

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

Form C-101  
August 1, 2011

Permit 312335

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

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

1. Operator Name and Address AMEREDEV OPERATING, LLC 2901 Via Fortuna Austin, TX 78746		2. OGRID Number 372224
		3. API Number 30-025-49931
4. Property Code 331807	5. Property Name AZALEA 26 36 28 STATE COM	6. Well No. 104H

**7. Surface Location**

UL - Lot C	Section 28	Township 26S	Range 36E	Lot Idn C	Feet From 230	N/S Line N	Feet From 2236	E/W Line W	County Lea
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**8. Proposed Bottom Hole Location**

UL - Lot F	Section 33	Township 26S	Range 36E	Lot Idn 3	Feet From 50	N/S Line S	Feet From 2325	E/W Line W	County Lea
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**9. Pool Information**

WC-025 G-09 S263619C;WOLFCAMP	98234
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**Additional Well Information**

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 2913
16. Multiple N	17. Proposed Depth 19651	18. Formation Wolfcamp	19. Contractor	20. Spud Date 4/15/2022
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	68	1894	1542	0
Int1	9.875	7.625	29.7	10968	2408	0
Prod	6.75	5.5	23	19651	1530	0

**Casing/Cement Program: Additional Comments**

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**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5000	2500	TBD

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable.	<b>OIL CONSERVATION DIVISION</b>	
Signature:		
Printed Name: Electronically filed by Christie Hanna	Approved By: Paul F Kautz	
Title:	Title: Geologist	
Email Address: channa@ameredev.com	Approved Date: 3/28/2022	Expiration Date: 3/28/2024
Date: 3/18/2022	Phone: 737-300-4723	Conditions of Approval Attached

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Phone: (505) 476-3460 Fax: (505) 476-3462

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

FORM C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-025-49931</b>	<sup>2</sup> Pool Code <b>98234</b>	<sup>3</sup> Pool Name <b>WC-025 G-09 S263619C; UPR WOLFCAMP</b>
<sup>4</sup> Property Code <b>331807</b>	<sup>5</sup> Property Name <b>AZALEA 26 36 28 STATE COM</b>	
<sup>7</sup> OGRID No. <b>372224</b>	<sup>8</sup> Operator Name <b>AMEREDEV OPERATING, LLC.</b>	<sup>6</sup> Well Number <b>104H</b>
		<sup>9</sup> Elevation <b>2913'</b>

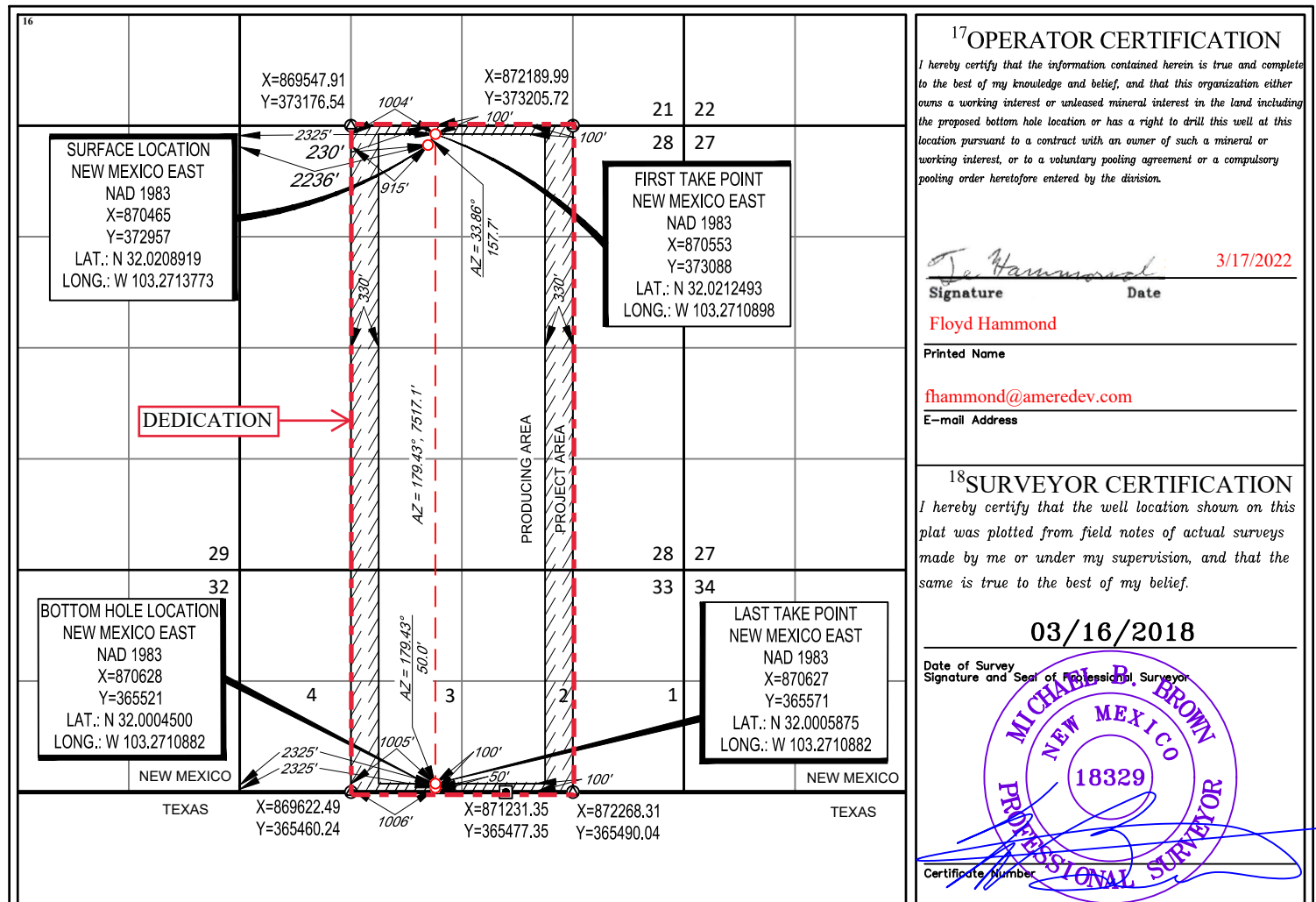
<sup>10</sup>Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>C</b>	<b>28</b>	<b>26-S</b>	<b>36-E</b>	<b>-</b>	<b>230'</b>	<b>NORTH</b>	<b>2236'</b>	<b>WEST</b>	<b>LEA</b>

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>3</b>	<b>33</b>	<b>26-S</b>	<b>36-E</b>	<b>-</b>	<b>50'</b>	<b>SOUTH</b>	<b>2325'</b>	<b>WEST</b>	<b>LEA</b>

<sup>12</sup> Dedicated Acres <b>467.46</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code <b>C</b>	<sup>15</sup> Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



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

Form APD Conditions

Permit 312335

**PERMIT CONDITIONS OF APPROVAL**

Operator Name and Address: AMEREDEV OPERATING, LLC [372224] 2901 Via Fortuna Austin, TX 78746	API Number: 30-025-49931
	Well: AZALEA 26 36 28 STATE COM #104H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	1) SURFACE & INTERMEDIATE CASING - Cement must circulate to surface -- 2) PRODUCTION CASING - Cement must tie back into intermediate casing --
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud



Ameredev II, LLC

## Wellbore Schematic

**Well:** Azalea 26 36 28 State Com 104H  
**SHL:** Sec. 28 26S-36E 230' FNL & 2236' FWL  
**BHL:** Sec. 33 26S-36E 50' FSL & 2325' FWL  
 Lea, NM  
**Wellhead:** A - 13-5/8" 10M x 13-5/8" SOW  
 B - 13-5/8" 10M x 13-5/8" 10M  
 C - 13-5/8" 10M x 13-5/8" 10M  
 Tubing Spool - 7-1/16" 15M x 13-3/8" 10M  
**Xmas Tree:** 2-9/16" 10M  
**Tubing:** 2-7/8" L-80 6.5# 8rd EUE

**Co. Well ID:** xxxxxx  
**AFE No.:** xxxx-xxx  
**API No.:** xxxxxxxxxxxx  
**GL:** 2,913'  
**Field:** Delaware  
**Objective:** Wolfcamp A  
**TVD:** 11,747'  
**MD:** 19,651'  
**Rig:** TBD **KB 27'**  
**E-Mail:** [Wellsite2@ameredev.com](mailto:Wellsite2@ameredev.com)

Hole Size	Formation Tops	Logs	Cement	Mud Weight
17.5"	Rustler 1,769' <b>13.375" 68# J-55 BTC 1,894'</b>	1,542 Sacks TOC 0'	100% Excess	8.4-8.6 ppg WBM
12.25"	Salado 2,162' DV Tool with ACP 3,143' Tansill 3,143' Capitan Reef 3,656' Lamar 4,960' Bell Canyon 5,107' <b>No Casing 5,085'</b>	799 Sacks TOC 0'	50% Excess	7.5-9.4 Diesel Brine Emulsion
9.875"	Brushy Canyon 7,093' Bone Spring Lime 8,066' First Bone Spring 9,582' Second Bone Spring 10,181' Third Bone Spring Upper 10,843' <b>7.625" 29.7# L-80HC FJM 10,968'</b>	2,408 Sacks TOC 0'	50% Excess	
6.75"	Third Bone Spring 11,438' Wolfcamp 11,641' <b>5.5" 23# P-110 USS Eagle SFH 19,651'</b> <b>Target Wolfcamp A 11747 TVD // 19651 MD</b>	1,530 Sacks TOC 0'	25% Excess	10.5-12.5 ppg OBM

## Casing Design and Safety Factor Check

<b>Casing Specifications</b>						
Segment	Hole ID	Depth	OD	Weight	Grade	Coupling
Surface	17.5	1,894'	13.375	68	J-55	BTC
Intermediate	9.875	10,968'	7.625	29.7	HCL-80	FJM
Prod Segment A	6.75	6,825'	5.5	23	P-110	SFH
Prod Segment B	6.75	19,651'	5.5	23	P-110	SFH

<b>Check Surface Casing</b>				
OD Cplg	Body	Joint	Collapse	Burst
<i>inches</i>	<i>1000 lbs</i>	<i>1000 lbs</i>	<i>psi</i>	<i>psi</i>
14.375	1,069	915	4,100	3,450
<b>Safety Factors</b>				
1.56	8.30	7.10	4.84	0.64
<b>Check Intermediate Casing</b>				
OD Cplg	Body	Joint	Collapse	Burst
<i>inches</i>	<i>1000 lbs</i>	<i>1000 lbs</i>	<i>psi</i>	<i>psi</i>
7.625	940	558	6700	9460
<b>Safety Factors</b>				
1.13	2.89	1.96	1.25	1.24
<b>Check Prod Casing, Segment A</b>				
OD Cplg	Body	Joint	Collapse	Burst
<i>inches</i>	<i>1000 lbs</i>	<i>1000 lbs</i>	<i>psi</i>	<i>psi</i>
5.777	728	655	12780	14360
<b>Safety Factors</b>				
0.49	2.69	2.42	2.88	1.88
<b>Check Prod Casing, Segment B</b>				
OD Cplg	Body	Joint	Collapse	Burst
<i>inches</i>	<i>1000 lbs</i>	<i>1000 lbs</i>	<i>psi</i>	<i>psi</i>
5.777	728	655	12780	14360
<b>Safety Factors</b>				
0.49	6.43	5.79	1.67	1.88

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

Submit Electronically  
Via E-permitting

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

### **Section 1 – Plan Description** **Effective May 25, 2021**

**I. Operator:** AMEREDEV OPERATING, LLC **OGRID:** 372224 **Date:** 3/17/2022

**II. Type:** ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: \_\_\_\_\_

**III. Well(s):** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
AZALEA STATE COM 26 36 28 104H		C-28-26-S-36-E	230'FNL & 2236'FWL	+/- 1000	+/- 11000	+/- 2200

**IV. Central Delivery Point Name:** AZALEA CTB [See 19.15.27.9(D)(1) NMAC]

**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
AZALEA STATE COM 26 36 28 104H		5/17/2022	6/17/2022	12/14/2022	1/28/2023	1/30/2023

**VI. Separation Equipment:** ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

**VII. Operational Practices:** ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

**VIII. Best Management Practices:** ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

**Section 2 – Enhanced Plan**  
**EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☐ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

**IX. Anticipated Natural Gas Production:**

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

**X. Natural Gas Gathering System (NGGS):**

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

**XI. Map.** ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII. Line Pressure.** Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:** ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

**Section 3 - Certifications****Effective May 25, 2021**

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

**Well Shut-In.** ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

**Venting and Flaring Plan.** ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

**Section 4 - Notices**

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

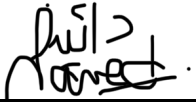
(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.



I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	
Printed Name:	Dayeed Khan
Title:	Engineer
E-mail Address:	dkhan@ameredev.com
Date:	3/17/2022
Phone:	737-300-4735
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>	
Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

## **Natural Gas Management Plan**

### **VI. Separation Equipment: Attach a complete description of how Operator will size separation equipment to optimize gas capture.**

- Separation equipment is sized to allow for retention time and velocity to adequately separate oil, gas, and water at anticipated peak rates.
- All central tank battery equipment is designed to efficiently capture the remaining gas from the liquid phase.
- Valves and meters are designed to service without flow interruption or venting of gas.

### **VII. Operational Practices: Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F 19.15.27.8 NMAC.**

#### **19.15.27.8 (A)**

Ameredev's field operations are designed with the goal of minimizing flaring and preventing venting of natural gas. If capturing the gas is not possible then the gas is combusted/flared using properly sized flares or combustors in accordance with state air permit rules.

#### **19.15.27.8 (B) Venting and Flaring during drilling operations**

- A properly-sized flare stack will be located at a minimum 100' from the nearest surface hole location on the pad.
- All natural gas produced during drilling operations will be flared. Venting will only occur if there is an equipment malfunction and/or to avoid risk of an immediate and substantial adverse impact on safety, public health, or the environment.

#### **19.15.27.8 (C) Venting and Flaring during completions or recompletions operations.**

- During all phases of flowback, wells will flow through a sand separator, or other appropriate flowback separation equipment, and the well stream will be directed to a central tank battery (CTB) through properly sized flowlines
- The CTB will have properly sized separation equipment for maximum anticipated flowrates
- Multiple stages of separation will be used to separate gas from liquids. All gas will be routed to a sales outlet. Fluids will be routed to tanks equipped with a closed loop system that will recover any residual gas from the tanks and route such gas to a sales outlet.

#### **19.15.27.8 (D) Venting and Flaring during production operations.**

- During production, the well stream will be routed to the CTB where multiple stages of separation will separate gas from liquids. All gas will be routed to a sales outlet. Fluids will be routed to tanks with a closed

loop system that will recover any residual gas from the tanks and route such gas to a sales outlet, minimizing tank emissions.

- Flares are equipped with auto-ignition systems and continuous pilot operations.
- Automatic gauging equipment is installed on all tanks.

#### **19.15.27.8 (E) Performance Standards**

- Production equipment will be designed to handle maximum anticipated rates and pressure.
- Automatic gauging equipment is installed on all tanks to minimize venting
- All flared gas will be combusted in a flare stack that is properly sized and designed to ensure proper combustion.
- Flares are equipped with continuous pilots and auto-ignitors along with remote monitoring of the pilot status
- Weekly AVOs and monthly LDAR inspections will be performed on all wells and facilities that produce more than 60 Mcfd.
- Gas/H<sub>2</sub>S detectors will be installed throughout the facilities and wellheads to detect leaks and enable timely repairs.

#### **19.15.27.8 (F) Measurement or estimation of vented and flared natural gas**

- All high pressure flared gas is measured by equipment conforming to API 14.10.
- No meter bypasses are installed.
- When metering is not practical due to low pressure/low rate, the vented or flared volume will be estimated through flare flow curves with the assistance of air emissions consultants, as necessary.

#### **VIII. Best Management Practices: Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.**

- Ameredev will use best management practices to vent as minimally as possible during well intervention operations and downhole well maintenance
- All natural gas is routed into the gas gathering system and directed to one of Ameredev's multiple gas sales outlets.
- All venting events will be recorded and all start-up, shutdown, maintenance logs will be kept for control equipment
- All control equipment will be maintained to provide highest run-time possible
- All procedures are drafted to keep venting and flaring to the absolute minimum



American Resource Development LLC.

## **Ameredev Operating**

**Lea County, NM (N83-NME)**

**Camelia\_Azalea**

**Azalea State Com 26-36-28 104H**

**104H**

**Plan: Baseline Plan #2 - 179.43**

## **Permit Plan**

**16 March, 2022**



American Resource Development LLC.

## Permit Plan

<b>Company:</b>	Ameredev Operating	<b>Local Co-ordinate Reference:</b>	Well Azalea State Com 26-36-28 104H
<b>Project:</b>	Lea County, NM (N83-NME)	<b>TVD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Site:</b>	Camelia_Azalea	<b>MD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Well:</b>	Azalea State Com 26-36-28 104H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	104H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Baseline Plan #2 - 179.43	<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit

<b>Project</b>	Lea County, NM (N83-NME)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

Site		Camelia_Azalea			
Site Position:		Northing:	372,956.73 usft	Latitude:	32.02089190
From:	Lat/Long	Easting:	870,464.84 usft	Longitude:	-103.27137730
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.56 °

Well		Azalea State Com 26-36-28 104H				
Well Position	+N/-S	0.0 usft	Northing:	372,956.73 usft	Latitude:	32.02089190
	+E/-W	0.0 usft	Easting:	870,464.84 usft	Longitude:	-103.27137730
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	2,913.0 usft

<b>Wellbore</b>	104H				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	2/14/2022	6.31	59.74	47,337.71083293

<b>Design</b>	Baseline Plan #2 - 179.43			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	179.43

<b>Survey Tool Program</b>	<b>Date</b>	3/16/2022		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	19,650.6	Baseline Plan #2 - 179.43 (104H)	MWD	OWSG MWD - Standard

<b>Planned Survey</b>							
<b>MD (usft)</b>	<b>Inc (°)</b>	<b>Azi (azimuth) (°)</b>	<b>TVD (usft)</b>	<b>+FSL/-FNL (usft)</b>	<b>+FWL/-FEL (usft)</b>	<b>Latitude (°)</b>	<b>Longitude (°)</b>
0.0	0.00	0.00	0.0	-230.0	2,236.0	32.02089190	-103.27137730
100.0	0.00	0.00	100.0	-230.0	2,236.0	32.02089190	-103.27137730
200.0	0.00	0.00	200.0	-230.0	2,236.0	32.02089190	-103.27137730
300.0	0.00	0.00	300.0	-230.0	2,236.0	32.02089190	-103.27137730
400.0	0.00	0.00	400.0	-230.0	2,236.0	32.02089190	-103.27137730
<b>Start Build 1.50</b>							
500.0	1.50	7.24	500.0	-228.7	2,236.2	32.02089546	-103.27137673
600.0	3.00	7.24	599.9	-224.8	2,236.7	32.02090616	-103.27137501
700.0	4.50	7.24	699.7	-218.3	2,237.5	32.02092397	-103.27137214
750.7	5.26	7.24	750.2	-214.0	2,238.0	32.02093571	-103.27137025
<b>Start 5723.7 hold at 750.7 MD</b>							
800.0	5.26	7.24	799.3	-209.6	2,238.6	32.02094802	-103.27136827



American Resource Development LLC.

## Permit Plan

<b>Company:</b>	Ameredev Operating	<b>Local Co-ordinate Reference:</b>	Well Azalea State Com 26-36-28 104H
<b>Project:</b>	Lea County, NM (N83-NME)	<b>TVD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Site:</b>	Camelia_Azalea	<b>MD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Well:</b>	Azalea State Com 26-36-28 104H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	104H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Baseline Plan #2 - 179.43	<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit

Planned Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude (°)	Longitude (°)
900.0	5.26	7.24	898.9	-200.5	2,239.8	32.02097299	-103.27136426
1,000.0	5.26	7.24	998.5	-191.4	2,240.9	32.02099795	-103.27136024
1,100.0	5.26	7.24	1,098.0	-182.3	2,242.1	32.02102292	-103.27135622
1,200.0	5.26	7.24	1,197.6	-173.2	2,243.2	32.02104789	-103.27135221
1,300.0	5.26	7.24	1,297.2	-164.1	2,244.4	32.02107286	-103.27134819
1,400.0	5.26	7.24	1,396.8	-155.0	2,245.5	32.02109782	-103.27134417
1,500.0	5.26	7.24	1,496.4	-145.9	2,246.7	32.02112279	-103.27134016
1,600.0	5.26	7.24	1,595.9	-136.8	2,247.8	32.02114776	-103.27133614
1,700.0	5.26	7.24	1,695.5	-127.7	2,249.0	32.02117272	-103.27133212
1,773.8	5.26	7.24	1,769.0	-121.0	2,249.9	32.02119115	-103.27132916
<b>Rustler</b>							
1,800.0	5.26	7.24	1,795.1	-118.6	2,250.2	32.02119769	-103.27132811
1,900.0	5.26	7.24	1,894.7	-109.5	2,251.3	32.02122266	-103.27132409
2,000.0	5.26	7.24	1,994.2	-100.4	2,252.5	32.02124762	-103.27132007
2,006.0	5.26	7.24	2,000.2	-99.9	2,252.5	32.02124912	-103.27131983
<b>Hard Line Exit at 2006.0 MD</b>							
2,100.0	5.26	7.24	2,093.8	-91.3	2,253.6	32.02127259	-103.27131606
2,168.5	5.26	7.24	2,162.0	-85.1	2,254.4	32.02128969	-103.27131331
<b>Salado</b>							
2,200.0	5.26	7.24	2,193.4	-82.2	2,254.8	32.02129756	-103.27131204
2,300.0	5.26	7.24	2,293.0	-73.1	2,255.9	32.02132253	-103.27130802
2,400.0	5.26	7.24	2,392.6	-64.0	2,257.1	32.02134749	-103.27130401
2,500.0	5.26	7.24	2,492.1	-54.9	2,258.2	32.02137246	-103.27129999
2,600.0	5.26	7.24	2,591.7	-45.8	2,259.4	32.02139743	-103.27129597
2,700.0	5.26	7.24	2,691.3	-36.7	2,260.6	32.02142239	-103.27129196
2,800.0	5.26	7.24	2,790.9	-27.7	2,261.7	32.02144736	-103.27128794
2,900.0	5.26	7.24	2,890.5	-18.6	2,262.9	32.02147233	-103.27128392
3,000.0	5.26	7.24	2,990.0	-9.5	2,264.0	32.02149730	-103.27127991
3,100.0	5.26	7.24	3,089.6	-0.4	2,265.2	32.02152226	-103.27127589
3,107.0	5.26	7.24	3,096.6	0.3	2,265.3	32.02152401	-103.27127561
<b>Lease Line Exit at 3107.0 MD</b>							
3,153.6	5.26	7.24	3,143.0	4.5	2,265.8	32.02153565	-103.27127374
<b>Tansill</b>							
3,200.0	5.26	7.24	3,189.2	8.7	2,266.3	32.02154723	-103.27127187
3,300.0	5.26	7.24	3,288.8	17.8	2,267.5	32.02157220	-103.27126786
3,400.0	5.26	7.24	3,388.3	26.9	2,268.6	32.02159716	-103.27126384
3,500.0	5.26	7.24	3,487.9	36.0	2,269.8	32.02162213	-103.27125982
3,600.0	5.26	7.24	3,587.5	45.1	2,271.0	32.02164710	-103.27125581
3,700.0	5.26	7.24	3,687.1	54.2	2,272.1	32.02167207	-103.27125179
3,800.0	5.26	7.24	3,786.7	63.3	2,273.3	32.02169703	-103.27124777
3,900.0	5.26	7.24	3,886.2	72.4	2,274.4	32.02172200	-103.27124376
4,000.0	5.26	7.24	3,985.8	81.5	2,275.6	32.02174697	-103.27123974
4,100.0	5.26	7.24	4,085.4	90.6	2,276.7	32.02177193	-103.27123572
4,200.0	5.26	7.24	4,185.0	99.7	2,277.9	32.02179690	-103.27123171
4,300.0	5.26	7.24	4,284.6	108.8	2,279.0	32.02182187	-103.27122769



American Resource Development LLC.

## Permit Plan

<b>Company:</b>	Ameredev Operating	<b>Local Co-ordinate Reference:</b>	Well Azalea State Com 26-36-28 104H
<b>Project:</b>	Lea County, NM (N83-NME)	<b>TVD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Site:</b>	Camelia_Azalea	<b>MD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Well:</b>	Azalea State Com 26-36-28 104H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	104H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Baseline Plan #2 - 179.43	<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit

## Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude (°)	Longitude (°)
4,400.0	5.26	7.24	4,384.1	117.9	2,280.2	32.02184684	-103.27122367
4,500.0	5.26	7.24	4,483.7	127.0	2,281.4	32.02187180	-103.27121966
4,600.0	5.26	7.24	4,583.3	136.1	2,282.5	32.02189677	-103.27121564
4,700.0	5.26	7.24	4,682.9	145.2	2,283.7	32.02192174	-103.27121162
4,800.0	5.26	7.24	4,782.5	154.3	2,284.8	32.02194670	-103.27120761
4,900.0	5.26	7.24	4,882.0	163.3	2,286.0	32.02197167	-103.27120359
4,978.3	5.26	7.24	4,960.0	170.5	2,286.9	32.02199122	-103.27120045
<b>Lamar</b>							
5,000.0	5.26	7.24	4,981.6	172.4	2,287.1	32.02199664	-103.27119957
5,100.0	5.26	7.24	5,081.2	181.5	2,288.3	32.02202160	-103.27119556
5,125.9	5.26	7.24	5,107.0	183.9	2,288.6	32.02202808	-103.27119452
<b>Bell Canyon</b>							
5,200.0	5.26	7.24	5,180.8	190.6	2,289.4	32.02204657	-103.27119154
5,300.0	5.26	7.24	5,280.3	199.7	2,290.6	32.02207154	-103.27118752
5,400.0	5.26	7.24	5,379.9	208.8	2,291.8	32.02209651	-103.27118351
5,500.0	5.26	7.24	5,479.5	217.9	2,292.9	32.02212147	-103.27117949
5,600.0	5.26	7.24	5,579.1	227.0	2,294.1	32.02214644	-103.27117547
5,700.0	5.26	7.24	5,678.7	236.1	2,295.2	32.02217141	-103.27117146
5,800.0	5.26	7.24	5,778.2	245.2	2,296.4	32.02219637	-103.27116744
5,900.0	5.26	7.24	5,877.8	254.3	2,297.5	32.02222134	-103.27116342
6,000.0	5.26	7.24	5,977.4	263.4	2,298.7	32.02224631	-103.27115941
6,100.0	5.26	7.24	6,077.0	272.5	2,299.8	32.02227128	-103.27115539
6,200.0	5.26	7.24	6,176.6	281.6	2,301.0	32.02229624	-103.27115137
6,300.0	5.26	7.24	6,276.1	290.7	2,302.2	32.02232121	-103.27114736
6,400.0	5.26	7.24	6,375.7	299.8	2,303.3	32.02234618	-103.27114334
6,474.4	5.26	7.24	6,449.8	306.5	2,304.2	32.02236475	-103.27114035
<b>Start Drop -1.50</b>							
6,500.0	4.88	7.24	6,475.3	308.8	2,304.5	32.02237091	-103.27113936
6,600.0	3.38	7.24	6,575.0	315.9	2,305.4	32.02239051	-103.27113621
6,700.0	1.88	7.24	6,674.9	320.5	2,305.9	32.02240298	-103.27113420
6,800.0	0.38	7.24	6,774.9	322.4	2,306.2	32.02240834	-103.27113334
6,825.1	0.00	0.00	6,800.0	322.5	2,306.2	32.02240856	-103.27113330
<b>Start 2800.0 hold at 6825.1 MD</b>							
6,900.0	0.00	0.00	6,874.9	322.5	2,306.2	32.02240856	-103.27113330
7,000.0	0.00	0.00	6,974.9	322.5	2,306.2	32.02240856	-103.27113330
7,100.0	0.00	0.00	7,074.9	322.5	2,306.2	32.02240856	-103.27113330
7,118.1	0.00	0.00	7,093.0	322.5	2,306.2	32.02240856	-103.27113330
<b>Brushy Canyon</b>							
7,200.0	0.00	0.00	7,174.9	322.5	2,306.2	32.02240856	-103.27113330
7,300.0	0.00	0.00	7,274.9	322.5	2,306.2	32.02240856	-103.27113330
7,400.0	0.00	0.00	7,374.9	322.5	2,306.2	32.02240856	-103.27113330
7,500.0	0.00	0.00	7,474.9	322.5	2,306.2	32.02240856	-103.27113330
7,600.0	0.00	0.00	7,574.9	322.5	2,306.2	32.02240856	-103.27113330
7,700.0	0.00	0.00	7,674.9	322.5	2,306.2	32.02240856	-103.27113330
7,800.0	0.00	0.00	7,774.9	322.5	2,306.2	32.02240856	-103.27113330



American Resource Development LLC.

## Permit Plan

**Company:** Ameredev Operating  
**Project:** Lea County, NM (N83-NME)  
**Site:** Camelia\_Azalea  
**Well:** Azalea State Com 26-36-28 104H  
**Wellbore:** 104H  
**Design:** Baseline Plan #2 - 179.43

**Local Co-ordinate Reference:** Well Azalea State Com 26-36-28 104H  
**TVD Reference:** GL 2913 + 27 KB @ 2940.0usft  
**MD Reference:** GL 2913 + 27 KB @ 2940.0usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** AUS-COMPASS - EDM\_15 - 32bit

## Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude (°)	Longitude (°)
7,900.0	0.00	0.00	7,874.9	322.5	2,306.2	32.02240856	-103.27113330
8,000.0	0.00	0.00	7,974.9	322.5	2,306.2	32.02240856	-103.27113330
8,091.1	0.00	0.00	8,066.0	322.5	2,306.2	32.02240856	-103.27113330
<b>Bone Spring Lime</b>							
8,100.0	0.00	0.00	8,074.9	322.5	2,306.2	32.02240856	-103.27113330
8,200.0	0.00	0.00	8,174.9	322.5	2,306.2	32.02240856	-103.27113330
8,300.0	0.00	0.00	8,274.9	322.5	2,306.2	32.02240856	-103.27113330
8,400.0	0.00	0.00	8,374.9	322.5	2,306.2	32.02240856	-103.27113330
8,500.0	0.00	0.00	8,474.9	322.5	2,306.2	32.02240856	-103.27113330
8,600.0	0.00	0.00	8,574.9	322.5	2,306.2	32.02240856	-103.27113330
8,700.0	0.00	0.00	8,674.9	322.5	2,306.2	32.02240856	-103.27113330
8,800.0	0.00	0.00	8,774.9	322.5	2,306.2	32.02240856	-103.27113330
8,900.0	0.00	0.00	8,874.9	322.5	2,306.2	32.02240856	-103.27113330
9,000.0	0.00	0.00	8,974.9	322.5	2,306.2	32.02240856	-103.27113330
9,100.0	0.00	0.00	9,074.9	322.5	2,306.2	32.02240856	-103.27113330
9,200.0	0.00	0.00	9,174.9	322.5	2,306.2	32.02240856	-103.27113330
9,300.0	0.00	0.00	9,274.9	322.5	2,306.2	32.02240856	-103.27113330
9,400.0	0.00	0.00	9,374.9	322.5	2,306.2	32.02240856	-103.27113330
9,500.0	0.00	0.00	9,474.9	322.5	2,306.2	32.02240856	-103.27113330
9,600.0	0.00	0.00	9,574.9	322.5	2,306.2	32.02240856	-103.27113330
9,607.1	0.00	0.00	9,582.0	322.5	2,306.2	32.02240856	-103.27113330
<b>First Bone Spring</b>							
9,625.1	0.00	0.00	9,600.0	322.5	2,306.2	32.02240856	-103.27113330
<b>Start Build 1.50</b>							
9,700.0	1.12	7.25	9,674.9	323.2	2,306.3	32.02241056	-103.27113298
9,800.0	2.62	7.25	9,774.8	326.5	2,306.7	32.02241946	-103.27113155
9,893.8	4.03	7.25	9,868.5	331.9	2,307.4	32.02243430	-103.27112916
<b>Start 1129.2 hold at 9893.8 MD</b>							
9,900.0	4.03	7.25	9,874.7	332.3	2,307.4	32.02243548	-103.27112897
10,000.0	4.03	7.25	9,974.4	339.3	2,308.3	32.02245462	-103.27112589
10,100.0	4.03	7.25	10,074.2	346.3	2,309.2	32.02247376	-103.27112281
10,200.0	4.03	7.25	10,173.9	353.2	2,310.1	32.02249291	-103.27111972
10,207.1	4.03	7.25	10,181.0	353.7	2,310.2	32.02249426	-103.27111950
<b>Second Bone Spring</b>							
10,300.0	4.03	7.25	10,273.7	360.2	2,311.0	32.02251205	-103.27111664
10,400.0	4.03	7.25	10,373.4	367.2	2,311.9	32.02253119	-103.27111356
10,500.0	4.03	7.25	10,473.2	374.1	2,312.8	32.02255034	-103.27111048
10,600.0	4.03	7.25	10,572.9	381.1	2,313.7	32.02256948	-103.27110739
10,700.0	4.03	7.25	10,672.7	388.1	2,314.5	32.02258862	-103.27110431
10,800.0	4.03	7.25	10,772.4	395.1	2,315.4	32.02260777	-103.27110123
10,870.7	4.03	7.25	10,843.0	400.0	2,316.1	32.02262131	-103.27109905
<b>Third Bone Spring Upper</b>							
10,900.0	4.03	7.25	10,872.2	402.0	2,316.3	32.02262691	-103.27109814
11,000.0	4.03	7.25	10,971.9	409.0	2,317.2	32.02264605	-103.27109506





American Resource Development LLC.

## Permit Plan

<b>Company:</b>	Ameredev Operating	<b>Local Co-ordinate Reference:</b>	Well Azalea State Com 26-36-28 104H
<b>Project:</b>	Lea County, NM (N83-NME)	<b>TVD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Site:</b>	Camelia_Azalea	<b>MD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Well:</b>	Azalea State Com 26-36-28 104H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	104H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Baseline Plan #2 - 179.43	<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit

Planned Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude (°)	Longitude (°)
11,023.1	4.03	7.25	10,995.0	410.6	2,317.4	32.02265047	-103.27109435
<b>Start Drop -1.50</b>							
11,100.0	2.88	7.25	11,071.8	415.2	2,318.0	32.02266309	-103.27109232
11,200.0	1.38	7.25	11,171.7	418.9	2,318.5	32.02267320	-103.27109069
11,291.8	0.00	0.00	11,263.5	420.0	2,318.6	32.02267621	-103.27109021
<b>Start DLS 12.00 TFO 179.42</b>							
11,300.0	0.98	179.42	11,271.7	419.9	2,318.6	32.02267601	-103.27109021
11,400.0	12.98	179.42	11,370.7	407.8	2,318.7	32.02264267	-103.27109020
11,470.5	21.44	179.42	11,438.0	387.0	2,318.9	32.02258542	-103.27109018
<b>Third Bone Spring</b>							
11,500.0	24.98	179.42	11,465.1	375.3	2,319.0	32.02255344	-103.27109017
11,600.0	36.98	179.42	11,550.7	324.0	2,319.6	32.02241221	-103.27109013
11,700.0	48.98	179.42	11,623.7	255.9	2,320.3	32.02222516	-103.27109008
11,727.2	52.24	179.42	11,641.0	234.9	2,320.5	32.02216738	-103.27109006
<b>Wolfcamp</b>							
11,800.0	60.98	179.42	11,681.0	174.2	2,321.1	32.02200047	-103.27109001
11,900.0	72.98	179.42	11,720.1	82.3	2,322.0	32.02174795	-103.27108994
11,984.0	83.06	179.42	11,737.5	0.3	2,322.8	32.02152245	-103.27108988
<b>Lease Line Entry at 11984.0 MD</b>							
12,000.0	84.98	179.42	11,739.1	-15.7	2,323.0	32.02147865	-103.27108987
12,041.4	89.95	179.42	11,741.0	-57.0	2,323.4	32.02136492	-103.27108983
<b>Start 42.1 hold at 12041.4 MD</b>							
12,083.5	89.95	179.42	11,741.0	-99.1	2,323.8	32.02124930	-103.27108980
<b>Start 7517.1 hold at 12083.5 MD - 01-FTP (AZ104H)</b>							
12,100.0	89.95	179.42	11,741.0	-115.6	2,324.0	32.02120393	-103.27108979
12,200.0	89.95	179.42	11,741.1	-215.6	2,325.0	32.02092906	-103.27108971
12,300.0	89.95	179.42	11,741.2	-315.6	2,326.0	32.02065420	-103.27108963
12,400.0	89.95	179.42	11,741.3	-415.6	2,327.0	32.02037933	-103.27108955
12,500.0	89.95	179.42	11,741.3	-515.6	2,328.0	32.02010447	-103.27108947
12,600.0	89.95	179.42	11,741.4	-615.6	2,329.0	32.01982960	-103.27108939
12,700.0	89.95	179.42	11,741.5	-715.6	2,330.0	32.01955474	-103.27108932
12,800.0	89.95	179.42	11,741.6	-815.6	2,331.0	32.01927987	-103.27108924
12,900.0	89.95	179.42	11,741.7	-915.6	2,332.1	32.01900501	-103.27108916
13,000.0	89.95	179.42	11,741.8	-1,015.6	2,333.1	32.01873014	-103.27108908
13,100.0	89.95	179.42	11,741.9	-1,115.6	2,334.1	32.01845528	-103.27108900
13,200.0	89.95	179.42	11,741.9	-1,215.6	2,335.1	32.01818041	-103.27108892
13,300.0	89.95	179.42	11,742.0	-1,315.5	2,336.1	32.01790555	-103.27108884
13,400.0	89.95	179.42	11,742.1	-1,415.5	2,337.1	32.01763068	-103.27108876
13,500.0	89.95	179.42	11,742.2	-1,515.5	2,338.1	32.01735581	-103.27108869
13,600.0	89.95	179.42	11,742.3	-1,615.5	2,339.1	32.01708095	-103.27108861
13,700.0	89.95	179.42	11,742.4	-1,715.5	2,340.1	32.01680608	-103.27108853
13,800.0	89.95	179.42	11,742.4	-1,815.5	2,341.1	32.01653122	-103.27108845
13,900.0	89.95	179.42	11,742.5	-1,915.5	2,342.1	32.01625635	-103.27108837
14,000.0	89.95	179.42	11,742.6	-2,015.5	2,343.1	32.01598149	-103.27108829
14,100.0	89.95	179.42	11,742.7	-2,115.5	2,344.1	32.01570662	-103.27108821



American Resource Development LLC.

## Permit Plan

<b>Company:</b>	Ameredev Operating	<b>Local Co-ordinate Reference:</b>	Well Azalea State Com 26-36-28 104H
<b>Project:</b>	Lea County, NM (N83-NME)	<b>TVD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Site:</b>	Camelia_Azalea	<b>MD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Well:</b>	Azalea State Com 26-36-28 104H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	104H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Baseline Plan #2 - 179.43	<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit

Planned Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude (°)	Longitude (°)
14,200.0	89.95	179.42	11,742.8	-2,215.5	2,345.2	32.01543176	-103.27108813
14,300.0	89.95	179.42	11,742.9	-2,315.5	2,346.2	32.01515689	-103.27108805
14,400.0	89.95	179.42	11,742.9	-2,415.5	2,347.2	32.01488203	-103.27108798
14,500.0	89.95	179.42	11,743.0	-2,515.5	2,348.2	32.01460716	-103.27108790
14,600.0	89.95	179.42	11,743.1	-2,615.5	2,349.2	32.01433229	-103.27108782
14,700.0	89.95	179.42	11,743.2	-2,715.5	2,350.2	32.01405743	-103.27108774
14,800.0	89.95	179.42	11,743.3	-2,815.5	2,351.2	32.01378256	-103.27108766
14,900.0	89.95	179.42	11,743.4	-2,915.5	2,352.2	32.01350770	-103.27108758
15,000.0	89.95	179.42	11,743.5	-3,015.5	2,353.2	32.01323283	-103.27108750
15,100.0	89.95	179.42	11,743.5	-3,115.5	2,354.2	32.01295797	-103.27108742
15,200.0	89.95	179.42	11,743.6	-3,215.5	2,355.2	32.01268310	-103.27108734
15,300.0	89.95	179.42	11,743.7	-3,315.4	2,356.2	32.01240823	-103.27108726
15,400.0	89.95	179.42	11,743.8	-3,415.4	2,357.2	32.01213337	-103.27108718
15,500.0	89.95	179.42	11,743.9	-3,515.4	2,358.2	32.01185850	-103.27108711
15,600.0	89.95	179.42	11,744.0	-3,615.4	2,359.3	32.01158364	-103.27108703
15,700.0	89.95	179.42	11,744.0	-3,715.4	2,360.3	32.01130877	-103.27108695
15,800.0	89.95	179.42	11,744.1	-3,815.4	2,361.3	32.01103391	-103.27108687
15,900.0	89.95	179.42	11,744.2	-3,915.4	2,362.3	32.01075904	-103.27108679
16,000.0	89.95	179.42	11,744.3	-4,015.4	2,363.3	32.01048417	-103.27108671
16,100.0	89.95	179.42	11,744.4	-4,115.4	2,364.3	32.01020931	-103.27108663
16,200.0	89.95	179.42	11,744.5	-4,215.4	2,365.3	32.00993444	-103.27108655
16,300.0	89.95	179.42	11,744.5	-4,315.4	2,366.3	32.00965958	-103.27108647
16,400.0	89.95	179.42	11,744.6	-4,415.4	2,367.3	32.00938471	-103.27108639
16,500.0	89.95	179.42	11,744.7	-4,515.4	2,368.3	32.00910985	-103.27108631
16,600.0	89.95	179.42	11,744.8	-4,615.4	2,369.3	32.00883498	-103.27108623
16,700.0	89.95	179.42	11,744.9	-4,715.4	2,370.3	32.00856011	-103.27108615
16,800.0	89.95	179.42	11,745.0	-4,815.4	2,371.3	32.00828525	-103.27108607
16,900.0	89.95	179.42	11,745.0	-4,915.4	2,372.4	32.00801038	-103.27108599
17,000.0	89.95	179.42	11,745.1	-5,015.4	2,373.4	32.00773552	-103.27108591
17,100.0	89.95	179.42	11,745.2	-5,115.4	2,374.4	32.00746065	-103.27108583
17,200.0	89.95	179.42	11,745.3	-5,215.3	2,375.4	32.00718578	-103.27108575
17,300.0	89.95	179.42	11,745.4	-5,315.3	2,376.4	32.00691092	-103.27108567
17,400.0	89.95	179.42	11,745.5	-5,415.3	2,377.4	32.00663605	-103.27108559
17,500.0	89.95	179.42	11,745.6	-5,515.3	2,378.4	32.00636119	-103.27108551
17,600.0	89.95	179.42	11,745.6	-5,615.3	2,379.4	32.00608632	-103.27108544
17,700.0	89.95	179.42	11,745.7	-5,715.3	2,380.4	32.00581146	-103.27108536
17,800.0	89.95	179.42	11,745.8	-5,815.3	2,381.4	32.00553659	-103.27108528
17,900.0	89.95	179.42	11,745.9	-5,915.3	2,382.4	32.00526172	-103.27108520
18,000.0	89.95	179.42	11,746.0	-6,015.3	2,383.4	32.00498686	-103.27108512
18,100.0	89.95	179.42	11,746.1	-6,115.3	2,384.4	32.00471199	-103.27108504
18,200.0	89.95	179.42	11,746.1	-6,215.3	2,385.4	32.00443713	-103.27108496
18,300.0	89.95	179.42	11,746.2	-6,315.3	2,386.5	32.00416226	-103.27108488
18,400.0	89.95	179.42	11,746.3	-6,415.3	2,387.5	32.00388739	-103.27108480
18,500.0	89.95	179.42	11,746.4	-6,515.3	2,388.5	32.00361253	-103.27108472



American Resource Development LLC.

## Permit Plan

<b>Company:</b>	Ameredev Operating	<b>Local Co-ordinate Reference:</b>	Well Azalea State Com 26-36-28 104H
<b>Project:</b>	Lea County, NM (N83-NME)	<b>TVD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Site:</b>	Camelia_Azalea	<b>MD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Well:</b>	Azalea State Com 26-36-28 104H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	104H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Baseline Plan #2 - 179.43	<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit

## Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude (°)	Longitude (°)
18,600.0	89.95	179.42	11,746.5	-6,615.3	2,389.5	32.00333766	-103.27108464
18,700.0	89.95	179.42	11,746.6	-6,715.3	2,390.5	32.00306280	-103.27108456
18,800.0	89.95	179.42	11,746.6	-6,815.3	2,391.5	32.00278793	-103.27108448
18,900.0	89.95	179.42	11,746.7	-6,915.3	2,392.5	32.00251306	-103.27108440
19,000.0	89.95	179.42	11,746.8	-7,015.3	2,393.5	32.00223820	-103.27108432
19,100.0	89.95	179.42	11,746.9	-7,115.3	2,394.5	32.00196333	-103.27108424
19,200.0	89.95	179.42	11,747.0	-7,215.2	2,395.5	32.00168846	-103.27108416
19,300.0	89.95	179.42	11,747.1	-7,315.2	2,396.5	32.00141360	-103.27108408
19,400.0	89.95	179.42	11,747.1	-7,415.2	2,397.5	32.00113873	-103.27108400
19,500.0	89.95	179.42	11,747.2	-7,515.2	2,398.5	32.00086387	-103.27108392
19,600.0	89.95	179.42	11,747.3	-7,615.2	2,399.6	32.00058900	-103.27108383
19,600.5	89.95	179.42	11,747.3	-7,615.8	2,399.6	32.00058752	-103.27108383
<b>Start 50.0 hold at 19600.5 MD - 02-LTP (AZ104H)</b>							
19,650.6	89.95	179.42	11,747.4	-7,665.8	2,400.1	32.00045002	-103.27108379
<b>TD at 19650.6 - 03-BHL (AZ104H)</b>							



American Resource Development LLC.

## Permit Plan

<b>Company:</b>	Ameredev Operating	<b>Local Co-ordinate Reference:</b>	Well Azalea State Com 26-36-28 104H
<b>Project:</b>	Lea County, NM (N83-NME)	<b>TVD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Site:</b>	Camelia_Azalea	<b>MD Reference:</b>	GL 2913 + 27 KB @ 2940.0usft
<b>Well:</b>	Azalea State Com 26-36-28 104H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	104H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Baseline Plan #2 - 179.43	<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit

## Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,125.9	5,107.0	Bell Canyon			
10,870.7	10,843.0	Third Bone Spring Upper			
10,207.1	10,181.0	Second Bone Spring			
1,773.8	1,769.0	Rustler			
8,091.1	8,066.0	Bone Spring Lime			
11,470.5	11,438.0	Third Bone Spring			
9,607.1	9,582.0	First Bone Spring			
7,118.1	7,093.0	Brushy Canyon			
3,153.6	3,143.0	Tansill			
4,978.3	4,960.0	Lamar			
2,168.5	2,162.0	Salado			
11,727.2	11,641.0	Wolfcamp			

## Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
400.0	400.0	0.0	0.0	Start Build 1.50
750.7	750.2	16.0	2.0	Start 5723.7 hold at 750.7 MD
2,006.0	2,000.2	130.1	16.5	Hard Line Exit at 2006.0 MD
3,107.0	3,096.6	230.3	29.3	Lease Line Exit at 3107.0 MD
6,474.4	6,449.8	536.5	68.2	Start Drop -1.50
6,825.1	6,800.0	552.5	70.2	Start 2800.0 hold at 6825.1 MD
9,625.1	9,600.0	552.5	70.2	Start Build 1.50
9,893.8	9,868.5	561.9	71.4	Start 1129.2 hold at 9893.8 MD
11,023.1	10,995.0	640.6	81.4	Start Drop -1.50
11,291.8	11,263.5	650.0	82.6	Start DLS 12.00 TFO 179.42
11,984.0	11,737.5	230.3	86.8	Lease Line Entry at 11984.0 MD
12,041.4	11,741.0	173.0	87.4	Start 42.1 hold at 12041.4 MD
12,083.5	11,741.0	130.9	87.8	Start 7517.1 hold at 12083.5 MD
19,600.5	11,747.3	-7,385.8	163.6	Start 50.0 hold at 19600.5 MD
19,650.6	11,747.4	-7,435.8	164.1	TD at 19650.6

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_