

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

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

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM137470
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator AMEREDEV OPERATING LLC (372224)		8. Lease Name and Well No. HOLLY FED COM 26 36 05 091H (326326)
3a. Address 5707 Southwest Parkway, Building 1, Suite 275 Austin TX	3b. Phone No. (include area code) (737)300-4700	9. API Well No. 70-025-46656 (78450)
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface LOT D / 230 FNL / 740 FWL / LAT 32.07894 / LONG -103.29328 At proposed prod. zone LOT M / 50 FSL / 660 FWL / LAT 32.05068 / LONG -103.2935		10. Field and Pool, or Exploratory JAL / WOLF CAMP WEST LIND 95
11. Sec., T. R. M. or Blk. and Survey or Area SEC 5 / T26S / R36E / NMP		12. County or Parish LEA
13. State NM		14. Distance in miles and direction from nearest town or post office* 6.5 miles
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	230 feet	16. No of acres in lease 440
17. Spacing Unit dedicated to this well	320	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 917 feet
19. Proposed Depth 11442 feet / 22209 feet	20. BLM/BIA Bond No. in file FED: NMB001478	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3002 feet
22. Approximate date work will start* 11/01/2019	23. Estimated duration 90 days	24. Attachments

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

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

25. Signature (Electronic Submission)	Name (Printed/Typed) Christie Hanna / Ph: (737)300-4723	Date 06/06/2019
Title Senior Engineering Technician		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 12/13/2019
Title Assistant Field Manager Lands & Minerals		
Office CARLSBAD		

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.

SCP Dec 12/18/19

APPROVED WITH CONDITIONS

Approval Date: 12/13/2019

12/23/19

PECOS DISTRICT

DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Ameredev Operating LLC
WELL NAME & NO.:	Holly Fed Com 26 36 05 091H
SURFACE HOLE FOOTAGE:	230'/N & 740'/W
BOTTOM HOLE FOOTAGE:	50'/S & 660'/W
LOCATION:	Section 5, T.26 S., R.36 E., NMPM
COUNTY:	Lea County, New Mexico

COA

H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input type="radio"/> Multibowl	<input checked="" type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input checked="" type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" type="checkbox"/> Fluid Filled	<input checked="" type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> 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

Primary Casing Design:

1. The 13-3/8 inch surface casing shall be set at approximately **1263 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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

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

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

Option 2:

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.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
- ❖ In **Capitan Reef Areas** if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- ❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:
 - Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.

- Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.
3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

Option 1 (Single Stage):

- Cement should tie-back at least **200 feet** into previous casing string and at least **50 feet** on top of Capitan Reef Top. Operator shall provide method of verification.

Option 2:

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

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
 - Cement should tie-back at least **200 feet** into previous casing string and at least **50 feet** on top of Capitan Reef Top. Operator shall provide method of verification.

Alternate Casing Design:

3. The minimum required fill of cement behind the 7-5/8 inch 2nd intermediate casing is:
- Cement to surface. If cement does not circulate see B.1.a, c-d above.
Excess calculates to 14% - additional cement might be required.

In the case of lost circulation, operator has proposed to pump down 9 5/8" X 7 5/8" annulus. Operator must run a CBL from TD of the 7 5/8" casing to surface. Submit results to the BLM.

Pilot hole is required to have a plug at the bottom of the hole. If two plugs are set, the BLM is to be contacted (575-361-2822) prior to tag of bottom plug, which must be a minimum of 200' in length. Operator can set one plug from bottom of pilot hole to kick-off point and save the WOC time for tagging the first plug. Note plug tops on subsequent drilling report.

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

Option 1 (Single Stage):

- Cement should tie-back at least **200 feet** into previous casing string and at least **50 feet** on top of Capitan Reef Top. Operator shall provide method of verification.

Option 2:

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.

- c. 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.
- d. Second stage above DV tool:
 - Cement should tie-back at least **200 feet** into previous casing string and at least **50 feet** on top of Capitan Reef Top. 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.

Option 1:

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate 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**.

Option 2:

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 10,000 (10M) psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

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

GENERAL REQUIREMENTS

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

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

☒ Eddy County

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

☒ Lea County

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

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

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as

possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except

the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

NMK10272019



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

Operator Certification Data Report

12/17/2019

Operator Certification

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

NAME: Christie Hanna

Signed on: 06/06/2019

Title: Senior Engineering Technician

Street Address: 5707 SOUTHWEST PKWY BLDG 1 STE 275

City: AUSTIN

State: TX

Zip: 78735

Phone: (737)300-4723

Email address: zboyd@ameredev.com

Field Representative

Representative Name:

Street Address: 5707 SOUTHWEST PARKWAY, BLDG 1, STE. 275

City: AUSTIN

State: TX

Zip: 78735

Phone: (580)940-5054

Email address: zboyd@ameredev.com



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

Application Data Report

12/17/2019

APD ID: 10400042565

Submission Date: 06/06/2019

Operator Name: AMEREDEV OPERATING LLC

Well Name: HOLLY FED COM 26 36 05

Well Number: 091H

Well Type: OIL WELL

Well Work Type: Drill

[Show Final Text](#)

Section 1 - General

APD ID: 10400042565

Tie to previous NOS?

Submission Date: 06/06/2019

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: NMNM137470

Lease Acres: 440

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? NO

APD Operator: AMEREDEV OPERATING LLC

Operator letter of designation:

Operator Info

Operator Organization Name: AMEREDEV OPERATING LLC

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

Zip: 78735

Operator PO Box:

Operator City: Austin

State: TX

Operator Phone: (737)300-4700

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: HOLLY FED COM 26 36 05

Well Number: 091H

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: HOLLY FED COM 26 36 05

Well Number: 091H

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? NO New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name:

Number: 2S

Well Class: HORIZONTAL

RB/HOL

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: 6.5 Miles

Distance to nearest well: 917 FT

Distance to lease line: 230 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: WELLSITE_20190606093537.pdf

HOLLY_FED_COM_26_36_05_091H__BLM_LEASE_MAP_20190606093645.pdf

HOLLY_FED_COM_26_36_05_091H__C_102_SIG_20190606093709.pdf

HOLLY_FED_COM_26_36_05_091H__EXH_2AB_20190606093722.pdf

HOLLY_FED_COM_26_36_05_091H__VICINITY_MAP_20190606093748.pdf

HOLLY_FED_COM_26_36_05_091H__GAS_CAPTURE_PLAN_20190606093815.pdf

Well work start Date: 11/01/2019

Duration: 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number: 18329

Reference Datum:

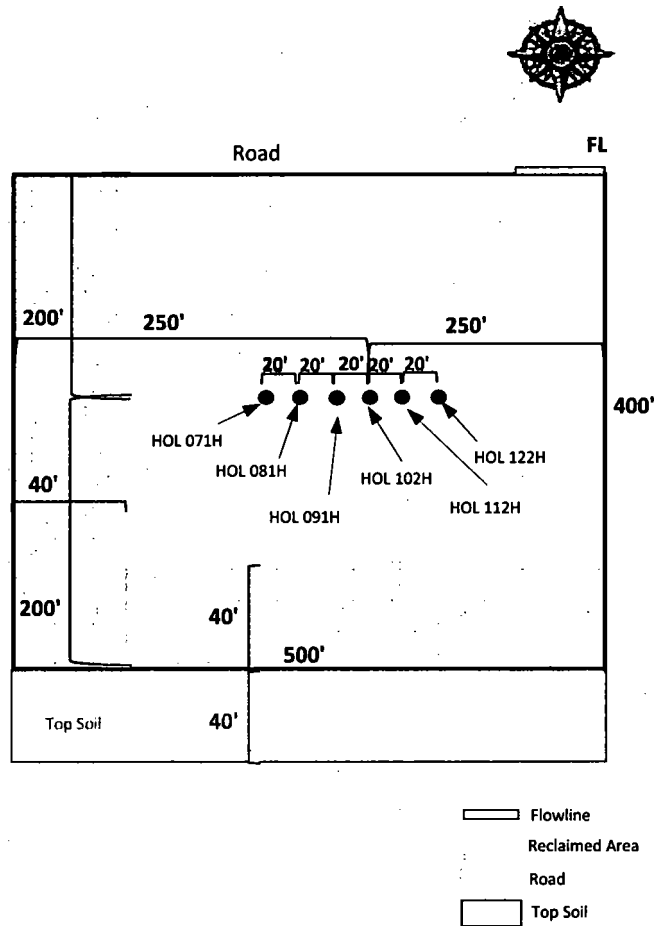
Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce
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Operator Name: AMEREDEV OPERATING LLC

Well Name: HOLLY FED COM 26 36 05

Well Number: 091H

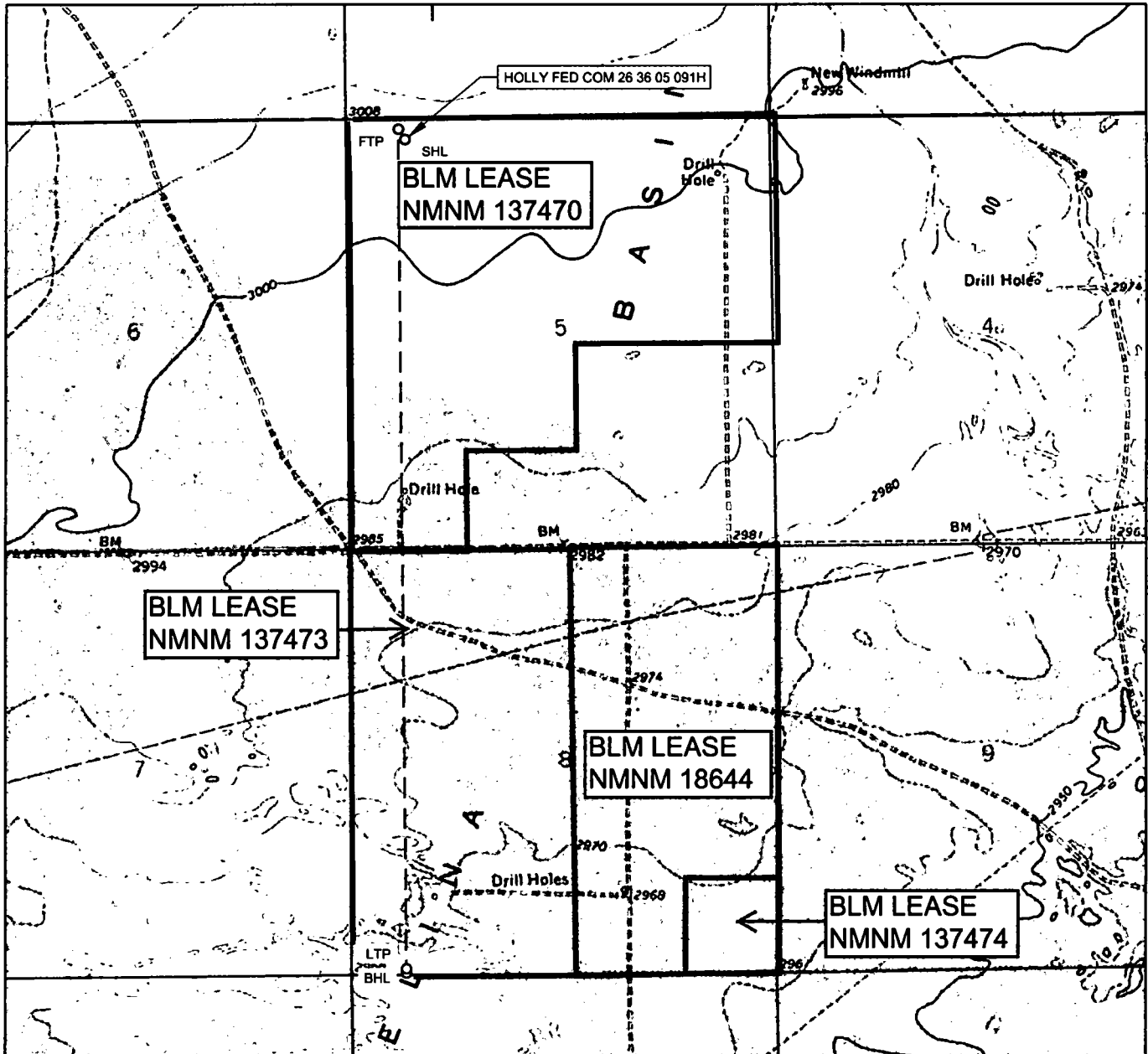
Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce
SHL Leg #1	230	FNL	740	FWL	26S	36E	5	Lot D	32.07894	- 103.2932 8	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 137470	300 2	0	0	
KOP Leg #1	421	FSL	774	FWL	25S	36E	32	Aliquot SWS W	32.08073	- 103.2931 5	LEA	NEW MEXI CO	NEW MEXI CO	F	FEE	- 794 8	109 83	109 50	
PPP Leg #1-1	0	FNL	715	FWL	26S	36E	8	Aliquot NWN W	32.06506	- 103.2935 2	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 137473	- 844 0	169 76	114 42	
PPP Leg #1-2	100	FNL	660	FWL	26S	36E	5	Aliquot NWN W	32.0793	- 103.2935 4	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 137470	- 844 0	117 96	114 42	
EXIT Leg #1	50	FSL	660	FWL	26S	36E	8	Aliquot SWS W	32.05068	- 103.2935	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 137473	- 844 0	222 09	114 42	
BHL Leg #1	50	FSL	660	FWL	26S	36E	8	Lot M	32.05068	- 103.2935	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 137473	- 844 0	222 09	114 42	



Holly Fed Com 26 36 05 071H SHL: 26S 36E 230' FNL 700' FWL
Holly Fed Com 26 36 05 081H SHL: 26S 36E 230' FNL 720' FWL
Holly Fed Com 26 36 05 091H SHL: 26S 36E 230' FNL 740' FWL
Holly Fed Com 26 36 05 102H SHL: 26S 36E 230' FNL 760' FWL
Holly Fed Com 26 36 05 112H SHL: 26S 36E 230' FNL 780' FWL
Holly Fed Com 26 36 05 122H SHL: 26S 36E 230' FNL 800' FWL

Exhibit 3 – Well Site Diagram

LOCATION & ELEVATION VERIFICATION MAP



AMEREDEV

AMEREDEV OPERATING, LLC

LEASE NAME & WELL NO.: HOLLY FED COM 26 36 05 091H

SECTION 5 TWP 26-S RGE 36-E SURVEY N.M.P.M.
 COUNTY LEA STATE NM ELEVATION 3002'
 DESCRIPTION 230' FNL & 740' FWL

LATITUDE N 32.0789466 LONGITUDE W 103.2932851



SCALE: 1" = 2000'
 0' 1000' 2000'

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.



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TELEPHONE: (432) 682-1653 OR (800) 787-1653 • FAX (432) 682-1743

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Application for Permit to Drill

U.S. Department of the Interior
Bureau of Land Management

APD Package Report

Date Printed: 12/17/2019 07:39 AM

APD ID: 10400042565

Well Status: AAPD

APD Received Date: 06/06/2019 11:02 AM

Well Name: HOLLY FED COM 26 36 05

Operator: AMEREDEV OPERATING LLC

Well Number: 091H

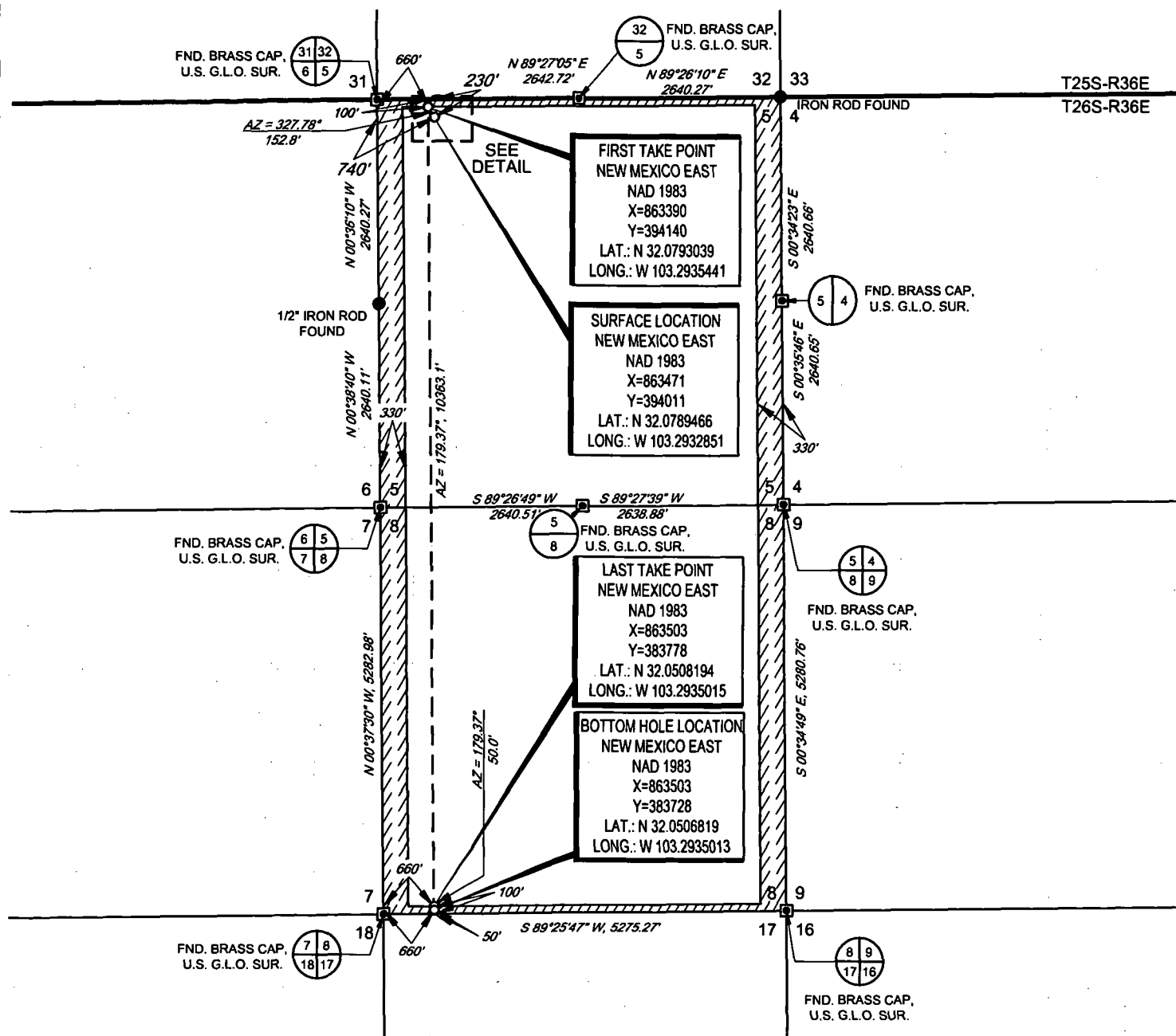
APD Package Report Contents

- Form 3160-3
- Operator Certification Report
- Application Report
- Application Attachments
 - Well Plat: 6 file(s)
- Drilling Plan Report
- Drilling Plan Attachments
 - Blowout Prevention Choke Diagram Attachment: 1 file(s)
 - Blowout Prevention BOP Diagram Attachment: 4 file(s)
 - Casing Design Assumptions and Worksheet(s): 6 file(s)
 - Hydrogen sulfide drilling operations plan: 1 file(s)
 - Proposed horizontal/directional/multi-lateral plan submission: 4 file(s)
 - Other Facets: 1 file(s)
 - Other Variances: 2 file(s)
- SUPO Report
- SUPO Attachments
 - Existing Road Map: 1 file(s)
 - Attach Well map: 1 file(s)
 - Production Facilities map: 2 file(s)
 - Water source and transportation map: 2 file(s)
 - Construction Materials source location attachment: 1 file(s)
 - Well Site Layout Diagram: 2 file(s)
 - Recontouring attachment: 1 file(s)
 - Other SUPO Attachment: 2 file(s)
- PWD Report
- PWD Attachments
 - None


- Bond Report
- Bond Attachments
 - None

AMEREDEV OPERATING, LLC
EXHIBIT 2A

SECTION 5, TOWNSHIP 26-S, RANGE 36-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

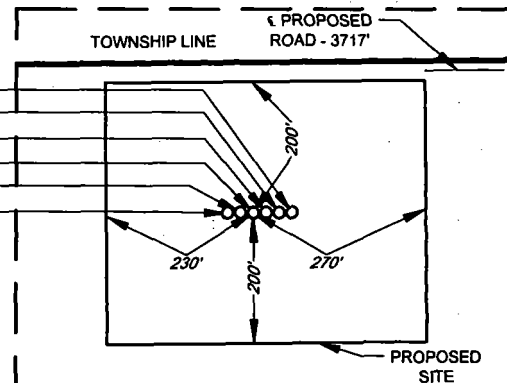


SCALE: 1" = 2000'



0' 1000' 2000'

HOLLY FED COM 26 36 05 122H -
HOLLY FED COM 26 36 05 112H -
HOLLY FED COM 26 36 05 102H -
HOLLY FED COM 26 36 05 091H
HOLLY FED COM 26 36 05 081H -
HOLLY FED COM 26 36 05 071H -



DETAIL VIEW
SCALE: 1" = 300'

1 FASE NAME & WELL NO.

HOLLY FED COM 26 36 05 091H

ST. R.

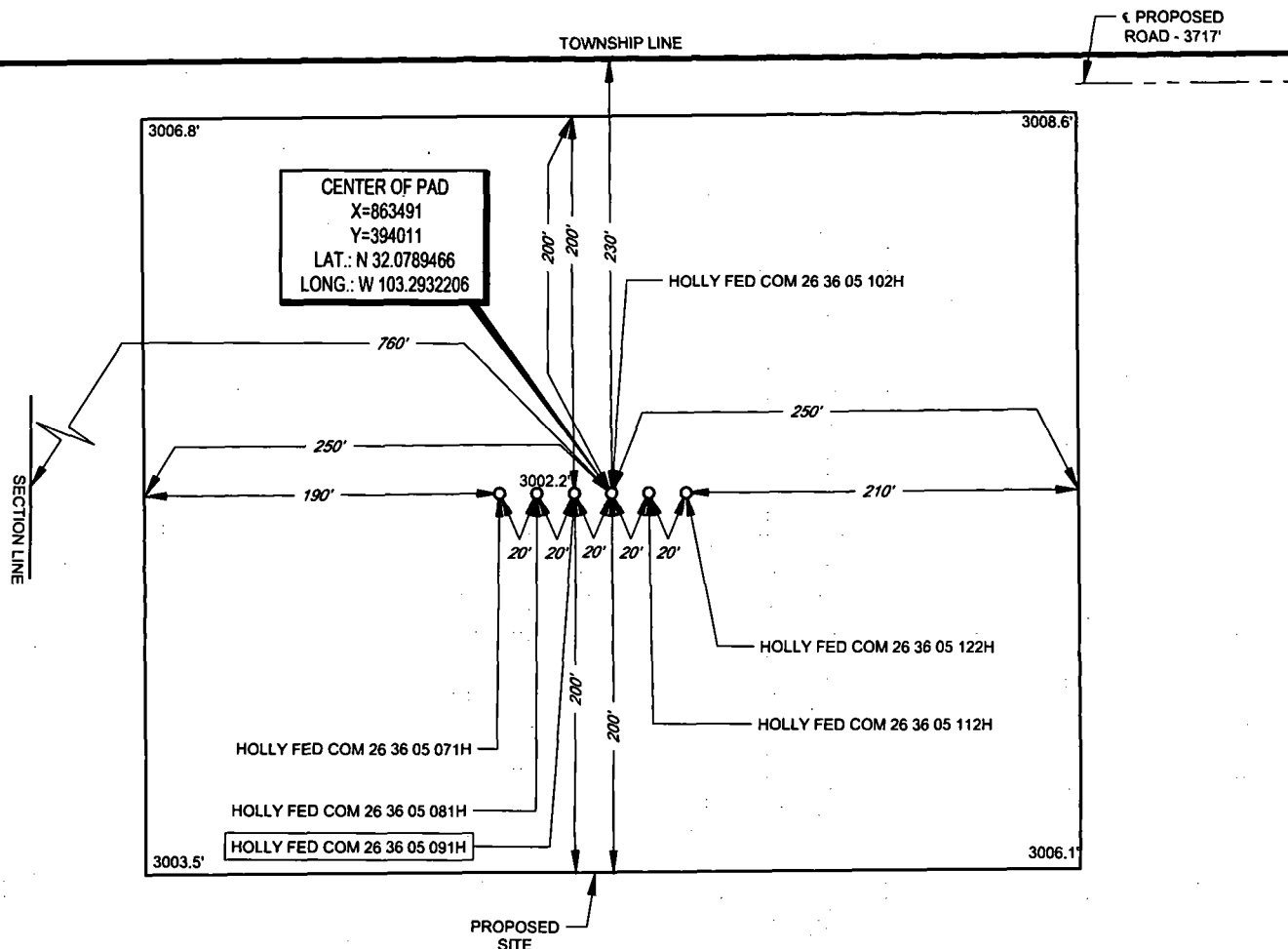
EXHIBIT 2B

AMEREDEV

AMEREDEV OPERATING, LLC

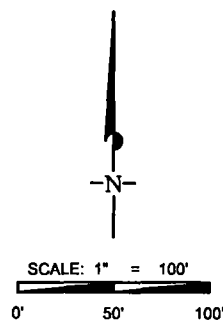
SECTION 5, TOWNSHIP 26-S, RANGE 36-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: HOLLY FED COM 26 36 05 091H
091H LATITUDE N 32.0789466 091H LONGITUDE W 103.2932851

CENTER OF PAD IS 230' FNL & 760' FWL



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

THIS PROPOSED PAD SITE 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.

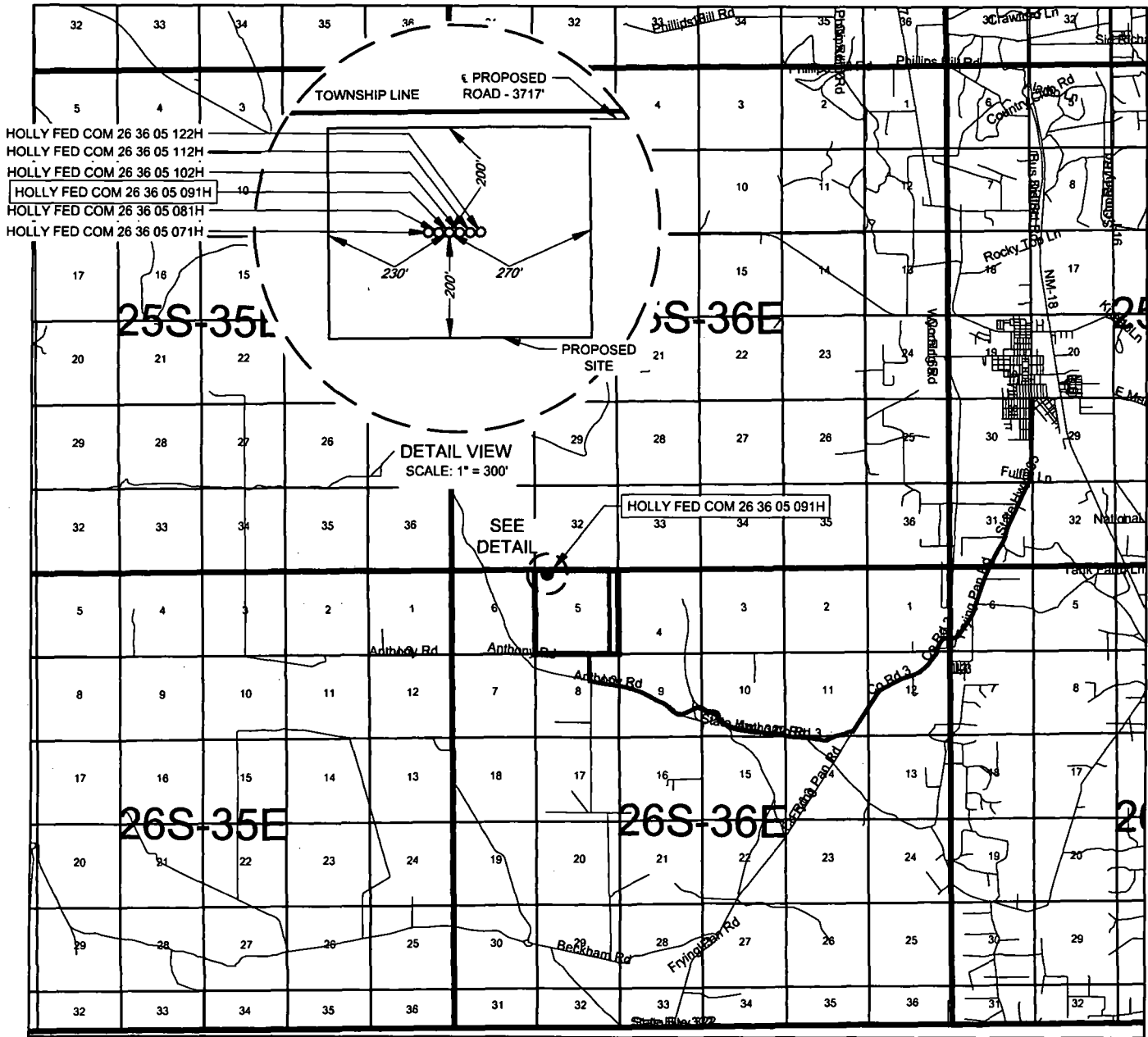
ORIGINAL DOCUMENT SIZE: 8.5" X 11"

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EXHIBIT 2

VICINITY MAP



AMEREDEV

AMEREDEV OPERATING, LLC

LEASE NAME & WELL NO.: HOLLY FED COM 26 36 05 091H

SECTION 5 TWP 26-S RGE 36-E SURVEY N.M.P.M.

COUNTY _____ LEA _____ STATE _____ NM _____

DESCRIPTION	230' FNL & 740' FWL

DISTANCE & DIRECTION

FROM INT. OF E NEVADA AVE & S 3RD ST, HEAD SOUTH ON S 3RD ST ± 1.0 MILE, THENCE CONTINUE SOUTH ON NM-205 ± 3.9 MILES, THENCE WEST (RIGHT) ON ANTHONY RD ± 1.7 MILES, THENCE CONTINUE WEST ON J-3 ± 1.7 MILES, THENCE NORTH (RIGHT) ON J-3 ± 0.3 MILES, THENCE EAST (RIGHT) ON A LEASE RD. ± 0.2 MILES, THENCE NORTH (LEFT) ON A LEASE RD. ± 1.0 MILE, THENCE WEST (LEFT) ON A PROPOSED RD. ± 3717 FEET TO A POINT ± 345 FEET NORTHEAST OF THE LOCATION

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 AMERDEVE 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.

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SCALE: 1" = 10000'

0' 5000' 10000'



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

Drilling Plan Data Report

12/17/2019

APD ID: 10400042565

Submission Date: 06/06/2019

Operator Name: AMEREDEV OPERATING LLC

Well Name: HOLLY FED COM 26 36 05

Well Number: 091H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	RUSTLER ANHYDRITE	3002	1138	1138	ANHYDRITE	NONE	N
2	SALADO	1415	1589	1589	SALT	NONE	N
3	TANSILL	-401	3405	3405	LIMESTONE	NONE	N
4	CAPITAN REEF	-856	3860	3860	LIMESTONE	USEABLE WATER	N
5	LAMAR	-2067	5071	5071	LIMESTONE	NONE	N
6	BELL CANYON	-2187	5191	5191	SANDSTONE	NATURAL GAS,OIL	N
7	BRUSHY CANYON	-4168	7172	7172	SANDSTONE	NATURAL GAS,OIL	N
8	BONE SPRING LIME	-5218	8222	8222	LIMESTONE	NONE	N
9	BONE SPRING 1ST	-6594	9598	9598	SANDSTONE	NATURAL GAS,OIL	N
10	BONE SPRING 2ND	-7110	10114	10114	SANDSTONE	NATURAL GAS,OIL	N
11	BONE SPRING 3RD	-7665	10669	10669	LIMESTONE	NONE	N
12	BONE SPRING 3RD	-8268	11272	11272	SANDSTONE	NATURAL GAS,OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M

Rating Depth: 15000

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

Requesting Variance? YES

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

Testina Procedure: See attachment

Operator Name: AMEREDEV OPERATING LLC

Well Name: HOLLY FED COM 26 36 05

Well Number: 091H

Choke Diagram Attachment:

10M_Choke_Manifold_REV_20190606094900.pdf

BOP Diagram Attachment:

5M_Annular_Preventer_Variance_and_Well_Control_Plan_20190606095008.pdf

5M_BOP_System_20190606095049.pdf

Pressure_Control_Plan_Single_Well_MB4_3String_Big_Hole_BLM_20190606095106.pdf

4_String_MB_Ameredev_Wellhead_Drawing_net_REV_20190606095222.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	1263	0	1263	3002		1263	J-55	68	OTHER - BTC	7.27	0.64	DRY	10.65	DRY	12.45
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	10983	0	10983			10983	HCL-80	40	OTHER - BTC	1.25	1.27	DRY	2.18	DRY	2.14
3	PRODUCTION	8.5	5.5	NEW	API	N	0	22209	0	11442			22209	OTHER	20	OTHER - BTC	1.79	1.93	DRY	2.86	DRY	3.18

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

13.375_68.00__J55_BTC_20190606095427.pdf

Holly_Fed_Com_26_36_05_091H__Wellbore_Diagram_and_CDA_20190606095548.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: HOLLY FED COM 26 36 05

Well Number: 091H

Casing Attachments

Casing ID: 2 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

9.625_40_SeAH80HC_4100_Collapse_20190606095709.pdf

Holly_Fed_Com_26_36_05_091H__Wellbore_Diagram_and_CDA_20190606095746.pdf

Casing ID: 3 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

5.50_20_USS_P110_HC_BTC_API_20190606100114.pdf

Holly_Fed_Com_26_36_05_091H__Wellbore_Diagram_and_CDA_20190606100214.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	877	595	1.76	13.5	1046.93	50	CLASS C	Bentonite, Accelerator, Kolseal, Defoamer, Celloflake
SURFACE	Tail		877	1263	200	1.34	14.8	268	100	CLASS C	Salt
INTERMEDIATE	Lead	5121	0	4271	703	2.47	11.9	1737.48	25	Class C	Salt, Bentonite, Kolseal, Defoamer, Celloflake

Operator Name: AMEREDEV OPERATING LLC

Well Name: HOLLY FED COM 26 36 05

Well Number: 091H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
											Additive
INTERMEDIATE	Tail		4271	5121	200	1.33	14.8	266	25	Class C	Retarder
INTERMEDIATE	Lead	5121	5121	9727	1580	2.47	11.9	3903.23	25	Class H	Bentonite, Salt, Kolseal, Defoamer, Celloflake, Retarder, Anti-Settling Expansion Additive
INTERMEDIATE	Tail		9727	10983	300	1.24	14.5	371.1	25	Class H	Salt, Bentonite, Retarder, Dispersant, Fluid Loss
PRODUCTION	Lead		0	22209	4742	1.34	14.2	6354.29	25	Class H	Salt, Bentonite, Fluid Loss, Dispersant, Retarder, Defoamer

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

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

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

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1263	WATER-BASED MUD	8.4	8.6							

Operator Name: AMEREDEV OPERATING LLC

Well Name: HOLLY FED COM 26 36 05

Well Number: 091H

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
1263	1098 3	OTHER : Diesel Brine Emulsion	8.5	9.4							
1098 3	1144 2	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:

DS,MWD,MUDLOG

Coring operation description for the well:

No coring will be done on this well.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6247

Anticipated Surface Pressure: 3729.76

Anticipated Bottom Hole Temperature(F): 165

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

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

H2S_Plan_20190606101114.pdf

Operator Name: AMEREDEV OPERATING LLC

Well Name: HOLLY FED COM 26 36 05

Well Number: 091H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Hol091_DR_20190606101158.pdf

Hol091_LLRR_20190606101228.pdf

Pressure_Control_Plan_Single_Well_MB4_3String_Big_Hole_BLM_20190606101332.pdf

5M_Annular_Preventer_Variance_and_Well_Control_Plan_20190606101310.pdf

Other proposed operations facets description:

4-STRING CONTINGENCY PLAN ATTACHED

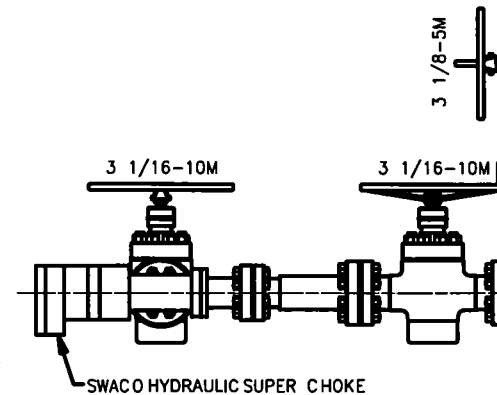
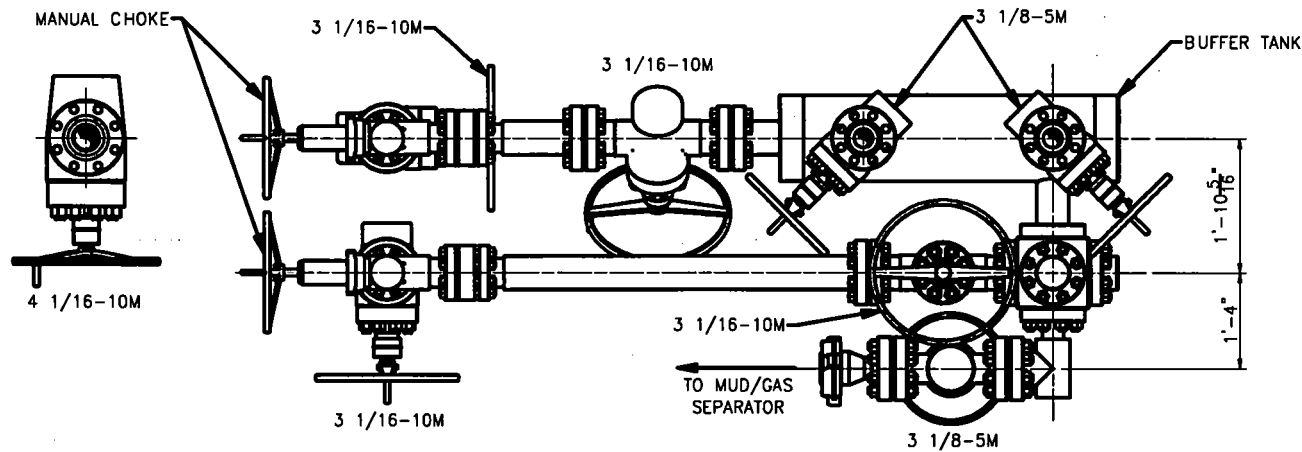
Other proposed operations facets attachment:

CAPITAN_PROTECTION_CONTINGENCY_PLAN_BS_PACKET_20190606_20190606103650.pdf

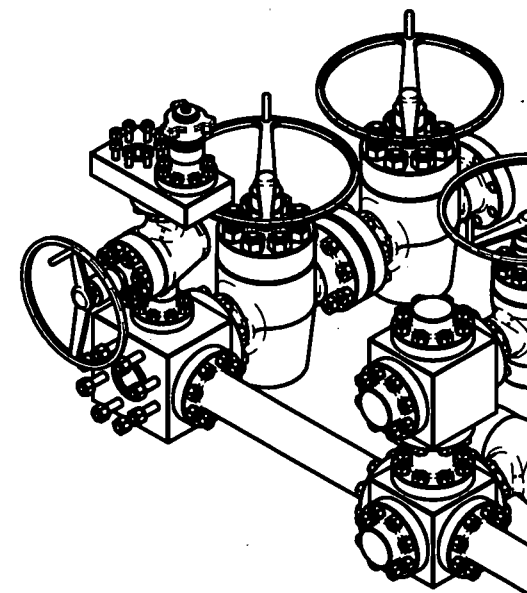
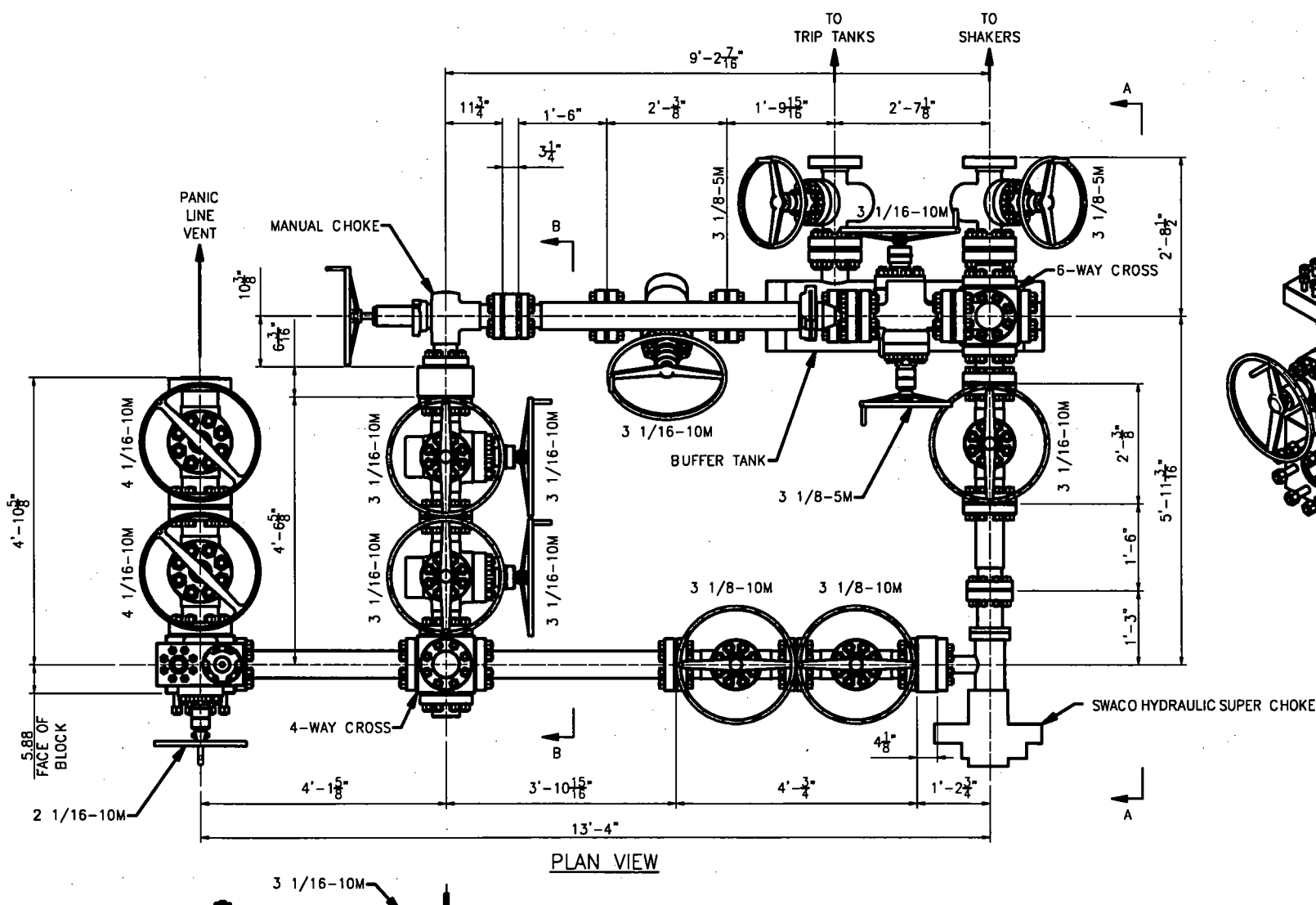
Other Variance attachment:

R616__CoC_for_hoses_12_18_17_20190606103732.pdf

Requested_Exceptions__3_String_Revised_01312019_20190606103815.pdf



VIEW A-A



H₂S Drilling Operation Plan

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

H₂S Drilling Operation Plan

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

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

8. **Mud program:**

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

9. **Metallurgy:**

- a. All drill strings, casing, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.
- b. Drilling Contractor supervisor will be required to be familiar with the effect H₂S has on tubular goods and other mechanical equipment provided through contractor.

H₂S Contingency Plan

Emergency Procedures

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

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

Ignition of Gas Source

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

Characteristics of H₂S and SO₂

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

Contacting Authorities

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

H₂S Contingency Plan**Ameredev Operating LLC – Emergency Phone 737-300-4799****Key Personnel:**

Name	Title	Office	Mobile
Floyd Hammond	Chief Operating officer	737-300-4724	512-783-6810
Zachary Boyd	Operations Superintendent	737-300-4725	432-385-6996
Blake Estrada	Construction Foreman		432-385-5831

Artesia

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

Carlsbad

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

Santa Fe

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

National

National Emergency Response Center (Washington, D.C.)	800-424-8802
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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.

RB/HOL

RB/HOL #2S

Holly 091H

Wellbore #1

Plan: Design #1

Standard Planning Report

22 February, 2019

Database:	EDM5000	Local Co-ordinate Reference:	Well Holly 091H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 3029.0usft
Project:	RB/HOL	MD Reference:	KB @ 3029.0usft
Site:	RB/HOL #2S	North Reference:	Grid
Well:	Holly 091H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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

Site	RB/HOL #2S				
Site Position:		Northing:	394,010.44 usft	Latitude:	32° 4' 44.208 N
From:	Lat/Long	Easting:	863,431.24 usft	Longitude:	103° 17' 36.291 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.55 °

Well	Holly 091H					
Well Position	+N/-S	0.4 usft	Northing:	394,010.82 usft	Latitude:	32° 4' 44.208 N
	+E/-W	40.0 usft	Easting:	863,471.26 usft	Longitude:	103° 17' 35.826 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,002.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/12/2018	6.65	59.95	47,730.96564239

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	179.82	

Plan Survey Tool Program	Date	2/22/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	22,209.2	Design #1 (Wellbore #1)	MWD
				OWSG MWD - Standard

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Wellbore:	Wellbore #1		
Design:	Design #1		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,300.0	6.00	3.00	2,299.5	15.7	0.8	2.00	2.00	0.00	3.00	
6,724.8	6.00	3.00	6,700.0	477.6	25.0	0.00	0.00	0.00	0.00	
7,024.8	0.00	0.00	6,999.5	493.2	25.8	2.00	-2.00	0.00	180.00	
8,525.3	0.00	0.00	8,500.0	493.2	25.8	0.00	0.00	0.00	0.00	
8,825.3	6.00	3.00	8,799.5	508.9	26.7	2.00	2.00	0.00	3.00	
10,032.5	6.00	3.00	10,000.0	634.9	33.3	0.00	0.00	0.00	0.00	
10,332.5	0.00	0.00	10,299.5	650.6	34.1	2.00	-2.00	0.00	180.00	
10,983.0	0.00	0.00	10,950.0	650.6	34.1	0.00	0.00	0.00	0.00	
11,599.7	72.99	195.46	11,412.9	320.6	-57.2	11.84	11.84	0.00	195.46	
11,796.1	90.00	179.37	11,442.0	129.2	-81.5	11.84	8.66	-8.19	-44.58	Hol091 FTP
22,209.2	90.00	179.37	11,442.0	-10,283.3	32.1	0.00	0.00	0.00	0.00	Hol091 BHL

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Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 3029.0usft
Project:	RB/HOL	MD Reference:	KB @ 3029.0usft
Site:	RB/HOL #2S	North Reference:	Grid
Well:	Holly 091H	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	3.00	2,100.0	1.7	0.1	-1.7	2.00	2.00	0.00
2,200.0	4.00	3.00	2,199.8	7.0	0.4	-7.0	2.00	2.00	0.00
2,300.0	6.00	3.00	2,299.5	15.7	0.8	-15.7	2.00	2.00	0.00
2,400.0	6.00	3.00	2,398.9	26.1	1.4	-26.1	0.00	0.00	0.00
2,500.0	6.00	3.00	2,498.4	36.5	1.9	-36.5	0.00	0.00	0.00
2,600.0	6.00	3.00	2,597.8	47.0	2.5	-47.0	0.00	0.00	0.00
2,700.0	6.00	3.00	2,697.3	57.4	3.0	-57.4	0.00	0.00	0.00
2,800.0	6.00	3.00	2,796.7	67.9	3.6	-67.9	0.00	0.00	0.00
2,900.0	6.00	3.00	2,896.2	78.3	4.1	-78.3	0.00	0.00	0.00
3,000.0	6.00	3.00	2,995.6	88.7	4.7	-88.7	0.00	0.00	0.00
3,100.0	6.00	3.00	3,095.1	99.2	5.2	-99.2	0.00	0.00	0.00
3,200.0	6.00	3.00	3,194.5	109.6	5.7	-109.6	0.00	0.00	0.00
3,300.0	6.00	3.00	3,294.0	120.1	6.3	-120.0	0.00	0.00	0.00
3,400.0	6.00	3.00	3,393.4	130.5	6.8	-130.5	0.00	0.00	0.00
3,500.0	6.00	3.00	3,492.9	140.9	7.4	-140.9	0.00	0.00	0.00
3,600.0	6.00	3.00	3,592.3	151.4	7.9	-151.3	0.00	0.00	0.00
3,700.0	6.00	3.00	3,691.8	161.8	8.5	-161.8	0.00	0.00	0.00
3,800.0	6.00	3.00	3,791.2	172.2	9.0	-172.2	0.00	0.00	0.00
3,900.0	6.00	3.00	3,890.7	182.7	9.6	-182.7	0.00	0.00	0.00
4,000.0	6.00	3.00	3,990.1	193.1	10.1	-193.1	0.00	0.00	0.00
4,100.0	6.00	3.00	4,089.6	203.6	10.7	-203.5	0.00	0.00	0.00
4,200.0	6.00	3.00	4,189.0	214.0	11.2	-214.0	0.00	0.00	0.00
4,300.0	6.00	3.00	4,288.5	224.4	11.8	-224.4	0.00	0.00	0.00
4,400.0	6.00	3.00	4,387.9	234.9	12.3	-234.8	0.00	0.00	0.00
4,500.0	6.00	3.00	4,487.4	245.3	12.9	-245.3	0.00	0.00	0.00
4,600.0	6.00	3.00	4,586.9	255.8	13.4	-255.7	0.00	0.00	0.00
4,700.0	6.00	3.00	4,686.3	266.2	14.0	-266.2	0.00	0.00	0.00
4,800.0	6.00	3.00	4,785.8	276.6	14.5	-276.6	0.00	0.00	0.00
4,900.0	6.00	3.00	4,885.2	287.1	15.0	-287.0	0.00	0.00	0.00
5,000.0	6.00	3.00	4,984.7	297.5	15.6	-297.5	0.00	0.00	0.00
5,100.0	6.00	3.00	5,084.1	308.0	16.1	-307.9	0.00	0.00	0.00
5,200.0	6.00	3.00	5,183.6	318.4	16.7	-318.3	0.00	0.00	0.00
5,300.0	6.00	3.00	5,283.0	328.8	17.2	-328.8	0.00	0.00	0.00

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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)
5,400.0	6.00	3.00	5,382.5	339.3	17.8	-339.2	0.00	0.00	0.00
5,500.0	6.00	3.00	5,481.9	349.7	18.3	-349.6	0.00	0.00	0.00
5,600.0	6.00	3.00	5,581.4	360.1	18.9	-360.1	0.00	0.00	0.00
5,700.0	6.00	3.00	5,680.8	370.6	19.4	-370.5	0.00	0.00	0.00
5,800.0	6.00	3.00	5,780.3	381.0	20.0	-381.0	0.00	0.00	0.00
5,900.0	6.00	3.00	5,879.7	391.5	20.5	-391.4	0.00	0.00	0.00
6,000.0	6.00	3.00	5,979.2	401.9	21.1	-401.8	0.00	0.00	0.00
6,100.0	6.00	3.00	6,078.6	412.3	21.6	-412.3	0.00	0.00	0.00
6,200.0	6.00	3.00	6,178.1	422.8	22.2	-422.7	0.00	0.00	0.00
6,300.0	6.00	3.00	6,277.5	433.2	22.7	-433.1	0.00	0.00	0.00
6,400.0	6.00	3.00	6,377.0	443.7	23.3	-443.6	0.00	0.00	0.00
6,500.0	6.00	3.00	6,476.4	454.1	23.8	-454.0	0.00	0.00	0.00
6,600.0	6.00	3.00	6,575.9	464.5	24.3	-464.5	0.00	0.00	0.00
6,700.0	6.00	3.00	6,675.3	475.0	24.9	-474.9	0.00	0.00	0.00
6,724.8	6.00	3.00	6,700.0	477.6	25.0	-477.5	0.00	0.00	0.00
6,800.0	4.50	3.00	6,774.9	484.4	25.4	-484.3	2.00	-2.00	0.00
6,900.0	2.50	3.00	6,874.7	490.5	25.7	-490.4	2.00	-2.00	0.00
7,000.0	0.50	3.00	6,974.7	493.1	25.8	-493.0	2.00	-2.00	0.00
7,024.8	0.00	0.00	6,999.5	493.2	25.8	-493.1	2.00	-2.00	0.00
7,100.0	0.00	0.00	7,074.7	493.2	25.8	-493.1	0.00	0.00	0.00
7,200.0	0.00	0.00	7,174.7	493.2	25.8	-493.1	0.00	0.00	0.00
7,300.0	0.00	0.00	7,274.7	493.2	25.8	-493.1	0.00	0.00	0.00
7,400.0	0.00	0.00	7,374.7	493.2	25.8	-493.1	0.00	0.00	0.00
7,500.0	0.00	0.00	7,474.7	493.2	25.8	-493.1	0.00	0.00	0.00
7,600.0	0.00	0.00	7,574.7	493.2	25.8	-493.1	0.00	0.00	0.00
7,700.0	0.00	0.00	7,674.7	493.2	25.8	-493.1	0.00	0.00	0.00
7,800.0	0.00	0.00	7,774.7	493.2	25.8	-493.1	0.00	0.00	0.00
7,900.0	0.00	0.00	7,874.7	493.2	25.8	-493.1	0.00	0.00	0.00
8,000.0	0.00	0.00	7,974.7	493.2	25.8	-493.1	0.00	0.00	0.00
8,100.0	0.00	0.00	8,074.7	493.2	25.8	-493.1	0.00	0.00	0.00
8,200.0	0.00	0.00	8,174.7	493.2	25.8	-493.1	0.00	0.00	0.00
8,300.0	0.00	0.00	8,274.7	493.2	25.8	-493.1	0.00	0.00	0.00
8,400.0	0.00	0.00	8,374.7	493.2	25.8	-493.1	0.00	0.00	0.00
8,500.0	0.00	0.00	8,474.7	493.2	25.8	-493.1	0.00	0.00	0.00
8,525.3	0.00	0.00	8,500.0	493.2	25.8	-493.1	0.00	0.00	0.00
8,600.0	1.49	3.00	8,574.7	494.2	25.9	-494.1	2.00	2.00	0.00
8,700.0	3.49	3.00	8,674.6	498.5	26.1	-498.5	2.00	2.00	0.00
8,800.0	5.49	3.00	8,774.2	506.4	26.5	-506.3	2.00	2.00	0.00
8,825.3	6.00	3.00	8,799.5	508.9	26.7	-508.8	2.00	2.00	0.00
8,900.0	6.00	3.00	8,873.7	516.7	27.1	-516.6	0.00	0.00	0.00
9,000.0	6.00	3.00	8,973.2	527.1	27.6	-527.0	0.00	0.00	0.00
9,100.0	6.00	3.00	9,072.6	537.6	28.2	-537.5	0.00	0.00	0.00
9,200.0	6.00	3.00	9,172.1	548.0	28.7	-547.9	0.00	0.00	0.00
9,300.0	6.00	3.00	9,271.5	558.4	29.3	-558.4	0.00	0.00	0.00
9,400.0	6.00	3.00	9,371.0	568.9	29.8	-568.8	0.00	0.00	0.00
9,500.0	6.00	3.00	9,470.4	579.3	30.4	-579.2	0.00	0.00	0.00
9,600.0	6.00	3.00	9,569.9	589.8	30.9	-589.7	0.00	0.00	0.00
9,700.0	6.00	3.00	9,669.3	600.2	31.5	-600.1	0.00	0.00	0.00
9,800.0	6.00	3.00	9,768.8	610.6	32.0	-610.5	0.00	0.00	0.00
9,900.0	6.00	3.00	9,868.2	621.1	32.5	-621.0	0.00	0.00	0.00
10,000.0	6.00	3.00	9,967.7	631.5	33.1	-631.4	0.00	0.00	0.00
10,032.5	6.00	3.00	10,000.0	634.9	33.3	-634.8	0.00	0.00	0.00
10,100.0	4.65	3.00	10,067.2	641.2	33.6	-641.1	2.00	-2.00	0.00
10,200.0	2.65	3.00	10,167.0	647.5	33.9	-647.4	2.00	-2.00	0.00

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Wellbore:	Wellbore #1		
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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,300.0	0.65	3.00	10,267.0	650.4	34.1	-650.3	2.00	-2.00	0.00
10,332.5	0.00	0.00	10,299.5	650.6	34.1	-650.5	2.00	-2.00	0.00
10,400.0	0.00	0.00	10,367.0	650.6	34.1	-650.5	0.00	0.00	0.00
10,500.0	0.00	0.00	10,467.0	650.6	34.1	-650.5	0.00	0.00	0.00
10,600.0	0.00	0.00	10,567.0	650.6	34.1	-650.5	0.00	0.00	0.00
10,700.0	0.00	0.00	10,667.0	650.6	34.1	-650.5	0.00	0.00	0.00
10,800.0	0.00	0.00	10,767.0	650.6	34.1	-650.5	0.00	0.00	0.00
10,900.0	0.00	0.00	10,867.0	650.6	34.1	-650.5	0.00	0.00	0.00
10,983.0	0.00	0.00	10,950.0	650.6	34.1	-650.5	0.00	0.00	0.00
Hol091 KOP									
11,000.0	2.01	195.46	10,967.0	650.3	34.0	-650.2	11.84	11.84	0.00
11,100.0	13.84	195.46	11,065.8	637.0	30.3	-636.9	11.84	11.84	0.00
11,200.0	25.68	195.46	11,159.8	604.5	21.4	-604.4	11.84	11.84	0.00
11,300.0	37.52	195.46	11,244.8	554.1	7.4	-554.1	11.84	11.84	0.00
11,400.0	49.35	195.46	11,317.3	487.9	-10.9	-488.0	11.84	11.84	0.00
11,500.0	61.19	195.46	11,374.1	408.9	-32.8	-409.0	11.84	11.84	0.00
11,599.7	72.99	195.46	11,412.9	320.6	-57.2	-320.7	11.84	11.84	0.00
11,600.0	73.02	195.43	11,413.0	320.2	-57.3	-320.4	11.84	8.43	-8.69
11,700.0	81.60	187.06	11,435.0	224.7	-76.1	-224.9	11.84	8.58	-8.37
11,796.1	90.00	179.37	11,442.0	129.2	-81.5	-129.5	11.84	8.75	-8.00
Hol091 FTP									
11,800.0	90.00	179.37	11,442.0	125.3	-81.4	-125.5	0.00	0.00	0.00
11,900.0	90.00	179.37	11,442.0	25.3	-80.3	-25.5	0.00	0.00	0.00
12,000.0	90.00	179.37	11,442.0	-74.7	-79.3	74.5	0.00	0.00	0.00
12,100.0	90.00	179.37	11,442.0	-174.7	-78.2	174.5	0.00	0.00	0.00
12,200.0	90.00	179.37	11,442.0	-274.7	-77.1	274.5	0.00	0.00	0.00
12,300.0	90.00	179.37	11,442.0	-374.7	-76.0	374.5	0.00	0.00	0.00
12,400.0	90.00	179.37	11,442.0	-474.7	-74.9	474.5	0.00	0.00	0.00
12,500.0	90.00	179.37	11,442.0	-574.7	-73.8	574.5	0.00	0.00	0.00
12,600.0	90.00	179.37	11,442.0	-674.7	-72.7	674.4	0.00	0.00	0.00
12,700.0	90.00	179.37	11,442.0	-774.7	-71.6	774.4	0.00	0.00	0.00
12,800.0	90.00	179.37	11,442.0	-874.7	-70.5	874.4	0.00	0.00	0.00
12,900.0	90.00	179.37	11,442.0	-974.7	-69.4	974.4	0.00	0.00	0.00
13,000.0	90.00	179.37	11,442.0	-1,074.7	-68.3	1,074.4	0.00	0.00	0.00
13,100.0	90.00	179.37	11,442.0	-1,174.6	-67.3	1,174.4	0.00	0.00	0.00
13,200.0	90.00	179.37	11,442.0	-1,274.6	-66.2	1,274.4	0.00	0.00	0.00
13,300.0	90.00	179.37	11,442.0	-1,374.6	-65.1	1,374.4	0.00	0.00	0.00
13,400.0	90.00	179.37	11,442.0	-1,474.6	-64.0	1,474.4	0.00	0.00	0.00
13,500.0	90.00	179.37	11,442.0	-1,574.6	-62.9	1,574.4	0.00	0.00	0.00
13,600.0	90.00	179.37	11,442.0	-1,674.6	-61.8	1,674.4	0.00	0.00	0.00
13,700.0	90.00	179.37	11,442.0	-1,774.6	-60.7	1,774.4	0.00	0.00	0.00
13,800.0	90.00	179.37	11,442.0	-1,874.6	-59.6	1,874.4	0.00	0.00	0.00
13,900.0	90.00	179.37	11,442.0	-1,974.6	-58.5	1,974.4	0.00	0.00	0.00
14,000.0	90.00	179.37	11,442.0	-2,074.6	-57.4	2,074.4	0.00	0.00	0.00
14,100.0	90.00	179.37	11,442.0	-2,174.6	-56.3	2,174.4	0.00	0.00	0.00
14,200.0	90.00	179.37	11,442.0	-2,274.6	-55.3	2,274.4	0.00	0.00	0.00
14,300.0	90.00	179.37	11,442.0	-2,374.6	-54.2	2,374.4	0.00	0.00	0.00
14,400.0	90.00	179.37	11,442.0	-2,474.6	-53.1	2,474.4	0.00	0.00	0.00
14,500.0	90.00	179.37	11,442.0	-2,574.6	-52.0	2,574.4	0.00	0.00	0.00
14,600.0	90.00	179.37	11,442.0	-2,674.6	-50.9	2,674.4	0.00	0.00	0.00
14,700.0	90.00	179.37	11,442.0	-2,774.6	-49.8	2,774.4	0.00	0.00	0.00
14,800.0	90.00	179.37	11,442.0	-2,874.5	-48.7	2,874.4	0.00	0.00	0.00
14,900.0	90.00	179.37	11,442.0	-2,974.5	-47.6	2,974.4	0.00	0.00	0.00
15,000.0	90.00	179.37	11,442.0	-3,074.5	-46.5	3,074.4	0.00	0.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Holly 091H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 3029.0usft
Project:	RB/HOL	MD Reference:	KB @ 3029.0usft
Site:	RB/HOL #2S	North Reference:	Grid
Well:	Holly 091H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,100.0	90.00	179.37	11,442.0	-3,174.5	-45.4	3,174.4	0.00	0.00	0.00
15,200.0	90.00	179.37	11,442.0	-3,274.5	-44.3	3,274.4	0.00	0.00	0.00
15,300.0	90.00	179.37	11,442.0	-3,374.5	-43.3	3,374.4	0.00	0.00	0.00
15,400.0	90.00	179.37	11,442.0	-3,474.5	-42.2	3,474.4	0.00	0.00	0.00
15,500.0	90.00	179.37	11,442.0	-3,574.5	-41.1	3,574.4	0.00	0.00	0.00
15,600.0	90.00	179.37	11,442.0	-3,674.5	-40.0	3,674.4	0.00	0.00	0.00
15,700.0	90.00	179.37	11,442.0	-3,774.5	-38.9	3,774.4	0.00	0.00	0.00
15,800.0	90.00	179.37	11,442.0	-3,874.5	-37.8	3,874.4	0.00	0.00	0.00
15,900.0	90.00	179.37	11,442.0	-3,974.5	-36.7	3,974.3	0.00	0.00	0.00
16,000.0	90.00	179.37	11,442.0	-4,074.5	-35.6	4,074.3	0.00	0.00	0.00
16,100.0	90.00	179.37	11,442.0	-4,174.5	-34.5	4,174.3	0.00	0.00	0.00
16,200.0	90.00	179.37	11,442.0	-4,274.5	-33.4	4,274.3	0.00	0.00	0.00
16,300.0	90.00	179.37	11,442.0	-4,374.5	-32.3	4,374.3	0.00	0.00	0.00
16,400.0	90.00	179.37	11,442.0	-4,474.5	-31.3	4,474.3	0.00	0.00	0.00
16,500.0	90.00	179.37	11,442.0	-4,574.4	-30.2	4,574.3	0.00	0.00	0.00
16,600.0	90.00	179.37	11,442.0	-4,674.4	-29.1	4,674.3	0.00	0.00	0.00
16,700.0	90.00	179.37	11,442.0	-4,774.4	-28.0	4,774.3	0.00	0.00	0.00
16,800.0	90.00	179.37	11,442.0	-4,874.4	-26.9	4,874.3	0.00	0.00	0.00
16,900.0	90.00	179.37	11,442.0	-4,974.4	-25.8	4,974.3	0.00	0.00	0.00
16,976.0	90.00	179.37	11,442.0	-5,050.4	-25.0	5,050.3	0.00	0.00	0.00
Hol091 into NMNM137473									
17,000.0	90.00	179.37	11,442.0	-5,074.4	-24.7	5,074.3	0.00	0.00	0.00
17,100.0	90.00	179.37	11,442.0	-5,174.4	-23.6	5,174.3	0.00	0.00	0.00
17,200.0	90.00	179.37	11,442.0	-5,274.4	-22.5	5,274.3	0.00	0.00	0.00
17,300.0	90.00	179.37	11,442.0	-5,374.4	-21.4	5,374.3	0.00	0.00	0.00
17,400.0	90.00	179.37	11,442.0	-5,474.4	-20.3	5,474.3	0.00	0.00	0.00
17,500.0	90.00	179.37	11,442.0	-5,574.4	-19.3	5,574.3	0.00	0.00	0.00
17,600.0	90.00	179.37	11,442.0	-5,674.4	-18.2	5,674.3	0.00	0.00	0.00
17,700.0	90.00	179.37	11,442.0	-5,774.4	-17.1	5,774.3	0.00	0.00	0.00
17,800.0	90.00	179.37	11,442.0	-5,874.4	-16.0	5,874.3	0.00	0.00	0.00
17,900.0	90.00	179.37	11,442.0	-5,974.4	-14.9	5,974.3	0.00	0.00	0.00
18,000.0	90.00	179.37	11,442.0	-6,074.4	-13.8	6,074.3	0.00	0.00	0.00
18,100.0	90.00	179.37	11,442.0	-6,174.4	-12.7	6,174.3	0.00	0.00	0.00
18,200.0	90.00	179.37	11,442.0	-6,274.3	-11.6	6,274.3	0.00	0.00	0.00
18,300.0	90.00	179.37	11,442.0	-6,374.3	-10.5	6,374.3	0.00	0.00	0.00
18,400.0	90.00	179.37	11,442.0	-6,474.3	-9.4	6,474.3	0.00	0.00	0.00
18,500.0	90.00	179.37	11,442.0	-6,574.3	-8.3	6,574.3	0.00	0.00	0.00
18,600.0	90.00	179.37	11,442.0	-6,674.3	-7.3	6,674.3	0.00	0.00	0.00
18,700.0	90.00	179.37	11,442.0	-6,774.3	-6.2	6,774.3	0.00	0.00	0.00
18,800.0	90.00	179.37	11,442.0	-6,874.3	-5.1	6,874.3	0.00	0.00	0.00
18,900.0	90.00	179.37	11,442.0	-6,974.3	-4.0	6,974.3	0.00	0.00	0.00
19,000.0	90.00	179.37	11,442.0	-7,074.3	-2.9	7,074.3	0.00	0.00	0.00
19,100.0	90.00	179.37	11,442.0	-7,174.3	-1.8	7,174.3	0.00	0.00	0.00
19,200.0	90.00	179.37	11,442.0	-7,274.3	-0.7	7,274.2	0.00	0.00	0.00
19,300.0	90.00	179.37	11,442.0	-7,374.3	0.4	7,374.2	0.00	0.00	0.00
19,400.0	90.00	179.37	11,442.0	-7,474.3	1.5	7,474.2	0.00	0.00	0.00
19,500.0	90.00	179.37	11,442.0	-7,574.3	2.6	7,574.2	0.00	0.00	0.00
19,600.0	90.00	179.37	11,442.0	-7,674.3	3.7	7,674.2	0.00	0.00	0.00
19,700.0	90.00	179.37	11,442.0	-7,774.3	4.7	7,774.2	0.00	0.00	0.00
19,800.0	90.00	179.37	11,442.0	-7,874.2	5.8	7,874.2	0.00	0.00	0.00
19,900.0	90.00	179.37	11,442.0	-7,974.2	6.9	7,974.2	0.00	0.00	0.00
20,000.0	90.00	179.37	11,442.0	-8,074.2	8.0	8,074.2	0.00	0.00	0.00
20,100.0	90.00	179.37	11,442.0	-8,174.2	9.1	8,174.2	0.00	0.00	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Holly 091H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 3029.0usft
Project:	RB/HOL	MD Reference:	KB @ 3029.0usft
Site:	RB/HOL #2S	North Reference:	Grid
Well:	Holly 091H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
20,200.0	90.00	179.37	11,442.0	-8,274.2	10.2	8,274.2	0.00	0.00	0.00
20,300.0	90.00	179.37	11,442.0	-8,374.2	11.3	8,374.2	0.00	0.00	0.00
20,400.0	90.00	179.37	11,442.0	-8,474.2	12.4	8,474.2	0.00	0.00	0.00
20,500.0	90.00	179.37	11,442.0	-8,574.2	13.5	8,574.2	0.00	0.00	0.00
20,600.0	90.00	179.37	11,442.0	-8,674.2	14.6	8,674.2	0.00	0.00	0.00
20,700.0	90.00	179.37	11,442.0	-8,774.2	15.7	8,774.2	0.00	0.00	0.00
20,800.0	90.00	179.37	11,442.0	-8,874.2	16.7	8,874.2	0.00	0.00	0.00
20,900.0	90.00	179.37	11,442.0	-8,974.2	17.8	8,974.2	0.00	0.00	0.00
21,000.0	90.00	179.37	11,442.0	-9,074.2	18.9	9,074.2	0.00	0.00	0.00
21,100.0	90.00	179.37	11,442.0	-9,174.2	20.0	9,174.2	0.00	0.00	0.00
21,200.0	90.00	179.37	11,442.0	-9,274.2	21.1	9,274.2	0.00	0.00	0.00
21,300.0	90.00	179.37	11,442.0	-9,374.2	22.2	9,374.2	0.00	0.00	0.00
21,400.0	90.00	179.37	11,442.0	-9,474.2	23.3	9,474.2	0.00	0.00	0.00
21,500.0	90.00	179.37	11,442.0	-9,574.1	24.4	9,574.2	0.00	0.00	0.00
21,600.0	90.00	179.37	11,442.0	-9,674.1	25.5	9,674.2	0.00	0.00	0.00
21,700.0	90.00	179.37	11,442.0	-9,774.1	26.6	9,774.2	0.00	0.00	0.00
21,800.0	90.00	179.37	11,442.0	-9,874.1	27.7	9,874.2	0.00	0.00	0.00
21,900.0	90.00	179.37	11,442.0	-9,974.1	28.7	9,974.2	0.00	0.00	0.00
22,000.0	90.00	179.37	11,442.0	-10,074.1	29.8	10,074.2	0.00	0.00	0.00
22,100.0	90.00	179.37	11,442.0	-10,174.1	30.9	10,174.2	0.00	0.00	0.00
22,159.2	90.00	179.37	11,442.0	-10,233.3	31.6	10,233.3	0.00	0.00	0.00
Hol091 LTP									
22,200.0	90.00	179.37	11,442.0	-10,274.1	32.0	10,274.2	0.00	0.00	0.00
22,209.2	90.00	179.37	11,442.0	-10,283.3	32.1	10,283.3	0.00	0.00	0.00
Hol091 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
Hol091 KOP - plan hits target center - Point	0.00	0.00	10,950.0	650.6	34.1	394,661.40	863,505.35	32° 4' 50.642 N	103° 17' 35.357 W
Hol091 BHL - plan hits target center - Point	0.00	0.00	11,442.0	-10,283.3	32.1	383,727.53	863,503.37	32° 3' 2.455 N	103° 17' 36.605 W
Hol091 FTP - plan hits target center - Point	0.00	0.00	11,442.0	129.2	-81.5	394,140.03	863,389.78	32° 4' 45.494 N	103° 17' 36.759 W
Hol091 LTP - plan hits target center - Point	0.00	0.01	11,442.0	-10,233.3	31.6	383,777.55	863,502.83	32° 3' 2.950 N	103° 17' 36.605 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
16,976.0	11,442.0	-5,050.4	-25.0	Hol091 into NMNM137473

AMEREDEV

Ameredev Operating, LLC.

RB/HOL

RB/HOL #2S

Holly 091H

Wellbore #1

Plan: Design #1

Lease Penetration Section Line Foot

22 February, 2019

Company: Ameredev Operating, LLC.
 Project: RB/HOL
 Site: RB/HOL #2S
 Well: Holly 091H
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference: Well Holly 091H
 TVD Reference: KB @ 3029.0usft
 MD Reference: KB @ 3029.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM5000

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

Site	RB/HOL #2S		
Site Position:		Northing:	394,010.44 usft
From:	Lat/Long	Easting:	863,431.24 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"
		Latitude:	32° 4' 44.208 N
		Longitude:	103° 17' 36.291 W
		Grid Convergence:	0.55 °

Well	Holly 091H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 4' 44.208 N
		Longitude:	103° 17' 35.826 W
		Ground Level:	3,002.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	12/12/2018	6.65
			Dip Angle
			(°)
			Field Strength
			(nT)
			47,730.96564239

Design	Design #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			179.82

Survey Tool Program	Date 2/22/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
0.0	22,209.2	Design #1 (Wellbore #1)	MWD
			Description
			OWSG MWD - Standard

Planned Survey							
MD	Inc	Azi (azimuth)	TVD	+FSL/-FNL	+FWL/-FEL	Latitude	Longitude
(usft)	(°)	(°)	(usft)	(usft)	(usft)		
0.0	0.00	0.00	0.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
100.0	0.00	0.00	100.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
200.0	0.00	0.00	200.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
300.0	0.00	0.00	300.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
400.0	0.00	0.00	400.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
500.0	0.00	0.00	500.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
600.0	0.00	0.00	600.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
700.0	0.00	0.00	700.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
800.0	0.00	0.00	800.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
900.0	0.00	0.00	900.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
1,000.0	0.00	0.00	1,000.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
1,100.0	0.00	0.00	1,100.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W

Company: Ameredev Operating, LLC.
Project: RB/HOL
Site: RB/HOL #2S
Well: Holly 091H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Holly 091H
TVD Reference: KB @ 3029.0usft
MD Reference: KB @ 3029.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
1,300.0	0.00	0.00	1,300.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
1,400.0	0.00	0.00	1,400.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
1,500.0	0.00	0.00	1,500.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
1,600.0	0.00	0.00	1,600.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
1,700.0	0.00	0.00	1,700.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
1,800.0	0.00	0.00	1,800.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
1,900.0	0.00	0.00	1,900.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
2,000.0	0.00	0.00	2,000.0	-229.6	740.0	32° 4' 44.208 N	103° 17' 35.826 W
2,100.0	2.00	3.00	2,100.0	-227.9	740.1	32° 4' 44.225 N	103° 17' 35.825 W
2,200.0	4.00	3.00	2,199.8	-222.6	740.4	32° 4' 44.277 N	103° 17' 35.821 W
2,300.0	6.00	3.00	2,299.5	-213.9	740.8	32° 4' 44.363 N	103° 17' 35.815 W
2,400.0	6.00	3.00	2,398.9	-203.5	741.4	32° 4' 44.466 N	103° 17' 35.808 W
2,500.0	6.00	3.00	2,498.4	-193.1	741.9	32° 4' 44.569 N	103° 17' 35.800 W
2,600.0	6.00	3.00	2,597.8	-182.6	742.5	32° 4' 44.672 N	103° 17' 35.792 W
2,700.0	6.00	3.00	2,697.3	-172.2	743.0	32° 4' 44.776 N	103° 17' 35.785 W
2,800.0	6.00	3.00	2,796.7	-161.7	743.6	32° 4' 44.879 N	103° 17' 35.777 W
2,900.0	6.00	3.00	2,896.2	-151.3	744.1	32° 4' 44.982 N	103° 17' 35.770 W
3,000.0	6.00	3.00	2,995.6	-140.9	744.7	32° 4' 45.085 N	103° 17' 35.762 W
3,100.0	6.00	3.00	3,095.1	-130.4	745.2	32° 4' 45.189 N	103° 17' 35.755 W
3,200.0	6.00	3.00	3,194.5	-120.0	745.8	32° 4' 45.292 N	103° 17' 35.747 W
3,300.0	6.00	3.00	3,294.0	-109.6	746.3	32° 4' 45.395 N	103° 17' 35.740 W
3,400.0	6.00	3.00	3,393.4	-99.1	746.9	32° 4' 45.498 N	103° 17' 35.732 W
3,500.0	6.00	3.00	3,492.9	-88.7	747.4	32° 4' 45.602 N	103° 17' 35.725 W
3,600.0	6.00	3.00	3,592.3	-78.2	748.0	32° 4' 45.705 N	103° 17' 35.717 W
3,700.0	6.00	3.00	3,691.8	-67.8	748.5	32° 4' 45.808 N	103° 17' 35.710 W
3,800.0	6.00	3.00	3,791.2	-57.4	749.0	32° 4' 45.911 N	103° 17' 35.702 W
3,900.0	6.00	3.00	3,890.7	-46.9	749.6	32° 4' 46.014 N	103° 17' 35.695 W
4,000.0	6.00	3.00	3,990.1	-36.5	750.1	32° 4' 46.118 N	103° 17' 35.687 W
4,100.0	6.00	3.00	4,089.6	-26.0	750.7	32° 4' 46.221 N	103° 17' 35.680 W
4,200.0	6.00	3.00	4,189.0	-15.6	751.2	32° 4' 46.324 N	103° 17' 35.672 W
4,300.0	6.00	3.00	4,288.5	-5.2	751.8	32° 4' 46.427 N	103° 17' 35.665 W
4,400.0	6.00	3.00	4,387.9	5.3	752.3	32° 4' 46.531 N	103° 17' 35.657 W
4,500.0	6.00	3.00	4,487.4	15.7	752.9	32° 4' 46.634 N	103° 17' 35.649 W
4,600.0	6.00	3.00	4,586.9	26.1	753.4	32° 4' 46.737 N	103° 17' 35.642 W
4,700.0	6.00	3.00	4,686.3	36.6	754.0	32° 4' 46.840 N	103° 17' 35.634 W
4,800.0	6.00	3.00	4,785.8	47.0	754.5	32° 4' 46.944 N	103° 17' 35.627 W
4,900.0	6.00	3.00	4,885.2	57.5	755.1	32° 4' 47.047 N	103° 17' 35.619 W
5,000.0	6.00	3.00	4,984.7	67.9	755.6	32° 4' 47.150 N	103° 17' 35.612 W
5,100.0	6.00	3.00	5,084.1	78.3	756.2	32° 4' 47.253 N	103° 17' 35.604 W
5,200.0	6.00	3.00	5,183.6	88.8	756.7	32° 4' 47.357 N	103° 17' 35.597 W
5,300.0	6.00	3.00	5,283.0	99.2	757.3	32° 4' 47.460 N	103° 17' 35.589 W
5,400.0	6.00	3.00	5,382.5	109.7	757.8	32° 4' 47.563 N	103° 17' 35.582 W
5,500.0	6.00	3.00	5,481.9	120.1	758.3	32° 4' 47.666 N	103° 17' 35.574 W

Company: Ameredev Operating, LLC.
Project: RB/HOL
Site: RB/HOL #2S
Well: Holly 091H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well Holly 091H
 KB @ 3029.0usft
 KB @ 3029.0usft
 Grid
 Minimum Curvature
 EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
5,600.0	6.00	3.00	5,581.4	130.5	758.9	32° 4' 47.769 N	103° 17' 35.567 W
5,700.0	6.00	3.00	5,680.8	141.0	759.4	32° 4' 47.873 N	103° 17' 35.559 W
5,800.0	6.00	3.00	5,780.3	151.4	760.0	32° 4' 47.976 N	103° 17' 35.552 W
5,900.0	6.00	3.00	5,879.7	161.8	760.5	32° 4' 48.079 N	103° 17' 35.544 W
6,000.0	6.00	3.00	5,979.2	172.3	761.1	32° 4' 48.182 N	103° 17' 35.537 W
6,100.0	6.00	3.00	6,078.6	182.7	761.6	32° 4' 48.286 N	103° 17' 35.529 W
6,200.0	6.00	3.00	6,178.1	193.2	762.2	32° 4' 48.389 N	103° 17' 35.521 W
6,300.0	6.00	3.00	6,277.5	203.6	762.7	32° 4' 48.492 N	103° 17' 35.514 W
6,400.0	6.00	3.00	6,377.0	214.0	763.3	32° 4' 48.595 N	103° 17' 35.506 W
6,500.0	6.00	3.00	6,476.4	224.5	763.8	32° 4' 48.699 N	103° 17' 35.499 W
6,600.0	6.00	3.00	6,575.9	234.9	764.4	32° 4' 48.802 N	103° 17' 35.491 W
6,700.0	6.00	3.00	6,675.3	245.4	764.9	32° 4' 48.905 N	103° 17' 35.484 W
6,724.8	6.00	3.00	6,700.0	247.9	765.0	32° 4' 48.931 N	103° 17' 35.482 W
6,800.0	4.50	3.00	6,774.9	254.8	765.4	32° 4' 48.999 N	103° 17' 35.477 W
6,900.0	2.50	3.00	6,874.7	260.9	765.7	32° 4' 49.059 N	103° 17' 35.473 W
7,000.0	0.50	3.00	6,974.7	263.5	765.9	32° 4' 49.085 N	103° 17' 35.471 W
7,024.8	0.00	0.00	6,999.5	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
7,100.0	0.00	0.00	7,074.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
7,200.0	0.00	0.00	7,174.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
7,300.0	0.00	0.00	7,274.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
7,400.0	0.00	0.00	7,374.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
7,500.0	0.00	0.00	7,474.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
7,600.0	0.00	0.00	7,574.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
7,700.0	0.00	0.00	7,674.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
7,800.0	0.00	0.00	7,774.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
7,900.0	0.00	0.00	7,874.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
8,000.0	0.00	0.00	7,974.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
8,100.0	0.00	0.00	8,074.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
8,200.0	0.00	0.00	8,174.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
8,300.0	0.00	0.00	8,274.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
8,400.0	0.00	0.00	8,374.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
8,500.0	0.00	0.00	8,474.7	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
8,525.3	0.00	0.00	8,500.0	263.6	765.9	32° 4' 49.086 N	103° 17' 35.471 W
8,600.0	1.49	3.00	8,574.7	264.6	765.9	32° 4' 49.095 N	103° 17' 35.470 W
8,700.0	3.49	3.00	8,674.6	268.9	766.1	32° 4' 49.138 N	103° 17' 35.467 W
8,800.0	5.49	3.00	8,774.2	276.8	766.6	32° 4' 49.216 N	103° 17' 35.461 W
8,825.3	6.00	3.00	8,799.5	279.3	766.7	32° 4' 49.241 N	103° 17' 35.459 W
8,900.0	6.00	3.00	8,873.7	287.1	767.1	32° 4' 49.318 N	103° 17' 35.454 W
9,000.0	6.00	3.00	8,973.2	297.5	767.6	32° 4' 49.421 N	103° 17' 35.446 W
9,100.0	6.00	3.00	9,072.6	308.0	768.2	32° 4' 49.524 N	103° 17' 35.439 W
9,200.0	6.00	3.00	9,172.1	318.4	768.7	32° 4' 49.627 N	103° 17' 35.431 W
9,300.0	6.00	3.00	9,271.5	328.8	769.3	32° 4' 49.731 N	103° 17' 35.424 W
9,400.0	6.00	3.00	9,371.0	339.3	769.8	32° 4' 49.834 N	103° 17' 35.416 W
9,500.0	6.00	3.00	9,470.4	349.7	770.4	32° 4' 49.937 N	103° 17' 35.409 W

Company: Ameredev Operating, LLC.
 Project: RB/HOL
 Site: RB/HOL #2S
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 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference: Well Holly 091H
 TVD Reference: KB @ 3029.0usft
 MD Reference: KB @ 3029.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
9,600.0	6.00	3.00	9,569.9	360.1	770.9	32° 4' 50.040 N	103° 17' 35.401 W
9,700.0	6.00	3.00	9,669.3	370.6	771.5	32° 4' 50.144 N	103° 17' 35.394 W
9,800.0	6.00	3.00	9,768.8	381.0	772.0	32° 4' 50.247 N	103° 17' 35.386 W
9,900.0	6.00	3.00	9,868.2	391.5	772.6	32° 4' 50.350 N	103° 17' 35.378 W
10,000.0	6.00	3.00	9,967.7	401.9	773.1	32° 4' 50.453 N	103° 17' 35.371 W
10,032.5	6.00	3.00	10,000.0	405.3	773.3	32° 4' 50.487 N	103° 17' 35.369 W
10,100.0	4.65	3.00	10,067.2	411.6	773.6	32° 4' 50.549 N	103° 17' 35.364 W
10,200.0	2.65	3.00	10,167.0	417.9	774.0	32° 4' 50.612 N	103° 17' 35.359 W
10,300.0	0.65	3.00	10,267.0	420.8	774.1	32° 4' 50.640 N	103° 17' 35.357 W
10,332.5	0.00	0.00	10,299.5	421.0	774.1	32° 4' 50.642 N	103° 17' 35.357 W
10,400.0	0.00	0.00	10,367.0	421.0	774.1	32° 4' 50.642 N	103° 17' 35.357 W
10,500.0	0.00	0.00	10,467.0	421.0	774.1	32° 4' 50.642 N	103° 17' 35.357 W
10,600.0	0.00	0.00	10,567.0	421.0	774.1	32° 4' 50.642 N	103° 17' 35.357 W
10,700.0	0.00	0.00	10,667.0	421.0	774.1	32° 4' 50.642 N	103° 17' 35.357 W
10,800.0	0.00	0.00	10,767.0	421.0	774.1	32° 4' 50.642 N	103° 17' 35.357 W
10,900.0	0.00	0.00	10,867.0	421.0	774.1	32° 4' 50.642 N	103° 17' 35.357 W
10,983.0	0.00	0.00	10,950.0	421.0	774.1	32° 4' 50.642 N	103° 17' 35.357 W
Hol091 KOP							
11,000.0	2.01	195.46	10,967.0	420.7	774.0	32° 4' 50.639 N	103° 17' 35.358 W
11,100.0	13.84	195.46	11,065.8	407.4	770.4	32° 4' 50.508 N	103° 17' 35.402 W
11,200.0	25.68	195.46	11,159.8	374.9	761.4	32° 4' 50.187 N	103° 17' 35.510 W
11,300.0	37.52	195.46	11,244.8	324.5	747.4	32° 4' 49.690 N	103° 17' 35.678 W
11,400.0	49.35	195.46	11,317.3	258.3	729.1	32° 4' 49.037 N	103° 17' 35.898 W
11,500.0	61.19	195.46	11,374.1	179.3	707.3	32° 4' 48.256 N	103° 17' 36.161 W
11,599.7	72.99	195.46	11,412.9	90.9	682.8	32° 4' 47.385 N	103° 17' 36.455 W
11,600.0	73.02	195.43	11,413.0	90.6	682.7	32° 4' 47.382 N	103° 17' 36.456 W
11,700.0	81.60	187.06	11,435.0	-4.9	663.9	32° 4' 46.438 N	103° 17' 36.686 W
11,796.1	90.00	179.37	11,442.0	-100.4	658.5	32° 4' 45.494 N	103° 17' 36.759 W
Hol091 FTP							
11,800.0	90.00	179.37	11,442.0	-104.3	658.6	32° 4' 45.455 N	103° 17' 36.759 W
11,900.0	90.00	179.37	11,442.0	-204.3	659.7	32° 4' 44.466 N	103° 17' 36.757 W
12,000.0	90.00	179.37	11,442.0	-304.3	660.8	32° 4' 43.476 N	103° 17' 36.756 W
12,100.0	90.00	179.37	11,442.0	-404.3	661.9	32° 4' 42.487 N	103° 17' 36.754 W
12,200.0	90.00	179.37	11,442.0	-504.3	662.9	32° 4' 41.497 N	103° 17' 36.753 W
12,300.0	90.00	179.37	11,442.0	-604.3	664.0	32° 4' 40.508 N	103° 17' 36.751 W
12,400.0	90.00	179.37	11,442.0	-704.3	665.1	32° 4' 39.518 N	103° 17' 36.750 W
12,500.0	90.00	179.37	11,442.0	-804.3	666.2	32° 4' 38.528 N	103° 17' 36.748 W
12,600.0	90.00	179.37	11,442.0	-904.3	667.3	32° 4' 37.539 N	103° 17' 36.747 W
12,700.0	90.00	179.37	11,442.0	-1,004.3	668.4	32° 4' 36.549 N	103° 17' 36.745 W
12,800.0	90.00	179.37	11,442.0	-1,104.3	669.5	32° 4' 35.560 N	103° 17' 36.744 W
12,900.0	90.00	179.37	11,442.0	-1,204.3	670.6	32° 4' 34.570 N	103° 17' 36.742 W
13,000.0	90.00	179.37	11,442.0	-1,304.3	671.7	32° 4' 33.581 N	103° 17' 36.741 W
13,100.0	90.00	179.37	11,442.0	-1,404.3	672.8	32° 4' 32.591 N	103° 17' 36.740 W
13,200.0	90.00	179.37	11,442.0	-1,504.3	673.9	32° 4' 31.602 N	103° 17' 36.738 W
13,300.0	90.00	179.37	11,442.0	-1,604.3	674.9	32° 4' 30.612 N	103° 17' 36.737 W

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 Well: Holly 091H
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Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Database:

Well Holly 091H
 KB @ 3029.0usft
 KB @ 3029.0usft
 Grid
 Minimum Curvature
 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	11,442.0	-1,704.2	676.0	32° 4' 29.623 N	103° 17' 36.735 W
13,500.0	90.00	179.37	11,442.0	-1,804.2	677.1	32° 4' 28.633 N	103° 17' 36.734 W
13,600.0	90.00	179.37	11,442.0	-1,904.2	678.2	32° 4' 27.644 N	103° 17' 36.732 W
13,700.0	90.00	179.37	11,442.0	-2,004.2	679.3	32° 4' 26.654 N	103° 17' 36.731 W
13,800.0	90.00	179.37	11,442.0	-2,104.2	680.4	32° 4' 25.665 N	103° 17' 36.729 W
13,900.0	90.00	179.37	11,442.0	-2,204.2	681.5	32° 4' 24.675 N	103° 17' 36.728 W
14,000.0	90.00	179.37	11,442.0	-2,304.2	682.6	32° 4' 23.686 N	103° 17' 36.726 W
14,100.0	90.00	179.37	11,442.0	-2,404.2	683.7	32° 4' 22.696 N	103° 17' 36.725 W
14,200.0	90.00	179.37	11,442.0	-2,504.2	684.8	32° 4' 21.707 N	103° 17' 36.723 W
14,300.0	90.00	179.37	11,442.0	-2,604.2	685.9	32° 4' 20.717 N	103° 17' 36.722 W
14,400.0	90.00	179.37	11,442.0	-2,704.2	686.9	32° 4' 19.728 N	103° 17' 36.720 W
14,500.0	90.00	179.37	11,442.0	-2,804.2	688.0	32° 4' 18.738 N	103° 17' 36.719 W
14,600.0	90.00	179.37	11,442.0	-2,904.2	689.1	32° 4' 17.749 N	103° 17' 36.717 W
14,700.0	90.00	179.37	11,442.0	-3,004.2	690.2	32° 4' 16.759 N	103° 17' 36.716 W
14,800.0	90.00	179.37	11,442.0	-3,104.2	691.3	32° 4' 15.770 N	103° 17' 36.714 W
14,900.0	90.00	179.37	11,442.0	-3,204.2	692.4	32° 4' 14.780 N	103° 17' 36.713 W
15,000.0	90.00	179.37	11,442.0	-3,304.1	693.5	32° 4' 13.791 N	103° 17' 36.711 W
15,100.0	90.00	179.37	11,442.0	-3,404.1	694.6	32° 4' 12.801 N	103° 17' 36.710 W
15,200.0	90.00	179.37	11,442.0	-3,504.1	695.7	32° 4' 11.812 N	103° 17' 36.708 W
15,300.0	90.00	179.37	11,442.0	-3,604.1	696.8	32° 4' 10.822 N	103° 17' 36.707 W
15,400.0	90.00	179.37	11,442.0	-3,704.1	697.9	32° 4' 9.833 N	103° 17' 36.706 W
15,500.0	90.00	179.37	11,442.0	-3,804.1	698.9	32° 4' 8.843 N	103° 17' 36.704 W
15,600.0	90.00	179.37	11,442.0	-3,904.1	700.0	32° 4' 7.854 N	103° 17' 36.703 W
15,700.0	90.00	179.37	11,442.0	-4,004.1	701.1	32° 4' 6.864 N	103° 17' 36.701 W
15,800.0	90.00	179.37	11,442.0	-4,104.1	702.2	32° 4' 5.875 N	103° 17' 36.700 W
15,900.0	90.00	179.37	11,442.0	-4,204.1	703.3	32° 4' 4.885 N	103° 17' 36.698 W
16,000.0	90.00	179.37	11,442.0	-4,304.1	704.4	32° 4' 3.896 N	103° 17' 36.697 W
16,100.0	90.00	179.37	11,442.0	-4,404.1	705.5	32° 4' 2.906 N	103° 17' 36.695 W
16,200.0	90.00	179.37	11,442.0	-4,504.1	706.6	32° 4' 1.917 N	103° 17' 36.694 W
16,300.0	90.00	179.37	11,442.0	-4,604.1	707.7	32° 4' 0.927 N	103° 17' 36.692 W
16,400.0	90.00	179.37	11,442.0	-4,704.1	708.8	32° 3' 59.938 N	103° 17' 36.691 W
16,500.0	90.00	179.37	11,442.0	-4,804.1	709.9	32° 3' 58.948 N	103° 17' 36.689 W
16,600.0	90.00	179.37	11,442.0	-4,904.1	710.9	32° 3' 57.959 N	103° 17' 36.688 W
16,700.0	90.00	179.37	11,442.0	-5,004.0	712.0	32° 3' 56.969 N	103° 17' 36.686 W
16,800.0	90.00	179.37	11,442.0	-5,104.0	713.1	32° 3' 55.979 N	103° 17' 36.685 W
16,900.0	90.00	179.37	11,442.0	-5,204.0	714.2	32° 3' 54.990 N	103° 17' 36.683 W
16,976.0	90.00	179.37	11,442.0	-5,280.0	715.0	32° 3' 54.238 N	103° 17' 36.682 W
Hol091 into NMNM137473							
17,000.0	90.00	179.37	11,442.0	-5,304.0	715.3	32° 3' 54.000 N	103° 17' 36.682 W
17,100.0	90.00	179.37	11,442.0	-5,404.0	716.4	32° 3' 53.011 N	103° 17' 36.680 W
17,200.0	90.00	179.37	11,442.0	-5,504.0	717.5	32° 3' 52.021 N	103° 17' 36.679 W
17,300.0	90.00	179.37	11,442.0	-5,604.0	718.6	32° 3' 51.032 N	103° 17' 36.677 W
17,400.0	90.00	179.37	11,442.0	-5,704.0	719.7	32° 3' 50.042 N	103° 17' 36.676 W
17,500.0	90.00	179.37	11,442.0	-5,804.0	720.8	32° 3' 49.053 N	103° 17' 36.674 W

Company: Ameredev Operating, LLC.
 Project: RB/HOL
 Site: RB/HOL #2S
 Well: Holly 091H
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Database:

Well Holly 091H
 KB @ 3029.0usft
 KB @ 3029.0usft
 Grid
 Minimum Curvature
 EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
17,600.0	90.00	179.37	11,442.0	-5,904.0	721.9	32° 3' 48.063 N	103° 17' 36.673 W
17,700.0	90.00	179.37	11,442.0	-6,004.0	722.9	32° 3' 47.074 N	103° 17' 36.672 W
17,800.0	90.00	179.37	11,442.0	-6,104.0	724.0	32° 3' 46.084 N	103° 17' 36.670 W
17,900.0	90.00	179.37	11,442.0	-6,204.0	725.1	32° 3' 45.095 N	103° 17' 36.669 W
18,000.0	90.00	179.37	11,442.0	-6,304.0	726.2	32° 3' 44.105 N	103° 17' 36.667 W
18,100.0	90.00	179.37	11,442.0	-6,404.0	727.3	32° 3' 43.116 N	103° 17' 36.666 W
18,200.0	90.00	179.37	11,442.0	-6,504.0	728.4	32° 3' 42.126 N	103° 17' 36.664 W
18,300.0	90.00	179.37	11,442.0	-6,604.0	729.5	32° 3' 41.137 N	103° 17' 36.663 W
18,400.0	90.00	179.37	11,442.0	-6,703.9	730.6	32° 3' 40.147 N	103° 17' 36.661 W
18,500.0	90.00	179.37	11,442.0	-6,803.9	731.7	32° 3' 39.158 N	103° 17' 36.660 W
18,600.0	90.00	179.37	11,442.0	-6,903.9	732.8	32° 3' 38.168 N	103° 17' 36.658 W
18,700.0	90.00	179.37	11,442.0	-7,003.9	733.9	32° 3' 37.179 N	103° 17' 36.657 W
18,800.0	90.00	179.37	11,442.0	-7,103.9	734.9	32° 3' 36.189 N	103° 17' 36.655 W
18,900.0	90.00	179.37	11,442.0	-7,203.9	736.0	32° 3' 35.200 N	103° 17' 36.654 W
19,000.0	90.00	179.37	11,442.0	-7,303.9	737.1	32° 3' 34.210 N	103° 17' 36.652 W
19,100.0	90.00	179.37	11,442.0	-7,403.9	738.2	32° 3' 33.221 N	103° 17' 36.651 W
19,200.0	90.00	179.37	11,442.0	-7,503.9	739.3	32° 3' 32.231 N	103° 17' 36.649 W
19,300.0	90.00	179.37	11,442.0	-7,603.9	740.4	32° 3' 31.242 N	103° 17' 36.648 W
19,400.0	90.00	179.37	11,442.0	-7,703.9	741.5	32° 3' 30.252 N	103° 17' 36.646 W
19,500.0	90.00	179.37	11,442.0	-7,803.9	742.6	32° 3' 29.263 N	103° 17' 36.645 W
19,600.0	90.00	179.37	11,442.0	-7,903.9	743.7	32° 3' 28.273 N	103° 17' 36.643 W
19,700.0	90.00	179.37	11,442.0	-8,003.9	744.8	32° 3' 27.284 N	103° 17' 36.642 W
19,800.0	90.00	179.37	11,442.0	-8,103.9	745.9	32° 3' 26.294 N	103° 17' 36.640 W
19,900.0	90.00	179.37	11,442.0	-8,203.9	746.9	32° 3' 25.305 N	103° 17' 36.639 W
20,000.0	90.00	179.37	11,442.0	-8,303.9	748.0	32° 3' 24.315 N	103° 17' 36.637 W
20,100.0	90.00	179.37	11,442.0	-8,403.8	749.1	32° 3' 23.326 N	103° 17' 36.636 W
20,200.0	90.00	179.37	11,442.0	-8,503.8	750.2	32° 3' 22.336 N	103° 17' 36.634 W
20,300.0	90.00	179.37	11,442.0	-8,603.8	751.3	32° 3' 21.347 N	103° 17' 36.633 W
20,400.0	90.00	179.37	11,442.0	-8,703.8	752.4	32° 3' 20.357 N	103° 17' 36.632 W
20,500.0	90.00	179.37	11,442.0	-8,803.8	753.5	32° 3' 19.367 N	103° 17' 36.630 W
20,600.0	90.00	179.37	11,442.0	-8,903.8	754.6	32° 3' 18.378 N	103° 17' 36.629 W
20,700.0	90.00	179.37	11,442.0	-9,003.8	755.7	32° 3' 17.388 N	103° 17' 36.627 W
20,800.0	90.00	179.37	11,442.0	-9,103.8	756.8	32° 3' 16.399 N	103° 17' 36.626 W
20,900.0	90.00	179.37	11,442.0	-9,203.8	757.9	32° 3' 15.409 N	103° 17' 36.624 W
21,000.0	90.00	179.37	11,442.0	-9,303.8	758.9	32° 3' 14.420 N	103° 17' 36.623 W
21,100.0	90.00	179.37	11,442.0	-9,403.8	760.0	32° 3' 13.430 N	103° 17' 36.621 W
21,200.0	90.00	179.37	11,442.0	-9,503.8	761.1	32° 3' 12.441 N	103° 17' 36.620 W
21,300.0	90.00	179.37	11,442.0	-9,603.8	762.2	32° 3' 11.451 N	103° 17' 36.618 W
21,400.0	90.00	179.37	11,442.0	-9,703.8	763.3	32° 3' 10.462 N	103° 17' 36.617 W
21,500.0	90.00	179.37	11,442.0	-9,803.8	764.4	32° 3' 9.472 N	103° 17' 36.615 W
21,600.0	90.00	179.37	11,442.0	-9,903.8	765.5	32° 3' 8.483 N	103° 17' 36.614 W
21,700.0	90.00	179.37	11,442.0	-10,003.8	766.6	32° 3' 7.493 N	103° 17' 36.612 W
21,800.0	90.00	179.37	11,442.0	-10,103.7	767.7	32° 3' 6.504 N	103° 17' 36.611 W
21,900.0	90.00	179.37	11,442.0	-10,203.7	768.8	32° 3' 5.514 N	103° 17' 36.609 W

Company: Ameredev Operating, LLC.
Project: RB/HOL
Site: RB/HOL #2S
Well: Holly 091H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Holly 091H
TVD Reference: KB @ 3029.0usft
MD Reference: KB @ 3029.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
22,000.0	90.00	179.37	11,442.0	-10,303.7	769.9	32° 3' 4.525 N	103° 17' 36.608 W
22,100.0	90.00	179.37	11,442.0	-10,403.7	770.9	32° 3' 3.535 N	103° 17' 36.606 W
22,159.2	90.00	179.37	11,442.0	-10,462.9	771.6	32° 3' 2.950 N	103° 17' 36.605 W
Hol091 LTP							
22,200.0	90.00	179.37	11,442.0	-10,503.7	772.0	32° 3' 2.546 N	103° 17' 36.605 W
22,209.2	90.00	179.37	11,442.0	-10,512.9	772.1	32° 3' 2.455 N	103° 17' 36.605 W
Hol091 BHL							

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
16,976.0	11,442.0	-5,050.4	-25.0	Hol091 into NMNM137473

Checked By: _____ Approved By: _____ Date: _____



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

PWD Data Report

12/17/2019

APD ID: 10400042565

Submission Date: 06/06/2019

Operator Name: AMEREDEV OPERATING LLC

Well Name: HOLLY FED COM 26 36 05

Well Number: 091H

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? NO

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:

Describe 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: HOLLY FED COM 26 36 05

Well Number: 091H

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? NO

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:

Describe 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: HOLLY FED COM 26 36 05

Well Number: 091H

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? NO

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? NO

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? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Operator Name: AMEREDEV OPERATING LLC

Well Name: HOLLY FED COM 26 36 05

Well Number: 091H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:



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

Bond Info Data Report

12/17/2019

APD ID: 10400042565

Submission Date: 06/06/2019

Operator Name: AMEREDEV OPERATING LLC

Well Name: HOLLY FED COM 26 36 05

Well Number: 091H

Well Type: OIL WELL

Well Work Type: Drill

[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: