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 323861

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

1. Operator Name and Address	2. OGRID Number
ADVANCE ENERGY PARTNERS HAT MESA, LLC 11490 Westheimer Rd., Ste 950 Houston, TX 77077	372417
	3. API Number 30-025-50564

4. Property Code	5. Property Name	6. Well No.
333273	BECKNELL 21 33 17 STATE COM	822H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
F	17	21S	33E	F	2437	N	1680	W	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
K	5	21S	33E	K	2588	S	2090	W	Lea

9. Pool Information

WC-025 G-08 S213304D;BONE SPRING	97895

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3788
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	21311	2nd Bone Spring Sand		6/10/2023
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	54.5	1829	1403	0
Int1	12.25	10.75	40.5	3722	422	0
Int2	9.875	7.625	29.7	5520	815	0
Prod	6.75	5.5	20	21311	682	0

Casing/Cement Program: Additional Comments

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 ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:		**OIL CONSERVATION DIVISION**	
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:	8/24/2022 Phone: 832-672-4604	Conditions of Approval Attached	

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District IV
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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

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-	97895	WC-025 G-08 S213304D;BONE SPRING

[4] Property Code	[5] Property Name	[6] Well Number
333273	Becknell 21-33-17 State Com	#822H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372417	ADVANCE ENERGY PARTNERS HAT MESA LLC	3,788.30'

[10] Surface Location

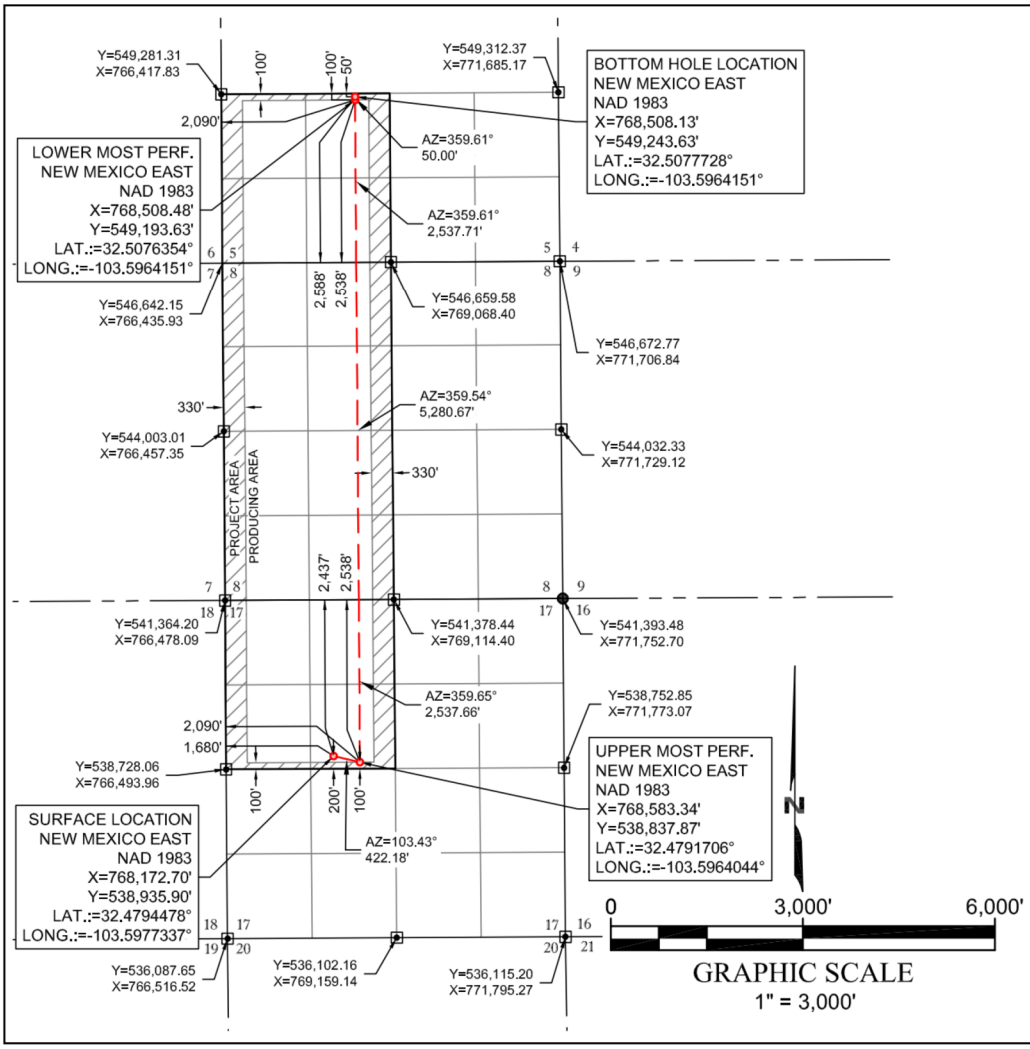
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	17	21-S	33-E	- -	2,437'	NORTH	1,680'	WEST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	5	21-S	33-E	- -	2,588'	SOUTH	2,090'	WEST	LEA

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

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



[17] OPERATOR CERTIFICATION

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

Signature — Date: 8/23/2022

Floyd Hammond
Printed Name

fhammond@ameredev.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

08/18/2022
Date of Survey

Signature and Seal of Professional Surveyor

JUSTIN MARK MURRAY
NEW MEXICO
24873
LICENSED PROFESSIONAL SURVEYOR

24873
Certificate Number

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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 323861

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
ADVANCE ENERGY PARTNERS HAT MESA, LLC [372417] 11490 Westheimer Rd., Ste 950 Houston, TX 77077	30-025-50564
	Well: BECKNELL 21 33 17 STATE COM #822H

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	CEMENT MUST COME TO THE SURFACE ON ALL STRINGS
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud

State of New Mexico
Energy, Minerals and Natural Resources Department

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: Becknell 21 33 17 State Com # 822H

PROPOSED LOCATION: U/L F Sec 17 T21S R33E 2437 FNL 1680 FWL

Lat. 32.4794478 Long. -103.5977337 NAD83

PROPOSED DEPTH: 221311' MD 10602' 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 (2022 year) ----------Yes_____ No ✓

The above referenced location is within the Buffer Zone----------Yes_____ No ✓

Signed _____

Printed Signature JAMES S. RUTLEY

Representing BLM

State of New Mexico
Energy, Minerals and Natural Resources Department

September 12, 2022,

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

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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 - C Pad
BECKNELL 21-31-17 STATE COM 822H

OWB

Plan: PRELIM1

Standard Planning Report - Geographic

23 August, 2022

AMEREDEV
American Resource Development LLC.

Planning Report - Geographic

Database:	AUS-COMPASS - EDM_15 - 32bit	**Local Co-ordinate Reference:**	Well BECKNELL 21-31-17 STATE COM 822H
Company:	Ameredev Operating	**TVD Reference:**	KB=27' @ 3815.0usft
Project:	Hat Mesa	**MD Reference:**	KB=27' @ 3815.0usft
Site:	Becknell State Com - C Pad	**North Reference:**	Grid
Well:	BECKNELL 21-31-17 STATE COM 822H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM1		

Project Hat Mesa, Lea County, NM

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

Site Becknell State Com - C Pad

Site Position:		**Northing:**	538,936.06 usft	**Latitude:**	32.479448
From:	Map	**Easting:**	768,192.76 usft	**Longitude:**	-103.597669
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well BECKNELL 21-31-17 STATE COM 822H

Well Position	**+N/-S**	0.0 usft	**Northing:**	538,935.90 usft	**Latitude:**	32.479448
	+E/-W	0.0 usft	**Easting:**	768,172.70 usft	**Longitude:**	-103.597734
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,788.0 usft
Grid Convergence:		0.40 °				

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/22/2022	6.44	60.09	47,516.09484076

Design PRELIM1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	1.86

Plan Survey Tool Program **Date** 8/23/2022

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	21,311.2	PRELIM1 (OWB)	MWD OWSG MWD - Standard	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,248.9	4.98	145.87	2,248.6	-8.9	6.1	2.00	2.00	0.00	145.87	
10,120.7	4.98	145.87	10,090.7	-574.4	389.4	0.00	0.00	0.00	0.00	
10,905.2	90.00	359.59	10,602.0	-98.0	410.6	12.00	10.84	-18.65	-146.18	FTP (BS 822H)
21,261.3	90.00	359.59	10,602.0	10,257.8	335.8	0.00	0.00	0.00	0.00	LTP (BS 822H)
21,311.2	90.00	359.59	10,602.0	10,307.7	335.4	0.00	0.00	0.00	0.00	BHL (BS 822H)

AMEREDEV
American Resource Development LLC.

Planning Report - Geographic

Database:	AUS-COMPASS - EDM_15 - 32bit	**Local Co-ordinate Reference:**	Well BECKNELL 21-31-17 STATE COM 822H
Company:	Ameredev Operating	**TVD Reference:**	KB=27' @ 3815.0usft
Project:	Hat Mesa	**MD Reference:**	KB=27' @ 3815.0usft
Site:	Becknell State Com - C Pad	**North Reference:**	Grid
Well:	BECKNELL 21-31-17 STATE COM 822H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM1		

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	538,935.90	768,172.70	32.479448	-103.597734
100.0	0.00	0.00	100.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
200.0	0.00	0.00	200.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
300.0	0.00	0.00	300.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
400.0	0.00	0.00	400.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
500.0	0.00	0.00	500.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
600.0	0.00	0.00	600.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
700.0	0.00	0.00	700.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
800.0	0.00	0.00	800.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
900.0	0.00	0.00	900.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
1,000.0	0.00	0.00	1,000.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
1,100.0	0.00	0.00	1,100.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
1,200.0	0.00	0.00	1,200.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
1,300.0	0.00	0.00	1,300.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
1,400.0	0.00	0.00	1,400.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
1,500.0	0.00	0.00	1,500.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
1,600.0	0.00	0.00	1,600.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
1,700.0	0.00	0.00	1,700.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
1,704.0	0.00	0.00	1,704.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
RSLR_GRID									
1,800.0	0.00	0.00	1,800.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
1,900.0	0.00	0.00	1,900.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
2,000.0	0.00	0.00	2,000.0	0.0	0.0	538,935.90	768,172.70	32.479448	-103.597734
Start Build 2.00									
2,100.0	2.00	145.87	2,100.0	-1.4	1.0	538,934.46	768,173.68	32.479444	-103.597731
2,108.6	2.17	145.87	2,108.6	-1.7	1.2	538,934.20	768,173.85	32.479443	-103.597730
SLDO_GRID									
2,200.0	4.00	145.87	2,199.8	-5.8	3.9	538,930.13	768,176.61	32.479432	-103.597721
2,248.9	4.98	145.87	2,248.6	-8.9	6.1	538,926.96	768,178.76	32.479423	-103.597715
Start 7871.8 hold at 2248.9 MD									
2,300.0	4.98	145.87	2,299.5	-12.6	8.6	538,923.29	768,181.25	32.479413	-103.597707
2,400.0	4.98	145.87	2,399.1	-19.8	13.4	538,916.10	768,186.12	32.479393	-103.597691
2,500.0	4.98	145.87	2,498.7	-27.0	18.3	538,908.92	768,190.99	32.479373	-103.597675
2,600.0	4.98	145.87	2,598.4	-34.2	23.2	538,901.74	768,195.86	32.479354	-103.597660
2,700.0	4.98	145.87	2,698.0	-41.3	28.0	538,894.55	768,200.73	32.479334	-103.597644
2,800.0	4.98	145.87	2,797.6	-48.5	32.9	538,887.37	768,205.59	32.479314	-103.597628
2,900.0	4.98	145.87	2,897.2	-55.7	37.8	538,880.19	768,210.46	32.479294	-103.597613
3,000.0	4.98	145.87	2,996.9	-62.9	42.6	538,873.00	768,215.33	32.479274	-103.597597
3,100.0	4.98	145.87	3,096.5	-70.1	47.5	538,865.82	768,220.20	32.479254	-103.597582
3,200.0	4.98	145.87	3,196.1	-77.3	52.4	538,858.64	768,225.07	32.479234	-103.597566
3,300.0	4.98	145.87	3,295.7	-84.5	57.2	538,851.45	768,229.94	32.479215	-103.597550
3,400.0	4.98	145.87	3,395.3	-91.6	62.1	538,844.27	768,234.81	32.479195	-103.597535
3,500.0	4.98	145.87	3,495.0	-98.8	67.0	538,837.08	768,239.68	32.479175	-103.597519
3,600.0	4.98	145.87	3,594.6	-106.0	71.9	538,829.90	768,244.55	32.479155	-103.597503
3,602.3	4.98	145.87	3,596.9	-106.2	72.0	538,829.73	768,244.66	32.479155	-103.597503
TNSL_GRID									
3,700.0	4.98	145.87	3,694.2	-113.2	76.7	538,822.72	768,249.42	32.479135	-103.597488
3,800.0	4.98	145.87	3,793.8	-120.4	81.6	538,815.53	768,254.29	32.479115	-103.597472
3,900.0	4.98	145.87	3,893.5	-127.6	86.5	538,808.35	768,259.16	32.479096	-103.597457
4,000.0	4.98	145.87	3,993.1	-134.7	91.3	538,801.17	768,264.03	32.479076	-103.597441
4,058.5	4.98	145.87	4,051.3	-138.9	94.2	538,796.97	768,266.87	32.479064	-103.597432
CPTN_GRID									
4,100.0	4.98	145.87	4,092.7	-141.9	96.2	538,793.98	768,268.89	32.479056	-103.597425
4,200.0	4.98	145.87	4,192.3	-149.1	101.1	538,786.80	768,273.76	32.479036	-103.597410

AMEREDEV
American Resource Development LLC.

Planning Report - Geographic

Database:	AUS-COMPASS - EDM_15 - 32bit	**Local Co-ordinate Reference:**	Well BECKNELL 21-31-17 STATE COM 822H
Company:	Ameredev Operating	**TVD Reference:**	KB=27' @ 3815.0usft
Project:	Hat Mesa	**MD Reference:**	KB=27' @ 3815.0usft
Site:	Becknell State Com - C Pad	**North Reference:**	Grid
Well:	BECKNELL 21-31-17 STATE COM 822H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,300.0	4.98	145.87	4,291.9	-156.3	105.9	538,779.62	768,278.63	32.479016	-103.597394
4,400.0	4.98	145.87	4,391.6	-163.5	110.8	538,772.43	768,283.50	32.478996	-103.597378
4,500.0	4.98	145.87	4,491.2	-170.7	115.7	538,765.25	768,288.37	32.478977	-103.597363
4,600.0	4.98	145.87	4,590.8	-177.8	120.5	538,758.07	768,293.24	32.478957	-103.597347
4,700.0	4.98	145.87	4,690.4	-185.0	125.4	538,750.88	768,298.11	32.478937	-103.597331
4,800.0	4.98	145.87	4,790.1	-192.2	130.3	538,743.70	768,302.98	32.478917	-103.597316
4,900.0	4.98	145.87	4,889.7	-199.4	135.2	538,736.52	768,307.85	32.478897	-103.597300
5,000.0	4.98	145.87	4,989.3	-206.6	140.0	538,729.33	768,312.72	32.478877	-103.597285
5,100.0	4.98	145.87	5,088.9	-213.8	144.9	538,722.15	768,317.59	32.478858	-103.597269
5,200.0	4.98	145.87	5,188.6	-220.9	149.8	538,714.96	768,322.46	32.478838	-103.597253
5,300.0	4.98	145.87	5,288.2	-228.1	154.6	538,707.78	768,327.32	32.478818	-103.597238
5,400.0	4.98	145.87	5,387.8	-235.3	159.5	538,700.60	768,332.19	32.478798	-103.597222
5,457.9	4.98	145.87	5,445.5	-239.5	162.3	538,696.44	768,335.01	32.478787	-103.597213
BLCN_GRID									
5,500.0	4.98	145.87	5,487.4	-242.5	164.4	538,693.41	768,337.06	32.478778	-103.597206
5,600.0	4.98	145.87	5,587.0	-249.7	169.2	538,686.23	768,341.93	32.478758	-103.597191
5,700.0	4.98	145.87	5,686.7	-256.9	174.1	538,679.05	768,346.80	32.478739	-103.597175
5,800.0	4.98	145.87	5,786.3	-264.0	179.0	538,671.86	768,351.67	32.478719	-103.597160
5,900.0	4.98	145.87	5,885.9	-271.2	183.8	538,664.68	768,356.54	32.478699	-103.597144
6,000.0	4.98	145.87	5,985.5	-278.4	188.7	538,657.50	768,361.41	32.478679	-103.597128
6,100.0	4.98	145.87	6,085.2	-285.6	193.6	538,650.31	768,366.28	32.478659	-103.597113
6,200.0	4.98	145.87	6,184.8	-292.8	198.5	538,643.13	768,371.15	32.478639	-103.597097
6,300.0	4.98	145.87	6,284.4	-300.0	203.3	538,635.95	768,376.02	32.478620	-103.597081
6,400.0	4.98	145.87	6,384.0	-307.1	208.2	538,628.76	768,380.89	32.478600	-103.597066
6,500.0	4.98	145.87	6,483.6	-314.3	213.1	538,621.58	768,385.76	32.478580	-103.597050
6,600.0	4.98	145.87	6,583.3	-321.5	217.9	538,614.40	768,390.62	32.478560	-103.597035
6,700.0	4.98	145.87	6,682.9	-328.7	222.8	538,607.21	768,395.49	32.478540	-103.597019
6,800.0	4.98	145.87	6,782.5	-335.9	227.7	538,600.03	768,400.36	32.478520	-103.597003
6,900.0	4.98	145.87	6,882.1	-343.1	232.5	538,592.84	768,405.23	32.478501	-103.596988
7,000.0	4.98	145.87	6,981.8	-350.2	237.4	538,585.66	768,410.10	32.478481	-103.596972
7,100.0	4.98	145.87	7,081.4	-357.4	242.3	538,578.48	768,414.97	32.478461	-103.596956
7,200.0	4.98	145.87	7,181.0	-364.6	247.1	538,571.29	768,419.84	32.478441	-103.596941
7,272.8	4.98	145.87	7,253.5	-369.8	250.7	538,566.07	768,423.38	32.478427	-103.596929
BYCN_GRID									
7,300.0	4.98	145.87	7,280.6	-371.8	252.0	538,564.11	768,424.71	32.478421	-103.596925
7,400.0	4.98	145.87	7,380.3	-379.0	256.9	538,556.93	768,429.58	32.478401	-103.596910
7,500.0	4.98	145.87	7,479.9	-386.2	261.8	538,549.74	768,434.45	32.478382	-103.596894
7,600.0	4.98	145.87	7,579.5	-393.3	266.6	538,542.56	768,439.32	32.478362	-103.596878
7,700.0	4.98	145.87	7,679.1	-400.5	271.5	538,535.38	768,444.19	32.478342	-103.596863
7,800.0	4.98	145.87	7,778.7	-407.7	276.4	538,528.19	768,449.06	32.478322	-103.596847
7,900.0	4.98	145.87	7,878.4	-414.9	281.2	538,521.01	768,453.92	32.478302	-103.596831
8,000.0	4.98	145.87	7,978.0	-422.1	286.1	538,513.83	768,458.79	32.478282	-103.596816
8,100.0	4.98	145.87	8,077.6	-429.3	291.0	538,506.64	768,463.66	32.478262	-103.596800
8,200.0	4.98	145.87	8,177.2	-436.4	295.8	538,499.46	768,468.53	32.478243	-103.596784
8,300.0	4.98	145.87	8,276.9	-443.6	300.7	538,492.28	768,473.40	32.478223	-103.596769
8,400.0	4.98	145.87	8,376.5	-450.8	305.6	538,485.09	768,478.27	32.478203	-103.596753
8,500.0	4.98	145.87	8,476.1	-458.0	310.4	538,477.91	768,483.14	32.478183	-103.596738
8,600.0	4.98	145.87	8,575.7	-465.2	315.3	538,470.72	768,488.01	32.478163	-103.596722
8,700.0	4.98	145.87	8,675.3	-472.4	320.2	538,463.54	768,492.88	32.478143	-103.596706
8,800.0	4.98	145.87	8,775.0	-479.5	325.1	538,456.36	768,497.75	32.478124	-103.596691
8,888.3	4.98	145.87	8,862.9	-485.9	329.3	538,450.02	768,502.04	32.478106	-103.596677
BSPG_GRID									
8,900.0	4.98	145.87	8,874.6	-486.7	329.9	538,449.17	768,502.62	32.478104	-103.596675
9,000.0	4.98	145.87	8,974.2	-493.9	334.8	538,441.99	768,507.49	32.478084	-103.596659

AMEREDEV
American Resource Development LLC.

Planning Report - Geographic

Database:	AUS-COMPASS - EDM_15 - 32bit	**Local Co-ordinate Reference:**	Well BECKNELL 21-31-17 STATE COM 822H
Company:	Ameredev Operating	**TVD Reference:**	KB=27' @ 3815.0usft
Project:	Hat Mesa	**MD Reference:**	KB=27' @ 3815.0usft
Site:	Becknell State Com - C Pad	**North Reference:**	Grid
Well:	BECKNELL 21-31-17 STATE COM 822H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM1		

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	4.98	145.87	9,073.8	-501.1	339.7	538,434.81	768,512.36	32.478064	-103.596644
9,200.0	4.98	145.87	9,173.5	-508.3	344.5	538,427.62	768,517.22	32.478044	-103.596628
9,300.0	4.98	145.87	9,273.1	-515.5	349.4	538,420.44	768,522.09	32.478024	-103.596613
9,400.0	4.98	145.87	9,372.7	-522.6	354.3	538,413.26	768,526.96	32.478005	-103.596597
9,500.0	4.98	145.87	9,472.3	-529.8	359.1	538,406.07	768,531.83	32.477985	-103.596581
9,600.0	4.98	145.87	9,572.0	-537.0	364.0	538,398.89	768,536.70	32.477965	-103.596566
9,700.0	4.98	145.87	9,671.6	-544.2	368.9	538,391.71	768,541.57	32.477945	-103.596550
9,800.0	4.98	145.87	9,771.2	-551.4	373.7	538,384.52	768,546.44	32.477925	-103.596534
9,900.0	4.98	145.87	9,870.8	-558.6	378.6	538,377.34	768,551.31	32.477905	-103.596519
9,944.8	4.98	145.87	9,915.4	-561.8	380.8	538,374.12	768,553.49	32.477897	-103.596512
FBSG_GRID									
10,000.0	4.98	145.87	9,970.4	-565.7	383.5	538,370.16	768,556.18	32.477886	-103.596503
10,030.7	4.98	145.87	10,001.0	-568.0	385.0	538,367.95	768,557.67	32.477879	-103.596498
AEP_TARGET_1BS_GRID									
10,100.0	4.98	145.87	10,070.1	-572.9	388.4	538,362.97	768,561.05	32.477866	-103.596488
10,120.7	4.98	145.87	10,090.7	-574.4	389.4	538,361.49	768,562.05	32.477862	-103.596484
Start DLS 12.00 TFO -146.18									
10,125.0	4.56	142.23	10,095.0	-574.7	389.6	538,361.20	768,562.26	32.477861	-103.596484
10,150.0	2.84	102.23	10,119.9	-575.6	390.8	538,360.28	768,563.48	32.477858	-103.596480
10,175.0	3.65	48.88	10,144.9	-575.2	392.0	538,360.67	768,564.68	32.477859	-103.596476
10,200.0	6.05	26.74	10,169.8	-573.5	393.2	538,362.37	768,565.87	32.477864	-103.596472
10,225.0	8.82	17.74	10,194.6	-570.5	394.4	538,365.37	768,567.05	32.477872	-103.596468
10,250.0	11.71	13.08	10,219.2	-566.2	395.5	538,369.67	768,568.21	32.477884	-103.596464
10,275.0	14.64	10.25	10,243.5	-560.7	396.6	538,375.25	768,569.35	32.477899	-103.596460
10,300.0	17.59	8.36	10,267.5	-553.8	397.8	538,382.10	768,570.46	32.477918	-103.596457
10,325.0	20.56	6.99	10,291.2	-545.7	398.8	538,390.20	768,571.54	32.477940	-103.596453
10,347.5	23.24	6.05	10,312.1	-537.4	399.8	538,398.55	768,572.49	32.477963	-103.596450
AEP_TARGET_2CARB_GRID									
10,350.0	23.53	5.96	10,314.3	-536.4	399.9	538,399.52	768,572.60	32.477966	-103.596449
10,375.0	26.51	5.15	10,337.0	-525.9	400.9	538,410.04	768,573.61	32.477995	-103.596446
10,400.0	29.50	4.49	10,359.1	-514.2	401.9	538,421.74	768,574.60	32.478027	-103.596442
10,425.0	32.48	3.94	10,380.5	-501.3	402.8	538,434.58	768,575.54	32.478062	-103.596439
10,450.0	35.47	3.48	10,401.2	-487.4	403.7	538,448.52	768,576.44	32.478101	-103.596436
10,475.0	38.46	3.08	10,421.2	-472.4	404.6	538,463.52	768,577.30	32.478142	-103.596433
10,500.0	41.45	2.72	10,440.3	-456.3	405.4	538,479.56	768,578.11	32.478186	-103.596430
10,525.0	44.45	2.41	10,458.6	-439.3	406.2	538,496.57	768,578.87	32.478233	-103.596427
10,550.0	47.44	2.13	10,476.0	-421.4	406.9	538,514.52	768,579.58	32.478282	-103.596424
10,575.0	50.43	1.88	10,492.4	-402.5	407.5	538,533.36	768,580.24	32.478334	-103.596422
10,600.0	53.43	1.64	10,507.9	-382.9	408.1	538,553.03	768,580.84	32.478388	-103.596419
10,602.1	53.68	1.62	10,509.1	-381.2	408.2	538,554.70	768,580.89	32.478392	-103.596419
SBSG_GRID									
10,625.0	56.42	1.43	10,522.2	-362.4	408.7	538,573.48	768,581.39	32.478444	-103.596417
10,650.0	59.42	1.22	10,535.5	-341.2	409.2	538,594.66	768,581.88	32.478502	-103.596415
10,675.0	62.41	1.03	10,547.6	-319.4	409.6	538,616.50	768,582.31	32.478562	-103.596413
10,686.5	63.80	0.95	10,552.9	-309.1	409.8	538,626.79	768,582.49	32.478590	-103.596412
AEP_TARGET_2BS_EK_UPR_GRID									
10,700.0	65.41	0.85	10,558.6	-297.0	410.0	538,638.94	768,582.68	32.478624	-103.596411
10,725.0	68.41	0.68	10,568.4	-274.0	410.3	538,661.94	768,582.99	32.478687	-103.596410
10,750.0	71.40	0.52	10,577.0	-250.5	410.5	538,685.41	768,583.23	32.478752	-103.596408
10,775.0	74.40	0.36	10,584.4	-226.6	410.7	538,709.30	768,583.41	32.478817	-103.596407
10,800.0	77.39	0.21	10,590.5	-202.4	410.8	538,733.55	768,583.53	32.478884	-103.596406
10,825.0	80.39	0.05	10,595.3	-177.8	410.9	538,758.07	768,583.59	32.478951	-103.596406
10,850.0	83.39	359.91	10,598.8	-153.1	410.9	538,782.82	768,583.58	32.479019	-103.596405
10,875.0	86.38	359.76	10,601.0	-128.2	410.8	538,807.72	768,583.51	32.479088	-103.596405

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American Resource Development LLC.

Planning Report - Geographic

Database:	AUS-COMPASS - EDM_15 - 32bit	**Local Co-ordinate Reference:**	Well BECKNELL 21-31-17 STATE COM 822H
Company:	Ameredev Operating	**TVD Reference:**	KB=27' @ 3815.0usft
Project:	Hat Mesa	**MD Reference:**	KB=27' @ 3815.0usft
Site:	Becknell State Com - C Pad	**North Reference:**	Grid
Well:	BECKNELL 21-31-17 STATE COM 822H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,900.0	89.38	359.62	10,602.0	-103.2	410.7	538,832.70	768,583.37	32.479156	-103.596405
10,905.2	90.00	359.59	10,602.0	-98.0	410.6	538,837.87	768,583.34	32.479171	-103.596405
Start 10356.1 hold at 10905.2 MD - FTP (BS 822H)									
11,000.0	90.00	359.59	10,602.0	-3.2	410.0	538,932.70	768,582.65	32.479431	-103.596405
11,100.0	90.00	359.59	10,602.0	96.8	409.2	539,032.69	768,581.93	32.479706	-103.596405
11,200.0	90.00	359.59	10,602.0	196.8	408.5	539,132.69	768,581.21	32.479981	-103.596405
11,300.0	90.00	359.59	10,602.0	296.8	407.8	539,232.69	768,580.48	32.480256	-103.596405
11,400.0	90.00	359.59	10,602.0	396.8	407.1	539,332.69	768,579.76	32.480531	-103.596405
11,500.0	90.00	359.59	10,602.0	496.8	406.3	539,432.68	768,579.04	32.480806	-103.596405
11,600.0	90.00	359.59	10,602.0	596.8	405.6	539,532.68	768,578.32	32.481080	-103.596405
11,700.0	90.00	359.59	10,602.0	696.8	404.9	539,632.68	768,577.59	32.481355	-103.596405
11,800.0	90.00	359.59	10,602.0	796.8	404.2	539,732.67	768,576.87	32.481630	-103.596406
11,900.0	90.00	359.59	10,602.0	896.8	403.4	539,832.67	768,576.15	32.481905	-103.596406
12,000.0	90.00	359.59	10,602.0	996.8	402.7	539,932.67	768,575.42	32.482180	-103.596406
12,100.0	90.00	359.59	10,602.0	1,096.8	402.0	540,032.67	768,574.70	32.482455	-103.596406
12,200.0	90.00	359.59	10,602.0	1,196.8	401.3	540,132.66	768,573.98	32.482730	-103.596406
12,300.0	90.00	359.59	10,602.0	1,296.8	400.6	540,232.66	768,573.26	32.483004	-103.596406
12,400.0	90.00	359.59	10,602.0	1,396.8	399.8	540,332.66	768,572.53	32.483279	-103.596406
12,500.0	90.00	359.59	10,602.0	1,496.8	399.1	540,432.66	768,571.81	32.483554	-103.596406
12,600.0	90.00	359.59	10,602.0	1,596.8	398.4	540,532.65	768,571.09	32.483829	-103.596406
12,700.0	90.00	359.59	10,602.0	1,696.7	397.7	540,632.65	768,570.37	32.484104	-103.596407
12,800.0	90.00	359.59	10,602.0	1,796.7	396.9	540,732.65	768,569.64	32.484379	-103.596407
12,900.0	90.00	359.59	10,602.0	1,896.7	396.2	540,832.65	768,568.92	32.484654	-103.596407
13,000.0	90.00	359.59	10,602.0	1,996.7	395.5	540,932.64	768,568.20	32.484929	-103.596407
13,100.0	90.00	359.59	10,602.0	2,096.7	394.8	541,032.64	768,567.47	32.485203	-103.596407
13,200.0	90.00	359.59	10,602.0	2,196.7	394.1	541,132.64	768,566.75	32.485478	-103.596407
13,300.0	90.00	359.59	10,602.0	2,296.7	393.3	541,232.64	768,566.03	32.485753	-103.596407
13,400.0	90.00	359.59	10,602.0	2,396.7	392.6	541,332.63	768,565.31	32.486028	-103.596407
13,500.0	90.00	359.59	10,602.0	2,496.7	391.9	541,432.63	768,564.58	32.486303	-103.596407
13,600.0	90.00	359.59	10,602.0	2,596.7	391.2	541,532.63	768,563.86	32.486578	-103.596407
13,700.0	90.00	359.59	10,602.0	2,696.7	390.4	541,632.63	768,563.14	32.486853	-103.596408
13,800.0	90.00	359.59	10,602.0	2,796.7	389.7	541,732.62	768,562.41	32.487127	-103.596408
13,900.0	90.00	359.59	10,602.0	2,896.7	389.0	541,832.62	768,561.69	32.487402	-103.596408
14,000.0	90.00	359.59	10,602.0	2,996.7	388.3	541,932.62	768,560.97	32.487677	-103.596408
14,100.0	90.00	359.59	10,602.0	3,096.7	387.5	542,032.61	768,560.25	32.487952	-103.596408
14,200.0	90.00	359.59	10,602.0	3,196.7	386.8	542,132.61	768,559.52	32.488227	-103.596408
14,300.0	90.00	359.59	10,602.0	3,296.7	386.1	542,232.61	768,558.80	32.488502	-103.596408
14,400.0	90.00	359.59	10,602.0	3,396.7	385.4	542,332.61	768,558.08	32.488777	-103.596408
14,500.0	90.00	359.59	10,602.0	3,496.7	384.7	542,432.60	768,557.36	32.489051	-103.596408
14,600.0	90.00	359.59	10,602.0	3,596.7	383.9	542,532.60	768,556.63	32.489326	-103.596408
14,700.0	90.00	359.59	10,602.0	3,696.7	383.2	542,632.60	768,555.91	32.489601	-103.596409
14,800.0	90.00	359.59	10,602.0	3,796.7	382.5	542,732.60	768,555.19	32.489876	-103.596409
14,900.0	90.00	359.59	10,602.0	3,896.7	381.8	542,832.59	768,554.46	32.490151	-103.596409
15,000.0	90.00	359.59	10,602.0	3,996.7	381.0	542,932.59	768,553.74	32.490426	-103.596409
15,100.0	90.00	359.59	10,602.0	4,096.7	380.3	543,032.59	768,553.02	32.490701	-103.596409
15,200.0	90.00	359.59	10,602.0	4,196.7	379.6	543,132.59	768,552.30	32.490976	-103.596409
15,300.0	90.00	359.59	10,602.0	4,296.7	378.9	543,232.58	768,551.57	32.491250	-103.596409
15,400.0	90.00	359.59	10,602.0	4,396.7	378.2	543,332.58	768,550.85	32.491525	-103.596409
15,500.0	90.00	359.59	10,602.0	4,496.7	377.4	543,432.58	768,550.13	32.491800	-103.596409
15,600.0	90.00	359.59	10,602.0	4,596.7	376.7	543,532.58	768,549.41	32.492075	-103.596410
15,700.0	90.00	359.59	10,602.0	4,696.7	376.0	543,632.57	768,548.68	32.492350	-103.596410
15,800.0	90.00	359.59	10,602.0	4,796.7	375.3	543,732.57	768,547.96	32.492625	-103.596410
15,900.0	90.00	359.59	10,602.0	4,896.7	374.5	543,832.57	768,547.24	32.492900	-103.596410
16,000.0	90.00	359.59	10,602.0	4,996.7	373.8	543,932.57	768,546.51	32.493174	-103.596410

AMEREDEV
American Resource Development LLC.

Planning Report - Geographic

Database:	AUS-COMPASS - EDM_15 - 32bit	**Local Co-ordinate Reference:**	Well BECKNELL 21-31-17 STATE COM 822H
Company:	Ameredev Operating	**TVD Reference:**	KB=27' @ 3815.0usft
Project:	Hat Mesa	**MD Reference:**	KB=27' @ 3815.0usft
Site:	Becknell State Com - C Pad	**North Reference:**	Grid
Well:	BECKNELL 21-31-17 STATE COM 822H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
16,100.0	90.00	359.59	10,602.0	5,096.7	373.1	544,032.56	768,545.79	32.493449	-103.596410
16,200.0	90.00	359.59	10,602.0	5,196.7	372.4	544,132.56	768,545.07	32.493724	-103.596410
16,300.0	90.00	359.59	10,602.0	5,296.7	371.6	544,232.56	768,544.35	32.493999	-103.596410
16,400.0	90.00	359.59	10,602.0	5,396.7	370.9	544,332.55	768,543.62	32.494274	-103.596410
16,500.0	90.00	359.59	10,602.0	5,496.7	370.2	544,432.55	768,542.90	32.494549	-103.596410
16,600.0	90.00	359.59	10,602.0	5,596.6	369.5	544,532.55	768,542.18	32.494824	-103.596411
16,700.0	90.00	359.59	10,602.0	5,696.6	368.8	544,632.55	768,541.45	32.495098	-103.596411
16,800.0	90.00	359.59	10,602.0	5,796.6	368.0	544,732.54	768,540.73	32.495373	-103.596411
16,900.0	90.00	359.59	10,602.0	5,896.6	367.3	544,832.54	768,540.01	32.495648	-103.596411
17,000.0	90.00	359.59	10,602.0	5,996.6	366.6	544,932.54	768,539.29	32.495923	-103.596411
17,100.0	90.00	359.59	10,602.0	6,096.6	365.9	545,032.54	768,538.56	32.496198	-103.596411
17,200.0	90.00	359.59	10,602.0	6,196.6	365.1	545,132.53	768,537.84	32.496473	-103.596411
17,300.0	90.00	359.59	10,602.0	6,296.6	364.4	545,232.53	768,537.12	32.496748	-103.596411
17,400.0	90.00	359.59	10,602.0	6,396.6	363.7	545,332.53	768,536.40	32.497022	-103.596411
17,500.0	90.00	359.59	10,602.0	6,496.6	363.0	545,432.53	768,535.67	32.497297	-103.596411
17,600.0	90.00	359.59	10,602.0	6,596.6	362.3	545,532.52	768,534.95	32.497572	-103.596412
17,700.0	90.00	359.59	10,602.0	6,696.6	361.5	545,632.52	768,534.23	32.497847	-103.596412
17,800.0	90.00	359.59	10,602.0	6,796.6	360.8	545,732.52	768,533.50	32.498122	-103.596412
17,900.0	90.00	359.59	10,602.0	6,896.6	360.1	545,832.52	768,532.78	32.498397	-103.596412
18,000.0	90.00	359.59	10,602.0	6,996.6	359.4	545,932.51	768,532.06	32.498672	-103.596412
18,100.0	90.00	359.59	10,602.0	7,096.6	358.6	546,032.51	768,531.34	32.498947	-103.596412
18,200.0	90.00	359.59	10,602.0	7,196.6	357.9	546,132.51	768,530.61	32.499221	-103.596412
18,300.0	90.00	359.59	10,602.0	7,296.6	357.2	546,232.51	768,529.89	32.499496	-103.596412
18,400.0	90.00	359.59	10,602.0	7,396.6	356.5	546,332.50	768,529.17	32.499771	-103.596412
18,500.0	90.00	359.59	10,602.0	7,496.6	355.7	546,432.50	768,528.45	32.500046	-103.596412
18,600.0	90.00	359.59	10,602.0	7,596.6	355.0	546,532.50	768,527.72	32.500321	-103.596413
18,700.0	90.00	359.59	10,602.0	7,696.6	354.3	546,632.49	768,527.00	32.500596	-103.596413
18,800.0	90.00	359.59	10,602.0	7,796.6	353.6	546,732.49	768,526.28	32.500871	-103.596413
18,900.0	90.00	359.59	10,602.0	7,896.6	352.9	546,832.49	768,525.55	32.501145	-103.596413
19,000.0	90.00	359.59	10,602.0	7,996.6	352.1	546,932.49	768,524.83	32.501420	-103.596413
19,100.0	90.00	359.59	10,602.0	8,096.6	351.4	547,032.48	768,524.11	32.501695	-103.596413
19,200.0	90.00	359.59	10,602.0	8,196.6	350.7	547,132.48	768,523.39	32.501970	-103.596413
19,300.0	90.00	359.59	10,602.0	8,296.6	350.0	547,232.48	768,522.66	32.502245	-103.596413
19,400.0	90.00	359.59	10,602.0	8,396.6	349.2	547,332.48	768,521.94	32.502520	-103.596413
19,500.0	90.00	359.59	10,602.0	8,496.6	348.5	547,432.47	768,521.22	32.502795	-103.596414
19,600.0	90.00	359.59	10,602.0	8,596.6	347.8	547,532.47	768,520.49	32.503069	-103.596414
19,700.0	90.00	359.59	10,602.0	8,696.6	347.1	547,632.47	768,519.77	32.503344	-103.596414
19,800.0	90.00	359.59	10,602.0	8,796.6	346.4	547,732.47	768,519.05	32.503619	-103.596414
19,900.0	90.00	359.59	10,602.0	8,896.6	345.6	547,832.46	768,518.33	32.503894	-103.596414
20,000.0	90.00	359.59	10,602.0	8,996.6	344.9	547,932.46	768,517.60	32.504169	-103.596414
20,100.0	90.00	359.59	10,602.0	9,096.6	344.2	548,032.46	768,516.88	32.504444	-103.596414
20,200.0	90.00	359.59	10,602.0	9,196.6	343.5	548,132.46	768,516.16	32.504719	-103.596414
20,300.0	90.00	359.59	10,602.0	9,296.6	342.7	548,232.45	768,515.44	32.504994	-103.596414
20,400.0	90.00	359.59	10,602.0	9,396.5	342.0	548,332.45	768,514.71	32.505268	-103.596414
20,500.0	90.00	359.59	10,602.0	9,496.5	341.3	548,432.45	768,513.99	32.505543	-103.596415
20,600.0	90.00	359.59	10,602.0	9,596.5	340.6	548,532.45	768,513.27	32.505818	-103.596415
20,700.0	90.00	359.59	10,602.0	9,696.5	339.8	548,632.44	768,512.54	32.506093	-103.596415
20,800.0	90.00	359.59	10,602.0	9,796.5	339.1	548,732.44	768,511.82	32.506368	-103.596415
20,900.0	90.00	359.59	10,602.0	9,896.5	338.4	548,832.44	768,511.10	32.506643	-103.596415
21,000.0	90.00	359.59	10,602.0	9,996.5	337.7	548,932.43	768,510.38	32.506918	-103.596415
21,100.0	90.00	359.59	10,602.0	10,096.5	337.0	549,032.43	768,509.65	32.507192	-103.596415
21,200.0	90.00	359.59	10,602.0	10,196.5	336.2	549,132.43	768,508.93	32.507467	-103.596415
21,261.2	90.00	359.59	10,602.0	10,257.7	335.8	549,193.63	768,508.49	32.507635	-103.596415
Start 50.0 hold at 21261.3 MD - LTP (BS 822H)									

AMEREDEV
American Resource Development LLC.

Planning Report - Geographic

Database:	AUS-COMPASS - EDM_15 - 32bit	**Local Co-ordinate Reference:**	Well BECKNELL 21-31-17 STATE COM 822H
Company:	Ameredev Operating	**TVD Reference:**	KB=27' @ 3815.0usft
Project:	Hat Mesa	**MD Reference:**	KB=27' @ 3815.0usft
Site:	Becknell State Com - C Pad	**North Reference:**	Grid
Well:	BECKNELL 21-31-17 STATE COM 822H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PRELIM1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
21,300.0	90.00	359.59	10,602.0	10,296.5	335.5	549,232.43	768,508.21	32.507742	-103.596415
21,311.2	90.00	359.59	10,602.0	10,307.7	335.4	549,243.63	768,508.13	32.507773	-103.596415
TD at 21311.2 - BHL (BS 822H)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LTP (BS 822H) - plan hits target center - Point	0.00	0.00	10,602.0	10,257.7	335.8	549,193.63	768,508.48	32.507635	-103.596415
FTP (BS 822H) - plan hits target center - Point	0.00	0.00	10,602.0	-98.0	410.6	538,837.87	768,583.34	32.479171	-103.596405
BHL (BS 822H) - plan hits target center - Point	0.00	0.00	10,602.0	10,307.7	335.4	549,243.63	768,508.13	32.507773	-103.596415

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,704.0	1,704.0	RSLR_GRID		0.00	
2,108.6	2,108.6	SLDO_GRID		0.00	
3,602.3	3,596.9	TNSL_GRID		0.00	
4,058.5	4,051.3	CPTN_GRID			
5,457.9	5,445.5	BLCN_GRID			
7,272.8	7,253.5	BYCN_GRID			
8,888.3	8,862.9	BSPG_GRID			
9,944.8	9,915.4	FBSG_GRID			
10,030.7	10,001.0	AEP_TARGET_1BS_GRID			
10,347.5	10,312.1	AEP_TARGET_2CARB_GRID			
10,602.1	10,509.1	SBSG_GRID			
10,686.5	10,552.9	AEP_TARGET_2BS_EK_UPR_GRI			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,000.0	2,000.0	0.0	0.0	Start Build 2.00
2,248.9	2,248.6	-8.9	6.1	Start 7871.8 hold at 2248.9 MD
10,120.7	10,090.7	-574.4	389.4	Start DLS 12.00 TFO -146.18
10,905.2	10,602.0	-98.0	410.6	Start 10356.1 hold at 10905.2 MD
21,261.3	10,602.0	10,257.8	335.8	Start 50.0 hold at 21261.3 MD
21,311.2	10,602.0	10,307.7	335.4	TD at 21311.2

ADVANCE ENERGY PARTNERS

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.

Sincerely,

E Laufer

Lizzy Laufer
Landman
Advance Energy Partners Hat Mesa, LLC
Email: 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 072H	30-025-	F-17-21S-33E	2437' FNL & 1700' FWL	1000	1600	3300
BECKNELL 21-33-17 State Com 092H	30-025-	F-17-21S-33E	2437' FNL & 1640' FWL	1000	1600	3300
BECKNELL 21-33-17 State Com 111H	30-025-	F-17-21S-33E	2437' FNL & 1620' FWL	1000	1600	3300
BECKNELL 21-33-17 State Com 822H	30-025-	F-17-21S-33E	2437' FNL & 1680' FWL	1000	1600	3300
BECKNELL 21-33-17 State Com 912H	30-025-	F-17-21S-33E	2437' FNL & 1660' FWL	1000	1600	3300
BECKNELL 21-33-17 State Com 921H	30-025-	F-17-21S-33E	2437' FNL & 1600' FWL	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 072H	30-025-	4/5/2023	4/25/2023	8/21/2022	10/11/2022	10/14/2022
BECKNELL 21-33-17 State Com 092H	30-025-	6/10/2023	6/30/2023	8/21/2022	10/11/2022	10/14/2022
BECKNELL 21-33-17 State Com 111H	30-025-	7/2/2023	7/22/2023	8/21/2022	10/11/2022	10/14/2022
BECKNELL 21-33-17 State Com 822H	30-025-	4/27/2023	5/17/2023	8/21/2022	10/11/2022	10/14/2022
BECKNELL 21-33-17 State Com 912H	30-025-	5/19/2023	6/8/2023	8/21/2022	10/11/2022	10/14/2022
BECKNELL 21-33-17 State Com 921H	30-025-	7/24/2023	8/13/2023	8/21/2022	10/11/2022	10/14/2022

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:

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)

Advanced Energy Partners 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/H2S 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.

• Advanced Energy Partners 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 Advanced Energy Partners 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