lea NM245247 AVANT OPERATING LLC 13-22fa 6-12-2023 LV

## Royal Oak 25 Fed Com 502H

13 3/8		surface csg in a		17 1/2		inch hole.		Design Factors				Surface		
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight		
"A"	54.50		j 55	ltc	5.51	1.28	0.95	1,711	4	1.65	2.24	93,250		
"B"				ltc				0				0		
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,171				Tail Cmt	does not	circ to sfc.	Totals:	1,711				93,250		
Comparison of Proposed to Minimum Required Cement Volumes														
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd				Min Dist		
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cplg		
17 1/2	0.6946	965	1745	1189	47	9.90	1663	2M				2.06		
Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.														
Site plot (pipe racks 3 or 4) as per O.D. 138.D.3.1 not found														

9 5/8		casing inside the		13 3/8		Design Factors				Int 1		
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	40.00		j 55	ltc	2.33	1.24	0.82	4,000	1	1.49	2.15	160,000
"B"	40.00		hcl 80	ltc	13.19	1.47	1.2	1,586	2	2.16	2.54	63,440
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,020								Totals:	5,586	223,440		
The cement volume(s) are intended to achieve a top of								0	ft from surface or a		1711	overlap.
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd	Min Dist			
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE	Hole-Cplg			
12 1/4	0.3132	1109	2118	1834	15	10.00	2658	3M	0.81			
r D V Tool(s):								sum of sx	Σ CuFt	Σ%excess		
t by stage % :								1109	2118	15		
Class 'H' tail cmt yld > 1.20												
Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.99, b, c, d All > 0.70, OK.												

5 1/2		casing inside the		9 5/8		Design Factors				Prod 1					
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight			
"A"	20.00		hpc 110	gbcd	3.52	2.54	2.99	19,987	3	5.40	4.59	399,740			
"B"								0				0			
"C"								0				0			
"D"				0				0				0			
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,138								Totals:	19,987			399,740			
The cement volume(s) are intended to achieve a top of												5386	ft from surface or a	200	overlap.
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd				Min Dist			
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cplg			
8 3/4	0.2526	3540	6127	3690	66	9.50						1.23			
Class 'C' tail cmt yld > 1.35															

#N/A											
0	5 1/2			Design Factors				<Choose Casing>			
Segment	#/ft	Grade	Coupling	#N/A	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"			0.00				0				0
"B"			0.00				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	0			0
Cmt vol calc below includes this csg, TOC intended							#N/A	ft from surface or a	#N/A		overlap.
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd			Min Dist
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE			Hole-Cplg
0		#N/A	#N/A	0	#N/A						
#N/A Capitan Reef est top XXXX.											

**WELL DETAILS: Royal Oak 25 Fed Com #502H**

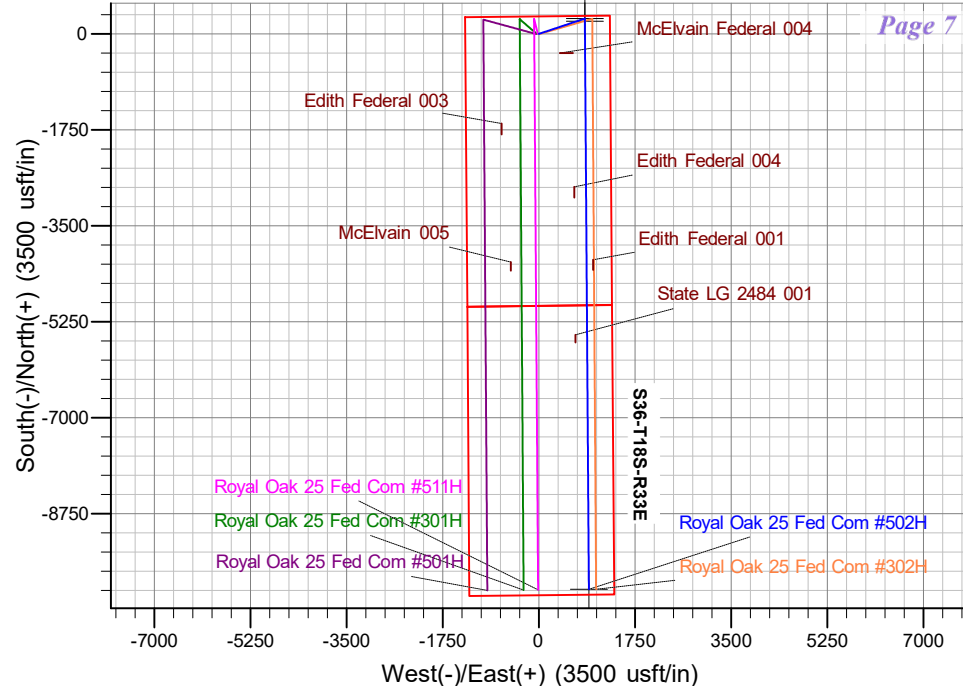
Ground Elev: 3870.0 KB: 3896.5

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	628240.27	760470.26	32.725047	-103.620770

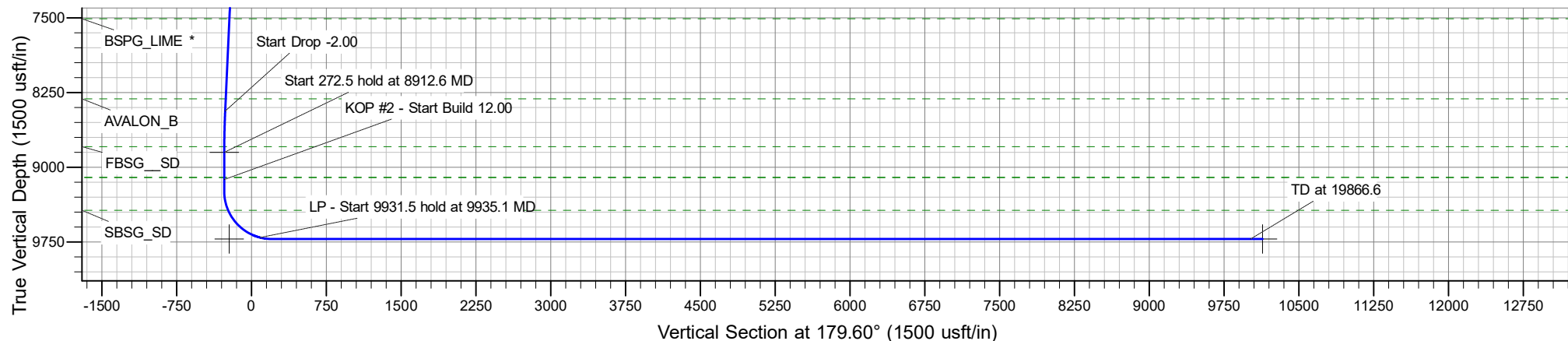
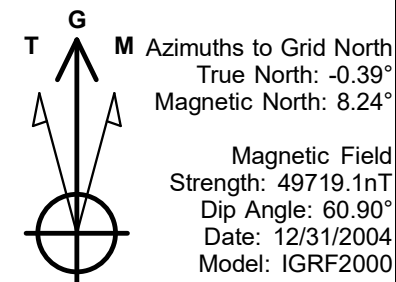
**PROJECT DETAILS: Lea Co., NM (NAD 83)**

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

System Datum: Mean Sea Level

**SECTION DETAILS**

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2400.0	0.00	0.00	2400.0	0.0	0.0	0.00	0.00	0.0	KOP - Start Build 2.00
3	2815.5	8.31	71.55	2814.0	9.5	28.5	2.00	71.55	-9.3	Start 5681.6 hold at 2815.5 MD
4	8497.1	8.31	71.55	8436.0	269.3	807.5	0.00	0.00	-263.7	Start Drop -2.00
5	8912.6	0.00	0.00	8850.0	278.8	836.0	2.00	180.00	-273.0	Start 272.5 hold at 8912.6 MD
6	9305.1	0.00	0.00	9242.5	278.8	836.0	0.00	0.00	-273.0	
7	10055.1	90.00	179.60	9720.0	-198.6	839.4	12.00	179.60	204.5	
8	19986.6	90.00	179.60	9720.0	-10129.8	909.1	0.00	0.00	10135.9	



# **Avant Operating, LLC**

**Lea Co., NM (NAD 83)**

**Royal Oak 25 Fed Com Pad 2**

**Royal Oak 25 Fed Com #502H**

**OH**

**Plan: Plan 0.1**

## **Standard Planning Report**

**04 February, 2025**

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Royal Oak 25 Fed Com #502H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3896.5usft (3896.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3896.5usft (3896.5)
Site:	Royal Oak 25 Fed Com Pad 2	North Reference:	Grid
Well:	Royal Oak 25 Fed Com #502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.1		

Project	Lea Co., NM (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Royal Oak 25 Fed Com Pad 2		
Site Position:		Northing:	628,331.07 usft
From:	Map	Easting:	760,434.75 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32.725297
		Longitude:	-103.620883

Well	Royal Oak 25 Fed Com #502H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	
Grid Convergence:	0.39 °		
		Latitude:	32.725047
		Longitude:	-103.620770
		Ground Level:	3,870.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2000	12/31/2004	8.62	60.90	49,719.13924449

Design	Plan 0.1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	179.60	

Plan Survey Tool Program	Date	2/4/2025			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	19,986.6 Plan 0.1 (OH)	B001Mb_MWD+HRGM		
			OWSG MWD + HRGM		

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	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,815.5	8.31	71.55	2,814.0	9.5	28.5	2.00	2.00	0.00	71.55	
8,497.1	8.31	71.55	8,436.0	269.3	807.5	0.00	0.00	0.00	0.00	
8,912.6	0.00	0.00	8,850.0	278.8	836.0	2.00	-2.00	0.00	180.00	KOP-Royal Oak 25 Fed
9,305.1	0.00	0.00	9,242.5	278.8	836.0	0.00	0.00	0.00	0.00	
10,055.1	90.00	179.60	9,720.0	-198.6	839.4	12.00	12.00	0.00	179.60	
19,986.6	90.00	179.60	9,720.0	-10,129.8	909.1	0.00	0.00	0.00	0.00	LTP/PBHL-Royal Oak

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Royal Oak 25 Fed Com #502H
<b>Company:</b>	Avant Operating, LLC	<b>TVD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Project:</b>	Lea Co., NM (NAD 83)	<b>MD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Site:</b>	Royal Oak 25 Fed Com Pad 2	<b>North Reference:</b>	Grid
<b>Well:</b>	Royal Oak 25 Fed Com #502H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 0.1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,628.0	0.00	0.00	1,628.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>RUSTLER</b>									
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,951.0	0.00	0.00	1,951.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>SOLADO</b>									
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP - Start Build 2.00</b>									
2,500.0	2.00	71.55	2,500.0	0.6	1.7	-0.5	2.00	2.00	0.00
2,600.0	4.00	71.55	2,599.8	2.2	6.6	-2.2	2.00	2.00	0.00
2,700.0	6.00	71.55	2,699.5	5.0	14.9	-4.9	2.00	2.00	0.00
2,800.0	8.00	71.55	2,798.7	8.8	26.4	-8.6	2.00	2.00	0.00
2,815.5	8.31	71.55	2,814.0	9.5	28.5	-9.3	2.00	2.00	0.00
<b>Start 5681.6 hold at 2815.5 MD</b>									
2,900.0	8.31	71.55	2,897.7	13.4	40.1	-13.1	0.00	0.00	0.00
3,000.0	8.31	71.55	2,996.6	18.0	53.8	-17.6	0.00	0.00	0.00
3,100.0	8.31	71.55	3,095.6	22.5	67.5	-22.1	0.00	0.00	0.00
3,200.0	8.31	71.55	3,194.5	27.1	81.2	-26.5	0.00	0.00	0.00
3,300.0	8.31	71.55	3,293.5	31.7	95.0	-31.0	0.00	0.00	0.00
3,400.0	8.31	71.55	3,392.4	36.2	108.7	-35.5	0.00	0.00	0.00
3,500.0	8.31	71.55	3,491.4	40.8	122.4	-40.0	0.00	0.00	0.00
3,600.0	8.31	71.55	3,590.3	45.4	136.1	-44.4	0.00	0.00	0.00
3,651.2	8.31	71.55	3,641.0	47.7	143.1	-46.7	0.00	0.00	0.00
<b>YATES</b>									
3,700.0	8.31	71.55	3,689.3	50.0	149.8	-48.9	0.00	0.00	0.00
3,800.0	8.31	71.55	3,788.2	54.5	163.5	-53.4	0.00	0.00	0.00
3,900.0	8.31	71.55	3,887.2	59.1	177.2	-57.9	0.00	0.00	0.00
4,000.0	8.31	71.55	3,986.1	63.7	190.9	-62.3	0.00	0.00	0.00
4,100.0	8.31	71.55	4,085.1	68.3	204.6	-66.8	0.00	0.00	0.00
4,200.0	8.31	71.55	4,184.0	72.8	218.4	-71.3	0.00	0.00	0.00
4,300.0	8.31	71.55	4,283.0	77.4	232.1	-75.8	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Royal Oak 25 Fed Com #502H
<b>Company:</b>	Avant Operating, LLC	<b>TVD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Project:</b>	Lea Co., NM (NAD 83)	<b>MD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Site:</b>	Royal Oak 25 Fed Com Pad 2	<b>North Reference:</b>	Grid
<b>Well:</b>	Royal Oak 25 Fed Com #502H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 0.1		

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)
4,400.0	8.31	71.55	4,381.9	82.0	245.8	-80.3	0.00	0.00	0.00
4,500.0	8.31	71.55	4,480.9	86.5	259.5	-84.7	0.00	0.00	0.00
4,600.0	8.31	71.55	4,579.8	91.1	273.2	-89.2	0.00	0.00	0.00
4,700.0	8.31	71.55	4,678.8	95.7	286.9	-93.7	0.00	0.00	0.00
4,800.0	8.31	71.55	4,777.7	100.3	300.6	-98.2	0.00	0.00	0.00
4,900.0	8.31	71.55	4,876.7	104.8	314.3	-102.6	0.00	0.00	0.00
5,000.0	8.31	71.55	4,975.6	109.4	328.0	-107.1	0.00	0.00	0.00
5,100.0	8.31	71.55	5,074.6	114.0	341.7	-111.6	0.00	0.00	0.00
5,200.0	8.31	71.55	5,173.5	118.6	355.5	-116.1	0.00	0.00	0.00
5,300.0	8.31	71.55	5,272.5	123.1	369.2	-120.5	0.00	0.00	0.00
5,400.0	8.31	71.55	5,371.4	127.7	382.9	-125.0	0.00	0.00	0.00
5,500.0	8.31	71.55	5,470.4	132.3	396.6	-129.5	0.00	0.00	0.00
5,600.0	8.31	71.55	5,569.3	136.8	410.3	-134.0	0.00	0.00	0.00
5,685.6	8.31	71.55	5,654.0	140.8	422.0	-137.8	0.00	0.00	0.00
CHERRY_CNYN									
5,700.0	8.31	71.55	5,668.3	141.4	424.0	-138.5	0.00	0.00	0.00
5,800.0	8.31	71.55	5,767.2	146.0	437.7	-142.9	0.00	0.00	0.00
5,900.0	8.31	71.55	5,866.2	150.6	451.4	-147.4	0.00	0.00	0.00
6,000.0	8.31	71.55	5,965.1	155.1	465.1	-151.9	0.00	0.00	0.00
6,100.0	8.31	71.55	6,064.1	159.7	478.9	-156.4	0.00	0.00	0.00
6,200.0	8.31	71.55	6,163.0	164.3	492.6	-160.8	0.00	0.00	0.00
6,300.0	8.31	71.55	6,262.0	168.9	506.3	-165.3	0.00	0.00	0.00
6,400.0	8.31	71.55	6,360.9	173.4	520.0	-169.8	0.00	0.00	0.00
6,500.0	8.31	71.55	6,459.9	178.0	533.7	-174.3	0.00	0.00	0.00
6,600.0	8.31	71.55	6,558.8	182.6	547.4	-178.8	0.00	0.00	0.00
6,700.0	8.31	71.55	6,657.8	187.1	561.1	-183.2	0.00	0.00	0.00
6,800.0	8.31	71.55	6,756.7	191.7	574.8	-187.7	0.00	0.00	0.00
6,900.0	8.31	71.55	6,855.7	196.3	588.5	-192.2	0.00	0.00	0.00
7,000.0	8.31	71.55	6,954.6	200.9	602.2	-196.7	0.00	0.00	0.00
7,100.0	8.31	71.55	7,053.6	205.4	616.0	-201.1	0.00	0.00	0.00
7,200.0	8.31	71.55	7,152.5	210.0	629.7	-205.6	0.00	0.00	0.00
7,284.4	8.31	71.55	7,236.0	213.9	641.2	-209.4	0.00	0.00	0.00
BYCN_MKR									
7,300.0	8.31	71.55	7,251.5	214.6	643.4	-210.1	0.00	0.00	0.00
7,400.0	8.31	71.55	7,350.4	219.2	657.1	-214.6	0.00	0.00	0.00
7,500.0	8.31	71.55	7,449.4	223.7	670.8	-219.0	0.00	0.00	0.00
7,559.3	8.31	71.55	7,508.0	226.4	678.9	-221.7	0.00	0.00	0.00
BSPG_LIME *									
7,600.0	8.31	71.55	7,548.3	228.3	684.5	-223.5	0.00	0.00	0.00
7,700.0	8.31	71.55	7,647.3	232.9	698.2	-228.0	0.00	0.00	0.00
7,800.0	8.31	71.55	7,746.2	237.5	711.9	-232.5	0.00	0.00	0.00
7,900.0	8.31	71.55	7,845.2	242.0	725.6	-237.0	0.00	0.00	0.00
8,000.0	8.31	71.55	7,944.1	246.6	739.3	-241.4	0.00	0.00	0.00
8,100.0	8.31	71.55	8,043.1	251.2	753.1	-245.9	0.00	0.00	0.00
8,200.0	8.31	71.55	8,142.0	255.7	766.8	-250.4	0.00	0.00	0.00
8,300.0	8.31	71.55	8,241.0	260.3	780.5	-254.9	0.00	0.00	0.00
8,372.8	8.31	71.55	8,313.0	263.6	790.5	-258.1	0.00	0.00	0.00
AVALON_B									
8,400.0	8.31	71.55	8,339.9	264.9	794.2	-259.3	0.00	0.00	0.00
8,497.1	8.31	71.55	8,436.0	269.3	807.5	-263.7	0.00	0.00	0.00
Start Drop -2.00									
8,500.0	8.25	71.55	8,438.9	269.5	807.9	-263.8	2.00	-2.00	0.00
8,600.0	6.25	71.55	8,538.1	273.5	819.9	-267.7	2.00	-2.00	0.00

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Royal Oak 25 Fed Com #502H
<b>Company:</b>	Avant Operating, LLC	<b>TVD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Project:</b>	Lea Co., NM (NAD 83)	<b>MD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Site:</b>	Royal Oak 25 Fed Com Pad 2	<b>North Reference:</b>	Grid
<b>Well:</b>	Royal Oak 25 Fed Com #502H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 0.1		

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)
8,700.0	4.25	71.55	8,637.6	276.3	828.6	-270.6	2.00	-2.00	0.00
8,800.0	2.25	71.55	8,737.5	278.1	833.9	-272.3	2.00	-2.00	0.00
8,854.6	1.16	71.55	8,792.0	278.7	835.5	-272.8	2.00	-2.00	0.00
<b>FBSG_SD</b>									
8,900.0	0.25	71.55	8,837.4	278.8	836.0	-273.0	2.00	-2.00	0.00
8,912.6	0.00	0.00	8,850.0	278.8	836.0	-273.0	2.00	-2.00	0.00
<b>Start 272.5 hold at 8912.6 MD - KOP-Royal Oak 25 Fed Com #502H</b>									
9,000.0	0.00	0.00	8,937.4	278.8	836.0	-273.0	0.00	0.00	0.00
9,100.0	0.00	0.00	9,037.4	278.8	836.0	-273.0	0.00	0.00	0.00
9,162.6	0.00	0.00	9,100.0	278.8	836.0	-273.0	0.00	0.00	0.00
<b>SBSG_SHALE *</b>									
9,165.6	0.00	0.00	9,103.0	278.8	836.0	-273.0	0.00	0.00	0.00
<b>SBSG_CARB</b>									
9,185.1	0.00	0.00	9,122.5	278.8	836.0	-273.0	0.00	0.00	0.00
<b>KOP #2 - Start Build 12.00</b>									
9,200.0	0.00	0.00	9,137.4	278.8	836.0	-273.0	0.00	0.00	0.00
9,300.0	0.00	0.00	9,237.4	278.8	836.0	-273.0	0.00	0.00	0.00
9,305.1	0.00	0.00	9,242.5	278.8	836.0	-273.0	0.00	0.00	0.00
9,400.0	11.39	179.60	9,336.8	269.4	836.1	-263.6	12.00	12.00	0.00
9,499.9	23.38	179.60	9,432.0	239.6	836.3	-233.8	12.00	12.00	0.00
<b>SBSG_SD</b>									
9,500.0	23.39	179.60	9,432.1	239.6	836.3	-233.8	12.00	12.00	0.00
9,600.0	35.39	179.60	9,519.0	190.6	836.7	-184.8	12.00	12.00	0.00
9,700.0	47.39	179.60	9,593.9	124.6	837.1	-118.8	12.00	12.00	0.00
<b>FTP-Royal Oak 25 Fed Com #502H</b>									
9,800.0	59.39	179.60	9,653.5	44.5	837.7	-38.7	12.00	12.00	0.00
9,900.0	71.39	179.60	9,695.0	-46.2	838.3	52.1	12.00	12.00	0.00
9,935.1	75.60	179.60	9,705.0	-79.9	838.5	85.7	12.00	12.00	0.00
<b>LP - Start 9931.5 hold at 9935.1 MD</b>									
10,000.0	83.39	179.60	9,716.8	-143.6	839.0	149.5	12.00	12.00	0.00
10,055.1	90.00	179.60	9,720.0	-198.6	839.4	204.5	12.00	12.00	0.00
10,100.0	90.00	179.60	9,720.0	-243.5	839.7	249.4	0.00	0.00	0.00
10,200.0	90.00	179.60	9,720.0	-343.5	840.4	349.4	0.00	0.00	0.00
10,300.0	90.00	179.60	9,720.0	-443.5	841.1	449.4	0.00	0.00	0.00
10,400.0	90.00	179.60	9,720.0	-543.5	841.8	549.4	0.00	0.00	0.00
10,500.0	90.00	179.60	9,720.0	-643.5	842.5	649.4	0.00	0.00	0.00
10,600.0	90.00	179.60	9,720.0	-743.5	843.2	749.4	0.00	0.00	0.00
10,700.0	90.00	179.60	9,720.0	-843.5	843.9	849.4	0.00	0.00	0.00
10,800.0	90.00	179.60	9,720.0	-943.5	844.6	949.4	0.00	0.00	0.00
10,900.0	90.00	179.60	9,720.0	-1,043.5	845.3	1,049.4	0.00	0.00	0.00
11,000.0	90.00	179.60	9,720.0	-1,143.5	846.0	1,149.4	0.00	0.00	0.00
11,100.0	90.00	179.60	9,720.0	-1,243.5	846.7	1,249.4	0.00	0.00	0.00
11,200.0	90.00	179.60	9,720.0	-1,343.5	847.4	1,349.4	0.00	0.00	0.00
11,300.0	90.00	179.60	9,720.0	-1,443.5	848.1	1,449.4	0.00	0.00	0.00
11,400.0	90.00	179.60	9,720.0	-1,543.5	848.8	1,549.4	0.00	0.00	0.00
11,500.0	90.00	179.60	9,720.0	-1,643.5	849.5	1,649.4	0.00	0.00	0.00
11,600.0	90.00	179.60	9,720.0	-1,743.5	850.2	1,749.4	0.00	0.00	0.00
11,700.0	90.00	179.60	9,720.0	-1,843.5	850.9	1,849.4	0.00	0.00	0.00
11,800.0	90.00	179.60	9,720.0	-1,943.5	851.6	1,949.4	0.00	0.00	0.00
11,900.0	90.00	179.60	9,720.0	-2,043.5	852.3	2,049.4	0.00	0.00	0.00
12,000.0	90.00	179.60	9,720.0	-2,143.5	853.0	2,149.4	0.00	0.00	0.00
12,100.0	90.00	179.60	9,720.0	-2,243.5	853.7	2,249.4	0.00	0.00	0.00
12,200.0	90.00	179.60	9,720.0	-2,343.5	854.4	2,349.4	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Royal Oak 25 Fed Com #502H
<b>Company:</b>	Avant Operating, LLC	<b>TVD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Project:</b>	Lea Co., NM (NAD 83)	<b>MD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Site:</b>	Royal Oak 25 Fed Com Pad 2	<b>North Reference:</b>	Grid
<b>Well:</b>	Royal Oak 25 Fed Com #502H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 0.1		

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)
12,300.0	90.00	179.60	9,720.0	-2,443.5	855.1	2,449.4	0.00	0.00	0.00
12,400.0	90.00	179.60	9,720.0	-2,543.5	855.8	2,549.4	0.00	0.00	0.00
12,500.0	90.00	179.60	9,720.0	-2,643.5	856.5	2,649.4	0.00	0.00	0.00
12,600.0	90.00	179.60	9,720.0	-2,743.4	857.2	2,749.4	0.00	0.00	0.00
12,700.0	90.00	179.60	9,720.0	-2,843.4	857.9	2,849.4	0.00	0.00	0.00
12,800.0	90.00	179.60	9,720.0	-2,943.4	858.6	2,949.4	0.00	0.00	0.00
12,900.0	90.00	179.60	9,720.0	-3,043.4	859.3	3,049.4	0.00	0.00	0.00
13,000.0	90.00	179.60	9,720.0	-3,143.4	860.0	3,149.4	0.00	0.00	0.00
13,100.0	90.00	179.60	9,720.0	-3,243.4	860.7	3,249.4	0.00	0.00	0.00
13,200.0	90.00	179.60	9,720.0	-3,343.4	861.4	3,349.4	0.00	0.00	0.00
13,300.0	90.00	179.60	9,720.0	-3,443.4	862.1	3,449.4	0.00	0.00	0.00
13,400.0	90.00	179.60	9,720.0	-3,543.4	862.8	3,549.4	0.00	0.00	0.00
13,500.0	90.00	179.60	9,720.0	-3,643.4	863.6	3,649.4	0.00	0.00	0.00
13,600.0	90.00	179.60	9,720.0	-3,743.4	864.3	3,749.4	0.00	0.00	0.00
13,700.0	90.00	179.60	9,720.0	-3,843.4	865.0	3,849.4	0.00	0.00	0.00
13,800.0	90.00	179.60	9,720.0	-3,943.4	865.7	3,949.4	0.00	0.00	0.00
13,900.0	90.00	179.60	9,720.0	-4,043.4	866.4	4,049.4	0.00	0.00	0.00
14,000.0	90.00	179.60	9,720.0	-4,143.4	867.1	4,149.4	0.00	0.00	0.00
14,100.0	90.00	179.60	9,720.0	-4,243.4	867.8	4,249.4	0.00	0.00	0.00
14,200.0	90.00	179.60	9,720.0	-4,343.4	868.5	4,349.4	0.00	0.00	0.00
14,300.0	90.00	179.60	9,720.0	-4,443.4	869.2	4,449.4	0.00	0.00	0.00
14,400.0	90.00	179.60	9,720.0	-4,543.4	869.9	4,549.4	0.00	0.00	0.00
14,500.0	90.00	179.60	9,720.0	-4,643.4	870.6	4,649.4	0.00	0.00	0.00
14,600.0	90.00	179.60	9,720.0	-4,743.4	871.3	4,749.4	0.00	0.00	0.00
14,700.0	90.00	179.60	9,720.0	-4,843.4	872.0	4,849.4	0.00	0.00	0.00
14,800.0	90.00	179.60	9,720.0	-4,943.4	872.7	4,949.4	0.00	0.00	0.00
14,900.0	90.00	179.60	9,720.0	-5,043.4	873.4	5,049.4	0.00	0.00	0.00
15,000.0	90.00	179.60	9,720.0	-5,143.4	874.1	5,149.4	0.00	0.00	0.00
15,100.0	90.00	179.60	9,720.0	-5,243.4	874.8	5,249.4	0.00	0.00	0.00
15,200.0	90.00	179.60	9,720.0	-5,343.4	875.5	5,349.4	0.00	0.00	0.00
15,300.0	90.00	179.60	9,720.0	-5,443.4	876.2	5,449.4	0.00	0.00	0.00
15,400.0	90.00	179.60	9,720.0	-5,543.4	876.9	5,549.4	0.00	0.00	0.00
15,500.0	90.00	179.60	9,720.0	-5,643.4	877.6	5,649.4	0.00	0.00	0.00
15,600.0	90.00	179.60	9,720.0	-5,743.4	878.3	5,749.4	0.00	0.00	0.00
15,700.0	90.00	179.60	9,720.0	-5,843.4	879.0	5,849.4	0.00	0.00	0.00
15,800.0	90.00	179.60	9,720.0	-5,943.4	879.7	5,949.4	0.00	0.00	0.00
15,900.0	90.00	179.60	9,720.0	-6,043.4	880.4	6,049.4	0.00	0.00	0.00
16,000.0	90.00	179.60	9,720.0	-6,143.4	881.1	6,149.4	0.00	0.00	0.00
16,100.0	90.00	179.60	9,720.0	-6,243.4	881.8	6,249.4	0.00	0.00	0.00
16,200.0	90.00	179.60	9,720.0	-6,343.4	882.5	6,349.4	0.00	0.00	0.00
16,300.0	90.00	179.60	9,720.0	-6,443.4	883.2	6,449.4	0.00	0.00	0.00
16,400.0	90.00	179.60	9,720.0	-6,543.4	883.9	6,549.4	0.00	0.00	0.00
16,500.0	90.00	179.60	9,720.0	-6,643.4	884.6	6,649.4	0.00	0.00	0.00
16,600.0	90.00	179.60	9,720.0	-6,743.3	885.3	6,749.4	0.00	0.00	0.00
16,700.0	90.00	179.60	9,720.0	-6,843.3	886.0	6,849.4	0.00	0.00	0.00
16,800.0	90.00	179.60	9,720.0	-6,943.3	886.7	6,949.4	0.00	0.00	0.00
16,900.0	90.00	179.60	9,720.0	-7,043.3	887.4	7,049.4	0.00	0.00	0.00
17,000.0	90.00	179.60	9,720.0	-7,143.3	888.1	7,149.4	0.00	0.00	0.00
17,100.0	90.00	179.60	9,720.0	-7,243.3	888.8	7,249.4	0.00	0.00	0.00
17,200.0	90.00	179.60	9,720.0	-7,343.3	889.5	7,349.4	0.00	0.00	0.00
17,300.0	90.00	179.60	9,720.0	-7,443.3	890.2	7,449.4	0.00	0.00	0.00
17,400.0	90.00	179.60	9,720.0	-7,543.3	890.9	7,549.4	0.00	0.00	0.00
17,500.0	90.00	179.60	9,720.0	-7,643.3	891.6	7,649.4	0.00	0.00	0.00
17,600.0	90.00	179.60	9,720.0	-7,743.3	892.3	7,749.4	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Royal Oak 25 Fed Com #502H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3896.5usft (3896.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3896.5usft (3896.5)
Site:	Royal Oak 25 Fed Com Pad 2	North Reference:	Grid
Well:	Royal Oak 25 Fed Com #502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.1		

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)	
17,700.0	90.00	179.60	9,720.0	-7,843.3	893.0	7,849.4	0.00	0.00	0.00	
17,800.0	90.00	179.60	9,720.0	-7,943.3	893.7	7,949.4	0.00	0.00	0.00	
17,900.0	90.00	179.60	9,720.0	-8,043.3	894.4	8,049.4	0.00	0.00	0.00	
18,000.0	90.00	179.60	9,720.0	-8,143.3	895.1	8,149.4	0.00	0.00	0.00	
18,100.0	90.00	179.60	9,720.0	-8,243.3	895.8	8,249.4	0.00	0.00	0.00	
18,200.0	90.00	179.60	9,720.0	-8,343.3	896.5	8,349.4	0.00	0.00	0.00	
18,300.0	90.00	179.60	9,720.0	-8,443.3	897.2	8,449.4	0.00	0.00	0.00	
18,400.0	90.00	179.60	9,720.0	-8,543.3	897.9	8,549.4	0.00	0.00	0.00	
18,500.0	90.00	179.60	9,720.0	-8,643.3	898.6	8,649.4	0.00	0.00	0.00	
18,600.0	90.00	179.60	9,720.0	-8,743.3	899.3	8,749.4	0.00	0.00	0.00	
18,700.0	90.00	179.60	9,720.0	-8,843.3	900.0	8,849.4	0.00	0.00	0.00	
18,800.0	90.00	179.60	9,720.0	-8,943.3	900.7	8,949.4	0.00	0.00	0.00	
18,900.0	90.00	179.60	9,720.0	-9,043.3	901.4	9,049.4	0.00	0.00	0.00	
19,000.0	90.00	179.60	9,720.0	-9,143.3	902.1	9,149.4	0.00	0.00	0.00	
19,100.0	90.00	179.60	9,720.0	-9,243.3	902.8	9,249.4	0.00	0.00	0.00	
19,200.0	90.00	179.60	9,720.0	-9,343.3	903.5	9,349.4	0.00	0.00	0.00	
19,300.0	90.00	179.60	9,720.0	-9,443.3	904.2	9,449.4	0.00	0.00	0.00	
19,400.0	90.00	179.60	9,720.0	-9,543.3	904.9	9,549.4	0.00	0.00	0.00	
19,500.0	90.00	179.60	9,720.0	-9,643.3	905.6	9,649.4	0.00	0.00	0.00	
19,600.0	90.00	179.60	9,720.0	-9,743.3	906.3	9,749.4	0.00	0.00	0.00	
19,700.0	90.00	179.60	9,720.0	-9,843.3	907.0	9,849.4	0.00	0.00	0.00	
19,800.0	90.00	179.60	9,720.0	-9,943.3	907.7	9,949.4	0.00	0.00	0.00	
19,866.6	90.00	179.60	9,720.0	-10,009.8	908.2	10,015.9	0.00	0.00	0.00	
TD at 19866.6										
19,900.0	90.00	179.60	9,720.0	-10,043.3	908.5	10,049.4	0.00	0.00	0.00	
19,986.6	90.00	179.60	9,720.0	-10,129.8	909.1	10,135.9	0.00	0.00	0.00	
LTP/PBHL-Royal Oak 25 Fed Com #502H										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP-Royal Oak 25 Fed - hit/miss target - Shape - Point	0.00	0.00	8,850.0	278.8	836.0	628,519.11	761,306.29	32.725798	-103.618045
FTP-Royal Oak 25 Fed ( ) - plan misses target center by 163.6usft at 9700.0usft MD (9593.9 TVD, 124.6 N, 837.1 E) - Point	0.00	0.00	9,720.0	228.8	836.4	628,469.12	761,306.66	32.725660	-103.618045
LTP/PBHL-Royal Oak 25 Fed - plan hits target center - Point	0.00	0.00	9,720.0	-10,129.8	909.1	618,110.43	761,379.31	32.697188	-103.618036

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
19,805.0	9,720.0	20" Casing		20	24

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Royal Oak 25 Fed Com #502H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3896.5usft (3896.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3896.5usft (3896.5)
Site:	Royal Oak 25 Fed Com Pad 2	North Reference:	Grid
Well:	Royal Oak 25 Fed Com #502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,628.0	1,628.0	RUSTLER				
1,951.0	1,951.0	SOLADO				
3,651.2	3,641.0	YATES				
5,685.6	5,654.0	CHERRY_CNYN				
7,284.4	7,236.0	BYCN_MKR				
7,559.3	7,508.0	BSPG_LIME *				
8,372.8	8,313.0	AVALON_B				
8,854.6	8,792.0	FBSG__SD				
9,162.6	9,100.0	SBSG_SHALE *				
9,165.6	9,103.0	SBSG_CARB				
9,499.9	9,432.0	SBSG_SD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
2,400.0	2,400.0	0.0	0.0	KOP - Start Build 2.00	
2,815.5	2,814.0	9.5	28.5	Start 5681.6 hold at 2815.5 MD	
8,497.1	8,436.0	269.3	807.5	Start Drop -2.00	
8,912.6	8,850.0	278.8	836.0	Start 272.5 hold at 8912.6 MD	
9,185.1	9,122.5	278.8	836.0	KOP #2 - Start Build 12.00	
9,935.1	9,705.0	-79.9	838.5	LP - Start 9931.5 hold at 9935.1 MD	
19,866.6	9,720.0	-10,009.8	908.2	TD at 19866.6	

# **Avant Operating, LLC**

**Lea Co., NM (NAD 83)**

**Royal Oak 25 Fed Com Pad 2**

**Royal Oak 25 Fed Com #502H**

**OH**

**Plan 0.1**

## **Anticollision Summary Report**

**04 February, 2025**



## Anticollision Summary Report

<b>Company:</b>	Avant Operating, LLC	<b>Local Co-ordinate Reference:</b>	Well Royal Oak 25 Fed Com #502H
<b>Project:</b>	Lea Co., NM (NAD 83)	<b>TVD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Reference Site:</b>	Royal Oak 25 Fed Com Pad 2	<b>MD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Royal Oak 25 Fed Com #502H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.16 Single User Db
<b>Reference Design:</b>	Plan 0.1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan 0.1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum centre distance of 1,000.0usft	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	2/4/2025		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	19,986.6	Plan 0.1 (OH)	B001Mb_MWD+HRGM	OWSG MWD + HRGM

<b>Summary</b>						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Royal Oak 25 Fed Com Pad 2						
Edith Federal 001 - OH - OH	13,992.8	9,705.1	120.6	-163.3	0.425	Level 1, CC, SF
Edith Federal 001 - OH - OH	14,000.0	9,704.9	120.8	-163.6	0.425	Level 1, ES
Edith Federal 003 - OH - OH						Out of range
Edith Federal 004 - OH - P&A	12,649.3	9,694.9	214.5	-61.4	0.777	Level 1, CC, ES, SF
McElvain 005 - OH - OH						Out of range
McElvain Federal 004 - OH - OH	4,900.8	4,880.0	468.7	327.4	3.316	CC
McElvain Federal 004 - OH - OH	5,100.0	5,075.7	470.2	325.1	3.241	ES
McElvain Federal 004 - OH - OH	5,700.0	5,665.3	491.7	336.1	3.159	SF
Royal Oak 25 Fed Com #301H - OH - Plan 0.1	2,000.0	1,996.0	40.0	26.1	2.882	CC, ES
Royal Oak 25 Fed Com #301H - OH - Plan 0.1	2,100.0	2,095.0	41.2	26.6	2.825	SF
Royal Oak 25 Fed Com #302H - OH - Plan 0.1	2,000.0	1,999.0	20.1	6.3	1.451	Level 3, CC, ES, SF
Royal Oak 25 Fed Com #501H - OH - Plan 0.1	2,200.0	2,198.7	59.9	44.6	3.914	CC, ES
Royal Oak 25 Fed Com #501H - OH - Plan 0.1	2,300.0	2,296.7	61.5	45.5	3.844	SF
Royal Oak 25 Fed Com #511H - OH - Plan 0.1	2,400.0	2,400.0	20.0	3.3	1.195	Level 2, CC, ES, SF
State LG 2484 001 - OH - OH	15,349.1	9,675.6	211.0	-76.1	0.735	Level 1, CC, ES, SF

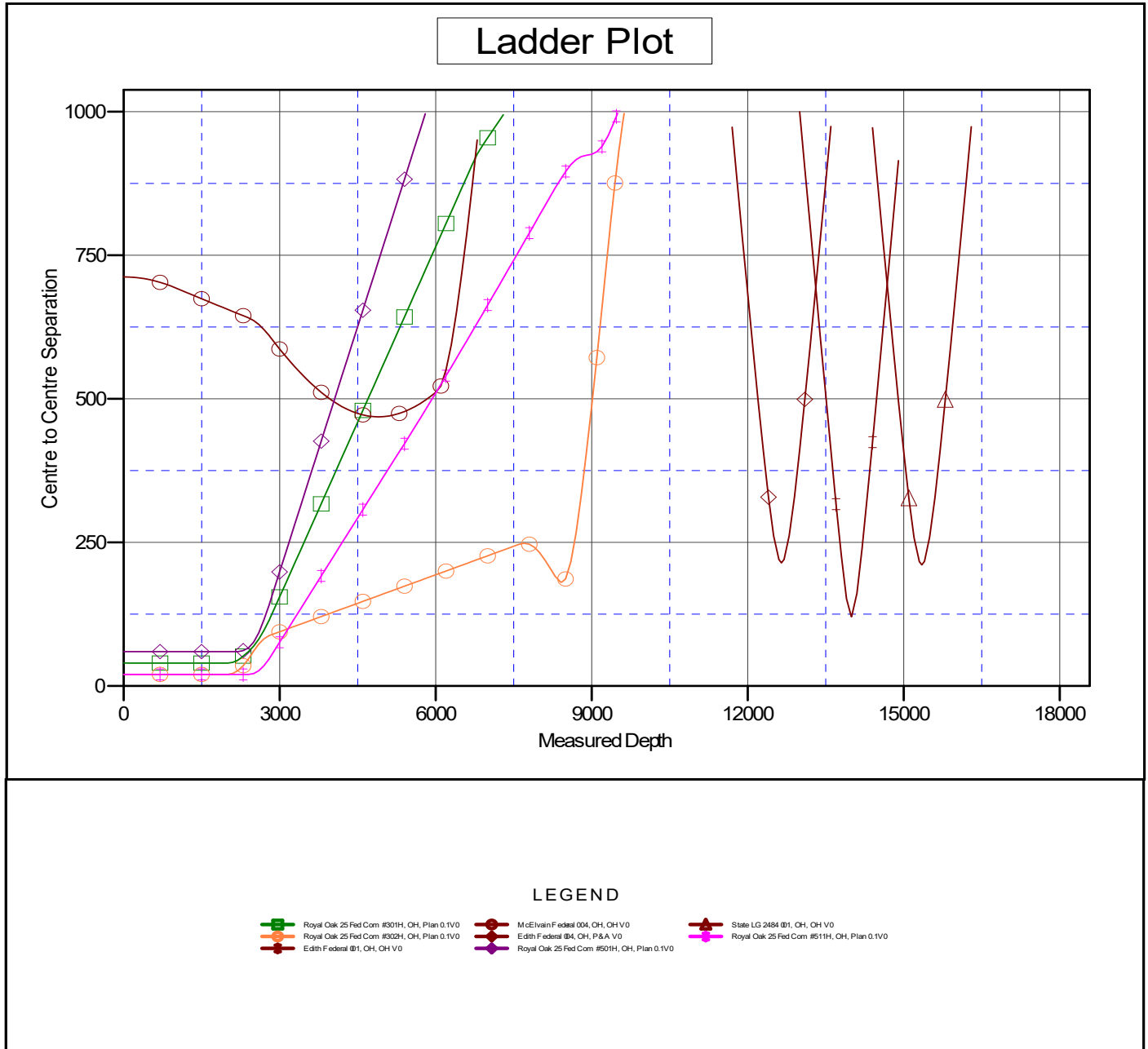
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

## Anticollision Summary Report

<b>Company:</b>	Avant Operating, LLC	<b>Local Co-ordinate Reference:</b>	Well Royal Oak 25 Fed Com #502H
<b>Project:</b>	Lea Co., NM (NAD 83)	<b>TVD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Reference Site:</b>	Royal Oak 25 Fed Com Pad 2	<b>MD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Royal Oak 25 Fed Com #502H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.16 Single User Db
<b>Reference Design:</b>	Plan 0.1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 3896.5usft (3896.5)  
Offset Depths are relative to Offset Datum  
Central Meridian is -104.333334

Coordinates are relative to: Royal Oak 25 Fed Com #502H  
Coordinate System is US State Plane 1983, New Mexico Eastern Zone  
Grid Convergence at Surface is: 0.39°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

## Anticollision Summary Report

<b>Company:</b>	Avant Operating, LLC	<b>Local Co-ordinate Reference:</b>	Well Royal Oak 25 Fed Com #502H
<b>Project:</b>	Lea Co., NM (NAD 83)	<b>TVD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Reference Site:</b>	Royal Oak 25 Fed Com Pad 2	<b>MD Reference:</b>	WELL @ 3896.5usft (3896.5)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Royal Oak 25 Fed Com #502H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	OH	<b>Database:</b>	EDM 5000.16 Single User Db
<b>Reference Design:</b>	Plan 0.1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 3896.5usft (3896.5)

Offset Depths are relative to Offset Datum

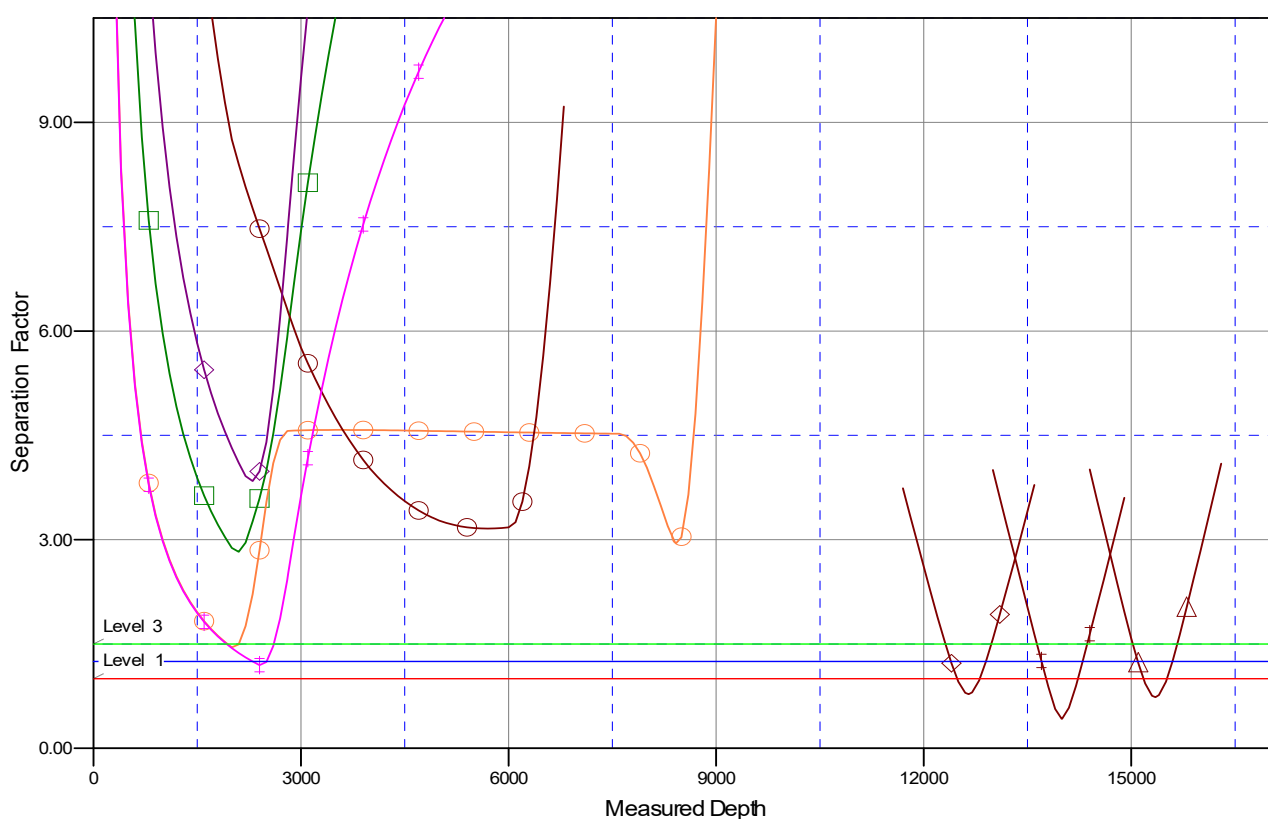
Central Meridian is -104.333334

Coordinates are relative to: Royal Oak 25 Fed Com #502H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.39°

## Separation Factor Plot



## LEGEND

Royal Oak 25 Fed Com #301H, OH, Plan 0.1V0	McElvain Federal 004, OH, OH V0	State LG 2484 #1, OH, OH V0
Royal Oak 25 Fed Com #302H, OH, Plan 0.1V0	Edith Federal #4, OH, P&A V0	Royal Oak 25 Fed Com #511H, OH, Plan 0.1V0
Edith Federal #1, OH, OH V0	Royal Oak 25 Fed Com #501H, OH, Plan 0.1V0	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

***AFE:***



# Royal Oak 25 Fed Com #502H

API:  
REGULATORY: BLM  
PERMIT #

## Bone Springs

Lea County, NM

RIG: H&P 460

CAMERON WELLHEAD

KB: 3896.5 (26.5')

9-5/8" x 7"11"

GL: 3870'

5K SSD-II

**SHL:**

*Sec. 25, T-18S, R-33E; 320 FSL, 1340 FWL*

Lat: 32.7250469, Long: -103.6207696 (NAD83)

HOLE SIZE	MD	FORMATION	TVD	MUD	CASING	CEMENT	SPECIAL INSTRUCTIONS
17 1/2 "	120	20" Conductor	120	SPUD MW	13 3/8 "	LEAD: 12.8 PPG Top of Lead: 0 50% Excess	Circ cement to surface is a NMOCD requirement  Casing must be set 25' into the Rustler  MUD: Fresh water only
	1,628	Rustler	1,628	Fresh	54.5# J-55 LTC +/- 13 Bowsprings 1 20' pup jt	TAIL: 14.8 PPG Top of Tail: 1353 20% Excess	
	1,653	SURF CSG PT	1,653	9.9 ppg	1 joint shoe track		
12 1/4 "	1,951	Solado	1,951	DRLOUT MW	SPLIT STRING 9 5/8 "	LEAD: 12.5 PPG Top of Lead: 0' 20% excess	Circ cement to surface is a NMOCD requirement
	3,651	Yates	3,641	Brine	40# J-55 LTC 0' - 4000'	TAIL: 14.8 PPG Top of Tail: 4468' 20% Excess	
	5,586	INTRM CSG PT	5,554	TD MW	40# L-80 HC LTC 4000' - 5586' +/- 9 Bowsprings 1 joint shoe track		
8 3/4 " VERTICAL	5,686	Cherry Canyon	5,654	DRLOUT MW			
	7,284	Brushy Canyon	7,236	Cut Brine			
	7,559	Bone Springs	7,508	KOP MW			
8 3/4 " CURVE	8,373	1st BS Sand	8,792	9.5			
	9,305	KOP	9,243	EOC MW			
	9,500	2nd BS Sand	9,432	CUT BRINE			
	10,055	EOC	9,720	9.5			
8 3/4 " LATERAL	MD	INC	INC	DIRECTIONAL PLAN	5 1/2 "	LEAD: 10.7 PPG Top of Lead: 0 50% Excess	BHL: 100 FSL, 2178 FWL  Expected BH Pressure 4665.6 psi
				TVD	20# P-110 HC GBCD	TAIL: 14.8 PPG Top of Tail: 9305 20% Excess	
				ANNOTATION	1 20' pup jt 2 20' Marker Jts +/- 30 Bowsprings +/- 27 Doublebows +/- 236 Solid Bodies	All aqueous fluids (spacer and disp) left inside or outside of pipe must have biocide & corrosion inhibitor	

**DIRECTIONS TO LOCATION:**



# **Coterra Energy Inc. CEMENT PROPOSAL #81433**

## **Surface Proposal**

Royal Oak 25 Fed Com #502H 30-025-52845  
S:25 T:18S R:33E Lea NM

February 06, 2025



## Surface Proposal

### CEMENT PROPOSAL

**Attention:** Kyle Adamek | (660) 247-2024 | kyle@deepenergyllc.com

Coterra Energy Inc.

202 S. Cheyenne Ave Suite 1000 | Tulsa, OK 74103

February 06, 2025

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Dear Kyle Adamek,

Thank you for the opportunity to submit pricing for cementing services on the attached wellbore. American Cementing's priority is to provide premium customer service while operating in a safe, efficient manner. If you have any questions regarding the proposal or services offered, please contact American Cementing at any time.

Sincerely,

Will Bautista

Sales | (432) 254-0261 | will.bautista@americancementing.com

Prepared By

Meseret Belayneh

Field Engineer III | (801) 513-8231 | meseret.belayneh@americancementing.com

**Field Office**      6165 W Murphy St, Odessa, TX 79763  
Phone: (432) 208-6452

### Disclaimer

1. Proposal is valid for 30 days
2. Proposal is for pricing purposes only; actual job procedure to be confirmed prior to job
3. American Cementing recommends proper hole conditioning prior to initiating cementing; please discuss procedures with your American Cementing representative
4. Applicable sales tax will be added to the final invoice
5. American Cementing's general terms and conditions are hereby incorporated into this Proposal





## Well Information

Well Name: **Royal Oak 25 Fed Com #502H**

Well API: **30-025-52845**

Latitude: **32.725487**

Longitude: **-103.620900**

Section: **25**

Township: **18S**

Range: **33E**

County: **Lea, NM**





## Job: Surface (Surface) - Well Information

Drilling Fluid Density: **8.40 lb/gal**  
 Drilling Fluid: **Water**  
 Total Measured Depth: **1653 ft**  
 Total Vertical Depth: **1653 ft**  
 BHCT: **86 °F**  
 BHST: **95 °F**  
 Temperature Gradient: **0.90 °F/100ft**  
 Surface Temp: **80 °F**

## Geometry

#	Type	Function	OD (in)	ID (in)	Weight (lb/ft)	Grade	Thread	Top	Bottom	Excess (%)
1	Casing	Outer	20.000	19.500	53.00		n/a	0	120	0.0
2	OpenHole	Outer		17.500			n/a	120	1353	50.0
3	OpenHole	Outer		17.500			n/a	1353	1653	20.0
1	Casing	Inner	13.375	12.615	54.50		n/a	0	1653	0.0

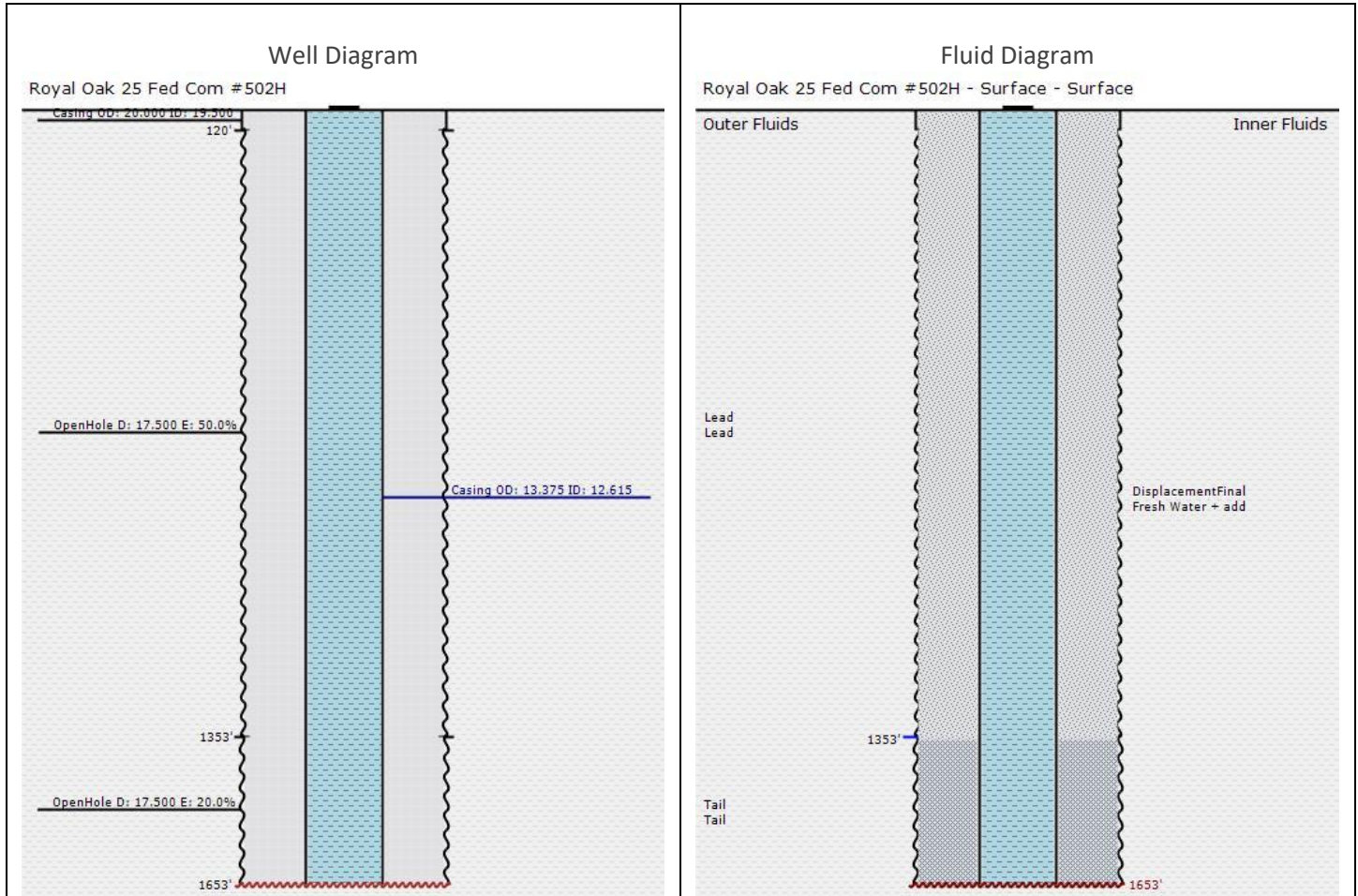
## Capacities

*Excess added to Capacity Factor*

Type	TopDepth (ft)	Length (ft)	OD (in)	ID (in)	Capacity (bbl/ft)	Capacity (ft <sup>3</sup> /ft)	Fill (ft/bbl)	Fill (ft/ft <sup>3</sup> )
DisplacementFinal	0	1568	12.615	0.000	0.1546	0.8679	6.47	1.15
ShoeJoint	1568	85	12.615	0.000	0.1546	0.8679	6.47	1.15
Casing to OpenHole	1353	300	17.500	13.375	0.1485	0.8335	6.74	1.20
Casing to OpenHole	120	1233	17.500	13.375	0.1856	1.0419	5.39	0.96
Casing to Casing	0	120	19.500	13.375	0.1956	1.0982	5.11	0.91



## Job: Surface (Surface) - Well & Fluid Diagrams





## Surface Proposal

## Job: Surface (Surface) - Material Information

Pump Order	Type	Fluid	Fluid Top (ft)	Density (lb/gal)	Water Req. (gal/bbl)	Yield (ft <sup>3</sup> /sk)	Proposed Volume (sks)	Proposed Volume (bbl)
1	Flush	FW with dye	0.00	8.34	42.0	n/a		20.00

DYE, LIQUID, BLUE - Other - 0.050 gal/bbl

Pump Order	Type	Fluid	Fluid Top (ft)	Density (lb/gal)	Water Req. (gal/sk)	Yield (ft <sup>3</sup> /sk)	Proposed Volume (sks)	Proposed Volume (bbl)
2	Lead	Lead	0.00	12.80	10.8	1.97	721	252.57

CEMENT, CLASS C, HSR - Cement - 100.000 %

Cement Additive, Sodium Metasilicate A-2 - Accelerator - 1.200 %BWOB

ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS - Accelerator - 0.500 %BWOB

FOAM PREVENTER, FP-28L - Defoamer - 0.005 gal/sk

IntegraSeal CELLO - LostCirculation - 0.250 lb/sk

IntegraSeal KOL - LostCirculation - 2.500 lb/sk

RETARDER, R-7C - Retarder - 0.170 %BWOB

Pump Order	Type	Fluid	Fluid Top (ft)	Density (lb/gal)	Water Req. (gal/sk)	Yield (ft <sup>3</sup> /sk)	Proposed Volume (sks)	Proposed Volume (bbl)
3	Tail	Tail	1353.00	14.80	6.3	1.33	244	57.82

CEMENT, CLASS C, HSR - Cement - 100.000 %

ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS - Accelerator - 0.500 %BWOB

FOAM PREVENTER, FP-28L - Defoamer - 0.005 gal/sk

ANTI STATIC ADDITIVE, STATIC FREE - Other - 0.005 lb/sk

Pump Order	Type	Fluid	Fluid Top (ft)	Density (lb/gal)	Water Req. (gal/bbl)	Yield (ft <sup>3</sup> /sk)	Proposed Volume (sks)	Proposed Volume (bbl)
4	DisplacementFinal	Fresh Water + add	0.00	8.34	42.0	n/a		243.00

## Job: Surface (Surface) - Pump Schedule

Sequence	Type	Fluid	Density (lb/gal)	Pump Rate (bpm)	Volume (bbls)	Volume (sks)	Cum. Vol. (bbls)	Stage Time (min)	Cum. Time (min)
1	Flush	FW with dye	8.34	5.00	20.00		20.00	4.00	4.00
2	Lead	Lead	12.80	5.00	252.57	721	272.57	50.51	54.51
3	Tail	Tail	14.80	5.00	57.82	244	330.39	11.56	66.07
4	DisplacementFinal	Fresh Water + add	8.34	5.00	243.00		573.39	48.60	114.67



## General Terms and Conditions

### AMERICAN CEMENTING, LLC TERMS AND CONDITIONS

These Terms and Conditions (these "T&Cs") contain INDEMNIFICATION, LIMITATION OF LIABILITY AND RISK SHIFTING PROVISIONS. The provision of Work by American Cementing, LLC or its affiliated companies ("Contractor" or "American") to any person or entity placing an Order for such Work ("Company" or "Customer") is subject to these T&Cs. By requesting the Work, Company voluntarily elects to enter into and be bound by these T&Cs, and any Order for Work shall constitute acceptance of these T&Cs, *unless* Contractor and Company have entered into a Master Service Agreement or other agreement expressly accepted in writing by Contractor's authorized representative, in which case the terms and conditions of such agreements shall govern the provision of the Work and completely supersede these T&Cs in all respects.

**1. DEFINITIONS.** "Claims" means all claims, lawsuits, demands, causes of action, liabilities, damages (including punitive damages), judgments, awards, fines, penalties, losses, costs, expenses (including, without limitation, reasonable attorneys' fees, expert fees, and costs of litigation) of any kind or character, without limit, which arise out of or are related to the Work. "COMPANY GROUP" means (i) COMPANY, and any of its parent, subsidiary and affiliated or related entities; (ii) the working interest owners, co-owners, co-lessees, co-lessors, partners and joint venturers of (i); (iii) any person or entity with an economic interest or property rights in the well, premises or the property in relation to or upon which Work is performed; and (iv) the officers, directors, employees, shareholders, agents, representatives, contractors (except CONTRACTOR), subcontractors, consultants, and invitees of (i), (ii) and (iii) above. "CONTRACTOR GROUP" means (i) CONTRACTOR and any of its subsidiary and affiliated or related entities; and (ii) the officers, directors, employees, shareholders, agents, representatives, contractors, subcontractors, consultants, and invitees of all of the foregoing. "Order" means a written or verbal request for specific Work, including by way of a purchase order, work order, service order, work authorization, or similar instrument issued by COMPANY to CONTRACTOR, and which shall incorporate the pricing proposal submitted by CONTRACTOR for such Work. A request will be considered written if exchanges, whether by correspondence, letter, fax, or email include all material terms and conditions and they have been accepted or ratified by both COMPANY and CONTRACTOR; *provided, however*, if verbal, such request shall be confirmed in writing as soon as practicable, and the terms of the written Order shall control. "Work" means any cementing services and other related services provided by CONTRACTOR, along with all related personnel, equipment, machinery, tools, supplies, materials, vehicles, facilities, consumables, goods, and any other items used in connection with such services.

**2. INDEPENDENT CONTRACTOR.** This Agreement does not create any agency, partnership, joint venture, or similar business relationship between parties. COMPANY will have the right generally to oversee and inspect the performance of the Work to ensure the reasonable satisfactory completion thereof; it being understood and agreed that CONTRACTOR shall have exclusive control over the operational details of the Work.

**3. PRICING AND PAYMENT.** **3.1** COMPANY will pay CONTRACTOR for the Work according to the prices and rates contained the applicable Order; *provided, however*, that if there are no such prices and rates, then the prices and rates set forth in the pricing proposal submitted by CONTRACTOR for the Work shall apply. The pricing proposals submitted by CONTRACTOR are generally valid sixty (60) days from submission of such proposal, unless otherwise set forth in such pricing proposal. Notwithstanding the foregoing, before commencing the Work and until an agreement is reached between the parties regarding such prices and rates, CONTRACTOR has the right to revise and shall advise COMPANY of any changes in the pricing proposal, and COMPANY may either accept or reject such changes, and proceed with the Work or not. **3.2** COMPANY shall pay CONTRACTOR's invoices within thirty (30) days of receipt of invoice. In the event COMPANY disputes any amount, it shall do so in good faith and shall notify CONTRACTOR of such dispute within thirty (30) days of receipt of invoice; *provided, however*, that COMPANY shall pay any undisputed portion of the invoice within the time for payment noted above and shall endeavor to expeditiously resolve such disputes. Any undisputed invoices, remaining unpaid for sixty (60) days after receipt by COMPANY, shall accrue interest at the rate of 1.5% per month or the maximum interest rate allowed by applicable law, whichever is less, through the time of collection. **3.3** Prices quoted by CONTRACTOR do not include sales, VAT, use or similar taxes, and such taxes, where applicable, shall be added to the quoted prices and invoiced accordingly. Each party shall pay all taxes levied or assessed by any governmental authority in connection with or incident to its performance under an Order; *provided, however*, that CONTRACTOR shall pay any assessments or taxes upon wages of CONTRACTOR, social security, unemployment insurance, old age benefits, or any other employment taxes, contributions or withholdings.

**4. ORDERS; STANDARD OF PERFORMANCE; WARRANTIES.** **4.1** COMPANY may from time to time place an Order for Work, and CONTRACTOR may provide such Work to COMPANY, subject to these T&Cs. Orders shall become binding only after signed or acknowledged by an authorized representative of each party. **4.2** CONTRACTOR shall provide all labor, equipment, machinery, tools, supplies, materials, vehicles, facilities, consumables, goods, and any other items required for the execution and completion of the Work, as more fully described in the applicable Order. **4.3** CONTRACTOR shall perform the Work with due diligence and care, in a good and workmanlike manner, using skilled, competent, experienced, and, where applicable, licensed personnel in accordance with the specifications represented by CONTRACTOR and with generally accepted oilfield practices. **4.4** CONTRACTOR shall conduct its Work, in all material respects, in accordance with all applicable laws, rules, regulations, decrees, and/or official government orders of any governing body having jurisdiction over the Work. **4.5** CONTRACTOR's Work is designed to operate under conditions normally encountered in a wellbore. COMPANY shall notify CONTRACTOR in advance and make special arrangements for Work in which hazardous or unusual conditions exist. COMPANY has complete care, custody, and control of the well, the premises around the well, and the drilling and production equipment of the well (other than such equipment provided by CONTRACTOR hereunder), and Company shall furnish directions and requirements for Work performed hereunder. CONTRACTOR is relying on COMPANY to provide such directions and requirements without further investigation by CONTRACTOR. CONTRACTOR agrees to observe and abide by COMPANY's safety policies and procedures communicated to and acknowledged by CONTRACTOR. CONTRACTOR shall as promptly as possible under the circumstances report to COMPANY's representative all accidents or occurrences resulting in injuries, illness or death to person(s) or damage to property, arising out of or occurring during the Work. **4.6** CONTRACTOR's sole liability, and COMPANY's exclusive remedy, for any Claims for breach of warranty under this Section 4 are limited to, at CONTRACTOR's sole option, (i) if practical, the re-performance of the defective Work or portion thereof, at no additional cost to COMPANY; or (ii) a refund or credit to COMPANY of any amount paid to CONTRACTOR for such defective Work or portion thereof. In the event that CONTRACTOR materially fails to perform the Work or if CONTRACTOR provides defective Work for reasons solely within CONTRACTOR's control, COMPANY shall give notice to CONTRACTOR of such non-performance or defective performance immediately upon discovery and prior to CONTRACTOR's departure from the worksite, otherwise such warranty Claim is waived. **4.7** Due to the nature of the Work to be performed in unpredictable wellbore conditions, CONTRACTOR does not warrant the accuracy, correctness, or completeness of any interpretations, analysis, recommendations, or advice, nor that COMPANY's or any third party's reliance on such interpretations, analysis, recommendations, or advice will accomplish any particular results, and which in any event are opinions only. Accordingly, it is COMPANY's responsibility, and sole risk, to determine the completion, well treatment, production, or financial decision involving any risk. Any outcomes that are less than expected will not relieve COMPANY of its responsibility to pay for the Work in accordance with these T&Cs. **4.8** THE WARRANTIES PROVIDED IN THIS SECTION 4 ARE THE SOLE AND EXCLUSIVE WARRANTIES RELATING TO THE WORK AND ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES WHETHER ORAL, WRITTEN, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WARRANTY OF MERCHANTABILITY AND WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

**5. ORDER CHANGES; PROJECT ADMINISTRATION.** **5.1** COMPANY may ask for and CONTRACTOR may agree to variations in the Work, whether by way of addition, modification or omission, which variations shall be in writing and signed by authorized representatives of both parties. The value of any such variations shall be ascertained by reference to the prices and rates specified in the applicable Order for like or analogous Work; *provided, however*, that if there are no such prices and rates or if they are otherwise inapplicable, then the prices and rates set forth in the pricing proposal submitted by CONTRACTOR for such additional Work shall apply. **5.2** To acknowledge or document various events during the provision of the Work, a party may from time to time sign the other party's forms, such as Orders, delivery tickets, job tickets, invoices, or similar instruments used by the parties in the normal course of business. In the event of a conflict between these T&Cs and any such documents, these T&Cs shall control, *unless* specific reference is made that these T&Cs are modified and the intention to modify is explicitly stated in such documents. **5.3** It is understood and agreed between the parties that COMPANY's representative (appointed in accordance with Section 5.4 below) shall have the authority to approve any job tickets, delivery tickets, or similar forms attesting to the completion of the Work by CONTRACTOR ("Job Tickets"). A COMPANY representative's signature on such Tickets shall indicate acceptance of the Work. If the Job Tickets are not acknowledged within forty-eight (48) hours of receipt through no fault of CONTRACTOR, CONTRACTOR may submit invoices for payment as if such Tickets had been acknowledged. **5.4** COMPANY will appoint a representative who will be responsible for the supervision of the Work, and who shall have full authority to represent and make decisions on behalf of COMPANY with respect to the Work, or otherwise to resolve the day-to-day issues which may arise related to the Work. Likewise, CONTRACTOR shall designate a representative with similar responsibilities and authority to liaise with COMPANY's representative.

**6. CONTRACTOR'S EQUIPMENT.** **6.1** Title to CONTRACTOR's equipment, including any lost, damaged, or confiscated equipment, shall remain in CONTRACTOR, and COMPANY shall have no right to assign, transfer, hypothecate, or remove such equipment from the place of its intended use without CONTRACTOR's prior written consent. **6.2** COMPANY shall be responsible for and agrees to compensate CONTRACTOR for all damages, losses, or any abnormal wear to CONTRACTOR GROUP's equipment: (i) while in COMPANY GROUP's care, custody or control, including while being transported by any member of COMPANY GROUP; (ii) as a result of operations conducted out of specifications at COMPANY GROUP's request, or in corrosive, abnormal temperatures or other





## Surface Proposal

unusual conditions; (iii) due to fishing operations (if any); or (iv) if lost in the hole or damaged beyond repair while in the hole or used in the hole. COMPANY will replace such equipment or reimburse CONTRACTOR with the current replacement price of such equipment.

**7. INDEMNITY.**

**7.1 Application of Indemnities.** 7.1.1 In those matters in which a party is required by these T&Cs to RELEASE, DEFEND, PROTECT, INDEMNIFY, AND HOLD HARMLESS the other party and/or members of its respective Group, SUCH OBLIGATIONS SHALL, EXCEPT TO THE EXTENT EXPRESSLY PROVIDED OTHERWISE IN THESE T&Cs, APPLY TO INDEMNITOR REGARDLESS OF THE CAUSE OR REASON, OR WHO MAY BE AT FAULT OR OTHERWISE RESPONSIBLE UNDER ANY CONTRACT, STATUTE, RULE, OR THEORY OF LAW, INCLUDING WITHOUT LIMITATION STRICT LIABILITY, TORT, BREACH OF DUTY (STATUTORY OR OTHERWISE), BREACH OF CONTRACT, BREACH OF REPRESENTATION OR WARRANTY, BREACH OF ANY SAFETY REQUIREMENT OR REGULATION, DUE TO ANY LATENT, PATENT, OR PRE-EXISTING DEFECTS OR CONDITIONS, IMPERFECTION OF MATERIAL, FAILURE OF EQUIPMENT, OR ANY LEGAL FAULT OR RESPONSIBILITY OF EITHER PARTY, INCLUDING THE SOLE, JOINT, AND/OR CONCURRENT NEGLIGENCE OR FAULT, WHETHER ACTIVE OR PASSIVE, OF THE INDEMNIFIED PARTY, OR OTHER PERSONS OR ENTITIES. 7.1.2 In the event these T&Cs are subject to the indemnity limitations in Chapter 127 of the Texas Civil Practice and Remedies Code (or any successor statute), and so long as such limitations are in force, each party covenants and agrees to support the mutual indemnity and release obligations contained herein by carrying insurance in an amount and of a type sufficient to cover their indemnity obligations.

**7.1.3** Notwithstanding any provisions in these T&Cs to the contrary, the following provision applies where Work is to be performed in New Mexico or Wyoming, as applicable: to the extent this Section 7 is governed by New Mexico or Wyoming law, then the provisions herein shall be read not to include indemnification for the indemnified party's own negligence. 7.1.4 If any defense, indemnity, or insurance provision contained in these T&Cs conflicts with, is prohibited by or violates public policy under any federal, state or other law determined to be applicable to a particular situation arising or involving these T&Cs, it is understood and agreed that the conflicting, prohibited or violating provision shall be deemed automatically amended in that situation to the extent—but only to the extent—necessary to conform with, not be prohibited by, and avoid violating public policy under such applicable law. The parties agree that the exculpatory, indemnification, and hold harmless provisions herein shall be modified or altered only insofar as required by a jurisdiction purporting to limit such provisions, it being the intention of both parties to enforce to the fullest extent, all terms and conditions herein agreed to.

**7.2 CONTRACTOR'S Indemnification.** CONTRACTOR shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD COMPANY GROUP HARMLESS from and against any and all Claims for personal or bodily injury to, sickness, disease or death of any member of CONTRACTOR GROUP, and any and all Claims for damage to or loss of any property of CONTRACTOR GROUP.

**7.3 COMPANY's Indemnification.** COMPANY shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD CONTRACTOR GROUP HARMLESS from and against any and all Claims for personal or bodily injury to, sickness, disease or death of any member of COMPANY GROUP, and any and all Claims for damage to or loss of any property of COMPANY GROUP.

**7.4 Pollution and Contamination; Catastrophic Damages or Losses.** Notwithstanding each party's obligations pursuant to Sections 7.2 and 7.3 hereof, it is understood and agreed between the parties that the following additional terms shall apply: 7.4.1 (a) CONTRACTOR shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD COMPANY GROUP HARMLESS from and against any and all Claims arising from pollution or contamination, which originates above the surface of the land or water, and which shall directly result from or be caused by CONTRACTOR GROUP's equipment, vehicles, or other tools and instruments while in CONTRACTOR GROUP's sole care, custody or control, and shall assume all responsibility for control and removal of same; and (b) COMPANY shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD CONTRACTOR GROUP HARMLESS from and against any and all Claims arising from any and all pollution or contamination other than that described under Section 7.4.1 (a) above, and including but not limited to, that which may result from cratering, seepage or any other uncontrolled flow of oil, gas, water or other substance, and shall assume all responsibility for control and removal of same. 7.4.2 COMPANY shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD CONTRACTOR GROUP HARMLESS from and against any and all Claims arising from any and all catastrophic damages or losses, including but not limited to those on account of injury, destruction of, loss or impairment (i) of any formation, strata, or reservoir beneath the surface of the earth; (ii) of any property rights in or to oil, gas, or other mineral substance or water, or the quiet enjoyment thereof, including subsurface trespass; (iii) to the well or the hole, including its casing; (iv) from radioactive sources; and (v) from fire, explosion, blowout, or any other uncontrolled well conditions, and the cost of controlling or regaining control of a wild well or out of control well.

**7.5 Incidental or Consequential Damages.** Notwithstanding any provisions to the contrary in these T&Cs, neither party shall be liable to the other party for, and parties shall RELEASE, PROTECT, DEFEND, INDEMNIFY AND HOLD EACH OTHER HARMLESS from and against any special, punitive, indirect, incidental or consequential damages or losses suffered by the other party and its Group resulting from or arising, directly or indirectly, out of or in connection with the Work, including, without limitation, loss and/or deferral of production, loss of product, loss of use, loss of bargain, contract expectations, or opportunity to contract with others, loss of revenue, profit, or anticipated profit, loss of business, business interruption, or downtime, whether direct or indirect, and whether or not such loss was foreseeable at the time of placing of an Order.

**8. INSURANCE.** 8.1 CONTRACTOR and COMPANY agree, at their sole cost and expense, to procure and continuously maintain in full force and effect throughout the term of this Agreement the following insurance coverage which may be met by a combination of primary and excess/umbrella insurance: A. Statutory Workers' Compensation Insurance and Employer's Liability in the amount of \$1,000,000 per occurrence and in the aggregate; B. Commercial General Liability insurance providing for third party property damage and personal injury, including broad form contractual liability for any agreement and broad form property damage in the amount of \$1,000,000 per occurrence and \$2,000,000 in the aggregate; C. Owned and Non-Owned Automobile Liability Insurance for bodily injury and property damage combined single limit in the amount of \$1,000,000 per occurrence and in the aggregate; D. Excess/Umbrella Liability Insurance providing coverage in excess of the foregoing insurances in the amount of \$5,000,000 per occurrence and in the aggregate, excluding statutory insurance coverage. 8.2 Each party agrees that, to the extent it assumes liability herein, it shall endorse the above coverages to name the indemnified parties as additional insureds (except for Workers' Compensation), shall waive its right of subrogation against the indemnified parties and their insurers, and agrees that its insurance shall be primary to that carried by the indemnified parties and non-contributory as per negligence for third party Claims, and shall not contribute in case of any Claim of exhaustion of horizontal limits. 8.3 Each party shall furnish an insurance certificate to the other to evidence the insurance required herein, and such certificates shall contain an endorsement stating that the insurer will endeavor to provide a thirty (30) days prior written notice of alteration or material change to such coverage. All deductible amounts, premiums, franchise amounts, or other charges due with respect to each party's required insurance should be the sole obligation of the insured party.

**9. CONFIDENTIALITY.** Each party contemplates that the other party may be provided and exposed to confidential and proprietary information ("Confidential Information"), which includes information relating to specifications of its tools, designs, inventions, component parts, parts list, software, firmware, hardware, processes, computer interfaces, operational parameters, and terms and pricing of Work. All Confidential Information shall remain the property of the party disclosing the same and no license is granted to the receiving party by virtue of the provision of such information. Confidential Information shall (i) be used by the recipient solely for the purpose of the provision of the Work and (ii) kept confidential and not disclosed to any person, except authorized representatives of the receiving Party, without written permission of the disclosing party. The receiving party shall take all reasonable steps to require its authorized representatives to keep such information confidential during and after the Work. Confidential Information shall not include information which: (i) at the time of placement of the Order is in the public domain or subsequently comes into the public domain through no fault of the receiving party and not in breach of these T&Cs; (ii) was already known to the receiving party on the date of disclosure, provided that such prior knowledge can be substantiated and proved by documentation; or (iii) properly and lawfully available to the receiving party from sources independent of the disclosing party.

**10. INTELLECTUAL PROPERTY.** While performing the Work, CONTRACTOR may utilize CONTRACTOR's intellectual property (including, without limitation, copyrights, registered marks, trademarks, service marks, patents, know-how, trade secrets, inventions, discoveries, techniques, technical information, technologies, designs, software, computer programs, formulae, calculations, computations, expertise, ideas, concepts, improvements, sketches, drawings, models, methods, practices, and/or processes, whether patentable or not) and/or develop, conceive, create, acquire, obtain, collect, generate, or make such additional intellectual property, which is and shall be CONTRACTOR's exclusive property. Except if expressly and specifically agreed in writing in a separate development agreement executed by the parties, and in exchange for appropriate payment, CONTRACTOR shall not develop any intellectual property for ownership by COMPANY in association with Work performed under a specific Order. Notwithstanding the foregoing, COMPANY or COMPANY GROUP shall own any intellectual property solely developed by COMPANY or COMPANY GROUP, respectively.

**11. FORCE MAJEURE.** 11.1 "Force Majeure" means (to the extent and only to the extent that any of the following are not reasonably within the control of the party claiming a Force Majeure and by the exercise of due diligence such party could not have mitigated, avoided, or overcome such condition) acts of God, fire, floods, lightning, blizzards, tornadoes, earthquakes, ice storms, named tropical storms and hurricanes, pandemics, terrorism, insurrection, revolution, war, strikes, lockouts, federal or state laws, rules and regulations of any governmental or public authorities having or asserting jurisdiction over the premises of either or both parties, inability to procure material due to industry wide shortages or soaring commodity costs, equipment, or necessary labor despite reasonable efforts, or similar causes. 11.2 If a party is rendered unable, wholly or in part, by a Force Majeure event to perform, that party will give written notice detailing such Force Majeure event to the other party as soon as reasonably possible. If a Force Majeure event continues without interruption for ten (10) days, either Party may cancel the applicable Order by giving prompt, written cancellation notice to the other party. Nothing in this Section 11.2 shall excuse COMPANY from its payment obligations of any invoices due and owing for Work performed under a specific Order.

**12. LIMITATION OF LIABILITY.** Notwithstanding anything to the contrary in these T&Cs, CONTRACTOR's liability arising from or in connection with its performance of the Work shall be limited to the value of the consideration paid to CONTRACTOR under the applicable Order.

**13. GOVERNING LAW; VENUE.** 13.1 For Work performed on a worksite within the United States, these T&Cs shall be exclusively governed by the laws of the State of Texas, excluding any conflict of laws principle that would refer to the laws of another jurisdiction. Venue shall lie exclusively in the state or federal courts of Harris County, Texas, and the parties consent to personal





Surface Proposal

jurisdiction therein. **13.2** For Work performed on a worksite within **Canada**, these T&Cs shall be exclusively governed by the laws of **Province of Alberta**, excluding any conflict of laws principle that would refer to the laws of another jurisdiction.

**14. MISCELLANEOUS.** **14.1 Notices.** Notices shall be sent by registered post, or delivered in person, to the address for notices communicated by the other party. Said notices shall be deemed received (i) upon delivery if hand delivered, (ii) upon delivery if sent by registered post, and (iii) upon recipient's confirmation of receipt if faxed. **14.2 Waiver.** No benefit or right accruing to either party under these T&Cs shall be deemed to be waived unless the waiver is in writing, expressly refers to these T&Cs, and is signed by a duly authorized representative of both parties. A waiver in any one or more instances shall not constitute a continuing waiver, unless specifically so stated in the written waiver. **14.3 Severability.** In the event one or more of the provisions contained in these T&Cs shall be held, for any reason, to be invalid, void, illegal, contrary to law and/or unenforceable in any respect, these T&Cs shall be deemed to be amended to partially or completely modify such provision or portion thereof to the extent necessary to make it enforceable. If necessary, these T&Cs shall be deemed to be amended to delete the unenforceable provision or portion thereof, in which event such invalidity, illegality or unenforceability shall not affect the remaining provisions hereof, and these T&Cs shall remain unaffected and shall be construed as if such invalid, void, illegal or unenforceable provision never had been contained herein. **14.4 Independent Representation.** COMPANY AND CONTRACTOR ACKNOWLEDGE THAT THEY HAVE CONSULTED AN ATTORNEY CONCERNING THESE T&Cs OR HAVE ELECTED NOT TO DO SO, BUT REPRESENT THAT THEY FULLY UNDERSTAND THEIR RIGHTS AND OBLIGATIONS HEREUNDER

Company: \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



# **Coterra Energy Inc. CEMENT PROPOSAL #81455**

## **Intermediate Proposal**

Royal Oak 25 Fed Com #502H 30-025-52845  
S:25 T:18S R:33E Lea NM

February 06, 2025



## Intermediate Proposal

### CEMENT PROPOSAL

**Attention:** Kyle Adamek | (660) 247-2024 | kyle@deepenergyllc.com

Coterra Energy Inc.

202 S. Cheyenne Ave Suite 1000 | Tulsa, OK 74103

February 06, 2025

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Dear Kyle Adamek,

Thank you for the opportunity to submit pricing for cementing services on the attached wellbore. American Cementing's priority is to provide premium customer service while operating in a safe, efficient manner. If you have any questions regarding the proposal or services offered, please contact American Cementing at any time.

Sincerely,

Will Bautista

Sales | (432) 254-0261 | will.bautista@americancementing.com

Prepared By

Meseret Belayneh

Field Engineer III | (801) 513-8231 | meseret.belayneh@americancementing.com

**Field Office**      6165 W Murphy St, Odessa, TX 79763  
Phone: (432) 208-6452

### Disclaimer

1. Proposal is valid for 30 days
2. Proposal is for pricing purposes only; actual job procedure to be confirmed prior to job
3. American Cementing recommends proper hole conditioning prior to initiating cementing; please discuss procedures with your American Cementing representative
4. Applicable sales tax will be added to the final invoice
5. American Cementing's general terms and conditions are hereby incorporated into this Proposal



## Intermediate Proposal

## Well Information

Well Name: **Royal Oak 25 Fed Com #502H**

Well API: **30-025-52845**

Latitude: **32.725487**

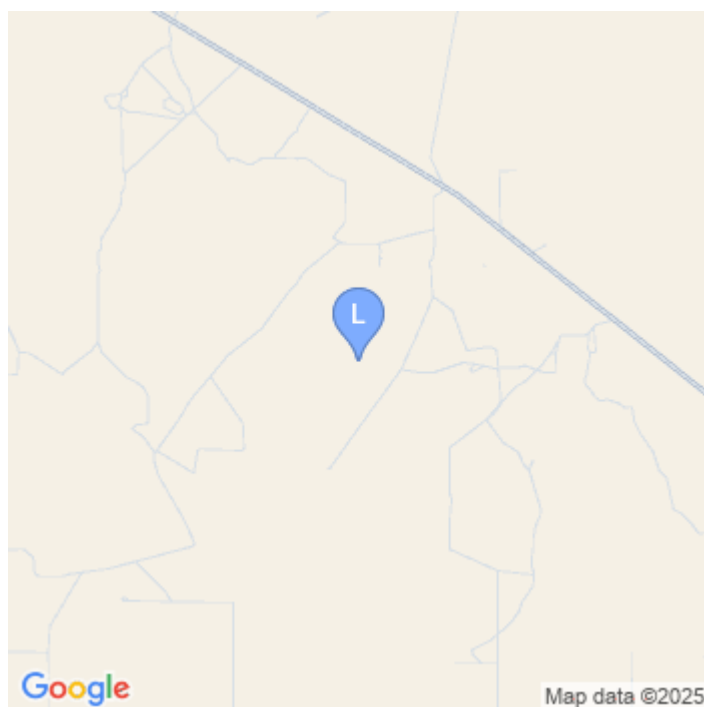
Longitude: **-103.620900**

Section: **25**

Township: **18S**

Range: **33E**

County: **Lea, NM**





## Job: Intermediate (Intermediate) - Well Information

Drilling Fluid Density: **10.00 lb/gal**

Drilling Fluid: **WBM**

Total Measured Depth: **5586 ft**

Total Vertical Depth: **5586 ft**

BHCT: **109 °F**

BHST: **130 °F**

Temperature Gradient: **0.90 °F/100ft**

Surface Temp: **80 °F**

## Geometry

#	Type	Function	OD (in)	ID (in)	Weight (lb/ft)	Grade	Thread	Top	Bottom	Excess (%)
1	Casing	Outer	13.375	12.615	54.50		n/a	0	1653	0.0
2	OpenHole	Outer		12.250			n/a	1653	4468	20.0
3	OpenHole	Outer		12.250			n/a	4468	5586	20.0
1	Casing	Inner	9.625	8.835	40.00		n/a	0	5586	0.0

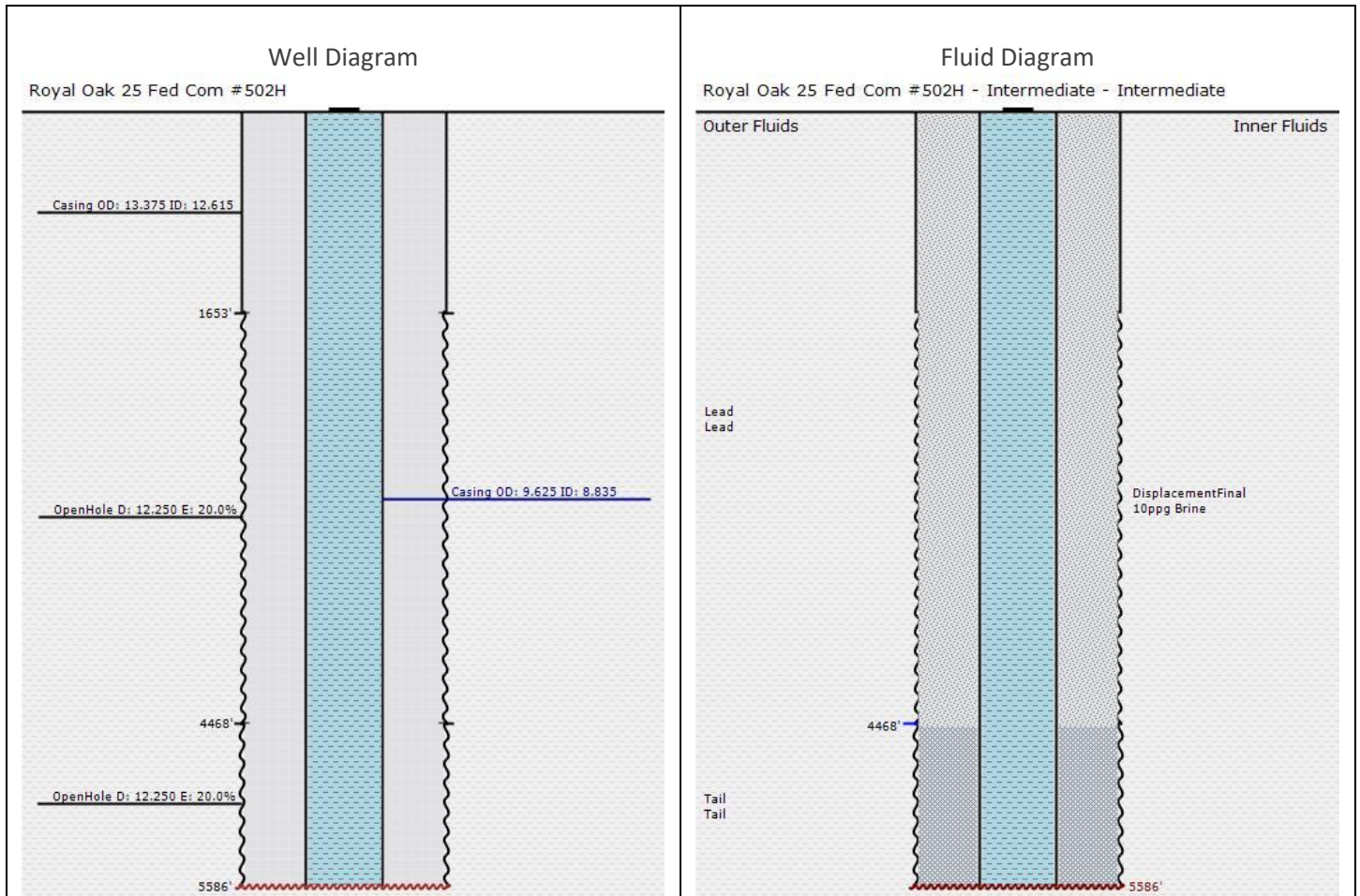
## Capacities

*Excess added to Capacity Factor*

Type	TopDepth (ft)	Length (ft)	OD (in)	ID (in)	Capacity (bbl/ft)	Capacity (ft <sup>3</sup> /ft)	Fill (ft/bbl)	Fill (ft/ft <sup>3</sup> )
DisplacementFinal	0	5501	8.835	0.000	0.0758	0.4257	13.19	2.35
ShoeJoint	5501	85	8.835	0.000	0.0758	0.4257	13.19	2.35
Casing to OpenHole	4468	1118	12.250	9.625	0.0669	0.3758	14.94	2.66
Casing to OpenHole	1653	2815	12.250	9.625	0.0669	0.3758	14.94	2.66
Casing to Casing	0	1653	12.615	9.625	0.0646	0.3627	15.48	2.76



## Job: Intermediate (Intermediate) - Well & Fluid Diagrams





## Intermediate Proposal

## Job: Intermediate (Intermediate) - Material Information

Pump Order	Type	Fluid	Fluid Top (ft)	Density (lb/gal)	Water Req. (gal/bbl)	Yield (ft <sup>3</sup> /sk)	Proposed Volume (sks)	Proposed Volume (bbl)
1	Flush	Fresh Water	0.00	8.34	42.0	n/a		20.00

Pump Order	Type	Fluid	Fluid Top (ft)	Density (lb/gal)	Water Req. (gal/sk)	Yield (ft <sup>3</sup> /sk)	Proposed Volume (sks)	Proposed Volume (bbl)
2	Lead	Lead	0.00	12.50	12.4	2.17	765	295.42

CEMENT, CLASS C, HSR - Cement - 100.000 %

Cement Additive, Sodium Metasilicate A-2 - Accelerator - 2.000 %BWOB

SALT,SODIUM CHLORIDE, A-5 - Accelerator - 3.000 %BWOW

FOAM PREVENTER, FP-28L - Defoamer - 0.005 gal/sk

RETARDER, R-7C - Retarder - 0.430 %BWOB

ANTI STATIC ADDITIVE, STATIC FREE - Other - 0.005 lb/sk

Pump Order	Type	Fluid	Fluid Top (ft)	Density (lb/gal)	Water Req. (gal/sk)	Yield (ft <sup>3</sup> /sk)	Proposed Volume (sks)	Proposed Volume (bbl)
3	Tail	Tail	4468.00	14.80	6.3	1.33	344	81.41

CEMENT, CLASS C, HSR - Cement - 100.000 %

Cement Additive, Sodium Metasilicate A-2 - Accelerator - 0.250 %BWOB

FOAM PREVENTER, FP-28L - Defoamer - 0.005 gal/sk

RETARDER, R-7C - Retarder - 0.050 %BWOB

Pump Order	Type	Fluid	Fluid Top (ft)	Density (lb/gal)	Water Req. (gal/bbl)	Yield (ft <sup>3</sup> /sk)	Proposed Volume (sks)	Proposed Volume (bbl)
4	DisplacementFinal	10ppg Brine	0.00	8.34	42.0	n/a		418.00

## Job: Intermediate (Intermediate) - Pump Schedule

Sequence	Type	Fluid	Density (lb/gal)	Pump Rate (bpm)	Volume (bbls)	Volume (sks)	Cum. Vol. (bbls)	Stage Time (min)	Cum. Time (min)
1	Flush	Fresh Water	8.34	5.00	20.00		20.00	4.00	4.00
2	Lead	Lead	12.50	5.00	295.42	765	315.42	59.08	63.08
3	Tail	Tail	14.80	5.00	81.41	344	396.83	16.28	79.36
4	DisplacementFinal	10ppg Brine	8.34	5.00	418.00		814.83	83.60	162.96



## General Terms and Conditions

### AMERICAN CEMENTING, LLC TERMS AND CONDITIONS

These Terms and Conditions (these "T&Cs") contain INDEMNIFICATION, LIMITATION OF LIABILITY AND RISK SHIFTING PROVISIONS. The provision of Work by American Cementing, LLC or its affiliated companies ("Contractor" or "American") to any person or entity placing an Order for such Work ("Company" or "Customer") is subject to these T&Cs. By requesting the Work, Company voluntarily elects to enter into and be bound by these T&Cs, and any Order for Work shall constitute acceptance of these T&Cs, unless Contractor and Company have entered into a Master Service Agreement or other agreement expressly accepted in writing by Contractor's authorized representative, in which case the terms and conditions of such agreements shall govern the provision of the Work and completely supersede these T&Cs in all respects.

**1. DEFINITIONS.** "Claims" means all claims, lawsuits, demands, causes of action, liabilities, damages (including punitive damages), judgments, awards, fines, penalties, losses, costs, expenses (including, without limitation, reasonable attorneys' fees, expert fees, and costs of litigation) of any kind or character, without limit, which arise out of or are related to the Work. "COMPANY GROUP" means (i) COMPANY, and any of its parent, subsidiary and affiliated or related entities; (ii) the working interest owners, co-owners, co-lessees, co-lessors, partners and joint venturers of (i); (iii) any person or entity with an economic interest or property rights in the well, premises or the property in relation to or upon which Work is performed; and (iv) the officers, directors, employees, shareholders, agents, representatives, contractors (except CONTRACTOR), subcontractors, consultants, and invitees of (i), (ii) and (iii) above. "CONTRACTOR GROUP" means (i) CONTRACTOR and any of its subsidiary and affiliated or related entities; and (ii) the officers, directors, employees, shareholders, agents, representatives, contractors, subcontractors, consultants, and invitees of all of the foregoing. "Order" means a written or verbal request for specific Work, including by way of a purchase order, work order, service order, work authorization, or similar instrument issued by COMPANY to CONTRACTOR, and which shall incorporate the pricing proposal submitted by CONTRACTOR for such Work. A request will be considered written if exchanges, whether by correspondence, letter, fax, or email include all material terms and conditions and they have been accepted or ratified by both COMPANY and CONTRACTOR; *provided, however*, if verbal, such request shall be confirmed in writing as soon as practicable, and the terms of the written Order shall control. "Work" means any cementing services and other related services provided by CONTRACTOR, along with all related personnel, equipment, machinery, tools, supplies, materials, vehicles, facilities, consumables, goods, and any other items used in connection with such services.

**2. INDEPENDENT CONTRACTOR.** This Agreement does not create any agency, partnership, joint venture, or similar business relationship between parties. COMPANY will have the right generally to oversee and inspect the performance of the Work to ensure the reasonable satisfactory completion thereof; it being understood and agreed that CONTRACTOR shall have exclusive control over the operational details of the Work.

**3. PRICING AND PAYMENT.** **3.1** COMPANY will pay CONTRACTOR for the Work according to the prices and rates contained the applicable Order; *provided, however*, that if there are no such prices and rates, then the prices and rates set forth in the pricing proposal submitted by CONTRACTOR for the Work shall apply. The pricing proposals submitted by CONTRACTOR are generally valid sixty (60) days from submission of such proposal, unless otherwise set forth in such pricing proposal. Notwithstanding the foregoing, before commencing the Work and until an agreement is reached between the parties regarding such prices and rates, CONTRACTOR has the right to revise and shall advise COMPANY of any changes in the pricing proposal, and COMPANY may either accept or reject such changes, and proceed with the Work or not. **3.2** COMPANY shall pay CONTRACTOR's invoices within thirty (30) days of receipt of invoice. In the event COMPANY disputes any amount, it shall do so in good faith and shall notify CONTRACTOR of such dispute within thirty (30) days of receipt of invoice; *provided, however*, that COMPANY shall pay any undisputed portion of the invoice within the time for payment noted above and shall endeavor to expeditiously resolve such disputes. Any undisputed invoices, remaining unpaid for sixty (60) days after receipt by COMPANY, shall accrue interest at the rate of 1.5% per month or the maximum interest rate allowed by applicable law, whichever is less, through the time of collection. **3.3** Prices quoted by CONTRACTOR do not include sales, VAT, use or similar taxes, and such taxes, where applicable, shall be added to the quoted prices and invoiced accordingly. Each party shall pay all taxes levied or assessed by any governmental authority in connection with or incident to its performance under an Order; *provided, however*, that CONTRACTOR shall pay any assessments or taxes upon wages of CONTRACTOR, social security, unemployment insurance, old age benefits, or any other employment taxes, contributions or withholdings.

**4. ORDERS; STANDARD OF PERFORMANCE; WARRANTIES.** **4.1** COMPANY may from time to time place an Order for Work, and CONTRACTOR may provide such Work to COMPANY, subject to these T&Cs. Orders shall become binding only after signed or acknowledged by an authorized representative of each party. **4.2** CONTRACTOR shall provide all labor, equipment, machinery, tools, supplies, materials, vehicles, facilities, consumables, goods, and any other items required for the execution and completion of the Work, as more fully described in the applicable Order. **4.3** CONTRACTOR shall perform the Work with due diligence and care, in a good and workmanlike manner, using skilled, competent, experienced, and, where applicable, licensed personnel in accordance with the specifications represented by CONTRACTOR and with generally accepted oilfield practices. **4.4** CONTRACTOR shall conduct its Work, in all material respects, in accordance with all applicable laws, rules, regulations, decrees, and/or official government orders of any governing body having jurisdiction over the Work. **4.5** CONTRACTOR's Work is designed to operate under conditions normally encountered in a wellbore. COMPANY shall notify CONTRACTOR in advance and make special arrangements for Work in which hazardous or unusual conditions exist. COMPANY has complete care, custody, and control of the well, the premises around the well, and the drilling and production equipment of the well (other than such equipment provided by CONTRACTOR hereunder), and Company shall furnish directions and requirements for Work performed hereunder. CONTRACTOR is relying on COMPANY to provide such directions and requirements without further investigation by CONTRACTOR. CONTRACTOR agrees to observe and abide by COMPANY's safety policies and procedures communicated to and acknowledged by CONTRACTOR. CONTRACTOR shall as promptly as possible under the circumstances report to COMPANY's representative all accidents or occurrences resulting in injuries, illness or death to person(s) or damage to property, arising out of or occurring during the Work. **4.6** CONTRACTOR's sole liability, and COMPANY's exclusive remedy, for any Claims for breach of warranty under this Section 4 are limited to, at CONTRACTOR's sole option, (i) if practical, the re-performance of the defective Work or portion thereof, at no additional cost to COMPANY; or (ii) a refund or credit to COMPANY of any amount paid to CONTRACTOR for such defective Work or portion thereof. In the event that CONTRACTOR materially fails to perform the Work or if CONTRACTOR provides defective Work for reasons solely within CONTRACTOR's control, COMPANY shall give notice to CONTRACTOR of such non-performance or defective performance immediately upon discovery and prior to CONTRACTOR's departure from the worksite, otherwise such warranty Claim is waived. **4.7** Due to the nature of the Work to be performed in unpredictable wellbore conditions, CONTRACTOR does not warrant the accuracy, correctness, or completeness of any interpretations, analysis, recommendations, or advice, nor that COMPANY's or any third party's reliance on such interpretations, analysis, recommendations, or advice will accomplish any particular results, and which in any event are opinions only. Accordingly, it is COMPANY's responsibility, and sole risk, to determine the completion, well treatment, production, or financial decision involving any risk. Any outcomes that are less than expected will not relieve COMPANY of its responsibility to pay for the Work in accordance with these T&Cs. **4.8** THE WARRANTIES PROVIDED IN THIS SECTION 4 ARE THE SOLE AND EXCLUSIVE WARRANTIES RELATING TO THE WORK AND ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES WHETHER ORAL, WRITTEN, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WARRANTY OF MERCHANTABILITY AND WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

**5. ORDER CHANGES; PROJECT ADMINISTRATION.** **5.1** COMPANY may ask for and CONTRACTOR may agree to variations in the Work, whether by way of addition, modification or omission, which variations shall be in writing and signed by authorized representatives of both parties. The value of any such variations shall be ascertained by reference to the prices and rates specified in the applicable Order for like or analogous Work; *provided, however*, that if there are no such prices and rates or if they are otherwise inapplicable, then the prices and rates set forth in the pricing proposal submitted by CONTRACTOR for such additional Work shall apply. **5.2** To acknowledge or document various events during the provision of the Work, a party may from time to time sign the other party's forms, such as Orders, delivery tickets, job tickets, invoices, or similar instruments used by the parties in the normal course of business. In the event of a conflict between these T&Cs and any such documents, these T&Cs shall control, unless specific reference is made that these T&Cs are modified and the intention to modify is explicitly stated in such documents. **5.3** It is understood and agreed between the parties that COMPANY's representative (appointed in accordance with Section 5.4 below) shall have the authority to approve any job tickets, delivery tickets, or similar forms attesting to the completion of the Work by CONTRACTOR ("Job Tickets"). A COMPANY representative's signature on such Tickets shall indicate acceptance of the Work. If the Job Tickets are not acknowledged within forty-eight (48) hours of receipt through no fault of CONTRACTOR, CONTRACTOR may submit invoices for payment as if such Tickets had been acknowledged. **5.4** COMPANY will appoint a representative who will be responsible for the supervision of the Work, and who shall have full authority to represent and make decisions on behalf of COMPANY with respect to the Work, or otherwise to resolve the day-to-day issues which may arise related to the Work. Likewise, CONTRACTOR shall designate a representative with similar responsibilities and authority to liaise with COMPANY's representative.

**6. CONTRACTOR'S EQUIPMENT.** **6.1** Title to CONTRACTOR's equipment, including any lost, damaged, or confiscated equipment, shall remain in CONTRACTOR, and COMPANY shall have no right to assign, transfer, hypothecate, or remove such equipment from the place of its intended use without CONTRACTOR's prior written consent. **6.2** COMPANY shall be responsible for and agrees to compensate CONTRACTOR for all damages, losses, or any abnormal wear to CONTRACTOR GROUP's equipment: (i) while in COMPANY GROUP's care, custody or control, including while being transported by any member of COMPANY GROUP; (ii) as a result of operations conducted out of specifications at COMPANY GROUP's request, or in corrosive, abnormal temperatures or other





## Intermediate Proposal

unusual conditions; (iii) due to fishing operations (if any); or (iv) if lost in the hole or damaged beyond repair while in the hole or used in the hole. COMPANY will replace such equipment or reimburse CONTRACTOR with the current replacement price of such equipment.

**7. INDEMNITY.**

**7.1 Application of Indemnities.** 7.1.1 In those matters in which a party is required by these T&Cs to RELEASE, DEFEND, PROTECT, INDEMNIFY, AND HOLD HARMLESS the other party and/or members of its respective Group, SUCH OBLIGATIONS SHALL, EXCEPT TO THE EXTENT EXPRESSLY PROVIDED OTHERWISE IN THESE T&Cs, APPLY TO INDEMNITOR REGARDLESS OF THE CAUSE OR REASON, OR WHO MAY BE AT FAULT OR OTHERWISE RESPONSIBLE UNDER ANY CONTRACT, STATUTE, RULE, OR THEORY OF LAW, INCLUDING WITHOUT LIMITATION STRICT LIABILITY, TORT, BREACH OF DUTY (STATUTORY OR OTHERWISE), BREACH OF CONTRACT, BREACH OF REPRESENTATION OR WARRANTY, BREACH OF ANY SAFETY REQUIREMENT OR REGULATION, DUE TO ANY LATENT, PATENT, OR PRE-EXISTING DEFECTS OR CONDITIONS, IMPERFECTION OF MATERIAL, FAILURE OF EQUIPMENT, OR ANY LEGAL FAULT OR RESPONSIBILITY OF EITHER PARTY, INCLUDING THE SOLE, JOINT, AND/OR CONCURRENT NEGLIGENCE OR FAULT, WHETHER ACTIVE OR PASSIVE, OF THE INDEMNIFIED PARTY, OR OTHER PERSONS OR ENTITIES. 7.1.2 In the event these T&Cs are subject to the indemnity limitations in Chapter 127 of the Texas Civil Practice and Remedies Code (or any successor statute), and so long as such limitations are in force, each party covenants and agrees to support the mutual indemnity and release obligations contained herein by carrying insurance in an amount and of a type sufficient to cover their indemnity obligations.

**7.1.3** Notwithstanding any provisions in these T&Cs to the contrary, the following provision applies where Work is to be performed in New Mexico or Wyoming, as applicable: to the extent this Section 7 is governed by New Mexico or Wyoming law, then the provisions herein shall be read not to include indemnification for the indemnified party's own negligence. 7.1.4 If any defense, indemnity, or insurance provision contained in these T&Cs conflicts with, is prohibited by or violates public policy under any federal, state or other law determined to be applicable to a particular situation arising or involving these T&Cs, it is understood and agreed that the conflicting, prohibited or violating provision shall be deemed automatically amended in that situation to the extent—but only to the extent—necessary to conform with, not be prohibited by, and avoid violating public policy under such applicable law. The parties agree that the exculpatory, indemnification, and hold harmless provisions herein shall be modified or altered only insofar as required by a jurisdiction purporting to limit such provisions, it being the intention of both parties to enforce to the fullest extent, all terms and conditions herein agreed to.

**7.2 CONTRACTOR'S Indemnification.** CONTRACTOR shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD COMPANY GROUP HARMLESS from and against any and all Claims for personal or bodily injury to, sickness, disease or death of any member of CONTRACTOR GROUP, and any and all Claims for damage to or loss of any property of CONTRACTOR GROUP.

**7.3 COMPANY's Indemnification.** COMPANY shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD CONTRACTOR GROUP HARMLESS from and against any and all Claims for personal or bodily injury to, sickness, disease or death of any member of COMPANY GROUP, and any and all Claims for damage to or loss of any property of COMPANY GROUP.

**7.4 Pollution and Contamination; Catastrophic Damages or Losses.** Notwithstanding each party's obligations pursuant to Sections 7.2 and 7.3 hereof, it is understood and agreed between the parties that the following additional terms shall apply: 7.4.1 (a) CONTRACTOR shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD COMPANY GROUP HARMLESS from and against any and all Claims arising from pollution or contamination, which originates above the surface of the land or water, and which shall directly result from or be caused by CONTRACTOR GROUP's equipment, vehicles, or other tools and instruments while in CONTRACTOR GROUP's sole care, custody or control, and shall assume all responsibility for control and removal of same; and (b) COMPANY shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD CONTRACTOR GROUP HARMLESS from and against any and all Claims arising from any and all pollution or contamination other than that described under Section 7.4.1 (a) above, and including but not limited to, that which may result from cratering, seepage or any other uncontrolled flow of oil, gas, water or other substance, and shall assume all responsibility for control and removal of same. 7.4.2 COMPANY shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD CONTRACTOR GROUP HARMLESS from and against any and all Claims arising from any and all catastrophic damages or losses, including but not limited to those on account of injury, destruction of, loss or impairment (i) of any formation, strata, or reservoir beneath the surface of the earth; (ii) of any property rights in or to oil, gas, or other mineral substance or water, or the quiet enjoyment thereof, including subsurface trespass; (iii) to the well or the hole, including its casing; (iv) from radioactive sources; and (v) from fire, explosion, blowout, or any other uncontrolled well conditions, and the cost of controlling or regaining control of a wild well or out of control well.

**7.5 Incidental or Consequential Damages.** Notwithstanding any provisions to the contrary in these T&Cs, neither party shall be liable to the other party for, and parties shall RELEASE, PROTECT, DEFEND, INDEMNIFY AND HOLD EACH OTHER HARMLESS from and against any special, punitive, indirect, incidental or consequential damages or losses suffered by the other party and its Group resulting from or arising, directly or indirectly, out of or in connection with the Work, including, without limitation, loss and/or deferral of production, loss of product, loss of use, loss of bargain, contract expectations, or opportunity to contract with others, loss of revenue, profit, or anticipated profit, loss of business, business interruption, or downtime, whether direct or indirect, and whether or not such loss was foreseeable at the time of placing of an Order.

**8. INSURANCE.** 8.1 CONTRACTOR and COMPANY agree, at their sole cost and expense, to procure and continuously maintain in full force and effect throughout the term of this Agreement the following insurance coverage which may be met by a combination of primary and excess/umbrella insurance: A. Statutory Workers' Compensation Insurance and Employer's Liability in the amount of \$1,000,000 per occurrence and in the aggregate; B. Commercial General Liability insurance providing for third party property damage and personal injury, including broad form contractual liability for any agreement and broad form property damage in the amount of \$1,000,000 per occurrence and \$2,000,000 in the aggregate; C. Owned and Non-Owned Automobile Liability Insurance for bodily injury and property damage combined single limit in the amount of \$1,000,000 per occurrence and in the aggregate; D. Excess/Umbrella Liability Insurance providing coverage in excess of the foregoing insurances in the amount of \$5,000,000 per occurrence and in the aggregate, excluding statutory insurance coverage. 8.2 Each party agrees that, to the extent it assumes liability herein, it shall endorse the above coverages to name the indemnified parties as additional insureds (except for Workers' Compensation), shall waive its right of subrogation against the indemnified parties and their insurers, and agrees that its insurance shall be primary to that carried by the indemnified parties and non-contributory as per negligence for third party Claims, and shall not contribute in case of any Claim of exhaustion of horizontal limits. 8.3 Each party shall furnish an insurance certificate to the other to evidence the insurance required herein, and such certificates shall contain an endorsement stating that the insurer will endeavor to provide a thirty (30) days prior written notice of alteration or material change to such coverage. All deductible amounts, premiums, franchise amounts, or other charges due with respect to each party's required insurance should be the sole obligation of the insured party.

**9. CONFIDENTIALITY.** Each party contemplates that the other party may be provided and exposed to confidential and proprietary information ("Confidential Information"), which includes information relating to specifications of its tools, designs, inventions, component parts, parts list, software, firmware, hardware, processes, computer interfaces, operational parameters, and terms and pricing of Work. All Confidential Information shall remain the property of the party disclosing the same and no license is granted to the receiving party by virtue of the provision of such information. Confidential Information shall (i) be used by the recipient solely for the purpose of the provision of the Work and (ii) kept confidential and not disclosed to any person, except authorized representatives of the receiving Party, without written permission of the disclosing party. The receiving party shall take all reasonable steps to require its authorized representatives to keep such information confidential during and after the Work. Confidential Information shall not include information which: (i) at the time of placement of the Order is in the public domain or subsequently comes into the public domain through no fault of the receiving party and not in breach of these T&Cs; (ii) was already known to the receiving party on the date of disclosure, provided that such prior knowledge can be substantiated and proved by documentation; or (iii) properly and lawfully available to the receiving party from sources independent of the disclosing party.

**10. INTELLECTUAL PROPERTY.** While performing the Work, CONTRACTOR may utilize CONTRACTOR's intellectual property (including, without limitation, copyrights, registered marks, trademarks, service marks, patents, know-how, trade secrets, inventions, discoveries, techniques, technical information, technologies, designs, software, computer programs, formulae, calculations, computations, expertise, ideas, concepts, improvements, sketches, drawings, models, methods, practices, and/or processes, whether patentable or not) and/or develop, conceive, create, acquire, obtain, collect, generate, or make such additional intellectual property, which is and shall be CONTRACTOR's exclusive property. Except if expressly and specifically agreed in writing in a separate development agreement executed by the parties, and in exchange for appropriate payment, CONTRACTOR shall not develop any intellectual property for ownership by COMPANY in association with Work performed under a specific Order. Notwithstanding the foregoing, COMPANY or COMPANY GROUP shall own any intellectual property solely developed by COMPANY or COMPANY GROUP, respectively.

**11. FORCE MAJEURE.** 11.1 "Force Majeure" means (to the extent and only to the extent that any of the following are not reasonably within the control of the party claiming a Force Majeure and by the exercise of due diligence such party could not have mitigated, avoided, or overcome such condition) acts of God, fire, floods, lightning, blizzards, tornadoes, earthquakes, ice storms, named tropical storms and hurricanes, pandemics, terrorism, insurrection, revolution, war, strikes, lockouts, federal or state laws, rules and regulations of any governmental or public authorities having or asserting jurisdiction over the premises of either or both parties, inability to procure material due to industry wide shortages or soaring commodity costs, equipment, or necessary labor despite reasonable efforts, or similar causes. 11.2 If a party is rendered unable, wholly or in part, by a Force Majeure event to perform, that party will give written notice detailing such Force Majeure event to the other party as soon as reasonably possible. If a Force Majeure event continues without interruption for ten (10) days, either Party may cancel the applicable Order by giving prompt, written cancellation notice to the other party. Nothing in this Section 11.2 shall excuse COMPANY from its payment obligations of any invoices due and owing for Work performed under a specific Order.

**12. LIMITATION OF LIABILITY.** Notwithstanding anything to the contrary in these T&Cs, CONTRACTOR's liability arising from or in connection with its performance of the Work shall be limited to the value of the consideration paid to CONTRACTOR under the applicable Order.

**13. GOVERNING LAW; VENUE.** 13.1 For Work performed on a worksite within the United States, these T&Cs shall be exclusively governed by the laws of the State of Texas, excluding any conflict of laws principle that would refer to the laws of another jurisdiction. Venue shall lie exclusively in the state or federal courts of Harris County, Texas, and the parties consent to personal



## Intermediate Proposal

jurisdiction therein. **13.2** For Work performed on a worksite within **Canada**, these T&Cs shall be exclusively governed by the laws of **Province of Alberta**, excluding any conflict of laws principle that would refer to the laws of another jurisdiction.

**14. MISCELLANEOUS.** **14.1 Notices.** Notices shall be sent by registered post, or delivered in person, to the address for notices communicated by the other party. Said notices shall be deemed received (i) upon delivery if hand delivered, (ii) upon delivery if sent by registered post, and (iii) upon recipient's confirmation of receipt if faxed. **14.2 Waiver.** No benefit or right accruing to either party under these T&Cs shall be deemed to be waived unless the waiver is in writing, expressly refers to these T&Cs, and is signed by a duly authorized representative of both parties. A waiver in any one or more instances shall not constitute a continuing waiver, unless specifically so stated in the written waiver. **14.3 Severability.** In the event one or more of the provisions contained in these T&Cs shall be held, for any reason, to be invalid, void, illegal, contrary to law and/or unenforceable in any respect, these T&Cs shall be deemed to be amended to partially or completely modify such provision or portion thereof to the extent necessary to make it enforceable. If necessary, these T&Cs shall be deemed to be amended to delete the unenforceable provision or portion thereof, in which event such invalidity, illegality or unenforceability shall not affect the remaining provisions hereof, and these T&Cs shall remain unaffected and shall be construed as if such invalid, void, illegal or unenforceable provision never had been contained herein. **14.4 Independent Representation.** COMPANY AND CONTRACTOR ACKNOWLEDGE THAT THEY HAVE CONSULTED AN ATTORNEY CONCERNING THESE T&Cs OR HAVE ELECTED NOT TO DO SO, BUT REPRESENT THAT THEY FULLY UNDERSTAND THEIR RIGHTS AND OBLIGATIONS HEREUNDER

Company: \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



# **Coterra Energy Inc. CEMENT PROPOSAL #81474**

## **Long String Proposal**

Royal Oak 25 Fed Com #502H 30-025-52845  
S:25 T:18S R:33E Lea NM

February 06, 2025



## Long String Proposal

### CEMENT PROPOSAL

**Attention:** Kyle Adamek | (660) 247-2024 | kyle@deepenergyllc.com

Coterra Energy Inc.

202 S. Cheyenne Ave Suite 1000 | Tulsa, OK 74103

February 06, 2025

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Dear Kyle Adamek,

Thank you for the opportunity to submit pricing for cementing services on the attached wellbore. American Cementing's priority is to provide premium customer service while operating in a safe, efficient manner. If you have any questions regarding the proposal or services offered, please contact American Cementing at any time.

Sincerely,

Will Bautista

Sales | (432) 254-0261 | will.bautista@americancementing.com

Prepared By

Meseret Belayneh

Field Engineer III | (801) 513-8231 | meseret.belayneh@americancementing.com

**Field Office**      6165 W Murphy St, Odessa, TX 79763  
Phone: (432) 208-6452

### Disclaimer

1. Proposal is valid for 30 days
2. Proposal is for pricing purposes only; actual job procedure to be confirmed prior to job
3. American Cementing recommends proper hole conditioning prior to initiating cementing; please discuss procedures with your American Cementing representative
4. Applicable sales tax will be added to the final invoice
5. American Cementing's general terms and conditions are hereby incorporated into this Proposal



## Well Information

Well Name: **Royal Oak 25 Fed Com #502H**

Well API: **30-025-52845**

Latitude: **32.725487**

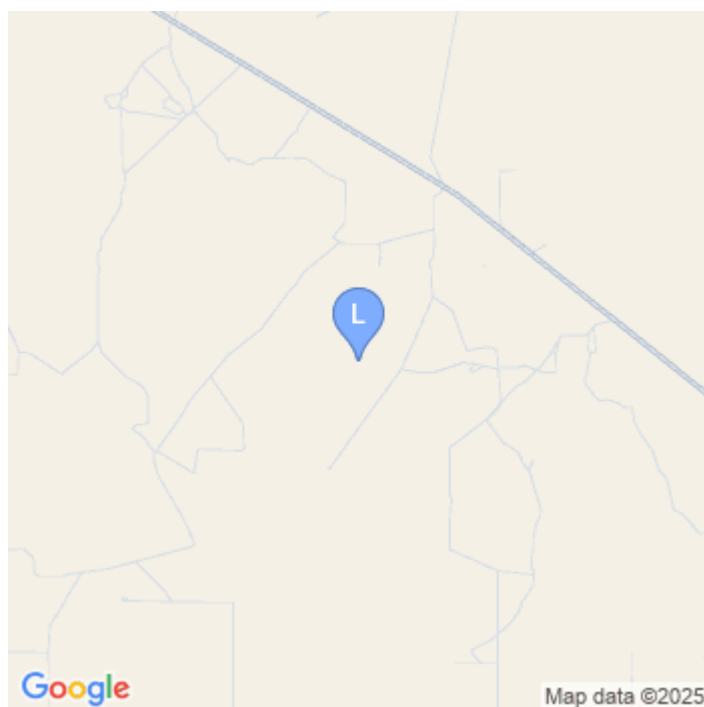
Longitude: **-103.620900**

Section: **25**

Township: **18S**

Range: **33E**

County: **Lea, NM**





## Job: Long String (Long String) - Well Information

Drilling Fluid Density: **9.20 lb/gal**  
 Drilling Fluid: **OBM**  
 Total Measured Depth: **19987 ft**  
 Total Vertical Depth: **9720 ft**  
 BHCT: **175 °F**  
 BHST: **175 °F**  
 Temperature Gradient: **0.98 °F/100ft**  
 Surface Temp: **80 °F**

### Geometry

#	Type	Function	OD (in)	ID (in)	Weight (lb/ft)	Grade	Thread	Top	Bottom	Excess (%)
1	Casing	Outer	9.625	8.835	40.00		n/a	0	5586	0.0
2	OpenHole	Outer		8.750			n/a	5586	9305	50.0
3	OpenHole	Outer		8.750			n/a	9305	19987	20.0
1	Casing	Inner	5.500	4.778	20.00		n/a	0	19987	0.0

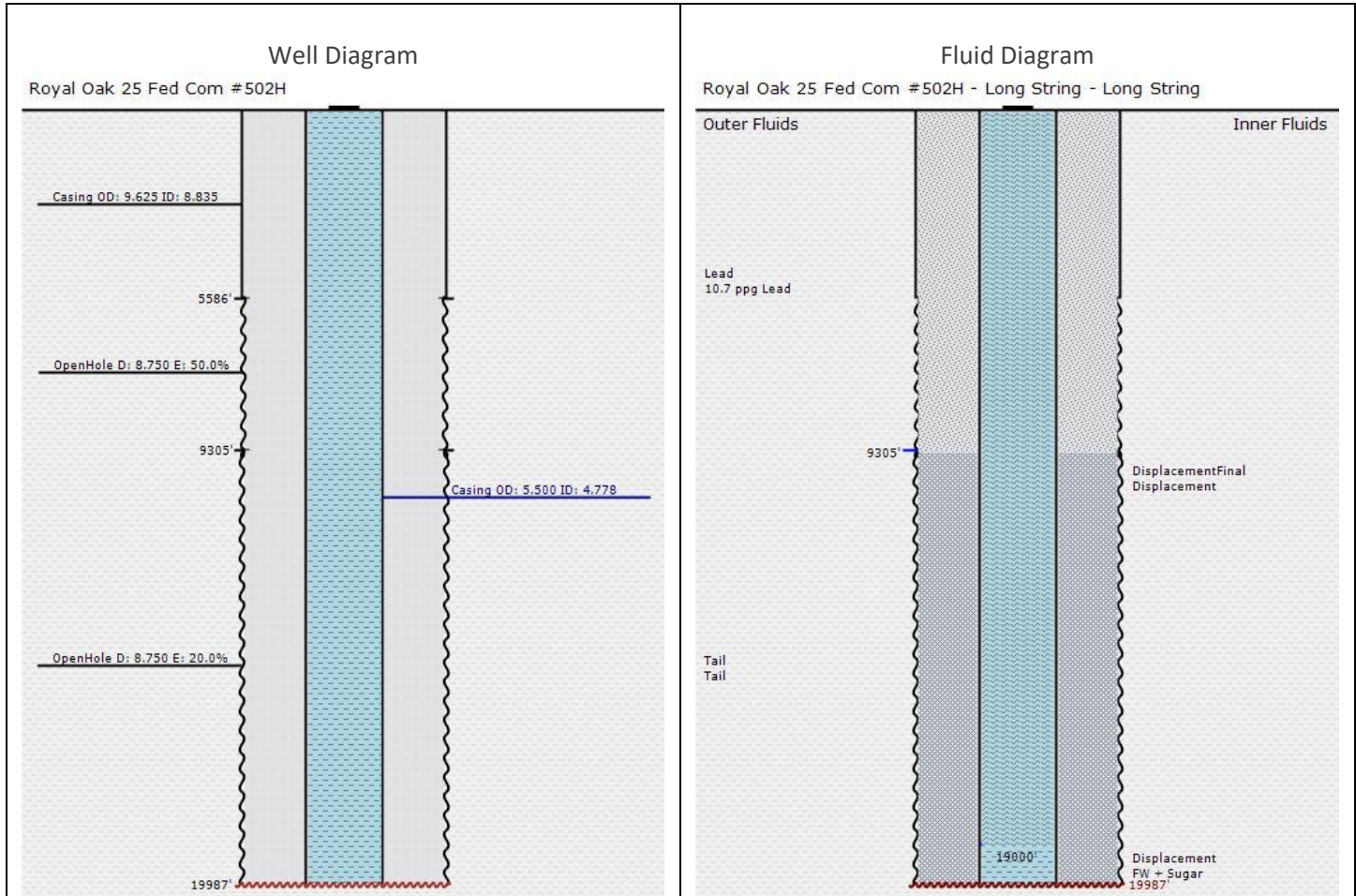
### Capacities

*Excess added to Capacity Factor*

Type	TopDepth (ft)	Length (ft)	OD (in)	ID (in)	Capacity (bbl/ft)	Capacity (ft <sup>3</sup> /ft)	Fill (ft/bbl)	Fill (ft/ft <sup>3</sup> )
DisplacementFinal	0	19902	4.778	0.000	0.0222	0.1245	45.09	8.03
ShoeJoint	19902	85	4.778	0.000	0.0222	0.1245	45.09	8.03
Casing to OpenHole	9305	10682	8.750	5.500	0.0540	0.3031	18.52	3.30
Casing to OpenHole	5586	3719	8.750	5.500	0.0675	0.3789	14.82	2.64
Casing to Casing	0	5586	8.835	5.500	0.0464	0.2607	21.53	3.84



## Job: Long String (Long String) - Well & Fluid Diagrams







## Job: Long String (Long String) - Material Information

Pump Order	Type	Fluid	Fluid Top (ft)	Density (lb/gal)	Water Req. (gal/bbl)	Yield (ft <sup>3</sup> /sk)	Proposed Volume (sks)	Proposed Volume (bbl)
1	Spacer	Spacer + LCM	0.00	9.70	38.5	n/a		40.00

WEIGHTING ADDITIVE, BARITE - Heavyweight - 65.072 lb/bbl

IntegraSeal HOLD, ALOC-1212 - LostCirculation - 10.000 lb/bbl

BIOSUITE GQ2510 - Biocide - 0.010 gal/bbl

DYE, LIQUID, BLUE - Other - 0.050 gal/bbl

CORROSION INHIBITORS, HS-2 - Other - 0.050 gal/bbl

XCem-621 - Viscosifier - 10.000 lb/bbl

Pump Order	Type	Fluid	Fluid Top (ft)	Density (lb/gal)	Water Req. (gal/sk)	Yield (ft <sup>3</sup> /sk)	Proposed Volume (sks)	Proposed Volume (bbl)
2	Lead	10.7 ppg Lead	0.00	10.70	24.5	3.92	732	510.88

CEMENT, CLASS C, HSR - Cement - 75.000 %

CEMENT, FLY ASH (OTX1) - Extender - 25.000 %

CEMENT EXTENDER, GYPSUM, A-10 - Accelerator - 5.000 %BWOB

Cement Additive, Sodium Metasilicate A-2 - Accelerator - 2.000 %BWOB

FLUID LOSS, AFL-533 - FluidLoss - 0.500 %BWOB

Viscosifier, AVIS-617 - Viscosifier - 0.300 %BWOB

BONDING AGENT, BA-95 - BondEnhancer - 15.000 lb/sk

FOAM PREVENTER, FP-28L - Defoamer - 0.005 gal/sk

RETARDER, R-21 - Retarder - 0.100 %BWOB

RETARDER, R-7C - Retarder - 0.500 %BWOB

DISPERSANT, XCem-403 - Dispersant - 0.100 %BWOB

Pump Order	Type	Fluid	Fluid Top (ft)	Density (lb/gal)	Water Req. (gal/sk)	Yield (ft <sup>3</sup> /sk)	Proposed Volume (sks)	Proposed Volume (bbl)
3	Tail	Tail	9305.00	14.80	4.9	1.16	2808	578.64

IntegraCem XTL, AEXT-1012 - Extender - 5.000 %

CEMENT, CLASS H, HSR - Cement - 70.000 %

CEMENT, FLY ASH (OTX1) - Extender - 25.000 %

SALT,SODIUM CHLORIDE, A-5 - Accelerator - 3.000 %BWOW

ANTI SETTLING, ASA-301 - Viscosifier - 0.150 %BWOB

FLUID LOSS, FL-66 - FluidLoss - 0.700 %BWOB

FOAM PREVENTER, FP-28L - Defoamer - 0.005 gal/sk

RETARDER, R-3 - Retarder - 0.080 %BWOB

DISPERSANT, XCem-403 - Dispersant - 0.700 %BWOB

Pump Order	Type	Fluid	Fluid Top (ft)	Density (lb/gal)	Water Req. (gal/bbl)	Yield (ft <sup>3</sup> /sk)	Proposed Volume (sks)	Proposed Volume (bbl)
4	Displacement	FW + Sugar	19000.00	8.36	41.8	n/a		20.00

RETARDER, SUGAR, GRANULAR - Retarder - 2.500 lb/bbl

Pump Order	Type	Fluid	Fluid Top (ft)	Density (lb/gal)	Water Req. (gal/bbl)	Yield (ft <sup>3</sup> /sk)	Proposed Volume (sks)	Proposed Volume (bbl)
5	DisplacementFinal	Displacement	0.00	8.34	41.9	n/a		422.00

BIOSUITE GQ2510 - Biocide - 0.010 gal/bbl

CORROSION INHIBITORS, HS-2 - Other - 0.050 gal/bbl





Job: Long String (Long String) - Pump Schedule

Sequence	Type	Fluid	Density (lb/gal)	Pump Rate (bpm)	Volume (bbls)	Volume (sks)	Cum. Vol. (bbls)	Stage Time (min)	Cum. Time (min)
1	Spacer	Spacer + LCM	9.70	5.00	40.00		40.00	8.00	8.00
2	Lead	10.7 ppg Lead	10.70	5.00	510.88	732	550.88	102.18	110.18
3	Tail	Tail	14.80	5.00	578.64	2808	1129.53	115.73	225.91
4	Displacement	FW + Sugar	8.36	5.00	20.00		1149.53	4.00	229.91
5	DisplacementFinal	Displacement	8.34	5.00	422.00		1571.53	84.40	314.31



## General Terms and Conditions

### AMERICAN CEMENTING, LLC TERMS AND CONDITIONS

These Terms and Conditions (these "T&Cs") contain INDEMNIFICATION, LIMITATION OF LIABILITY AND RISK SHIFTING PROVISIONS. The provision of Work by American Cementing, LLC or its affiliated companies ("Contractor" or "American") to any person or entity placing an Order for such Work ("Company" or "Customer") is subject to these T&Cs. By requesting the Work, Company voluntarily elects to enter into and be bound by these T&Cs, and any Order for Work shall constitute acceptance of these T&Cs, *unless* Contractor and Company have entered into a Master Service Agreement or other agreement expressly accepted in writing by Contractor's authorized representative, in which case the terms and conditions of such agreements shall govern the provision of the Work and completely supersede these T&Cs in all respects.

**1. DEFINITIONS.** "Claims" means all claims, lawsuits, demands, causes of action, liabilities, damages (including punitive damages), judgments, awards, fines, penalties, losses, costs, expenses (including, without limitation, reasonable attorneys' fees, expert fees, and costs of litigation) of any kind or character, without limit, which arise out of or are related to the Work. "COMPANY GROUP" means (i) COMPANY, and any of its parent, subsidiary and affiliated or related entities; (ii) the working interest owners, co-owners, co-lessees, co-lessors, partners and joint venturers of (i); (iii) any person or entity with an economic interest or property rights in the well, premises or the property in relation to or upon which Work is performed; and (iv) the officers, directors, employees, shareholders, agents, representatives, contractors (except CONTRACTOR), subcontractors, consultants, and invitees of (i), (ii) and (iii) above. "CONTRACTOR GROUP" means (i) CONTRACTOR and any of its subsidiary and affiliated or related entities; and (ii) the officers, directors, employees, shareholders, agents, representatives, contractors, subcontractors, consultants, and invitees of all of the foregoing. "Order" means a written or verbal request for specific Work, including by way of a purchase order, work order, service order, work authorization, or similar instrument issued by COMPANY to CONTRACTOR, and which shall incorporate the pricing proposal submitted by CONTRACTOR for such Work. A request will be considered written if exchanges, whether by correspondence, letter, fax, or email include all material terms and conditions and they have been accepted or ratified by both COMPANY and CONTRACTOR; *provided, however*, if verbal, such request shall be confirmed in writing as soon as practicable, and the terms of the written Order shall control. "Work" means any cementing services and other related services provided by CONTRACTOR, along with all related personnel, equipment, machinery, tools, supplies, materials, vehicles, facilities, consumables, goods, and any other items used in connection with such services.

**2. INDEPENDENT CONTRACTOR.** This Agreement does not create any agency, partnership, joint venture, or similar business relationship between parties. COMPANY will have the right generally to oversee and inspect the performance of the Work to ensure the reasonable satisfactory completion thereof; it being understood and agreed that CONTRACTOR shall have exclusive control over the operational details of the Work.

**3. PRICING AND PAYMENT.** **3.1** COMPANY will pay CONTRACTOR for the Work according to the prices and rates contained the applicable Order; *provided, however*, that if there are no such prices and rates, then the prices and rates set forth in the pricing proposal submitted by CONTRACTOR for the Work shall apply. The pricing proposals submitted by CONTRACTOR are generally valid sixty (60) days from submission of such proposal, unless otherwise set forth in such pricing proposal. Notwithstanding the foregoing, before commencing the Work and until an agreement is reached between the parties regarding such prices and rates, CONTRACTOR has the right to revise and shall advise COMPANY of any changes in the pricing proposal, and COMPANY may either accept or reject such changes, and proceed with the Work or not. **3.2** COMPANY shall pay CONTRACTOR's invoices within thirty (30) days of receipt of invoice. In the event COMPANY disputes any amount, it shall do so in good faith and shall notify CONTRACTOR of such dispute within thirty (30) days of receipt of invoice; *provided, however*, that COMPANY shall pay any undisputed portion of the invoice within the time for payment noted above and shall endeavor to expeditiously resolve such disputes. Any undisputed invoices, remaining unpaid for sixty (60) days after receipt by COMPANY, shall accrue interest at the rate of 1.5% per month or the maximum interest rate allowed by applicable law, whichever is less, through the time of collection. **3.3** Prices quoted by CONTRACTOR do not include sales, VAT, use or similar taxes, and such taxes, where applicable, shall be added to the quoted prices and invoiced accordingly. Each party shall pay all taxes levied or assessed by any governmental authority in connection with or incident to its performance under an Order; *provided, however*, that CONTRACTOR shall pay any assessments or taxes upon wages of CONTRACTOR, social security, unemployment insurance, old age benefits, or any other employment taxes, contributions or withholdings.

**4. ORDERS; STANDARD OF PERFORMANCE; WARRANTIES.** **4.1** COMPANY may from time to time place an Order for Work, and CONTRACTOR may provide such Work to COMPANY, subject to these T&Cs. Orders shall become binding only after signed or acknowledged by an authorized representative of each party. **4.2** CONTRACTOR shall provide all labor, equipment, machinery, tools, supplies, materials, vehicles, facilities, consumables, goods, and any other items required for the execution and completion of the Work, as more fully described in the applicable Order. **4.3** CONTRACTOR shall perform the Work with due diligence and care, in a good and workmanlike manner, using skilled, competent, experienced, and, where applicable, licensed personnel in accordance with the specifications represented by CONTRACTOR and with generally accepted oilfield practices. **4.4** CONTRACTOR shall conduct its Work, in all material respects, in accordance with all applicable laws, rules, regulations, decrees, and/or official government orders of any governing body having jurisdiction over the Work. **4.5** CONTRACTOR's Work is designed to operate under conditions normally encountered in a wellbore. COMPANY shall notify CONTRACTOR in advance and make special arrangements for Work in which hazardous or unusual conditions exist. COMPANY has complete care, custody, and control of the well, the premises around the well, and the drilling and production equipment of the well (other than such equipment provided by CONTRACTOR hereunder), and Company shall furnish directions and requirements for Work performed hereunder. CONTRACTOR is relying on COMPANY to provide such directions and requirements without further investigation by CONTRACTOR. CONTRACTOR agrees to observe and abide by COMPANY's safety policies and procedures communicated to and acknowledged by CONTRACTOR. CONTRACTOR shall as promptly as possible under the circumstances report to COMPANY's representative all accidents or occurrences resulting in injuries, illness or death to person(s) or damage to property, arising out of or occurring during the Work. **4.6** CONTRACTOR's sole liability, and COMPANY's exclusive remedy, for any Claims for breach of warranty under this Section 4 are limited to, at CONTRACTOR's sole option, (i) if practical, the re-performance of the defective Work or portion thereof, at no additional cost to COMPANY; or (ii) a refund or credit to COMPANY of any amount paid to CONTRACTOR for such defective Work or portion thereof. In the event that CONTRACTOR materially fails to perform the Work or if CONTRACTOR provides defective Work for reasons solely within CONTRACTOR's control, COMPANY shall give notice to CONTRACTOR of such non-performance or defective performance immediately upon discovery and prior to CONTRACTOR's departure from the worksite, otherwise such warranty Claim is waived. **4.7** Due to the nature of the Work to be performed in unpredictable wellbore conditions, CONTRACTOR does not warrant the accuracy, correctness, or completeness of any interpretations, analysis, recommendations, or advice, nor that COMPANY's or any third party's reliance on such interpretations, analysis, recommendations, or advice will accomplish any particular results, and which in any event are opinions only. Accordingly, it is COMPANY's responsibility, and sole risk, to determine the completion, well treatment, production, or financial decision involving any risk. Any outcomes that are less than expected will not relieve COMPANY of its responsibility to pay for the Work in accordance with these T&Cs. **4.8** THE WARRANTIES PROVIDED IN THIS SECTION 4 ARE THE SOLE AND EXCLUSIVE WARRANTIES RELATING TO THE WORK AND ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES WHETHER ORAL, WRITTEN, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WARRANTY OF MERCHANTABILITY AND WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

**5. ORDER CHANGES; PROJECT ADMINISTRATION.** **5.1** COMPANY may ask for and CONTRACTOR may agree to variations in the Work, whether by way of addition, modification or omission, which variations shall be in writing and signed by authorized representatives of both parties. The value of any such variations shall be ascertained by reference to the prices and rates specified in the applicable Order for like or analogous Work; *provided, however*, that if there are no such prices and rates or if they are otherwise inapplicable, then the prices and rates set forth in the pricing proposal submitted by CONTRACTOR for such additional Work shall apply. **5.2** To acknowledge or document various events during the provision of the Work, a party may from time to time sign the other party's forms, such as Orders, delivery tickets, job tickets, invoices, or similar instruments used by the parties in the normal course of business. In the event of a conflict between these T&Cs and any such documents, these T&Cs shall control, *unless* specific reference is made that these T&Cs are modified and the intention to modify is explicitly stated in such documents. **5.3** It is understood and agreed between the parties that COMPANY's representative (appointed in accordance with Section 5.4 below) shall have the authority to approve any job tickets, delivery tickets, or similar forms attesting to the completion of the Work by CONTRACTOR ("Job Tickets"). A COMPANY representative's signature on such Tickets shall indicate acceptance of the Work. If the Job Tickets are not acknowledged within forty-eight (48) hours of receipt through no fault of CONTRACTOR, CONTRACTOR may submit invoices for payment as if such Tickets had been acknowledged. **5.4** COMPANY will appoint a representative who will be responsible for the supervision of the Work, and who shall have full authority to represent and make decisions on behalf of COMPANY with respect to the Work, or otherwise to resolve the day-to-day issues which may arise related to the Work. Likewise, CONTRACTOR shall designate a representative with similar responsibilities and authority to liaise with COMPANY's representative.

**6. CONTRACTOR'S EQUIPMENT.** **6.1** Title to CONTRACTOR's equipment, including any lost, damaged, or confiscated equipment, shall remain in CONTRACTOR, and COMPANY shall have no right to assign, transfer, hypothecate, or remove such equipment from the place of its intended use without CONTRACTOR's prior written consent. **6.2** COMPANY shall be responsible for and agrees to compensate CONTRACTOR for all damages, losses, or any abnormal wear to CONTRACTOR GROUP's equipment: (i) while in COMPANY GROUP's care, custody or control, including while being transported by any member of COMPANY GROUP; (ii) as a result of operations conducted out of specifications at COMPANY GROUP's request, or in corrosive, abnormal temperatures or other



## Long String Proposal

unusual conditions; (iii) due to fishing operations (if any); or (iv) if lost in the hole or damaged beyond repair while in the hole or used in the hole. COMPANY will replace such equipment or reimburse CONTRACTOR with the current replacement price of such equipment.

**7. INDEMNITY.**

**7.1 Application of Indemnities.** 7.1.1 In those matters in which a party is required by these T&Cs to RELEASE, DEFEND, PROTECT, INDEMNIFY, AND HOLD HARMLESS the other party and/or members of its respective Group, SUCH OBLIGATIONS SHALL, EXCEPT TO THE EXTENT EXPRESSLY PROVIDED OTHERWISE IN THESE T&Cs, APPLY TO INDEMNITOR REGARDLESS OF THE CAUSE OR REASON, OR WHO MAY BE AT FAULT OR OTHERWISE RESPONSIBLE UNDER ANY CONTRACT, STATUTE, RULE, OR THEORY OF LAW, INCLUDING WITHOUT LIMITATION STRICT LIABILITY, TORT, BREACH OF DUTY (STATUTORY OR OTHERWISE), BREACH OF CONTRACT, BREACH OF REPRESENTATION OR WARRANTY, BREACH OF ANY SAFETY REQUIREMENT OR REGULATION, DUE TO ANY LATENT, PATENT, OR PRE-EXISTING DEFECTS OR CONDITIONS, IMPERFECTION OF MATERIAL, FAILURE OF EQUIPMENT, OR ANY LEGAL FAULT OR RESPONSIBILITY OF EITHER PARTY, INCLUDING THE SOLE, JOINT, AND/OR CONCURRENT NEGLIGENCE OR FAULT, WHETHER ACTIVE OR PASSIVE, OF THE INDEMNIFIED PARTY, OR OTHER PERSONS OR ENTITIES. 7.1.2 In the event these T&Cs are subject to the indemnity limitations in Chapter 127 of the Texas Civil Practice and Remedies Code (or any successor statute), and so long as such limitations are in force, each party covenants and agrees to support the mutual indemnity and release obligations contained herein by carrying insurance in an amount and of a type sufficient to cover their indemnity obligations.

**7.1.3** Notwithstanding any provisions in these T&Cs to the contrary, the following provision applies where Work is to be performed in New Mexico or Wyoming, as applicable: to the extent this Section 7 is governed by New Mexico or Wyoming law, then the provisions herein shall be read not to include indemnification for the indemnified party's own negligence. 7.1.4 If any defense, indemnity, or insurance provision contained in these T&Cs conflicts with, is prohibited by or violates public policy under any federal, state or other law determined to be applicable to a particular situation arising or involving these T&Cs, it is understood and agreed that the conflicting, prohibited or violating provision shall be deemed automatically amended in that situation to the extent—but only to the extent—necessary to conform with, not be prohibited by, and avoid violating public policy under such applicable law. The parties agree that the exculpatory, indemnification, and hold harmless provisions herein shall be modified or altered only insofar as required by a jurisdiction purporting to limit such provisions, it being the intention of both parties to enforce to the fullest extent, all terms and conditions herein agreed to.

**7.2 CONTRACTOR'S Indemnification.** CONTRACTOR shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD COMPANY GROUP HARMLESS from and against any and all Claims for personal or bodily injury to, sickness, disease or death of any member of CONTRACTOR GROUP, and any and all Claims for damage to or loss of any property of CONTRACTOR GROUP.

**7.3 COMPANY's Indemnification.** COMPANY shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD CONTRACTOR GROUP HARMLESS from and against any and all Claims for personal or bodily injury to, sickness, disease or death of any member of COMPANY GROUP, and any and all Claims for damage to or loss of any property of COMPANY GROUP.

**7.4 Pollution and Contamination; Catastrophic Damages or Losses.** Notwithstanding each party's obligations pursuant to Sections 7.2 and 7.3 hereof, it is understood and agreed between the parties that the following additional terms shall apply: 7.4.1 (a) CONTRACTOR shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD COMPANY GROUP HARMLESS from and against any and all Claims arising from pollution or contamination, which originates above the surface of the land or water, and which shall directly result from or be caused by CONTRACTOR GROUP's equipment, vehicles, or other tools and instruments while in CONTRACTOR GROUP's sole care, custody or control, and shall assume all responsibility for control and removal of same; and (b) COMPANY shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD CONTRACTOR GROUP HARMLESS from and against any and all Claims arising from any and all pollution or contamination other than that described under Section 7.4.1 (a) above, and including but not limited to, that which may result from cratering, seepage or any other uncontrolled flow of oil, gas, water or other substance, and shall assume all responsibility for control and removal of same. 7.4.2 COMPANY shall be liable for, and hereby agrees to RELEASE, DEFEND, PROTECT, INDEMNIFY AND HOLD CONTRACTOR GROUP HARMLESS from and against any and all Claims arising from any and all catastrophic damages or losses, including but not limited to those on account of injury, destruction of, loss or impairment (i) of any formation, strata, or reservoir beneath the surface of the earth; (ii) of any property rights in or to oil, gas, or other mineral substance or water, or the quiet enjoyment thereof, including subsurface trespass; (iii) to the well or the hole, including its casing; (iv) from radioactive sources; and (v) from fire, explosion, blowout, or any other uncontrolled well conditions, and the cost of controlling or regaining control of a wild well or out of control well.

**7.5 Incidental or Consequential Damages.** Notwithstanding any provisions to the contrary in these T&Cs, neither party shall be liable to the other party for, and parties shall RELEASE, PROTECT, DEFEND, INDEMNIFY AND HOLD EACH OTHER HARMLESS from and against any special, punitive, indirect, incidental or consequential damages or losses suffered by the other party and its Group resulting from or arising, directly or indirectly, out of or in connection with the Work, including, without limitation, loss and/or deferral of production, loss of product, loss of use, loss of bargain, contract expectations, or opportunity to contract with others, loss of revenue, profit, or anticipated profit, loss of business, business interruption, or downtime, whether direct or indirect, and whether or not such loss was foreseeable at the time of placing of an Order.

**8. INSURANCE.** 8.1 CONTRACTOR and COMPANY agree, at their sole cost and expense, to procure and continuously maintain in full force and effect throughout the term of this Agreement the following insurance coverage which may be met by a combination of primary and excess/umbrella insurance: A. Statutory Workers' Compensation Insurance and Employer's Liability in the amount of \$1,000,000 per occurrence and in the aggregate; B. Commercial General Liability insurance providing for third party property damage and personal injury, including broad form contractual liability for any agreement and broad form property damage in the amount of \$1,000,000 per occurrence and \$2,000,000 in the aggregate; C. Owned and Non-Owned Automobile Liability Insurance for bodily injury and property damage combined single limit in the amount of \$1,000,000 per occurrence and in the aggregate; D. Excess/Umbrella Liability Insurance providing coverage in excess of the foregoing insurances in the amount of \$5,000,000 per occurrence and in the aggregate, excluding statutory insurance coverage. 8.2 Each party agrees that, to the extent it assumes liability herein, it shall endorse the above coverages to name the indemnified parties as additional insureds (except for Workers' Compensation), shall waive its right of subrogation against the indemnified parties and their insurers, and agrees that its insurance shall be primary to that carried by the indemnified parties and non-contributory as per negligence for third party Claims, and shall not contribute in case of any Claim of exhaustion of horizontal limits. 8.3 Each party shall furnish an insurance certificate to the other to evidence the insurance required herein, and such certificates shall contain an endorsement stating that the insurer will endeavor to provide a thirty (30) days prior written notice of alteration or material change to such coverage. All deductible amounts, premiums, franchise amounts, or other charges due with respect to each party's required insurance should be the sole obligation of the insured party.

**9. CONFIDENTIALITY.** Each party contemplates that the other party may be provided and exposed to confidential and proprietary information ("Confidential Information"), which includes information relating to specifications of its tools, designs, inventions, component parts, parts list, software, firmware, hardware, processes, computer interfaces, operational parameters, and terms and pricing of Work. All Confidential Information shall remain the property of the party disclosing the same and no license is granted to the receiving party by virtue of the provision of such information. Confidential Information shall (i) be used by the recipient solely for the purpose of the provision of the Work and (ii) kept confidential and not disclosed to any person, except authorized representatives of the receiving Party, without written permission of the disclosing party. The receiving party shall take all reasonable steps to require its authorized representatives to keep such information confidential during and after the Work. Confidential Information shall not include information which: (i) at the time of placement of the Order is in the public domain or subsequently comes into the public domain through no fault of the receiving party and not in breach of these T&Cs; (ii) was already known to the receiving party on the date of disclosure, provided that such prior knowledge can be substantiated and proved by documentation; or (iii) properly and lawfully available to the receiving party from sources independent of the disclosing party.

**10. INTELLECTUAL PROPERTY.** While performing the Work, CONTRACTOR may utilize CONTRACTOR's intellectual property (including, without limitation, copyrights, registered marks, trademarks, service marks, patents, know-how, trade secrets, inventions, discoveries, techniques, technical information, technologies, designs, software, computer programs, formulae, calculations, computations, expertise, ideas, concepts, improvements, sketches, drawings, models, methods, practices, and/or processes, whether patentable or not) and/or develop, conceive, create, acquire, obtain, collect, generate, or make such additional intellectual property, which is and shall be CONTRACTOR's exclusive property. Except if expressly and specifically agreed in writing in a separate development agreement executed by the parties, and in exchange for appropriate payment, CONTRACTOR shall not develop any intellectual property for ownership by COMPANY in association with Work performed under a specific Order. Notwithstanding the foregoing, COMPANY or COMPANY GROUP shall own any intellectual property solely developed by COMPANY or COMPANY GROUP, respectively.

**11. FORCE MAJEURE.** 11.1 "Force Majeure" means (to the extent and only to the extent that any of the following are not reasonably within the control of the party claiming a Force Majeure and by the exercise of due diligence such party could not have mitigated, avoided, or overcome such condition) acts of God, fire, floods, lightning, blizzards, tornadoes, earthquakes, ice storms, named tropical storms and hurricanes, pandemics, terrorism, insurrection, revolution, war, strikes, lockouts, federal or state laws, rules and regulations of any governmental or public authorities having or asserting jurisdiction over the premises of either or both parties, inability to procure material due to industry wide shortages or soaring commodity costs, equipment, or necessary labor despite reasonable efforts, or similar causes. 11.2 If a party is rendered unable, wholly or in part, by a Force Majeure event to perform, that party will give written notice detailing such Force Majeure event to the other party as soon as reasonably possible. If a Force Majeure event continues without interruption for ten (10) days, either Party may cancel the applicable Order by giving prompt, written cancellation notice to the other party. Nothing in this Section 11.2 shall excuse COMPANY from its payment obligations of any invoices due and owing for Work performed under a specific Order.

**12. LIMITATION OF LIABILITY.** Notwithstanding anything to the contrary in these T&Cs, CONTRACTOR's liability arising from or in connection with its performance of the Work shall be limited to the value of the consideration paid to CONTRACTOR under the applicable Order.

**13. GOVERNING LAW; VENUE.** 13.1 For Work performed on a worksite within the United States, these T&Cs shall be exclusively governed by the laws of the State of Texas, excluding any conflict of laws principle that would refer to the laws of another jurisdiction. Venue shall lie exclusively in the state or federal courts of Harris County, Texas, and the parties consent to personal



## Long String Proposal

jurisdiction therein. **13.2** For Work performed on a worksite within **Canada**, these T&Cs shall be exclusively governed by the laws of **Province of Alberta**, excluding any conflict of laws principle that would refer to the laws of another jurisdiction.

**14. MISCELLANEOUS.** **14.1 Notices.** Notices shall be sent by registered post, or delivered in person, to the address for notices communicated by the other party. Said notices shall be deemed received (i) upon delivery if hand delivered, (ii) upon delivery if sent by registered post, and (iii) upon recipient's confirmation of receipt if faxed. **14.2 Waiver.** No benefit or right accruing to either party under these T&Cs shall be deemed to be waived unless the waiver is in writing, expressly refers to these T&Cs, and is signed by a duly authorized representative of both parties. A waiver in any one or more instances shall not constitute a continuing waiver, unless specifically so stated in the written waiver. **14.3 Severability.** In the event one or more of the provisions contained in these T&Cs shall be held, for any reason, to be invalid, void, illegal, contrary to law and/or unenforceable in any respect, these T&Cs shall be deemed to be amended to partially or completely modify such provision or portion thereof to the extent necessary to make it enforceable. If necessary, these T&Cs shall be deemed to be amended to delete the unenforceable provision or portion thereof, in which event such invalidity, illegality or unenforceability shall not affect the remaining provisions hereof, and these T&Cs shall remain unaffected and shall be construed as if such invalid, void, illegal or unenforceable provision never had been contained herein. **14.4 Independent Representation.** COMPANY AND CONTRACTOR ACKNOWLEDGE THAT THEY HAVE CONSULTED AN ATTORNEY CONCERNING THESE T&Cs OR HAVE ELECTED NOT TO DO SO, BUT REPRESENT THAT THEY FULLY UNDERSTAND THEIR RIGHTS AND OBLIGATIONS HEREUNDER

**Company:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_



<b>C-102</b>  Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department <b>OIL CONSERVATION DIVISION</b>		Revised July 9, 2024	
	Submittal Type:	<input type="checkbox"/> Initial Submittal		
		<input checked="" type="checkbox"/> Amended Report		
		<input type="checkbox"/> As Drilled		

## WELL LOCATION INFORMATION

API Number 30-025-52845	Pool Code 21650	Pool Name E-K; Bone Spring
Property Code 335845	Property Name <b>ROYAL OAK 25 FED COM</b>	Well Number <b>502H</b>
OGRID No. 330396	Operator Name <b>AVANT OPERATING, LLC</b>	Ground Level Elevation <b>3870.0</b>
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal

## Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
C	25	18 S	33 E		320 FNL	1340 FWL	32.7250469° N	103.6207696° W	LEA

## Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
N	36	18 S	33 E		100 FSL	2178 FWL	32.6971884° N	103.6180360° W	LEA

Dedicated Acres 1280	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
Order Numbers. R-23452			Well setbacks are under Common Ownership: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

## Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
C	25	18 S	33 E		50 FNL	2178 FWL	32.7257978° N	103.6180451° W	LEA


## First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
C	25	18 S	33 E		100 FNL	2178 FWL	32.7256604° N	103.6180450° W	LEA

## Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
N	36	18 S	33 E		100 FSL	2178 FWL	32.6971884° N	103.6180360° W	LEA

Unitized Area or Area of Uniform Interest	Spacing Unit Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation: 3849.0
---	--	-----------------------------------

<b>OPERATOR CERTIFICATIONS</b> 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 vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.  If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.  <div style="display: flex; justify-content: space-between;"> <div> <i>Sarah Ferreyros</i>            Signature         </div> <div>2/7/2025 Date</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Sarah Ferreyros Printed Name</div> <div></div> </div> <div style="display: flex; justify-content: space-between;"> <div>sarah@avantnr.com E-mail Address</div> <div></div> </div>	<b>SURVEYOR CERTIFICATIONS</b> I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. I further certify that United Field Services, Inc., located at 21 Road 3520 in Flora Vista, New Mexico is the company providing this information.  <div style="text-align: center;">   <i>[Signature]</i>            Signature and Seal of Professional Surveyor         </div> <div style="display: flex; justify-content: space-between;"> <div>14831 Certificate Number</div> <div>1/29/25 Date of Field Survey</div> <div>2/4/2025 Date of Certification</div> </div>
---	---

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

## ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.

United Field Services, Inc., located at 21 Road 3520, Flora Vista, New Mexico, is the company providing this plat.

Plat Revised: 1/31/25

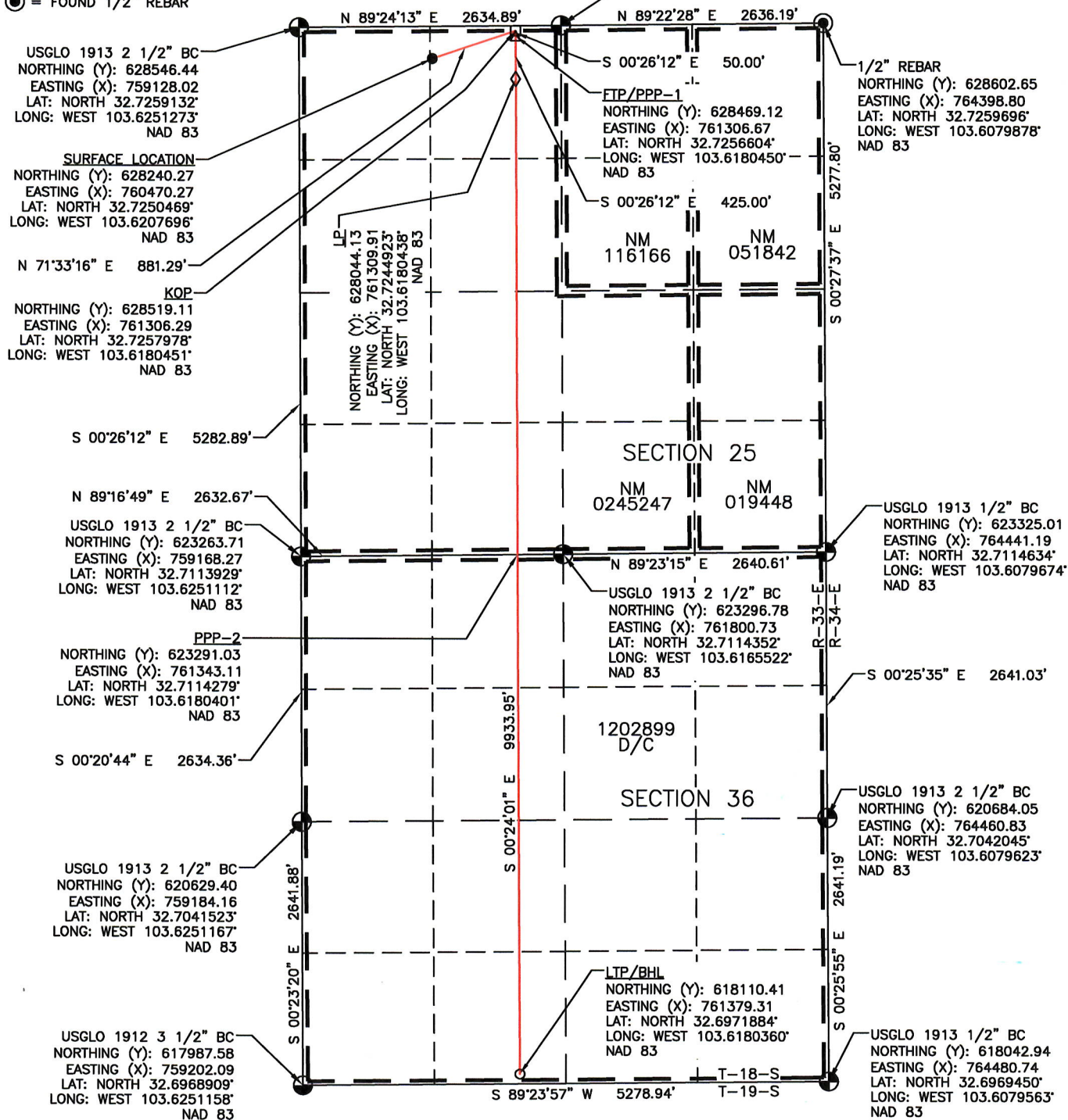
UFSI PROJECT NO. 11722

## LEGEND:

- = SURFACE LOCATION (SHL)
- = KICK OFF POINT (KOP)
- △ = FTP/PPP-1
- ◇ = LANDING POINT (LP)
- = LTP/BHL
- ⊙ = FOUND 1913 USGLO BRASS CAP
- ⊙ = FOUND 1912 USGLO BRASS CAP
- ⊙ = FOUND 1/2" REBAR

NOTE: BEARINGS AND DISTANCES SHOWN ARE REFERENCED TO THE NEW MEXICO COORDINATE SYSTEM, EAST ZONE, NAD 83, UNLESS OTHERWISE NOTED

AVANT OPERATING, LLC			
ROYAL OAK 25 FED COM 502H			
FOOTAGES			SEC.
SHL	320' FNL	1340' FWL	25
KOP	50' FNL	2178' FWL	25
FTP/PPP-1	100' FNL	2178' FWL	25
LP	525' FNL	2178' FWL	25
PPP-2	0' FNL	2175' FWL	36
LTP/BHL	100' FSL	2178' FWL	36





<b>C-102</b>  Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department <b>OIL CONSERVATION DIVISION</b>		Revised July 9, 2024	
	Submittal Type:	<input type="checkbox"/> Initial Submittal <input checked="" type="checkbox"/> Amended Report <input type="checkbox"/> As Drilled		

## WELL LOCATION INFORMATION

API Number 30-025-52845	Pool Code 21650	Pool Name E-K; Bone Spring
Property Code 335845	Property Name <b>ROYAL OAK 25 FED COM</b>	Well Number <b>502H</b>
OGRID No. 330396	Operator Name <b>AVANT OPERATING, LLC</b>	Ground Level Elevation <b>3870.0</b>
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal

## Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
C	25	18 S	33 E		320 FNL	1340 FWL	32.7250469° N	103.6207696° W	LEA

## Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
N	36	18 S	33 E		100 FSL	2178 FWL	32.6971884° N	103.6180360° W	LEA

Dedicated Acres 1280	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
Order Numbers. R-23452			Well setbacks are under Common Ownership: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

## Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
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UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
C	25	18 S	33 E		100 FNL	2178 FWL	32.7256604° N	103.6180450° W	LEA

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Unitized Area or Area of Uniform Interest	Spacing Unit Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation: 3849.0
---	--	-----------------------------------

## OPERATOR CERTIFICATIONS

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 vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

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

*Sarah Ferreyros* 2/7/2025  
Signature Date

Sarah Ferreyros

Printed Name

sarah@avantnr.com

E-mail Address

## SURVEYOR CERTIFICATIONS

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. I further certify that United Field Services, Inc., located at 21 Road 3520 in Flora Vista, New Mexico is the company providing this information.



Signature and Seal of Professional Surveyor

14831  
Certificate Number

1/29/25  
Date of Field Survey

2/4/2025  
Date of Certification

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

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

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Plat Revised: 1/31/25

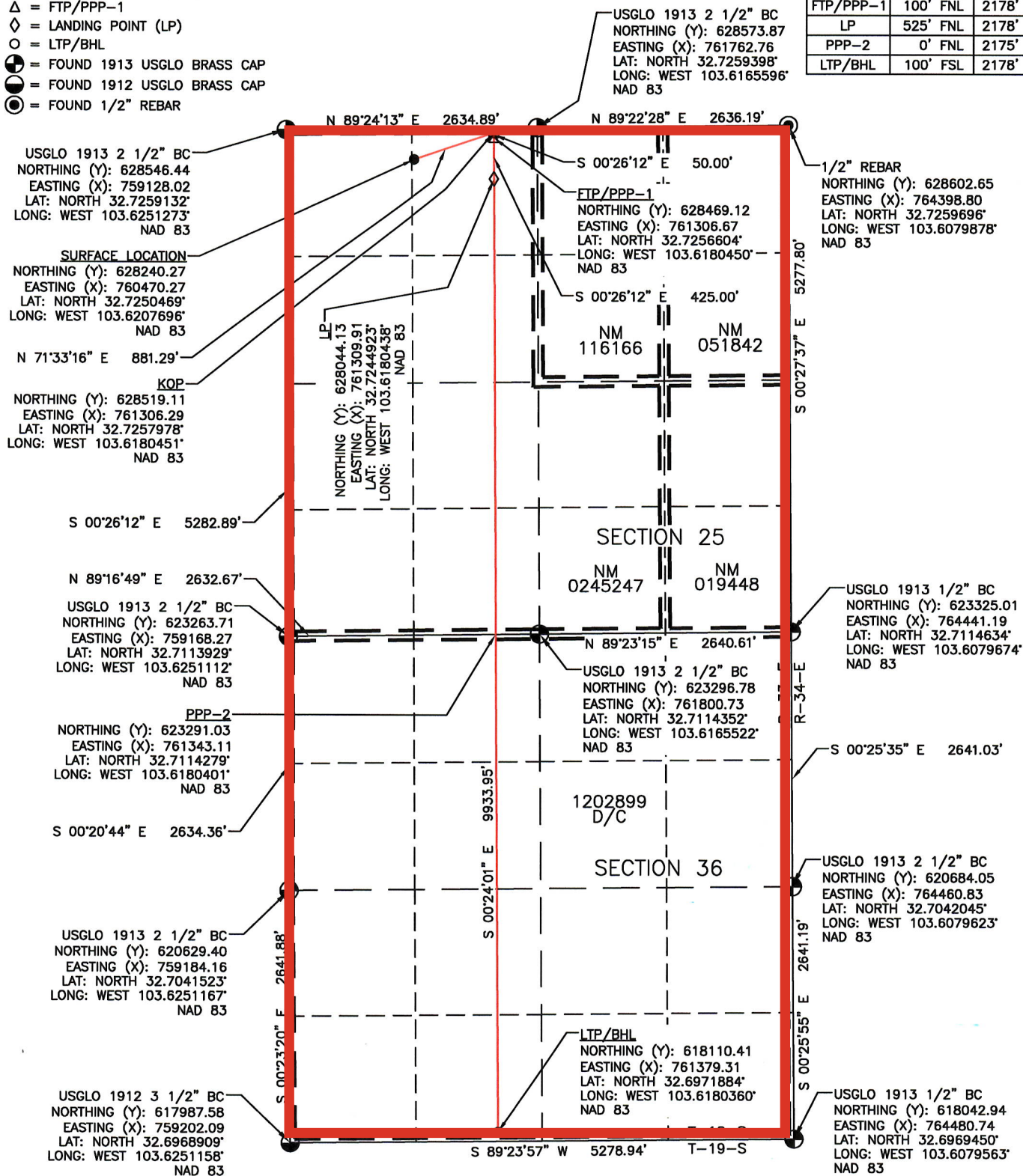
UFSI PROJECT NO. 11722

**LEGEND:**

- = SURFACE LOCATION (SHL)
- = KICK OFF POINT (KOP)
- △ = FTP/PPP-1
- ◇ = LANDING POINT (LP)
- = LTP/BHL
- ⊕ = FOUND 1913 USGLO BRASS CAP
- ⊙ = FOUND 1912 USGLO BRASS CAP
- ⦿ = FOUND 1/2" REBAR

NOTE: BEARINGS AND DISTANCES SHOWN ARE REFERENCED TO THE NEW MEXICO COORDINATE SYSTEM, EAST ZONE, NAD 83, UNLESS OTHERWISE NOTED

AVANT OPERATING, LLC				
ROYAL OAK 25 FED COM 502H				
FOOTAGES				
SHL	320' FNL	1340' FWL	SEC	
KOP	50' FNL	2178' FWL	25	
FTP/PPP-1	100' FNL	2178' FWL	25	
LP	525' FNL	2178' FWL	25	
PPP-2	0' FNL	2175' FWL	36	
LTP/BHL	100' FSL	2178' FWL	36	





Well Name: ROYAL OAK 25 FED COM	Well Location: T18S / R33E / SEC 25 / NWNW / 32.7254868 / -103.6209	County or Parish/State: LEA / NM
Well Number: 502H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM0245247	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002552845	Operator: AVANT OPERATING LLC	

Notice of Intent

Sundry ID: 2789515

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 05/10/2024	Time Sundry Submitted: 10:05
Date proposed operation will begin: 05/10/2024	

Procedure Description: Avant Operating, LLC would like to update the dedicated acreage of this well. New dedicated acreage will be 1280 total acres, please see attached updated plat to reflect this change.

NOI Attachments

Procedure Description

Royal\_Oak\_25\_Fed\_Com\_502H\_C\_102\_Plat\_20241127095331.pdf

Well Number: 502H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM0245247

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002552845

Operator: AVANT OPERATING LLC

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: MEGHAN TWELE

Signed on: NOV 27, 2024 09:53 AM

Name: AVANT OPERATING LLC

Title: Contract Regulatory Analyst

Street Address: 1515 WYNKOOP ST SUITE 700

City: DENVER

State: CO

Phone: (720) 339-6880

Email address: MTWELE@OUTLOOK.COM

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Accepted

Disposition Date: 02/12/2025

Signature: Chris Walls

Form 3160-5 (June 2019)	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT	FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> <i>Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.</i>		5. Lease Serial No.
		6. If Indian, Allottee or Tribe Name

<b>SUBMIT IN TRIPLICATE - Other instructions on page 2</b>		7. If Unit of CA/Agreement, Name and/or No.
1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No.
2. Name of Operator		9. API Well No.
3a. Address	3b. Phone No. (include area code)	10. Field and Pool or Exploratory Area
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA				
TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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

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

<b>THE SPACE FOR FEDERAL OR STATE OFFICE USE</b>		
Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

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

(Instructions on page 2)

## GENERAL INSTRUCTIONS

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

## SPECIFIC INSTRUCTIONS

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

*Item 13*: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

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

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

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

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

## Additional Information

### Location of Well

0. SHL: NWNW / 160 FNL / 1300 FWL / TWSP: 18S / RANGE: 33E / SECTION: 25 / LAT: 32.7254868 / LONG: -103.6209 ( TVD: 0 feet, MD: 0 feet )

PPP: NENW / 100 FNL / 1650 FWL / TWSP: 18S / RANGE: 33E / SECTION: 25 / LAT: 32.7256551 / LONG: -103.6197618 ( TVD: 9600 feet, MD: 9886 feet )

BHL: SESW / 100 FSL / 1650 FWL / TWSP: 18S / RANGE: 33E / SECTION: 36 / LAT: 32.6971829 / LONG: -103.6197523 ( TVD: 9600 feet, MD: 19805 feet )



**DISTRICT I**

1625 N. French Dr., Hobbs, N.M. 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

**DISTRICT II**

811 S. First St., Artesia, N.M. 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

**DISTRICT III**

1000 Rio Brazos Rd., Aztec, N.M. 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

**DISTRICT IV**

1220 S. St. Francis Dr., Santa Fe, N.M. 87505  
Phone: (505) 476-3480 Fax: (505) 476-3482

State of New Mexico  
Energy, Minerals & Natural Resources Department

**OIL CONSERVATION DIVISION**

1220 South St. Francis Dr.  
Santa Fe, N.M. 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate  
District Office

☐ AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number	<sup>2</sup> Pool Code 21650	<sup>3</sup> Pool Name E-K; Bone Spring
<sup>4</sup> Property Code	<sup>5</sup> Property Name ROYAL OAK 25 FED COM	<sup>6</sup> Well Number 502H
<sup>7</sup> OGRID No. 330396	<sup>8</sup> Operator Name AVANT OPERATING, LLC	<sup>9</sup> Elevation 3866

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	25	18 S	33 E		160	NORTH	1300	WEST	LEA

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	36	18 S	33 E		100	SOUTH	1650	WEST	LEA

<sup>12</sup> Dedicated Acres 1280 Acres Total.	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. R-23452
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

**16**

**Legend:**

- = SURFACE LOCATION (SHL)
- = BOTTOM HOLE LOCATION/ LTP
- △ = FIRST TAKE POINT (FTP)
- ⊙ = FOUND 1913 USGLO BRASS CAP
- ⊙ = FOUND 1912 USGLO BRASS CAP
- ⊙ = FOUND 1/2" REBAR

SCALE: 1"=3000'

**SURFACE LOCATION**  
NAD 83 NME, NMSPC ZONE 3001  
Y= 628400.03 N  
X= 760429.08 E  
LAT: 32.7254868° N  
LONG: 103.6209000° W

**FIRST TAKE POINT**  
NAD 83 NME, NMSPC ZONE 3001  
100' FNL, 1650' FWL  
SEC. 25, T18S, R33E  
Y= 628463.62 N  
X= 760778.70 E  
LAT: 32.7256551° N  
LONG: 103.6197618° W

**LAST TAKE POINT/  
BOTTOM HOLE LOCATION**  
NAD 83 NME, NMSPC ZONE 3001  
Y= 618104.88 N  
X= 760851.33 E  
LAT: 32.6971829° N  
LONG: 103.6197523° W

**CORNER COORDINATES TABLE**  
NAD 83 NME, NMSPC ZONE 3001

A	- Y= 628546.44 N, X= 759128.02 E
B	- Y= 628573.87 N, X= 761762.76 E
C	- Y= 623263.71 N, X= 759168.27 E
D	- Y= 623296.78 N, X= 761800.73 E
E	- Y= 620629.40 N, X= 759184.16 E
F	- Y= 617987.58 N, X= 759202.09 E
G	- Y= 618042.94 N, X= 764480.74 E

**CORNER COORDINATES TABLE**  
NAD 83 NME, NMSPC ZONE 3001

A	- LAT.=32.7259132° N, LONG.=103.6251273° W
B	- LAT.=32.7259398° N, LONG.=103.6165596° W
C	- LAT.=32.7113929° N, LONG.=103.6251112° W
D	- LAT.=32.7114352° N, LONG.=103.6165522° W
E	- LAT.=32.7041523° N, LONG.=103.6251167° W
F	- LAT.=32.6968909° N, LONG.=103.6251158° W
G	- LAT.=32.6969450° N, LONG.=103.6079563° W

**17 OPERATOR CERTIFICATION**

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

Signature: Sarah Ferreyros Date: 4/23/2024

Printed Name: Sarah Ferreyros

E-mail Address: sarah@avantnr.com

**18 SURVEYOR CERTIFICATION**

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

Date of Survey: 10/28/22

Signature and Seal of Professional Surveyor: Marshall W. Lindeen

Certificate Number: 17078

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 431493

CONDITIONS

Operator:  Avant Operating, LLC 1515 Wynkoop Street Denver, CO 80202	OGRID:  330396
	Action Number:  431493
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	If cement is not circulated to surface during cementing operations, a Cement Bond Log (CBL) is required.	2/20/2025
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing.	2/20/2025