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

HOBBS OCD
FEB 26 2020
RECEIVED

5. Lease Serial No.
NMNM127447

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.
PAR THREE ~~FED COM~~ 25 36 06 FED COM (327173)
112H

2. Name of Operator
AMEREDEV OPERATING LLC (372224)

9. API Well No.
30-025-46917

3a. Address
5707 Southwest Parkway, Building 1, Suite 275, Austin, TX

3b. Phone No. *(include area code)*
(737) 300-4700

10. Field and Pool, or Exploratory
JAL/WOLFCAMP WEST (37813)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SWSW / 1000 FSL / 683 FWL / LAT 32.1694599 / LONG -103.310504
At proposed prod. zone SWSW / 50 FSL / 1026 FWL / LAT 32.1378105 / LONG -103.3094052

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 31/T24S/R36E/NMP

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
7 miles	LEA	NM

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
1000 feet	2443.45	320.0

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
3255 feet	11842 feet / 23151 feet	FED: NMB001478

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3339 feet	06/01/2020	90 days

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
(Electronic Submission)	Christie Hanna / Ph: (737) 300-4700	01/10/2020

Title
Senior Engineering Technician

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575) 234-5959	02/24/2020

Title	Office
Assistant Field Manager Lands & Minerals	Carlsbad Field 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.

GCP Rec 2/26/2020

KZ 02/29/2020

NL

REQUIRES NSL

(Continued on page 2)

APPROVED WITH CONDITIONS

Approval Date: 02/24/2020

*(Instructions on page 2)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	AMEREDEV OPERATING, LLC
WELL NAME & NO.:	PAR THREE FED COM 25 36 06 112H
SURFACE HOLE FOOTAGE:	200'/N & 2328'/W
BOTTOM HOLE FOOTAGE	50'/N & 1672'/W
LOCATION:	Section 6, T.25 S., R.36 E., 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 1485 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface. Because the nearest geophysical data is more than two miles away and the proposed project is very near the Central Basin Platform margin the likelihood any gridding is anywhere near projections is highly suspect. Because of this discrepancy, BLM requests that a mudlogger be present for this well on this pad to verify the top of the Rustler Formation and top of the Salt Formation. GR and CNL geophysical logging MUST be run from surface to total depth because of the lack of data. If salt is encountered, set casing a minimum of 25 feet above the salt.
    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature

survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

❖ 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.

Operator has proposed to pump down 13-3/8" X 9-5/8" annulus. Operator must run a CBL from TD of the 9-5/8" casing to surface. Submit results to BLM.

3. The minimum required fill of cement behind the **7-5/8** inch intermediate casing (alternate design) is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above.
- Fresh-water based mud is to be used across the Capitan interval

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

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

C. PRESSURE CONTROL

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

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

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

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.

- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

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

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

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

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

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

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

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

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as

well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

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

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

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Operator Certification Data Report

02/25/2020

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Christie Hanna **Signed on:** 01/10/2020

Title: Senior Engineering Technician

Street Address: 5707 SOUTHWEST PKWY BLDG 1 STE 275

City: AUSTIN **State:** TX **Zip:** 78735

Phone: (737)300-4723

Email address: channa@ameredev.com

Field Representative

Representative Name: Zachary Boyd

Street Address: 5707 SOUTHWEST PKWY BLDG 1 275

City: AUSTIN **State:** TX **Zip:** 78735

Phone: (737)300-4700

Email address: zboyd@ameredev.com

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BUREAU OF LAND MANAGEMENT

Application Data Report

02/25/2020

APD ID: 10400053133 **Submission Date:** 01/10/2020

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

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

[redacted]

Show Final Text

Section 1 - General

APD ID: 10400053133 **Tie to previous NOS?** N **Submission Date:** 01/10/2020

BLM Office: CARLSBAD **User:** Christie Hanna **Title:** Senior Engineering Technician

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM127447 **Lease Acres:** 2443.45

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? N

Permitting Agent? NO **APD Operator:** AMEREDEV OPERATING LLC

Operator letter of designation:

Operator Info

Operator Organization Name: AMEREDEV OPERATING LLC

Operator Address: 5707 Southwest Parkway, Building 1, Suite 275

Zip: 78735

Operator PO Box:

Operator City: Austin **State:** TX

Operator Phone: (737)300-4700

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO **Master Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** JAL **Pool Name:** WOLFCAMP WEST

Is the proposed well in an area containing other mineral resources? USEABLE WATER NATURAL GAS CO2 OIL

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

Is the proposed well in an area containing other mineral resources? USEABLE WATER,NATURAL GAS,CO2,OIL

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** PT **Number:** 1N

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 7 Miles **Distance to nearest well:** 3255 FT **Distance to lease line:** 1000 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: PAR_THREE_FED_COM_25_36_06_112H___WELLSITE_20200110151155.pdf

Par_Three_Fed_Com_25_36_06_112H___Vicinity_Map_20200110151210.pdf

Par_Three_Fed_Com_25_36_06_112H___BLM_Lease_Map_20200110151210.pdf

Par_Three_Fed_Com_25_36_06_112H___C_102_SIG_20200110151211.pdf

Par_Three_Fed_Com_25_36_06_112H___Exh_2AB_20200110151211.pdf

GAS_CAPTURE_PLAN___PAR_THREE_FED_COM_25_36_06_112H_20200110151226.pdf

Well work start Date: 06/01/2020 **Duration:** 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 11401 **Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL	1000	FSL	683	FWL	24S	36E	31	Aliquot	32.16945 99	-103.3105	LEA	NEW MEXI	NEW MEXI	F	FEE	3339	0	0	N

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
KOP Leg #1	1000	FSL	1019	FWL	24S	36E	31	Aliquot SWSW	32.1694511	-103.3094175	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-8011	11367	11350	N
PPP Leg #1-1	100	FNL	1026	FWL	25S	36E	6	Aliquot NWNW	32.166435	-103.3093924	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-8503	12737	11842	Y
PPP Leg #1-2	2640	FNL	1061	FWL	25S	36E	6	Aliquot NWSW	32.159445	-103.3093956	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 138911	-8503	15280	11842	Y
PPP Leg #1-3	1320	FSL	1073	FWL	25S	36E	6	Aliquot SWSW	32.1558166	-103.3093972	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 127447	-8503	16600	11842	Y
PPP Leg #1-4	2640	FSL	1109	FWL	25S	36E	7	Aliquot NWSW	32.1449316	-103.3094019	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 127448	-8503	20560	11842	Y
EXIT Leg #1	50	FSL	1026	FWL	25S	36E	7	Aliquot SWSW	32.1378105	-103.3094052	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 127448	-8503	23151	11842	Y
BHL Leg #1	50	FSL	1026	FWL	25S	36E	7	Aliquot SWSW	32.1378105	-103.3094052	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 127448	-8503	23151	11842	Y

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

Drilling Plan Data Report

02/25/2020

APD ID: 10400053133 **Submission Date:** 01/10/2020

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

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

[redacted]

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Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
632942	RUSTLER ANHYDRITE	3339	1374	1374	ANHYDRITE	NONE	N
632943	SALADO	1403	1936	1936	SALT	NONE	N
632938	TANSILL	-335	3674	3674	LIMESTONE	NONE	N
632939	CAPITAN REEF	-700	4039	4039	LIMESTONE	USEABLE WATER	N
632948	LAMAR	-1956	5295	5295	LIMESTONE	NONE	N
632940	BELL CANYON	-2040	5379	5379	SANDSTONE	NATURAL GAS, OIL	N
632941	BRUSHY CANYON	-3966	7305	7305	SANDSTONE	NATURAL GAS, OIL	N
632944	BONE SPRING LIME	-5178	8517	8517	LIMESTONE	NONE	N
632949	BONE SPRING 1ST	-6495	9834	9834	SANDSTONE	NATURAL GAS, OIL	N
632945	BONE SPRING 2ND	-7015	10354	10354	SANDSTONE	NATURAL GAS, OIL	N
632946	BONE SPRING 3RD	-7539	10878	10878	LIMESTONE	NATURAL GAS, NONE, OIL	N
632947	BONE SPRING 3RD	-8098	11437	11437	SANDSTONE	NATURAL GAS, OIL	N
632950	WOLFCAMP	-8306	11645	11645	SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

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_20200110153328.pdf

BOP Diagram Attachment:

5M_Annular_Preventer_Variance_and_Well_Control_Plan_20200110153337.pdf

Pressure_Control_Plan_Single_Well_MB4_3String_Big_Hole_BLM_20200110153337.pdf

5M_BOP_System_20200110153337.pdf

4_String_MB_Ameredev_Wellhead_Drawing_net_REV_20200110153344.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	1499	0	1499	3339	1840	1499	J-55	68	OTHER - BTC	6.12	1	DRY	8.98	DRY	10.49
2	INTERMEDIATE	9.875	7.625	NEW	API	N	0	11003	0	11003	3001	-7664	11003	HCL-80	29.7	OTHER - BTC	1.25	1.23	DRY	2	DRY	2.88
3	PRODUCTION	6.75	5.5	NEW	API	N	0	23151	0	11842	3001	-8503	23151	P-110	20	OTHER - BTC	1.73	1.87	DRY	2.77	DRY	3.07

Casing Attachments

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

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_20200110153950.pdf

Par_Three_Fed_Com_25_36_06_112H___Wellbore_Diagram_and_CDA_20200110153955.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

7.625_29.70_L80HC_BORUSAN_20200110153836.pdf

Par_Three_Fed_Com_25_36_06_112H___Wellbore_Diagram_and_CDA_20200110153843.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

5.50_20_USS_P110_HC_BTC_API_20200110153744.pdf

Par_Three_Fed_Com_25_36_06_112H___Wellbore_Diagram_and_CDA_20200110153750.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

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	1113	1030	1.76	13.5	1812.85	100	CLASS C	Bentonite, Accelerator, Kolseal, Defoamer, Celloflake
SURFACE	Tail		1113	1499	200	1.34	14.8	268	100	CLASS C	None
INTERMEDIATE	Lead	3674	0	3143	713	3.5	9	2494.76	50	Class C	Salt, Bentonite, Kolseal, Defoamer, Celloflake
INTERMEDIATE	Tail		3143	3674	200	1.33	14.8	266	25	Class C	None
INTERMEDIATE	Lead	3674	3674	9782	2271	2.47	11.9	5608.23	50	CLASS H	Bentonite, Retarder, Kolseal, Defoamer, Celloflake, Anti-Settling Expansion Additive
INTERMEDIATE	Tail		9782	11003	200	1.31	14.2	262	25	CLASS H	Salt, Bentonite, Retarder, Dispersant, Fluid Loss
PRODUCTION	Lead		0	23151	1802	1.34	14.2	2414.92	25	CLASS H	Salt, Bentonite, Fluid Loss, Dispersant, Retarder, Defoamer

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: All necessary supplies (e.g. bentonite, cedar bark) for fluid control will be on site.

Describe the mud monitoring system utilized: An electronic pit volume totalizer (PVT) will be utilized on the circulating system to monitor pit volume, flow rate, pump pressure, and pump rate.

Circulating Medium Table

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

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	1499	WATER-BASED MUD	8.4	8.6							
1499	11003	OTHER : Diesel Brine Emulsion	8.5	9.4							
11003	11842	OIL-BASED MUD	10.5	12.5							

Section 6 - Test, Logging, Coring

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

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

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

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

Coring operation description for the well:

No coring will be done on this well.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6466 **Anticipated Surface Pressure:** 3860

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_20200110154411.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

PT112_DR_20200110154428.pdf

PT112_LLR_20200110154428.pdf

5M_Annular_Preventer_Variance_and_Well_Control_Plan_20200110154449.pdf

Pressure_Control_Plan_Single_Well_MB4_3String_Big_Hole_BLM_20200110154449.pdf

Other proposed operations facets description:

4-STRING CONTINGENCY PLAN AND SKID PROCEDURE ATTACHED

Other proposed operations facets attachment:

Wolfcamp_Contingency_PDF_20200110154457.pdf

Rig_Skid_Procedure_20200110154504.pdf

Other Variance attachment:

Requested_Exceptions___3_String_Revised_12032019_20200110154515.pdf

R616___CoC_for_hoses_12_18_17_20200110154519.pdf

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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

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)

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

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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.

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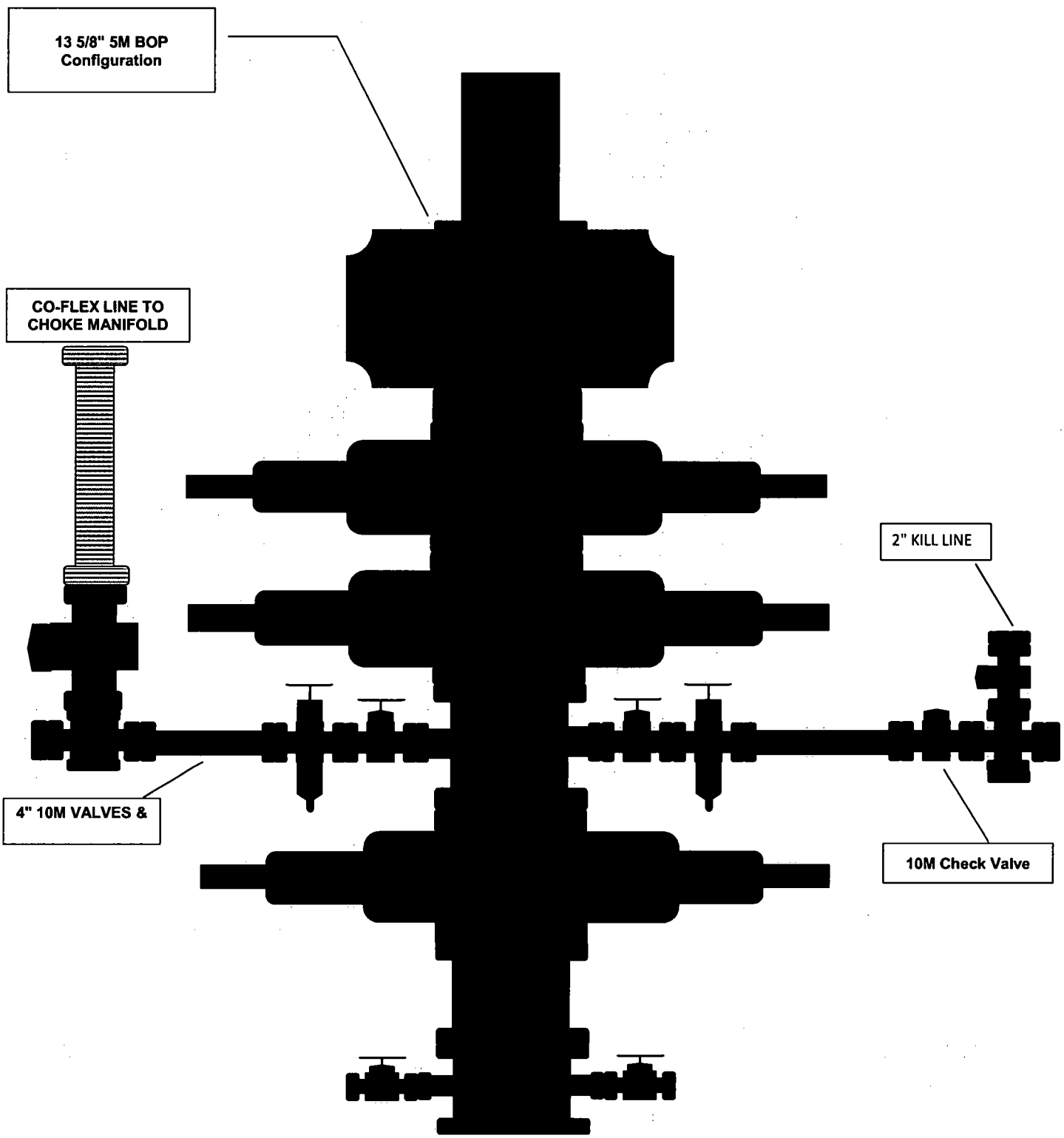
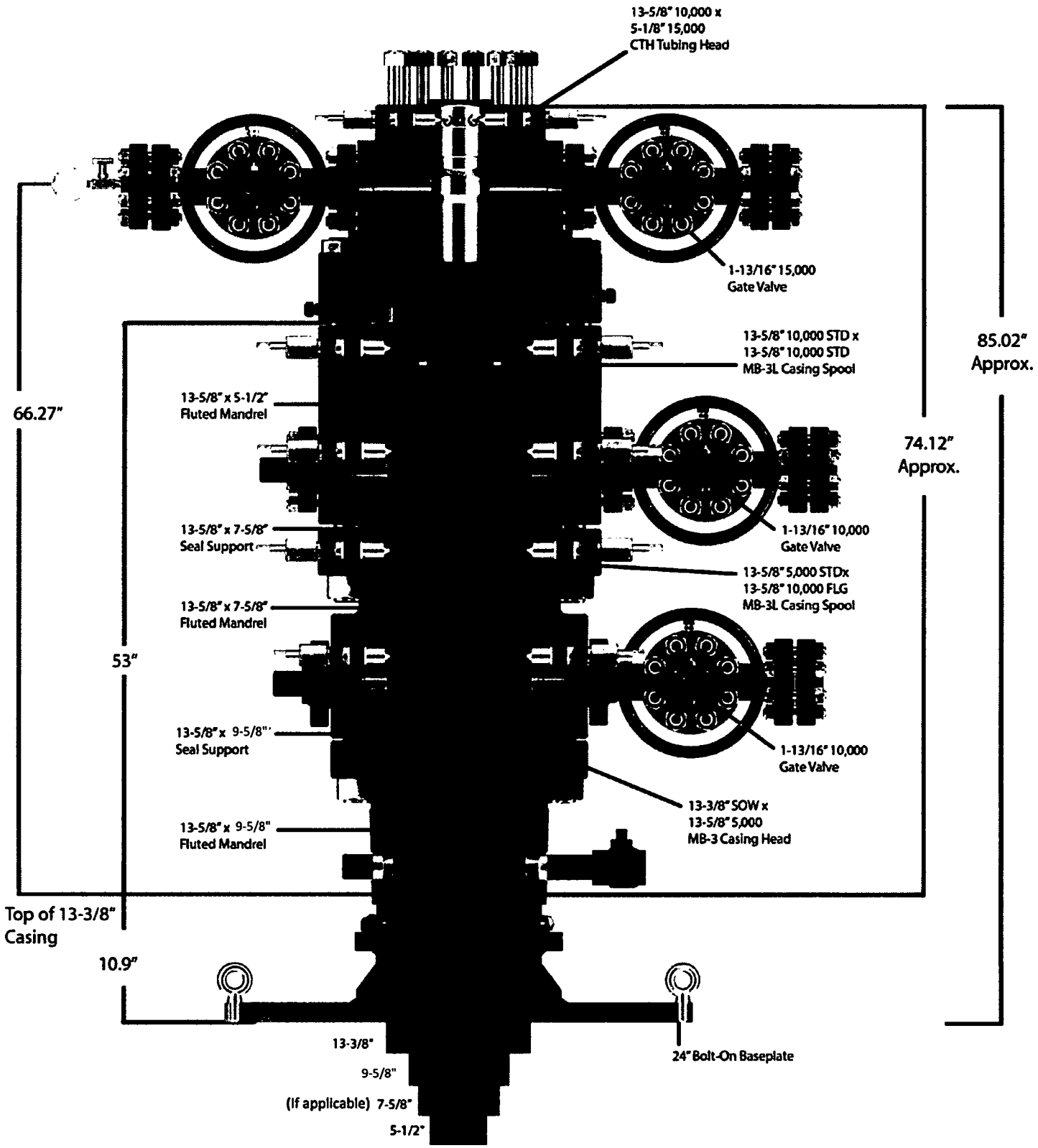
Pressure Control Plan

- 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
CO-FLEX LINE TO
CHOKE MANIFOLD
2" KILL LINE
4" 10M VALVES &
10M Check Valve



Quotation

Downing Wellhead Equipment

Oklahoma City, Oklahoma - USA

Reference Data:

16925 AMEREDEV

Proprietary and Confidential

TITLE:

AMEREDEV

DRAWN			SIZE	DWG. NO.	REV.
CHECKED			A		
APPROVED			Scale:	Weight:	Sheet:

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Contingency Wellbore Schematic

Well:	Par Three Fed Com 25-36-06 112H	**Co. Well ID:**	xxxxxx
SHL:	Sec. 31 24S-36E 1000' FSL & 683' FWL	**AFE No.:**	xxxx-xxx
BHL:	Sec. 07 25S-36E 50' FSL & 1026' FWL	**API No.:**	xxxxxxxxxx
	Lea, NM	**GL:**	3,339'
Wellhead:	A - 13-5/8" 10M x 13-5/8" SOW	**Field:**	Delaware
	B - 13-5/8" 10M x 13-5/8" 10M	**Objective:**	Wolfcamp A
	C - 13-5/8" 10M x 13-5/8" 10M	**TVD:**	11,842'
	Tubing Spool - 5-1/8" 15M x 13-3/8" 10M	**MD:**	23,151'
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

Hole Size	Formation Tops		Logs	Cement	Mud Weight
17.5"	Rustler	1,374'		1,230 Sacks TOC 0' 100% Excess	8.4-8.6 ppg WBM
	13.375" 68# J-55 BTC	**1,499'**			
	Salado	1,936'		913 Sacks TOC 0' 50% Excess	
	DV Tool with ACP	3,674'			
12.25"	Tansill	3,674'			8.5-9.4 Diesel Brine Emulsion
	Capitan Reef	4,039'			
	Lamar	5,296'			
	Bell Canyon	5,379'			
	No Casing	**5,421'**			
9.875"	Brushy Canyon	7,305'		2,471 Sacks TOC 0' 50% Excess	
	Bone Spring Lime	8,517'			
	First Bone Spring	9,834'			
	Second Bone Spring	10,354'			
	Third Bone Spring Upper	10,878'			
	7.625" 29.7# L-80HC BTC	**11,003'**			
6.75" 12° Build @ 11,367' MD thru 12,737' MD	Third Bone Spring	11,437'		1,802 Sacks TOC 0' 25% Excess	10.5-12.5 ppg OBM
	Wolfcamp	11,645'			
	5.5" 20# P-110 USS RYS SF	**23,151'**			
	Target Wolfcamp A 11842 TVD // 23151 MD				

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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.

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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)

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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
Zachary Boyd	Operations Superintendent	737-300-4725	432-385-6996
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

AMEREDEV

Ameredev Operating, LLC.

Par Three
Par Three #1N
Par Three 112H

Wellbore #1

Plan: Design #1

Standard Planning Report

08 January, 2020

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Par Three 112H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3366.0usft
Project:	Par Three	**MD Reference:**	KB @ 3366.0usft
Site:	Par Three #1N	**North Reference:**	Grid
Well:	Par Three 112H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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

Site	Par Three #1N				
Site Position:		**Northing:**	426,888.43 usft	**Latitude:**	32° 10' 10.056 N
From:	Lat/Long	**Easting:**	857,805.16 usft	**Longitude:**	103° 18' 38.047 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.54 °

Well	Par Three 112H					
Well Position	**+N/-S**	0.2 usft	**Northing:**	426,888.62 usft	**Latitude:**	32° 10' 10.056 N
	+E/-W	20.0 usft	**Easting:**	857,825.18 usft	**Longitude:**	103° 18' 37.814 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,339.0 usft

Wellbore	Wellbore #1				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	12/3/2019	6.56	60.02	47,679.97792102

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	177.76	

Plan Survey Tool Program **Date** 12/3/2019

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	23,150.7	Design #1 (Wellbore #1)	MWD	
				OWSG MWD - Standard	

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Site:	Par Three #1N	**North Reference:**	Grid
Well:	Par Three 112H	**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	90.00	2,299.5	0.0	15.7	2.00	2.00	0.00	90.00	
5,216.5	6.00	90.00	5,200.0	0.0	320.6	0.00	0.00	0.00	0.00	
5,516.5	0.00	0.00	5,499.5	0.0	336.2	2.00	-2.00	0.00	180.00	
11,367.1	0.00	0.00	11,350.0	0.0	336.2	0.00	0.00	0.00	0.00	
12,105.9	88.66	179.05	11,827.3	-466.2	344.0	12.00	12.00	0.00	179.05	
12,725.4	88.66	179.05	11,841.9	-1,085.4	354.3	0.00	0.00	0.00	0.00	
12,737.1	90.00	179.48	11,842.0	-1,097.2	354.4	12.00	11.43	3.65	17.72	PT112 FTP
23,151.3	90.00	179.48	11,842.0	-11,510.9	449.5	0.00	0.00	0.00	0.00	PT112 BHL

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Par Three 112H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3366.0usft
Project:	Par Three	**MD Reference:**	KB @ 3366.0usft
Site:	Par Three #1N	**North Reference:**	Grid
Well:	Par Three 112H	**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	90.00	2,100.0	0.0	1.7	0.1	2.00	2.00	0.00
2,200.0	4.00	90.00	2,199.8	0.0	7.0	0.3	2.00	2.00	0.00
2,300.0	6.00	90.00	2,299.5	0.0	15.7	0.6	2.00	2.00	0.00
2,400.0	6.00	90.00	2,398.9	0.0	26.1	1.0	0.00	0.00	0.00
2,500.0	6.00	90.00	2,498.4	0.0	36.6	1.4	0.00	0.00	0.00
2,600.0	6.00	90.00	2,597.8	0.0	47.1	1.8	0.00	0.00	0.00
2,700.0	6.00	90.00	2,697.3	0.0	57.5	2.2	0.00	0.00	0.00
2,800.0	6.00	90.00	2,796.7	0.0	68.0	2.7	0.00	0.00	0.00
2,900.0	6.00	90.00	2,896.2	0.0	78.4	3.1	0.00	0.00	0.00
3,000.0	6.00	90.00	2,995.6	0.0	88.9	3.5	0.00	0.00	0.00
3,100.0	6.00	90.00	3,095.1	0.0	99.3	3.9	0.00	0.00	0.00
3,200.0	6.00	90.00	3,194.5	0.0	109.8	4.3	0.00	0.00	0.00
3,300.0	6.00	90.00	3,294.0	0.0	120.2	4.7	0.00	0.00	0.00
3,400.0	6.00	90.00	3,393.4	0.0	130.7	5.1	0.00	0.00	0.00
3,500.0	6.00	90.00	3,492.9	0.0	141.1	5.5	0.00	0.00	0.00
3,600.0	6.00	90.00	3,592.3	0.0	151.6	5.9	0.00	0.00	0.00
3,700.0	6.00	90.00	3,691.8	0.0	162.0	6.3	0.00	0.00	0.00
3,800.0	6.00	90.00	3,791.2	0.0	172.5	6.7	0.00	0.00	0.00
3,900.0	6.00	90.00	3,890.7	0.0	182.9	7.1	0.00	0.00	0.00
4,000.0	6.00	90.00	3,990.1	0.0	193.4	7.5	0.00	0.00	0.00
4,100.0	6.00	90.00	4,089.6	0.0	203.8	8.0	0.00	0.00	0.00
4,200.0	6.00	90.00	4,189.0	0.0	214.3	8.4	0.00	0.00	0.00
4,300.0	6.00	90.00	4,288.5	0.0	224.8	8.8	0.00	0.00	0.00
4,400.0	6.00	90.00	4,387.9	0.0	235.2	9.2	0.00	0.00	0.00
4,500.0	6.00	90.00	4,487.4	0.0	245.7	9.6	0.00	0.00	0.00
4,600.0	6.00	90.00	4,586.9	0.0	256.1	10.0	0.00	0.00	0.00
4,700.0	6.00	90.00	4,686.3	0.0	266.6	10.4	0.00	0.00	0.00
4,800.0	6.00	90.00	4,785.8	0.0	277.0	10.8	0.00	0.00	0.00
4,900.0	6.00	90.00	4,885.2	0.0	287.5	11.2	0.00	0.00	0.00
5,000.0	6.00	90.00	4,984.7	0.0	297.9	11.6	0.00	0.00	0.00
5,100.0	6.00	90.00	5,084.1	0.0	308.4	12.0	0.00	0.00	0.00
5,200.0	6.00	90.00	5,183.6	0.0	318.8	12.4	0.00	0.00	0.00
5,216.5	6.00	90.00	5,200.0	0.0	320.6	12.5	0.00	0.00	0.00

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Site:	Par Three #1N	**North Reference:**	Grid
Well:	Par Three 112H	**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)
5,300.0	4.33	90.00	5,283.1	0.0	328.1	12.8	2.00	-2.00	0.00
5,400.0	2.33	90.00	5,383.0	0.0	333.9	13.0	2.00	-2.00	0.00
5,500.0	0.33	90.00	5,482.9	0.0	336.2	13.1	2.00	-2.00	0.00
5,516.5	0.00	0.00	5,499.5	0.0	336.2	13.1	2.00	-2.00	0.00
5,600.0	0.00	0.00	5,582.9	0.0	336.2	13.1	0.00	0.00	0.00
5,700.0	0.00	0.00	5,682.9	0.0	336.2	13.1	0.00	0.00	0.00
5,800.0	0.00	0.00	5,782.9	0.0	336.2	13.1	0.00	0.00	0.00
5,900.0	0.00	0.00	5,882.9	0.0	336.2	13.1	0.00	0.00	0.00
6,000.0	0.00	0.00	5,982.9	0.0	336.2	13.1	0.00	0.00	0.00
6,100.0	0.00	0.00	6,082.9	0.0	336.2	13.1	0.00	0.00	0.00
6,200.0	0.00	0.00	6,182.9	0.0	336.2	13.1	0.00	0.00	0.00
6,300.0	0.00	0.00	6,282.9	0.0	336.2	13.1	0.00	0.00	0.00
6,400.0	0.00	0.00	6,382.9	0.0	336.2	13.1	0.00	0.00	0.00
6,500.0	0.00	0.00	6,482.9	0.0	336.2	13.1	0.00	0.00	0.00
6,600.0	0.00	0.00	6,582.9	0.0	336.2	13.1	0.00	0.00	0.00
6,700.0	0.00	0.00	6,682.9	0.0	336.2	13.1	0.00	0.00	0.00
6,800.0	0.00	0.00	6,782.9	0.0	336.2	13.1	0.00	0.00	0.00
6,900.0	0.00	0.00	6,882.9	0.0	336.2	13.1	0.00	0.00	0.00
7,000.0	0.00	0.00	6,982.9	0.0	336.2	13.1	0.00	0.00	0.00
7,100.0	0.00	0.00	7,082.9	0.0	336.2	13.1	0.00	0.00	0.00
7,200.0	0.00	0.00	7,182.9	0.0	336.2	13.1	0.00	0.00	0.00
7,300.0	0.00	0.00	7,282.9	0.0	336.2	13.1	0.00	0.00	0.00
7,400.0	0.00	0.00	7,382.9	0.0	336.2	13.1	0.00	0.00	0.00
7,500.0	0.00	0.00	7,482.9	0.0	336.2	13.1	0.00	0.00	0.00
7,600.0	0.00	0.00	7,582.9	0.0	336.2	13.1	0.00	0.00	0.00
7,700.0	0.00	0.00	7,682.9	0.0	336.2	13.1	0.00	0.00	0.00
7,800.0	0.00	0.00	7,782.9	0.0	336.2	13.1	0.00	0.00	0.00
7,900.0	0.00	0.00	7,882.9	0.0	336.2	13.1	0.00	0.00	0.00
8,000.0	0.00	0.00	7,982.9	0.0	336.2	13.1	0.00	0.00	0.00
8,100.0	0.00	0.00	8,082.9	0.0	336.2	13.1	0.00	0.00	0.00
8,200.0	0.00	0.00	8,182.9	0.0	336.2	13.1	0.00	0.00	0.00
8,300.0	0.00	0.00	8,282.9	0.0	336.2	13.1	0.00	0.00	0.00
8,400.0	0.00	0.00	8,382.9	0.0	336.2	13.1	0.00	0.00	0.00
8,500.0	0.00	0.00	8,482.9	0.0	336.2	13.1	0.00	0.00	0.00
8,600.0	0.00	0.00	8,582.9	0.0	336.2	13.1	0.00	0.00	0.00
8,700.0	0.00	0.00	8,682.9	0.0	336.2	13.1	0.00	0.00	0.00
8,800.0	0.00	0.00	8,782.9	0.0	336.2	13.1	0.00	0.00	0.00
8,900.0	0.00	0.00	8,882.9	0.0	336.2	13.1	0.00	0.00	0.00
9,000.0	0.00	0.00	8,982.9	0.0	336.2	13.1	0.00	0.00	0.00
9,100.0	0.00	0.00	9,082.9	0.0	336.2	13.1	0.00	0.00	0.00
9,200.0	0.00	0.00	9,182.9	0.0	336.2	13.1	0.00	0.00	0.00
9,300.0	0.00	0.00	9,282.9	0.0	336.2	13.1	0.00	0.00	0.00
9,400.0	0.00	0.00	9,382.9	0.0	336.2	13.1	0.00	0.00	0.00
9,500.0	0.00	0.00	9,482.9	0.0	336.2	13.1	0.00	0.00	0.00
9,600.0	0.00	0.00	9,582.9	0.0	336.2	13.1	0.00	0.00	0.00
9,700.0	0.00	0.00	9,682.9	0.0	336.2	13.1	0.00	0.00	0.00
9,800.0	0.00	0.00	9,782.9	0.0	336.2	13.1	0.00	0.00	0.00
9,900.0	0.00	0.00	9,882.9	0.0	336.2	13.1	0.00	0.00	0.00
10,000.0	0.00	0.00	9,982.9	0.0	336.2	13.1	0.00	0.00	0.00
10,100.0	0.00	0.00	10,082.9	0.0	336.2	13.1	0.00	0.00	0.00
10,200.0	0.00	0.00	10,182.9	0.0	336.2	13.1	0.00	0.00	0.00
10,300.0	0.00	0.00	10,282.9	0.0	336.2	13.1	0.00	0.00	0.00
10,400.0	0.00	0.00	10,382.9	0.0	336.2	13.1	0.00	0.00	0.00
10,500.0	0.00	0.00	10,482.9	0.0	336.2	13.1	0.00	0.00	0.00

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Site:	Par Three #1N	**North Reference:**	Grid
Well:	Par Three 112H	**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)
10,600.0	0.00	0.00	10,582.9	0.0	336.2	13.1	0.00	0.00	0.00
10,700.0	0.00	0.00	10,682.9	0.0	336.2	13.1	0.00	0.00	0.00
10,800.0	0.00	0.00	10,782.9	0.0	336.2	13.1	0.00	0.00	0.00
10,900.0	0.00	0.00	10,882.9	0.0	336.2	13.1	0.00	0.00	0.00
11,000.0	0.00	0.00	10,982.9	0.0	336.2	13.1	0.00	0.00	0.00
11,100.0	0.00	0.00	11,082.9	0.0	336.2	13.1	0.00	0.00	0.00
11,200.0	0.00	0.00	11,182.9	0.0	336.2	13.1	0.00	0.00	0.00
11,300.0	0.00	0.00	11,282.9	0.0	336.2	13.1	0.00	0.00	0.00
11,367.1	0.00	0.00	11,350.0	0.0	336.2	13.1	0.00	0.00	0.00
PT112 KOP									
11,400.0	3.95	179.05	11,382.9	-1.1	336.3	14.3	12.00	12.00	0.00
11,500.0	15.95	179.05	11,481.2	-18.4	336.6	31.5	12.00	12.00	0.00
11,600.0	27.95	179.05	11,573.8	-55.7	337.2	68.8	12.00	12.00	0.00
11,700.0	39.95	179.05	11,656.6	-111.4	338.1	124.5	12.00	12.00	0.00
11,800.0	51.95	179.05	11,726.0	-183.2	339.3	196.3	12.00	12.00	0.00
11,900.0	63.95	179.05	11,779.0	-267.8	340.7	280.8	12.00	12.00	0.00
12,000.0	75.95	179.05	11,813.2	-361.5	342.3	374.6	12.00	12.00	0.00
12,100.0	87.95	179.05	11,827.2	-460.3	343.9	473.4	12.00	12.00	0.00
12,105.9	88.66	179.05	11,827.3	-466.2	344.0	479.3	12.00	12.00	0.00
12,200.0	88.66	179.05	11,829.5	-560.3	345.6	573.3	0.00	0.00	0.00
12,300.0	88.66	179.05	11,831.9	-660.2	347.2	673.3	0.00	0.00	0.00
12,400.0	88.66	179.05	11,834.2	-760.2	348.9	773.2	0.00	0.00	0.00
12,500.0	88.66	179.05	11,836.6	-860.2	350.5	873.2	0.00	0.00	0.00
12,600.0	88.66	179.05	11,838.9	-960.1	352.2	973.1	0.00	0.00	0.00
12,700.0	88.66	179.05	11,841.3	-1,060.1	353.9	1,073.1	0.00	0.00	0.00
12,725.4	88.66	179.05	11,841.9	-1,085.4	354.3	1,098.4	0.00	0.00	0.00
12,737.1	90.00	179.48	11,842.0	-1,097.2	354.4	1,110.2	12.00	11.43	3.65
PT112 FTP									
12,800.0	90.00	179.48	11,842.0	-1,160.1	355.0	1,173.0	0.00	0.00	0.00
12,900.0	90.00	179.48	11,842.0	-1,260.1	355.9	1,273.0	0.00	0.00	0.00
13,000.0	90.00	179.48	11,842.0	-1,360.1	356.8	1,372.9	0.00	0.00	0.00
13,100.0	90.00	179.48	11,842.0	-1,460.1	357.8	1,472.9	0.00	0.00	0.00
13,200.0	90.00	179.48	11,842.0	-1,560.1	358.7	1,572.9	0.00	0.00	0.00
13,300.0	90.00	179.48	11,842.0	-1,660.0	359.6	1,672.8	0.00	0.00	0.00
13,400.0	90.00	179.48	11,842.0	-1,760.0	360.5	1,772.8	0.00	0.00	0.00
13,500.0	90.00	179.48	11,842.0	-1,860.0	361.4	1,872.7	0.00	0.00	0.00
13,600.0	90.00	179.48	11,842.0	-1,960.0	362.3	1,972.7	0.00	0.00	0.00
13,700.0	90.00	179.48	11,842.0	-2,060.0	363.2	2,072.6	0.00	0.00	0.00
13,800.0	90.00	179.48	11,842.0	-2,160.0	364.1	2,172.6	0.00	0.00	0.00
13,900.0	90.00	179.48	11,842.0	-2,260.0	365.1	2,272.5	0.00	0.00	0.00
14,000.0	90.00	179.48	11,842.0	-2,360.0	366.0	2,372.5	0.00	0.00	0.00
14,100.0	90.00	179.48	11,842.0	-2,460.0	366.9	2,472.5	0.00	0.00	0.00
14,200.0	90.00	179.48	11,842.0	-2,560.0	367.8	2,572.4	0.00	0.00	0.00
14,300.0	90.00	179.48	11,842.0	-2,660.0	368.7	2,672.4	0.00	0.00	0.00
14,400.0	90.00	179.48	11,842.0	-2,760.0	369.6	2,772.3	0.00	0.00	0.00
14,500.0	90.00	179.48	11,842.0	-2,860.0	370.5	2,872.3	0.00	0.00	0.00
14,600.0	90.00	179.48	11,842.0	-2,960.0	371.5	2,972.2	0.00	0.00	0.00
14,700.0	90.00	179.48	11,842.0	-3,060.0	372.4	3,072.2	0.00	0.00	0.00
14,800.0	90.00	179.48	11,842.0	-3,160.0	373.3	3,172.1	0.00	0.00	0.00
14,900.0	90.00	179.48	11,842.0	-3,260.0	374.2	3,272.1	0.00	0.00	0.00
15,000.0	90.00	179.48	11,842.0	-3,360.0	375.1	3,372.1	0.00	0.00	0.00
15,100.0	90.00	179.48	11,842.0	-3,460.0	376.0	3,472.0	0.00	0.00	0.00
15,200.0	90.00	179.48	11,842.0	-3,560.0	376.9	3,572.0	0.00	0.00	0.00
15,280.2	90.00	179.48	11,842.0	-3,640.2	377.7	3,652.1	0.00	0.00	0.00

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Par Three 112H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3366.0usft
Project:	Par Three	**MD Reference:**	KB @ 3366.0usft
Site:	Par Three #1N	**North Reference:**	Grid
Well:	Par Three 112H	**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)
PT112 into NMNM138911									
15,300.0	90.00	179.48	11,842.0	-3,660.0	377.8	3,671.9	0.00	0.00	0.00
15,400.0	90.00	179.48	11,842.0	-3,760.0	378.8	3,771.9	0.00	0.00	0.00
15,500.0	90.00	179.48	11,842.0	-3,860.0	379.7	3,871.8	0.00	0.00	0.00
15,600.0	90.00	179.48	11,842.0	-3,960.0	380.6	3,971.8	0.00	0.00	0.00
15,700.0	90.00	179.48	11,842.0	-4,059.9	381.5	4,071.7	0.00	0.00	0.00
15,800.0	90.00	179.48	11,842.0	-4,159.9	382.4	4,171.7	0.00	0.00	0.00
15,900.0	90.00	179.48	11,842.0	-4,259.9	383.3	4,271.7	0.00	0.00	0.00
16,000.0	90.00	179.48	11,842.0	-4,359.9	384.2	4,371.6	0.00	0.00	0.00
16,100.0	90.00	179.48	11,842.0	-4,459.9	385.1	4,471.6	0.00	0.00	0.00
16,200.0	90.00	179.48	11,842.0	-4,559.9	386.1	4,571.5	0.00	0.00	0.00
16,300.0	90.00	179.48	11,842.0	-4,659.9	387.0	4,671.5	0.00	0.00	0.00
16,400.0	90.00	179.48	11,842.0	-4,759.9	387.9	4,771.4	0.00	0.00	0.00
16,500.0	90.00	179.48	11,842.0	-4,859.9	388.8	4,871.4	0.00	0.00	0.00
16,600.0	90.00	179.48	11,842.0	-4,959.9	389.7	4,971.3	0.00	0.00	0.00
16,600.3	90.00	179.48	11,842.0	-4,960.2	389.7	4,971.6	0.00	0.00	0.00
PT112 into NMNM127447									
16,700.0	90.00	179.48	11,842.0	-5,059.9	390.6	5,071.3	0.00	0.00	0.00
16,800.0	90.00	179.48	11,842.0	-5,159.9	391.5	5,171.2	0.00	0.00	0.00
16,900.0	90.00	179.48	11,842.0	-5,259.9	392.5	5,271.2	0.00	0.00	0.00
17,000.0	90.00	179.48	11,842.0	-5,359.9	393.4	5,371.2	0.00	0.00	0.00
17,100.0	90.00	179.48	11,842.0	-5,459.9	394.3	5,471.1	0.00	0.00	0.00
17,200.0	90.00	179.48	11,842.0	-5,559.9	395.2	5,571.1	0.00	0.00	0.00
17,300.0	90.00	179.48	11,842.0	-5,659.9	396.1	5,671.0	0.00	0.00	0.00
17,400.0	90.00	179.48	11,842.0	-5,759.9	397.0	5,771.0	0.00	0.00	0.00
17,500.0	90.00	179.48	11,842.0	-5,859.9	397.9	5,870.9	0.00	0.00	0.00
17,600.0	90.00	179.48	11,842.0	-5,959.9	398.8	5,970.9	0.00	0.00	0.00
17,700.0	90.00	179.48	11,842.0	-6,059.9	399.8	6,070.8	0.00	0.00	0.00
17,800.0	90.00	179.48	11,842.0	-6,159.9	400.7	6,170.8	0.00	0.00	0.00
17,900.0	90.00	179.48	11,842.0	-6,259.9	401.6	6,270.8	0.00	0.00	0.00
18,000.0	90.00	179.48	11,842.0	-6,359.9	402.5	6,370.7	0.00	0.00	0.00
18,100.0	90.00	179.48	11,842.0	-6,459.8	403.4	6,470.7	0.00	0.00	0.00
18,200.0	90.00	179.48	11,842.0	-6,559.8	404.3	6,570.6	0.00	0.00	0.00
18,300.0	90.00	179.48	11,842.0	-6,659.8	405.2	6,670.6	0.00	0.00	0.00
18,400.0	90.00	179.48	11,842.0	-6,759.8	406.1	6,770.5	0.00	0.00	0.00
18,500.0	90.00	179.48	11,842.0	-6,859.8	407.1	6,870.5	0.00	0.00	0.00
18,600.0	90.00	179.48	11,842.0	-6,959.8	408.0	6,970.4	0.00	0.00	0.00
18,700.0	90.00	179.48	11,842.0	-7,059.8	408.9	7,070.4	0.00	0.00	0.00
18,800.0	90.00	179.48	11,842.0	-7,159.8	409.8	7,170.4	0.00	0.00	0.00
18,900.0	90.00	179.48	11,842.0	-7,259.8	410.7	7,270.3	0.00	0.00	0.00
19,000.0	90.00	179.48	11,842.0	-7,359.8	411.6	7,370.3	0.00	0.00	0.00
19,100.0	90.00	179.48	11,842.0	-7,459.8	412.5	7,470.2	0.00	0.00	0.00
19,200.0	90.00	179.48	11,842.0	-7,559.8	413.5	7,570.2	0.00	0.00	0.00
19,300.0	90.00	179.48	11,842.0	-7,659.8	414.4	7,670.1	0.00	0.00	0.00
19,400.0	90.00	179.48	11,842.0	-7,759.8	415.3	7,770.1	0.00	0.00	0.00
19,500.0	90.00	179.48	11,842.0	-7,859.8	416.2	7,870.0	0.00	0.00	0.00
19,600.0	90.00	179.48	11,842.0	-7,959.8	417.1	7,970.0	0.00	0.00	0.00
19,700.0	90.00	179.48	11,842.0	-8,059.8	418.0	8,070.0	0.00	0.00	0.00
19,800.0	90.00	179.48	11,842.0	-8,159.8	418.9	8,169.9	0.00	0.00	0.00
19,900.0	90.00	179.48	11,842.0	-8,259.8	419.8	8,269.9	0.00	0.00	0.00
20,000.0	90.00	179.48	11,842.0	-8,359.8	420.8	8,369.8	0.00	0.00	0.00
20,100.0	90.00	179.48	11,842.0	-8,459.8	421.7	8,469.8	0.00	0.00	0.00
20,200.0	90.00	179.48	11,842.0	-8,559.8	422.6	8,569.7	0.00	0.00	0.00

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Par Three 112H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3366.0usft
Project:	Par Three	**MD Reference:**	KB @ 3366.0usft
Site:	Par Three #1N	**North Reference:**	Grid
Well:	Par Three 112H	**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	179.48	11,842.0	-8,659.8	423.5	8,669.7	0.00	0.00	0.00
20,400.0	90.00	179.48	11,842.0	-8,759.8	424.4	8,769.6	0.00	0.00	0.00
20,500.0	90.00	179.48	11,842.0	-8,859.7	425.3	8,869.6	0.00	0.00	0.00
20,560.4	90.00	179.48	11,842.0	-8,920.1	425.9	8,930.0	0.00	0.00	0.00
PT112 into NMNM127448									
20,600.0	90.00	179.48	11,842.0	-8,959.7	426.2	8,969.6	0.00	0.00	0.00
20,700.0	90.00	179.48	11,842.0	-9,059.7	427.1	9,069.5	0.00	0.00	0.00
20,800.0	90.00	179.48	11,842.0	-9,159.7	428.1	9,169.5	0.00	0.00	0.00
20,900.0	90.00	179.48	11,842.0	-9,259.7	429.0	9,269.4	0.00	0.00	0.00
21,000.0	90.00	179.48	11,842.0	-9,359.7	429.9	9,369.4	0.00	0.00	0.00
21,100.0	90.00	179.48	11,842.0	-9,459.7	430.8	9,469.3	0.00	0.00	0.00
21,200.0	90.00	179.48	11,842.0	-9,559.7	431.7	9,569.3	0.00	0.00	0.00
21,300.0	90.00	179.48	11,842.0	-9,659.7	432.6	9,669.2	0.00	0.00	0.00
21,400.0	90.00	179.48	11,842.0	-9,759.7	433.5	9,769.2	0.00	0.00	0.00
21,500.0	90.00	179.48	11,842.0	-9,859.7	434.5	9,869.1	0.00	0.00	0.00
21,600.0	90.00	179.48	11,842.0	-9,959.7	435.4	9,969.1	0.00	0.00	0.00
21,700.0	90.00	179.48	11,842.0	-10,059.7	436.3	10,069.1	0.00	0.00	0.00
21,800.0	90.00	179.48	11,842.0	-10,159.7	437.2	10,169.0	0.00	0.00	0.00
21,900.0	90.00	179.48	11,842.0	-10,259.7	438.1	10,269.0	0.00	0.00	0.00
22,000.0	90.00	179.48	11,842.0	-10,359.7	439.0	10,368.9	0.00	0.00	0.00
22,100.0	90.00	179.48	11,842.0	-10,459.7	439.9	10,468.9	0.00	0.00	0.00
22,200.0	90.00	179.48	11,842.0	-10,559.7	440.8	10,568.8	0.00	0.00	0.00
22,300.0	90.00	179.48	11,842.0	-10,659.7	441.8	10,668.8	0.00	0.00	0.00
22,400.0	90.00	179.48	11,842.0	-10,759.7	442.7	10,768.7	0.00	0.00	0.00
22,500.0	90.00	179.48	11,842.0	-10,859.7	443.6	10,868.7	0.00	0.00	0.00
22,600.0	90.00	179.48	11,842.0	-10,959.7	444.5	10,968.7	0.00	0.00	0.00
22,700.0	90.00	179.48	11,842.0	-11,059.7	445.4	11,068.6	0.00	0.00	0.00
22,800.0	90.00	179.48	11,842.0	-11,159.7	446.3	11,168.6	0.00	0.00	0.00
22,900.0	90.00	179.48	11,842.0	-11,259.6	447.2	11,268.5	0.00	0.00	0.00
23,000.0	90.00	179.48	11,842.0	-11,359.6	448.1	11,368.5	0.00	0.00	0.00
23,100.0	90.00	179.48	11,842.0	-11,459.6	449.1	11,468.4	0.00	0.00	0.00
PT112 LTP									
23,151.3	90.00	179.48	11,842.0	-11,510.9	449.5	11,519.7	0.00	0.00	0.00
PT112 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
PT112 FTP - plan hits target center - Point	0.00	0.00	11,842.0	-1,097.2	354.4	425,791.42	858,179.63	32° 9' 59.166 N	103° 18' 33.813 W
PT112 LTP - plan misses target center by 1.3usft at 23100.0usft MD (11842.0 TVD, -11459.6 N, 449.1 E) - Point	0.00	0.00	11,842.0	-11,460.9	449.1	415,427.71	858,274.27	32° 8' 16.612 N	103° 18' 33.858 W
PT112 BHL - plan hits target center - Point	0.00	0.00	11,842.0	-11,510.9	449.5	415,377.73	858,274.71	32° 8' 16.118 N	103° 18' 33.859 W

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Par Three 112H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3366.0usft
Project:	Par Three	**MD Reference:**	KB @ 3366.0usft
Site:	Par Three #1N	**North Reference:**	Grid
Well:	Par Three 112H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
11,367.1	11,350.0	0.0	336.2	PT112 KOP
15,280.2	11,842.0	-3,640.2	377.7	PT112 into NMNM138911
16,600.3	11,842.0	-4,960.2	389.7	PT112 into NMNM127447
20,560.4	11,842.0	-8,920.1	425.9	PT112 into NMNM127448

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Ameredev Operating, LLC.

Par Three
Par Three #1N
Par Three 112H
Wellbore #1

Plan: Design #1

Lease Penetration Section Line Foot

08 January, 2020

AMEREDEV

Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Par Three 112H
Project:	Par Three	**TVD Reference:**	KB @ 3366.0usft
Site:	Par Three #1N	**MD Reference:**	KB @ 3366.0usft
Well:	Par Three 112H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM5000

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

Site	Par Three #1N				
Site Position:		**Northing:**	426,888.43 usft	**Latitude:**	32° 10' 10.056 N
From:	Lat/Long	**Easting:**	857,805.16 usft	**Longitude:**	103° 18' 38.047 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	0.54 °

Well	Par Three 112H				
Well Position	**+N/-S**	0.0 usft	**Northing:**	426,888.62 usft	**Latitude:**	32° 10' 10.056 N
	+E/-W	0.0 usft	**Easting:**	857,825.19 usft	**Longitude:**	103° 18' 37.814 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,339.0 usft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	12/3/2019	6.56	60.02	47,679.97792102

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	177.76

Survey Tool Program **Date** 1/8/2020

From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
0.0	23,150.7	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	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
100.0	0.00	0.00	100.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
200.0	0.00	0.00	200.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
300.0	0.00	0.00	300.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
400.0	0.00	0.00	400.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
500.0	0.00	0.00	500.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
600.0	0.00	0.00	600.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
700.0	0.00	0.00	700.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
800.0	0.00	0.00	800.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
900.0	0.00	0.00	900.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
1,000.0	0.00	0.00	1,000.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
1,100.0	0.00	0.00	1,100.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W

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Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Par Three 112H
Project:	Par Three	**TVD Reference:**	KB @ 3366.0usft
Site:	Par Three #1N	**MD Reference:**	KB @ 3366.0usft
Well:	Par Three 112H	**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	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
1,300.0	0.00	0.00	1,300.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
1,400.0	0.00	0.00	1,400.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
1,500.0	0.00	0.00	1,500.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
1,600.0	0.00	0.00	1,600.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
1,700.0	0.00	0.00	1,700.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
1,800.0	0.00	0.00	1,800.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
1,900.0	0.00	0.00	1,900.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
2,000.0	0.00	0.00	2,000.0	1,000.2	683.0	32° 10' 10.056 N	103° 18' 37.814 W
2,100.0	2.00	90.00	2,100.0	1,000.2	684.8	32° 10' 10.055 N	103° 18' 37.794 W
2,200.0	4.00	90.00	2,199.8	1,000.2	690.0	32° 10' 10.055 N	103° 18' 37.733 W
2,300.0	6.00	90.00	2,299.5	1,000.2	698.7	32° 10' 10.054 N	103° 18' 37.632 W
2,400.0	6.00	90.00	2,398.9	1,000.2	709.2	32° 10' 10.053 N	103° 18' 37.510 W
2,500.0	6.00	90.00	2,498.4	1,000.2	719.6	32° 10' 10.052 N	103° 18' 37.389 W
2,600.0	6.00	90.00	2,597.8	1,000.2	730.1	32° 10' 10.051 N	103° 18' 37.267 W
2,700.0	6.00	90.00	2,697.3	1,000.2	740.5	32° 10' 10.050 N	103° 18' 37.145 W
2,800.0	6.00	90.00	2,796.7	1,000.2	751.0	32° 10' 10.049 N	103° 18' 37.024 W
2,900.0	6.00	90.00	2,896.2	1,000.2	761.4	32° 10' 10.048 N	103° 18' 36.902 W
3,000.0	6.00	90.00	2,995.6	1,000.2	771.9	32° 10' 10.047 N	103° 18' 36.781 W
3,100.0	6.00	90.00	3,095.1	1,000.2	782.3	32° 10' 10.046 N	103° 18' 36.659 W
3,200.0	6.00	90.00	3,194.5	1,000.2	792.8	32° 10' 10.045 N	103° 18' 36.537 W
3,300.0	6.00	90.00	3,294.0	1,000.2	803.2	32° 10' 10.044 N	103° 18' 36.416 W
3,400.0	6.00	90.00	3,393.4	1,000.2	813.7	32° 10' 10.043 N	103° 18' 36.294 W
3,500.0	6.00	90.00	3,492.9	1,000.2	824.1	32° 10' 10.042 N	103° 18' 36.173 W
3,600.0	6.00	90.00	3,592.3	1,000.2	834.6	32° 10' 10.041 N	103° 18' 36.051 W
3,700.0	6.00	90.00	3,691.8	1,000.2	845.1	32° 10' 10.040 N	103° 18' 35.929 W
3,800.0	6.00	90.00	3,791.2	1,000.2	855.5	32° 10' 10.039 N	103° 18' 35.808 W
3,900.0	6.00	90.00	3,890.7	1,000.2	866.0	32° 10' 10.038 N	103° 18' 35.686 W
4,000.0	6.00	90.00	3,990.1	1,000.2	876.4	32° 10' 10.037 N	103° 18' 35.565 W
4,100.0	6.00	90.00	4,089.6	1,000.2	886.9	32° 10' 10.036 N	103° 18' 35.443 W
4,200.0	6.00	90.00	4,189.0	1,000.2	897.3	32° 10' 10.035 N	103° 18' 35.321 W
4,300.0	6.00	90.00	4,288.5	1,000.2	907.8	32° 10' 10.034 N	103° 18' 35.200 W
4,400.0	6.00	90.00	4,387.9	1,000.2	918.2	32° 10' 10.034 N	103° 18' 35.078 W
4,500.0	6.00	90.00	4,487.4	1,000.2	928.7	32° 10' 10.033 N	103° 18' 34.957 W
4,600.0	6.00	90.00	4,586.9	1,000.2	939.1	32° 10' 10.032 N	103° 18' 34.835 W
4,700.0	6.00	90.00	4,686.3	1,000.2	949.6	32° 10' 10.031 N	103° 18' 34.714 W
4,800.0	6.00	90.00	4,785.8	1,000.2	960.0	32° 10' 10.030 N	103° 18' 34.592 W
4,900.0	6.00	90.00	4,885.2	1,000.2	970.5	32° 10' 10.029 N	103° 18' 34.470 W
5,000.0	6.00	90.00	4,984.7	1,000.2	980.9	32° 10' 10.028 N	103° 18' 34.349 W
5,100.0	6.00	90.00	5,084.1	1,000.2	991.4	32° 10' 10.027 N	103° 18' 34.227 W
5,200.0	6.00	90.00	5,183.6	1,000.2	1,001.8	32° 10' 10.026 N	103° 18' 34.106 W
5,216.5	6.00	90.00	5,200.0	1,000.2	1,003.6	32° 10' 10.025 N	103° 18' 34.085 W
5,300.0	4.33	90.00	5,283.1	1,000.2	1,011.1	32° 10' 10.025 N	103° 18' 33.998 W
5,400.0	2.33	90.00	5,383.0	1,000.2	1,016.9	32° 10' 10.024 N	103° 18' 33.930 W

AMEREDEV

Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Par Three 112H
Project:	Par Three	**TVD Reference:**	KB @ 3366.0usft
Site:	Par Three #1N	**MD Reference:**	KB @ 3366.0usft
Well:	Par Three 112H	**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
5,500.0	0.33	90.00	5,482.9	1,000.2	1,019.2	32° 10' 10.024 N	103° 18' 33.903 W
5,516.5	0.00	0.00	5,499.5	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
5,600.0	0.00	0.00	5,582.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
5,700.0	0.00	0.00	5,682.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
5,800.0	0.00	0.00	5,782.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
5,900.0	0.00	0.00	5,882.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
6,000.0	0.00	0.00	5,982.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
6,100.0	0.00	0.00	6,082.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
6,200.0	0.00	0.00	6,182.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
6,300.0	0.00	0.00	6,282.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
6,400.0	0.00	0.00	6,382.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
6,500.0	0.00	0.00	6,482.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
6,600.0	0.00	0.00	6,582.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
6,700.0	0.00	0.00	6,682.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
6,800.0	0.00	0.00	6,782.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
6,900.0	0.00	0.00	6,882.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
7,000.0	0.00	0.00	6,982.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
7,100.0	0.00	0.00	7,082.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
7,200.0	0.00	0.00	7,182.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
7,300.0	0.00	0.00	7,282.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
7,400.0	0.00	0.00	7,382.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
7,500.0	0.00	0.00	7,482.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
7,600.0	0.00	0.00	7,582.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
7,700.0	0.00	0.00	7,682.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
7,800.0	0.00	0.00	7,782.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
7,900.0	0.00	0.00	7,882.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
8,000.0	0.00	0.00	7,982.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
8,100.0	0.00	0.00	8,082.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
8,200.0	0.00	0.00	8,182.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
8,300.0	0.00	0.00	8,282.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
8,400.0	0.00	0.00	8,382.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
8,500.0	0.00	0.00	8,482.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
8,600.0	0.00	0.00	8,582.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
8,700.0	0.00	0.00	8,682.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
8,800.0	0.00	0.00	8,782.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
8,900.0	0.00	0.00	8,882.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
9,000.0	0.00	0.00	8,982.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
9,100.0	0.00	0.00	9,082.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
9,200.0	0.00	0.00	9,182.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
9,300.0	0.00	0.00	9,282.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
9,400.0	0.00	0.00	9,382.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
9,500.0	0.00	0.00	9,482.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
9,600.0	0.00	0.00	9,582.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
9,700.0	0.00	0.00	9,682.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W

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Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Par Three 112H
Project:	Par Three	**TVD Reference:**	KB @ 3366.0usft
Site:	Par Three #1N	**MD Reference:**	KB @ 3366.0usft
Well:	Par Three 112H	**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	9,782.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
9,900.0	0.00	0.00	9,882.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
10,000.0	0.00	0.00	9,982.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
10,100.0	0.00	0.00	10,082.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
10,200.0	0.00	0.00	10,182.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
10,300.0	0.00	0.00	10,282.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
10,400.0	0.00	0.00	10,382.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
10,500.0	0.00	0.00	10,482.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
10,600.0	0.00	0.00	10,582.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
10,700.0	0.00	0.00	10,682.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
10,800.0	0.00	0.00	10,782.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
10,900.0	0.00	0.00	10,882.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
11,000.0	0.00	0.00	10,982.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
11,100.0	0.00	0.00	11,082.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
11,200.0	0.00	0.00	11,182.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
11,300.0	0.00	0.00	11,282.9	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
11,367.1	0.00	0.00	11,350.0	1,000.2	1,019.3	32° 10' 10.024 N	103° 18' 33.903 W
PT112 KOP							
11,400.0	3.95	179.05	11,382.9	999.1	1,019.3	32° 10' 10.013 N	103° 18' 33.903 W
11,500.0	15.95	179.05	11,481.2	981.8	1,019.6	32° 10' 9.842 N	103° 18' 33.901 W
11,600.0	27.95	179.05	11,573.8	944.5	1,020.2	32° 10' 9.473 N	103° 18' 33.898 W
11,700.0	39.95	179.05	11,656.6	888.8	1,021.1	32° 10' 8.921 N	103° 18' 33.894 W
11,800.0	51.95	179.05	11,726.0	817.0	1,022.3	32° 10' 8.211 N	103° 18' 33.888 W
11,900.0	63.95	179.05	11,779.0	732.4	1,023.7	32° 10' 7.374 N	103° 18' 33.881 W
12,000.0	75.95	179.05	11,813.2	638.7	1,025.3	32° 10' 6.446 N	103° 18' 33.873 W
12,100.0	87.95	179.05	11,827.2	539.9	1,026.9	32° 10' 5.468 N	103° 18' 33.865 W
12,105.9	88.66	179.05	11,827.3	534.0	1,027.0	32° 10' 5.410 N	103° 18' 33.864 W
12,200.0	88.66	179.05	11,829.5	439.9	1,028.6	32° 10' 4.479 N	103° 18' 33.857 W
12,300.0	88.66	179.05	11,831.9	339.9	1,030.2	32° 10' 3.490 N	103° 18' 33.848 W
12,400.0	88.66	179.05	11,834.2	240.0	1,031.9	32° 10' 2.501 N	103° 18' 33.840 W
12,500.0	88.66	179.05	11,836.6	140.0	1,033.6	32° 10' 1.512 N	103° 18' 33.832 W
12,600.0	88.66	179.05	11,838.9	40.1	1,035.2	32° 10' 0.522 N	103° 18' 33.823 W
12,700.0	88.66	179.05	11,841.3	-59.9	1,036.9	32° 9' 59.533 N	103° 18' 33.815 W
12,725.4	88.66	179.05	11,841.9	-85.3	1,037.3	32° 9' 59.282 N	103° 18' 33.813 W
12,737.1	90.00	179.48	11,842.0	-97.0	1,037.5	32° 9' 59.166 N	103° 18' 33.813 W
PT112 FTP							
12,800.0	90.00	179.48	11,842.0	-159.9	1,038.0	32° 9' 58.544 N	103° 18' 33.813 W
12,900.0	90.00	179.48	11,842.0	-259.9	1,039.0	32° 9' 57.554 N	103° 18' 33.813 W
13,000.0	90.00	179.48	11,842.0	-359.9	1,039.9	32° 9' 56.565 N	103° 18' 33.814 W
13,100.0	90.00	179.48	11,842.0	-459.9	1,040.8	32° 9' 55.575 N	103° 18' 33.814 W
13,200.0	90.00	179.48	11,842.0	-559.9	1,041.7	32° 9' 54.586 N	103° 18' 33.815 W
13,300.0	90.00	179.48	11,842.0	-659.9	1,042.6	32° 9' 53.596 N	103° 18' 33.815 W
13,400.0	90.00	179.48	11,842.0	-759.9	1,043.5	32° 9' 52.607 N	103° 18' 33.816 W
13,500.0	90.00	179.48	11,842.0	-859.8	1,044.4	32° 9' 51.617 N	103° 18' 33.816 W
13,600.0	90.00	179.48	11,842.0	-959.8	1,045.3	32° 9' 50.628 N	103° 18' 33.816 W

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Project:	Par Three	**TVD Reference:**	KB @ 3366.0usft
Site:	Par Three #1N	**MD Reference:**	KB @ 3366.0usft
Well:	Par Three 112H	**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
13,700.0	90.00	179.48	11,842.0	-1,059.8	1,046.3	32° 9' 49.638 N	103° 18' 33.817 W
13,800.0	90.00	179.48	11,842.0	-1,159.8	1,047.2	32° 9' 48.649 N	103° 18' 33.817 W
13,900.0	90.00	179.48	11,842.0	-1,259.8	1,048.1	32° 9' 47.659 N	103° 18' 33.818 W
14,000.0	90.00	179.48	11,842.0	-1,359.8	1,049.0	32° 9' 46.670 N	103° 18' 33.818 W
14,100.0	90.00	179.48	11,842.0	-1,459.8	1,049.9	32° 9' 45.680 N	103° 18' 33.819 W
14,200.0	90.00	179.48	11,842.0	-1,559.8	1,050.8	32° 9' 44.691 N	103° 18' 33.819 W
14,300.0	90.00	179.48	11,842.0	-1,659.8	1,051.7	32° 9' 43.701 N	103° 18' 33.820 W
14,400.0	90.00	179.48	11,842.0	-1,759.8	1,052.6	32° 9' 42.712 N	103° 18' 33.820 W
14,500.0	90.00	179.48	11,842.0	-1,859.8	1,053.6	32° 9' 41.722 N	103° 18' 33.821 W
14,600.0	90.00	179.48	11,842.0	-1,959.8	1,054.5	32° 9' 40.733 N	103° 18' 33.821 W
14,700.0	90.00	179.48	11,842.0	-2,059.8	1,055.4	32° 9' 39.743 N	103° 18' 33.821 W
14,800.0	90.00	179.48	11,842.0	-2,159.8	1,056.3	32° 9' 38.754 N	103° 18' 33.822 W
14,900.0	90.00	179.48	11,842.0	-2,259.8	1,057.2	32° 9' 37.764 N	103° 18' 33.822 W
15,000.0	90.00	179.48	11,842.0	-2,359.8	1,058.1	32° 9' 36.775 N	103° 18' 33.823 W
15,100.0	90.00	179.48	11,842.0	-2,459.8	1,059.0	32° 9' 35.785 N	103° 18' 33.823 W
15,200.0	90.00	179.48	11,842.0	-2,559.8	1,060.0	32° 9' 34.796 N	103° 18' 33.824 W
15,280.2	90.00	179.48	11,842.0	-2,640.0	1,060.7	32° 9' 34.002 N	103° 18' 33.824 W
PT112 into NMNM138911							
15,300.0	90.00	179.48	11,842.0	-2,659.8	1,060.9	32° 9' 33.806 N	103° 18' 33.824 W
15,400.0	90.00	179.48	11,842.0	-2,759.8	1,061.8	32° 9' 32.817 N	103° 18' 33.825 W
15,500.0	90.00	179.48	11,842.0	-2,859.8	1,062.7	32° 9' 31.827 N	103° 18' 33.825 W
15,600.0	90.00	179.48	11,842.0	-2,959.8	1,063.6	32° 9' 30.838 N	103° 18' 33.825 W
15,700.0	90.00	179.48	11,842.0	-3,059.8	1,064.5	32° 9' 29.848 N	103° 18' 33.826 W
15,800.0	90.00	179.48	11,842.0	-3,159.8	1,065.4	32° 9' 28.859 N	103° 18' 33.826 W
15,900.0	90.00	179.48	11,842.0	-3,259.7	1,066.3	32° 9' 27.869 N	103° 18' 33.827 W
16,000.0	90.00	179.48	11,842.0	-3,359.7	1,067.3	32° 9' 26.880 N	103° 18' 33.827 W
16,100.0	90.00	179.48	11,842.0	-3,459.7	1,068.2	32° 9' 25.890 N	103° 18' 33.828 W
16,200.0	90.00	179.48	11,842.0	-3,559.7	1,069.1	32° 9' 24.901 N	103° 18' 33.828 W
16,300.0	90.00	179.48	11,842.0	-3,659.7	1,070.0	32° 9' 23.911 N	103° 18' 33.829 W
16,400.0	90.00	179.48	11,842.0	-3,759.7	1,070.9	32° 9' 22.922 N	103° 18' 33.829 W
16,500.0	90.00	179.48	11,842.0	-3,859.7	1,071.8	32° 9' 21.932 N	103° 18' 33.829 W
16,600.0	90.00	179.48	11,842.0	-3,959.7	1,072.7	32° 9' 20.943 N	103° 18' 33.830 W
16,600.3	90.00	179.48	11,842.0	-3,960.0	1,072.7	32° 9' 20.940 N	103° 18' 33.830 W
PT112 into NMNM127447							
16,700.0	90.00	179.48	11,842.0	-4,059.7	1,073.6	32° 9' 19.953 N	103° 18' 33.830 W
16,800.0	90.00	179.48	11,842.0	-4,159.7	1,074.6	32° 9' 18.964 N	103° 18' 33.831 W
16,900.0	90.00	179.48	11,842.0	-4,259.7	1,075.5	32° 9' 17.974 N	103° 18' 33.831 W
17,000.0	90.00	179.48	11,842.0	-4,359.7	1,076.4	32° 9' 16.985 N	103° 18' 33.832 W
17,100.0	90.00	179.48	11,842.0	-4,459.7	1,077.3	32° 9' 15.995 N	103° 18' 33.832 W
17,200.0	90.00	179.48	11,842.0	-4,559.7	1,078.2	32° 9' 15.006 N	103° 18' 33.833 W
17,300.0	90.00	179.48	11,842.0	-4,659.7	1,079.1	32° 9' 14.016 N	103° 18' 33.833 W
17,400.0	90.00	179.48	11,842.0	-4,759.7	1,080.0	32° 9' 13.027 N	103° 18' 33.833 W
17,500.0	90.00	179.48	11,842.0	-4,859.7	1,081.0	32° 9' 12.037 N	103° 18' 33.834 W
17,600.0	90.00	179.48	11,842.0	-4,959.7	1,081.9	32° 9' 11.048 N	103° 18' 33.834 W

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Par Three 112H
Project:	Par Three	**TVD Reference:**	KB @ 3366.0usft
Site:	Par Three #1N	**MD Reference:**	KB @ 3366.0usft
Well:	Par Three 112H	**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
17,700.0	90.00	179.48	11,842.0	-5,059.7	1,082.8	32° 9' 10.058 N	103° 18' 33.835 W
17,800.0	90.00	179.48	11,842.0	-5,159.7	1,083.7	32° 9' 9.069 N	103° 18' 33.835 W
17,900.0	90.00	179.48	11,842.0	-5,259.7	1,084.6	32° 9' 8.079 N	103° 18' 33.836 W
18,000.0	90.00	179.48	11,842.0	-5,359.7	1,085.5	32° 9' 7.090 N	103° 18' 33.836 W
18,100.0	90.00	179.48	11,842.0	-5,459.7	1,086.4	32° 9' 6.100 N	103° 18' 33.836 W
18,200.0	90.00	179.48	11,842.0	-5,559.7	1,087.3	32° 9' 5.111 N	103° 18' 33.837 W
18,300.0	90.00	179.48	11,842.0	-5,659.6	1,088.3	32° 9' 4.121 N	103° 18' 33.837 W
18,400.0	90.00	179.48	11,842.0	-5,759.6	1,089.2	32° 9' 3.132 N	103° 18' 33.838 W
18,500.0	90.00	179.48	11,842.0	-5,859.6	1,090.1	32° 9' 2.142 N	103° 18' 33.838 W
18,600.0	90.00	179.48	11,842.0	-5,959.6	1,091.0	32° 9' 1.153 N	103° 18' 33.839 W
18,700.0	90.00	179.48	11,842.0	-6,059.6	1,091.9	32° 9' 0.163 N	103° 18' 33.839 W
18,800.0	90.00	179.48	11,842.0	-6,159.6	1,092.8	32° 8' 59.174 N	103° 18' 33.840 W
18,900.0	90.00	179.48	11,842.0	-6,259.6	1,093.7	32° 8' 58.184 N	103° 18' 33.840 W
19,000.0	90.00	179.48	11,842.0	-6,359.6	1,094.6	32° 8' 57.195 N	103° 18' 33.840 W
19,100.0	90.00	179.48	11,842.0	-6,459.6	1,095.6	32° 8' 56.205 N	103° 18' 33.841 W
19,200.0	90.00	179.48	11,842.0	-6,559.6	1,096.5	32° 8' 55.216 N	103° 18' 33.841 W
19,300.0	90.00	179.48	11,842.0	-6,659.6	1,097.4	32° 8' 54.226 N	103° 18' 33.842 W
19,400.0	90.00	179.48	11,842.0	-6,759.6	1,098.3	32° 8' 53.237 N	103° 18' 33.842 W
19,500.0	90.00	179.48	11,842.0	-6,859.6	1,099.2	32° 8' 52.247 N	103° 18' 33.843 W
19,600.0	90.00	179.48	11,842.0	-6,959.6	1,100.1	32° 8' 51.258 N	103° 18' 33.843 W
19,700.0	90.00	179.48	11,842.0	-7,059.6	1,101.0	32° 8' 50.268 N	103° 18' 33.844 W
19,800.0	90.00	179.48	11,842.0	-7,159.6	1,102.0	32° 8' 49.279 N	103° 18' 33.844 W
19,900.0	90.00	179.48	11,842.0	-7,259.6	1,102.9	32° 8' 48.289 N	103° 18' 33.844 W
20,000.0	90.00	179.48	11,842.0	-7,359.6	1,103.8	32° 8' 47.300 N	103° 18' 33.845 W
20,100.0	90.00	179.48	11,842.0	-7,459.6	1,104.7	32° 8' 46.310 N	103° 18' 33.845 W
20,200.0	90.00	179.48	11,842.0	-7,559.6	1,105.6	32° 8' 45.321 N	103° 18' 33.846 W
20,300.0	90.00	179.48	11,842.0	-7,659.6	1,106.5	32° 8' 44.331 N	103° 18' 33.846 W
20,400.0	90.00	179.48	11,842.0	-7,759.6	1,107.4	32° 8' 43.342 N	103° 18' 33.847 W
20,500.0	90.00	179.48	11,842.0	-7,859.6	1,108.3	32° 8' 42.352 N	103° 18' 33.847 W
20,560.4	90.00	179.48	11,842.0	-7,920.0	1,108.9	32° 8' 41.754 N	103° 18' 33.847 W
PT112 Into NMNM127448							
20,600.0	90.00	179.48	11,842.0	-7,959.6	1,109.3	32° 8' 41.363 N	103° 18' 33.848 W
20,700.0	90.00	179.48	11,842.0	-8,059.5	1,110.2	32° 8' 40.373 N	103° 18' 33.848 W
20,800.0	90.00	179.48	11,842.0	-8,159.5	1,111.1	32° 8' 39.384 N	103° 18' 33.848 W
20,900.0	90.00	179.48	11,842.0	-8,259.5	1,112.0	32° 8' 38.394 N	103° 18' 33.849 W
21,000.0	90.00	179.48	11,842.0	-8,359.5	1,112.9	32° 8' 37.405 N	103° 18' 33.849 W
21,100.0	90.00	179.48	11,842.0	-8,459.5	1,113.8	32° 8' 36.415 N	103° 18' 33.850 W
21,200.0	90.00	179.48	11,842.0	-8,559.5	1,114.7	32° 8' 35.426 N	103° 18' 33.850 W
21,300.0	90.00	179.48	11,842.0	-8,659.5	1,115.6	32° 8' 34.436 N	103° 18' 33.851 W
21,400.0	90.00	179.48	11,842.0	-8,759.5	1,116.6	32° 8' 33.447 N	103° 18' 33.851 W
21,500.0	90.00	179.48	11,842.0	-8,859.5	1,117.5	32° 8' 32.457 N	103° 18' 33.851 W
21,600.0	90.00	179.48	11,842.0	-8,959.5	1,118.4	32° 8' 31.468 N	103° 18' 33.852 W
21,700.0	90.00	179.48	11,842.0	-9,059.5	1,119.3	32° 8' 30.478 N	103° 18' 33.852 W
21,800.0	90.00	179.48	11,842.0	-9,159.5	1,120.2	32° 8' 29.489 N	103° 18' 33.853 W
21,900.0	90.00	179.48	11,842.0	-9,259.5	1,121.1	32° 8' 28.499 N	103° 18' 33.853 W

AMEREDEV

Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Par Three 112H
Project:	Par Three	**TVD Reference:**	KB @ 3366.0usft
Site:	Par Three #1N	**MD Reference:**	KB @ 3366.0usft
Well:	Par Three 112H	**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
22,000.0	90.00	179.48	11,842.0	-9,359.5	1,122.0	32° 8' 27.510 N	103° 18' 33.854 W
22,100.0	90.00	179.48	11,842.0	-9,459.5	1,123.0	32° 8' 26.520 N	103° 18' 33.854 W
22,200.0	90.00	179.48	11,842.0	-9,559.5	1,123.9	32° 8' 25.531 N	103° 18' 33.855 W
22,300.0	90.00	179.48	11,842.0	-9,659.5	1,124.8	32° 8' 24.541 N	103° 18' 33.855 W
22,400.0	90.00	179.48	11,842.0	-9,759.5	1,125.7	32° 8' 23.552 N	103° 18' 33.855 W
22,500.0	90.00	179.48	11,842.0	-9,859.5	1,126.6	32° 8' 22.562 N	103° 18' 33.856 W
22,600.0	90.00	179.48	11,842.0	-9,959.5	1,127.5	32° 8' 21.572 N	103° 18' 33.856 W
22,700.0	90.00	179.48	11,842.0	-10,059.5	1,128.4	32° 8' 20.583 N	103° 18' 33.857 W
22,800.0	90.00	179.48	11,842.0	-10,159.5	1,129.3	32° 8' 19.593 N	103° 18' 33.857 W
22,900.0	90.00	179.48	11,842.0	-10,259.5	1,130.3	32° 8' 18.604 N	103° 18' 33.858 W
23,000.0	90.00	179.48	11,842.0	-10,359.5	1,131.2	32° 8' 17.614 N	103° 18' 33.858 W
23,100.0	90.00	179.48	11,842.0	-10,459.4	1,132.1	32° 8' 16.625 N	103° 18' 33.858 W
PT112 LTP							
23,151.3	90.00	179.48	11,842.0	-10,510.7	1,132.6	32° 8' 16.118 N	103° 18' 33.859 W
PT112 BHL							

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
11,367.1	11,350.0	0.0	336.2	PT112 KOP
15,280.2	11,842.0	-3,640.2	377.7	PT112 into NMNM138911
16,600.3	11,842.0	-4,960.2	389.7	PT112 into NMNM127447
20,560.4	11,842.0	-8,920.1	425.9	PT112 into NMNM127448

Checked By: _____ Approved By: _____ Date: _____

AFMSS

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

PWD Data Report

02/25/2020

APD ID: 10400053133 **Submission Date:** 01/10/2020

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

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

Section 1 - General

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

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

Lined pit Monitor description:

Lined pit Monitor attachment:

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

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

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

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

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

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

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

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

02/25/2020

APD ID: 10400053133 **Submission Date:** 01/10/2020

Operator Name: AMEREDEV OPERATING LLC

Well Name: PAR THREE FED COM 25 36 06 **Well Number:** 112H

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

[redacted]

Show Final Text

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001478

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment: