

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER		5. Lease Serial No.
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		7. If Unit or CA Agreement, Name and No.
		8. Lease Name and Well No. [331309]
2. Name of Operator [372224]		9. API Well No. 30-025-52445
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory XX XXXX [98234]
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
		13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be requested by the BLM. |

25. Signature	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		
Office		

Application approval 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.
Conditions of approval, if any, are attached.

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.

NGMP Rec 01/12/2024

SL

(Continued on page 2)

KZ
01/19/2024

*(Instructions on page 2)

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws 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, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: 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 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., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

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

The BLM connects this information to an evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. 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 Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Additional Operator Remarks

Location of Well

0. SHL: SWSW / 230 FSL / 230 FWL / TWSP: 26S / RANGE: 36E / SECTION: 32 / LAT: 32.0009393 / LONG: -103.2948099 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 235 FSL / 930 FEL / TWSP: 26S / RANGE: 36E / SECTION: 31 / LAT: 32.0005826 / LONG: -103.2987441 (TVD: 12552 feet, MD: 12660 feet)

PPP: NENE / 1314 FNL / 1051 FEL / TWSP: 26S / RANGE: 36E / SECTION: 30 / LAT: 32.0184652 / LONG: -103.2987436 (TVD: 12691 feet, MD: 19058 feet)

BHL: NENE / 50 FNL / 988 FWL / TWSP: 26S / RANGE: 36E / SECTION: 30 / LAT: 32.0213556 / LONG: -103.2987757 (TVD: 12691 feet, MD: 20109 feet)

BLM Point of Contact

Name: CIJI METHOLA

Title: GIS Support - Adjudicator

Phone: (575) 234-5924

Email: cmethola@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

District I
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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

FORM C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

WC-025 G-09

¹ API Number 32	² Pool Code 98234 33813	³ Pool Name S263619C; WOLFCAMP JAL; WOLFCAMP, WOLFCAMP
⁴ Property Code 331309	⁵ Property Name S BIG OAK TREE FED COM 26 36 31	⁶ Well Number 127H
⁷ OGRID No. 372224	⁸ Operator Name AMEREDEV OPERATING, LLC.	⁹ Elevation 2906'

¹⁰Surface Location

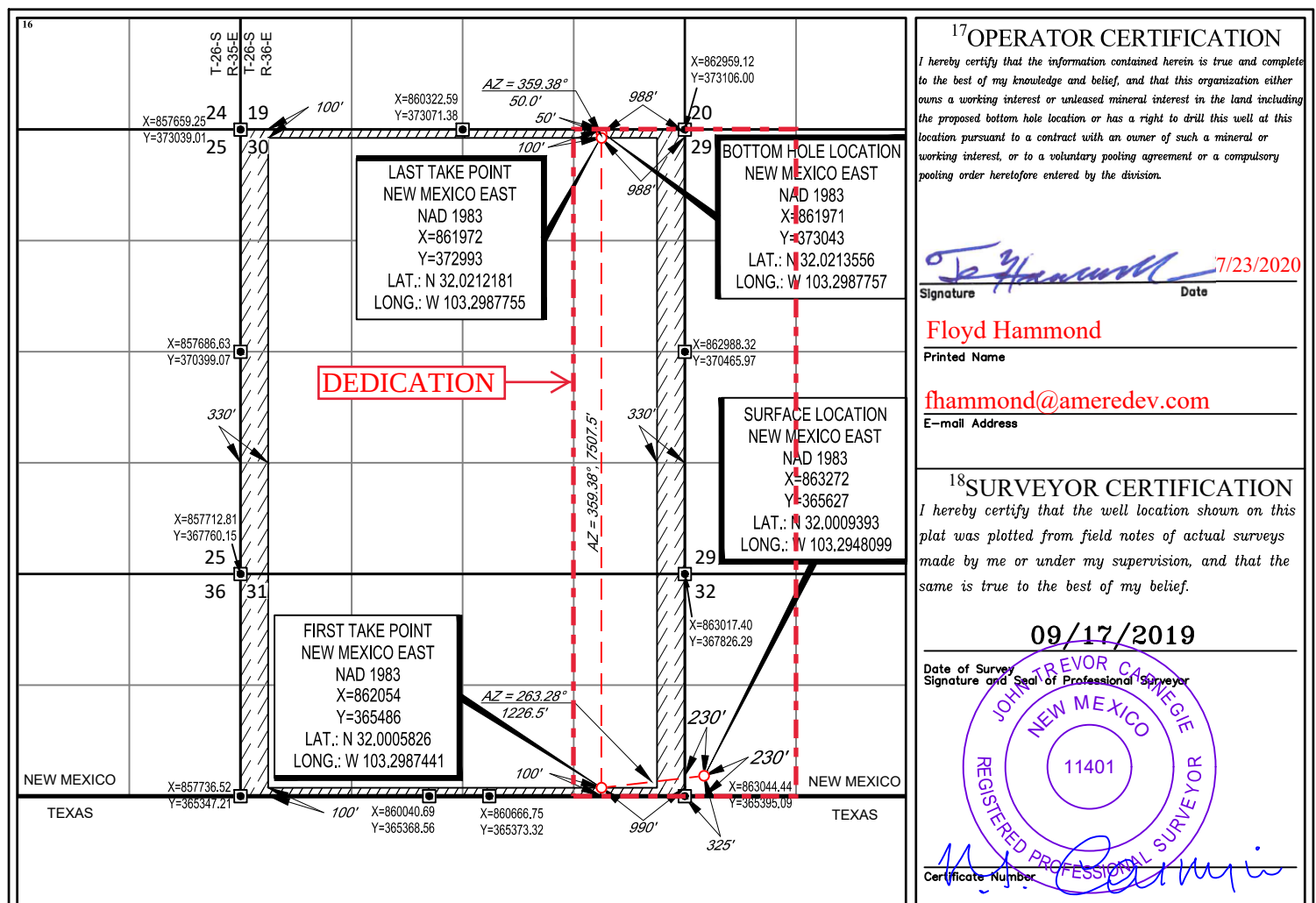
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	32	26-S	36-E	-	230'	SOUTH	230'	WEST	LEA

¹¹Bottom 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
A	30	26-S	36-E	-	50'	NORTH	988'	EAST	LEA

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
467.17		C	

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.



State of New Mexico
Energy, Minerals and Natural Resources DepartmentSubmit Electronically
Via E-permittingOil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505**NATURAL GAS MANAGEMENT PLAN**

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description**Effective May 25, 2021****I. Operator:** _____ Ameredev II, LLC _____ **OGRID:** _____ 372224 _____ **Date:** _____ 01/12/2024 _____**II. Type:** ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
S The Big Oak Tree Fed Com 26 36 31 127H	30025-		230' FSL & 230' FWL	353	3,175	826

IV. Central Delivery Point Name: _____ [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
S The Big Oak Tree Fed Com 26 36 31 127H	30025-	10/05/2024	10/25/2024	11/25/2024	12/15/2024	12/18/2024

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator’s best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: <i>Cesca Yu</i>
Printed Name: Cesca Yu
Title: Engineer
E-mail Address: cyu@ameredev.com
Date: 01/12/2024
Phone: 512-775-1417
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

Natural Gas Management Plan

VI. Separation Equipment: Attach a complete description of how Operator will size separation equipment to optimize gas capture.

- Separation equipment is sized to allow for retention time and velocity to adequately separate oil, gas, and water at anticipated peak rates.
- All central tank battery equipment is designed to efficiently capture the remaining gas from the liquid phase.
- Valves and meters are designed to service without flow interruption or venting of gas.

VII. Operational Practices: Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F 19.15.27.8 NMAC.

19.15.27.8 (A)

Ameredev's field operations are designed with the goal of minimizing flaring and preventing venting of natural gas. If capturing the gas is not possible then the gas is combusted/flared using properly sized flares or combustors in accordance with state air permit rules.

19.15.27.8 (B) Venting and Flaring during drilling operations

- A properly-sized flare stack will be located at a minimum 100' from the nearest surface hole location on the pad.
- All natural gas produced during drilling operations will be flared. Venting will only occur if there is an equipment malfunction and/or to avoid risk of an immediate and substantial adverse impact on safety, public health, or the environment.

19.15.27.8 (C) Venting and Flaring during completions or recompletions operations.

- During all phases of flowback, wells will flow through a sand separator, or other appropriate flowback separation equipment, and the well stream will be directed to a central tank battery (CTB) through properly sized flowlines
- The CTB will have properly sized separation equipment for maximum anticipated flowrates
- Multiple stages of separation will be used to separate gas from liquids. All gas will be routed to a sales outlet. Fluids will be routed to tanks equipped with a closed loop system that will recover any residual gas from the tanks and route such gas to a sales outlet.

19.15.27.8 (D) Venting and Flaring during production operations.

- During production, the well stream will be routed to the CTB where multiple stages of separation will separate gas from liquids. All gas will be routed to a sales outlet. Fluids will be routed to tanks with a closed

loop system that will recover any residual gas from the tanks and route such gas to a sales outlet, minimizing tank emissions.

- Flares are equipped with auto-ignition systems and continuous pilot operations.
- Automatic gauging equipment is installed on all tanks.

19.15.27.8 (E) Performance Standards

- Production equipment will be designed to handle maximum anticipated rates and pressure.
- Automatic gauging equipment is installed on all tanks to minimize venting
- All flared gas will be combusted in a flare stack that is properly sized and designed to ensure proper combustion.
- Flares are equipped with continuous pilots and auto-ignitors along with remote monitoring of the pilot status
- Weekly AVOs and monthly LDAR inspections will be performed on all wells and facilities that produce more than 60 Mcfd.
- Gas/H₂S detectors will be installed throughout the facilities and wellheads to detect leaks and enable timely repairs.

19.15.27.8 (F) Measurement or estimation of vented and flared natural gas

- All high pressure flared gas is measured by equipment conforming to API 14.10.
- No meter bypasses are installed.
- When metering is not practical due to low pressure/low rate, the vented or flared volume will be estimated through flare flow curves with the assistance of air emissions consultants, as necessary.

VIII. Best Management Practices: Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

- Ameredev will use best management practices to vent as minimally as possible during well intervention operations and downhole well maintenance
- All natural gas is routed into the gas gathering system and directed to one of Ameredev's multiple gas sales outlets.
- All venting events will be recorded and all start-up, shutdown, maintenance logs will be kept for control equipment
- All control equipment will be maintained to provide highest run-time possible
- All procedures are drafted to keep venting and flaring to the absolute minimum



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

Drilling Plan Data Report

01/12/2024

APD ID: 10400050865

Submission Date: 11/08/2019

Highlighted data reflects the most recent changes

Operator Name: AMEREDEV OPERATING LLC

Well Number: 127H

Show Final Text

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Work Type: Drill

Well Type: OIL WELL

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
12724210	RUSTLER ANHYDRITE	2906	1398	1398	ANHYDRITE	NONE	N
12724211	SALADO	1228	1678	1678	SALT	NONE	N
12724223	TANSILL	-30	2936	2936	LIMESTONE	NONE	N
12724219	CAPITAN REEF	-566	3472	3472	LIMESTONE	USEABLE WATER	N
12724220	LAMAR	-1908	4814	4814	LIMESTONE	NONE	N
12724221	BELL CANYON	-2093	4999	4999	SANDSTONE	NATURAL GAS, OIL	N
12724212	BRUSHY CANYON	-4434	7340	7340	SANDSTONE	NATURAL GAS, OIL	N
12724222	BONE SPRING LIME	-5652	8558	8558	LIMESTONE	NONE	N
12724213	BONE SPRING 1ST	-6994	9900	9900	SANDSTONE	NATURAL GAS, OIL	N
12724214	BONE SPRING 2ND	-7625	10531	10531	SANDSTONE	NATURAL GAS, OIL	N
12724215	BONE SPRING 3RD	-8103	11009	11009	LIMESTONE	NATURAL GAS, OIL	N
12724216	BONE SPRING 3RD	-8717	11623	11623	SANDSTONE	NATURAL GAS, OIL	N
12724217	WOLFCAMP	-8971	11877	11877	SHALE	NATURAL GAS, OIL	N
12724218	WOLFCAMP	-9485	12391	12391	SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31Well Number: 127H

Pressure Rating (PSI): 10M

Rating Depth: 15000

Equipment: 10M BOPE SYSTEM WILL BE USED AFTER THE SURFACE CASING IS SET. A KELLY COCK WILL BE KEPT IN THE DRILL STRING AT ALL TIMES. A FULL OPENING DRILL PIPE STABBING VALVE WITH PROPER DRILL PIPE CONNECTIONS WILL BE ON THE RIG FLOOR AT ALL TIMES.

Requesting Variance? YES

Variance request: Co-Flex Choke Line, 5M Annular Preventer

Testing Procedure: See attachment

Choke Diagram Attachment:

10M_Choke_Manifold_REV_20200811085753.pdf

BOP Diagram Attachment:

5M_Annular_Preventer_Variance_and_Well_Control_Plan_20200811085815.pdf

Pressure_Control_Plan_Single_Well_MB4_3String_Big_Hole_BLM_20200811085815.pdf

5M_BOP_System_20200811085816.pdf

4_String_MB_Ameredev_Wellhead_Drawing_net_REV_20200811085827.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	1523	0	1523	2906	1383	1523	J-55	68	OTHER - BTC	6.03	1	DRY	8.84	DRY	10.33
2	INTERMEDIATE	9.875	7.625	NEW	API	N	0	11134	0	11134	2918	-8228	11134	HCL-80	29.7	OTHER - BTC	1.23	1.15	DRY	1.96	DRY	2.84
3	PRODUCTION	6.75	5.5	NEW	API	N	0	20147	0	12691	2918	-9785	20147	P-110	23	OTHER - MS2 Anaconda GT	1.6	1.74	DRY	2.24	DRY	2.49

Casing Attachments

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Casing Attachments

Casing ID: 1StringSURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

13.375_68_20200811085916.00
S_Big_Oak_Tree_Fed_Com_26_36_31_127H___Wellbore_Diagram_and_CDA_20200811085927.pdf

Casing ID: 2StringINTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

S_Big_Oak_Tree_Fed_Com_26_36_31_127H___Wellbore_Diagram_and_CDA_20200811090014.pdf
7.625_29.70_L80HC_BORUSAN_20200811090025.pdf

Casing ID: 3StringPRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

5_20200811090130.5_23
S_Big_Oak_Tree_Fed_Com_26_36_31_127H___Wellbore_Diagram_and_CDA_20200811090138.pdf

Operator Name: AMEREDEV OPERATING LLC**Well Name:** S BIG OAK TREE FED COM 26 36 31**Well Number:** 127H**Section 4 - Cement**

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1137	1049	1.76	13.5	1846.17	100	Class C	Bentonite, Accelerator, Kolseal, Defoamer, Celloflake
SURFACE	Tail		1137	1523	200	1.34	14.8	268	100	Class C	None
INTERMEDIATE	Lead	2936	0	2405	554	3.5	9	1940.2	50	Class C	Bentonite, Salt, Kolseal, Defoamer, Celloflake
INTERMEDIATE	Tail		2405	2936	200	1.33	14.8	266	25	Class C	None
INTERMEDIATE	Lead	2936	2936	9913	2204	2.47	11.9	5443.34	50	Class H	Bentonite, Retarder, Kolseal, Defoamer, Celloflake, Anti-Settling Expansion Additive
INTERMEDIATE	Tail		9913	11134	200	1.31	14.2	262	25	Class H	Salt, Bentonite, Retarder, Dispersant, Fluid Loss
PRODUCTION	Lead		0	20147	1568	1.34	14.2	2101.58	25	Class H	Salt, Bentonite, Fluid Loss, Dispersant, Retarder, Defoamer

Section 5 - Circulating Medium**Mud System Type:** Closed**Will an air or gas system be Used?** NO**Description of the equipment for the circulating system in accordance with Onshore Order #2:****Diagram of the equipment for the circulating system in accordance with Onshore Order #2:****Describe what will be on location to control well or mitigate other conditions:** All necessary supplies (e.g. bentonite, cedar bark) for fluid control will be on site.**Describe the mud monitoring system utilized:** An electronic pit volume totalizer (PVT) will be utilized on the circulating system to monitor pit volume, flow rate, pump pressure, and pump rate.**Circulating Medium Table**

Operator Name: AMEREDEV OPERATING LLC**Well Name:** S BIG OAK TREE FED COM 26 36 31**Well Number:** 127H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1523	WATER-BASED MUD	8.4	8.6							
1523	1113 4	OTHER : Diesel Brine Emulsion	8.5	9.4							
1113 4	1269 1	OIL-BASED MUD	10.5	12.5							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

A directional survey, measurement while drilling and a mudlog/geologic lithology log will all be run from surface to TD.

List of open and cased hole logs run in the well:

DIRECTIONAL SURVEY, MEASUREMENT WHILE DRILLING, MUD LOG/GEOLOGIC LITHOLOGY LOG, MUD LOG/GEOLOGICAL LITHOLOGY LOG,

Coring operation description for the well:

No coring will be done on this well.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 8249

Anticipated Surface Pressure: 5456

Anticipated Bottom Hole Temperature(F): 165

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

H2S_Plan_20200811100408.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

SBOT127_LLR_20200811100459.pdf

SBOT127_DR_20200811100459.pdf

5M_Annular_Preventer_Variance_and_Well_Control_Plan_20200811100513.pdf

Pressure_Control_Plan_Single_Well_MB4_3String_Big_Hole_BLM_20200811100513.pdf

Other proposed operations facets description:

4-STRING CONTINGENCY PLAN AND SKID PROCEDURE ATTACHED

Other proposed operations facets attachment:

Wolfcamp_Contingency_20200811100529.pdf

Rig_Skid_Procedure_20200811100539.pdf

Other Variance attachment:

Requested_Exceptions___3_String_Revised_01312019_20200811100551.pdf

R616___CoC_for_hoses_12_18_17_20200811100642.pdf



Ameredev II, LLC

Wellbore Schematic

Well: S Big Oak Tree Fed Com 26-36-31 127H
SHL: Sec. 32 26S-36E 230' FSL & 230' FWL
BHL: Sec. 30 26S-36E 50' FNL & 988' FEL
 Lea, NM
Wellhead: A - 13-5/8" 10M x 13-5/8" SOW
 B - 13-5/8" 10M x 13-5/8" 10M
 C - 13-5/8" 10M x 13-5/8" 10M
 Tubing Spool - 7-1/16" 15M x 13-3/8" 10M
Xmas Tree: 2-9/16" 10M
Tubing: 2-7/8" L-80 6.5# 8rd EUE

Co. Well ID: xxxxxx
AFE No.: xxxx-xxx
API No.: xxxxxxxxxxxx
GL: 2,906'
Field: Delaware
Objective: Wolfcamp B
TVD: 12,691'
MD: 20,147'
Rig: TBD **KB 27'**
E-Mail: Wellsite2@ameredev.com

Hole Size	Formation Tops	Logs	Cement	Mud Weight
17.5"	Rustler 1,398'	1,249 Sacks	TOC 0'	8.4-8.6 ppg WBM
	13.375" 68# J-55 BTC 1,523'			
12.25"	Salado 1,678'	754 Sacks	TOC 0'	8.5-9.4 Diesel Brine Emulsion
	DV Tool with ACP 2,936'		50% Excess	
	Tansill 2,936'			
	Capitan Reef 3,472'			
	Lamar 4,814'			
	Bell Canyon 4,999'			
	No Casing 4,939'			
9.875"	Brushy Canyon 7,340'			8.5-9.4 Diesel Brine Emulsion
	Bone Spring Lime 8,558'			
	First Bone Spring 9,900'			
	Second Bone Spring 10,531'			
	Third Bone Spring Upper 11,009'			
	7.625" 29.7# L-80HC BTC 11,134'			
6.75"	Third Bone Spring 11,623'			10.5-12.5 ppg OBM
12° Build @ 12,284' MD thru 13,044' MD	Wolfcamp A 11,877'			
	Wolfcamp B 12,391'			
	5.5" 23# P110MS2 Anaconda GT 20,147'			
	Target Wolfcamp B 12691 TVD // 20147 MD			
		1,568 Sacks	TOC 0'	
			25% Excess	

Casing Design and Safety Factor Check

Casing Specifications						
Segment	Hole ID	Depth	OD	Weight	Grade	Coupling
Surface	17.5	1,523'	13.375	68	J-55	BTC
Intermediate	9.875	11,134'	7.625	29.7	HCL-80	BTC
Prod Segment A	6.75	12,284'	5.5	23	P-110	GT
Prod Segment B	6.75	20,147'	5.5	23	P-110	GT

Check Surface Casing				
OD Cplg	Body	Joint	Collapse	Burst
<i>inches</i>	<i>1000 lbs</i>	<i>1000 lbs</i>	<i>psi</i>	<i>psi</i>
14.375	1,069	915	4,100	3,450
Safety Factors				
1.56	10.33	8.84	6.03	0.63
Check Intermediate Casing				
OD Cplg	Body	Joint	Collapse	Burst
<i>inches</i>	<i>1000 lbs</i>	<i>1000 lbs</i>	<i>psi</i>	<i>psi</i>
7.625	940	558	6700	9460
Safety Factors				
1.13	2.84	1.96	1.23	1.15
Check Prod Casing, Segment A				
OD Cplg	Body	Joint	Collapse	Burst
<i>inches</i>	<i>1000 lbs</i>	<i>1000 lbs</i>	<i>psi</i>	<i>psi</i>
5.777	728	655	12780	14360
Safety Factors				
0.49	2.49	2.24	1.60	1.74
Check Prod Casing, Segment B				
OD Cplg	Body	Joint	Collapse	Burst
<i>inches</i>	<i>1000 lbs</i>	<i>1000 lbs</i>	<i>psi</i>	<i>psi</i>
5.777	728	655	12780	14360
Safety Factors				
0.49	77.77	69.97	1.55	1.74



API 5CT Casing Performance Data Sheet

Manufactured to specifications of API 5CT 9th edition and bears the API monogram.
Designed for enhanced performance through increased collapse resistance.

Grade	L80HC
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Pipe Body Mechanical Properties

Minimum Yield Strength	80,000 psi
Maximum Yield Strength	95,000 psi
Minimum Tensile Strength	95,000 psi
Maximum Hardness	23.0 HRC

Sizes

OD	7 5/8 in
Nominal Wall Thickness	0.375 in
Nominal Weight, T&C	29.70 lb/ft
Nominal Weight, PE	29.06 lb/ft
Nominal ID	6.875 in
Standard Drift	6.750 in
Alternate Drift	N/A

Minimum Performance

Collapse Pressure	5,780 psi
Internal Pressure Yield	6,880 psi
Pipe body Tension Yield	683,000 lbs
Internal pressure leak resistance STC/LTC connections	6,880 psi
Internal pressure leak resistance BTC connections	6,880 psi

Inspection and Testing

Visual	OD Longitudinal and independent 3rd party SEA
NDT	Independent 3rd party full body EMI after hydrotest Calibration notch sensitivity: 10% of specified wall thickness

Color code

Pipe ends	One red, one brown and one blue band
Couplings	Red with one brown band

5.5 23# P-110 MS2 Anaconda GT

Pipe Body Data

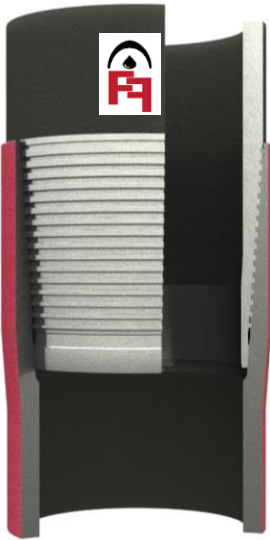
Nominal OD	5.500	Inches
Wall Thickness	0.415	Inches
Weight	23.00	lb/ft
PE Weight	22.56	lb/ft
Nominal ID	4.670	Inches
Drift	4.545	Inches
Minimum Yield Strength	110,000	PSI
Minimum Tensile Strength	120,000	PSI
RBW	87.5%	Rating

Make-Up torques

Yield torque	42,000	FT-LBS.
Max Operating Torque	33,600	FT-LBS.
Max Make-Up	20,000	FT-LBS.
Optimum Make-Up	16,500	FT-LBS.
Minimum Make-Up	13,000	FT-LBS.

Connection Data

Connection OD	5.748	Inches
Connection ID	4.590	Inches
Make-Up loss	5.592	Inches
Tension Efficiency	90%	Rating
Compression Efficiency	90%	Rating
Yield Strength in Tension	656,000	LBS.
Yield Strength in Compression	656,000	LBS.
MIYP (Burst)	14,530	PSI
Collapse Pressure	14,540	PSI
Uniaxial Bending	83	degrees



Technical Sales Support: Rafael Escamilla Jr., Cell: 281-961-7704, jescamilla@ofsint.com

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Ameredev Operating, LLC.

Green Jacket

Oak #10N

S Big Oak Tree 127H

Wellbore #1

Plan: Design #1

Lease Penetration Section Line Foot

28 July, 2020



Ameredev Operating, LLC
Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	Local Co-ordinate Reference:	Well S BOT 127H
Project:	Green Jacket	TVD Reference:	KB @ 2933.0usft
Site:	Oak #10N	MD Reference:	KB @ 2933.0usft
Well:	S BOT 127H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM5000

Project	Green Jacket		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Oak #10N			
Site Position:		Northing:	365,628.32 usft	Latitude:	32° 0' 3.382 N
From:	Lat/Long	Easting:	863,351.86 usft	Longitude:	103° 17' 40.387 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.55 °

Well	S BOT 127H					
Well Position	+N/-S	0.0 usft	Northing:	365,627.52 usft	Latitude:	32° 0' 3.382 N
	+E/-W	0.0 usft	Easting:	863,271.86 usft	Longitude:	103° 17' 41.316 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	2,906.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/28/2020	6.47	59.86	47,518.28617160

Design	Design #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	350.05

Survey Tool Program	Date	7/28/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	20,147.2	Design #1 (Wellbore #1)	MWD	OWSG MWD - Standard	

Planned Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W	
1.0	0.00	0.00	1.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W	
SBOT South Border								
100.0	0.00	0.00	100.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W	
200.0	0.00	0.00	200.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W	
300.0	0.00	0.00	300.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W	
400.0	0.00	0.00	400.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W	
500.0	0.00	0.00	500.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W	
600.0	0.00	0.00	600.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W	
700.0	0.00	0.00	700.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W	
800.0	0.00	0.00	800.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W	
900.0	0.00	0.00	900.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W	



Ameredev Operating, LLC
Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	Local Co-ordinate Reference:	Well S BOT 127H
Project:	Green Jacket	TVD Reference:	KB @ 2933.0usft
Site:	Oak #10N	MD Reference:	KB @ 2933.0usft
Well:	S BOT 127H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM5000

Planned Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
1,000.0	0.00	0.00	1,000.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W
1,100.0	0.00	0.00	1,100.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W
1,200.0	0.00	0.00	1,200.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W
1,300.0	0.00	0.00	1,300.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W
1,400.0	0.00	0.00	1,400.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W
1,500.0	0.00	0.00	1,500.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W
1,600.0	0.00	0.00	1,600.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W
1,700.0	0.00	0.00	1,700.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W
1,800.0	0.00	0.00	1,800.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W
1,900.0	0.00	0.00	1,900.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W
2,000.0	0.00	0.00	2,000.0	229.2	230.0	32° 0' 3.382 N	103° 17' 41.316 W
2,100.0	2.00	262.00	2,100.0	229.0	228.3	32° 0' 3.380 N	103° 17' 41.336 W
2,200.0	4.00	262.00	2,199.8	228.2	223.1	32° 0' 3.373 N	103° 17' 41.396 W
2,300.0	6.00	262.00	2,299.5	227.0	214.5	32° 0' 3.362 N	103° 17' 41.497 W
2,362.5	7.25	262.00	2,361.5	226.0	207.3	32° 0' 3.353 N	103° 17' 41.580 W
2,400.0	7.25	262.00	2,398.7	225.4	202.6	32° 0' 3.346 N	103° 17' 41.634 W
2,500.0	7.25	262.00	2,497.9	223.6	190.1	32° 0' 3.330 N	103° 17' 41.779 W
2,600.0	7.25	262.00	2,597.1	221.8	177.6	32° 0' 3.314 N	103° 17' 41.925 W
2,700.0	7.25	262.00	2,696.3	220.1	165.1	32° 0' 3.298 N	103° 17' 42.070 W
2,800.0	7.25	262.00	2,795.5	218.3	152.6	32° 0' 3.282 N	103° 17' 42.215 W
2,900.0	7.25	262.00	2,894.7	216.6	140.1	32° 0' 3.265 N	103° 17' 42.361 W
3,000.0	7.25	262.00	2,993.9	214.8	127.6	32° 0' 3.249 N	103° 17' 42.506 W
3,100.0	7.25	262.00	3,093.1	213.1	115.2	32° 0' 3.233 N	103° 17' 42.651 W
3,200.0	7.25	262.00	3,192.3	211.3	102.7	32° 0' 3.217 N	103° 17' 42.797 W
3,300.0	7.25	262.00	3,291.5	209.5	90.2	32° 0' 3.201 N	103° 17' 42.942 W
3,400.0	7.25	262.00	3,390.7	207.8	77.7	32° 0' 3.185 N	103° 17' 43.087 W
3,500.0	7.25	262.00	3,489.9	206.0	65.2	32° 0' 3.168 N	103° 17' 43.232 W
3,600.0	7.25	262.00	3,589.1	204.3	52.7	32° 0' 3.152 N	103° 17' 43.378 W
3,700.0	7.25	262.00	3,688.3	202.5	40.2	32° 0' 3.136 N	103° 17' 43.523 W
3,800.0	7.25	262.00	3,787.5	200.8	27.7	32° 0' 3.120 N	103° 17' 43.668 W
3,900.0	7.25	262.00	3,886.7	199.0	15.2	32° 0' 3.104 N	103° 17' 43.814 W
4,000.0	7.25	262.00	3,985.9	197.3	2.7	32° 0' 3.087 N	103° 17' 43.959 W
4,100.0	7.25	262.00	4,085.1	195.5	-9.8	32° 0' 3.071 N	103° 17' 44.104 W
4,200.0	7.25	262.00	4,184.3	193.7	-22.3	32° 0' 3.055 N	103° 17' 44.250 W
4,300.0	7.25	262.00	4,283.5	192.0	-34.8	32° 0' 3.039 N	103° 17' 44.395 W
4,400.0	7.25	262.00	4,382.7	190.2	-47.3	32° 0' 3.023 N	103° 17' 44.540 W
4,500.0	7.25	262.00	4,481.9	188.5	-59.8	32° 0' 3.006 N	103° 17' 44.685 W
4,600.0	7.25	262.00	4,581.1	186.7	-72.3	32° 0' 2.990 N	103° 17' 44.831 W
4,700.0	7.25	262.00	4,680.3	185.0	-84.8	32° 0' 2.974 N	103° 17' 44.976 W
4,800.0	7.25	262.00	4,779.5	183.2	-97.3	32° 0' 2.958 N	103° 17' 45.121 W
4,900.0	7.25	262.00	4,878.7	181.4	-109.8	32° 0' 2.942 N	103° 17' 45.267 W
5,000.0	7.25	262.00	4,977.9	179.7	-122.3	32° 0' 2.925 N	103° 17' 45.412 W
5,100.0	7.25	262.00	5,077.1	177.9	-134.8	32° 0' 2.909 N	103° 17' 45.557 W
5,200.0	7.25	262.00	5,176.3	176.2	-147.3	32° 0' 2.893 N	103° 17' 45.703 W



Ameredev Operating, LLC
Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	Local Co-ordinate Reference:	Well S BOT 127H
Project:	Green Jacket	TVD Reference:	KB @ 2933.0usft
Site:	Oak #10N	MD Reference:	KB @ 2933.0usft
Well:	S BOT 127H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM5000

Planned Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
5,300.0	7.25	262.00	5,275.5	174.4	-159.8	32° 0' 2.877 N	103° 17' 45.848 W
5,400.0	7.25	262.00	5,374.7	172.7	-172.3	32° 0' 2.861 N	103° 17' 45.993 W
5,500.0	7.25	262.00	5,473.9	170.9	-184.8	32° 0' 2.844 N	103° 17' 46.139 W
5,600.0	7.25	262.00	5,573.1	169.2	-197.3	32° 0' 2.828 N	103° 17' 46.284 W
5,700.0	7.25	262.00	5,672.3	167.4	-209.8	32° 0' 2.812 N	103° 17' 46.429 W
5,800.0	7.25	262.00	5,771.6	165.6	-222.3	32° 0' 2.796 N	103° 17' 46.574 W
5,900.0	7.25	262.00	5,870.8	163.9	-234.8	32° 0' 2.780 N	103° 17' 46.720 W
6,000.0	7.25	262.00	5,970.0	162.1	-247.3	32° 0' 2.764 N	103° 17' 46.865 W
6,100.0	7.25	262.00	6,069.2	160.4	-259.8	32° 0' 2.747 N	103° 17' 47.010 W
6,200.0	7.25	262.00	6,168.4	158.6	-272.3	32° 0' 2.731 N	103° 17' 47.156 W
6,300.0	7.25	262.00	6,267.6	156.9	-284.8	32° 0' 2.715 N	103° 17' 47.301 W
6,400.0	7.25	262.00	6,366.8	155.1	-297.3	32° 0' 2.699 N	103° 17' 47.446 W
6,500.0	7.25	262.00	6,466.0	153.3	-309.7	32° 0' 2.683 N	103° 17' 47.592 W
6,600.0	7.25	262.00	6,565.2	151.6	-322.2	32° 0' 2.666 N	103° 17' 47.737 W
6,700.0	7.25	262.00	6,664.4	149.8	-334.7	32° 0' 2.650 N	103° 17' 47.882 W
6,800.0	7.25	262.00	6,763.6	148.1	-347.2	32° 0' 2.634 N	103° 17' 48.028 W
6,900.0	7.25	262.00	6,862.8	146.3	-359.7	32° 0' 2.618 N	103° 17' 48.173 W
7,000.0	7.25	262.00	6,962.0	144.6	-372.2	32° 0' 2.602 N	103° 17' 48.318 W
7,100.0	7.25	262.00	7,061.2	142.8	-384.7	32° 0' 2.585 N	103° 17' 48.463 W
7,200.0	7.25	262.00	7,160.4	141.0	-397.2	32° 0' 2.569 N	103° 17' 48.609 W
7,300.0	7.25	262.00	7,259.6	139.3	-409.7	32° 0' 2.553 N	103° 17' 48.754 W
7,400.0	7.25	262.00	7,358.8	137.5	-422.2	32° 0' 2.537 N	103° 17' 48.899 W
7,500.0	7.25	262.00	7,458.0	135.8	-434.7	32° 0' 2.521 N	103° 17' 49.045 W
7,600.0	7.25	262.00	7,557.2	134.0	-447.2	32° 0' 2.504 N	103° 17' 49.190 W
7,700.0	7.25	262.00	7,656.4	132.3	-459.7	32° 0' 2.488 N	103° 17' 49.335 W
7,800.0	7.25	262.00	7,755.6	130.5	-472.2	32° 0' 2.472 N	103° 17' 49.481 W
7,900.0	7.25	262.00	7,854.8	128.8	-484.7	32° 0' 2.456 N	103° 17' 49.626 W
8,000.0	7.25	262.00	7,954.0	127.0	-497.2	32° 0' 2.440 N	103° 17' 49.771 W
8,100.0	7.25	262.00	8,053.2	125.2	-509.7	32° 0' 2.423 N	103° 17' 49.917 W
8,200.0	7.25	262.00	8,152.4	123.5	-522.2	32° 0' 2.407 N	103° 17' 50.062 W
8,300.0	7.25	262.00	8,251.6	121.7	-534.7	32° 0' 2.391 N	103° 17' 50.207 W
8,400.0	7.25	262.00	8,350.8	120.0	-547.2	32° 0' 2.375 N	103° 17' 50.352 W
8,500.0	7.25	262.00	8,450.0	118.2	-559.7	32° 0' 2.359 N	103° 17' 50.498 W
8,600.0	7.25	262.00	8,549.2	116.5	-572.2	32° 0' 2.343 N	103° 17' 50.643 W
8,700.0	7.25	262.00	8,648.4	114.7	-584.7	32° 0' 2.326 N	103° 17' 50.788 W
8,800.0	7.25	262.00	8,747.6	112.9	-597.2	32° 0' 2.310 N	103° 17' 50.934 W
8,900.0	7.25	262.00	8,846.8	111.2	-609.7	32° 0' 2.294 N	103° 17' 51.079 W
9,000.0	7.25	262.00	8,946.0	109.4	-622.2	32° 0' 2.278 N	103° 17' 51.224 W
9,100.0	7.25	262.00	9,045.2	107.7	-634.7	32° 0' 2.262 N	103° 17' 51.370 W
9,200.0	7.25	262.00	9,144.4	105.9	-647.2	32° 0' 2.245 N	103° 17' 51.515 W
9,300.0	7.25	262.00	9,243.6	104.2	-659.7	32° 0' 2.229 N	103° 17' 51.660 W
9,400.0	7.25	262.00	9,342.8	102.4	-672.2	32° 0' 2.213 N	103° 17' 51.805 W
9,500.0	7.25	262.00	9,442.0	100.7	-684.7	32° 0' 2.197 N	103° 17' 51.951 W
9,600.0	7.25	262.00	9,541.2	98.9	-697.2	32° 0' 2.181 N	103° 17' 52.096 W
9,700.0	7.25	262.00	9,640.4	97.1	-709.7	32° 0' 2.164 N	103° 17' 52.241 W



Ameredev Operating, LLC
Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	Local Co-ordinate Reference:	Well S BOT 127H
Project:	Green Jacket	TVD Reference:	KB @ 2933.0usft
Site:	Oak #10N	MD Reference:	KB @ 2933.0usft
Well:	S BOT 127H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM5000

Planned Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
9,800.0	7.25	262.00	9,739.6	95.4	-722.2	32° 0' 2.148 N	103° 17' 52.387 W
9,900.0	7.25	262.00	9,838.8	93.6	-734.6	32° 0' 2.132 N	103° 17' 52.532 W
10,000.0	7.25	262.00	9,938.0	91.9	-747.1	32° 0' 2.116 N	103° 17' 52.677 W
10,100.0	7.25	262.00	10,037.2	90.1	-759.6	32° 0' 2.100 N	103° 17' 52.823 W
10,200.0	7.25	262.00	10,136.4	88.4	-772.1	32° 0' 2.083 N	103° 17' 52.968 W
10,300.0	7.25	262.00	10,235.6	86.6	-784.6	32° 0' 2.067 N	103° 17' 53.113 W
10,400.0	7.25	262.00	10,334.8	84.8	-797.1	32° 0' 2.051 N	103° 17' 53.259 W
10,500.0	7.25	262.00	10,434.0	83.1	-809.6	32° 0' 2.035 N	103° 17' 53.404 W
10,600.0	7.25	262.00	10,533.2	81.3	-822.1	32° 0' 2.019 N	103° 17' 53.549 W
10,700.0	7.25	262.00	10,632.4	79.6	-834.6	32° 0' 2.002 N	103° 17' 53.694 W
10,800.0	7.25	262.00	10,731.6	77.8	-847.1	32° 0' 1.986 N	103° 17' 53.840 W
10,900.0	7.25	262.00	10,830.8	76.1	-859.6	32° 0' 1.970 N	103° 17' 53.985 W
11,000.0	7.25	262.00	10,930.0	74.3	-872.1	32° 0' 1.954 N	103° 17' 54.130 W
11,100.0	7.25	262.00	11,029.2	72.6	-884.6	32° 0' 1.938 N	103° 17' 54.276 W
11,200.0	7.25	262.00	11,128.4	70.8	-897.1	32° 0' 1.921 N	103° 17' 54.421 W
11,300.0	7.25	262.00	11,227.6	69.0	-909.6	32° 0' 1.905 N	103° 17' 54.566 W
11,400.0	7.25	262.00	11,326.8	67.3	-922.1	32° 0' 1.889 N	103° 17' 54.712 W
11,500.0	7.25	262.00	11,426.0	65.5	-934.6	32° 0' 1.873 N	103° 17' 54.857 W
11,600.0	7.25	262.00	11,525.2	63.8	-947.1	32° 0' 1.857 N	103° 17' 55.002 W
11,700.0	7.25	262.00	11,624.4	62.0	-959.6	32° 0' 1.840 N	103° 17' 55.148 W
11,746.0	7.25	262.00	11,670.0	61.2	-965.3	32° 0' 1.833 N	103° 17' 55.214 W
11,800.0	6.17	262.00	11,723.6	60.3	-971.6	32° 0' 1.825 N	103° 17' 55.287 W
11,900.0	4.17	262.00	11,823.2	59.1	-980.5	32° 0' 1.813 N	103° 17' 55.391 W
12,000.0	2.17	262.00	11,923.1	58.3	-986.0	32° 0' 1.806 N	103° 17' 55.454 W
12,100.0	0.17	262.00	12,023.0	58.0	-988.0	32° 0' 1.804 N	103° 17' 55.478 W
12,108.5	0.00	0.00	12,031.5	58.0	-988.0	32° 0' 1.804 N	103° 17' 55.478 W
12,200.0	0.00	0.00	12,123.0	58.0	-988.0	32° 0' 1.804 N	103° 17' 55.478 W
12,283.5	0.00	0.00	12,206.5	58.0	-988.0	32° 0' 1.804 N	103° 17' 55.478 W
SBOT127 KOP							
12,300.0	1.95	359.38	12,223.0	58.3	-988.0	32° 0' 1.806 N	103° 17' 55.478 W
12,400.0	13.78	359.38	12,321.9	72.0	-988.2	32° 0' 1.942 N	103° 17' 55.478 W
12,500.0	25.61	359.38	12,415.9	105.6	-988.5	32° 0' 2.274 N	103° 17' 55.479 W
12,600.0	37.43	359.38	12,501.0	157.8	-989.1	32° 0' 2.791 N	103° 17' 55.480 W
12,690.2	48.10	359.38	12,567.1	219.0	-989.8	32° 0' 3.396 N	103° 17' 55.480 W
SBOT127 FTP							
12,700.0	49.26	359.38	12,573.6	226.3	-989.9	32° 0' 3.469 N	103° 17' 55.481 W
12,800.0	61.09	359.38	12,630.6	308.2	-990.7	32° 0' 4.280 N	103° 17' 55.482 W
12,900.0	72.91	359.38	12,669.6	400.1	-991.7	32° 0' 5.189 N	103° 17' 55.483 W
13,000.0	84.74	359.38	12,689.0	498.0	-992.8	32° 0' 6.158 N	103° 17' 55.485 W
13,044.5	90.00	359.38	12,691.0	542.5	-993.3	32° 0' 6.598 N	103° 17' 55.485 W
SBOT127 EOC							
13,100.0	90.00	359.38	12,691.0	598.0	-993.9	32° 0' 7.147 N	103° 17' 55.486 W
13,200.0	90.00	359.38	12,691.0	698.0	-995.0	32° 0' 8.136 N	103° 17' 55.488 W
13,300.0	90.00	359.38	12,691.0	798.0	-996.1	32° 0' 9.126 N	103° 17' 55.489 W
13,400.0	90.00	359.38	12,691.0	897.9	-997.2	32° 0' 10.115 N	103° 17' 55.491 W



Ameredev Operating, LLC
Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	Local Co-ordinate Reference:	Well S BOT 127H
Project:	Green Jacket	TVD Reference:	KB @ 2933.0usft
Site:	Oak #10N	MD Reference:	KB @ 2933.0usft
Well:	S BOT 127H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM5000

Planned Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
13,500.0	90.00	359.38	12,691.0	997.9	-998.2	32° 0' 11.105 N	103° 17' 55.492 W
13,600.0	90.00	359.38	12,691.0	1,097.9	-999.3	32° 0' 12.094 N	103° 17' 55.494 W
13,700.0	90.00	359.38	12,691.0	1,197.9	-1,000.4	32° 0' 13.084 N	103° 17' 55.495 W
13,800.0	90.00	359.38	12,691.0	1,297.9	-1,001.5	32° 0' 14.074 N	103° 17' 55.497 W
13,900.0	90.00	359.38	12,691.0	1,397.9	-1,002.6	32° 0' 15.063 N	103° 17' 55.498 W
14,000.0	90.00	359.38	12,691.0	1,497.9	-1,003.7	32° 0' 16.053 N	103° 17' 55.500 W
14,100.0	90.00	359.38	12,691.0	1,597.9	-1,004.8	32° 0' 17.042 N	103° 17' 55.501 W
14,200.0	90.00	359.38	12,691.0	1,697.9	-1,005.9	32° 0' 18.032 N	103° 17' 55.503 W
14,300.0	90.00	359.38	12,691.0	1,797.9	-1,006.9	32° 0' 19.021 N	103° 17' 55.504 W
14,400.0	90.00	359.38	12,691.0	1,897.9	-1,008.0	32° 0' 20.011 N	103° 17' 55.506 W
14,500.0	90.00	359.38	12,691.0	1,997.9	-1,009.1	32° 0' 21.000 N	103° 17' 55.507 W
14,600.0	90.00	359.38	12,691.0	2,097.9	-1,010.2	32° 0' 21.990 N	103° 17' 55.509 W
14,700.0	90.00	359.38	12,691.0	2,197.9	-1,011.3	32° 0' 22.979 N	103° 17' 55.510 W
14,800.0	90.00	359.38	12,691.0	2,297.9	-1,012.4	32° 0' 23.969 N	103° 17' 55.512 W
14,900.0	90.00	359.38	12,691.0	2,397.9	-1,013.5	32° 0' 24.958 N	103° 17' 55.513 W
15,000.0	90.00	359.38	12,691.0	2,497.9	-1,014.6	32° 0' 25.948 N	103° 17' 55.515 W
15,100.0	90.00	359.38	12,691.0	2,597.8	-1,015.6	32° 0' 26.937 N	103° 17' 55.516 W
15,200.0	90.00	359.38	12,691.0	2,697.8	-1,016.7	32° 0' 27.927 N	103° 17' 55.518 W
15,300.0	90.00	359.38	12,691.0	2,797.8	-1,017.8	32° 0' 28.916 N	103° 17' 55.519 W
15,400.0	90.00	359.38	12,691.0	2,897.8	-1,018.9	32° 0' 29.906 N	103° 17' 55.521 W
15,500.0	90.00	359.38	12,691.0	2,997.8	-1,020.0	32° 0' 30.895 N	103° 17' 55.522 W
15,600.0	90.00	359.38	12,691.0	3,097.8	-1,021.1	32° 0' 31.885 N	103° 17' 55.524 W
15,700.0	90.00	359.38	12,691.0	3,197.8	-1,022.2	32° 0' 32.874 N	103° 17' 55.525 W
15,800.0	90.00	359.38	12,691.0	3,297.8	-1,023.2	32° 0' 33.864 N	103° 17' 55.527 W
15,900.0	90.00	359.38	12,691.0	3,397.8	-1,024.3	32° 0' 34.854 N	103° 17' 55.528 W
16,000.0	90.00	359.38	12,691.0	3,497.8	-1,025.4	32° 0' 35.843 N	103° 17' 55.530 W
16,100.0	90.00	359.38	12,691.0	3,597.8	-1,026.5	32° 0' 36.833 N	103° 17' 55.532 W
16,200.0	90.00	359.38	12,691.0	3,697.8	-1,027.6	32° 0' 37.822 N	103° 17' 55.533 W
16,300.0	90.00	359.38	12,691.0	3,797.8	-1,028.7	32° 0' 38.812 N	103° 17' 55.535 W
16,400.0	90.00	359.38	12,691.0	3,897.8	-1,029.8	32° 0' 39.801 N	103° 17' 55.536 W
16,500.0	90.00	359.38	12,691.0	3,997.8	-1,030.9	32° 0' 40.791 N	103° 17' 55.538 W
16,600.0	90.00	359.38	12,691.0	4,097.8	-1,031.9	32° 0' 41.780 N	103° 17' 55.539 W
16,700.0	90.00	359.38	12,691.0	4,197.8	-1,033.0	32° 0' 42.770 N	103° 17' 55.541 W
16,800.0	90.00	359.38	12,691.0	4,297.7	-1,034.1	32° 0' 43.759 N	103° 17' 55.542 W
16,900.0	90.00	359.38	12,691.0	4,397.7	-1,035.2	32° 0' 44.749 N	103° 17' 55.544 W
17,000.0	90.00	359.38	12,691.0	4,497.7	-1,036.3	32° 0' 45.738 N	103° 17' 55.545 W
17,100.0	90.00	359.38	12,691.0	4,597.7	-1,037.4	32° 0' 46.728 N	103° 17' 55.547 W
17,200.0	90.00	359.38	12,691.0	4,697.7	-1,038.5	32° 0' 47.717 N	103° 17' 55.548 W
17,300.0	90.00	359.38	12,691.0	4,797.7	-1,039.6	32° 0' 48.707 N	103° 17' 55.550 W
17,400.0	90.00	359.38	12,691.0	4,897.7	-1,040.6	32° 0' 49.696 N	103° 17' 55.551 W
17,500.0	90.00	359.38	12,691.0	4,997.7	-1,041.7	32° 0' 50.686 N	103° 17' 55.553 W
17,600.0	90.00	359.38	12,691.0	5,097.7	-1,042.8	32° 0' 51.675 N	103° 17' 55.554 W
17,700.0	90.00	359.38	12,691.0	5,197.7	-1,043.9	32° 0' 52.665 N	103° 17' 55.556 W
17,800.0	90.00	359.38	12,691.0	5,297.7	-1,045.0	32° 0' 53.654 N	103° 17' 55.557 W



Ameredev Operating, LLC
Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	Local Co-ordinate Reference:	Well S BOT 127H
Project:	Green Jacket	TVD Reference:	KB @ 2933.0usft
Site:	Oak #10N	MD Reference:	KB @ 2933.0usft
Well:	S BOT 127H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
17,900.0	90.00	359.38	12,691.0	5,397.7	-1,046.1	32° 0' 54.644 N	103° 17' 55.559 W
18,000.0	90.00	359.38	12,691.0	5,497.7	-1,047.2	32° 0' 55.633 N	103° 17' 55.560 W
18,100.0	90.00	359.38	12,691.0	5,597.7	-1,048.3	32° 0' 56.623 N	103° 17' 55.562 W
18,200.0	90.00	359.38	12,691.0	5,697.7	-1,049.3	32° 0' 57.613 N	103° 17' 55.563 W
18,300.0	90.00	359.38	12,691.0	5,797.7	-1,050.4	32° 0' 58.602 N	103° 17' 55.565 W
18,400.0	90.00	359.38	12,691.0	5,897.7	-1,051.5	32° 0' 59.592 N	103° 17' 55.566 W
18,500.0	90.00	359.38	12,691.0	5,997.6	-1,052.6	32° 1' 0.581 N	103° 17' 55.568 W
18,600.0	90.00	359.38	12,691.0	6,097.6	-1,053.7	32° 1' 1.571 N	103° 17' 55.569 W
18,700.0	90.00	359.38	12,691.0	6,197.6	-1,054.8	32° 1' 2.560 N	103° 17' 55.571 W
18,800.0	90.00	359.38	12,691.0	6,297.6	-1,055.9	32° 1' 3.550 N	103° 17' 55.572 W
18,900.0	90.00	359.38	12,691.0	6,397.6	-1,056.9	32° 1' 4.539 N	103° 17' 55.574 W
19,000.0	90.00	359.38	12,691.0	6,497.6	-1,058.0	32° 1' 5.529 N	103° 17' 55.575 W
19,100.0	90.00	359.38	12,691.0	6,597.6	-1,059.1	32° 1' 6.518 N	103° 17' 55.577 W
19,192.4	90.00	359.38	12,691.0	6,690.0	-1,060.1	32° 1' 7.433 N	103° 17' 55.578 W
SBOT127 into NMNM137809							
19,200.0	90.00	359.38	12,691.0	6,697.6	-1,060.2	32° 1' 7.508 N	103° 17' 55.578 W
19,300.0	90.00	359.38	12,691.0	6,797.6	-1,061.3	32° 1' 8.497 N	103° 17' 55.580 W
19,400.0	90.00	359.38	12,691.0	6,897.6	-1,062.4	32° 1' 9.487 N	103° 17' 55.581 W
19,500.0	90.00	359.38	12,691.0	6,997.6	-1,063.5	32° 1' 10.476 N	103° 17' 55.583 W
19,600.0	90.00	359.38	12,691.0	7,097.6	-1,064.6	32° 1' 11.466 N	103° 17' 55.584 W
19,700.0	90.00	359.38	12,691.0	7,197.6	-1,065.6	32° 1' 12.455 N	103° 17' 55.586 W
19,800.0	90.00	359.38	12,691.0	7,297.6	-1,066.7	32° 1' 13.445 N	103° 17' 55.587 W
19,900.0	90.00	359.38	12,691.0	7,397.6	-1,067.8	32° 1' 14.434 N	103° 17' 55.589 W
20,000.0	90.00	359.38	12,691.0	7,497.6	-1,068.9	32° 1' 15.424 N	103° 17' 55.590 W
20,097.1	90.00	359.38	12,691.0	7,594.7	-1,070.0	32° 1' 16.385 N	103° 17' 55.592 W
SBOT127 LTP							
20,100.0	90.00	359.38	12,691.0	7,597.6	-1,070.0	32° 1' 16.413 N	103° 17' 55.592 W
20,147.2	90.00	359.38	12,691.0	7,644.7	-1,070.5	32° 1' 16.880 N	103° 17' 55.593 W
SBOT127 BHL							

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,283.5	12,206.5	-171.2	-1,218.0	SBOT127 KOP
19,192.4	12,691.0	6,460.8	-1,290.1	SBOT127 into NMNM137809

Checked By: _____ Approved By: _____ Date: _____



Ameredev Operating, LLC.

Green Jacket

Oak #10N

S Big Oak Tree 127H

Wellbore #1

Plan: Design #1

Standard Planning Report

28 July, 2020



Ameredev Operating, LLC
Planning Report

Database:	EDM5000	Local Co-ordinate Reference:	Well S BOT 127H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 2933.0usft
Project:	Green Jacket	MD Reference:	KB @ 2933.0usft
Site:	Oak #10N	North Reference:	Grid
Well:	S BOT 127H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Green Jacket		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Oak #10N				
Site Position:		Northing:	365,628.31 usft	Latitude:	32° 0' 3.382 N
From:	Lat/Long	Easting:	863,351.86 usft	Longitude:	103° 17' 40.387 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.55 °

Well	S BOT 127H					
Well Position	+N/-S	-0.8 usft	Northing:	365,627.51 usft	Latitude:	32° 0' 3.382 N
	+E/-W	-80.0 usft	Easting:	863,271.86 usft	Longitude:	103° 17' 41.316 W
Position Uncertainty	0.0 usft		Wellhead Elevation:		Ground Level:	2,906.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/28/2020	6.47	59.86	47,518.28617160

Design	Design #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	350.05

Plan Survey Tool Program	Date	7/28/2020		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	20,147.2	Design #1 (Wellbore #1)	MWD
				OWSG MWD - Standard

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,362.5	7.25	262.00	2,361.5	-3.2	-22.7	2.00	2.00	0.00	262.00	
11,746.0	7.25	262.00	11,670.0	-168.0	-1,195.3	0.00	0.00	0.00	0.00	
12,108.5	0.00	0.00	12,031.5	-171.2	-1,218.0	2.00	-2.00	0.00	180.00	
12,283.5	0.00	0.00	12,206.5	-171.2	-1,218.0	0.00	0.00	0.00	0.00	
13,044.5	90.00	359.38	12,691.0	313.3	-1,223.3	11.83	11.83	0.00	-0.62	
20,147.2	90.00	359.38	12,691.0	7,415.5	-1,300.5	0.00	0.00	0.00	0.00	SBOT127 BHL



Ameredev Operating, LLC

Planning Report

Database:	EDM5000	Local Co-ordinate Reference:	Well S BOT 127H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 2933.0usft
Project:	Green Jacket	MD Reference:	KB @ 2933.0usft
Site:	Oak #10N	North Reference:	Grid
Well:	S BOT 127H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SBOT South Border									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	2.00	262.00	2,100.0	-0.2	-1.7	0.1	2.00	2.00	0.00
2,200.0	4.00	262.00	2,199.8	-1.0	-6.9	0.2	2.00	2.00	0.00
2,300.0	6.00	262.00	2,299.5	-2.2	-15.5	0.5	2.00	2.00	0.00
2,362.5	7.25	262.00	2,361.5	-3.2	-22.7	0.8	2.00	2.00	0.00
2,400.0	7.25	262.00	2,398.7	-3.8	-27.4	0.9	0.00	0.00	0.00
2,500.0	7.25	262.00	2,497.9	-5.6	-39.9	1.4	0.00	0.00	0.00
2,600.0	7.25	262.00	2,597.1	-7.4	-52.4	1.8	0.00	0.00	0.00
2,700.0	7.25	262.00	2,696.3	-9.1	-64.9	2.2	0.00	0.00	0.00
2,800.0	7.25	262.00	2,795.5	-10.9	-77.4	2.7	0.00	0.00	0.00
2,900.0	7.25	262.00	2,894.7	-12.6	-89.9	3.1	0.00	0.00	0.00
3,000.0	7.25	262.00	2,993.9	-14.4	-102.4	3.5	0.00	0.00	0.00
3,100.0	7.25	262.00	3,093.1	-16.1	-114.8	3.9	0.00	0.00	0.00
3,200.0	7.25	262.00	3,192.3	-17.9	-127.3	4.4	0.00	0.00	0.00
3,300.0	7.25	262.00	3,291.5	-19.7	-139.8	4.8	0.00	0.00	0.00
3,400.0	7.25	262.00	3,390.7	-21.4	-152.3	5.2	0.00	0.00	0.00
3,500.0	7.25	262.00	3,489.9	-23.2	-164.8	5.7	0.00	0.00	0.00
3,600.0	7.25	262.00	3,589.1	-24.9	-177.3	6.1	0.00	0.00	0.00
3,700.0	7.25	262.00	3,688.3	-26.7	-189.8	6.5	0.00	0.00	0.00
3,800.0	7.25	262.00	3,787.5	-28.4	-202.3	6.9	0.00	0.00	0.00
3,900.0	7.25	262.00	3,886.7	-30.2	-214.8	7.4	0.00	0.00	0.00
4,000.0	7.25	262.00	3,985.9	-31.9	-227.3	7.8	0.00	0.00	0.00
4,100.0	7.25	262.00	4,085.1	-33.7	-239.8	8.2	0.00	0.00	0.00
4,200.0	7.25	262.00	4,184.3	-35.5	-252.3	8.7	0.00	0.00	0.00
4,300.0	7.25	262.00	4,283.5	-37.2	-264.8	9.1	0.00	0.00	0.00
4,400.0	7.25	262.00	4,382.7	-39.0	-277.3	9.5	0.00	0.00	0.00
4,500.0	7.25	262.00	4,481.9	-40.7	-289.8	9.9	0.00	0.00	0.00
4,600.0	7.25	262.00	4,581.1	-42.5	-302.3	10.4	0.00	0.00	0.00
4,700.0	7.25	262.00	4,680.3	-44.2	-314.8	10.8	0.00	0.00	0.00
4,800.0	7.25	262.00	4,779.5	-46.0	-327.3	11.2	0.00	0.00	0.00
4,900.0	7.25	262.00	4,878.7	-47.8	-339.8	11.7	0.00	0.00	0.00
5,000.0	7.25	262.00	4,977.9	-49.5	-352.3	12.1	0.00	0.00	0.00



Ameredev Operating, LLC

Planning Report

Database:	EDM5000	Local Co-ordinate Reference:	Well S BOT 127H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 2933.0usft
Project:	Green Jacket	MD Reference:	KB @ 2933.0usft
Site:	Oak #10N	North Reference:	Grid
Well:	S BOT 127H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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)
5,100.0	7.25	262.00	5,077.1	-51.3	-364.8	12.5	0.00	0.00	0.00
5,200.0	7.25	262.00	5,176.3	-53.0	-377.3	12.9	0.00	0.00	0.00
5,300.0	7.25	262.00	5,275.5	-54.8	-389.8	13.4	0.00	0.00	0.00
5,400.0	7.25	262.00	5,374.7	-56.5	-402.3	13.8	0.00	0.00	0.00
5,500.0	7.25	262.00	5,473.9	-58.3	-414.8	14.2	0.00	0.00	0.00
5,600.0	7.25	262.00	5,573.1	-60.0	-427.3	14.7	0.00	0.00	0.00
5,700.0	7.25	262.00	5,672.3	-61.8	-439.8	15.1	0.00	0.00	0.00
5,800.0	7.25	262.00	5,771.6	-63.6	-452.3	15.5	0.00	0.00	0.00
5,900.0	7.25	262.00	5,870.8	-65.3	-464.8	15.9	0.00	0.00	0.00
6,000.0	7.25	262.00	5,970.0	-67.1	-477.3	16.4	0.00	0.00	0.00
6,100.0	7.25	262.00	6,069.2	-68.8	-489.8	16.8	0.00	0.00	0.00
6,200.0	7.25	262.00	6,168.4	-70.6	-502.3	17.2	0.00	0.00	0.00
6,300.0	7.25	262.00	6,267.6	-72.3	-514.8	17.7	0.00	0.00	0.00
6,400.0	7.25	262.00	6,366.8	-74.1	-527.3	18.1	0.00	0.00	0.00
6,500.0	7.25	262.00	6,466.0	-75.9	-539.7	18.5	0.00	0.00	0.00
6,600.0	7.25	262.00	6,565.2	-77.6	-552.2	18.9	0.00	0.00	0.00
6,700.0	7.25	262.00	6,664.4	-79.4	-564.7	19.4	0.00	0.00	0.00
6,800.0	7.25	262.00	6,763.6	-81.1	-577.2	19.8	0.00	0.00	0.00
6,900.0	7.25	262.00	6,862.8	-82.9	-589.7	20.2	0.00	0.00	0.00
7,000.0	7.25	262.00	6,962.0	-84.6	-602.2	20.7	0.00	0.00	0.00
7,100.0	7.25	262.00	7,061.2	-86.4	-614.7	21.1	0.00	0.00	0.00
7,200.0	7.25	262.00	7,160.4	-88.2	-627.2	21.5	0.00	0.00	0.00
7,300.0	7.25	262.00	7,259.6	-89.9	-639.7	22.0	0.00	0.00	0.00
7,400.0	7.25	262.00	7,358.8	-91.7	-652.2	22.4	0.00	0.00	0.00
7,500.0	7.25	262.00	7,458.0	-93.4	-664.7	22.8	0.00	0.00	0.00
7,600.0	7.25	262.00	7,557.2	-95.2	-677.2	23.2	0.00	0.00	0.00
7,700.0	7.25	262.00	7,656.4	-96.9	-689.7	23.7	0.00	0.00	0.00
7,800.0	7.25	262.00	7,755.6	-98.7	-702.2	24.1	0.00	0.00	0.00
7,900.0	7.25	262.00	7,854.8	-100.4	-714.7	24.5	0.00	0.00	0.00
8,000.0	7.25	262.00	7,954.0	-102.2	-727.2	25.0	0.00	0.00	0.00
8,100.0	7.25	262.00	8,053.2	-104.0	-739.7	25.4	0.00	0.00	0.00
8,200.0	7.25	262.00	8,152.4	-105.7	-752.2	25.8	0.00	0.00	0.00
8,300.0	7.25	262.00	8,251.6	-107.5	-764.7	26.2	0.00	0.00	0.00
8,400.0	7.25	262.00	8,350.8	-109.2	-777.2	26.7	0.00	0.00	0.00
8,500.0	7.25	262.00	8,450.0	-111.0	-789.7	27.1	0.00	0.00	0.00
8,600.0	7.25	262.00	8,549.2	-112.7	-802.2	27.5	0.00	0.00	0.00
8,700.0	7.25	262.00	8,648.4	-114.5	-814.7	28.0	0.00	0.00	0.00
8,800.0	7.25	262.00	8,747.6	-116.3	-827.2	28.4	0.00	0.00	0.00
8,900.0	7.25	262.00	8,846.8	-118.0	-839.7	28.8	0.00	0.00	0.00
9,000.0	7.25	262.00	8,946.0	-119.8	-852.2	29.2	0.00	0.00	0.00
9,100.0	7.25	262.00	9,045.2	-121.5	-864.7	29.7	0.00	0.00	0.00
9,200.0	7.25	262.00	9,144.4	-123.3	-877.2	30.1	0.00	0.00	0.00
9,300.0	7.25	262.00	9,243.6	-125.0	-889.7	30.5	0.00	0.00	0.00
9,400.0	7.25	262.00	9,342.8	-126.8	-902.2	31.0	0.00	0.00	0.00
9,500.0	7.25	262.00	9,442.0	-128.5	-914.7	31.4	0.00	0.00	0.00
9,600.0	7.25	262.00	9,541.2	-130.3	-927.2	31.8	0.00	0.00	0.00
9,700.0	7.25	262.00	9,640.4	-132.1	-939.7	32.2	0.00	0.00	0.00
9,800.0	7.25	262.00	9,739.6	-133.8	-952.2	32.7	0.00	0.00	0.00
9,900.0	7.25	262.00	9,838.8	-135.6	-964.6	33.1	0.00	0.00	0.00
10,000.0	7.25	262.00	9,938.0	-137.3	-977.1	33.5	0.00	0.00	0.00
10,100.0	7.25	262.00	10,037.2	-139.1	-989.6	34.0	0.00	0.00	0.00
10,200.0	7.25	262.00	10,136.4	-140.8	-1,002.1	34.4	0.00	0.00	0.00
10,300.0	7.25	262.00	10,235.6	-142.6	-1,014.6	34.8	0.00	0.00	0.00
10,400.0	7.25	262.00	10,334.8	-144.4	-1,027.1	35.2	0.00	0.00	0.00



Ameredev Operating, LLC

Planning Report

Database:	EDM5000	Local Co-ordinate Reference:	Well S BOT 127H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 2933.0usft
Project:	Green Jacket	MD Reference:	KB @ 2933.0usft
Site:	Oak #10N	North Reference:	Grid
Well:	S BOT 127H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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)
10,500.0	7.25	262.00	10,434.0	-146.1	-1,039.6	35.7	0.00	0.00	0.00
10,600.0	7.25	262.00	10,533.2	-147.9	-1,052.1	36.1	0.00	0.00	0.00
10,700.0	7.25	262.00	10,632.4	-149.6	-1,064.6	36.5	0.00	0.00	0.00
10,800.0	7.25	262.00	10,731.6	-151.4	-1,077.1	37.0	0.00	0.00	0.00
10,900.0	7.25	262.00	10,830.8	-153.1	-1,089.6	37.4	0.00	0.00	0.00
11,000.0	7.25	262.00	10,930.0	-154.9	-1,102.1	37.8	0.00	0.00	0.00
11,100.0	7.25	262.00	11,029.2	-156.6	-1,114.6	38.2	0.00	0.00	0.00
11,200.0	7.25	262.00	11,128.4	-158.4	-1,127.1	38.7	0.00	0.00	0.00
11,300.0	7.25	262.00	11,227.6	-160.2	-1,139.6	39.1	0.00	0.00	0.00
11,400.0	7.25	262.00	11,326.8	-161.9	-1,152.1	39.5	0.00	0.00	0.00
11,500.0	7.25	262.00	11,426.0	-163.7	-1,164.6	40.0	0.00	0.00	0.00
11,600.0	7.25	262.00	11,525.2	-165.4	-1,177.1	40.4	0.00	0.00	0.00
11,700.0	7.25	262.00	11,624.4	-167.2	-1,189.6	40.8	0.00	0.00	0.00
11,746.0	7.25	262.00	11,670.0	-168.0	-1,195.3	41.0	0.00	0.00	0.00
11,800.0	6.17	262.00	11,723.6	-168.9	-1,201.6	41.2	2.00	-2.00	0.00
11,900.0	4.17	262.00	11,823.2	-170.1	-1,210.5	41.5	2.00	-2.00	0.00
12,000.0	2.17	262.00	11,923.1	-170.9	-1,216.0	41.7	2.00	-2.00	0.00
12,100.0	0.17	262.00	12,023.0	-171.2	-1,218.0	41.8	2.00	-2.00	0.00
12,108.5	0.00	0.00	12,031.5	-171.2	-1,218.0	41.8	2.00	-2.00	0.00
12,200.0	0.00	0.00	12,123.0	-171.2	-1,218.0	41.8	0.00	0.00	0.00
12,283.5	0.00	0.00	12,206.5	-171.2	-1,218.0	41.8	0.00	0.00	0.00
SBOT127 KOP									
12,300.0	1.95	359.38	12,223.0	-170.9	-1,218.0	42.1	11.84	11.84	0.00
12,400.0	13.78	359.38	12,321.9	-157.2	-1,218.2	55.6	11.83	11.83	0.00
12,500.0	25.61	359.38	12,415.9	-123.6	-1,218.5	88.7	11.83	11.83	0.00
12,600.0	37.43	359.38	12,501.0	-71.4	-1,219.1	140.2	11.83	11.83	0.00
12,690.2	48.10	359.38	12,567.1	-10.2	-1,219.8	200.6	11.83	11.83	0.00
SBOT127 FTP									
12,700.0	49.26	359.38	12,573.6	-2.9	-1,219.9	207.9	11.83	11.83	0.00
12,800.0	61.09	359.38	12,630.6	79.0	-1,220.7	288.7	11.83	11.83	0.00
12,900.0	72.91	359.38	12,669.6	170.9	-1,221.7	379.4	11.83	11.83	0.00
13,000.0	84.74	359.38	12,689.0	268.8	-1,222.8	476.0	11.83	11.83	0.00
13,044.5	90.00	359.38	12,691.0	313.3	-1,223.3	519.9	11.82	11.82	0.00
SBOT127 EOC									
13,100.0	90.00	359.38	12,691.0	368.8	-1,223.9	574.6	0.00	0.00	0.00
13,200.0	90.00	359.38	12,691.0	468.8	-1,225.0	673.3	0.00	0.00	0.00
13,300.0	90.00	359.38	12,691.0	568.8	-1,226.1	772.0	0.00	0.00	0.00
13,400.0	90.00	359.38	12,691.0	668.7	-1,227.2	870.7	0.00	0.00	0.00
13,500.0	90.00	359.38	12,691.0	768.7	-1,228.2	969.4	0.00	0.00	0.00
13,600.0	90.00	359.38	12,691.0	868.7	-1,229.3	1,068.0	0.00	0.00	0.00
13,700.0	90.00	359.38	12,691.0	968.7	-1,230.4	1,166.7	0.00	0.00	0.00
13,800.0	90.00	359.38	12,691.0	1,068.7	-1,231.5	1,265.4	0.00	0.00	0.00
13,900.0	90.00	359.38	12,691.0	1,168.7	-1,232.6	1,364.1	0.00	0.00	0.00
14,000.0	90.00	359.38	12,691.0	1,268.7	-1,233.7	1,462.7	0.00	0.00	0.00
14,100.0	90.00	359.38	12,691.0	1,368.7	-1,234.8	1,561.4	0.00	0.00	0.00
14,200.0	90.00	359.38	12,691.0	1,468.7	-1,235.9	1,660.1	0.00	0.00	0.00
14,300.0	90.00	359.38	12,691.0	1,568.7	-1,236.9	1,758.8	0.00	0.00	0.00
14,400.0	90.00	359.38	12,691.0	1,668.7	-1,238.0	1,857.5	0.00	0.00	0.00
14,500.0	90.00	359.38	12,691.0	1,768.7	-1,239.1	1,956.1	0.00	0.00	0.00
14,600.0	90.00	359.38	12,691.0	1,868.7	-1,240.2	2,054.8	0.00	0.00	0.00
14,700.0	90.00	359.38	12,691.0	1,968.7	-1,241.3	2,153.5	0.00	0.00	0.00
14,800.0	90.00	359.38	12,691.0	2,068.7	-1,242.4	2,252.2	0.00	0.00	0.00
14,900.0	90.00	359.38	12,691.0	2,168.7	-1,243.5	2,350.9	0.00	0.00	0.00



Ameredev Operating, LLC

Planning Report

Database:	EDM5000	Local Co-ordinate Reference:	Well S BOT 127H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 2933.0usft
Project:	Green Jacket	MD Reference:	KB @ 2933.0usft
Site:	Oak #10N	North Reference:	Grid
Well:	S BOT 127H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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)	
15,000.0	90.00	359.38	12,691.0	2,268.7	-1,244.6	2,449.5	0.00	0.00	0.00	
15,100.0	90.00	359.38	12,691.0	2,368.6	-1,245.6	2,548.2	0.00	0.00	0.00	
15,200.0	90.00	359.38	12,691.0	2,468.6	-1,246.7	2,646.9	0.00	0.00	0.00	
15,300.0	90.00	359.38	12,691.0	2,568.6	-1,247.8	2,745.6	0.00	0.00	0.00	
15,400.0	90.00	359.38	12,691.0	2,668.6	-1,248.9	2,844.2	0.00	0.00	0.00	
15,500.0	90.00	359.38	12,691.0	2,768.6	-1,250.0	2,942.9	0.00	0.00	0.00	
15,600.0	90.00	359.38	12,691.0	2,868.6	-1,251.1	3,041.6	0.00	0.00	0.00	
15,700.0	90.00	359.38	12,691.0	2,968.6	-1,252.2	3,140.3	0.00	0.00	0.00	
15,800.0	90.00	359.38	12,691.0	3,068.6	-1,253.2	3,239.0	0.00	0.00	0.00	
15,900.0	90.00	359.38	12,691.0	3,168.6	-1,254.3	3,337.6	0.00	0.00	0.00	
16,000.0	90.00	359.38	12,691.0	3,268.6	-1,255.4	3,436.3	0.00	0.00	0.00	
16,100.0	90.00	359.38	12,691.0	3,368.6	-1,256.5	3,535.0	0.00	0.00	0.00	
16,200.0	90.00	359.38	12,691.0	3,468.6	-1,257.6	3,633.7	0.00	0.00	0.00	
16,300.0	90.00	359.38	12,691.0	3,568.6	-1,258.7	3,732.4	0.00	0.00	0.00	
16,400.0	90.00	359.38	12,691.0	3,668.6	-1,259.8	3,831.0	0.00	0.00	0.00	
16,500.0	90.00	359.38	12,691.0	3,768.6	-1,260.9	3,929.7	0.00	0.00	0.00	
16,600.0	90.00	359.38	12,691.0	3,868.6	-1,261.9	4,028.4	0.00	0.00	0.00	
16,700.0	90.00	359.38	12,691.0	3,968.6	-1,263.0	4,127.1	0.00	0.00	0.00	
16,800.0	90.00	359.38	12,691.0	4,068.5	-1,264.1	4,225.8	0.00	0.00	0.00	
16,900.0	90.00	359.38	12,691.0	4,168.5	-1,265.2	4,324.4	0.00	0.00	0.00	
17,000.0	90.00	359.38	12,691.0	4,268.5	-1,266.3	4,423.1	0.00	0.00	0.00	
17,100.0	90.00	359.38	12,691.0	4,368.5	-1,267.4	4,521.8	0.00	0.00	0.00	
17,200.0	90.00	359.38	12,691.0	4,468.5	-1,268.5	4,620.5	0.00	0.00	0.00	
17,300.0	90.00	359.38	12,691.0	4,568.5	-1,269.6	4,719.1	0.00	0.00	0.00	
17,400.0	90.00	359.38	12,691.0	4,668.5	-1,270.6	4,817.8	0.00	0.00	0.00	
17,500.0	90.00	359.38	12,691.0	4,768.5	-1,271.7	4,916.5	0.00	0.00	0.00	
17,600.0	90.00	359.38	12,691.0	4,868.5	-1,272.8	5,015.2	0.00	0.00	0.00	
17,700.0	90.00	359.38	12,691.0	4,968.5	-1,273.9	5,113.9	0.00	0.00	0.00	
17,800.0	90.00	359.38	12,691.0	5,068.5	-1,275.0	5,212.5	0.00	0.00	0.00	
17,900.0	90.00	359.38	12,691.0	5,168.5	-1,276.1	5,311.2	0.00	0.00	0.00	
18,000.0	90.00	359.38	12,691.0	5,268.5	-1,277.2	5,409.9	0.00	0.00	0.00	
18,100.0	90.00	359.38	12,691.0	5,368.5	-1,278.3	5,508.6	0.00	0.00	0.00	
18,200.0	90.00	359.38	12,691.0	5,468.5	-1,279.3	5,607.3	0.00	0.00	0.00	
18,300.0	90.00	359.38	12,691.0	5,568.5	-1,280.4	5,705.9	0.00	0.00	0.00	
18,400.0	90.00	359.38	12,691.0	5,668.5	-1,281.5	5,804.6	0.00	0.00	0.00	
18,500.0	90.00	359.38	12,691.0	5,768.4	-1,282.6	5,903.3	0.00	0.00	0.00	
18,600.0	90.00	359.38	12,691.0	5,868.4	-1,283.7	6,002.0	0.00	0.00	0.00	
18,700.0	90.00	359.38	12,691.0	5,968.4	-1,284.8	6,100.6	0.00	0.00	0.00	
18,800.0	90.00	359.38	12,691.0	6,068.4	-1,285.9	6,199.3	0.00	0.00	0.00	
18,900.0	90.00	359.38	12,691.0	6,168.4	-1,286.9	6,298.0	0.00	0.00	0.00	
19,000.0	90.00	359.38	12,691.0	6,268.4	-1,288.0	6,396.7	0.00	0.00	0.00	
19,100.0	90.00	359.38	12,691.0	6,368.4	-1,289.1	6,495.4	0.00	0.00	0.00	
19,192.4	90.00	359.38	12,691.0	6,460.8	-1,290.1	6,586.5	0.00	0.00	0.00	
SBOT127 into NMNM137809										
19,200.0	90.00	359.38	12,691.0	6,468.4	-1,290.2	6,594.0	0.00	0.00	0.00	
19,300.0	90.00	359.38	12,691.0	6,568.4	-1,291.3	6,692.7	0.00	0.00	0.00	
19,400.0	90.00	359.38	12,691.0	6,668.4	-1,292.4	6,791.4	0.00	0.00	0.00	
19,500.0	90.00	359.38	12,691.0	6,768.4	-1,293.5	6,890.1	0.00	0.00	0.00	
19,600.0	90.00	359.38	12,691.0	6,868.4	-1,294.6	6,988.8	0.00	0.00	0.00	
19,700.0	90.00	359.38	12,691.0	6,968.4	-1,295.6	7,087.4	0.00	0.00	0.00	
19,800.0	90.00	359.38	12,691.0	7,068.4	-1,296.7	7,186.1	0.00	0.00	0.00	
19,900.0	90.00	359.38	12,691.0	7,168.4	-1,297.8	7,284.8	0.00	0.00	0.00	
20,000.0	90.00	359.38	12,691.0	7,268.4	-1,298.9	7,383.5	0.00	0.00	0.00	
20,097.1	90.00	359.38	12,691.0	7,365.5	-1,300.0	7,479.3	0.00	0.00	0.00	



Ameredev Operating, LLC

Planning Report

Database:	EDM5000	Local Co-ordinate Reference:	Well S BOT 127H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 2933.0usft
Project:	Green Jacket	MD Reference:	KB @ 2933.0usft
Site:	Oak #10N	North Reference:	Grid
Well:	S BOT 127H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #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)
SBOT127 LTP									
20,100.0	90.00	359.38	12,691.0	7,368.4	-1,300.0	7,482.1	0.00	0.00	0.00
20,147.2	90.00	359.38	12,691.0	7,415.5	-1,300.5	7,528.7	0.00	0.00	0.00
SBOT127 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
SBOT South Border	0.00	0.00	1.0	-280.3	-5,535.3	365,347.21	857,736.52	32° 0' 1.130 N	103° 18' 45.621 W
- plan misses target center by 5542.4usft at 1.0usft MD (1.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			1.0	0.0	0.0	365,347.21	857,736.52		
Point 2			1.0	47.9	5,307.9	365,395.11	863,044.42		
SBOT127 FTP	0.00	0.00	12,691.0	-141.5	-1,218.4	365,486.01	862,053.49	32° 0' 2.097 N	103° 17' 55.479 W
- plan misses target center by 180.5usft at 12690.2usft MD (12567.1 TVD, -10.2 N, -1219.8 E)									
- Point									
SBOT127 LTP	0.00	0.00	12,691.0	7,365.5	-1,300.0	372,993.01	861,971.89	32° 1' 16.385 N	103° 17' 55.592 W
- plan hits target center									
- Point									
SBOT127 EOC	0.00	0.00	12,691.0	313.3	-1,223.3	365,940.78	862,048.57	32° 0' 6.598 N	103° 17' 55.485 W
- plan hits target center									
- Point									
SBOT127 BHL	0.00	0.00	12,691.0	7,415.5	-1,300.5	373,043.03	861,971.35	32° 1' 16.880 N	103° 17' 55.593 W
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,283.5	12,206.5	-171.2	-1,218.0	SBOT127 KOP
19,192.4	12,691.0	6,460.8	-1,290.1	SBOT127 into NMNM137809

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Ameredev Operating LLC
WELL NAME & NO.:	S Big Oak Tree Fed Com 26 36 31 127H
LOCATION:	Sec 32-26S-36E-NMP
COUNTY:	Lea County, New Mexico

COA

H2S	☐ Yes	☒ No	
Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst Potential	☒ Low	☐ Medium	☐ High
Cave/Karst Potential	☐ Critical		
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	☐ Conventional	☒ Multibowl	☐ Both
Other	☐ 4 String Area	☒ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☒ COM	☐ Unit

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The 13-3/8 inch surface casing shall be set at approximately 1,965 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - 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 **8 hours** 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.
2. The minimum required fill of cement behind the **13-3/8** inch intermediate casing is:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage. **More cement is required for lead on the DV stage tool. The BLM recommends at least 400 sacks at 2.47 ft³/sacks.**

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
 - b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office.
- ❖ 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.
- ❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:
- Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
 - Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

3. 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. If cement does not circulate see B.1.a, c-d above.

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. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 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 OOGO2.III.A.2.i 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.
- 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.

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)

☒ Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)
393-3612

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 Onshore Oil and Gas Order No. 2 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.

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 Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

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 OOGO2.III.A.2.i 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 when specified), 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 plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 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 Onshore Order No. 2.

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.



H₂S Drilling Operation Plan

1. **All Company and Contract personnel admitted on location must be trained by a qualified H₂S safety instructor to the following:**
 - a. Characteristics of H₂S
 - b. Physical effects and hazards
 - c. Principal and operation of H₂S detectors, warning system and briefing areas
 - d. Evacuation procedure, routes and first aid
 - e. Proper use of safety equipment and life support systems
 - f. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30 minute pressure demand air packs.
2. **Briefing Area:**
 - a. Two perpendicular areas will be designated by signs and readily accessible.
 - b. Upon location entry there will be a designated area to establish all safety compliance criteria (1.) has been met.
3. **H₂S Detection and Alarm Systems:**
 - a. H₂S sensors/detectors shall be located on the drilling rig floor, in the base of the sub structure/cellar area, and on the mud pits in the shale shaker area. Additional H₂S detectors may be placed as deemed necessary. All detectors will be set to initiate visual alarm at 10 ppm and visual with audible at 14 ppm and all equipment will be calibrated every 30 days or as needed.
 - b. An audio alarm will be installed on the derrick floor and in the top doghouse.
4. **Protective Equipment for Essential Personnel:**
 - a. **Breathing Apparatus:**
 - i. Rescue Packs (SCBA) - 1 Unit shall be placed at each briefing area.
 - ii. Two (SCBA) Units will be stored in safety trailer on location.
 - iii. Work/Escapes packs - 1 Unit will be available on rig floor in doghouse for emergency evacuation for driller.
 - b. **Auxiliary Rescue Equipment:**
 - i. Stretcher
 - ii. 2 - OSHA full body harnesses
 - iii. 100 ft. 5/8" OSHA approved rope
 - iv. 1 - 20# class ABC fire extinguisher
5. **Windsock and/or Wind Streamers:**
 - a. Windsock at mud pit area should be high enough to be visible.
 - b. Windsock on the rig floor should be high enough to be visible.
6. **Communication:**
 - a. While working under mask scripting boards will be used for communication where applicable.
 - b. Hand signals will be used when script boards are not applicable.



H₂S Drilling Operation Plan

- c. Two way radios will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at Drilling Foreman's Office.
- 7. **Drill Stem Testing:** - No Planned DST at this time.
- 8. **Mud program:**
 - a. If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary.
- 9. **Metallurgy:**
 - a. All drill strings, casing, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.
 - b. Drilling Contractor supervisor will be required to be familiar with the effect H₂S has on tubular goods and other mechanical equipment provided through contractor.



H₂S Contingency Plan

Emergency Procedures

In the event of a release of H₂S, the first responder(s) must:

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H₂S monitors and air packs in order to control the release.
- Use the “buddy system” to ensure no injuries occur during the response.
- Take precautions to avoid personal injury during this operation.
- Contact Operator and/or local officials the aid in operation. See list of phone numbers attached.
- Have received training in the:
 - Detection of H₂S and
 - Measures for protection against the gas,
 - Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air=1	2 ppm	N/A	1000 ppm

Contacting Authorities

Ameredev Operating LLC personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including direction to site. The following call list of essential and potential responders has been prepared for use during a release. Ameredev Operating LLC’s response must be in coordination with the State of New Mexico’s “Hazardous Materials Emergency Response Plan” (HMER)



H₂S Contingency Plan

Ameredev Operating LLC – Emergency Phone 737-300-4799			
Key Personnel:			
Name	Title	Office	Mobile
Floyd Hammond	Chief Operating officer	737-300-4724	512-783-6810
Shane McNeely	Operations Engineer	737-300-4729	432-413-8593
Blake Estrada	Construction Foreman		432-385-5831

<u>Artesia</u>			
Ambulance			911
State Police			575-746-2703
City Police			575-746-2703
Sheriff's Office			575-746-9888
Fire Department			575-746-2701
Local Emergency Planning Committee			575-746-2122
New Mexico Oil Conservation Division			575-748-1283
<u>Carlsbad</u>			
Ambulance			911
State Police			575-885-3137
City Police			575-885-2111
Sheriff's Office			575-887-7551
Fire Department			575-887-3798
Local Emergency Planning Committee			575-887-6544
US Bureau of Land Management			575-887-6544
<u>Santa Fe</u>			
New Mexico Emergency Response Commission (Santa Fe)			505-476-9600
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs			505-827-9126
New Mexico State Emergency Operations Center			505-476-9635
<u>National</u>			
National Emergency Response Center (Washington, D.C.)			800-424-8802
<u>Medical</u>			
Flight for Life - 4000 24th St.; Lubbock, TX			806-743-9911
Aerocare - R3, Box 49F; Lubbock, TX			806-747-8923
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM			505-842-4433
.SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM			505-842-4949



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

SUPO Data Report

01/12/2024

APD ID: 10400050865

Submission Date: 11/08/2019

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data
reflects the most
recent changes
[Show Final Text](#)

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

S_BIG_OAK_TREE_FED_COM_26_36_31_127H___WELL_PAD_ACCESS_MAP_20200811100853.pdf

Existing Road Purpose: ACCESS

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

S_BIG_OAK_TREE_FED_COM_26_36_31_127H___WELL_PAD_ACCESS_MAP_20200811100925.pdf

S_BIG_OAK_TREE_FED_COM_26_36_31_127H___ROAD_PLATS_REV_20200811100943.pdf

New road type: RESOURCE

Length: 17586

Feet

Width (ft.): 30

Max slope (%): 2

Max grade (%): 2

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 20

New road access erosion control: Crowned and Ditched

New road access plan or profile prepared? N

New road access plan

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Access road engineering design? N

Access road engineering design

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: Grader

Access other construction information: NM One Call (811) will be notified before construction start.

Access miscellaneous information:

Number of access turnouts:

Access turnout map:

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: Crowned and Ditched

Road Drainage Control Structures (DCS) description: None

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

S_BIG_OAK_TREE_FED_COM_26_36_31_127H__1_MI_RADIUS_WELLS_20200811101041.pdf

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: A 30 foot pipeline ROW will run from the OAK 10N pad to the existing Amen Corner CTB, northeast of the well pad. The ROW will contain (6) buried 4 inch poly flow lines (700 psi maximum) that transport produced oil, water and gas from the pad to the CTB (one for each well on the pad), and (1) buried 12 inch poly water line (200 psi maximum) provided for produced/recycled water for frac. The flow lines will run approximately 18,581 linear feet from pad to CTB. The water line runs approximately 8,429 linear feet from the pad to a tie-in to an existing water line in section 33. Any additional production facilities located on the well pad will be strategically placed to allow for maximum interim reclamation, re-contouring, and revegetation of the well location.

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Production Facilities map:

S_BIG_OAK_TREE_FED_COM_26_36_31_127H___WATER_LINE_20200811101135.pdf
BO_AMEN_CORNER_BATTERY_SITE_20200811101138.PDF
S_BIG_OAK_TREE_FED_COM_26_36_31_127H___FLOWLINES_REV_20200811101142.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: GW WELL

Water source use type: DUST CONTROL
SURFACE CASING
INTERMEDIATE/PRODUCTION CASING
STIMULATION

Source latitude: Source longitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Water source transport method: PIPELINE
TRUCKING

Source land ownership: PRIVATE

Source transportation land ownership: FEDERAL

Water source volume (barrels): 20000 Source volume (acre-feet): 2.577862
Source volume (gal): 840000

Water source and transportation

S_BIG_OAK_TREE_FED_COM_26_36_31_127H___WATER_WELL_LIST_20200811101232.pdf
S_BIG_OAK_TREE_FED_COM_26_36_31_127H___WATER_MAP_20200811101234.pdf

Water source comments: Water will be trucked or surface piped from existing water wells on private land. See attached list of available wells.
New water well? N

New Water Well Info

Well latitude: Well Longitude: Well datum:
Well target aquifer:
Est. depth to top of aquifer(ft): Est thickness of aquifer:

Operator Name: AMEREDEV OPERATING LLC**Well Name:** S BIG OAK TREE FED COM 26 36 31**Well Number:** 127H**Aquifer comments:****Aquifer documentation:****Well depth (ft):****Well casing type:****Well casing outside diameter (in.):****Well casing inside diameter (in.):****New water well casing?****Used casing source:****Drilling method:****Drill material:****Grout material:****Grout depth:****Casing length (ft.):****Casing top depth (ft.):****Well Production type:****Completion Method:****Water well additional information:****State appropriation permit:****Additional information attachment:**

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: NM One Call (811) will be notified before construction start. Top 6" of soil and brush will be stockpiled east of the pad. Closed loop drilling system will be used. Caliche will be hauled from an existing caliche pit on private (Dinwiddie Cattle Company) land in W2 08-25S-36E or an existing caliche pit on private (Dinwiddie Cattle Company) land in E2 17-25S-36E.

Construction Materials source location

S_BIG_OAK_TREE_FED_COM_26_36_31_127H__CALICHE_MAP_20200811101328.pdf

Section 7 - Methods for Handling

Waste type: DRILLING**Waste content description:** Drill cuttings, mud, salts, and other chemicals**Amount of waste:** 2000 barrels**Waste disposal frequency :** Daily**Safe containment description:** Steel tanks on pad**Safe containmant attachment:****Waste disposal type:** HAUL TO COMMERCIAL FACILITY**Disposal location ownership:** COMMERCIAL**Disposal type description:****Disposal location description:** R360's State approved (NM-01-0006) disposal site at Halfway, NM

Reserve Pit

Reserve Pit being used? NO**Temporary disposal of produced water into reserve pit?** NO

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Reserve pit length (ft.)

Reserve pit width (ft.)

Reserve pit depth (ft.)

Reserve pit volume (cu. yd.)

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? Y

Description of cuttings location Steel tanks on pad

Cuttings area length (ft.)

Cuttings area width (ft.)

Cuttings area depth (ft.)

Cuttings area volume (cu. yd.)

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

BO_OAK_10N_PAD_SITE_ALT_S_20200811101435.pdf

S_BIG_OAK_TREE_FED_COM_26_36_31_127H___WELLSITE_20200811101436.pdf

Comments:

Operator Name: AMEREDEV OPERATING LLC**Well Name:** S BIG OAK TREE FED COM 26 36 31**Well Number:** 127H

Section 10 - Plans for Surface

Type of disturbance: New Surface Disturbance**Multiple Well Pad Name:** OAK**Multiple Well Pad Number:** 10N

Recontouring

S_BIG_OAK_TREE_FED_COM_26_36_31_127H___WELLSITE_20200811101500.pdf

Drainage/Erosion control construction: Crowned and ditched**Drainage/Erosion control reclamation:** Harrowed on the contour

Well pad proposed disturbance (acres): 4.59	Well pad interim reclamation (acres): 0.79	Well pad long term disturbance (acres): 3.8
Road proposed disturbance (acres): 12.11	Road interim reclamation (acres): 0	Road long term disturbance (acres): 12.11
Powerline proposed disturbance (acres): 0	Powerline interim reclamation (acres): 0	Powerline long term disturbance (acres): 0
Pipeline proposed disturbance (acres): 12.8	Pipeline interim reclamation (acres): 0	Pipeline long term disturbance (acres): 12.8
Other proposed disturbance (acres): 5.81	Other interim reclamation (acres): 0	Other long term disturbance (acres): 5.81
Total proposed disturbance: 35.31	Total interim reclamation: 0.79	Total long term disturbance: 34.52

Disturbance Comments:

Reconstruction method: If circumstances allow, interim reclamation and/or final reclamation actions will be completed no later than 6 months from when the final well on location has been completed or plugged. Ameredev will gain written permission from the BLM if more time is needed. Interim reclamation will be completed within 6 months of completing the well. Interim reclamation will consist of shrinking the pad 17% (.79 acre) by removing caliche and reclaiming 40' wide swaths on the south and east sides of the pad. This will leave 3.8 acres for producing six wells, with tractor-trailer turn around. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with the surface owner's requirements. All topsoil for the battery will be reseeded in place for the life of the battery.

Topsoil redistribution: Enough stockpiled topsoil will be retained to cover the remainder of the pad when the well is plugged. New road will be similarly reclaimed within 6 months of plugging. Noxious weeds will be controlled.

Soil treatment: None**Existing Vegetation at the well pad:** Sparse low brush and intermittent grasses**Existing Vegetation at the well pad****Existing Vegetation Community at the road:** Sparse low brush and intermittent grasses**Existing Vegetation Community at the road****Existing Vegetation Community at the pipeline:** Sparse low brush and intermittent grasses**Existing Vegetation Community at the pipeline**

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Existing Vegetation Community at other disturbances: Sparse low brush and intermittent grasses

Existing Vegetation Community at other disturbances

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Seed

Seed Table

Seed Summary	
Seed Type	Pounds/Acre

Total pounds/Acre:

Seed reclamation

Operator Contact/Responsible Official

First Name: Christie

Last Name: Hanna

Phone: (737)300-4723

Email: channa@ameredev.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment

Weed treatment plan description: To BLM standards

Weed treatment plan

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Monitoring plan description: To BLM standards

Monitoring plan

Success standards: To BLM satisfaction

Pit closure description: No pit

Pit closure attachment:

Section 11 - Surface

Disturbance type: PIPELINE

Describe:

Surface Owner: PRIVATE OWNERSHIP,STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: HOBBS

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: AGREEMENT

Surface Access Agreement Need description: AMEREDEV OPERATING, LLC AND WASHINGTON CROSSING FIELD SERVICES, LLC HAVE AN SUA IN PLACE.

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Disturbance type: WELL PAD

Describe:

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: HOBBS

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: PRIVATE OWNERSHIP,STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: HOBBS

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: AGREEMENT

Surface Access Agreement Need description: AMEREDEV OPERATING, LLC AND WASHINGTON CROSSING FIELD SERVICES, LLC HAVE AN SUA IN PLACE.

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Disturbance type: OTHER

Describe: WATER LINE

Surface Owner: PRIVATE OWNERSHIP,STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

Operator Name: AMEREDEV OPERATING LLC**Well Name:** S BIG OAK TREE FED COM 26 36 31**Well Number:** 127H**BOR Local Office:****COE Local Office:****DOD Local Office:****NPS Local Office:****State Local Office:** HOBBS**Military Local Office:****USFWS Local Office:****Other Local Office:****USFS Region:****USFS Forest/Grassland:****USFS Ranger District:****Surface use plan certification:** NO**Surface use plan certification document:****Surface access agreement or bond:** AGREEMENT**Surface Access Agreement Need description:** AMEREDEV OPERATING, LLC AND WASHINGTON CROSSING FIELD SERVICES, LLC HAVE AN SUA IN PLACE.**Surface Access Bond BLM or Forest Service:****BLM Surface Access Bond number:****USFS Surface access bond number:**

Section 12 - Other

Right of Way needed? N**Use APD as ROW?****ROW Type(s):****ROW****SUPO Additional Information:**

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Use a previously conducted onsite? N

Previous Onsite information:

Other SUPO

S_BIG_OAK_TREE_FED_COM_26_36_31_127H__SURFACE_USE_PLAN_REV_20210722102215.pdf



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

PWD Data Report

01/12/2024

APD ID: 10400050865

Submission Date: 11/08/2019

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit

Pit liner description:

Pit liner manufacturers

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule

Lined pit reclamation description:

Lined pit reclamation

Leak detection system description:

Leak detection system

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Lined pit Monitor description:

Lined pit Monitor

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information

Section 3 - Unlined

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres):

PWD surface owner:

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule

Unlined pit reclamation description:

Unlined pit reclamation

Unlined pit Monitor description:

Unlined pit Monitor

Do you propose to put the produced water to beneficial use?

Beneficial use user

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic

State

Unlined Produced Water Pit Estimated

Unlined pit: do you have a reclamation bond for the pit?

Operator Name: AMEREDEV OPERATING LLC**Well Name:** S BIG OAK TREE FED COM 26 36 31**Well Number:** 127H**Is the reclamation bond a rider under the BLM bond?****Unlined pit bond number:****Unlined pit bond amount:****Additional bond information****Section 4 -****Would you like to utilize Injection PWD options?** N**Produced Water Disposal (PWD) Location:****PWD surface owner:****PWD disturbance (acres):****Injection PWD discharge volume (bbl/day):****Injection well mineral owner:****Injection well type:****Injection well number:****Injection well name:****Assigned injection well API number?****Injection well API number:****Injection well new surface disturbance (acres):****Minerals protection information:****Mineral protection****Underground Injection Control (UIC) Permit?****UIC Permit****Section 5 - Surface****Would you like to utilize Surface Discharge PWD options?** N**Produced Water Disposal (PWD) Location:****PWD surface owner:****PWD disturbance (acres):****Surface discharge PWD discharge volume (bbl/day):****Surface Discharge NPDES Permit?****Surface Discharge NPDES Permit attachment:****Surface Discharge site facilities information:****Surface discharge site facilities map:****Section 6 -****Would you like to utilize Other PWD options?** N**Produced Water Disposal (PWD) Location:****PWD surface owner:****PWD disturbance (acres):****Other PWD discharge volume (bbl/day):**

Operator Name: AMEREDEV OPERATING LLC

Well Name: S BIG OAK TREE FED COM 26 36 31

Well Number: 127H

Other PWD type description:

Other PWD type

Have other regulatory requirements been met?

Other regulatory requirements



Ameredev II, LLC

Wellbore Schematic

Well: S Big Oak Tree Fed Com 26-36-31 127H
SHL: Sec. 32 26S-36E 230' FSL & 230' FWL
BHL: Sec. 30 26S-36E 50' FNL & 988' FEL
 Lea, NM
Wellhead: A - 13-5/8" 10M x 13-5/8" SOW
 B - 13-5/8" 10M x 13-5/8" 10M
 C - 13-5/8" 10M x 13-5/8" 10M
 Tubing Spool - 7-1/16" 15M x 13-3/8" 10M
Xmas Tree: 2-9/16" 10M
Tubing: 2-7/8" L-80 6.5# 8rd EUE

Co. Well ID: xxxxxx
AFE No.: xxxx-xxx
API No.: xxxxxxxxxxxx
GL: 2,906'
Field: Delaware
Objective: Wolfcamp B
TVD: 12,691'
MD: 20,147'
Rig: TBD **KB 27'**
E-Mail: Wellsite2@ameredev.com

Hole Size	Formation Tops	Logs	Cement	Mud Weight
17.5"	Rustler 1,398'	1,249 Sacks	TOC 0'	8.4-8.6 ppg WBM
	13.375" 68# J-55 BTC 1,523'		100% Excess	
12.25"	Salado 1,678'	754 Sacks	TOC 0'	8.5-9.4 Diesel Brine Emulsion
	DV Tool with ACP 2,936'		50% Excess	
	Tansill 2,936'			
	Capitan Reef 3,472'			
	Lamar 4,814'			
	Bell Canyon 4,999'			
	No Casing 4,939'			
9.875"	Brushy Canyon 7,340'			8.5-9.4 Diesel Brine Emulsion
	Bone Spring Lime 8,558'			
	First Bone Spring 9,900'			
	Second Bone Spring 10,531'			
	Third Bone Spring Upper 11,009'			
	7.625" 29.7# L-80HC BTC 11,134'			
6.75"	Third Bone Spring 11,623'			10.5-12.5 ppg OBM
12° Build @ 12,284' MD thru 13,044' MD	Wolfcamp A 11,877'			
	Wolfcamp B 12,391'			
	5.5" 23# P110MS2 Anaconda GT 20,147'			
	Target Wolfcamp B 12691 TVD // 20147 MD			
		1,568 Sacks	TOC 0'	
			25% Excess	



5M Annular Preventer Variance Request and Well Control Procedures

Note: A copy of the Well Control Plan must be available at multiple locations on the rig for review by rig personnel, as well as review by the BLM PET/PE, and a copy must be maintained on the rig floor.

Dual Isolation Design for 5M Annular Exception

Ameredev will utilize 13-5/8” 10M (5M Annular) BOPE System consisting of:

- 13-5/8” 5M Annular
- 13-5/8” 10M Upper Pipe Rams
 - o 3-1/2” – 5-1/2” Variable Bore Ram
- 13-5/8” 10M Blind Rams
- 13-5/8” 10M Drilling Spool /w 2 - 4” 10M Outlets Double 10M Isolation Valves
- 13-5/8” 10M Lower Blind Rams
 - o 3-1/2” – 5-1/2” Variable Bore Ram

All drilling components and casing associated to exposure > 5000 psi BHP requiring a 10M system will have a double isolation (secondary barrier) below the 5M Annular that would provide a barrier to flow. The mud system will always be primary barrier, it will be maintained by adjusting values based on tourly mud tests and monitoring a PVT System to maintain static wellbore conditions, displacement procedures will be followed and recorded on daily drilling reports during tripping operations. Surge and swab pressure values will be calculated and maintained and static flow check will be monitored at previous casing shoe and verified static well conditions prior to tripping out of hole and again prior to pulling last joint of drill pipe through BOPE. The below table, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

Drill Components	Size	Primary Barrier	Secondary Barrier	Third Barrier
Drillpipe	3-1/2”-5-1/2”	Drilling Fluid	Upper Pipe Rams	Lower Pipe Rams
HWDP Drillpipe	3-1/2”-5-1/2”	Drilling Fluid	Upper Pipe Rams	Lower Pipe Rams
Drill Collars	3-1/2”-5-1/2”	Drilling Fluid	Upper Pipe Rams	Lower Pipe Rams
Production Casing	3-1/2”-5-1/2”	Drilling Fluid	Upper Pipe Rams	Lower Pipe Rams
Open Hole	13-5/8	Drilling Fluid	Blind Rams	
All Drilling Components in 10M Environment will have OD that will allow full Operational RATED WORKING PRESSURE for system design. Kill line with minimum 2” ID will be available outside substructure with 10M Check Valve for OOH Kill Operations				

Well Control Procedures

Proper well control procedures are dependent to differentiating well conditions, to cover the basic well control operations there are will be standard drilling ahead, tripping pipe, tripping BHA, running casing, and pipe out of the hole/open hole scenarios that will be defined by procedures below. Initial Shut In Pressure can be taken against the Uppermost BOPE component the 5M Annular, pressure control can be transferred from the lesser 5M Annular to the 10M Upper Pipe Rams if needed. Shut In Pressures may be equal to or less than the Rated Working Pressure but at no time will the pressure on the annular preventer exceed the Rated Working Pressure of the annular. The annular will be tested to 5,000 psi. This will be the Rated Working Pressure of the annular preventer. All scenarios will be written such as shut in will be performed by closing the 10,000 psi Upper Pipe Rams for faster Accumulator pressure recovery to allow safer reaction to controlling wellbore pressure.

Shutting In While Drilling

1. Sound alarm signaling well control event to Rig Crew
2. Space out drill string to allow FOSV installation
3. Shut down pumps
4. Shut in Upper Pipe Rams and open HCR against Open Chokes and Valves
Open to working pressure gauge
5. Install open, full open safety valve and close valve, Close Chokes
6. Verify well is shut-in and flow has stopped
7. Notify supervisory personnel
8. Record data (SIDP, SICP, Pit Gain, and Time)
9. Hold pre-job safety meeting and discuss kill procedure

Shutting In While Tripping

1. Sound alarm signaling well control event to Rig Crew
2. Space out drill string to allow FOSV installation
3. Shut in Upper Pipe Rams and open HCR against Open Chokes and Valves
Open to working pressure gauge
4. Install open, full open safety valve and close valve, Close Chokes
5. Verify well is shut-in and flow has stopped
6. Notify supervisory personnel
7. Record data (SIDP, SICP, Pit Gain, and Time)
8. Hold pre-job safety meeting and discuss kill procedure

Shutting In While Running Casing

1. Sound alarm signaling well control event to Rig Crew
2. Space out casing to allow circulating swedge installation
3. Shut in Upper Pipe Rams and open HCR against Open Chokes and Valves
Open to working pressure gauge
4. Install circulating swedge, Close high pressure, low torque valves, Close Chokes
5. Verify well is shut-in and flow has stopped
6. Notify supervisory personnel
7. Record data (SIDP, SICP, Pit Gain, and Time)
8. Hold Pre-job safety meeting and discuss kill procedure

Shutting in while out of hole

1. Sound alarm signaling well control event to Rig Crew
2. Shut-in well: close blind rams and open HCR against Open Chokes and Valves
Open to working pressure gauge
3. Close Chokes, Verify well is shut-in and monitor pressures
4. Notify supervisory personnel
5. Record data (SIDP, SICP, Pit Gain, and Time)
6. Hold Pre-job safety meeting and discuss kill procedure

Shutting in prior to pulling BHA through stack

Prior to pulling last joint of drill pipe thru the stack space out and check flow
If flowing see steps below.

1. Sound alarm signaling well control event to Rig Crew
2. Shut in upper pipe ram and open HCR against Open Chokes and Valves Open
to working pressure gauge
3. Install open, full open safety valve and close valve, Close Chokes
4. Verify well is shut-in and flow has stopped
5. Notify supervisory personnel
6. Record data (SIDP, SICP, Pit Gain, and Time)
7. Hold pre-job safety meeting and discuss kill procedure

Shutting in while BHA is in the stack and ram preventer and combo immediately available

1. Sound alarm signaling well control event to Rig Crew
2. Space out BHA with upset just beneath the compatible pipe ram
3. Shut in upper compatible pipe ram and open HCR against Open Chokes and Valves Open to working pressure gauge
4. Install open, full open safety valve and close valve, Close Chokes
5. Verify well is shut-in and flow has stopped
6. Notify supervisory personnel
7. Record data (SIDP, SICP, Pit Gain, and Time)
8. Hold pre-job safety meeting and discuss kill procedure

*FOSV will be on rig floor in open position with operating handle for each type of connection utilized and tested to 10,000 psi

Shutting in while BHA is in the stack and no ram preventer or combo immediately available

1. Sound alarm signaling well control event to Rig Crew
2. If possible pick up high enough, to pull string clear and follow "Open Hole" scenario

If not possible to pick up high enough:

3. Stab Crossover, make up one joint/stand of drill pipe, and install open, full open safety valve (Leave Open)
4. Space out drill string with upset just beneath the compatible pipe ram.
5. Shut in upper compatible pipe ram and open HCR against Open Chokes and Valves Open to working pressure gauge
6. Close FOSV, Close Chokes, Verify well is shut-in and flow has stopped
7. Notify supervisory personnel
8. Record data (SIDP, SICP, Pit Gain, and Time)
9. Hold pre-job safety meeting and discuss kill procedure



Pressure Control Plan

Pressure Control Equipment

- Following setting of 13-3/8" Surface Casing Ameredev will install 13-5/8 MB4 Multi Bowl Casing Head by welding on a 13-5/8 SOW x 13-5/8" 5M in combination with 13-5/8 5M x 13-5/8 10M B-Sec to Land Intm #1 and a 13-5/8 10M x 13-5/8 10M shouldered to land C-Sec to Land Intm #2 (Installation procedure witnessed and verified by a manufacturer's representative).
- Casing will be tested to 1500 psi or .22 psi/ft whichever is greater for 30 minutes with <10% leak off, but will not exceed 70% of the burst rating per Onshore Order No. 2.
- Ameredev will install a 5M System Blowout Preventer (BOPE) with a 5M Annular Preventer and related equipment (BOPE). Full testing will be performed utilizing a full isolation test plug and limited to 5,000 psi MOP of MB4 Multi Bowl Casing Head. Pressure will be held for 10 min or until provisions of test are met on all valves and rams. The 5M Annular Preventer will be tested to 50% of approved working pressure (2,500 psi). Casing will be tested to 1500 psi or .22 psi/ft whichever is greater for 30 minutes with <10% leak off, but will not exceed 70% of the burst rating per Onshore Order No. 2.
- Setting of 9-5/8" (7-5/8" as applicable) Intermediate will be done by landing a wellhead hanger in the 13-5/8" 5M Bowl, Cementing and setting Well Head Packing seals and testing same. (Installation procedure witnessed and verified by a manufacturer's representative) Casing will be tested to 1500 psi or .22 psi/ft whichever is greater for 30 minutes with <10% leak off, but will not exceed 70% of the burst rating per Onshore Order No. 2.
- Full testing will be performed utilizing a full isolation test plug to 10,000 psi MOP of MB4 Multi Bowl B-Section. Pressure will be held for 10 min or until provisions of test are met on all valves and rams. The 5M Annular Preventer will be tested to 100% of approved working pressure (5,000 psi).
- Before drilling >20ft of new formation under the 9-5/8" (7-5/8" as applicable) Casing Shoe a pressure integrity test of the Casing Shoe will be performed to minimum of the MWE anticipated to control formation pressure to the next casing depth.
- Following setting of 5-1/2" Production Casing and adequate WOC time Ameredev will break 10M System Blowout Preventer (BOP) from 10M DOL-2 Casing Head, install annulus casing slips and test same (Installation procedure witnessed and verified by a manufacturer's representative) and install 11" 10M x 5-1/8" 15M Tubing Head (Installation procedure witnessed and verified by a manufacturer's representative). Ameredev will test head to 70% casing design and install Dry Hole cap with needle valve and pressure gauge to monitor well awaiting completion.



Pressure Control Plan

- Slow pump speeds will be taken daily by each crew and recorded on Daily Drilling Report after mudding up.
- A choke manifold and accumulator with floor and remote operating stations will be functional and in place after installation of BOPE, as well as full functioning mud gas separator.
- Weekly BOPE pit level drills will be conducted by each crew and recorded on Daily Drilling Report.
- BOP will be fully operated when out of hole and will be documented on the daily drilling log.
- All B.O.P.s and associated equipment will be tested in accordance with Onshore Order #2
- All B.O.P. testing will be done by an independent service company.
- The B.O.P. will be tested within 21 days of the original test if drilling takes more time than planned.
- Ameredev requests a variance to connect the B.O.P. choke outlet to the choke manifold using a co-flex hose with a 10,000 psi working pressure that has been tested to 15,000psi and is built to API Spec 16C. Once the flex line is installed it will be tied down with safety clamps. (certifications will be sent to Carlsbad BLM Office prior to install)
- Ameredev requests a variance to install a 5M Annular Preventer on the 10M System to drill the Production Hole below the 9-5/8" (7-5/8" as applicable) Intermediate Section. 5M Annular will be tested to 100% working pressure (5,000 psi). A full well control procedure will be included to isolate well bore.

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1625 N. French Dr., Hobbs, NM 88240
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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 303118

CONDITIONS

Operator: AMEREDEV OPERATING, LLC 2901 Via Fortuna Austin, TX 78746	OGRID: 372224
	Action Number: 303118
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	1/19/2024
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	1/19/2024
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	1/19/2024
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	1/19/2024
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing	1/19/2024