

Well Name: SANDRA JEAN 23 FED COM	Well Location: T20S / R33E / SEC 23 / SWSE / 32.5519278 / -103.6320203	County or Parish/State: LEA / NM
Well Number: 603H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM29704	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002552441	Operator: AVANT OPERATING LLC	

Notice of Intent

Sundry ID: 2801878

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 07/18/2024	Time Sundry Submitted: 09:48
Date proposed operation will begin: 08/01/2024	

Procedure Description: Avant Operating, LLC would like to request the following changes to Sandra Jean 23 Fed Com 603H. - Name change to the Sandra Jean 23 Fed Com 703H - TVD change to 11,315' - Change from a Bone Spring to a Wolfcamp well Please see the attached updated documents for this request. Thank you!

NOI Attachments

Procedure Description

- Sandra_Jean_23_Fed_Com_703H_WBS_Prelim_20240718214713.pdf
- AVANTN_1_20240718214655.PDF
- Sandra_Jean_23_Fed_Com_703H_Plan_0.1_Report_20240718214646.pdf
- Sandra_Jean_23_Fed_Com_703H_C_102_20240718214633.pdf
- 5.5_in_20__P110HC_INT_SP_20240718214622.pdf

Received by OCD: 7/25/2024 2:12:26 PM

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Conditions of Approval

Additional

23_20_33_O_Sundry_ID_2801878_Sandra_Jean_23_Fed_Com_703H_Lea_NM29704_AVANT_OPERATING_LLC_13_22fa_8_9_2023_LV_20240724095556.pdf
Sandra_Jean_23_Fed_Com_703H_Sundry_ID_2801878_20240724095556.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 18, 2024 09:48 PM
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: 07/25/2024
Signature: Chris Walls	

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☐ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

3a. Address

3b. Phone No. (include area code)

4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)

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

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleting 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 performed 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 recompleting 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 determined 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: SWSE / 200 FSL / 2057 FEL / TWSP: 20S / RANGE: 33E / SECTION: 23 / LAT: 32.5519278 / LONG: -103.6320203 (TVD: 0 feet, MD: 0 feet)

PPP: SWSE / 100 FSL / 2178 FEL / TWSP: 20S / RANGE: 33E / SECTION: 23 / LAT: 32.5516528 / LONG: -103.6324134 (TVD: 11350 feet, MD: 11624 feet)

BHL: NENW / 100 FNL / 2178 FEL / TWSP: 20S / RANGE: 33E / SECTION: 23 / LAT: 32.5656378 / LONG: -103.6324138 (TVD: 11350 feet, MD: 16285 feet)

23-20-33-O Sundry ID 2801878 Sandra Jean 23 Fed Com 703H Lea NM29704 AVANT OPERATING LLC 13-22fa 8-9-2023 LV

Sandra Jean 23 Fed Com 703H

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	1.14	1,453	3	1.91	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	1250	2221	#N/A	#N/A	10.00	1107	2M				1.50
She plot (pipe racks 3 or 4) as per O.D. 130 D 4 L not found												

13 3/8		casing inside the		20		Design Factors				Int 1		
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	54.50		j 55	btc	4.60	0.61	1.2	3,400	1	2.43	1.02	185,300
"B"								0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 427								Totals:	3,400			185,300
The cement volume(s) are intended to achieve a top of 0								ft from surface or a		1453		overlap.
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd				Min Dist
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cplg
17 1/2	0.6946	1895	3404	2833	20	10.50	1125	2M				1.56
r D V Tool(s):								sum of sx	Σ CuFt			Σ%excess
t by stage % :								1895	3404			20
Class 'C' tail cmt yld > 1.35												

9 5/8	casing inside the		13 3/8			Design Factors				Int 2		
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	40.00		j 55	btc	3.03	1.47	0.69	4,000	2	1.21	2.97	160,000
"B"	40.00		hcl 80	btc	19.09	1.86	1	1,200	3	1.76	3.76	48,000
"C"								0				0
"D"								0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,020												
				The cement volume(s) are intended to achieve a top of 0 ft from surface or a				3400				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	0.3132	1125	2000	1797	11	8.40	3271	5M				0.81
Class 'C' tail cmt yld > 1.35												
burst frac gradient(s) for segment(s): A, B, C, D = 0.99, 0.9, 0.9 All > 0.70, OK												

5 1/2	casing inside the		9 5/8			Design Factors				Prod 1		
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	20.00		p 110	intrepid-sp	2.83	2.12	2.19	16,253	2	3.86	3.73	325,060
"B"								0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,489												
				The cement volume(s) are intended to achieve a top of 3543 ft from surface or a				1657				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
8 3/4	0.2526	1020	3509	3224	9	9.80						1.23
Class 'H' tail cmt yld > 1.20												
Capitan Reef est top XXXX.												

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 703H
SURFACE HOLE FOOTAGE:	200'/S & 2057'/E
BOTTOM HOLE FOOTAGE:	100'/N & 2178'/E
ATS/API ID:	3002552441
APD ID:	10400092836
Sundry ID:	2801878

COA

H2S	Yes ▼		
Potash	R-111-P ▼		
Cave/Karst Potential	Low ▼		
Cave/Karst Potential	<input type="checkbox"/> Critical		
Variance	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> Flex Hose	<input checked="" type="checkbox"/> Other
Wellhead	Diverter ▼		
Other	<input checked="" type="checkbox"/> 4 String	Capitan Reef Int 2 ▼	<input type="checkbox"/> WIPP
Other	Pilot Hole None ▼	<input type="checkbox"/> Open Annulus	
Cementing	Contingency Squeeze None ▼	Echo-Meter None ▼	Primary Cement Squeeze None ▼
Special Requirements	<input type="checkbox"/> Water Disposal/Injection	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit
Special Requirements	<input type="checkbox"/> Batch Sundry		
Special Requirements Variance	<input type="checkbox"/> Break Testing	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> 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 **3400 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.
3. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:
- Cement to surface. If cement does not circulate see B.1.a, c-d above. 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.
4. The minimum required fill of cement behind the **5-1/2** inch production 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. 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.

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 **9-5/8** 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 surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
 - 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**.

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) 7/24/2024

API:
REGULATORY: BLM
PERMIT #



AFE:

RIG: H&P 255
KB: 25.5
GL: 3632

Sandra Jean 23 Fed Com 703H

Wolfcamp

Lea County, NM

Sec. 23, T-20S, R-33E; 200 FSL, 2057 FEL

SHL:

Lat: 32.5519278, Long: -103.6320203 (NAD83)

HOLE SIZE	MD	FORMATION	TVD	MUD	CASING	CEMENT	SPECIAL INSTRUCTIONS
	120	30" Conductor	120	SPUD MW 8.4 PPG	20 "	Top of Lead: Surface 50% Excess	Circ cmt to surface is a regulatory requirement
24"	1,428	Rustler	1,428	FRESH TD MW +/- 12 10.0 ppg	94# J-55 BTC Bowsprings 1 joint shoe track	Top of Tail: 1153' 20% Excess	Casing must be set 25' into the Rustler MUD: Fresh water only
	1,453	SURF CSG PT	1,453				
17.5"	3,200	Yates	3,200	DRLOUT MW 10.0 ppg	13 3/8 " 54.5# J-55 BTC	Top of Lead: Surface 50% OH Excess Top of Tail: 2720' 20% Excess	Circ cmt to surface is a regulatory requirement
	3,400	INTRM1 CSG PT	3,400	TD MW +/- 23 10.5 ppg	Bowsprings 1 joint shoe track		
12.25"	3,593	Capitan Reef	3,593	DRILLOUT MW 8.4 ppg	SPLIT STRING (GRADE) 9 5/8 " 0' - 4000' 40# J-55 BTC 4000' - 5200' 40# L-80 HC BTC	Top of Lead: Surface 50% OH Excess Top of Tail: 4160' 20% Excess	
	5,200	INTRM2 CSG PT	5,200	TD MW +/- 14 8.4 ppg	Bowsprings 1 joint shoe track		
VERT	5,250	Cherry Canyon	5,250	DRLOUT MW 9.2 ppg	5 1/2 " 20# P-110 HC Intrepid SP		
	5,260	Delaware	5,260	CUT BRINE KOP MW 9.5 ppg			
8.75"	6,701	Brushy Canyon	6,700				
	8,324	Bone Spring	8,321				
	9,399	1st BS Sand	9,395				
	9,914	2nd BS Sand	9,909				
CRV	10,800	3rd BS Sand	10,795	CUT BRINE EOC MW 9.5 ppg	OBM	TD MW 9.8 ppg	
8.75"	10,842	KOP	10,838				16,253 MD 4,988 VS
LAT							11,315 TVD
	11,592	EOC	11,315	VS: 327'	Est. BHST = 178°, Est. BHCT = 161°		BHL: 100' FNL, 2178' FEL
8.75"				FLOTATION COLLAR @ +/- KOP +/- 37 Singlebows 5,100 - 10,642 +/- 27 Doublebows 10,642 - 11,792 +/- 55.5 Solid bodies 11,792 - 16,253	Top of Lead: Surface 50% OH Excess Top of Tail: 10842' (KOP) 20% Excess	Expected BH Pressure: 5295	

PRELIMINARY

DIRECTIONS TO LOCATON:

PROPOSAL#: 230609161231-D



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 #703H

Lea County, NM

Rig: H&P 460

API Number: 30-025-52441

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

.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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7/17/2024 8:39

VERSION: v0.29

Avant Natural Resources
Sandra Jean 23 Fed Com #703H
Lea County, NM
Rig: H&P 460

Surface



PROPOSAL#: 230609161231-D

WELL INFORMATION						
MUD	8.4# Spud Mud					
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					
TVD	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	50%	0.2564	264.9
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	930-SX					319.7-bbls
DENSITY	12.8-ppg					
YIELD	1.93-cf/sx					
MIX WATER	10.57-gps					
TOP OF CEMENT	Surface					
EXCESS	50%					

Avant Natural Resources
Sandra Jean 23 Fed Com #703H
Lea County, NM
Rig: H&P 460

Surface



PROPOSAL#: 230609161231-D

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 #703H
Lea County, NM
Rig: H&P 460

1st Intermediate



PROPOSAL#: 230609161231-D

WELL INFORMATION						
MUD	10.5# Brine					
PREVIOUS PIPE	20" 94# CSG to 1453					
OPEN HOLE	17.5" OH to 3400					
CASING/INJECTION	13.375" 54.5# J-55/BTC to 3400					
MD	3400					
TVD	3400					
EST BHST/BHCT	108-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	1267	17.5	13.375	50%	0.1856	235.1
Tail	680	17.5	13.375	20%	0.1485	100.9
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+0.05% R-1300+0.25PPS Pol-E-Flake+0.005GPS NoFoam V1A						
VOLUME	1450-SX					
DENSITY	12.8-ppg					
YIELD	1.93-cf/sx					
MIX WATER	10.57-gps					
TOP OF CEMENT	Surface					
EXCESS	50%					
						498.4-bbls

498.4-bbls

Avant Natural Resources
Sandra Jean 23 Fed Com #703H
Lea County, NM
Rig: H&P 460

1st Intermediate



PROPOSAL#: 230609161231-D

Tail		
	100% Class C+5% SALT+0.005GPS NoFoam V1A	
VOLUME	445-SX	107.8-bbls
DENSITY	14.8-ppg	
YIELD	1.36-cf/sx	
MIX WATER	6.51-gps	
TOP OF CEMENT	2720-ft	
EXCESS	20%	
DISPLACEMENT		
	Displacement	
VOLUME	519.4-bbl	

Avant Natural Resources
Sandra Jean 23 Fed Com #703H
Lea County, NM
Rig: H&P 460

2nd Intermediate



PROPOSAL#: 230609161231-D

WELL INFORMATION						
MUD	8.4# Fresh Water					
PREVIOUS PIPE	13.375" 54.5# CSG to 3400					
OPEN HOLE	12.25" OH to 5200					
CASING/INJECTION	9.625" 40# J-55/L-80/HC/BTC to 5200					
MD	5200					
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	3400	12.615	9.625		0.0646	219.6
Lead	760	12.25	9.625	50%	0.0837	63.6
Tail	1040	12.25	9.625	20%	0.0669	69.6
SHOE JOINT	40	9.625	8.835		0.0758	3.0
FLUIDS						
SPACER						
Fresh Water						
VOLUME	25-bbl					
Lead						
35% Ch_Poz+65% Class C+6% Gel+5% SALT+0.2% R-1300+0.25PPS Pol-E-Flake+0.005GPS NoFoam V1A						
VOLUME	825-SX					283.6-bbls
DENSITY	12.8-ppg					
YIELD	1.93-cf/sx					
MIX WATER	10.57-gps					
TOP OF CEMENT	Surface					
EXCESS	50%					

Avant Natural Resources
Sandra Jean 23 Fed Com #703H
Lea County, NM
Rig: H&P 460

2nd Intermediate



PROPOSAL#: 230609161231-D

Tail		
	100% Class C+5% SALT+0.005GPS NoFoam V1A	
VOLUME	300-SX	72.7-bbls
DENSITY	14.8-ppg	
YIELD	1.36-cf/sx	
MIX WATER	6.51-gps	
TOP OF CEMENT	4160-ft	
EXCESS	20%	
DISPLACEMENT		
	Displacement	
VOLUME	391.2-bbl	

Avant Natural Resources
Sandra Jean 23 Fed Com #703H
Lea County, NM
Rig: H&P 460

Production



PROPOSAL#: 230609161231-D

WELL INFORMATION						
MUD	9.8# OBM					
PREVIOUS PIPE	9.625" 40# CSG to 5200					
OPEN HOLE	8.75" OH to 16253					
CASING/INJECTION	5.5" 20# P-110 HC Intrepid SP to 16253					
MD	16253					
TVD	11315					
EST BHST/BHCT	178-F / 178-F (0.86-F/100-FT)					
KOP	10842					
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	5200	8.835	5.5		0.0464	241.5
Lead	5642	8.75	5.5	50%	0.0675	380.7
Tail	5411	8.75	5.5	20%	0.0540	292.1
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+3PPS Gilsonite+0.005GPS NoFoam V1A						
VOLUME	1020-SX					
DENSITY	10.7-ppg					
YIELD	3.44-cf/sx					
MIX WATER	21.64-gps					
TOP OF CEMENT	Surface					
EXCESS	50%					
						624.9-bbls

624.9-bbls

Avant Natural Resources
Sandra Jean 23 Fed Com #703H
Lea County, NM
Rig: H&P 460

Production



PROPOSAL#: 230609161231-D

Tail		
50% Ch_Poz+50% Class H+5% SALT+0.05% RCKCAS-100+0.75% FR-5+0.5% FL-24+0.005GPS NoFoam V1A		
VOLUME	1325-SX	295-bbls
DENSITY	14.5-ppg	
YIELD	1.25-cf/sx	
MIX WATER	5.74-gps	
TOP OF CEMENT	10842-ft	
EXCESS	20%	
DISPLACEMENT		
Fresh Water+ 0.25GPT Plexicide 24L+1GPT Corplex		
VOLUME	358.6-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
Premium C	WTC270	API 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
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
FR-5	WTC258	Lignosulfonate Retarder
CRT-201	WTC278	Lignosulfonate Retarder
C-37	WTC224	Dispersant, Friction Reducer
FL-24	WTC277	Fluid Loss (polymers/copolymers - 300-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

Avant Operating, LLC

Lea Co., NM (NAD 83)

Sandra Jean 23 Fed Com Pad 2

Sandra Jean 23 Fed Com 703H

OH

Plan: Plan 0.1

Standard Planning Report

16 July, 2024

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Sandra Jean 23 Fed Com 703H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3658.5usft (3658.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3658.5usft (3658.5)
Site:	Sandra Jean 23 Fed Com Pad 2	North Reference:	Grid
Well:	Sandra Jean 23 Fed Com 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.1		

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

Site		Sandra Jean 23 Fed Com Pad 2			
Site Position:		Northing:	565,233.85 usft	Latitude:	32.551928
From:	Lat/Long	Easting:	757,466.12 usft	Longitude:	-103.631891
Position Uncertainty:		0.0 usft	Slot Radius:	13-3/16 "	

Well	Sandra Jean 23 Fed Com 703H					
Well Position	+N/-S	0.0 usft	Northing:	565,233.62 usft	Latitude:	32.551928
	+E/-W	0.0 usft	Easting:	757,426.10 usft	Longitude:	-103.632021
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,632.0 usft
Grid Convergence:		0.38 °				

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2000	12/31/2004	8.62	60.74	49,613.84681047

Design	Plan 0.1				
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	359.62	

Plan Survey Tool Program	Date	7/16/2024			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	16,252.7 Plan 0.1 (OH)	B001Mb_MWD+HRGM		
			OWSG MWD + HRGM		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,739.2	2.78	218.46	5,739.2	-2.6	-2.1	2.00	2.00	0.00	218.46	
9,565.4	2.78	218.46	9,560.8	-148.2	-117.7	0.00	0.00	0.00	0.00	
9,704.6	0.00	0.00	9,700.0	-150.8	-119.8	2.00	-2.00	0.00	180.00	
10,842.2	0.00	0.00	10,837.5	-150.8	-119.8	0.00	0.00	0.00	0.00	
11,592.2	90.00	359.62	11,315.0	326.6	-123.0	12.00	12.00	0.00	359.62	
16,252.7	90.00	359.62	11,315.0	4,987.1	-154.1	0.00	0.00	0.00	0.00	LTP/BHL - Sandra Je

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Sandra Jean 23 Fed Com 703H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3658.5usft (3658.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3658.5usft (3658.5)
Site:	Sandra Jean 23 Fed Com Pad 2	North Reference:	Grid
Well:	Sandra Jean 23 Fed Com 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
YATES									
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,593.0	0.00	0.00	3,593.0	0.0	0.0	0.0	0.00	0.00	0.00
CAPITAN REEF									
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Sandra Jean 23 Fed Com 703H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3658.5usft (3658.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3658.5usft (3658.5)
Site:	Sandra Jean 23 Fed Com Pad 2	North Reference:	Grid
Well:	Sandra Jean 23 Fed Com 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,250.0	0.00	0.00	5,250.0	0.0	0.0	0.0	0.00	0.00	0.00
CHERRY CANYON									
5,260.0	0.00	0.00	5,260.0	0.0	0.0	0.0	0.00	0.00	0.00
DELAWARE									
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 2.00									
5,700.0	2.00	218.46	5,700.0	-1.4	-1.1	-1.4	2.00	2.00	0.00
5,739.2	2.78	218.46	5,739.2	-2.6	-2.1	-2.6	2.00	2.00	0.00
Start 3826.2 hold at 5739.2 MD									
5,800.0	2.78	218.46	5,799.9	-5.0	-3.9	-4.9	0.00	0.00	0.00
5,900.0	2.78	218.46	5,899.8	-8.8	-7.0	-8.7	0.00	0.00	0.00
6,000.0	2.78	218.46	5,999.6	-12.6	-10.0	-12.5	0.00	0.00	0.00
6,100.0	2.78	218.46	6,099.5	-16.4	-13.0	-16.3	0.00	0.00	0.00
6,200.0	2.78	218.46	6,199.4	-20.2	-16.0	-20.1	0.00	0.00	0.00
6,300.0	2.78	218.46	6,299.3	-24.0	-19.0	-23.9	0.00	0.00	0.00
6,400.0	2.78	218.46	6,399.2	-27.8	-22.1	-27.6	0.00	0.00	0.00
6,500.0	2.78	218.46	6,499.0	-31.6	-25.1	-31.4	0.00	0.00	0.00
6,600.0	2.78	218.46	6,598.9	-35.4	-28.1	-35.2	0.00	0.00	0.00
6,700.0	2.78	218.46	6,698.8	-39.2	-31.1	-39.0	0.00	0.00	0.00
6,701.2	2.78	218.46	6,700.0	-39.2	-31.2	-39.0	0.00	0.00	0.00
BRUSHY CANYON									
6,800.0	2.78	218.46	6,798.7	-43.0	-34.2	-42.8	0.00	0.00	0.00
6,900.0	2.78	218.46	6,898.6	-46.8	-37.2	-46.6	0.00	0.00	0.00
7,000.0	2.78	218.46	6,998.5	-50.6	-40.2	-50.3	0.00	0.00	0.00
7,100.0	2.78	218.46	7,098.3	-54.4	-43.2	-54.1	0.00	0.00	0.00
7,200.0	2.78	218.46	7,198.2	-58.2	-46.2	-57.9	0.00	0.00	0.00
7,300.0	2.78	218.46	7,298.1	-62.0	-49.3	-61.7	0.00	0.00	0.00
7,400.0	2.78	218.46	7,398.0	-65.8	-52.3	-65.5	0.00	0.00	0.00
7,500.0	2.78	218.46	7,497.9	-69.6	-55.3	-69.3	0.00	0.00	0.00
7,600.0	2.78	218.46	7,597.7	-73.4	-58.3	-73.0	0.00	0.00	0.00
7,700.0	2.78	218.46	7,697.6	-77.2	-61.3	-76.8	0.00	0.00	0.00
7,800.0	2.78	218.46	7,797.5	-81.0	-64.4	-80.6	0.00	0.00	0.00
7,900.0	2.78	218.46	7,897.4	-84.8	-67.4	-84.4	0.00	0.00	0.00
8,000.0	2.78	218.46	7,997.3	-88.6	-70.4	-88.2	0.00	0.00	0.00
8,100.0	2.78	218.46	8,097.2	-92.4	-73.4	-92.0	0.00	0.00	0.00
8,200.0	2.78	218.46	8,197.0	-96.2	-76.4	-95.7	0.00	0.00	0.00
8,300.0	2.78	218.46	8,296.9	-100.0	-79.5	-99.5	0.00	0.00	0.00
8,324.1	2.78	218.46	8,321.0	-101.0	-80.2	-100.4	0.00	0.00	0.00
Top of BSGL									
8,400.0	2.78	218.46	8,396.8	-103.9	-82.5	-103.3	0.00	0.00	0.00
8,500.0	2.78	218.46	8,496.7	-107.7	-85.5	-107.1	0.00	0.00	0.00
8,600.0	2.78	218.46	8,596.6	-111.5	-88.5	-110.9	0.00	0.00	0.00
8,700.0	2.78	218.46	8,696.5	-115.3	-91.6	-114.7	0.00	0.00	0.00
8,800.0	2.78	218.46	8,796.3	-119.1	-94.6	-118.4	0.00	0.00	0.00
8,900.0	2.78	218.46	8,896.2	-122.9	-97.6	-122.2	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Sandra Jean 23 Fed Com 703H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3658.5usft (3658.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3658.5usft (3658.5)
Site:	Sandra Jean 23 Fed Com Pad 2	North Reference:	Grid
Well:	Sandra Jean 23 Fed Com 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,000.0	2.78	218.46	8,996.1	-126.7	-100.6	-126.0	0.00	0.00	0.00
9,100.0	2.78	218.46	9,096.0	-130.5	-103.6	-129.8	0.00	0.00	0.00
9,200.0	2.78	218.46	9,195.9	-134.3	-106.7	-133.6	0.00	0.00	0.00
9,300.0	2.78	218.46	9,295.7	-138.1	-109.7	-137.4	0.00	0.00	0.00
9,399.4	2.78	218.46	9,395.0	-141.9	-112.7	-141.1	0.00	0.00	0.00
Top of FBSG SD									
9,400.0	2.78	218.46	9,395.6	-141.9	-112.7	-141.1	0.00	0.00	0.00
9,500.0	2.78	218.46	9,495.5	-145.7	-115.7	-144.9	0.00	0.00	0.00
9,565.4	2.78	218.46	9,560.8	-148.2	-117.7	-147.4	0.00	0.00	0.00
Start Drop -2.00									
9,600.0	2.09	218.46	9,595.4	-149.3	-118.6	-148.5	2.00	-2.00	0.00
9,681.6	0.46	218.46	9,677.0	-150.8	-119.7	-150.0	2.00	-2.00	0.00
Top of SBSG Shale									
9,704.6	0.00	0.00	9,700.0	-150.8	-119.8	-150.0	2.00	-2.00	0.00
Start 1137.5 hold at 9704.6 MD									
9,800.0	0.00	0.00	9,795.4	-150.8	-119.8	-150.0	0.00	0.00	0.00
9,900.0	0.00	0.00	9,895.4	-150.8	-119.8	-150.0	0.00	0.00	0.00
9,913.6	0.00	0.00	9,909.0	-150.8	-119.8	-150.0	0.00	0.00	0.00
Top of SBSG SD									
10,000.0	0.00	0.00	9,995.4	-150.8	-119.8	-150.0	0.00	0.00	0.00
10,100.0	0.00	0.00	10,095.4	-150.8	-119.8	-150.0	0.00	0.00	0.00
10,200.0	0.00	0.00	10,195.4	-150.8	-119.8	-150.0	0.00	0.00	0.00
10,300.0	0.00	0.00	10,295.4	-150.8	-119.8	-150.0	0.00	0.00	0.00
10,400.0	0.00	0.00	10,395.4	-150.8	-119.8	-150.0	0.00	0.00	0.00
10,440.6	0.00	0.00	10,436.0	-150.8	-119.8	-150.0	0.00	0.00	0.00
Top of TBSG Carb									
10,500.0	0.00	0.00	10,495.4	-150.8	-119.8	-150.0	0.00	0.00	0.00
10,600.0	0.00	0.00	10,595.4	-150.8	-119.8	-150.0	0.00	0.00	0.00
10,700.0	0.00	0.00	10,695.4	-150.8	-119.8	-150.0	0.00	0.00	0.00
10,799.6	0.00	0.00	10,795.0	-150.8	-119.8	-150.0	0.00	0.00	0.00
Top of TBSG SD									
10,800.0	0.00	0.00	10,795.4	-150.8	-119.8	-150.0	0.00	0.00	0.00
10,842.1	0.00	0.00	10,837.5	-150.8	-119.8	-150.0	0.00	0.00	0.00
KOP #2 - Start Build 12.00 - KOP - Sandra Jean 603H									
10,850.0	0.94	359.62	10,845.4	-150.8	-119.8	-150.0	11.95	11.95	0.00
10,875.0	3.94	359.62	10,870.3	-149.7	-119.8	-148.9	12.00	12.00	0.00
10,900.0	6.94	359.62	10,895.2	-147.3	-119.8	-146.5	12.00	12.00	0.00
10,925.0	9.94	359.62	10,920.0	-143.7	-119.8	-142.9	12.00	12.00	0.00
10,950.0	12.94	359.62	10,944.5	-138.7	-119.9	-137.9	12.00	12.00	0.00
10,975.0	15.94	359.62	10,968.7	-132.5	-119.9	-131.7	12.00	12.00	0.00
11,000.0	18.94	359.62	10,992.5	-125.0	-120.0	-124.2	12.00	12.00	0.00
11,025.0	21.94	359.62	11,015.9	-116.2	-120.0	-115.4	12.00	12.00	0.00
11,050.0	24.94	359.62	11,038.9	-106.3	-120.1	-105.5	12.00	12.00	0.00
11,075.0	27.94	359.62	11,061.3	-95.2	-120.2	-94.4	12.00	12.00	0.00
11,100.0	30.94	359.62	11,083.0	-82.9	-120.3	-82.1	12.00	12.00	0.00
11,125.0	33.94	359.62	11,104.1	-69.5	-120.3	-68.7	12.00	12.00	0.00
11,150.0	36.94	359.62	11,124.5	-55.0	-120.4	-54.2	12.00	12.00	0.00
11,175.0	39.94	359.62	11,144.1	-39.4	-120.5	-38.6	12.00	12.00	0.00
11,200.0	42.94	359.62	11,162.8	-22.9	-120.7	-22.1	12.00	12.00	0.00
11,225.0	45.94	359.62	11,180.7	-5.4	-120.8	-4.6	12.00	12.00	0.00
11,245.6	48.41	359.62	11,194.6	9.7	-120.9	10.5	12.00	12.00	0.00
FTP - Sandra Jean 603H									
11,250.0	48.94	359.62	11,197.6	13.0	-120.9	13.8	12.00	12.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Sandra Jean 23 Fed Com 703H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3658.5usft (3658.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3658.5usft (3658.5)
Site:	Sandra Jean 23 Fed Com Pad 2	North Reference:	Grid
Well:	Sandra Jean 23 Fed Com 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,275.0	51.94	359.62	11,213.5	32.3	-121.0	33.1	12.00	12.00	0.00
11,300.0	54.94	359.62	11,228.4	52.4	-121.2	53.2	12.00	12.00	0.00
11,325.0	57.94	359.62	11,242.2	73.2	-121.3	74.0	12.00	12.00	0.00
11,350.0	60.94	359.62	11,254.9	94.7	-121.4	95.5	12.00	12.00	0.00
11,375.0	63.94	359.62	11,266.5	116.9	-121.6	117.7	12.00	12.00	0.00
11,400.0	66.94	359.62	11,276.9	139.6	-121.7	140.4	12.00	12.00	0.00
11,425.0	69.94	359.62	11,286.0	162.9	-121.9	163.7	12.00	12.00	0.00
11,450.0	72.94	359.62	11,294.0	186.6	-122.1	187.4	12.00	12.00	0.00
11,475.0	75.94	359.62	11,300.7	210.6	-122.2	211.4	12.00	12.00	0.00
11,500.0	78.94	359.62	11,306.1	235.0	-122.4	235.8	12.00	12.00	0.00
11,525.0	81.94	359.62	11,310.3	259.7	-122.5	260.5	12.00	12.00	0.00
11,550.0	84.94	359.62	11,313.1	284.5	-122.7	285.3	12.00	12.00	0.00
11,575.0	87.94	359.62	11,314.7	309.5	-122.9	310.3	12.00	12.00	0.00
11,592.2	90.00	359.62	11,315.0	326.6	-123.0	327.4	12.00	12.00	0.00
LP - Start 4660.5 hold at 11592.2 MD									
11,600.0	90.00	359.62	11,315.0	334.5	-123.0	335.3	0.00	0.00	0.00
11,700.0	90.00	359.62	11,315.0	434.5	-123.7	435.3	0.00	0.00	0.00
11,800.0	90.00	359.62	11,315.0	534.5	-124.4	535.3	0.00	0.00	0.00
11,900.0	90.00	359.62	11,315.0	634.5	-125.0	635.3	0.00	0.00	0.00
12,000.0	90.00	359.62	11,315.0	734.5	-125.7	735.3	0.00	0.00	0.00
12,100.0	90.00	359.62	11,315.0	834.5	-126.4	835.3	0.00	0.00	0.00
12,200.0	90.00	359.62	11,315.0	934.5	-127.0	935.3	0.00	0.00	0.00
12,300.0	90.00	359.62	11,315.0	1,034.5	-127.7	1,035.3	0.00	0.00	0.00
12,400.0	90.00	359.62	11,315.0	1,134.4	-128.4	1,135.3	0.00	0.00	0.00
12,500.0	90.00	359.62	11,315.0	1,234.4	-129.0	1,235.3	0.00	0.00	0.00
12,600.0	90.00	359.62	11,315.0	1,334.4	-129.7	1,335.3	0.00	0.00	0.00
12,700.0	90.00	359.62	11,315.0	1,434.4	-130.4	1,435.3	0.00	0.00	0.00
12,800.0	90.00	359.62	11,315.0	1,534.4	-131.0	1,535.3	0.00	0.00	0.00
12,900.0	90.00	359.62	11,315.0	1,634.4	-131.7	1,635.3	0.00	0.00	0.00
13,000.0	90.00	359.62	11,315.0	1,734.4	-132.4	1,735.3	0.00	0.00	0.00
13,100.0	90.00	359.62	11,315.0	1,834.4	-133.0	1,835.3	0.00	0.00	0.00
13,200.0	90.00	359.62	11,315.0	1,934.4	-133.7	1,935.3	0.00	0.00	0.00
13,300.0	90.00	359.62	11,315.0	2,034.4	-134.4	2,035.3	0.00	0.00	0.00
13,400.0	90.00	359.62	11,315.0	2,134.4	-135.1	2,135.3	0.00	0.00	0.00
13,500.0	90.00	359.62	11,315.0	2,234.4	-135.7	2,235.3	0.00	0.00	0.00
13,600.0	90.00	359.62	11,315.0	2,334.4	-136.4	2,335.3	0.00	0.00	0.00
13,700.0	90.00	359.62	11,315.0	2,434.4	-137.1	2,435.3	0.00	0.00	0.00
13,800.0	90.00	359.62	11,315.0	2,534.4	-137.7	2,535.3	0.00	0.00	0.00
13,900.0	90.00	359.62	11,315.0	2,634.4	-138.4	2,635.3	0.00	0.00	0.00
14,000.0	90.00	359.62	11,315.0	2,734.4	-139.1	2,735.3	0.00	0.00	0.00
14,100.0	90.00	359.62	11,315.0	2,834.4	-139.7	2,835.3	0.00	0.00	0.00
14,200.0	90.00	359.62	11,315.0	2,934.4	-140.4	2,935.3	0.00	0.00	0.00
14,300.0	90.00	359.62	11,315.0	3,034.4	-141.1	3,035.3	0.00	0.00	0.00
14,400.0	90.00	359.62	11,315.0	3,134.4	-141.7	3,135.3	0.00	0.00	0.00
14,500.0	90.00	359.62	11,315.0	3,234.4	-142.4	3,235.3	0.00	0.00	0.00
14,600.0	90.00	359.62	11,315.0	3,334.4	-143.1	3,335.3	0.00	0.00	0.00
14,700.0	90.00	359.62	11,315.0	3,434.4	-143.7	3,435.3	0.00	0.00	0.00
14,800.0	90.00	359.62	11,315.0	3,534.4	-144.4	3,535.3	0.00	0.00	0.00
14,900.0	90.00	359.62	11,315.0	3,634.4	-145.1	3,635.3	0.00	0.00	0.00
15,000.0	90.00	359.62	11,315.0	3,734.4	-145.7	3,735.3	0.00	0.00	0.00
15,100.0	90.00	359.62	11,315.0	3,834.4	-146.4	3,835.3	0.00	0.00	0.00
15,200.0	90.00	359.62	11,315.0	3,934.4	-147.1	3,935.3	0.00	0.00	0.00
15,300.0	90.00	359.62	11,315.0	4,034.4	-147.7	4,035.3	0.00	0.00	0.00
15,400.0	90.00	359.62	11,315.0	4,134.4	-148.4	4,135.3	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Sandra Jean 23 Fed Com 703H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3658.5usft (3658.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3658.5usft (3658.5)
Site:	Sandra Jean 23 Fed Com Pad 2	North Reference:	Grid
Well:	Sandra Jean 23 Fed Com 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,500.0	90.00	359.62	11,315.0	4,234.4	-149.1	4,235.3	0.00	0.00	0.00	
15,600.0	90.00	359.62	11,315.0	4,334.4	-149.7	4,335.3	0.00	0.00	0.00	
15,700.0	90.00	359.62	11,315.0	4,434.4	-150.4	4,435.3	0.00	0.00	0.00	
15,800.0	90.00	359.62	11,315.0	4,534.4	-151.1	4,535.3	0.00	0.00	0.00	
15,900.0	90.00	359.62	11,315.0	4,634.4	-151.7	4,635.3	0.00	0.00	0.00	
16,000.0	90.00	359.62	11,315.0	4,734.4	-152.4	4,735.3	0.00	0.00	0.00	
16,100.0	90.00	359.62	11,315.0	4,834.4	-153.1	4,835.3	0.00	0.00	0.00	
16,200.0	90.00	359.62	11,315.0	4,934.4	-153.7	4,935.3	0.00	0.00	0.00	
16,252.7	90.00	359.62	11,315.0	4,987.1	-154.1	4,988.0	0.00	0.00	0.00	
TD at 16252.7 - LTP/BHL - Sandra Jean 603H										

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										
KOP - Sandra Jean 603I - plan hits target center - Point	0.00	0.00	10,837.5	-150.8	-119.8	565,082.79	757,306.30	32.551515	-103.632413	
FTP - Sandra Jean 603H - plan misses target center by 163.4usft at 11245.6usft MD (11194.6 TVD, 9.7 N, -120.9 E) - Point	0.00	0.00	11,315.0	-100.8	-120.2	565,132.77	757,305.94	32.551653	-103.632413	
LTP/BHL - Sandra Jean - plan hits target center - Point	0.00	0.00	11,315.0	4,987.1	-154.1	570,220.68	757,272.01	32.565638	-103.632414	

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
	11,350.0	LP		5-1/2	5-1/2

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Sandra Jean 23 Fed Com 703H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3658.5usft (3658.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3658.5usft (3658.5)
Site:	Sandra Jean 23 Fed Com Pad 2	North Reference:	Grid
Well:	Sandra Jean 23 Fed Com 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,428.0	1,428.0	RUSTLER				
3,200.0	3,200.0	YATES				
3,593.0	3,593.0	CAPITAN REEF				
5,250.0	5,250.0	CHERRY CANYON				
5,260.0	5,260.0	DELAWARE				
6,701.2	6,700.0	BRUSHY CANYON				
8,324.1	8,321.0	Top of BSGL				
9,399.4	9,395.0	Top of FBSG SD				
9,681.6	9,677.0	Top of SBSG Shale				
9,913.6	9,909.0	Top of SBSG SD				
10,440.6	10,436.0	Top of TBSG Carb				
10,799.6	10,795.0	Top of TBSG SD				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,600.0	5,600.0	0.0	0.0	KOP - Start Build 2.00
5,739.2	5,739.2	-2.6	-2.1	Start 3826.2 hold at 5739.2 MD
9,565.4	9,560.8	-148.2	-117.7	Start Drop -2.00
9,704.6	9,700.0	-150.8	-119.8	Start 1137.5 hold at 9704.6 MD
10,842.2	10,837.5	-150.8	-119.8	KOP #2 - Start Build 12.00
11,592.2	11,315.0	326.6	-123.0	LP - Start 4660.5 hold at 11592.2 MD
16,252.7	11,315.0	4,987.1	-154.1	TD at 16252.7

☐ AMENDED REPORT

LAST TAKE POINT/
BOTTOM HOLE LOCATION
NAD 83 NME, NMSPC ZONE 3001
Y= 570220.67 N
X= 757272.00 E
LAT: 32.5656378° N
LONG: 103.6324138° W

Performance Data Sheet

Issued on: 01.09.2023



OD Label	LM Label	Grade	Connection
5 1/2	20.00	P110HC	INTREPID-SP®

PIPE BODY PROPERTIES

Nominal OD	Nominal ID	Nominal WT	Nominal LM
5.500 inch 139,70 mm	4.778 inch 121,36 mm	0.361 inch 9,17 mm	20.00 ppf 29,76 kg/m
Standard Drift	Minimal YS	Maximal YS	Minimal UTS
4.653 inch 118,19 mm	110 ksi 758 MPa	140 ksi 965 MPa	125 ksi 862 MPa

CONNECTION PROPERTIES & PERFORMANCES

Name	Type	Coupling OD	Connection ID
INTREPID-SP®	Semi-Premium T&C	6.300 inch 160,02 mm	4.778 inch 121,36 mm
Coupling length	Tension efficiency	Compression Efficiency	Make-up loss
9.449 inch 240,00 mm	641 klb 2 850 kN 100 % PB	641 klb 2 850 kN 100 % PB	4.126 inch 104,80 mm
Burst	Collapse	Max. Bending	Max. Load on Coupling Face
12 640 Psi 87,1 MPa 100 % PB	12 200 Psi 84,1 MPa 100 % PB	46 °/100 ft 46 °/30 m	583 klb 2 591 kN

FIELD TORQUE VALUES

	[ft-lb]	[N·m]		[ft-lb]	[N·m]
Min. Make-Up Torque	12 400	16 800	Operational Torque	21 500	29 150
Opt. Make-Up Torque	13 800	18 700			
Max. Make-Up Torque	15 200	20 600	Yield Torque	23 900	32 400

The Performance Data Sheet contains general information that is correct at the time of issue. In the interests of continuous development, the Interpipe company reserves the right to change the format and contents of the Data Sheet at any time without warning and without incurring any obligations. For any questions regarding mentioned data, please mail to Yuriy.Kuratsapov@m.interpipe.biz

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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
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
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 367414

CONDITIONS

Operator: Avant Operating, LLC 1515 Wynkoop Street Denver, CO 80202	OGRID: 330396
	Action Number: 367414
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	REQUIRES NSP	8/2/2024