<u>District I</u> 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 323884

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

71 - 10 (11011 Ott 11111 10 Did11 111 111 111 111 111 111 111 111 111								
1. Operator Name and Address	2. OGRID Number							
ADVANCE ENERGY PARTNERS HA	372417							
11490 Westheimer Rd., Ste 950	3. API Number							
Houston, TX 77077	Houston, TX 77077							
4. Property Code	5. Property Name	6. Well No.						
333273	BECKNELL 21 33 17 STATE COM	913H						

7. Surface Location

ſ	UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
	Н	17	21S	33E	Н	2440	N	830	E	Lea

6.1 Toposa Bottom Holo Essation									
UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
1	5	215	33E	1	2588	S	1330	F	ا ا

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	3790
16. Multiple	17. Proposed Depth	18. Formation	19. Contractor	20. Spud Date
N	21950	3rd Bone Spring Carbonate	3/28/2023	
Depth to Ground water		Distance from nearest fresh water well	Distance to nearest surface water	

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	1889	1446	0
Int1	12.25	10.75	40.5	3786	427	0
Int2	9.875	7.625	29.7	5544	817	0
Prod	6.75	5.5	20	21950	703	0

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program								
Туре	Working Pressure	Test Pressure	Manufacturer					
Double Ram	5000	5000	TRD					

knowledge and I further certify ⊠, if applicable.	belief. I have complied with 19.15.14.9 (A)	s true and complete to the best of my NMAC ⊠ and/or 19.15.14.9 (B) NMAC		OIL CONSE	ERVATION DIVISION		
Signature:							
Printed Name:	Electronically filed by Eileen M I	Cosakowski	Approved By:	Paul F Kautz	Paul F Kautz		
Title:			Title:	Geologist	Geologist		
Email Address:	ekosakowski@advanceenergyp	artners.com	Approved Date:	9/14/2022	Expiration Date: 9/14/2024		
Date:	8/23/2022	Phone: 832-672-4604	Conditions of App	proval Attached			

District I

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

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

1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

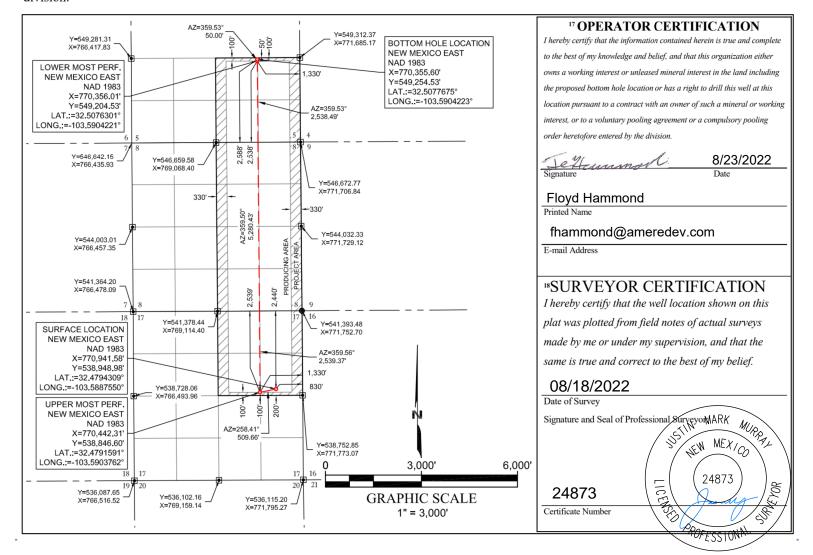
WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025- 50571		² Pool Code 97895	1G			
⁴ Property Code 333273			roperty Name 6 Well Number 1-33-17 State Com #913H			
⁷ OGRID No. 372417			perator Name PARTNERS HAT MESA LLC	⁹ Elevation 3,790.30'		

¹⁰ Surface Location

					Bullace	Docation			
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Н	17	21-S	33-E		2,440'	NORTH	830'	EAST	LEA
	¹¹ Bottom Hole Location If Different From Surface								
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	5	21-S	33-E		2,588'	SOUTH	1,330'	EAST	LEA
12 Dedicated Acre	s 13 Joint o	r Infill 14	Consolidation	Code 15 Or	der No.				
640			С						
ı		I		I					,

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.



Permit 323884

Form APD Conditions

<u>District I</u> 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

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**

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
ADVANCE ENERGY PARTNERS HAT MESA, LLC [372417]	30-025-50571
11490 Westheimer Rd., Ste 950	Well:
Houston, TX 77077	BECKNELL 21 33 17 STATE COM #913H

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	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	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

Michelle Lujan Grisham Governor

Sarah Cottrell Propst Cabinet Secretary Designate Adrienne Sandoval, Division Director Oil Conservation Division



Todd E. Leahy, JD, PhD Deputy Secretary

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 # 913H

PROPOSED LOCATION: U/L H Sec 17 T21S R33E 2440 FNL 830 FEL

Lat. 32.4794309

Long. -103.5887550 NAD83

PROPOSED DEPTH: 21950' MD 11214' 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

Paul Kautz

Hobbs Office Geologist, District I

RESONSE:

Signed

The above referenced location is within the Buffer Zone------Yes_____No

Printed Signature

Representing BWM

State of New Mexico Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham

Governor

Sarah Cottrell Propst
Cabinet Secretary Designate

Adrienne Sandoval, Division Director Oil Conservation Division



Todd E. Leahy, JD, PhD Deputy Secretary

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 # 913H

PROPOSED LOCATION: U/L H Sec 17 T21S R33E 2440 FNL 830 FEL

Lat. 32.4794309

Long. -103.5887550 NAD83

PROPOSED DEPTH: 21950' MD

11214' 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

Paul Kautz

Hobbs Office Geologist, District I

RESONSE:



American Resource Development LLC.

Ameredev Operating

Hat Mesa Becknell State Com - A Pad Becknell 21-33-17 State Com 913H

OWB

Plan: Permit Plan 1 - 359.50

Standard Planning Report - Geographic

22 August, 2022



AUS-COMPASS - EDM_15 - 32bit Database:

Company: Ameredev Operating Project: Hat Mesa

Site: Becknell State Com - A Pad Well: Becknell 21-33-17 State Com 913H

Wellbore: **OWB**

Map Zone:

Permit Plan 1 - 359.50 Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Becknell 21-33-17 State Com 913H

GL 3790.30 + 27 KB @ 3817.3usft GL 3790.30 + 27 KB @ 3817.3usft

Minimum Curvature

Project Hat Mesa, Lea County, NM

US State Plane 1983 Map System: North American Datum 1983 Geo Datum:

New Mexico Eastern Zone

System Datum:

Mean Sea Level

Becknell State Com - A Pad Site

538,949.04 usft Northing: Site Position: Latitude: 32.479431 770,961.52 usft -103.588691 Lat/Long Easting: From: Longitude:

Position Uncertainty: 0.0 usft Slot Radius: 13-3/16 "

Well Becknell 21-33-17 State Com 913H

Well Position +N/-S 0.0 usft Northing: 538,948.97 usft Latitude: 32.479431

+E/-W 0.0 usft Easting: 770,941.56 usft Longitude: -103.588755 Wellhead Elevation: **Position Uncertainty** 0.0 usft usft Ground Level: 3,790.3 usft

Grid Convergence: 0.40°

OWB Wellbore Magnetics Declination **Model Name** Sample Date **Dip Angle** Field Strength (°) (°) (nT) IGRF2020 8/22/2022 6.43 60.09 47,516.97301219

Design Permit Plan 1 - 359.50 **Audit Notes:** Version: Phase: **PLAN** Tie On Depth: 0.0 +N/-S Vertical Section: Depth From (TVD) +E/-W Direction

(usft) (usft) (usft) (°) 0.0 0.0 0.0 359.50

Plan Survey Tool Program 8/22/2022

Depth From Depth To

(usft) Survey (Wellbore) **Tool Name** (usft) Remarks

1 0.0 21,950.2 Permit Plan 1 - 359.50 (OWB) MWD

OWSG MWD - Standard



Database: AUS-COMPASS - EDM_15 - 32bit

Company: Ameredev Operating

Project: Hat Mesa

Site: Becknell State Com - A Pad
Well: Becknell 21-33-17 State Com 913H

Wellbore: OWB

Design: Permit Plan 1 - 359.50

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well Becknell 21-33-17 State Com 913H

GL 3790.30 + 27 KB @ 3817.3usft GL 3790.30 + 27 KB @ 3817.3usft

Grid

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	
2,353.4	5.30	219.52	2,352.9	-12.6	-10.4	1.50	1.50	0.00	219.52	
10,418.6	5.30	219.52	10,383.6	-587.4	-484.6	0.00	0.00	0.00	0.00	
10,772.0	0.00	0.00	10,736.5	-600.0	-495.0	1.50	-1.50	0.00	180.00	
11,521.2	89.90	359.51	11,214.0	-123.4	-499.1	12.00	12.00	-0.07	359.51	
11,542.2	89.90	359.51	11,214.0	-102.4	-499.2	0.00	0.00	0.00	0.00	FTP (BECK913H)
11,547.1	90.00	359.52	11,214.0	-97.4	-499.3	2.00	1.99	0.24	6.90	
21,900.5	90.00	359.52	11,214.0	10,255.6	-585.6	0.00	0.00	0.00	0.00	LTP (BECK913H)
21,950.5	90.00	359.52	11,214.0	10,305.5	-586.0	0.00	0.00	0.00	0.00	BHL (BECK913H)



Database: AUS-COMPASS - EDM_15 - 32bit

Company: Ameredev Operating

Project: Hat Mesa

Site: Becknell State Com - A Pad
Well: Becknell 21-33-17 State Com 913H

Wellbore: OWB

Design: Permit Plan 1 - 359.50

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Becknell 21-33-17 State Com 913H

GL 3790.30 + 27 KB @ 3817.3usft GL 3790.30 + 27 KB @ 3817.3usft

Grid

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	0.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
100.0		0.00	100.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
200.0		0.00	200.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
300.0		0.00	300.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
400.0		0.00	400.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
500.0		0.00	500.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
600.0		0.00	600.0	0.0	0.0	538,948.97	770,941.56	32.479431 32.479431	-103.588755
700.0 800.0		0.00 0.00	700.0 800.0	0.0 0.0	0.0 0.0	538,948.97 538,948.97	770,941.56 770,941.56	32.479431 32.479431	-103.588755 -103.588755
900.0		0.00	900.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
1,000.0		0.00	1,000.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
1,100.0		0.00	1,100.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
1,200.0		0.00	1,200.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
1,300.0		0.00	1,300.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
1,400.0		0.00	1,400.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
1,500.0		0.00	1,500.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
1,600.0	0.00	0.00	1,600.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
1,700.0	0.00	0.00	1,700.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
1,764.0	0.00	0.00	1,764.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
Rustler									
1,800.0	0.00	0.00	1,800.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
1,900.0	0.00	0.00	1,900.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
2,000.0	0.00	0.00	2,000.0	0.0	0.0	538,948.97	770,941.56	32.479431	-103.588755
Start Bu	ild 1.50								
2,100.0		219.52	2,100.0	-1.0	-0.8	538,947.96	770,940.73	32.479428	-103.588758
2,156.0	2.34	219.52	2,156.0	-2.5	-2.0	538,946.51	770,939.54	32.479424	-103.588762
Salado									
2,200.0		219.52	2,199.9	-4.0	-3.3	538,944.93	770,938.23	32.479420	-103.588766
2,300.0		219.52	2,299.7	-9.1	-7.5	538,939.89	770,934.07	32.479406	-103.588780
2,353.4		219.52	2,352.9	-12.6	-10.4	538,936.37	770,931.17	32.479397	-103.588789
	65.2 hold at 23								
2,400.0		219.52	2,399.3	-15.9	-13.1	538,933.05	770,928.43	32.479387	-103.588798
2,500.0		219.52	2,498.9	-23.0	-19.0	538,925.92	770,922.55	32.479368	-103.588817
2,600.0		219.52	2,598.4	-30.2	-24.9	538,918.79	770,916.67	32.479349	-103.588837
2,700.0		219.52	2,698.0	-37.3	-30.8	538,911.67	770,910.79	32.479329	-103.588856
2,800.0 2,900.0		219.52 219.52	2,797.6 2,897.2	-44.4 -51.6	-36.7 -42.5	538,904.54 538,897.41	770,904.91 770,899.03	32.479310 32.479290	-103.588875 -103.588894
3,000.0		219.52	2,097.2	-51.6 -58.7	-42.5 -48.4	538,890.29	770,893.15	32.479290 32.479271	-103.588914
3,100.0	5.30	219.52	3,096.3	-65.8	-54.3	538,883.16	770,887.27	32.479251	-103.588933
3,200.0		219.52	3,195.9	-72.9	-60.2	538,876.03	770,881.39	32.479232	-103.588952
3,300.0		219.52	3,295.4	-80.1	-66.1	538,868.91	770,875.51	32.479212	-103.588971
3,400.0		219.52	3,395.0	-87.2	-71.9	538,861.78	770,869.63	32.479193	-103.588990
3,500.0		219.52	3,494.6	-94.3	-77.8	538,854.65	770,863.75	32.479173	-103.589010
3,600.0		219.52	3,594.2	-101.4	-83.7	538,847.53	770,857.87	32.479154	-103.589029
3,667.1	5.30	219.52	3,661.0	-106.2	-87.6	538,842.74	770,853.93	32.479141	-103.589042
Tansill									
3,700.0	5.30	219.52	3,693.7	-108.6	-89.6	538,840.40	770,851.99	32.479134	-103.589048
3,800.0		219.52	3,793.3	-115.7	-95.5	538,833.27	770,846.11	32.479115	-103.589067
3,900.0	5.30	219.52	3,892.9	-122.8	-101.3	538,826.14	770,840.23	32.479095	-103.589087
4,000.0		219.52	3,992.5	-130.0	-107.2	538,819.02	770,834.35	32.479076	-103.589106
4,100.0		219.52	4,092.0	-137.1	-113.1	538,811.89	770,828.47	32.479056	-103.589125
4,162.2	5.30	219.52	4,154.0	-141.5	-116.8	538,807.45	770,824.81	32.479044	-103.589137
Capitan									
4,200.0	5.30	219.52	4,191.6	-144.2	-119.0	538,804.76	770,822.59	32.479037	-103.589144



Database: AUS-COMPASS - EDM_15 - 32bit

Company: Ameredev Operating

Project: Hat Mesa

Site: Becknell State Com - A Pad
Well: Becknell 21-33-17 State Com 913H

Wellbore: OWB

Design: Permit Plan 1 - 359.50

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well Becknell 21-33-17 State Com 913H

GL 3790.30 + 27 KB @ 3817.3usft GL 3790.30 + 27 KB @ 3817.3usft

Grid

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	5.30	219.52	4,291.2	-151.3	-124.8	538,797.64	770,816.71	32.479017	-103.589164
4,400.0	5.30	219.52	4,390.7	-158.5	-130.7	538,790.51	770,810.84	32.478998	-103.589183
4,500.0	5.30	219.52	4,490.3	-165.6	-136.6	538,783.38	770,804.96	32.478978	-103.589202
4,600.0	5.30	219.52	4,589.9	-172.7	-142.5	538,776.26	770,799.08	32.478959	-103.589221
4,700.0	5.30	219.52	4,689.5	-179.8	-148.4	538,769.13	770,793.20	32.478940	-103.589240
4,800.0	5.30	219.52	4,789.0	-187.0	-154.2	538,762.00	770,787.32	32.478920	-103.589260
4,900.0	5.30	219.52	4,888.6	-194.1	-160.1	538,754.88	770,781.44	32.478901	-103.589279
5,000.0	5.30	219.52	4,988.2	-201.2	-166.0	538,747.75	770,775.56	32.478881	-103.589298
5,100.0	5.30	219.52	5,087.7	-208.3	-171.9	538,740.62	770,769.68	32.478862	-103.589317
5,200.0	5.30	219.52	5,187.3	-215.5	-177.8	538,733.50	770,763.80	32.478842	-103.589337
5,300.0	5.30	219.52	5,286.9	-222.6	-183.6	538,726.37	770,757.92	32.478823	-103.589356
5,400.0	5.30	219.52	5,386.5	-229.7	-189.5	538,719.24	770,752.04	32.478803	-103.589375
5,482.9	5.30	219.52	5,469.0	-235.6	-194.4	538,713.33	770,747.16	32.478787	-103.589391
Bell Can 5,500.0	yon 5.30	219.52	5,486.0	-236.9	-195.4	538,712.11	770,746.16	32.478784	-103.589394
5,600.0	5.30	219.52	5,585.6	-244.0	-193.4	538,704.99	770,740.10	32.478764	-103.589413
5,700.0	5.30	219.52	5,685.2	-251.1	-201.3 -207.2	538,697.86	770,734.40	32.478745	-103.589433
5,800.0	5.30	219.52	5,784.8	-258.2	-207.2	538,690.73	770,734.40	32.478725	-103.589452
5,900.0	5.30	219.52	5,884.3	-265.4	-218.9	538,683.61	770,723.52	32.478706	-103.589471
6,000.0	5.30	219.52	5,983.9	-272.5	-224.8	538,676.48	770,716.76	32.478686	-103.589490
6,100.0	5.30	219.52	6,083.5	-272.5	-230.7	538.669.35	770,710.76	32.478667	-103.589510
6,200.0	5.30	219.52	6,183.0	-286.7	-236.6	538,662.23	770,715.00	32.478647	-103.589529
6,300.0	5.30	219.52	6,282.6	-293.9	-242.4	538,655.10	770,699.12	32.478628	-103.589548
6,400.0	5.30	219.52	6,382.2	-301.0	-242.4	538,647.97	770,693.24	32.478608	-103.589567
6,500.0	5.30	219.52	6,481.8	-308.1	-254.2	538,640.85	770,687.36	32.478589	-103.589587
6,600.0	5.30	219.52	6,581.3	-315.3	-260.1	538,633.72	770,681.48	32.478569	-103.589606
6,700.0	5.30	219.52	6,680.9	-322.4	-266.0	538,626.59	770,675.60	32.478550	-103.589625
6,800.0	5.30	219.52	6,780.5	-329.5	-271.8	538,619.47	770,669.72	32.478531	-103.589644
6,900.0	5.30	219.52	6,880.0	-336.6	-277.7	538,612.34	770,663.84	32.478511	-103.589663
7,000.0	5.30	219.52	6,979.6	-343.8	-283.6	538,605.21	770,657.96	32.478492	-103.589683
7,100.0	5.30	219.52	7,079.2	-350.9	-289.5	538,598.08	770,652.08	32.478472	-103.589702
7,200.0	5.30	219.52	7,178.8	-358.0	-295.4	538,590.96	770,646.20	32.478453	-103.589721
7,267.5	5.30	219.52	7,246.0	-362.8	-299.3	538,586.15	770,642.23	32.478439	-103.589734
Brushy (,			,	.,,		
7,300.0	5.30	219.52	7,278.3	-365.1	-301.2	538,583.83	770,640.32	32.478433	-103.589740
7,400.0	5.30	219.52	7,377.9	-372.3	-307.1	538,576.70	770,634.45	32.478414	-103.589760
7,500.0	5.30	219.52	7,477.5	-379.4	-313.0	538,569.58	770,628.57	32.478394	-103.589779
7,600.0	5.30	219.52	7,577.1	-386.5	-318.9	538,562.45	770,622.69	32.478375	-103.589798
7,700.0	5.30	219.52	7,676.6	-393.6	-324.8	538,555.32	770,616.81	32.478355	-103.589817
7,800.0	5.30	219.52	7,776.2	-400.8	-330.6	538,548.20	770,610.93	32.478336	-103.589836
7,900.0		219.52	7,875.8	-407.9	-336.5	538,541.07	770,605.05	32.478316	-103.589856
8,000.0	5.30	219.52	7,975.3	-415.0	-342.4	538,533.94	770,599.17	32.478297	-103.589875
8,100.0	5.30	219.52	8,074.9	-422.2	-348.3	538,526.82	770,593.29	32.478277	-103.589894
8,200.0	5.30	219.52	8,174.5	-429.3	-354.2	538,519.69	770,587.41	32.478258	-103.589913
8,300.0	5.30	219.52	8,274.1	-436.4	-360.0	538,512.56	770,581.53	32.478238	-103.589933
8,400.0	5.30	219.52	8,373.6	-443.5	-365.9	538,505.44	770,575.65	32.478219	-103.589952
8,500.0	5.30	219.52	8,473.2	-450.7	-371.8	538,498.31	770,569.77	32.478199	-103.589971
8,600.0	5.30	219.52	8,572.8	-457.8	-377.7	538,491.18	770,563.89	32.478180	-103.589990
8,700.0	5.30	219.52	8,672.3	-464.9	-383.6	538,484.05	770,558.01	32.478160	-103.590009
8,800.0	5.30	219.52	8,771.9	-472.0	-389.4	538,476.93	770,552.13	32.478141	-103.590029
8,886.4	5.30	219.52	8,858.0	-478.2	-394.5	538,470.77	770,547.05	32.478124	-103.590045
Bone Sp	ring Lime								
8,900.0	5.30	219.52	8,871.5	-479.2	-395.3	538,469.80	770,546.25	32.478122	-103.590048
9,000.0	5.30	219.52	8,971.1	-486.3	-401.2	538,462.67	770,540.37	32.478102	-103.590067



Database: AUS-COMPASS - EDM_15 - 32bit

Company: Ameredev Operating

Project: Hat Mesa

Site: Becknell State Com - A Pad
Well: Becknell 21-33-17 State Com 913H

Wellbore: OWB

Design: Permit Plan 1 - 359.50

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Becknell 21-33-17 State Com 913H

GL 3790.30 + 27 KB @ 3817.3usft GL 3790.30 + 27 KB @ 3817.3usft

Grid

ned Survey	,								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
						` '	` '		<u> </u>
9,100.0	5.30	219.52	9,070.6	-493.4	-407.1	538,455.55	770,534.49	32.478083	-103.59
9,200.0	5.30	219.52	9,170.2	-500.5	-413.0	538,448.42	770,528.61	32.478063	-103.59
9,300.0	5.30	219.52	9,269.8	-507.7	-418.8	538,441.29	770,522.73	32.478044	-103.59
9,400.0	5.30	219.52	9,369.4	-514.8	-424.7	538,434.17	770,516.85	32.478024	-103.59
9,500.0	5.30	219.52	9,468.9	-521.9	-430.6	538,427.04	770,510.97	32.478005	-103.59
9,600.0	5.30	219.52	9,568.5	-529.1	-436.5	538,419.91	770,505.09	32.477985	-103.59
9,700.0	5.30	219.52	9,668.1	-536.2	-442.4	538,412.79	770,499.21	32.477966	-103.59
9,800.0	5.30	219.52	9,767.6	-543.3	-448.2	538,405.66	770,493.33	32.477946	-103.59
9,900.0	5.30	219.52	9,867.2	-550.4	-454.1	538,398.53	770,487.45	32.477927	-103.59
9,952.0	5.30	219.52	9,919.0	-554.1	-457.2	538,394.83	770,484.40	32.477917	-103.59
	ne Spring								
10,000.0	5.30	219.52	9,966.8	-557.6	-460.0	538,391.41	770,481.57	32.477907	-103.59
10,100.0	5.30	219.52	10,066.4	-564.7	-465.9	538,384.28	770,475.69	32.477888	-103.59
10,200.0	5.30	219.52	10,165.9	-571.8	-471.8	538,377.15	770,469.81	32.477868	-103.59
10,300.0	5.30	219.52	10,265.5	-578.9	-477.6	538,370.02	770,463.93	32.477849	-103.59
10,400.0	5.30	219.52	10,365.1	-586.1	-483.5	538,362.90	770,458.06	32.477829	-103.59
10,418.6	5.30	219.52	10,383.6	-587.4	-484.6	538,361.57	770,456.96	32.477826	-103.59
Start Dro	•								
10,500.0	4.08	219.52	10,464.7	-592.5	-488.8	538,356.44	770,452.73	32.477812	-103.59
10,530.3	3.62	219.52	10,495.0	-594.1	-490.1	538,354.87	770,451.43	32.477807	-103.59
	Bone Spring								
10,600.0	2.58	219.52	10,564.6	-597.0	-492.5	538,351.96	770,449.03	32.477799	-103.59
10,700.0	1.08	219.52	10,664.5	-599.5	-494.6	538,349.49	770,447.00	32.477793	-103.59
10,772.0	0.00	0.00	10,736.5	-600.0	-495.0	538,348.97	770,446.56	32.477791	-103.59
	S 12.00 TFO 3								
10,800.0	3.36	359.51	10,764.5	-599.2	-495.0	538,349.79	770,446.56	32.477794	-103.59
10,900.0	15.36	359.51	10,863.0	-582.9	-495.1	538,366.02	770,446.42	32.477838	-103.59
11,000.0	27.36	359.51	10,955.9	-546.6	-495.5	538,402.38	770,446.11	32.477938	-103.59
11,100.0	39.36	359.51	11,039.3	-491.7	-495.9	538,457.26	770,445.64	32.478089	-103.59
11,130.2	42.98	359.51	11,062.0	-471.9	-496.1	538,477.11	770,445.47	32.478144	-103.59
Third Ca									
11,200.0	51.36	359.51	11,109.4	-420.7	-496.5	538,528.28	770,445.03	32.478284	-103.59
11,300.0	63.36	359.51	11,163.3	-336.6	-497.2	538,612.33	770,444.32	32.478515	-103.59
11,400.0	75.36	359.51	11,198.5	-243.2	-498.0	538,705.74	770,443.52	32.478772	-103.59
11,500.0	87.36	359.51	11,213.5	-144.5	-498.9	538,804.42	770,442.68	32.479043	-103.59
11,521.2	89.90	359.51	11,214.0	-123.4	-499.1	538,825.60	770,442.49	32.479101	-103.59
	0 hold at 1152								
11,542.2	89.90	359.51	11,214.0	-102.4	-499.2	538,846.60	770,442.32	32.479159	-103.59
	S 2.00 TFO 6.9								
11,547.1	90.00	359.52	11,214.0	-97.4	-499.3	538,851.53	770,442.27	32.479173	-103.59
	353.4 hold at 1								
11,600.0	90.00	359.52	11,214.0	-44.6	-499.7	538,904.41	770,441.83	32.479318	-103.59
11,700.0	90.00	359.52	11,214.0	55.4	-500.6	539,004.41	770,441.00	32.479593	-103.59
11,800.0	90.00	359.52	11,214.0	155.4	-501.4	539,104.40	770,440.17	32.479868	-103.59
11,900.0	90.00	359.52	11,214.0	255.4	-502.2	539,204.40	770,439.33	32.480143	-103.59
12,000.0	90.00	359.52	11,214.0	355.4	-503.1	539,304.40	770,438.50	32.480418	-103.59
12,100.0	90.00	359.52	11,214.0	455.4	-503.9	539,404.39	770,437.67	32.480692	-103.59
12,200.0	90.00	359.52	11,214.0	555.4	-504.7	539,504.39	770,436.83	32.480967	-103.59
12,300.0	90.00	359.52	11,214.0	655.4	-505.6	539,604.39	770,436.00	32.481242	-103.59
12,400.0	90.00	359.52	11,214.0	755.4	-506.4	539,704.38	770,435.17	32.481517	-103.59
12,500.0	90.00	359.52	11,214.0	855.4	-507.2	539,804.38	770,434.33	32.481792	-103.59
12,600.0	90.00	359.52	11,214.0	955.4	-508.1	539,904.38	770,433.50	32.482067	-103.59
12,700.0	90.00	359.52	11,214.0	1,055.4	-508.9	540,004.37	770,432.67	32.482342	-103.59
12,800.0	90.00	359.52	11,214.0	1,155.4	-509.7	540,104.37	770,431.83	32.482616	-103.59



Database: AUS-COMPASS - EDM_15 - 32bit

Company: Ameredev Operating

Project: Hat Mesa

Site: Becknell State Com - A Pad
Well: Becknell 21-33-17 State Com 913H

Wellbore: OWB

Design: Permit Plan 1 - 359.50

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well Becknell 21-33-17 State Com 913H

GL 3790.30 + 27 KB @ 3817.3usft GL 3790.30 + 27 KB @ 3817.3usft

Grid

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	11,214.0	1,255.4	-510.6	540,204.36	770,431.00	32.482891	-103.590382
13,000.0	90.00	359.52	11,214.0	1,355.4	-511.4	540,304.36	770,430.17	32.483166	-103.590383
13,100.0	90.00	359.52	11,214.0	1,455.4	-512.2	540,404.36	770,429.34	32.483441	-103.590383
13,200.0 13,300.0	90.00 90.00	359.52 359.52	11,214.0 11,214.0	1,555.4 1,655.4	-513.1 -513.9	540,504.35 540,604.35	770,428.50 770,427.67	32.483716 32.483991	-103.590384 -103.590384
13,400.0	90.00	359.52	11,214.0	1,755.4	-513.9 -514.7	540,704.35	770,426.84	32.484266	-103.590385
13,500.0	90.00	359.52	11,214.0	1,755.4	-514.7 -515.6	540,804.34	770,426.00	32.484540	-103.590385
13,600.0	90.00	359.52	11,214.0	1,955.4	-516.4	540,904.34	770,425.17	32.484815	-103.590386
13,700.0	90.00	359.52	11,214.0	2,055.4	-517.2	541,004.34	770,424.34	32.485090	-103.590386
13,800.0	90.00	359.52	11,214.0	2,155.4	-518.1	541,104.33	770,423.50	32.485365	-103.590386
13,900.0	90.00	359.52	11,214.0	2,255.4	-518.9	541,204.33	770,422.67	32.485640	-103.590387
14,000.0	90.00	359.52	11,214.0	2,355.4	-519.7	541,304.33	770,421.84	32.485915	-103.590387
14,100.0	90.00	359.52	11,214.0	2,455.4	-520.6	541,404.32	770,421.00	32.486190	-103.590388
14,200.0	90.00	359.52	11,214.0	2,555.3	-521.4	541,504.32	770,420.17	32.486465	-103.590388
14,300.0	90.00	359.52	11,214.0	2,655.3	-522.2	541,604.32	770,419.34	32.486739	-103.590389
14,400.0	90.00	359.52	11,214.0	2,755.3	-523.1	541,704.31	770,418.50	32.487014	-103.590389
14,500.0	90.00	359.52	11,214.0	2,855.3	-523.9	541,804.31	770,417.67	32.487289	-103.590390
14,600.0	90.00	359.52	11,214.0	2,955.3	-524.7	541,904.31	770,416.84	32.487564	-103.590390
14,700.0	90.00	359.52	11,214.0	3,055.3	-525.6	542,004.30	770,416.00	32.487839	-103.590390
14,800.0	90.00	359.52	11,214.0	3,155.3	-526.4	542,104.30	770,415.17	32.488114	-103.590391
14,900.0	90.00	359.52	11,214.0	3,255.3	-527.2	542,204.30	770,414.34	32.488389	-103.590391
15,000.0	90.00	359.52	11,214.0	3,355.3	-528.1	542,304.29	770,413.50	32.488663	-103.590392
15,100.0	90.00	359.52	11,214.0	3,455.3	-528.9	542,404.29	770,412.67	32.488938	-103.590392
15,200.0	90.00	359.52	11,214.0	3,555.3	-529.7	542,504.28	770,411.84	32.489213	-103.590393
15,300.0	90.00	359.52	11,214.0	3,655.3	-530.6	542,604.28	770,411.00	32.489488	-103.590393
15,400.0	90.00	359.52	11,214.0	3,755.3	-531.4	542,704.28	770,410.17	32.489763	-103.590394
15,500.0	90.00	359.52	11,214.0	3,855.3	-532.2	542,804.27	770,409.34	32.490038	-103.590394
15,600.0	90.00	359.52	11,214.0	3,955.3	-533.1	542,904.27	770,408.50	32.490313	-103.590394
15,700.0	90.00	359.52	11,214.0	4,055.3	-533.9	543,004.27	770,407.67	32.490587	-103.590395
15,800.0	90.00	359.52	11,214.0	4,155.3	-534.7	543,104.26	770,406.84	32.490862	-103.590395
15,900.0	90.00	359.52	11,214.0	4,255.3	-535.6	543,204.26	770,406.01	32.491137	-103.590396
16,000.0	90.00	359.52	11,214.0	4,355.3	-536.4	543,304.26	770,405.17	32.491412	-103.590396
16,100.0	90.00	359.52	11,214.0	4,455.3	-537.2	543,404.25	770,404.34	32.491687	-103.590397
16,200.0	90.00	359.52	11,214.0	4,555.3	-538.1	543,504.25	770,403.51	32.491962	-103.590397
16,300.0	90.00	359.52	11,214.0	4,655.3	-538.9	543,604.25	770,402.67	32.492237	-103.590398
16,400.0	90.00	359.52	11,214.0	4,755.3	-539.7	543,704.24	770,401.84	32.492511	-103.590398
16,500.0	90.00	359.52	11,214.0	4,855.3	-540.6	543,804.24	770,401.01	32.492786	-103.590398
16,600.0	90.00	359.52	11,214.0	4,955.3	-541.4	543,904.24	770,400.17	32.493061	-103.590399
16,700.0	90.00	359.52	11,214.0	5,055.3	-542.2	544,004.23	770,399.34	32.493336	-103.590399
16,800.0	90.00	359.52	11,214.0	5,155.3	-543.1	544,104.23	770,398.51	32.493611	-103.590400
16,900.0	90.00	359.52	11,214.0	5,255.3	-543.9	544,204.23 544,304.22	770,397.67	32.493886	-103.590400
17,000.0	90.00 90.00	359.52 359.52	11,214.0	5,355.3 5,455.2	-544.7 -545.6	544,304.22 544,404.22	770,396.84	32.494161 32.494436	-103.590401 -103.590401
17,100.0			11,214.0				770,396.01		-103.590401
17,200.0	90.00	359.52 359.52	11,214.0	5,555.2 5,655.2	-546.4 -547.2	544,504.22 544,604.21	770,395.17 770,394.34	32.494710 32.494985	-103.590402
17,300.0 17,400.0	90.00 90.00	359.52 359.52	11,214.0 11,214.0	5,055.2 5,755.2	-547.2 -548.1	544,604.21 544,704.21	770,394.34 770,393.51	32.494985 32.495260	-103.590402
17,400.0	90.00	359.52	11,214.0	5,855.2	-548.9	544,804.21	770,393.51	32.495535	-103.590402
17,600.0	90.00	359.52	11,214.0	5,955.2	-549.7	544,904.21	770,392.87	32.495810	-103.590403
17,700.0	90.00	359.52	11,214.0	6,055.2	-549.7 -550.6	545,004.20	770,391.01	32.496085	-103.590403
17,700.0	90.00	359.52	11,214.0	6,155.2	-551.4	545,104.19	770,391.01	32.496360	-103.590404
17,900.0	90.00	359.52	11,214.0	6,255.2	-552.2	545,204.19	770,389.34	32.496634	-103.590404
18,000.0	90.00	359.52	11,214.0	6,355.2	-553.1	545,304.19	770,388.51	32.496909	-103.590405
18,100.0	90.00	359.52	11,214.0	6,455.2	-553.9	545,404.18	770,387.67	32.497184	-103.590406
18,200.0	90.00	359.52	11,214.0	6,555.2	-554.7	545,504.18	770,386.84	32.497459	-103.590406
18,300.0	90.00	359.52	11,214.0	6,655.2	-555.6	545,604.18	770,386.01	32.497734	-103.590406



Database: AUS-COMPASS - EDM_15 - 32bit

Company: Ameredev Operating

Project: Hat Mesa

Site: Becknell State Com - A Pad
Well: Becknell 21-33-17 State Com 913H

Wellbore: OWB

Design: Permit Plan 1 - 359.50

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well Becknell 21-33-17 State Com 913H

GL 3790.30 + 27 KB @ 3817.3usft GL 3790.30 + 27 KB @ 3817.3usft

Grid

leasured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Map Northing	Map Easting		
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	Latitude	Longitude
18,400.0	90.00	359.52	11,214.0	6,755.2	-556.4	545,704.17	770,385.17	32.498009	-103.59
18,500.0	90.00	359.52	11,214.0	6,855.2	-557.2	545,804.17	770,384.34	32.498284	-103.59
18,600.0	90.00	359.52	11,214.0	6,955.2	-558.1	545,904.17	770,383.51	32.498558	-103.59
18,700.0	90.00	359.52	11,214.0	7,055.2	-558.9	546,004.16	770,382.67	32.498833	-103.59
18,800.0	90.00	359.52	11,214.0	7,155.2	-559.7	546,104.16	770,381.84	32.499108	-103.59
18,900.0	90.00	359.52	11,214.0	7,255.2	-560.6	546,204.16	770,381.01	32.499383	-103.59
19,000.0	90.00	359.52	11,214.0	7,355.2	-561.4	546,304.15	770,380.18	32.499658	-103.59
19,100.0	90.00	359.52	11,214.0	7,455.2	-562.2	546,404.15	770,379.34	32.499933	-103.59
19,200.0	90.00	359.52	11,214.0	7,555.2	-563.1	546,504.15	770,378.51	32.500208	-103.59
19,300.0	90.00	359.52	11,214.0	7,655.2	-563.9	546,604.14	770,377.68	32.500482	-103.59
19,400.0	90.00	359.52	11,214.0	7,755.2	-564.7	546,704.14	770,376.84	32.500757	-103.59
19,500.0	90.00	359.52	11,214.0	7,855.2	-565.6	546,804.14	770,376.01	32.501032	-103.59
19,600.0	90.00	359.52	11,214.0	7,955.2	-566.4	546,904.13	770,375.18	32.501307	-103.59
19,700.0	90.00	359.52	11,214.0	8,055.2	-567.2	547,004.13	770,374.34	32.501582	-103.59
19,800.0	90.00	359.52	11,214.0	8,155.2	-568.1	547,104.13	770,373.51	32.501857	-103.59
19,900.0	90.00	359.52	11,214.0	8,255.2	-568.9	547,204.12	770,372.68	32.502132	-103.59
20,000.0	90.00	359.52	11,214.0	8,355.1	-569.7	547,304.12	770,371.84	32.502407	-103.59
20,100.0	90.00	359.52	11,214.0	8,455.1	-570.6	547,404.11	770,371.01	32.502681	-103.59
20,200.0	90.00	359.52	11,214.0	8,555.1	-571.4	547,504.11	770,370.18	32.502956	-103.59
20,300.0	90.00	359.52	11,214.0	8,655.1	-572.2	547,604.11	770,369.34	32.503231	-103.59
20,400.0	90.00	359.52	11,214.0	8,755.1	-573.1	547,704.10	770,368.51	32.503506	-103.59
20,500.0	90.00	359.52	11,214.0	8,855.1	-573.9	547,804.10	770,367.68	32.503781	-103.59
20,600.0	90.00	359.52	11,214.0	8,955.1	-574.7	547,904.10	770,366.84	32.504056	-103.59
20,700.0	90.00	359.52	11,214.0	9,055.1	-575.6	548,004.09	770,366.01	32.504331	-103.59
20,800.0	90.00	359.52	11,214.0	9,155.1	-576.4	548,104.09	770,365.18	32.504605	-103.59
20,900.0	90.00	359.52	11,214.0	9,255.1	-577.2	548,204.09	770,364.34	32.504880	-103.59
21,000.0	90.00	359.52	11,214.0	9,355.1	-578.1	548,304.08	770,363.51	32.505155	-103.59
21,100.0	90.00	359.52	11,214.0	9,455.1	-578.9	548,404.08	770,362.68	32.505430	-103.59
21,200.0	90.00	359.52	11,214.0	9,555.1	-579.7	548,504.08	770,361.84	32.505705	-103.59
21,300.0	90.00	359.52	11,214.0	9,655.1	-580.6	548,604.07	770,361.01	32.505980	-103.59
21,400.0	90.00	359.52	11,214.0	9,755.1	-581.4	548,704.07	770,360.18	32.506255	-103.59
21,500.0	90.00	359.52	11,214.0	9,855.1	-582.2	548,804.07	770,359.34	32.506529	-103.59
21,600.0	90.00	359.52	11,214.0	9,955.1	-583.1	548,904.06	770,358.51	32.506804	-103.59
21,700.0	90.00	359.52	11,214.0	10,055.1	-583.9	549,004.06	770,357.68	32.507079	-103.59
21,800.0	90.00	359.52	11,214.0	10,155.1	-584.7	549,104.06	770,356.85	32.507354	-103.59
21,900.0	90.00	359.52	11,214.0	10,255.1	-585.6	549,204.05	770,356.01	32.507629	-103.59
21,900.5	90.00	359.52	11,214.0	10,255.6	-585.6	549,204.53	770,356.01	32.507630	-103.59
			(BECK913H)						
21,950.5	90.00	359.52	11,214.0	10,305.5	-586.0	549,254.51	770,355.59	32.507768	-103.59



Database: AUS-COMPASS - EDM_15 - 32bit

Company: Ameredev Operating

Project: Hat Mesa

 Site:
 Becknell State Com - A Pad

 Well:
 Becknell 21-33-17 State Com 913H

Wellbore: OWB

Design: Permit Plan 1 - 359.50

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well Becknell 21-33-17 State Com 913H

GL 3790.30 + 27 KB @ 3817.3usft GL 3790.30 + 27 KB @ 3817.3usft

Grid

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
FTP (BECK913H) - plan hits target cen - Point	0.00 ter	0.00	11,214.0	-102.4	-499.2	538,846.60	770,442.32	32.479159	-103.590376
BHL (BECK913H) - plan hits target cen - Point	0.00 ter	0.00	11,214.0	10,305.5	-586.0	549,254.51	770,355.60	32.507768	-103.590423
LTP (BECK913H) - plan hits target cen - Point	0.00 ter	0.00	11,214.0	10,255.6	-585.6	549,204.53	770,356.01	32.507630	-103.590422

Formations							
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,764.0	1,764.0	Rustler				
	2,156.0	2,156.0	Salado				
	3,667.1	3,661.0	Tansill				
	4,162.2	4,154.0	Capitan				
	5,482.9	5,469.0	Bell Canyon				
	7,267.5	7,246.0	Brushy Canyon				
	8,886.4	8,858.0	Bone Spring Lime				
	9,952.0	9,919.0	First Bone Spring				
	10,530.3	10,495.0	Second Bone Spring				
	11,130.2	11,062.0	Third Carb				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coor +N/-S (usft)	dinates +E/-W (usft)	Comment
2,000.0	2,000.0	0.0	0.0	Start Build 1.50
2,353.4	2,352.9	-12.6	-10.4	Start 8065.2 hold at 2353.4 MD
10,418.6	10,383.6	-587.4	-484.6	Start Drop -1.50
10,772.0	10,736.5	-600.0	-495.0	Start DLS 12.00 TFO 359.51
11,521.2	11,214.0	-123.4	-499.1	Start 21.0 hold at 11521.2 MD
11,542.2	11,214.0	-102.4	-499.2	Start DLS 2.00 TFO 6.90
11,547.1	11,214.0	-97.4	-499.3	Start 10353.4 hold at 11547.1 MD
21,900.5	11,214.0	10,255.6	-585.6	Start 50.0 hold at 21900.5 MD
21,950.5	11,214.0	10,305.5	-586.0	TD at 21950.5



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,

Lizzy Laufer Landman

Advance Energy Partners Hat Mesa, LLC

Email: LLaufer@ameredev.com

to

State of New Mexico Energy, Minerals and Natural Resources Department

Submit Electronically Via E-permitting

Date:

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

II.	Type: ⊠ Original □	Amendment d	ue to \Box 19.15.27.9.	D(6)(a) NMAC	□ 19.15.27.9.D(6)(b) NMAC □	Other.
If (Other, please describe: _						
	. Well(s): Provide the forecompleted from a sing					vells proposed to	be drilled or propose
	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	1
----------------------------------	-----------	------------	-------	------	---

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	Completion	Initial Flow	First Production	
		_	Date	Commencement Date	mencement Date Back Date		
BECKNELL 21-33-17	30-025-	5/11/2023	5/31/2023	6/27/2023	8/17/2023	8/20/2023	
State Com 093H							
BECKNELL 21-33-17	30-025-	4/19/2023	5/9/2023	6/27/2023	8/17/2023	8/20/2023	
State Com 114H							
BECKNELL 21-33-17	30-025-	2/12/2023	3/4/2023	6/27/2023	8/17/2023	8/20/2023	
State Com 814H							
BECKNELL 21-33-17	30-025-	3/6/2023	3/26/2023	6/27/2023	8/17/2023	8/20/2023	
State Com 834H							
BECKNELL 21-33-17	30-025-	6/2/2023	6/22/2023	6/27/2023	8/17/2023	8/20/2023	
State Com 913H							
BECKNELL 21-33-17	30-025-	3/28/2023	4/17/2023	6/27/2023	8/17/2023	8/20/2023	
State Com 924H							

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. \square 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	ı 🗌 will 🗆 will not have	e capacity to gather 100%	of the anticipated nat	tural gas
production volume from the well prior to the date of fir	rst production.			

XIII. Line Pressure. Operator \square does \square 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 b	y the new w	rell(s).

			manage						

XIV. Confidentiality: \Box Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information providence.	ided 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 infor	mation
for which confidentiality is asserted and the basis for such assertion.	

(i)

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: power generation on lease; (a) **(b)** power generation for grid; compression on lease; (c) (d) liquids removal on lease; reinjection for underground storage; (e) **(f)** reinjection for temporary storage; **(g)** reinjection for enhanced oil recovery; fuel cell production; and (h)

Section 4 - Notices

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

other alternative beneficial uses approved by the division.

- (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