Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

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

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

[322777]

2. Name of Operator **[372224]**

9. API Well No. **30-025-48194**

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory XX XX [98234]

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

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

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

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

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

25. Signature	Name *(Printed/Typed)*	Date

Title

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

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

GCP Rec 12/07/2020

KZ

12/18/2020

SL

APPROVED WITH CONDITIONS

Approval Date: 12/04/2020

(Continued on page 2)

*(Instructions on page 2)

083PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Ameredev Operating LLC
WELL NAME & NO.:	Golden Bell Fed Com 26 36 06 117H
LOCATION:	Sec 31-25S-36E-NMP
COUNTY:	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 1100 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.

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

after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

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

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

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

C. PRESSURE CONTROL

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

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

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

e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

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

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

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

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

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

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

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

b. When the operator proposes to set surface casing with Spudder Rig
   - Notify the BLM when moving in and removing the Spudder Rig.
   - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
   - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

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

12/04/2020

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

Application Data Report
12/04/2020

APD ID: 10400049502
Submission Date: 10/16/2019
Operator Name: AMEREDEV OPERATING LLC
Well Name: GOLDEN BELL FED COM 26 36 06
Well Number: 117H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400049502
Tie to previous NOS? N
Submission Date: 10/16/2019
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: NMNM137807
Lease Acres: 80
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: 2901 VIA FORTUNA, SUITE 600
Zip: 78746
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: GOLDEN BELL FED COM 26 36 06
Well Number: 117H
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: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

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:** NAN/GB **Number:** 8N

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:** 1990 FT **Distance to lease line:** 200 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: GOLDEN_BELL_FED_COM_26_36_06_117H___WELLSITE_20191016090614.pdf

Golden_Bell_Fed_Com_26_36_06_117H___Vicinity_Map_20191016092704.pdf

Golden_Bell_Fed_Com_26_36_06_117H___C_102_SIG_20191016092705.pdf

Golden_Bell_Fed_Com_26_36_06_117H___Exh_2AB_20191016092705.pdf

Golden_Bell_Fed_Com_26_36_06_117H___BLM_Lease_Map_20200908130204.pdf

Golden_Bell_Fed_Com_26_36_06_117H___GAS_CAPTURE_PLAN_REV_20200908130749.pdf

Well work start Date: 06/01/2021 **Duration:** 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 18329 **Reference Datum:** GROUND LEVEL

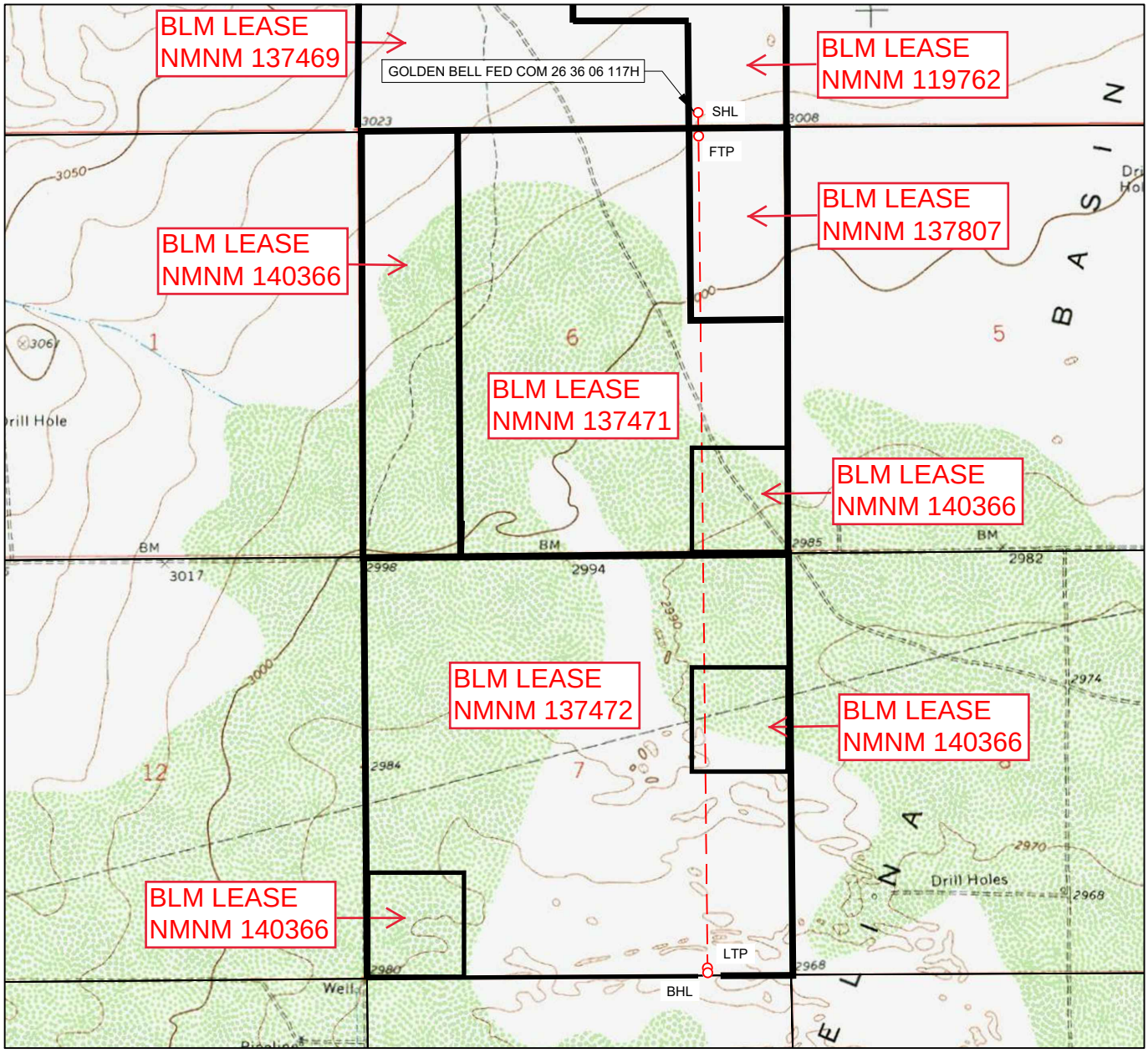
Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

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 Leg #1	200	FSL	1030	FEL	25S	36E	31	Aliquot SESE	32.0801277	-103.299003	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 119762	3010	0	0	N
KOP Leg #1	320	FSL	1287	FEL	25S	36E	31	Aliquot SESE	32.0804638	-103.2998266	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 119762	-8340	11364	11350	N
PPP Leg #1-1	100	FNL	1026	FEL	26S	36E	6	Aliquot NENE	32.0793032	-103.298987	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 137807	-8833	12135	11843	Y
PPP Leg #1-2	2640	FNL	997	FEL	26S	36E	6	Aliquot NESE	32.0723222	-103.2989819	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 137471	-8841	14665	11851	Y
PPP Leg #1-3	1320	FSL	983	FEL	26S	36E	6	Aliquot SESE	32.0686938	-103.2989755	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 140366	-8841	15985	11851	Y
PPP Leg #1-4	0	FNL	968	FEL	26S	36E	7	Aliquot NENE	32.0650652	-103.2989694	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 137472	-8841	17305	11851	Y
EXIT Leg #1	50	FSL	1026	FEL	26S	36E	7	Aliquot SESE	32.0506763	-103.2989425	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 137472	-8841	22540	11851	Y
BHL Leg #1	50	FSL	1026	FEL	26S	36E	7	Aliquot SESE	32.0506763	-103.2989425	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 137472	-8841	22540	11851	Y

LOCATION & ELEVATION VERIFICATION MAP

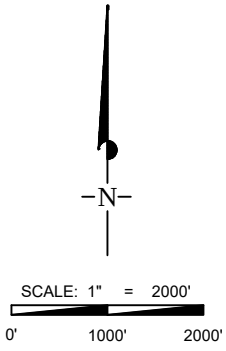


AMEREDEV OPERATING, LLC

LEASE NAME & WELL NO.: GOLDEN BELL FED COM 26 36 06 117H

SECTION 31 TWP 25-S RGE 36-E SURVEY N.M.P.M.
COUNTY LEA STATE NM ELEVATION 3010'
DESCRIPTION 200' FSL & 1030' FEL

LATITUDE N 32.0801277 LONGITUDE W 103.2990003



THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY AMEREDEV OPERATING LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
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WWW.TOPOGRAPHIC.COM

AFMSS

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

Drilling Plan Data Report

12/04/2020

APD ID: 10400049502

Submission Date: 10/16/2019

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06

Well Number: 117H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data reflects the most recent changes

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Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
563461	RUSTLER ANHYDRITE	3010	1052	1052	ANHYDRITE	NONE	N
563462	SALADO	1477	1533	1533	SALT	NONE	N
563457	TANSILL	-387	3397	3397	LIMESTONE	NONE	N
563465	CAPITAN REEF	-807	3817	3817	LIMESTONE	USEABLE WATER	N
563458	LAMAR	-2033	5043	5043	LIMESTONE	NONE	N
563468	BELL CANYON	-2144	5154	5154	SANDSTONE	NATURAL GAS, OIL	N
563459	BRUSHY CANYON	-4189	7199	7199	SANDSTONE	NATURAL GAS, OIL	N
563460	BONE SPRING LIME	-5288	8298	8298	LIMESTONE	NONE	N
563463	BONE SPRING 1ST	-6652	9662	9662	SANDSTONE	NATURAL GAS, OIL	N
563469	BONE SPRING 2ND	-7159	10169	10169	SANDSTONE	NATURAL GAS, OIL	N
563464	BONE SPRING 3RD	-7708	10718	10718	LIMESTONE	NATURAL GAS, OIL	N
563466	BONE SPRING 3RD	-8319	11329	11329	SANDSTONE	NATURAL GAS, OIL	N
563470	WOLFCAMP	-8588	11598	11598	SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

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

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

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

Testing Procedure: See attachment

Choke Diagram Attachment:

10M_Choke_Manifold_REV_20191016094527.pdf

BOP Diagram Attachment:

5M_Annular_Preventer_Variance_and_Well_Control_Plan_20191016094539.pdf

Pressure_Control_Plan_Single_Well_MB4_3String_Big_Hole_BLM_20191016094539.pdf

5M_BOP_System_20191016094539.pdf

4_String_MB_Ameredev_Wellhead_Drawing_net_REV_20191016094549.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	1177	0	1177	3010	1833	1177	J-55	68	OTHER - BTC	7.8	1	DRY	11.43	DRY	13.36
2	INTERMEDIATE	9.875	7.625	NEW	API	N	0	10843	0	10843	3014	-7833	10843	HCL-80	29.7	OTHER - FJM	1.27	1.23	DRY	2.02	DRY	2.92
3	PRODUCTION	6.75	5.5	NEW	API	N	0	22540	0	11851	3014	-8841	22540	P-110	23	OTHER - SFH	1.73	1.87	DRY	2.4	DRY	2.67

Casing Attachments

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

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_20191016094917.pdf

Golden_Bell_Fed_Com_26_36_06_117H___Wellbore_Diagram_and_CDA_REV_20200908131807.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

7.625_29.70_P110HC_LIBERTY_FJM_20191016095043.pdf

Golden_Bell_Fed_Com_26_36_06_117H___Wellbore_Diagram_and_CDA_REV_20200908132020.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

5_20200908132207.5_23

Golden_Bell_Fed_Com_26_36_06_117H___Wellbore_Diagram_and_CDA_REV_20200908132220.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	791	776	1.76	13.5	1365.86	100	CLASS C	Bentonite, Accelerator, Kolseal, Defoamer, Celloflake
SURFACE	Tail		791	1177	200	1.34	14.8	268	100	CLASS C	None
INTERMEDIATE	Lead	3397	0	2866	653	3.5	9	2286.61	50	CLASS C	Bentonite, Salt, Kolseal, Defoamer, Celloflake
INTERMEDIATE	Tail		2866	3397	200	1.33	14.8	266	25	CLASS C	None
INTERMEDIATE	Lead	3397	3397	9622	2206	2.47	11.9	5448.05	50	Class H	Bentonite, Retarder, Kolseal, Defoamer, Celloflake, Anti-Settling Expansion Additive
INTERMEDIATE	Tail		9622	10843	200	1.31	14.2	14.2	25	Class H	Salt, Bentonite, Retarder, Dispersant, Fluid Loss
PRODUCTION	Lead		0	22540	1755	1.34	14.2	2351.19	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: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1177	WATER-BASED MUD	8.4	8.6							
1177	10843	OTHER : Diesel Brine Emulsion	8.5	9.4							
10843	11851	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: 7703 **Anticipated Surface Pressure:** 5095

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_20200908132917.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

GB117_LLR_20191016100207.pdf
GB117_DR_20191016100207.pdf
5M_Annular_Preventer_Variance_and_Well_Control_Plan_20191016100215.pdf
Pressure_Control_Plan_Single_Well_MB4_3String_Big_Hole_BLM_20191016100215.pdf

Other proposed operations facets description:

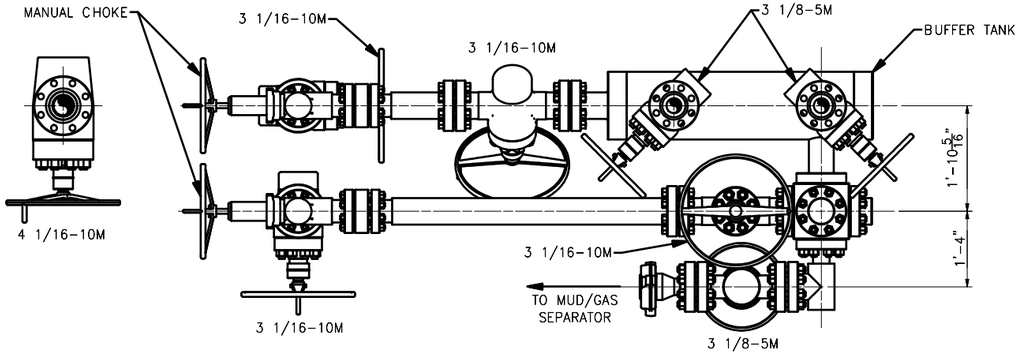
4-STRING CONTINGENCY PLAN AND SKID PROCEDURE ATTACHED

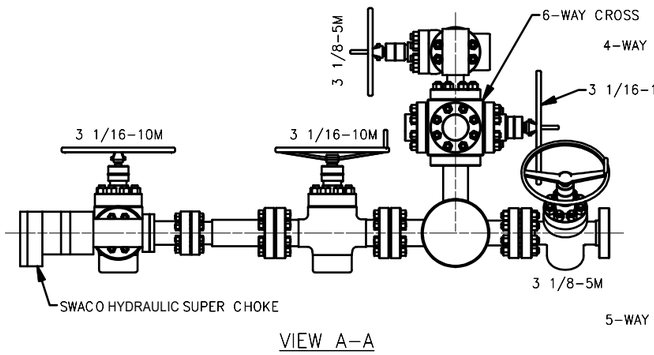
Other proposed operations facets attachment:

Rig_Skid_Procedure_20191016100243.pdf
Wolfcamp_Contingency_20200908133259.pdf

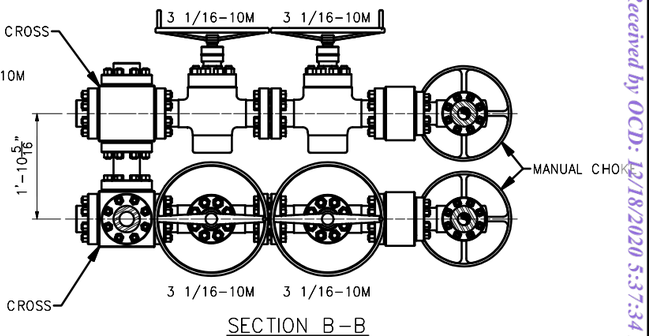
Other Variance attachment:

Requested_Exceptions___3_String_Revised_01312019_20191016100928.pdf
R616___CoC_for_hoses_12_18_17_20191016100942.pdf

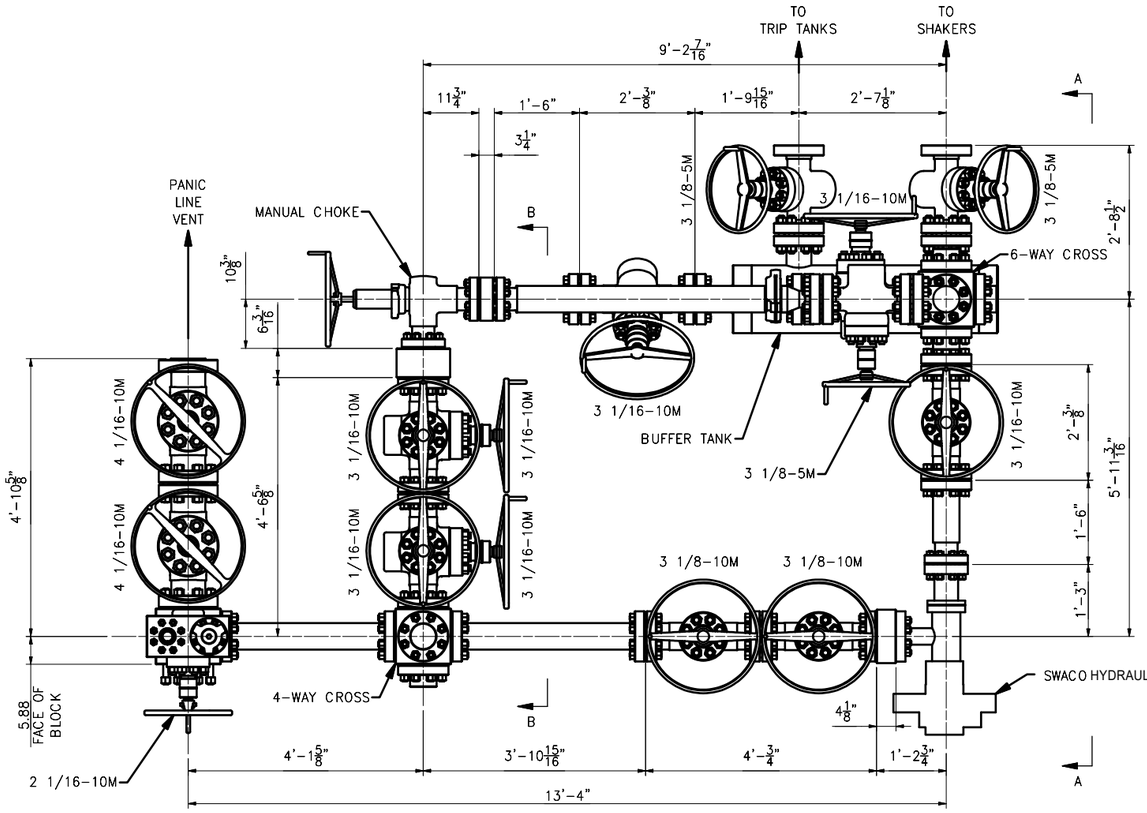




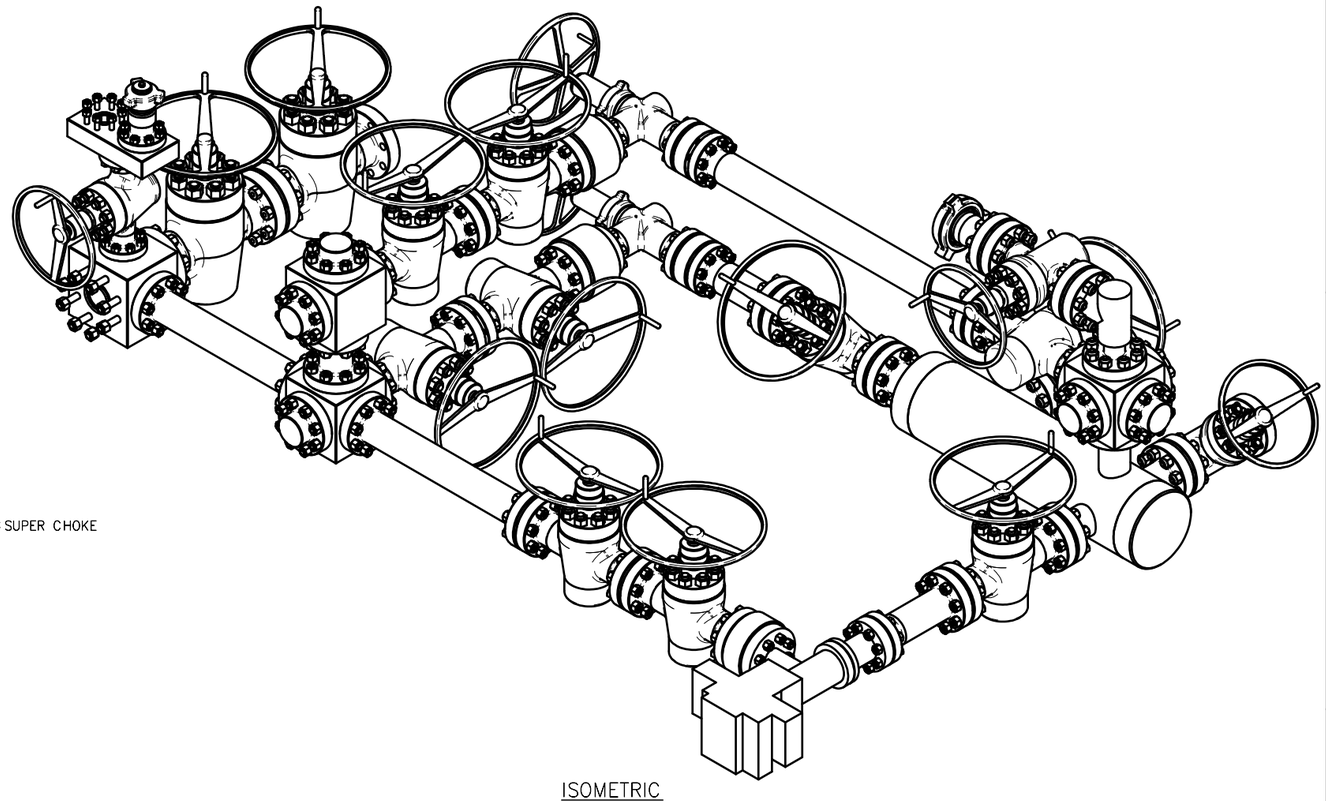
VIEW A-A



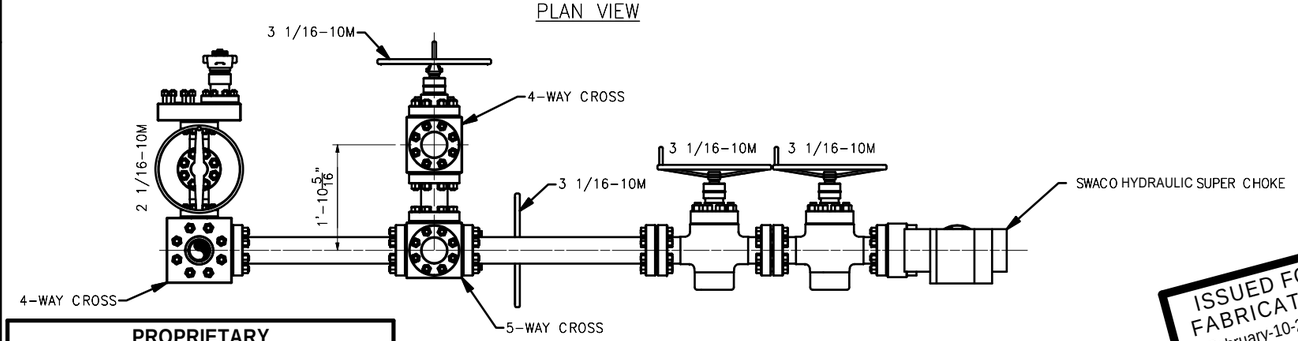
SECTION B-B



PLAN VIEW



ISOMETRIC



ISSUED FOR FABRICATION
February-10-2014
DRAFTSMAN _____
ENGINEER _____

STANDARD TOLERANCES
(UNLESS NOTED)

1. FABRICATION DIMENSIONS:	A-0° TO 24°	± 1/16"
	B-24° TO 120°	± 1/8"
	C-OVER 120°	± 1/4"
2. MACHINED DIMENSIONS:	A-ANGULAR	± .30'
	B-LINEAR (EXPRESSED AS FRACTION)	± .015
	LINEAR (EXPRESSED TO ONE DECIMAL)	± .1
	LINEAR (EXPRESSED TO TWO DECIMALS)	± .015
	LINEAR (EXPRESSED TO THREE DECIMALS)	± .005

REV	DATE	DESCRIPTION	BY
–			

HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

TITLE: 3 CHOKE, 3 LEVEL, 10M CHOKE MANIFOLD G.A.

CUSTOMER: H&P

PROJECT:

DRAWN: MWL | DATE: 2/10/2014 | DWG. NO.: HP-D1254 | REV: –

SCALE: 3/4"=1'-0" | SHEET: 1 OF 1

5M Annular Preventer Variance Request and Well Control Procedures

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

Dual Isolation Design for 5M Annular Exception

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

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

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

Drill Components	Size	Primary Barrier	Secondary Barrier	Third Barrier
Drillpipe	3-1/2"-5-1/2"	Drilling Fluid	Upper Pipe Rams	Lower Pipe Rams
HWDP Drillpipe	3-1/2"-5-1/2"	Drilling Fluid	Upper Pipe Rams	Lower Pipe Rams
Drill Collars	3-1/2"-5-1/2"	Drilling Fluid	Upper Pipe Rams	Lower Pipe Rams
Production Casing	3-1/2"-5-1/2"	Drilling Fluid	Upper Pipe Rams	Lower Pipe Rams
0pen Hole	13-5/8	Drilling Fluid	Blind Rams	
All Drilling Components in 10M Environment will have OD that will allow full Operational RATED WORKING PRESSURE for system design. Kill line with minimum 2" ID will be available outside substructure with 10M Check Valve for OOH Kill Operations				

Well Control Procedures

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

Shutting In While Drilling

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

Shutting In While Tripping

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

Shutting In While Running Casing

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

Shutting in while out of hole

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

Shutting in prior to pulling BHA through stack

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

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

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

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

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

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

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

If not possible to pick up high enough:

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

Pressure Control Plan

Pressure Control Equipment

- Following setting of 13-3/8” Surface Casing Ameredev will install 13-5/8 MB4 Multi Bowl Casing Head by welding on a 13-5/8 SOW x 13-5/8” 5M in combination with 13-5/8 5M x 13-5/8 10M B-Sec to Land Intm #1 and a 13-5/8 10M x 13-5/8 10M shouldered to land C-Sec to Land Intm #2 (Installation procedure witnessed and verified by a manufacturer’s representative).

- Casing will be tested to 1500 psi or .22 psi/ft whichever is greater for 30 minutes with <10% leak off, but will not exceed 70% of the burst rating per Onshore Order No. 2.

- Ameredev will install a 5M System Blowout Preventer (BOPE) with a 5M Annular Preventer and related equipment (BOPE). Full testing will be performed utilizing a full isolation test plug and limited to 5,000 psi MOP of MB4 Multi Bowl Casing Head. Pressure will be held for 10 min or until provisions of test are met on all valves and rams. The 5M Annular Preventer will be tested to 50% of approved working pressure (2,500 psi). Casing will be tested to 1500 psi or .22 psi/ft whichever is greater for 30 minutes with <10% leak off, but will not exceed 70% of the burst rating per Onshore Order No. 2.

- Setting of 9-5/8” (7-5/8" as applicable) Intermediate will be done by landing a wellhead hanger in the 13-5/8” 5M Bowl, Cementing and setting Well Head Packing seals and testing same. (Installation procedure witnessed and verified by a manufacturer’s representative) Casing will be tested to 1500 psi or .22 psi/ft whichever is greater for 30 minutes with <10% leak off, but will not exceed 70% of the burst rating per Onshore Order No. 2.

- Full testing will be performed utilizing a full isolation test plug to 10,000 psi MOP of MB4 Multi Bowl B-Section. Pressure will be held for 10 min or until provisions of test are met on all valves and rams. The 5M Annular Preventer will be tested to 100% of approved working pressure (5,000 psi).

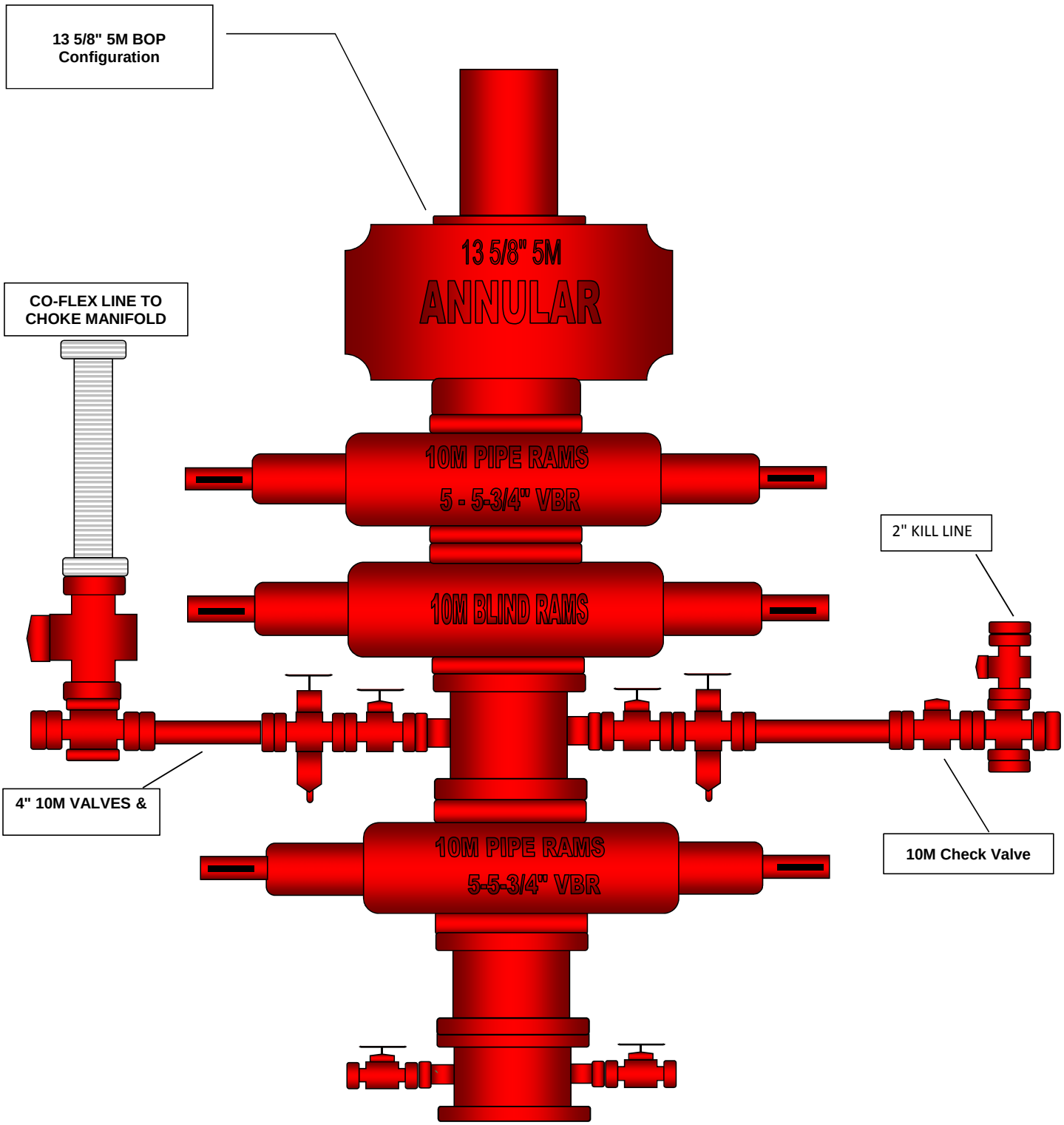
- Before drilling >20ft of new formation under the 9-5/8” (7-5/8" as applicable) Casing Shoe a pressure integrity test of the Casing Shoe will be performed to minimum of the MWE anticipated to control formation pressure to the next casing depth.

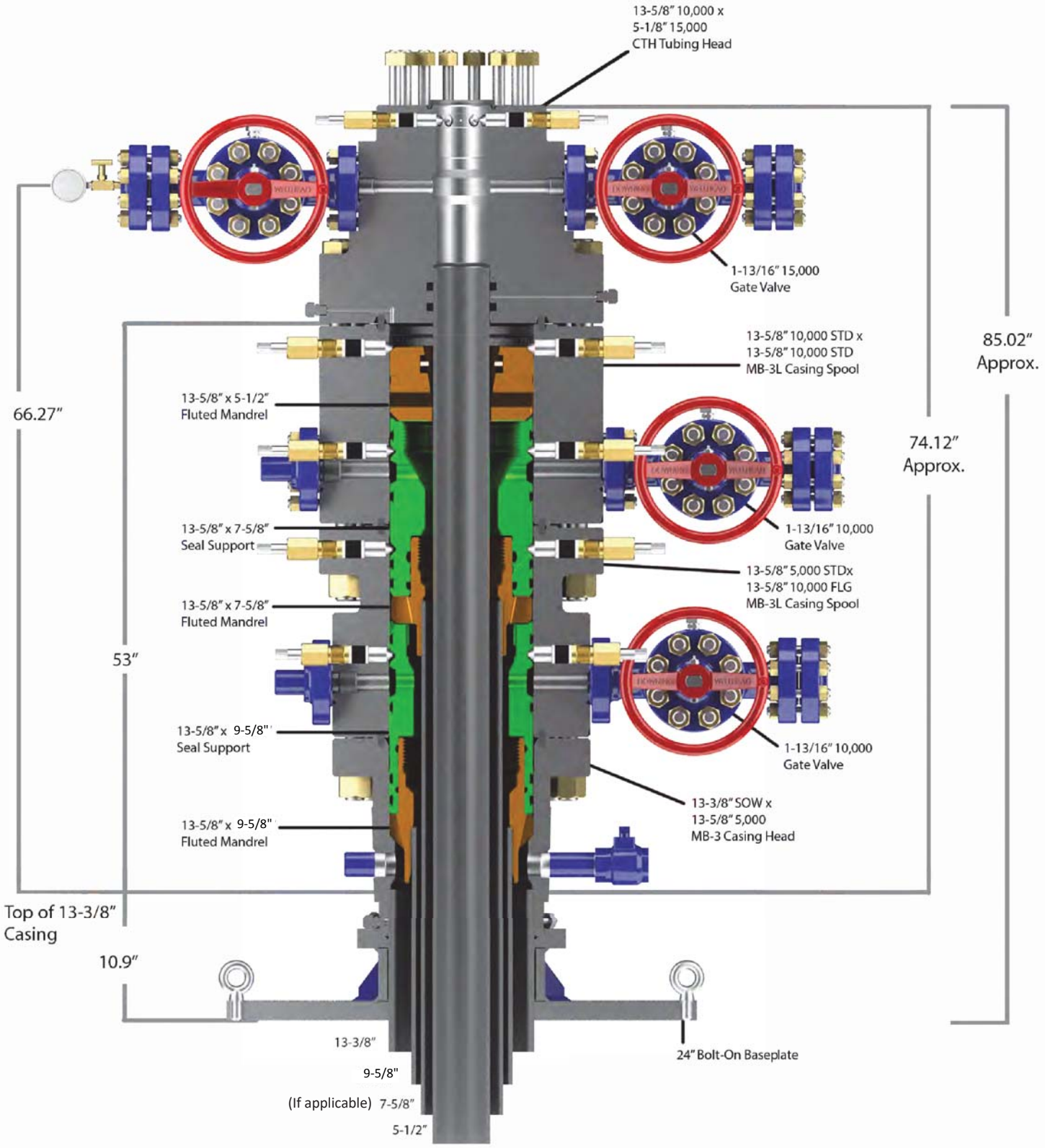
- Following setting of 5-1/2” Production Casing and adequate WOC time Ameredev will break 10M System Blowout Preventer (BOP) from 10M DOL-2 Casing Head, install annulus casing slips and test same (Installation procedure witnessed and verified by a manufacturer’s representative) and install 11” 10M x 5-1/8” 15M Tubing Head (Installation procedure witnessed and verified by a manufacturer’s representative). Ameredev will test head to 70% casing design and install Dry Hole cap with needle valve and pressure gauge to monitor well awaiting completion.

AMEREDEV
American Resource Development LLC

Pressure Control Plan

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


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



Quotation

Downing Wellhead Equipment

Oklahoma City,
Oklahoma - USA

Reference Data:

16925 AMEREDEV

Proprietary and Confidential

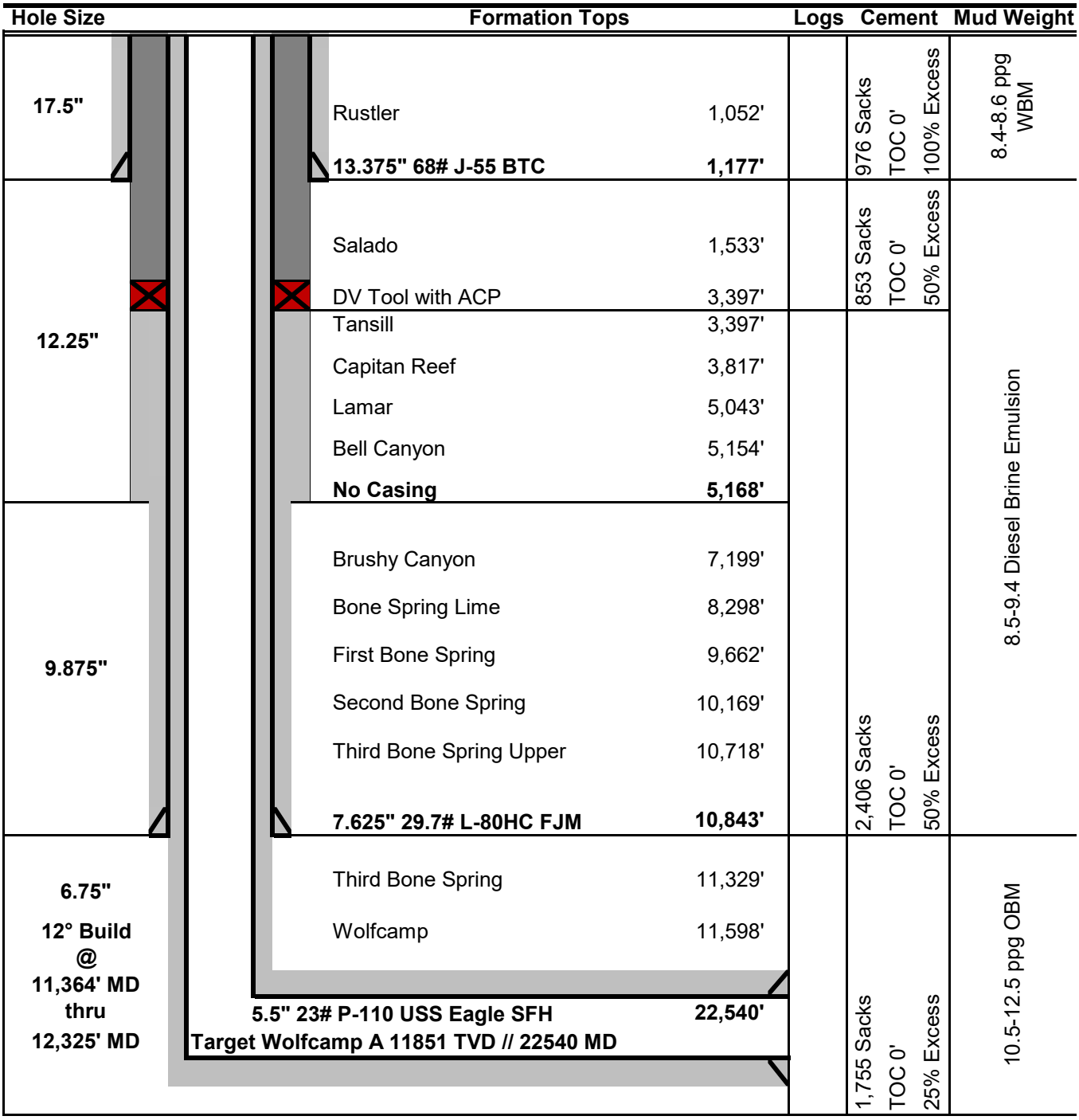
TITLE:

AMEREDEV

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

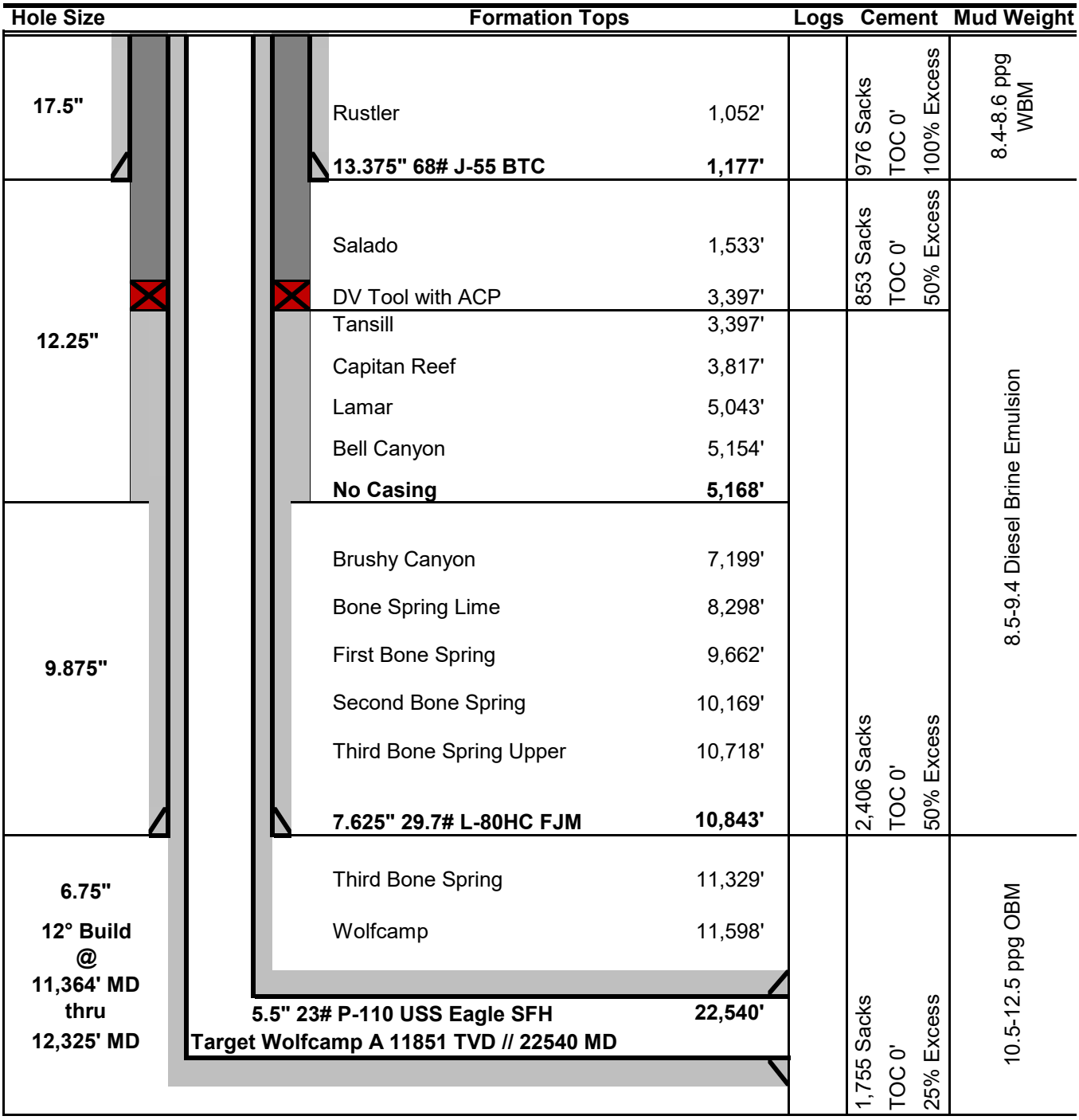
Wellbore Schematic

Well:	Golden Bell Fed Com 26-36-06 117H	**Co. Well ID:**	xxxxxx
SHL:	Sec. 31 25S-36E 200' FSL & 1030' FEL	**AFE No.:**	xxxx-xxx
BHL:	Sec. 07 26S-36E 50' FSL & 1026' FEL	**API No.:**	xxxxxxxxxx
	Lea, NM	**GL:**	3,010'
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:**	11,851'
	Tubing Spool - 7-1/16" 15M x 13-3/8" 10M	**MD:**	22,540'
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



Wellbore Schematic

Well:	Golden Bell Fed Com 26-36-06 117H	**Co. Well ID:**	xxxxxx
SHL:	Sec. 31 25S-36E 200' FSL & 1030' FEL	**AFE No.:**	xxxx-xxx
BHL:	Sec. 07 26S-36E 50' FSL & 1026' FEL	**API No.:**	xxxxxxxxxx
	Lea, NM	**GL:**	3,010'
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:**	11,851'
	Tubing Spool - 7-1/16" 15M x 13-3/8" 10M	**MD:**	22,540'
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



Wellbore Schematic

Well:	Golden Bell Fed Com 26-36-06 117H	**Co. Well ID:**	xxxxxx
SHL:	Sec. 31 25S-36E 200' FSL & 1030' FEL	**AFE No.:**	xxxx-xxx
BHL:	Sec. 07 26S-36E 50' FSL & 1026' FEL	**API No.:**	xxxxxxxxxx
	Lea, NM	**GL:**	3,010'
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:**	11,851'
	Tubing Spool - 7-1/16" 15M x 13-3/8" 10M	**MD:**	22,540'
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	1,052'		976 Sacks TOC 0' 100% Excess	8.4-8.6 ppg WBM
	13.375" 68# J-55 BTC	**1,177'**			
	Salado	1,533'		853 Sacks TOC 0' 50% Excess	8.5-9.4 Diesel Brine Emulsion
	DV Tool with ACP	3,397'			
12.25"	Tansill	3,397'			
	Capitan Reef	3,817'			
	Lamar	5,043'			
	Bell Canyon	5,154'			
	No Casing	**5,168'**			
9.875"	Brushy Canyon	7,199'		2,406 Sacks TOC 0' 50% Excess	
	Bone Spring Lime	8,298'			
	First Bone Spring	9,662'			
	Second Bone Spring	10,169'			
	Third Bone Spring Upper	10,718'			
	7.625" 29.7# L-80HC FJM	**10,843'**			
6.75" 12° Build @ 11,364' MD thru 12,325' MD	Third Bone Spring	11,329'		1,755 Sacks TOC 0' 25% Excess	10.5-12.5 ppg OBM
	Wolfcamp	11,598'			
	5.5" 23# P-110 USS Eagle SFH	**22,540'**			
	Target Wolfcamp A 11851 TVD // 22540 MD				

H_2S Drilling Operation Plan

1. **All Company and Contract personnel admitted on location must be trained by a qualified H_2S safety instructor to the following:**
    a. Characteristics of H_2S
    b. Physical effects and hazards
    c. Principal and operation of H_2s detectors, warning system and briefing areas
    d. Evacuation procedure, routes and first aid
    e. Proper use of safety equipment and life support systems
    f. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30 minute pressure demand air packs.

2. **Briefing Area:**
    a. Two perpendicular areas will be designated by signs and readily accessible.
    b. Upon location entry there will be a designated area to establish all safety compliance criteria (1.) has been met.

3. **H_2S Detection and Alarm Systems:**
    a. H_2S sensors/detectors shall be located on the drilling rig floor, in the base of the sub structure/cellar area, and on the mud pits in the shale shaker area. Additional H_2S detectors may be placed as deemed necessary. All detectors will be set to initiate visual alarm at 10 ppm and visual with audible at 14 ppm and all equipment will be calibrated every 30 days or as needed.
    b. An audio alarm will be installed on the derrick floor and in the top doghouse.

4. **Protective Equipment for Essential Personnel:**
    a. **Breathing Apparatus:**
        i. Rescue Packs (SCBA) - 1 Unit shall be placed at each briefing area.
        ii. Two (SCBA) Units will be stored in safety trailer on location.
        iii. Work/Escape packs - 1 Unit will be available on rig floor in doghouse for emergency evacuation for driller.
    b. **Auxiliary Rescue Equipment:**
        i. Stretcher
        ii. 2 - OSHA full body harnesses
        iii. 100 ft. 5/8” OSHA approved rope
        iv. 1 - 20# class ABC fire extinguisher

5. **Windsock and/or Wind Streamers:**
    a. Windsock at mud pit area should be high enough to be visible.
    b. Windsock on the rig floor should be high enough to be visible.

6. **Communication:**
    a. While working under mask scripting boards will be used for communication where applicable.
    b. Hand signals will be used when script boards are not applicable.

c. Two way radios will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at Drilling Foreman's Office.

7. **Drill Stem Testing:** - No Planned DST at this time.

8. **Mud program:**
   a. If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary.

9. **Metallurgy:**

   a. All drill strings, casing, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.
   b. Drilling Contractor supervisor will be required to be familiar with the effect H_2S has on tubular goods and other mechanical equipment provided through contractor.

H_2S Contingency Plan

Emergency Procedures

In the event of a release of H_2S, the first responder(s) must:

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H_2S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response.
- Take precautions to avoid personal injury during this operation.
- Contact Operator and/or local officials the aid in operation. See list of phone numbers attached.
- Have received training in the:
    - Detection of H_2S and
    - Measures for protection against the gas,
    - Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air=1	2 ppm	N/A	1000 ppm

Contacting Authorities

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

H_2S Contingency Plan

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

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

Ameredev Operating, LLC.

NAN/GB
NAN/GB #8N
Golden Bell 117H
Wellbore #1

Plan: Design #1

Lease Penetration Section Line Foot

28 August, 2019

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Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Golden Bell 117H
Project:	NAN/GB	**TVD Reference:**	KB @ 3037.0usft
Site:	NAN/GB #8N	**MD Reference:**	KB @ 3037.0usft
Well:	Golden Bell 117H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM5000

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

Site	NAN/GB #8N				
Site Position:		**Northing:**	394,423.90 usft	**Latitude:**	32° 4' 48.460 N
From:	Lat/Long	**Easting:**	861,736.87 usft	**Longitude:**	103° 17' 55.936 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	0.55 °

Well	Golden Bell 117H				
Well Position	**+N/-S** 0.0 usft	**Northing:**	394,423.48 usft	**Latitude:**	32° 4' 48.460 N
	+E/-W 0.0 usft	**Easting:**	861,696.89 usft	**Longitude:**	103° 17' 56.401 W
Position Uncertainty	0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,010.0 usft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	12/7/2018	6.66	59.95	47,732.43471664

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	179.36

Survey Tool Program **Date** 8/28/2019

From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
0.0	22,540.3	Design #1 (Wellbore #1)	MWD	OWSG MWD - Standard

Planned Survey

MD (usft)	**Inc (°)**	**Azi (azimuth) (°)**	**TVD (usft)**	**+FSL/-FNL (usft)**	**+FWL/-FEL (usft)**	**Latitude**	**Longitude**
0.0	0.00	0.00	0.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
100.0	0.00	0.00	100.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
200.0	0.00	0.00	200.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
300.0	0.00	0.00	300.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
400.0	0.00	0.00	400.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
500.0	0.00	0.00	500.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
600.0	0.00	0.00	600.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
700.0	0.00	0.00	700.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
800.0	0.00	0.00	800.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
900.0	0.00	0.00	900.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
1,000.0	0.00	0.00	1,000.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
1,100.0	0.00	0.00	1,100.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W

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Ameredev Operating, LLC

Lease Penetration Section Line Footages

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Site:	NAN/GB #8N	**MD Reference:**	KB @ 3037.0usft
Well:	Golden Bell 117H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
1,200.0	0.00	0.00	1,200.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
1,300.0	0.00	0.00	1,300.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
1,400.0	0.00	0.00	1,400.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
1,500.0	0.00	0.00	1,500.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
1,600.0	0.00	0.00	1,600.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
1,700.0	0.00	0.00	1,700.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
1,800.0	0.00	0.00	1,800.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
1,900.0	0.00	0.00	1,900.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
2,000.0	0.00	0.00	2,000.0	199.6	-1,030.0	32° 4' 48.460 N	103° 17' 56.401 W
2,100.0	2.00	295.00	2,100.0	200.3	-1,031.6	32° 4' 48.467 N	103° 17' 56.419 W
2,200.0	4.00	295.00	2,199.8	202.5	-1,036.3	32° 4' 48.490 N	103° 17' 56.474 W
2,300.0	6.00	295.00	2,299.5	206.2	-1,044.2	32° 4' 48.527 N	103° 17' 56.566 W
2,400.0	6.00	295.00	2,398.9	210.6	-1,053.7	32° 4' 48.571 N	103° 17' 56.675 W
2,500.0	6.00	295.00	2,498.4	215.0	-1,063.2	32° 4' 48.616 N	103° 17' 56.785 W
2,600.0	6.00	295.00	2,597.8	219.5	-1,072.6	32° 4' 48.661 N	103° 17' 56.894 W
2,700.0	6.00	295.00	2,697.3	223.9	-1,082.1	32° 4' 48.705 N	103° 17' 57.004 W
2,800.0	6.00	295.00	2,796.7	228.3	-1,091.6	32° 4' 48.750 N	103° 17' 57.114 W
2,900.0	6.00	295.00	2,896.2	232.7	-1,101.1	32° 4' 48.794 N	103° 17' 57.223 W
3,000.0	6.00	295.00	2,995.6	237.1	-1,110.5	32° 4' 48.839 N	103° 17' 57.333 W
3,100.0	6.00	295.00	3,095.1	241.6	-1,120.0	32° 4' 48.884 N	103° 17' 57.442 W
3,200.0	6.00	295.00	3,194.5	246.0	-1,129.5	32° 4' 48.928 N	103° 17' 57.552 W
3,300.0	6.00	295.00	3,294.0	250.4	-1,138.9	32° 4' 48.973 N	103° 17' 57.662 W
3,400.0	6.00	295.00	3,393.4	254.8	-1,148.4	32° 4' 49.017 N	103° 17' 57.771 W
3,500.0	6.00	295.00	3,492.9	259.2	-1,157.9	32° 4' 49.062 N	103° 17' 57.881 W
3,600.0	6.00	295.00	3,592.3	263.6	-1,167.4	32° 4' 49.107 N	103° 17' 57.991 W
3,700.0	6.00	295.00	3,691.8	268.1	-1,176.8	32° 4' 49.151 N	103° 17' 58.100 W
3,800.0	6.00	295.00	3,791.2	272.5	-1,186.3	32° 4' 49.196 N	103° 17' 58.210 W
3,900.0	6.00	295.00	3,890.7	276.9	-1,195.8	32° 4' 49.240 N	103° 17' 58.319 W
4,000.0	6.00	295.00	3,990.1	281.3	-1,205.3	32° 4' 49.285 N	103° 17' 58.429 W
4,100.0	6.00	295.00	4,089.6	285.7	-1,214.7	32° 4' 49.330 N	103° 17' 58.539 W
4,200.0	6.00	295.00	4,189.0	290.1	-1,224.2	32° 4' 49.374 N	103° 17' 58.648 W
4,300.0	6.00	295.00	4,288.5	294.6	-1,233.7	32° 4' 49.419 N	103° 17' 58.758 W
4,400.0	6.00	295.00	4,387.9	299.0	-1,243.2	32° 4' 49.463 N	103° 17' 58.867 W
4,500.0	6.00	295.00	4,487.4	303.4	-1,252.6	32° 4' 49.508 N	103° 17' 58.977 W
4,600.0	6.00	295.00	4,586.9	307.8	-1,262.1	32° 4' 49.553 N	103° 17' 59.087 W
4,700.0	6.00	295.00	4,686.3	312.2	-1,271.6	32° 4' 49.597 N	103° 17' 59.196 W
4,713.8	6.00	295.00	4,700.0	312.8	-1,272.9	32° 4' 49.603 N	103° 17' 59.211 W
4,800.0	4.28	295.00	4,785.9	316.1	-1,279.9	32° 4' 49.636 N	103° 17' 59.292 W
4,900.0	2.28	295.00	4,885.7	318.5	-1,285.1	32° 4' 49.661 N	103° 17' 59.352 W
5,000.0	0.28	295.00	4,985.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.375 W
5,013.8	0.00	0.00	4,999.5	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
5,100.0	0.00	0.00	5,085.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
5,200.0	0.00	0.00	5,185.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
5,300.0	0.00	0.00	5,285.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W

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Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
5,400.0	0.00	0.00	5,385.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
5,500.0	0.00	0.00	5,485.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
5,600.0	0.00	0.00	5,585.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
5,700.0	0.00	0.00	5,685.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
5,800.0	0.00	0.00	5,785.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
5,900.0	0.00	0.00	5,885.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
6,000.0	0.00	0.00	5,985.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
6,100.0	0.00	0.00	6,085.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
6,200.0	0.00	0.00	6,185.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
6,300.0	0.00	0.00	6,285.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
6,400.0	0.00	0.00	6,385.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
6,500.0	0.00	0.00	6,485.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
6,600.0	0.00	0.00	6,585.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
6,700.0	0.00	0.00	6,685.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
6,800.0	0.00	0.00	6,785.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
6,900.0	0.00	0.00	6,885.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
7,000.0	0.00	0.00	6,985.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
7,100.0	0.00	0.00	7,085.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
7,200.0	0.00	0.00	7,185.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
7,300.0	0.00	0.00	7,285.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
7,400.0	0.00	0.00	7,385.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
7,500.0	0.00	0.00	7,485.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
7,600.0	0.00	0.00	7,585.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
7,700.0	0.00	0.00	7,685.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
7,800.0	0.00	0.00	7,785.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
7,900.0	0.00	0.00	7,885.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
8,000.0	0.00	0.00	7,985.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
8,100.0	0.00	0.00	8,085.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
8,200.0	0.00	0.00	8,185.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
8,300.0	0.00	0.00	8,285.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
8,400.0	0.00	0.00	8,385.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
8,500.0	0.00	0.00	8,485.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
8,600.0	0.00	0.00	8,585.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
8,700.0	0.00	0.00	8,685.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
8,800.0	0.00	0.00	8,785.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
8,900.0	0.00	0.00	8,885.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
9,000.0	0.00	0.00	8,985.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
9,100.0	0.00	0.00	9,085.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
9,200.0	0.00	0.00	9,185.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
9,300.0	0.00	0.00	9,285.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
9,400.0	0.00	0.00	9,385.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
9,500.0	0.00	0.00	9,485.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
9,600.0	0.00	0.00	9,585.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
9,700.0	0.00	0.00	9,685.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W

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Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Golden Bell 117H
Project:	NAN/GB	**TVD Reference:**	KB @ 3037.0usft
Site:	NAN/GB #8N	**MD Reference:**	KB @ 3037.0usft
Well:	Golden Bell 117H	**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	9,785.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
9,900.0	0.00	0.00	9,885.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
10,000.0	0.00	0.00	9,985.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
10,100.0	0.00	0.00	10,085.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
10,200.0	0.00	0.00	10,185.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
10,300.0	0.00	0.00	10,285.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
10,400.0	0.00	0.00	10,385.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
10,500.0	0.00	0.00	10,485.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
10,600.0	0.00	0.00	10,585.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
10,700.0	0.00	0.00	10,685.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
10,800.0	0.00	0.00	10,785.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
10,900.0	0.00	0.00	10,885.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
11,000.0	0.00	0.00	10,985.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
11,100.0	0.00	0.00	11,085.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
11,200.0	0.00	0.00	11,185.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
11,300.0	0.00	0.00	11,285.7	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
11,364.3	0.00	0.00	11,350.0	319.5	-1,287.1	32° 4' 49.670 N	103° 17' 59.376 W
GB117 KOP							
11,400.0	4.16	152.19	11,385.6	318.3	-1,286.5	32° 4' 49.659 N	103° 17' 59.369 W
11,500.0	15.82	152.19	11,484.0	303.0	-1,278.4	32° 4' 49.507 N	103° 17' 59.277 W
11,600.0	27.48	152.19	11,576.7	270.4	-1,261.2	32° 4' 49.183 N	103° 17' 59.081 W
11,700.0	39.14	152.19	11,660.2	221.9	-1,235.7	32° 4' 48.700 N	103° 17' 58.789 W
11,800.0	50.80	152.19	11,730.8	159.5	-1,202.8	32° 4' 48.080 N	103° 17' 58.413 W
11,900.0	62.46	152.19	11,785.7	85.8	-1,163.9	32° 4' 47.347 N	103° 17' 57.970 W
12,000.0	74.12	152.19	11,822.6	3.8	-1,120.6	32° 4' 46.531 N	103° 17' 57.476 W
12,087.4	84.31	152.19	11,839.0	-72.1	-1,080.6	32° 4' 45.777 N	103° 17' 57.020 W
12,091.8	84.41	152.70	11,839.4	-76.0	-1,078.6	32° 4' 45.738 N	103° 17' 56.996 W
GB117 into NMNM137807							
12,100.0	84.59	153.64	11,840.2	-83.2	-1,074.9	32° 4' 45.665 N	103° 17' 56.954 W
12,135.0	85.39	157.67	11,843.3	-115.0	-1,060.5	32° 4' 45.350 N	103° 17' 56.791 W
GB117 FTP							
12,200.0	86.92	165.10	11,847.6	-176.4	-1,039.8	32° 4' 44.740 N	103° 17' 56.557 W
12,300.0	89.38	176.51	11,850.9	-274.9	-1,023.9	32° 4' 43.764 N	103° 17' 56.383 W
12,325.1	90.00	179.37	11,851.0	-300.0	-1,023.0	32° 4' 43.516 N	103° 17' 56.375 W
GB117 EOC							
12,400.0	90.00	179.37	11,851.0	-374.9	-1,022.2	32° 4' 42.775 N	103° 17' 56.374 W
12,500.0	90.00	179.37	11,851.0	-474.9	-1,021.1	32° 4' 41.785 N	103° 17' 56.372 W
12,600.0	90.00	179.37	11,851.0	-574.9	-1,019.9	32° 4' 40.796 N	103° 17' 56.371 W
12,700.0	90.00	179.37	11,851.0	-674.9	-1,018.8	32° 4' 39.806 N	103° 17' 56.369 W
12,800.0	90.00	179.37	11,851.0	-774.9	-1,017.7	32° 4' 38.817 N	103° 17' 56.367 W
12,900.0	90.00	179.37	11,851.0	-874.9	-1,016.6	32° 4' 37.827 N	103° 17' 56.366 W
13,000.0	90.00	179.37	11,851.0	-974.9	-1,015.5	32° 4' 36.838 N	103° 17' 56.364 W
13,100.0	90.00	179.37	11,851.0	-1,074.8	-1,014.4	32° 4' 35.848 N	103° 17' 56.362 W
13,200.0	90.00	179.37	11,851.0	-1,174.8	-1,013.3	32° 4' 34.859 N	103° 17' 56.360 W
13,300.0	90.00	179.37	11,851.0	-1,274.8	-1,012.2	32° 4' 33.869 N	103° 17' 56.359 W

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Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Golden Bell 117H
Project:	NAN/GB	**TVD Reference:**	KB @ 3037.0usft
Site:	NAN/GB #8N	**MD Reference:**	KB @ 3037.0usft
Well:	Golden Bell 117H	**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
13,400.0	90.00	179.37	11,851.0	-1,374.8	-1,011.1	32° 4' 32.880 N	103° 17' 56.357 W
13,500.0	90.00	179.37	11,851.0	-1,474.8	-1,010.0	32° 4' 31.890 N	103° 17' 56.355 W
13,600.0	90.00	179.37	11,851.0	-1,574.8	-1,008.9	32° 4' 30.901 N	103° 17' 56.354 W
13,700.0	90.00	179.37	11,851.0	-1,674.8	-1,007.8	32° 4' 29.911 N	103° 17' 56.352 W
13,800.0	90.00	179.37	11,851.0	-1,774.8	-1,006.7	32° 4' 28.922 N	103° 17' 56.350 W
13,900.0	90.00	179.37	11,851.0	-1,874.8	-1,005.6	32° 4' 27.932 N	103° 17' 56.348 W
14,000.0	90.00	179.37	11,851.0	-1,974.8	-1,004.5	32° 4' 26.943 N	103° 17' 56.347 W
14,100.0	90.00	179.37	11,851.0	-2,074.8	-1,003.3	32° 4' 25.953 N	103° 17' 56.345 W
14,200.0	90.00	179.37	11,851.0	-2,174.8	-1,002.2	32° 4' 24.964 N	103° 17' 56.343 W
14,300.0	90.00	179.37	11,851.0	-2,274.8	-1,001.1	32° 4' 23.974 N	103° 17' 56.341 W
14,400.0	90.00	179.37	11,851.0	-2,374.8	-1,000.0	32° 4' 22.985 N	103° 17' 56.340 W
14,500.0	90.00	179.37	11,851.0	-2,474.8	-998.9	32° 4' 21.995 N	103° 17' 56.338 W
14,600.0	90.00	179.37	11,851.0	-2,574.8	-997.8	32° 4' 21.006 N	103° 17' 56.336 W
14,665.2	90.00	179.37	11,851.0	-2,640.0	-997.1	32° 4' 20.360 N	103° 17' 56.335 W
GB117 into NMNM137471							
14,700.0	90.00	179.37	11,851.0	-2,674.8	-996.7	32° 4' 20.016 N	103° 17' 56.335 W
14,800.0	90.00	179.37	11,851.0	-2,774.7	-995.6	32° 4' 19.026 N	103° 17' 56.333 W
14,900.0	90.00	179.37	11,851.0	-2,874.7	-994.5	32° 4' 18.037 N	103° 17' 56.331 W
15,000.0	90.00	179.37	11,851.0	-2,974.7	-993.4	32° 4' 17.047 N	103° 17' 56.329 W
15,100.0	90.00	179.37	11,851.0	-3,074.7	-992.3	32° 4' 16.058 N	103° 17' 56.328 W
15,200.0	90.00	179.37	11,851.0	-3,174.7	-991.2	32° 4' 15.068 N	103° 17' 56.326 W
15,300.0	90.00	179.37	11,851.0	-3,274.7	-990.1	32° 4' 14.079 N	103° 17' 56.324 W
15,400.0	90.00	179.37	11,851.0	-3,374.7	-989.0	32° 4' 13.089 N	103° 17' 56.323 W
15,500.0	90.00	179.37	11,851.0	-3,474.7	-987.9	32° 4' 12.100 N	103° 17' 56.321 W
15,600.0	90.00	179.37	11,851.0	-3,574.7	-986.7	32° 4' 11.110 N	103° 17' 56.319 W
15,700.0	90.00	179.37	11,851.0	-3,674.7	-985.6	32° 4' 10.121 N	103° 17' 56.317 W
15,800.0	90.00	179.37	11,851.0	-3,774.7	-984.5	32° 4' 9.131 N	103° 17' 56.316 W
15,900.0	90.00	179.37	11,851.0	-3,874.7	-983.4	32° 4' 8.142 N	103° 17' 56.314 W
15,985.3	90.00	179.37	11,851.0	-3,960.0	-982.5	32° 4' 7.298 N	103° 17' 56.312 W
GB117 into NMNM18644							
16,000.0	90.00	179.37	11,851.0	-3,974.7	-982.3	32° 4' 7.152 N	103° 17' 56.312 W
16,100.0	90.00	179.37	11,851.0	-4,074.7	-981.2	32° 4' 6.163 N	103° 17' 56.310 W
16,200.0	90.00	179.37	11,851.0	-4,174.7	-980.1	32° 4' 5.173 N	103° 17' 56.309 W
16,300.0	90.00	179.37	11,851.0	-4,274.7	-979.0	32° 4' 4.184 N	103° 17' 56.307 W
16,400.0	90.00	179.37	11,851.0	-4,374.6	-977.9	32° 4' 3.194 N	103° 17' 56.305 W
16,500.0	90.00	179.37	11,851.0	-4,474.6	-976.8	32° 4' 2.205 N	103° 17' 56.304 W
16,600.0	90.00	179.37	11,851.0	-4,574.6	-975.7	32° 4' 1.215 N	103° 17' 56.302 W
16,700.0	90.00	179.37	11,851.0	-4,674.6	-974.6	32° 4' 0.226 N	103° 17' 56.300 W
16,800.0	90.00	179.37	11,851.0	-4,774.6	-973.5	32° 3' 59.236 N	103° 17' 56.298 W
16,900.0	90.00	179.37	11,851.0	-4,874.6	-972.4	32° 3' 58.247 N	103° 17' 56.297 W
17,000.0	90.00	179.37	11,851.0	-4,974.6	-971.3	32° 3' 57.257 N	103° 17' 56.295 W
17,100.0	90.00	179.37	11,851.0	-5,074.6	-970.1	32° 3' 56.268 N	103° 17' 56.293 W
17,200.0	90.00	179.37	11,851.0	-5,174.6	-969.0	32° 3' 55.278 N	103° 17' 56.292 W
17,300.0	90.00	179.37	11,851.0	-5,274.6	-967.9	32° 3' 54.289 N	103° 17' 56.290 W

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Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Golden Bell 117H
Project:	NAN/GB	**TVD Reference:**	KB @ 3037.0usft
Site:	NAN/GB #8N	**MD Reference:**	KB @ 3037.0usft
Well:	Golden Bell 117H	**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
17,305.4	90.00	179.37	11,851.0	-5,280.0	-967.9	32° 3' 54.235 N	103° 17' 56.290 W
GB117 into NMNM137472							
17,400.0	90.00	179.37	11,851.0	-5,374.6	-966.8	32° 3' 53.299 N	103° 17' 56.288 W
17,500.0	90.00	179.37	11,851.0	-5,474.6	-965.7	32° 3' 52.310 N	103° 17' 56.286 W
17,600.0	90.00	179.37	11,851.0	-5,574.6	-964.6	32° 3' 51.320 N	103° 17' 56.285 W
17,700.0	90.00	179.37	11,851.0	-5,674.6	-963.5	32° 3' 50.331 N	103° 17' 56.283 W
17,800.0	90.00	179.37	11,851.0	-5,774.6	-962.4	32° 3' 49.341 N	103° 17' 56.281 W
17,900.0	90.00	179.37	11,851.0	-5,874.6	-961.3	32° 3' 48.352 N	103° 17' 56.279 W
18,000.0	90.00	179.37	11,851.0	-5,974.5	-960.2	32° 3' 47.362 N	103° 17' 56.278 W
18,100.0	90.00	179.37	11,851.0	-6,074.5	-959.1	32° 3' 46.373 N	103° 17' 56.276 W
18,200.0	90.00	179.37	11,851.0	-6,174.5	-958.0	32° 3' 45.383 N	103° 17' 56.274 W
18,300.0	90.00	179.37	11,851.0	-6,274.5	-956.9	32° 3' 44.393 N	103° 17' 56.273 W
18,400.0	90.00	179.37	11,851.0	-6,374.5	-955.8	32° 3' 43.404 N	103° 17' 56.271 W
18,500.0	90.00	179.37	11,851.0	-6,474.5	-954.7	32° 3' 42.414 N	103° 17' 56.269 W
18,600.0	90.00	179.37	11,851.0	-6,574.5	-953.5	32° 3' 41.425 N	103° 17' 56.267 W
18,700.0	90.00	179.37	11,851.0	-6,674.5	-952.4	32° 3' 40.435 N	103° 17' 56.266 W
18,800.0	90.00	179.37	11,851.0	-6,774.5	-951.3	32° 3' 39.446 N	103° 17' 56.264 W
18,900.0	90.00	179.37	11,851.0	-6,874.5	-950.2	32° 3' 38.456 N	103° 17' 56.262 W
19,000.0	90.00	179.37	11,851.0	-6,974.5	-949.1	32° 3' 37.467 N	103° 17' 56.261 W
19,100.0	90.00	179.37	11,851.0	-7,074.5	-948.0	32° 3' 36.477 N	103° 17' 56.259 W
19,200.0	90.00	179.37	11,851.0	-7,174.5	-946.9	32° 3' 35.488 N	103° 17' 56.257 W
19,300.0	90.00	179.37	11,851.0	-7,274.5	-945.8	32° 3' 34.498 N	103° 17' 56.255 W
19,400.0	90.00	179.37	11,851.0	-7,374.5	-944.7	32° 3' 33.509 N	103° 17' 56.254 W
19,500.0	90.00	179.37	11,851.0	-7,474.5	-943.6	32° 3' 32.519 N	103° 17' 56.252 W
19,600.0	90.00	179.37	11,851.0	-7,574.5	-942.5	32° 3' 31.530 N	103° 17' 56.250 W
19,700.0	90.00	179.37	11,851.0	-7,674.4	-941.4	32° 3' 30.540 N	103° 17' 56.248 W
19,800.0	90.00	179.37	11,851.0	-7,774.4	-940.3	32° 3' 29.551 N	103° 17' 56.247 W
19,900.0	90.00	179.37	11,851.0	-7,874.4	-939.2	32° 3' 28.561 N	103° 17' 56.245 W
20,000.0	90.00	179.37	11,851.0	-7,974.4	-938.1	32° 3' 27.572 N	103° 17' 56.243 W
20,100.0	90.00	179.37	11,851.0	-8,074.4	-936.9	32° 3' 26.582 N	103° 17' 56.242 W
20,200.0	90.00	179.37	11,851.0	-8,174.4	-935.8	32° 3' 25.593 N	103° 17' 56.240 W
20,300.0	90.00	179.37	11,851.0	-8,274.4	-934.7	32° 3' 24.603 N	103° 17' 56.238 W
20,400.0	90.00	179.37	11,851.0	-8,374.4	-933.6	32° 3' 23.614 N	103° 17' 56.236 W
20,500.0	90.00	179.37	11,851.0	-8,474.4	-932.5	32° 3' 22.624 N	103° 17' 56.235 W
20,600.0	90.00	179.37	11,851.0	-8,574.4	-931.4	32° 3' 21.635 N	103° 17' 56.233 W
20,700.0	90.00	179.37	11,851.0	-8,674.4	-930.3	32° 3' 20.645 N	103° 17' 56.231 W
20,800.0	90.00	179.37	11,851.0	-8,774.4	-929.2	32° 3' 19.656 N	103° 17' 56.229 W
20,900.0	90.00	179.37	11,851.0	-8,874.4	-928.1	32° 3' 18.666 N	103° 17' 56.228 W
21,000.0	90.00	179.37	11,851.0	-8,974.4	-927.0	32° 3' 17.677 N	103° 17' 56.226 W
21,100.0	90.00	179.37	11,851.0	-9,074.4	-925.9	32° 3' 16.687 N	103° 17' 56.224 W
21,200.0	90.00	179.37	11,851.0	-9,174.4	-924.8	32° 3' 15.698 N	103° 17' 56.223 W
21,300.0	90.00	179.37	11,851.0	-9,274.3	-923.7	32° 3' 14.708 N	103° 17' 56.221 W
21,400.0	90.00	179.37	11,851.0	-9,374.3	-922.6	32° 3' 13.719 N	103° 17' 56.219 W
21,500.0	90.00	179.37	11,851.0	-9,474.3	-921.4	32° 3' 12.729 N	103° 17' 56.217 W

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Ameredev Operating, LLC

Lease Penetration Section Line Footages

Company:	Ameredev Operating, LLC.	**Local Co-ordinate Reference:**	Well Golden Bell 117H
Project:	NAN/GB	**TVD Reference:**	KB @ 3037.0usft
Site:	NAN/GB #8N	**MD Reference:**	KB @ 3037.0usft
Well:	Golden Bell 117H	**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
21,600.0	90.00	179.37	11,851.0	-9,574.3	-920.3	32° 3' 11.740 N	103° 17' 56.216 W
21,700.0	90.00	179.37	11,851.0	-9,674.3	-919.2	32° 3' 10.750 N	103° 17' 56.214 W
21,800.0	90.00	179.37	11,851.0	-9,774.3	-918.1	32° 3' 9.760 N	103° 17' 56.212 W
21,900.0	90.00	179.37	11,851.0	-9,874.3	-917.0	32° 3' 8.771 N	103° 17' 56.210 W
22,000.0	90.00	179.37	11,851.0	-9,974.3	-915.9	32° 3' 7.781 N	103° 17' 56.209 W
22,100.0	90.00	179.37	11,851.0	-10,074.3	-914.8	32° 3' 6.792 N	103° 17' 56.207 W
22,200.0	90.00	179.37	11,851.0	-10,174.3	-913.7	32° 3' 5.802 N	103° 17' 56.205 W
22,300.0	90.00	179.37	11,851.0	-10,274.3	-912.6	32° 3' 4.813 N	103° 17' 56.204 W
22,400.0	90.00	179.37	11,851.0	-10,374.3	-911.5	32° 3' 3.823 N	103° 17' 56.202 W
22,490.4	90.00	179.37	11,851.0	-10,464.6	-910.5	32° 3' 2.929 N	103° 17' 56.200 W
GB117 LTP							
22,500.0	90.00	179.37	11,851.0	-10,474.3	-910.4	32° 3' 2.834 N	103° 17' 56.200 W
22,540.3	90.00	179.37	11,851.0	-10,514.6	-909.9	32° 3' 2.435 N	103° 17' 56.199 W
GB117 BHL							

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
11,364.3	11,350.0	119.9	-257.1	GB117 KOP
12,091.8	11,839.4	-275.5	-48.6	GB117 into NMNM137807
14,665.2	11,851.0	-2,839.5	32.9	GB117 into NMNM137471
15,985.3	11,851.0	-4,159.6	47.5	GB117 into NMNM18644
17,305.4	11,851.0	-5,479.6	62.1	GB117 into NMNM137472

Checked By: _____ Approved By: _____ Date: _____

Ameredev Operating, LLC.

NAN/GB
NAN/GB #8N
Golden Bell 117H

Wellbore #1

Plan: Design #1

Standard Planning Report

28 August, 2019

AMEREDEV

Ameredev Operating, LLC

Planning Report

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Golden Bell 117H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3037.0usft
Project:	NAN/GB	**MD Reference:**	KB @ 3037.0usft
Site:	NAN/GB #8N	**North Reference:**	Grid
Well:	Golden Bell 117H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project NAN/GB

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

Site NAN/GB #8N

Site Position:		**Northing:**	394,423.90 usft	**Latitude:**	32° 4' 48.460 N
From:	Lat/Long	**Easting:**	861,736.87 usft	**Longitude:**	103° 17' 55.936 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.55 °

Well Golden Bell 117H

Well Position	**+N/-S**	-0.4 usft	**Northing:**	394,423.48 usft	**Latitude:**	32° 4' 48.460 N
	+E/-W	-40.0 usft	**Easting:**	861,696.89 usft	**Longitude:**	103° 17' 56.401 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,010.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/7/2018	6.66	59.95	47,732.43471664

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	179.36

Plan Survey Tool Program **Date** 8/28/2019

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	22,540.3	Design #1 (Wellbore #1)	MWD	
				OWSG MWD - Standard	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,300.0	6.00	295.00	2,299.5	6.6	-14.2	2.00	2.00	0.00	295.00	
4,713.8	6.00	295.00	4,700.0	113.3	-242.9	0.00	0.00	0.00	0.00	
5,013.8	0.00	0.00	4,999.5	119.9	-257.1	2.00	-2.00	0.00	180.00	
11,364.3	0.00	0.00	11,350.0	119.9	-257.1	0.00	0.00	0.00	0.00	
12,087.4	84.31	152.19	11,839.0	-271.6	-50.6	11.66	11.66	0.00	152.19	
12,325.1	90.00	179.37	11,851.0	-499.6	7.0	11.66	2.39	11.43	79.06	GB117 EOC
22,540.3	90.00	179.37	11,851.0	-10,714.2	120.1	0.00	0.00	0.00	0.00	GB117 BHL

AMEREDEV

Ameredev Operating, LLC

Planning Report

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Golden Bell 117H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3037.0usft
Project:	NAN/GB	**MD Reference:**	KB @ 3037.0usft
Site:	NAN/GB #8N	**North Reference:**	Grid
Well:	Golden Bell 117H	**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	295.00	2,100.0	0.7	-1.6	-0.8	2.00	2.00	0.00
2,200.0	4.00	295.00	2,199.8	2.9	-6.3	-3.0	2.00	2.00	0.00
2,300.0	6.00	295.00	2,299.5	6.6	-14.2	-6.8	2.00	2.00	0.00
2,400.0	6.00	295.00	2,398.9	11.0	-23.7	-11.3	0.00	0.00	0.00
2,500.0	6.00	295.00	2,498.4	15.5	-33.2	-15.8	0.00	0.00	0.00
2,600.0	6.00	295.00	2,597.8	19.9	-42.6	-20.4	0.00	0.00	0.00
2,700.0	6.00	295.00	2,697.3	24.3	-52.1	-24.9	0.00	0.00	0.00
2,800.0	6.00	295.00	2,796.7	28.7	-61.6	-29.4	0.00	0.00	0.00
2,900.0	6.00	295.00	2,896.2	33.1	-71.1	-33.9	0.00	0.00	0.00
3,000.0	6.00	295.00	2,995.6	37.6	-80.5	-38.5	0.00	0.00	0.00
3,100.0	6.00	295.00	3,095.1	42.0	-90.0	-43.0	0.00	0.00	0.00
3,200.0	6.00	295.00	3,194.5	46.4	-99.5	-47.5	0.00	0.00	0.00
3,300.0	6.00	295.00	3,294.0	50.8	-109.0	-52.0	0.00	0.00	0.00
3,400.0	6.00	295.00	3,393.4	55.2	-118.4	-56.5	0.00	0.00	0.00
3,500.0	6.00	295.00	3,492.9	59.6	-127.9	-61.1	0.00	0.00	0.00
3,600.0	6.00	295.00	3,592.3	64.1	-137.4	-65.6	0.00	0.00	0.00
3,700.0	6.00	295.00	3,691.8	68.5	-146.9	-70.1	0.00	0.00	0.00
3,800.0	6.00	295.00	3,791.2	72.9	-156.3	-74.6	0.00	0.00	0.00
3,900.0	6.00	295.00	3,890.7	77.3	-165.8	-79.2	0.00	0.00	0.00
4,000.0	6.00	295.00	3,990.1	81.7	-175.3	-83.7	0.00	0.00	0.00
4,100.0	6.00	295.00	4,089.6	86.1	-184.7	-88.2	0.00	0.00	0.00
4,200.0	6.00	295.00	4,189.0	90.6	-194.2	-92.7	0.00	0.00	0.00
4,300.0	6.00	295.00	4,288.5	95.0	-203.7	-97.3	0.00	0.00	0.00
4,400.0	6.00	295.00	4,387.9	99.4	-213.2	-101.8	0.00	0.00	0.00
4,500.0	6.00	295.00	4,487.4	103.8	-222.6	-106.3	0.00	0.00	0.00
4,600.0	6.00	295.00	4,586.9	108.2	-232.1	-110.8	0.00	0.00	0.00
4,700.0	6.00	295.00	4,686.3	112.7	-241.6	-115.4	0.00	0.00	0.00
4,713.8	6.00	295.00	4,700.0	113.3	-242.9	-116.0	0.00	0.00	0.00
4,800.0	4.28	295.00	4,785.9	116.5	-249.9	-119.3	2.00	-2.00	0.00
4,900.0	2.28	295.00	4,885.7	118.9	-255.1	-121.8	2.00	-2.00	0.00
5,000.0	0.28	295.00	4,985.7	119.9	-257.1	-122.8	2.00	-2.00	0.00
5,013.8	0.00	0.00	4,999.5	119.9	-257.1	-122.8	2.00	-2.00	0.00
5,100.0	0.00	0.00	5,085.7	119.9	-257.1	-122.8	0.00	0.00	0.00

AMEREDEV

Ameredev Operating, LLC

Planning Report

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Golden Bell 117H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3037.0usft
Project:	NAN/GB	**MD Reference:**	KB @ 3037.0usft
Site:	NAN/GB #8N	**North Reference:**	Grid
Well:	Golden Bell 117H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	0.00	0.00	5,185.7	119.9	-257.1	-122.8	0.00	0.00	0.00
5,300.0	0.00	0.00	5,285.7	119.9	-257.1	-122.8	0.00	0.00	0.00
5,400.0	0.00	0.00	5,385.7	119.9	-257.1	-122.8	0.00	0.00	0.00
5,500.0	0.00	0.00	5,485.7	119.9	-257.1	-122.8	0.00	0.00	0.00
5,600.0	0.00	0.00	5,585.7	119.9	-257.1	-122.8	0.00	0.00	0.00
5,700.0	0.00	0.00	5,685.7	119.9	-257.1	-122.8	0.00	0.00	0.00
5,800.0	0.00	0.00	5,785.7	119.9	-257.1	-122.8	0.00	0.00	0.00
5,900.0	0.00	0.00	5,885.7	119.9	-257.1	-122.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,985.7	119.9	-257.1	-122.8	0.00	0.00	0.00
6,100.0	0.00	0.00	6,085.7	119.9	-257.1	-122.8	0.00	0.00	0.00
6,200.0	0.00	0.00	6,185.7	119.9	-257.1	-122.8	0.00	0.00	0.00
6,300.0	0.00	0.00	6,285.7	119.9	-257.1	-122.8	0.00	0.00	0.00
6,400.0	0.00	0.00	6,385.7	119.9	-257.1	-122.8	0.00	0.00	0.00
6,500.0	0.00	0.00	6,485.7	119.9	-257.1	-122.8	0.00	0.00	0.00
6,600.0	0.00	0.00	6,585.7	119.9	-257.1	-122.8	0.00	0.00	0.00
6,700.0	0.00	0.00	6,685.7	119.9	-257.1	-122.8	0.00	0.00	0.00
6,800.0	0.00	0.00	6,785.7	119.9	-257.1	-122.8	0.00	0.00	0.00
6,900.0	0.00	0.00	6,885.7	119.9	-257.1	-122.8	0.00	0.00	0.00
7,000.0	0.00	0.00	6,985.7	119.9	-257.1	-122.8	0.00	0.00	0.00
7,100.0	0.00	0.00	7,085.7	119.9	-257.1	-122.8	0.00	0.00	0.00
7,200.0	0.00	0.00	7,185.7	119.9	-257.1	-122.8	0.00	0.00	0.00
7,300.0	0.00	0.00	7,285.7	119.9	-257.1	-122.8	0.00	0.00	0.00
7,400.0	0.00	0.00	7,385.7	119.9	-257.1	-122.8	0.00	0.00	0.00
7,500.0	0.00	0.00	7,485.7	119.9	-257.1	-122.8	0.00	0.00	0.00
7,600.0	0.00	0.00	7,585.7	119.9	-257.1	-122.8	0.00	0.00	0.00
7,700.0	0.00	0.00	7,685.7	119.9	-257.1	-122.8	0.00	0.00	0.00
7,800.0	0.00	0.00	7,785.7	119.9	-257.1	-122.8	0.00	0.00	0.00
7,900.0	0.00	0.00	7,885.7	119.9	-257.1	-122.8	0.00	0.00	0.00
8,000.0	0.00	0.00	7,985.7	119.9	-257.1	-122.8	0.00	0.00	0.00
8,100.0	0.00	0.00	8,085.7	119.9	-257.1	-122.8	0.00	0.00	0.00
8,200.0	0.00	0.00	8,185.7	119.9	-257.1	-122.8	0.00	0.00	0.00
8,300.0	0.00	0.00	8,285.7	119.9	-257.1	-122.8	0.00	0.00	0.00
8,400.0	0.00	0.00	8,385.7	119.9	-257.1	-122.8	0.00	0.00	0.00
8,500.0	0.00	0.00	8,485.7	119.9	-257.1	-122.8	0.00	0.00	0.00
8,600.0	0.00	0.00	8,585.7	119.9	-257.1	-122.8	0.00	0.00	0.00
8,700.0	0.00	0.00	8,685.7	119.9	-257.1	-122.8	0.00	0.00	0.00
8,800.0	0.00	0.00	8,785.7	119.9	-257.1	-122.8	0.00	0.00	0.00
8,900.0	0.00	0.00	8,885.7	119.9	-257.1	-122.8	0.00	0.00	0.00
9,000.0	0.00	0.00	8,985.7	119.9	-257.1	-122.8	0.00	0.00	0.00
9,100.0	0.00	0.00	9,085.7	119.9	-257.1	-122.8	0.00	0.00	0.00
9,200.0	0.00	0.00	9,185.7	119.9	-257.1	-122.8	0.00	0.00	0.00
9,300.0	0.00	0.00	9,285.7	119.9	-257.1	-122.8	0.00	0.00	0.00
9,400.0	0.00	0.00	9,385.7	119.9	-257.1	-122.8	0.00	0.00	0.00
9,500.0	0.00	0.00	9,485.7	119.9	-257.1	-122.8	0.00	0.00	0.00
9,600.0	0.00	0.00	9,585.7	119.9	-257.1	-122.8	0.00	0.00	0.00
9,700.0	0.00	0.00	9,685.7	119.9	-257.1	-122.8	0.00	0.00	0.00
9,800.0	0.00	0.00	9,785.7	119.9	-257.1	-122.8	0.00	0.00	0.00
9,900.0	0.00	0.00	9,885.7	119.9	-257.1	-122.8	0.00	0.00	0.00
10,000.0	0.00	0.00	9,985.7	119.9	-257.1	-122.8	0.00	0.00	0.00
10,100.0	0.00	0.00	10,085.7	119.9	-257.1	-122.8	0.00	0.00	0.00
10,200.0	0.00	0.00	10,185.7	119.9	-257.1	-122.8	0.00	0.00	0.00
10,300.0	0.00	0.00	10,285.7	119.9	-257.1	-122.8	0.00	0.00	0.00
10,400.0	0.00	0.00	10,385.7	119.9	-257.1	-122.8	0.00	0.00	0.00
10,500.0	0.00	0.00	10,485.7	119.9	-257.1	-122.8	0.00	0.00	0.00

AMEREDEV

Ameredev Operating, LLC

Planning Report

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Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3037.0usft
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Well:	Golden Bell 117H	**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	10,585.7	119.9	-257.1	-122.8	0.00	0.00	0.00
10,700.0	0.00	0.00	10,685.7	119.9	-257.1	-122.8	0.00	0.00	0.00
10,800.0	0.00	0.00	10,785.7	119.9	-257.1	-122.8	0.00	0.00	0.00
10,900.0	0.00	0.00	10,885.7	119.9	-257.1	-122.8	0.00	0.00	0.00
11,000.0	0.00	0.00	10,985.7	119.9	-257.1	-122.8	0.00	0.00	0.00
11,100.0	0.00	0.00	11,085.7	119.9	-257.1	-122.8	0.00	0.00	0.00
11,200.0	0.00	0.00	11,185.7	119.9	-257.1	-122.8	0.00	0.00	0.00
11,300.0	0.00	0.00	11,285.7	119.9	-257.1	-122.8	0.00	0.00	0.00
11,364.3	0.00	0.00	11,350.0	119.9	-257.1	-122.8	0.00	0.00	0.00
GB117 KOP									
11,400.0	4.16	152.19	11,385.6	118.7	-256.5	-121.6	11.66	11.66	0.00
11,500.0	15.82	152.19	11,484.0	103.4	-248.4	-106.2	11.66	11.66	0.00
11,600.0	27.48	152.19	11,576.7	70.9	-231.3	-73.4	11.66	11.66	0.00
11,700.0	39.14	152.19	11,660.2	22.4	-205.7	-24.7	11.66	11.66	0.00
11,800.0	50.80	152.19	11,730.8	-40.0	-172.8	38.1	11.66	11.66	0.00
11,900.0	62.46	152.19	11,785.7	-113.8	-133.9	112.3	11.66	11.66	0.00
12,000.0	74.12	152.19	11,822.6	-195.8	-90.6	194.8	11.66	11.66	0.00
12,087.4	84.31	152.19	11,839.0	-271.6	-50.6	271.1	11.66	11.66	0.00
12,091.8	84.41	152.70	11,839.4	-275.5	-48.6	275.0	11.66	2.22	11.50
GB117 into NMNM137807									
12,100.0	84.59	153.64	11,840.2	-282.8	-44.9	282.3	11.66	2.23	11.50
12,135.0	85.39	157.67	11,843.3	-314.6	-30.5	314.3	11.66	2.28	11.48
GB117 FTP									
12,200.0	86.92	165.10	11,847.6	-376.0	-9.8	375.9	11.66	2.36	11.44
12,300.0	89.38	176.51	11,850.9	-474.5	6.1	474.5	11.66	2.45	11.41
12,325.1	90.00	179.37	11,851.0	-499.6	7.0	499.6	11.66	2.49	11.39
GB117 EOC									
12,400.0	90.00	179.37	11,851.0	-574.5	7.8	574.5	0.00	0.00	0.00
12,500.0	90.00	179.37	11,851.0	-674.5	8.9	674.5	0.00	0.00	0.00
12,600.0	90.00	179.37	11,851.0	-774.5	10.0	774.5	0.00	0.00	0.00
12,700.0	90.00	179.37	11,851.0	-874.5	11.1	874.5	0.00	0.00	0.00
12,800.0	90.00	179.37	11,851.0	-974.4	12.3	974.5	0.00	0.00	0.00
12,900.0	90.00	179.37	11,851.0	-1,074.4	13.4	1,074.5	0.00	0.00	0.00
13,000.0	90.00	179.37	11,851.0	-1,174.4	14.5	1,174.5	0.00	0.00	0.00
13,100.0	90.00	179.37	11,851.0	-1,274.4	15.6	1,274.5	0.00	0.00	0.00
13,200.0	90.00	179.37	11,851.0	-1,374.4	16.7	1,374.5	0.00	0.00	0.00
13,300.0	90.00	179.37	11,851.0	-1,474.4	17.8	1,474.5	0.00	0.00	0.00
13,400.0	90.00	179.37	11,851.0	-1,574.4	18.9	1,574.5	0.00	0.00	0.00
13,500.0	90.00	179.37	11,851.0	-1,674.4	20.0	1,674.5	0.00	0.00	0.00
13,600.0	90.00	179.37	11,851.0	-1,774.4	21.1	1,774.5	0.00	0.00	0.00
13,700.0	90.00	179.37	11,851.0	-1,874.4	22.2	1,874.5	0.00	0.00	0.00
13,800.0	90.00	179.37	11,851.0	-1,974.4	23.3	1,974.5	0.00	0.00	0.00
13,900.0	90.00	179.37	11,851.0	-2,074.4	24.4	2,074.5	0.00	0.00	0.00
14,000.0	90.00	179.37	11,851.0	-2,174.4	25.5	2,174.5	0.00	0.00	0.00
14,100.0	90.00	179.37	11,851.0	-2,274.4	26.6	2,274.5	0.00	0.00	0.00
14,200.0	90.00	179.37	11,851.0	-2,374.4	27.7	2,374.5	0.00	0.00	0.00
14,300.0	90.00	179.37	11,851.0	-2,474.4	28.9	2,474.5	0.00	0.00	0.00
14,400.0	90.00	179.37	11,851.0	-2,574.3	30.0	2,574.5	0.00	0.00	0.00
14,500.0	90.00	179.37	11,851.0	-2,674.3	31.1	2,674.5	0.00	0.00	0.00
14,600.0	90.00	179.37	11,851.0	-2,774.3	32.2	2,774.5	0.00	0.00	0.00
14,665.2	90.00	179.37	11,851.0	-2,839.5	32.9	2,839.7	0.00	0.00	0.00
GB117 into NMNM137471									
14,700.0	90.00	179.37	11,851.0	-2,874.3	33.3	2,874.5	0.00	0.00	0.00

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Ameredev Operating, LLC

Planning Report

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Golden Bell 117H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3037.0usft
Project:	NAN/GB	**MD Reference:**	KB @ 3037.0usft
Site:	NAN/GB #8N	**North Reference:**	Grid
Well:	Golden Bell 117H	**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)
14,800.0	90.00	179.37	11,851.0	-2,974.3	34.4	2,974.5	0.00	0.00	0.00
14,900.0	90.00	179.37	11,851.0	-3,074.3	35.5	3,074.5	0.00	0.00	0.00
15,000.0	90.00	179.37	11,851.0	-3,174.3	36.6	3,174.5	0.00	0.00	0.00
15,100.0	90.00	179.37	11,851.0	-3,274.3	37.7	3,274.5	0.00	0.00	0.00
15,200.0	90.00	179.37	11,851.0	-3,374.3	38.8	3,374.5	0.00	0.00	0.00
15,300.0	90.00	179.37	11,851.0	-3,474.3	39.9	3,474.5	0.00	0.00	0.00
15,400.0	90.00	179.37	11,851.0	-3,574.3	41.0	3,574.5	0.00	0.00	0.00
15,500.0	90.00	179.37	11,851.0	-3,674.3	42.1	3,674.5	0.00	0.00	0.00
15,600.0	90.00	179.37	11,851.0	-3,774.3	43.2	3,774.5	0.00	0.00	0.00
15,700.0	90.00	179.37	11,851.0	-3,874.3	44.3	3,874.5	0.00	0.00	0.00
15,800.0	90.00	179.37	11,851.0	-3,974.3	45.5	3,974.5	0.00	0.00	0.00
15,900.0	90.00	179.37	11,851.0	-4,074.3	46.6	4,074.5	0.00	0.00	0.00
15,985.3	90.00	179.37	11,851.0	-4,159.6	47.5	4,159.8	0.00	0.00	0.00
GB117 into NMNM18644									
16,000.0	90.00	179.37	11,851.0	-4,174.3	47.7	4,174.5	0.00	0.00	0.00
16,100.0	90.00	179.37	11,851.0	-4,274.2	48.8	4,274.5	0.00	0.00	0.00
16,200.0	90.00	179.37	11,851.0	-4,374.2	49.9	4,374.5	0.00	0.00	0.00
16,300.0	90.00	179.37	11,851.0	-4,474.2	51.0	4,474.5	0.00	0.00	0.00
16,400.0	90.00	179.37	11,851.0	-4,574.2	52.1	4,574.5	0.00	0.00	0.00
16,500.0	90.00	179.37	11,851.0	-4,674.2	53.2	4,674.5	0.00	0.00	0.00
16,600.0	90.00	179.37	11,851.0	-4,774.2	54.3	4,774.5	0.00	0.00	0.00
16,700.0	90.00	179.37	11,851.0	-4,874.2	55.4	4,874.5	0.00	0.00	0.00
16,800.0	90.00	179.37	11,851.0	-4,974.2	56.5	4,974.5	0.00	0.00	0.00
16,900.0	90.00	179.37	11,851.0	-5,074.2	57.6	5,074.5	0.00	0.00	0.00
17,000.0	90.00	179.37	11,851.0	-5,174.2	58.7	5,174.5	0.00	0.00	0.00
17,100.0	90.00	179.37	11,851.0	-5,274.2	59.8	5,274.5	0.00	0.00	0.00
17,200.0	90.00	179.37	11,851.0	-5,374.2	60.9	5,374.5	0.00	0.00	0.00
17,300.0	90.00	179.37	11,851.0	-5,474.2	62.1	5,474.5	0.00	0.00	0.00
17,305.4	90.00	179.37	11,851.0	-5,479.6	62.1	5,479.9	0.00	0.00	0.00
GB117 into NMNM137472									
17,400.0	90.00	179.37	11,851.0	-5,574.2	63.2	5,574.5	0.00	0.00	0.00
17,500.0	90.00	179.37	11,851.0	-5,674.2	64.3	5,674.5	0.00	0.00	0.00
17,600.0	90.00	179.37	11,851.0	-5,774.2	65.4	5,774.5	0.00	0.00	0.00
17,700.0	90.00	179.37	11,851.0	-5,874.1	66.5	5,874.5	0.00	0.00	0.00
17,800.0	90.00	179.37	11,851.0	-5,974.1	67.6	5,974.5	0.00	0.00	0.00
17,900.0	90.00	179.37	11,851.0	-6,074.1	68.7	6,074.5	0.00	0.00	0.00
18,000.0	90.00	179.37	11,851.0	-6,174.1	69.8	6,174.5	0.00	0.00	0.00
18,100.0	90.00	179.37	11,851.0	-6,274.1	70.9	6,274.5	0.00	0.00	0.00
18,200.0	90.00	179.37	11,851.0	-6,374.1	72.0	6,374.5	0.00	0.00	0.00
18,300.0	90.00	179.37	11,851.0	-6,474.1	73.1	6,474.5	0.00	0.00	0.00
18,400.0	90.00	179.37	11,851.0	-6,574.1	74.2	6,574.5	0.00	0.00	0.00
18,500.0	90.00	179.37	11,851.0	-6,674.1	75.3	6,674.5	0.00	0.00	0.00
18,600.0	90.00	179.37	11,851.0	-6,774.1	76.4	6,774.5	0.00	0.00	0.00
18,700.0	90.00	179.37	11,851.0	-6,874.1	77.5	6,874.5	0.00	0.00	0.00
18,800.0	90.00	179.37	11,851.0	-6,974.1	78.7	6,974.5	0.00	0.00	0.00
18,900.0	90.00	179.37	11,851.0	-7,074.1	79.8	7,074.5	0.00	0.00	0.00
19,000.0	90.00	179.37	11,851.0	-7,174.1	80.9	7,174.5	0.00	0.00	0.00
19,100.0	90.00	179.37	11,851.0	-7,274.1	82.0	7,274.5	0.00	0.00	0.00
19,200.0	90.00	179.37	11,851.0	-7,374.1	83.1	7,374.5	0.00	0.00	0.00
19,300.0	90.00	179.37	11,851.0	-7,474.0	84.2	7,474.5	0.00	0.00	0.00
19,400.0	90.00	179.37	11,851.0	-7,574.0	85.3	7,574.5	0.00	0.00	0.00
19,500.0	90.00	179.37	11,851.0	-7,674.0	86.4	7,674.5	0.00	0.00	0.00
19,600.0	90.00	179.37	11,851.0	-7,774.0	87.5	7,774.5	0.00	0.00	0.00
19,700.0	90.00	179.37	11,851.0	-7,874.0	88.6	7,874.5	0.00	0.00	0.00

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Ameredev Operating, LLC

Planning Report

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Golden Bell 117H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3037.0usft
Project:	NAN/GB	**MD Reference:**	KB @ 3037.0usft
Site:	NAN/GB #8N	**North Reference:**	Grid
Well:	Golden Bell 117H	**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)
19,800.0	90.00	179.37	11,851.0	-7,974.0	89.7	7,974.5	0.00	0.00	0.00
19,900.0	90.00	179.37	11,851.0	-8,074.0	90.8	8,074.5	0.00	0.00	0.00
20,000.0	90.00	179.37	11,851.0	-8,174.0	91.9	8,174.5	0.00	0.00	0.00
20,100.0	90.00	179.37	11,851.0	-8,274.0	93.0	8,274.5	0.00	0.00	0.00
20,200.0	90.00	179.37	11,851.0	-8,374.0	94.2	8,374.5	0.00	0.00	0.00
20,300.0	90.00	179.37	11,851.0	-8,474.0	95.3	8,474.5	0.00	0.00	0.00
20,400.0	90.00	179.37	11,851.0	-8,574.0	96.4	8,574.5	0.00	0.00	0.00
20,500.0	90.00	179.37	11,851.0	-8,674.0	97.5	8,674.5	0.00	0.00	0.00
20,600.0	90.00	179.37	11,851.0	-8,774.0	98.6	8,774.5	0.00	0.00	0.00
20,700.0	90.00	179.37	11,851.0	-8,874.0	99.7	8,874.5	0.00	0.00	0.00
20,800.0	90.00	179.37	11,851.0	-8,974.0	100.8	8,974.5	0.00	0.00	0.00
20,900.0	90.00	179.37	11,851.0	-9,074.0	101.9	9,074.5	0.00	0.00	0.00
21,000.0	90.00	179.37	11,851.0	-9,173.9	103.0	9,174.5	0.00	0.00	0.00
21,100.0	90.00	179.37	11,851.0	-9,273.9	104.1	9,274.5	0.00	0.00	0.00
21,200.0	90.00	179.37	11,851.0	-9,373.9	105.2	9,374.5	0.00	0.00	0.00
21,300.0	90.00	179.37	11,851.0	-9,473.9	106.3	9,474.5	0.00	0.00	0.00
21,400.0	90.00	179.37	11,851.0	-9,573.9	107.4	9,574.5	0.00	0.00	0.00
21,500.0	90.00	179.37	11,851.0	-9,673.9	108.5	9,674.5	0.00	0.00	0.00
21,600.0	90.00	179.37	11,851.0	-9,773.9	109.6	9,774.5	0.00	0.00	0.00
21,700.0	90.00	179.37	11,851.0	-9,873.9	110.8	9,874.5	0.00	0.00	0.00
21,800.0	90.00	179.37	11,851.0	-9,973.9	111.9	9,974.5	0.00	0.00	0.00
21,900.0	90.00	179.37	11,851.0	-10,073.9	113.0	10,074.5	0.00	0.00	0.00
22,000.0	90.00	179.37	11,851.0	-10,173.9	114.1	10,174.5	0.00	0.00	0.00
22,100.0	90.00	179.37	11,851.0	-10,273.9	115.2	10,274.5	0.00	0.00	0.00
22,200.0	90.00	179.37	11,851.0	-10,373.9	116.3	10,374.5	0.00	0.00	0.00
22,300.0	90.00	179.37	11,851.0	-10,473.9	117.4	10,474.5	0.00	0.00	0.00
22,400.0	90.00	179.37	11,851.0	-10,573.9	118.5	10,574.5	0.00	0.00	0.00
22,490.4	90.00	179.37	11,851.0	-10,664.2	119.5	10,664.9	0.00	0.00	0.00
GB117 LTP									
22,500.0	90.00	179.37	11,851.0	-10,673.9	119.6	10,674.5	0.00	0.00	0.00
22,540.3	90.00	179.37	11,851.0	-10,714.2	120.1	10,714.9	0.00	0.00	0.00
GB117 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
GB117 FTP	0.00	0.00	11,851.0	-299.9	7.0	394,123.57	861,703.88	32° 4' 45.492 N	103° 17' 56.353 W
- plan misses target center by 41.0usft at 12135.0usft MD (11843.3 TVD, -314.6 N, -30.5 E)									
- Point									
GB117 LTP	0.00	0.00	11,851.0	-10,664.2	120.1	383,759.28	861,816.95	32° 3' 2.929 N	103° 17' 56.194 W
- plan misses target center by 0.6usft at 22490.4usft MD (11851.0 TVD, -10664.2 N, 119.5 E)									
- Point									
GB117 BHL	0.00	0.00	11,851.0	-10,714.2	120.6	383,709.30	861,817.49	32° 3' 2.435 N	103° 17' 56.193 W
- plan misses target center by 0.6usft at 22540.3usft MD (11851.0 TVD, -10714.2 N, 120.1 E)									
- Point									
GB117 EOC	0.00	0.00	11,851.0	-499.6	7.0	393,923.90	861,703.88	32° 4' 43.516 N	103° 17' 56.375 W
- plan hits target center									
- Point									

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Ameredev Operating, LLC

Planning Report

Database:	EDM5000	**Local Co-ordinate Reference:**	Well Golden Bell 117H
Company:	Ameredev Operating, LLC.	**TVD Reference:**	KB @ 3037.0usft
Project:	NAN/GB	**MD Reference:**	KB @ 3037.0usft
Site:	NAN/GB #8N	**North Reference:**	Grid
Well:	Golden Bell 117H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
11,364.3	11,350.0	119.9	-257.1	GB117 KOP
12,091.8	11,839.4	-275.5	-48.6	GB117 into NMNM137807
14,665.2	11,851.0	-2,839.5	32.9	GB117 into NMNM137471
15,985.3	11,851.0	-4,159.6	47.5	GB117 into NMNM18644
17,305.4	11,851.0	-5,479.6	62.1	GB117 into NMNM137472

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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American Resource Development LLC

Pressure Control Plan

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

Rig Skid Procedure

- Drilling rig will drill to Intermediate setting depth per drilling program and run 7-5/8” casing.
- We will cement Intermediate casing to surface as per program, after we bump the plug on final stage of cement we will install well head packing on MB4 Multi bowl and test.
- WOC 4 hrs, break down BOP and Install Dry Hole Cap and install pressure gauges.
    - Pressures of all postponed wells on pad will be noted on daily drilling report.
- Skid rig to drill next well programmed on drilling pad.
- Once all wells to be drilled on drilling pad have reached Intermediate casing depth, operations will begin drilling production section of the wells.

- Drilling rig will drill to Production setting depth per drilling program and run 5-1/2” casing.
- We will cement Production casing to as per program, after we bump the plug on final stage of cement we will WOC 8hrs or till 500 psi compressive have been reached, we will remove BOP and install casing slips and tubing head and test to 70% burst, we will install pressure gauges.
    - Pressures of all postponed wells on pad will be noted on daily drilling report.
- Skid rig to drill next well programmed on drilling pad.

- Continue with program until all wells on schedule have been completed.

Ameredev Drilling Plan: 3 String with 4 String Contingency

- Contingency plan if losses exceed 50% in the 12-1/4" intermediate interval:
  - Utilize an MB4 wellhead that will enable the conversion of the planned 3 string design to a 4 string design. (Schematic attached.)
  - Displace well with fresh water and drill or condition to run 10-3/4", 45.5# L-80HC SCC (additional fourth string) casing string approximately 125' into the Lamar Limestone, utilizing a DV tool w/ ACP at the Tansill to isolate Capitan Reef and cement to surface.
  - 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.

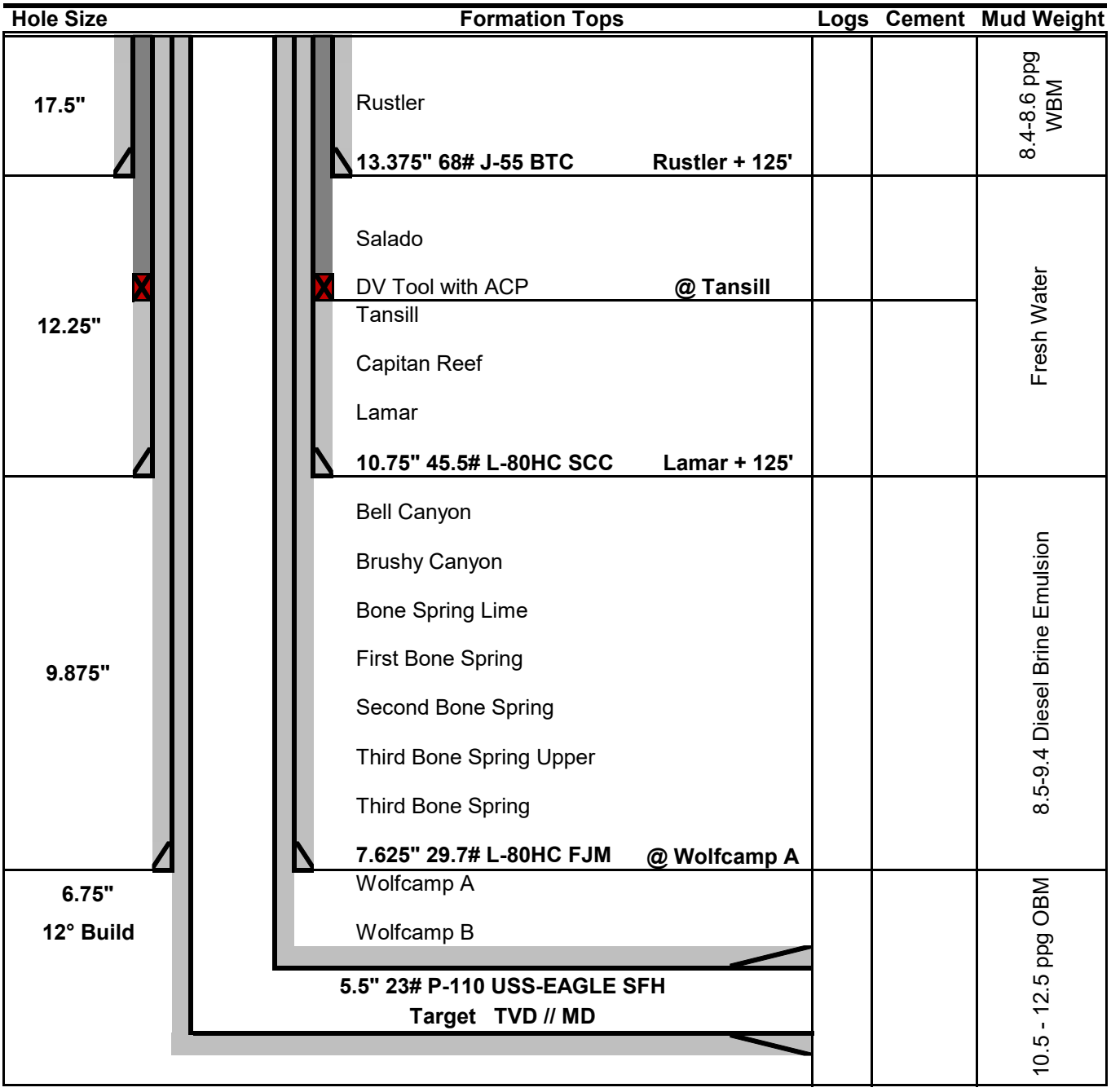
- 7-5/8" Casing will be run as planned.
  - Drill remaining hole section to base of Third Bone Spring.
  - Run 7-5/8" 29.7# L-80HC FJM casing.

- Variance Request
  - Run 5-1/2" casing to surface in 6-3/4" open hole on production casing.
  - Cement will be programmed to surface for tie back isolation.

AMEREDEV
Ameredev II, LLC

Contingency Wellbore Schematic

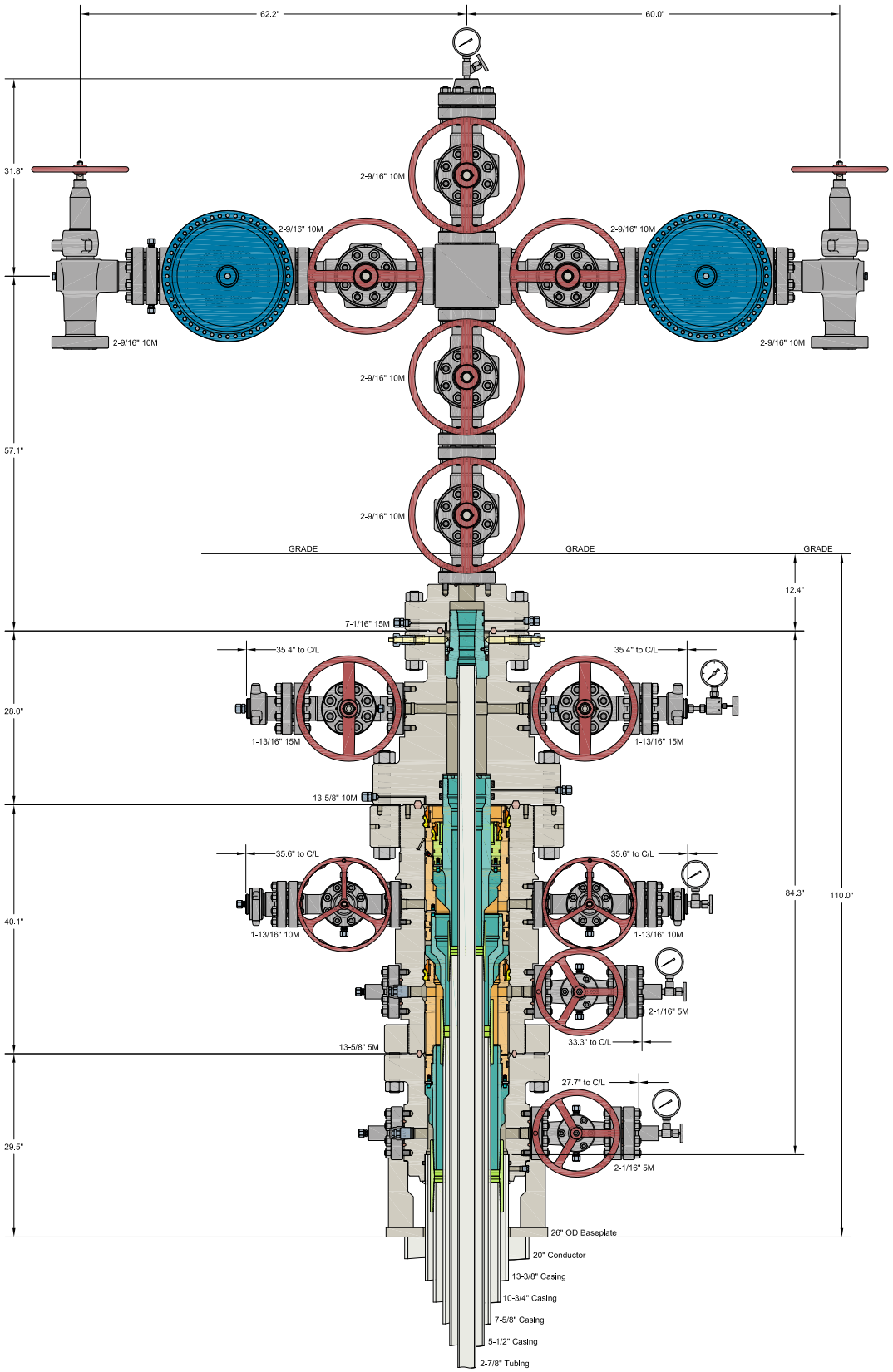
Well:	Wellname	**Co. Well ID:**	xxxxxx
SHL:	SHL	**AFE No.:**	xxxx-xxx
BHL:	BHL	**API No.:**	xxxxxxxxxx
	Lea, NM	**GL:**	xxxx
Wellhead:	A - 13-5/8" 10M x 13-5/8" SOW	**Field:**	Delaware
	B - 13-5/8" 10M x 13-5/8" 10M	**Objective:**	Target Zone
	C - 13-5/8" 10M x 13-5/8" 10M	**TVD:**	xxxxx
	Tubing Spool - 7-1/16" 15M x 13-3/8" 10M	**MD:**	xxxxx
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



Example Contingency Casing Design and Safety Factor Check

Casing Specifications						
Segment	**Hole ID**	**Depth**	**OD**	**Weight**	**Grade**	**Coupling**
Surface	17.5	1,555'	13.375	68	J-55	BTC
Int #1	12.25	5,248'	10.75	45.5	HCL-80	SCC
Int #2	9.875	11,045'	7.625	29.7	HCL-80	FJM
Prod Segment A	6.75	11,045'	5.5	23	P-110	SFH
Prod Segment B	6.75	21,533'	5.5	23	P-110	SFH

Check Surface Casing				
OD Cplg	Body	Joint	Collapse	Burst
inches	*1000 lbs*	*1000 lbs*	*psi*	*psi*
14.38	1,069	1,140	1,950	3,450
Safety Factors				
1.56	10.11	10.78	2.41	1.10
Check Int #1 Casing				
OD Cplg	Body	Joint	Collapse	Burst
inches	*1000 lbs*	*1000 lbs*	*psi*	*psi*
11.25	1040	1063	3130	5210
Safety Factors				
0.50	4.36	4.45	1.00	0.86
Check Int #2 Casing				
OD Cplg	Body	Joint	Collapse	Burst
inches	*1000 lbs*	*1000 lbs*	*psi*	*psi*
7.625	940	558	6700	9460
Safety Factors				
0.56	2.87	1.98	1.11	1.25
Check Prod Casing, Segment A				
OD Cplg	Body	Joint	Collapse	Burst
inches	*1000 lbs*	*1000 lbs*	*psi*	*psi*
5.777	728	655	12780	14360
Safety Factors				
0.49	3.13	2.82	1.78	1.90
Check Prod Casing, Segment B				
OD Cplg	Body	Joint	Collapse	Burst
inches	*1000 lbs*	*1000 lbs*	*psi*	*psi*
5.777	728	655	12780	14360
Safety Factors				
0.49	63.53	57.16	1.69	1.90



ALL DIMENSIONS APPROXIMATE

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

Example Contingency Cement Calculations

Stage 1 Lead

Hole Size	Casing Size	Depth	Sacks	Yield	Density
17.5	13.375	1555	1,074	1.76	13.5

Bbl/Sk	0.31372549
bbls	337.0034275
Stage Tool Depth	N/A
Top MD of Segment	0
Bottom MD of Segment	1169
Cement Type	C
Additves	Bentonite, Accelerator, Kolseal, Defoamer, Celloflake
Quantity (sks)	1,074
Yield (cu ft/sk)	1.76
Density (lbs/gal)	13.5
Volume (cu ft)	1,890.59
Percent Excess	100%
Column Height	2,723.88

Target % 100% OK

Target TOC 0

Calc TOC	-1555	bbl	25% Excess	100%
calc vol	0.12372195	192.3876318	240.4845397	384.7752635

Stage 1 Tail

Hole Size	Casing Size	Depth	Sacks	Yield	Density
17.5	13.375	1555	200	1.34	14.8

Bbl/Sk	0.23885918
bbls	47.77183601
Top MD of Segment	1169
Bottom MD of Segment	1555
Cement Type	C
Additives	
Quantity (sks)	200
Yield (cu ft/sk)	1.34
Density (lbs/gal)	14.8
Volume (cu ft)	268
Percent Excess	100%
Column Height	386.1225606

Example Contingency Cement Calculations (Continued)

Stage 1 Lead

Hole Size	Casing Size	Depth	Sacks	Yield	Density
12.25	10.75	5323	353	3.5	9

Bbl/Sk	0.623885918
bbls	220.1825428
Stage Tool Depth	N/A
Top MD of Segment	0
Bottom MD of Segment	3908
Cement Type	C
Additves	Bentonite,Salt,Kolseal,Defoamer,Celloclake
Quantity (sks)	353
Yield (cu ft/sk)	3.5
Density (lbs/gal)	9
Volume (cu ft)	1,235.22
Percent Excess	50%
Column Height	6,569.74

Target % 50% OK

Target TOC 0

Calc TOC	-2661.5	bbl	25% Excess	50%
calc vol	0.033514669	178.3985817	222.9982271	267.5978725

Stage 1 Tail

Hole Size	Casing Size	Depth	Sacks	Yield	Density
12.25	10.75	5323	200	1.33	14.8

Bbl/Sk	0.237076649
bbls	47.41532977
Top MD of Segment	3908
Bottom MD of Segment	5323
Cement Type	C
Additives	
Quantity (sks)	200
Yield (cu ft/sk)	1.33
Density (lbs/gal)	14.8
Volume (cu ft)	266
Percent Excess	25%
Column Height	1414.763492

Example Contingency Cement Calculations (Continued)

Stage 1 Lead

Hole Size	Casing Size	Depth	Sacks	Yield	Density
9.875	7.625	10674	492	2.47	9

Bbl/Sk	0.440285205
bbls	216.475221
Stage Tool Depth	N/A
Top MD of Segment	0
Bottom MD of Segment	6759
Cement Type	H
Additves	Bentonite,Retarder,Kolseal,Defoamer,Celloflake, Anti-Settling
Expansion Additive	
Quantity (sks)	492
Yield (cu ft/sk)	2.47
Density (lbs/gal)	9
Volume (cu ft)	1,214.43
Percent Excess	50%
Column Height	12,096.47

Target % 50% OK

Target TOC 0

Calc TOC	-5337	bbl	25% Excess	50%
calc vol	0.01789574	191.0191313	238.7739141	286.5286969

Stage 1 Tail

Hole Size	Casing Size	Depth	Sacks	Yield	Density
8.75	7.625	10674	300	1.31	14.2

Bbl/Sk	0.233511586
bbls	70.05347594
Top MD of Segment	6759
Bottom MD of Segment	10674
Cement Type	H
Additves	Salt,Bentonite,Retarder,Dispersant,Fluid Loss
Quantity (sks)	300
Yield (cu ft/sk)	1.31
Density (lbs/gal)	14.2
Volume (cu ft)	393
Percent Excess	25%
Column Height	3914.533571

Example Contingency Cement Calculations (Continued)

Stage 1 Lead

Hole Size	Casing Size	Depth	Sacks	Yield	Density
6.75	5.5	21533	2,011	1.34	14.2

Bbl/Sk	0.23885918		
bbls	480.4605535		
Stage Tool Depth	N/A		
Top MD of Segment	0		
Bottom MD of Segment	21533		
Cement Type	H		
Additves	Salt, Bentonite, Fluid Loss, Dispersant, Retarder, Defoamer		
Quantity (sks)	2,011		
Yield (cu ft/sk)	1.34		
Density (lbs/gal)	14.2		
Volume (cu ft)	2,695.38		
Percent Excess	50%	Target %	50% OK
Column Height	32,299.50		

Target TOC	0			
Calc TOC	-10766.5	bbl	25% Excess	50%
calc vol	0.01487517	320.3070357	400.3837946	480.4605535

Stage 1 Tail

Hole Size	Casing Size	Depth	Sacks	Yield	Density
6.75	5.5	21533	0	0	0

Bbl/Sk	0
bbls	0
Top MD of Segment	21533
Bottom MD of Segment	21533
Cement Type	C
Additives	
Quantity (sks)	0
Yield (cu ft/sk)	0
Density (lbs/gal)	0
Volume (cu ft)	0
Percent Excess	
Column Height	0

HALLIBURTON

Permian Basin, Ft Stockton

Lab Results- Lead

Job Information

Request/Slurry	2488456/2	**Rig Name**		**Date**	18/DEC/2018
Submitted By	Dillon Briers	**Job Type**	Intermediate Casing	**Bulk Plant**	
Customer	Ameredev	**Location**	Lea	**Well**	

Well Information

Casing/Liner Size	7.625 in	**Depth MD**	5013 ft	**BHST**	165°F
Hole Size	8.75 in	**Depth TVD**	5013 ft	**BHCT**	130°F

Cement Information - Lead Design

Conc	UOM	Cement/Additive
100	% BWOC	NeoCem
14.68	gal/sack	Heated Fresh Water

Cement Properties

Slurry Density	9	lbm/gal
Slurry Yield	3.5	ft3/sack
Water Requirement	14.68	gal/sack

Pilot Test Results Request ID 2488456/1

API Rheology, Request Test ID:35665340

Temp (degF)	300	200	100	60	30	6	3	Cond Time (min)
80 (up)	**82**	**67**	**49**	**42**	**39**	**36**	**28**	**0**
80 (down)	**82**	**59**	**35**	**26**	**18**	**10**	**9**	**0**
80 (avg.)	**82**	**63**	**42**	**34**	**29**	**23**	**19**	**0**

PV (cP) & YP (lbs/100ft2): 61.73 22.32 (Least-squares method)

PV (cP) & YP (lbs/100ft2): 60 22 (Traditional method (300 & 100 rpm based))

Generalized Herschel-Bulkley 4: YP(lbf/100ft2)=20.33 MuInf(cP)=52.39 m=0.81 n=0.81

API Rheology, Request Test ID:35665341

Temp (degF)	300	200	100	60	30	6	3	Cond Time (min)	Cond Temp (degF)
134 (up)	**63**	**47**	**29**	**21**	**15**	**7**	**6**	**30**	**134**
134 (down)	**63**	**46**	**29**	**21**	**14**	**7**	**4**	**30**	**134**
134 (avg.)	**63**	**47**	**29**	**21**	**15**	**7**	**5**	**30**	**134**

PV (cP) & YP (lbs/100ft2): 57.12 7.98 (Least-squares method)

PV (cP) & YP (lbs/100ft2): 51 12 (Traditional method (300 & 100 rpm based))

Generalized Herschel-Bulkley 4: YP(lbf/100ft2)=2.26 MuInf(cP)=30.64 m=0.41 n=0.41

API Fluid Loss, Request Test ID:35665342

Test Temp (degF)	Test Pressure (psi)	Test Time (min)	Meas. Vol.	Calculated FL (<30 min)	Conditioning time (min)	Conditioning Temp (degF)
134	**1000**	**9.12**	**52**	**189**	**30**	**134**

Free Fluid API 10B-2, Request Test ID:35665343

Con. Temp (degF)	Cond. Time (min)	Static T. (F)	Static time (min)	Incl. (deg)	% Fluid
134	30	80	120	0	0

Pilot Test Results Request ID 2504116/5

Thickening Time - ON-OFF-ON, Request Test ID:35852392

Test Temp (degF)	Pressure (psi)	Reached in (min)	70 Bc (hh:min)	Start Bc
126	5800	40	6:18	16

UCA Comp. Strength, Request Test ID:35852394

End Temp (degF)	Pressure (psi)	50 psi (hh:mm)	500 psi (hh:mm)	12 hr CS (psi)	24 hr CS (psi)	48 hr CS (psi)
159	4000	8:55	12:23	456	749	681

Requested Exceptions

- Variance is requested to connect the BOP choke outlet to the choke manifold using a co-flex line (instead of using a 4" OD steel line) with a 10,000 psi working pressure that has been tested to 15,000 psi and is built to API Spec 16C. Once the flex line is installed it will be tied down with safety clamps.

- Variance is requested to allow Option of rig not capable of reaching TD presetting Surface, Drilling Plan will be same using Fresh Water fluid system.

- Variance is requested to wave any centralizer requirements on the 5-1/2" casing. Ameredev will utilize cement expansion additives in the cement slurry to maximize cement bond and zonal isolation.

- Variance is requested to wave any centralizer requirements on the 9-5/8" casing. Ameredev will utilize cement expansion additives in the cement slurry to maximize cement bond and zonal isolation.

- Variance is requested to allow Temporary Postponement of Operations on well to skid to adjacent well if multiple wells on drilling pad are drilled.

- Variance is requested to allow use of Multi-Bowl Well Head System.

- Variance is requested to allow adjustment of Casing Design Safety Factor on conditions that Ameredev keeps minimum of 1/3 casing capacity filled with OMW drilling fluids.

- Variance is requested to allow 5M Annular Preventer on 10M BOPE System to drill Production Interval. (Supporting Documentation Attached)

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

SUPO Data Report
12/04/2020

APD ID: 10400049502
Submission Date: 10/16/2019
Operator Name: AMEREDEV OPERATING LLC
Well Name: GOLDEN BELL FED COM 26 36 06
Well Number: 117H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

GOLDEN_BELL_FED_COM_26_36_06_117H___WELL_PAD_ACCESS_20191016101010.pdf

Existing Road Purpose: ACCESS

Row(s) Exist? NO

ROW ID(s)

ID: NM-138148

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

GOLDEN_BELL_FED_COM_26_36_06_117H___1_MI_RADIUS_WELLS_20191016101035.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: A 4 poly flowline (700 psi maximum) will be buried and run approximately 1,025 from the Golden Bell Fed Com 26 36 06 117H to the existing Nandina/Golden Bell CTB northwest of the well pad. Should any type of production facilities be located on the well pad itself, they will be strategically placed to allow for maximum interim reclamation, re-contouring, and revegetation of the well location.

Production Facilities map:

NANDINA_GOLDEN_BELL_CTB_PLAT_20191016101110.pdf

NAN_GB_FLOWLINE_8N_20200908133944.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: GW WELL

Water source use type: STIMULATION

SURFACE CASING

DUST CONTROL

INTERMEDIATE/PRODUCTION CASING

Source latitude:

Source longitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Water source transport method: TRUCKING

PIPELINE

Source land ownership: PRIVATE

Source transportation land ownership: FEDERAL

Water source volume (barrels): 20000

Source volume (acre-feet): 2.577862

Source volume (gal): 840000

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

Water source and transportation map:

GOLDEN_BELL_FED_COM_26_36_06_117H___WATER_MAP_20191016101148.pdf

GOLDEN_BELL_FED_COM_26_36_06_117H___WATER_WELLS_LIST_20191016101150.pdf

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

New water well? N

New Water Well Info

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

Well target aquifer:

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

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

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

Construction Materials source location attachment:

GOLDEN_BELL_FED_COM_26_36_06_117H___CALICHE_MAP_20191016101215.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

Section 7 - Methods for Handling Waste

Waste type: DRILLING

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

Amount of waste: 2000 barrels

Waste disposal frequency : Daily

Safe containment description: Steel tanks

Safe containmant attachment:

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

Disposal type description:

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

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

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

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? Y

Description of cuttings location Steel tanks on pad

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

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

WCuttings area liner

Cuttings area liner specifications and installation description

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

GOLDEN_BELL_FED_COM_26_36_06_117H___WELLSITE_20191016101353.pdf

BO_NAN_GB_8N_PAD_SITE_S_20191016101416.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** NAN/GB

Multiple Well Pad Number: 8N

Recontouring attachment:

GOLDEN_BELL_FED_COM_26_36_06_117H___WELLSITE_20200908134056.pdf

Drainage/Erosion control construction: Crowned and ditched

Drainage/Erosion control reclamation: Harrowed on the contour

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

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

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

Pipeline proposed disturbance (acres): 0.71 **Pipeline interim reclamation (acres):** 0 **Pipeline long term disturbance (acres):** 0.71

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

Total proposed disturbance: 5.3 **Total interim reclamation:** 0.79 **Total long term disturbance:** 4.51

Disturbance Comments:

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

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

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

Soil treatment: None

Existing Vegetation at the well pad: Sparse low brush and intermittent grasses

Existing Vegetation at the well pad attachment:

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

Existing Vegetation Community at the road attachment:

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

Existing Vegetation Community at the pipeline attachment:

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

Existing Vegetation Community at other disturbances attachment:

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed Summary	
Seed Type	**Pounds/Acre**

Total pounds/Acre:

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: CHRISTIE **Last Name:** HANNA

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

Phone: (737)300-4723 **Email:** channa@ameredev.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: To BLM standards

Weed treatment plan attachment:

Monitoring plan description: To BLM standards

Monitoring plan attachment:

Success standards: To BLM satisfaction

Pit closure description: No pit

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: PIPELINE

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Section 12 - Other Information

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

ROW Type(s): 288100 ROW – O&G Pipeline,289001 ROW- O&G Well Pad

ROW Applications

SUPO Additional Information:

Use a previously conducted onsite? Y

Previous Onsite information: An on-site meeting for Ameredevs Golden Bell Fed Com 26 36 06 117H was held on 5/23/18. Attendees included Jeff Robertson (BLM), Shane McNeely (Ameredev), and Ged Adams (Topographic). Ameredev made a donation with the MOU fund in lieu of an archaeology report. (NOS #: 10400041553)

Other SUPO Attachment

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

GOLDEN_BELL_FED_COM_26_36_06_117H___SURFACE_USE_PLAN_20191016101714.pdf

Ameredev Operating, LLC
Golden Bell Fed Com 26 36 06 117H
Section 6, Township 26S, Range 36E
Lea County, New Mexico

API	WELL NAME	STATUS	TD
30025261530000	SPOTTED TAIL FED #2	AB-LOC	
30025098400000	SAND HILLS UNIT #9	D&A-O	3386
30025450340000	RED BUD 25 36 32 STATE COM #087H	PERMIT	
30025450360000	RED BUD 25 36 32 STATE COM #107H	PERMIT	
30025450330000	RED BUD 25 36 32 STATE COM #077H	PERMIT	
30025450350000	RED BUD 25 36 32 STATE COM #097H	PERMIT	
30025450370000	RED BUD 25 36 32 STATE COM #117H	PERMIT	
30025450380000	RED BUD 25 36 32 STATE COM #127H	PERMIT	
30025268920000	SITTING BULL #2	D&A	3746
30025452430000	NANDINA 25 36 31 FEDERAL COM #105H	PERMIT	
30025452460000	NANDINA 25 36 31 FEDERAL COM #115H	PERMIT	
30025453100000	GOLDEN BELL 26 36 06 FED COM #105H	PERMIT	
30025453360000	GOLDEN BELL 26 36 06 FED COM #125H	PERMIT	
30025453360100	GOLDEN BELL 26 36 06 FED COM #125H	PERMIT	
30025444710100	REDBUD 25-36-32 STATE COM #115H	CANCEL	
30025260100000	SPOTTED TAIL FED #1	OIL	3336
30025260170000	SITTING BULL #1	OIL	3379
30025260090000	STANDING BEAR #1	ABD-OW	3280
30025268760000	STANDING BEAR FED #2	ABD-OW	3311
30025260270000	SITTING BULL #1	OIL	3368
30025259400000	BUSSELL FEDERAL #1	AB-LOC	
30025444700000	RED BUD 25-36-32 STATE COM #105H	OIL	21597
30025444710000	REDBUD 25-36-32 STATE COM #115H	OIL	21668
30025453110000	GOLDEN BELL 26 36 06 FED COM #115H	OIL	22612
30025452440000	NANDINA 25 36 31 FED COM #125H	TREATD	22635

Exhibit 2a – One Mile Radius Existing Wells List

Ameredev Operating, LLC
Golden Bell Fed Com 26 36 06 117H
Section 6, Township 26S, Range 36E
Lea County, New Mexico

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

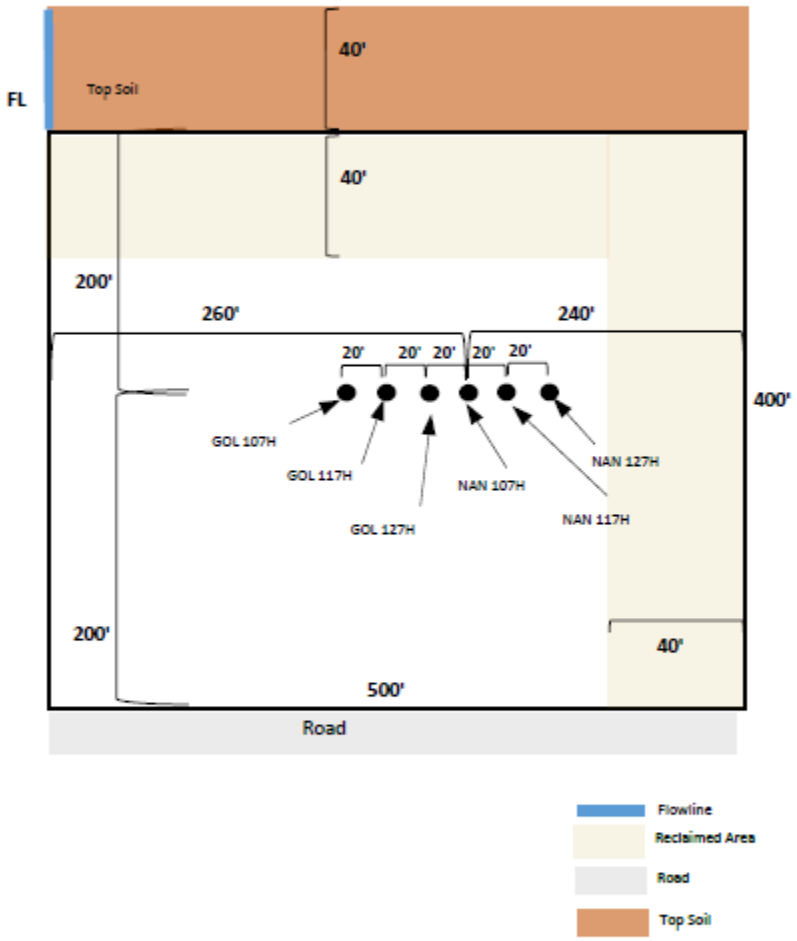
A. The multiple well pad will be located on Section 31, and will measure 400'x500'. Should any type of production facilities be located on the well pad, they will be strategically placed to allow for maximum interim reclamation, re-contouring, and revegetation of the well location.

B. Production from the proposed well will be transported to an existing production facility named Nandina/Golden Bell CTB, northwest of the well pad, via a buried 4" poly flowline that runs approximately 1,025'.

C. All permanent (lasting more than six months) above ground structures including but not limited to pump jacks, storage tanks, barrels, pipeline risers, meter housing, etc., that are not subject to safety requirements will be painted a non-reflective paint color, Shale Green, from the BLM Standard Environmental Colors chart, unless another color is required in the APD Conditions of Approval.

D. If any plans change regarding the production facility or other infrastructure (pipeline, electrical lines, etc.), Ameredev will submit a sundry notice or right-of-way (if applicable) prior to installation or construction.

Ameredev Operating, LLC
Golden Bell Fed Com 26 36 06 117H
Section 6, Township 26S, Range 36E
Lea County, New Mexico



Nandina Fed Com 25 36 31 107H SHL: 25S 36E 200' FSL 990' FWL
Nandina Fed Com 25 36 31 117H SHL: 25S 36E 200' FSL 970' FWL
Nandina Fed Com 25 36 31 127H SHL: 25S 36E 200' FSL 950' FWL
Golden Bell Fed Com 26 36 06 107H SHL: 26S 36E 200' FSL 1050' FWL
Golden Bell Fed Com 26 36 06 117H SHL: 26S 36E 200' FSL 1030' FWL
Golden Bell Fed Com 26 36 06 127H SHL: 26S 36E 200' FSL 1010' FWL

Exhibit 3 – Well Site Diagram

Ameredev Operating, LLC
Golden Bell Fed Com 26 36 06 117H
Section 6, Township 26S, Range 36E
Lea County, New Mexico

Section 5 - Location and Types of Water Supply

A. This location will be drilled using a combination of water and mud systems (outlined in the Drilling Program). The water will be obtained from preexisting water wells, by running a pump directly to the drilling rig. See *Exhibit 4 - Water Wells*, for a list of available water wells. In cases where a polyline is used to transport water for drilling or completion purposes, the existing and proposed roads into location will be utilized.

Permit #	Well Name	Location (Lat/Lon)
CP 1049 POD 2	Bennett	32°04'14.32" N, 103°12'32.30" W
CP 1378	S. Eppenour	32°05'40.62" N, 103°13' 35.26" W
CP 1285	Sec. 5	32°03'56.50" N, 103°17'37.04" W
CP 857	Capped	32°04'39.70" N, 103°16'51.13" W
C 2287	#1	32°03'59.0" N, 103°33'16.8" W
C 2286	#2	32°03'59.2" N, 103°33'15.2" W
C 2290	#3	32°04'1.0" N, 103°33' 12.6" W
C 2285	#4	32°04'3.7" N, 103°33'9.7" W
C 2288	#5	32°04'0.5" N, 103°33'8.4" W
C 2294	Garden	32°03'3.2" N, 103°32'38.1" W
C 2293	House	32°03'2.3" N, 103°32'36.8" W
J-11-S-3	Farm Well #2	32°03'08.4" N, 103°16'35.2" W
J-11-S-2	Farm Well #3	32°03'11.5" N, 103°17'02.0" W
J-11-S	Farm Well #4	32°03'24.6" N, 103°17'02.1" W
CP 1170 POD 1	CB 1	32°03'57.2" N, 103°18'45.3" W
CP 1170 POD 5		32°07'17.1" N, 103°17'48.0" W
CP 1263 POD 5	CB 2	32°03'56.27" N, 103°18'27.4" W
CP 1263 POD 3	CB 3	32°03'54.90" N, 103°18'16.74" W
CP 1351 POD 1	CB 4	32°03'57.16" N, 103°17'45.13" W
CP 1351 POD 2	CB 5	32°03'30.70" N, 103°17'45.70" W
J 26	Ryan	32°01'20.41" N, 103°15'49.46" W
J 3		32°02'41.5" N, 103°18'55.8" W

Exhibit 4 – Water Wells

Ameredev Operating, LLC
Golden Bell Fed Com 26 36 06 117H
Section 6, Township 26S, Range 36E
Lea County, New Mexico

Section 6 – Construction/Construction Materials

A. Caliche will be obtained from the caliche pit located at Lat: 32° 6'28.78"N, Long: 103°16'58.77"W, or the caliche pit at Lat: 32° 6'33.14"N, Long: 103°18'44.16"W, or the caliche pit at Lat: 32° 3'8.30"N, Long: 103°13'57.00"W.

B. Caliche utilized for the drilling pad will be obtained either from the locations listed above, an existing approved mineral pit, or by benching into a hill, which will allow the pad to be level with existing caliche from the cut, or extracted by "flipping" the well location. A mineral material permit will be obtained from the BLM prior to excavating any caliche on Federal Lands. Amount will vary for each pad. The procedure for "flipping" a well location is as follows:

1. An adequate amount of topsoil/root zone (usually top 6 inches of soil) will be stripped from the proposed well location and stockpiled along the side of the well location as depicted on the *Exhibit 3 - Well Site Diagram*.
2. An area will be used within the proposed well site dimensions to excavate caliche.
3. Subsoil will be removed and stockpiled within the surveyed well pad dimensions.
4. Once caliche/surfacing mineral is found, the mineral material will be excavated and stock piled within the approved drilling pad dimensions.
5. Subsoil will then be pushed back in the excavated hole and caliche will be spread accordingly across the entire well pad and road (if available).
6. Neither caliche, nor subsoil will be stockpiled outside of the well pad dimensions. Topsoil will be stockpiled along the edge of the pad as depicted in *Exhibit 3 – Well Site Diagram.*
7. In the event that no caliche is found onsite, caliche will be hauled in from a BLM approved caliche pit or other established mineral pit. A BLM mineral material permit will be acquired prior to obtaining any mineral material from BLM pits or federal land.

Section 7 - Methods of Handling Waste

A. Drill cuttings, mud, salts and other chemicals will be properly disposed of into steel tanks on site and hauled to a State approved commercial disposal facility.

B. Garbage and trash produced during drilling and completion operations will be collected in a portable metal trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.

C. Human waste and grey water will be properly contained and disposed of properly at a state approved disposal facility.

D. After drilling and completion operations, trash, chemicals, salts, frac sand and other waste material will be removed and disposed of properly at a state approved disposal facility.

Ameredev Operating, LLC
Golden Bell Fed Com 26 36 06 117H
Section 6, Township 26S, Range 36E
Lea County, New Mexico

Section 8 - Ancillary Facilities

A. No ancillary facilities will be needed for the proposed project.

Section 9 - Well Site Layout

A. See *Exhibit 3 - Well Site Diagram.* The following information is presented:
1. Reasonable scale
2. Well pad dimensions/orientation
3. Proposed access road
4. Topsoil stockpile

B. The proposed drilling pad was staked and surveyed by a professional surveyor. The attached survey plat of the well site depicts the drilling pad layout as staked.

C. Topsoil salvaging
1. Grass, forbs, and small woody vegetation such as mesquite will be excavated as the topsoil is removed. Large woody vegetation will be stripped and stored separately and re-spread evenly on the site following topsoil re-spreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

Section 10 - Plans for Final Surface Reclamation

Reclamation Objectives

A. The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil, to control erosion, and to minimize habitat and forage loss, visual impact, and weed infestation during the life of the well or facilities.

B. The long-term objective of final reclamation is to return the land to a condition similar to what existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity.

C. The BLM will be notified at least 3 days prior to the commencement of any reclamation procedures.

D. If circumstances allow, interim reclamation and/or final reclamation actions will be completed no later than 6 months from when the final well on location has been completed or plugged. Ameredev will gain written permission from the BLM if more time is needed.

E. Interim reclamation will be performed on the well site after the well is drilled and completed. *Exhibit 3 – Well Site Diagram* depicts the location and dimension of the planned interim reclamation for the well site.

Interim Reclamation Procedures (if performed)

A. Within 30 days of well completion, the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not required for production.

B. In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.

C. The areas planned for interim reclamation will then be contoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 Ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be re-contoured to the above ratios during interim reclamation.

D. Topsoil will be evenly re-spread and aggressively revegetated over the entire disturbed area not needed for all-weather operations, including cuts and fills. To seed the area, the proper BLM mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting, in order to break the soil crust and create seed germination micro-sites.

E. Proper erosion control methods will be used on the area to control erosion, runoff, and siltation of the surrounding area.

F. The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

Final Reclamation Procedures (well pad, buried pipelines, etc.)

A. Prior to final reclamation procedures, the well pad, road, and surrounding area will be cleared of material, trash, and equipment.

B. All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.

C. All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be re-contoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to re-contouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

D. After all the disturbed areas have been properly prepared, the areas will be seeded with the proper BLM seed mixture, free of noxious weeds. Final seedbed preparation will consist of

contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting, in order to break the soil crust and create seed germination micro-sites.

E. Proper erosion control methods will be used on the area to control erosion, runoff, and siltation of the surrounding area.

F. All unused equipment and structures including pipelines, electric line poles, tanks, etc. that serviced the well will be removed.

G. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not re-disturbed, and that erosion is controlled.

Section 11 - Surface Ownership

A. BLM has surface ownership for proposed project area.

Section 12 - Other Information

A. There are no dwellings within 1 mile of this location.

B. An on-site meeting for Ameredev's Golden Bell Fed Com 26 36 06 117H well was held on May 23, 2018 (NOS ID #10400041553). Attendees included Jeff Robertson (BLM), Shane McNeely (Ameredev), and Ged Adams (Topographic).

C. The well pad described in this document - Nandina/Golden Bell (NAN/GB #8N) - will contain 6 wells that produce into an existing central tank battery (CTB) located northeast of the well pad. The wells share a common pad access road, pipeline easement, and electrical corridor. The six flowlines from the individual wells will share a common corridor that will terminate into the CTB. The wells that share the pad are:

- Nandina Fed Com 25 36 31 107H
- Nandina Fed Com 25 36 31 117H
- Nandina Fed Com 25 36 31 127H
- Golden Bell Fed Com 26 36 06 107H
- Golden Bell Fed Com 26 36 06 117H
- Golden Bell Fed Com 26 36 06 127H

Ameredev field representative:

Zac Boyd, Operations Supervisor

Cell: (432) 385-6996

Email: zboyd@ameredev.com

Ameredev office contact:

Christie Hanna, Regulatory Coordinator

Direct: (737) 300-4723

Email: channa@ameredev.com

Ameredev Operating, LLC Address: 5707 Southwest Parkway Building 1, Suite 275 Austin, Texas 78735

AFMSS

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

PWD Data Report

12/04/2020

APD ID: 10400049502 **Submission Date:** 10/16/2019

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

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

Section 1 - General

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

Section 2 - Lined 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: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

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: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

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):**

Other PWD discharge volume (bbl/day):

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06 **Well Number:** 117H

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

12/04/2020

APD ID: 10400049502

Submission Date: 10/16/2019

Operator Name: AMEREDEV OPERATING LLC

Well Name: GOLDEN BELL FED COM 26 36 06

Well Number: 117H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data reflects the most recent changes

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:

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

FORM C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ **AMENDED REPORT**

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1]API Number	[2]Pool Code	[3]Pool Name
30-025-48194	98234	WC-025 G-09 S263619C; WOLFCAMP

[4]Property Code	[5]Property Name	[6]Well Number
322777	GOLDEN BELL FED COM 26 36 06	117H

[7]OGRID No.	[8]Operator Name	[9]Elevation
372224	AMEREDEV OPERATING, LLC.	3010'

[10]Surface Location

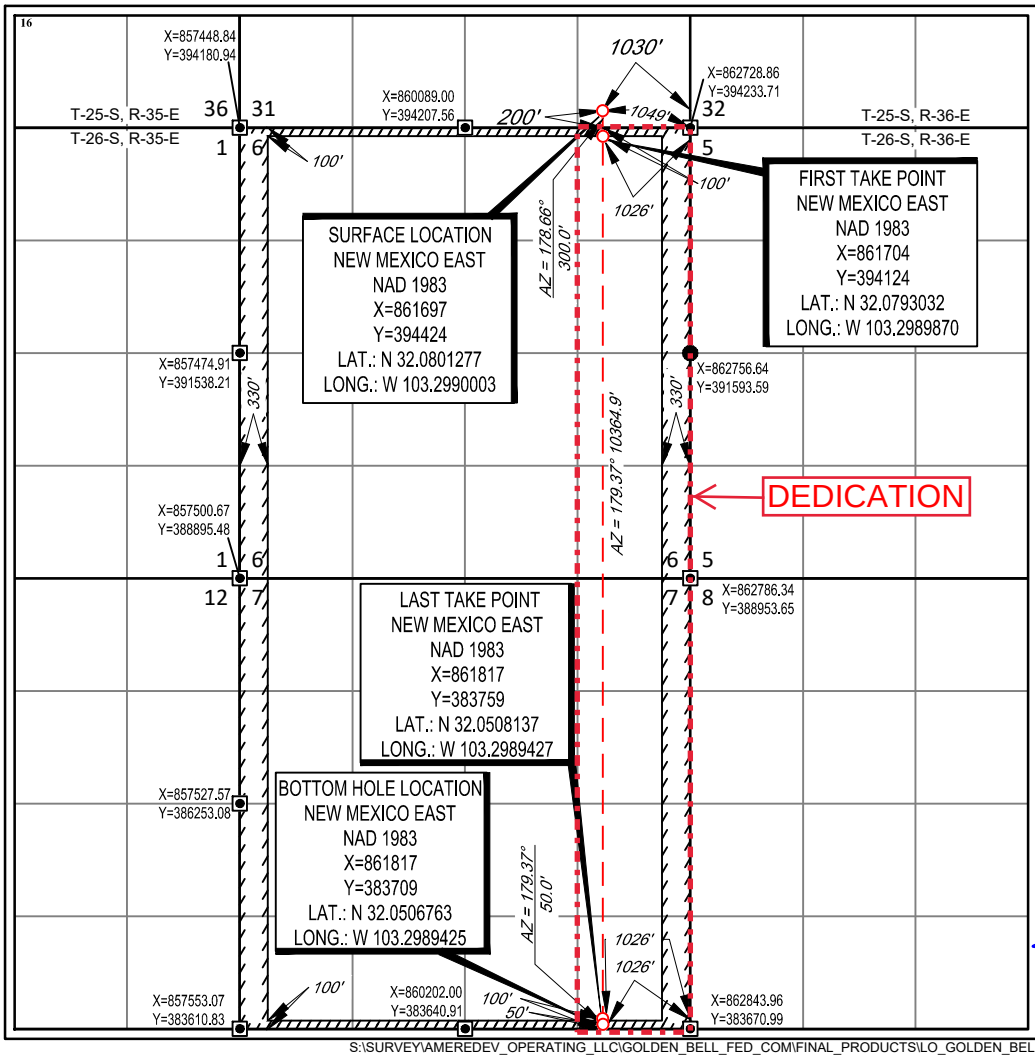
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	31	25-S	36-E	-	200'	SOUTH	1030'	EAST	LEA

[11]Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	7	26-S	36-E	-	50'	SOUTH	1026'	EAST	LEA

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

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



[17]OPERATOR CERTIFICATION

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

Signature 6/20/19 Date

Floyd Hammond
Printed Name

fhammond@ameredev.com
E-mail Address

[18]SURVEYOR CERTIFICATION

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

05/09/2018
Date of Survey
Signature and Seal of Professional Surveyor

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

Certificate Number

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Original to Appropriate District Office

GAS CAPTURE PLAN

Date: 9/8/2020

☒ Original Operator & OGRID No.: Ameredev Operating LLC (372224)
☐ Amended - Reason for Amendment:_____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	SHL (ULSTR)	SHL Footages	Expected MCF/D	Flared or Vented	Comments
Golden Bell Fed Com 26 36 06 117H	30-025-**30-025-48194**	P-31-25S-36E	200' FSL & 1030' FEL	1000	<30 days	Flare until well clean, then connect

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete. Gas produced from the above wells is not dedicated to a gas purchaser. The production facility will be (or is currently) connected to multiple low pressure gathering systems located in Lea County, New Mexico, which are operated by DCP Operating Co., ETC Texas Pipeline, and Lucid Energy Delaware (collectively "Gas Transporters"). Ameredev provides (periodically) to one or more Gas Transporters a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Ameredev and the Gas Transporters have periodic conference calls to discuss changes in drilling and completion schedules. Gas from the well(s) will be processed at one or more of Gas Transporters' processing plants located in several different locations. The actual flow of gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Gas Transporter system at that time. Based on current information, it is Operator's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 12687

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
AMEREDEV OPERATING, LLC 2901 Via Fortuna Suite 600 Austin, TX78746	372224	12687	FORM 3160-3

OCD Reviewer	Condition
pkautz	Will require a directional survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until freshwater zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.