U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Sundry Print Report

07/18/2024

Well Name: SANDRA JEAN 23 FED COM

Well Location: T20S / R33E / SEC 23 / SWSW / 32.552152 / -103.639405

County or Parish/State: LEA / NM

Well Number: 805H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM29704

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002552883

Operator: AVANT OPERATING LLC

Notice of Intent

Sundry ID: 2800685

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 07/15/2024

Time Sundry Submitted: 10:06

Date proposed operation will begin: 07/17/2024

Procedure Description: Avant Operating, LLC would like to request a SHL and TVD change to the Sandra Jean 805H well. The SHL will change to 200' FSL and 1067' FWL, instead of the original 280' FSL and 957' FWL. The TVD depth will change to 12,535'. Please see the attached updated C-102 plat and documentation for this request.

NOI Attachments

Procedure Description

Avant_Natural_Resources_Sandra_Jean_23_Fed_Com_805H_No_Pricing_20240717095933.pdf

Sandra_Jean_23_Fed_Com_805H_WBS_Prelim_5_String_20240717095917.pdf

5.500_x_20.00__P_110_HC_Anaconda__SP_Data_Sheet_20240717095904.pdf

Sandra_Jean_23_Fed_Com_805H_Plan_0.2_Report_20240715100619.pdf

Sandra_Jean_23_Fed_Com_805H_C_102_20240715100344.pdf

Well Name: SANDRA JEAN 23 FED COM | **Well Location:** T20S / R33E / SEC 23 / SWSW / 32.552152 / -103.639405 | **County or Parish/State:** LEA / NM

Well Number: 805H | **Type of Well:** OIL WELL | **Allottee or Tribe Name:**

Lease Number: NMNM29704 | **Unit or CA Name:** | **Unit or CA Number:**

US Well Number: 3002552883 | **Operator:** AVANT OPERATING LLC

Conditions of Approval

Additional

23_20_33_M_Sundry_ID_2800685_Sandra_Jean_23_Fed_Com_805H_Lea_NM29704_AVANT_OPERATING_LLC_13_22g_2_27_2024_LV_20240717125630.pdf

Sandra_Jean_23_Fed_Com_805H_Dr_COA_20240717125630.pdf

Operator

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

Operator Electronic Signature: SARAH FERREYROS **Signed on:** JUL 17, 2024 10:00 AM

Name: AVANT OPERATING LLC

Title: Director of Regulatory

Street Address: 1515 WYNKOOP

City: DENVER **State:** CO

Phone: (720) 854-9020

Email address: SARAH@AVANTNR.COM

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS **BLM POC Title:** Petroleum Engineer

BLM POC Phone: 5752342234 **BLM POC Email Address:** cwalls@blm.gov

Disposition: Approved **Disposition Date:** 07/18/2024

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.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No. NMNM29704

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No. SANDRA JEAN 23 FED COM/805H

2. Name of Operator AVANT OPERATING LLC

9. API Well No. 3002552883

3a. Address 1515 WYNKOOP STREET, SUITE 700, DENVEF

3b. Phone No. *(include area code)* (720) 746-5045

10. Field and Pool or Exploratory Area TEAS/WOLFCAMP

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)* SEC 23/T20S/R33E/NMP

11. Country or Parish, State LEA/NM

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

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

Avant Operating, LLC would like to request a SHL and TVD change to the Sandra Jean 805H well. The SHL will change to 200' FSL and 1067' FWL, instead of the original 280' FSL and 957' FWL. The TVD depth will change to 12,535'.

Please see the attached updated C-102 plat and documentation for this request.

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)* SARAH FERREYROS / Ph: (720) 854-9020

Title Director of Regulatory

Signature (Electronic Submission)

Date 07/17/2024

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by CODY LAYTON / Ph: (575) 234-5959 / Approved

Title Assistant Field Manager Lands & I

Date 07/18/2024

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

Office CARLSBAD

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.
PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.
ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.
EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.
Response to this request is mandatory.
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect ofthis form to U.S. Department ofthe Interior, Bureau ofLand 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: SWSW / 280 FSL / 957 FWL / TWSP: 20S / RANGE: 33E / SECTION: 23 / LAT: 32.552152 / LONG: -103.639405 (TVD: 0 feet, MD: 0 feet)

PPP: SWNW / 2641 FSL / 330 FWL / TWSP: 20S / RANGE: 33E / SECTION: 23 / LAT: 32.558641 / LONG: -103.641443 (TVD: 12400 feet, MD: 15247 feet)

PPP: SWSW / 100 FSL / 330 FWL / TWSP: 20S / RANGE: 33E / SECTION: 23 / LAT: 32.551658 / LONG: -103.64144 (TVD: 12400 feet, MD: 12706 feet)

PPP: NWNW / 1322 FNL / 330 FWL / TWSP: 20S / RANGE: 33E / SECTION: 23 / LAT: 32.562273 / LONG: -103.641444 (TVD: 12400 feet, MD: 16106 feet)

BHL: NWNW / 100 FNL / 330 FWL / TWSP: 20S / RANGE: 33E / SECTION: 23 / LAT: 32.56563 / LONG: -103.641446 (TVD: 12400 feet, MD: 17328 feet)

Sandra Jean 23 Fed Com 805H

20	surface csg in a	24	inch hole.		Design Factors			Surface			
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	94.00	j 55	btc	10.26	0.69	1.17	1,453	3	1.96	1.20	136,582
"B"			btc				0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig:	843	Tail Cmt	does not	circ to sfc.	Totals:	1,453				136,582

Comparison of Proposed to Minimum Required Cement Volumes

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
24	0.9599	1095	1921	1395	38	10.00	1074	2M	1.50

Site plat (pipe racks S or E) as per O.O.1 III.D.4.i. not found

13 3/8	casing inside the	20			Design Factors			Int 1			
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	54.50	j 55	ltc	2.86	0.63	1.18	3,300	2	2.32	1.05	179,850
"B"							0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig:	478				Totals:	3,300				179,850
	The cement volume(s) are intended to achieve a top of			0	ft from surface or a		1453				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
17 1/2	0.6946	1710	3072	2764	11	10.50	1179	2M	2.06
r D V Tool(s):							sum of sx	Σ CuFt	Σ%excess
t by stage % :		#VALUE!	#VALUE!				1710	3072	11

Class 'C' tail cmt yld > 1.35

10 3/4	casing inside the	13 3/8			Design Factors			Int 2			
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	40.50	j 55	ltc	1.99	0.68	0.65	5,201	1	1.21	1.34	210,641
"B"							0				0
"C"							0				0
"D"							0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig:	-78				Totals:	5,201				210,641
	The cement volume(s) are intended to achieve a top of			0	ft from surface or a		3300				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
12 1/4	0.1882	470	1234	1142	8	8.60	2582	3M	0.75

Class 'C' tail cmt yld > 1.35
Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.6, b, c, d <0.70 a
Problem!!

7 5/8	casing inside the	10 3/4			Design Factors			Int 3			
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	29.70	p 110	ltc	2.59	1.12	1.48	10,036	2	2.61	2.07	298,069
"B"							0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig:	2,202				Totals:	10,036				298,069
	The cement volume(s) are intended to achieve a top of			3543	ft from surface or a		1658				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
9 7/8	0.2148	790	1834	1426	29	9.20	3624	5M	0.69

Class 'H' tail cmt yld > 1.20 Capitan Reef est top XXXX.

5 1/2	casing inside the	7 5/8			Design Factors			Prod 1			
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	20.00	p 110	gbcd	1.83	2.29	1.98	9,536	2	3.49	4.03	190,720
"B"	20.00	hcp 110	Anaconda SP	4.02	2.07	2.25	2,597	2	3.96	3.64	51,940
"C"	20.00	P 110	gbcd	5.96	1.74	1.98	5,381	2	3.49	3.06	107,620
"D"							0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig:	2,098				Totals:	17,514				350,280
	The cement volume(s) are intended to achieve a top of			9536	ft from surface or a		500				overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Min Dist Hole-Cplg
6 3/4	0.0835	1035	2609	1561	67	9.80	0.23

Class 'H' tail cmt yld > 1.20

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Avant Operating LLC**
LEASE NO.:	**NMNM29704**
LOCATION:	Section 23, T.20 S., R.33 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	**Sandra Jean 23 Fed Com 805H**
SURFACE HOLE FOOTAGE:	280'/S & 957'/W
BOTTOM HOLE FOOTAGE	100'/N & 330'/W
ATS/API ID:	**3002552883**
APD ID:	**10400094990**
Sundry ID:	**2800685**

COA

H2S	Yes		
Potash	R-111-P		
Cave/Karst Potential	Low		
Cave/Karst Potential	☐ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	Diverter		
Other	☑ 4 String	Capitan Reef Int 2	☐ WIPP
Other	Pilot Hole None	☐ Open Annulus	
Cementing	Contingency Squeeze None	Echo-Meter None	Primary Cement Squeeze None
Special Requirements	☐ Water Disposal/Injection	☑ COM	☐ Unit
Special Requirements	☐ Batch Sundry		
Special Requirements Variance	☐ Break Testing	☑ Offline Cementing	☑ Casing Clearance

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** formation. As a result, the Hydrogen Sulfide area must meet **43 CFR part 3170 Subpart 3176** requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

Surface casing must be kept fluid filled to meet BLM minimum collapse requirement.

1. The **20** inch surface casing shall be set at approximately **1453 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt when present, and below usable fresh water) and cemented to the surface. The surface hole shall be **24** inch in diameter.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **24 hours in the Potash Area** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **13-3/8** inch intermediate casing shall be set at approximately **3300 feet** is:

    - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef. Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.**

- ❖ In R111 Potash Areas if cement does not circulate to surface on the first two salt protection casing strings, the cement on the 3rd casing salt string must come to surface.

- ❖ In Capitan Reef Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

3. The minimum required fill of cement behind the **10-3/4** inch intermediate casing is:

    - Cement to surface. If cement does not circulate see B.1.a, c-d above. Operator shall provide method of verification.
      Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef. Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

4. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

    - Cement should tie-back at least **50 feet** on top of Capitan Reef top **or 500 feet** into the previous casing, whichever is greater. Operator shall provide method of verification.
      Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef.

5. The minimum required fill of cement behind the **5-1/2** inch intermediate casing is:

    - Cement should tie-back at least **500 feet** into the previous casing. Operator shall provide method of verification.
      Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be tested to **1500** psi. A Diverter system is approved as a variance to drill the **13-3/8** inch intermediate casing section in a **17-1/2** inch hole.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13-3/8** inch intermediate casing shoe shall be **3000 (3M)** psi.

c. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **10-3/4** inch intermediate casing shoe shall be **3000 (3M)** psi.

d. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **7-5/8** inch intermediate casing shoe shall be **5000 (5M)** psi.

Option 2:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be tested to **1500** psi. A Diverter system is approved as a variance to drill the **13-3/8** inch intermediate casing section in a **17-1/2** inch hole.

b. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch intermediate casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M)** psi.

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in **43 CFR part 3170 Subpart 3171**
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

Offline Cementing

Operator has been **(Approved)** to pump the proposed cement program offline in the **Intermediate(s) interval**.

Offline cementing should commence within 24 hours of landing the casing for the interval.

Notify the BLM 4hrs prior to cementing offline at **Lea County: 575-689-5981**.

Casing Clearance

Operator casing variance is approved for the utilization of 5-1/2 inch Anaconda SP **from** base of curve and a minimum of 500 feet or the minimum tie-back requirement above, whichever is greater into the previous casing shoe. **All** other 5-1/2 inch casing will run .

Operator shall clean up cycles until wellbore is clear of cuttings and any large debris, ensure cutting sizes are less than 0.5 micron before cementing.

GENERAL REQUIREMENTS

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

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

☑ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report when present.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172** and **API STD 53 Sec. 5.3**.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-

off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

Long Vo (LVO) 7/17/2024

PROPOSAL#: 230927091257-E

CEMENT PROCEDURE & PROPOSAL

PREPARED FOR:

Mr. Braden Harris
EMAIL: braden@avantnr.com
PHONE NUMBER: 406-600-3310

Avant Natural Resources

Sandra Jean 23 Fed Com #805H

Lea County, NM
Rig: H&P 460
API Number: 30-025-52883

Service Point

Odessa
1400 S JBS Parkway Odessa, TX 79766
432-701-8955

Technical Writer
Jonathan Smith
jonathan@wtcementers.com
432-701-3719

WTC Representative
Jon Reynolds
jon@wtcementers.com
432-257-1234

PRINTED 7/16/2024 14:55 VERSION: v0.29

Avant Natural Resources
Sandra Jean 23 Fed Com #805H
Lea County, NM
Rig: H&P 460

Surface

PROPOSAL#: 230927091257-E

WELL INFORMATION	
MUD	8.4# Fresh Water
PREVIOUS PIPE	30" 98.89# CSG to 120
OPEN HOLE	24" OH to 1453
CASING/INJECTION	20" 94# J-55/BTC to 1453
MD	1453
EST BHST/BHCT	92-F / 85-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	1033	24	20	20%	0.2052	211.9
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% Ch_Poz+65% Class C+6% Gel+5% SALT+0.25PPS Pol-E-Flake+0.005GPS NoFoam V1A

VOLUME	775-SX	*266.4-bbls*
DENSITY	12.8-ppg	
YIELD	1.93-cf/sx	
MIX WATER	10.57-gps	
TOP OF CEMENT	Surface	
EXCESS	20%	

Avant Natural Resources
Sandra Jean 23 Fed Com #805H
Lea County, NM
Rig: H&P 460

Surface

PROPOSAL#: 230927091257-E

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	1153-ft	
EXCESS	20%	
DISPLACEMENT		
	Displacement	
VOLUME	502-bbl	

Avant Natural Resources
Sandra Jean 23 Fed Com #805H
Lea County, NM
Rig: H&P 460

1st Intermediate

PROPOSAL#: 230927091257-E

WELL INFORMATION	
MUD	10.5# Brine
PREVIOUS PIPE	20'' 94# CSG to 1453
OPEN HOLE	17.5'' OH to 3300
CASING/INJECTION	13.375'' 54.5# J-55/LTC to 3300
MD	3300
EST BHST/BHCT	107-F / 96-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	1453	19.124	13.375		0.1815	263.7
Lead	1188	17.5	13.375	20%	0.1485	176.4
Tail	659	17.5	13.375	20%	0.1485	97.8
SHOE JOINT	40	13.375	12.615		0.1546	6.2

FLUIDS

SPACER

Fresh Water

VOLUME	25-bbl

Lead

35% Ch_Poz+65% Class C+6% Gel+5% SALT+0.35% R-1300+0.25PPS Pol-E-Flake+0.005GPS NoFoam V1A

VOLUME	1280-SX	*442.3-bbls*
DENSITY	12.8-ppg	
YIELD	1.94-cf/sx	
MIX WATER	10.58-gps	
TOP OF CEMENT	Surface	
EXCESS	20%	

Avant Natural Resources
Sandra Jean 23 Fed Com #805H
Lea County, NM
Rig: H&P 460

1st Intermediate

PROPOSAL#: 230927091257-E

Tail		
100% Class C+5% SALT+0.55% FR-5+0.005GPS NoFoam V1A		
VOLUME	430-SX	*104.9-bbls*
DENSITY	14.8-ppg	
YIELD	1.37-cf/sx	
MIX WATER	6.48-gps	
TOP OF CEMENT	2641-ft	
EXCESS	20%	
DISPLACEMENT		
Displacement		
VOLUME	503.9-bbl	

Avant Natural Resources
Sandra Jean 23 Fed Com #805H
Lea County, NM
Rig: H&P 460

2nd Intermediate

PROPOSAL#: 230927091257-E

WELL INFORMATION	
MUD	8.6# Fresh Water
PREVIOUS PIPE	13.375'' 54.5# CSG to 3300
OPEN HOLE	12.25'' OH to 5201
CASING/INJECTION	10.75'' 40.5# J-55/LTC to 5201
MD	5201
TVD	5200
EST BHST/BHCT	122-F / 106-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	3300	12.615	10.75		0.0423	139.7
Lead	860	12.25	10.75	20%	0.0402	34.6
Tail	1041	12.25	10.75	20%	0.0402	41.9
SHOE JOINT	40	10.75	8.835		0.0758	3.0

FLUIDS

SPACER

Fresh Water

VOLUME 20-bbl

Lead

100% ProLiteCh+5PPS Plexcrete STE+2% SMS+0.7% R-1300+3PPS Gilsonite+0.005GPS NoFoam V1A

VOLUME	285-SX	*174.6-bbls*
DENSITY	10.7-ppg	
YIELD	3.44-cf/sx	
MIX WATER	21.64-gps	
TOP OF CEMENT	Surface	
EXCESS	20%	

Avant Natural Resources
Sandra Jean 23 Fed Com #805H
Lea County, NM
Rig: H&P 460

2nd Intermediate

PROPOSAL#: 230927091257-E

Tail		
100% Class C+5% SALT+0.6% FR-5+0.005GPS NoFoam V1A		
VOLUME	185-SX	*45.1-bbls*
DENSITY	14.8-ppg	
YIELD	1.37-cf/sx	
MIX WATER	6.48-gps	
TOP OF CEMENT	4160-ft	
EXCESS	20%	
DISPLACEMENT		
Displacement		
VOLUME	391.3-bbl	

Avant Natural Resources
Sandra Jean 23 Fed Com #805H
Lea County, NM
Rig: H&P 460

3rd Intermediate

PROPOSAL#: 230927091257-E

WELL INFORMATION	
MUD	8.4# Cut Brine
PREVIOUS PIPE	10.75'' 40.5# CSG to 5201
OPEN HOLE	9.875'' OH to 10036
CASING/INJECTION	7.625'' 29.7# P-110 HC LTC to 10036
MD	10036
TVD	10010
EST BHST/BHCT	161-F / 139-F (0.8-F/100-FT)
NOTES	Standby charges start after WTC has been on location for more than 6-hrs.

VOLUMES

FLUID NAME	LENGTH (ft)	OD (in.)	ID (in.)	XS (%)	FACTOR (bbl/ft)	VOLUME (bbl)
Lead	5201	8.835	7.625		0.0193	100.6
Lead	2807	9.875	7.625	20%	0.0459	128.8
Tail	2028	9.875	7.625	20%	0.0459	93.1
SHOE JOINT	40	7.625	8.835		0.0758	3.0

FLUIDS

SPACER

Fresh Water

VOLUME 25-bbl

Lead

100% ProLiteCh+5PPS Plexcrete STE+2% SMS+0.7% R-1300+3PPS Gilsonite+0.005GPS NoFoam V1A

VOLUME	375-SX	*229.7-bbls*
DENSITY	10.7-ppg	
YIELD	3.44-cf/sx	
MIX WATER	21.64-gps	
TOP OF CEMENT	Surface	
EXCESS	20%	

Avant Natural Resources
Sandra Jean 23 Fed Com #805H
Lea County, NM
Rig: H&P 460

3rd Intermediate

PROPOSAL#: 230927091257-E

Tail		
50% Ch_Poz+50% Class H+5% SALT+0.2% FR-5+0.2% FL-24+0.005GPS NoFoam V1A		
VOLUME	415-SX	*96.8-bbls*
DENSITY	14.2-ppg	
YIELD	1.31-cf/sx	
MIX WATER	6.26-gps	
TOP OF CEMENT	8008-ft	
EXCESS	20%	
DISPLACEMENT		
Displacement		
VOLUME	757.9-bbl	

Avant Natural Resources
Sandra Jean 23 Fed Com #805H
Lea County, NM
Rig: H&P 460

Production

PROPOSAL#: 230927091257-E

WELL INFORMATION	
MUD	9.8# OBM
PREVIOUS PIPE	7.625'' 29.7# CSG to 5201
OPEN HOLE	6.75'' OH to 17514
CASING/INJECTION	5.5'' 20# P110HC/GBCD to 17514
MD	17514
TVD	12535
EST BHST/BHCT	190-F / 190-F (0.87-F/100-FT)
KOP	12133
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	5201	8.835	5.5		0.0464	241.5
Lead	6932	6.75	5.5	20%	0.0178	123.7
Tail	5381	6.75	5.5	20%	0.0178	96.0
SHOE JOINT	80	5.5	4.778		0.0222	1.8

FLUIDS

SPACER

Wt. Spacer 37.04GPB Water+8PPB PolyScrub 4320+106.59PPB Barite+1GPB HoleScrub 4311+1PPB R-1300

VOLUME	40-bbl
DENSITY	10.3-ppg

Lead

100% ProLiteCh+5PPS Plexcrete STE+2% SMS+0.65% R-1300+0.2% FL-24+0.5% MagBond+3PPS Gilsonite+0.005GPS NoFoam V1A

VOLUME	595-SX	*366.7-bbls*
DENSITY	10.7-ppg	
YIELD	3.46-cf/sx	
MIX WATER	21.76-gps	
TOP OF CEMENT	Surface	
EXCESS	20%	

Avant Natural Resources
Sandra Jean 23 Fed Com #805H
Lea County, NM
Rig: H&P 460

Production

PROPOSAL#: 230927091257-E

Tail		
50% Ch_Poz+50% Class H+5% SALT+0.05% RCKCAS-100+0.3% FR-5+0.5% FL-24+0.5% MagBond+0.005GPS NoFoam V1A		
VOLUME	440-SX	*98-bbls*
DENSITY	14.5-ppg	
YIELD	1.25-cf/sx	
MIX WATER	5.8-gps	
TOP OF CEMENT	12133-ft	
EXCESS	20%	
DISPLACEMENT		
Fresh Water+ 0.25GPT Plexcide 24L+1GPT Corplex		
VOLUME	386.6-bbl	
DENSITY	8.34-ppg	

CHEMICAL DESCRIPTIONS		
CHEMICAL NAME	**CODE**	**DESCRIPTION**
Ch_Poz	WTC237	Poz - Fly Ash, Extender
Class H	WTC101	API Cement
Class C	WTC100	API Cement
Super C		Blended Based Cement
ProLiteCh		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
CaCl2	WTC112	Accelerator
SMS	WTC115	Free Water Control, Extender
RCKCAS-100	WTC276	Free Water Control, Anti-Settling Agent
SA-1	WTC264	Free Water Control, Extender
FR-5	WTC258	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-24	WTC277	Fluid Loss (polymers/copolymers - 300-F max)
MagBond	WTC271	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

AFE: NM0813

API: 30-025-52883
REGULATORY: BLM
PERMIT #

RIG: H&P 460
KB: 3648.5 (26.5')
GL: 3622'

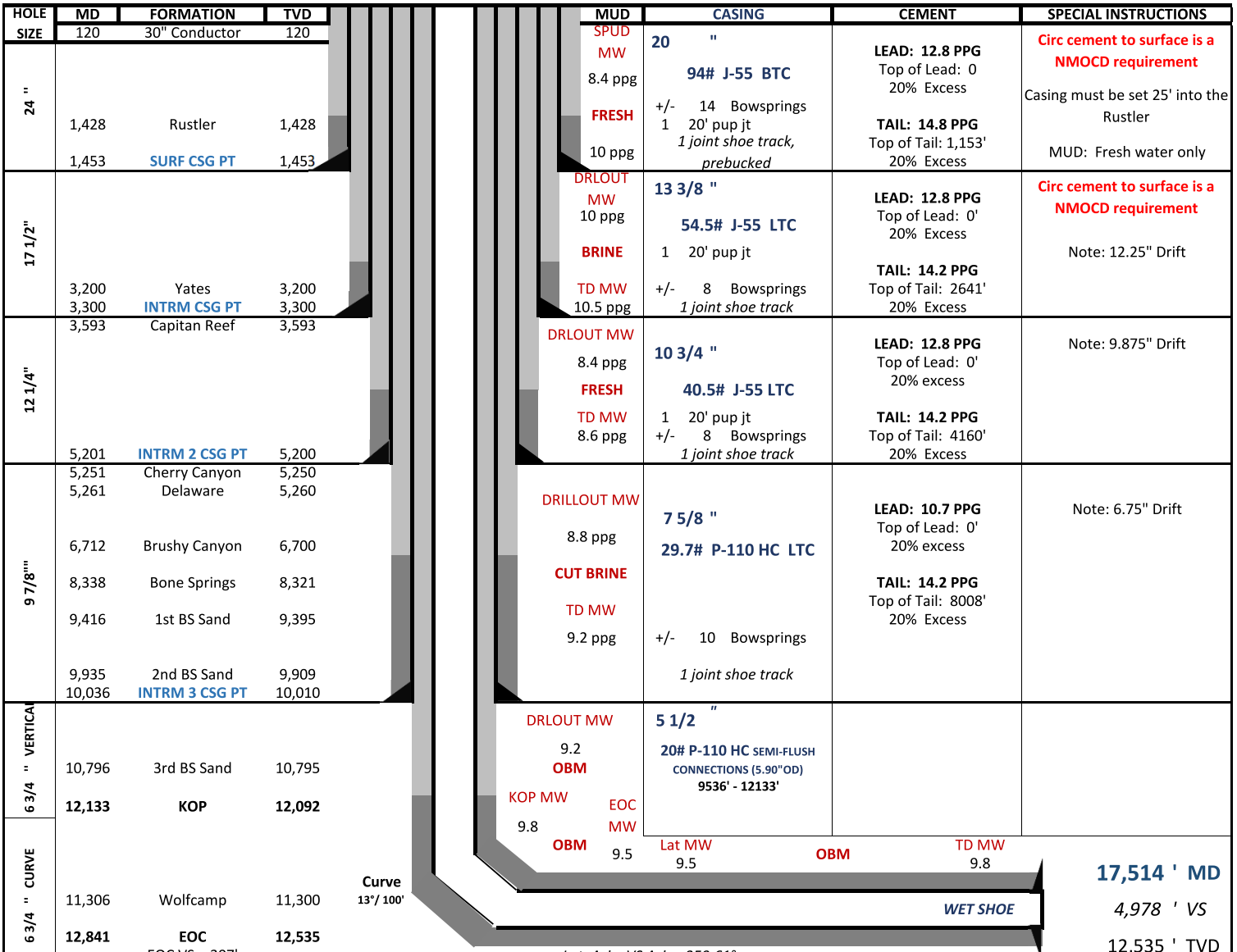
Sandra Jean 23 Fed Com 805H

Wolfcamp

Lea County, NM

SHL: *Sec. 23, T-20S, R-33E; 200 FSL, 1067 FWL*

Lat: 32.5521521, Long: -103.6394054 (NAD83)



DIRECTIONS TO LOCATION:

Drilling Engineer: Ryan Harris

Sandra Jean 23 Fed Com 805H (H&P 460)

Date: 7/16/2024

Fermata Technologies

5.500 x 20.00# P-110 HC Anaconda™ SP

Pipe Body Data		
Nominal OD	5.500	Inches
Wall Thickness	0.361	Inches
Weight	20.00	lb/ft
PE Weight	19.83	lb/ft
Nominal ID	4.778	Inches
Drift	4.653	Inches
Minimum Yield Strength	110,000	PSI
Minimum Tensile Strength	125,000	PSI
RBW	87.5%	Rating

Connection Data		
Connection OD	5.748	Inches
Connection ID	4.778	Inches
Make-Up Loss	4.765	Inches
Tension Efficiency	90%	Rating
Compression Efficiency	90%	Rating
Yield Strength in Tension	577,000	LBS.
Yield Strength in Compression	577,000	LBS.
MIYP (Burst)	12,640	PSI
Collapse*	12,770	PSI
Uniaxial Bending	82.6	°/100 FT

Make-Up Torque		
Yield Torque	37,000	FT-LBS.
Max Operating Torque	29,600	FT-LBS.
Max Make-Up	22,000	FT-LBS.
Optimum Make-Up	20,000	FT-LBS.
Minimum Make-Up	18,000	FT-LBS.

Revision 7.12.23

For Technical Support please email support@fermata-tech.com or call (281) 941-5257. 3/18/2024

*Collapse value based on API collapse +10-15% depending on D/t ratio and is used for example only. The actual collapse rating is 100% of pipe body and will vary depending on the mill. Verify the collapse rating of the pipe body with the manufacturer.

Avant Operating, LLC

Lea Co., NM (NAD 83)
Sandra Jean 23 Fed Com Pad 4
Sandra Jean 23 Fed Com 805H

OH

Plan: Plan 0.2

Standard Planning Report

09 July, 2024

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Sandra Jean 23 Fed Com 805H
Company:	Avant Operating, LLC	**TVD Reference:**	WELL @ 3657.5usft (3657.5)
Project:	Lea Co., NM (NAD 83)	**MD Reference:**	WELL @ 3657.5usft (3657.5)
Site:	Sandra Jean 23 Fed Com Pad 4	**North Reference:**	Grid
Well:	Sandra Jean 23 Fed Com 805H	**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 Sandra Jean 23 Fed Com Pad 4

Site Position:		**Northing:**	565,393.22 usft	**Latitude:**	32.552367
From:	Lat/Long	**Easting:**	757,375.07 usft	**Longitude:**	-103.632183
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well Sandra Jean 23 Fed Com 805H

Well Position	**+N/-S**	0.0 usft	**Northing:**	565,220.90 usft	**Latitude:**	32.551932
	+E/-W	0.0 usft	**Easting:**	755,260.67 usft	**Longitude:**	-103.639048
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,631.0 usft
Grid Convergence:		0.37 °				

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2000	12/31/2004	8.62	60.73	49,612.99288409

Design Plan 0.2

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	351.20

Plan Survey Tool Program **Date** 7/9/2024

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	17,513.4	Plan 0.2 (OH)	B001Mb_MWD+HRGM OWSG MWD + HRGM	

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Sandra Jean 23 Fed Com 805H
Company:	Avant Operating, LLC	**TVD Reference:**	WELL @ 3657.5usft (3657.5)
Project:	Lea Co., NM (NAD 83)	**MD Reference:**	WELL @ 3657.5usft (3657.5)
Site:	Sandra Jean 23 Fed Com Pad 4	**North Reference:**	Grid
Well:	Sandra Jean 23 Fed Com 805H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.2		

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	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,300.0	2.00	0.00	2,300.0	1.7	0.0	2.00	2.00	0.00	0.00	
2,800.3	2.00	0.00	2,800.0	19.2	0.0	0.00	0.00	0.00	0.00	
2,956.8	2.00	257.00	2,956.5	21.3	-2.7	2.00	0.00	-65.81	-141.48	
7,102.9	2.00	257.00	7,100.0	-11.2	-143.6	0.00	0.00	0.00	0.00	
7,370.4	7.35	257.00	7,366.5	-16.1	-164.9	2.00	2.00	0.00	0.00	
11,765.0	7.35	257.00	11,725.0	-142.6	-712.7	0.00	0.00	0.00	0.00	
12,132.5	0.00	0.00	12,091.5	-147.9	-735.6	2.00	-2.00	28.03	180.00	
12,133.5	0.00	0.00	12,092.5	-147.9	-735.6	0.00	0.00	0.00	0.00	
12,830.2	90.00	359.60	12,535.0	294.6	-738.7	12.92	12.92	-0.06	359.60	
17,514.4	90.00	359.60	12,535.0	4,978.7	-771.2	0.00	0.00	0.00	0.00	Sandra Jean 805H LT

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Project:	Lea Co., NM (NAD 83)	**MD Reference:**	WELL @ 3657.5usft (3657.5)
Site:	Sandra Jean 23 Fed Com Pad 4	**North Reference:**	Grid
Well:	Sandra Jean 23 Fed Com 805H	**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
1,428.0	0.00	0.00	1,428.0	0.0	0.0	0.0	0.00	0.00	0.00
RUSTLER									
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
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 2.00									
2,300.0	2.00	0.00	2,300.0	1.7	0.0	1.7	2.00	2.00	0.00
Start 500.3 hold at 2300.0 MD									
2,400.0	2.00	0.00	2,399.9	5.2	0.0	5.2	0.00	0.00	0.00
2,500.0	2.00	0.00	2,499.9	8.7	0.0	8.6	0.00	0.00	0.00
2,600.0	2.00	0.00	2,599.8	12.2	0.0	12.1	0.00	0.00	0.00
2,700.0	2.00	0.00	2,699.7	15.7	0.0	15.5	0.00	0.00	0.00
2,800.0	2.00	0.00	2,799.7	19.2	0.0	19.0	0.00	0.00	0.00
2,800.3	2.00	0.00	2,800.0	19.2	0.0	19.0	0.00	0.00	0.00
Start DLS 2.00 TFO -141.48									
2,900.0	1.32	289.51	2,899.6	21.3	-1.1	21.2	2.00	-0.69	-70.72
2,956.8	2.00	257.00	2,956.5	21.3	-2.7	21.5	2.00	1.20	-57.21
Start 4146.1 hold at 2956.8 MD									
3,000.0	2.00	257.00	2,999.6	21.0	-4.1	21.4	0.00	0.00	0.00
3,100.0	2.00	257.00	3,099.5	20.2	-7.5	21.1	0.00	0.00	0.00
3,200.0	2.00	257.00	3,199.5	19.4	-10.9	20.9	0.00	0.00	0.00
3,200.5	2.00	257.00	3,200.0	19.4	-10.9	20.9	0.00	0.00	0.00
YATES									
3,300.0	2.00	257.00	3,299.4	18.6	-14.3	20.6	0.00	0.00	0.00
3,400.0	2.00	257.00	3,399.3	17.8	-17.7	20.3	0.00	0.00	0.00
3,500.0	2.00	257.00	3,499.3	17.1	-21.1	20.1	0.00	0.00	0.00
3,593.8	2.00	257.00	3,593.0	16.3	-24.3	19.9	0.00	0.00	0.00
CAPITAN REEF									
3,600.0	2.00	257.00	3,599.2	16.3	-24.5	19.8	0.00	0.00	0.00
3,700.0	2.00	257.00	3,699.2	15.5	-27.9	19.6	0.00	0.00	0.00
3,800.0	2.00	257.00	3,799.1	14.7	-31.3	19.3	0.00	0.00	0.00
3,900.0	2.00	257.00	3,899.0	13.9	-34.7	19.1	0.00	0.00	0.00
4,000.0	2.00	257.00	3,999.0	13.1	-38.1	18.8	0.00	0.00	0.00

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Site:	Sandra Jean 23 Fed Com Pad 4	**North Reference:**	Grid
Well:	Sandra Jean 23 Fed Com 805H	**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)
4,100.0	2.00	257.00	4,098.9	12.3	-41.5	18.6	0.00	0.00	0.00
4,200.0	2.00	257.00	4,198.9	11.6	-44.9	18.3	0.00	0.00	0.00
4,300.0	2.00	257.00	4,298.8	10.8	-48.3	18.1	0.00	0.00	0.00
4,400.0	2.00	257.00	4,398.7	10.0	-51.7	17.8	0.00	0.00	0.00
4,500.0	2.00	257.00	4,498.7	9.2	-55.1	17.5	0.00	0.00	0.00
4,600.0	2.00	257.00	4,598.6	8.4	-58.5	17.3	0.00	0.00	0.00
4,700.0	2.00	257.00	4,698.6	7.6	-61.9	17.0	0.00	0.00	0.00
4,800.0	2.00	257.00	4,798.5	6.9	-65.3	16.8	0.00	0.00	0.00
4,900.0	2.00	257.00	4,898.4	6.1	-68.7	16.5	0.00	0.00	0.00
5,000.0	2.00	257.00	4,998.4	5.3	-72.1	16.3	0.00	0.00	0.00
5,100.0	2.00	257.00	5,098.3	4.5	-75.5	16.0	0.00	0.00	0.00
5,200.0	2.00	257.00	5,198.3	3.7	-78.9	15.8	0.00	0.00	0.00
5,251.8	2.00	257.00	5,250.0	3.3	-80.7	15.6	0.00	0.00	0.00
CHERRY CANYON									
5,261.8	2.00	257.00	5,260.0	3.2	-81.0	15.6	0.00	0.00	0.00
DELAWARE									
5,300.0	2.00	257.00	5,298.2	2.9	-82.3	15.5	0.00	0.00	0.00
5,400.0	2.00	257.00	5,398.1	2.1	-85.7	15.2	0.00	0.00	0.00
5,500.0	2.00	257.00	5,498.1	1.4	-89.1	15.0	0.00	0.00	0.00
5,600.0	2.00	257.00	5,598.0	0.6	-92.5	14.7	0.00	0.00	0.00
5,700.0	2.00	257.00	5,697.9	-0.2	-95.9	14.5	0.00	0.00	0.00
5,800.0	2.00	257.00	5,797.9	-1.0	-99.3	14.2	0.00	0.00	0.00
5,900.0	2.00	257.00	5,897.8	-1.8	-102.7	14.0	0.00	0.00	0.00
6,000.0	2.00	257.00	5,997.8	-2.6	-106.1	13.7	0.00	0.00	0.00
6,100.0	2.00	257.00	6,097.7	-3.4	-109.5	13.5	0.00	0.00	0.00
6,200.0	2.00	257.00	6,197.6	-4.1	-112.9	13.2	0.00	0.00	0.00
6,300.0	2.00	257.00	6,297.6	-4.9	-116.3	12.9	0.00	0.00	0.00
6,400.0	2.00	257.00	6,397.5	-5.7	-119.7	12.7	0.00	0.00	0.00
6,500.0	2.00	257.00	6,497.5	-6.5	-123.1	12.4	0.00	0.00	0.00
6,600.0	2.00	257.00	6,597.4	-7.3	-126.5	12.2	0.00	0.00	0.00
6,700.0	2.00	257.00	6,697.3	-8.1	-129.9	11.9	0.00	0.00	0.00
6,702.7	2.00	257.00	6,700.0	-8.1	-130.0	11.9	0.00	0.00	0.00
BRUSHY CANYON									
6,800.0	2.00	257.00	6,797.3	-8.8	-133.3	11.7	0.00	0.00	0.00
6,900.0	2.00	257.00	6,897.2	-9.6	-136.7	11.4	0.00	0.00	0.00
7,000.0	2.00	257.00	6,997.2	-10.4	-140.1	11.2	0.00	0.00	0.00
7,100.0	2.00	257.00	7,097.1	-11.2	-143.6	10.9	0.00	0.00	0.00
7,102.9	2.00	257.00	7,100.0	-11.2	-143.6	10.9	0.00	0.00	0.00
Start DLS 2.00 TFO 0.00									
7,200.0	3.94	257.00	7,197.0	-12.4	-148.6	10.5	2.00	2.00	0.00
7,300.0	5.94	257.00	7,296.6	-14.3	-156.9	9.9	2.00	2.00	0.00
7,370.4	7.35	257.00	7,366.5	-16.1	-164.9	9.3	2.00	2.00	0.00
Start 4394.6 hold at 7370.4 MD									
7,400.0	7.35	257.00	7,395.9	-17.0	-168.6	9.0	0.00	0.00	0.00
7,500.0	7.35	257.00	7,495.0	-19.9	-181.0	8.1	0.00	0.00	0.00
7,600.0	7.35	257.00	7,594.2	-22.7	-193.5	7.2	0.00	0.00	0.00
7,700.0	7.35	257.00	7,693.4	-25.6	-206.0	6.2	0.00	0.00	0.00
7,800.0	7.35	257.00	7,792.6	-28.5	-218.4	5.3	0.00	0.00	0.00
7,900.0	7.35	257.00	7,891.8	-31.4	-230.9	4.3	0.00	0.00	0.00
8,000.0	7.35	257.00	7,990.9	-34.2	-243.4	3.4	0.00	0.00	0.00
8,100.0	7.35	257.00	8,090.1	-37.1	-255.8	2.5	0.00	0.00	0.00
8,200.0	7.35	257.00	8,189.3	-40.0	-268.3	1.5	0.00	0.00	0.00
8,300.0	7.35	257.00	8,288.5	-42.9	-280.8	0.6	0.00	0.00	0.00
8,332.8	7.35	257.00	8,321.0	-43.8	-284.8	0.3	0.00	0.00	0.00

Planning Report

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Project:	Lea Co., NM (NAD 83)	**MD Reference:**	WELL @ 3657.5usft (3657.5)
Site:	Sandra Jean 23 Fed Com Pad 4	**North Reference:**	Grid
Well:	Sandra Jean 23 Fed Com 805H	**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)
Top of BSGL									
8,400.0	7.35	257.00	8,387.6	-45.8	-293.2	-0.3	0.00	0.00	0.00
8,500.0	7.35	257.00	8,486.8	-48.6	-305.7	-1.3	0.00	0.00	0.00
8,600.0	7.35	257.00	8,586.0	-51.5	-318.2	-2.2	0.00	0.00	0.00
8,700.0	7.35	257.00	8,685.2	-54.4	-330.6	-3.1	0.00	0.00	0.00
8,800.0	7.35	257.00	8,784.4	-57.3	-343.1	-4.1	0.00	0.00	0.00
8,900.0	7.35	257.00	8,883.5	-60.1	-355.6	-5.0	0.00	0.00	0.00
9,000.0	7.35	257.00	8,982.7	-63.0	-368.0	-6.0	0.00	0.00	0.00
9,100.0	7.35	257.00	9,081.9	-65.9	-380.5	-6.9	0.00	0.00	0.00
9,200.0	7.35	257.00	9,181.1	-68.8	-392.9	-7.8	0.00	0.00	0.00
9,300.0	7.35	257.00	9,280.3	-71.7	-405.4	-8.8	0.00	0.00	0.00
9,400.0	7.35	257.00	9,379.4	-74.5	-417.9	-9.7	0.00	0.00	0.00
9,415.7	7.35	257.00	9,395.0	-75.0	-419.8	-9.8	0.00	0.00	0.00
Top of FBSG SD									
9,500.0	7.35	257.00	9,478.6	-77.4	-430.3	-10.6	0.00	0.00	0.00
9,600.0	7.35	257.00	9,577.8	-80.3	-442.8	-11.6	0.00	0.00	0.00
9,700.0	7.35	257.00	9,677.0	-83.2	-455.3	-12.5	0.00	0.00	0.00
Top of SBSG Shale									
9,800.0	7.35	257.00	9,776.1	-86.0	-467.7	-13.4	0.00	0.00	0.00
9,900.0	7.35	257.00	9,875.3	-88.9	-480.2	-14.4	0.00	0.00	0.00
9,934.0	7.35	257.00	9,909.0	-89.9	-484.4	-14.7	0.00	0.00	0.00
Top of SBSG SD									
10,000.0	7.35	257.00	9,974.5	-91.8	-492.7	-15.3	0.00	0.00	0.00
10,100.0	7.35	257.00	10,073.7	-94.7	-505.1	-16.2	0.00	0.00	0.00
10,200.0	7.35	257.00	10,172.9	-97.6	-517.6	-17.2	0.00	0.00	0.00
10,300.0	7.35	257.00	10,272.0	-100.4	-530.1	-18.1	0.00	0.00	0.00
10,400.0	7.35	257.00	10,371.2	-103.3	-542.5	-19.1	0.00	0.00	0.00
10,465.3	7.35	257.00	10,436.0	-105.2	-550.7	-19.7	0.00	0.00	0.00
Top of TBSG Carb									
10,500.0	7.35	257.00	10,470.4	-106.2	-555.0	-20.0	0.00	0.00	0.00
10,600.0	7.35	257.00	10,569.6	-109.1	-567.5	-20.9	0.00	0.00	0.00
10,700.0	7.35	257.00	10,668.7	-111.9	-579.9	-21.9	0.00	0.00	0.00
10,800.0	7.35	257.00	10,767.9	-114.8	-592.4	-22.8	0.00	0.00	0.00
10,827.3	7.35	257.00	10,795.0	-115.6	-595.8	-23.1	0.00	0.00	0.00
Top of TBSG SD									
10,900.0	7.35	257.00	10,867.1	-117.7	-604.9	-23.7	0.00	0.00	0.00
11,000.0	7.35	257.00	10,966.3	-120.6	-617.3	-24.7	0.00	0.00	0.00
11,100.0	7.35	257.00	11,065.5	-123.5	-629.8	-25.6	0.00	0.00	0.00
11,105.6	7.35	257.00	11,071.0	-123.6	-630.5	-25.7	0.00	0.00	0.00
Top WFMP									
11,200.0	7.35	257.00	11,164.6	-126.3	-642.2	-26.5	0.00	0.00	0.00
11,300.0	7.35	257.00	11,263.8	-129.2	-654.7	-27.5	0.00	0.00	0.00
11,400.0	7.35	257.00	11,363.0	-132.1	-667.2	-28.4	0.00	0.00	0.00
11,500.0	7.35	257.00	11,462.2	-135.0	-679.6	-29.4	0.00	0.00	0.00
11,600.0	7.35	257.00	11,561.4	-137.8	-692.1	-30.3	0.00	0.00	0.00
11,700.0	7.35	257.00	11,660.5	-140.7	-704.6	-31.2	0.00	0.00	0.00
11,765.0	7.35	257.00	11,725.0	-142.6	-712.7	-31.8	0.00	0.00	0.00
Start DLS 2.00 TFO 180.00									
11,800.0	6.65	257.00	11,759.7	-143.6	-716.8	-32.1	2.00	-2.00	0.00
11,900.0	4.65	257.00	11,859.2	-145.8	-726.4	-32.9	2.00	-2.00	0.00
12,000.0	2.65	257.00	11,959.0	-147.2	-732.6	-33.3	2.00	-2.00	0.00
12,100.0	0.65	257.00	12,059.0	-147.9	-735.4	-33.5	2.00	-2.00	0.00
12,132.5	0.00	0.00	12,091.5	-147.9	-735.6	-33.6	2.00	-2.00	316.89

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Sandra Jean 23 Fed Com 805H
Company:	Avant Operating, LLC	**TVD Reference:**	WELL @ 3657.5usft (3657.5)
Project:	Lea Co., NM (NAD 83)	**MD Reference:**	WELL @ 3657.5usft (3657.5)
Site:	Sandra Jean 23 Fed Com Pad 4	**North Reference:**	Grid
Well:	Sandra Jean 23 Fed Com 805H	**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)
Start 1.0 hold at 12132.5 MD									
12,133.5	0.00	0.00	12,092.5	-147.9	-735.6	-33.6	0.00	0.00	0.00
KOP #2 - Start DLS 12.92 TFO 359.60									
12,200.0	8.59	359.60	12,158.7	-142.9	-735.6	-28.6	12.92	12.92	-0.60
12,300.0	21.51	359.60	12,255.1	-117.0	-735.8	-3.0	12.92	12.92	0.00
12,400.0	34.43	359.60	12,343.2	-70.2	-736.2	43.3	12.92	12.92	0.00
12,500.0	47.35	359.60	12,418.7	-4.9	-736.6	107.9	12.92	12.92	0.00
Sandra Jean 805H FTP									
12,600.0	60.27	359.60	12,477.6	75.6	-737.2	187.6	12.92	12.92	0.00
12,700.0	73.18	359.60	12,517.0	167.3	-737.8	278.3	12.92	12.92	0.00
12,800.0	86.10	359.60	12,535.0	265.5	-738.5	375.4	12.92	12.92	0.00
12,830.2	90.00	359.60	12,535.0	294.6	-738.7	404.2	12.92	12.92	0.00
LP - Start 4684.2 hold at 12830.2 MD									
12,900.0	90.00	359.60	12,535.0	364.4	-739.2	473.3	0.00	0.00	0.00
13,000.0	90.00	359.60	12,535.0	464.4	-739.9	572.2	0.00	0.00	0.00
13,100.0	90.00	359.60	12,535.0	564.4	-740.6	671.1	0.00	0.00	0.00
13,200.0	90.00	359.60	12,535.0	664.4	-741.2	770.1	0.00	0.00	0.00
13,300.0	90.00	359.60	12,535.0	764.4	-741.9	869.0	0.00	0.00	0.00
13,400.0	90.00	359.60	12,535.0	864.4	-742.6	967.9	0.00	0.00	0.00
13,500.0	90.00	359.60	12,535.0	964.4	-743.3	1,066.8	0.00	0.00	0.00
13,600.0	90.00	359.60	12,535.0	1,064.4	-744.0	1,165.8	0.00	0.00	0.00
13,700.0	90.00	359.60	12,535.0	1,164.4	-744.7	1,264.7	0.00	0.00	0.00
13,800.0	90.00	359.60	12,535.0	1,264.4	-745.4	1,363.6	0.00	0.00	0.00
13,900.0	90.00	359.60	12,535.0	1,364.4	-746.1	1,462.5	0.00	0.00	0.00
14,000.0	90.00	359.60	12,535.0	1,464.4	-746.8	1,561.5	0.00	0.00	0.00
14,100.0	90.00	359.60	12,535.0	1,564.4	-747.5	1,660.4	0.00	0.00	0.00
14,200.0	90.00	359.60	12,535.0	1,664.4	-748.2	1,759.3	0.00	0.00	0.00
14,300.0	90.00	359.60	12,535.0	1,764.4	-748.9	1,858.2	0.00	0.00	0.00
14,400.0	90.00	359.60	12,535.0	1,864.4	-749.6	1,957.2	0.00	0.00	0.00
14,500.0	90.00	359.60	12,535.0	1,964.4	-750.3	2,056.1	0.00	0.00	0.00
14,600.0	90.00	359.60	12,535.0	2,064.4	-750.9	2,155.0	0.00	0.00	0.00
14,700.0	90.00	359.60	12,535.0	2,164.4	-751.6	2,253.9	0.00	0.00	0.00
14,800.0	90.00	359.60	12,535.0	2,264.4	-752.3	2,352.9	0.00	0.00	0.00
14,900.0	90.00	359.60	12,535.0	2,364.4	-753.0	2,451.8	0.00	0.00	0.00
15,000.0	90.00	359.60	12,535.0	2,464.4	-753.7	2,550.7	0.00	0.00	0.00
15,100.0	90.00	359.60	12,535.0	2,564.4	-754.4	2,649.6	0.00	0.00	0.00
15,200.0	90.00	359.60	12,535.0	2,664.4	-755.1	2,748.6	0.00	0.00	0.00
15,300.0	90.00	359.60	12,535.0	2,764.4	-755.8	2,847.5	0.00	0.00	0.00
15,400.0	90.00	359.60	12,535.0	2,864.4	-756.5	2,946.4	0.00	0.00	0.00
15,500.0	90.00	359.60	12,535.0	2,964.4	-757.2	3,045.3	0.00	0.00	0.00
15,600.0	90.00	359.60	12,535.0	3,064.4	-757.9	3,144.3	0.00	0.00	0.00
15,700.0	90.00	359.60	12,535.0	3,164.4	-758.6	3,243.2	0.00	0.00	0.00
15,800.0	90.00	359.60	12,535.0	3,264.4	-759.3	3,342.1	0.00	0.00	0.00
15,900.0	90.00	359.60	12,535.0	3,364.4	-760.0	3,441.0	0.00	0.00	0.00
16,000.0	90.00	359.60	12,535.0	3,464.4	-760.7	3,540.0	0.00	0.00	0.00
16,100.0	90.00	359.60	12,535.0	3,564.4	-761.3	3,638.9	0.00	0.00	0.00
16,200.0	90.00	359.60	12,535.0	3,664.4	-762.0	3,737.8	0.00	0.00	0.00
16,300.0	90.00	359.60	12,535.0	3,764.4	-762.7	3,836.7	0.00	0.00	0.00
16,400.0	90.00	359.60	12,535.0	3,864.4	-763.4	3,935.7	0.00	0.00	0.00
16,500.0	90.00	359.60	12,535.0	3,964.4	-764.1	4,034.6	0.00	0.00	0.00
16,600.0	90.00	359.60	12,535.0	4,064.4	-764.8	4,133.5	0.00	0.00	0.00
16,700.0	90.00	359.60	12,535.0	4,164.3	-765.5	4,232.4	0.00	0.00	0.00
16,800.0	90.00	359.60	12,535.0	4,264.3	-766.2	4,331.4	0.00	0.00	0.00

Planning Report

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Project:	Lea Co., NM (NAD 83)	**MD Reference:**	WELL @ 3657.5usft (3657.5)
Site:	Sandra Jean 23 Fed Com Pad 4	**North Reference:**	Grid
Well:	Sandra Jean 23 Fed Com 805H	**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)
16,900.0	90.00	359.60	12,535.0	4,364.3	-766.9	4,430.3	0.00	0.00	0.00
17,000.0	90.00	359.60	12,535.0	4,464.3	-767.6	4,529.2	0.00	0.00	0.00
17,100.0	90.00	359.60	12,535.0	4,564.3	-768.3	4,628.2	0.00	0.00	0.00
17,200.0	90.00	359.60	12,535.0	4,664.3	-769.0	4,727.1	0.00	0.00	0.00
17,300.0	90.00	359.60	12,535.0	4,764.3	-769.7	4,826.0	0.00	0.00	0.00
17,400.0	90.00	359.60	12,535.0	4,864.3	-770.4	4,924.9	0.00	0.00	0.00
17,500.0	90.00	359.60	12,535.0	4,964.3	-771.1	5,023.9	0.00	0.00	0.00
17,514.4	90.00	359.60	12,535.0	4,978.7	-771.2	5,038.1	0.00	0.00	0.00
TD at 17514.4 - Sandra Jean 805H LTP/BHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Sandra Jean 805H FTP - plan misses target center by 153.1usft at 12500.0usft MD (12418.7 TVD, -4.9 N, -736.6 E) - Point	0.00	0.00	12,535.0	-104.5	-736.3	565,116.44	754,524.34	32.551658	-103.641440
Sandra Jean 805H LTP/I - plan hits target center - Point	0.00	0.00	12,535.0	4,978.7	-771.2	570,199.60	754,489.52	32.565630	-103.641446

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
4,800.0	4,798.5	AC	20	24

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,428.0	1,428.0	RUSTLER			
3,200.5	3,200.0	YATES			
3,593.8	3,593.0	CAPITAN REEF			
5,251.8	5,250.0	CHERRY CANYON			
5,261.8	5,260.0	DELAWARE			
6,702.7	6,700.0	BRUSHY CANYON			
8,332.8	8,321.0	Top of BSGL			
9,415.7	9,395.0	Top of FBSG SD			
9,700.0	9,677.0	Top of SBSG Shale			
9,934.0	9,909.0	Top of SBSG SD			
10,465.3	10,436.0	Top of TBSG Carb			
10,827.3	10,795.0	Top of TBSG SD			
11,105.6	11,071.0	Top WFMP			

Planning Report

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Project:	Lea Co., NM (NAD 83)	**MD Reference:**	WELL @ 3657.5usft (3657.5)
Site:	Sandra Jean 23 Fed Com Pad 4	**North Reference:**	Grid
Well:	Sandra Jean 23 Fed Com 805H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.2		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
2,200.0	2,200.0	0.0	0.0	KOP - Start Build 2.00
2,300.0	2,300.0	1.7	0.0	Start 500.3 hold at 2300.0 MD
2,800.3	2,800.0	19.2	0.0	Start DLS 2.00 TFO -141.48
2,956.8	2,956.5	21.3	-2.7	Start 4146.1 hold at 2956.8 MD
7,102.9	7,100.0	-11.2	-143.6	Start DLS 2.00 TFO 0.00
7,370.4	7,366.5	-16.1	-164.9	Start 4394.6 hold at 7370.4 MD
11,765.0	11,725.0	-142.6	-712.7	Start DLS 2.00 TFO 180.00
12,132.5	12,091.5	-147.9	-735.6	Start 1.0 hold at 12132.5 MD
12,133.5	12,092.5	-147.9	-735.6	KOP #2 - Start DLS 12.92 TFO 359.60
12,830.2	12,535.0	294.6	-738.7	LP - Start 4684.2 hold at 12830.2 MD
17,514.4	12,535.0	4,978.7	-771.2	TD at 17514.4

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
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DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, N.M. 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-52883	58980	Teas; Wolfcamp

[4] Property Code	[5] Property Name	[6] Well Number
334758	SANDRA JEAN 23 FED COM	805H

[7] OGRID No.	[8] Operator Name	[9] Elevation
330396	AVANT OPERATING, LLC	3622.8

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	23	20 S	33 E		200	SOUTH	1067	WEST	LEA

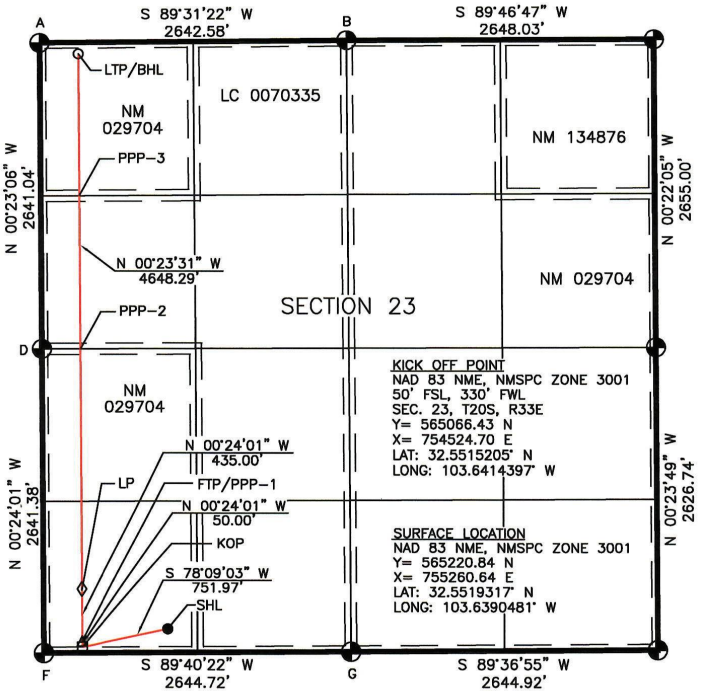
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	23	20 S	33 E		100	NORTH	330	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
SECTION 23: 640 Ac.			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16 Legend:
- ● = SURFACE LOCATION (SHL)
- ○ = LTP/BHL
- △ = FTP/PPP-1
- □ = KICK OFF POINT (KOP)
- ◇ = LANDING POINT (LP)
- ◕ = FOUND 1912 USGLO BRASS CAP



[17] OPERATOR CERTIFICATION

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

Sarah Ferreyros 7/15/24
Signature Date

Sarah Ferreyros
Printed Name

sarah@avantnr.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

7/09/24
Date of Survey
Plat Revised: 7/09/24
Signature and Seal of Professional Surveyor:

JOHN A. RUSSELL
NEW MEXICO
14831
PROFESSIONAL SURVEYOR

Certificate Number 14831

FIRST TAKE POINT/PPP-1
NAD 83 NME, NMSPC ZONE 3001
100' FSL, 330' FWL
SEC. 23, T20S, R33E
Y= 565116.43 N
X= 754524.35 E
LAT: 32.5516579° N
LONG: 103.6414398° W

LANDING POINT
NAD 83 NME, NMSPC ZONE 3001
535' FSL, 330' FWL
SEC. 23, T20S, R33E
Y= 565551.42 N
X= 754521.31 E
LAT: 32.5528535° N
LONG: 103.6414405° W

PPP-2
NAD 83 NME, NMSPC ZONE 3001
2641' FSL, 330' FWL
SEC. 23, T20S, R33E
Y= 567657.00 N
X= 754506.91 E
LAT: 32.5586411° N
LONG: 103.6414428° W

PPP-3
NAD 83 NME, NMSPC ZONE 3001
1322' FNL, 330' FWL
SEC. 23, T20S, R33E
Y= 568978.30 N
X= 754497.87 E
LAT: 32.5622729° N
LONG: 103.6414443° W

CORNER COORDINATES TABLE
NAD 83 NME, NMSPC ZONE 3001
A - Y= 570296.85 N, X= 754158.86 E
B - Y= 570318.86 N, X= 756801.34 E
D - Y= 567655.87 N, X= 754176.61 E
F - Y= 565014.55 N, X= 754195.06 E
G - Y= 565029.65 N, X= 756839.74 E

CORNER COORDINATES TABLE
NAD 83 NME, NMSPC ZONE 3001
A - LAT.=32.5659031° N, LONG.=103.6425168° W
B - LAT.=32.5659162° N, LONG.=103.6339394° W
D - LAT.=32.5586439° N, LONG.=103.6425148° W
F - LAT.=32.5513837° N, LONG.=103.6425106° W
G - LAT.=32.5513778° N, LONG.=103.6339276° W

LAST TAKE POINT/
BOTTOM HOLE LOCATION
NAD 83 NME, NMSPC ZONE 3001
Y= 570199.60 N
X= 754489.52 E
LAT: 32.5656299° N
LONG: 103.6414456° W

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

CONDITIONS

Action 365557

CONDITIONS

Operator: Avant Operating, LLC 1515 Wynkoop Street Denver, CO 80202	OGRID: 330396
	Action Number: 365557
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	8/8/2024