

Well Name: EMERALD FEDERAL COM	Well Location: T19S / R33E / SEC 6 / SESE / 32.68305 / -103.69783	County or Parish/State: LEA / NM
Well Number: 516H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM077002	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002553472	Operator: AVANT OPERATING LLC	

Notice of Intent

Sundry ID: 2880947

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 11/03/2025	Time Sundry Submitted: 12:51
Date proposed operation will begin: 12/01/2025	

Procedure Description: Coterra Energy Operating Co requests the following changes to the Emerald Fed Com 516H (API 30-025-53472): Name change from Emerald Fed Com 516H to Emerald Fed Com 506H SHL change from 350 FSL/1250 FWL to 300 FSL/1290 FEL BHL change from 100 FNL/330 FEL to 100 FNL/660 FEL TVD change from 9200 to 9600 Please see attached for updated C102, drilling and directional plans.

NOI Attachments

Procedure Description

Emerald_506H_Sundry_Submittal_11032025_20251103125048.pdf

Well Name: EMERALD FEDERAL COM

Well Location: T19S / R33E / SEC 6 / SESE / 32.68305 / -103.69783

County or Parish/State: LEA / NM

Well Number: 516H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM077002

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002553472

Operator: AVANT OPERATING LLC

Conditions of Approval

Additional

6_19_33_P_Sundry_ID_2880947_Emerald_Federal_Com_506H_20251210080728.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: SHELLY BOWEN

Signed on: NOV 03, 2025 12:50 PM

Name: AVANT OPERATING LLC

Title: Regulatory Analyst

Street Address: 6001 DEAUVILLE BLVD STE 300N

City: MIDLAND

State: TX

Phone: (432) 620-1644

Email address: DL_PBUREGULATORY@COTERRA.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: 12/10/2025

Signature: Chris Walls

Form 3160-5
(October 2024)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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

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

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

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: SESE / 350 FSL / 1240 FEL / TWSP: 19S / RANGE: 33E / SECTION: 6 / LAT: 32.68305 / LONG: -103.69783 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 100 FSL / 330 FEL / TWSP: 19S / RANGE: 33E / SECTION: 6 / LAT: 32.682361 / LONG: -103.694841 (TVD: 9200 feet, MD: 9632 feet)

BHL: NENE / 100 FNL / 330 FEL / TWSP: 18S / RANGE: 33E / SECTION: 31 / LAT: 32.710896 / LONG: -103.694862 (TVD: 9200 feet, MD: 20014 feet)

CONFIDENTIAL

6-19-33-P Sundry ID 2880947 Emerald Federal Com 506H.xlsm

Emerald Federal Com 506H

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	6.29	1.74	0.86	1,500	4	1.46	3.54	81,750		
"B"				ltc				0				0		
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,263						Tail Cmt	does not	circ to sfc.	Totals:	1,500		81,750		
Comparison of Proposed to Minimum Required Cement Volumes														
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd						
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE						
17 1/2	0.6946	986	1617	1042	55	8.33	1881	2M						
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. 1.38, 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	2.19	0.81	0.83	5,942	1	1.50	1.37	237,680
"B"								0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 172								Totals:	5,942			237,680
The cement volume(s) are intended to achieve a top of 0								ft from surface or a 1500		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	1436	2542	1935	31	10.33	2626	3M				0.81
r D V Tool(s):								sum of sx	Σ CuFt	Σ%excess		
t by stage % :								1436	2542	31		
Class 'H' tail cmt yld > 1.20												
Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.66, b, c, d <0.70 a Problem!!												

Tail cmt											
5 1/2		casing inside the		9 5/8		Design Factors				Prod 1	
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	Weight
"A"	20.00		p 110	gbcd	3.34	2.34	2.67	19,991	3	4.81	4.23 399,820
"B"								0			0
"C"								0			0
"D"								0			0
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,112								Totals:	19,991		399,820
The cement volume(s) are intended to achieve a top of								ft from surface or 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
8 3/4	0.2526	3486	5379	3601	49	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 Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg
0		#N/A	#N/A	0	#N/A						
#N/A Capitan Reef est top XXXX.											

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

WELL LOCATION INFORMATION

API Number 30-025-53472	Pool Code 13160	Pool Name CorbinSouth; Bone Spring
Property Code 338306	Property Name EMERALD FEDERAL COM	Well Number 506H
OGRID No. 215099	Operator Name COTERRA ENERGY OPERATING CO.	Ground Level Elevation 3683.9
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	6	19 S	33 E		300 FSL	1290 FEL	32.6829134° N	103.6979608° W	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	31	18 S	33 E		100 FNL	660 FEL	32.7108929° N	103.6959345° W	LEA

Dedicated Acres 1302.98 Ac.	Infill or Defining Well Infill	Defining Well API 30-025-54190	Overlapping Spacing Unit (Y/N) N	Consolidation Code C, F
Order Numbers. R-23267-A		Well setbacks are under Common Ownership: ☒ Yes ☐ No		

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	6	19 S	33 E		100 FSL	660 FEL	32.6823622° N	103.6959140° W	LEA

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	6	19 S	33 E		100 FSL	660 FEL	32.6823622° N	103.6959140° W	LEA

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	31	18 S	33 E		100 FNL	660 FEL	32.7108929° N	103.6959345° W	LEA

Unitized Area or Area of Uniform Interest NA	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 3683.9
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OPERATOR CERTIFICATIONS

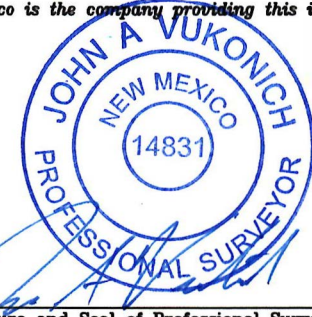
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location 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.

Signature <i>Shelly Bowen</i>	Date 7/1/2025
Printed Name Shelly Bowen	
E-mail Address shelly.bowen@coterra.com	

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	4/21/25	6/9/2025
Certificate Number	Date of Field Survey	Date of Certification

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

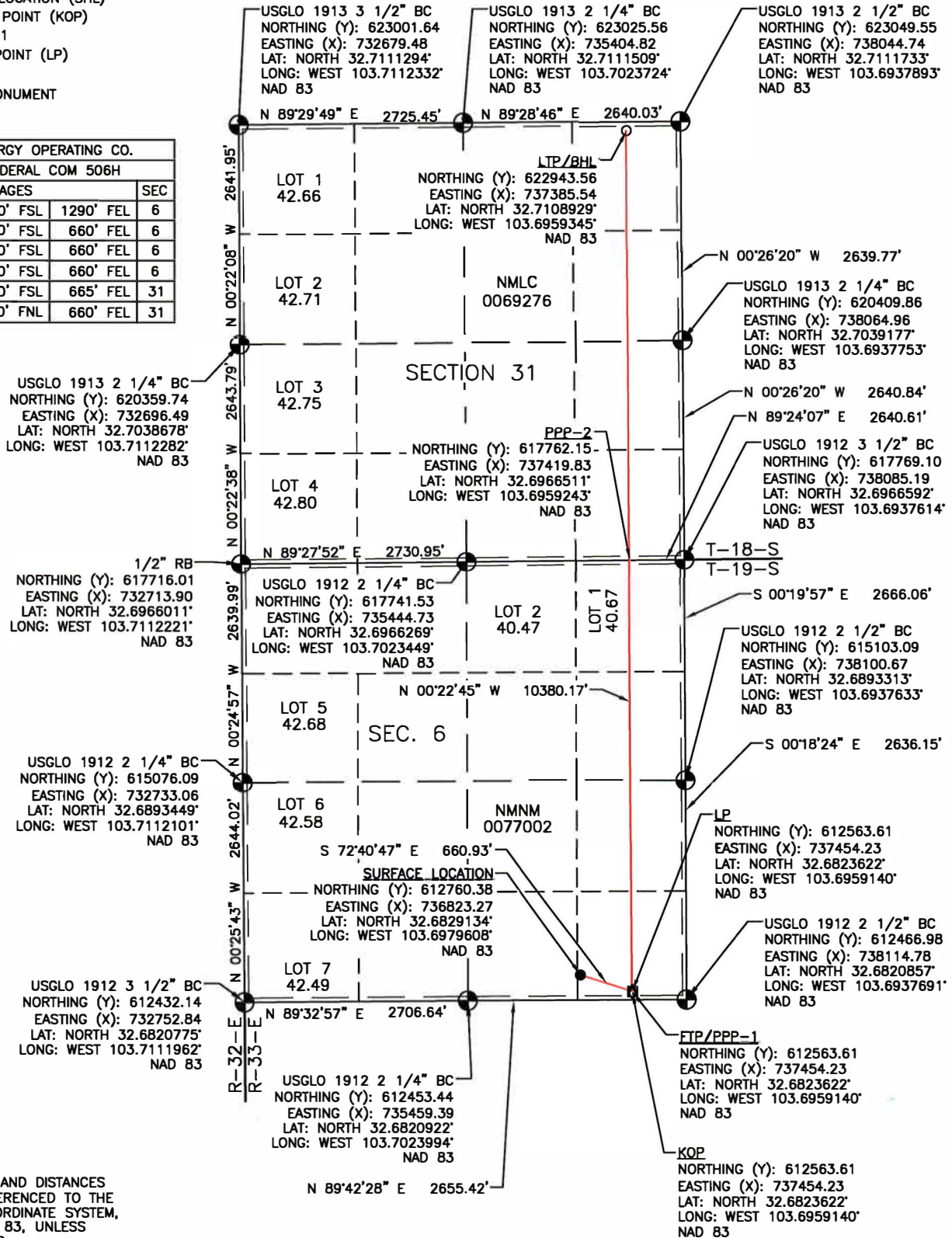
This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with dimensions from the section 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.

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

LEGEND:

- = SURFACE LOCATION (SHL)
- = KICK OFF POINT (KOP)
- △ = FTP/PPP-1
- ◇ = LANDING POINT (LP)
- = LTP/BHL
- ⊕ = FOUND MONUMENT

COTERRA ENERGY OPERATING CO.			
EMERALD FEDERAL COM 506H			
FOOTAGES			SEC
SHL	300' FSL	1290' FEL	6
KOP	100' FSL	660' FEL	6
FTP/PPP-1	100' FSL	660' FEL	6
LP	100' FSL	660' FEL	6
PPP-2	0' FSL	665' FEL	31
LTP/BHL	100' FNL	660' FEL	31



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

1. Geological Formations

TVD of target 9,600

Pilot Hole TD N/A

MD at TD 19,991

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1500	N/A	
Top of Salt	1798	N/A	
Base of Salt/Lamar	5918	N/A	
Top Delaware Sands/Bell Canyon	6028	N/A	
Cherry Canyon	6198	N/A	
Brushy Canyon	6665	N/A	
Basal Brushy Canyon	7230	N/A	
Bone Spring Lime	7600	N/A	
Leonard/Avalon Sand	7705	N/A	
Avalon Shale	7860	N/A	
1st Bone Spring Sand	8795	N/A	
2nd Bone Spring Sand	9330	Hydrocarbons	
2nd Bone Spring Sand - Target	9826	Hydrocarbons	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1605	1605	13-3/8"	54.50	J-55	ST&C	1.63	3.94	5.88
12 1/4	0	5942	5942	9-5/8"	40.00	J-55	BT&C	1.50	1.24	2.65
8 3/4	0	9278								
8 3/4	9278	19991	9600	5-1/2"	17.00	P-110	BT&C	1.58	2.24	99.74
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Cimarex Energy Co., Emerald Federal Com 506H

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

3. Cementing Program

Casing	# Sk	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	778	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	208	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	1144	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	292	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	362	10.30	3.64	22.18		Lead: Tuned Light + LCM
	3124	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	45
Intermediate	0	51
Production	5742	25

Cimarex request the ability to perform casing integrity tests after plug bump of cement job.

4. Pressure Control Equipment

X	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.				
BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
12 1/4	13 5/8	10M	Annular	X	100% of working pressure
			Blind Ram		10M
			Pipe Ram	X	
			Double Ram		
			Other		
8 3/4	13 5/8	10M	Annular	X	100% of working pressure
			Blind Ram		10M
			Pipe Ram	X	
			Double Ram	X	
			Other		

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.				
X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.				
N	Are anchors required by manufacturer?				

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 1605'	Fresh Water	7.83 - 8.33	28	N/C
1605' to 5942'	Brine Water	9.83 - 10.33	30-32	N/C
5942' to 19991'	OBM	9.00 - 9.50	50-70	N/C

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

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

6. Logging and Testing Procedures

Logging, Coring and Testing	
	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
X	No logs are planned based on well control or offset log information.
	Drill stem test?
	Coring?

Additional Logs Planned	Interval
-------------------------	----------

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	4742 psi
Abnormal Temperature	No

Hydrogen Sulfide (H₂S) monitors will be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

X	H ₂ S is present
X	H ₂ S plan is attached

8. Other Facets of Operation**9. Wellhead**

1. The multi-bowl wellhead will be installed by a vendor representative. A copy of the installation instructions has been sent to the BLM field office.
2. A packoff will be installed after running and cementing the production casing. This packoff will be tested to 10K psi.

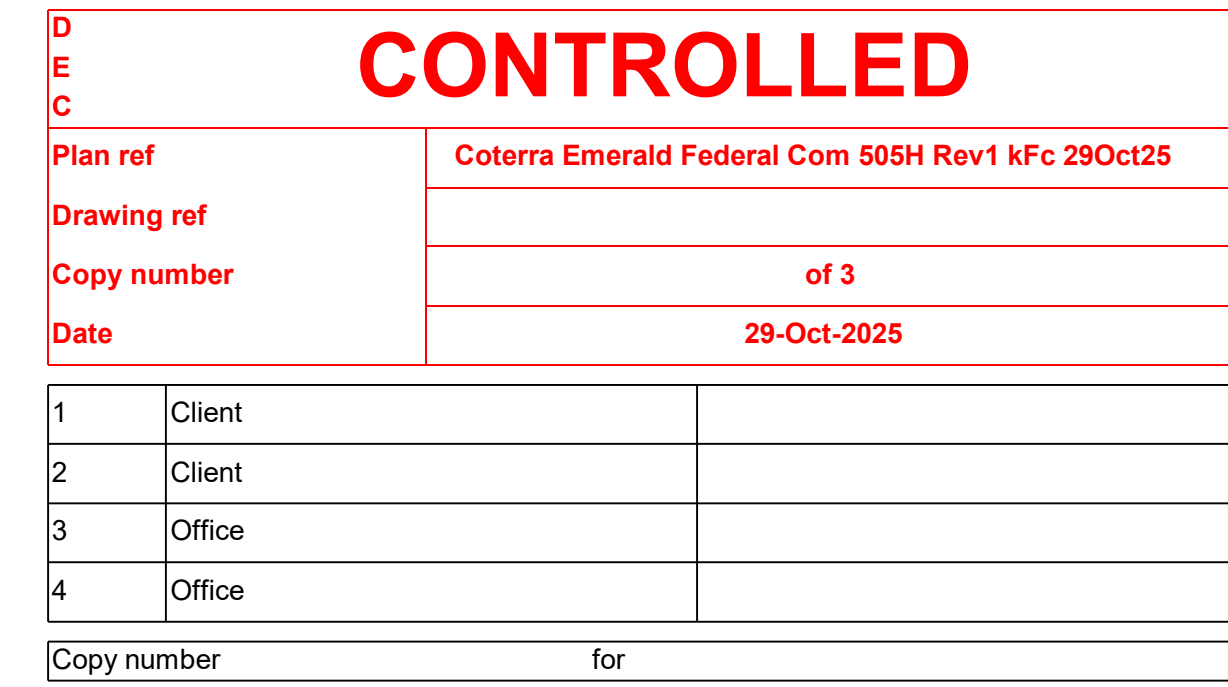
BOPE Additional Information & Testing

1. After running the first string of casing, a 10M BOP/BOPE system with 10M annular will be installed. BOPs will be tested according to Onshore Order #2. BOPE will be tested to full rated pressure (10K for all BOPE). For the low test, the system will be tested to 250 psi.
2. All BOP equipment will be tested utilizing a conventional test plug.
3. A remote kill line is included in the BOPE system
4. All casing strings will be tested per Onshore Order #2, to 0.22 psi/ft or 1,500 psi, whichever is greater, not to exceed 70% of casing burst.
5. If well conditions dictate, conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Additional Well Control Notes

1. In the event wellbore pressure encroaches to the maximum rated pressure of the annular, primary pressure control will be switched to the higher rated components (i.e., switch from annular to pipe rams) – upper pipe rams will be closed, and the annular opened in order to not exceed maximum rated pressures.

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [300°FSL, 1310°FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler	1509.00	0.00	253.73	1509.00	0.00	0.00	0.00	0.00
A3 Top	1580.00	0.00	253.73	1580.00	0.00	0.00	0.00	0.00
Nudge, Build 2"/100ft	1600.00	0.00	253.73	1600.00	0.00	0.00	0.00	0.00
A3 Base	1716.03	2.32	253.73	1716.00	-0.64	-0.66	-2.26	2.00
Salado	1795.15	3.90	253.73	1795.00	-1.82	-1.86	-6.38	2.00
Hold	2050.17	9.00	253.73	2048.32	-9.67	-9.89	-33.88	2.00
Lamar	5967.11	9.00	253.73	5917.00	-177.53	-181.66	-622.30	0.00
Bell Canyon	6080.51	9.00	253.73	6029.00	-182.39	-186.63	-639.34	0.00
Drop 2"/100ft	6238.90	9.00	253.73	6185.44	-189.18	-193.58	-663.13	0.00
Cherry Canyon	6249.59	8.79	253.73	6196.00	-189.63	-194.04	-664.72	2.00
Hold	6689.07	0.00	253.73	6633.76	-198.84	-203.47	-697.01	2.00
Brushy Canyon	6700.31	0.00	253.73	6645.00	-198.84	-203.47	-697.01	0.00
Basal Brushy Canyon	7274.31	0.00	253.73	7219.00	-198.84	-203.47	-697.01	0.00
Bone Springs Lime	7625.31	0.00	253.73	7570.00	-198.84	-203.47	-697.01	0.00
Leonard	7708.31	0.00	253.73	7653.00	-198.84	-203.47	-697.01	0.00
Avalon	7910.31	0.00	253.73	7855.00	-198.84	-203.47	-697.01	0.00
1st BS SS	8830.31	0.00	253.73	8775.00	-198.84	-203.47	-697.01	0.00
KOP, Build 10"/100ft	9269.07	0.00	253.73	9213.76	-198.84	-203.47	-697.01	0.00
2nd BS SS	9355.64	8.66	359.62	9300.00	-192.32	-196.94	-697.06	10.00
Build 5"/100ft	10019.07	75.00	359.62	9767.19	225.82	221.19	-699.83	10.00
Landing Point	10342.39	91.17	359.62	9806.00	545.72	541.08	-701.95	5.00
Emerald Federal Comm 505H - BHL [100°FNL, 2008°FEL]	19975.12	91.17	359.62	9610.00	10176.46	10171.61	-765.70	0.00





Coterra Emerald Federal Com 505H Rev1 kFc 29Oct25 Proposal Geodetic

Report
Def Plan

Report Date: October 29, 2025 - 08:04 PM (UTC 0)
Client: COTERRA
Field: NM Lea County (NAD 83)
Structure / Slot: Coterra - Emerald Federal Com Pad (east) / Emerald Federal Com 505H
Well: Emerald Federal Com 505H
Borehole: Emerald Federal Com 505H
UBH / API#: Unknown / Unknown
Survey Name: Coterra Emerald Federal Com 505H Rev1 kFc 29Oct25
Survey Date: October 29, 2025
Tort / AHD / DDI / ERD Ratio: 109.173 ' / 11101.413 ft / 6.392 ' / 1.132
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: 32°40'58.48775"N , 103°41'52.88321"W
Location Grid N/E Y/X: N 812760.200 RLUS , E 736803.250 RLUS
CRS Grid Convergence Angle: 0.343"
Grid Scale Factor: 0.99995284(Applied)
Version / Patch: 2025.1.0.1

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 359.620 °(GRID North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3706.900 ft above MSL
Sealed / Ground Elevation: 3883.900 ft above MSL
Magnetic Declination: 6.231"
Total Gravity Field Strength: 998.509mgm (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47454.153 nT
Magnetic Dip Angle: 60.415°
Declination Date: October 29, 2025
Magnetic Declination Model: HDGM 2025
North Reference: Grid North
Grid Convergence Used: 0.343"
Total Corr Mag North->Grid North: 5.888"
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
SHL [300FSL, 1310FEL]	0.00	0.00	0.00	0.00	-3.706.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589			
	100.00	0.00	253.73	100.00	-3.606.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	200.00	0.00	253.73	200.00	-3.506.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	300.00	0.00	253.73	300.00	-3.406.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	400.00	0.00	253.73	400.00	-3.306.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	500.00	0.00	253.73	500.00	-3.206.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	600.00	0.00	253.73	600.00	-3.106.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	700.00	0.00	253.73	700.00	-3.006.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	800.00	0.00	253.73	800.00	-2.906.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	900.00	0.00	253.73	900.00	-2.806.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	1,000.00	0.00	253.73	1,000.00	-2.706.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	1,100.00	0.00	253.73	1,100.00	-2.606.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	1,200.00	0.00	253.73	1,200.00	-2.506.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	1,300.00	0.00	253.73	1,300.00	-2.406.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	1,400.00	0.00	253.73	1,400.00	-2.306.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	1,500.00	0.00	253.73	1,500.00	-2.206.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
Rustler	1,509.00	0.00	253.73	1,509.00	-2.197.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
A3 Top	1,580.00	0.00	253.73	1,580.00	-2.126.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
Nudge, Build 2"/100ft	1,600.00	0.00	253.73	1,600.00	-2.106.90	0.00	0.00	0.00	612.760.20	736.803.25	32.68291326	-103.69802589	0.00	0.00	0.00
	1,700.00	2.00	253.73	1,699.98	-2.009.92	-0.48	-0.49	-1.68	612.759.71	736.801.57	32.68291195	-103.69803135	2.00	2.00	0.00
A3 Base	1,716.03	2.32	253.73	1,716.00	-1.990.90	-0.64	-0.66	-2.26	612.759.54	736.800.99	32.68291149	-103.69803323	2.00	2.00	0.00
Salado	1,795.15	3.90	253.73	1,795.00	-1.911.90	-1.82	-1.86	-6.38	612.758.34	736.796.87	32.68290825	-103.69804666	2.00	2.00	0.00
	1,800.00	4.00	253.73	1,799.84	-1.907.06	-1.91	-1.96	-6.70	612.758.24	736.796.55	32.68290800	-103.69804770	2.00	2.00	0.00
	1,900.00	6.00	253.73	1,899.45	-1.807.45	-4.30	-4.40	-15.06	612.755.80	736.788.19	32.68290142	-103.69804744	2.00	2.00	0.00
	2,000.00	8.00	253.73	1,998.70	-1.708.20	-7.63	-7.81	-26.76	612.752.39	736.776.49	32.68289223	-103.69811302	2.00	2.00	0.00
	2,050.17	9.00	253.73	2,048.32	-1.658.58	-9.67	-9.89	-33.88	612.750.31	736.769.37	32.68288664	-103.69813620	2.00	2.00	0.00
	2,100.00	9.00	253.73	2,097.54	-1.609.36	-11.80	-12.08	-41.37	612.748.12	736.761.88	32.68288075	-103.69816057	0.00	0.00	0.00
	2,200.00	9.00	253.73	2,196.30	-1.510.60	-16.09	-16.46	-56.39	612.743.74	736.746.86	32.68286895	-103.69820948	0.00	0.00	0.00
	2,300.00	9.00	253.73	2,295.07	-1.411.83	-20.37	-20.85	-71.41	612.739.35	736.731.84	32.68285714	-103.69825838	0.00	0.00	0.00
	2,400.00	9.00	253.73	2,293.84	-1.313.06	-24.66	-25.23	-86.44	612.734.97	736.716.82	32.68284534	-103.69830729	0.00	0.00	0.00
	2,500.00	9.00	253.73	2,492.61	-1.214.29	-28.94	-29.62	-101.46	612.730.58	736.701.80	32.68283353	-103.69835620	0.00	0.00	0.00
	2,600.00	9.00	253.73	2,591.38	-1.115.52	-33.23	-34.00	-116.48	612.726.20	736.686.78	32.68282173	-103.69840510	0.00	0.00	0.00
	2,700.00	9.00	253.73	2,690.14	-1.016.76	-37.51	-38.39	-131.50	612.721.81	736.671.75	32.68280992	-103.69845401	0.00	0.00	0.00
	2,800.00	9.00	253.73	2,788.91	-917.99	-41.80	-42.77	-146.53	612.717.43	736.656.73	32.68279812	-103.69850291	0.00	0.00	0.00
	2,900.00	9.00	253.73	2,887.68	-819.22	-46.09	-47.16	-161.55	612.713.04	736.641.71	32.68278631	-103.69855182	0.00	0.00	0.00
	3,000.00	9.00	253.73	2,986.45	-720.45	-50.37	-51.54	-176.57	612.708.66	736.626.69	32.68277450	-103.69860073	0.00	0.00	0.00
	3,100.00	9.00	253.73	3,085.21	-621.69	-54.66	-55.93	-191.59	612.704.27	736.611.67	32.68276270	-103.69864963	0.00	0.00	0.00
	3,200.00	9.00	253.73	3,183.98	-522.92	-58.94	-60.31	-206.62	612.699.89	736.596.65	32.68275089	-103.69869854	0.00	0.00	0.00
	3,300.00	9.00	253.73	3,282.75	-424.15	-63.23	-64.70	-221.64	612.695.50	736.581.62	32.68273909	-103.69874745	0.00	0.00	0.00
	3,400.00	9.00	253.73	3,381.52	-325.38	-67.51	-69.08	-236.66	612.691.12	736.566.60	32.68272728	-103.69879633	0.00	0.00	0.00
	3,500.00	9.00	253.73	3,480.29	-226.61	-71.80	-73.47	-251.68	612.686.73	736.551.58	32.68271548	-103.69884526	0.00	0.00	0.00
	3,600.00	9.00	253.73	3,579.05	-127.85	-76.08	-77.86	-266.70	612.682.35	736.536.56	32.68270367	-103.69889417	0.00	0.00	0.00
	3,700.00	9.00	253.73	3,677.82	-29.08	-80.37	-82.24	-281.73	612.677.96	736.521.54	32.68269186	-103.69894307	0.00	0.00	0.00
	3,800.00	9.00	253.73	3,776.59	69.69	-84.66	-86.63	-296.75	612.673.58	736.506.51	32.68268006	-103.69899198	0.00	0.00	0.00
	3,900.00	9.00	253.73	3,875.36	168.46	-88.94	-91.01	-311.77	612.669.19	736.491.49	32.68266825	-103.69904088	0.00	0.00	0.00
	4,000.00	9.00	253.73	3,974.13	267.23	-93.23	-95.40	-326.79	612.664.81	736.476.47	32.68265645	-103.69908979	0.00	0.00	0.00
	4,100.00	9.00	253.73	4,072.89	365.99	-97.51	-99.78	-341.82	612.660.42	736.461.45	32.68264464	-103.69913870	0.00	0.00	0.00
	4,200.00	9.00	253.73	4,171.66	464.76	-101.80	-104.17	-356.84	612.656.04	736.446.43	32.68263284	-103.69918760	0.00	0.00	0.00
	4,300.00	9.00	253.73	4,270.43	563.53	-106.08	-108.55	-371.86	612.651.65	736.431.41	32.68262103	-103.69923651	0.00	0.00	0.00
	4,400.00	9.00	253.73	4,369.20	662.30	-110.37	-112.94	-386.88	612.647.27	736.416.38	32.68260922	-103.69928542	0.00	0.00	0.00
	4,500.00	9.00	253.73	4,467.97	761.07	-114.66	-117.32	-401.91	612.642.88	736.401.36	32.68259742	-103.69933432	0.00	0.00	0.00
	4,600.00	9.00	253.73	4,566.73	859.83	-118.94	-121.71	-416.93	612.638.50	736.386.34	32.68258561	-103.69938323	0.00	0.00	0.00
	4,700.00	9.00	253.73	4,665.50	958.60	-123.23	-126.09	-431.95	612.634.11	736.371.32	32.68257381	-103.69943214	0.00	0.00	0.00
	4,800.00	9.00	253.73	4,764.27	1,057.37	-127.51	-130.48	-446.97	612.629.73	736.356.30	32.68256200	-103.69948104	0.00	0.00	0.00
	4,900.00	9.00	253.73	4,863.04	1,156.14	-131.80	-134.86	-462.00	612.625.34	736.341.28	32.68255020	-103.69952995	0.00	0.00	0.00
	5,000.00	9.00	253.73	4,961.80	1,254.90	-136.08	-139.25	-477.02	612.620.96	736.326.25	32.68253839	-103.69957885	0.00	0.00	0.00
	5,100.00	9.00	253.73	5,060.57	1,353.67	-140.37	-143.63	-492.04	612.616.57	736.311.23	32.68252658	-103.69962776	0.00	0.00	0.00
	5,200.00	9.00	253.73	5,159.34	1,452.44	-144.65	-148.02	-507.06	612.612.19	736.296.21	32.68251478	-103.69967667	0.00	0.00	0.00
	5,300.00	9.00	253.73	5,258.11	1,551.21										

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (°)	Longitude (°)	DLS (°100ft)	BR (°100ft)	TR (°100ft)
1st BS SS □	8,800.00	0.00	253.73	8,744.69	5,037.79	-198.84	-203.47	-697.01	612,556.74	736,106.27	32.68236550	-103.70029506	0.00	0.00	0.00
	8,830.31	0.00	253.73	8,775.00	5,068.10	-198.84	-203.47	-697.01	612,556.74	736,106.27	32.68236550	-103.70029506	0.00	0.00	0.00
	8,900.00	0.00	253.73	8,844.69	5,137.79	-198.84	-203.47	-697.01	612,556.74	736,106.27	32.68236550	-103.70029506	0.00	0.00	0.00
	9,000.00	0.00	253.73	8,944.69	5,237.79	-198.84	-203.47	-697.01	612,556.74	736,106.27	32.68236550	-103.70029506	0.00	0.00	0.00
	9,100.00	0.00	253.73	9,044.69	5,337.79	-198.84	-203.47	-697.01	612,556.74	736,106.27	32.68236550	-103.70029506	0.00	0.00	0.00
KOP, Build 10°100ft	9,200.00	0.00	253.73	9,144.69	5,437.79	-198.84	-203.47	-697.01	612,556.74	736,106.27	32.68236550	-103.70029506	0.00	0.00	0.00
	9,269.07	0.00	253.73	9,213.76	5,506.96	-198.84	-203.47	-697.01	612,556.74	736,106.27	32.68236550	-103.70029506	0.00	0.00	0.00
	9,300.00	3.09	359.62	9,244.67	5,537.77	-198.01	-202.64	-697.02	612,557.57	736,106.26	32.68236779	-103.70029506	10.00	10.00	0.00
	9,355.64	8.66	359.62	9,300.00	5,593.10	-192.32	-196.94	-697.06	612,563.27	736,106.23	32.68238344	-103.70029507	10.00	10.00	0.00
	9,400.00	13.09	359.62	9,343.55	5,636.65	-183.95	-188.58	-697.11	612,571.63	736,106.17	32.68240643	-103.70029509	10.00	10.00	0.00
2nd BS SS □	9,500.00	23.09	359.62	9,438.49	5,731.59	-152.93	-157.56	-697.32	612,602.65	736,105.97	32.68249168	-103.70029516	10.00	10.00	0.00
	9,600.00	33.09	359.62	9,526.59	5,819.69	-105.90	-110.53	-697.63	612,649.68	736,105.65	32.68262094	-103.70029526	10.00	10.00	0.00
	9,700.00	43.09	359.62	9,605.20	5,898.30	-44.29	-48.92	-698.04	612,711.29	736,105.24	32.68279029	-103.70029539	10.00	10.00	0.00
	9,800.00	53.09	359.62	9,671.90	5,965.00	30.04	25.41	-698.53	612,785.61	736,104.75	32.68289458	-103.70029555	10.00	10.00	0.00
	9,900.00	63.09	359.62	9,724.67	6,037.79	114.83	110.19	-699.09	612,870.39	736,104.19	32.68322760	-103.70029574	10.00	10.00	0.00
Build 5°100ft	10,000.00	73.09	359.62	9,761.95	6,055.05	207.49	202.85	-699.71	612,963.04	736,103.58	32.68348227	-103.70029594	10.00	10.00	0.00
	10,019.07	75.00	359.62	9,767.19	6,060.29	225.82	221.19	-699.83	612,981.38	736,103.45	32.68353267	-103.70029598	10.00	10.00	0.00
	10,100.00	79.05	359.62	9,785.36	6,078.46	304.67	300.03	-700.35	613,060.22	736,102.93	32.68374937	-103.70029615	5.00	5.00	0.00
	10,200.00	84.05	359.62	9,800.06	6,093.16	403.55	398.91	-701.01	613,159.09	736,102.28	32.68402115	-103.70029636	5.00	5.00	0.00
	10,300.00	89.05	359.62	9,806.08	6,099.18	503.34	498.70	-701.67	613,258.87	736,101.61	32.68429540	-103.70029657	5.00	5.00	0.00
Landing Point	10,342.39	91.17	359.62	9,806.00	6,099.10	545.72	541.08	-701.95	613,301.25	736,101.33	32.68441190	-103.70029668	5.00	5.00	0.00
	10,400.00	91.17	359.62	9,804.83	6,097.93	603.32	598.68	-702.33	613,358.85	736,100.95	32.68457021	-103.70029678	0.00	0.00	0.00
	10,500.00	91.17	359.62	9,802.80	6,095.90	703.30	698.66	-702.99	613,458.82	736,100.29	32.68484500	-103.70029700	0.00	0.00	0.00
	10,600.00	91.17	359.62	9,800.76	6,093.86	803.28	798.63	-703.66	613,558.79	736,099.63	32.68511979	-103.70029721	0.00	0.00	0.00
	10,700.00	91.17	359.62	9,798.73	6,091.83	903.26	898.61	-704.32	613,658.77	736,098.97	32.68539457	-103.70029742	0.00	0.00	0.00
	10,800.00	91.17	359.62	9,796.69	6,089.79	1,003.24	998.59	-704.98	613,758.74	736,098.31	32.68566936	-103.70029763	0.00	0.00	0.00
	10,900.00	91.17	359.62	9,794.66	6,087.76	1,103.22	1,098.56	-705.64	613,858.71	736,097.64	32.68594415	-103.70029784	0.00	0.00	0.00
	11,000.00	91.17	359.62	9,792.62	6,085.72	1,203.20	1,198.54	-706.30	613,958.68	736,096.98	32.68621894	-103.70029805	0.00	0.00	0.00
	11,100.00	91.17	359.62	9,790.59	6,083.69	1,303.18	1,298.52	-706.96	614,058.65	736,096.32	32.68649373	-103.70029827	0.00	0.00	0.00
	11,200.00	91.17	359.62	9,788.55	6,081.65	1,403.16	1,398.50	-707.63	614,158.63	736,095.66	32.68676851	-103.70029848	0.00	0.00	0.00
	11,300.00	91.17	359.62	9,786.52	6,079.62	1,503.14	1,498.47	-708.29	614,258.60	736,095.00	32.68704330	-103.70029869	0.00	0.00	0.00
	11,400.00	91.17	359.62	9,784.48	6,077.58	1,603.12	1,598.45	-708.95	614,358.57	736,094.34	32.68731809	-103.70029890	0.00	0.00	0.00
	11,500.00	91.17	359.62	9,782.45	6,075.55	1,703.10	1,698.43	-709.61	614,458.54	736,093.67	32.68759288	-103.70029912	0.00	0.00	0.00
	11,600.00	91.17	359.62	9,780.41	6,073.51	1,803.07	1,798.40	-710.27	614,558.52	736,093.01	32.68786767	-103.70029933	0.00	0.00	0.00
	11,700.00	91.17	359.62	9,778.38	6,071.48	1,903.05	1,898.38	-710.93	614,658.49	736,092.35	32.68814245	-103.70029954	0.00	0.00	0.00
	11,800.00	91.17	359.62	9,776.34	6,069.44	2,003.03	1,998.36	-711.60	614,758.46	736,091.68	32.68841724	-103.70029975	0.00	0.00	0.00
	11,900.00	91.17	359.62	9,774.31	6,067.41	2,103.01	2,098.34	-712.26	614,858.43	736,091.03	32.68869203	-103.70029996	0.00	0.00	0.00
	12,000.00	91.17	359.62	9,772.28	6,065.38	2,202.99	2,198.31	-712.92	614,958.40	736,090.37	32.68896682	-103.70030018	0.00	0.00	0.00
	12,100.00	91.17	359.62	9,770.24	6,063.34	2,302.97	2,298.29	-713.58	615,058.38	736,089.70	32.68924161	-103.70030039	0.00	0.00	0.00
	12,200.00	91.17	359.62	9,768.21	6,061.31	2,402.95	2,398.27	-714.24	615,158.35	736,089.04	32.68951639	-103.70030060	0.00	0.00	0.00
	12,300.00	91.17	359.62	9,766.17	6,059.27	2,502.93	2,498.24	-714.91	615,258.32	736,088.38	32.68979118	-103.70030081	0.00	0.00	0.00
	12,400.00	91.17	359.62	9,764.14	6,057.24	2,602.91	2,598.22	-715.57	615,358.29	736,087.72	32.69006597	-103.70030102	0.00	0.00	0.00
	12,500.00	91.17	359.62	9,762.10	6,055.20	2,702.89	2,698.20	-716.23	615,458.27	736,087.06	32.69034076	-103.70030124	0.00	0.00	0.00
	12,600.00	91.17	359.62	9,760.07	6,053.17	2,802.87	2,798.17	-716.89	615,558.24	736,086.39	32.69061555	-103.70030145	0.00	0.00	0.00
	12,700.00	91.17	359.62	9,758.03	6,051.13	2,902.85	2,898.15	-717.55	615,658.21	736,085.73	32.69089033	-103.70030166	0.00	0.00	0.00
	12,800.00	91.17	359.62	9,756.00	6,049.10	3,002.83	2,998.13	-718.21	615,758.18	736,085.07	32.69116512	-103.70030187	0.00	0.00	0.00
	12,900.00	91.17	359.62	9,753.96	6,047.06	3,102.81	3,098.11	-718.88	615,858.15	736,084.41	32.69143991	-103.70030208	0.00	0.00	0.00
	13,000.00	91.17	359.62	9,751.93	6,045.03	3,202.79	3,198.08	-719.54	615,958.13	736,083.75	32.69171470	-103.70030229	0.00	0.00	0.00
	13,100.00	91.17	359.62	9,749.89	6,042.99	3,302.76	3,298.06	-720.20	616,058.10	736,083.09	32.69198949	-103.70030251	0.00	0.00	0.00
	13,200.00	91.17	359.62	9,747.86	6,040.96	3,402.74	3,398.04	-720.86	616,158.07	736,082.43	32.69226427	-103.70030272	0.00	0.00	0.00
	13,300.00	91.17	359.62	9,745.82	6,038.92	3,502.72	3,498.01	-721.52	616,258.04	736,081.76	32.69253906	-103.70030293	0.00	0.00	0.00
	13,400.00	91.17	359.62	9,743.79	6,036.89	3,602.70	3,597.99	-722.18	616,358.01	736,081.10	32.69281385	-103.70030314	0.00	0.00	0.00
	13,500.00	91.17	359.62	9,741.75	6,034.85	3,702.68	3,697.97	-722.85	616,457.99	736,080.44	32.69308864	-103.70030335	0.00	0.0	

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
		1	0.000	9,200.000	1/100.000	'5 – 12.25 – 8.75 3.375 – 9.625 – 7			A001Mb_MWD						Emerald Federal Com 505H / Coterra Emerald Fede
		1	9,200.000	19,975.124	1/100.000	8.75 – 6	7 – 4.5		A008Mb_MWD+IFR1+MS						Emerald Federal Com 505H / Coterra Emerald Fede
EOU Geometry:															
End MD (ft)	Hole Size (in)		Casing Size (in)		Name										
1,300.000	17.500		13.375												
4,937.425	12.250		9.625												
9,568.795	8.750		7.000												
19,975.124	6.000		4.500												



Coterra Emerald Federal Com 505H Rev1 kFc 29Oct25 Proposal Geodetic Report

Def Plan

Report Date: October 29, 2025 - 08:04 PM (UTC 0)
Client: COTERRA
Field: NM Lea County (NAD 83)
Structure / Slot: Coterra - Emerald Federal Com Pad (east) / Emerald Federal Com 505H
Well: Emerald Federal Com 505H
Borehole: Emerald Federal Com 505H
UBHI / API#: Unknown / Unknown
Survey Name: Coterra Emerald Federal Com 505H Rev1 kFc 29Oct25
Survey Date: October 29, 2025
Tort / AH / DOI / ERD Ratio: 109.173 / 11101.413 ft / 6.392 / 1.132
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: 32°40'58.48775"N , 103°41'52.89321"W
Location Grid NIE YX: N 612760.200 RUS , E 736803.250 RUS
CRS Grid Convergence Angle: 0.343
Grid Scale Factor: 0.9995284(Applied)
Version / Patch: 2025.1.0.1

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 359.620 (10GRD North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3706.900 ft above MSL
Seabed / Ground Elevation: 3653.900 ft above MSL
Magnetic Declination: 6.231°
Total Gravity Field Strength: 998.509mgm (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47454.153 nT
Magnetic Dip Angle: 60.415°
Declination Date: October 29, 2025
Magnetic Declination Model: HDGM 2025
North Reference: Grid North
Grid Convergence Used: 0.343°
Total Corr Mag North->Grid North: 5.888°
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Eastings (ftUS)	Latitude (°)	Longitude (°)	DLS (ft/100ft)	BR (ft/100ft)	TR (ft/100ft)
SHL [300FSL, 1310FEL]	0.00	0.00	0.00	0.00	-3,706.90	0.00	0.00	0.00	612,760.20	736,803.25	32.68291326	-103.69802589			
Nudge, Build 2"/100ft	1,600.00	0.00	253.73	1,600.00	-2,106.90	0.00	0.00	0.00	612,760.20	736,803.25	32.68291326	-103.69802589	0.00	0.00	0.00
Hold	2,050.17	9.00	253.73	2,048.32	-1,658.58	-9.67	-9.89	-33.88	612,750.31	736,769.37	32.68288664	-103.69813620	2.00	2.00	0.00
Drop 2"/100ft	6,238.90	9.00	253.73	6,185.44	2,478.54	-189.18	-193.58	-663.13	612,566.63	736,140.15	32.68239212	-103.70018475	0.00	0.00	0.00
Hold	6,689.07	0.00	253.73	6,633.76	2,926.86	-198.84	-203.47	-697.01	612,556.74	736,106.27	32.68236550	-103.70029506	2.00	-2.00	0.00
KOP, Build 10"/100ft	9,269.07	0.00	253.73	9,213.76	5,506.86	-198.84	-203.47	-697.01	612,556.74	736,106.27	32.68236550	-103.70029506	0.00	0.00	0.00
Build 5"/100ft	10,019.07	75.00	359.62	9,767.19	6,060.29	225.82	221.19	-699.83	612,981.38	736,103.45	32.68353267	-103.70029598	10.00	10.00	0.00
Landing Point	10,342.39	91.17	359.62	9,806.00	6,099.10	545.72	541.08	-701.95	613,301.25	736,101.33	32.68441190	-103.70029666	5.00	5.00	0.00
Emerald Federal Com 505H - BHL [100FNL, 2008FEL]	19,975.12	91.17	359.62	9,610.00	5,903.10	10,176.46	10,171.61	-765.70	622,931.31	736,037.59	32.71088146	-103.70031703	0.00	0.00	0.00

Survey Type: Def Plan

Survey Error Model: ISWISA Rev 4 *** 3-D 95 % Confidence 2.7955 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Code	Vendor / Tool	Borehole / Survey
	1	0.000	9,200.000	1/100.000	5 – 12.25 – 8.75 3.375 – 9.625 – 7			A001Mb_MWD		Emerald Federal Com 505H / Coterra Emerald Fed
	1	9,200.000	19,975.124	1/100.000	8.75 – 6	7 – 4.5		A008Mb_MWD+IFR1+MS		Emerald Federal Com 505H / Coterra Emerald Fed

EOU Geometry:

End MD (ft)	Hole Size (in)	Casing Size (in)	Name
1,300.000	17.500	13.375	
4,937.425	12.250	9.625	
9,568.795	8.750	7.000	
19,975.124	6.000	4.500	



Coterra Emerald Federal Com 505H Rev1 kFc 29Oct25 Anti-Collision Summary Report

Analysis Date-24hr Time: October 29, 2025 - 08:05 PM (UTC 0)
Client: COTERRA
Field: NM Lea County (NAD 83)
Structure: Coterra - Emerald Federal Com Pad (east)
Slot: Emerald Federal Com 505H
Well: Emerald Federal Com 505H
Borehole: Emerald Federal Com 505H
Scan MD Range: 0.00ft ~ 19975.12ft

Analysis Method: 3D Least Distance
Reference Trajectory: Coterra Emerald Federal Com 505H Rev1 kFc 29Oct25 (Def
Every 10.00 Measured Depth (ft)
Depth Interval:
Rule Set: NAL Procedure: D&M AntiCollision Standard S002
Min Pts: Absolute minima indicated.
Engine Version: 2025.1.0.1
Database \ Project: Emerald Federal Com 505H-COTERRA

Trajectory Error Model: ISCWSA Rev 4 *** 3-D 95 % Confidence 2.7955 sigma

Offset Trajectories Summary

Offset Selection Criteria

Bounding box scan: minimum Ct-Ct separation <= 2000ft
Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans
Selection filters: - All Non-Def Surveys when no Def-Survey is set in a borehole - All Non-Def Plans when no Def-Plan is set in a borehole

4 out of 9 are selected

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Breaking Rule	Reference Trajectory		Risk Level			Alert
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major	

Results highlighted in red: Sep-Factor <= 1.5

Result highlighted in boxed, red and bold: all local minima indicated.

30-025-25782 - Nellis Federal 002 - Inc Only to 13670ft - INACTIVE (DefinitiveSurvey) - **Fail Major**

754.26	32.81	750.86	721.45	532.17			0.00	0.00				Surface
753.83	32.81	750.43	721.02	531.42			20.00	20.00				MinPt-SF
753.81	32.81	750.41	721.00	531.49			23.00	23.00				WRP
621.27	187.98	495.37	433.30	4.99		OSF 5.00	3100.00	3085.21	OSF<=5.00			Enter Alert
508.65	332.57	286.40	176.09	2.30		OSF 5.00	5380.00	5337.12				MinPt-CtCt
525.78	382.63	270.15	143.15	2.06		OSF 5.00	6230.00	6176.65				MinPt-EOU
536.24	536.34	178.15	-0.10	1.50		OSF 1.50	8550.00	8494.69	OSF<=1.50			Enter Minor
414.37	626.30	-3.67	-211.93	0.99		OSF 1.00	9650.00	9567.24		OSF<=1.00		Enter Major
24.01	643.42	-405.44	-619.42	0.05		OSF 1.00	10132.71	9791.12				MinPts
427.10	645.00	-3.40	-217.90	0.99		OSF 1.00	10560.00	9801.58			OSF>1.00	Exit Major
636.84	644.67	206.56	-7.83	1.48		OSF 1.50	10770.00	9797.30	OSF>1.50			Exit Minor
2136.21	642.39	1707.45	1493.81	5.00		OSF 5.00	12270.00	9766.78	OSF>5.00			Exit Alert
9839.63	632.37	9417.55	9207.26	23.39			19975.12	9610.00				TD

30-025-34317 - Gazelle 31 Federal 001 - Inc Only to 13617ft - A (DefinitiveSurvey) - **Fail Major**

8282.52	32.81	8279.02	8249.71	5463.28			0.00	0.00				Surface
8282.52	32.81	8278.84	8249.71	4864.08			23.00	23.00				WRP
8282.52	86.21	8224.46	8196.31	147.08			1600.00	1600.00				MinPt-CtCt
8366.81	249.88	8199.63	8116.93	50.57			3950.00	3924.74				MinPt-EOU
8408.02	316.54	8196.40	8091.47	40.06			4890.00	4853.16				MinPt-EOU
2144.39	646.14	1713.13	1498.25	4.99		OSF 5.00	15960.00	9691.70	OSF<=5.00			Enter Alert
645.28	651.40	210.51	-6.13	1.49		OSF 1.50	17540.00	9659.55		OSF<=1.50		Enter Minor
436.88	660.91	-4.22	-224.02	0.99		OSF 1.00	17830.00	9653.65		OSF<=1.00		Enter Major
362.44	670.08	-84.78	-307.64	0.81		OSF 1.00	18073.98	9648.68				MinPts
438.03	663.12	-4.55	-225.09	0.99		OSF 1.00	18320.00	9643.68			OSF>1.00	Exit Major
646.97	653.21	210.99	-6.25	1.49		OSF 1.50	18610.00	9637.78	OSF>1.50			Exit Minor
1935.00	643.93	1505.21	1291.07	4.51		OSF 5.00	19975.12	9610.00				TD

Coterra Emerald Federal Com 506H Rev1 kFc 29Oct25 (DefinitivePlan) - **Fail Minor**

20.02	16.42	16.73	3.60	9.37		CtCt 15.00m	0.00	0.00	CtCt<=15.00m			Enter Alert
20.02	16.42	16.73	3.60	9.37		CtCt 15.00m	23.00	23.00				WRP
20.02	20.00	6.26	0.03	1.50		OSF 5.00	1290.00	1290.00				MinPts
20.02	20.14	6.27	-0.12	1.49		OSF 1.50	1320.00	1320.00	OSF<=1.50			Enter Minor
20.02	24.31	3.49	-4.28	1.22		OSF 1.50	1600.00	1600.00				MinPt-CtCt
20.06	24.45	3.43	-4.39	1.22		OSF 1.50	1610.00	1610.00				MinPt-EOU
20.15	24.59	3.43	-4.44	1.22		OSF 1.50	1620.00	1620.00				MinPts
25.64	26.15	7.89	-0.50	1.47		OSF 1.50	1730.00	1729.96	OSF>1.50			Exit Minor
100.37	31.12	79.29	69.24	4.95		OSF 5.00	2100.00	2097.54	OSF>5.00			Exit Alert
1348.04	137.92	1255.77	1210.13	14.76			9290.00	9234.68				MinPt-EOU
1348.05	137.93	1255.77	1210.12	14.75			9370.00	9314.17				MinPt-EOU
1348.06	260.60	1174.00	1087.46	7.78			16420.00	9682.34				MinPt-CtCt
1348.10	363.20	1105.64	984.90	5.58			19975.12	9610.00				MinPts

30-025-35339 - Gazelle 31 Federal 003 - Inc Only to 13650ft - A (DefinitiveSurvey) - **Warning Alert**

6990.14	32.81	6986.70	6957.33	4778.14			0.00	0.00				Surface
6990.14	32.81	6986.52	6957.33	4274.61			23.00	23.00				WRP
6990.14	106.10	6918.82	6884.04	100.47			1600.00	1600.00				MinPt-CtCt
6994.43	119.70	6914.04	6874.72	88.93			1860.00	1859.64				MinPt-EOU
6998.83	124.91	6914.97	6873.92	85.22			1970.00	1968.97				MinPt-ADP
7120.12	270.72	6939.06	6849.41	39.70			3990.00	3964.25				MinPt-EOU
7178.17	344.82	6947.70	6833.34	31.38			4890.00	4853.16				MinPt-ADP
2290.29	689.03	1830.44	1601.26	4.99		OSF 5.00	14910.00	9713.06	OSF<=5.00			Enter Alert
1354.39	701.89	885.96	652.50	2.90		OSF 5.00	16757.29	9675.48				MinPt-CtCt
1354.39	701.90	885.96	652.49	2.90		OSF 5.00	16760.00	9675.42				MinPts
1354.45	701.95	885.98	652.50	2.90		OSF 5.00	16770.00	9675.22				MinPt-SF
2302.75	693.08	1840.19	1609.67	4.99		OSF 5.00	18620.00	9637.57	OSF>5.00			Exit Alert
3490.64	687.94	3031.51	2802.70	7.62			19975.12	9610.00				TD

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

COMMENTS

Action 533917

COMMENTS

Operator: Avant Operating, LLC 6001 Deauville Blvd Midland, TX 79706	OGRID: 330396
	Action Number: 533917
	Action Type: [C-103] NOI Change of Plans (C-103A)

COMMENTS

Created By	Comment	Comment Date
matthew.gomez	Order R-23267 negates the requirement previously required for an NSP.	12/24/2025

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

General Information
Phone: (505) 629-6116

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CONDITIONS

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Operator: Avant Operating, LLC 6001 Deauville Blvd Midland, TX 79706	OGRID: 330396
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CONDITIONS

Created By	Condition	Condition Date
matthew.gomez	No additives containing PFAS chemicals will be added to the drilling fluids or completion fluids used during drilling, completions, or recompletions operations.	12/24/2025
matthew.gomez	If cement does not circulate to surface on any string, a Cement Bond Log (CBL) is required for that string of casing, if a CBL is unable to indicate sufficient cement coverage due to a lighter cement, a USI log may also be required. If strata isolation is not achieved, remediation will be required before further operations may commence.	12/24/2025
matthew.gomez	All conducted logs must be submitted to the OCD.	12/24/2025
matthew.gomez	Cement must be in place for at least eight hours and achieve a minimum compressive strength of 500 PSI before performing any further operations on the well.	12/24/2025
matthew.gomez	Notify the OCD 24 hours prior to casing & cement.	12/24/2025
matthew.gomez	All previous COA's still apply.	12/24/2025