

Well Name: CUTBOW 36 1 FEDERAL COM	Well Location: T19S / R32E / SEC 25 / SESW /	County or Parish/State:
Well Number: 501H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM77054	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002551649	Well Status: Approved Application for Permit to Drill	Operator: AVANT OPERATING LLC

Notice of Intent

Sundry ID: 2773918

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 02/08/2024	Time Sundry Submitted: 10:16
Date proposed operation will begin: 03/01/2024	

Procedure Description: Avant Operating, LLC would like submit an updated directional plan for this well from what was originally permitted due to SHL change that was previously approved, please see attached directional survey. Avant would also like to request a secondary drilling procedure. If full returns are lost while drilling the 12.25" intermediate hole section, a DV tool will be set @ 3,200' and the attached 2 stage cement design job will be execute.

NOI Attachments

Procedure Description

- Cutbow_36_1_Fed_Com_501H__Plan_0.2_Report_20240208101544.pdf
- Avant_Natural_Resources_Cutbow_36_1_Fed_Com__501H__220810161451_G__Entire_Well_No_Pricing_20240207151110.pdf

Well Name: CUTBOW 36 1 FEDERAL COM	Well Location: T19S / R32E / SEC 25 / SESW /	County or Parish/State:
Well Number: 501H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM77054	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002551649	Well Status: Approved Application for Permit to Drill	Operator: AVANT OPERATING LLC

Conditions of Approval

Additional

25_19_32_N_Sundry_ID_2773918_Cutbow_36_1_Federal_Com_501H_Lea_NM077054_AVANT_OPERATING_LLC_13_22d_1_24_2023_LV_20240304120157.pdf

Cutbow_36_1_Federal_Com_501H_Dr_COA_20240304120157.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: MEGHAN TWELE	Signed on: FEB 08, 2024 10:15 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: CODY LAYTON	BLM POC Title: Assistant Field Manager Lands & Minerals
BLM POC Phone: 5752345959	BLM POC Email Address: clayton@blm.gov
Disposition: Approved	Disposition Date: 03/05/2024
Signature: Cody R. Layton	

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

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: SESW / 761 FSL / 1440 FWL / TWSP: 19S / RANGE: 32E / SECTION: 25 / LAT: 32.6261389 / LONG: -103.7235853 (TVD: 0 feet, MD: 0 feet)
PPP: SWSW / 473 FSL / 341 FWL / TWSP: 19S / RANGE: 32E / SECTION: 25 / LAT: 32.6253503 / LONG: -103.7271541 (TVD: 8850 feet, MD: 8991 feet)
PPP: NWNW / 0 FNL / 330 FWL / TWSP: 19S / RANGE: 32E / SECTION: 36 / LAT: 32.624097 / LONG: -103.727205 (TVD: 9788 feet, MD: 10156 feet)
PPP: SWNW / 1320 FNL / 330 FWL / TWSP: 20S / RANGE: 32E / SECTION: 1 / LAT: 32.606051 / LONG: -103.727251 (TVD: 9800 feet, MD: 16711 feet)
BHL: SWSW / 100 FSL / 330 FWL / TWSP: 20S / RANGE: 32E / SECTION: 1 / LAT: 32.5952747 / LONG: -103.7272871 (TVD: 9800 feet, MD: 20641 feet)

WELL DETAILS: Cutbow 36 1 Federal Com 501H

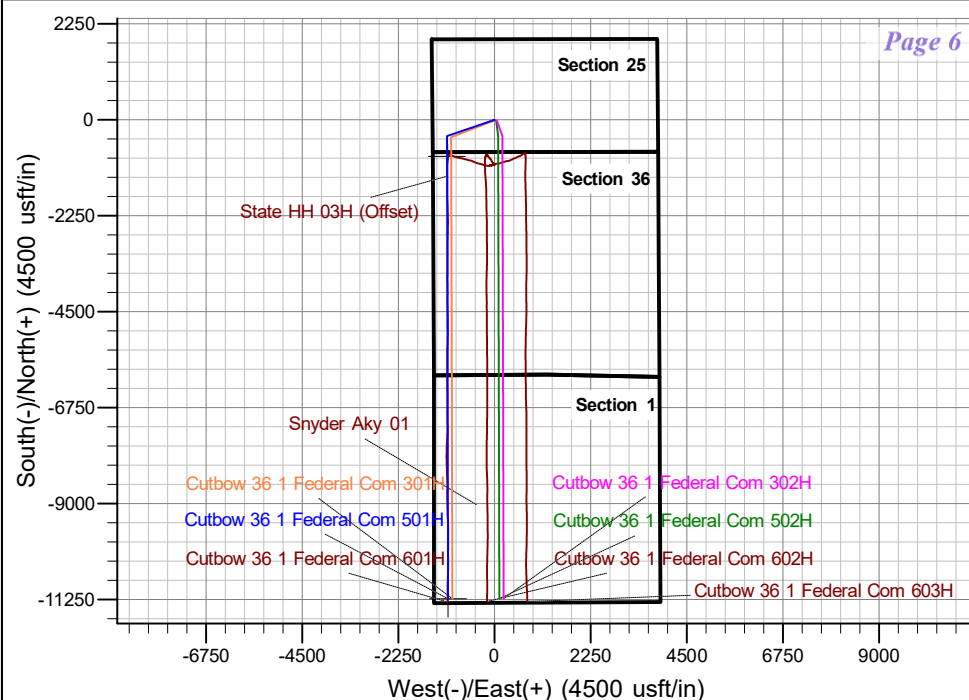
Ground Elev: 3580.0 KB: 3606.5

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	592053.99	729069.82	32.6261257°N	103.7235465°W

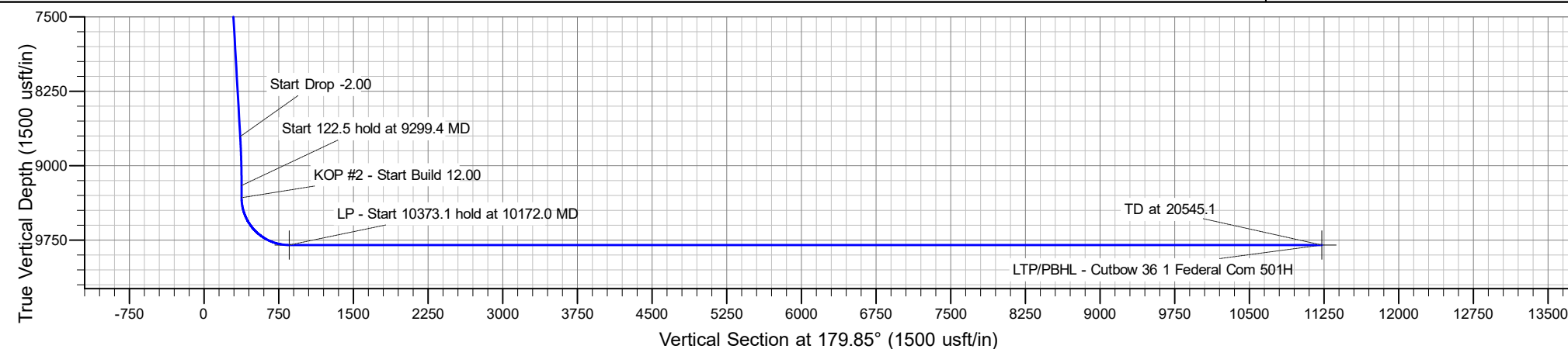
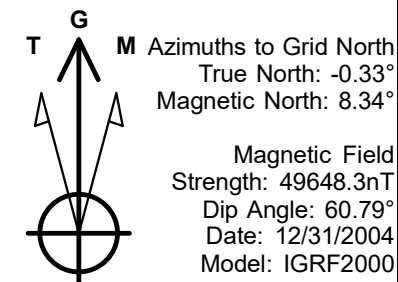
PROJECT DETAILS: Lea Co., NM (NAD 83)

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	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	KOP - Start Build 2.00
3	2496.5	9.93	251.10	2494.0	-13.9	-40.6	2.00	251.10	13.8	Start 6306.5 hold at 2496.5 MD
4	8803.0	9.93	251.10	8706.0	-366.1	-1069.4	0.00	0.00	363.3	Start Drop -2.00
5	9299.4	0.00	0.00	9200.0	-380.0	-1110.0	2.00	180.00	377.1	Start 122.5 hold at 9299.4 MD
6	9422.0	0.00	0.00	9322.5	-380.0	-1110.0	0.00	0.00	377.1	KOP #2 - Start Build 12.00
7	10172.0	90.00	179.88	9800.0	-857.5	-1109.0	12.00	179.88	854.6	LP - Start 10373.1 hold at 10172.0 MD
8	20545.1	90.00	179.88	9800.0	-11230.5	-1087.6	0.00	0.00	11227.7	TD at 20545.1





Avant Operating, LLC

Lea Co., NM (NAD 83)

Cutbow 36 1 Federal Com Pad 2

Cutbow 36 1 Federal Com 501H

OH

Plan: Plan 0.2

Standard Planning Report

07 February, 2024





Planning Report



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Cutbow 36 1 Federal Com 501H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3606.5usft (3606.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3606.5usft (3606.5)
Site:	Cutbow 36 1 Federal Com Pad 2	North Reference:	Grid
Well:	Cutbow 36 1 Federal Com 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.2		

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	Cutbow 36 1 Federal Com Pad 2		
Site Position:		Northing:	591,898.24 usft
From:	Map	Easting:	729,027.52 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32.6256983°N
		Longitude:	103.7236868°W

Well	Cutbow 36 1 Federal Com 501H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
Grid Convergence:	0.33 °		
		Latitude:	32.6261257°N
		Longitude:	103.7235465°W
		Ground Level:	3,580.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2000	12/31/2004	8.67	60.79	49,648.31118629

Design	Plan 0.2			
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	179.85

Plan Survey Tool Program	Date	2/7/2024		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	20,545.1 Plan 0.2 (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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,496.5	9.93	251.10	2,494.0	-13.9	-40.6	2.00	2.00	0.00	251.10	
8,803.0	9.93	251.10	8,706.0	-366.1	-1,069.4	0.00	0.00	0.00	0.00	
9,299.4	0.00	0.00	9,200.0	-380.0	-1,110.0	2.00	-2.00	0.00	180.00	
9,422.0	0.00	0.00	9,322.5	-380.0	-1,110.0	0.00	0.00	0.00	0.00	
10,172.0	90.00	179.88	9,800.0	-857.5	-1,109.0	12.00	12.00	0.00	179.88	
20,545.1	90.00	179.88	9,800.0	-11,230.5	-1,087.6	0.00	0.00	0.00	0.00	LTP/PBHL - Cutbow 3



Planning Report



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Cutbow 36 1 Federal Com 501H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3606.5usft (3606.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3606.5usft (3606.5)
Site:	Cutbow 36 1 Federal Com Pad 2	North Reference:	Grid
Well:	Cutbow 36 1 Federal Com 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.2		

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
1,700.0	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
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 2.00									
2,100.0	2.00	251.10	2,100.0	-0.6	-1.7	0.6	2.00	2.00	0.00
2,200.0	4.00	251.10	2,199.8	-2.3	-6.6	2.2	2.00	2.00	0.00
2,300.0	6.00	251.10	2,299.5	-5.1	-14.8	5.0	2.00	2.00	0.00
2,400.0	8.00	251.10	2,398.7	-9.0	-26.4	9.0	2.00	2.00	0.00
2,496.5	9.93	251.10	2,494.0	-13.9	-40.6	13.8	2.00	2.00	0.00
Start 6306.5 hold at 2496.5 MD									
2,500.0	9.93	251.10	2,497.5	-14.1	-41.2	14.0	0.00	0.00	0.00
2,600.0	9.93	251.10	2,596.0	-19.7	-57.5	19.5	0.00	0.00	0.00
2,700.0	9.93	251.10	2,694.5	-25.3	-73.8	25.1	0.00	0.00	0.00
2,800.0	9.93	251.10	2,793.0	-30.9	-90.1	30.6	0.00	0.00	0.00
2,900.0	9.93	251.10	2,891.5	-36.4	-106.4	36.2	0.00	0.00	0.00
3,000.0	9.93	251.10	2,990.0	-42.0	-122.7	41.7	0.00	0.00	0.00
3,100.0	9.93	251.10	3,088.5	-47.6	-139.1	47.2	0.00	0.00	0.00
3,200.0	9.93	251.10	3,187.0	-53.2	-155.4	52.8	0.00	0.00	0.00
3,300.0	9.93	251.10	3,285.5	-58.8	-171.7	58.3	0.00	0.00	0.00
3,400.0	9.93	251.10	3,384.0	-64.4	-188.0	63.9	0.00	0.00	0.00
3,500.0	9.93	251.10	3,482.5	-69.9	-204.3	69.4	0.00	0.00	0.00
3,600.0	9.93	251.10	3,581.0	-75.5	-220.6	75.0	0.00	0.00	0.00
3,700.0	9.93	251.10	3,679.5	-81.1	-236.9	80.5	0.00	0.00	0.00
3,800.0	9.93	251.10	3,778.0	-86.7	-253.2	86.0	0.00	0.00	0.00
3,900.0	9.93	251.10	3,876.5	-92.3	-269.6	91.6	0.00	0.00	0.00
4,000.0	9.93	251.10	3,975.0	-97.9	-285.9	97.1	0.00	0.00	0.00
4,100.0	9.93	251.10	4,073.5	-103.5	-302.2	102.7	0.00	0.00	0.00
4,200.0	9.93	251.10	4,172.0	-109.0	-318.5	108.2	0.00	0.00	0.00
4,300.0	9.93	251.10	4,270.5	-114.6	-334.8	113.7	0.00	0.00	0.00
4,400.0	9.93	251.10	4,369.0	-120.2	-351.1	119.3	0.00	0.00	0.00
4,500.0	9.93	251.10	4,467.5	-125.8	-367.4	124.8	0.00	0.00	0.00
4,600.0	9.93	251.10	4,566.0	-131.4	-383.8	130.4	0.00	0.00	0.00
4,700.0	9.93	251.10	4,664.5	-137.0	-400.1	135.9	0.00	0.00	0.00
4,800.0	9.93	251.10	4,763.0	-142.5	-416.4	141.5	0.00	0.00	0.00
4,900.0	9.93	251.10	4,861.5	-148.1	-432.7	147.0	0.00	0.00	0.00



Planning Report



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Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3606.5usft (3606.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3606.5usft (3606.5)
Site:	Cutbow 36 1 Federal Com Pad 2	North Reference:	Grid
Well:	Cutbow 36 1 Federal Com 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,000.0	9.93	251.10	4,960.0	-153.7	-449.0	152.5	0.00	0.00	0.00
5,100.0	9.93	251.10	5,058.5	-159.3	-465.3	158.1	0.00	0.00	0.00
5,200.0	9.93	251.10	5,157.0	-164.9	-481.6	163.6	0.00	0.00	0.00
5,300.0	9.93	251.10	5,255.5	-170.5	-498.0	169.2	0.00	0.00	0.00
5,400.0	9.93	251.10	5,354.0	-176.1	-514.3	174.7	0.00	0.00	0.00
5,500.0	9.93	251.10	5,452.5	-181.6	-530.6	180.2	0.00	0.00	0.00
5,600.0	9.93	251.10	5,551.0	-187.2	-546.9	185.8	0.00	0.00	0.00
5,700.0	9.93	251.10	5,649.5	-192.8	-563.2	191.3	0.00	0.00	0.00
5,800.0	9.93	251.10	5,748.0	-198.4	-579.5	196.9	0.00	0.00	0.00
5,900.0	9.93	251.10	5,846.5	-204.0	-595.8	202.4	0.00	0.00	0.00
6,000.0	9.93	251.10	5,945.0	-209.6	-612.1	208.0	0.00	0.00	0.00
6,100.0	9.93	251.10	6,043.5	-215.1	-628.5	213.5	0.00	0.00	0.00
6,200.0	9.93	251.10	6,142.0	-220.7	-644.8	219.0	0.00	0.00	0.00
6,300.0	9.93	251.10	6,240.5	-226.3	-661.1	224.6	0.00	0.00	0.00
6,400.0	9.93	251.10	6,339.1	-231.9	-677.4	230.1	0.00	0.00	0.00
6,500.0	9.93	251.10	6,437.6	-237.5	-693.7	235.7	0.00	0.00	0.00
6,600.0	9.93	251.10	6,536.1	-243.1	-710.0	241.2	0.00	0.00	0.00
6,700.0	9.93	251.10	6,634.6	-248.7	-726.3	246.8	0.00	0.00	0.00
6,800.0	9.93	251.10	6,733.1	-254.2	-742.7	252.3	0.00	0.00	0.00
6,900.0	9.93	251.10	6,831.6	-259.8	-759.0	257.8	0.00	0.00	0.00
7,000.0	9.93	251.10	6,930.1	-265.4	-775.3	263.4	0.00	0.00	0.00
7,100.0	9.93	251.10	7,028.6	-271.0	-791.6	268.9	0.00	0.00	0.00
7,200.0	9.93	251.10	7,127.1	-276.6	-807.9	274.5	0.00	0.00	0.00
7,300.0	9.93	251.10	7,225.6	-282.2	-824.2	280.0	0.00	0.00	0.00
7,400.0	9.93	251.10	7,324.1	-287.7	-840.5	285.5	0.00	0.00	0.00
7,500.0	9.93	251.10	7,422.6	-293.3	-856.8	291.1	0.00	0.00	0.00
7,600.0	9.93	251.10	7,521.1	-298.9	-873.2	296.6	0.00	0.00	0.00
7,700.0	9.93	251.10	7,619.6	-304.5	-889.5	302.2	0.00	0.00	0.00
7,800.0	9.93	251.10	7,718.1	-310.1	-905.8	307.7	0.00	0.00	0.00
7,900.0	9.93	251.10	7,816.6	-315.7	-922.1	313.3	0.00	0.00	0.00
8,000.0	9.93	251.10	7,915.1	-321.3	-938.4	318.8	0.00	0.00	0.00
8,100.0	9.93	251.10	8,013.6	-326.8	-954.7	324.3	0.00	0.00	0.00
8,200.0	9.93	251.10	8,112.1	-332.4	-971.0	329.9	0.00	0.00	0.00
8,300.0	9.93	251.10	8,210.6	-338.0	-987.4	335.4	0.00	0.00	0.00
8,400.0	9.93	251.10	8,309.1	-343.6	-1,003.7	341.0	0.00	0.00	0.00
8,500.0	9.93	251.10	8,407.6	-349.2	-1,020.0	346.5	0.00	0.00	0.00
8,600.0	9.93	251.10	8,506.1	-354.8	-1,036.3	352.1	0.00	0.00	0.00
8,700.0	9.93	251.10	8,604.6	-360.4	-1,052.6	357.6	0.00	0.00	0.00
8,800.0	9.93	251.10	8,703.1	-365.9	-1,068.9	363.1	0.00	0.00	0.00
8,803.0	9.93	251.10	8,706.0	-366.1	-1,069.4	363.3	0.00	0.00	0.00
Start Drop -2.00									
8,900.0	7.99	251.10	8,801.9	-371.0	-1,083.7	368.2	2.00	-2.00	0.00
9,000.0	5.99	251.10	8,901.1	-374.9	-1,095.2	372.1	2.00	-2.00	0.00
9,100.0	3.99	251.10	9,000.7	-377.8	-1,103.4	374.9	2.00	-2.00	0.00
9,200.0	1.99	251.10	9,100.6	-379.4	-1,108.4	376.5	2.00	-2.00	0.00
9,299.4	0.00	0.00	9,200.0	-380.0	-1,110.0	377.1	2.00	-2.00	0.00
Start 122.5 hold at 9299.4 MD									
9,300.0	0.00	0.00	9,200.6	-380.0	-1,110.0	377.1	0.00	0.00	0.00
9,400.0	0.00	0.00	9,300.6	-380.0	-1,110.0	377.1	0.00	0.00	0.00
9,422.0	0.00	0.00	9,322.5	-380.0	-1,110.0	377.1	0.00	0.00	0.00
KOP #2 - Start Build 12.00									
9,500.0	9.37	179.88	9,400.2	-386.4	-1,110.0	383.5	12.00	12.00	0.00
9,600.0	21.37	179.88	9,496.5	-412.8	-1,109.9	409.9	12.00	12.00	0.00



Planning Report



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Cutbow 36 1 Federal Com 501H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3606.5usft (3606.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3606.5usft (3606.5)
Site:	Cutbow 36 1 Federal Com Pad 2	North Reference:	Grid
Well:	Cutbow 36 1 Federal Com 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,700.0	33.37	179.88	9,585.1	-458.7	-1,109.8	455.8	12.00	12.00	0.00
9,800.0	45.37	179.88	9,662.3	-522.0	-1,109.7	519.1	12.00	12.00	0.00
9,900.0	57.37	179.88	9,724.6	-600.0	-1,109.5	597.1	12.00	12.00	0.00
10,000.0	69.37	179.88	9,769.4	-689.2	-1,109.4	686.3	12.00	12.00	0.00
10,100.0	81.37	179.88	9,794.6	-785.8	-1,109.2	782.9	12.00	12.00	0.00
10,172.0	90.00	179.88	9,800.0	-857.5	-1,109.0	854.6	12.00	12.00	0.00
LP - Start 10373.1 hold at 10172.0 MD									
10,172.5	90.00	179.88	9,800.0	-858.0	-1,109.0	855.1	0.00	0.00	0.00
FTP - Cutbow 36 1 Federal Com 501H									
10,200.0	90.00	179.88	9,800.0	-885.5	-1,109.0	882.6	0.00	0.00	0.00
10,300.0	90.00	179.88	9,800.0	-985.5	-1,108.8	982.6	0.00	0.00	0.00
10,400.0	90.00	179.88	9,800.0	-1,085.5	-1,108.5	1,082.6	0.00	0.00	0.00
10,500.0	90.00	179.88	9,800.0	-1,185.5	-1,108.3	1,182.6	0.00	0.00	0.00
10,600.0	90.00	179.88	9,800.0	-1,285.5	-1,108.1	1,282.6	0.00	0.00	0.00
10,700.0	90.00	179.88	9,800.0	-1,385.5	-1,107.9	1,382.6	0.00	0.00	0.00
10,800.0	90.00	179.88	9,800.0	-1,485.5	-1,107.7	1,482.6	0.00	0.00	0.00
10,900.0	90.00	179.88	9,800.0	-1,585.5	-1,107.5	1,582.6	0.00	0.00	0.00
11,000.0	90.00	179.88	9,800.0	-1,685.5	-1,107.3	1,682.6	0.00	0.00	0.00
11,100.0	90.00	179.88	9,800.0	-1,785.5	-1,107.1	1,782.6	0.00	0.00	0.00
11,200.0	90.00	179.88	9,800.0	-1,885.5	-1,106.9	1,882.6	0.00	0.00	0.00
11,300.0	90.00	179.88	9,800.0	-1,985.5	-1,106.7	1,982.6	0.00	0.00	0.00
11,400.0	90.00	179.88	9,800.0	-2,085.5	-1,106.5	2,082.6	0.00	0.00	0.00
11,500.0	90.00	179.88	9,800.0	-2,185.5	-1,106.3	2,182.6	0.00	0.00	0.00
11,600.0	90.00	179.88	9,800.0	-2,285.5	-1,106.1	2,282.6	0.00	0.00	0.00
11,700.0	90.00	179.88	9,800.0	-2,385.5	-1,105.9	2,382.6	0.00	0.00	0.00
11,800.0	90.00	179.88	9,800.0	-2,485.5	-1,105.7	2,482.6	0.00	0.00	0.00
11,900.0	90.00	179.88	9,800.0	-2,585.5	-1,105.5	2,582.6	0.00	0.00	0.00
12,000.0	90.00	179.88	9,800.0	-2,685.5	-1,105.2	2,682.6	0.00	0.00	0.00
12,100.0	90.00	179.88	9,800.0	-2,785.5	-1,105.0	2,782.6	0.00	0.00	0.00
12,200.0	90.00	179.88	9,800.0	-2,885.5	-1,104.8	2,882.6	0.00	0.00	0.00
12,300.0	90.00	179.88	9,800.0	-2,985.5	-1,104.6	2,982.6	0.00	0.00	0.00
12,400.0	90.00	179.88	9,800.0	-3,085.5	-1,104.4	3,082.6	0.00	0.00	0.00
12,500.0	90.00	179.88	9,800.0	-3,185.5	-1,104.2	3,182.6	0.00	0.00	0.00
12,600.0	90.00	179.88	9,800.0	-3,285.5	-1,104.0	3,282.6	0.00	0.00	0.00
12,700.0	90.00	179.88	9,800.0	-3,385.5	-1,103.8	3,382.6	0.00	0.00	0.00
12,800.0	90.00	179.88	9,800.0	-3,485.5	-1,103.6	3,482.6	0.00	0.00	0.00
12,900.0	90.00	179.88	9,800.0	-3,585.5	-1,103.4	3,582.6	0.00	0.00	0.00
13,000.0	90.00	179.88	9,800.0	-3,685.5	-1,103.2	3,682.6	0.00	0.00	0.00
13,100.0	90.00	179.88	9,800.0	-3,785.5	-1,103.0	3,782.6	0.00	0.00	0.00
13,200.0	90.00	179.88	9,800.0	-3,885.5	-1,102.8	3,882.6	0.00	0.00	0.00
13,300.0	90.00	179.88	9,800.0	-3,985.5	-1,102.6	3,982.6	0.00	0.00	0.00
13,400.0	90.00	179.88	9,800.0	-4,085.5	-1,102.4	4,082.6	0.00	0.00	0.00
13,500.0	90.00	179.88	9,800.0	-4,185.5	-1,102.2	4,182.6	0.00	0.00	0.00
13,600.0	90.00	179.88	9,800.0	-4,285.5	-1,102.0	4,282.6	0.00	0.00	0.00
13,700.0	90.00	179.88	9,800.0	-4,385.5	-1,101.7	4,382.6	0.00	0.00	0.00
13,800.0	90.00	179.88	9,800.0	-4,485.5	-1,101.5	4,482.6	0.00	0.00	0.00
13,900.0	90.00	179.88	9,800.0	-4,585.5	-1,101.3	4,582.6	0.00	0.00	0.00
14,000.0	90.00	179.88	9,800.0	-4,685.5	-1,101.1	4,682.6	0.00	0.00	0.00
14,100.0	90.00	179.88	9,800.0	-4,785.5	-1,100.9	4,782.6	0.00	0.00	0.00
14,200.0	90.00	179.88	9,800.0	-4,885.5	-1,100.7	4,882.6	0.00	0.00	0.00
14,300.0	90.00	179.88	9,800.0	-4,985.5	-1,100.5	4,982.6	0.00	0.00	0.00
14,400.0	90.00	179.88	9,800.0	-5,085.5	-1,100.3	5,082.6	0.00	0.00	0.00
14,500.0	90.00	179.88	9,800.0	-5,185.5	-1,100.1	5,182.6	0.00	0.00	0.00
14,600.0	90.00	179.88	9,800.0	-5,285.5	-1,099.9	5,282.6	0.00	0.00	0.00



Planning Report



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Cutbow 36 1 Federal Com 501H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3606.5usft (3606.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3606.5usft (3606.5)
Site:	Cutbow 36 1 Federal Com Pad 2	North Reference:	Grid
Well:	Cutbow 36 1 Federal Com 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.2		

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)
14,700.0	90.00	179.88	9,800.0	-5,385.5	-1,099.7	5,382.6	0.00	0.00	0.00
14,800.0	90.00	179.88	9,800.0	-5,485.5	-1,099.5	5,482.6	0.00	0.00	0.00
14,900.0	90.00	179.88	9,800.0	-5,585.5	-1,099.3	5,582.6	0.00	0.00	0.00
15,000.0	90.00	179.88	9,800.0	-5,685.5	-1,099.1	5,682.6	0.00	0.00	0.00
15,100.0	90.00	179.88	9,800.0	-5,785.5	-1,098.9	5,782.6	0.00	0.00	0.00
15,200.0	90.00	179.88	9,800.0	-5,885.5	-1,098.7	5,882.6	0.00	0.00	0.00
15,300.0	90.00	179.88	9,800.0	-5,985.5	-1,098.4	5,982.6	0.00	0.00	0.00
15,400.0	90.00	179.88	9,800.0	-6,085.5	-1,098.2	6,082.6	0.00	0.00	0.00
15,500.0	90.00	179.88	9,800.0	-6,185.5	-1,098.0	6,182.6	0.00	0.00	0.00
15,600.0	90.00	179.88	9,800.0	-6,285.5	-1,097.8	6,282.6	0.00	0.00	0.00
15,700.0	90.00	179.88	9,800.0	-6,385.5	-1,097.6	6,382.6	0.00	0.00	0.00
15,800.0	90.00	179.88	9,800.0	-6,485.5	-1,097.4	6,482.6	0.00	0.00	0.00
15,900.0	90.00	179.88	9,800.0	-6,585.5	-1,097.2	6,582.6	0.00	0.00	0.00
16,000.0	90.00	179.88	9,800.0	-6,685.5	-1,097.0	6,682.6	0.00	0.00	0.00
16,100.0	90.00	179.88	9,800.0	-6,785.5	-1,096.8	6,782.6	0.00	0.00	0.00
16,200.0	90.00	179.88	9,800.0	-6,885.5	-1,096.6	6,882.6	0.00	0.00	0.00
16,300.0	90.00	179.88	9,800.0	-6,985.5	-1,096.4	6,982.6	0.00	0.00	0.00
16,400.0	90.00	179.88	9,800.0	-7,085.5	-1,096.2	7,082.6	0.00	0.00	0.00
16,500.0	90.00	179.88	9,800.0	-7,185.5	-1,096.0	7,182.6	0.00	0.00	0.00
16,600.0	90.00	179.88	9,800.0	-7,285.5	-1,095.8	7,282.6	0.00	0.00	0.00
16,700.0	90.00	179.88	9,800.0	-7,385.5	-1,095.6	7,382.6	0.00	0.00	0.00
16,800.0	90.00	179.88	9,800.0	-7,485.5	-1,095.4	7,482.6	0.00	0.00	0.00
16,900.0	90.00	179.88	9,800.0	-7,585.5	-1,095.1	7,582.6	0.00	0.00	0.00
17,000.0	90.00	179.88	9,800.0	-7,685.5	-1,094.9	7,682.6	0.00	0.00	0.00
17,100.0	90.00	179.88	9,800.0	-7,785.5	-1,094.7	7,782.6	0.00	0.00	0.00
17,200.0	90.00	179.88	9,800.0	-7,885.5	-1,094.5	7,882.6	0.00	0.00	0.00
17,300.0	90.00	179.88	9,800.0	-7,985.5	-1,094.3	7,982.6	0.00	0.00	0.00
17,400.0	90.00	179.88	9,800.0	-8,085.5	-1,094.1	8,082.6	0.00	0.00	0.00
17,500.0	90.00	179.88	9,800.0	-8,185.5	-1,093.9	8,182.6	0.00	0.00	0.00
17,600.0	90.00	179.88	9,800.0	-8,285.5	-1,093.7	8,282.6	0.00	0.00	0.00
17,700.0	90.00	179.88	9,800.0	-8,385.5	-1,093.5	8,382.6	0.00	0.00	0.00
17,800.0	90.00	179.88	9,800.0	-8,485.5	-1,093.3	8,482.6	0.00	0.00	0.00
17,900.0	90.00	179.88	9,800.0	-8,585.5	-1,093.1	8,582.6	0.00	0.00	0.00
18,000.0	90.00	179.88	9,800.0	-8,685.5	-1,092.9	8,682.6	0.00	0.00	0.00
18,100.0	90.00	179.88	9,800.0	-8,785.5	-1,092.7	8,782.6	0.00	0.00	0.00
18,200.0	90.00	179.88	9,800.0	-8,885.5	-1,092.5	8,882.6	0.00	0.00	0.00
18,300.0	90.00	179.88	9,800.0	-8,985.5	-1,092.3	8,982.6	0.00	0.00	0.00
18,400.0	90.00	179.88	9,800.0	-9,085.5	-1,092.1	9,082.6	0.00	0.00	0.00
18,500.0	90.00	179.88	9,800.0	-9,185.5	-1,091.9	9,182.6	0.00	0.00	0.00
18,600.0	90.00	179.88	9,800.0	-9,285.5	-1,091.6	9,282.6	0.00	0.00	0.00
18,700.0	90.00	179.88	9,800.0	-9,385.5	-1,091.4	9,382.6	0.00	0.00	0.00
18,800.0	90.00	179.88	9,800.0	-9,485.5	-1,091.2	9,482.6	0.00	0.00	0.00
18,900.0	90.00	179.88	9,800.0	-9,585.5	-1,091.0	9,582.6	0.00	0.00	0.00
19,000.0	90.00	179.88	9,800.0	-9,685.5	-1,090.8	9,682.6	0.00	0.00	0.00
19,100.0	90.00	179.88	9,800.0	-9,785.5	-1,090.6	9,782.6	0.00	0.00	0.00
19,200.0	90.00	179.88	9,800.0	-9,885.5	-1,090.4	9,882.6	0.00	0.00	0.00
19,300.0	90.00	179.88	9,800.0	-9,985.5	-1,090.2	9,982.6	0.00	0.00	0.00
19,400.0	90.00	179.88	9,800.0	-10,085.5	-1,090.0	10,082.6	0.00	0.00	0.00
19,500.0	90.00	179.88	9,800.0	-10,185.5	-1,089.8	10,182.6	0.00	0.00	0.00
19,600.0	90.00	179.88	9,800.0	-10,285.5	-1,089.6	10,282.6	0.00	0.00	0.00
19,700.0	90.00	179.88	9,800.0	-10,385.5	-1,089.4	10,382.6	0.00	0.00	0.00
19,800.0	90.00	179.88	9,800.0	-10,485.5	-1,089.2	10,482.6	0.00	0.00	0.00
19,900.0	90.00	179.88	9,800.0	-10,585.5	-1,089.0	10,582.6	0.00	0.00	0.00
20,000.0	90.00	179.88	9,800.0	-10,685.5	-1,088.8	10,682.6	0.00	0.00	0.00



Planning Report



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Cutbow 36 1 Federal Com 501H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3606.5usft (3606.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3606.5usft (3606.5)
Site:	Cutbow 36 1 Federal Com Pad 2	North Reference:	Grid
Well:	Cutbow 36 1 Federal Com 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.2		

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)	
20,100.0	90.00	179.88	9,800.0	-10,785.5	-1,088.6	10,782.6	0.00	0.00	0.00	
20,200.0	90.00	179.88	9,800.0	-10,885.5	-1,088.3	10,882.6	0.00	0.00	0.00	
20,300.0	90.00	179.88	9,800.0	-10,985.5	-1,088.1	10,982.6	0.00	0.00	0.00	
20,400.0	90.00	179.88	9,800.0	-11,085.5	-1,087.9	11,082.6	0.00	0.00	0.00	
20,500.0	90.00	179.88	9,800.0	-11,185.5	-1,087.7	11,182.6	0.00	0.00	0.00	
20,545.1	90.00	179.88	9,800.0	-11,230.5	-1,087.6	11,227.7	0.00	0.00	0.00	
TD at 20545.1 - LTP/PBHL - Cutbow 36 1 Federal Com 501H										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
LTP/PBHL - Cutbow 36	0.00	0.01	9,800.0	-11,230.5	-1,087.6	580,823.44	727,982.18	32.5952747°N	103.7272871°W
- plan hits target center									
- Point									
FTP - Cutbow 36 1 Fede	0.00	0.00	9,800.0	-858.0	-1,114.7	591,195.97	727,955.10	32.6237849°N	103.7271830°W
- plan misses target center by 5.7usft at 10172.5usft MD (9800.0 TVD, -858.0 N, -1109.0 E)									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
10,172.0	9,800.0	LP	5-1/2	5-1/2	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
2,000.0	2,000.0	0.0	0.0	KOP - Start Build 2.00	
2,496.5	2,494.0	-13.9	-40.6	Start 6306.5 hold at 2496.5 MD	
8,803.0	8,706.0	-366.1	-1,069.4	Start Drop -2.00	
9,299.4	9,200.0	-380.0	-1,110.0	Start 122.5 hold at 9299.4 MD	
9,422.0	9,322.5	-380.0	-1,110.0	KOP #2 - Start Build 12.00	
10,172.0	9,800.0	-857.5	-1,109.0	LP - Start 10373.1 hold at 10172.0 MD	
20,545.1	9,800.0	-11,230.5	-1,087.6	TD at 20545.1	



Avant Operating, LLC

Lea Co., NM (NAD 83)

Cutbow 36 1 Federal Com Pad 2

Cutbow 36 1 Federal Com 501H

OH

Plan 0.2

Anticollision Summary Report

07 February, 2024





Anticollision Summary Report



Company:	Avant Operating, LLC	Local Co-ordinate Reference:	Well Cutbow 36 1 Federal Com 501H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	WELL @ 3606.5usft (3606.5)
Reference Site:	Cutbow 36 1 Federal Com Pad 2	MD Reference:	WELL @ 3606.5usft (3606.5)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Cutbow 36 1 Federal Com 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.16 Single User Db
Reference Design:	Plan 0.2	Offset TVD Reference:	Offset Datum

Reference	Plan 0.2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,000.0usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	2/7/2024		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	20,545.1	Plan 0.2 (OH)	B001Mb_MWD+HRGM	OWSG MWD + HRGM

Summary						
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						
Cutbow 36 1 Federal Com Pad 1						
Cutbow 36 1 Federal Com 601H - OH - Surveys	10,143.0	9,897.9	41.5	-31.0	0.572	Level 1, CC, ES, SF
Cutbow 36 1 Federal Com 602H - OH - Surveys	6,066.3	6,058.2	905.4	861.5	20.624	CC
Cutbow 36 1 Federal Com 602H - OH - Surveys	10,143.0	9,838.0	921.7	850.0	12.862	ES
Cutbow 36 1 Federal Com 602H - OH - Surveys	10,150.0	9,838.2	921.7	850.1	12.862	SF
Cutbow 36 1 Federal Com 603H - OH - Surveys	3,520.2	3,489.6	994.3	969.8	40.688	CC
Cutbow 36 1 Federal Com 603H - OH - Surveys	3,800.0	3,765.7	995.4	968.9	37.501	ES
Cutbow 36 1 Federal Com 603H - OH - Surveys	4,000.0	3,956.5	998.6	970.5	35.624	SF
Cutbow 36 1 Federal Com Pad 2						
Cutbow 36 1 Federal Com 301H - OH - Plan 0.2	2,000.0	2,000.0	20.0	6.1	1.439	Level 3, CC
Cutbow 36 1 Federal Com 301H - OH - Plan 0.2	8,600.0	8,606.9	56.8	-11.1	0.836	Level 1, ES, SF
Cutbow 36 1 Federal Com 302H - OH - Plan 0.2	2,000.0	2,000.0	60.0	46.1	4.323	CC, ES
Cutbow 36 1 Federal Com 302H - OH - Plan 0.2	2,100.0	2,100.0	61.3	46.8	4.205	SF
Cutbow 36 1 Federal Com 502H - OH - Plan 0.2	2,000.0	2,000.0	39.9	26.0	2.875	CC, ES
Cutbow 36 1 Federal Com 502H - OH - Plan 0.2	2,100.0	2,100.0	41.2	26.7	2.827	SF
Snyder Aky 01 (Offset)						
Snyder Aky 01 - Snyder Aky 01 - Surveys	18,335.5	9,678.5	663.9	360.8	2.191	CC, ES, SF
State HH 03H (Offset)						
State HH 03H (Offset) - State HH 03H (Offset) - Surveys	10,636.7	9,765.8	3.4	-50.6	0.063	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



Company:	Avant Operating, LLC	Local Co-ordinate Reference:	Well Cutbow 36 1 Federal Com 501H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	WELL @ 3606.5usft (3606.5)
Reference Site:	Cutbow 36 1 Federal Com Pad 2	MD Reference:	WELL @ 3606.5usft (3606.5)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Cutbow 36 1 Federal Com 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.16 Single User Db
Reference Design:	Plan 0.2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 3606.5usft (3606.5)

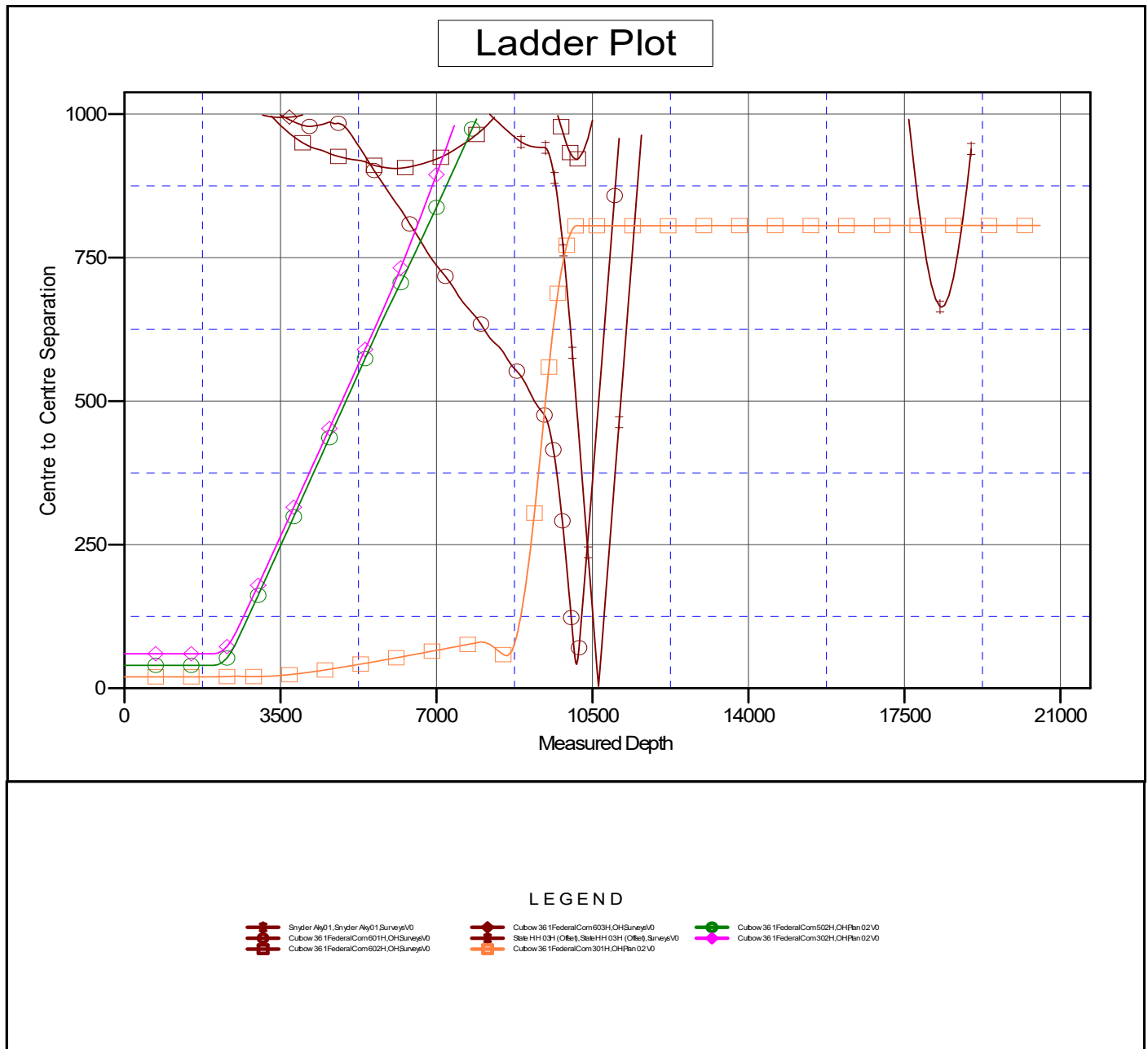
Offset Depths are relative to Offset Datum

Central Meridian is 104.333333°W

Coordinates are relative to: Cutbow 36 1 Federal Com 501H

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

Grid Convergence at Surface is: 0.33°



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



Anticollision Summary Report



Company:	Avant Operating, LLC	Local Co-ordinate Reference:	Well Cutbow 36 1 Federal Com 501H
Project:	Lea Co., NM (NAD 83)	TVD Reference:	WELL @ 3606.5usft (3606.5)
Reference Site:	Cutbow 36 1 Federal Com Pad 2	MD Reference:	WELL @ 3606.5usft (3606.5)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Cutbow 36 1 Federal Com 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.16 Single User Db
Reference Design:	Plan 0.2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 3606.5usft (3606.5)

Offset Depths are relative to Offset Datum

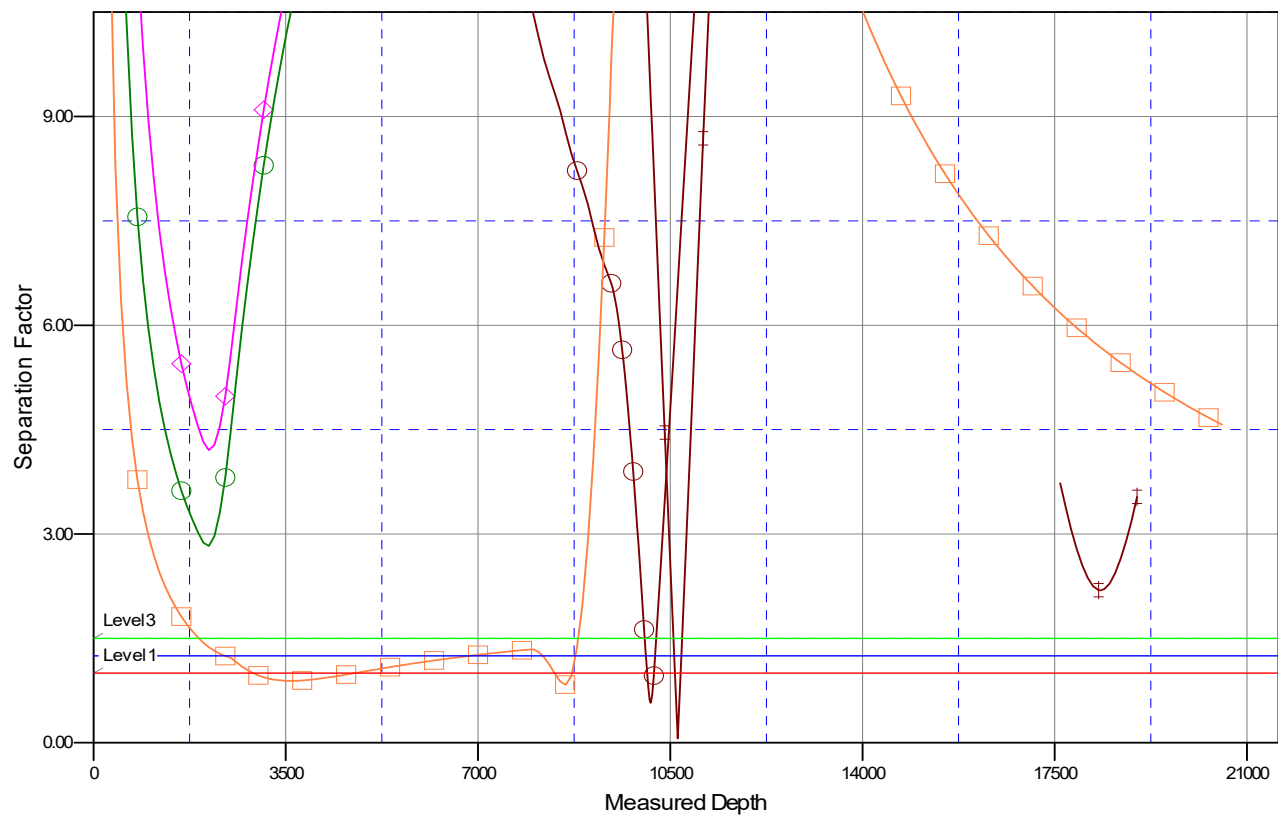
Central Meridian is 104.333333°W

Coordinates are relative to: Cutbow 36 1 Federal Com 501H

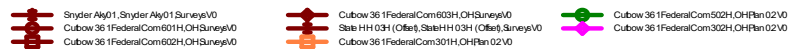
Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.33°

Separation Factor Plot



LEGEND



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

PROPOSAL#: 220810161451-G



CEMENT PROCEDURE & PROPOSAL

PREPARED FOR:

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Avant Natural Resources

Cutbow 36-1 Fed Com #501H

Lea County, NM

Service Point

Odessa

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.Disclaimer Notice:

The ability of West Texas Cementers to complete this work is subject to the availability of the raw materials required to complete the job.

This information is presented in good faith, but no warranty is given by and West Texas Cementers LLC assumes no liability for advice or recommendations made concerning results to be obtained from the use of any product or service. The results given are estimates based on calculations produced by a computer model including various assumptions on the well, reservoir and treatment. The results depend on input data provided by the Operator and estimates as to unknown data and can be no more accurate than the model, the assumptions and such input data. The information presented is WTC LLC best estimate of the actual results that may be achieved and should be used for comparison purposes rather than absolute values. The quality of input data, and hence results, may be improved through the use of certain tests and procedures which West Texas Cementers LLC can assist in selecting. The Operator has superior knowledge of the well, the reservoir, the field and conditions affecting them. If the Operator is aware of any conditions whereby a neighboring well or wells might be affected by the treatment proposed herein it is the Operator's responsibility to notify the owner or owners of the well or wells accordingly. Prices quoted are estimates only and are good for 30 days from the date of issue. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Freedom from infringement of patents of West Texas Cementers LLC or others is not to be inferred.

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VERSION: v0.29

Avant Natural Resources
Cutbow 36-1 Fed Com #501H
Lea County, NM

Surface



PROPOSAL#: 220810161451-G

WELL INFORMATION						
MUD	8.4# Fresh Water					
PREVIOUS PIPE	30" 98.89# CSG to 120					
OPEN HOLE	24" OH to 1175					
CASING/INJECTION	20" 94# J-55/BTC to 1175					
MD	1175					
EST BHST/BHCT	90-F / 82-F (0.8-F/100-FT)					
NOTES	Standby charges start after WTC has been on location for more than 4-hrs.					
VOLUMES						
FLUID NAME	LENGTH (ft)	OD (in.)	ID (in.)	XS (%)	FACTOR (bbl/ft)	VOLUME (bbl)
Lead	120	29.376	20		0.4497	54.0
Lead	755	24	20	50%	0.2564	193.6
Tail	300	24	20	20%	0.2052	61.5
SHOE JOINT	40	20	19.124		0.3553	14.2
FLUIDS						
SPACER						
Fresh Water						
VOLUME	20-bbl					
Lead						
35% B_Poz+65% Class C+6% Gel+5% SALT+0.25PPS Pol-E-Flake+0.005GPS NoFoam V1A						
VOLUME	735-SX					248.7-bbls
DENSITY	12.8-ppg					
YIELD	1.9-cf/sx					
MIX WATER	10.17-gps					
TOP OF CEMENT	Surface					
EXCESS	50%					

Avant Natural Resources
Cutbow 36-1 Fed Com #501H
Lea County, NM

Surface



PROPOSAL#: 220810161451-G

Tail		
	100% Class C+1% CaCl2+0.005GPS NoFoam V1A	
VOLUME	320-SX	75.8-bbls
DENSITY	14.8-ppg	
YIELD	1.33-cf/sx	
MIX WATER	6.34-gps	
TOP OF CEMENT	875-ft	
EXCESS	20%	
DISPLACEMENT		
	Displacement	
VOLUME	403.2-bbl	

Avant Natural Resources
Cutbow 36-1 Fed Com #501H
Lea County, NM

1st Intermediate



PROPOSAL#: 220810161451-G

WELL INFORMATION						
MUD	10.5# Brine					
PREVIOUS PIPE	20" 94# CSG to 1175					
OPEN HOLE	17.5" OH to 2950					
CASING/INJECTION	13.375" 54.5# J-55/LTC to 2950					
MD	2950					
EST BHST/BHCT	104-F / 94-F (0.8-F/100-FT)					
NOTES	Standby charges start after WTC has been on location for more than 4-hrs.					
VOLUMES						
FLUID NAME	LENGTH (ft)	OD (in.)	ID (in.)	XS (%)	FACTOR (bbl/ft)	VOLUME (bbl)
Lead	1175	19.124	13.375		0.1815	213.2
Lead	1185	17.5	13.375	50%	0.1856	219.9
Tail	590	17.5	13.375	20%	0.1485	87.6
SHOE JOINT	40	13.375	12.615		0.1546	6.2
FLUIDS						
SPACER						
Fresh Water						
VOLUME	20-bbl					
Lead						
35% B_Poz+65% Class C+6% Gel+5% SALT+0.05% R-1300+0.25PPS Pol-E-Flake+0.005GPS NoFoam V1A						
VOLUME	1285-SX					434.8-bbls
DENSITY	12.8-ppg					
YIELD	1.9-cf/sx					
MIX WATER	10.17-gps					
TOP OF CEMENT	Surface					
EXCESS	50%					

Avant Natural Resources
Cutbow 36-1 Fed Com #501H
Lea County, NM

1st Intermediate



PROPOSAL#: 220810161451-G

Tail		
	100% Class C+5% SALT+0.005GPS NoFoam V1A	
VOLUME	390-SX	94.5-bbls
DENSITY	14.8-ppg	
YIELD	1.36-cf/sx	
MIX WATER	6.51-gps	
TOP OF CEMENT	2360-ft	
EXCESS	20%	
DISPLACEMENT		
	Displacement	
VOLUME	449.8-bbl	

Avant Natural Resources
Cutbow 36-1 Fed Com #501H
Lea County, NM

2nd Multi-Stage Intermediate



PROPOSAL#: 220810161451-G

WELL INFORMATION						
MUD	8.4# Fresh Water					
PREVIOUS PIPE	13.375" 54.5# CSG to 2950					
OPEN HOLE	12.25" OH to 4603					
CASING/INJECTION	9.625" 40# J-55/LTC/L80/HC to 4603					
MD	4603					
TVD	4600					
EST BHST/BHCT	117-F / 103-F (0.8-F/100-FT)					
DV TOOL	3200					
EST BHST/BHCT STG2	106-F / 95-F (0.8-F/100-FT)					
NOTES	Standby charges start after WTC has been on location for more than 8-hrs.					
VOLUMES						
FLUID NAME	LENGTH (ft)	OD (in.)	ID (in.)	XS (%)	FACTOR (bbl/ft)	VOLUME (bbl)
Stage 1 Lead	482	12.25	9.625	50%	0.0837	40.3
Stage 1 Tail	921	12.25	9.625	20%	0.0669	61.6
Stage 2 Lead	2790	12.615	9.625	50%	0.0969	270.3
Stage 2 Tail	160	12.615	9.625	0%	0.0646	10.3
Stage 2 Tail	250	12.25	9.625	0%	0.0558	13.9
SHOE JOINT	40	9.625	8.835		0.0758	3.0
FLUIDS						
SPACER						
Fresh Water						
VOLUME	25-bbl					
Stage 1 Lead						
35% B_Poz+65% Class C+6% Gel+5% SALT+0.4% R-1300+0.25PPS Pol-E-Flake+0.005GPS NoFoam V1A						
VOLUME	120-SX					
DENSITY	12.8-ppg					
YIELD	1.9-cf/sx					
MIX WATER	10.18-gps					
TOP OF CEMENT	3200-ft					
EXCESS	50%					
	40.6-bbls					

40.6-bbls

Avant Natural Resources
Cutbow 36-1 Fed Com #501H
Lea County, NM

2nd Multi-Stage Intermediate



PROPOSAL#: 220810161451-G

Stage 1 Tail		
100% Class C+5% SALT+0.25% CRT-201+0.005GPS NoFoam V1A		
VOLUME	270-SX	65.4-bbls
DENSITY	14.8-ppg	
YIELD	1.36-cf/sx	
MIX WATER	6.49-gps	
TOP OF CEMENT	3682-ft	
EXCESS	20%	
DISPLACEMENT		
Displacement		
VOLUME	346-bbl	
SPACER		
Fresh Water		
VOLUME	20-bbl	
Stage 2 Lead		
35% B_Poz+65% Class C+6% Gel+5% SALT+0.2% R-1300+0.25PPS Pol-E-Flake+0.005GPS NoFoam V1A		
VOLUME	800-SX	270.7-bbls
DENSITY	12.8-ppg	
YIELD	1.9-cf/sx	
MIX WATER	10.18-gps	
TOP OF CEMENT	Surface	
EXCESS	50%	
Stage 2 Tail		
100% Class C+5% SALT+0.005GPS NoFoam V1A		
VOLUME	100-SX	24.2-bbls
DENSITY	14.8-ppg	
YIELD	1.36-cf/sx	
MIX WATER	6.51-gps	
TOP OF CEMENT	2790-ft	
EXCESS	0%	
DISPLACEMENT		
Displacement		
VOLUME	242.6-bbl	

Avant Natural Resources
Cutbow 36-1 Fed Com #501H
Lea County, NM

Production



PROPOSAL#: 220810161451-G

WELL INFORMATION						
MUD	9.8# OBM					
PREVIOUS PIPE	9.625" 40# CSG to 4603					
OPEN HOLE	8.75" OH to 10268; 8.5" OH to 20593					
CASING/INJECTION	5.5" 20# P-110/HC/GBCD to 20593					
MD	20593					
TVD	9800					
EST BHST/BHCT	212-F / 195-F (1.34-F/100-FT)					
KOP	9368					
NOTES	Standby charges start after WTC has been on location for more than 8-hrs.					
VOLUMES						
FLUID NAME	LENGTH (ft)	OD (in.)	ID (in.)	XS (%)	FACTOR (bbl/ft)	VOLUME (bbl)
Lead	4603	8.835	5.5		0.0464	213.8
Lead	4765	8.75	5.5	50%	0.0675	321.5
Tail	900	8.75	5.5	20%	0.0540	48.6
Tail	10325	8.5	5.5	20%	0.0490	505.5
SHOE JOINT	80	5.5	4.778		0.0222	1.8
FLUIDS						
SPACER						
Wt. Spacer 37.16GPB Water+8PPB PolyScrub 4320+105.54PPB Barite+1GPB HoleScrub 4311+1PPB R-1300						
VOLUME	40-bbl					
DENSITY	10.3-ppg					
Lead						
100% ProLite+5PPS Plexcrete STE+2% SMS+0.65% R-1300+0.2% FL-17+3PPS Gilsonite+0.005GPS NoFoam V1A						
VOLUME	890-SX					535.8-bbls
DENSITY	10.7-ppg					
YIELD	3.38-cf/sx					
MIX WATER	21.07-gps					
TOP OF CEMENT	Surface					
EXCESS	50%					

Avant Natural Resources
Cutbow 36-1 Fed Com #501H
Lea County, NM

Production



PROPOSAL#: 220810161451-G

Tail		
50% B_Poz+50% Class H+5% SALT+0.05% RCKCAS-100+0.75% R-1201+0.5% FL-17+0.005GPS NoFoam V1A		
VOLUME	2580-SX	556-bbls
DENSITY	14.5-ppg	
YIELD	1.21-cf/sx	
MIX WATER	5.28-gps	
TOP OF CEMENT	9368-ft	
EXCESS	20%	
DISPLACEMENT		
Fresh Water+ 0.25GPT Plexicide 24L+1GPT Corplex		
VOLUME	454.9-bbl	
DENSITY	8.34-ppg	

CHEMICAL DESCRIPTIONS		
CHEMICAL NAME	CODE	DESCRIPTION
B_Poz	WTC228	Poz - Fly Ash, Extender
Class H	WTC101	API Cement
Class C	WTC100	API Cement
Premium C	WTC270	API Cement
ProLite		Blended Based Cement
Plexcrete SFA	WTC129	Cement Strength Enhancer
Gel	WTC102	Extender
Micro Crystal	WTC212	Cement Strength Enhancer
Micro Shell	WTC209	Cement Strength Enhancer
WTC1	WTC250	Extender
Plexcrete STE	WTC127	Cement Strength Enhancer
FAR-2	WTC260	Cement Strength Enhancer
Gypsum	WTC111	Free Water Control, Extender
CaCl ₂	WTC112	Accelerator
SMS	WTC115	Free Water Control, Extender
RCKCAS-100	WTC276	Free Water Control, Anti-Settling Agent
SA-1	WTC264	Free Water Control, Extender
R-33	WTC243	Lignosulfonate Retarder
R-1300	WTC201	Low Temperature Retarder
R-1201	WTC253	Lignosulfonate Retarder
CRT-201	WTC278	Lignosulfonate Retarder
C-37	WTC224	Dispersant, Friction Reducer
FL-17	WTC130	Fluid Loss and Gas Migration Control (400-F max)
EC-10	WTC120	Expanding Agent
Gas Bond	WTC126	Gas Migration Control (Hydrogen Generating)
Gilsonite	WTC003	Premium Lost Circulation Material, Free Water Control
Pol-E-Flake	WTC106	Lost Circulation Material
Web Seal	WTC133	Premium Fiber Lost Circulation Material
Zone Seal	WTC207	Premium Lost Circulation Material
NoFoam V1A	WTC105	Liquid Defoamer
Water		Fresh Water
PolyScrub 4320	WTC232	Spacer Gelling Agent
Barite	WTC116	Weighting Agent
HoleScrub 4311	WTC281	Surfactant
HoleScrub 4305	WTC213	Surfactant
HoleScrub 4308	WTC215	Surfactant
Soda Ash	WTC164	pH Control
R-1300	WTC201	Low Temperature Retarder
SuspendaCem 6302	WTC005	Free Water Control, Anti-Settling Agent
Sugar	WTC119	Retarder
AI-1, Acid Inhibitor	WTC015	Corrosion Inhibitor
Plexcide 24L	WTC166	Biocide
Corplex	WTC134	Corrosion Inhibitor
Clay Max	WTC096	KCL Substitute
Zone Seal	WTC207	Premium Lost Circulation Material

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1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
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District III
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Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 320510

CONDITIONS

Operator: Avant Operating, LLC 1515 Wynkoop Street Denver, CO 80202	OGRID: 330396
	Action Number: 320510
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	3/29/2024