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.

[320762]

2. Name of Operator

[372224]

9. API Well No. **30-025-49252**

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory **[98150]**

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 07/27/2021

KZ
07/28/2021

SL

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 05/27/2021

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
30-025-49252	98150	WC-025 G-08 S263620G; LWR Bone Spring

[4]Property Code	[5]Property Name	[6]Well Number
320762	RED BUD FED COM 25 36 32	081H

[7]OGRID No.	[8]Operator Name	[9]Elevation
372224	AMEREDEV OPERATING, LLC.	3011'

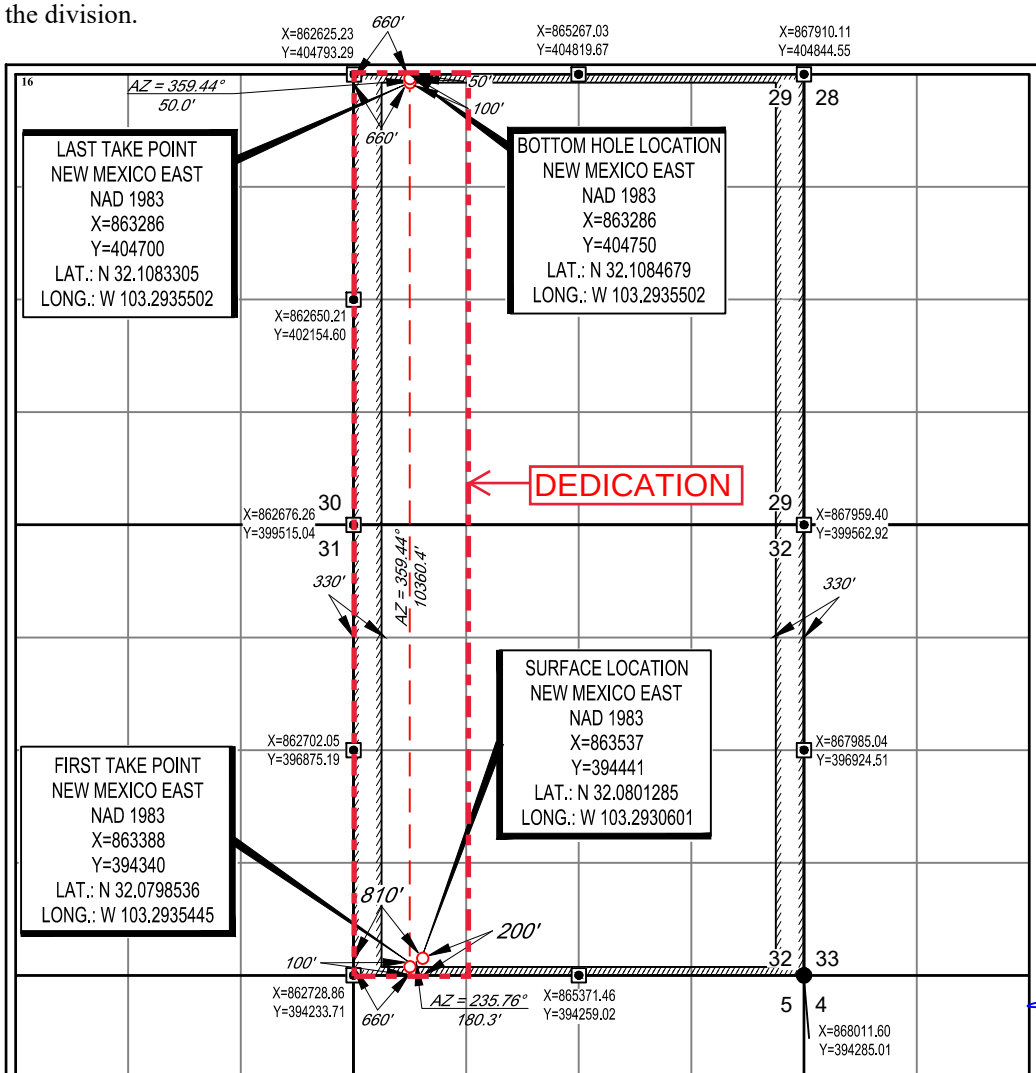
[10]Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	32	25-S	36-E	–	200'	SOUTH	810'	WEST	LEA

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	29	25-S	36-E	–	50'	NORTH	660'	WEST	LEA

[12]Dedicated Acres	[13]Joint or Infill	[14]Consolidation Code	[15]Order No.
320		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: 5/13/2020

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.

05/02/2018
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

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

Submit Electronically
Via E-permitting

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 OPERATING, LLC **OGRID:** 372224 **Date:** 7/8/2021

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
RED BUD FED COM 25 36 32 081H	30-025-_____ **30-025-49252**	M-32-25S-36E	200'FSL & 810'FWL	+/- 1300	+/- 700	+/- 1700

IV. Central Delivery Point Name: RED BUD CTB [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
RED BUD FED COM 25 36 32 081H	30-025-_____ **30-025-49252**	10/30/2021	11/30/2021	5/29/2022	7/13/2022	7/15/2022

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:	
Printed Name:	Dayeed Khan
Title:	Engineer
E-mail Address:	dkhan@ameredev.com
Date:	7/8/2021
Phone:	737-300-4735

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
05/27/2021

APD ID: 10400057104
Submission Date: 05/13/2020
Operator Name: AMEREDEV OPERATING LLC
Well Name: RED BUD FED COM 25 36 32
Well Number: 081H
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 Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
736057	RUSTLER ANHYDRITE	3011	1129	1129	ANHYDRITE	NONE	N
736060	SALADO	1501	1510	1510	SALT	NONE	N
736051	TANSILL	-217	3228	3228	LIMESTONE	NONE	N
736052	CAPITAN REEF	-727	3738	3738	LIMESTONE	USEABLE WATER	N
736061	LAMAR	-2090	5101	5101	LIMESTONE	NONE	N
736062	BELL CANYON	-2126	5137	5137	SANDSTONE	NATURAL GAS, OIL	N
736053	BRUSHY CANYON	-4053	7064	7064	SANDSTONE	NATURAL GAS, OIL	N
736054	BONE SPRING LIME	-5164	8175	8175	LIMESTONE	NONE	N
736058	BONE SPRING 1ST	-6543	9554	9554	SANDSTONE	NATURAL GAS, OIL	N
736055	BONE SPRING 2ND	-7072	10083	10083	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M
Rating Depth: 15000

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

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

Testing Procedure: See attachment

Choke Diagram Attachment:

10M_Choke_Manifold_REV_20200513164456.pdf

BOP Diagram Attachment:

Operator Name: AMEREDEV OPERATING LLC

Well Name: RED BUD FED COM 25 36 32 **Well Number:** 081H

10M_Choke_Manifold_REV_20200513164456.pdf

5M_Annular_Preventer_Variance_and_Well_Control_Plan_20200513164506.pdf

Pressure_Control_Plan_Single_Well_MB4_3String_Big_Hole_BLM_20200513164507.pdf

5M_BOP_System_20200513164507.pdf

4_String_MB_Ameredev_Wellhead_Drawing_7.0625in_Spool_net_REV_20210112140547.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	1254	0	1254	3011	1757	1254	J-55	68	OTHER - BTC	7.32	1	DRY	10.73	DRY	12.54
2	INTERMEDIATE	9.875	7.625	NEW	API	N	0	10561	0	10561		-7550	10561	HCL-80	29.7	OTHER - FJM	1.3	1.83	DRY	2.07	DRY	3
3	PRODUCTION	6.75	5.5	NEW	API	N	0	20847	0	10561		-7550	20847	P-110	23	OTHER - USS Eagle SFH	1.95	2.09	DRY	2.7	DRY	3

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

13.375_68_J55_SEAH_20200513164556.pdf

Red_Bud_Fed_Com_25_36_32_081H___Welbore_Diagram_and_CDA_R2_20210112151310.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: RED BUD FED COM 25 36 32 **Well Number:** 081H

Casing Attachments

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

7.625_29.70_P110HC_LIBERTY_FJM_20210112151347.pdf

Red_Bud_Fed_Com_25_36_32_081H___Welbore_Diagram_and_CDA_R2_20210112151356.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

5_20210112151444.5_23

Red_Bud_Fed_Com_25_36_32_081H___Welbore_Diagram_and_CDA_R2_20210112151453.pdf

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	868	590	1.76	13.5	1037.56	50	Class C	Bentonite, Accelerator, Kolseal, Defoamer, Celloflake
SURFACE	Tail		868	1254	200	1.34	14.8	268	100	Class C	Salt
INTERMEDIATE	Lead	3228	0	1988	243	2.47	11.9	599.85	25	Class C	Salt, Bentonite, Kolseal, Defoamer, Celloflake,Anti-Settling

Operator Name: AMEREDEV OPERATING LLC

Well Name: RED BUD FED COM 25 36 32 **Well Number:** 081H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
											Additive
INTERMEDIATE	Tail		1988	3228	200	1.33	14.8	266	25	Class C	Retarder
INTERMEDIATE	Lead	3228	3228	8730	988	2.47	11.9	2439.79	25	Class H	Bentonite, Retarder, Kolseal, Defoamer, Celloflake, Anti-Settling Expansion Additive
INTERMEDIATE	Tail		8730	10561	300	1.24	14.5	371.1	25	Class H	Salt, Bentonite, Retarder, Dispersant, Fluid Loss
PRODUCTION	Lead		0	20847	1623	1.34	14.2	2174.59	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

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
1254	10561	OTHER : Diesel Brine Emulsion	8.5	9.4							

Operator Name: AMEREDEV OPERATING LLC

Well Name: RED BUD FED COM 25 36 32 **Well Number:** 081H

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	1254	WATER-BASED MUD	8.4	8.6							

Section 6 - Test, Logging, Coring

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

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

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

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

Coring operation description for the well:

No coring will be done on this well.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5766 **Anticipated Surface Pressure:** 3442

Anticipated Bottom Hole Temperature(F): 165

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

H2S_Plan_20210112151854.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: RED BUD FED COM 25 36 32 **Well Number:** 081H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

RB081_LLR_20200513165306.pdf
RB081_DR_20200513165306.pdf
5M_Annular_Preventer_Variance_and_Well_Control_Plan_20200513165317.pdf
Pressure_Control_Plan_Single_Well_MB4_3String_Big_Hole_BLM_20200513165318.pdf

Other proposed operations facets description:

4-STRING CONTINGENCY PLAN AND SKID PROCEDURE ATTACHED

Other proposed operations facets attachment:

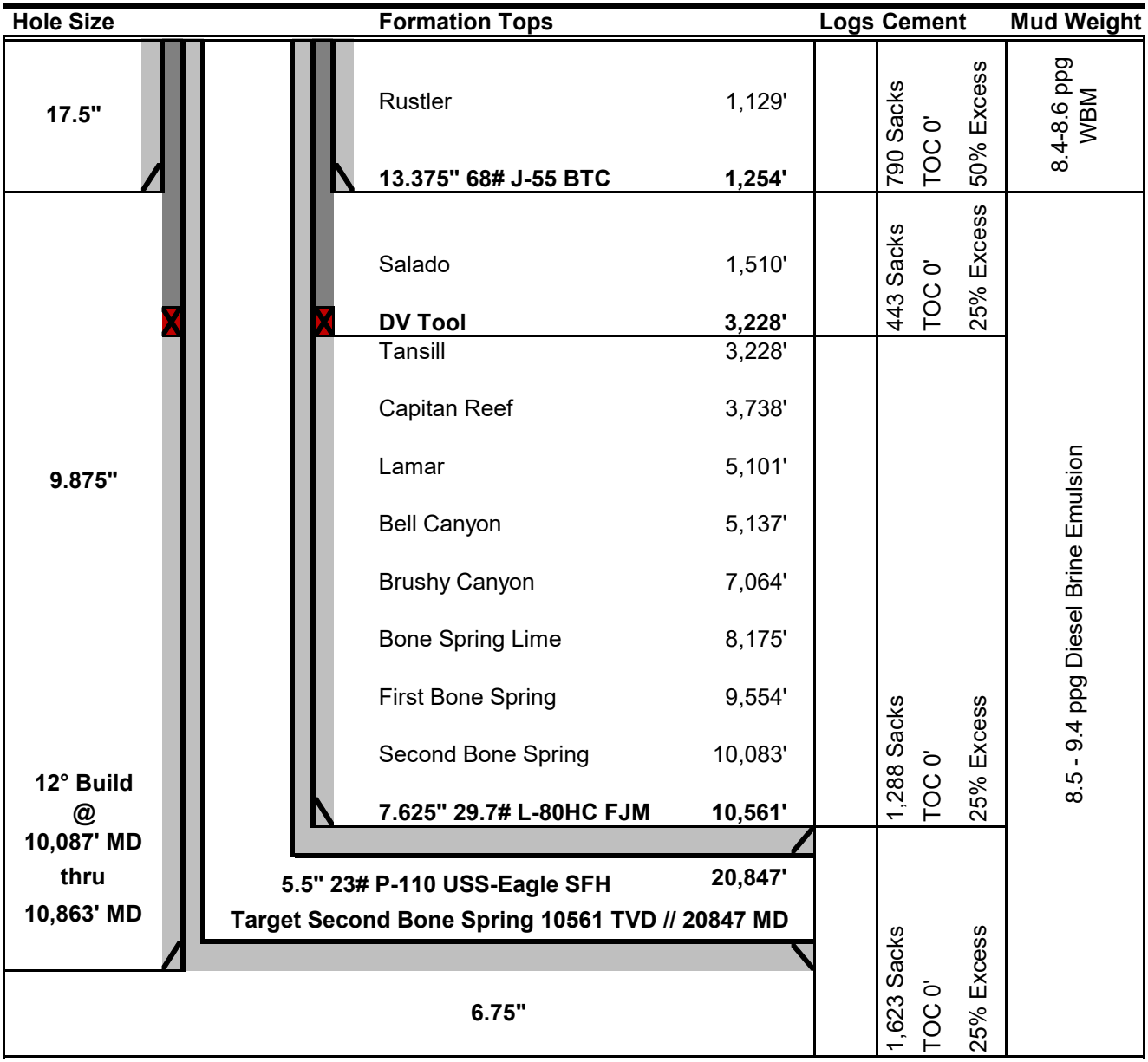
Rig_Skid_Procedure_20200513165343.pdf
BONE_SPRING_CONTINGENCY_20210112152022.pdf

Other Variance attachment:

Requested_Exceptions___3_String_Revised_01312019_20200513165352.pdf
R616___CoC_for_hoses_12_18_17_20200513165444.pdf

Wellbore Schematic

Well:	Red Bud Fed Com 25-36-32 081H	**Co. Well ID:**	xxxxxx
SHL:	Sec. 32 25S-36E 200' FSL & 810' FWL	**AFE No.:**	xxxx-xxx
BHL:	Sec. 29 25S-36E 50' FNL & 660' FWL	**API No.:**	xxxxxxxxxx
	Lea, NM	**GL:**	3,011'
Wellhead:	A - 13-5/8" 10M x 13-5/8" SOW	**Field:**	Delaware
	B - 13-5/8" 10M x 13-5/8" 10M	**Objective:**	Second Bone Spring
	C - 13-5/8" 10M x 13-5/8" 10M	**TVD:**	10,561'
	Tubing Spool - 7-1/16" 15M x 13-3/8" 10M	**MD:**	20,847'
Xmas Tree:	2-9/16" 10M	**Rig:**	TBD **KB:** 27'
Tubing:	2-7/8" L-80 6.5# 8rd EUE	**E-Mail:**	Wellsite2@ameredev.com



Casing Design and Safety Factor Check

Casing Specifications						
Segment	**Hole ID**	**Depth**	**OD**	**Weight**	**Grade**	**Coupling**
Surface	17.5	1,254'	13.375	68	J-55	BTC
Intermediate	9.875	10,561'	7.625	29.7	HCL-80	FJM
Prod Segment A	6.75	10,087'	5.5	23	P-110	SFH
Prod Segment B	6.75	20,847'	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	12.54	10.73	7.32	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	3.00	2.07	1.30	1.83
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	3.00	2.70	1.95	2.09
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	66.78	60.08	1.86	2.09

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

U. S. Steel Tubular Products

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7.625" 29.70lbs/ft (0.375" Wall) P110 HC USS-LIBERTY FJM®

MECHANICAL PROPERTIES	Pipe	USS-LIBERTY FJM®	
Minimum Yield Strength	110,000	--	psi
Maximum Yield Strength	140,000	--	psi
Minimum Tensile Strength	125,000	--	psi
DIMENSIONS	**Pipe**	**USS-LIBERTY FJM®**	
Outside Diameter	7.625	7.625	in.
Wall Thickness	0.375	--	in.
Inside Diameter	6.875	6.789	in.
Standard Drift	6.750	6.750	in.
Alternate Drift	--	--	in.
Nominal Linear Weight, T&C	29.70	--	lbs/ft
Plain End Weight	29.06	--	lbs/ft
SECTION AREA	**Pipe**	**USS-LIBERTY FJM®**	
Critical Area	8.541	5.074	sq. in.
Joint Efficiency	--	59.4	%
PERFORMANCE	**Pipe**	**USS-LIBERTY FJM®**	
Minimum Collapse Pressure	6,700	6,700	psi
Minimum Internal Yield Pressure	9,460	9,460	psi
Minimum Pipe Body Yield Strength	940,000	--	lbs
Joint Strength	--	558,000	lbs
Compression Rating	--	558,000	lbs
Reference Length	--	12,810	ft
Maximum Uniaxial Bend Rating	--	39.3	deg/100 ft
MAKE-UP DATA	**Pipe**	**USS-LIBERTY FJM®**	
Make-Up Loss	--	3.92	in.
Minimum Make-Up Torque	--	10,800	ft-lbs
Maximum Make-Up Torque	--	15,250	ft-lbs

1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness and Specified Minimum Yield Strength (SMYS).
2. Compressive & Tensile Connection Efficiencies are calculated by dividing the connection critical area by the pipe body area.
3. Uniaxial bending rating shown is structural only, and equal to compression efficiency.
4. USS-LIBERTY FJM™ connections are optimized for each combination of OD and wall thickness and cannot be interchanged.
5. Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
6. Reference length is calculated by joint strength divided by nominal plain end weight with 1.5 safety factor.
7. Connection external pressure leak resistance has been verified to 100% API pipe body collapse pressure following the guidelines of API 5C5 Cal III.

U. S. Steel Tubular Products
10343 Sam Houston Park Dr., #120
Houston, TX 77064

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connections@uss.com
www.usstubular.com

U. S. Steel Tubular Products

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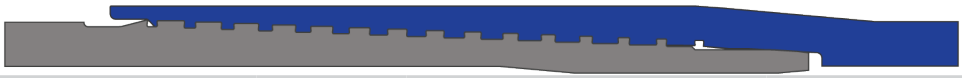
5.500" 23.00lbs/ft (0.415" Wall) USS RYS110 USS-EAGLE SFH™



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
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Ameredev Operating, LLC.

RB/HOL
RB/HOL #2N
Redbud 081H
Wellbore #1

Plan: Design #1

Lease Penetration Section Line Foot

10 April, 2020

AMEREDEV

Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Redbud 081H
Project:	RB/HOL	**TVD Reference:**	KB @ 3038.0usft
Site:	RB/HOL #2N	**MD Reference:**	KB @ 3038.0usft
Well:	Redbud 081H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM5000

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

Site	RB/HOL #2N				
Site Position:		**Northing:**	394,441.85 usft	**Latitude:**	32° 4' 48.463 N
From:	Lat/Long	**Easting:**	863,576.79 usft	**Longitude:**	103° 17' 34.552 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	0.55 °

Well	Redbud 081H				
Well Position	**+N/-S** 0.0 usft	**Northing:**	394,441.45 usft	**Latitude:**	32° 4' 48.462 N
	+E/-W 0.0 usft	**Easting:**	863,536.79 usft	**Longitude:**	103° 17' 35.017 W
Position Uncertainty	0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,011.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/13/2019	6.63	59.95	47,713.87200835

Design Design #1

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	358.61

Survey Tool Program **Date** 4/8/2020

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	20,846.5	Design #1 (Wellbore #1)	MWD	OWSG MWD - Standard

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
100.0	0.00	0.00	100.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
200.0	0.00	0.00	200.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
300.0	0.00	0.00	300.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
400.0	0.00	0.00	400.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
500.0	0.00	0.00	500.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
600.0	0.00	0.00	600.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
700.0	0.00	0.00	700.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
800.0	0.00	0.00	800.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
900.0	0.00	0.00	900.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
1,000.0	0.00	0.00	1,000.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
1,100.0	0.00	0.00	1,100.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W

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Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Redbud 081H
Project:	RB/HOL	**TVD Reference:**	KB @ 3038.0usft
Site:	RB/HOL #2N	**MD Reference:**	KB @ 3038.0usft
Well:	Redbud 081H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
1,200.0	0.00	0.00	1,200.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
1,300.0	0.00	0.00	1,300.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
1,400.0	0.00	0.00	1,400.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
1,500.0	0.00	0.00	1,500.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
1,600.0	0.00	0.00	1,600.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
1,700.0	0.00	0.00	1,700.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
1,800.0	0.00	0.00	1,800.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
1,900.0	0.00	0.00	1,900.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
2,000.0	0.00	0.00	2,000.0	199.6	810.0	32° 4' 48.462 N	103° 17' 35.017 W
2,100.0	2.00	220.00	2,100.0	198.3	808.9	32° 4' 48.449 N	103° 17' 35.030 W
2,200.0	4.00	220.00	2,199.8	194.3	805.5	32° 4' 48.410 N	103° 17' 35.069 W
2,300.0	6.00	220.00	2,299.5	187.6	799.9	32° 4' 48.344 N	103° 17' 35.135 W
2,400.0	6.00	220.00	2,398.9	179.6	793.2	32° 4' 48.266 N	103° 17' 35.214 W
2,500.0	6.00	220.00	2,498.4	171.6	786.5	32° 4' 48.187 N	103° 17' 35.293 W
2,600.0	6.00	220.00	2,597.8	163.6	779.8	32° 4' 48.109 N	103° 17' 35.372 W
2,700.0	6.00	220.00	2,697.3	155.5	773.0	32° 4' 48.030 N	103° 17' 35.451 W
2,800.0	6.00	220.00	2,796.7	147.5	766.3	32° 4' 47.952 N	103° 17' 35.530 W
2,900.0	6.00	220.00	2,896.2	139.5	759.6	32° 4' 47.873 N	103° 17' 35.609 W
3,000.0	6.00	220.00	2,995.6	131.5	752.9	32° 4' 47.794 N	103° 17' 35.688 W
3,100.0	6.00	220.00	3,095.1	123.5	746.2	32° 4' 47.716 N	103° 17' 35.767 W
3,200.0	6.00	220.00	3,194.5	115.5	739.4	32° 4' 47.637 N	103° 17' 35.846 W
3,300.0	6.00	220.00	3,294.0	107.5	732.7	32° 4' 47.559 N	103° 17' 35.925 W
3,400.0	6.00	220.00	3,393.4	99.5	726.0	32° 4' 47.480 N	103° 17' 36.004 W
3,500.0	6.00	220.00	3,492.9	91.5	719.3	32° 4' 47.401 N	103° 17' 36.083 W
3,600.0	6.00	220.00	3,592.3	83.5	712.6	32° 4' 47.323 N	103° 17' 36.162 W
3,700.0	6.00	220.00	3,691.8	75.5	705.8	32° 4' 47.244 N	103° 17' 36.241 W
3,800.0	6.00	220.00	3,791.2	67.5	699.1	32° 4' 47.166 N	103° 17' 36.320 W
3,900.0	6.00	220.00	3,890.7	59.5	692.4	32° 4' 47.087 N	103° 17' 36.399 W
4,000.0	6.00	220.00	3,990.1	51.5	685.7	32° 4' 47.008 N	103° 17' 36.478 W
4,100.0	6.00	220.00	4,089.6	43.4	679.0	32° 4' 46.930 N	103° 17' 36.557 W
4,200.0	6.00	220.00	4,189.0	35.4	672.3	32° 4' 46.851 N	103° 17' 36.636 W
4,211.0	6.00	220.00	4,200.0	34.6	671.5	32° 4' 46.843 N	103° 17' 36.644 W
4,300.0	4.22	220.00	4,288.6	28.5	666.4	32° 4' 46.783 N	103° 17' 36.704 W
4,400.0	2.22	220.00	4,388.5	24.2	662.8	32° 4' 46.741 N	103° 17' 36.747 W
4,500.0	0.22	220.00	4,488.4	22.6	661.4	32° 4' 46.725 N	103° 17' 36.763 W
4,511.0	0.00	0.00	4,499.5	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
4,600.0	0.00	0.00	4,588.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
4,700.0	0.00	0.00	4,688.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
4,800.0	0.00	0.00	4,788.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
4,900.0	0.00	0.00	4,888.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
5,000.0	0.00	0.00	4,988.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
5,100.0	0.00	0.00	5,088.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
5,200.0	0.00	0.00	5,188.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
5,300.0	0.00	0.00	5,288.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W

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Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Redbud 081H
Project:	RB/HOL	**TVD Reference:**	KB @ 3038.0usft
Site:	RB/HOL #2N	**MD Reference:**	KB @ 3038.0usft
Well:	Redbud 081H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
5,400.0	0.00	0.00	5,388.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
5,500.0	0.00	0.00	5,488.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
5,600.0	0.00	0.00	5,588.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
5,700.0	0.00	0.00	5,688.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
5,800.0	0.00	0.00	5,788.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
5,900.0	0.00	0.00	5,888.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
6,000.0	0.00	0.00	5,988.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
6,100.0	0.00	0.00	6,088.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
6,200.0	0.00	0.00	6,188.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
6,300.0	0.00	0.00	6,288.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
6,400.0	0.00	0.00	6,388.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
6,500.0	0.00	0.00	6,488.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
6,600.0	0.00	0.00	6,588.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
6,700.0	0.00	0.00	6,688.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
6,800.0	0.00	0.00	6,788.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
6,900.0	0.00	0.00	6,888.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
7,000.0	0.00	0.00	6,988.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
7,100.0	0.00	0.00	7,088.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
7,200.0	0.00	0.00	7,188.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
7,300.0	0.00	0.00	7,288.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
7,400.0	0.00	0.00	7,388.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
7,500.0	0.00	0.00	7,488.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
7,600.0	0.00	0.00	7,588.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
7,700.0	0.00	0.00	7,688.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
7,800.0	0.00	0.00	7,788.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
7,900.0	0.00	0.00	7,888.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
8,000.0	0.00	0.00	7,988.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
8,100.0	0.00	0.00	8,088.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
8,200.0	0.00	0.00	8,188.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
8,300.0	0.00	0.00	8,288.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
8,400.0	0.00	0.00	8,388.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
8,500.0	0.00	0.00	8,488.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
8,600.0	0.00	0.00	8,588.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
8,700.0	0.00	0.00	8,688.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
8,800.0	0.00	0.00	8,788.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
8,900.0	0.00	0.00	8,888.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
9,000.0	0.00	0.00	8,988.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
9,100.0	0.00	0.00	9,088.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
9,200.0	0.00	0.00	9,188.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
9,300.0	0.00	0.00	9,288.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
9,400.0	0.00	0.00	9,388.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
9,500.0	0.00	0.00	9,488.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
9,600.0	0.00	0.00	9,588.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
9,700.0	0.00	0.00	9,688.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W

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Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Redbud 081H
Project:	RB/HOL	**TVD Reference:**	KB @ 3038.0usft
Site:	RB/HOL #2N	**MD Reference:**	KB @ 3038.0usft
Well:	Redbud 081H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
9,800.0	0.00	0.00	9,788.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
9,900.0	0.00	0.00	9,888.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
10,000.0	0.00	0.00	9,988.4	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
10,086.6	0.00	0.00	10,075.0	22.5	661.4	32° 4' 46.725 N	103° 17' 36.763 W
RB081 KOP							
10,100.0	1.61	0.04	10,088.4	22.7	661.4	32° 4' 46.726 N	103° 17' 36.763 W
10,200.0	13.61	0.04	10,187.4	35.9	661.4	32° 4' 46.857 N	103° 17' 36.761 W
10,300.0	25.61	0.04	10,281.4	69.4	661.5	32° 4' 47.189 N	103° 17' 36.757 W
10,400.0	37.61	0.04	10,366.4	121.8	661.5	32° 4' 47.707 N	103° 17' 36.751 W
10,500.0	49.61	0.04	10,438.7	190.6	661.5	32° 4' 48.388 N	103° 17' 36.743 W
RB081 FTP							
10,600.0	61.61	0.04	10,495.0	273.0	661.6	32° 4' 49.203 N	103° 17' 36.733 W
10,679.3	71.12	0.04	10,526.8	345.5	661.7	32° 4' 49.920 N	103° 17' 36.724 W
10,700.0	71.12	0.04	10,533.5	365.1	661.7	32° 4' 50.115 N	103° 17' 36.722 W
10,705.6	71.12	0.04	10,535.3	370.4	661.7	32° 4' 50.167 N	103° 17' 36.721 W
10,800.0	82.45	359.66	10,556.9	462.2	661.4	32° 4' 51.075 N	103° 17' 36.714 W
10,863.0	90.00	359.42	10,561.0	525.0	660.9	32° 4' 51.696 N	103° 17' 36.712 W
RB081 EOC							
10,900.0	90.00	359.42	10,561.0	562.0	660.6	32° 4' 52.063 N	103° 17' 36.713 W
11,000.0	90.00	359.42	10,561.0	662.0	659.6	32° 4' 53.052 N	103° 17' 36.713 W
11,100.0	90.00	359.42	10,561.0	762.0	658.5	32° 4' 54.042 N	103° 17' 36.714 W
11,200.0	90.00	359.42	10,561.0	862.0	657.5	32° 4' 55.031 N	103° 17' 36.714 W
11,300.0	90.00	359.42	10,561.0	962.0	656.5	32° 4' 56.021 N	103° 17' 36.715 W
11,400.0	90.00	359.42	10,561.0	1,062.0	655.5	32° 4' 57.010 N	103° 17' 36.715 W
11,500.0	90.00	359.42	10,561.0	1,162.0	654.5	32° 4' 58.000 N	103° 17' 36.716 W
11,600.0	90.00	359.42	10,561.0	1,262.0	653.5	32° 4' 58.989 N	103° 17' 36.716 W
11,700.0	90.00	359.42	10,561.0	1,362.0	652.5	32° 4' 59.979 N	103° 17' 36.717 W
11,800.0	90.00	359.42	10,561.0	1,462.0	651.5	32° 5' 0.968 N	103° 17' 36.717 W
11,900.0	90.00	359.42	10,561.0	1,562.0	650.5	32° 5' 1.958 N	103° 17' 36.718 W
12,000.0	90.00	359.42	10,561.0	1,662.0	649.4	32° 5' 2.947 N	103° 17' 36.719 W
12,100.0	90.00	359.42	10,561.0	1,762.0	648.4	32° 5' 3.937 N	103° 17' 36.719 W
12,200.0	90.00	359.42	10,561.0	1,861.9	647.4	32° 5' 4.926 N	103° 17' 36.720 W
12,300.0	90.00	359.42	10,561.0	1,961.9	646.4	32° 5' 5.916 N	103° 17' 36.720 W
12,400.0	90.00	359.42	10,561.0	2,061.9	645.4	32° 5' 6.905 N	103° 17' 36.721 W
12,500.0	90.00	359.42	10,561.0	2,161.9	644.4	32° 5' 7.895 N	103° 17' 36.721 W
12,600.0	90.00	359.42	10,561.0	2,261.9	643.4	32° 5' 8.884 N	103° 17' 36.722 W
12,700.0	90.00	359.42	10,561.0	2,361.9	642.4	32° 5' 9.874 N	103° 17' 36.722 W
12,800.0	90.00	359.42	10,561.0	2,461.9	641.4	32° 5' 10.863 N	103° 17' 36.723 W
12,900.0	90.00	359.42	10,561.0	2,561.9	640.4	32° 5' 11.853 N	103° 17' 36.723 W
13,000.0	90.00	359.42	10,561.0	2,661.9	639.3	32° 5' 12.842 N	103° 17' 36.724 W
13,100.0	90.00	359.42	10,561.0	2,761.9	638.3	32° 5' 13.832 N	103° 17' 36.724 W
13,200.0	90.00	359.42	10,561.0	2,861.9	637.3	32° 5' 14.821 N	103° 17' 36.725 W
13,300.0	90.00	359.42	10,561.0	2,961.9	636.3	32° 5' 15.811 N	103° 17' 36.726 W
13,400.0	90.00	359.42	10,561.0	3,061.9	635.3	32° 5' 16.800 N	103° 17' 36.726 W
13,500.0	90.00	359.42	10,561.0	3,161.9	634.3	32° 5' 17.790 N	103° 17' 36.727 W

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Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Redbud 081H
Project:	RB/HOL	**TVD Reference:**	KB @ 3038.0usft
Site:	RB/HOL #2N	**MD Reference:**	KB @ 3038.0usft
Well:	Redbud 081H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
13,600.0	90.00	359.42	10,561.0	3,261.9	633.3	32° 5' 18.779 N	103° 17' 36.727 W
13,700.0	90.00	359.42	10,561.0	3,361.9	632.3	32° 5' 19.769 N	103° 17' 36.728 W
13,800.0	90.00	359.42	10,561.0	3,461.9	631.3	32° 5' 20.758 N	103° 17' 36.728 W
13,900.0	90.00	359.42	10,561.0	3,561.9	630.2	32° 5' 21.748 N	103° 17' 36.729 W
14,000.0	90.00	359.42	10,561.0	3,661.9	629.2	32° 5' 22.737 N	103° 17' 36.729 W
14,100.0	90.00	359.42	10,561.0	3,761.8	628.2	32° 5' 23.727 N	103° 17' 36.730 W
14,200.0	90.00	359.42	10,561.0	3,861.8	627.2	32° 5' 24.717 N	103° 17' 36.730 W
14,300.0	90.00	359.42	10,561.0	3,961.8	626.2	32° 5' 25.706 N	103° 17' 36.731 W
14,400.0	90.00	359.42	10,561.0	4,061.8	625.2	32° 5' 26.696 N	103° 17' 36.731 W
14,500.0	90.00	359.42	10,561.0	4,161.8	624.2	32° 5' 27.685 N	103° 17' 36.732 W
14,600.0	90.00	359.42	10,561.0	4,261.8	623.2	32° 5' 28.675 N	103° 17' 36.733 W
14,700.0	90.00	359.42	10,561.0	4,361.8	622.2	32° 5' 29.664 N	103° 17' 36.733 W
14,800.0	90.00	359.42	10,561.0	4,461.8	621.2	32° 5' 30.654 N	103° 17' 36.734 W
14,900.0	90.00	359.42	10,561.0	4,561.8	620.1	32° 5' 31.643 N	103° 17' 36.734 W
15,000.0	90.00	359.42	10,561.0	4,661.8	619.1	32° 5' 32.633 N	103° 17' 36.735 W
15,100.0	90.00	359.42	10,561.0	4,761.8	618.1	32° 5' 33.622 N	103° 17' 36.735 W
15,200.0	90.00	359.42	10,561.0	4,861.8	617.1	32° 5' 34.612 N	103° 17' 36.736 W
15,300.0	90.00	359.42	10,561.0	4,961.8	616.1	32° 5' 35.601 N	103° 17' 36.736 W
15,400.0	90.00	359.42	10,561.0	5,061.8	615.1	32° 5' 36.591 N	103° 17' 36.737 W
15,500.0	90.00	359.42	10,561.0	5,161.8	614.1	32° 5' 37.580 N	103° 17' 36.737 W
15,600.0	90.00	359.42	10,561.0	5,261.8	613.1	32° 5' 38.570 N	103° 17' 36.738 W
15,618.2	90.00	359.42	10,561.0	5,280.0	612.9	32° 5' 38.750 N	103° 17' 36.738 W
RB081 into NMNM138913							
15,700.0	90.00	359.42	10,561.0	5,361.8	612.1	32° 5' 39.559 N	103° 17' 36.738 W
15,800.0	90.00	359.42	10,561.0	5,461.8	611.0	32° 5' 40.549 N	103° 17' 36.739 W
15,900.0	90.00	359.42	10,561.0	5,561.8	610.0	32° 5' 41.538 N	103° 17' 36.740 W
16,000.0	90.00	359.42	10,561.0	5,661.8	609.0	32° 5' 42.528 N	103° 17' 36.740 W
16,100.0	90.00	359.42	10,561.0	5,761.7	608.0	32° 5' 43.517 N	103° 17' 36.741 W
16,200.0	90.00	359.42	10,561.0	5,861.7	607.0	32° 5' 44.507 N	103° 17' 36.741 W
16,300.0	90.00	359.42	10,561.0	5,961.7	606.0	32° 5' 45.496 N	103° 17' 36.742 W
16,400.0	90.00	359.42	10,561.0	6,061.7	605.0	32° 5' 46.486 N	103° 17' 36.742 W
16,500.0	90.00	359.42	10,561.0	6,161.7	604.0	32° 5' 47.475 N	103° 17' 36.743 W
16,600.0	90.00	359.42	10,561.0	6,261.7	603.0	32° 5' 48.465 N	103° 17' 36.743 W
16,700.0	90.00	359.42	10,561.0	6,361.7	602.0	32° 5' 49.454 N	103° 17' 36.744 W
16,800.0	90.00	359.42	10,561.0	6,461.7	600.9	32° 5' 50.444 N	103° 17' 36.744 W
16,900.0	90.00	359.42	10,561.0	6,561.7	599.9	32° 5' 51.433 N	103° 17' 36.745 W
17,000.0	90.00	359.42	10,561.0	6,661.7	598.9	32° 5' 52.423 N	103° 17' 36.745 W
17,100.0	90.00	359.42	10,561.0	6,761.7	597.9	32° 5' 53.412 N	103° 17' 36.746 W
17,200.0	90.00	359.42	10,561.0	6,861.7	596.9	32° 5' 54.402 N	103° 17' 36.747 W
17,300.0	90.00	359.42	10,561.0	6,961.7	595.9	32° 5' 55.391 N	103° 17' 36.747 W
17,400.0	90.00	359.42	10,561.0	7,061.7	594.9	32° 5' 56.381 N	103° 17' 36.748 W
17,500.0	90.00	359.42	10,561.0	7,161.7	593.9	32° 5' 57.370 N	103° 17' 36.748 W
17,600.0	90.00	359.42	10,561.0	7,261.7	592.9	32° 5' 58.360 N	103° 17' 36.749 W
17,700.0	90.00	359.42	10,561.0	7,361.7	591.8	32° 5' 59.349 N	103° 17' 36.749 W

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Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Redbud 081H
Project:	RB/HOL	**TVD Reference:**	KB @ 3038.0usft
Site:	RB/HOL #2N	**MD Reference:**	KB @ 3038.0usft
Well:	Redbud 081H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
17,800.0	90.00	359.42	10,561.0	7,461.7	590.8	32° 6' 0.339 N	103° 17' 36.750 W
17,900.0	90.00	359.42	10,561.0	7,561.7	589.8	32° 6' 1.328 N	103° 17' 36.750 W
18,000.0	90.00	359.42	10,561.0	7,661.6	588.8	32° 6' 2.318 N	103° 17' 36.751 W
18,100.0	90.00	359.42	10,561.0	7,761.6	587.8	32° 6' 3.307 N	103° 17' 36.751 W
18,200.0	90.00	359.42	10,561.0	7,861.6	586.8	32° 6' 4.297 N	103° 17' 36.752 W
18,300.0	90.00	359.42	10,561.0	7,961.6	585.8	32° 6' 5.286 N	103° 17' 36.752 W
18,400.0	90.00	359.42	10,561.0	8,061.6	584.8	32° 6' 6.276 N	103° 17' 36.753 W
18,500.0	90.00	359.42	10,561.0	8,161.6	583.8	32° 6' 7.265 N	103° 17' 36.753 W
18,600.0	90.00	359.42	10,561.0	8,261.6	582.8	32° 6' 8.255 N	103° 17' 36.754 W
18,700.0	90.00	359.42	10,561.0	8,361.6	581.7	32° 6' 9.244 N	103° 17' 36.755 W
18,800.0	90.00	359.42	10,561.0	8,461.6	580.7	32° 6' 10.234 N	103° 17' 36.755 W
18,900.0	90.00	359.42	10,561.0	8,561.6	579.7	32° 6' 11.223 N	103° 17' 36.756 W
19,000.0	90.00	359.42	10,561.0	8,661.6	578.7	32° 6' 12.213 N	103° 17' 36.756 W
19,100.0	90.00	359.42	10,561.0	8,761.6	577.7	32° 6' 13.202 N	103° 17' 36.757 W
19,200.0	90.00	359.42	10,561.0	8,861.6	576.7	32° 6' 14.192 N	103° 17' 36.757 W
19,300.0	90.00	359.42	10,561.0	8,961.6	575.7	32° 6' 15.181 N	103° 17' 36.758 W
19,400.0	90.00	359.42	10,561.0	9,061.6	574.7	32° 6' 16.171 N	103° 17' 36.758 W
19,500.0	90.00	359.42	10,561.0	9,161.6	573.7	32° 6' 17.160 N	103° 17' 36.759 W
19,600.0	90.00	359.42	10,561.0	9,261.6	572.6	32° 6' 18.150 N	103° 17' 36.759 W
19,700.0	90.00	359.42	10,561.0	9,361.6	571.6	32° 6' 19.139 N	103° 17' 36.760 W
19,800.0	90.00	359.42	10,561.0	9,461.6	570.6	32° 6' 20.129 N	103° 17' 36.760 W
19,900.0	90.00	359.42	10,561.0	9,561.6	569.6	32° 6' 21.118 N	103° 17' 36.761 W
20,000.0	90.00	359.42	10,561.0	9,661.5	568.6	32° 6' 22.108 N	103° 17' 36.762 W
20,100.0	90.00	359.42	10,561.0	9,761.5	567.6	32° 6' 23.098 N	103° 17' 36.762 W
20,200.0	90.00	359.42	10,561.0	9,861.5	566.6	32° 6' 24.087 N	103° 17' 36.763 W
20,300.0	90.00	359.42	10,561.0	9,961.5	565.6	32° 6' 25.077 N	103° 17' 36.763 W
20,400.0	90.00	359.42	10,561.0	10,061.5	564.6	32° 6' 26.066 N	103° 17' 36.764 W
20,500.0	90.00	359.42	10,561.0	10,161.5	563.6	32° 6' 27.056 N	103° 17' 36.764 W
20,600.0	90.00	359.42	10,561.0	10,261.5	562.5	32° 6' 28.045 N	103° 17' 36.765 W
20,700.0	90.00	359.42	10,561.0	10,361.5	561.5	32° 6' 29.035 N	103° 17' 36.765 W
20,796.5	90.00	359.42	10,561.0	10,458.0	560.6	32° 6' 29.990 N	103° 17' 36.766 W
RB081 LTP							
20,800.0	90.00	359.42	10,561.0	10,461.5	560.5	32° 6' 30.024 N	103° 17' 36.766 W
20,846.5	90.00	359.42	10,561.0	10,508.0	560.1	32° 6' 30.484 N	103° 17' 36.766 W
RB081 BHL							

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
10,086.6	10,075.0	-177.1	-148.6	RB081 KOP
15,618.2	10,561.0	5,080.4	-197.1	RB081 into NMNM138913

Checked By: _____ Approved By: _____ Date: _____

Ameredev Operating, LLC.

RB/HOL
RB/HOL #2N
Redbud 081H

Wellbore #1

Plan: Design #1

Standard Planning Report

10 April, 2020

AMEREDEV

Ameredev Operating, LLC

Planning Report

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Redbud 081H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3038.0usft
Project:	RB/HOL	**MD Reference:**	KB @ 3038.0usft
Site:	RB/HOL #2N	**North Reference:**	Grid
Well:	Redbud 081H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project RB/HOL

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

Site RB/HOL #2N

Site Position:		**Northing:**	394,441.85 usft	**Latitude:**	32° 4' 48.463 N
From:	Lat/Long	**Easting:**	863,576.79 usft	**Longitude:**	103° 17' 34.552 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.55 °

Well Redbud 081H

Well Position	**+N/-S**	-0.4 usft	**Northing:**	394,441.45 usft	**Latitude:**	32° 4' 48.462 N
	+E/-W	-40.0 usft	**Easting:**	863,536.79 usft	**Longitude:**	103° 17' 35.017 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,011.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/13/2019	6.63	59.95	47,713.87200835

Design Design #1

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	358.61

Plan Survey Tool Program **Date** 4/8/2020

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	20,846.5	Design #1 (Wellbore #1)	MWD	
				OWSG MWD - Standard	

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Ameredev Operating, LLC

Planning Report

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Redbud 081H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3038.0usft
Project:	RB/HOL	**MD Reference:**	KB @ 3038.0usft
Site:	RB/HOL #2N	**North Reference:**	Grid
Well:	Redbud 081H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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	
2,300.0	6.00	220.00	2,299.5	-12.0	-10.1	2.00	2.00	0.00	220.00	
4,211.0	6.00	220.00	4,200.0	-165.0	-138.5	0.00	0.00	0.00	0.00	
4,511.0	0.00	0.00	4,499.5	-177.1	-148.6	2.00	-2.00	0.00	180.00	
10,086.6	0.00	0.00	10,075.0	-177.1	-148.6	0.00	0.00	0.00	0.00	
10,679.3	71.12	0.04	10,526.8	145.9	-148.3	12.00	12.00	0.00	0.04	
10,705.6	71.12	0.04	10,535.3	170.8	-148.3	0.00	0.00	0.00	0.00	
10,863.0	90.00	359.42	10,561.0	325.4	-149.1	12.00	11.99	-0.40	-1.92	RB081 EOC
20,846.5	90.00	359.42	10,561.0	10,308.4	-249.9	0.00	0.00	0.00	0.00	RB081 BHL

AMEREDEV

Ameredev Operating, LLC

Planning Report

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Redbud 081H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3038.0usft
Project:	RB/HOL	**MD Reference:**	KB @ 3038.0usft
Site:	RB/HOL #2N	**North Reference:**	Grid
Well:	Redbud 081H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	2.00	220.00	2,100.0	-1.3	-1.1	-1.3	2.00	2.00	0.00
2,200.0	4.00	220.00	2,199.8	-5.3	-4.5	-5.2	2.00	2.00	0.00
2,300.0	6.00	220.00	2,299.5	-12.0	-10.1	-11.8	2.00	2.00	0.00
2,400.0	6.00	220.00	2,398.9	-20.0	-16.8	-19.6	0.00	0.00	0.00
2,500.0	6.00	220.00	2,498.4	-28.0	-23.5	-27.5	0.00	0.00	0.00
2,600.0	6.00	220.00	2,597.8	-36.0	-30.2	-35.3	0.00	0.00	0.00
2,700.0	6.00	220.00	2,697.3	-44.1	-37.0	-43.1	0.00	0.00	0.00
2,800.0	6.00	220.00	2,796.7	-52.1	-43.7	-51.0	0.00	0.00	0.00
2,900.0	6.00	220.00	2,896.2	-60.1	-50.4	-58.8	0.00	0.00	0.00
3,000.0	6.00	220.00	2,995.6	-68.1	-57.1	-66.7	0.00	0.00	0.00
3,100.0	6.00	220.00	3,095.1	-76.1	-63.8	-74.5	0.00	0.00	0.00
3,200.0	6.00	220.00	3,194.5	-84.1	-70.6	-82.4	0.00	0.00	0.00
3,300.0	6.00	220.00	3,294.0	-92.1	-77.3	-90.2	0.00	0.00	0.00
3,400.0	6.00	220.00	3,393.4	-100.1	-84.0	-98.0	0.00	0.00	0.00
3,500.0	6.00	220.00	3,492.9	-108.1	-90.7	-105.9	0.00	0.00	0.00
3,600.0	6.00	220.00	3,592.3	-116.1	-97.4	-113.7	0.00	0.00	0.00
3,700.0	6.00	220.00	3,691.8	-124.1	-104.2	-121.6	0.00	0.00	0.00
3,800.0	6.00	220.00	3,791.2	-132.1	-110.9	-129.4	0.00	0.00	0.00
3,900.0	6.00	220.00	3,890.7	-140.1	-117.6	-137.2	0.00	0.00	0.00
4,000.0	6.00	220.00	3,990.1	-148.1	-124.3	-145.1	0.00	0.00	0.00
4,100.0	6.00	220.00	4,089.6	-156.2	-131.0	-152.9	0.00	0.00	0.00
4,200.0	6.00	220.00	4,189.0	-164.2	-137.7	-160.8	0.00	0.00	0.00
4,211.0	6.00	220.00	4,200.0	-165.0	-138.5	-161.6	0.00	0.00	0.00
4,300.0	4.22	220.00	4,288.6	-171.1	-143.6	-167.6	2.00	-2.00	0.00
4,400.0	2.22	220.00	4,388.5	-175.4	-147.2	-171.8	2.00	-2.00	0.00
4,500.0	0.22	220.00	4,488.4	-177.0	-148.6	-173.4	2.00	-2.00	0.00
4,511.0	0.00	0.00	4,499.5	-177.1	-148.6	-173.4	2.00	-2.00	0.00
4,600.0	0.00	0.00	4,588.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
4,700.0	0.00	0.00	4,688.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
4,800.0	0.00	0.00	4,788.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
4,900.0	0.00	0.00	4,888.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
5,000.0	0.00	0.00	4,988.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
5,100.0	0.00	0.00	5,088.4	-177.1	-148.6	-173.4	0.00	0.00	0.00

AMEREDEV

Ameredev Operating, LLC

Planning Report

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Redbud 081H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3038.0usft
Project:	RB/HOL	**MD Reference:**	KB @ 3038.0usft
Site:	RB/HOL #2N	**North Reference:**	Grid
Well:	Redbud 081H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	0.00	0.00	5,188.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
5,300.0	0.00	0.00	5,288.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
5,400.0	0.00	0.00	5,388.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
5,500.0	0.00	0.00	5,488.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
5,600.0	0.00	0.00	5,588.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
5,700.0	0.00	0.00	5,688.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,788.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
5,900.0	0.00	0.00	5,888.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,988.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
6,100.0	0.00	0.00	6,088.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,188.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
6,300.0	0.00	0.00	6,288.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,388.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
6,500.0	0.00	0.00	6,488.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
6,600.0	0.00	0.00	6,588.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
6,700.0	0.00	0.00	6,688.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
6,800.0	0.00	0.00	6,788.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
6,900.0	0.00	0.00	6,888.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
7,000.0	0.00	0.00	6,988.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
7,100.0	0.00	0.00	7,088.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
7,200.0	0.00	0.00	7,188.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
7,300.0	0.00	0.00	7,288.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
7,400.0	0.00	0.00	7,388.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
7,500.0	0.00	0.00	7,488.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
7,600.0	0.00	0.00	7,588.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
7,700.0	0.00	0.00	7,688.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
7,800.0	0.00	0.00	7,788.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
7,900.0	0.00	0.00	7,888.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
8,000.0	0.00	0.00	7,988.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
8,100.0	0.00	0.00	8,088.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
8,200.0	0.00	0.00	8,188.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
8,300.0	0.00	0.00	8,288.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
8,400.0	0.00	0.00	8,388.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
8,500.0	0.00	0.00	8,488.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
8,600.0	0.00	0.00	8,588.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
8,700.0	0.00	0.00	8,688.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
8,800.0	0.00	0.00	8,788.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
8,900.0	0.00	0.00	8,888.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
9,000.0	0.00	0.00	8,988.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
9,100.0	0.00	0.00	9,088.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
9,200.0	0.00	0.00	9,188.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
9,300.0	0.00	0.00	9,288.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
9,400.0	0.00	0.00	9,388.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
9,500.0	0.00	0.00	9,488.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
9,600.0	0.00	0.00	9,588.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
9,700.0	0.00	0.00	9,688.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
9,800.0	0.00	0.00	9,788.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
9,900.0	0.00	0.00	9,888.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
10,000.0	0.00	0.00	9,988.4	-177.1	-148.6	-173.4	0.00	0.00	0.00
10,086.6	0.00	0.00	10,075.0	-177.1	-148.6	-173.4	0.00	0.00	0.00
RB081 KOP									
10,100.0	1.61	0.04	10,088.4	-176.9	-148.6	-173.2	12.00	12.00	0.00
10,200.0	13.61	0.04	10,187.4	-163.7	-148.6	-160.0	12.00	12.00	0.00

AMEREDEV

Ameredev Operating, LLC

Planning Report

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Redbud 081H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3038.0usft
Project:	RB/HOL	**MD Reference:**	KB @ 3038.0usft
Site:	RB/HOL #2N	**North Reference:**	Grid
Well:	Redbud 081H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,300.0	25.61	0.04	10,281.4	-130.2	-148.5	-126.5	12.00	12.00	0.00
10,400.0	37.61	0.04	10,366.4	-77.8	-148.5	-74.2	12.00	12.00	0.00
10,500.0	49.61	0.04	10,438.7	-9.0	-148.5	-5.4	12.00	12.00	0.00
RB081 FTP									
10,600.0	61.61	0.04	10,495.0	73.4	-148.4	77.0	12.00	12.00	0.00
10,679.3	71.12	0.04	10,526.8	145.9	-148.3	149.5	12.00	12.00	0.00
10,700.0	71.12	0.04	10,533.5	165.5	-148.3	169.1	0.00	0.00	0.00
10,705.6	71.12	0.04	10,535.3	170.8	-148.3	174.4	0.00	0.00	0.00
10,800.0	82.45	359.66	10,556.9	262.6	-148.6	266.1	12.00	11.99	-0.40
10,863.0	90.00	359.42	10,561.0	325.4	-149.1	328.9	12.00	11.99	-0.38
RB081 EOC									
10,900.0	90.00	359.42	10,561.0	362.4	-149.4	365.9	0.00	0.00	0.00
11,000.0	90.00	359.42	10,561.0	462.4	-150.4	465.9	0.00	0.00	0.00
11,100.0	90.00	359.42	10,561.0	562.4	-151.5	565.9	0.00	0.00	0.00
11,200.0	90.00	359.42	10,561.0	662.4	-152.5	665.9	0.00	0.00	0.00
11,300.0	90.00	359.42	10,561.0	762.4	-153.5	765.9	0.00	0.00	0.00
11,400.0	90.00	359.42	10,561.0	862.4	-154.5	865.9	0.00	0.00	0.00
11,500.0	90.00	359.42	10,561.0	962.4	-155.5	965.9	0.00	0.00	0.00
11,600.0	90.00	359.42	10,561.0	1,062.4	-156.5	1,065.9	0.00	0.00	0.00
11,700.0	90.00	359.42	10,561.0	1,162.4	-157.5	1,165.8	0.00	0.00	0.00
11,800.0	90.00	359.42	10,561.0	1,262.4	-158.5	1,265.8	0.00	0.00	0.00
11,900.0	90.00	359.42	10,561.0	1,362.4	-159.5	1,365.8	0.00	0.00	0.00
12,000.0	90.00	359.42	10,561.0	1,462.4	-160.6	1,465.8	0.00	0.00	0.00
12,100.0	90.00	359.42	10,561.0	1,562.4	-161.6	1,565.8	0.00	0.00	0.00
12,200.0	90.00	359.42	10,561.0	1,662.3	-162.6	1,665.8	0.00	0.00	0.00
12,300.0	90.00	359.42	10,561.0	1,762.3	-163.6	1,765.8	0.00	0.00	0.00
12,400.0	90.00	359.42	10,561.0	1,862.3	-164.6	1,865.8	0.00	0.00	0.00
12,500.0	90.00	359.42	10,561.0	1,962.3	-165.6	1,965.8	0.00	0.00	0.00
12,600.0	90.00	359.42	10,561.0	2,062.3	-166.6	2,065.8	0.00	0.00	0.00
12,700.0	90.00	359.42	10,561.0	2,162.3	-167.6	2,165.7	0.00	0.00	0.00
12,800.0	90.00	359.42	10,561.0	2,262.3	-168.6	2,265.7	0.00	0.00	0.00
12,900.0	90.00	359.42	10,561.0	2,362.3	-169.6	2,365.7	0.00	0.00	0.00
13,000.0	90.00	359.42	10,561.0	2,462.3	-170.7	2,465.7	0.00	0.00	0.00
13,100.0	90.00	359.42	10,561.0	2,562.3	-171.7	2,565.7	0.00	0.00	0.00
13,200.0	90.00	359.42	10,561.0	2,662.3	-172.7	2,665.7	0.00	0.00	0.00
13,300.0	90.00	359.42	10,561.0	2,762.3	-173.7	2,765.7	0.00	0.00	0.00
13,400.0	90.00	359.42	10,561.0	2,862.3	-174.7	2,865.7	0.00	0.00	0.00
13,500.0	90.00	359.42	10,561.0	2,962.3	-175.7	2,965.7	0.00	0.00	0.00
13,600.0	90.00	359.42	10,561.0	3,062.3	-176.7	3,065.7	0.00	0.00	0.00
13,700.0	90.00	359.42	10,561.0	3,162.3	-177.7	3,165.6	0.00	0.00	0.00
13,800.0	90.00	359.42	10,561.0	3,262.3	-178.7	3,265.6	0.00	0.00	0.00
13,900.0	90.00	359.42	10,561.0	3,362.3	-179.8	3,365.6	0.00	0.00	0.00
14,000.0	90.00	359.42	10,561.0	3,462.3	-180.8	3,465.6	0.00	0.00	0.00
14,100.0	90.00	359.42	10,561.0	3,562.2	-181.8	3,565.6	0.00	0.00	0.00
14,200.0	90.00	359.42	10,561.0	3,662.2	-182.8	3,665.6	0.00	0.00	0.00
14,300.0	90.00	359.42	10,561.0	3,762.2	-183.8	3,765.6	0.00	0.00	0.00
14,400.0	90.00	359.42	10,561.0	3,862.2	-184.8	3,865.6	0.00	0.00	0.00
14,500.0	90.00	359.42	10,561.0	3,962.2	-185.8	3,965.6	0.00	0.00	0.00
14,600.0	90.00	359.42	10,561.0	4,062.2	-186.8	4,065.6	0.00	0.00	0.00
14,700.0	90.00	359.42	10,561.0	4,162.2	-187.8	4,165.5	0.00	0.00	0.00
14,800.0	90.00	359.42	10,561.0	4,262.2	-188.8	4,265.5	0.00	0.00	0.00
14,900.0	90.00	359.42	10,561.0	4,362.2	-189.9	4,365.5	0.00	0.00	0.00
15,000.0	90.00	359.42	10,561.0	4,462.2	-190.9	4,465.5	0.00	0.00	0.00
15,100.0	90.00	359.42	10,561.0	4,562.2	-191.9	4,565.5	0.00	0.00	0.00

AMEREDEV

Ameredev Operating, LLC

Planning Report

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Redbud 081H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3038.0usft
Project:	RB/HOL	**MD Reference:**	KB @ 3038.0usft
Site:	RB/HOL #2N	**North Reference:**	Grid
Well:	Redbud 081H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,200.0	90.00	359.42	10,561.0	4,662.2	-192.9	4,665.5	0.00	0.00	0.00
15,300.0	90.00	359.42	10,561.0	4,762.2	-193.9	4,765.5	0.00	0.00	0.00
15,400.0	90.00	359.42	10,561.0	4,862.2	-194.9	4,865.5	0.00	0.00	0.00
15,500.0	90.00	359.42	10,561.0	4,962.2	-195.9	4,965.5	0.00	0.00	0.00
15,600.0	90.00	359.42	10,561.0	5,062.2	-196.9	5,065.5	0.00	0.00	0.00
15,618.2	90.00	359.42	10,561.0	5,080.4	-197.1	5,083.7	0.00	0.00	0.00
RB081 into NMNM138913									
15,700.0	90.00	359.42	10,561.0	5,162.2	-197.9	5,165.4	0.00	0.00	0.00
15,800.0	90.00	359.42	10,561.0	5,262.2	-199.0	5,265.4	0.00	0.00	0.00
15,900.0	90.00	359.42	10,561.0	5,362.2	-200.0	5,365.4	0.00	0.00	0.00
16,000.0	90.00	359.42	10,561.0	5,462.2	-201.0	5,465.4	0.00	0.00	0.00
16,100.0	90.00	359.42	10,561.0	5,562.1	-202.0	5,565.4	0.00	0.00	0.00
16,200.0	90.00	359.42	10,561.0	5,662.1	-203.0	5,665.4	0.00	0.00	0.00
16,300.0	90.00	359.42	10,561.0	5,762.1	-204.0	5,765.4	0.00	0.00	0.00
16,400.0	90.00	359.42	10,561.0	5,862.1	-205.0	5,865.4	0.00	0.00	0.00
16,500.0	90.00	359.42	10,561.0	5,962.1	-206.0	5,965.4	0.00	0.00	0.00
16,600.0	90.00	359.42	10,561.0	6,062.1	-207.0	6,065.4	0.00	0.00	0.00
16,700.0	90.00	359.42	10,561.0	6,162.1	-208.0	6,165.3	0.00	0.00	0.00
16,800.0	90.00	359.42	10,561.0	6,262.1	-209.1	6,265.3	0.00	0.00	0.00
16,900.0	90.00	359.42	10,561.0	6,362.1	-210.1	6,365.3	0.00	0.00	0.00
17,000.0	90.00	359.42	10,561.0	6,462.1	-211.1	6,465.3	0.00	0.00	0.00
17,100.0	90.00	359.42	10,561.0	6,562.1	-212.1	6,565.3	0.00	0.00	0.00
17,200.0	90.00	359.42	10,561.0	6,662.1	-213.1	6,665.3	0.00	0.00	0.00
17,300.0	90.00	359.42	10,561.0	6,762.1	-214.1	6,765.3	0.00	0.00	0.00
17,400.0	90.00	359.42	10,561.0	6,862.1	-215.1	6,865.3	0.00	0.00	0.00
17,500.0	90.00	359.42	10,561.0	6,962.1	-216.1	6,965.3	0.00	0.00	0.00
17,600.0	90.00	359.42	10,561.0	7,062.1	-217.1	7,065.3	0.00	0.00	0.00
17,700.0	90.00	359.42	10,561.0	7,162.1	-218.2	7,165.2	0.00	0.00	0.00
17,800.0	90.00	359.42	10,561.0	7,262.1	-219.2	7,265.2	0.00	0.00	0.00
17,900.0	90.00	359.42	10,561.0	7,362.1	-220.2	7,365.2	0.00	0.00	0.00
18,000.0	90.00	359.42	10,561.0	7,462.0	-221.2	7,465.2	0.00	0.00	0.00
18,100.0	90.00	359.42	10,561.0	7,562.0	-222.2	7,565.2	0.00	0.00	0.00
18,200.0	90.00	359.42	10,561.0	7,662.0	-223.2	7,665.2	0.00	0.00	0.00
18,300.0	90.00	359.42	10,561.0	7,762.0	-224.2	7,765.2	0.00	0.00	0.00
18,400.0	90.00	359.42	10,561.0	7,862.0	-225.2	7,865.2	0.00	0.00	0.00
18,500.0	90.00	359.42	10,561.0	7,962.0	-226.2	7,965.2	0.00	0.00	0.00
18,600.0	90.00	359.42	10,561.0	8,062.0	-227.2	8,065.2	0.00	0.00	0.00
18,700.0	90.00	359.42	10,561.0	8,162.0	-228.3	8,165.1	0.00	0.00	0.00
18,800.0	90.00	359.42	10,561.0	8,262.0	-229.3	8,265.1	0.00	0.00	0.00
18,900.0	90.00	359.42	10,561.0	8,362.0	-230.3	8,365.1	0.00	0.00	0.00
19,000.0	90.00	359.42	10,561.0	8,462.0	-231.3	8,465.1	0.00	0.00	0.00
19,100.0	90.00	359.42	10,561.0	8,562.0	-232.3	8,565.1	0.00	0.00	0.00
19,200.0	90.00	359.42	10,561.0	8,662.0	-233.3	8,665.1	0.00	0.00	0.00
19,300.0	90.00	359.42	10,561.0	8,762.0	-234.3	8,765.1	0.00	0.00	0.00
19,400.0	90.00	359.42	10,561.0	8,862.0	-235.3	8,865.1	0.00	0.00	0.00
19,500.0	90.00	359.42	10,561.0	8,962.0	-236.3	8,965.1	0.00	0.00	0.00
19,600.0	90.00	359.42	10,561.0	9,062.0	-237.4	9,065.1	0.00	0.00	0.00
19,700.0	90.00	359.42	10,561.0	9,162.0	-238.4	9,165.0	0.00	0.00	0.00
19,800.0	90.00	359.42	10,561.0	9,262.0	-239.4	9,265.0	0.00	0.00	0.00
19,900.0	90.00	359.42	10,561.0	9,362.0	-240.4	9,365.0	0.00	0.00	0.00
20,000.0	90.00	359.42	10,561.0	9,461.9	-241.4	9,465.0	0.00	0.00	0.00
20,100.0	90.00	359.42	10,561.0	9,561.9	-242.4	9,565.0	0.00	0.00	0.00
20,200.0	90.00	359.42	10,561.0	9,661.9	-243.4	9,665.0	0.00	0.00	0.00

AMEREDEV

Ameredev Operating, LLC
Planning Report

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Redbud 081H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3038.0usft
Project:	RB/HOL	**MD Reference:**	KB @ 3038.0usft
Site:	RB/HOL #2N	**North Reference:**	Grid
Well:	Redbud 081H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
20,300.0	90.00	359.42	10,561.0	9,761.9	-244.4	9,765.0	0.00	0.00	0.00
20,400.0	90.00	359.42	10,561.0	9,861.9	-245.4	9,865.0	0.00	0.00	0.00
20,500.0	90.00	359.42	10,561.0	9,961.9	-246.4	9,965.0	0.00	0.00	0.00
20,600.0	90.00	359.42	10,561.0	10,061.9	-247.5	10,065.0	0.00	0.00	0.00
20,700.0	90.00	359.42	10,561.0	10,161.9	-248.5	10,164.9	0.00	0.00	0.00
20,796.5	90.00	359.42	10,561.0	10,258.4	-249.4	10,261.5	0.00	0.00	0.00
RB081 LTP									
20,800.0	90.00	359.42	10,561.0	10,261.9	-249.5	10,264.9	0.00	0.00	0.00
20,846.5	90.00	359.42	10,561.0	10,308.4	-249.9	10,311.5	0.00	0.00	0.00
RB081 BHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
RB081 BHL	0.00	0.00	10,561.0	10,308.4	-251.2	404,749.87	863,285.58	32° 6' 30.484 N	103° 17' 36.781 W
- plan misses target center by 1.3usft at 20846.5usft MD (10561.0 TVD, 10308.4 N, -249.9 E)									
- Point									
RB081 EOC	0.00	0.00	10,561.0	325.4	-149.1	394,766.85	863,387.73	32° 4' 51.696 N	103° 17' 36.712 W
- plan hits target center									
- Point									
RB081 FTP	0.00	0.00	10,561.0	-101.4	-149.1	394,340.01	863,387.73	32° 4' 47.473 N	103° 17' 36.760 W
- plan misses target center by 153.3usft at 10500.0usft MD (10438.7 TVD, -9.0 N, -148.5 E)									
- Point									
RB081 LTP	0.00	0.00	10,561.0	10,258.4	-250.7	404,699.89	863,286.06	32° 6' 29.990 N	103° 17' 36.781 W
- plan misses target center by 1.3usft at 20796.5usft MD (10561.0 TVD, 10258.4 N, -249.4 E)									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
10,086.6	10,075.0	-177.1	-148.6	RB081 KOP
15,618.2	10,561.0	5,080.4	-197.1	RB081 into NMNM138913

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Ameredev Operating LLC
WELL NAME & NO.:	Red Bud Fed Com 25 36 32 081H
LOCATION:	Sec 5-26S-36E-NMP
COUNTY:	Lea County, New Mexico

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately 1297 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.

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

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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 **9-5/8** 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:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.

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

❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:

- Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.

- Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

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

- Cement should tie-back at least **50 feet** on top of Capitan Reef top. If cement does not circulate see B.1.a, c-d above.

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

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

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

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

a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
c. Manufacturer representative shall install the test plug for the initial BOP test.
d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to

the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

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

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

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

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

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

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all

Approval Date: 05/27/2021

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

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

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

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the

formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

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

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

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

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

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

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

    b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

    c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

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

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

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

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

the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

Approval Date: 05/27/2021

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
Blake Estrada	Construction Foreman		432-385-5831

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
05/27/2021

APD ID: 10400057104
Submission Date: 05/13/2020
Operator Name: AMEREDEV OPERATING LLC
Well Name: RED BUD FED COM 25 36 32
Well Number: 081H
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:

RED_BUD_FED_COM_25_36_32_081H___WELL_PAD_ACCESS_MAP_20200513165510.pdf

Existing Road Purpose: ACCESS

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

RED_BUD_FED_COM_25_36_32_081H___ONE_MILE_RADIUS_WELLS_20200513165541.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: RED BUD FED COM 25 36 32 **Well Number:** 081H

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: A buried 4 poly flowline will run approximately 3,032 feet from the Red Bud Fed Com 25 36 32 081H to the existing Red Bud/Holly CTB southeast of the well pad. Should any type of production facilities be located on the well pad, they will be strategically placed to allow for maximum interim reclamation, re-contouring, and revegetation of the well location.

Production Facilities map:

RB_HOL_FLOWLINE_SEC5_2N_20200513165618.pdf

EXISTING_REDBUD_STATE_COM_BATTERY_SITE_S_20200513165619.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: GW WELL

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

Source latitude:

Source longitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Water source transport method: PIPELINE
TRUCKING

Source land ownership: PRIVATE

Source transportation land ownership: FEDERAL

Water source volume (barrels): 20000

Source volume (acre-feet): 2.577862

Source volume (gal): 840000

Operator Name: AMEREDEV OPERATING LLC

Well Name: RED BUD FED COM 25 36 32 **Well Number:** 081H

Water source and transportation map:

RED_BUD_FED_COM_25_36_32_081H___WATER_WELLS_LIST_20200513165647.pdf
RED_BUD_FED_COM_25_36_32_081H___WATER_WELLS_MAP_20200513165649.pdf

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

New Water Well Info

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

Well target aquifer:

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

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 north 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 attachment:

RED_BUD_FED_COM_25_36_32_081H___CALICHE_MAP_20200513165721.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: RED BUD FED COM 25 36 32 **Well Number:** 081H

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drill cuttings, mud, salts, and other chemicals

Amount of waste: 2000 barrels

Waste disposal frequency : Daily

Safe containment description: Steel tanks on pad

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: R360's State approved (NM-01-0006) disposal site at Halfway, NM

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

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

Operator Name: AMEREDEV OPERATING LLC

Well Name: RED BUD FED COM 25 36 32 **Well Number:** 081H

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

BO_RB_HOL_2N_PAD_SITE_S_20200513165814.pdf

RED_BUD_FED_COM_25_36_32_081H___WELLSITE_20200513165815.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** RB/HOL

Multiple Well Pad Number: 2N

Recontouring attachment:

RED_BUD_FED_COM_25_36_32_081H___WELLSITE_20200513165835.pdf

Drainage/Erosion control construction: Crowned and ditched

Drainage/Erosion control reclamation: Harrowed on the contour

Well pad proposed disturbance (acres): 4.59 **Well pad interim reclamation (acres):** 0.79 **Well pad long term disturbance (acres):** 3.8

Road proposed disturbance (acres): **Road interim reclamation (acres):** 0 **Road long term disturbance (acres):** 0

Powerline proposed disturbance (acres): 0 **Powerline interim reclamation (acres):** 0 **Powerline long term disturbance (acres):** 0

Pipeline proposed disturbance (acres): 2.09 **Pipeline interim reclamation (acres):** 0 **Pipeline long term disturbance (acres):** 2.09

Other proposed disturbance (acres): 0 **Other interim reclamation (acres):** 0 **Other long term disturbance (acres):** 0

Total proposed disturbance: 6.68 **Total interim reclamation:** 0.79 **Total long term disturbance:** 5.89

Disturbance Comments:

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

Operator Name: AMEREDEV OPERATING LLC

Well Name: RED BUD FED COM 25 36 32 **Well Number:** 081H

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 attachment:

Existing Vegetation Community at the road: Sparse low brush and intermittent grasses

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Sparse low brush and intermittent grasses

Existing Vegetation Community at the pipeline attachment:

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

Existing Vegetation Community at other disturbances attachment:

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: Christie **Last Name:** Hanna

Operator Name: AMEREDEV OPERATING LLC

Well Name: RED BUD FED COM 25 36 32 **Well Number:** 081H

Phone: (737)300-4700 **Email:** channa@ameredev.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: To BLM standards

Weed treatment plan attachment:

Monitoring plan description: To BLM standards

Monitoring plan attachment:

Success standards: To BLM satisfaction

Pit closure description: No pit

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: HOBBS

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Operator Name: AMEREDEV OPERATING LLC

Well Name: RED BUD FED COM 25 36 32 **Well Number:** 081H

Disturbance type: PIPELINE

Describe:

Surface Owner: PRIVATE OWNERSHIP,STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: HOBBS

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Fee Owner: Fee Owner Depercated **Fee Owner Address:**

Phone: (999)999-9999 **Email:** none@aol.com

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: AGREEMENT

Surface Access Agreement Need description: AMEREDEV HAS AN SUA IN PLACE WITH THE PRIVATE SURFACE OWNER.

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Section 12 - Other Information

Right of Way needed? N **Use APD as ROW?**

ROW Type(s):

ROW Applications

Operator Name: AMEREDEV OPERATING LLC

Well Name: RED BUD FED COM 25 36 32 **Well Number:** 081H

SUPO Additional Information:

Use a previously conducted onsite? Y

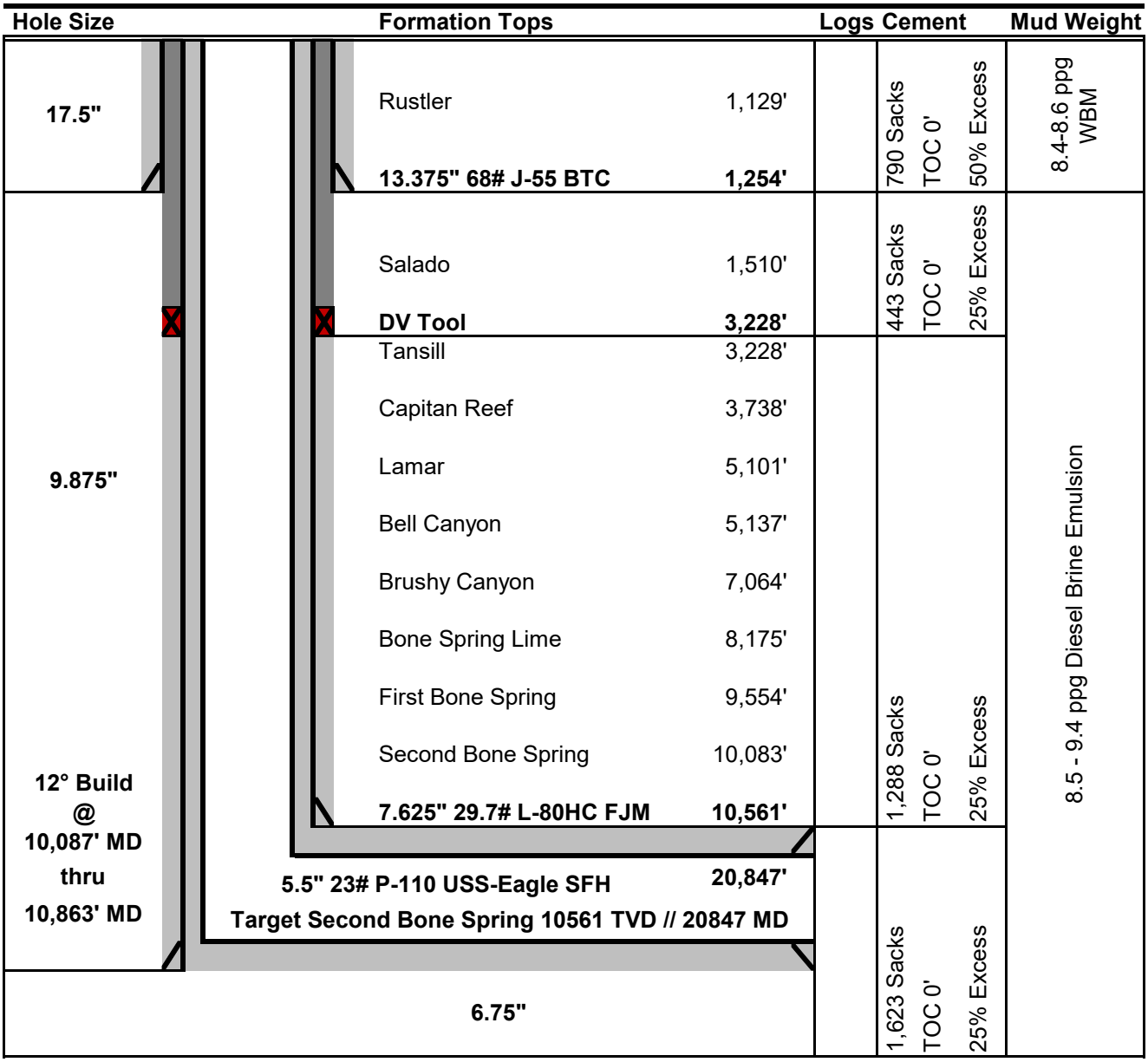
Previous Onsite information: An on-site meeting for Ameredev's Red Bud Fed Com 25 36 32 081H was held on 11/19/2018. (NOS #: 10400037355) Attendees included Jeff Robertson (BLM), Shane McNeely (Ameredev), and Ged Adams (Topographic). Ameredev made a donation with the MOU fund in lieu of an archaeology report.

Other SUPO Attachment

RED_BUD_FED_COM_25_36_32_081H___SURFACE_USE_PLAN_OF_OPERATIONS_20200513170018.pdf

Wellbore Schematic

Well:	Red Bud Fed Com 25-36-32 081H	**Co. Well ID:**	xxxxxx
SHL:	Sec. 32 25S-36E 200' FSL & 810' FWL	**AFE No.:**	xxxx-xxx
BHL:	Sec. 29 25S-36E 50' FNL & 660' FWL	**API No.:**	xxxxxxxxxx
	Lea, NM	**GL:**	3,011'
Wellhead:	A - 13-5/8" 10M x 13-5/8" SOW	**Field:**	Delaware
	B - 13-5/8" 10M x 13-5/8" 10M	**Objective:**	Second Bone Spring
	C - 13-5/8" 10M x 13-5/8" 10M	**TVD:**	10,561'
	Tubing Spool - 7-1/16" 15M x 13-3/8" 10M	**MD:**	20,847'
Xmas Tree:	2-9/16" 10M	**Rig:**	TBD **KB:** 27'
Tubing:	2-7/8" L-80 6.5# 8rd EUE	**E-Mail:**	Wellsite2@ameredev.com



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).

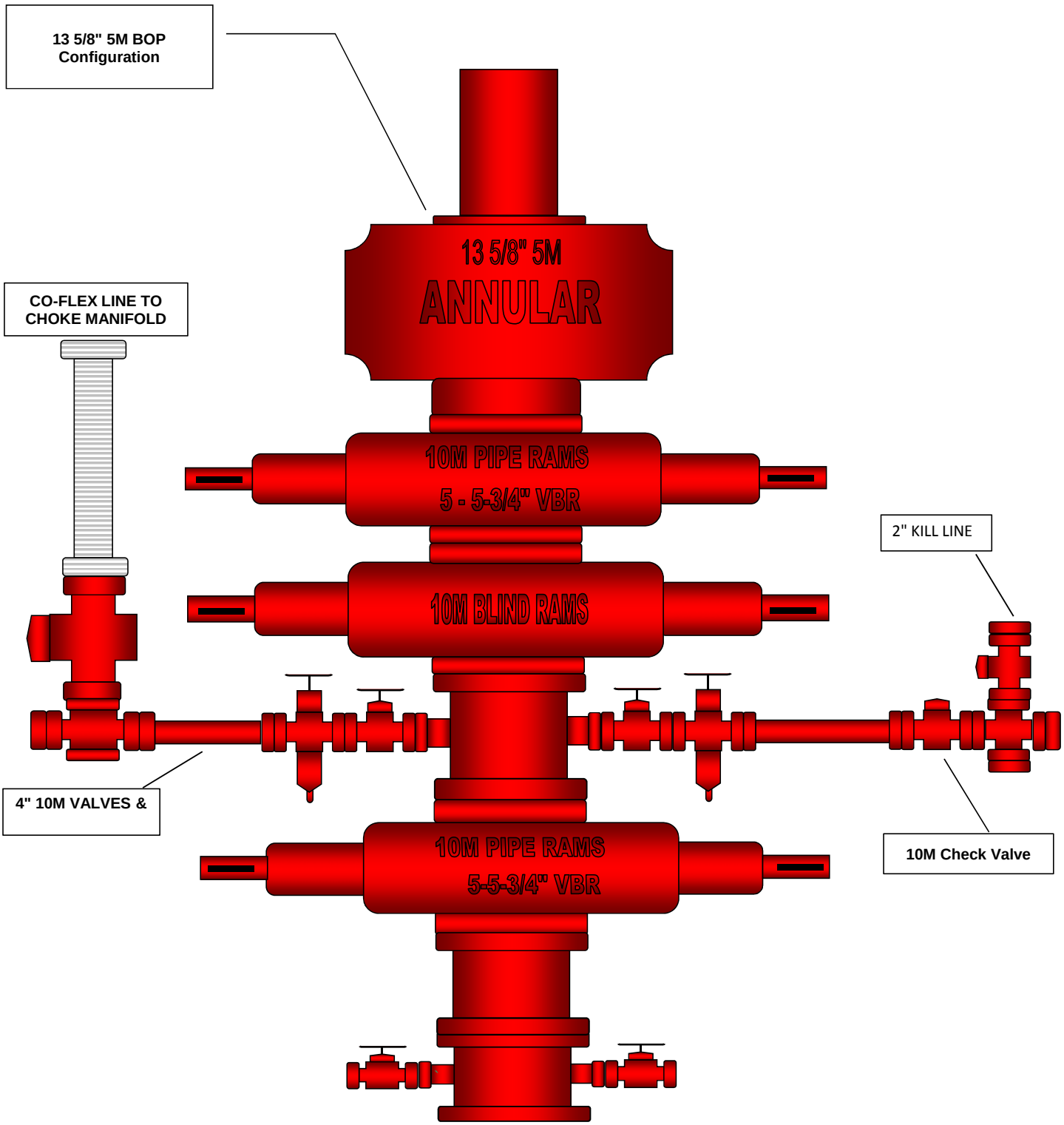
- Before drilling >20ft of new formation under the 9-5/8” (7-5/8" as applicable) Casing Shoe a pressure integrity test of the Casing Shoe will be performed to minimum of the MWE anticipated to control formation pressure to the next casing depth.

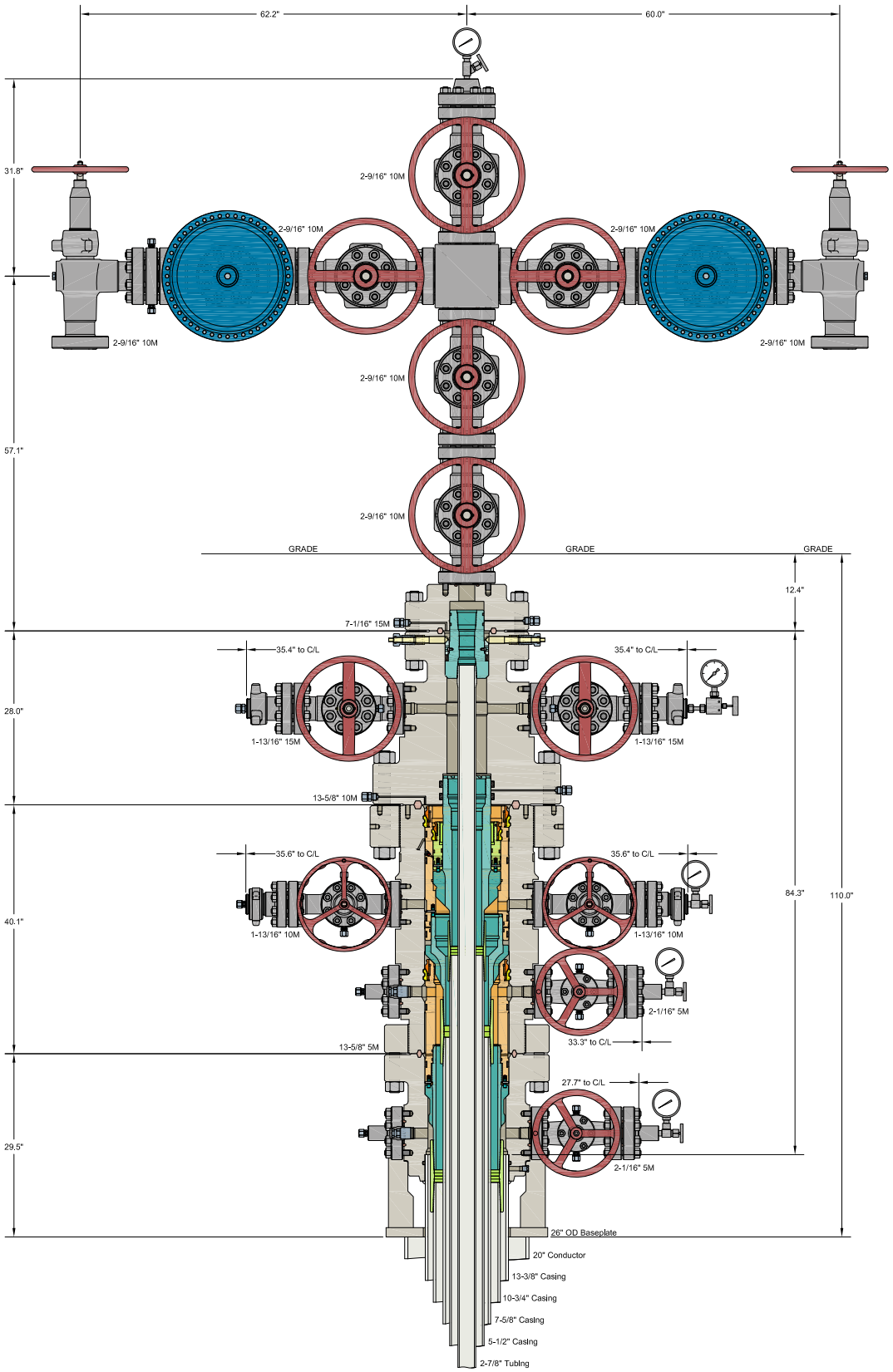
- Following setting of 5-1/2” Production Casing and adequate WOC time Ameredev will break 10M System Blowout Preventer (BOP) from 10M DOL-2 Casing Head, install annulus casing slips and test same (Installation procedure witnessed and verified by a manufacturer’s representative) and install 11” 10M x 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.


13 5/8" 5M BOP Configuration
13 5/8" 5M
ANNULAR
CO-FLEX LINE TO CHOKE MANIFOLD
10M PIPE RAMS
5 - 5-3/4" VBR
2" KILL LINE
10M BLIND RAMS
4" 10M VALVES &
10M PIPE RAMS
5-5-3/4" VBR
10M Check Valve



ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC		AMEREDEV DELAWARE	
20" x 13-3/8" x 10-3/4" x 7-5/8" x 5-1/2" x 2-7/8" MBU-4T-SOW Sys. With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head And 2-9/16" 10M x 2-9/16" 10M Production Tree Assembly	DRAWN	DLE	17DEC19
	APPRV		
	DRAWING NO.	HBE0000176	

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 38418

CONDITIONS

Operator: AMEREDEV OPERATING, LLC 2901 Via Fortuna Austin, TX 78746	OGRID: 372224
	Action Number: 38418
	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	7/29/2021
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	7/29/2021