Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

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.

[331686]

2. Name of Operator

[372224]

9. API Well No.

30-025-52144

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory **[33813]**

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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
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 10/13/2023

SL

APPROVED WITH CONDITIONS

KZ
10/20/2023

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 10/05/2023

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 wen, 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 directionany 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 wen 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 win 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 conects this information to anow 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 Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Approval Date: 10/05/2023

Additional Operator Remarks

Location of Well

0. SHL: SESE / 200 FSL / 906 FEL / TWSP: 25S / RANGE: 36E / SECTION: 20 / LAT: 32.1091552 / LONG: -103.2815392 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 100 FSL / 1025 FEL / TWSP: 25S / RANGE: 36E / SECTION: 20 / LAT: 32.1088805 / LONG: -103.2819237 (TVD: 11344 feet, MD: 11636 feet)

BHL: NENE / 50 FNL / 1025 FEL / TWSP: 25S / RANGE: 36E / SECTION: 17 / LAT: 32.1374929 / LONG: -103.2819003 (TVD: 11344 feet, MD: 22046 feet)

BLM Point of Contact

Name: MARIAH HUGHES
Title: Land Law Examiner
Phone: (575) 234-5972
Email: mhughes@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

[1]API Number	[2]Pool Code	[3]Pool Name
30-025-52144	33813	JAL;WOLFCAMP, WEST

[4]Property Code	[5]Property Name	[6]Well Number
331686	DOGWOOD 25 36 20 FED COM	117H

[7]OGRID No.	[8]Operator Name	[9]Elevation
372224	AMEREDEV OPERATING, LLC.	3052'

[10]Surface Location

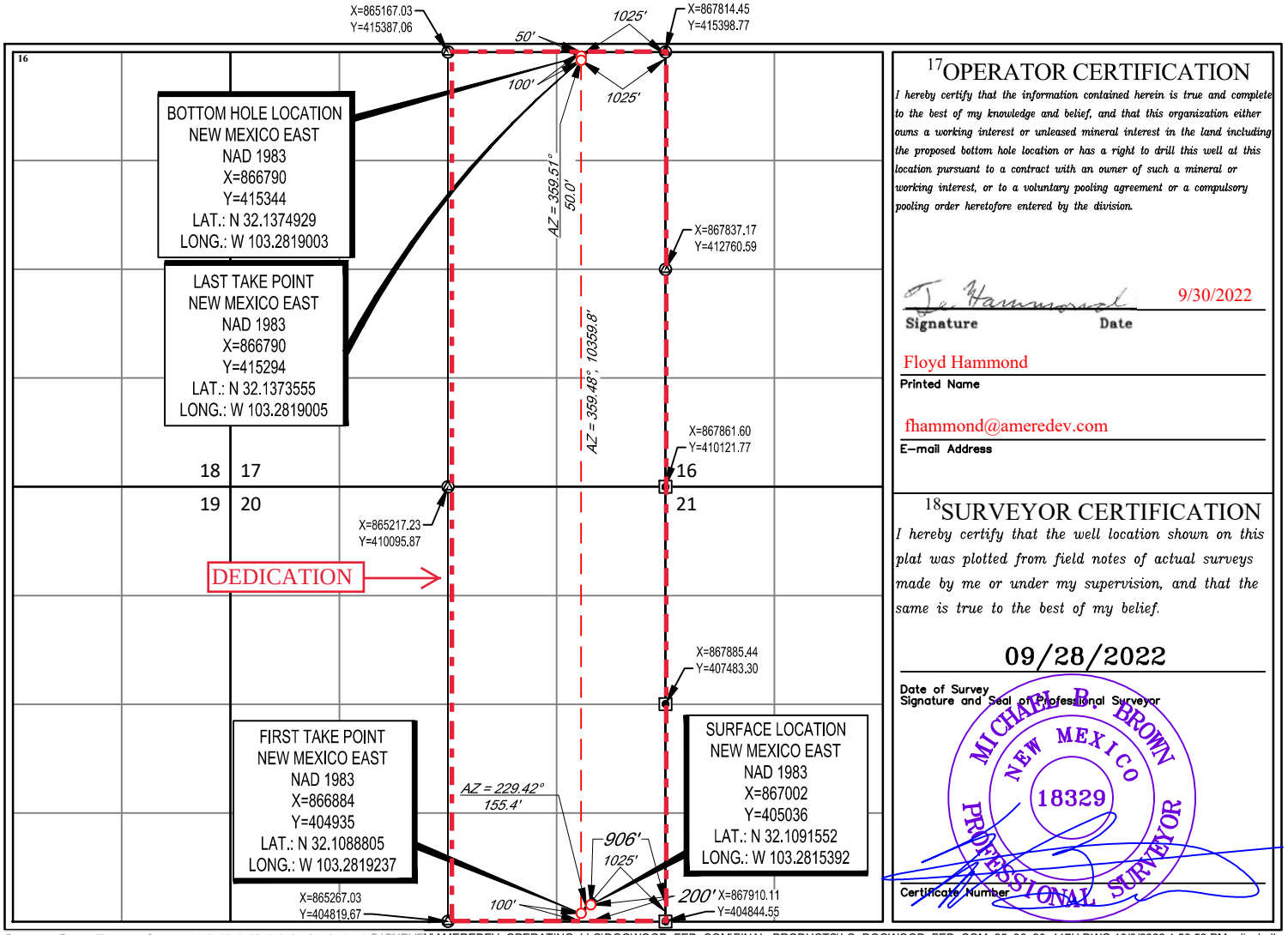
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	20	25-S	36-E	-	200'	SOUTH	906'	EAST	LEA

[11]Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	17	25-S	36-E	-	50'	NORTH	1025'	EAST	LEA

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



[17]OPERATOR CERTIFICATION

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

Signature Date 9/30/2022

Floyd Hammond
Printed Name

fhammond@ameredev.com
E-mail Address

[18]SURVEYOR CERTIFICATION

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

09/28/2022
Date of Survey
Signature and Seal of Professional Surveyor

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

Certificate Number

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil 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:** 09/22/2023

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
Dogwood 25 36 20 Fed Com 108H	30025-		200' FSL & 846' FEL	564	1,114	555
Dogwood 25 36 20 Fed Com 111H	30025-		200' FSL & 360' FWL	564	1,114	555
Dogwood 25 36 20 Fed Com 113H	30025-		200' FSL & 1720' FWL	564	1,114	555
Dogwood 25 36 20 Fed Com 115H	30025-		200' FSL & 1780' FEL	564	1,114	555
Dogwood 25 36 20 Fed Com 117H	30025-		200' FSL & 906' FEL	564	1,114	555
Dogwood 25 36 20 Fed Com 122H	30025-		200' FSL & 400' FWL	564	1,114	555

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
Dogwood 25 36 20 Fed Com 108H	30025-	12/01/2023	12/20/2024	01/20/2024	02/10/2024	02/13/2024
Dogwood 25 36 20 Fed Com 111H	30025-	12/01/2023	12/20/2024	01/20/2024	02/10/2024	02/13/2024
Dogwood 25 36 20 Fed Com 113H	30025-	12/01/2023	12/20/2024	01/20/2024	02/10/2024	02/13/2024
Dogwood 25 36 20 Fed Com 115H	30025-	12/01/2023	12/20/2024	01/20/2024	02/10/2024	02/13/2024
Dogwood 25 36 20 Fed Com 117H	30025-	12/01/2023	12/20/2024	01/20/2024	02/10/2024	02/13/2024
Dogwood 25 36 20 Fed Com 122H	30025-	12/01/2023	12/20/2024	01/20/2024	02/10/2024	02/13/2024

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: Cesca Yu
Printed Name: Cesca Yu
Title: Engineer
E-mail Address: cyu@ameredev.com
Date: 09/22/2023
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

AFMSS

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

Drilling Plan Data Report

10/06/2023

APD ID: 10400088648 **Submission Date:** 10/14/2022

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
12258279	RUSTLER ANHYDRITE	3052	1190	1190	ANHYDRITE	NONE	N
12258280	SALADO	1320	1732	1732	SALT	NONE	N
12258281	TANSILL	-296	3348	3348	LIMESTONE	NONE	N
12258282	CAPITAN REEF	-893	3945	3945	LIMESTONE	USEABLE WATER	N
12258283	LAMAR	-2016	5068	5068	LIMESTONE	NONE	N
12258284	BELL CANYON	-2182	5234	5234	SANDSTONE	NATURAL GAS, OIL	N
12258285	BRUSHY CANYON	-4035	7087	7087	SANDSTONE	NATURAL GAS, OIL	N
12258286	BONE SPRING LIME	-4909	7961	7961	LIMESTONE	NONE	N
12258287	BONE SPRING 1ST	-6368	9420	9420	SANDSTONE	NATURAL GAS, OIL	N
12258288	BONE SPRING 2ND	-6830	9882	9882	SANDSTONE	NATURAL GAS, OIL	N
12258289	BONE SPRING 3RD	-7350	10402	10402	LIMESTONE	NATURAL GAS, OIL	N
12258290	BONE SPRING 3RD	-7922	10974	10974	SANDSTONE	NATURAL GAS, OIL	N
12258291	WOLFCAMP	-8083	11135	11135	SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

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

Testing Procedure: See attachment

Choke Diagram Attachment:

10M_Choke_Manifold_REV_20221012094900.pdf

BOP Diagram Attachment:

5M_BOP_System_20221012094915.pdf

5M_Annular_Preventer_Variance_and_Well_Control_Plan_20221012094915.pdf

Pressure_Control_Plan_Single_Well_MB4_3String_Big_Hole_BLM_20221012094915.pdf

3_String_MB_Ameredev_Wellhead_Drawing_7.0625in_Spool_net_20221012094930.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	1315	0	1315	3052	1737	1315	J-55	68	OTHER - BTC	6.98	1	DRY	10.23	DRY	11.96
2	INTERMEDIATE	9.875	7.625	NEW	API	N	0	10527	0	10527	3061	-7475	10527	HCL-80	29.7	OTHER - BTC	1.3	1.28	DRY	2.04	DRY	3.01
3	PRODUCTION	6.75	5.5	NEW	API	N	0	22046	0	11344	3061	-8292	22046	P-110	23	OTHER - USS Eagle SFH	1.81	1.95	DRY	1.5	DRY	1.67

Casing Attachments

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Dogwood_25_36_20_Fed_Com_117H_WBS_and_CDA_20221014074130.pdf

13.375_68_J55_SEAH_20221012095127.pdf

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Dogwood_25_36_20_Fed_Com_117H_WBS_and_CDA_20221014074242.pdf

7.625_29.70_L80HC_BORUSAN_20221012112210.pdf

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Dogwood_25_36_20_Fed_Com_117H_WBS_and_CDA_20221014074213.pdf

5.5_23_RYS110_EAGLE_SFH_20221012112232.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

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	929	885.2	1.76	13.5	1557.9	100	Class C	Bentonite, Accelerator, Kolseal, Defoamer, Celloflake
SURFACE	Tail		929	1315	200	1.34	14.8	268	100	Class C	N/A
INTERMEDIATE	Lead	3348	0	2817	642.8	3.5	9	2249.8	50	Class C	Bentonite, Salt, Kolseal, Defoamer, Celloclake
INTERMEDIATE	Tail		2817	3348	200	1.33	14.8	266	25	Class C	N/A
INTERMEDIATE	Lead	3348	3348	9306	909.9	2.47	11.9	2247.3	50	Class H	Bentonite, Retarder, Kolseal, Defoamer, Celloflake, Anti-Settling
INTERMEDIATE	Tail		9306	10527	200	1.31	14.2	262	25	Class H	Salt, Bentonite, Retarder, Dispersant, Fluid Loss
PRODUCTION	Lead		0	22046	1716	1.34	14.2	2300	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: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

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	1315	WATER-BASED MUD	8.4	8.6							
1315	10527	OTHER : Diesel Brine Emulsion	7.5	9.4							
10527	11344	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/GEOLOGICAL LITHOLOGY LOG,

Coring operation description for the well:

No coring will be done on this well.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6194 **Anticipated Surface Pressure:** 3698

Anticipated Bottom Hole Temperature(F): 165

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

H2S_Plan_20221012101152.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Dogwood_Fed_Com_25_36_20_117H_PWP_20221014074559.pdf

Other proposed operations facets description:

Rig Skid Procedure

Other proposed operations facets attachment:

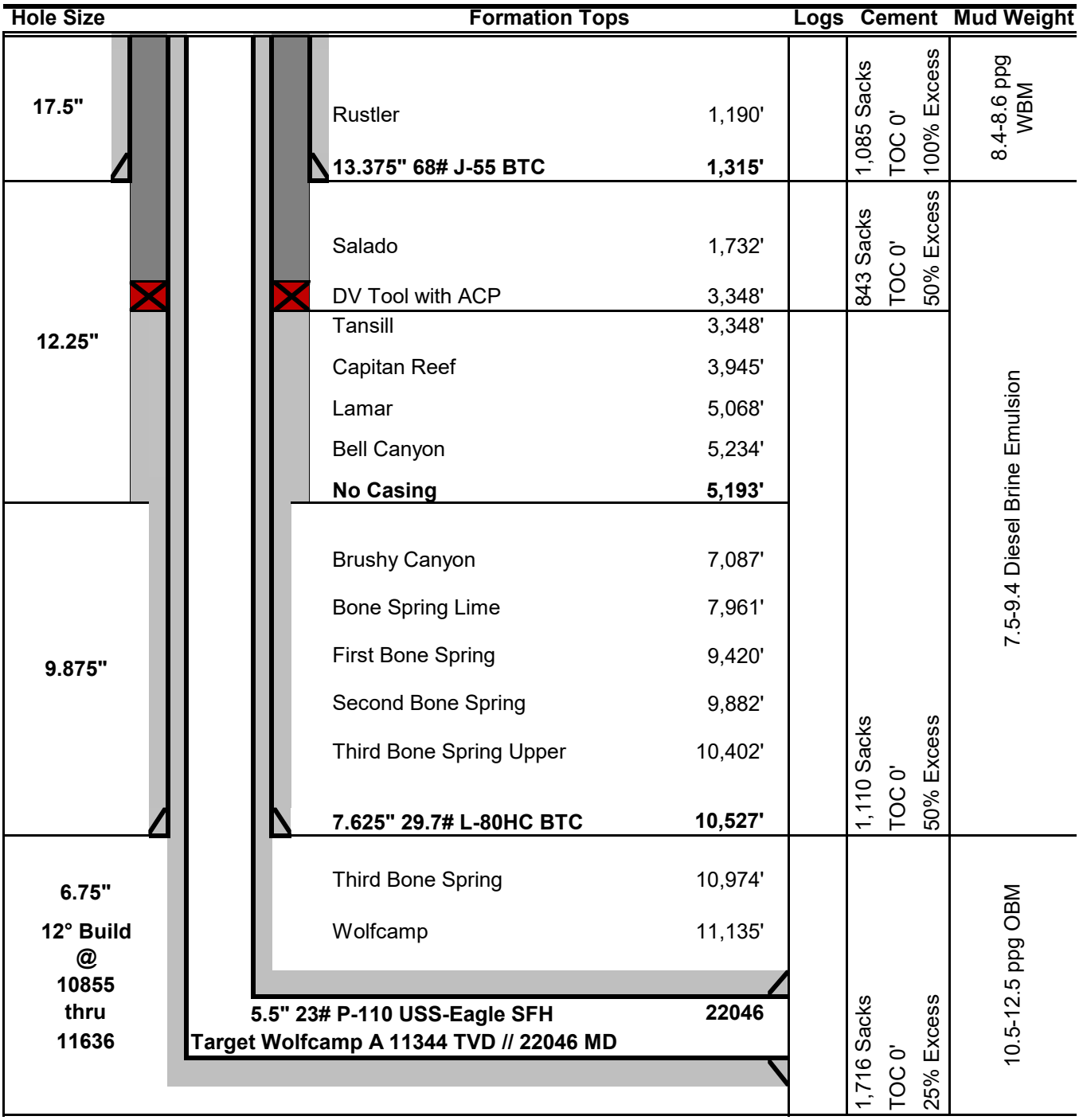
Rig_Skid_Procedure_20221013091522.pdf

Other Variance attachment:

5M_Annular_Preventer_Variance_and_Well_Control_Plan_20221012101237.pdf
Generic_Wolfcamp_Contingency_PDF_REV2_20221014071540.pdf
R616___CoC_for_hoses_12_18_17_20221012101226.pdf
Requested_Exceptions___3_String_Revised_01312019_20221012101224.pdf

Wellbore Schematic

Well:	Dogwood 25 36 20 Fed Com 117H	**Co. Well ID:**	xxxxxx
SHL:	SEC. 20, T.-25S, R.-36E, 200' FSL, 906' FEL	**AFE No.:**	xxxx-xxx
BHL:	SEC. 17, T.-25S, R.-36E, 50' FNL, 1025' FEL	**API No.:**	xxxxxxxxxx
	Lea, NM	**GL:**	3052
Wellhead:	A - 13-5/8" 10M x 13-5/8" SOW	**Field:**	Delaware
	B - 13-5/8" 10M x 13-5/8" 10M	**Objective:**	Wolfcamp A
	C - 13-5/8" 10M x 13-5/8" 10M	**TVD:**	11344
	Tubing Spool - 7-1/16" 15M x 13-3/8" 10M	**MD:**	22046
Xmas Tree:	2-9/16" 10M	**Rig:**	TBD **KB** 27'
Tubing:	2-7/8" L-80 6.5# 8rd EUE	**E-Mail:**	DrillingCR@ameredev.com



Casing Design and Safety Factor Check

Casing Specifications						
Segment	**Hole ID**	**Depth**	**OD**	**Weight**	**Grade**	**Coupling**
Surface	17.5	1,315'	13.375	68	J-55	BTC
Intermediate	9.875	10,527'	7.625	29.7	HCL-80	BTC
Prod Segment A	6.75	10855	5.5	23	P-110	SFH
Prod Segment B	6.75	22046	5.5	23	P-110	SFH

Check Surface Casing				
OD Cplg	Body	Joint	Collapse	Burst
inches	*1000 lbs*	*1000 lbs*	*psi*	*psi*
14.375	1,069	915	4,100	3,450
Safety Factors				
1.56	11.96	10.23	6.98	0.67
Check Intermediate Casing				
OD Cplg	Body	Joint	Collapse	Burst
inches	*1000 lbs*	*1000 lbs*	*psi*	*psi*
7.625	940	558	6700	9460
Safety Factors				
1.13	3.01	2.04	1.30	1.28
Check Prod Casing, Segment A				
OD Cplg	Body	Joint	Collapse	Burst
inches	*1000 lbs*	*1000 lbs*	*psi*	*psi*
5.777	728	655	12780	14360
Safety Factors				
0.49	1.67	1.50	1.81	1.95
Check Prod Casing, Segment B				
OD Cplg	Body	Joint	Collapse	Burst
inches	*1000 lbs*	*1000 lbs*	*psi*	*psi*
5.777	728	655	12780	14360
Safety Factors				
0.49	2.83	2.54	0.89	1.95

PERFORMANCE DATA

API BTC **13.375 in** **68.00 lbs/ft** **J-55**
Technical Data Sheet

Tubular Parameters

Size	13.375	in	Minimum Yield	55,000	psi
Nominal Weight	68.00	lbs/ft	Minimum Tensile	75,000	psi
Grade	J-55		Yield Load	1,069,000	lbs
PE Weight	66.10	lbs/ft	Tensile Load	1,458,000	lbs
Wall Thickness	0.480	in	Min. Internal Yield Pressure	3,500	psi
Nominal ID	12.415	in	Collapse Pressure	1,950	psi
Drift Diameter	12.259	in			
Nom. Pipe Body Area	19.445	in²			

Connection Parameters

Connection OD	14.375	in
Coupling Length	10.625	in
Threads Per Inch	5.000	in
Standoff Thread Turns	1.000	
Make-Up Loss	4.513	in
Yield Load In Tension	---	lbs
Min. Internal Yield Pressure	3,500	psi

Printed on: February-13-2015

BORUSAN MANNESMANN

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

	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

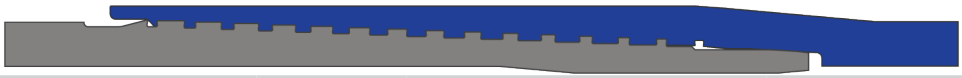
	Inspection and Testing
Visual	OD Longitidunal and independent 3rd party SEA
NDT	Independent 3rd party full body EMI after hydrotest Calibration notch sensitivity: 10% of specified wall thickness

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

U. S. Steel Tubular Products

11/14/2018 9:02:57 AM

5.500" 23.00lbs/ft (0.415" Wall) USS RYS110 USS-EAGLE SFH™



MECHANICAL PROPERTIES	Pipe	USS-EAGLE SFH™	
Minimum Yield Strength	110,000	--	psi
Maximum Yield Strength	125,000	--	psi
Minimum Tensile Strength	120,000	--	psi
DIMENSIONS	**Pipe**	**USS-EAGLE SFH™**	
Outside Diameter	5.500	5.830	in.
Wall Thickness	0.415	--	in.
Inside Diameter	4.670	4.585	in.
Standard Drift	4.545	4.545	in.
Alternate Drift	--	4.545	in.
Nominal Linear Weight, T&C	23.00	--	lbs/ft
Plain End Weight	22.56	--	lbs/ft
SECTION AREA	**Pipe**	**USS-EAGLE SFH™**	
Critical Area	6.630	5.507	sq. in.
Joint Efficiency	--	83.1	%
PERFORMANCE	**Pipe**	**USS-EAGLE SFH™**	
Minimum Collapse Pressure	14,540	14,540	psi
External Pressure Leak Resistance	--	10,000	psi
Minimum Internal Yield Pressure	14,520	14,520	psi
Minimum Pipe Body Yield Strength	729,000	--	lbs
Joint Strength	--	606,000	lbs
Compression Rating	--	606,000	lbs
Reference Length	--	17,909	ft
Maximum Uniaxial Bend Rating	--	76.2	deg/100 ft
MAKE-UP DATA	**Pipe**	**USS-EAGLE SFH™**	
Make-Up Loss	--	6.65	in.
Minimum Make-Up Torque	--	16,600	ft-lbs
Maximum Make-Up Torque	--	19,800	ft-lbs
Maximum Operating Torque	--	28,000	ft-lbs

U. S. Steel Tubular Products
460 Wildwood Forest Drive, Suite 300S
Spring, Texas 77380

1-877-893-9461
connections@uss.com
www.usstubular.com

Ameredev Operating

Lea County, NM (N83-NME)
Dogwood_AGI
Dogwood Fed Com 25 36 20 117H

OWB

Plan: PRELIM#1

Standard Planning Report - Geographic

10 October, 2022

AMEREDEV
American Resource Development LLC.

Planning Report - Geographic

Database:	AUS-COMPASS - EDM_15 - 32bit	**Local Co-ordinate Reference:**	Well Dogwood Fed Com 25 36 20 117H
Company:	Ameredev Operating	**TVD Reference:**	KB=26' @ 3078.0usft
Project:	Lea County, NM (N83-NME)	**MD Reference:**	KB=26' @ 3078.0usft
Site:	Dogwood_AGI	**North Reference:**	Grid
Well:	Dogwood Fed Com 25 36 20 117H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM#1		

Project Lea County, NM (N83-NME)

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

Site Dogwood_AGI

Site Position:		**Northing:**	405,003.49 usft	**Latitude:**	32.1091554
From:	Map	**Easting:**	863,649.20 usft	**Longitude:**	-103.2923681
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well Dogwood Fed Com 25 36 20 117H

Well Position	**+N/-S**	0.0 usft	**Northing:**	405,036.00 usft	**Latitude:**	32.1091552
	+E/-W	0.0 usft	**Easting:**	867,002.29 usft	**Longitude:**	-103.2815392
Position Uncertainty		3.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,052.0 usft
Grid Convergence:		0.56 °				

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	10/10/2022	6.25	59.79	47,319.79927979

Design PRELIM#1

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	359.48

Plan Survey Tool Program **Date** 10/10/2022

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	22,046.0	PRELIM#1 (OWB)	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	
2,192.2	3.84	190.52	2,192.1	-6.3	-1.2	2.00	2.00	0.00	190.52	
10,854.8	3.84	190.52	10,835.2	-577.4	-107.2	0.00	0.00	0.00	0.00	
11,636.2	90.00	359.48	11,344.0	-101.1	-118.1	12.00	11.03	21.62	168.94	FTP (DW 117H)
21,996.1	90.00	359.48	11,344.0	10,258.3	-212.0	0.00	0.00	0.00	0.00	LTP (DW 117H)
22,046.0	90.00	359.48	11,344.0	10,308.2	-212.4	0.00	0.00	0.00	0.00	BHL (DW 117H)

AMEREDEV
American Resource Development LLC.

Planning Report - Geographic

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Site:	Dogwood_AGI	**North Reference:**	Grid
Well:	Dogwood Fed Com 25 36 20 117H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM#1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
100.0	0.00	0.00	100.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
200.0	0.00	0.00	200.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
300.0	0.00	0.00	300.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
400.0	0.00	0.00	400.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
500.0	0.00	0.00	500.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
600.0	0.00	0.00	600.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
700.0	0.00	0.00	700.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
800.0	0.00	0.00	800.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
900.0	0.00	0.00	900.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
1,000.0	0.00	0.00	1,000.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
1,100.0	0.00	0.00	1,100.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
1,189.0	0.00	0.00	1,189.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
Rustler									
1,200.0	0.00	0.00	1,200.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
1,300.0	0.00	0.00	1,300.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
1,400.0	0.00	0.00	1,400.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
1,500.0	0.00	0.00	1,500.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
1,600.0	0.00	0.00	1,600.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
1,700.0	0.00	0.00	1,700.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
1,731.0	0.00	0.00	1,731.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
Salado									
1,800.0	0.00	0.00	1,800.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
1,900.0	0.00	0.00	1,900.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
2,000.0	0.00	0.00	2,000.0	0.0	0.0	405,036.00	867,002.29	32.1091552	-103.2815392
Start Build 2.00									
2,100.0	2.00	190.52	2,100.0	-1.7	-0.3	405,034.28	867,001.97	32.1091505	-103.2815403
2,192.2	3.84	190.52	2,192.1	-6.3	-1.2	405,029.66	867,001.11	32.1091378	-103.2815432
Start 8662.6 hold at 2192.2 MD									
2,200.0	3.84	190.52	2,199.8	-6.9	-1.3	405,029.15	867,001.02	32.1091364	-103.2815435
2,300.0	3.84	190.52	2,299.6	-13.4	-2.5	405,022.55	866,999.79	32.1091183	-103.2815477
2,400.0	3.84	190.52	2,399.4	-20.0	-3.7	405,015.96	866,998.57	32.1091003	-103.2815518
2,500.0	3.84	190.52	2,499.2	-26.6	-4.9	405,009.37	866,997.34	32.1090822	-103.2815560
2,600.0	3.84	190.52	2,598.9	-33.2	-6.2	405,002.78	866,996.12	32.1090641	-103.2815602
2,700.0	3.84	190.52	2,698.7	-39.8	-7.4	404,996.18	866,994.90	32.1090460	-103.2815643
2,800.0	3.84	190.52	2,798.5	-46.4	-8.6	404,989.59	866,993.67	32.1090279	-103.2815685
2,900.0	3.84	190.52	2,898.3	-53.0	-9.8	404,983.00	866,992.45	32.1090098	-103.2815726
3,000.0	3.84	190.52	2,998.0	-59.6	-11.1	404,976.40	866,991.22	32.1089917	-103.2815768
3,100.0	3.84	190.52	3,097.8	-66.2	-12.3	404,969.81	866,990.00	32.1089736	-103.2815810
3,200.0	3.84	190.52	3,197.6	-72.8	-13.5	404,963.22	866,988.78	32.1089556	-103.2815851
3,300.0	3.84	190.52	3,297.4	-79.4	-14.7	404,956.63	866,987.55	32.1089375	-103.2815893
3,349.7	3.84	190.52	3,347.0	-82.7	-15.3	404,953.35	866,986.94	32.1089285	-103.2815914
Tansill									
3,400.0	3.84	190.52	3,397.1	-86.0	-16.0	404,950.03	866,986.33	32.1089194	-103.2815934
3,500.0	3.84	190.52	3,496.9	-92.6	-17.2	404,943.44	866,985.10	32.1089013	-103.2815976
3,600.0	3.84	190.52	3,596.7	-99.2	-18.4	404,936.85	866,983.88	32.1088832	-103.2816018
3,700.0	3.84	190.52	3,696.5	-105.7	-19.6	404,930.25	866,982.65	32.1088651	-103.2816059
3,800.0	3.84	190.52	3,796.2	-112.3	-20.9	404,923.66	866,981.43	32.1088470	-103.2816101
3,900.0	3.84	190.52	3,896.0	-118.9	-22.1	404,917.07	866,980.21	32.1088289	-103.2816142
3,948.1	3.84	190.52	3,944.0	-122.1	-22.7	404,913.90	866,979.62	32.1088202	-103.2816163
Capitan									
4,000.0	3.84	190.52	3,995.8	-125.5	-23.3	404,910.48	866,978.98	32.1088109	-103.2816184
4,100.0	3.84	190.52	4,095.6	-132.1	-24.5	404,903.88	866,977.76	32.1087928	-103.2816226
4,200.0	3.84	190.52	4,195.3	-138.7	-25.8	404,897.29	866,976.53	32.1087747	-103.2816267

AMEREDEV
American Resource Development LLC.

Planning Report - Geographic

Database:	AUS-COMPASS - EDM_15 - 32bit	**Local Co-ordinate Reference:**	Well Dogwood Fed Com 25 36 20 117H
Company:	Ameredev Operating	**TVD Reference:**	KB=26' @ 3078.0usft
Project:	Lea County, NM (N83-NME)	**MD Reference:**	KB=26' @ 3078.0usft
Site:	Dogwood_AGI	**North Reference:**	Grid
Well:	Dogwood Fed Com 25 36 20 117H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM#1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,300.0	3.84	190.52	4,295.1	-145.3	-27.0	404,890.70	866,975.31	32.1087566	-103.2816309
4,400.0	3.84	190.52	4,394.9	-151.9	-28.2	404,884.10	866,974.09	32.1087385	-103.2816351
4,500.0	3.84	190.52	4,494.7	-158.5	-29.4	404,877.51	866,972.86	32.1087204	-103.2816392
4,600.0	3.84	190.52	4,594.4	-165.1	-30.7	404,870.92	866,971.64	32.1087023	-103.2816434
4,700.0	3.84	190.52	4,694.2	-171.7	-31.9	404,864.33	866,970.41	32.1086842	-103.2816475
4,800.0	3.84	190.52	4,794.0	-178.3	-33.1	404,857.73	866,969.19	32.1086662	-103.2816517
4,900.0	3.84	190.52	4,893.8	-184.9	-34.3	404,851.14	866,967.97	32.1086481	-103.2816559
5,000.0	3.84	190.52	4,993.5	-191.5	-35.5	404,844.55	866,966.74	32.1086300	-103.2816600
5,073.6	3.84	190.52	5,067.0	-196.3	-36.4	404,839.69	866,965.84	32.1086167	-103.2816631
Lamar									
5,100.0	3.84	190.52	5,093.3	-198.0	-36.8	404,837.95	866,965.52	32.1086119	-103.2816642
5,118.0	3.84	190.52	5,111.3	-199.2	-37.0	404,836.77	866,965.30	32.1086086	-103.2816649
NMNM138912 Exit at 5118.0 MD									
5,200.0	3.84	190.52	5,193.1	-204.6	-38.0	404,831.36	866,964.29	32.1085938	-103.2816683
5,240.0	3.84	190.52	5,233.0	-207.3	-38.5	404,828.72	866,963.80	32.1085866	-103.2816700
Bell Canyon									
5,300.0	3.84	190.52	5,292.9	-211.2	-39.2	404,824.77	866,963.07	32.1085757	-103.2816725
5,400.0	3.84	190.52	5,392.6	-217.8	-40.4	404,818.18	866,961.84	32.1085576	-103.2816767
5,500.0	3.84	190.52	5,492.4	-224.4	-41.7	404,811.58	866,960.62	32.1085395	-103.2816808
5,600.0	3.84	190.52	5,592.2	-231.0	-42.9	404,804.99	866,959.40	32.1085215	-103.2816850
5,700.0	3.84	190.52	5,692.0	-237.6	-44.1	404,798.40	866,958.17	32.1085034	-103.2816891
5,800.0	3.84	190.52	5,791.7	-244.2	-45.3	404,791.80	866,956.95	32.1084853	-103.2816933
5,900.0	3.84	190.52	5,891.5	-250.8	-46.6	404,785.21	866,955.72	32.1084672	-103.2816975
6,000.0	3.84	190.52	5,991.3	-257.4	-47.8	404,778.62	866,954.50	32.1084491	-103.2817016
6,100.0	3.84	190.52	6,091.1	-264.0	-49.0	404,772.03	866,953.28	32.1084310	-103.2817058
6,200.0	3.84	190.52	6,190.8	-270.6	-50.2	404,765.43	866,952.05	32.1084129	-103.2817099
6,300.0	3.84	190.52	6,290.6	-277.2	-51.5	404,758.84	866,950.83	32.1083948	-103.2817141
6,400.0	3.84	190.52	6,390.4	-283.8	-52.7	404,752.25	866,949.60	32.1083768	-103.2817183
6,500.0	3.84	190.52	6,490.2	-290.3	-53.9	404,745.65	866,948.38	32.1083587	-103.2817224
6,600.0	3.84	190.52	6,589.9	-296.9	-55.1	404,739.06	866,947.16	32.1083406	-103.2817266
6,700.0	3.84	190.52	6,689.7	-303.5	-56.4	404,732.47	866,945.93	32.1083225	-103.2817307
6,800.0	3.84	190.52	6,789.5	-310.1	-57.6	404,725.88	866,944.71	32.1083044	-103.2817349
6,900.0	3.84	190.52	6,889.3	-316.7	-58.8	404,719.28	866,943.48	32.1082863	-103.2817391
7,000.0	3.84	190.52	6,989.0	-323.3	-60.0	404,712.69	866,942.26	32.1082682	-103.2817432
7,097.2	3.84	190.52	7,086.0	-329.7	-61.2	404,706.28	866,941.07	32.1082506	-103.2817473
Brushy Canyon									
7,100.0	3.84	190.52	7,088.8	-329.9	-61.3	404,706.10	866,941.03	32.1082501	-103.2817474
7,200.0	3.84	190.52	7,188.6	-336.5	-62.5	404,699.50	866,939.81	32.1082321	-103.2817516
7,300.0	3.84	190.52	7,288.4	-343.1	-63.7	404,692.91	866,938.59	32.1082140	-103.2817557
7,400.0	3.84	190.52	7,388.1	-349.7	-64.9	404,686.32	866,937.36	32.1081959	-103.2817599
7,500.0	3.84	190.52	7,487.9	-356.3	-66.2	404,679.73	866,936.14	32.1081778	-103.2817640
7,600.0	3.84	190.52	7,587.7	-362.9	-67.4	404,673.13	866,934.91	32.1081597	-103.2817682
7,700.0	3.84	190.52	7,687.5	-369.5	-68.6	404,666.54	866,933.69	32.1081416	-103.2817724
7,800.0	3.84	190.52	7,787.2	-376.1	-69.8	404,659.95	866,932.47	32.1081235	-103.2817765
7,900.0	3.84	190.52	7,887.0	-382.6	-71.0	404,653.35	866,931.24	32.1081054	-103.2817807
7,973.2	3.84	190.52	7,960.0	-387.5	-71.9	404,648.53	866,930.35	32.1080922	-103.2817837
Bone Spring Lime									
8,000.0	3.84	190.52	7,986.8	-389.2	-72.3	404,646.76	866,930.02	32.1080874	-103.2817848
8,100.0	3.84	190.52	8,086.6	-395.8	-73.5	404,640.17	866,928.79	32.1080693	-103.2817890
8,200.0	3.84	190.52	8,186.3	-402.4	-74.7	404,633.58	866,927.57	32.1080512	-103.2817932
8,300.0	3.84	190.52	8,286.1	-409.0	-75.9	404,626.98	866,926.34	32.1080331	-103.2817973
8,400.0	3.84	190.52	8,385.9	-415.6	-77.2	404,620.39	866,925.12	32.1080150	-103.2818015
8,500.0	3.84	190.52	8,485.7	-422.2	-78.4	404,613.80	866,923.90	32.1079969	-103.2818056
8,600.0	3.84	190.52	8,585.4	-428.8	-79.6	404,607.20	866,922.67	32.1079788	-103.2818098

AMEREDEV
American Resource Development LLC.

Planning Report - Geographic

Database:	AUS-COMPASS - EDM_15 - 32bit	**Local Co-ordinate Reference:**	Well Dogwood Fed Com 25 36 20 117H
Company:	Ameredev Operating	**TVD Reference:**	KB=26' @ 3078.0usft
Project:	Lea County, NM (N83-NME)	**MD Reference:**	KB=26' @ 3078.0usft
Site:	Dogwood_AGI	**North Reference:**	Grid
Well:	Dogwood Fed Com 25 36 20 117H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM#1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,700.0	3.84	190.52	8,685.2	-435.4	-80.8	404,600.61	866,921.45	32.1079607	-103.2818140
8,800.0	3.84	190.52	8,785.0	-442.0	-82.1	404,594.02	866,920.22	32.1079426	-103.2818181
8,900.0	3.84	190.52	8,884.8	-448.6	-83.3	404,587.43	866,919.00	32.1079246	-103.2818223
9,000.0	3.84	190.52	8,984.5	-455.2	-84.5	404,580.83	866,917.78	32.1079065	-103.2818264
9,100.0	3.84	190.52	9,084.3	-461.8	-85.7	404,574.24	866,916.55	32.1078884	-103.2818306
9,200.0	3.84	190.52	9,184.1	-468.4	-87.0	404,567.65	866,915.33	32.1078703	-103.2818348
9,300.0	3.84	190.52	9,283.9	-474.9	-88.2	404,561.05	866,914.10	32.1078522	-103.2818389
9,400.0	3.84	190.52	9,383.6	-481.5	-89.4	404,554.46	866,912.88	32.1078341	-103.2818431
9,435.4	3.84	190.52	9,419.0	-483.9	-89.8	404,552.12	866,912.45	32.1078277	-103.2818446
First Bone Spring									
9,500.0	3.84	190.52	9,483.4	-488.1	-90.6	404,547.87	866,911.66	32.1078160	-103.2818472
9,600.0	3.84	190.52	9,583.2	-494.7	-91.9	404,541.28	866,910.43	32.1077979	-103.2818514
9,700.0	3.84	190.52	9,683.0	-501.3	-93.1	404,534.68	866,909.21	32.1077799	-103.2818556
9,800.0	3.84	190.52	9,782.7	-507.9	-94.3	404,528.09	866,907.98	32.1077618	-103.2818597
9,898.5	3.84	190.52	9,881.0	-514.4	-95.5	404,521.60	866,906.78	32.1077440	-103.2818638
Second Bone Spring									
9,900.0	3.84	190.52	9,882.5	-514.5	-95.5	404,521.50	866,906.76	32.1077437	-103.2818639
10,000.0	3.84	190.52	9,982.3	-521.1	-96.8	404,514.90	866,905.53	32.1077256	-103.2818680
10,100.0	3.84	190.52	10,082.1	-527.7	-98.0	404,508.31	866,904.31	32.1077075	-103.2818722
10,200.0	3.84	190.52	10,181.8	-534.3	-99.2	404,501.72	866,903.09	32.1076894	-103.2818764
10,300.0	3.84	190.52	10,281.6	-540.9	-100.4	404,495.13	866,901.86	32.1076713	-103.2818805
10,400.0	3.84	190.52	10,381.4	-547.5	-101.7	404,488.53	866,900.64	32.1076532	-103.2818847
10,419.7	3.84	190.52	10,401.0	-548.8	-101.9	404,487.24	866,900.40	32.1076497	-103.2818855
Upper Third Bone Spring									
10,500.0	3.84	190.52	10,481.2	-554.1	-102.9	404,481.94	866,899.41	32.1076352	-103.2818889
10,600.0	3.84	190.52	10,580.9	-560.7	-104.1	404,475.35	866,898.19	32.1076171	-103.2818930
10,700.0	3.84	190.52	10,680.7	-567.2	-105.3	404,468.75	866,896.97	32.1075990	-103.2818972
10,800.0	3.84	190.52	10,780.5	-573.8	-106.5	404,462.16	866,895.74	32.1075809	-103.2819013
10,854.8	3.84	190.52	10,835.2	-577.4	-107.2	404,458.55	866,895.07	32.1075710	-103.2819036
KOP-Start DLS 12.00 TFO 168.94									
10,875.0	1.54	208.13	10,855.3	-578.4	-107.5	404,457.64	866,894.82	32.1075685	-103.2819045
10,900.0	1.81	335.43	10,880.3	-578.3	-107.8	404,457.71	866,894.50	32.1075687	-103.2819055
10,925.0	4.71	350.49	10,905.3	-576.9	-108.1	404,459.08	866,894.16	32.1075725	-103.2819065
10,950.0	7.69	354.01	10,930.1	-574.2	-108.5	404,461.75	866,893.82	32.1075798	-103.2819076
10,975.0	10.68	355.57	10,954.8	-570.3	-108.8	404,465.73	866,893.47	32.1075908	-103.2819086
10,993.6	12.90	356.26	10,973.0	-566.5	-109.1	404,469.51	866,893.20	32.1076012	-103.2819093
Third Bone Spring									
11,000.0	13.67	356.45	10,979.3	-565.0	-109.2	404,470.98	866,893.10	32.1076052	-103.2819096
11,025.0	16.67	357.02	11,003.4	-558.5	-109.6	404,477.51	866,892.73	32.1076232	-103.2819106
11,050.0	19.66	357.42	11,027.1	-550.7	-109.9	404,485.30	866,892.36	32.1076446	-103.2819115
11,075.0	22.66	357.71	11,050.4	-541.7	-110.3	404,494.32	866,891.98	32.1076694	-103.2819125
11,100.0	25.66	357.95	11,073.2	-531.5	-110.7	404,504.54	866,891.59	32.1076975	-103.2819134
11,125.0	28.66	358.13	11,095.5	-520.1	-111.1	404,515.94	866,891.20	32.1077288	-103.2819143
11,150.0	31.66	358.29	11,117.1	-507.5	-111.5	404,528.50	866,890.81	32.1077634	-103.2819152
11,170.1	34.07	358.39	11,134.0	-496.6	-111.8	404,539.41	866,890.49	32.1077934	-103.2819159
Wolfcamp									
11,175.0	34.66	358.41	11,138.0	-493.8	-111.9	404,542.16	866,890.42	32.1078009	-103.2819160
11,200.0	37.66	358.53	11,158.2	-479.1	-112.3	404,556.91	866,890.02	32.1078415	-103.2819168
11,225.0	40.66	358.62	11,177.6	-463.3	-112.7	404,572.69	866,889.63	32.1078848	-103.2819176
11,250.0	43.66	358.71	11,196.1	-446.5	-113.0	404,589.46	866,889.24	32.1079309	-103.2819183
11,275.0	46.66	358.78	11,213.8	-428.8	-113.4	404,607.18	866,888.85	32.1079797	-103.2819190
11,300.0	49.66	358.85	11,230.4	-410.2	-113.8	404,625.80	866,888.47	32.1080308	-103.2819197
11,325.0	52.65	358.92	11,246.1	-390.7	-114.2	404,645.26	866,888.09	32.1080843	-103.2819203
11,350.0	55.65	358.98	11,260.7	-370.5	-114.6	404,665.52	866,887.72	32.1081400	-103.2819208

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Project:	Lea County, NM (N83-NME)	**MD Reference:**	KB=26' @ 3078.0usft
Site:	Dogwood_AGI	**North Reference:**	Grid
Well:	Dogwood Fed Com 25 36 20 117H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM#1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,375.0	58.65	359.03	11,274.3	-349.5	-114.9	404,686.52	866,887.35	32.1081978	-103.2819214
11,400.0	61.65	359.08	11,286.7	-327.8	-115.3	404,708.20	866,887.00	32.1082574	-103.2819218
11,425.0	64.65	359.13	11,298.0	-305.5	-115.6	404,730.50	866,886.65	32.1083187	-103.2819222
11,450.0	67.65	359.18	11,308.1	-282.6	-116.0	404,753.36	866,886.31	32.1083815	-103.2819226
11,475.0	70.65	359.22	11,317.0	-259.3	-116.3	404,776.72	866,885.99	32.1084457	-103.2819229
11,500.0	73.65	359.26	11,324.7	-235.5	-116.6	404,800.51	866,885.67	32.1085111	-103.2819232
11,525.0	76.65	359.31	11,331.1	-211.3	-116.9	404,824.67	866,885.37	32.1085775	-103.2819234
11,537.0	78.09	359.33	11,333.7	-199.6	-117.1	404,836.35	866,885.23	32.1086096	-103.2819235
NMNM138912 Entry at 11537.0 MD									
11,550.0	79.65	359.35	11,336.2	-186.9	-117.2	404,849.13	866,885.08	32.1086448	-103.2819236
11,575.0	82.65	359.39	11,340.1	-162.2	-117.5	404,873.83	866,884.81	32.1087127	-103.2819237
11,600.0	85.65	359.42	11,342.6	-137.3	-117.7	404,898.69	866,884.55	32.1087810	-103.2819237
11,625.0	88.65	359.46	11,343.9	-112.3	-118.0	404,923.66	866,884.31	32.1088496	-103.2819237
11,636.2	90.00	359.48	11,344.0	-101.1	-118.1	404,934.90	866,884.21	32.1088805	-103.2819237
LP-Start 10359.8 hold at 11636.2 MD - FTP (DW 117H)									
11,700.0	90.00	359.48	11,344.0	-37.3	-118.7	404,998.66	866,883.63	32.1090558	-103.2819236
11,800.0	90.00	359.48	11,344.0	62.7	-119.6	405,098.65	866,882.72	32.1093306	-103.2819233
11,900.0	90.00	359.48	11,344.0	162.6	-120.5	405,198.65	866,881.82	32.1096055	-103.2819231
12,000.0	90.00	359.48	11,344.0	262.6	-121.4	405,298.64	866,880.91	32.1098804	-103.2819229
12,100.0	90.00	359.48	11,344.0	362.6	-122.3	405,398.64	866,880.00	32.1101552	-103.2819227
12,200.0	90.00	359.48	11,344.0	462.6	-123.2	405,498.64	866,879.10	32.1104301	-103.2819224
12,300.0	90.00	359.48	11,344.0	562.6	-124.1	405,598.63	866,878.19	32.1107049	-103.2819222
12,400.0	90.00	359.48	11,344.0	662.6	-125.0	405,698.63	866,877.28	32.1109798	-103.2819220
12,500.0	90.00	359.48	11,344.0	762.6	-125.9	405,798.62	866,876.38	32.1112547	-103.2819218
12,600.0	90.00	359.48	11,344.0	862.6	-126.8	405,898.62	866,875.47	32.1115295	-103.2819215
12,700.0	90.00	359.48	11,344.0	962.6	-127.7	405,998.61	866,874.57	32.1118044	-103.2819213
12,800.0	90.00	359.48	11,344.0	1,062.6	-128.6	406,098.61	866,873.66	32.1120793	-103.2819211
12,900.0	90.00	359.48	11,344.0	1,162.6	-129.5	406,198.61	866,872.75	32.1123541	-103.2819209
13,000.0	90.00	359.48	11,344.0	1,262.6	-130.4	406,298.60	866,871.85	32.1126290	-103.2819206
13,100.0	90.00	359.48	11,344.0	1,362.6	-131.3	406,398.60	866,870.94	32.1129038	-103.2819204
13,200.0	90.00	359.48	11,344.0	1,462.6	-132.3	406,498.59	866,870.03	32.1131787	-103.2819202
13,300.0	90.00	359.48	11,344.0	1,562.6	-133.2	406,598.59	866,869.13	32.1134536	-103.2819200
13,400.0	90.00	359.48	11,344.0	1,662.6	-134.1	406,698.59	866,868.22	32.1137284	-103.2819197
13,500.0	90.00	359.48	11,344.0	1,762.6	-135.0	406,798.58	866,867.32	32.1140033	-103.2819195
13,600.0	90.00	359.48	11,344.0	1,862.6	-135.9	406,898.58	866,866.41	32.1142782	-103.2819193
13,700.0	90.00	359.48	11,344.0	1,962.6	-136.8	406,998.57	866,865.50	32.1145530	-103.2819191
13,800.0	90.00	359.48	11,344.0	2,062.6	-137.7	407,098.57	866,864.60	32.1148279	-103.2819189
13,900.0	90.00	359.48	11,344.0	2,162.6	-138.6	407,198.57	866,863.69	32.1151027	-103.2819186
14,000.0	90.00	359.48	11,344.0	2,262.6	-139.5	407,298.56	866,862.78	32.1153776	-103.2819184
14,100.0	90.00	359.48	11,344.0	2,362.6	-140.4	407,398.56	866,861.88	32.1156525	-103.2819182
14,200.0	90.00	359.48	11,344.0	2,462.6	-141.3	407,498.55	866,860.97	32.1159273	-103.2819180
14,300.0	90.00	359.48	11,344.0	2,562.6	-142.2	407,598.55	866,860.07	32.1162022	-103.2819177
14,400.0	90.00	359.48	11,344.0	2,662.5	-143.1	407,698.54	866,859.16	32.1164770	-103.2819175
14,500.0	90.00	359.48	11,344.0	2,762.5	-144.0	407,798.54	866,858.25	32.1167519	-103.2819173
14,600.0	90.00	359.48	11,344.0	2,862.5	-144.9	407,898.54	866,857.35	32.1170268	-103.2819171
14,700.0	90.00	359.48	11,344.0	2,962.5	-145.8	407,998.53	866,856.44	32.1173016	-103.2819168
14,800.0	90.00	359.48	11,344.0	3,062.5	-146.8	408,098.53	866,855.53	32.1175765	-103.2819166
14,900.0	90.00	359.48	11,344.0	3,162.5	-147.7	408,198.52	866,854.63	32.1178514	-103.2819164
15,000.0	90.00	359.48	11,344.0	3,262.5	-148.6	408,298.52	866,853.72	32.1181262	-103.2819162
15,100.0	90.00	359.48	11,344.0	3,362.5	-149.5	408,398.52	866,852.82	32.1184011	-103.2819159
15,200.0	90.00	359.48	11,344.0	3,462.5	-150.4	408,498.51	866,851.91	32.1186759	-103.2819157
15,300.0	90.00	359.48	11,344.0	3,562.5	-151.3	408,598.51	866,851.00	32.1189508	-103.2819155
15,400.0	90.00	359.48	11,344.0	3,662.5	-152.2	408,698.50	866,850.10	32.1192257	-103.2819153
15,500.0	90.00	359.48	11,344.0	3,762.5	-153.1	408,798.50	866,849.19	32.1195005	-103.2819150

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American Resource Development LLC.

Planning Report - Geographic

Database:	AUS-COMPASS - EDM_15 - 32bit	**Local Co-ordinate Reference:**	Well Dogwood Fed Com 25 36 20 117H
Company:	Ameredev Operating	**TVD Reference:**	KB=26' @ 3078.0usft
Project:	Lea County, NM (N83-NME)	**MD Reference:**	KB=26' @ 3078.0usft
Site:	Dogwood_AGI	**North Reference:**	Grid
Well:	Dogwood Fed Com 25 36 20 117H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM#1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,600.0	90.00	359.48	11,344.0	3,862.5	-154.0	408,898.50	866,848.28	32.1197754	-103.2819148
15,700.0	90.00	359.48	11,344.0	3,962.5	-154.9	408,998.49	866,847.38	32.1200503	-103.2819146
15,800.0	90.00	359.48	11,344.0	4,062.5	-155.8	409,098.49	866,846.47	32.1203251	-103.2819144
15,900.0	90.00	359.48	11,344.0	4,162.5	-156.7	409,198.48	866,845.57	32.1206000	-103.2819141
16,000.0	90.00	359.48	11,344.0	4,262.5	-157.6	409,298.48	866,844.66	32.1208748	-103.2819139
16,100.0	90.00	359.48	11,344.0	4,362.5	-158.5	409,398.48	866,843.75	32.1211497	-103.2819137
16,200.0	90.00	359.48	11,344.0	4,462.5	-159.4	409,498.47	866,842.85	32.1214246	-103.2819135
16,300.0	90.00	359.48	11,344.0	4,562.5	-160.3	409,598.47	866,841.94	32.1216994	-103.2819132
16,400.0	90.00	359.48	11,344.0	4,662.5	-161.3	409,698.46	866,841.03	32.1219743	-103.2819130
16,500.0	90.00	359.48	11,344.0	4,762.5	-162.2	409,798.46	866,840.13	32.1222491	-103.2819128
16,600.0	90.00	359.48	11,344.0	4,862.5	-163.1	409,898.45	866,839.22	32.1225240	-103.2819126
16,700.0	90.00	359.48	11,344.0	4,962.5	-164.0	409,998.45	866,838.32	32.1227989	-103.2819123
16,800.0	90.00	359.48	11,344.0	5,062.4	-164.9	410,098.45	866,837.41	32.1230737	-103.2819121
16,818.0	90.00	359.48	11,344.0	5,080.4	-165.0	410,116.41	866,837.25	32.1231231	-103.2819121
NMNM138912 Exit at 16818.0 MD									
16,900.0	90.00	359.48	11,344.0	5,162.4	-165.8	410,198.44	866,836.50	32.1233486	-103.2819119
17,000.0	90.00	359.48	11,344.0	5,262.4	-166.7	410,298.44	866,835.60	32.1236235	-103.2819117
17,100.0	90.00	359.48	11,344.0	5,362.4	-167.6	410,398.43	866,834.69	32.1238983	-103.2819114
17,200.0	90.00	359.48	11,344.0	5,462.4	-168.5	410,498.43	866,833.78	32.1241732	-103.2819112
17,300.0	90.00	359.48	11,344.0	5,562.4	-169.4	410,598.43	866,832.88	32.1244480	-103.2819110
17,400.0	90.00	359.48	11,344.0	5,662.4	-170.3	410,698.42	866,831.97	32.1247229	-103.2819108
17,500.0	90.00	359.48	11,344.0	5,762.4	-171.2	410,798.42	866,831.07	32.1249978	-103.2819105
17,600.0	90.00	359.48	11,344.0	5,862.4	-172.1	410,898.41	866,830.16	32.1252726	-103.2819103
17,700.0	90.00	359.48	11,344.0	5,962.4	-173.0	410,998.41	866,829.25	32.1255475	-103.2819101
17,800.0	90.00	359.48	11,344.0	6,062.4	-173.9	411,098.41	866,828.35	32.1258223	-103.2819099
17,900.0	90.00	359.48	11,344.0	6,162.4	-174.8	411,198.40	866,827.44	32.1260972	-103.2819096
18,000.0	90.00	359.48	11,344.0	6,262.4	-175.8	411,298.40	866,826.53	32.1263721	-103.2819094
18,100.0	90.00	359.48	11,344.0	6,362.4	-176.7	411,398.39	866,825.63	32.1266469	-103.2819092
18,200.0	90.00	359.48	11,344.0	6,462.4	-177.6	411,498.39	866,824.72	32.1269218	-103.2819090
18,300.0	90.00	359.48	11,344.0	6,562.4	-178.5	411,598.38	866,823.82	32.1271967	-103.2819087
18,400.0	90.00	359.48	11,344.0	6,662.4	-179.4	411,698.38	866,822.91	32.1274715	-103.2819085
18,500.0	90.00	359.48	11,344.0	6,762.4	-180.3	411,798.38	866,822.00	32.1277464	-103.2819083
18,600.0	90.00	359.48	11,344.0	6,862.4	-181.2	411,898.37	866,821.10	32.1280212	-103.2819081
18,700.0	90.00	359.48	11,344.0	6,962.4	-182.1	411,998.37	866,820.19	32.1282961	-103.2819078
18,800.0	90.00	359.48	11,344.0	7,062.4	-183.0	412,098.36	866,819.28	32.1285710	-103.2819076
18,900.0	90.00	359.48	11,344.0	7,162.4	-183.9	412,198.36	866,818.38	32.1288458	-103.2819074
19,000.0	90.00	359.48	11,344.0	7,262.4	-184.8	412,298.36	866,817.47	32.1291207	-103.2819072
19,100.0	90.00	359.48	11,344.0	7,362.4	-185.7	412,398.35	866,816.57	32.1293955	-103.2819069
19,200.0	90.00	359.48	11,344.0	7,462.3	-186.6	412,498.35	866,815.66	32.1296704	-103.2819067
19,300.0	90.00	359.48	11,344.0	7,562.3	-187.5	412,598.34	866,814.75	32.1299453	-103.2819065
19,400.0	90.00	359.48	11,344.0	7,662.3	-188.4	412,698.34	866,813.85	32.1302201	-103.2819063
19,500.0	90.00	359.48	11,344.0	7,762.3	-189.3	412,798.34	866,812.94	32.1304950	-103.2819060
19,600.0	90.00	359.48	11,344.0	7,862.3	-190.3	412,898.33	866,812.03	32.1307699	-103.2819058
19,700.0	90.00	359.48	11,344.0	7,962.3	-191.2	412,998.33	866,811.13	32.1310447	-103.2819056
19,800.0	90.00	359.48	11,344.0	8,062.3	-192.1	413,098.32	866,810.22	32.1313196	-103.2819054
19,900.0	90.00	359.48	11,344.0	8,162.3	-193.0	413,198.32	866,809.32	32.1315944	-103.2819051
20,000.0	90.00	359.48	11,344.0	8,262.3	-193.9	413,298.32	866,808.41	32.1318693	-103.2819049
20,100.0	90.00	359.48	11,344.0	8,362.3	-194.8	413,398.31	866,807.50	32.1321442	-103.2819047
20,200.0	90.00	359.48	11,344.0	8,462.3	-195.7	413,498.31	866,806.60	32.1324190	-103.2819045
20,300.0	90.00	359.48	11,344.0	8,562.3	-196.6	413,598.30	866,805.69	32.1326939	-103.2819042
20,400.0	90.00	359.48	11,344.0	8,662.3	-197.5	413,698.30	866,804.78	32.1329687	-103.2819040
20,500.0	90.00	359.48	11,344.0	8,762.3	-198.4	413,798.29	866,803.88	32.1332436	-103.2819038
20,600.0	90.00	359.48	11,344.0	8,862.3	-199.3	413,898.29	866,802.97	32.1335185	-103.2819036
20,700.0	90.00	359.48	11,344.0	8,962.3	-200.2	413,998.29	866,802.07	32.1337933	-103.2819033

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American Resource Development LLC.

Planning Report - Geographic

Database:	AUS-COMPASS - EDM_15 - 32bit	**Local Co-ordinate Reference:**	Well Dogwood Fed Com 25 36 20 117H
Company:	Ameredev Operating	**TVD Reference:**	KB=26' @ 3078.0usft
Project:	Lea County, NM (N83-NME)	**MD Reference:**	KB=26' @ 3078.0usft
Site:	Dogwood_AGI	**North Reference:**	Grid
Well:	Dogwood Fed Com 25 36 20 117H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM#1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
20,800.0	90.00	359.48	11,344.0	9,062.3	-201.1	414,098.28	866,801.16	32.1340682	-103.2819031
20,900.0	90.00	359.48	11,344.0	9,162.3	-202.0	414,198.28	866,800.25	32.1343431	-103.2819029
21,000.0	90.00	359.48	11,344.0	9,262.3	-202.9	414,298.27	866,799.35	32.1346179	-103.2819027
21,100.0	90.00	359.48	11,344.0	9,362.3	-203.8	414,398.27	866,798.44	32.1348928	-103.2819024
21,200.0	90.00	359.48	11,344.0	9,462.3	-204.8	414,498.27	866,797.53	32.1351676	-103.2819022
21,300.0	90.00	359.48	11,344.0	9,562.3	-205.7	414,598.26	866,796.63	32.1354425	-103.2819020
21,400.0	90.00	359.48	11,344.0	9,662.3	-206.6	414,698.26	866,795.72	32.1357174	-103.2819018
21,500.0	90.00	359.48	11,344.0	9,762.3	-207.5	414,798.25	866,794.82	32.1359922	-103.2819015
21,600.0	90.00	359.48	11,344.0	9,862.3	-208.4	414,898.25	866,793.91	32.1362671	-103.2819013
21,700.0	90.00	359.48	11,344.0	9,962.2	-209.3	414,998.25	866,793.00	32.1365419	-103.2819011
21,800.0	90.00	359.48	11,344.0	10,062.2	-210.2	415,098.24	866,792.10	32.1368168	-103.2819008
21,900.0	90.00	359.48	11,344.0	10,162.2	-211.1	415,198.24	866,791.19	32.1370917	-103.2819006
21,996.0	90.00	359.48	11,344.0	10,258.2	-212.0	415,294.23	866,790.32	32.1373555	-103.2819004
LTP (DW 117H)									
21,996.1	90.00	359.48	11,344.0	10,258.3	-212.0	415,294.29	866,790.32	32.1373557	-103.2819004
Start 49.9 hold at 21996.1 MD									
22,000.0	90.00	359.48	11,344.0	10,262.2	-212.0	415,298.23	866,790.28	32.1373665	-103.2819004
22,046.0	90.00	359.48	11,344.0	10,308.2	-212.4	415,344.22	866,789.87	32.1374929	-103.2819003
TD at 22046.0 - BHL (DW 117H)									

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
LTP (DW 117H) - plan hits target center - Point	0.00	0.00	11,344.0	10,258.2	-212.0	415,294.23	866,790.29	32.1373555	-103.2819005
BHL (DW 117H) - plan hits target center - Point	0.00	0.00	11,344.0	10,308.2	-212.4	415,344.22	866,789.87	32.1374929	-103.2819003
FTP (DW 117H) - plan hits target center - Point	0.00	0.00	11,344.0	-101.1	-118.1	404,934.90	866,884.21	32.1088805	-103.2819237

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Project:	Lea County, NM (N83-NME)	**MD Reference:**	KB=26' @ 3078.0usft
Site:	Dogwood_AGI	**North Reference:**	Grid
Well:	Dogwood Fed Com 25 36 20 117H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM#1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,189.0	1,189.0	Rustler		0.00	
1,731.0	1,731.0	Salado		0.00	
3,349.7	3,347.0	Tansill			
3,948.1	3,944.0	Capitan			
5,073.6	5,067.0	Lamar			
5,240.0	5,233.0	Bell Canyon			
7,097.2	7,086.0	Brushy Canyon			
7,973.2	7,960.0	Bone Spring Lime			
9,435.4	9,419.0	First Bone Spring			
9,898.5	9,881.0	Second Bone Spring			
10,419.7	10,401.0	Upper Third Bone Spring			
10,993.6	10,973.0	Third Bone Spring			
11,170.1	11,134.0	Wolfcamp			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,000.0	2,000.0	0.0	0.0	Start Build 2.00
2,192.2	2,192.1	-6.3	-1.2	Start 8662.6 hold at 2192.2 MD
5,118.0	5,111.3	-199.2	-37.0	NMNM138912 Exit at 5118.0 MD
10,854.8	10,835.2	-577.4	-107.2	KOP-Start DLS 12.00 TFO 168.94
11,537.0	11,333.7	-199.6	-117.1	NMNM138912 Entry at 11537.0 MD
11,636.2	11,344.0	-101.1	-118.1	LP-Start 10359.8 hold at 11636.2 MD
16,818.0	11,344.0	5,080.4	-165.0	NMNM138912 Exit at 16818.0 MD
21,996.1	11,344.0	10,258.3	-212.0	Start 49.9 hold at 21996.1 MD
22,046.0	11,344.0	10,308.2	-212.4	TD at 22046.0

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Ameredev Operating LLC
WELL NAME & NO.:	Dogwood 25 36 20 Fed Com 117H
LOCATION:	Sec 20-25S-36E-NMP
COUNTY:	Lea County, New Mexico

COA

H_2S	○ No	○ Yes		
Potash / WIPP	○ None	○ Secretary	○ R-111-P	☐ WIPP
Cave / Karst	○ Low	○ Medium	○ High	○ Critical
Wellhead	○ Conventional	○ Multibowl	○ Both	○ Diverter
Cementing	☐ Primary Squeeze	☐ Cont. Squeeze	☐ EchoMeter	☑ DV Tool
Special Req	☐ Break Testing	☐ Water Disposal	☑ COM	☐ Unit
Variance	☑ Flex Hose	☐ Casing Clearance	☐ Pilot Hole	☑ Capitan Reef
Variance	☐ Four-String	☐ Offline Cementing	☐ Fluid-Filled	☐ Open Annulus
☐ **Batch APD / Sundry**				

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 1315 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) 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

 Approval Date: 10/05/2023

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 ***alternate*** **10-3/4** inch intermediate casing is:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

❖ 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 Requirement:** Ensure FW based mud used across the Capitan interval.

3. The minimum required fill of cement behind the **7-5/8** 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.

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:

- **FOR PRIMARY THREE-STRING DESIGN:** Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**
- **FOR ALTERNATE FOUR-STRING DESIGN:** Cement should tie-back at least **50 feet** on top of Capitan Reef top or **200 feet** into the previous casing, whichever is greater. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

❖ 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:

(Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the capitan interval)

- Switch to freshwater 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.

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

    - Cement should tie-back at least **50 feet** on top of Capitan Reef top or **200 feet** into the previous casing, whichever is greater. 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. 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 43 CFR 3172 must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- 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
Email **or** call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, **BLM_NM_CFO_DrillingNotifications@BLM.GOV**
(575) 361-2822

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

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

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure

rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).

b. When the operator proposes to set surface casing with Spudder Rig
   - Notify the BLM when moving in and removing the Spudder Rig.
   - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
   - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.

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

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

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 intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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

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

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

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

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

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

B. PRESSURE CONTROL

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

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

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

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

a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
c. Manufacturer representative shall install the test plug for the initial BOP test.
d. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** must be followed.
e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

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

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

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

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

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE.

If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

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

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

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

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

H_2S Drilling Operation Plan

1. **All Company and Contract personnel admitted on location must be trained by a qualified H_2S safety instructor to the following:**
    a. Characteristics of H_2S
    b. Physical effects and hazards
    c. Principal and operation of H_2s 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. **H_2S Detection and Alarm Systems:**
    a. H_2S 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 H_2S 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/Escape 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.

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 H_2S service.
   b. Drilling Contractor supervisor will be required to be familiar with the effect H_2S has on tubular goods and other mechanical equipment provided through contractor.

H_2S Contingency Plan

Emergency Procedures

In the event of a release of H_2S, 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 H_2S 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 H_2S 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 (SO_2). 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 H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	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)

H_2S 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
Joe Bob Jones	Construction Foreman		432-260-9261

Artesia	
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
Carlsbad	
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
Santa Fe	
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
National	
National Emergency Response Center (Washington, D.C.)	800-424-8802
Medical	
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

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

SUPO Data Report
10/06/2023

APD ID: 10400088648
Submission Date: 10/14/2022
Operator Name: AMEREDEV OPERATING LLC
Well Name: DOGWOOD 25 36 20 FED COM
Well Number: 117H
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:

DOGWOOD_25_36_20_FED_COM_117H___ACCESS_ROAD_MAP_20221014074650.pdf
EP_PEACH_BATTERY_ROAD_SEC_21_S_20221014074701.pdf
Dogwood_Road_20221014074701.pdf

Existing Road Purpose: ACCESS
Row(s) Exist? YES

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:

EP_PEACH_BATTERY_ROAD_SEC_21_S_20221013144932.pdf
DOGWOOD_25_36_20_FED_COM_117H___ACCESS_ROAD_MAP_20221014074725.pdf
Dogwood_Road_20221013144932.pdf

New road type: RESOURCE

Length: 1788 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

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

New road access plan or profile prepared? N

New road access plan

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:

DOGWOOD_25_36_20_FED_COM_117H___ONE_MILE_RADIUS_20221014074750.pdf

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: A 4 Poly Flowline will be buried and run approximately 1,287 from the Dogwood Fed Com 25 36 20 117H to the Peach CTB northeast of the well pad. A 30' pipeline ROW containing three 12 poly water lines will be run 964' from the Peach CTB to existing water lines. A power line will be run parallel to the pipeline corridor and connect to an existing power line. The power line will be approximately 14,673'. The Peach CTB will be 500x525 and will include a separator, Heat Exchanger, VRU, VRT, meter run and a tank battery. The new production facility will have a secondary containment structure that is

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

constructed to hold the capacity of 1-1/2 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Production Facilities map:

BO_PEACH_BATTERY_SITE_S_20221013145042.pdf

EP_DOGWOOD_FLOWLINE_SEC_20_S_20221013145042.pdf

EP_DOGWOOD_FLOWLINE_SEC_21_S_20221013145042.pdf

EP_PEACH_BATTERY_ELECTRIC_SEC_21_S_20221013145042.pdf

Peach_Singh_Water_Line_20221013145042.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: TRUCKING

PIPELINE

Source land ownership: PRIVATE

Source transportation land ownership: FEDERAL

Water source volume (barrels): 20000

Source volume (acre-feet): 2.57786193

Source volume (gal): 840000

Water source and transportation

DOGWOOD_25_36_20_FED_COM_117H___WATER_WELLS_LIST_20221014074814.pdf

DOGWOOD_25_36_20_FED_COM_117H___WATER_MAP_20221014074814.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

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

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 west 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

DOGWOOD_25_36_20_FED_COM_117H___CALICHE_MAP_20221014074840.pdf

DOGWOOD_25_36_20_FED_COM_117H___WELLSITE_20221014074845.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

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

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:

DOGWOOD_25_36_20_FED_COM_117H___WELLSITE_20221014074903.pdf
BO_DOGWOOD_9N_PAD_SITE_S_20221013145156.pdf

Comments:

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

Section 10 - Plans for Surface

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** DW

Multiple Well Pad Number: #9N

Recontouring

DOGWOOD_25_36_20_FED_COM_117H___WELLSITE_20221014074915.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):** 0.37	**Well pad long term disturbance (acres):** 4.22
Road proposed disturbance (acres): 1.23	**Road interim reclamation (acres):** 0	**Road long term disturbance (acres):** 1.23
Powerline proposed disturbance (acres): 10.11	**Powerline interim reclamation (acres):** 0	**Powerline long term disturbance (acres):** 10.11
Pipeline proposed disturbance (acres): 0.89	**Pipeline interim reclamation (acres):** 0	**Pipeline long term disturbance (acres):** 0.89
Other proposed disturbance (acres): 0	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance: 16.82	**Total interim reclamation:** 0.37	**Total long term disturbance:** 16.45

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 consist of shrinking the pad 8% (.37 acre) by removing caliche and reclaiming a 40' wide swath on the west side of the pad. This will leave 4.22 acres for producing four 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

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

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

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

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation

Operator Contact/Responsible Official

First Name: Patrick **Last Name:** Kelley

Phone: (404)402-9980 **Email:** pkelley@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

Monitoring plan description: To BLM standards

Monitoring plan

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

Success standards: To BLM satisfaction

Pit closure description: No Pit

Pit closure attachment:

Section 11 - Surface

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

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 and the private surface owner have a surface use agreement in place.

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

Disturbance type: PIPELINE

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

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 and the private surface owner have a surface use agreement in place.

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

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 and the private surface owner have a surface use agreement in place.

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Disturbance type: OTHER

Describe: POWERLINE

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

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 and the private surface owner have a surface use agreement 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

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: AGREEMENT

Surface Access Agreement Need description: Ameredev and the private surface owner have a surface use agreement 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:

Use a previously conducted onsite? N

Previous Onsite information:

Other SUPO

Dogwood_25_36_20_Fed_Com_117H_SUPO_20221014075013.pdf

AFMSS

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

PWD Data Report

10/06/2023

APD ID: 10400088648 **Submission Date:** 10/14/2022

Operator Name: AMEREDEV OPERATING LLC

Well Name: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

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:

Decribe 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: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

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:

Decribe 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: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

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: DOGWOOD 25 36 20 FED COM **Well Number:** 117H

Other PWD type description:

Other PWD type

Have other regulatory requirements been met?

Other regulatory requirements

Wellbore Schematic

Well:	Dogwood 25 36 20 Fed Com 117H	**Co. Well ID:**	xxxxxx
SHL:	SEC. 20, T.-25S, R.-36E, 200' FSL, 906' FEL	**AFE No.:**	xxxx-xxx
BHL:	SEC. 17, T.-25S, R.-36E, 50' FNL, 1025' FEL	**API No.:**	xxxxxxxxxx
	Lea, NM	**GL:**	3052
Wellhead:	A - 13-5/8" 10M x 13-5/8" SOW	**Field:**	Delaware
	B - 13-5/8" 10M x 13-5/8" 10M	**Objective:**	Wolfcamp A
	C - 13-5/8" 10M x 13-5/8" 10M	**TVD:**	11344
	Tubing Spool - 7-1/16" 15M x 13-3/8" 10M	**MD:**	22046
Xmas Tree:	2-9/16" 10M	**Rig:**	TBD **KB** 27'
Tubing:	2-7/8" L-80 6.5# 8rd EUE	**E-Mail:**	DrillingCR@ameredev.com

Hole Size	Formation Tops		Logs	Cement	Mud Weight
17.5"	Rustler	1,190'		1,085 Sacks TOC 0' 100% Excess	8.4-8.6 ppg WBM
	13.375" 68# J-55 BTC	**1,315'**			
12.25"	Salado	1,732'		843 Sacks TOC 0' 50% Excess	7.5-9.4 Diesel Brine Emulsion
	DV Tool with ACP	3,348'			
	Tansill	3,348'			
	Capitan Reef	3,945'			
	Lamar	5,068'			
	Bell Canyon	5,234'			
	No Casing	**5,193'**			
9.875"	Brushy Canyon	7,087'		1,110 Sacks TOC 0' 50% Excess	
	Bone Spring Lime	7,961'			
	First Bone Spring	9,420'			
	Second Bone Spring	9,882'			
	Third Bone Spring Upper	10,402'			
	7.625" 29.7# L-80HC BTC	**10,527'**			
6.75" 12° Build @ 10855 thru 11636	Third Bone Spring	10,974'		1,716 Sacks TOC 0' 25% Excess	10.5-12.5 ppg OBM
	Wolfcamp	11,135'			
	5.5" 23# P-110 USS-Eagle SFH	**22046**			
	Target Wolfcamp A 11344 TVD // 22046 MD				

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
  - 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
  - 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
0pen 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.

AMEREDEV
American Resource Development LLC

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.

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 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 275106

CONDITIONS

Operator: AMEREDEV OPERATING, LLC 2901 Via Fortuna Austin, TX 78746	OGRID: 372224
	Action Number: 275106
	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	10/20/2023
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	10/20/2023
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	10/20/2023
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	10/20/2023
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing	10/20/2023