

**District I**

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

**District II**

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

**District III**

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

**District IV**

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

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

Form C-101

August 1, 2011

Permit 323885

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

1. Operator Name and Address ADVANCE ENERGY PARTNERS HAT MESA, LLC 11490 Westheimer Rd., Ste 950 Houston, TX 77077		2. OGRID Number 372417
		3. API Number 30-025-50574
4. Property Code 333273	5. Property Name BECKNELL 21 33 17 STATE COM	6. Well No. 924H

**7. Surface Location**

UL - Lot H	Section 17	Township 21S	Range 33E	Lot Idn H	Feet From 2440	N/S Line N	Feet From 770	E/W Line E	County Lea
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**8. Proposed Bottom Hole Location**

UL - Lot I	Section 5	Township 21S	Range 33E	Lot Idn I	Feet From 2589	N/S Line S	Feet From 450	E/W Line E	County Lea
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**9. Pool Information**

WC-025 G-08 S213304D;BONE SPRING	97895
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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 3791
16. Multiple N	17. Proposed Depth 22149	18. Formation 3rd Bone Spring Carbonate	19. Contractor	20. Spud Date 4/19/2023
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	1892	1449	0
Int1	12.25	10.75	40.5	3790	427	0
Int2	9.875	7.625	29.7	5549	818	0
Prod	6.75	5.5	20	22149	709	0

**Casing/Cement Program: Additional Comments**

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**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5000	5000	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 Eileen M Kosakowski	Approved By: Paul F Kautz	
Title:	Title: Geologist	
Email Address: ekosakowski@advanceenergypartners.com	Approved Date: 9/14/2022	Expiration Date: 9/14/2024
Date: 8/23/2022	Phone: 832-672-4604	Conditions of Approval Attached

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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 C-102

August 1, 2011

Permit 323885

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1. API Number 30-025-50574	2. Pool Code 97895	3. Pool Name WC-025 G-08 S213304D;BONE SPRING
4. Property Code 333273	5. Property Name BECKNELL 21 33 17 STATE COM	6. Well No. 924H
7. OGRID No. 372417	8. Operator Name ADVANCE ENERGY PARTNERS HAT MESA, LLC	9. Elevation 3791

**10. Surface Location**

UL - Lot H	Section 17	Township 21S	Range 33E	Lot Idn H	Feet From 2440	N/S Line N	Feet From 770	E/W Line E	County Lea
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**11. Bottom Hole Location If Different From Surface**

UL - Lot I	Section 5	Township 21S	Range 33E	Lot Idn 1	Feet From 2589	N/S Line N	Feet From 450	E/W Line E	County Lea
12. Dedicated Acres 640.00	13. Joint or Infill			14. Consolidation Code Communitization			15. Order No.		

**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**

	<p style="text-align: center;"><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location(s) or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p>E-Signed By: Eileen M Kosakowski Title: Date: 8/23/2022</p>
	<p style="text-align: center;"><b>SURVEYOR CERTIFICATION</b></p> <p><i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i></p> <p>Surveyed By: Justin Murray Date of Survey: 8/18/2022 Certificate Number: 24873</p>

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**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form APD Conditions

Permit 323885

**PERMIT CONDITIONS OF APPROVAL**

Operator Name and Address: ADVANCE ENERGY PARTNERS HAT MESA, LLC [372417] 11490 Westheimer Rd., Ste 950 Houston, TX 77077	API Number: 30-025-50574
	Well: BECKNELL 21 33 17 STATE COM #924H

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	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
pkautz	Cement must come to the surface on all strings

State of New Mexico  
Energy, Minerals and Natural Resources Department

**Michelle Lujan Grisham**  
Governor

**Sarah Cottrell Propst**  
Cabinet Secretary Designate

**Todd E. Leahy, JD, PhD**  
Deputy Secretary

**Adrienne Sandoval, Division Director**  
Oil Conservation Division



September 12, 2022,

BUREAU OF LAND MANAGEMENT  
ATT: James S. Rutley  
620 E Greene Street  
Carlsbad, NM 88220

STATE LAND OFFICE  
ATT: Paige Czoski  
PO BOX 1148  
Santa Fe, NM 87505

RE: APPLICATION FOR PERMIT TO DRILL IN POTASH AREA

OPERATOR: Advance Energy Partners Hat Mesa, LLC

LEASE NAME: Boone 21 33 16 State Com # 924H

PROPOSED LOCATION: U/L H Sec 17 T21S R33E 2440 FNL 770 FEL

Lat. 32.4794306 Long. -103.585606 NAD83

PROPOSED DEPTH: 22149' MD 11417' TVD

Gentleman:

The application for permit to drill identified above has been filed with this office of the New Mexico Oil Conservation Division. Pursuant to the provisions of Oil Conservation Division Order R – 111 - P, please advise this office whether the location is within an established Life-of-Mine-Reserve that are filed with and approved by your office. If not, please advise whether it is within the buffer zone established by the order.

Thank you for your assistance. Please Return as soon as possible.

Very truly yours,

OIL CONSERVATION DIVISION

*P. Kautz*  
Paul Kautz

Hobbs Office Geologist, District I

RESONSE:

The above referenced location is in LMR (2012 year) -----Yes \_\_\_\_\_ No ☒

The above referenced location is within the Buffer Zone -----Yes \_\_\_\_\_ No ☒

Signed \_\_\_\_\_

Printed Signature

Representing

*JAMES S. RUTLEY*  
*BLM*

State of New Mexico  
Energy, Minerals and Natural Resources Department

**Michelle Lujan Grisham**  
Governor

**Sarah Cottrell Propst**  
Cabinet Secretary Designate

**Todd E. Leahy, JD, PhD**  
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Thank you for your assistance. Please Return as soon as possible.

Very truly yours,

OIL CONSERVATION DIVISION

*P. Kautz*  
Paul Kautz

Hobbs Office Geologist, District I

RESONSE:

The above referenced location is in LMR ( 2022 year) -----Yes \_\_\_\_\_ No  X

The above referenced location is within the Buffer Zone-----Yes \_\_\_\_\_ No  X

Signed *Paige Czoski*

Printed Signature Paige Czoski

Representing NM SLO



American Resource Development LLC.

## **Ameredev Operating**

**Hat Mesa**

**Becknell State Com - A Pad**

**Becknell 21-33-17 State Com 924H**

**OWB**

**Plan: Permit Plan 1 - 359.50**

## **Standard Planning Report - Geographic**

**22 August, 2022**



American Resource Development LLC

## Planning Report - Geographic

<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit	<b>Local Co-ordinate Reference:</b>	Well Becknell 21-33-17 State Com 924H
<b>Company:</b>	Ameredev Operating	<b>TVD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Project:</b>	Hat Mesa	<b>MD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Site:</b>	Becknell State Com - A Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Becknell 21-33-17 State Com 924H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	Permit Plan 1 - 359.50		

<b>Project</b>	Hat Mesa, Lea County, NM		
<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	Becknell State Com - A Pad						
Site Position:		Northing:	538,949.04	usft	Latitude:	32.479431	
From:	Lat/Long		Easting:	770,961.52	usft	Longitude:	-103.588691
Position Uncertainty:		0.0	usft	Slot Radius:	13-3/16		"

Well	Becknell 21-33-17 State Com 924H					
Well Position	+N/-S	0.0 usft	Northing:	538,949.28 usft	Latitude:	32.479431
	+E/-W	0.0 usft	Easting:	771,001.51 usft	Longitude:	-103.588561
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,791.7 usft
Grid Convergence:		0.40 °				

<b>Wellbore</b>	OWB				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	8/22/2022	6.43	60.09	47,516.98226775

<b>Design</b>	Permit Plan 1 - 359.50			
<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	359.50

<b>Plan Survey Tool Program</b>	<b>Date</b>	8/22/2022		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.0	22,149.4 Permit Plan 1 - 359.50 (OWB)	MWD	
			OWSG MWD - Standard	



American Resource Development LLC.

## Planning Report - Geographic

<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit	<b>Local Co-ordinate Reference:</b>	Well Becknell 21-33-17 State Com 924H
<b>Company:</b>	Ameredev Operating	<b>TVD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Project:</b>	Hat Mesa	<b>MD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Site:</b>	Becknell State Com - A Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Becknell 21-33-17 State Com 924H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	Permit Plan 1 - 359.50		

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	
2,301.1	4.52	151.56	2,300.8	-10.4	5.6	1.50	1.50	0.00	151.56	
10,665.0	4.52	151.56	10,638.7	-589.6	319.4	0.00	0.00	0.00	0.00	
10,966.1	0.00	0.00	10,939.5	-600.0	325.0	1.50	-1.50	0.00	180.00	
11,715.4	89.92	359.52	11,417.0	-123.2	321.0	12.00	12.00	-0.06	359.52	
11,740.1	89.92	359.52	11,417.0	-98.5	320.8	0.00	0.00	0.00	0.00	FTP (BECK924H)
11,744.3	90.00	359.52	11,417.0	-94.4	320.8	2.00	2.00	0.07	1.87	
22,099.5	90.00	359.52	11,417.0	10,260.4	234.5	0.00	0.00	0.00	0.00	LTP (BECK924H)
22,149.4	90.00	359.52	11,417.0	10,310.4	234.1	0.00	0.00	0.00	0.00	BHL (BECK924H)





American Resource Development LLC

## Planning Report - Geographic

<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit	<b>Local Co-ordinate Reference:</b>	Well Becknell 21-33-17 State Com 924H
<b>Company:</b>	Ameredev Operating	<b>TVD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Project:</b>	Hat Mesa	<b>MD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Site:</b>	Becknell State Com - A Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Becknell 21-33-17 State Com 924H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	Permit Plan 1 - 359.50		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
100.0	0.00	0.00	100.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
200.0	0.00	0.00	200.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
300.0	0.00	0.00	300.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
400.0	0.00	0.00	400.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
500.0	0.00	0.00	500.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
600.0	0.00	0.00	600.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
700.0	0.00	0.00	700.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
800.0	0.00	0.00	800.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
900.0	0.00	0.00	900.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
1,000.0	0.00	0.00	1,000.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
1,100.0	0.00	0.00	1,100.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
1,200.0	0.00	0.00	1,200.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
1,300.0	0.00	0.00	1,300.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
1,400.0	0.00	0.00	1,400.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
1,500.0	0.00	0.00	1,500.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
1,600.0	0.00	0.00	1,600.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
1,700.0	0.00	0.00	1,700.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
1,767.0	0.00	0.00	1,767.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
<b>Rustler</b>									
1,800.0	0.00	0.00	1,800.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
1,900.0	0.00	0.00	1,900.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
2,000.0	0.00	0.00	2,000.0	0.0	0.0	538,949.28	771,001.51	32.479431	-103.588561
<b>Start Build 1.50</b>									
2,100.0	1.50	151.56	2,100.0	-1.2	0.6	538,948.13	771,002.14	32.479428	-103.588559
2,159.0	2.39	151.56	2,159.0	-2.9	1.6	538,946.37	771,003.09	32.479423	-103.588556
<b>Salado</b>									
2,200.0	3.00	151.56	2,199.9	-4.6	2.5	538,944.68	771,004.01	32.479418	-103.588553
2,300.0	4.50	151.56	2,299.7	-10.4	5.6	538,938.93	771,007.12	32.479402	-103.588543
2,301.1	4.52	151.56	2,300.8	-10.4	5.6	538,938.85	771,007.16	32.479402	-103.588543
<b>Start 8363.9 hold at 2301.1 MD</b>									
2,400.0	4.52	151.56	2,399.4	-17.3	9.4	538,932.00	771,010.87	32.479383	-103.588531
2,500.0	4.52	151.56	2,499.1	-24.2	13.1	538,925.08	771,014.62	32.479364	-103.588519
2,600.0	4.52	151.56	2,598.8	-31.1	16.9	538,918.15	771,018.37	32.479345	-103.588507
2,700.0	4.52	151.56	2,698.4	-38.1	20.6	538,911.23	771,022.12	32.479326	-103.588495
2,800.0	4.52	151.56	2,798.1	-45.0	24.4	538,904.30	771,025.88	32.479307	-103.588483
2,900.0	4.52	151.56	2,897.8	-51.9	28.1	538,897.38	771,029.63	32.479287	-103.588471
3,000.0	4.52	151.56	2,997.5	-58.8	31.9	538,890.46	771,033.38	32.479268	-103.588459
3,100.0	4.52	151.56	3,097.2	-65.7	35.6	538,883.53	771,037.13	32.479249	-103.588447
3,200.0	4.52	151.56	3,196.9	-72.7	39.4	538,876.61	771,040.88	32.479230	-103.588435
3,300.0	4.52	151.56	3,296.6	-79.6	43.1	538,869.68	771,044.63	32.479211	-103.588423
3,400.0	4.52	151.56	3,396.3	-86.5	46.9	538,862.76	771,048.38	32.479192	-103.588411
3,500.0	4.52	151.56	3,496.0	-93.4	50.6	538,855.83	771,052.13	32.479173	-103.588399
3,600.0	4.52	151.56	3,595.7	-100.4	54.4	538,848.91	771,055.88	32.479154	-103.588387
3,669.6	4.52	151.56	3,665.0	-105.2	57.0	538,844.09	771,058.49	32.479140	-103.588378
<b>Tansill</b>									
3,700.0	4.52	151.56	3,695.3	-107.3	58.1	538,841.99	771,059.63	32.479135	-103.588375
3,800.0	4.52	151.56	3,795.0	-114.2	61.9	538,835.06	771,063.38	32.479116	-103.588363
3,900.0	4.52	151.56	3,894.7	-121.1	65.6	538,828.14	771,067.13	32.479096	-103.588351
4,000.0	4.52	151.56	3,994.4	-128.1	69.4	538,821.21	771,070.88	32.479077	-103.588339
4,100.0	4.52	151.56	4,094.1	-135.0	73.1	538,814.29	771,074.63	32.479058	-103.588327
4,167.1	4.52	151.56	4,161.0	-139.6	75.6	538,809.64	771,077.15	32.479045	-103.588319
<b>Capitan</b>									
4,200.0	4.52	151.56	4,193.8	-141.9	76.9	538,807.36	771,078.38	32.479039	-103.588315



American Resource Development LLC

## Planning Report - Geographic

<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit	<b>Local Co-ordinate Reference:</b>	Well Becknell 21-33-17 State Com 924H
<b>Company:</b>	Ameredev Operating	<b>TVD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Project:</b>	Hat Mesa	<b>MD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Site:</b>	Becknell State Com - A Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Becknell 21-33-17 State Com 924H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	Permit Plan 1 - 359.50		

Planned Survey										
Measured			Vertical			Map	Map			
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Map	Map			
(usft)	(°)	(°)	(usft)	(usft)	(usft)	Northing	Easting		Latitude	Longitude
						(usft)	(usft)			
4,300.0	4.52	151.56	4,293.5	-148.8	80.6	538,800.44	771,082.14		32.479020	-103.588303
4,400.0	4.52	151.56	4,393.2	-155.8	84.4	538,793.52	771,085.89		32.479001	-103.588291
4,500.0	4.52	151.56	4,492.9	-162.7	88.1	538,786.59	771,089.64		32.478982	-103.588279
4,600.0	4.52	151.56	4,592.5	-169.6	91.9	538,779.67	771,093.39		32.478963	-103.588267
4,700.0	4.52	151.56	4,692.2	-176.5	95.6	538,772.74	771,097.14		32.478944	-103.588255
4,800.0	4.52	151.56	4,791.9	-183.5	99.4	538,765.82	771,100.89		32.478925	-103.588243
4,900.0	4.52	151.56	4,891.6	-190.4	103.1	538,758.89	771,104.64		32.478905	-103.588231
5,000.0	4.52	151.56	4,991.3	-197.3	106.9	538,751.97	771,108.39		32.478886	-103.588219
5,100.0	4.52	151.56	5,091.0	-204.2	110.6	538,745.05	771,112.14		32.478867	-103.588207
5,200.0	4.52	151.56	5,190.7	-211.2	114.4	538,738.12	771,115.89		32.478848	-103.588195
5,300.0	4.52	151.56	5,290.4	-218.1	118.1	538,731.20	771,119.64		32.478829	-103.588183
5,400.0	4.52	151.56	5,390.1	-225.0	121.9	538,724.27	771,123.39		32.478810	-103.588171
5,484.2	4.52	151.56	5,474.0	-230.8	125.0	538,718.44	771,126.55		32.478794	-103.588161
Bell Canyon										
5,500.0	4.52	151.56	5,489.8	-231.9	125.6	538,717.35	771,127.14		32.478791	-103.588159
5,600.0	4.52	151.56	5,589.4	-238.9	129.4	538,710.42	771,130.89		32.478772	-103.588147
5,700.0	4.52	151.56	5,689.1	-245.8	133.1	538,703.50	771,134.64		32.478753	-103.588135
5,800.0	4.52	151.56	5,788.8	-252.7	136.9	538,696.58	771,138.40		32.478733	-103.588123
5,900.0	4.52	151.56	5,888.5	-259.6	140.6	538,689.65	771,142.15		32.478714	-103.588111
6,000.0	4.52	151.56	5,988.2	-266.6	144.4	538,682.73	771,145.90		32.478695	-103.588099
6,100.0	4.52	151.56	6,087.9	-273.5	148.1	538,675.80	771,149.65		32.478676	-103.588087
6,200.0	4.52	151.56	6,187.6	-280.4	151.9	538,668.88	771,153.40		32.478657	-103.588075
6,300.0	4.52	151.56	6,287.3	-287.3	155.6	538,661.95	771,157.15		32.478638	-103.588063
6,400.0	4.52	151.56	6,387.0	-294.2	159.4	538,655.03	771,160.90		32.478619	-103.588051
6,500.0	4.52	151.56	6,486.6	-301.2	163.1	538,648.11	771,164.65		32.478600	-103.588039
6,600.0	4.52	151.56	6,586.3	-308.1	166.9	538,641.18	771,168.40		32.478581	-103.588027
6,700.0	4.52	151.56	6,686.0	-315.0	170.6	538,634.26	771,172.15		32.478562	-103.588015
6,800.0	4.52	151.56	6,785.7	-321.9	174.4	538,627.33	771,175.90		32.478542	-103.588003
6,900.0	4.52	151.56	6,885.4	-328.9	178.1	538,620.41	771,179.65		32.478523	-103.587991
7,000.0	4.52	151.56	6,985.1	-335.8	181.9	538,613.48	771,183.40		32.478504	-103.587979
7,100.0	4.52	151.56	7,084.8	-342.7	185.6	538,606.56	771,187.15		32.478485	-103.587967
7,200.0	4.52	151.56	7,184.5	-349.6	189.4	538,599.64	771,190.90		32.478466	-103.587955
7,262.7	4.52	151.56	7,247.0	-354.0	191.7	538,595.29	771,193.26		32.478454	-103.587947
Brushy Canyon										
7,300.0	4.52	151.56	7,284.2	-356.6	193.1	538,592.71	771,194.65		32.478447	-103.587943
7,400.0	4.52	151.56	7,383.9	-363.5	196.9	538,585.79	771,198.41		32.478428	-103.587931
7,500.0	4.52	151.56	7,483.5	-370.4	200.6	538,578.86	771,202.16		32.478409	-103.587919
7,600.0	4.52	151.56	7,583.2	-377.3	204.4	538,571.94	771,205.91		32.478390	-103.587907
7,700.0	4.52	151.56	7,682.9	-384.3	208.1	538,565.01	771,209.66		32.478371	-103.587895
7,800.0	4.52	151.56	7,782.6	-391.2	211.9	538,558.09	771,213.41		32.478351	-103.587883
7,900.0	4.52	151.56	7,882.3	-398.1	215.6	538,551.17	771,217.16		32.478332	-103.587871
8,000.0	4.52	151.56	7,982.0	-405.0	219.4	538,544.24	771,220.91		32.478313	-103.587859
8,100.0	4.52	151.56	8,081.7	-412.0	223.1	538,537.32	771,224.66		32.478294	-103.587847
8,200.0	4.52	151.56	8,181.4	-418.9	226.9	538,530.39	771,228.41		32.478275	-103.587835
8,300.0	4.52	151.56	8,281.1	-425.8	230.6	538,523.47	771,232.16		32.478256	-103.587823
8,400.0	4.52	151.56	8,380.7	-432.7	234.4	538,516.54	771,235.91		32.478237	-103.587811
8,500.0	4.52	151.56	8,480.4	-439.7	238.1	538,509.62	771,239.66		32.478218	-103.587799
8,600.0	4.52	151.56	8,580.1	-446.6	241.9	538,502.70	771,243.41		32.478199	-103.587787
8,700.0	4.52	151.56	8,679.8	-453.5	245.7	538,495.77	771,247.16		32.478179	-103.587775
8,800.0	4.52	151.56	8,779.5	-460.4	249.4	538,488.85	771,250.91		32.478160	-103.587763
8,880.7	4.52	151.56	8,860.0	-466.0	252.4	538,483.26	771,253.94		32.478145	-103.587753
Bone Spring Lime										
8,900.0	4.52	151.56	8,879.2	-467.4	253.2	538,481.92	771,254.67		32.478141	-103.587751
9,000.0	4.52	151.56	8,978.9	-474.3	256.9	538,475.00	771,258.42		32.478122	-103.587739



American Resource Development LLC

## Planning Report - Geographic

<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit	<b>Local Co-ordinate Reference:</b>	Well Becknell 21-33-17 State Com 924H
<b>Company:</b>	Ameredev Operating	<b>TVD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Project:</b>	Hat Mesa	<b>MD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Site:</b>	Becknell State Com - A Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Becknell 21-33-17 State Com 924H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	Permit Plan 1 - 359.50		

## Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,100.0	4.52	151.56	9,078.6	-481.2	260.7	538,468.07	771,262.17	32.478103	-103.587727
9,200.0	4.52	151.56	9,178.3	-488.1	264.4	538,461.15	771,265.92	32.478084	-103.587715
9,300.0	4.52	151.56	9,278.0	-495.1	268.2	538,454.23	771,269.67	32.478065	-103.587703
9,400.0	4.52	151.56	9,377.6	-502.0	271.9	538,447.30	771,273.42	32.478046	-103.587691
9,500.0	4.52	151.56	9,477.3	-508.9	275.7	538,440.38	771,277.17	32.478027	-103.587679
9,600.0	4.52	151.56	9,577.0	-515.8	279.4	538,433.45	771,280.92	32.478008	-103.587667
9,700.0	4.52	151.56	9,676.7	-522.8	283.2	538,426.53	771,284.67	32.477988	-103.587655
9,800.0	4.52	151.56	9,776.4	-529.7	286.9	538,419.60	771,288.42	32.477969	-103.587643
9,900.0	4.52	151.56	9,876.1	-536.6	290.7	538,412.68	771,292.17	32.477950	-103.587631
9,945.0	4.52	151.56	9,921.0	-539.7	292.3	538,409.56	771,293.86	32.477942	-103.587625
<b>First Bone Spring</b>									
10,000.0	4.52	151.56	9,975.8	-543.5	294.4	538,405.76	771,295.92	32.477931	-103.587619
10,100.0	4.52	151.56	10,075.5	-550.4	298.2	538,398.83	771,299.67	32.477912	-103.587607
10,200.0	4.52	151.56	10,175.2	-557.4	301.9	538,391.91	771,303.42	32.477893	-103.587595
10,300.0	4.52	151.56	10,274.8	-564.3	305.7	538,384.98	771,307.17	32.477874	-103.587583
10,400.0	4.52	151.56	10,374.5	-571.2	309.4	538,378.06	771,310.93	32.477855	-103.587570
10,500.0	4.52	151.56	10,474.2	-578.1	313.2	538,371.13	771,314.68	32.477836	-103.587558
10,520.8	4.52	151.56	10,495.0	-579.6	313.9	538,369.69	771,315.46	32.477832	-103.587556
<b>Second Bone Spring</b>									
10,600.0	4.52	151.56	10,573.9	-585.1	316.9	538,364.21	771,318.43	32.477816	-103.587546
10,665.0	4.52	151.56	10,638.7	-589.6	319.4	538,359.71	771,320.86	32.477804	-103.587539
<b>Start Drop -1.50</b>									
10,700.0	3.99	151.56	10,673.6	-591.9	320.6	538,357.43	771,322.10	32.477798	-103.587535
10,800.0	2.49	151.56	10,773.5	-596.8	323.3	538,352.45	771,324.79	32.477784	-103.587526
10,900.0	0.99	151.56	10,873.4	-599.5	324.7	538,349.78	771,326.24	32.477777	-103.587521
10,966.1	0.00	0.00	10,939.5	-600.0	325.0	538,349.28	771,326.51	32.477775	-103.587521
<b>Start DLS 12.00 TFO 359.52</b>									
11,000.0	4.07	359.52	10,973.4	-598.8	325.0	538,350.48	771,326.50	32.477779	-103.587521
11,091.0	14.99	359.52	11,063.0	-583.8	324.9	538,365.53	771,326.38	32.477820	-103.587521
<b>Third Carb</b>									
11,100.0	16.07	359.52	11,071.7	-581.3	324.8	538,367.93	771,326.36	32.477827	-103.587521
11,200.0	28.07	359.52	11,164.2	-543.8	324.5	538,405.43	771,326.04	32.477930	-103.587521
11,300.0	40.07	359.52	11,246.8	-487.9	324.1	538,461.35	771,325.57	32.478083	-103.587521
11,400.0	52.07	359.52	11,316.1	-416.0	323.5	538,533.23	771,324.97	32.478281	-103.587521
11,500.0	64.07	359.52	11,368.9	-331.3	322.7	538,617.94	771,324.26	32.478514	-103.587522
11,600.0	76.07	359.52	11,402.9	-237.5	322.0	538,711.77	771,323.48	32.478772	-103.587522
11,700.0	88.07	359.52	11,416.7	-138.6	321.1	538,810.63	771,322.65	32.479043	-103.587523
11,715.4	89.92	359.52	11,417.0	-123.2	321.0	538,826.04	771,322.52	32.479086	-103.587523
<b>Start 24.7 hold at 11715.4 MD</b>									
11,740.1	89.92	359.52	11,417.0	-98.5	320.8	538,850.74	771,322.31	32.479154	-103.587523
<b>Start DLS 2.00 TFO 1.87 - FTP (BECK924H)</b>									
11,744.3	90.00	359.52	11,417.0	-94.4	320.8	538,854.88	771,322.28	32.479165	-103.587523
<b>Start 10355.2 hold at 11744.3 MD</b>									
11,800.0	90.00	359.52	11,417.0	-38.7	320.3	538,910.63	771,321.81	32.479318	-103.587523
11,900.0	90.00	359.52	11,417.0	61.3	319.5	539,010.62	771,320.98	32.479593	-103.587524
12,000.0	90.00	359.52	11,417.0	161.3	318.6	539,110.62	771,320.15	32.479868	-103.587524
12,100.0	90.00	359.52	11,417.0	261.3	317.8	539,210.62	771,319.31	32.480143	-103.587524
12,200.0	90.00	359.52	11,417.0	361.3	317.0	539,310.61	771,318.48	32.480418	-103.587525
12,300.0	90.00	359.52	11,417.0	461.3	316.1	539,410.61	771,317.65	32.480693	-103.587525
12,400.0	90.00	359.52	11,417.0	561.3	315.3	539,510.61	771,316.81	32.480967	-103.587526
12,500.0	90.00	359.52	11,417.0	661.3	314.5	539,610.60	771,315.98	32.481242	-103.587526
12,600.0	90.00	359.52	11,417.0	761.3	313.6	539,710.60	771,315.15	32.481517	-103.587527
12,700.0	90.00	359.52	11,417.0	861.3	312.8	539,810.60	771,314.31	32.481792	-103.587527
12,800.0	90.00	359.52	11,417.0	961.3	312.0	539,910.59	771,313.48	32.482067	-103.587527



American Resource Development LLC

## Planning Report - Geographic

<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit	<b>Local Co-ordinate Reference:</b>	Well Becknell 21-33-17 State Com 924H
<b>Company:</b>	Ameredev Operating	<b>TVD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Project:</b>	Hat Mesa	<b>MD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Site:</b>	Becknell State Com - A Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Becknell 21-33-17 State Com 924H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	Permit Plan 1 - 359.50		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
12,900.0	90.00	359.52	11,417.0	1,061.3	311.1	540,010.59	771,312.65	32.482342	-103.587528
13,000.0	90.00	359.52	11,417.0	1,161.3	310.3	540,110.59	771,311.81	32.482617	-103.587528
13,100.0	90.00	359.52	11,417.0	1,261.3	309.5	540,210.58	771,310.98	32.482892	-103.587529
13,200.0	90.00	359.52	11,417.0	1,361.3	308.6	540,310.58	771,310.15	32.483166	-103.587529
13,300.0	90.00	359.52	11,417.0	1,461.3	307.8	540,410.58	771,309.31	32.483441	-103.587530
13,400.0	90.00	359.52	11,417.0	1,561.3	307.0	540,510.57	771,308.48	32.483716	-103.587530
13,500.0	90.00	359.52	11,417.0	1,661.3	306.1	540,610.57	771,307.65	32.483991	-103.587531
13,600.0	90.00	359.52	11,417.0	1,761.3	305.3	540,710.56	771,306.82	32.484266	-103.587531
13,700.0	90.00	359.52	11,417.0	1,861.3	304.5	540,810.56	771,305.98	32.484541	-103.587531
13,800.0	90.00	359.52	11,417.0	1,961.3	303.6	540,910.56	771,305.15	32.484816	-103.587532
13,900.0	90.00	359.52	11,417.0	2,061.3	302.8	541,010.55	771,304.32	32.485090	-103.587532
14,000.0	90.00	359.52	11,417.0	2,161.3	302.0	541,110.55	771,303.48	32.485365	-103.587533
14,100.0	90.00	359.52	11,417.0	2,261.3	301.1	541,210.55	771,302.65	32.485640	-103.587533
14,200.0	90.00	359.52	11,417.0	2,361.3	300.3	541,310.54	771,301.82	32.485915	-103.587534
14,300.0	90.00	359.52	11,417.0	2,461.3	299.5	541,410.54	771,300.98	32.486190	-103.587534
14,400.0	90.00	359.52	11,417.0	2,561.3	298.6	541,510.54	771,300.15	32.486465	-103.587534
14,500.0	90.00	359.52	11,417.0	2,661.3	297.8	541,610.53	771,299.32	32.486740	-103.587535
14,600.0	90.00	359.52	11,417.0	2,761.3	297.0	541,710.53	771,298.48	32.487014	-103.587535
14,700.0	90.00	359.52	11,417.0	2,861.2	296.1	541,810.53	771,297.65	32.487289	-103.587536
14,800.0	90.00	359.52	11,417.0	2,961.2	295.3	541,910.52	771,296.82	32.487564	-103.587536
14,900.0	90.00	359.52	11,417.0	3,061.2	294.5	542,010.52	771,295.98	32.487839	-103.587537
15,000.0	90.00	359.52	11,417.0	3,161.2	293.6	542,110.52	771,295.15	32.488114	-103.587537
15,100.0	90.00	359.52	11,417.0	3,261.2	292.8	542,210.51	771,294.32	32.488389	-103.587537
15,200.0	90.00	359.52	11,417.0	3,361.2	292.0	542,310.51	771,293.48	32.488664	-103.587538
15,300.0	90.00	359.52	11,417.0	3,461.2	291.1	542,410.51	771,292.65	32.488938	-103.587538
15,400.0	90.00	359.52	11,417.0	3,561.2	290.3	542,510.50	771,291.82	32.489213	-103.587539
15,500.0	90.00	359.52	11,417.0	3,661.2	289.5	542,610.50	771,290.98	32.489488	-103.587539
15,600.0	90.00	359.52	11,417.0	3,761.2	288.6	542,710.50	771,290.15	32.489763	-103.587540
15,700.0	90.00	359.52	11,417.0	3,861.2	287.8	542,810.49	771,289.32	32.490038	-103.587540
15,800.0	90.00	359.52	11,417.0	3,961.2	287.0	542,910.49	771,288.48	32.490313	-103.587541
15,900.0	90.00	359.52	11,417.0	4,061.2	286.1	543,010.48	771,287.65	32.490588	-103.587541
16,000.0	90.00	359.52	11,417.0	4,161.2	285.3	543,110.48	771,286.82	32.490863	-103.587541
16,100.0	90.00	359.52	11,417.0	4,261.2	284.5	543,210.48	771,285.99	32.491137	-103.587542
16,200.0	90.00	359.52	11,417.0	4,361.2	283.6	543,310.47	771,285.15	32.491412	-103.587542
16,300.0	90.00	359.52	11,417.0	4,461.2	282.8	543,410.47	771,284.32	32.491687	-103.587543
16,400.0	90.00	359.52	11,417.0	4,561.2	282.0	543,510.47	771,283.49	32.491962	-103.587543
16,500.0	90.00	359.52	11,417.0	4,661.2	281.1	543,610.46	771,282.65	32.492237	-103.587544
16,600.0	90.00	359.52	11,417.0	4,761.2	280.3	543,710.46	771,281.82	32.492512	-103.587544
16,700.0	90.00	359.52	11,417.0	4,861.2	279.5	543,810.46	771,280.99	32.492787	-103.587544
16,800.0	90.00	359.52	11,417.0	4,961.2	278.6	543,910.45	771,280.15	32.493061	-103.587545
16,900.0	90.00	359.52	11,417.0	5,061.2	277.8	544,010.45	771,279.32	32.493336	-103.587545
17,000.0	90.00	359.52	11,417.0	5,161.2	277.0	544,110.45	771,278.49	32.493611	-103.587546
17,100.0	90.00	359.52	11,417.0	5,261.2	276.1	544,210.44	771,277.65	32.493886	-103.587546
17,200.0	90.00	359.52	11,417.0	5,361.2	275.3	544,310.44	771,276.82	32.494161	-103.587547
17,300.0	90.00	359.52	11,417.0	5,461.2	274.5	544,410.44	771,275.99	32.494436	-103.587547
17,400.0	90.00	359.52	11,417.0	5,561.2	273.6	544,510.43	771,275.15	32.494711	-103.587547
17,500.0	90.00	359.52	11,417.0	5,661.1	272.8	544,610.43	771,274.32	32.494985	-103.587548
17,600.0	90.00	359.52	11,417.0	5,761.1	272.0	544,710.43	771,273.49	32.495260	-103.587548
17,700.0	90.00	359.52	11,417.0	5,861.1	271.1	544,810.42	771,272.65	32.495535	-103.587549
17,800.0	90.00	359.52	11,417.0	5,961.1	270.3	544,910.42	771,271.82	32.495810	-103.587549
17,900.0	90.00	359.52	11,417.0	6,061.1	269.5	545,010.42	771,270.99	32.496085	-103.587550
18,000.0	90.00	359.52	11,417.0	6,161.1	268.6	545,110.41	771,270.15	32.496360	-103.587550
18,100.0	90.00	359.52	11,417.0	6,261.1	267.8	545,210.41	771,269.32	32.496635	-103.587551
18,200.0	90.00	359.52	11,417.0	6,361.1	267.0	545,310.41	771,268.49	32.496909	-103.587551
18,300.0	90.00	359.52	11,417.0	6,461.1	266.1	545,410.40	771,267.65	32.497184	-103.587551



American Resource Development LLC

## Planning Report - Geographic

<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit	<b>Local Co-ordinate Reference:</b>	Well Becknell 21-33-17 State Com 924H
<b>Company:</b>	Ameredev Operating	<b>TVD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Project:</b>	Hat Mesa	<b>MD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Site:</b>	Becknell State Com - A Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Becknell 21-33-17 State Com 924H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	Permit Plan 1 - 359.50		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
18,400.0	90.00	359.52	11,417.0	6,561.1	265.3	545,510.40	771,266.82	32.497459	-103.587552
18,500.0	90.00	359.52	11,417.0	6,661.1	264.5	545,610.39	771,265.99	32.497734	-103.587552
18,600.0	90.00	359.52	11,417.0	6,761.1	263.6	545,710.39	771,265.16	32.498009	-103.587553
18,700.0	90.00	359.52	11,417.0	6,861.1	262.8	545,810.39	771,264.32	32.498284	-103.587553
18,800.0	90.00	359.52	11,417.0	6,961.1	262.0	545,910.38	771,263.49	32.498559	-103.587554
18,900.0	90.00	359.52	11,417.0	7,061.1	261.1	546,010.38	771,262.66	32.498834	-103.587554
19,000.0	90.00	359.52	11,417.0	7,161.1	260.3	546,110.38	771,261.82	32.499108	-103.587554
19,100.0	90.00	359.52	11,417.0	7,261.1	259.5	546,210.37	771,260.99	32.499383	-103.587555
19,200.0	90.00	359.52	11,417.0	7,361.1	258.6	546,310.37	771,260.16	32.499658	-103.587555
19,300.0	90.00	359.52	11,417.0	7,461.1	257.8	546,410.37	771,259.32	32.499933	-103.587556
19,400.0	90.00	359.52	11,417.0	7,561.1	257.0	546,510.36	771,258.49	32.500208	-103.587556
19,500.0	90.00	359.52	11,417.0	7,661.1	256.1	546,610.36	771,257.66	32.500483	-103.587557
19,600.0	90.00	359.52	11,417.0	7,761.1	255.3	546,710.36	771,256.82	32.500758	-103.587557
19,700.0	90.00	359.52	11,417.0	7,861.1	254.5	546,810.35	771,255.99	32.501032	-103.587557
19,800.0	90.00	359.52	11,417.0	7,961.1	253.6	546,910.35	771,255.16	32.501307	-103.587558
19,900.0	90.00	359.52	11,417.0	8,061.1	252.8	547,010.35	771,254.32	32.501582	-103.587558
20,000.0	90.00	359.52	11,417.0	8,161.1	252.0	547,110.34	771,253.49	32.501857	-103.587559
20,100.0	90.00	359.52	11,417.0	8,261.1	251.1	547,210.34	771,252.66	32.502132	-103.587559
20,200.0	90.00	359.52	11,417.0	8,361.1	250.3	547,310.34	771,251.82	32.502407	-103.587560
20,300.0	90.00	359.52	11,417.0	8,461.1	249.5	547,410.33	771,250.99	32.502682	-103.587560
20,400.0	90.00	359.52	11,417.0	8,561.0	248.6	547,510.33	771,250.16	32.502956	-103.587560
20,500.0	90.00	359.52	11,417.0	8,661.0	247.8	547,610.33	771,249.32	32.503231	-103.587561
20,600.0	90.00	359.52	11,417.0	8,761.0	247.0	547,710.32	771,248.49	32.503506	-103.587561
20,700.0	90.00	359.52	11,417.0	8,861.0	246.1	547,810.32	771,247.66	32.503781	-103.587562
20,800.0	90.00	359.52	11,417.0	8,961.0	245.3	547,910.32	771,246.82	32.504056	-103.587562
20,900.0	90.00	359.52	11,417.0	9,061.0	244.5	548,010.31	771,245.99	32.504331	-103.587563
21,000.0	90.00	359.52	11,417.0	9,161.0	243.6	548,110.31	771,245.16	32.504606	-103.587563
21,100.0	90.00	359.52	11,417.0	9,261.0	242.8	548,210.30	771,244.32	32.504880	-103.587564
21,200.0	90.00	359.52	11,417.0	9,361.0	242.0	548,310.30	771,243.49	32.505155	-103.587564
21,300.0	90.00	359.52	11,417.0	9,461.0	241.1	548,410.30	771,242.66	32.505430	-103.587564
21,400.0	90.00	359.52	11,417.0	9,561.0	240.3	548,510.29	771,241.83	32.505705	-103.587565
21,500.0	90.00	359.52	11,417.0	9,661.0	239.5	548,610.29	771,240.99	32.505980	-103.587565
21,600.0	90.00	359.52	11,417.0	9,761.0	238.6	548,710.29	771,240.16	32.506255	-103.587566
21,700.0	90.00	359.52	11,417.0	9,861.0	237.8	548,810.28	771,239.33	32.506530	-103.587566
21,800.0	90.00	359.52	11,417.0	9,961.0	237.0	548,910.28	771,238.49	32.506805	-103.587567
21,900.0	90.00	359.52	11,417.0	10,061.0	236.1	549,010.28	771,237.66	32.507079	-103.587567
22,000.0	90.00	359.52	11,417.0	10,161.0	235.3	549,110.27	771,236.83	32.507354	-103.587567
22,099.5	90.00	359.52	11,417.0	10,260.4	234.5	549,209.72	771,236.00	32.507628	-103.587568
Start 50.0 hold at 22099.5 MD - LTP (BECK924H)									
22,100.0	90.00	359.52	11,417.0	10,261.0	234.5	549,210.27	771,235.99	32.507629	-103.587568
22,149.4	90.00	359.52	11,417.0	10,310.4	234.1	549,259.71	771,235.58	32.507765	-103.587568
TD at 22149.4 - BHL (BECK924H)									



American Resource Development LLC

## Planning Report - Geographic

<b>Database:</b>	AUS-COMPASS - EDM_15 - 32bit	<b>Local Co-ordinate Reference:</b>	Well Becknell 21-33-17 State Com 924H
<b>Company:</b>	Ameredev Operating	<b>TVD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Project:</b>	Hat Mesa	<b>MD Reference:</b>	GL 3791.68 + 27 KB @ 3818.7usft
<b>Site:</b>	Becknell State Com - A Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Becknell 21-33-17 State Com 924H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	Permit Plan 1 - 359.50		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
BHL (BECK924H)	0.00	0.00	11,417.0	10,310.4	234.1	549,259.71	771,235.59	32.507765	-103.587568
- plan hits target center									
- Point									
FTP (BECK924H)	0.00	0.00	11,417.0	-98.5	320.8	538,850.74	771,322.31	32.479154	-103.587523
- plan hits target center									
- Point									
LTP (BECK924H)	0.00	0.00	11,417.0	10,260.4	234.5	549,209.72	771,236.00	32.507628	-103.587568
- plan hits target center									
- Point									

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
1,767.0	1,767.0	Rustler			
2,159.0	2,159.0	Salado			
3,669.6	3,665.0	Tansill			
4,167.1	4,161.0	Capitan			
5,484.2	5,474.0	Bell Canyon			
7,262.7	7,247.0	Brushy Canyon			
8,880.7	8,860.0	Bone Spring Lime			
9,945.0	9,921.0	First Bone Spring			
10,520.8	10,495.0	Second Bone Spring			
11,091.0	11,063.0	Third Carb			

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
2,000.0	2,000.0	0.0	0.0	Start Build 1.50
2,301.1	2,300.8	-10.4	5.6	Start 8363.9 hold at 2301.1 MD
10,665.0	10,638.7	-589.6	319.4	Start Drop -1.50
10,966.1	10,939.5	-600.0	325.0	Start DLS 12.00 TFO 359.52
11,715.4	11,417.0	-123.2	321.0	Start 24.7 hold at 11715.4 MD
11,740.1	11,417.0	-98.5	320.8	Start DLS 2.00 TFO 1.87
11,744.3	11,417.0	-94.4	320.8	Start 10355.2 hold at 11744.3 MD
22,099.5	11,417.0	10,260.4	234.5	Start 50.0 hold at 22099.5 MD
22,149.4	11,417.0	10,310.4	234.1	TD at 22149.4





2901 Via Fortuna, Suite 600, Austin, Texas 78746 • Phone 832-672-4700 • Fax 832-672-4609

September 9, 2022

Mr. Paul Kautz, Hobbs District Geologist  
Energy Minerals Natural Resources Dept.  
Oil Conservation Division  
1625 N. French Dr.  
Hobbs, New Mexico 88240

Re: Advance Energy Partners Hat Mesa, LLC (OGRID No. 372417)  
Proposed Well APDs- Becknell Wells  
State Land in Section 17, T21S-R33E  
Lea County, New Mexico

Dear Mr. Kautz,

This letter is to confirm that there are no active potash leases within a 1-mile radius of the SHLs of the Becknell 21-33-17 State Com wells in Section 17, Township 21 South, Range 33 East, Lea County, New Mexico.

**Becknell 21-33-17 State Com Wells:**

**Becknell 21-33-17 State Com #71H**

- The surface location is located 2,437 feet from the north line and 700 feet from the west line (Unit E) of Section 17
- The bottom hole location is located 2,589 feet from the south line and 330 feet from the west line (Unit L) of Section 5.

**Becknell 21-33-17 State Com #72H**

- The surface location is located 2,437 feet from the north line and 1,700 feet from the west line (Unit F) of Section 17.
- The bottom hole location is located 2,588 feet from the south line and 1,973 feet from the west line (Unit K) of Section 5.

**Becknell 21-33-17 State Com #73H**

- The surface location is located 2,439 feet from the north line and 2,033 feet from the east line (Unit G) of Section 17.
- The bottom hole location is located 2,588 feet from the south line and 1,430 feet from the east line (Unit J) of Section 5.

**Becknell 21-33-17 State Com #91H**

- The surface location is located 2,437 feet from the north line and 760 feet from the west line (Unit E) of Section 17

- The bottom hole location is located 2,589 feet from the south line and 330 feet from the west line (Unit L) of Section 5.

Becknell 21-33-17 State Com #92H

- The surface location is located 2,437 feet from the north line and 1,640 feet from the west line (Unit F) of Section 17.
- The bottom hole location is located 2,588 feet from the south line and 2,090 feet from the west line (Unit K) of Section 5.

Becknell 21-33-17 State Com #93H

- The surface location is located 2,440 feet from the north line and 810 feet from the east line (Unit H) of Section 17.
- The bottom hole location is located 2,588 feet from the south line and 1,430 feet from the east line (Unit J) of Section 5.

Becknell 21-33-17 State Com #111H

- The surface location is located 2,437 feet from the north line and 1,620 feet from the west line (Unit F) of Section 17
- The bottom hole location is located 2,588 feet from the south line and 1,210 feet from the west line (Unit L) of Section 5.

Becknell 21-33-17 State Com #113H

- The surface location is located 2,439 feet from the north line and 2,073 feet from the east line (Unit G) of Section 17
- The bottom hole location is located 2,588 feet from the south line and 2,304 feet from the east line (Unit J) of Section 5.

Becknell 21-33-17 State Com #114H

- The surface location is located 2,440 feet from the north line and 790 feet from the east line (Unit H) of Section 17
- The bottom hole location is located 2,589 feet from the south line and 550 feet from the east line (Unit I) of Section 5.

Becknell 21-33-17 State Com #811H

- The surface location is located 2,437 feet from the north line and 800 feet from the west line (Unit E) of Section 17.
- The bottom hole location is located 2,588 feet from the south line and 1,210 feet from the west line (Unit L) of Section 5.

Becknell 21-33-17 State Com #813H

- The surface location is located 2,439 feet from the north line and 2,133 feet from the east line (Unit G) of Section 17.
- The bottom hole location is located 2,588 feet from the south line and 2,304 feet from the east line (Unit J) of Section 5.



Becknell 21-33-17 State Com #814H

- The surface location is located 2,440 feet from the north line and 730 feet from the east line (Unit H) of Section 17
- The bottom hole location is located 2,589 feet from the south line and 550 feet from the east line (Unit I ) of Section 5.

Becknell 21-33-17 State Com #821H

- The surface location is located 2,437 feet from the north line and 720 feet from the west line (Unit E) of Section 17.
- The bottom hole location is located 2,589 feet from the south line and 330 feet from the west line (Unit L) of Section 5.

Becknell 21-33-17 State Com #822H

- The surface location is located 2,437 feet from the north line and 1,680 feet from the west line (Unit F) of Section 17.
- The bottom hole location is located 2,588 feet from the south line and 2,090 feet from the west line (Unit K) of Section 5.

Becknell 21-33-17 State Com #823H

- The surface location is located 2,439 feet from the north line and 2,053 feet from the east line (Unit G) of Section 17.
- The bottom hole location is located 2,588 feet from the south line and 1,430 feet from the east line (Unit J) of Section 5.

Becknell 21-33-17 State Com #831H

- The surface location is located 2,437 feet from the north line and 780 feet from the west line (Unit E) of Section 17
- The bottom hole location is located 2,588 feet from the south line and 1,210 feet from the west line (Unit L) of Section 5.

Becknell 21-33-17 State Com #833H

- The surface location is located 2,439 feet from the north line and 2,113 feet from the east line (Unit G) of Section 17.
- The bottom hole location is located 2,588 feet from the south line and 2,304 feet from the east line (Unit J) of Section 5.

Becknell 21-33-17 State Com #834H

- The surface location is located 2,440 feet from the north line and 750 feet from the east line (Unit H) of Section 17
- The bottom hole location is located 2,589 feet from the south line and 550 feet from the east line (Unit I) of Section 5.

Becknell 21-33-17 State Com #911H

- The surface location is located 2,437 feet from the north line and 740 feet from the west line (Unit E) of Section 17

- The bottom hole location is located 2,589 feet from the south line and 430 feet from the west line (Unit L) of Section 5.

Becknell 21-33-17 State Com #912H

- The surface location is located 2,437 feet from the north line and 1,660 feet from the west line (Unit F) of Section 17.
- The bottom hole location is located 2,588 feet from the south line and 2,190 feet from the west line (Unit K) of Section 5.

Becknell 21-33-17 State Com #913H

- The surface location is located 2,440 feet from the north line and 830 feet from the east line (Unit H) of Section 17.
- The bottom hole location is located 2,588 feet from the south line and 1,330 feet from the east line (Unit J) of Section 5.

Becknell 21-33-17 State Com #921H

- The surface location is located 2,437 feet from the north line and 1,600 feet from the west line (Unit F) of Section 17.
- The bottom hole location is located 2,588 feet from the south line and 1,310 feet from the west line (Unit L) of Section 5.

Becknell 21-33-17 State Com #923H

- The surface location is located 2,439 feet from the north line and 2,093 feet from the east line (Unit G) of Section 17
- The bottom hole location is located 2,588 feet from the south line and 2,204 feet from the east line (Unit J) of Section 5.

Boone 21-33-16 State Com #924H

- The surface location is located 2,440 feet from the north line and 770 feet from the east line (Unit H) of Section 17
- The bottom hole location is located 2,589 feet from the south line and 450 feet from the east line (Unit I) of Section 5.

If you have any questions about this letter, please contact me by phone at 737-444-2997 or email at [LLaufer@ameredev.com](mailto:LLaufer@ameredev.com).

Sincerely,



Lizzy Laufer

Landman

Advance Energy Partners Hat Mesa, LLC

Email: [LLaufer@ameredev.com](mailto:LLaufer@ameredev.com)

State of New Mexico  
Energy, Minerals and Natural Resources Department

Submit Electronically  
Via E-permitting

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

## 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:** Advance Energy Partners Hat Mesa, LLC **OGRID:** 372417 **Date:** \_\_\_\_\_

**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
BECKNELL 21-33-17 State Com 093H	30-025-	H-17-21S-33E	2440' FNL & 810' FEL	1000	1600	3300
BECKNELL 21-33-17 State Com 114H	30-025-	H-17-21S-33E	2440' FNL & 790' FEL	1000	1600	3300
BECKNELL 21-33-17 State Com 814H	30-025-	H-17-21S-33E	2440' FNL & 730' FEL	1000	1600	3300
BECKNELL 21-33-17 State Com 834H	30-025-	H-17-21S-33E	2440' FNL & 750' FEL	1000	1600	3300
BECKNELL 21-33-17 State Com 913H	30-025-	H-17-21S-33E	2440' FNL & 830' FEL	1000	1600	3300
BECKNELL 21-33-17 State Com 924H	30-025-	H-17-21S-33E	2440' FNL & 770' FEL	1000	1600	3300

**IV. Central Delivery Point Name:** \_\_\_\_\_ [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
BECKNELL 21-33-17 State Com 093H	30-025-	5/11/2023	5/31/2023	6/27/2023	8/17/2023	8/20/2023
BECKNELL 21-33-17 State Com 114H	30-025-	4/19/2023	5/9/2023	6/27/2023	8/17/2023	8/20/2023
BECKNELL 21-33-17 State Com 814H	30-025-	2/12/2023	3/4/2023	6/27/2023	8/17/2023	8/20/2023
BECKNELL 21-33-17 State Com 834H	30-025-	3/6/2023	3/26/2023	6/27/2023	8/17/2023	8/20/2023
BECKNELL 21-33-17 State Com 913H	30-025-	6/2/2023	6/22/2023	6/27/2023	8/17/2023	8/20/2023
BECKNELL 21-33-17 State Com 924H	30-025-	3/28/2023	4/17/2023	6/27/2023	8/17/2023	8/20/2023

**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: *Dayeed Khan*

Printed Name: Dayeed Khan

Title: Engineer

E-mail Address: dkhan@ameredev.com

Date: 08/23/2022

Phone: 737-300-4735

**OIL CONSERVATION DIVISION**  
**(Only applicable when submitted as a standalone form)**

Approved By:

Title:

Approval Date:

Conditions of Approval: